JHPIEGO
An Affiliate of Johns Hopkins University
A GLOBAL LEADER IN IMPROVING HEALTH CARE FOR WOMEN AND FAMILIES

Basic Maternal and Newborn Care:

A Guide for Skilled Providers




authors

Barbara Kinzie
Patricia Gomez

editor

Rebecca Chase

Maternal & Neonatal Health

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UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT
USAID

Maternal & Neonatal Health

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JHPIEGO, an affiliate of Johns Hopkins University, builds global and local partnerships to enhance the quality of health care services for women and families around the world. JHPIEGO is a global leader in the creation of innovative and effective approaches to developing human resources for health.
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PREFACE

Basic Maternal and Newborn Care: A Guide for Skilled Providers (BMNC) is based on the premise that provision of quality basic care to women experiencing normal pregnancies, births, and postpartum periods, as well as to their normal newborns, not only improves the health of mother and baby, but also can help save lives. Basic maternal and newborn care includes the healthcare services that all childbearing women and newborns should receive. Healthcare systems often focus their resources on caring for women and newborns who have complications, not recognizing that providing quality basic care services to all women and newborns can support and help maintain normal processes, as well as prevent many complications and/or identify and treat them before they become life-threatening. Basic care provision also emphasizes the importance of providing health messages and counseling to women and their families to empower them to become active participants in their own healthcare.

The BMNC manual is intended for use by skilled providers (including midwives, doctors, and nurses) who care for women and newborns in low-resource settings. Basic care can be given in a variety of sites, including the woman's home, the peripheral health center, and the district referral hospital. It is assumed that the skilled provider will furnish all basic care services, identify and manage common complications, and stabilize (if necessary) and refer/transfer women and newborns needing additional interventions. It is recognized, however, that some skilled providers will also be capable of treating more complex conditions and so will not need to refer/transfer the woman or her newborn to another facility or provider for that care. For further information about complications, this manual refers the user to *Managing Complications in Pregnancy and Childbirth: A Guide for Midwives and Doctors*[1] and *Managing Newborn Problems: A Guide for Doctors, Nurses, and Midwives*[2], which are part of the World Health Organization's (WHO) Integrated Management of Pregnancy and Childbirth (IMPAC) series.

Although the manual is intended primarily as a reference for the skilled provider, the care described herein is based on current scientific evidence and/or expert opinion, and thus will be of use in both inservice training and preservice education programs. In inservice programs, the manual will serve as a reference to providers as they are updated in specific areas of basic maternal and newborn care. In preservice education programs, it will complement basic science materials as learners become proficient in recognizing and supporting normal pregnancy, labor and birth, and postpartum and newborn periods, while they learn how to identify and manage common complications. The manual is designed to be used with the BMNC Learning Resource Package, also published by JHPIEGO/Maternal and Neonatal Health Program, which contains all of the materials needed to conduct a competency-based training course (e.g., class schedules, course outlines, pre- and post-tests, skills checklists, role plays, case studies).

Because this is a "field-test" manual, we encourage feedback on its structure and contents from users throughout the world, working in as many settings as possible. (See the User Evaluation, **page xv**.)

We hope that this manual will serve as a foundation for the provision of basic care to women and newborns all around the world, both to maintain and promote their health, and to help ensure their survival.

[1] WHO. 2000. *Managing Complications in Pregnancy and Childbirth: A Guide for Midwives and Doctors*. WHO: Geneva.
[2] WHO. 2003. *Managing Newborn Problems: A Guide for Doctors, Nurses, and Midwives*. WHO: Geneva.

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* These individuals reviewed all or, according to area of expertise, part of the manual.

USER EVALUATION

Because ***Basic Maternal and Newborn Care: A Guide for Skilled Providers*** is a "field-test" manual, feedback on its structure and contents—from users throughout the world, working in as many settings as possible—is encouraged. After filling out this form (attaching pages as needed), please return it to:

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A. User Information

1. Name _____ Date _____

2. What type of health professional are you? (check only one)
   - ☐ Physician/Surgeon
   - ☐ Nurse
   - ☐ Medical Student
   - ☐ Intern/Resident (or equivalent)
   - ☐ Other (specify) _____
   - ☐ Nurse/Midwife
   - ☐ Midwife
   - ☐ Nursing/Midwifery Student

3. What is your area of specialty?
   - ☐ Ob/Gyn
   - ☐ Nursing
   - ☐ Pediatrics
   - ☐ Other (specify) _____
   - ☐ Midwifery
   - ☐ Nursing/Midwifery

4. Name and address of institution where you provide maternal and newborn healthcare

   Institution name _____

   Address _____

   City _____ Country _____

5. Type of institution
   - ☐ Health Dispensary
   - ☐ Health Center
   - ☐ District Hospital
   - ☐ Regional Hospital
   - ☐ Private Clinic/Hospital
   - ☐ Nursing/Midwifery Teaching Institution
   - ☐ Other (specify) _____

6. What is your primary job responsibility?
   - ☐ Healthcare provider
   - ☐ Clinical training supervisor
   - ☐ Teacher/Educator/Instructor
   - ☐ Other (specify) _____

7. Please estimate the **percentage of your professional time** each week spent in the following activities. **(Total should add up to 100%.)**

Patient/Client Care	_____%
Clinical Training	_____%
Teaching/Educating/Instructing (not in clinical setting)	_____%
Other (specify) _____	_____%
TOTAL	**100 %**

8. How do you use *Basic Maternal and Newborn Care: A Guide for Skilled Providers*? (check all that apply)
   - ☐ Client care provision
   - ☐ Preservice education
   - ☐ Inservice training

9. Is the manual appropriate for the cadre and/or the level at which you work?
   ☐ Yes ☐ No ☐ Don't know

B. Please indicate your opinion of the manual using the following 1–5 scale:

5-Excellent **4-**Very Good **3-**Satisfactory **2-**Needs Improvement* **1-**Unsatisfactory*

CONTENTS	COMPLETENESS (contains all need-to-know information)	ACCURACY (content is correct and up-to-date	USER-FRIENDLINESS (easy to read, understand, and use)	USEFULNESS (in problem solving and decision-making)	HELPFULNESS (of figures, tables, and textboxes)
Chapter 1: Introduction to Basic Care					
Chapter 2: Rationales for Components of Basic Care					
Chapter 3: Key Tools in Basic Care					
Chapter 4: Conducting the Basic Maternal and Newborn Care Visit					
Chapter 5: Antenatal Care—Assessment and Care Provision					
Chapter 6: Labor/Childbirth Care—Assessment and Care Provision					
Chapter 7: Postpartum Care—Assessment and Care Provision					
Chapter 8: Newborn Care—Assessment and Care Provision					
Chapter 9: Common Discomforts/ Concerns					
Chapter 10: Special Needs					
Chapter 11: Life-Threatening Complications					
Annex 1: Preparation of the Care Site					
Annex 2: Essential Equipment and Supplies					
Annex 3: The Partograph					
Annex 4: Additional Procedures					
Annex 5: Additional Health Messages and Counseling					
Annex 6: Quick Check					
Annex 7: Guidelines for Referral/Transfer					
Overall (the manual as a whole)					

* Please comment on the back (under D) if you rated any chapter or annex less than satisfactory.

C. Please answer any or all of the following questions:

1. In **Section 1** (**Chapters 1–3**): What topics (if any) should be added or described in more detail? What topics (if any) should be omitted or described in less detail?

2. Are there any other global/basic care recommendations for assessing and caring for the woman and newborn that should be included to **Section 2** to make **the following chapters** more useful? If so, what?

   Chapter 4: Conducting the Basic Maternal and Newborn Care Visit

   Chapter 5: Antenatal Care

   Chapter 6: Labor/Childbirth Care

   Chapter 7: Postpartum Care

   Chapter 8: Newborn Care

3. Are there any other changes that should be made to **Section 2** (e.g., to the organization/layout or content)?

4. Are there Common Discomforts/Concerns that should be included (or deleted) to make **Chapter 9** more useful? If so, what?

5. Are there Special Needs that should be included (or deleted) to make **Chapter 10** more useful? If so, what?

6. Are there Life-Threatening Complications that should be included (or deleted) to make **Chapter 11** more useful? If so, what?

7. Are there any other changes that should be made to **Section 3** (e.g., to the organization/layout or content)?

8. In **Section 4** (**Annexes 1–7**): What topics (if any) should be added or described in more detail? What topics (if any) should be omitted or described in less detail?

9. Are there any other changes that should be made to **Section 4** (e.g., to the organization/layout or content)?

10. Are there specific job aids that would complement the manual or make it easier to use? If so, please describe.

11. Are there additional figures, tables, or textboxes (or changes to existing graphics) that would complement the text or make it easier to understand? If so, please describe.

D. Additional Comments

Thank you!

HOW TO USE THIS MANUAL

Different parts of this manual may be used by a wide range of people in the healthcare community in a variety of ways, depending on their individual objectives. Facility supervisors, for example, may focus on certain sections for guidance on integrating the use of the manual into current practice, as well as on assessing and improving existing practices/systems and even developing new ones where needed. Policymakers may focus on other sections when advocating for necessary changes in community, regional, or national healthcare protocols. This manual may provide a useful starting point, a basis for valuable thought and discussion, in these and many other efforts aimed at reducing maternal and newborn morbidity and mortality in developing countries. The primary user, however, is the skilled provider (**page 1-6**) who is caring for women at any point during the childbearing cycle and for newborn babies during the first 6 days of life. The following guidelines are intended to assist the skilled provider in using this manual to provide that care in the most effective and efficient manner possible.

The manual comprises four sections, each numbered separately and designated with a number code. Cross-referencing is used extensively throughout the text to allow the user to quickly find the relevant information in all sections of the manual. These sections are described below.

Section One: Fundamentals of Basic Care (designated by the number "1" preceding page, figure, table, and textbox numbers) contains information on cross-cutting issues, concepts, and skills that form the foundation of basic care during pregnancy, labor and childbirth, and the postpartum and newborn periods.

- **Chapter 1** describes the general principles and scope of basic care, as well as the context in which it is best carried out—issues that may need to be addressed at a facility/community level before the skilled provider is able to use the manual most effectively in caring for women and newborns.
- **Chapter 2** contains the rationales for all components of basic care, the assumption being that care will be more "focused" (and thus, more efficient and effective) if the provider understands the purpose for each element of assessment and care provision.
- **Chapter 3** provides a general review of key skills (in which the skilled provider should already be proficient) that are fundamental to the safe and effective provision of all basic care.

> **Note:** Although the provider may not need to access this section on a day-to-day or ongoing basis, s/he should know, understand, and—where appropriate—be able to apply its contents before using the technical sections.

Section Two: Core Components of Basic Care (designated by the number "2" preceding page, figure, table, and textbox numbers) may be considered the primary text of the manual in that it provides practical guidance on caring for women whose pregnancies, labor/childbirths, and postpartum periods are progressing normally, and for normal newborn babies. Because any woman or newborn can develop a life-threatening complication at any time or have a condition that may pose a threat to health and survival, this section is linked to sections (Sections 3 and 4) that provide practical guidance on recognizing and responding appropriately to a wide range of problems and potential problems that may adversely affect the woman or newborn.

- **Chapter 4** provides general guidance on conducting the maternal or newborn healthcare visit.
  - Chapter 4 also acts as an easy-to-use, practical supplement to this piece (How to Use This Manual) by showing exactly how the provider navigates among different sections of the manual during the course of a visit.
- **Chapters 5 through 8** provide step-by-step guidance on caring for a woman during a normal pregnancy, labor and childbirth, and postpartum period, or for a normal newborn, respectively.
  - Each of the technical chapters (i.e., Chapters 5–8) begins with the appropriate overview/schedule of care.

- Following the overview are **basic assessment tables** that guide the provider through each component of assessment (history, physical examination, testing)—in the order in which it is generally conducted. The tables summarize normal findings where appropriate and indicate findings that may indicate a problem and/or a need for additional assessment and care. Integrated throughout the assessment tables, **followup actions** may simply highlight the element of basic care provision that is most relevant to a given element of assessment (e.g., the provider is directed to use information gathered about a woman's dietary intake to individualize nutritional support); or—when findings may indicate a problem or potential problem—they generally direct the provider to Section 3 or 4, where there is further guidance on additional assessment and care provision, or Annex 7, which provides guidelines for urgent referral/transfer.

Note: Whether the provider treats or refers/transfers the woman or newborn after stabilization (if necessary) depends on the provider's/facility's level of competency/capability and available resources—a matter which should be discussed/decided beforehand.

- Following the assessment tables is **basic care provision**, detailed information on health messages and counseling, immunizations and other preventive measures, and other care components to be individualized for each woman and baby based on their unique needs and situations.

Note: Because the provider may need to access this section on a day-to-day or ongoing basis, s/he may become familiar enough with its contents that the schedule/overview at the beginning of each technical chapter can eventually be used as a quick guide.

Section Three: Additional Care (designated by the number "3" preceding page, figure, table, and textbox numbers) provides practical guidance on additional assessment and care provision that a woman or newborn with certain problems or potential problems (as detected/identified in Section Two) requires. Integrated throughout, **follow-up actions** generally direct the provider to other parts of Section 3 or to Section 4, where there is further guidance on additional assessment and care provision, or Annex 7, which provides guidelines for urgent referral/transfer.

- **Chapter 9** provides practical guidance on caring for women with common discomforts (signs/symptoms that sometimes arise during pregnancy, labor and childbirth, and the postpartum period), which are always or usually normal but may cause women anxiety or discomfort. Guidance is also provided for dealing with common concerns of the newborn period, which are also always or usually normal but may cause the mother anxiety. The provider accesses this chapter as directed in Section 2. Instructions for using this chapter are given on **page 3-1**.
- **Chapter 10** provides practical guidance for caring for women and newborns with special needs, which are conditions, situations, or factors that require special consideration, assessment, or care in addition to the core components of basic care. Additional assessment, together with the core components of assessment (Section Two), helps the provider distinguish between conditions that can and cannot be adequately managed within the scope of this manual. If no such conditions are identified, additional care provision, together with the core components of care provision (Section Two), helps to restore or maintain "normalcy." The provider accesses this chapter as directed in Section 2. Instructions for using this chapter are given on **page 3-35**.
- **Chapter 11** provides practical guidance on initial specialized care (which may include life-saving measures) of the most commonly encountered complications, which may be life-threatening. Additional assessment, together with the core components of assessment (Section Two), helps the provider distinguish between conditions that can and cannot be adequately managed within the scope of this manual. If no such conditions are identified, additional care provision, together with the core components of care provision (Section Two), helps to restore or maintain "normalcy." The provider accesses this chapter as directed in Section 2 or the quick check (Annex 6). Instructions for using this chapter are given on **page 3-89**.

Note: Because the care in this section is generally provided in addition to—not instead of—that in Section Two, the provider should be as familiar as possible with its contents and organization before using this manual. Knowing the overall approach of this section and how the two sections fit together can help the provider integrate them more smoothly in caring for a woman or newborn.

Section Four: Annexes (designated by the number "4" preceding page, figure, table, and textbox numbers) contains the following annexes. Although some are supplemental in nature (e.g., Breastfeeding Support in Annex 5), others are an essential component of care for all women and newborns (e.g., the Quick Check, Annex 6).

- **Annex 1** describes preparation of the care site, which should be addressed at a facility/community level in order for the skilled provider to use the manual most effectively in caring for women and babies.
- **Annex 2** covers essential equipment, supplies, and drugs, which should be addressed at a facility/community level in order for the skilled provider to use the manual most effectively in caring for women and babies.
- **Annex 3** provides instructions for using the partograph as well as a sample partograph that can be copied and filled out by the provider while caring for a woman during labor and childbirth.
- **Annex 4** provides guidance on additional procedures that a woman or baby may require during the course of basic care. The provider should not bypass Section Two or Three to access this annex (or any of the individual entries therein) directly. Section Two or Three provides a necessary context to this annex, which is not intended, or designed, to be used as a stand-alone document.
- **Annex 5** provides guidance on additional health messages and counseling that a woman or baby may require during the course of basic care. Although the provider may bypass earlier sections to access this annex (or any of the individual entries therein) directly, Section Two or Three provides a helpful context for each of the topics covered.
- **Annex 6**, which immediately follows the red divider, is the quick check that every woman or baby should undergo as the first step in basic care. Exactly how this is used and by whom should be addressed at a facility/community level in order for the skilled provider to able to use the manual most effectively in caring for women and babies. Use of this annex should be fully integrated into facility procedure in order for the skilled provider to use the manual most effectively in caring for women and babies.
- **Annex 7** provides guidelines for referral/transfer of the woman or newborn. The provider should not bypass Section Two or Three or Annex 6 to access this annex directly. Section Two or Three or Annex 6 provides a necessary context to this annex, which is not intended, or designed, to be used as a stand-alone document. Use of this annex should be fully integrated into facility procedure in order for the skilled provider to use the manual most effectively in caring for women and babies.

LIST OF ABBREVIATIONS

3TC	Lamivudine
AIDS	Acquired immunodeficiency syndrome
ANC	Antenatal care
ARV	Antiretroviral
AZT	Zidovudine
BCG	bacille Calmette-Guérin (for immunization against tuberculosis)
BMS	Breastmilk substitute
BP	Blood pressure
CBC	Childbirth care
CEOC	Comprehensive essential obstetric care
CIC	Combined injectable contraceptive
cm	centimeter
COC	Combined oral contraceptive
Cont.	Continually
dL	deciliter
DPT	diphtheria, pertussis, and tetanus vaccine
EDC	Estimated date of childbirth
FGC	Female genital cutting
g	gram
G6PD	Glucose-6-phosphate dehydrogenase
HBV	Hepatitis B virus
HIV	Human immunodeficiency virus
HIV/AIDS	Human immunodeficiency virus/Acquired immunodeficiency syndrome
HLD	High-level disinfected
IM	Intramuscular
IP	Infection prevention
IPPF	International Planned Parenthood Federation
IPT	Intermittent preventive treatment
ITN	Insecticide-treated (bed)nets
IUD	Intrauterine device
IV	Intravenous
kg	kilogram
kPa	kiloPascal
L	liter
LAM	Lactational amenorrhea method
LMP	Last menstrual period
mcg	microgram
MCPC	*Managing Complications in Pregnancy and Childbirth: A Guide for Midwives and Doctors*

mg	milligram
min	minute
mL	milliliter
mmHg	millimeter mercury
MNP	*Managing Newborn Problems: A Guide for Doctors, Nurses, and Midwives*
MTCT	Mother-to-child transmission of HIV
N/A	Not applicable
NBC	Newborn care
NVP	Nevirapine
OPV	Oral polio vaccine
ORS	Oral rehydration solution
PLWHA	People living with HIV/AIDS
PMTCT	Preventing mother-to-child transmission of HIV
POC	Progestin-only contraceptive
POP	Progestin-only pill
PPC	Postpartum care
PPE	Personal protective equipment
PPH	Postpartum hemorrhage
psi	pounds per square inch
Rh	Rhesus
RPR/VDRL	Rapid plasma reagent/ Venereal disease research laboratory test
STI	Sexually transmitted infection
TB	Tuberculosis
TBA	Traditional birth attendant
TT	Tetanus toxoid
WHO	World Health Organization
ZDV	Zidovudine

CHAPTER ONE

INTRODUCTION TO BASIC CARE

WHAT IS BASIC CARE?

The reduction of maternal and newborn mortality and morbidity continues to be a great challenge to human development. Each year, more than 500,000 women die from complications of pregnancy or childbirth, and more than 3 million babies die during the first week of life. It is not surprising, then, that many manuals related to maternal and newborn health focus on problems and complications that arise during the childbearing cycle (i.e., pregnancy, labor and childbirth, and the postpartum period) and the newborn period (i.e., the first 28 days of life). However, most women and babies progress through the childbearing cycle and newborn period without complications; thus, basic maternal and newborn care is sufficient for the majority of women and newborn babies.

Basic maternal and newborn care consists of healthcare services that all pregnant women and newborn babies should receive. The services described in this manual are:

- Appropriate for use in low-resource settings;
- Based on evidence—that is, proven to be effective in promoting the health and survival of women and newborn babies—and firm rationales, rather than on habit or tradition; and
- Focused, through targeted assessment and individualized care provision, on the most prevalent health issues affecting women and their babies.

One key practice in basic care is the attendance of a skilled provider at every birth, which is a critical intervention that can save the lives of women and newborn babies. In addition, because every childbearing woman and newborn is at risk of developing a life-threatening complication at any time, basic care must be linked to a full range of services, including emergency care.

Goals of Basic Care

The major goal of basic care is to maintain a normal childbearing cycle and newborn period in an attempt to ensure a healthy outcome for the woman and baby.

The childbearing cycle and newborn period usually progress normally, without complications. Therefore, basic care should not be an overly "medicalized" experience, focusing solely on the problems that may occur. The focus, rather, is on ensuring, supporting, and maintaining maternal and fetal/newborn well-being. To achieve the main goal of basic care, the skilled provider works toward accomplishing the following supporting goals, which are outlined in the four sections that follow:

- Promotion of health and prevention of disease
- Detection of existing diseases and treatment
- Early detection and management of complications
- Birth preparedness and complication readiness

Promotion of Health and Prevention of Disease

Integrated throughout basic care, health messages and counseling promote health by empowering women to take good care of themselves and their babies, and helping them prevent potential problems. The skilled provider should ensure that the woman and her family have the information they need to make healthy decisions during pregnancy, childbirth, and the postpartum/newborn period, as well as sufficient guidance in

applying that information in their particular situation. Some topics that may be included in health messages and counseling include the following:

- Nutritional support
- Danger signs and complication readiness
- Care for common discomforts during pregnancy, labor/childbirth, and the postpartum period
- Counseling and testing for HIV
- Hygiene and infection prevention
- Breastfeeding and breast care
- Sexual relations and safer sex
- Family planning
- Newborn care
- Prevention of tetanus and anemia
- Discouraging harmful traditional practices while encouraging beneficial traditional practices

Health messages and counseling should be built into every basic care visit, but some topics may be more efficiently addressed in a group setting. For example, an entire community may need, but lack, information on topics such as nutrition and HIV/AIDS. Conducting a group education session on a healthcare facility/ community level can allow the skilled provider to focus more on counseling—which should be a one-on-one activity—during visits.

Although the childbearing cycle and newborn period usually progress normally, an important goal of basic care is the promotion of safe, simple, and cost-effective interventions to prevent certain conditions. Some key interventions that have proven effective in reducing maternal and newborn mortality and morbidity include the following:

- Tetanus toxoid immunization
- Iron/folate supplementation
- Intermittent preventive treatment of malaria
- Use of infection prevention practices
- Prevention of mother-to-child transmission of HIV
- Use of the partograph
- Restricted use of episiotomy
- Active management of the 3rd stage of labor
- Early and exclusive breastfeeding
- Immediate warming of the newborn
- Newborn immunizations
- Family planning services

Detection of Existing Diseases and Treatment

In addition to health promotion and the prevention of diseases and other problems, a goal of basic care is the detection of existing diseases/conditions that can complicate the childbearing cycle and newborn period. Basic care also includes providing or facilitating appropriate treatment of any problems detected. Through targeted assessment, which is based on individual needs, the skilled provider interviews the woman and

examines her or the newborn to detect signs and symptoms of chronic or infectious diseases/conditions that are endemic among the population being served, congenital problems, and other problems that may harm the health of the woman or newborn, such as:

- Syphilis and other sexually transmitted infections (STIs)
- HIV/AIDS
- Malaria
- Tuberculosis
- Anemia
- Heart disease
- Diabetes
- Malnutrition

Early Detection and Management of Complications

To achieve another, closely related goal of basic care, the skilled provider looks for signs and symptoms of maternal and newborn complications. Basic care also includes performing life-saving measures, if necessary, and managing or facilitating management of any complications detected. The following complications are the major causes of maternal and newborn mortality and morbidity:

- Hemorrhage (woman)
- Obstructed labor (woman and fetus)
- Pre-eclampsia/eclampsia (woman)
- Sepsis/infection (woman and newborn)
- Asphyxia (newborn)
- Hypothermia (newborn)

Birth Preparedness and Complication Readiness

If the woman and her family are well prepared for normal childbirth as well as any possible maternal or newborn complications, the woman or baby is more likely to receive the skilled and timely care needed to preserve health and ensure survival. Although the manual focuses on what the skilled provider, the woman, and her family can do to prepare for birth and possible complications, birth preparedness/complication readiness is actually a community-wide issue, as shown in **Textbox 1-1** (**page 1-4**).

As part of focused antenatal care, the woman and her family develop a birth plan to ensure that necessary preparations are made well in advance of the estimated date of childbirth. This plan includes arrangements for normal childbirth and the postpartum/newborn period, such as:

- Skilled provider to attend the birth and care for the woman and newborn during the immediate postpartum/newborn period
- Appropriate place of birth (home, healthcare facility, or referral center)
- Transportation of/to the skilled provider
- Funds
- Support/birth companion
- Items needed for a clean and safe birth and for the newborn
- Assistance at home with other children

In addition, because every woman and newborn is at risk of developing a complication, and most of these complications cannot be predicted, the plan includes complication readiness to ensure an appropriate and timely response to any complication that may arise. Preparing for complications can help prevent life-threatening delays in recognizing and responding to complications. In some cases, the time required to make arrangements—which could have been made before the emergency—defines the line between survival and death for the woman and/or child. Factors to consider when preparing a complication readiness plan include the following:

- Knowledge of possible danger signs and appropriate responses
- How to access emergency funds
- How to access emergency transportation
- Where to go in an emergency
- Possible blood donors

Textbox 1-1. Birth Preparedness and Complication Readiness: A Shared Responsibility

Birth preparedness and complications readiness are shared responsibilities. Women, families, communities, policymakers, and healthcare facility staff should work individually and together to build an enabling environment for birth preparedness and complication readiness by doing the following:

- Identifying and knowing how to reach a skilled provider
- Funding (including personal, communal, and reimbursement schemes) to pay for expenses incurred
- Establishing communal transportation schemes that can be accessed should life-threatening complications occur
- Advocating for skilled providers, 24-hour services, and improved roads and communications systems

Scope of Basic Care

Although some women and newborn babies require specialized care because of complications or other potentially dangerous conditions, the vast majority of them—whose pregnancies, births, and postpartum/newborn periods progress normally—require only basic care services.

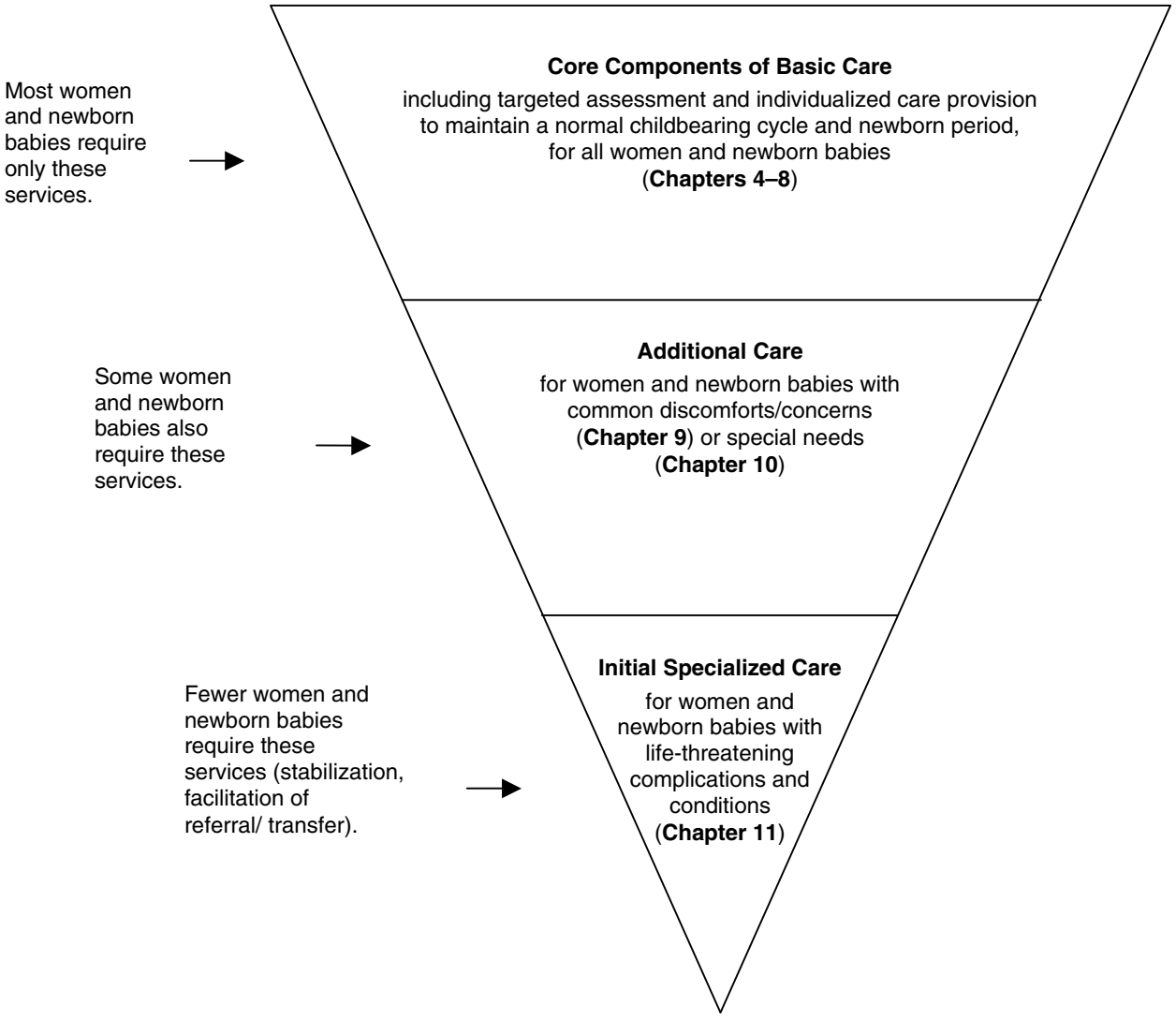
The core components of basic care are the services that all women and newborn babies should receive to ensure, support, and maintain a normal childbearing cycle and newborn period (**Figure 1-1, page 1-5**). At a minimum, basic care includes the following:

- Targeted assessment to facilitate the early detection of complications, chronic conditions, and other problems/potential problems
- Individualized care provision, consisting of preventive measures, health messages and counseling, and birth preparedness and complication readiness planning

Basic care also encompasses the following care scenarios:

- Additional care: for women and newborn babies who have common discomforts/concerns or special needs
  - Common discomforts/concerns (**Chapter 9, page 3-1**): normal changes, signs and symptoms, and physical and emotional behaviors that may occur during the childbearing cycle (e.g., back pain, breast tenderness, vivid dreams) and newborn period (e.g., misshapen head, increased crying)
  - Special needs (**Chapter 10, page 3-35**): conditions or social/personal factors that should be taken into consideration when planning and implementing care
- Initial specialized care (**Chapter 11, page 3-89**): for women and newborn babies with potentially life-threatening complications and other conditions whose diagnosis and management may lie beyond the scope of this manual

Figure 1-1. Scope of Basic Care



GENERAL PRINCIPLES OF BASIC CARE

Overview

In order for basic maternal and newborn healthcare to be effective in reducing mortality and morbidity among women and babies, services must be consistently delivered in accordance with certain general principles. In addition to being based on evidence and firm rationales, high-quality maternal and newborn healthcare should be:

- Delivered by a skilled provider (**page 1-6**) in the context of a care provision system (**page 1-9**) that includes a clean, safe client care area and an emergency-response system
- Provided in a manner that is respectful of and sensitive to the woman, her newborn and family (**page 1-7**), and their culture (**page 1-8**)
- Individualized to meet the unique needs of the woman and her newborn and family (**page 1-7**)

- Incorporated with the following key skills:
  - Clinical decision-making (**page 1-41**)
  - Interpersonal skills (**page 1-42**)
  - Infection prevention (**page 1-47**)
  - Record keeping (**page 1-57**)

The Skilled Provider

The presence of a skilled provider during childbirth and the immediate postpartum/newborn period is a critical aspect in saving the lives of women and newborn babies. The skilled provider has the knowledge, skills, and qualifications[1] necessary to deliver essential maternal and newborn care in any setting—including the home, community health post, healthcare facility, and district hospital. The term skilled provider is not specific to any one profession; rather, it designates a person (e.g., midwife, doctor, nurse, or other qualified healthcare worker) with certain core competencies. These core competencies include basic and life-saving skills and reflect the minimum skill set of the skilled provider. The skilled provider also has responsibilities in helping to establish and maintain safe and effective healthcare services.

This section outlines the core competencies and responsibilities of the skilled provider (as defined in the context of this manual) in managing the normal childbearing cycle and newborn period. The skilled provider is capable of:

- Gathering relevant information about the woman or newborn through targeted history taking, physical examination, and testing to ensure that the childbearing cycle or newborn period is progressing normally
- Analyzing information gathered in a logical and systematic manner to make clinical decisions about care
- Caring for a woman and baby during a normal childbearing cycle and newborn period by:
  - Providing ongoing advice and counseling
  - Providing preventive measures (e.g., immunizations, drugs, and micronutrient supplementation)
  - Assisting in birth preparedness and complication readiness planning
  - Assisting in normal labor and childbirth, including continuous monitoring during labor and childbirth using the partograph, clean and safe childbirth, and active management of the 3rd stage of labor
  - Providing immediate support to the newborn after birth to make sure s/he is breathing, is warm, receives proper cord and eye care, and is immunized
  - Vigilantly monitoring the woman and baby through the first 6 hours postpartum and then at 6 days, and the woman again at 6 weeks, to ensure early detection and management of problems
  - Providing encouragement and guidance in early and exclusive breastfeeding and other key self- and newborn-care measures
  - Providing family planning and other key reproductive health services
- Anticipating and recognizing potential problems by:
  - Noting any deviations from normal
  - Detecting signs/symptoms of the major causes of maternal and newborn morbidity and mortality
  - Checking for signs/symptoms of other conditions that may adversely affect the woman and newborn
  - Identifying factors that are associated with complications

[1] The qualifications necessary to be considered a skilled provider differ from country to country.

- Responding appropriately to major complications/conditions by:
  - Performing life-saving measures, if needed
  - Managing the problem or facilitating referral/transfer of a woman or newborn to a higher level of care, as appropriate
- Using all available and appropriate means to:
  - Protect and promote the health/survival of the woman and newborn
  - Detect complications/conditions
  - Manage and/or refer/transfer for complications/conditions
- Continuing to learn and to develop her/his knowledge base and skill set
- Providing care that is in accordance with national policies and standards, clinical care guidelines, and local resources
- Continually assessing existing services in order to:
  - Build on strengths
  - Identify gaps
  - Work on practical solutions to fill gaps
- Supporting activities that advocate or facilitate linkages among healthcare workers, facilities, communities, and other key stakeholders in the care provision system

Woman- and Newborn-Friendly Care

In woman- and newborn-friendly care, the woman's and newborn's health and survival, basic human rights, and comfort are given clear priority. The woman's personal desires and preferences are also regarded as important. Providing woman- and newborn-friendly care means:

- Making services acceptable to the woman and her family:
  - The beliefs and traditions of their culture (**page 1-8**), as well as gender roles and relations, are respected.
  - Family members or other support people are included in the care of the woman and newborn, as the woman desires.
  - Health messages and recommendations are relevant and feasible given the woman's resources, capabilities, and limitations.
- Empowering the woman and her family to become active participants in their healthcare, and supporting them in overcoming obstacles to maintaining or improving their health:
  - The woman is given the information she needs to plan for birth, survive an emergency, and take good care of herself and her newborn.
  - The woman and her family are assisted in solving problems and making decisions regarding her and her newborn's health.
- Ensuring that skilled providers and other healthcare workers demonstrate knowledge of the rights of women:
  - Information about her health and the health of her baby is shared with the woman.
  - The woman is continually informed about what will happen next during the visit.

  - The woman's permission/consent is obtained throughout the physical examination and testing (before proceeding to the next element), as well as before performing any special procedures.
  - The woman is encouraged to express her views about the services received.
- Ensuring that all healthcare facility staff use good interpersonal skills (**page 1-42**)
- Keeping the woman and her newborn together as much as possible to encourage bonding, as well as to honor and maintain the mother-baby dyad

> **Remember:** To respect and maintain the mother-baby dyad, keep them together as much as possible throughout the postpartum/newborn period.
> - Avoid separating the woman and newborn, even while individually assessing and caring for them.
> - Place the baby in skin-to-skin contact immediately at birth, and facilitate immediate breastfeeding.
> - Encourage and facilitate "rooming in"—keeping the baby with the woman day and night.
> - Allow and encourage the woman's participation in examination and care of the baby.

- Considering the emotional, psychological, and social well-being of the woman and newborn to be as important as their physical well-being

Male Involvement

There is growing recognition that male partners should be actively involved in the care of women and newborns. Communication, participation, and partnership within/by the couple in seeking and making decisions about care help to ensure a fuller and safer reproductive health experience for the woman, her newborn, and her family. Some ways that skilled providers can encourage and facilitate involvement of male partners in the care of women and newborns during pregnancy, childbirth, and the postpartum/newborn period—when appropriate and as the woman desires—include the following:

- Recognizing and working to decrease skilled provider bias against the involvement of male partners
- Helping the male partner feel comfortable participating in antenatal, childbirth, and postpartum/newborn care
- Making a special effort to include the male partner in planning for birth preparedness and complication readiness
- Targeting the couple during health counseling around topics that are especially pertinent to the male partner (e.g., family planning, sexual relations and safer sex, mother-baby-family relationships)

Culturally Appropriate Care

Pregnancy and childbirth are individual, family, and community events, rich in spiritual significance and power. Every culture has its own rituals, taboos, and proscriptions surrounding pregnancy and childbirth. These beliefs and practices are deeply held, are passed from generation to generation, and may even be institutionalized in law and religion. They define what a culture regards as acceptable or unacceptable conduct on the part of the pregnant woman, her partner and family, and others who are caring for her. Cultural awareness, competency, and openness are, therefore, essential in entering into a care relationship with a woman during this important time in her life.

The skilled provider cooperates and coordinates with traditional health systems whenever possible. Both skilled providers and traditional birth attendants view their knowledge as important and legitimate. If a skilled provider's recommendations do not fit within a woman's cultural context, the woman or her family may not consider them to be as important, valuable, or authoritative as advice from people within the community, and therefore dismiss them.

The skilled provider can demonstrate cultural sensitivity when interacting with the woman and her family by doing the following:

- Speaking to the woman in her own language or arranging to have someone in attendance who can
- Observing the rules and norms of the culture of the woman and newborn as appropriate
- Understanding who makes the decisions in the lives of the woman and newborn and, when appropriate, involving that person in the decision-making process
- Working with traditional birth attendants when possible (For more information, see Healthcare Facility-Community Linkages, **page 1-12**.)
- Showing respect for traditional practices by doing the following:
  - Striving to understand the details of the traditional practices and the reasons for them
  - Promoting and building upon positive or "neutral" traditional practices
  - Offering alternatives to practices that are potentially harmful or that detract from beneficial practices
  - Showing sensitivity and acknowledging that change can be a difficult process when the elimination of a traditional practice is necessary

Note: When a specific cultural practice has been identified as a violation of human rights, skilled providers must carefully assess the use of the practice in their area and—with other skilled providers and local, influential people—develop a plan to advocate change.

Individualization of Care

This manual proposes a standard package of basic services that all women and babies should receive during the childbearing cycle and newborn period. However, it also recognizes the importance of developing a plan of care that meets the individual needs of each woman and newborn. By taking into consideration all of the information known about a woman and newborn—e.g., current health, medical history, daily habits and lifestyle, cultural beliefs and customs, and any other unique circumstances—the skilled provider can individualize both assessment and care provision components of the care plan. For example, if the woman reveals during her history that she has had gestational diabetes in the past, the skilled provider would include a urine test for glucose. Or, if a newborn has problems attaching to the breast, the skilled provider may emphasize techniques for successful breastfeeding.

THE CARE PROVISION SYSTEM

Skilled care is a critical component in reducing maternal and newborn mortality and morbidity. However, for skilled providers to do their jobs effectively, they must be supported by an adequate care provision system. The care provision system actually comprises many smaller systems that must work together to function as a whole and, in accordance with national policies and standards, ensure positive health outcomes for women and newborn babies. An adequate care provision system has the following features:

- Necessary infrastructure that includes:
  - Facilities that are adequately built and with reliable sources of power and clean, running water
  - Essential supplies, equipment, and drugs available at all levels of the care provision system, as well as a system for re-supply and maintenance of these resources
  - Health finance systems for assisting clients in saving funds, for covering or sharing the cost of services, and for reimbursing the skilled providers
  - Roads that connect communities, even in remote regions, with healthcare facilities at all levels of the healthcare system

  - Human resources (i.e., skilled providers, medical and nonmedical support staff) available in sufficient numbers and in the places where they are needed
- A functioning system for referral/transfer
  - Every skilled provider, healthcare facility, and community has a complication readiness plan and can access the referral/transfer system when an emergency arises
- A quality assurance system that includes:
  - Service delivery guidelines that have been developed and disseminated to all levels of the care provision system
  - Mechanisms for ongoing quality assessment and improvement of healthcare services that have been developed and implemented
- Systems for developing and maintaining clinical competence that include:
  - Preservice education programs to equip skilled providers with the knowledge, skills, and qualifications necessary to provide high-quality maternal and newborn care
  - Inservice training programs to update and expand the knowledge base and skill set of skilled providers already on the job, to help them improve the quality of services provided

Healthcare Site Preparation/Preparedness

Before safe and effective services can be provided to women and newborn babies on a consistent basis, the healthcare site itself must be adequately prepared. Whether the woman and newborn come to a healthcare facility for care or receive care in a home setting, it is the skilled provider's responsibility to ensure that:

- The client care area is clean and organized (**Annex 1, page 4-1**),
- Essential equipment and supplies are available and ready for use (**Annex 2, page 4-3**), and
- An emergency-response system is in place (below).

Emergency Response System

All healthcare facility staff should be trained both to recognize danger signs, which indicate that the woman or newborn may be experiencing a life-threatening complication, or signs of advanced labor, and to respond in an agreed-upon fashion. This training forms the basis of effective emergency response. Having an emergency response system in place ensures that a woman or newborn with an emergent condition will be identified, stabilized (if necessary), and treated as quickly as possible. This system helps to ensure appropriate response because, in the event of an emergency, healthcare facility staff know exactly what to do (i.e., the exact procedures and protocols) and the necessary resources are available and accessible (e.g., emergency transport, supplies, drugs). (For information on emergency response in the home setting, see **Textbox 1-2, page 1-12**.)

In general, an emergency response system should include provision for the following elements:

- Identification
- Initial response
- Management or referral/transfer

Identification

To eliminate delay in obtaining life-saving attention for a woman or newborn who presents with an emergency condition, a designated member of the healthcare facility staff—who is trained/equipped to identify danger signs and signs of advanced labor, and to mobilize emergency care—performs a quick check

(**Annex 6, page 4-61**). The quick check is performed immediately upon the woman's or newborn's arrival at the healthcare facility (or to a different part of the same healthcare facility, e.g., a postpartum or newborn ward).

Initial Response

If any danger sign is (or was recently) present, the person who performed the quick check immediately initiates the designated emergency response procedures. (This should include notifying the skilled provider as soon as possible, if an individual other than the skilled provider performed the quick check.) The skilled provider then performs a rapid initial assessment to assess the general nature of the woman's or newborn's problem and need for stabilization. Appropriate care for a woman presenting with signs of advanced labor would also be initiated at this time.

Management or Referral/Transfer

Once the woman or newborn has been stabilized (if necessary), the skilled provider either manages the complication/condition (if qualified and equipped to do so) or urgently refers/transfers the woman or newborn to a healthcare facility that has the following comprehensive essential obstetric care (CEOC) services:

- Anesthesia
- Blood transfusion
- Surgical obstetrics, including:
  - Cesarean section
  - Repair of 3rd and 4th degree vaginal tears and extensive cervical tears
  - Laparotomy (e.g., surgical treatment of sepsis, hysterectomy, removal of ectopic pregnancy)[2]
- Care for sick or low birthweight newborns

If the woman or newborn is not in need of stabilization/resuscitation, the skilled provider should treat her or the newborn according to guidelines provided for the presenting danger sign, which may involve the following:

- Provision of basic care with certain additions and/or emphases
- Referral/transfer to a specialist or higher level of care if appropriate

Facilitating the referral/transfer process includes the following tasks:

- Obtaining, or assisting the woman in obtaining, reliable transportation to the referral site
- Arranging for the woman to receive appropriate care and support during transfer
- Sending complete documentation of the woman's condition to the referral site, including all relevant findings and interventions
- Communicating with the referral site as needed to ensure continuity of care and appropriate followup for the woman

[2] *Adapted from*: World Health Organization. 2000. Fact Sheet No. 245 (June).

Textbox 1-2. Emergency Response in the Home Setting

- The quick check (**Annex 6, page 4-61**) is the first action a designated member of the healthcare facility staff should take upon entering the woman's home, just as it is the first action taken when a woman or newborn arrives at a healthcare facility.
- If danger signs are found, appropriate action should be taken by proceeding to rapid initial assessment, stabilization (if necessary), and treatment or referral/transfer of the woman to the appropriate healthcare facility.
  - The woman's complication readiness plan (**page 2-26**) will specify arrangements previously made for complication readiness, including emergency transportation and funds, decision-making, blood donors, and support. This plan will enable the skilled provider and family members to respond appropriately and without delay—even in the home setting.
  - If there is no complication readiness plan, address the above issues with the woman and her family, and take action in as timely a manner as possible.

Healthcare Facility-Community Linkages

Skilled providers, healthcare facilities, and the care provision system have the final responsibility in providing high-quality maternal and newborn care, but the communities they serve also have an important role in maintaining that quality. Healthcare facilities and healthcare workers should continually work with women, families, and communities to improve awareness of, demand for, and access to high-quality services.

The skilled provider can help organize activities to strengthen linkages between the healthcare facility and the community it serves, such as:

- Inviting the community to learn about the healthcare facility's role, function, constraints, and limitations, and to be part of the healthcare services development committee
- Including members of the community in the development, evaluation, and shaping of services through constructive dialogue about mutual needs, issues, and accountability
- Learning about "traditional care" services existing in the community and facilitating their integration, when appropriate, with those offered by the healthcare facility (e.g., working with traditional birth attendants; **Textbox 1-3**, below)
- Collaborating with the community in developing transportation, funding, and referral systems to reduce delays for women and newborn babies in obtaining care
- Organizing open-door events to celebrate pregnancy and safe motherhood with the community

Textbox 1-3. Working with Traditional Birth Attendants

Traditional birth attendants (TBAs), female relatives, neighbors, and other community birth assistants are part of the childbirth process throughout the developing world. Because TBAs generally hold positions of respect and influence within their communities, they are in a key position to inform and assist women and their families in preparing for birth. Facilities and skilled providers should respect TBAs as part of the informal healthcare system by:

- Including TBAs in supporting women and their families throughout the childbearing cycle and newborn period
- Enlisting the support of TBAs in conveying vital health messages and information to families and communities in a culturally appropriate way, such as:
  - Ensuring that TBAs have correct information and are supported in their understanding of safe motherhood messages
  - Supporting, rather than competing with, the inherent role that TBAs have in giving advice and information to communities and families
  - Equipping TBAs to provide health education on such topics as nutrition, STIs (including HIV), breastfeeding, newborn care, danger signs, and where to go for help in the event of an emergency
- Partnering with TBAs in identifying pregnant women in the community who need healthcare services and helping them access services
- Responding respectfully and promptly to TBAs who bring a woman to a healthcare facility or skilled provider
- Allowing and working with TBAs to provide emotional and social support to women during labor and childbirth, whether in the healthcare facility or the home

CHAPTER TWO

RATIONALES FOR COMPONENTS OF BASIC CARE

OVERVIEW

The basic maternal and newborn care practices recommended in this manual are based on evidence and firm rationales. This chapter describes the core components of basic care and the rationales for their inclusion in this manual. With a greater understanding of the purpose of each core component, skilled providers will be able to focus their care more effectively.

CORE COMPONENTS OF BASIC CARE

The core components of basic care are the services that all women and newborn babies should receive to ensure, support, and maintain a normal childbearing cycle and newborn period. At a minimum, basic care includes the following:

- Targeted assessment to ensure normal progress of the childbearing cycle and newborn period and facilitate the early detection of complications, chronic conditions, and other problems/potential problems; and
- Individualized care provision to help maintain normal progress, consisting of preventive measures, supportive care, health messages and counseling, and birth preparedness and complication readiness planning.

Quick Check

The quick check ensures that a woman or newborn in need of immediate medical attention is identified, stabilized (if necessary), and treated or referred/transferred as quickly as possible. Every woman or newborn who comes to the healthcare facility for care (or is cared for at home) undergoes a quick check immediately upon arrival. All healthcare facility staff should be trained and equipped to recognize and respond appropriately to potentially life-threatening conditions. If danger signs are identified, the skilled provider performs a rapid initial assessment to determine the degree of illness (if any) and the need for stabilization or emergency care before proceeding. The quick check is also used to recognize and respond appropriately to signs of advanced labor in the pregnant woman, and to danger signs in the newborn.

Basic Assessment

If it is determined through the quick check that the woman or newborn does not have an emergent condition, the skilled provider may proceed to the assessment. Through the assessment process, the skilled provider works to:

- Ensure maternal or newborn well-being and/or normal pregnancy
- Gather information that can be used to individualize a plan of care to best meet the woman's or newborn's needs
- Identify common discomforts/concerns and special needs
- Detect conditions beyond the scope of basic care, including life-threatening complications
- Establish a trusting and respectful relationship with the woman and her companion/partner/family

During the assessment, the skilled provider takes the woman's or newborn's history, performs a physical examination, and conducts any necessary tests.

History

The woman's or newborn's history provides information that helps the skilled provider target the physical examination and testing, and individualize the plan of care. History taking also facilitates identification of common discomforts/concerns and special needs, and detection of abnormal signs and symptoms to help focus the additional care required. A rationale for each element of the history is described in **Table 1-1** (below) and **Table 1-2** (**page 1-17**).

Table 1-1. Rationales for Elements of Maternal History

ELEMENT*	RATIONALE
Personal information	• Used to: – Identify and contact the woman. – Help establish rapport. – Gain a general idea of who she is and her living situation. – Guide development of the birth preparedness/complication readiness plan. – Guide further assessment and individualization of care, health messages, and counseling. – Identify the adolescent, who may have special needs and requires additional care.
Daily habits and lifestyle	• Helps guide individualization of health messages and counseling. • Helps address other concerns, such as: – Daily workload, rest, and dietary intake: Helps determine whether there is a balance between the physical demands of the woman's daily life and her rest and dietary intake. – Use of potentially harmful substances: Helps to individualize health messages and counseling on use of alcohol, tobacco, and drugs/medications. – Household members: Helps guide development of the birth preparedness/complication readiness plan. • Can help identify women who are subjected to violence, a special need that requires additional care.
Menstrual and contraceptive history	• Helps calculate the gestational age of the pregnancy as well as the estimated date of childbirth (EDC). The EDC can help gauge whether the fetus is developing normally. • Guides individualization of health messages and counseling about family planning. • Asking about previous family planning methods and plans for using family planning methods in the future helps guide individualization of care, health messages, and counseling.
Obstetric history	• A woman who has had complications or problems during a previous pregnancy, labor/childbirth, or postpartum period may require additional care, even if it involves nothing more than emotional support and reassurance. Similar complications or problems may occur during the present pregnancy, labor/childbirth, or postpartum period depending on the underlying cause, and some previous complications or problems may require referral/transfer to a higher level of care. In particular, the skilled provider should ask about the following complications and problems to guide individualization of care, health messages, and counseling: – Convulsions – Cesarean section – Uterine rupture – Perineal tear – Stillbirths – Preterm or low birthweight baby – Babies who died before 1 month of age – Three or more spontaneous abortions – Pre-eclampsia/eclampsia – Postpartum depression/psychosis – Problems with breastfeeding

* Unless otherwise indicated, each element should be assessed in each part of the childbearing cycle.

Table 1-1. Rationales for Elements of Maternal History *(continued)*

ELEMENT*	RATIONALE
Present pregnancy (ANC and CBC only)	• Guides further assessment, individualization of care, health messages, and counseling. – Reports of convulsions or vaginal bleeding during this pregnancy help the skilled provider develop and implement a care plan that will adequately address the woman's needs and prevent related complications during the postpartum period. • Helps to assess for: – Fetal movements: Calculate/confirm gestational age and provide a baseline observation against which to evaluate later reports of a decrease in or lack of fetal movement, which is a special need that requires additional care. – Common discomforts: Determine the need for additional care, which may include assessing the woman further to confirm that there is not a more serious cause, reassuring her, and advising her on ways to relieve her anxiety and discomfort. – Emotional distress/unwanted pregnancy: Guide individualization of counseling and referral (e.g., mental health services).
Present labor/childbirth (CBC only)	• Rupture of membranes helps determine the need for additional care to prevent infection of woman and baby. The character (i.e., color, odor) of the amniotic fluid provides additional information about possible complications for the woman or fetus, including amnionitis and fetal distress. • Frequency and duration of contractions provide further information needed to determine the onset and assess the progress of labor. – Fetal movements: Provide an indication of fetal well-being. Reported decrease or absence of fetal movement in the last 24 hours may be the first indication of fetal distress. – Use of potentially harmful substances: Indicate a need to be especially vigilant for signs of toxicity, rapid or slowed labor, and/or fetal distress. – Food and fluids: If the woman has not eaten or taken fluids in the last 8 hours, the skilled provider needs to be vigilant for signs of dehydration, exhaustion, and ketosis, which can interfere with the normal progress of labor.
Present pregnancy and labor/childbirth (PPC only)	• Helps guide further assessment and individualization of care, health messages, and counseling: – When birth occurred: Clinical significance of many findings and the care the woman needs vary depending on how much time has elapsed since the birth. – Birth setting and attendance: If a birth occurred at home and/or was not attended by a skilled provider, the postpartum care skilled provider should be alert for signs and symptoms indicating problems that may not have been identified or adequately addressed during childbirth (e.g., sepsis). – Present pregnancy: Reports of convulsions or vaginal bleeding during this pregnancy help the skilled provider develop and implement a care plan that will adequately address the woman's needs and prevent related complications during the postpartum period. – Present childbirth: Reports of cesarean section or other operative/Instrument-assisted birth, ruptured uterus, perineal tear or episiotomy, or convulsions during this childbirth will guide further assessment and care provision. This ensures the development and implementation of a care plan that will adequately address the woman's needs and prevent related complications during the postpartum period.

* Unless otherwise indicated, each element should be assessed in each part of the childbearing cycle.

Table 1-1. Rationales for Elements of Maternal History *(continued)*

ELEMENT*	RATIONALE
Present postpartum period (PPC only)	• Helps guide further assessment and care provision for problems or complications that may be ongoing: – Vaginal bleeding: Heavy or prolonged bleeding may indicate potentially life-threatening complications. A history of vaginal bleeding will guide further assessment to detect anemia or other problems. – Lochia: Abnormalities in the color, quality, or amount of lochia guide further assessment to detect other signs and symptoms of sepsis or subinvolution. – Bowel/bladder function: Reported bowel or bladder dysfunction will guide further assessment to detect vesico-vaginal or recto-vaginal fistulas, urinary tract infection, urinary retention, or constipation. – Breastfeeding: Breastfeeding problems require prompt attention so that the woman will not become discouraged and stop breastfeeding. – Emotional response to the baby: Emotional distress, psychotic symptoms, postpartum sadness (“blues”), or depression may interfere with the woman’s ability to practice good self-care and care for her baby, and may indicate a need for referral to support resources or mental health services. – Adjustment of the family to the baby: If the partner or other family members are not adjusting to the baby, the woman/family may need to receive additional counseling or be linked to support groups or other organizations that can help facilitate a more harmonious family dynamic.
Interim history (ANC and PPC only)	• A history of any problems or issues that have developed since the last visit helps the skilled provider evaluate the effectiveness of the woman’s plan of care, targeted assessment, and focused care provision, and screen for problems that may require treatment/referral. Findings also will guide the skilled provider in adjusting the care plan, if necessary, to better meet the woman’s needs.

* Unless otherwise indicated, each element should be assessed in each part of the childbearing cycle.

Table 1-2. Rationales for Elements of Newborn History

ELEMENT	RATIONALE
Personal information	• Used to do the following: – Identify the newborn and contact the woman. – Help establish rapport with the woman and show that the skilled provider thinks the baby is important. – Guide further assessment—the clinical significance of many findings varies depending on the age of the newborn. – Guide individualization of care, health messages, and counseling. – Guide development of the complication readiness plan.
Baby's birth	• Helps guide further assessment of the newborn. – Birth setting and attendance: If the birth occurred at home and/or was not attended by a skilled provider, the skilled provider should be alert for signs of conditions/complications that may not have been adequately addressed. – Maternal complications: The woman's report of rupture of membranes for more than 18 hours before birth, or a uterine infection or fever during labor or after birth, will guide further assessment and care provision. – Newborn complications: Report of complications that may have caused injury, such as shoulder dystocia, breech birth, large baby, or instrument assistance (e.g., vacuum extraction, forceps) indicates a need for further assessment for signs of birth injury. – Asphyxia at birth: Be alert for signs of respiratory distress/breathing difficulty. – Birthweight: Low or high birthweight will guide further assessment and care provision. Birthweight less than 2 kg is a life-threatening condition beyond the scope of basic care. Birthweight of 2.0–2.5 kg or greater than 4 kg is a special need. – Birth less than 24 months since the previous birth: Higher incidence of newborn mortality.
Present newborn period	• Helps skilled providers understand the current condition of the newborn and plan appropriate care, including counseling of the woman/caregiver. – Baby's feeding habits: Guides further assessment if intakes seem inadequate. – Breastfeeding: Guides further assessment, health messages, and counseling. – Passage of stool and urine: Knowledge of the frequency of urination of the newborn helps determine if the newborn is receiving sufficient milk, and guides counseling and health messages. The frequency and consistency of the newborn's stools will also help determine if feeding is adequate, or if s/he has a problem (e.g., diarrhea or blood in stool). – Congenital malformation: Indicates that the baby has a condition beyond the scope of basic care that does not require immediate attention. – Newborn immunizations: Guides further care provision.
Maternal medical history	• Gathering information about any maternal infections at the time of the birth will guide further assessment, individualization of care, health messages, and counseling. • Woman with diabetes: Indicates that a baby less than 3 days of age has a condition beyond the scope of basic care. • Woman with hepatitis B (HBV), HIV, syphilis, or tuberculosis (TB): Guides further assessment and care provision. • Woman's feelings toward baby: If the woman feels sad or overwhelmed, or feels negatively toward the baby, further assessment of the woman may be necessary.
Interim history	• Information about problems that may have developed since the last visit, and information about treatment or care of the newborn, will guide the skilled provider in planning and implementing care, including referral/transfer (if necessary). This information will also guide the counseling of the woman/caregiver. Any problems that would cause a woman/caregiver to bring her newborn for treatment must be addressed as a priority in order to gain or maintain the woman's trust, and to encourage the woman to continue to be vigilant in observations and care of her newborn.

Physical Examination

Physical examination helps the skilled provider detect and identify abnormal signs, special needs, and other potential problems that should be considered during further assessment and when planning and implementing care. A rationale for each element of the physical examination is described in **Table 1-3** (below) and **Table 1-4** (**page 1-20**).

Table 1-3. Rationales for Elements of Maternal Physical Examination

ELEMENT*	RATIONALE
Gait and movements	• Limping or unsteadiness may indicate prolonged lack of food or drink, use of drugs/medications/herbal treatments, injury, or another potentially serious condition (e.g., postpartum depression/psychosis). • During labor: Abnormal gait and movements may also indicate that the woman is in the middle of a contraction.
Behavior, vocalizations, and facial expression(s)	• Unresponsiveness, anxiousness, or culturally inappropriate behavior may indicate emotional distress, prolonged lack of food or drink, use of drugs/medications, or a potentially serious condition (e.g., postpartum depression/psychosis). • During labor: Abnormal findings may also indicate that the woman is in the middle of a contraction.
General hygiene	• Visible dirt may indicate the need for messages and counseling on hygiene/infection prevention. • A foul odor may indicate the need for messages and counseling about hygiene/infection prevention; the skilled provider should be alert for signs of a more serious problem (e.g., infection).
Skin	• Bruises or lesions may indicate gender violence, injury from another source, or another serious condition.
Conjunctiva	• Pallor may be a sign of anemia; further testing may be needed.
Breathing	• Labored or audible breathing may indicate breathing difficulty.
Blood pressure	• Elevated blood pressure may indicate pre-eclampsia/eclampsia; further assessment may be needed. • Low blood pressure may be a sign of shock.
Temperature	• Fever (38°C or more) indicates infection.
Pulse	• Rapid rate (110 beats per minute or more) may indicate dehydration, anxiousness, overexertion, or another, more serious problem (e.g., anemia, shock, infection, heart disease).
Breasts	• Gross abnormalities (e.g., skin puckering or scaliness, dimpling, irregular contours) may indicate cancer. • During the postpartum period: – Localized areas of redness, heat, or pain; pus/blood coming from the nipples; or red, warm, painful breasts may indicate infection (abscess or mastitis). – Swollen, hard, tense breasts may indicate engorgement. – Cracked/sore nipples may indicate breast or breastfeeding problems. – Inverted nipples may indicate the need for breastfeeding support.

* Unless otherwise indicated, each element should be assessed in each part of the childbearing cycle.

Table 1-3. Rationales for Elements of Maternal Physical Examination *(continued)*

ELEMENT*	RATIONALE
Abdominal examination	• Scar may indicate previous surgery or trauma. • Fundal height can help calculate gestational age (after 12 weeks) and determine fetal position (after 36 weeks). • Palpation of uterus for fetal parts (after 24 weeks) and movement (after 22 weeks) and listening to fetal heart tones (after 20 weeks) provide evidence of fetal life. • Helps identify size-date discrepancy and lack of fetal heart tones, as well as malpresentation of the fetus (after 36 weeks). • During labor and childbirth: – Monitoring fetal descent helps evaluate progress of labor. – Uterus that does not relax between contractions indicates a need for further assessment. • During the postpartum period: – The following may indicate infection: abdominal incision (sutures) that is draining pus/discharge or has edges that are red or pulled apart; or severely tender uterus. – Soft or boggy uterus, or uterus that has increased or not decreased since the last visit, may indicate subinvolution. – Palpable bladder may indicate urinary retention.
Genital examination	• Sores, ulcers, warts, and painful labia may indicate an STI. • Foul-smelling vaginal discharge may indicate infection. • Leakage of urine/feces from the vagina may indicate a fistula. • During pregnancy: bleeding may indicate hemorrhage. • During the postpartum period: – The following may indicate infection: perineal incision (sutures) that is draining pus/discharge or has edges that are red or pulled apart; or foul-smelling lochia. – Incision (sutures) from perineal tear or episiotomy indicates a need for additional care. – Heavy bleeding may indicate hemorrhage. – Abnormal color or amount of lochia may indicate hemorrhage and/or subinvolution. – Swelling, edema, or severely tender perineum indicate a need for additional care.
Cervical examination (CBC only)	• Presentation of the fetus can be confirmed. • Degree of cervical dilation helps determine the stage, phase, and progress of labor. • Rupture of membranes for more than 18 hours before birth increases the risk of infection. • Degree of molding of the fetal head may indicate obstructed labor. • Red/greenish/brownish and/or foul-smelling amniotic fluid may indicate the presence of meconium or signs of infection. • Palpation of cord indicates cord prolapse.
Leg examination (PPC only)	• Pain in the calf when the foot is forcibly dorsiflexed may indicate deep vein thrombosis.

* Unless otherwise indicated, each element should be assessed in each part of the childbearing cycle.

Table 1-4. Rationales for Elements of Newborn Physical Examination/Observation

ELEMENT	RATIONALE
Weight	• Birthweight less than 2.5 kg (less than 2.0 kg in some populations) or more than 4 kg indicates a special need and a potentially serious condition.
Temperature	• Fever (more than 37.5°C axillary) or hypothermia (less than 36.5°C axillary) may indicate infection, environmental danger, or another serious condition.
Chest/Respirations	• Abnormal respirations, grunting on expiration, gasping, indrawing, or irregular/asymmetrical movements of the chest wall may indicate respiratory distress, other breathing problems, or another serious condition.
Color	• Central cyanosis may indicate respiratory distress. • Jaundice/yellowness may indicate sepsis, blood incompatibility, or another serious condition. • Pallor may indicate anemia, internal bleeding, a blood abnormality, or another serious condition (e.g., a heart defect).
Movements and posture	• Convulsions or extreme jitteriness may indicate central nervous system damage or another serious condition (e.g., hypoglycemia). • Spasms and/or extreme hyperextension may indicate tetanus.
Level of alertness and muscle tone	• Floppiness or lethargy may indicate damage to central nervous system, sepsis, drug withdrawal, hypoglycemia, or another serious condition. • Irregular/asymmetric movements may indicate birth injury or another, more serious condition.
Skin	• Bruises may indicate birth injury or another, more serious condition (e.g., blood clotting disorder). • Lesions may indicate congenital syphilis or another serious condition. • Cuts and abrasions may indicate birth injury.
Head	• Disproportionate size, bulging anterior fontanelle, or abnormally wide sutures may indicate hydrocephalus, a congenital malformation, or another serious condition.
Face and mouth	• Irregular/asymmetrical features (e.g., cleft lip or palate), facial movements, or paralysis may indicate a congenital malformation or another serious condition.
Eyes	• Redness, swelling, or pus may indicate infection.
Abdomen	• Distention may indicate infection or bowel obstruction. • Abnormal protrusions not covered by skin (e.g., omphalocele/gastroschisis) may indicate a congenital malformation.
Cord stump/ umbilicus	• Bleeding may indicate a need to retie the cord or another, more serious condition. • Redness, swelling, or pus may indicate infection. • Protrusions at the base may indicate an umbilical hernia or another, more serious condition (e.g., omphalocele/gastroschisis).
External genitalia and anus	• Irregularity of genitalia or imperforate anus may indicate a congenital malformation.
Back	• Dent or opening over the spine may indicate a serious malformation (e.g., spina bifida).
Limbs	• Swelling over a bone or joint, or irregular/asymmetrical movements may indicate birth injury. • Birth defects (e.g., club foot) may indicate a serious condition.
Breastfeeding	• Problems with holding, positioning, or newborn attaching/suckling may indicate a lack of technique (and a need for breastfeeding support), breast problems (e.g., sore/cracked nipples), or another, more serious condition (e.g., the inability of the baby to suck).
Mother-baby bonding	• Problems with physical contact, "communication," or empathy between the woman and newborn may indicate postpartum sadness ("blues") or another, more serious condition (e.g., postpartum depression/psychosis).

Maternal Testing

Testing reveals abnormalities that may not have been apparent during history taking or physical examination. A rationale for each element of testing is described in **Table 1-5** (below).

Table 1-5. Rationales for Elements of Maternal Testing

ELEMENT*	RATIONALE
Hemoglobin levels (ANC only; CBC and PPC as indicated)	Used to screen for anemia. This test should be repeated if the woman presents with signs or symptoms of anemia.
Rapid Plasma Reagent (RPR) or VDRL (ANC and CBC only)	Used to test for syphilis, a special need.
HIV	Used to detect the presence of HIV antibodies, which indicate HIV infection. HIV testing should be done as early as possible during the pregnancy, but any woman can benefit from learning her HIV status. Normally, combined with pretest and post-test counseling. A positive (reactive) HIV test allows the woman to receive additional care to keep her as healthy as possible, prevent transmission to her baby and partner, and help her make decisions about the future. The skilled provider can counsel HIV-negative women on ways to stay uninfected.
Blood group, Rh (ANC and CBC only)	Used to determine blood group or Rh so that blood donors can be identified as part of the complication readiness plan (in case transfusion is needed), as well as to identify Rh-negative women who could benefit from injection of anti-D immune globulin.
Urine for glucose (ANC only in areas/ populations where there is a high prevalence of diabetes)	Used to test for diabetes.
Other tests for STIs in accordance with local guidelines	Used to ensure adequate identification and treatment of STIs.

* Unless otherwise indicated, each element should be assessed in each part of the childbearing cycle.

Basic Care Provision

General Elements

If all findings of the assessment are normal, the woman or newborn is a suitable candidate for basic care provision. All of the components of basic care provision should be addressed during the first visit, if possible, and reinforced or addressed as needed during subsequent visits. During this part of the basic care visit, the skilled provider helps support and maintain a normal childbearing cycle and newborn period by doing the following:

- Helping to prevent conditions that can adversely affect the woman, fetus, or newborn through preventive measures
- Assisting the woman and her family in preparing for normal birth and possible complications
- Empowering the woman with information that promotes her overall health and protects her life, as well as the health and life of her baby
- Continuing to build a trusting and respectful relationship with the woman and her companion/partner/ family

A rationale for each element of basic care provision is described in **Table 1-6** (**page 1-22**) and **Table 1-7** (**page 1-24**).

Table 1-6. Rationales for Elements of Maternal Basic Care Provision

ELEMENT[1]	RATIONALE
Birth preparedness and complication readiness planning	• The birth preparedness plan helps ensure that all arrangements for a clean and safe birth, including the presence of a skilled provider, are made well in advance of the estimated date of childbirth. • Because all women are at risk of complications during the childbearing cycle, and most complications cannot be predicted, the woman and her family should be prepared to respond appropriately in an emergency situation. Such preparation can help prevent life-threatening delays in recognizing and responding to complications. In some cases, the time required to make arrangements—which could have been made before the emergency—may easily define the line between survival and death for woman and child.
Breastfeeding and breast care	• Breastfeeding has many health benefits for the newborn and promotes bonding between the woman and baby. The woman should learn about the importance of breastfeeding during the antenatal period so that she will expect—and demand—that her baby be put to the breast immediately after birth. Many breastfeeding problems can be prevented if the woman understands the basic principles of milk production, is skilled at effective breastfeeding techniques and practices, and practices simple self-care measures.
Counseling and testing for HIV	• Counseling and testing for HIV is offered to all women. – Women who test negative for HIV can learn how to remain uninfected. – A woman who tests positive for HIV can take appropriate measures to optimize her health, make informed decisions about the future, help protect her partner, and decrease the risk of transmission to her baby.
Family planning	• During the childbearing cycle, women and their families think more and become more aware of the demands of a growing family—making this a good time to discuss family planning. Birth spacing and choosing the most appropriate family planning method for the woman offer many health benefits for her, her baby, and her partner. Family planning is a key component of basic postpartum care because a woman's fertility will likely return by the end of the postpartum period if she is not breastfeeding exclusively.
Health messages and counseling	• Use of potentially harmful substances: Use of alcohol, tobacco, and certain drugs/medications during pregnancy can cause fetal malformation, central nervous system problems, and intrauterine growth restriction; during breastfeeding, it can decrease milk production and cause problems in the newborn. • Hygiene/infection prevention: Good hygiene and infection prevention practices (e.g., handwashing) can help the woman protect herself and her baby from local and systemic infection. • Rest and activity: Women need additional rest throughout the childbearing cycle because of the high energy that pregnancy, postpartum healing/recovery, and breastmilk production require. There also needs to be a balance among the woman's level of activity, daily workload, and dietary intake. • Sexual relations and safer sex: The woman needs to know how sexual relations may fit into the childbearing cycle. She also needs to know how to protect herself from STIs, which can have many damaging effects on the woman and child, especially when acquired during pregnancy. • Consider the following during postpartum care: – Newborn care: Information on newborn care may help build the confidence of the first-time mother and help ensure that the newborn gets the care that s/he needs to remain healthy. – Woman-newborn and family relationships: As the woman and her family adjust their pattern of living to meet the needs of a new and very dependent life, health messages and counseling can help alleviate stress, facilitate bonding, and anticipate and address problems that may develop.

[1] Elements are listed in alphabetical order.

Table 1-6. Rationales for Elements of Maternal Basic Care Provision *(continued)*

ELEMENT[1]	RATIONALE
Immunization and other preventive measures	• Tetanus toxoid immunization: TT is a safe and stable vaccine that, when given according to the recommended schedule, protects both woman and child against tetanus. • Iron/folate supplementation: Daily iron/folate supplements have been shown to reduce incidence of anemia, which can lead to maternal and fetal morbidity and mortality. • Malaria[2] prevention: Intermittent preventive treatment (IPT) has been shown to reduce the incidence of malaria in pregnancy. Insecticide-treated (bed)nets (ITNs), when used as directed by the skilled provider, can help protect against malaria by killing and repelling mosquitoes that carry the infection. • Hookworm infection[2] prevention: Presumptive treatment prevents hookworm infection, a major cause of iron-deficiency anemia. • Vitamin A[2] supplementation: After the first 60 days after conception, vitamin A supplements can help reduce the incidence of maternal mortality and night blindness. • Iodine[2] supplementation: Iodine deficiency is associated with an increase in newborn deaths, cognitive and motor performance impairment, and perinatal morbidity and mortality.
Nutritional support	• Health messages and counseling should be provided on the importance of sufficient caloric, protein, and nutrient intake (based on the woman's individual needs). A pregnant woman requires an additional 200 calories per day (e.g., 12 groundnuts or 1 serving of maize porridge) or more if her nonpregnant weight was low. A lactating woman requires an additional 500 calories per day. • The consequences of malnutrition for the woman include increased infections and anemia, compromised immune function, weakness, lethargy, and lower productivity. For the fetus/baby, maternal malnutrition may result in problems such as an increased risk of perinatal mortality, intrauterine growth restriction, preterm birth, low birthweight, compromised immune function, birth defects, and delays in mental and physical development.

[1] Elements are listed in alphabetical order.
[2] In areas/populations where there is a high prevalence of the condition or deficiency

Table 1-7. Rationales for Elements of Newborn Basic Care Provision

ELEMENT*	RATIONALE
Breastfeeding	• Breastfeeding provides the newborn with the ideal nutrition, provides antibodies to protect the baby from infection, promotes bonding between the newborn and woman, and provides protection against allergies even later in life.
Complication readiness	• Because all babies are at risk of complications, and most complications cannot be predicted, the woman and her family should be prepared to respond appropriately in an emergency situation. The woman and her family must be familiar with danger signs that indicate a problem, as well as where to find help. Such preparation can help prevent life-threatening delays in recognizing and responding to complications. In some cases, the time required to make decisions and arrangements—which could have been made prior to the emergency—may easily define the line between survival and death.
Cord care	• Keeping the cord clean and dry helps protect the newborn from tetanus. Application of alcohol, tinctures, powders, ointments, and other substances to the cord stump may increase the risk of infection.
Hygiene	• Almost one quarter of newborn deaths are due to infection. Because handwashing is the most effective means of preventing infection, each person who handles the newborn must wash her/his hands before and after handling the newborn.
Immunizations	• Administering the following vaccines protects the newborn against certain diseases: – BCG: tuberculosis – Hepatitis-1 and Hepatitis-2: hepatitis B virus – Oral polio-0 and Oral polio-1: poliomyelitis – DPT-1: diphtheria, whooping cough (pertussis), and tetanus
Maintaining warmth	• Hypothermia requires the baby's body to expend energy to keep warm, rather than to grow, and adds stress to the fragile organ systems. Hypothermia and hyperthermia (fever) can be signs of sepsis.
Sleep and other needs/behaviors	• Understanding the normal sleeping, eating, and crying behaviors of the newborn helps the woman avoid becoming needlessly anxious.
Washing and bathing	• If the baby is not dried quickly and thoroughly and dressed warmly after a bath, the evaporation of water causes a decrease in body temperature. The baby's first bath should be delayed until s/he is at least 6 hours old—preferably 24 hours old—to protect her/him from hypothermia.

* Elements are listed in alphabetical order.

Elements Unique to Labor/Childbirth

Although findings from the quick check and basic assessment may be normal, the condition of the woman or baby can change very suddenly during labor, childbirth, and the immediate postpartum/newborn period. Therefore, ongoing monitoring of the condition of the woman and baby at a frequency appropriate to the stage and phase of labor is essential to ensuring the continued well-being of the woman and baby, as well as early detection of any abnormalities. (**Note:** From the 1st stage/active phase of labor until childbirth, assessment of progress of labor is facilitated by use of a partograph. See **Table 1-8** [**page 1-25**] for more details.)

Table 1-8. Rationales for Ongoing Assessment during the Four Stages of Labor

ELEMENT	RATIONALE
Maternal blood pressure	Pre-eclampsia/eclampsia and shock
Maternal temperature	Fever (38°C or more) and infection
Maternal pulse	Maternal distress and shock
Fetal heart tones	Abnormal fetal heart tones or lack of fetal heart tones (which may indicate fetal distress)
Membranes and amniotic fluid	Rupture of membranes for more than 18 hours before birth, meconium (which may indicate fetal distress), and infection
Frequency and duration of contractions	Unsatisfactory progress of labor
Dilation of the cervix	Unsatisfactory progress of labor
Presentation of the fetus	Malpresentation
Fetal descent	Unsatisfactory progress of labor
Uterus	Postpartum hemorrhage
Vaginal secretions or bleeding	Hemorrhage
Bladder	Urinary retention
Maternal ability to cope/response to labor and childbirth	Problems coping and extreme pain
Newborn respiration	Respiratory distress
Newborn temperature	Fever (more than 37.5°C axillary), which may indicate infection, or hypothermia (less than 36.5°C axillary)
Newborn color	Central cyanosis (which may indicate respiratory distress)

Continuous emotional and physical support during labor is associated with shorter labor, the use of less medication (including epidural analgesia), and fewer operative deliveries. Even when progressing normally, labor and childbirth can be stressful and exhausting for the woman. Therefore, it is important that the skilled provider, birth companion, and healthcare facility staff remain encouraging and supportive throughout, considering the woman's emotional well-being, comfort, and desires, as well as her physical requirements. As labor progresses, an increase in the level of physical and emotional support provided may be necessary, as the growing intensity of labor places greater demands on the woman. See **Table 1-9** (**page 1-26**) for more details.

Table 1-9. Rationales for Ongoing Supportive Care Measures during the Four Stages of Labor

ELEMENT	RATIONALE
Attendance/communication	• Continuous care by the same skilled provider throughout the childbirth event, rather than several different skilled providers, is associated with better outcomes for the woman and baby. The presence of a birth companion throughout labor has been associated with decreased need for pain medication, cesarean sections and other operative deliveries, amniotomy, and other medical interventions. Facilitating effective communication among all present—focused on listening and answering questions—helps create an environment in which the woman feels safe, secure, and of value.
Rest and activity/positions	• Facilitating a balance between activity and rest will help the woman be rested as she enters the 2nd stage of labor, when she needs the most energy and strength. Allowing the woman to choose the position that is most comfortable for her is an important part of culturally sensitive, woman-friendly care. Nonsupine positions have many advantages over supine or dorsal lithotomy positions.
Comfort measures	• Physical and emotional comfort measures (e.g., massage, cold cloth on the forehead, relaxation techniques) help the woman cope with labor and are associated with: – Reduced need for analgesia – Fewer operative vaginal deliveries – Less incidence of postpartum depression at 6 weeks
Nutrition	• Current literature supports allowing women to eat and drink as desired in normal labor. (In women deprived of food and fluid, the amount of ketones in the blood increases, while the amount of essential amino acids decreases.) Higher intake of fluids helps prevent dehydration and is associated with shorter duration of labor and reduced need for augmentation of labor with oxytocin infusion.
Elimination	• Encouraging the woman to empty her bladder at least every 2 hours and her bowels as needed helps prevent obstruction of labor and inefficient uterine activity. Enemas are no longer recommended as they are uncomfortable, can damage the bowel, and do not shorten labor or decrease newborn and perineal wound infection. Routine catheterization should be avoided as it may increase the incidence of infection.
Hygiene/infection prevention	• Infection prevention practices during labor and childbirth help protect the woman and newborn from sepsis and transmission of HIV, hepatitis B, and other infectious diseases.
Mother-baby bonding (4th stage of labor)	• Bonding between the woman and baby is a crucial early connection that fosters maternal nurturing, care, and protection of the baby; can reduce risk of infection in the baby; can help maintain the baby's warmth; and promotes successful breastfeeding.

Key Actions during the Four Stages of Labor

During each stage/phase of labor, the skilled provider performs specific key actions appropriate to the stage/phase of labor while also performing the ongoing assessment and supportive care measures listed above.

1st Stage/Active Phase of Labor

Prolonged labor is a leading cause of death among pregnant women and newborn babies in the developing world. It is most likely to occur if a woman's pelvis is not large enough to accommodate her baby's head or if a woman's uterus does not contract sufficiently. If her labor does not progress normally, the woman may experience serious complications such as obstructed labor, dehydration, exhaustion, or rupture of the uterus. Prolonged labor may also contribute to maternal infection and hemorrhage, as well as to newborn infection.

The partograph (**Textbox 1-4,** below)—a simple chart for recording information about the progress of labor and the condition of the woman and her baby during labor—gives objective data on which to base clinical decisions during the 1st stage/active phase of labor and enhances communication among members of the team of skilled providers who are caring for the woman, so that decisions can be made in a timely manner. Skilled management of labor using a partograph is key to the appropriate prevention and management of prolonged labor and its complications. The World Health Organization (WHO) promotes use of the partograph to improve the management of labor and support decision-making regarding the need for interventions. When used appropriately, the partograph helps skilled providers identify prolonged labor and determine when to take appropriate actions.

Textbox 1-4. The Partograph: An Aid in Clinical Decision-Making

The partograph helps the skilled provider make decisions about a woman's care by furnishing a visual representation of the conditions of both woman and fetus. The information given helps the skilled provider determine whether and when to intervene if labor is not progressing normally. Each time the skilled provider plots data on the graph, s/he should consider, "Is this what should be happening at this point?"

- If the answer is yes, the skilled provider should then consider what s/he expects to happen in the next 2–4 hours if labor progresses normally. This sets the standard to which the progress of the woman's labor as well as the status of the fetus should be compared.
- If the answer is no, the skilled provider must consider what to do to address the condition of the woman or fetus. For example, if cervical dilation is plotted to the right of the "alert line," s/he knows that progress is abnormal and the woman will require additional care and possibly management or urgent referral/transfer for complications.

Used in this way, the partograph helps to ensure that women and fetuses are carefully monitored during labor, unnecessary interventions are avoided, and complications are recognized and responded to in a timely manner.

2nd and 3rd Stages of Labor

The 2nd stage of labor begins with complete cervical dilation and ends with the birth of the baby. Steady descent of the fetus during the 2nd stage is the most accurate indicator of normal progress. During this period, support of the woman's efforts and practical assistance are critical. The 3rd stage of labor begins with the birth of the baby and ends with the delivery of the placenta, a process the skilled provider actively manages to reduce the amount of blood the woman loses. A rationale for each key action for the woman and baby during the 2nd and 3rd stages of labor is described in **Table 1-10** (**page 1-28**).

Table 1-10. Rationales for Key Actions for the Woman and Baby during the 2nd and 3rd Stages of Labor

ELEMENT	RATIONALE
Assisting in pushing	• The woman is encouraged to push when she feels the urge and to rest between contractions. She is not encouraged to push when she does not feel the urge because this does not decrease the length of the 2nd stage and may in fact contribute to maternal exhaustion and discouragement. The skilled provider advises the woman on the amount of effort to put forth and helps the woman control pushing while the baby's head is coming to help prevent tearing.
Facilitating the position of choice	• It is important to allow the woman to choose a position that is comfortable for her. However, nonsupine (upright or lateral) positions have many advantages over supine or dorsal lithotomy positions and should be encouraged. These positions are associated with the following: – Shorter 2nd stage of labor – Fewer instrument-assisted births – Fewer episiotomies – Fewer reports of severe pain – Fewer abnormal fetal heart rate patterns
Assisting in vaginal birth	• Hand movements used in assisting in vaginal birth facilitate smooth passage of the baby through the birth canal, help protect the woman from tears, and protect the baby from trauma and oxygen deprivation. Controlled birth of the head can help prevent tearing and the need for episiotomy. Episiotomies are not performed routinely because they have been associated with higher incidence of tears in the anus and rectum, increased postpartum perineal pain, and increased risk of rectal incontinence.
Initiating immediate newborn care	• Thoroughly drying and covering the baby with a dry cloth and placing the baby on the woman's abdomen help prevent heat loss. Heat loss results in additional oxygen requirements in the newborn and stress on vital organs. • Immediate assessment of breathing helps ensure that the baby's oxygen requirements are met. • Clamping and cutting the cord helps prevent blood loss, and standard infection prevention measures help prevent cord infection, which can be fatal. • Wiping the newborn's eyes with a clean swab or cloth removes transient organisms that may harm the baby's eyes.
Active management of the 3rd stage of labor	• Because of the risk of postpartum hemorrhage, delivery of the placenta and membranes is potentially the most hazardous part of childbirth. Several definitive studies have found that women who received active management had a shorter 3rd stage of labor and reduced need for blood transfusion and uterotonic drugs. – Giving uterotonic drugs within 1 minute of the birth of the baby helps the uterus contract and the placenta separate. – Controlled cord traction with supra-pubic countertraction during a contraction helps the placenta descend. – Uterine massage helps the uterus stay contracted. – Inspection of the placenta and membranes for completeness helps assess for possible hemorrhage. – Examination of the vagina and perineum for tears helps prevent further bleeding.

4th Stage of Labor

During the 4th stage of labor (the first 2 hours after delivery of the placenta), the skilled provider facilitates mother-baby bonding, promotes breastfeeding, and performs other tasks to assist the woman in recovering from labor, and the newborn in adjusting to life outside the uterus. A rationale for each key action for the woman and baby during the 4th stage of labor is described in **Table 1-11** (**page 1-29**).

Table 1-11. Rationales for Key Actions for the Woman and Baby during the 4th Stage of Labor

ELEMENT	RATIONALE	
	WOMAN	**NEWBORN**
Close monitoring of vital signs, vaginal bleeding, and uterine fundus	• This detects hemorrhage to allow intervention in a timely fashion.	
Helping to initiate early and exclusive breastfeeding	• Early breastfeeding helps stimulate the woman's uterus to contract, decreasing blood loss.	• Early breastfeeding helps establish a successful pattern for breastfeeding, prevent newborn hypothermia and hypoglycemia, provide energy that the baby needs for adjusting to life outside the uterus, and promote mother-baby bonding.
Reviewing the complication readiness plan	• This helps ensure that the woman and her family are prepared for a possible emergency.	
Providing health messages and counseling	• These should be limited to the essentials (below) and the woman's questions and concerns as the woman may be focused on her baby or too exhausted or excited to absorb the new information. – Hygiene: Good hygiene practices, especially perineal hygiene and newborn care, prevent local and systemic infection. – Newborn warmth: Prevents newborn hypothermia. – Uterine massage: Helps maintain firmness and prevent postpartum hemorrhage.	
Attaching an identification label (newborn)		• This measure ensures correct identification of the baby by facility staff and family.
Providing eye treatment (newborn)		• Placing an antimicrobial in the eyes of the newborn can kill organisms introduced during labor that can cause serious infection.
Conducting a complete initial physical examination (newborn)		• See **Table 1-4** (**page 1-20**).

ADDITIONAL CARE PROVISION

Basic care also includes additional care, as needed, for women with normal pregnancies who also have common discomforts and special needs, as well as initial care for women and newborn babies with life-threatening complications.

Common Discomforts/Concerns

Common discomforts/concerns are normal changes, signs, and physical and emotional behaviors that may occur during the childbearing cycle and newborn period. Examples of common maternal discomforts include back pain, stretch marks, and nausea or vomiting. Some examples of common concerns during the newborn period are diaper/napkin rash, misshapen head (molding), and swollen or red eyelids. Although common discomforts/concerns do not usually pose a threat to the health of the woman or newborn, the woman or newborn may require care in addition to the core components of basic care. Once the skilled provider has ruled out more serious possible causes of the woman's or newborn's symptoms, the woman should be provided with reassurance and practical guidance, if available, on how to address the discomforts/concerns. She should also be advised on key alert signs that may indicate a more serious problem. **Chapter 9** (**page 3-1**) provides guidance on additional care for women and babies with common discomforts/concerns.

Special Needs

Some women and babies have a condition that requires a specific course of management or have abnormal signs and symptoms that require further assessment. Others have social or personal factors that should be taken into consideration when planning and implementing care. Still others require additional preventive measures because they live in an area endemic for certain diseases or deficiencies. Women and newborn babies with special needs require care in addition to the core components of basic care. **Chapter 10** (**page 3-35**) provides guidance on additional care for women and newborn babies with special needs. **Table 1-12** (**page 1-31**) describes the special needs covered in this manual and the possible effects on women and babies.

Table 1-12. Rationales for Additional Care for Maternal and Fetal/Newborn Special Needs

FACTOR/CAUSE	DESCRIPTION/ BACKGROUND INFORMATION	POSSIBLE EFFECTS ON WOMAN	POSSIBLE EFFECTS ON FETUS/NEWBORN
Adolescence (19 years of age and under)	In many cultures, the adolescent woman is considered an "adult," is sometimes married, and may be eager to become pregnant—even at a very early age—to prove her fertility and gain the respect of her family, in-laws, or the community. In other cultures, however, pregnancy during adolescence is clearly discouraged. In either case, the pregnant adolescent may be living with many barriers to care, as well as circumstances that may pose a threat to her health and survival and the outcome of the pregnancy.	• The adolescent woman may be experiencing powerlessness in the following ways: – Lack of access to basic healthcare and antenatal care services – Lack of a support system – Lack of resources (e.g., funding, transportation) – Limited ability to provide basic self-care or newborn care • Emotional trauma (e.g., feelings of fear, shame, and guilt) • Threat of gender violence • Exposure to STIs	
Violence against women	Although freedom from violence is a basic human right, there is a general tolerance of abuse in many societies. From 10 to 50% of women around the world are estimated to have suffered physical violence at some time during their lives. Many pregnant women face such violence, which threatens their health and survival as well as the outcome of the pregnancy. Pregnancy may be a precipitating factor of violence, which becomes "punishment" for becoming pregnant. Violence in the form of rape may result in pregnancy.	• Women who suffer from gender violence at the hands of a partner, family member, or another person may be living with the following: – The ongoing threat of injury and death – Powerlessness and emotional trauma (e.g., feelings of fear, shame, and guilt) – Exposure to STIs – Lack of access to basic healthcare and antenatal care services – Lack of a support system – Impaired ability to provide basic self-care or newborn care • Violence may contribute to pregnancy loss or other problems that can complicate labor and childbirth.	

Table 1-12. Rationales for Additional Care for Maternal and Fetal/Newborn Special Needs *(continued)*

FACTOR/CAUSE	DESCRIPTION/ BACKGROUND INFORMATION	POSSIBLE EFFECTS ON WOMAN	POSSIBLE EFFECTS ON FETUS/NEWBORN
Poor obstetric history	A history of complications during the childbearing cycle may indicate an underlying medical or obstetric condition that may also cause a problem during the current pregnancy. The following are previous complications that may require additional care: • Antenatal convulsions • Cesarean section or other uterine surgery • 3rd or 4th degree perineal tears • Three or more spontaneous abortions • Fetal or newborn complications • Postpartum hemorrhage	• Anxiety; need for reassurance • Similar problems during this childbearing cycle depending on underlying cause (e.g., complications due to elevated blood pressure) • Possibly a need for care with specialist or at higher level facility during this childbearing cycle (e.g., previous cesarean section)	• Similar problems may occur during this childbearing cycle depending on underlying cause (e.g., previous fetal complications due to pre-eclampsia/eclampsia)
Female genital cutting (FGC)	FGC is a common practice in some cultures.	• Some types of FGC may do the following: – Obstruct the vaginal opening – Cause large keloids or dermoid cysts – Cause infected mucosal ulcers or cysts	
Anemia	Anemia results when the hemoglobin level falls below 11 g/dL. The main cause is iron/folate deficiency. When a woman is pregnant or breastfeeding, her body requires more iron than usual. For women in developing countries, it may be especially difficult to meet this increased need for iron because their diets are often lacking in iron-rich foods. In addition, anemia is often aggravated by parasites (e.g., hookworm) and, in endemic areas, malaria.	• Higher risk of disease and infection • Shock • Cardiac failure	• Low birthweight • Infections • Increased risk of death

Table 1-12. Rationales for Additional Care for Maternal and Fetal/Newborn Special Needs *(continued)*

FACTOR/CAUSE	DESCRIPTION/ BACKGROUND INFORMATION	POSSIBLE EFFECTS ON WOMAN	POSSIBLE EFFECTS ON FETUS/NEWBORN
HIV	The human immunodeficiency virus (HIV) causes AIDS. The virus weakens the immune system, making the infected person susceptible to opportunistic infections. HIV can be accelerated by pregnancy, and HIV can contribute to maternal complications. In addition, HIV can be transmitted from the woman to her baby during pregnancy and childbirth, and while breastfeeding. More than 90% of pediatric HIV/AIDS cases are caused by mother-to-child transmission of HIV.	• Risk of opportunistic infections such as tuberculosis or oral or vaginal candidiasis • High risk of other coexistent conditions and postpartum infections • Increased risk of depression, anxiety, and other emotional difficulties • Increased risk of abandonment and abuse • Lack of social support because of stigma and discrimination surrounding HIV infection	• Increased risk of perinatal mortality • HIV infection (while in the womb, during birth, and while breastfeeding) – Infection increases risk of perinatal mortality, preterm birth, opportunistic infections, low birthweight, intrauterine growth restriction, and vitamin deficiencies
HBV	Hepatitis B virus (HBV) is a virus that can be transmitted sexually, through needles, or by sharing toothbrushes and razors with an infected person. HBV may be the cause of 80% of liver cancer in the world. A woman with hepatitis B can transmit the virus to the fetus.	• Chronic hepatitis • Cirrhosis • Liver cancer	• Infection with HBV, possibly leading to chronic hepatitis, cirrhosis, or liver cancer
Syphilis	Syphilis is an STI caused by the spirochete *Treponema pallidum*. If left untreated during pregnancy, it can be transmitted to the fetus through the placenta.	• Soft tissue tumors • Lesions in the blood vessels, heart, spinal cord, and brain • Increased risk of spontaneous abortion	• Congenital syphilis • Spontaneous abortion • Stillbirth • Increased risk of mortality
Tuberculosis (TB)	TB is a bacterial infection that can be transmitted to the fetus. It is associated with HIV in many parts of the world.	• Infection in the lungs, central nervous system, or organs • Generalized systemic infection	• Infection in the newborn, resulting in failure to thrive or death
Malaria	Malaria is a parasitic infection transmitted by mosquitoes. As many as 300 to 500 million cases of malaria, and 1 million deaths from malaria, occur each year. Forty percent of the world's population is at risk for malaria. Prevention, early detection, and treatment of malaria in the antenatal and postpartum periods can help to reduce both the number of deaths and the death rates of women and children. Malaria during pregnancy affects the health of both newborn and woman. In areas of stable transmission, malaria infection in women is often asymptomatic; the harmful consequences to the woman and newborn may occur before the disease is recognized.	• Spontaneous abortion • Severe anemia • Renal failure • Pulmonary edema • High fever	• Stillbirth • Low birthweight • Congenital malaria

Table 1-12. Rationales for Additional Care for Maternal and Fetal/Newborn Special Needs *(continued)*

FACTOR/CAUSE	DESCRIPTION/ BACKGROUND INFORMATION	POSSIBLE EFFECTS ON WOMAN	POSSIBLE EFFECTS ON FETUS/NEWBORN
Hookworm infection	Hookworm is a parasitic infection transmitted through the skin from soil that contains hookworm larvae. Hookworm is an intestinal parasite that infects about 1 billion people, or one fifth of the world's population. Although hookworm is rarely found in dry climates, hookworm can infest up to 80% of the population in some tropical and subtropical areas.	• Anemia • Protein deficiency	
Vitamin A deficiency	During pregnancy, vitamin A is needed in increased amounts to support maternal reproductive processes, including fetal growth and development. Vitamin A deficiency is a major public health problem in Africa, Southeast Asia, and the Western Pacific, and is the most common cause of preventable childhood blindness. Vitamin A is needed in increased amounts during pregnancy and while breastfeeding to support maternal reproductive processes and prevent deficiency. Vitamin A deficiency in the woman results in reduced transfer of vitamin A to the fetus. Although a broad, life-cycle approach to vitamin A deficiency by fortifying food and improving diet may be most appropriate, individual supplementation (capsules and dietary) may be needed. Because high doses of vitamin A should be avoided in pregnant women, the safest time to build up vitamin A reserves in women of reproductive age is during the first 6 weeks after childbirth (i.e., before fertility returns).	• Night blindness • Possible increased risk of mortality	• Reduced transfer of vitamin A to the fetus • Possible increased risk of mother-to-child transmission of HIV (if the woman is infected)
Iodine deficiency	This deficiency results from a lack of iodine in the diet. Iodine deficiency is a major risk factor for both physical and mental developmental disorders of an estimated 1.6 billion people living in iodine-deficient environments. Ideally, nationwide iodization would reduce deficiency. Fortifying salt and improving diet may be most appropriate. In the meantime, individual supplementation may be needed.	• Goiter • During pregnancy: mental retardation or brain damage of the baby, as well as stillbirth, spontaneous abortions, and increased neonatal mortality	• Mental retardation • Brain damage • Stillbirth • Spontaneous abortion • Increased risk of newborn mortality
Diabetes	Diabetes occurs when the pancreas does not produce enough insulin, a hormone that helps the body store and use the sugar and fat from food. Diabetes in the woman can be chronic or result from pregnancy.	• Can result in increased risk of maternal morbidity and mortality when uncontrolled • Larger size of babies born to diabetic women may contribute to cephalopelvic disproportion and obstructed labor	• High risk of developing low blood sugar during first 3 days of life. Low blood sugar can result in damage to major organ systems, convulsions, unconsciousness, and even death • Increased risk (three times higher) of having a congenital malformation • Increased risk of jaundice

Table 1-12. Rationales for Additional Care for Maternal and Fetal/Newborn Special Needs *(continued)*

FACTOR/CAUSE	DESCRIPTION/ BACKGROUND INFORMATION	POSSIBLE EFFECTS ON WOMAN	POSSIBLE EFFECTS ON FETUS/NEWBORN
Size-date discrepancy	Fundal height/uterine size is larger or smaller than expected for gestational age. It may indicate incorrect dates, large fetus, intrauterine growth restriction, ectopic pregnancy, spontaneous abortion, or molar pregnancy.		
Burning on urination	The woman feels a burning sensation when she urinates.	• Proteinuria • Urinary tract infection • Kidney infection	
Urinary retention	The pressure of the fetus's head on the urethra and bladder during prolonged labor can lead to bruising, edema, and even spasm of the internal sphincter of the bladder, which in turn may lead to urinary retention in the postpartum period.		
Rupture of membranes for more than 18 hours before birth; uterine infection or fever during labor or birth	Intact membranes protect the fetus and woman from infection. If membranes rupture early, disease-causing organisms may ascend into the fluid and wall of the uterus, causing fatal infection of the newborn and/or woman.	• Sepsis	• Sepsis
Breast and breastfeeding problems	Examples include poor attachment of the newborn to the breast, maternal concern about insufficient supply of milk, flat or inverted nipples, and mastitis.	• Discomforts, such as breast engorgement and cracked/sore nipples • Discouragement, which can lead to more difficulties or discontinuation of breastfeeding altogether	• Loss of benefits of breastfeeding
Postpartum sadness ("blues")	Often experienced during the third to fifth day after birth, postpartum sadness ("blues") may be caused by hormonal changes, sudden cessation of physical exertion of labor, peak experience of giving birth, emotional letdown after anxiety of pregnancy and fear of labor, physical discomforts of the postpartum period, and lack of sleep.	• Crying • Feelings of sadness • Feeling overwhelmed • Irritability	
1st, 2nd, or 3rd degree perineal tears; episiotomy; defibulation	Women who have perineal tears or who have undergone episiotomy or defibulation may experience discomfort and other side effects.	• Perineal pain • Bleeding • Infection	
Uterine subinvolution	Uterus has increased, or is not decreasing, in size since the last visit; increase in lochia.	• Fever • Abdominal pain • Bleeding	

Table 1-12. Rationales for Additional Care for Maternal and Fetal/Newborn Special Needs *(continued)*

FACTOR/CAUSE	DESCRIPTION/ BACKGROUND INFORMATION	POSSIBLE EFFECTS ON WOMAN	POSSIBLE EFFECTS ON FETUS/NEWBORN
Previous newborn complications or deaths	History of newborn complications or death may indicate an underlying maternal condition that may cause a problem during the baby's first days of life.		• Stillbirth • Newborn death
Newborn death or stillborn	The death of a newborn is very disturbing for all concerned and evokes a range of emotions that can have significant consequences.	• Pain and grief • Depression • Disorientation • Isolation • Anger • Denial	
Low birthweight baby	Birthweight less than 2.5 kg (or less than 2.0 kg in some populations).		• Breathing problems • Low body temperature • Feeding problems
Large baby	Birthweight of 4 kg or more.	• Trauma during childbirth	• Trauma or injury during birth • Breathing difficulties due to meconium aspiration • Low blood sugar
Baby with cuts and abrasions that are not bleeding	Some equipment used and procedures performed during birth can result in cuts and abrasions to the baby.		• Increased risk of infection • May indicate an injury that affected the baby in other ways (e.g., broken bones, dislocations, trauma to organs)

Life-Threatening Complications

Introduction

Some women and newborn babies may present with danger signs that indicate a life-threatening condition or one whose diagnosis or management lies beyond the scope of this manual. Identifying those who have such conditions is just as important as identifying women and newborn babies who are progressing normally through the childbearing cycle and newborn period. Initial care for these women and newborn babies, which is covered in **Chapter 11** (**page 3-89**), includes the following:

- Rapid initial assessment
- Stabilization and other initial management measures, as needed
- Urgent referral/transfer to a specialist or facility that has comprehensive essential obstetric care services

Rapid Initial Assessment and Stabilization Procedures

When danger signs are identified, the skilled provider immediately performs a rapid initial assessment to determine the degree of illness, need for emergency care/stabilization, and immediate course of action that must be taken. The skilled provider will assess the woman or newborn for signs of the following:

- Respiratory distress
- Shock
- Convulsions or loss of consciousness (and, for newborn babies, spasms)

If the woman or newborn is in need of stabilization, the skilled provider performs the designated life-saving measures to stabilize the woman or newborn before proceeding with care or urgent referral/transfer. If the woman or newborn is not in need of stabilization, the skilled provider should conduct a further assessment per presenting danger sign to determine whether the woman or newborn requires urgent referral/transfer or specialized care, or whether the woman or newborn can continue with basic care. **Table 1-13** (**page 1-38**) and **Table 1-14** (**page 1-40**) describe the life-threatening conditions that may be indicated by various danger signs.

Table 1-13. Possible Diagnoses Associated with Maternal Life-Threatening Complications

FACTOR	POSSIBLE DIAGNOSES
Vaginal bleeding in early pregnancy (through 22 weeks' gestation)	• Ectopic pregnancy • Threatened abortion • Inevitable abortion • Incomplete abortion • Complete abortion • Molar pregnancy
Vaginal bleeding in later pregnancy (after 22 weeks' gestation) or labor	• Placental abruption • Placenta previa • Ruptured uterus
Vaginal bleeding after childbirth	• Uterine atony • Extensive tears of the cervix, vagina, perineum, and/or labia • Non-extensive tears of the cervix, vagina, perineum, and/or labia • Retained placenta or placenta fragments • Ruptured uterus • Inverted uterus • Delayed postpartum hemorrhage
Severe headache, blurred vision, elevated blood pressure, convulsions	• Pre-eclampsia/eclampsia • Epilepsy • Chronic hypertension • Meningitis or encephalitis • Tetanus • Malaria
Breathing difficulty	• Severe anemia • Heart failure due to anemia or heart disease • Pneumonia • Bronchial asthma • Pulmonary edema associated with heart failure or pre-eclampsia • Pulmonary embolism
Fever	• Amnionitis • Septic abortion • Acute pyelonephritis • Metritis • Abscess (pelvic, wound, breast) • Peritonitis • Deep vein thrombosis • Pneumonia • Malaria • Typhoid • Hepatitis

Table 1-13. Possible Diagnoses Associated with Maternal Life-Threatening Complications *(continued)*

FACTOR	POSSIBLE DIAGNOSES
Severe abdominal pain in early pregnancy (through 22 weeks' gestation)	• Ectopic pregnancy • Spontaneous abortion/septic abortion • Peritonitis • Appendicitis • Acute pyelonephritis • Ovarian cyst • Bowel obstruction or pancreatitis
Severe abdominal pain in later pregnancy (after 22 weeks' gestation) or labor	• Preterm labor • Placental abruption • Ruptured uterus • Amnionitis • Appendicitis • Acute pyelonephritis • Peritonitis • Bowel obstruction or pancreatitis
Severe abdominal pain after childbirth	• Metritis • Ruptured uterus • Pelvic abscess • Peritonitis • Acute pyelonephritis • Ovarian cyst • Bowel obstruction or pancreatitis
Contractions before 37 weeks' gestation	• Preterm labor
Unsatisfactory progress of 1st or 2nd stage of labor	• Cephalopelvic disproportion/obstructed labor • Inadequate uterine activity, possibly caused by amnionitis, inadequate caloric intake, inadequate fluid intake
Inadequate uterine contractions	• Inadequate uterine activity, possibly caused by amnionitis, inadequate caloric intake, inadequate fluid intake
Meconium-stained amniotic fluid, absence of fetal movement or heart tones, abnormal fetal heart rate, prolapsed cord	• Fetal distress or death
Fetal part (e.g., hand, foot) protruding from vagina	• Malpresentation/malposition
Pain in calf	• Deep vein thrombosis
Pus, redness, or pulling apart of skin edges of the perineal suture line; pus or drainage from unrepaired tear; severe pain from tear or episiotomy	• Necrotizing fasciitis • Cellulitis • Abscess • Fistula
Verbalization/behavior that indicates the woman may hurt herself or her baby, and/or hallucinations	• Postpartum psychosis • Postpartum depression

Table 1-14. Possible Diagnoses Associated with Newborn Life-Threatening Complications

FACTOR	POSSIBLE DIAGNOSES
Abnormal body temperature (axillary temperature less than 36.5°C or more than 37.5°C)	• Exposure to low or high environmental temperature • Sepsis
Bleeding	• Hemorrhagic disease • Coagulopathy
Redness or foul smell of umbilicus	• Infection of umbilicus • Sepsis
Pus or redness of eyes	• Gonoccocal ophthalmia/conjunctivitis • Chlamydial conjunctivitis • Staphylococcal conjunctivitis
Pus or lesions of skin	• Cellulitis/abscess • Sepsis • Congenital syphilis
Jaundice	• Sepsis • Glucose-6-phosphate dehydrogenase (G6PD) deficiency • Rhesus or ABO blood incompatibility • Obstructive disorders: intestinal atresia or stenosis, meconium ileus, Hirschsprung's disease
Abdominal distention	• Sepsis • Necrotizing enterocolitis • Suspected gastrointestinal malformation or obstruction
Diarrhea	• Dehydration • Sepsis • Necrotizing enterocolitis • Dysentery/intestinal infection
Swollen limb or joint	• Fracture • Birth injury

CHAPTER THREE

KEY TOOLS IN BASIC CARE

OVERVIEW

This chapter outlines the following four tools necessary to providing high-quality basic care:

- Clinical decision-making
- Interpersonal skills
- Infection prevention
- Record keeping

These tools should be used in every component of basic care provision by all staff at the healthcare facility (as appropriate to their job duties).

CLINICAL DECISION-MAKING

To decide on the care a woman or newborn needs, the skilled provider engages in a purposeful and organized thinking process known as clinical decision-making. Although this process is ongoing and circular, it can be broken down into a series of linked steps, which often occur simultaneously. These steps help the skilled provider gather the information needed to form accurate judgments about a person's condition, begin appropriate care, and evaluate the effectiveness of the care provided. In the course of caring for a woman or her baby, the skilled provider undertakes the process of clinical decision-making repeatedly as the clinical situation changes and different needs or problems emerge. The steps of clinical decision-making are as follows:

- Gathering information
- Interpreting information
- Developing a care plan
- Implementing the care plan
- Evaluating the care plan

Gathering Information

This step includes obtaining information through targeted history taking, physical examination, and testing to determine individual needs and potential problems to be addressed. As the skilled provider progresses through the assessment, it is essential to consider the information gathered through each part (history, physical examination, testing) in the context of the other parts. This approach helps the skilled provider focus testing and make more accurate diagnoses as each finding is viewed in relation to other findings, rather than as an isolated fact. The information gathered includes both what the skilled provider observes and what the woman reports about herself or her baby.

Interpreting Information

The skilled provider must then interpret the information gathered in order to form a diagnosis. The interpretation process involves the following:

- Comparing signs/symptoms and other findings to accepted standards of health and disease to judge whether they are normal or abnormal

- Considering all conditions known to produce any abnormal sign/symptom detected
- Eliminating conditions that do not fit the whole clinical picture
- Ruling out the most serious, if less likely, conditions
- Investigating further each abnormal sign/symptom (e.g., when it began, how painful or severe it is, what other signs/symptoms go along with it, etc.)
- Considering these signs/symptoms in the context of other factors, such as the woman's or newborn's age and history
- Consulting other sources of reliable and up-to-date information, such as reference books and clinical specialists, for additional information when needed

Developing a Care Plan

Based on the assessment, the skilled provider and the woman work together to develop an appropriate plan of care that is also individualized to meet the woman's and/or newborn's unique needs (e.g., individual preferences, lifestyle, cultural beliefs, socioeconomic status).

Implementing the Care Plan

Once the care plan is developed, it is put into action. Implementing the care plan is a responsibility shared by both the skilled provider (e.g., providing tetanus toxoid immunization) and the woman and her family (e.g., practicing birth preparedness and complication readiness or keeping the newborn warm using skin-to-skin contact).

Evaluating the Care Plan

Evaluating the care plan is more than a step in clinical decision-making; it is an ongoing process. The skilled provider continuously monitors the woman's response to treatment and is ready to change the care plan as necessary. If the plan has not achieved the desired result, additional information will need to be gathered and interpreted so that the plan can be revised. A care plan is effective when it has done the following:

- Been carried out by the woman, her care support systems, and the skilled provider
- Improved or maintained the woman's or newborn's general level of health
- Restored any abnormal findings to the range of normal
- Met the woman's needs for information, guidance, and support
- Been acknowledged as valuable by the woman and her family
- Revealed new health needs to address or changes to be made

INTERPERSONAL SKILLS

Interpersonal skills allow people to interact successfully with others. Skilled providers who demonstrate good interpersonal skills are able to develop open communication with clients and establish mutual respect and trust.

In general, skilled providers should do the following:

- Provide a safe and comfortable healthcare environment in which the woman and her family feel welcome (**Annex 1, page 4-1**)
- Promote continuity of care so that the woman sees the same skilled provider as often as possible

- Use effective communication skills when providing services to the woman and her newborn
- Treat the woman and her newborn with respect and courtesy
- Ensure privacy and confidentiality
- Respond to the woman's emotional needs, in addition to her physical needs
- Display a professional attitude with clients and coworkers

Effective Communication

Good communication skills are an essential aspect of providing high-quality healthcare services to the woman and her newborn. Effective communication helps build a woman's trust and confidence in the skilled provider, which makes her more likely to seek care for herself or her baby, follow recommendations, and return for followup visits.

Listed below are ways in which the skilled provider can communicate effectively with women and their families throughout the childbearing cycle. Skills that are particular to labor/childbirth and the postpartum/newborn period are highlighted in **Textbox 1-5** (**page 1-44**).

- Use simple, clear, and locally understood language (or a translator, if necessary), as well as terminology that the woman understands.
- Speak in a soft, gentle tone of voice.
- Be sensitive to and show respect for social norms and cultural beliefs and practices (**page 1-8**).
- Use culturally appropriate nonverbal communication (e.g., smiling, looking directly at the client, avoiding distracting movements, and allowing for pauses or moments of silence).
- Highlight important information by summarizing or repeating it.
- Encourage the woman to ask questions and express her concerns.
- Listen carefully to what the woman has to say, avoid interrupting her, and take notes as necessary.
- Answer the woman's questions directly in a calm, reassuring manner.
- Be honest with the woman, and do not be afraid to admit when you do not know something.
- Ask the woman to repeat the key points or recommendations to ensure her understanding, or give her illustrations and written information (if available and appropriate) to remind her of instructions.
- Respect the woman's right to make decisions about her own or her baby's life, and allow her the time she needs to make important decisions.
- Be empathetic and reinforce through words and nonverbal communication that it is the skilled provider's role to provide help and support, not to judge the woman and her family.
- Thank the woman and her family for coming at the end of each visit.

Textbox 1-5. Interpersonal Skills during Labor/Childbirth and the Postpartum/Newborn Period

The general interpersonal skills recommended in this section should be used during all aspects of basic care provision. There are, however, some special recommendations for labor and childbirth, as well as the postpartum/newborn period.

Labor and Childbirth

- Remain sensitive to the woman's physical discomfort and emotional state.
- Keep the woman informed about the progress of her labor.
- During a physical examination, allow the woman to move during a contraction if she desires.
- Provide continuous emotional and physical support as appropriate during labor and childbirth. Consider the woman's emotional well-being, comfort, and desires, as well as her physical requirements. (For more information on supportive care measures during labor and childbirth, see **Table 2-7** [**page 2-47**].)
- Give the woman verbal encouragement and praise, as well as reassurance about her condition and the well-being of the baby.

Postpartum/Newborn Period

- Allow the woman and newborn to remain together as much as possible.
- Encourage the woman in her "mothering" abilities by doing the following:
  - Noting and praising her for what she is doing right
  - Helping to build her confidence by using verbal and non-verbal messages
  - Assuring her that she is capable of caring for her newborn
  - Substituting gentle, constructive suggestions for criticisms
- Continually acknowledge the baby, referring to her/him by name when appropriate.
- Ensure that someone is watching the baby or that s/he is in a safe place while the woman is undergoing a physical examination.
- When observing breastfeeding, help the woman feel relaxed and confident; do not hurry the woman and her newborn. Reinforce through words and non-verbal communication that the skilled provider is present to help and support her, not to judge her or her newborn.
- Work with the family to devise strategies for challenges that they may face during the immediate postpartum/newborn period (e.g., the woman's increased need for rest).

Privacy and Confidentiality

An atmosphere of privacy and confidentiality helps to protect the woman's security and dignity, and increases her willingness to communicate openly. Ideally, the client care area would be a separate room with a door that closes and locks, but other simple changes can make significant improvements in privacy during visits. For example, adding curtains or dividers can provide greater privacy for the woman during a physical examination.

All information that the woman provides during her visit should be kept confidential. Confidentiality means that, without the woman's consent, healthcare workers and facility staff do not discuss this information with the woman's partner, family, person accompanying her to the healthcare facility, or any facility staff members not directly involved in her care and treatment (except when required in a life-threatening medical emergency).

Use the measures listed below to help assure the woman that her right to privacy and confidentiality is being respected.

- Arrange for the waiting area to be an adequate distance from the client care area, so that clients waiting for services do not hear information about the woman or newborn currently being seen.
- Close and lock the doors to the client care area during the visit, and/or secure the curtains, ensuring that they completely block any view of the client care area.
- If a separate room is not available for the woman's or newborn's visit, increase confidentiality by taking the history and discussing personal matters in an area where others cannot hear the conversation, and by limiting traffic of healthcare facility staff and visitors into and through the area.
- Allow the woman to decide whether her companion is to be included in all or any parts of her visit.

- Speak in a low voice when discussing the history or present health status of the woman or her newborn.
- Store medical records securely, where only authorized personnel can access them.

When performing a physical examination, follow the steps below to ensure the woman's privacy and confidentiality.

- Have the woman remove and adjust clothing only as needed.
  - Remove upper garments for a breast inspection.
  - Remove lower garments for a genital examination.
  - Remove or loosen upper and lower garments as needed for an abdominal examination.
- Provide the woman with a drape or blanket to cover parts of her body that are not being examined.
- If the woman needs to undress before the physical examination, exit the client care area while she is doing so.
- Ask the woman's permission before re-entering the client care area to perform the physical examination.

Follow the steps below to ensure the woman's privacy and confidentiality in the home setting.

- Allow the woman to choose the part of the house in which she wants to have the visit.
- Be prepared to ask family members to leave the care area to ensure privacy.

Physical Examination

The woman may feel anxious about having a physical examination, or about having her newborn examined. The interpersonal skills listed below can help skilled providers make the woman feel more comfortable.

- Explain to the woman what is going to happen, and why.
- Be encouraging and supportive.
- Preserve her privacy (**page 1-44**) and respect her modesty.
- Ensure that the woman is comfortable on the examination surface (e.g., help her onto the examination surface, provide a pillow to support her head, ask her to take a few deep breaths to help her relax).
- Be gentle and avoid sudden movements.
- Encourage the woman to ask questions and voice concerns.
- Obtain the woman's permission/consent before proceeding with the examination or procedure.
- Discuss findings as the examination progresses, making sure that the woman understands what they mean.
- Respect social norms and cultural beliefs and practices.

Counseling and Health Messages

The purpose of counseling and health messages is to provide the woman with essential information for improving or maintaining her health or the health of her newborn, and to facilitate decision-making and, when necessary, behavior change. Providing counseling and health messages also empowers the woman to become an active participant in her healthcare and that of her newborn. Topics include: birth preparedness and complication readiness; common discomforts; danger signs; HIV pre- and post-test counseling; safer sex; family planning; and newborn feeding options. Health messages will vary throughout the process of care during the childbearing cycle and newborn period.

When providing health messages, the skilled provider gives practical messages to help the woman, such as information on nutrition or how to recognize and respond to an emergency. When counseling, the skilled provider offers assistance and support to help the woman apply health messages to her life, adopt healthy practices, solve problems, and make informed decisions.

The provision of effective health messages and counseling is based on the key principles listed below.

- The skills required for providing health messages and counseling build on those used in effective communication (**page 1-43**).
- Messages are most helpful to the woman and her family when they do the following:
  - Are based on locally available and financially feasible solutions
  - Emphasize what the woman should do and how to do it (rather than why)
  - Are easy for the woman to understand, remember, and implement
- Advice and counseling should be integrated whenever possible with other components of the care plan (e.g., while dispensing iron/folate, the skilled provider should also advise the woman on how to take it, inform her about dietary sources of iron/folate, counsel her on relief of common side effects, and provide information on any other related issues).
- As in other components of the care plan, health messages and counseling should be individualized to fit the woman's needs and circumstances (**Textbox 1-6**, below).

Textbox 1-6. Individualizing Health Messages and Counseling

One way to individualize health messages and counseling is to prioritize the topics. Prioritizing means selecting topics to discuss and/or emphasize based on what is most important: (1) in different clinical situations; and (2) at different times during the childbearing cycle and newborn period. Prioritization is important because the skilled provider has a limited amount of time to spend with each woman and newborn, and there are limits on how much information the woman can retain at a single visit.

- First, respond to the woman's specific questions or concerns.
  - The woman is most likely to benefit from information that addresses self-identified needs.
  - Paying attention to existing issues, even if they are not life-threatening, is as important as preparing for potential problems.
- Next, provide the woman with essential messages that may have a direct or immediate impact on the health or survival of the woman and her baby. Advice and counseling on these topics is an important part of every visit. Examples are birth preparedness and complication readiness.
- Finally, deliver other messages that help the woman: (1) enhance or maintain her and her baby's health; (2) understand and adhere to the care plan; (3) cope with the current emotional and physical aspects of her situation; and (4) prepare for the next phase of the childbearing cycle or newborn period. Examples are nutrition, rest, hygiene, family planning, and sexual relations.
  - Some messages can be prioritized according to when they are most relevant. For example, although family planning may be covered briefly in the antenatal period, it should be discussed in much more detail in the postpartum period.
  - Not all messages are routine or appropriate for all women. For example, some women may require a lot of advice/counseling on breastfeeding, while others require no guidance at all. It is the skilled provider's job to continually assess the woman's need for particular health messages.

- Counseling and health messages should be respectful of the woman, her family, and their social norms and cultural beliefs/practices.
- Counseling should be provided in a manner that empowers the woman to exercise informed choice (i.e., do not try to persuade the woman to make a particular decision or take a certain course of action).
- The involvement of the woman's support system is especially important in advice and counseling; her partner, companion, or family members can support her in following recommendations, carrying out plans, and making important decisions.
- It is important to maintain an up-to-date list of local sources of support and assistance so that the skilled provider can quickly and effectively link the woman and her family to appropriate resources.

- Group education should be used to introduce or supplement (not replace) individual counseling and health messages (**Textbox 1-7**, below).

Textbox 1-7. Tips for Conducting an Effective Group Education Session

- Consider the local cultural needs. Choose appropriate topics and use words that the group can understand.
- Encourage all clients to participate in the group education session.
- Introduce the topic(s) clearly and state the objectives of the session.
- Ask questions to find out what the group knows before providing all of the information. There is no need to give information the group already knows.
- Use an interactive approach. Ask and answer questions and encourage group members to ask questions.
- Praise group members when they participate.
- Use client education materials as appropriate.
- Maintain eye contact with the group.
- Speak loudly enough that everyone can hear.
- Summarize key points.
- Even if the skilled provider does not facilitate the group education session, s/he should be familiar with the way group education sessions are conducted and which topics are covered at her/his healthcare facility.

Encouragement and Support

The childbearing cycle is a time of challenges and opportunities for women. The skilled provider should help the woman find strategies to solve problems and identify opportunities to increase her general knowledge and skills.

- Whenever possible, note and praise the woman for things she is doing well.
- Use gentle, constructive suggestions rather than judging or criticizing the woman.
- Provide psychological support and practical help.
- Show empathy for and understanding of the woman's situation or concerns.
- When appropriate, assure the woman that her struggles are common among women in her situation.
- Take measures to provide physical comfort (e.g., a cool cloth during labor, a warm blanket after birth, etc.) as needed and appropriate.
- When appropriate, let the woman's partner, companion, or family know how they can help her.

INFECTION PREVENTION[1]

One of the most significant causes of maternal death is postpartum infection (or puerperal sepsis), which accounts for 15% of all maternal deaths in developing countries.[2] Unsafe abortion practices and related infections also contribute to many maternal deaths each year. Newborn babies are at increased risk of infection because their immune systems have not yet matured. Approximately 2.5 million newborn babies die of tetanus or other infections each year.

Healthcare workers and support staff are also at risk of infection—in caring for women and newborn babies throughout the childbearing cycle, they can become infected through exposure to contaminated surgical instruments, blood or body fluids, and other infectious items. As bloodborne infectious diseases such as hepatitis B, C, and D, and HIV continue to spread, healthcare workers and clients are at increased risk of acquiring an infection during a routine healthcare visit or surgical procedure.

[1] Much of the information in the Infection Prevention section was adapted from *Infection Prevention Guidelines for Healthcare Facilities with Limited Resources*. Tietjen L, D Bossemeyer, N McIntosh. 2003. JHPIEGO Corporation: Baltimore, MD.
[2] World Health Organization. 1996. *Puerperal Sepsis Module, Safe Motherhood*. WHO: Geneva.

Infection prevention (IP) practices[3] focus on preventing infection and disease transmission in both clients and healthcare workers. When proper precautions are not taken, people can become very ill or die. Therefore, IP practices should be integrated in the following ways into every component of maternal and newborn care, as needed, to protect the woman, newborn, healthcare worker, and other healthcare facility staff:

- Minimizing infections due to microorganisms
- Decreasing the risk of transmitting life-threatening diseases such as hepatitis B, C, and D, and HIV to the woman and newborn and to healthcare workers and facility staff, including cleaning and housekeeping personnel

In addition to incorporating IP practices during healthcare, healthcare workers should reduce the risk of infection by avoiding harmful traditional practices and talking to women and their families about healthy practices.

How Infection Prevention Practices Work

Microorganisms cannot be seen by the human eye. A surgical instrument may look clean but be contaminated by microorganisms. IP practices interrupt the cycle of transmission by either destroying microorganisms or preventing transmission from one source to another. For example, handwashing before a procedure and disinfection during housekeeping will interrupt the cycle at the reservoir stage. Also, handwashing, housekeeping, instrument processing, and safe handling of sharps will interrupt the cycle at the method of transmission level. Preventing injuries with sharps will interrupt the cycle at the place of entry stage. IP practices overlap and have a cumulative effect; by applying all IP practices correctly and consistently, the likelihood of causing an infection or transmitting disease is greatly decreased.

Infection Prevention Principles

IP practices are based on the principles listed below.

- Every person (client or healthcare worker) is considered infectious because infections may be present but asymptomatic.
- Every person is considered at risk of infection.
- Handwashing (or using an alcohol-based handrub) is the most practical procedure for preventing infections.
- Gloves are worn on both hands before touching anything wet—broken skin, mucous membranes, blood, or other body fluids (secretions or excretions)—or performing an invasive procedure.
- Barriers (e.g., protective goggles, face masks, or aprons) are worn if splashes or spills of any body fluids are anticipated.
- Antiseptic agents are used to clean the skin or mucous membranes before certain procedures, or for cleaning wounds.
- All healthcare workers and facility staff follow safe work practices (e.g., not recapping or bending needles, proper instrument processing, and suturing with blunt needles when appropriate).
- The care site is cleaned routinely, and waste is properly disposed of.
- Facility staff who are in direct contact with clients receive as many of the following immunizations as possible:
  - Rubella
  - Measles

[3] The terms "universal" or "standard precautions" refer to some of the IP practices that focus on protecting the healthcare worker. IP practices include, but are not limited to, universal or standard precautions.

- Hepatitis B virus
- Mumps
- Influenza (yearly)

Infection Prevention Practices

Handwashing

Handwashing is the most practical procedure for preventing the spread of infection. Wash hands with soap and water (if hands are visibly clean and not contaminated with blood or body fluids, disinfect them using an antiseptic handrub) in the following situations:

- Before and after examining a client
- After contact with blood, other body fluids, or soiled instruments, even if gloves were worn
- Before and after removing gloves because they may have invisible holes in them
- Upon arriving at and before leaving the workplace

To wash hands, do the following:

- Thoroughly wet hands with clean water
- Wash hands for 10–15 seconds with plain soap and running or poured water
- Allow hands to air-dry or dry them with a clean paper or personal towel

Unless the hands are visibly soiled, a waterless, alcohol-based antiseptic handrub is more effective in cleaning hands than handwashing. Antiseptic handrub can be made by adding 2 mL of glycerin (or other emollient) to 100 mL of 60–90% ethyl or isopropyl alcohol solution.

Use the guidelines below to clean hands using an antiseptic handrub.

- Apply enough antiseptic handrub to cover the entire surface of hands and fingers (about one teaspoonful).
- Rub the solution vigorously into hands, especially between fingers and under nails, until dry.

Antisepsis

When combined with good hand hygiene and other IP practices, proper antisepsis can help prevent infection by reducing the number of microorganisms on the skin.

Use the guidelines below for skin preparation for injections.

- If the skin is clean, it is not necessary to use an antiseptic before giving a skin injection.
- If the injection site appears dirty, wash it with soap and water.
- Dry with a clean towel; then give the injection.

When cleansing the genitals before and after birth, wash the external genital area with soap and water or antiseptic if visibly soiled.

Note: If using an antiseptic, ask the client about allergic reactions. Use a water-based product (such as an iodophor or chlorhexidine), as alcohols or products containing alcohol may burn and irritate mucous membranes.

Gloving

Gloves are the most important physical barrier for preventing the spread of infection. They protect the hands of healthcare workers from infectious materials and protect clients from microorganisms on healthcare workers' hands. Please note that the use of gloves does not replace hand hygiene. Gloves should be worn in the following situations:

- If there is reasonable chance of hand contact with broken skin, mucous membranes, blood, or other body fluids (secretions or excretions)
- When performing an invasive procedure
- When handling soiled instruments, gloves, medical waste, or contaminated waste items, or when touching contaminated surfaces

Adhere to the guidelines below for glove use.

- A separate pair of gloves must be used for each woman and newborn to avoid spreading infection from client to client.
- Properly dispose of gloves after contact with a client. Before removing gloves, dip hands in 0.5% chlorine solution and, if not re-using gloves, dispose of gloves in a leak-proof bag or container.
- Wear high-level disinfected (HLD) or sterile gloves for any procedures that will involve contact with broken skin or tissue under the skin (e.g., pelvic examination, childbirth, or vaginal repair; see **Table 1-15** [**page 1-51**]).
- Wear clean examination gloves for starting an IV, drawing blood, or handling blood or body fluids.
- Wear utility gloves for cleaning instruments, handling waste, and cleaning up blood and body fluids.
- If the supply of gloves is limited, surgical gloves can be reused if they have been:
  - Decontaminated by soaking in 0.5% chlorine solution for 10 minutes;
  - Washed and rinsed; and
  - Sterilized or high-level disinfected.
- If single-use disposable surgical gloves are reused, do not process them more than three times because invisible tears may occur.
- Never use gloves that are cracked or peeling or that have visible holes or tears.
- Always remove a used or contaminated glove by the cuff.
- Place the used or contaminated glove in a waste container; if reusing the glove, place it in 0.5% chlorine solution.

Listed below are some DOs and DON'Ts about glove use.

- DO wear the correct size gloves, particularly surgical gloves. Poorly fitting gloves limit the healthcare worker's ability to perform a task and may be torn or cut more easily.
- DO keep fingernails short (no more than 3 mm [1/8 inch] beyond the fingertip) to reduce the risk of tears.
- DO pull gloves up over the cuffs of the gown, if worn, to protect the wrists.
- DO use water-soluble (non-oil containing) hand lotions and moisturizers often to prevent hands from drying, cracking, and chapping.
- DON'T use oil-based hand lotions or creams. These damage latex rubber surgical and examination gloves.

- DON'T use hand lotions and moisturizers that are very fragrant or perfumed, as they irritate the skin under gloves.
- DON'T store gloves in areas where there are extremes in temperature (e.g., in the sun, near a heater, by an air conditioner, etc.). These conditions may damage the gloves and reduce their effectiveness as a barrier.

Table 1-15. Glove Requirements for Common Medical and Surgical Procedures

TASK OR ACTIVITY	ARE GLOVES NEEDED?	PREFERRED GLOVES[1]	ACCEPTABLE GLOVES
Blood pressure check	No		
Temperature check	No		
Injection	No		
Blood drawing	Yes	Examination[2]	HLD Surgical[4]
Measuring hemoglobin	Yes	Examination[2]	HLD Surgical[4]
Urinalysis	Yes	Examination[2]	HLD Surgical[4]
RPR Test	Yes	Examination[2]	HLD Surgical[4]
Catheterization	Yes	Sterile Surgical[3]	HLD Surgical[4]
IV insertion and removal	Yes	Examination[2]	HLD Surgical[4]
Genital examination (including examination for tears)	Yes	Examination[2]	HLD Surgical
Pelvic (speculum and bimanual) examination	Yes	Examination[2]	HLD Surgical[4]
Vaginal birth	Yes	Sterile Surgical[3]	Examination[2] or HLD Surgical[4]
Management of prolapsed cord	Yes	Sterile Surgical[3]	HLD Surgical[4]
Artificial rupture of membranes	Yes	Sterile Surgical[3]	HLD Surgical[4]
Episiotomy	Yes	Sterile Surgical[3]	HLD Surgical[4]
Repair of episiotomy, cervical, vaginal, and perineal tears, and defibulation	Yes	Sterile Surgical[3]	HLD Surgical[4]
Manual removal of placenta or placental fragments, and correction of uterine inversion	Yes	Sterile Surgical[3] (use elbow-length gloves, if possible)	HLD Surgical[4] (use elbow-length gloves, if possible)
Vacuum extraction	Yes	Sterile Surgical[3]	Examination[2] or HLD Surgical[4]
Bimanual compression of the uterus	Yes	Sterile Surgical[3]	HLD Surgical[4]
Handling and cleaning instruments	Yes	Utility[5]	Examination[2] or HLD Surgical[4]
Handling contaminated waste	Yes	Utility[5]	Examination[2] or HLD Surgical[4]
Cleaning blood or body fluid spills	Yes	Utility[5]	Examination[2] or HLD Surgical[4]

[1] Although sterile gloves may be used for any surgical procedure, they are **not** always required. In some cases, examination or HLD surgical gloves are equally safe and less expensive.
[2] This includes new, never-used individual, or bulk-packaged examination gloves (as long as boxes are stored properly).
[3] When sterilization equipment (autoclave) is not available, high-level disinfection is the **only** acceptable alternative.
[4] Reprocessed surgical gloves. Reprocessing surgical gloves more than three times usually is not cost-effective.
[5] Utility gloves are thick household gloves.

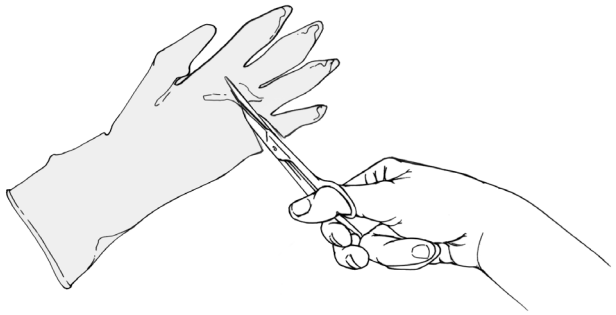
Elbow-Length Gloves for Obstetric Procedures

When the hand and forearm need to be inserted into the vagina (e.g., manual removal of the placenta or placental fragments), elbow-length—sometimes termed "gauntlet"— gloves help protect the healthcare worker from significant blood and amniotic fluid contamination and help protect the woman as well.

If elbow-length gloves are not available, an inexpensive, effective alternative can be easily made from previously used surgical gloves that have been decontaminated, cleaned, and dried. Follow the steps below to make a pair of elbow-length gloves.

- Cut the four fingers completely off each glove just below where all the fingers join the glove (**Figure 1-2**, below).
- Sterilize or high-level disinfect two to three pairs of cut-off (fingerless) gloves according to the recommended process for each method and store the gloves after final processing in a sterile or HLD container until needed.

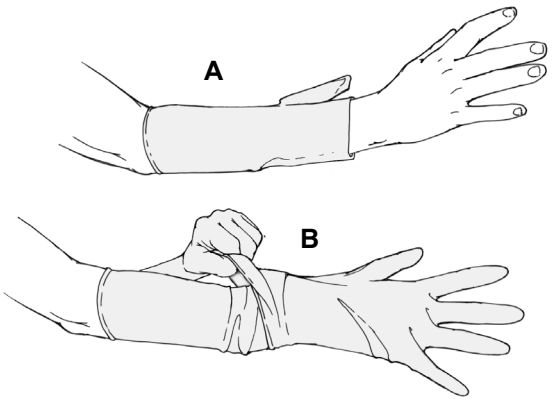
Figure 1-2. Making Elbow-Length Gloves from Previously Used Surgical Gloves



Follow the steps below if it is anticipated that the forearms need to be protected **before** starting the procedures.

- Perform surgical handscrub, including the forearms up to the elbows, using an alcohol-based antiseptic agent.
- Put fingerless sterile or HLD gloves on both hands and pull up onto the forearm(s) (**Figure 1-3A**, below).
- Put intact sterile or HLD surgical gloves on both hands so that the lower (distal) end of the fingerless glove is completely covered (**Figure 1-3B**, below).

Figure 1-3. Putting on Fingerless (A) and Surgical (B) Gloves



Follow the steps below if the need for protection of the forearm(s) occurs **during** a procedure or a sudden need to wear elbow-length gloves arises (e.g., correcting uterine inversion).

- Remove the surgical glove from one or both hands.
- Put on a fingerless sterile or HLD glove(s) and pull up onto the forearm(s).
- Put a new sterile or HLD surgical glove on one or both hands.

Safe Handling of Sharp Instruments

Hypodermic (hollow bore) needles cause the most injuries to healthcare workers at all levels. Follow the safety guidelines below when handling and using (**Textbox 1-8**, below) sharp instruments, such as needles and syringes.

- Never pass a sharp instrument from one hand directly to another person's hand.
  - Use a pan such as a sterile kidney basin to carry and pass sharp instruments.
  - Always alert others by saying "sharp" or "blade" when placing an instrument in the "safe" basin or container.
- Use caution when suturing to prevent accidental injuries with sharps. Always use a needle holder when suturing, and never hold the needle with fingers or use the fingers to guide the needle.
- After use, decontaminate syringes and needles by flushing them with 0.5% chlorine three times.
- Immediately dispose of sharps in a puncture-resistant container. Do not recap, bend, break, or disassemble needles before disposal.

Textbox 1-8. Safety Tips for Using Hypodermic Needles and Syringes

- Use each needle and syringe only once.
- Do **not** disassemble the needle and syringe after use.
- Do **not** recap, bend, or break needles before disposal.
- Decontaminate the needle and syringe before disposal.
- Dispose of the needle and syringe in a puncture-resistant container.

Personal Protective Equipment (PPE)

Personal protective equipment (PPE) is used to protect healthcare workers and clients from infectious microorganisms, especially when splashing of blood or other body fluids is likely. PPE includes:

- Gloves (**page 1-50**)
- Eyewear (face shields, goggles, or glasses)
  - Protects the healthcare worker's eyes from accidental splashes of blood or body fluids
  - Should be worn (along with masks) when performing a task (e.g., artificial rupture of membranes [amniotomy], assisting a birth) during which an accidental splash into the face is likely
- Aprons
  - Should be made of rubber or plastic to provide a fluid-resistant barrier that keeps contaminated fluids off the healthcare worker's clothing and skin
  - Should be worn while cleaning, or during a procedure in which blood or other body fluid spills are anticipated

- Footwear
  - Protects the healthcare worker's feet from injury by sharps or heavy items that may accidentally fall on them
  - Should be clean and cover the entire foot (do not go barefoot or wear sandals, thongs, or shoes made of soft materials); rubber boots and leather shoes provide the most protection but should be kept clean

PPE can be made of paper, cloth (such as lightweight cotton), treated fabrics, or synthetic materials that do not allow liquids to penetrate them. When fabric is used, it should be light in color to show dirt and contamination easily.

PPE made of paper should never be reused because it cannot be properly cleaned.

Instrument Processing

Soiled instruments, used surgical gloves, and other reusable items can transmit disease if IP procedures are not properly followed. The IP practices for decontamination, cleaning, sterilization, high-level disinfection (HLD), and proper storage are summarized below.

- **Decontamination:** This process makes inanimate objects safer to handle before cleaning.
  - Immediately after use, soak soiled items in 0.5% chlorine solution for 10 minutes. Do not soak metal instruments for more than 1 hour; prolonged soaking may cause rusting.
  - Use a plastic container for decontamination. This prevents dulling of sharp instruments and rusting of metal instruments.
  - After decontamination, rinse instruments immediately with cool water to prevent corrosion and remove visible organic material.
  - Larger surfaces, such as examination tables, should be wiped carefully with 0.5% chlorine solution after each use.
- **Cleaning:** After instruments and other reusable items have been decontaminated, they need to be cleaned.
  - Cleaning removes visible soil and debris, including blood or body fluids.
  - Cleaning is the most effective way to reduce the number of microorganisms on soiled instruments and equipment.
  - Neither sterilization nor HLD procedures are effective without cleaning.
  - Cleaning is the best way to kill endospores, which also cause tetanus and gangrene. If sterilization is not available, thorough cleaning is the only way to effectively reduce the number of endospores.
  - Follow the steps below to properly clean instruments and other items.
    - Thoroughly wash items to be cleaned with soap and water. Use a liquid soap and soft brush (an old toothbrush works well) if available. Do not use abrasive cleaners or steel wool, especially on metal.
    - After washing, rinse items with clean water to remove any soap residue.
    - After rinsing, dry the items thoroughly, regardless of whether or not they will be sterilized or high-level disinfected.
    - If instruments will be sterilized, individually wrap and package them after cleaning.
    - Pay special attention to instruments with teeth, joints, or screws.
    - Wear utility gloves, protective eyewear, and a plastic apron while cleaning instruments and equipment.

  - Wash surgical gloves on the inside and outside. To test gloves for holes, inflate them and hold them under water. If there are holes, air bubbles will appear. Do not reuse gloves that have holes.
  - Never mix oral and rectal thermometers, even if they are clean.

- **Sterilization:** Sterilization destroys all microorganisms, including bacterial endospores, that are present on instruments or equipment. Use sterilization for instruments, surgical gloves, and other items that come in direct contact with the blood stream or other sterile tissues. Do not overload the sterilizer. Follow the guidelines below to achieve sterilization.
  - Autoclaving (high-pressure steam) for 20 minutes (for unwrapped items) or 30 minutes (for wrapped items) at 121°C (250°F) and 106 kPa (15 psi). Allow items to dry before removing them from the sterilizer.
  - Dry heat (oven) at 170°C (340°F) for 1 hour or 160°C (320°F) for 2 hours.
  - Chemical sterilization by allowing instruments to soak:
    - For 10 hours in a 2–4% glutaraldehyde solution (check specific product instructions); or
    - At least 24 hours in 8% formaldehyde.
- **High-Level Disinfection (HLD):** HLD destroys all microorganisms except some bacterial endospores on instruments or objects. It is the only acceptable alternative to sterilization. HLD may be achieved by doing any of the actions below.
  - Boiling the items in water for 20 minutes. Always remove the items immediately, and if they will not be used promptly, place them in an HLD container.
  - Steaming the items for 20 minutes and then allowing the items to dry for 1–2 hours before using them.
  - Soaking the items in a 0.5% chlorine solution, 8% formaldehyde solution, glutaraldehyde solution, or 6% hydrogen peroxide solution for 20 minutes. Remove items using HLD or sterile forceps or gloves, and rinse well with boiled and filtered water three times. Allow items to air dry. Use items promptly, or store them in a HLD container.
- **Storage:** Sterilized and HLD items must be stored carefully. Sterilized items will not remain sterile unless they are properly stored.
  - Keep the storage area clean, dry, dust-free, and lint-free.
  - Control temperature and humidity when possible. Keep the temperature at approximately 24°C and the relative humidity less than 70%.
  - Store sterile packs and containers 20–25 cm (8–10 inches) off the floor, 45–50 cm (18–20 inches) from the ceiling, and 15–20 cm (6–8 inches) from an outside wall.
  - Do not use cardboard boxes for storage. These shed dust and debris and may harbor insects.
  - Date and rotate the supplies. Use a "first in, first out" guideline for using instruments.
  - Wrapped packages that remain dry and intact may be used up to 1 week.
  - Wrapped packages sealed in plastic that remain dry and intact may be used up to 1 month.

Housekeeping and Waste Disposal

Housekeeping refers to the general cleaning of hospitals and clinics, including the floors, walls, equipment, tables, and other surfaces. In addition to reducing the number of microorganisms that may come into contact with clients, visitors, facility staff, and the community, regular and thorough housekeeping helps provide a clean and pleasant atmosphere for clients and facility staff.

Most waste (e.g., paper, trash, food, boxes) produced by hospitals and clinics is noncontaminated and poses no risk of infection to the people who handle it. These items can be disposed of by the usual methods or sent to the local landfill or dumpsite. Some waste, however, is contaminated and, if not disposed of properly, may carry microorganisms that can infect people who come into contact with it as well as the community at large. Contaminated waste includes blood and other body fluids, and items that come in contact with them, such as used dressings. To protect the people who handle waste items from accidental injury, and to prevent the spread of infection, contaminated waste should be properly handled and disposed of.

Use the guidelines below for housekeeping and waste disposal.

- Each care site should have and consistently follow a housekeeping schedule for regular maintenance and clean-up after procedures.
  - Post the cleaning schedule in a visible area.
  - Provide details on exactly what needs to be done and how often.
  - Educate facility staff regarding cleaning, and delegate responsibility.
- Follow general guidelines for housekeeping:
  - Clean from the top to the bottom (e.g., of walls and window coverings) so that the dirt that falls during cleaning is removed.
  - Ensure that a fresh bucket containing disinfectant solution is available at all times.
  - Immediately clean up spills of blood or body fluids using disinfectant solutions.
  - Store and process soiled linens as shown in **Textbox 1-9** (**page 1-57**); wrap or cover clean linens and store them in an enclosed cart or cabinet to prevent contamination with dust.
  - After each use, wipe off beds, tables, and procedure trolleys using disinfectant solution.
  - Decontaminate cleaning equipment that has been contaminated with blood or body fluids by soaking it for 10 minutes in a 0.5% chlorine solution.
  - Wash cleaning buckets, cloths, brushes, and mops with detergent and water daily, or sooner if visibly dirty. Rinse in clean water and dry completely before reuse.
- Always wear utility gloves while cleaning, laundering linens, or handling waste.
- Separate contaminated waste (e.g., items soiled by blood and other body fluids) from non-contaminated waste.
- Dispose of the placenta in a safe and culturally appropriate way.
  - Wear gloves when handling the placenta.
  - Carry the placenta in a leakproof container.
  - Burn the placenta or bury it in a pit at least 2 meters deep.
- Use a puncture-resistant container for contaminated sharps, and destroy the container when it is two-thirds full.
- Follow the steps below to destroy containers of contaminated waste and sharps.
  - Add a small amount of kerosene to burn the container of contaminated waste or used syringes and needles.
  - Burn contaminated waste in an open area downwind from the care site.
  - Dispose of waste at least 50 meters away from water sources.

Textbox 1-9. Tips for Processing Linen

- Linen should be collected in cloth or plastic bags or containers with lids.
- Always wear utility gloves and a plastic or rubber apron when handling soiled linen.
- Linen should be sorted carefully because soiled linen frequently contains needles, sharps, soiled dressings, or other infectious items.
- All linen items used in the direct care of clients must be thoroughly washed before reuse.
- Decontamination prior to washing is not necessary, unless linen is heavily soiled and will be handwashed.

RECORD KEEPING

Accurate record keeping is necessary for adequate monitoring of the woman's or newborn's condition, for providing continuity of care (over time and across healthcare workers), for planning and evaluating the client's care, and for communication between healthcare workers and between care sites. The healthcare facility establishes and maintains a record for every woman and newborn who receive care, and the healthcare worker refers to and updates this record at each visit.

Types of information noted in each client's record include the following:

- Personal information (e.g., client's name, age, address, contact information)
- Chief complaint (client's reason for coming)
- Findings from the history, physical examination, screening, and other diagnostic tests and procedures
- Interpretation of findings/assessment, including identification of problems
- Details of the care plan, including birth preparedness and complication readiness plans, and any changes in these plans
- Care provided, including prophylaxis, advice and counseling, and treatments for specific problems
- Referrals made
- Outcomes (of care provided, referrals/transfers made)
- Plans for followup/return visit

Below are practical guidelines for taking clear, concise, and accurate records.

- Prepare/update client records as soon as possible (during or immediately after the visit). Information not recorded in a timely manner may be forgotten or remembered incorrectly.
- Record all signs/symptoms that contribute to an interpretation of findings/assessment (e.g., "hemoglobin 9 g/dL, moderate lethargy and fatigue, respirations 26/min, pale conjunctiva—assessment: mild to moderate anemia").
- Note the absence of any signs/symptoms that may be expected given an interpretation of findings/assessment (e.g., "hemoglobin 10 g/dL, mild lethargy and fatigue, normal respirations [16/min], pink conjunctiva—assessment: mild to moderate anemia").
- Note exact values and measurements where appropriate (e.g., "blood pressure: 120/95" rather than "blood pressure slightly elevated").
- Clearly distinguish between clinical observations and the client's subjective experience (e.g., "woman feels hot to the touch" versus "woman reports feeling feverish").
- Present findings as objectively and nonjudgmentally as possible, as statements of fact rather than opinion (e.g., "woman has not taken medication" rather than "woman is uncooperative").

- Use neat handwriting and avoid unnecessary abbreviations/shorthand. Information should be legible/understandable to other healthcare workers, who may need to consult the client's record.
- Store records in a secure location, where only authorized personnel can access them.

CHAPTER FOUR

CONDUCTING THE BASIC MATERNAL AND NEWBORN CARE VISIT

ESSENTIAL PRE-VISIT ACTIVITIES

Before the skilled provider conducts a basic maternal and newborn care visit, the following activities should be completed:

- The woman and/or newborn undergo a quick check (**Annex 6, page 4-61**) to ensure that they do not have danger signs that may indicate a life-threatening complication or—for the pregnant woman—signs of labor.
  - If the woman has signs of labor but no danger signs, she should receive basic labor/childbirth care as described in **Chapter 6**.
  - If the woman and/or newborn has any danger signs, the woman and/or newborn should receive emergency attention and care, as indicated.
  - If there are no danger signs or signs of labor, the woman and/or newborn should wait to be seen by the skilled provider.
- Before the woman (and newborn, if applicable) and her family enter the client care area, the skilled provider completes the following tasks:
  - Reviews the woman's and/or newborn's medical records, if available. (It is important to gather as much information as possible from existing records and charts.)
  - Ensures that the client care area is adequately prepared, including:
    - Placing waste products and contaminated objects (from the previous visit) into the appropriate containers;
    - Wiping down surfaces with 0.5% chlorine solution;
    - Checking that essential equipment and supplies (**Annex 2, page 4-3**) are available, easily accessible, and ready for use; and
    - Tidying the area if necessary.
  - Uses an antiseptic rub or washes her/his hands.

(For more information, see Preparation of the Care Site [**Annex 1, page 4-1**] and Infection Prevention [**Chapter 3, page 1-47**].)

WELCOMING THE WOMAN AND HER FAMILY

As soon as the woman (and newborn, if applicable) and her family enter the client care area, the skilled provider welcomes them as follows.

- Greet them in a manner appropriate to their culture.
  - During the postpartum/newborn period, acknowledge the newborn in a friendly manner as well.
- If this is the first time you have met them, ask their names and introduce yourself. Continue to use their names as appropriate from this point on.
- Offer seating to the woman and, if she desires, a companion (see **Note, page 2-2**).

- Confirm that the woman and/or newborn have undergone the quick check.
- Inform the woman, in general terms, what is going to happen during the visit.
- Answer any questions she may have.

(For more information about Interpersonal Skills, see **page 1-42**.)

Note: The woman's companion can help her feel more comfortable during the visit, as well as assist and support her in many practical ways during the childbearing cycle. During labor and childbirth, the companion has an especially important role in encouraging the woman, tending to her comfort, and helping to care for the baby after the birth. There may be times, however, when the presence of another person—even a close friend or family member—may cause the woman to avoid certain topics of discussion (e.g., violence against women, HIV status) or withhold important information. If you suspect that this is happening, use your best judgment in deciding how to address the situation. You may need to:

- Politely ask the companion to wait outside during certain parts of the visit; or
- Make a note on the woman's records to address certain issues again, when the companion is not present (e.g., at a later visit).

CONDUCTING BASIC ASSESSMENT

- At every visit, conduct basic assessment (history, physical examination, testing) according to the care schedule/overview shown at the beginning of the appropriate chapter. During labor and within the first 6 hours after birth (pre-discharge), the woman and/or newborn should also receive ongoing assessment and supportive care, as indicated, while undergoing assessment. Throughout basic assessment:
  - Adhere to the general principles of basic care as outlined in **Chapter 1** (**page 1-5**).
  - Take all of the findings gathered through each part of the assessment into consideration during other parts of the assessment. This approach can help you:
    - target assessment; and
    - make a more accurate diagnosis, as each finding should be viewed in relation to other findings, rather than as an isolated fact.

(For more information on Clinical Decision-Making, see **Chapter 3, page 1-41**.)

  - If abnormal and potentially abnormal signs/symptoms are detected, conduct additional assessment as indicated (**Textbox 2-1, page 2-3**).
- At return visits, also compare present findings with previous findings to:
  - ensure continued normal progress;
  - identify changes, both positive and negative; and
  - determine whether treatments and other aspects of basic care provision have been effective or require modification.

Textbox 2-1. Following Up on Abnormal/Potentially Abnormal Findings

- If sign/symptoms of conditions requiring urgent referral/transfer are detected, facilitate referral/transfer immediately, as indicated.
  - During labor/childbirth, urgent referral/transfer should be facilitated only after careful consideration and then only when the woman and newborn are in stable condition.
- If signs/symptoms of common discomforts or concerns, special needs, or life-threatening complications are detected, conduct additional assessment and provide additional care, as indicated.
- If sign/symptoms of conditions requiring nonurgent referral/transfer are detected, facilitate referral/transfer after providing basic care, as indicated.
  - During labor/childbirth, nonurgent referral/transfer should not be facilitated until a minimum of 6 hours after birth and then only when the woman and newborn are in stable condition.

PROVIDING BASIC CARE

- At every visit, provide basic care according to the care schedule/overview shown at the beginning of the appropriate chapter. During labor and within the first 6 hours after birth (pre-discharge), the woman and/or newborn should receive ongoing assessment and supportive care, as indicated, while the skilled provider performs key actions. Throughout basic care provision:
  - Adhere to the general principles of basic care as outlined in **Chapter 1** (**page 1-5**).
  - Take all of the findings gathered through basic assessment into consideration during basic care provision. This approach can help you individualize health messages/counseling and other aspects of the basic care provision to best fit the woman's or newborn's needs. (For more information on clinical decision-making, see **page 1-41**.)
  - If abnormal and potentially abnormal signs/symptoms are detected, provide additional care as indicated (**Textbox 2-1**, above).
- At return visits, make any necessary changes to the plan of care, replenish supplies of supplements and other drugs/medications, continue development of and/or review the birth and complication readiness plan, and reinforce key health messages and counseling.

SCHEDULING A RETURN VISIT

Note: Appropriate scheduling of basic care visits depends on the point at which the woman is in the childbearing cycle (e.g., 28 weeks' gestation, 4 days' postpartum) and/or the newborn is in the newborn period (e.g., 24 hours of age, 4 days of age), as well as their individual needs and situations. Women and newborn babies with common discomforts/concerns, special needs, complications, or other problems may require additional visits.

- Before the woman and/or newborn leave, schedule a time for the next antenatal, postpartum, or newborn visit (**Table 2-1, page 2-4**).
  - Immediately after childbirth, if transferring the woman and/or newborn to a separate ward for continued postpartum/newborn care, see **Textbox 2-2** (**page 2-4**).
- Ensure that the woman knows when and where the next visit will be and why the next visit is important.
- Provide contact information for the healthcare facility or skilled provider.
- Address any additional questions or concerns.
- Advise her to bring any records with her to each visit.
- Advise her to bring her partner or other companion with her if possible (to at least one visit).

- Ensure that she understands that she should not wait for the next appointment if she is having problems or experiencing any of the danger signs.
- Review the danger signs and key points of the complication readiness plan.
- Thank the woman and her family for coming.

Table 2-1. Scheduling for Basic Care Visits*

	FIRST VISIT	SECOND VISIT	THIRD VISIT	FOURTH VISIT	COMMENTS
Antenatal Care	16 weeks (by the end of 4 months)	24–28 weeks (6–7 months)	32 weeks (8 months)	36 weeks (9 months)	For women whose pregnancies are progressing normally, a minimum of four antenatal care visits—scheduled as shown—is sufficient.
Childbirth Care	–	–	–	–	Ideally, childbirth care by a skilled provider is initiated when labor begins and continues into the immediate postpartum/newborn period (2 hours after childbirth).
Postpartum Care	6 hours	6 days	6 weeks	–	For women whose postpartum periods are progressing normally, a minimum of three postpartum care visits—scheduled as shown—may be sufficient.
Newborn Care	6 hours	6 days	–	–	For babies whose newborn periods are progressing normally, a minimum of two newborn care visits—scheduled as shown—may be sufficient.

* Visits should take place on or around the times listed.

Textbox 2-2. Preparing for Transfer to Continued Postpartum/Newborn Care

Before the woman and her newborn are transferred to continued postpartum/newborn care:

- Address any additional questions or concerns.
- Review the danger signs and key points of the complication readiness plan.
- Ensure communication of all relevant information about the woman, labor and childbirth, and newborn to the skilled postpartum/newborn care provider(s).
- Ensure that the woman and baby receive ongoing assessment and care in the interim period until 6 hours after birth (or pre-discharge):
  - Ongoing assessment according to the schedules shown in **Chapters 7 and 8** (for the woman: **Table 2-13** [**page 2-85**]; for the newborn: **Table 2-16** [**page 2-111**]); and
  - Ongoing supportive care according to the schedules shown in **Chapters 7 and 8** (for the woman: **Table 2-14** [**page 2-86**]; for the newborn: **Table 2-17** [**page 2-112**]).

CHAPTER FIVE

ANTENATAL CARE

OVERVIEW

After the woman has undergone the quick check (**Annex 6, page 4-61**), the antenatal care visit should be conducted according to the guidelines shown in **Chapter 4** (**page 2-1**) and the schedule shown below (**Table 2-2**).

Table 2-2. Schedule and Overview of Antenatal Care

COMPONENTS/ELEMENTS	1ST VISIT	SUBSEQUENT VISITS
ASSESSMENT		
History		
H-1. Personal information, page 2-6	✓	–
H-2. Menstrual history, contraceptive history/plans, page 2-8	✓	–
H-3. Present pregnancy, page 2-10	✓	✓
H-4. Daily habits and lifestyle, page 2-10	✓	–
H-5. Obstetric history, page 2-11	✓	–
H-6. Medical history, page 2-12	✓	–
H-7. Interim history, page 2-13	–	✓
Physical Examination		
PE-1. General well-being, page 2-14	✓	✓
PE-2. Blood pressure, page 2-15	✓	✓
PE-3. Breasts, page 2-15	✓	As needed
PE-4. Abdomen, page 2-17	✓	✓
PE-5. Genitals, page 2-22	✓	As needed
Testing		
T-1. Hemoglobin levels, page 2-25	✓	As needed
T-2. RPR (or VDRL), page 2-25	✓	–
T-3. HIV, page 2-25	✓[1]	As needed[1]
T-4. Blood group and Rh, page 2-25	✓	As needed
CARE PROVISION		
C-1. Nutritional Support, page 2-26	✓	Reinforce key messages
C-2. Birth and Complication Readiness Plan, page 2-26	✓	Continue to develop as needed; reinforce key messages

Table 2-2. Schedule and Overview of Antenatal Care *(continued)*

COMPONENTS/ELEMENTS	1ST VISIT	SUBSEQUENT VISITS
CARE PROVISION (CONTINUED)		
C-3. Self-Care and Other Healthy Practices, page 2-29 C-3.1. Use of potentially harmful substances, page 2-29 C-3.2. Prevention of infection/hygiene, page 2-29 C-3.3. Rest and activity, page 2-30 C-3.4. Sexual relations and safer sex, page 2-31 C-3.5. Early and exclusive breastfeeding, page 2-32 C-3.6. Family planning, page 2-33	✓	Reinforce key messages
C-4. HIV Counseling and Testing, page 2-33 C-4.1. Pretest counseling, page 2-33 C-4.2. Post-test counseling, page 2-34	✓	As needed
C-5. Immunizations and Other Preventive Measures, page 2-34 C-5.1. Tetanus toxoid (TT) immunization, page 2-34 C-5.2. Iron/folate, page 2-35 Intermittent preventive treatment and insecticide-treated bednets (for malaria)[2], page 3-59 Presumptive treatment (for hookworm infection)[2], page 3-58 Vitamin A supplementation[2], page 3-62 Iodine supplementation[2], page 3-61	✓	Reinforce key messages; replenish drugs as needed

[1] If woman "opts out" of HIV testing at one visit, she should be offered testing at subsequent visits.
[2] According to region/population-specific recommendations

ANTENATAL ASSESSMENT

History (H)

Once you have welcomed the woman and her companion, take the woman's history. Be sure to record all findings in the woman's chart.

➡ **If this is the first visit**, take a complete history (elements **H-1** through **H-6**).

➡ **If this is a return visit**, a shortened history (elements **H-3** and **H-7**) may be sufficient.

H-1. Personal Information (First Visit)

Question	Use of Information/Followup Action

• What is the woman's **name**?	• Use this information to:
	  • Identify the woman, and
	  • Help establish rapport.

• What is her **age** (her date of birth, if available)?	➡ **If the woman is 19 years of age or under**, see Adolescence (**page 3-37**) for additional information about assessment and care provision.

• What is her **phone number** (if available)?
• Where does she live (her **address**, if available)?
	• Use this information to:
	  • Contact the woman, and
	  • Guide development of the birth and complication readiness plan.

Question	Use of Information/Followup Action
• Does she have reliable **transportation**? • What sources of **income/financial support** does she/her family have?	• Use this information to guide development of the birth and complication readiness plan.
• How many **previous pregnancies** (gravida) and **childbirths** (para) has she had?	• Use this information to guide individualization of health messages and counseling and other aspects of basic care provision.
• Is she **currently** having a medical, obstetric, social, or personal **problem or other concerns**? • Has she had any **problems during this pregnancy**?	➡ **If YES:** • Ask general followup questions (**Textbox 2-3**, below) to assess the nature of her problem; and • Consider this information in the context of further assessment. ➡ **If the woman reports signs or symptoms shown in Textbox 2-4** (**page 2-8**), see the corresponding entry for additional information about assessment and care provision.
• Has she received **care from another caregiver** (including a TBA, herbalist, traditional healer) during this pregnancy?	➡ **If YES**, why did she seek care? ➡ **If because of a problem**, ask the general followup questions in Set A (**Textbox 2-3**, below) to assess the nature of her problem. ➡ **If not because of a problem**, ask the general followup questions in Set B (**Textbox 2-3**, below) to assess the nature of care received. • Consider this information in the context of further assessment.

Textbox 2-3. General Followup Questions

Set A: Questions to ask if the woman has (or recently had) a problem:

- What is the problem, exactly?
- When did it first occur?
- Did it occur suddenly or develop gradually?
- When and how often does the problem occur?
- What may have caused the problem? Did anything unusual occur before its onset?
- How is the woman affected by the problem? Is she eating, sleeping, and behaving normally?
- Has the problem become more or less severe?
- Are there accompanying signs/symptoms or conditions? If YES, what are they?
- Has she received care/treatment from another caregiver for this problem? If YES, proceed to Set B.

Set B: Questions to ask if the woman has received care/treatment from another caregiver:

- Who (or what healthcare facility) provided this care?
- What did this care involve (drugs/medications, treatments, etc.)?
- What was the outcome of this care (i.e., Was it effective? If for a problem, did it eliminate the problem?)?

Textbox 2-4. Common Discomforts of Pregnancy

Abdomen, Breasts, and Legs
Abdominal (or groin) pain, page 3-3
Breast changes, page 3-4
Leg cramps, page 3-5
Swelling (edema) of ankles and feet, page 3-5

Digestion and Elimination
Bowel function changes—constipation or diarrhea, page 3-6
Food cravings or eating nonfood substances (pica), page 3-7
Gas, bloating, or loss of appetite, page 3-7
Heartburn or indigestion, page 3-8
Nausea or vomiting, page 3-9
Salivation, increased, page 3-9
Urination, increased, page 3-10

Genitals
Vaginal discharge, page 3-11

Skin
Itchiness, page 3-11
Perspiration, increased, page 3-12
Skin changes, page 3-12
Spider nevi, page 3-12
Stretch marks, page 3-13
Varicose veins, page 3-13

Sleep and Mental State
Dreams (vivid) or nightmares, page 3-14
Fatigue or sleepiness, page 3-14
Feelings of worry or fear about pregnancy and labor, page 3-16
Insomnia, page 3-16
Mood swings, page 3-17

Miscellaneous
Back pain, page 3-18
Bleeding or painful gums, page 3-19
Difficulty getting up/down, page 3-19
Dizziness or fainting, page 3-20
Hair loss, page 3-20
Headache, page 3-21
Heart palpitations, page 3-21
Hemorrhoids, page 3-22
Hip pain, page 3-22
Hyperventilation or shortness of breath, page 3-23
Nasal stuffiness or nasal bleeding, page 3-23
Numbness/tingling of fingers and toes, page 3-24
Walking awkwardly (waddling) or clumsiness, page 3-24

H-2. Menstrual History, Contraceptive History/Plans (First Visit)

Question	Use of Information/Followup Action
• When was the first day of her **last menstrual period** (LMP)?	➡ **If the woman does not know the first day of her LMP**, confirm pregnancy and/or calculate gestational age based on further assessment, for example: • Symptoms of pregnancy (**Textbox 2-5, page 2-9**), as found through additional history • Signs of pregnancy, as found through physical examination or testing (abdominal examination, vaginal examination, urine pregnancy test, or ultrasound) ➡ **If the woman knows the first day of her LMP**, ask these followup questions: • Was her LMP abnormal in terms of onset, flow, and duration? • Was she using a hormonal contraceptive or breastfeeding when she became pregnant? ➡ **If NO to BOTH followup questions**, calculate estimated date of childbirth (EDC) using one of the methods shown in **Textbox 2-6** (**page 2-9**). ➡ **If YES to EITHER followup question**, confirm pregnancy and/or calculate gestational age based on further assessment, for example: • Symptoms of pregnancy (**Textbox 2-5, page 2-9**), as found through additional history • Signs of pregnancy, as found through physical examination or testing (abdominal examination, vaginal examination, urine pregnancy test, or ultrasound)
• How many **more children** does she plan to have?	• Use this information to guide individualization of family planning and other aspects of basic care provision.

Question	Use of Information/Followup Action
• Has she used a **family planning method** before?	➡ **If YES**, ask these followup questions: • Which family planning method(s) did she use? • If one method: Did she like it? Why/why not? • If more than one method: Which did she like most? Which did she like least? Why? • Use this information to guide individualization of family planning and other aspects of basic care provision.
• Does she plan to use a **family planning method after** this baby is born?	➡ **If YES**, ask these followup questions: • Which method does she want to use? • Would she like information on additional methods? • Use this information to guide individualization of family planning and other aspects of basic care provision.

Textbox 2-5. Symptoms of Pregnancy

A woman may seek care to confirm that she is pregnant, having noticed the following symptoms:

- No menses—she may have missed one or more menstrual periods
- Breast changes—she may notice an increase in size, as well as tenderness or a tingling sensation
- Nausea and/or vomiting—she may experience these symptoms at any time during the day/night, most commonly in the 1st trimester
- Increased urinary frequency—she may notice that she has to urinate more frequently than usual
- Quickening—she may feel the baby move

Textbox 2-6. Methods for Calculating Estimated Date of Childbirth

The following methods can be used to calculate EDC:

- **Gestational age calculator**, such as the pregnancy wheel
- **Calendar method**, based on the following formula:

  the date of the first day of the LMP + 7 days – 3 months = EDC
  for example: 9 May + 7 days – 3 months = 16 February

- **Moon method** (if her periods are usually 1 moon, or 4 weeks, apart): If a woman's period starts on a full moon, the baby is due 10 full moons later. If her period starts on a new moon, the baby is due 10 new moons later.

H-3. Present Pregnancy (Every Visit)

Question	Use of Information/Followup Action
• Has she felt **fetal movements**? **Note**: If the woman knows when the fetal movements began, use this information to help confirm/calculate gestational age. Fetal movements are usually first felt between 16 and 20 weeks' gestation.	➡ **If NO and the woman is/may be beyond 22 weeks' gestation**, ACT NOW!—see Management of Decreased or Absent Fetal Movements (**Textbox 3-43, page 3-111**) before proceeding. ➡ **If YES**, ask these followup questions: • When did the fetal movements begin? • Has she felt any in the last day? ➡ **If the woman has felt fetal movements but not in the last day**, ACT NOW!—see Management of Decreased or Absent Fetal Movements (**Textbox 3-43, page 3-111**) before proceeding.
• What are **her feelings** about the pregnancy? • What are her **partner's/ family's feelings** about it?	• Use this information to guide individualization of Support for Mother-Baby-Family Relationships and other aspects of basic care provision. ➡ **If she reports mood swings (page 3-17) or worry or fear (page 3-16)**, see Chapter 9 for additional information about assessment and care provision.

H-4. Daily Habits and Lifestyle (First Visit)

Question	Use of Information/Followup Action
• Does the woman work outside the home? Is her **daily workload** strenuous (i.e., how much does she walk, carry heavy loads, engage in physical labor)? • Does she get adequate **sleep/rest**? • Is her **dietary intake** adequate (ask what she eats in a typical day, or what she has eaten in the past 2 days)? Does she eat any **nonfood substances** such as dirt or clay? • Has she **given birth within the last year**? • Is she currently **breastfeeding** another child?	• Use this information to: • Determine whether there is a balance between the physical demands of the woman's daily life and her dietary intake; and • Guide individualization of Nutritional Support and other aspects of basic care provision. ➡ **If eating nonfood substances (pica) is reported**, see **page 3-7** for additional information about assessment and care provision.
• Does she smoke, drink alcohol, or use any other **potentially harmful substances**?	• Use this information to guide individualization of health messages and counseling and other aspects of basic care provision.
• With whom does she live (partner, children, other **household members**)?	• Use this information to guide development of the birth and complication readiness plan.

Question	Use of Information/Followup Action

• Inform the woman that you are going to ask her some questions of a **personal nature**, and that **you ask these questions of all clients**.
  • Has anyone ever **kept her** from seeing family or friends, **not allowed her** to leave the house, or **threatened her** life?
  • Has she ever been **injured**, hit, or forced to have sex by someone?
  • Is she **frightened** of anyone?
	➡ **If NO to ALL questions OR the woman does not want to discuss this issue**, inform her that she can discuss it with you at any time.
	➡ **If YES to ANY question OR you suspect abuse**, see Violence against Women (**page 3-81**) for additional information about assessment and care provision.
	
	Note: Violence against women is a difficult topic to address, especially if it is not clearly condemned in the woman's culture. To encourage the woman to discuss this issue with you:
	• Ensure complete confidentiality by asking these questions when she is alone (i.e., when no family members or friends are present).
	• Make it clear that no one deserves to be hit or abused by anyone and that it should never happen, even though some people may think there is nothing wrong with it.

H-5. Obstetric History (First Visit)

Note: Although a woman with a poor obstetric history does not necessarily require additional/specialized care, knowing about past complications helps you understand any concerns she may have during this pregnancy/ childbirth. In addition, discussing past complications provides an opportunity to emphasize the importance of having a birth and complication readiness plan.

Question	Use of Information/Followup Action

• If this is not the woman's first pregnancy/ childbirth, has she had any of the following **previous complications**:
  • Convulsions (pre-eclampsia/eclampsia) during pregnancy or childbirth?
  • Cesarean section, uterine rupture, or any uterine surgery during a previous childbirth?
  • Tears through the sphincter (3rd degree tear) and/or rectum (4th degree tear) during childbirth?
  • Postpartum hemorrhage?
  • Stillbirths; preterm or low birthweight babies; babies who died before 1 month of age?
  • Three or more spontaneous abortions?
	➡ **If YES**, see Maternal, Fetal, or Newborn Complications of Previous Pregnancy, Labor/Childbirth, or the Postpartum/Newborn Period (**page 3-64**) for additional information about assessment and care provision.

• If this is not the woman's first child, has she **breastfed before**?	➡ **If NO**, explore the reasons why.
	  • What prevented her from breastfeeding?
	  • Did she stop because she had problems breastfeeding?
	➡ **If YES**, ask these followup questions:
	  • For how long did she breastfeed previous babies?
	  • Did she have problems breastfeeding?
	• Use this information to guide individualization of health messages and counseling and other aspects of basic care provision.

H-6. Medical History (First Visit)

Question	Use of Information/Followup Action
• Does the woman have any **allergies**?	➡ **If YES**, avoid use of any known allergens.
• Has the woman been diagnosed with **HIV**?	➡ **If YES**, see HIV (**page 3-51**) for additional information about assessment and care provision.
• Has she been recently (within the last 3 months) diagnosed with **anemia**?	➡ **If YES**, see Anemia (**page 3-41**) for additional information about assessment and care provision.
• Has the woman been diagnosed with **syphilis**?	➡ **If YES**, see Syphilis (**page 3-76**) for additional information about assessment and care provision.
• Has the woman been diagnosed with **hepatitis, tuberculosis, heart disease, kidney disease, sickle cell disease, diabetes, goiter, or another serious chronic illness**?	➡ **If YES**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.
• Has she had any **previous hospitalizations or surgeries**?	➡ **If YES**, ask these followup questions: • What was the reason for the hospitalization or surgery? • When was it? • What was the outcome? ➡ **If the condition is unresolved or has the potential to complicate the pregnancy or childbirth**, consider this information in the context of further assessment.
• Is she taking any **drugs/medications**—including traditional/local preparations, herbal remedies, over-the-counter drugs, vitamins, and dietary supplements?	• Use this information to guide individualization of health messages and counseling and other aspects of basic care provision.
• Has she had a complete series of five **tetanus toxoid** (TT) immunizations to date? • Has it been less than 10 years since her **last booster**?	• Use this information to assess the woman's need for TT, according to the recommended TT schedule (**Table 2-3, page 2-34**). ➡ **If NO to EITHER question OR the woman does not have a written record of prior TT immunizations**, proceed according to the recommended TT schedule (**Table 2-3, page 2-34**).

H-7. Interim History (Return Visits)

Note: The questions below, together with those in **H-3**, represent the minimum that you would ask a woman upon a return visit. Additional history may be necessary depending on the woman's individual needs.

Question	Use of Information/Followup Action

• Is she having a medical, obstetric, social, or personal problem or other concerns currently?
• Has she had any **problems (or significant changes)** since the last visit?
	➡ **If YES:**
	  • Ask general followup questions (**Textbox 2-3, page 2-7**) to assess the nature of the problem (or change); and
	  • Consider this information in the context of further assessment.
	➡ **If the woman reports signs or symptoms shown in Textbox 2-4** (**page 2-8**), see the corresponding entry for additional information about assessment and care provision.
	• Use this information to determine changes that need to be made in the current plan of care.

• Has she received **care from another caregiver** (including a TBA, herbalist, traditional healer) since the last visit?	➡ **If YES**, why did she seek care?
	  ➡ **If because of a problem**, ask the general followup questions in Set A (**Textbox 2-3, page 2-7**) to assess the nature of her problem.
	  ➡ **If not because of a problem**, ask the general followup questions in Set B (**Textbox 2-3, page 2-7**) to assess the nature of care received.
	• Consider this information in the context of further assessment.

• Has there been a **change in the woman's personal information** (phone number, address, etc.) since the last visit?
• Has there been a **change in her daily habits or lifestyle** (increase in workload, decrease in rest/sleep or dietary intake, etc.) since the last visit?
• Has there been a **change in her medical history** since the last visit? For example, new or recent:
  • Diagnoses
  • Injuries
  • Hospitalizations
  • Drugs/medications
	• Use this information to:
	  • Maintain accuracy of the woman's medical records, and
	  • Determine changes that need to be made in the current plan of care.
	
	Remember: The questions in element **H-3** (Present Pregnancy) should be asked at every antenatal care visit.

Question	Use of Information/Followup Action
• Has she been **unable to carry out any part of the plan of care** (e.g., taking drugs/medications as prescribed, following dietary recommendations)? • Has she had any **reactions or side effects** to immunizations or drugs/medications given at last visit?	➡ **If YES to EITHER question:** • Consider this information in the context of further assessment. • Use this information to determine changes that need to be made in the current plan of care.

Physical Examination (PE)

When you have finished taking the woman's history, perform a physical examination. Be sure to record all findings in the woman's chart.

➡ **If this is the first visit**, perform a complete physical examination (elements **PE-1** through **PE-5**).

➡ **If this is a return visit**, a shortened physical examination may be sufficient:

- **Always** assess general well-being, examine conjunctiva, measure blood pressure, and examine the abdomen (elements **PE-1**, **PE-2**, **PE-4**).
- Perform visual inspection of the breasts and genital examination (elements **PE-3**, **PE-5**) **as needed**.

PE-1. Assessment of General Well-Being (Every Visit)

Element	Normal	Abnormal/Followup action
Gait and movements **Facial expression**	• The woman **walks** without a limp. • Her **gait and movements** are steady and moderately paced. • Her **facial expression** is alert and responsive, yet calm.	➡ **If findings are not within normal range**, ask these followup questions: • Has she been without food or fluids for a prolonged period? • Has she been taking drugs/medications, herbs, etc.? • Does she have an injury? ➡ **If YES to ANY of the above questions**, consider the findings during further assessment and when planning/implementing care. ➡ **If NO to ALL of the above questions:** • Ask general followup questions to assess the nature of her problem (**Textbox 2-3, page 2-7**); and • Consider this information in the context of further assessment.
General cleanliness	• The woman is generally clean (i.e., there is no visible dirt, no odor, etc.).	➡ **If the woman appears unclean**, consider when individualizing health messages and counseling and other aspects of basic care provision.

Element	Normal	Abnormal/Followup action
Skin	• The woman's skin is free from lesions and bruises.	➡ **If there are lesions and bruises on the woman's skin OR you suspect abuse**, see Violence against Women (**page 3-81**) for additional information about assessment and care provision. ➡ **If there are lesions and bruises on the woman's skin AND you do not suspect abuse**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.
Conjunctiva (mucous membrane on insides of eyelids)	• The woman's conjunctiva is pink (not white or very pale pink) in color.	➡ **If her conjunctiva appears white or very pale rather than pink**, see Anemia (**page 3-41**) for additional information about assessment and care provision.

PE-2. Blood Pressure Measurement (Every Visit)

- Have the woman remain seated or lying down with the knees slightly bent, ensuring that she is comfortable and relaxed.
- Measure her blood pressure (BP).

Normal	Abnormal/Followup Action
• Systolic BP (top number) is 90–140 mmHg, and • Diastolic BP (bottom number) is less than 90 mmHg	➡ **If the systolic BP is less than 90 mmHg**, ACT NOW!—perform Rapid Initial Assessment (**page 3-90**) before proceeding. ➡ **If the diastolic BP is 90–110 mmHg**, ACT NOW!—see Severe Headache, Blurred Vision, or Elevated Blood Pressure (**page 3-108**) before proceeding. ➡ **If the diastolic BP is more than 110 mmHg**, ACT NOW!—perform Rapid Initial Assessment (**page 3-90**) before proceeding.

PE-3. Visual Inspection of the Breasts (First Visit/As Needed)

- Help the woman prepare for further examination (follow the steps shown in **Textbox 2-7** [**page 2-16**]).
- Ask the woman to uncover her body from the waist up.
- Have her remain seated with her arms at her sides.
- Visually inspect the overall appearance of the woman's breasts, such as contours, skin, and nipples; note any abnormalities.

Element	Normal	Abnormal/Followup Action

Contours
 	
Skin
	• Contours are regular with no dimpling or visible lumps.
	• Skin is smooth with no puckering; no areas of scaliness, thickening, or redness; and no lesions, sores, or rashes.
	• **Normal variations:**
	  • Breasts may be larger (and more tender) than usual.
	  • Veins may be larger and darker, more visible beneath the skin.
	  • Areolas may be larger and darker than usual, with tiny bumps on them.
		➡ **If findings are not within normal range**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.

Nipples	• There is no abnormal nipple discharge.
	• Nipples are not inverted.
	• **Normal variations:**
	  • Nipples may be larger, darker, and more erectile than usual.
	  • Colostrum (a clear, yellowish, watery fluid) may leak spontaneously from nipples after 6 weeks' gestation.
		➡ **If there is abnormal nipple discharge**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.
		➡ **If nipples appear to be inverted**, test for protractility (**Textbox 2-8, page 2-17**).
		  ➡ **If the nipples are inverted**, be alert for potential breastfeeding problems (e.g., problems with attachment of the newborn to the breast, suckling).

Textbox 2-7. Preparing for Further Examination

Complete the steps below before performing the rest of the physical examination. Before asking the woman to undress:

- Explain the next steps in the physical examination and obtain her permission/consent before proceeding.
- Ask her to empty her bladder.
  - **During pregnancy**: At the first visit and as indicated, have the woman provide a urine sample at this time if you (or your healthcare facility) are equipped to conduct urine testing.
- Have the woman undress in private.
  - **During pregnancy and the postpartum period**: Ask her to remove only enough clothing to complete the examination. For example:
    - For the breast inspection, she should remove her upper garments.
    - For the genital examination, she should remove her lower garments.
    - For the abdominal examination, she should remove or loosen upper and lower garments as needed.
  - **During labor/childbirth**: If possible, give her a clean gown to wear (instead of having her remove or loosen individual items of clothing).
- Provide her with a drape or blanket (if available) to cover parts of her body that are not being examined.
- Help her onto the examination surface and assist her in assuming a comfortable position. Use a pillow, if available, to support her head. If necessary, ask her to take a few deep breaths to help her relax.
- Wash your hands thoroughly with soap and water and dry them with a clean, dry cloth or allow them to air dry.
- Put new or high level-disinfected examination gloves on both hands.

Textbox 2-8. Checking Protractility of Nipples that Appear Inverted

- Place the thumb and fingers on either side of the areola and gently squeeze.
- If the nipple goes in when it is gently squeezed, then it is inverted. (Truly inverted nipples are rare.)

PE-4. Abdominal Examination (Every Visit)

- If you have not already done so, help the woman prepare for further examination (follow the steps shown in **Textbox 2-7** [**page 2-16**]).
- Ask the woman to uncover her abdomen.
- Have her lie on her back with her knees slightly bent.

Element	Normal	Abnormal/Followup Action
Surface of the abdomen (First Visit)	• There are no scars (from previous cesarean section, uterine rupture, or other uterine surgeries) on the surface of the abdomen.	➡ **If there is a scar from a cesarean section, uterine rupture, or other uterine surgery**, see Maternal, Fetal, or Newborn Complications of Previous Pregnancy, Labor/Childbirth, or the Postpartum/Newborn Period (**page 3-64**) for additional information about assessment and care provision.

Fundal height (between 12 and 22 weeks' gestation)
 	
For the procedure, see **Textbox 2-9** (**page 2-19**).
 	
(After 16 weeks' gestation, see also **Fetal parts and movement** [**page 2-18**].)
	• The uterus feels firm.
	• Fundal height increases, and does not decrease, between visits.
	• Fundal height is consistent with the gestational age, as previously calculated.
	  • **At 12 weeks**, the uterus rises out of the pelvis and is palpable just above the symphysis pubis.
	  • **At 16 weeks**, the uterus is about halfway between the symphysis pubis and umbilicus.
	  • **At 18–20 weeks**, the uterus measures about 20 cm above the symphysis pubis, just below the umbilicus.
	  • **At 22 weeks**, the uterus is at the level of the umbilicus.
	
	(See also **Figure 2-1** [**page 2-20**].)
		➡ **If any of the following signs is present**, see Size-Date Discrepancy through 22 Weeks' Gestation (**page 3-72**) for additional information about assessment and care provision:
		• Uterus is soft and boggy,
		• Uterus has decreased in size since the last visit, or
		• Uterus is too small or large for dates.

Element	Normal	Abnormal/Followup Action
Fundal height (after 22 weeks' gestation) For the procedure, see **Textbox 2-9** (**page 2-19**). (See also **Fetal parts and movement** [below].)	• Fundal height increases, and does not decrease, between visits. • Fundal height is consistent (within 2 cm+/-, per local standards) with the gestational age, as previously calculated. • **At 22–24 weeks**, the uterus measures about 24 cm above the symphysis pubis, at the upper margin of the umbilicus. • **At 26–30 weeks**, the uterus measures about 28 cm above the symphysis pubis, midway between the umbilicus and the xiphoid process. • **At 30–34 weeks**, the uterus measures about 30 to 32 cm in length, closer to the xiphoid process than the umbilicus. • **At 34–38 weeks**, the uterus measures about 32 to 34 cm above the symphysis pubis and extends to the xiphoid process. • **At 39–40 weeks**, the uterus measures about 32 to 34 cm above the symphysis pubis, as the presenting part of the fetus settles into the pelvis. (See also **Figure 2-1** [**page 2-20**].)	➡ **If either of the following signs is present**, see Size-Date Discrepancy after 22 Weeks' Gestation (**page 3-73**) for additional information about assessment and care provision: • Uterus has decreased in size since the last visit, or • Uterus is too small or large for dates.
Fetal parts and movement (between 20 weeks' and term gestation) (At/after 36 weeks' gestation, see also **Fetal lie and presentation**, [below].)	• **At 24+ weeks**, fetal parts are palpable. • **After 22+ weeks**, fetal movements may be felt.	➡ **If a fetus is not palpable and the likelihood of pregnancy is in doubt**, confirm pregnancy by performing a pelvic examination (**page 4-26**) or conducting a urine pregnancy test.

Fetal lie and presentation (at/after 36 weeks' gestation)
 	
For the procedure, see **Textbox 2-10** (**page 2-20**).
	• **At 36 weeks**, the fetus is longitudinal in lie and cephalic in presentation.
	• **After 36 weeks**, the head may be:
	  • Fixed, engaged
	  • Dipping into the pelvis
	  • Free and floating
		➡ **If the fetus is in breech presentation or transverse lie and you do not suspect labor**, facilitate nonurgent referral/ transfer (**Annex 7, page 4-63**) after providing basic care.

Element	Normal	Abnormal/Followup Action
Fetal heart tones (after 20 weeks' gestation) For the procedure, see **Textbox 2-11** (**page 2-21**).	• **By 12 weeks**, fetal heart tones are heard with a Doppler stethoscope or electronic fetal stethoscope (fetoscope). • **At 20+ weeks**, fetal heart tones are heard with a Pinard fetoscope. • Fetal heart rate is from 120 to 160 beats per minute (during pregnancy only, not when the woman is in labor).	➡ **If fetal heart tones are present but not within normal range**, ACT NOW!—see Management of Abnormal Fetal Heart Rate (**Textbox 3-45, page 3-113**) before proceeding. ➡ **If fetal heart tones are not present**, ACT NOW!—see Management of Absent Fetal Heart Tones (**Textbox 3-44, page 3-112**) before proceeding.

Textbox 2-9. Procedure for Fundal Height Measurement

Procedure for 12–22 weeks:

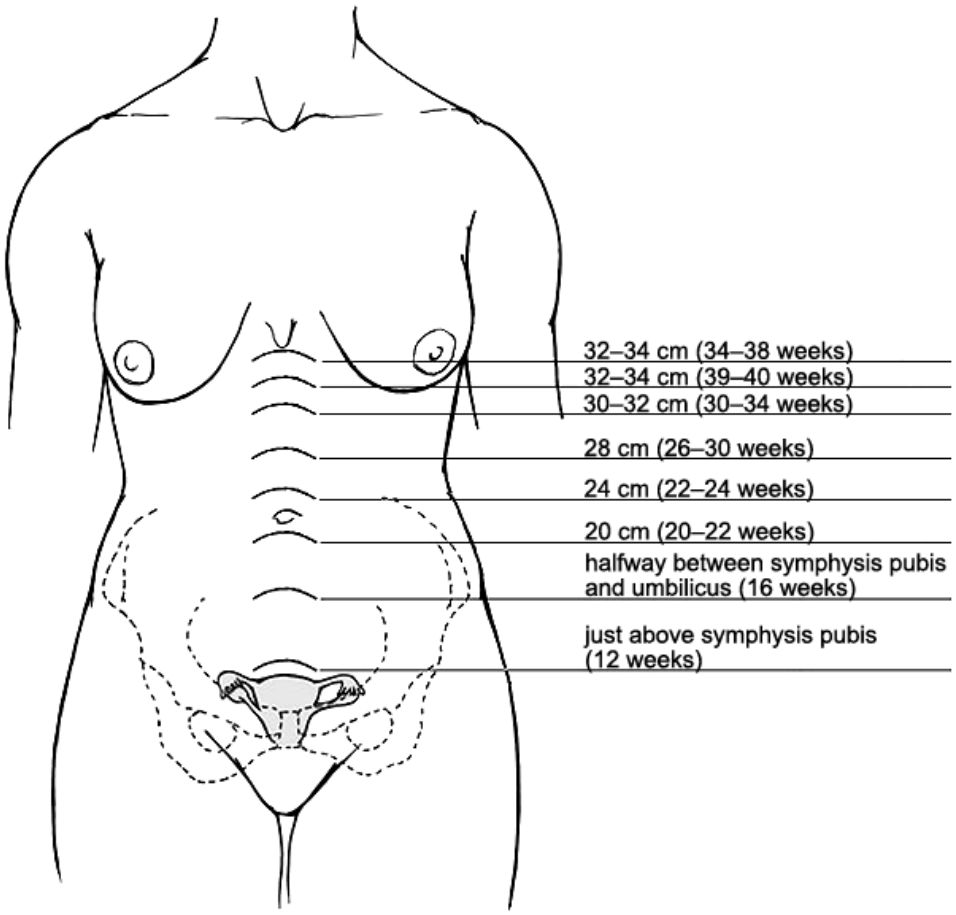
- Gently palpate the abdomen above the symphysis pubis.
- Estimate the weeks of gestation by determining the distance between the top of the fundus and the symphysis pubis (**Figure 2-1, page 2-20**).

Procedure for more than 22 weeks:

- Check the fundal height with a tape measure.
- Place the zero line of the tape measure on the upper edge of the symphysis pubis.
- Stretch the tape measure across the contour of the abdomen to the top of the fundus. Use the abdominal midline as the line of measurement (**Figure 2-1, page 2-20**).
- Alternatively, place the zero line of the tape measure at the top of the fundus and stretch to the upper edge of the symphysis pubis.

Note: When comparing actual fundal height measurements to those listed in the assessment table, be aware that there is variation among different populations in what is considered a "normal" fundal height at each gestational stage. Refer to local standards to determine appropriate fundal height measurements for your client population.

Figure 2-1. Antenatal Fundal Height Measurement



Textbox 2-10. Procedure for Determining Fetal Lie and Presentation

Before performing the following three maneuvers:
- Be sure your hands are clean and warm.
- Stand at the woman's side, facing her head.

STEP 1: Fundal Palpation (**Figure 2-2, page 2-21**):
- Using the flat part (pads), not the tips, of your fingers, place both hands on the sides of the fundus at the top of the abdomen.
- Determine which part of the fetus is at the top of the uterus. To do this, gently but firmly use the flat part (pads) of the fingers to assess the consistency and mobility of the fetal part:
  - The buttocks will be softer and more irregularly shaped than the head, and cannot be moved independently of the body.
  - The head will be harder than the buttocks, and can be moved back and forth between both hands.

STEP 2: Lateral Palpation (**Figure 2-3, page 2-21**):
- Move your hands smoothly down the sides of the uterus to feel for the fetal back; it will feel firm and smooth in contrast to the small parts, which will feel knobby and easily moveable.
- Keep your dominant hand steady against the side of the uterus, while using the palms of your nondominant hand to apply gentle but deep pressure to explore the opposite side of the uterus.
- Repeat the maneuver, palpating with the dominant hand and steadying with the nondominant hand.

STEP 3: Pelvic Palpation (Supra-Pubic) (**Figure 2-4, page 2-21**):
- Turn and face the woman's feet. (Her knees should already be bent slightly to relax the abdominal muscles.)
- Place your hands on the sides of the uterus with the palms of your hands below the level of the umbilicus and your fingers pointing toward the symphysis pubis. Grasp the fetal part snugly between the hands. (The thumbs will be at the approximate level of the umbilicus.)
- If this fetal part is palpable at or above the symphysis, feel it for shape, size, consistency, and mobility. If the head is presenting, a hard mass with a distinctive round surface will be felt. If the breech is presenting, a larger, softer mass will be felt. Observe the woman's face for signs of pain/tenderness during palpation.

Figure 2-2. Fundal Palpation

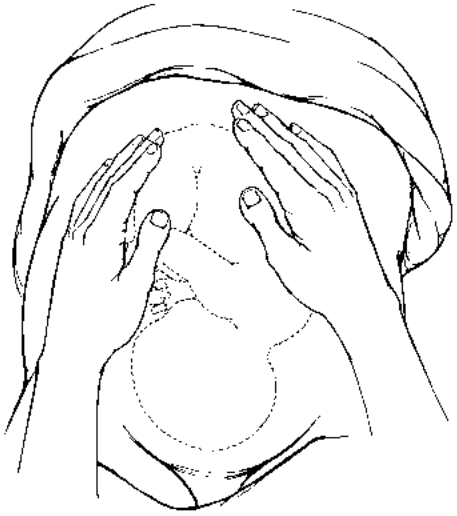


Figure 2-3. Lateral Palpation

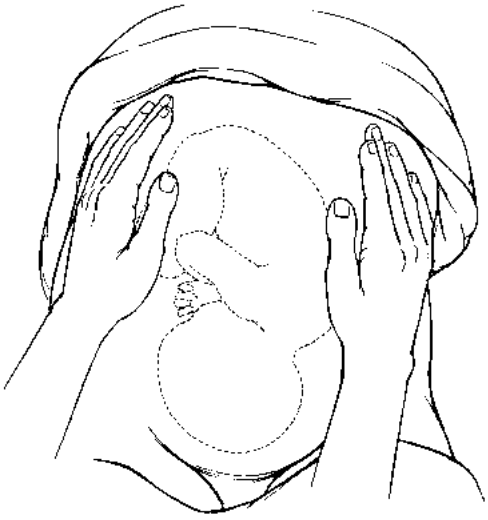
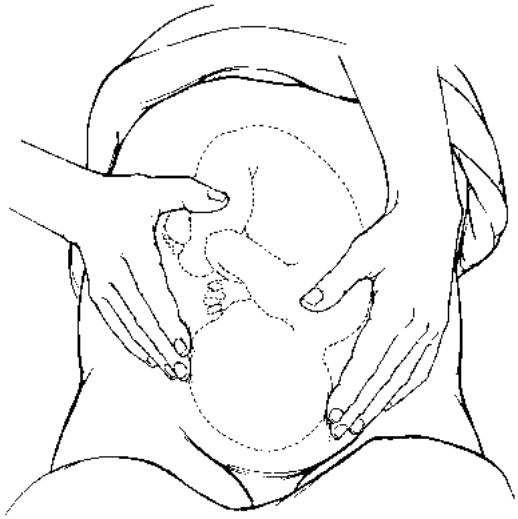


Figure 2-4. Pelvic Palpation (Supra-Pubic)



Textbox 2-11. Procedure for Determining Fetal Heart Rate (after 20 weeks' gestation)

- Place the fetal stethoscope (fetoscope) on the woman's abdomen at right angles to it (on the same side on which you palpated the fetal back).

  Note: If a Pinard fetoscope is not available, you may use a regular stethoscope, headscope, or toilet paper roll.

- Place your ear in close, firm contact with the fetal stethoscope.
- Move the fetal stethoscope around to where the fetal heart is heard most clearly.
- Remove your hands from the fetal stethoscope and listen to the fetal heart.
- Listen for a full minute, counting the beats against the second hand of a clock.
  - **During active labor**: Also listen through a contraction and for at least 15 seconds afterwards.

  Note: Feel the woman's pulse at her wrist, simultaneously, to ensure that you are measuring fetal heart tones and not maternal pulse. The maternal pulse will be slower than the fetal heart rate.

PE-5. Genital Examination (First Visit/As Needed)

- If you have not already done so, help the woman prepare for further examination (follow the steps shown in **Textbox 2-7** [**page 2-16**]).
- Perform a genital/vaginal examination (**Textbox 2-12, page 2-23**).
- After the examination, perform the Post-Examination Steps (**Textbox 2-13, page 2-24**).

Element	Normal	Abnormal/Followup Action
Vaginal opening **Skin** **Labia**	• There are no signs of female genital cutting. • The genital skin is free from sores, ulcers, warts, nits, or lice. • The labia are soft and not painful.	➡ **If signs of genital cutting are present**, see Female Genital Cutting during Pregnancy or Labor (**page 3-49**) for additional information about assessment and care provision. ➡ **If findings (other than signs of genital cutting) are not within normal range**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.
Vaginal secretions	• There is no blood or foul-smelling, yellow, or greenish discharge coming from the vaginal opening. • There is no urine or stool coming from the vaginal opening. • **Normal variations:** There may be increased vaginal secretions, but they are white or clear and odorless.	➡ **If there is vaginal bleeding**, ACT NOW!—see Vaginal Bleeding in Early Pregnancy (through 22 weeks' gestation) (**page 3-102**) or Vaginal Bleeding in Later Pregnancy (after 22 weeks' gestation) or Labor (**page 3-102**) before proceeding. ➡ **If other findings are not within normal range**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.
Skene's and Bartholin's glands	• The Skene's and Bartholin's glands are not painful and do not exude any discharge when milked or pressed.	➡ **If findings are not within normal range**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.

Textbox 2-12. Procedure for Genital/Vaginal Examination

- Before you begin:
  - Inform the woman of what you are going to do before each step of the examination.
  - Ask the woman to uncover her genital area. Cover or drape her to preserve her privacy and respect her modesty.
  - Ask the woman to separate her legs while continuing to bend her knees slightly.
  - Turn on the light and direct it toward the genital area.
  - Wash your hands thoroughly with soap and water and dry them with a clean, dry cloth or allow them to air dry.
  - Put new or high-level disinfected examination gloves on both hands.
- Before cleansing the vulva, inspect the external genitalia.
- Touch the inside of the woman's thigh before touching any part of her genital area.
- Separating the labia majora with two fingers, check the labia minora, clitoris, urethral opening, and vaginal opening.
- Palpate the labia minora. Look for swelling, discharge, tenderness, ulcers, and fistulas. Feel for any irregularities or nodules.
- Look at the perineum. Check for any scars, lesions, inflammation, or skin integrity/cracks in the skin.
- **During the antenatal period:**
  - Check the Skene's gland for discharge and tenderness (**Figure 2-5, page 2-24**). With the palm facing upward, insert the index finger into the vagina and gently push upward toward the urethra; milk the gland on each side of the urethra, and then milk gently directly over the urethra.
  - Check the Bartholin's gland for discharge and tenderness (**Figure 2-6, page 2-24**). Insert the index finger into the vagina at the lower edge of the opening and feel at base of each of the labia majora. Using your finger and thumb, palpate each side for any swelling or tenderness.
  - Ask the woman to bear down while you hold the labia open. Check for any bulging of the anterior or posterior vaginal walls.
- **During labor/childbirth:**
  - Observe the introitus for visible bulging of membranes or fetal head/parts.
  - Perform a vaginal examination: Gently insert the index and middle finger of the examination hand into the vagina, maintaining light, downward pressure as you move your fingers toward the cervix. Continue with the cervical examination.
- **During the postpartum period:** Note bruising of the perineum and characteristics of lochia (by looking at the perineum and the woman's perineal pads).

Figure 2-5. Checking the Skene's Gland

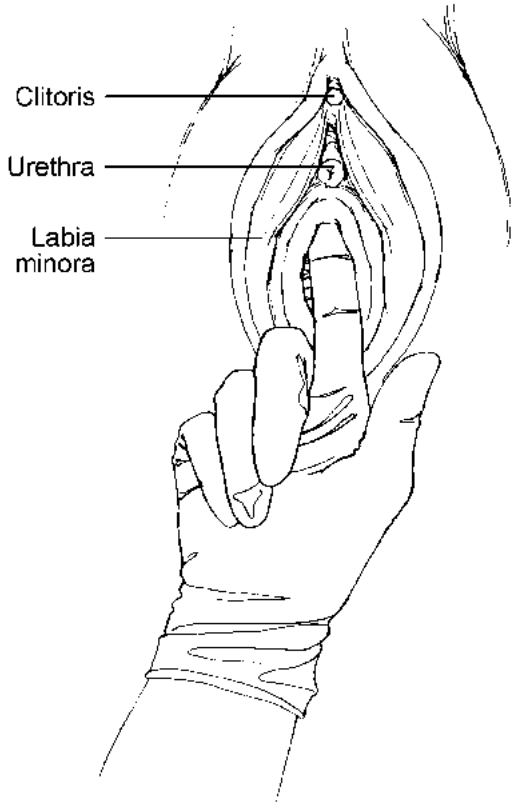


Figure 2-6. Checking the Bartholin's Gland

Textbox 2-13. Post-Examination Steps

Complete the following steps after examining the woman:

- Immerse both gloved hands in 0.5% chlorine solution.
- Remove gloves by turning them inside out.
- If disposing of gloves, place in leakproof container or plastic bag.
- If reusing gloves, submerge in 0.5% chlorine solution for 10 minutes to decontaminate.
- Wash hands thoroughly.
- Assist the woman in getting off the table.
  - **During labor/childbirth**: Assist her in assuming the position of her choice.
- Share your findings with her.

Testing (T)

When you have finished performing a physical examination, conduct testing. Be sure to record all findings in the woman's chart.

➧ **If this is the woman's first visit**, conduct all of the tests listed (elements **T-1** through **T-4**), but remember that the woman may "opt out" of HIV testing (see **Note** [**page 2-25**]).

➧ **If this is a return visit**, conduct tests only as indicated or needed.

- Test hemoglobin levels (element **T-1**) as needed based on signs and symptoms.
- Conduct an HIV test (element **T-3**) whenever the woman chooses to have it done (see **Note, page 2-25**).

Element	Normal	Abnormal/Followup Action
T-1. Hemoglobin levels For the procedure, see **page 4-43**.	• Hemoglobin level is 11 g/dL or more	➡ **If her hemoglobin level is less than 7 g/dL**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If her hemoglobin level is 7–11 g/dL**, see Anemia (**page 3-41**) for additional information about assessment and care provision.
T-2. RPR[1] For the procedure, see **page 4-44**.	• Negative	➡ **If the test is positive for syphilis**, see Syphilis (**page 3-76**) for additional information about assessment and care provision.
T-3. HIV (See **Note** [below].)	• Negative	➡ **If the test is positive for HIV**, see HIV (**page 3-51**) for additional information about assessment and care provision. **Note**: **Always adhere to national guidelines for HIV testing**. In general: • If the test is positive for HIV, test again with a different type/preparation of test. • If the second test is positive, see HIV (**page 3-51**). • If the second test is negative, do a third test for discordant test results. • If the third test is positive, see HIV (**page 3-51**). • If the third test is negative, inform the woman that she is HIV-negative during post-test counseling (**page 2-34**).
T-4. Blood group and Rh, if available	• Blood group is A, B, AB, or O. • Rh is positive.	➡ **If Rh is negative**, the woman is a candidate for anti-D immune globulin.

Note: The woman should be informed that HIV testing is recommended for all pregnant women, but that she may "opt out" of being tested if she desires. If she opts out, be sure to offer testing at all subsequent visits. A woman who chooses not to be tested during the first visit may change her mind and choose to be tested after she has received counseling, considered the benefits of testing, and/or discussed testing with her partner. Assure the woman that "opting out" will not result in her being denied services, and will not affect the care she receives.

[1] Use VDRL if RPR is not available.

Region/Population-Specific Testing:
Urine for Glucose (first visit/as needed)

If the woman lives in an area with a high prevalence of diabetes/gestational diabetes or has a history of this disease, test her urine for glucose.

Normal	Abnormal/Followup Action
Negative	➡ **If her urine is negative for glucose BUT the woman lives in an area with a high prevalence of diabetes/gestational diabetes or has a history of this disease**, repeat the test early in the 3rd trimester (around 28 weeks). ➡ **If her urine is positive for glucose**, the woman has a condition beyond the scope of basic care; facilitate appropriate care and/or referral/transfer to a specialist, higher level of care, or supportive services.

ANTENATAL CARE PROVISION

C-1. Nutritional Support

Based on the woman's dietary history, the resources available to the woman and her family, and any other relevant findings or discussion, individualize the following key nutrition messages.

All women should:

- Eat a balanced diet consisting of beans and nuts, starchy foods (e.g., potatoes, cassava, maize, cereals, rice), animal products (meat, milk, eggs, fish, yogurt, cheese), and fruits and vegetables.
- Eat a variety of foods each day, including foods rich in:
  - Iron: red meat, liver, eggs, peanuts, lentils, dark green leafy vegetables, and shellfish. Substances that inhibit iron absorption, such as coffee or tea and calcium supplements, should be avoided or taken 2 hours after meals.
  - Vitamin A: liver, milk products, eggs, sweet potatoes, pumpkin, carrots, and papaya.
  - Calcium: milk, dark green leafy vegetables, shrimp, dried fish, beans, lentils, whole-grain millet, and oil seeds.
  - Magnesium: cereal, dark green leafy vegetables, seafood, nuts, legumes, and groundnuts.
  - Vitamin C: oranges or other citrus fruits, tomatoes, and potatoes.

Pregnant women should also:

- Eat at least one additional serving of staple food per day.
- Eat smaller, more frequent meals if unable to consume larger amounts in fewer meals.
- Take micronutrient supplements as directed.

C-2. Birth and Complication Readiness Plan

Assist the woman in developing a birth plan that includes both birth preparedness (all the arrangements that should be made for a normal birth) and complication readiness (an exact plan for what to do if a danger sign arises). The woman's family, partner, or other key decision makers in her life should be involved in this process; if she permits, invite them to join in this discussion. Honor the woman's choices except when doing

so may put her or her newborn at risk. Also, be sensitive to cultural beliefs or social norms (e.g., superstitions that urge against buying items for a baby not yet born) that may impede the planning process.

Note: Although this section focuses on what the skilled provider, the woman, and her family can do to prepare for birth and possible complications, birth preparedness/complication readiness is actually a community-wide issue. In order for an individual birth plan to be effective in saving a woman's life, it must also have support—in the form of actions, resources, skills, and attitudes—from policymakers, healthcare facilities, and individual community members.

- On the **first visit**, introduce the concept of a birth plan (including complication readiness):
  - Ensure that the woman and her family understand that they should address each of the items well before the estimated date of childbirth (EDC).
- On each **return visit**, review and update the birth plan:
  - What arrangements have been made since the last visit?
  - Has anything changed?
  - Have any obstacles or problems been encountered?
- By **32 weeks,** finalize the birth plan. The woman and her family should have made all of the arrangements by now. If needed, provide additional assistance at this time to complete the plan.

Components of the Birth and Complication Readiness Plan

Note: Items to be included in the complication readiness plan, which should be discussed/reviewed at every encounter/visit with the woman during the entire childbearing cycle, are indicated with an asterisk (*).

Skilled Provider

Assist the woman in arranging for a skilled provider to attend the birth; this person should be trained in supporting normal labor/childbirth and managing complications, if they arise.

Note: Ensure that the woman knows how to contact the skilled provider or healthcare facility at the appropriate time.

Items Needed for Clean and Safe Birth and the Newborn

Make sure the woman has gathered necessary items for a clean and safe birth. Discuss the importance of keeping items together for easy retrieval when needed.

- Items needed for the birth include: perineal pads/cloths; soap; clean bed cloths; placenta receptacle; clean, unused razor blade; waterproof/plastic cover; clean cord ties.
- Items needed for the newborn include: blankets, diapers/napkins, hat, clothes, etc. that have been washed and dried in the sun.

Note: Items needed depend on the individual requirements of the intended place of birth, whether in a healthcare facility or in the home.

Appropriate Setting/ Healthcare Facility*

Ensure that the woman has an appropriate place for the birth to take place based on her individual needs.

For complication readiness, assist the woman in choosing the appropriate healthcare facility (e.g., district hospital, health center) to go to if danger signs arise.

Transportation*

Ensure that the woman is familiar with local transportation systems and has transportation to an appropriate place for the birth based on her individual needs.

For complication readiness, assist the woman in choosing emergency transportation to an appropriate healthcare facility if danger signs arise.

Funds*

Assist the woman in planning to have funds available when needed to pay for care during normal birth. For example, putting aside even a small amount on a weekly basis can result in savings.

For complication readiness, discuss emergency funds that are available through the community and/or healthcare facility if danger signs arise.

Decision-Making*

Discuss how decisions are made in the woman's family (who usually makes decisions?), and decide the following:

- How decisions will be made when labor begins or if danger signs arise (who is the key decision maker?)
- Who else can make decisions if that person is not present

Support*

Assist the woman in deciding on/making arrangements for necessary support, including the following:

- Companion of her choice to stay with her during labor and childbirth, and accompany her during transport if needed
- Someone to care for her house and children during her absence

Blood Donor*

Ensure that the woman has identified an appropriate blood donor and that this person will be available in case of emergency.

Danger Signs* and Signs of Labor

Ensure that the woman knows the danger signs which indicate a need to enact the complication readiness plan:

- Vaginal bleeding
- Breathing difficulty
- Fever
- Severe abdominal pain
- Severe headache/blurred vision
- Convulsions/loss of consciousness
- Foul-smelling discharge/fluid from vagina
- Decreased/absent fetal movements
- Leaking of greenish/brownish (meconium-stained) fluid from the vagina

Also ensure that she knows the signs of labor, which indicate a need to contact the skilled provider and enact the birth preparedness plan:

- Regular, progressively painful contractions

- Lower back pain radiating from uterus
- Bloody show
- Rupture of membranes

C-3. Self-Care and Other Healthy Practices

Based on the woman's history and any other relevant findings or discussion, individualize health messages and counseling on the topics addressed below.

Although these issues should be addressed at the earliest opportunity, other topics—such as support for mother-baby-family relationships, breastfeeding support, and the basics of newborn care—may be more relevant later in the pregnancy or can be included according to individual need. Ideally, the woman's partner would be present during these discussions.

Note: Women who have **common discomforts** of pregnancy require additional care, which consists mainly of health messages and counseling. **Chapter 9** (**page 3-1**) contains information on additional care for women with common discomforts.

C-3.1. Use of Potentially Harmful Substances

- Smoking, drinking alcohol, and taking any drugs/medications—including certain prescribed and over-the-counter drugs, vitamins and dietary supplements, and herbal/traditional preparations or remedies—may be especially harmful to a pregnant woman and her unborn baby.
- A pregnant woman should inform her skilled provider about any drugs/medications she is currently taking; her skilled provider will decide whether they should be discontinued or the dosage should be adjusted during pregnancy.
- A pregnant woman should talk to her skilled provider before taking any drugs/medications during the course of the pregnancy.
- The skilled provider should prescribe only drugs/medications that are necessary and safe.

C-3.2. Prevention of Infection/Hygiene

General hygiene:

- Hands should be washed before the following activities:
  - Eating or drinking
  - Preparing food
  - Feeding a baby
- Hands should be washed after the following activities:
  - Using the toilet
  - Changing a baby's diaper/napkin
- Safe water should be used for drinking to avoid infections and diarrhea, which may compromise nutritional status. To prepare safe drinking water, do the following:
  - Boil water for 10 minutes before use if it is not clean.
  - Store clean water in a container with a lid.

- Food should be handled and stored safely by doing the following:
  - Clean surfaces on which food is prepared or served.
  - Cover food to avoid flies and contamination.
  - Store food for no more than 12 hours without refrigeration.
- The woman's body, clothing, bedding, and environment should be kept clean; this means:
  - Bathing regularly
  - Changing bedding and clothing regularly
  - Cleaning regularly

Hygiene during pregnancy:

In addition to practicing good general hygiene (above), the pregnant woman should be advised of the following:

- During pregnancy, the pregnant woman should be especially careful about hygiene to prevent disease and infection—pregnant women sweat more and have more vaginal discharge than nonpregnant women (due to hormonal changes), and may be more vulnerable to germs.
- Dental hygiene is especially important during pregnancy because increased estrogen levels can cause swelling and increased sensitivity in gum tissues. Whether she cleans her teeth with a dental stick or a toothbrush and toothpaste, the pregnant woman should do so regularly.

C-3.3. Rest and Activity

Based on the woman's history and any other relevant findings and discussion, individualize the following key messages:

- A pregnant woman should try to decrease the amount of heavy work and increase rest time.
- A pregnant woman needs additional rest. In early pregnancy, the woman will feel tired as her body becomes accustomed to being pregnant. In later pregnancy, the growing fetus uses more of the woman's energy and causes greater strains on her body. As the pregnancy progresses, she will need more and more rest.
- A pregnant woman should have periodic rest periods during the day, in addition to whatever amount of sleep she normally needs.

Note: In most cultures, women do not get permission to rest during pregnancy. It may be your role to play advocate for the woman, and help her find creative ways to reduce her workload and find more time for rest.

- A pregnant woman should avoid lying on her back. The best resting position for a pregnant woman is lying on her left side with her feet elevated. (See also **Textbox 2-14** [**page 2-31**]).
- Pregnant women should avoid sitting or standing for long periods during the day.

Textbox 2-14. Why Side-Lying Is Important for the Pregnant Woman

When a pregnant woman lies flat on her back (such as when she is resting or sleeping), the enlarged uterus puts pressure on the major vessels of her circulatory system, which:

- Decreases blood flow from the lower half of the body, which in turn:
  - Reduces the amount of blood filling the heart;
  - Lowers cardiac output;
  - Restricts blood flow to the fetus; and
  - May result in low blood pressure, which may cause the woman to faint when she gets up.
- The woman can alleviate this syndrome by sitting up or lying on her side.

- During pregnancy, hormonal changes cause softening of cartilage in some joints and relaxation in other joints. This means that the pregnant woman is much more susceptible to injuries. She should therefore:
  - Avoid overexertion;
  - Avoid carrying heavy loads; and
  - Use proper body mechanics (**Textbox 2-15**, below), especially when lifting anything such as a small child.
- The pregnant woman has increased caloric needs. She should consider decreasing her workload and/or avoiding heavy physical labor, especially if she:
  - Appears to be getting thinner;
  - Has unsatisfied hunger or work-related fatigue; or
  - Cannot increase her dietary intake enough to meet the caloric requirements of pregnancy or the physical demands of her daily life.

Textbox 2-15. Proper Body Mechanics

- Use proper body mechanics for lifting:
  - Squat (keeping the spine erect), rather than bend, to lift anything so that the legs (thighs), rather than the back, bear the weight and strain.
  - When squatting or rising from a squatting position, spread the feet apart and place one foot slightly in front of the other, so that there is a broad base for balance.
- Practice good posture when standing or sitting.
- Do not cross the legs when sitting.

C-3.4. Sexual Relations and Safer Sex

Practicing safer sex can reduce the risk of HIV and other sexually transmitted infections (STIs):

- Abstinence or mutually monogamous sex with a partner who is free from HIV or STIs is the only sure protection.
- Consistent use of condoms is important, even during pregnancy.
- Sexual practices that may further increase risk of infection (such as anal sex, "dry" sex, etc.) should be avoided.
- A decrease or increase in the woman's desire for sex is normal during pregnancy.
- Intercourse during a pregnancy that is progressing normally will not harm the woman or the fetus.

- Intercourse should be avoided, however, if she experiences the following:
  - Leaking watery fluid
  - Vaginal bleeding
  - Signs of premature labor
- As the pregnancy progresses, changes in sexual position may be needed to accommodate the woman's enlarged abdomen or satisfy both partners' sexual needs.
- Having or contracting an STI—such as HIV, syphilis, gonorrhea, or chlamydia—while pregnant is dangerous to the woman, her partner, and the unborn baby.

C-3.5. Early and Exclusive Breastfeeding

Note: If the woman is HIV-negative, exclusive breastfeeding for the first 6 months of life should be strongly encouraged. The following health messages and counseling should be provided to all women during pregnancy unless they are HIV-positive or have said that they do not wish to breastfeed.

Based on the woman's history and any other relevant findings and discussion, individualize the key messages below.

Benefits of breastfeeding:

Breastfeeding has many benefits for the woman and newborn, including the following:

- Provides the best nutrition for the newborn:
  - Is easily digested and efficiently used by the baby's body
  - Protects against infection and other illnesses
  - Offers some protection against allergies
- Is cost-effective/affordable
- Promotes mother-baby bonding
- Provides the woman with contraceptive protection until menses return (as long as she is exclusively breastfeeding)

General principles of early and exclusive breastfeeding:

The basic principles of early and exclusive breastfeeding are as follows:

- Babies should begin breastfeeding as soon as possible after birth (preferably within the first hour) and continue for the first 6 months of life.
- Colostrum, the first milk, should be given to the baby, not thrown away.
- The baby should be breastfed **exclusively** for the first 6 months of life. This means that nothing else should be given to the baby to drink or eat during that time.
- The baby should be breastfed whenever s/he wants, day and night (**on demand**), which stimulates the breasts to produce an adequate supply of breastmilk.

Note: For more specific breastfeeding guidelines, see **page 2-102**. For information on proper positioning for good attachment, see **page 4-47**.

C-3.6. Family Planning

During the antenatal period, discussion should begin concerning postpartum contraception options. It should be based on the woman's history and other relevant findings together with her and, if appropriate, her partner's preference for desired family size and child spacing. Appropriate birth spacing is also a crucial element of family health and should be discussed.

- Intervals of at least 3 years have health benefits for both the woman and baby. Appropriate birth spacing lowers the risk of:
  - Maternal mortality
  - Anemia (woman)
  - Premature rupture of membranes (woman)
  - Postpartum endometritis (woman)
  - Malnutrition (woman)
  - Fetal death
  - Preterm birth
  - Small-for-gestational-age baby
  - Newborn death
  - Intrauterine growth retardation and low birthweight baby
- Numerous safe methods of contraception are available for the breastfeeding woman (**page 4-53**).
- The return of fertility after birth is not entirely predictable, and conception can occur before the woman resumes her menstrual periods.

C-4. HIV Counseling and Testing (First Visit/As Needed)

If the woman does not know her HIV status or has not been tested for HIV, provide HIV counseling and testing.

C-4.1. Pretest Counseling

- Inform her that **testing is recommended for all pregnant (and postpartum) women**, but that she may "opt out" (chose not to be tested) if she desires.
- Explain that:
  - HIV counseling and testing is confidential and private.
  - The woman can receive HIV counseling and testing at any visit, even if she has opted out in the past.
- Help the woman assess her **individual risk factors** for HIV/AIDS, such as unprotected sex, multiple partners (more than one partner in the last 3 months), nonmonogamous partner or one with a mobile job (military position, long-distance truck driver), new or casual partner, sexual assault, and injection drug use.
- Provide information about HIV/AIDS: **how the virus is transmitted** (e.g., unprotected sex, reusing needles), how it can affect the body (e.g., decreases the body's ability to fight infections), and how the risk of transmission can be reduced (e.g., mutual monogamy, abstinence, condom use for dual protection).
- Address **local myths and false rumors** about HIV/AIDS, for example, about what it is, how it is transmitted, and who is at risk.
- Provide **information about the test** (its confidentiality, how it is conducted, when the results will be available).

- Provide **information about the results**:
  - A positive result indicates HIV infection.
  - A negative result indicates the absence of HIV infection, but because there is a "window period" between infection and a positive test result, the test may need to be repeated in cases of recent possible infection.
- Emphasize the importance of **returning for her test results** and continuing basic care.

C-4.2. Post-Test Counseling

Arrange to see the woman in person to give her the test results. Do not give results over the telephone.

- For a negative result:
  - Provide the result.
  - Review the woman's individual risk factors and counsel accordingly.
  - Reinforce risk reduction practices, including skill-building exercises (e.g., demonstrating proper use of condoms; role playing to practice negotiation skills, such as for using condoms or abstaining from sex).
  - Identify support for risk reduction (e.g., accessible source of condoms).
- For a positive result, see **Textbox 3-18** (**page 3-53**) for guidance on appropriate post-test counseling, as well as HIV (**page 3-51**) for additional information about assessment and care provision.

C-5. Immunizations and Other Preventive Measures

C-5.1. Tetanus Toxoid (TT) Immunization

➡ **If the woman is due for her next TT vaccination** (according to her written record, history, or the schedule below [**Table 2-3**]):
  - Give tetanus toxoid 0.5 mL IM in the woman's upper arm.
  - Update her card (provide her with one if needed) and inform her when the next vaccination is due.

➡ **If the woman is not due for a TT vaccination**, inform her when the next one is due.

Table 2-3. Tetanus Toxoid Immunization Schedule

TT INJECTION	DUE
TT1	At first contact with a woman of childbearing age or as early as possible during pregnancy (at first postpartum visit)
TT2	At least 4 weeks after TT1
TT3	At least 6 months after TT2
TT4	At least 1 year after TT3
TT5	At least 1 year after TT4

- Counsel and provide health messages about the following:
  - TT immunization is the best protection against tetanus for the woman and her baby. Therefore, it is very important for her to be immunized according to the schedule on her card, and to bring her card to every healthcare visit.
  - The woman and her family should plan/prepare for a clean and safe childbirth with a skilled provider.
  - To prevent tetanus in the newborn, the newborn's cord should be kept clean and dry after birth and until it falls off.

C-5.2. Iron/Folate

- To prevent anemia, prescribe iron 60 mg + folate 400 mcg to be taken by mouth once daily throughout the pregnancy.
- Dispense sufficient supply to last until the next visit.
- Provide health messages and counseling as follows:
  - Eat foods rich in vitamin C, as these help the body absorb iron. Sources of vitamin C include citrus fruits (oranges, grapefruit, lemons, limes), tomatoes, peppers, potatoes, cassava leaves, and yams.
  - Avoid tea, coffee, and colas, as these inhibit iron absorption.
  - Possible side effects of the iron/folate tablets include black stools, constipation, and nausea. Lessen side effects by doing the following:
    - Drinking more fluids (an additional 2–4 cups per day)
    - Eating more fruits and vegetables
    - Getting adequate exercise (such as walking)
    - Taking tablets with meals or at night

Region/Population-Specific Preventive Measures

- For women in areas with a high prevalence of **malaria**, see guidelines for prevention (**page 3-59**).
- For women in areas with a high prevalence of **hookworm infection**, see guidelines for prevention (**page 3-58**).
- For women in areas with a high prevalence of **vitamin A deficiency**, see guidelines for additional supplementation (**page 3-62**).
- For women in areas with a high prevalence of **iodine deficiency**, see guidelines for additional supplementation (**page 3-61**).

CHAPTER SIX

LABOR/CHILDBIRTH CARE

OVERVIEW

After the woman has undergone the quick check (**Annex 6, page 4-61**), care during labor and childbirth should be provided according to the guidelines shown in **Chapter 4** (**page 2-1**) and the schedule shown below (**Table 2-4**).

Table 2-4. Schedule and Overview of Labor/Childbirth Care

COMPONENTS/ELEMENTS	INITIAL ASSESSMENT	1ST STAGE	2ND & 3RD STAGES	4TH STAGE
ASSESSMENT				
Ongoing Assessment, page 2-38	✓	✓	✓	✓
History				
H-1. Personal information, page 2-50	✓	–	–	–
H-2. Estimated date of childbirth/menstrual history, page 2-51	✓	–	–	–
H-3. Present pregnancy and labor/childbirth, page 2-52	✓	–	–	–
H-4. Obstetric history, page 2-53	✓	–	–	–
H-5. Medical history, page 2-54	✓	–	–	–
Physical Examination				
PE-1. General well-being, page 2-55	✓	–	–	–
PE-2. Vital signs, page 2-56	✓	[1]	[1]	[1]
PE-3. Breasts, page 2-57	✓[2]	–	–	–
PE-4. Abdomen, page 2-58	✓	[1]	[1]	[1]
PE-5. Genitals, page 2-63	✓	[1]	[1]	[1]
PE-6. Cervix, page 2-64	✓	[1]	[1]	[1]
Testing				
T-1. RPR (or VDRL), page 2-69	✓	–	–	–
T-2. HIV, page 2-69	✓[3]	–	–	–
T-3. Blood group and Rh, page 2-70	✓	–	–	–
CARE PROVISION				
Ongoing Supportive Care, page 2-38	✓	✓	✓	✓
C-1. Key Actions for 1st Stage, page 2-70 C-1.1. Start a partograph, page 2-71	–	✓	–	–

Table 2-4. Schedule and Overview of Labor/Childbirth Care *(continued)*

COMPONENTS/ELEMENTS	INITIAL ASSESSMENT	1ST STAGE	2ND & 3RD STAGES	4TH STAGE
CARE PROVISION (CONTINUED)				
C-2. Key Actions for 2nd and 3rd Stages, page 2-71 C-2.1. Assist the woman in pushing, page 2-72 C-2.2. Assist in normal birth, page 2-74 C-2.3. Initiate immediate newborn care, page 2-77 C-2.4. Perform active management of 3rd stage, page 2-78	–	–	✓	–
C-3. Key Actions for 4th Stage, page 2-79 C-3.1. Provide immediate postpartum care for the woman, page 2-80 C-3.2. Continue immediate newborn care, page 2-82	–	–	–	✓

[1] Element is also part of ongoing assessment.
[2] Element can be postponed to 4th stage.
[3] Woman may "opt out" of HIV testing.

ONGOING ASSESSMENT AND SUPPORTIVE CARE

Throughout the four stages of labor, the woman (and newborn, when applicable) should receive:

- **Ongoing assessment**, according to the schedule shown in **Table 2-5** (**page 2-39**) (for guidance on ongoing assessment of the newborn, see **Table 2-6** [**page 2-46**]); and
- **Ongoing supportive care**, as shown in **Table 2-7** (**page 2-47**).

Remember: To respect and maintain the mother-baby dyad, keep them together as much as possible throughout the immediate postpartum/newborn period.

- Avoid separating the woman and newborn, even while individually assessing and caring for them.
- Place the baby in skin-to-skin contact immediately at birth, and facilitate immediate breastfeeding.
- Encourage and facilitate "rooming in"—keeping the baby with the woman day and night.
- Allow and encourage the woman's participation in examination and care of the baby.

Table 2-5. Ongoing Assessment of the Woman during Labor and Childbirth

WHAT TO ASSESS	STAGE, PHASE OF LABOR/ HOW OFTEN TO ASSESS				NORMAL	ABNORMAL/FOLLOWUP ACTION
	1ST, LATENT	1ST, ACTIVE[1]	2ND	4TH [2]		
Maternal Blood Pressure*	Every 4 hours	Every 4 hours (at least)	Once (at least)	Every 15 minutes	• Systolic BP (top number) is 90–140 mmHg. • Diastolic BP (bottom number) is less than 90 mmHg.	➡ **If the systolic BP is less than 90 mmHg**, ACT NOW!—perform Rapid Initial Assessment (**page 3-90**) before proceeding. ➡ **If the diastolic BP is 90–110 mmHg**, ACT NOW!—see Severe Headache, Blurred Vision, or Elevated Blood Pressure (**page 3-108**) before proceeding. ➡ **If the diastolic BP is more than 110 mmHg**, ACT NOW!—perform Rapid Initial Assessment (**page 3-90**) before proceeding.
Maternal Temperature*	Every 4 hours	Every 2 hours	Once (at least)	(Once)	• Temperature is less than 38°C.	➡ **If temperature is 38°C or more**, ACT NOW!—see Fever or Foul-Smelling Vaginal Discharge (**page 3-115**) before proceeding.
Maternal Pulse*	Every 4 hours	Every 30 minutes	Every 30 minutes	Every 15 minutes	• Pulse is 90–110 beats per minute.	➡ **If pulse is less than 90 or 110 or more beats per minute**, ACT NOW!—perform Rapid Initial Assessment (**page 3-90**) before proceeding.
Fetal Heart Tones*	Every 4 hours	Every 30 minutes	Every 5 minutes	–	• **During 1st stage/latent phase:** Fetal heart rate is from 120 to 160 beats per minute. • **Once the woman goes into active labor:** fetal heart rate is from 100 to 180 beats per minute.	➡ **If fetal heart tones are absent**, ACT NOW!—see Management of Absent Fetal Heart Tones (**Textbox 3-44, page 3-112**) before proceeding. ➡ **If fetal heart tones are not within normal range**, ACT NOW!—see Management of Abnormal Fetal Heart Rate (**Textbox 3-45, page 3-113**) before proceeding.

* Once active labor begins, this element is recorded on a partograph and interpreted accordingly.

[1] From this point up to childbirth, all elements followed by an asterisk (*) are recorded on a partograph and interpreted accordingly.

[2] Constant vigilance of the woman and baby is critical during the 3rd stage of labor, although not a formal component of this table. If the woman and baby are stable, ongoing monitoring continues with the 4th stage of labor at the times indicated in this table.

Table 2-5. Ongoing Assessment of the Woman during Labor and Childbirth *(continued)*

WHAT TO ASSESS	STAGE, PHASE OF LABOR/ HOW OFTEN TO ASSESS				NORMAL	ABNORMAL/FOLLOWUP ACTION
	1ST, LATENT	1ST, ACTIVE[1]	2ND	4TH [2]		
Membranes and Amniotic Fluid*	When doing vaginal exam or when leaking of fluid from the vagina is observed or reported	When doing a vaginal exam or when leaking of fluid from the vagina is observed or reported	When doing a vaginal exam or when leaking of fluid from the vagina is observed or reported	–	• Membranes rupture spontaneously during labor or birth. • Amniotic fluid is clear and has a distinct, but not foul, mild odor. **Note:** Do not routinely rupture the membranes.	➡ **If the fluid is red**, ACT NOW!—see Vaginal Bleeding in Later Pregnancy or Labor (**page 3-102**) before proceeding. ➡ **If the fluid is greenish/brownish**, ACT NOW!—see Management of Meconium-Stained Amniotic Fluid (**Textbox 3-42, page 3-111**) before proceeding. ➡ **If the fluid is foul-smelling**, ACT NOW!—see Fever or Foul-Smelling Vaginal Discharge (**page 3-115**) before proceeding. ➡ **If it has been more than 18 hours since membranes have ruptured**, see Prelabor Rupture of Membranes or Rupture of Membranes for More than 18 Hours before Birth (**page 3-70**) for additional information about assessment and care provision.
Molding of Fetal Head	When doing a vaginal exam	When doing a vaginal exam	When doing a vaginal exam		• Bones are separated or just touch each other. (See also **Figures 2-9 and 2-10** [**page 2-67**].)	➡ **If the bones overlap**, consider in the context of further assessment: – Be alert for signs/symptoms of unsatisfactory progress of labor (e.g., fetal descent or cervical dilation is not progressing, contractions become more irregular).
Fetal Descent*	Once	Every 4 hours	Every 15 minutes	–	• Descent progresses continually in active phase of labor.	➡ **If descent is not progressing continually**, consider in the context of further assessment: – Be alert for signs/symptoms of unsatisfactory progress of labor (e.g., cervical dilation is not progressing, contractions become more irregular).

* Once active labor begins, this element is recorded on a partograph and interpreted accordingly.
[1] From this point up to childbirth, all elements followed by an asterisk (*) are recorded on a partograph and interpreted accordingly.
[2] Constant vigilance of the woman and baby is critical during the 3rd stage of labor, although not a formal component of this table. If the woman and baby are stable, ongoing monitoring continues with the 4th stage of labor at the times indicated in this table.

Table 2-5. Ongoing Assessment of the Woman during Labor and Childbirth *(continued)*

WHAT TO ASSESS	STAGE, PHASE OF LABOR/ HOW OFTEN TO ASSESS				NORMAL	ABNORMAL/FOLLOWUP ACTION
	1ST, LATENT	1ST, ACTIVE[1]	2ND	4TH [2]		
Contractions Frequency* and Duration*	Every 4 hours	Every 30 minutes	Every 30 minutes	–	• **1st stage/latent phase:** Contractions are increasing in strength, frequency, and duration. • **1st stage/active phase:** – Frequency: three to five per 10 minutes – Duration: more than 40 seconds – Complete relaxation between contractions • **2nd stage:** – Frequency: three to five per 10 minutes – Duration: more than 40 seconds – Complete relaxation between contractions	➡ **If there are continuous uterine contractions that do not allow the uterus to relax**, ACT NOW!—see Vaginal Bleeding in Later Pregnancy or Labor (**page 3-102**) before proceeding. ➡ **If there is constant pain that persists between contractions or is sudden in onset (or if contractions cease altogether)**, ACT NOW!—see Severe Abdominal Pain in Later Pregnancy or Labor (**page 3-119**) before proceeding. • **1st stage/latent phase:** ➡ **If contractions are decreasing in frequency/duration**, assess the woman for false labor (**Table 2-8, page 2-68**). ➡ **If false labor is suspected**, see False Labor (**page 3-48**) for additional information about assessment and care provision. • **1st stage/active phase:** ➡ **If contractions are decreasing in frequency/duration**, ACT NOW!—see Unsatisfactory Progress of Labor (**page 3-109**) before proceeding. • **2nd stage:** ➡ **If contractions are increasing in frequency/duration and fetal head is not descending continually**, ACT NOW!—see Unsatisfactory Progress of Labor (**page 3-109**) before proceeding. ➡ **If contractions are decreasing in frequency/duration**, consider in the context of further assessment: – Be alert for signs/symptoms of unsatisfactory progress of labor (e.g., fetal descent is not progressing).

* Once active labor begins, this element is recorded on a partograph and interpreted accordingly.

[1] From this point up to childbirth, all elements followed by an asterisk (*) are recorded on a partograph and interpreted accordingly.

[2] Constant vigilance of the woman and baby is critical during the 3rd stage of labor, although not a formal component of this table. If the woman and baby are stable, ongoing monitoring continues with the 4th stage of labor at the times indicated in this table.

Table 2-5. Ongoing Assessment of the Woman during Labor and Childbirth *(continued)*

WHAT TO ASSESS	STAGE, PHASE OF LABOR/ HOW OFTEN TO ASSESS				NORMAL	ABNORMAL/FOLLOWUP ACTION
	1ST, LATENT	1ST, ACTIVE[1]	2ND	4TH [2]		
Cervix Dilation* and Presentation	Every 4 hours	Every 4 hours	–	–	• **1st stage/latent phase:** – Dilation is 1–3 cm. – Dilation is progressing slowly. – Presentation is cephalic. • **1st stage/active phase:** – Dilation is 4–10 cm. – Dilation is increasing by 1 cm per hour at least. – Presentation is cephalic. • ***On the partograph:*** *Plotted line stays on or to the left of the alert line.*	➡ **If the fetus is in breech presentation**, see Breech Presentation in Labor (**page 3-47**) for additional information about assessment and care provision. • **1st stage/latent phase:** ➡ **If dilation has not increased for more than 8 hours and contractions are regular**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If dilation has reached 1 to 3 cm, but then progressive dilation stops**, see Unsatisfactory Progress of Labor (**page 3-109**) for information about additional assessment and care provision. • **1st stage/active phase:** ➡ **If dilation has not increased at least 4 cm in 4 hours and contractions are regular,** ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). • **On the partograph** ➡ **If the plotted line moves to the right of the alert line**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

* Once active labor begins, this element is recorded on a partograph and interpreted accordingly.

[1] From this point up to childbirth, all elements followed by an asterisk (*) are recorded on a partograph and interpreted accordingly.

[2] Constant vigilance of the woman and baby is critical during the 3rd stage of labor, although not a formal component of this table. If the woman and baby are stable, ongoing monitoring continues with the 4th stage of labor at the times indicated in this table.

Table 2-5. Ongoing Assessment of the Woman during Labor and Childbirth *(continued)*

WHAT TO ASSESS	STAGE, PHASE OF LABOR/ HOW OFTEN TO ASSESS				NORMAL	ABNORMAL/FOLLOWUP ACTION
	1ST, LATENT	1ST, ACTIVE[1]	2ND	4TH [2]		
Vaginal Secretions or Bleeding	Every 4 hours (or when increased secretions/ bleeding are reported)	Every 4 hours (or when increased secretions/ bleeding are reported)	Continually	Every 15 minutes	• There is no blood, foul-smelling or yellow/greenish discharge, urine, or stool coming from the vaginal opening. • **Normal variations:** mucous plug, bloody show, amniotic fluids (**If amniotic fluids**, see Membranes and Amniotic Fluid, **page 2-65**.) • **4th stage:** Amount of bleeding is similar to heavy menses. – **Normal variations:** Clots no larger than lemons may be passed.	• **1st/2nd stage:** ➡ **If blood (as opposed to normal bloody show) is coming from the vagina**, ACT NOW!—see Vaginal Bleeding in Later Pregnancy or Labor (**page 3-102**) before proceeding. • **4th stage:** ➡ **If there is frank, heavy bleeding; a steady slow trickle of blood; intermittent gushes of blood; or blood clots larger than lemons**, ACT NOW!—see Vaginal Bleeding after Childbirth (**page 3-103**) before proceeding. ➡ **If other findings are not within normal range**, facilitate postpartum referral/transfer (**Annex 7, page 4-63**) after providing basic care.
Bladder	Every 4 hours	Every 2 hours	Every hour	Every 15 minutes	• Bladder is not palpable. • The woman is able to urinate when the urge is felt.	➡ **If the bladder is palpable or the woman is unable to urinate when the urge is felt**, see Urinary Retention during Labor and the Postpartum Period (**page 3-79**) for additional information about assessment and care provision.

[1] From this point up to childbirth, all elements followed by an asterisk (*) are recorded on a partograph and interpreted accordingly.
[2] Constant vigilance of the woman and baby is critical during the 3rd stage of labor, although not a formal component of this table. If the woman and baby are stable, ongoing monitoring continues with the 4th stage of labor at the times indicated in this table.

Table 2-5. Ongoing Assessment of the Woman during Labor and Childbirth *(continued)*

WHAT TO ASSESS	STAGE, PHASE OF LABOR/ HOW OFTEN TO ASSESS				NORMAL	ABNORMAL/FOLLOWUP ACTION
	1ST, LATENT	1ST, ACTIVE[1]	2ND	4TH [2]		
Maternal Ability to Cope/ Response to Labor and Childbirth	Cont.	Cont.	Cont.	Cont.	**Reminder:** Normal response is highly variable and often culturally specific. • **1st stage/latent phase:** The woman is behaving like her "usual self" (level of discomfort and effort required are minimal). • **1st stage/active phase:** The woman is reacting to pain and uncertainty with some distress, but is able to communicate and still in control of her behavior (level of discomfort and effort required are moderate). • **2nd stage:** The woman is reacting to growing intensity of pain and uncertainty with some distress, and must focus almost all of her energy and attention on contractions first and later on pushing (level of discomfort and effort required are intense).	➡ **If the woman's ability to cope is not within normal range**, consider in the context of further assessment. ➡ **If the woman is experiencing any of the signs/symptoms shown in Textbox 2-16** (**page 2-51**), see the corresponding entry for additional information about assessment and care provision.
Uterus	–	–	–	Every 15 minutes	• Uterus remains firm; feels like a firm ball at or below the umbilicus.	➡ **If uterus remains soft or quickly becomes soft after uterine massage**, ACT NOW!—see Vaginal Bleeding after Childbirth (**page 3-103**) before proceeding.

[1] From this point up to childbirth, all elements followed by an asterisk (*) are recorded on a partograph and interpreted accordingly.
[2] Constant vigilance of the woman and baby is critical during the 3rd stage of labor, although not a formal component of this table. If the woman and baby are stable, ongoing monitoring continues with the 4th stage of labor at the times indicated in this table.

Table 2-5. Ongoing Assessment of the Woman during Labor and Childbirth *(continued)*

WHAT TO ASSESS	STAGE, PHASE OF LABOR/ HOW OFTEN TO ASSESS				NORMAL	ABNORMAL/FOLLOWUP ACTION
	1ST, LATENT	1ST, ACTIVE[1]	2ND	4TH [2]		
Breastfeeding	–	–	–	Whenever newborn nurses	• The woman is positioned and holds the baby properly. • The woman seems comfortable. • Attachment of the newborn to the breast and suckling are effective. • The baby seems satisfied after feeding.	➡ **If findings are not within normal range and attachment or suckling does not appear effective**, see Breast and Breastfeeding Problems (**page 3-43**) for additional information on assessment and care provision. ➡ **If the woman has not yet decided whether she wants to breastfeed or use a breastmilk substitute**, see Breastfeeding versus Using a Breastmilk Substitute (**page 4-49**). ➡ **If the woman has chosen to use a breastmilk substitute**, see Using a Breastmilk Substitute (**page 4-51**).
Mother-Baby Bonding	–	–	–	Cont.	• The woman appears to enjoy physical contact with her newborn and appears contented with the newborn. • She caresses, talks to, and makes eye contact with the newborn. • When holding or feeding the newborn, she and the newborn are turned toward each other. • She responds with active concern to the newborn's crying or need for attention.	➡ **If findings are not within normal range**, ask whether she is experiencing feelings of sadness, guilt, worthlessness, anxiety, being overwhelmed, or disturbances in sleep or appetite; crying more than usual; and/or is more irritable than usual. ➡ **If YES**, see Postpartum Sadness (**page 3-69**) for additional information about assessment and care provision.

[1] From this point up to childbirth, all elements followed by an asterisk (*) are recorded on a partograph and interpreted accordingly.
[2] Constant vigilance of the woman and baby is critical during the 3rd stage of labor, although not a formal component of this table. If the woman and baby are stable, ongoing monitoring continues with the 4th stage of labor at the times indicated in this table.

Table 2-6. Ongoing Assessment of the Baby during Labor and Childbirth

WHAT TO ASSESS	STAGE, PHASE OF LABOR/ HOW OFTEN TO ASSESS				NORMAL	ABNORMAL/FOLLOWUP ACTION
	1ST, LATENT	1ST, ACTIVE	2ND	4TH		
Fetal Well-being	As in **Table 2-5**	As in **Table 2-5**	As in **Table 2-5**		• As in **Table 2-5**	➡ As in **Table 2-5**
Newborn Respiration	–	–	–	Every 15 minutes	• Respiratory rate is 30–60 breaths per minute. • There is no gasping, grunting on expiration, or chest indrawing.	➡ **If respirations are not within normal range**, ACT NOW!—see Newborn Rapid Initial Assessment (**page 3-96**) before proceeding.
Newborn Temperature	–	–	–	Every 15 minutes	• Feet are not cold to the touch. • Feet are not very warm to the touch.	➡ **If feet are cold or very warm to the touch**, measure axillary temperature. ➡ **If axillary temperature is less than 36.5°C OR more than 37.5°C**, ACT NOW!—see Abnormal Body Temperature (**page 3-122**) before proceeding.
Newborn Color	–	–	–	Every 15 minutes	• Baby's lips, tongue, and nailbeds are pink • No central cyanosis (blue tongue and lips) • No jaundice (yellowness) • No pallor • Hands and feet are sometimes "bluish"/ cyanotic	➡ **If there is central cyanosis or pallor**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If there is jaundice**, ACT NOW!—see Jaundice (**page 3-124**) before proceeding.

Table 2-7. Ongoing Supportive Care Measures for Labor and Childbirth

ELEMENT	1ST STAGE/LATENT PHASE	1ST STAGE/ACTIVE PHASE	2ND AND 3RD STAGES	4TH STAGE
Communication/ Attendance	• Constant vigilance is not yet necessary. Attend to the woman as needed, at least every 4 hours. If she lives close by, she can return when contractions become stronger. • Periodically engage her in conversation, even if briefly. • Encourage the birth companion to stay with her.	• Never leave the woman alone for more than 30 minutes, even if birth companion is with her. Closer attendance may be necessary if woman is having difficulty coping, companion is not attentive, or fetal or maternal condition requires closer monitoring. • Periodically engage her in conversation, even if briefly. • Provide continual information and reassurance about the woman's progress and the well-being of the baby. • Never make false promises. • Encourage the birth companion to stay with her.	• Never leave the woman alone during 2nd or 3rd stage. • Focus on woman; look for nonverbal cues of her needs and preferences. • Use and expect minimal verbal interactions. Be direct and clear. • Give her verbal encouragement and praise. • Provide continual information and reassurance about her progress and the well-being of the baby. • Never make false promises. • Encourage birth companion in support of the woman.	• The skilled provider should attend to the woman at least every 15 minutes, when vital signs are checked, and: – Focus on the woman; look for nonverbal cues of her needs and preferences. – Give her verbal encouragement and praise. – Provide continual information and reassurance about her condition and the well-being of the baby. – Encourage her to ask questions and express her feelings. – Advise the birth companion to remain with the woman during this time. (See also Mother-Baby Bonding [**page 2-49**].)
Rest and Activity/ Positions	• Allow the woman to remain as active as she desires. • Encourage rest or sleep, as she desires, so that she is well rested when active labor begins.	• Allow the woman freedom to choose from a variety of positions, while guiding her to find a position that eases her discomfort and promotes labor. • Assist her in relaxing between contractions in order to conserve her energy. • Encourage position changes (e.g., sitting, squatting, side-lying, hands and knees), as well as walking, pacing, standing, rocking, leaning over a chair—these may all be helpful at various times throughout the labor process.	• Allow the woman freedom to choose from a variety of positions, while guiding her to find a position that eases her discomfort and promotes labor. • Assist her in relaxing between contractions in order to conserve her energy. • If a position is tiring, assist the woman in changing positions between contractions to facilitate progress and to provide some relief of discomfort. • Encourage position changes (e.g., sitting, squatting, side-lying, hands and knees).	• Ensure that the woman has enough blankets to maintain warmth. • Maintain a calm environment conducive to rest for the woman that facilitates bonding with her baby and initiation of breastfeeding. (See also Mother-Baby Bonding [**page 2-49**].)

Table 2-7. Ongoing Supportive Care Measures for Labor and Childbirth *(continued)*

ELEMENT	1ST STAGE/LATENT PHASE	1ST STAGE/ACTIVE PHASE	2ND AND 3RD STAGES	4TH STAGE
Comfort	• Give the woman a back rub or massage. • Teach her to breathe out more slowly than usual during contractions and relax with each breath.	• Lightly massage, rub her back, or apply pressure to the lower back, as she desires. • Provide a cool cloth for the face and chest, as she desires. • Continue to coach her to breathe through her mouth during contraction in deliberate slow breaths. (For more information about breathing techniques, see **Textbox 2-24** [**page 2-73**].)	• Lightly massage or rub her back, as she desires. • Apply lower back pressure to help relieve back pain. • Stretch legs out and flex foot upwards to relieve muscle cramps in legs and feet. • Provide a cool cloth for the face and chest, as she desires. • Continue to coach her to breathe during contractions until she has the urge to push; then coach her to push when she has the urge, acknowledging her good efforts. (For more information about breathing techniques, see **Textbox 2-24** [**page 2-73**].) • Do not encourage her to push when she has no urge nor to sustain pushing longer than she desires.	• Ensure that the woman and baby have enough blankets to stay warm. • Maintain a calm environment conducive to rest for the woman that facilitates bonding with her baby and initiation of breastfeeding. (See also Mother-Baby Bonding [**page 2-49**].)
Nutrition	• Encourage foods as tolerated. There are no restrictions on intake as long as the woman has no nausea and/or vomiting. • Provide the woman with nutritious drinks to maintain hydration. Two liters of oral fluids per 24-hour period is a minimum amount.	• Encourage light meals/food as tolerated. There are no restrictions on intake as long as the woman has no nausea and/or vomiting. • Provide the woman with nutritious drinks to maintain hydration. Two liters of oral fluids per 24-hour period is a minimum amount. **Note:** Some women experience nausea and/or vomiting as labor progresses; it is especially important in these cases to offer small sips of fluids as tolerated to maintain hydration.	• Offer sips of cool, sweetened fluids between contractions. **Note:** The woman will probably not want food during this time. Some women experience nausea and/or vomiting in the 2nd stage; offer fluids as tolerated to maintain hydration.	• Encourage the woman to eat and drink, as she desires.

Table 2-7. Ongoing Supportive Care Measures for Labor and Childbirth *(continued)*

ELEMENT	1ST STAGE/LATENT PHASE	1ST STAGE/ACTIVE PHASE	2ND AND 3RD STAGES	4TH STAGE
Elimination	• Encourage the woman to empty her bladder every 2 hours and empty her bowels as needed. • Do NOT give the woman an enema.	• Encourage the woman to empty her bladder every 2 hours and empty her bowels as needed. • Record urine output on partograph. • Do NOT give the woman an enema.	• Have her empty her bladder before onset of pushing. • Reassure her that it is normal to urinate during the force of a contraction, or empty her bowels as the baby's head presses on the rectum.	• Encourage the woman to pass urine when the urge is felt or if bladder is palpable.
Hygiene/ Infection Prevention	• Maintain cleanliness of the woman and her environment: – Encourage her to bathe before active labor begins. – Cleanse the genital area if necessary before each examination. – Do NOT shave the vulva. – Before and after each examination, wash your hands (with soap and water) and dry with a clean towel or air dry. – Clean up spills immediately. – Replace soiled cloths/blankets with clean and dry cloths/blankets.	• Maintain cleanliness of the woman and her environment: – Encourage her to bathe before active labor begins. – Cleanse the genital area if necessary before each examination. – Do NOT shave the vulva. – Before and after each examination, wash your hands (with soap and water) and dry with a clean towel or air dry. – Clean up spills immediately. – Replace soiled cloths/blankets with clean and dry cloths/blankets.	• Dispose of the soiled linen in a bucket, plastic bag, or other container that can be closed for transport to washing facility. • Keep the woman clean by wiping feces and secretions immediately from the perineum.	• Replace soiled and wet clothing and bedding. • Dispose of the soiled linen in a bucket, plastic bag, or other container that can be closed for transport to a washing facility. • Keep clean pads/cloths against the perineum.
Mother-Baby Bonding	N/A	N/A	N/A	• Ensure that the woman and newborn are kept together as much as possible; facilitate rooming-in for the woman and newborn. • Maintain skin-to-skin contact between the woman and baby as much as possible. • Encourage the woman to hold and explore her baby freely. • Encourage the woman and family to cuddle and talk to the newborn as much as they wish; give them time alone if possible. • Help build the woman's confidence by verbal and nonverbal messages of encouragement and praise. • Encourage early and exclusive breastfeeding.

LABOR/CHILDBIRTH ASSESSMENT

History (H)

Once you have welcomed the woman and her companion, review the woman's antenatal records, if available. If not, take the woman's history. Be sure to record all findings in the woman's chart. Note that at the beginning of the active phase of 1st stage of labor, when the cervix is 4 cm dilated, you should start a partograph (**Annex 3, page 4-7**). From that point through childbirth, you should record findings (those marked with an asterisk [*] in this chapter) on the partograph. After the baby is born, resume the woman's chart and start a chart for the newborn.

H-1. Personal Information

Question	Use of Information/Followup Action

• What is the woman's **name**?	• Use this information to:
	  • Identify the woman, and
	  • Help establish rapport.

• What is her **age** (her date of birth, if available)?	➡ **If the woman is 19 years of age or under**, see Adolescence (**page 3-37**) for additional information about assessment and care provision.

• What is her **phone number** (if available)?
• Where does she live (her **address**, if available)?
	• Use this information to:
	  • Contact the woman, and
	  • Guide development of the complication readiness plan.

• How many **previous pregnancies** (gravida) and **childbirths** (para) has she had?	• Use this information to guide individualization of health messages and counseling and other aspects of basic care provision.
• Does she have a **complication readiness plan** that can be enacted if problems arise during labor or childbirth?	➡ **If YES**, confirm that arrangements have been made for all essential components of complication readiness, as shown in **Textbox 2-17** (**page 2-51**). ➡ **f NO**, arrange—or assist the woman and her family in arranging—for all essential components of complication readiness, as shown in **Textbox 2-17** (**page 2-51**).

• Is she **currently** having a medical, obstetric, social, or personal **problem or other concerns**?
• Has she had any **problems during this labor/childbirth**?
	➡ **If YES:**
	  • Ask general followup questions (**Textbox 2-3, page 2-7**) to assess the nature of her problem; and
	  • Consider this information in the context of further assessment.
	➡ **If the woman reports signs or symptoms shown in Textbox 2-16** (**page 2-51**), see the corresponding entry for additional information about assessment and care provision.

• Has she received **care from another caregiver** (including a TBA, herbalist, traditional healer) during this labor/childbirth?	➡ **If YES**, ask why did she seek care?
	  ➡ **If because of a problem**, ask the general followup questions in Set A (**Textbox 2-3, page 2-7**) to assess the nature of her problem.
	  ➡ **If not because of a problem**, ask the general followup questions in Set B (**Textbox 2-3, page 2-7**) to assess the nature of care received.
	• Consider this information in the context of further assessment.

Textbox 2-16. Common Discomforts of Labor/Childbirth

Abdomen, Breasts, and Legs
Abdominal (or groin) pain, page 3-3
Afterpains, page 3-4
Leg cramps, page 3-5
Swelling (edema) of ankles and feet, page 3-5

Digestion and Elimination
Nausea or vomiting, page 3-9
Urination, increased, page 3-10

Genitals
Vaginal discharge, page 3-11

Skin
Varicose veins, page 3-13

Sleep and Mental State
Mood swings, page 3-17
Feelings of worry or fear about labor, page 3-16

Miscellaneous
Back pain, page 3-18
Feeling hot, page 3-20
Headache, page 3-21
Hemorrhoids, page 3-22
Hyperventilation or shortness of breath, page 3-23
Nasal stuffiness or nasal bleeding, page 3-23
Numbness/tingling of fingers and toes, page 3-24
Shivering/quivering, page 3-24
Walking awkwardly (waddling) or clumsiness, page 3-24

Textbox 2-17. Essential Components of Complication Readiness during Labor and Childbirth

- **Danger signs:** the woman and her family are aware of signs/symptoms that indicate a need to enact the complication readiness plan
- **Emergency transportation:** they have arranged for transfer to appropriate skilled provider/healthcare facility if danger signs arise
- **Emergency funds:** they have access to funds to pay for emergency care if needed
- **Decision-making:** they have discussed how decisions will be made if an emergency arises
- **Support:** support people have been identified to accompany the woman in transfer and to take care of the house/family in her absence, if needed
- **Blood donor:** an appropriate donor has been identified and is available, if needed

(Complete information about Complication Readiness is provided on **page 2-26**.)

H-2. Estimated Date of Childbirth/Menstrual History

Question	Use of Information/Followup Action
• What is her estimated date of childbirth (EDC)?	➡ **If less than 37 weeks' gestation (according to the EDC) and onset of labor is apparent**, ACT NOW!—see Contractions before 37 Weeks' Gestation (**page 3-120**) before proceeding. ➡ **If the woman does not know her EDC,** estimate gestational age based on guidelines in **Textbox 2-18** (below).

Textbox 2-18. Following Up on Unknown Estimated Date of Childbirth

If the woman does not know her EDC, estimate gestational age based on further assessment, for example:

Last menstrual period (LMP): If the woman knows the first day of her LMP, ask these followup questions:

- Was her LMP abnormal in terms of onset, flow, and duration?
- Was she using a hormonal contraceptive or breastfeeding when she became pregnant?

➡ **If NO to BOTH followup questions**, calculate EDC using one of the methods shown in **Textbox 2-6** (**page 2-9**).

➡ **If YES to EITHER followup question**, estimate gestational age based on further assessment, for example:
- Woman's report of first fetal movement (below)
- Fundal height measurement (below)
- Ultrasound, if available

First fetal movement: If she knows when she first felt the baby move, estimate the EDC by adding 20 weeks to this date if this is her first baby, and by adding up to 24 weeks if she has had at least one baby.

Fundal height measurement: During abdominal examination, compare fundal height measurement with any findings from the history to confirm EDC or identify potential size-date discrepancy.

H-3. Present Pregnancy and Labor/Childbirth

Question	Use of Information/Followup Action
• Did she receive **antenatal care** during this pregnancy?	➡ **If YES**, ask these followup questions and consider findings in the context of further assessment: • From what provider/healthcare facility did she receive antenatal care? • How many antenatal care visits did she have? • What did the antenatal care include (e.g., testing, immunizations, drugs/medications, counseling)? ➡ **If NO or the care was not adequate**, consider findings in the context of further assessment: • Be alert for signs/symptoms of conditions or complications that may not have been adequately addressed during pregnancy.
• Have her **membranes ruptured**?	➡ **If NO**, reassure the woman that her membranes should rupture spontaneously during labor or birth. ➡ **If YES**, ask these followup questions: • When did they rupture? • What is/was the color of the amniotic fluid? • Is/was the fluid foul-smelling? • **Normal/normal variations:** • Amniotic fluid is clear and has a distinct, but not foul-smelling, mild odor. • Membranes rupture spontaneously during labor or birth. ➡ **If fluid is/was red**, ACT NOW!—see Vaginal Bleeding in Later Pregnancy or Labor (**page 3-102**) before proceeding. ➡ **If fluid is/was greenish/brownish**, ACT NOW!—see Management of Meconium-Stained Amniotic Fluid (**Textbox 3-42, page 3-111**) before proceeding. ➡ **If fluid is/was foul-smelling**, ACT NOW!—see Fever or Foul-Smelling Vaginal Discharge (**page 3-115**) before proceeding. ➡ **If it has been more than 18 hours since membranes have ruptured, and you suspect labor has begun**, see Prelabor Rupture of Membranes or Membranes Ruptured for More than 18 Hours before Birth (**page 3-70**) for additional information about assessment and care provision. ➡ **If it has been 4 hours or more since membranes have ruptured, and you suspect labor has not begun**, see Prelabor Rupture of Membranes or Membranes Ruptured for More than 18 Hours before Birth (**page 3-70**) for additional information about assessment and care provision.
• Have **regular contractions** begun (i.e., are they occurring at regular intervals)?	➡ **If NO,** assess the woman for false labor (**Table 2-8, page 2-68**). ➡ **If false labor is suspected**, see False Labor (**page 3-48**) for additional information on assessment and care provision. ➡ **If YES**, when did they begin? ➡ **If it has been more than 12 hours since regular contractions began**, consider this finding in the context of further assessment: • Be alert for other signs of unsatisfactory progress of labor (e.g., fetal descent or cervical dilation is not progressing, contractions become more irregular).

Question	Use of Information/Followup Action

• What are the **frequency and duration** of contractions?	• Use this information in:
	  • Evaluating the effectiveness of contractions (**Textbox 2-20, page 2-62**).
	  • Assessing stage and phase of labor (**Table 2-8, page 2-68**), which will be confirmed in the physical examination.
	  • Establishing a baseline against which later findings can be evaluated.
	➡ **If false labor is suspected**, see False Labor (**page 3-48**) for additional information on assessment and care provision.

• Has she felt **fetal movements** in the last 24 hours?	➡ **If she has not felt fetal movements in the last 24 hours**, ACT NOW!—see Management of Decreased or Absent Fetal Movements (**Textbox 3-43, page 3-111**) before proceeding.
• Has she drunk alcohol or used any drugs/ medications, herbs, or other **potentially harmful substances** in the last 24 hours?	➡ **If YES**, consider this finding in the context of further assessment. • Be alert for signs of toxicity (e.g., altered mental state, nausea, vomiting), rapid or slowed labor, and/or fetal distress.
• When did she last **eat and/or drink**?	➡ **If it has been more than 8 hours since she has eaten food or taken fluids**, consider this finding in the context of further assessment: • Be alert for signs of dehydration (e.g., pulse more than 100 beats per minute, dry mouth and tongue, sunken eyes, thirst). **Note:** During labor, the woman should be provided nutritious drinks to maintain hydration. Two liters of oral fluids per 24-hour period is a minimum amount. Women should also be encouraged to have light meals/food as tolerated. There are no restrictions on intake as long as the woman has no nausea and/or vomiting.

H-4. Obstetric History

Note: Although a woman with a poor obstetric history does not necessarily require additional/specialized care, knowing about past complications helps you understand any concerns she may have during this childbirth. In addition, discussing past complications provides an opportunity to emphasize the importance of having a complication readiness plan.

Question	Use of Information/Followup Action
• If this is not the woman's first childbirth, has she had a **previous cesarean section, uterine rupture, or any uterine surgery**?	➡ **If YES**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

Question	Use of Information/Followup Action

• If this is not the woman's first pregnancy/ childbirth, has she had any of the other following **previous complications:**
  • Convulsions (pre-eclampsia/eclampsia) during pregnancy or childbirth?
  • Tears through the sphincter (3rd degree tear) and/or rectum (4th degree tear) during childbirth?
  • Postpartum hemorrhage?
  • Stillbirths; preterm or low birthweight babies; babies who died before 1 month of age?
	➡ **If YES**, see Maternal, Fetal, or Newborn Complications of Previous Pregnancy, Labor/Childbirth, or the Postpartum/Newborn Period (**page 3-64**) for additional information about assessment and care provision.

• If this is not the woman's first child, has she **breastfed before**?	➡ **If NO**, explore the reasons why.
	  • What prevented her from breastfeeding?
	  • Did she stop because she had problems breastfeeding?
	➡ **If YES**, ask these followup questions:
	  • For how long did she breastfeed previous babies?
	  • Did she have problems breastfeeding?
	  ➡ **If she has had problems breastfeeding in the past**, consider this finding in the context of further assessment:
	  • Be alert for signs of breast and breastfeeding problems (e.g., breast pain, ineffective positioning or attachment).
	• Use this information to guide individualization of health messages and counseling and other aspects of basic care provision.

H-5. Medical History

Question	Use of Information/Followup Action
• Does the woman have any **allergies**?	➡ **If YES**, avoid use of any known allergens.
• Has the woman been diagnosed with **HIV**?	➡ **If YES**, see HIV (**page 3-51**) for additional information about assessment and care provision.
• Has she been recently (within the last 3 months) diagnosed with **anemia**?	➡ **If YES**, see Anemia (**page 3-41**) for additional information about assessment and care provision.
• Has the woman been diagnosed with **syphilis**?	➡ **If YES**, see Syphilis (**page 3-76**) for additional information about assessment and care provision.
• Has the woman been diagnosed with **hepatitis, tuberculosis, heart disease, kidney disease, sickle cell disease, diabetes, goiter, or another serious chronic illness**?	➡ **If YES**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) during the postpartum period.

Question	Use of Information/Followup Action
• Has she had any previous hospitalizations or surgeries?	➡ **If YES,** ask these followup questions: • What was the reason for the hospitalization or surgery? • When was it? • What was the outcome? ➡ **If the condition is unresolved or has the potential to complicate childbirth**, consider this information in the context of further assessment.
• Is she taking any **drugs/ medications**—including traditional/local preparations, herbal remedies, over-the-counter drugs, vitamins, and dietary supplements?	• Use this information to guide individualization of health messages and counseling and other aspects of basic care provision.
• Has she had a complete series of five **tetanus toxoid** (TT) immunizations to date? • Has it been less than 10 years since her **last booster**?	• Use this information to assess the woman's need for TT, according to the recommended TT schedule (**Table 2-3, page 2-34**). ➡ **If NO to EITHER question OR the woman does not have a written record of prior TT immunizations**, facilitate postpartum followup.

Physical Examination (PE)

When you have finished taking the woman's history, perform a physical examination. Be sure to record all findings in the woman's chart. Note that at the beginning of the active phase of the 1st stage of labor, when the cervix is 4 cm dilated, you should start a partograph (**Annex 3, page 4-7**). From that point through childbirth, you should record findings (those marked with an asterisk [*] in this chapter) on the partograph. After the baby is born, resume the woman's chart and start a chart for the newborn.

PE-1. Assessment of General Well-Being

Element	Normal	Abnormal/Followup action
Gait and movements **Behavior and vocalizations**	• The woman **walks** without a limp. • Her **gait and movements** are steady and moderately paced. • Her **behavior and vocalizations** are appropriate to her culture. (See **Note**, **page 2-56**.)	➡ **If findings are not within normal range**, ask these followup questions: • Has she been without food or fluids for a prolonged period? • Has she been taking drugs/medications, herbs, etc.? • Does she have an injury? • Is she in the middle of a contraction? ➡ **If YES to ANY of the above questions**, consider the findings during further assessment and when planning/implementing care. ➡ **If NO to ALL of the above questions:** • Ask general followup questions to assess the nature of her problem (**Textbox 2-3, page 2-7**); and • Consider this information in the context of further assessment.

Element	Normal	Abnormal/Followup action
Skin	• The woman's skin is free from lesions and bruises.	➡ **If there are lesions and bruises on the woman's skin OR you suspect abuse**, see Violence against Women (**page 3-81**) for additional information about assessment and care provision. ➡ **If there are lesions and bruises on the woman's skin AND you do not suspect abuse**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) during the postpartum period.
Conjunctiva (mucous membrane on insides of eyelids)	• The woman's conjunctiva is pink (not white or very pale pink) in color.	➡ **If her conjunctiva appears white or very pale rather than pink**, test the woman's hemoglobin levels (**page 4-43**). ➡ **If her hemoglobin level is less than 7 g/dL**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If her hemoglobin level is 7–11 g/dL**, see Anemia (**page 3-41**) for additional information about assessment and care provision.

Note: Each woman responds differently to the discomfort that is a normal part of labor and childbirth. Moreover, what is considered an appropriate response to pain is, to a certain extent, culturally specific. In some cultures, it is acceptable for women to cry out; in others, they are expected to remain quiet/unexpressive. Thus, it is important to observe the woman for coping behaviors that:

- Are clearly unusual or extreme for her culture;
- Pose a threat to herself or others; or
- Interfere with your ability to care for her (e.g., flailing, inability to communicate, incoherence).

Such behaviors may indicate imminent birth or an abnormal level of pain or other potential problem that requires prompt attention.

PE-2. Vital Signs Measurement

- Have the woman remain seated or lying down with the knees slightly bent, ensuring that she is comfortable and relaxed.
- Assess her respirations.
- While taking her temperature, measure her blood pressure (BP) and check her pulse.
- Plot all elements marked with an asterisk (*) on the partograph once the active phase of the 1st stage of labor has begun (i.e., when the cervix is 4 cm dilated).

Element	Normal	Abnormal/Followup Action
Respirations	• Her breathing is regular, not rapid. • No gasping, wheezing, or rales.	➡ **If findings are not within normal range**, ACT NOW!—perform Rapid Initial Assessment (**page 3-90**) before proceeding.

Element	Normal	Abnormal/Followup Action
Blood Pressure*	• Systolic BP (top number) is 90–140 mmHg. • Diastolic BP (bottom number) is less than 90 mmHg.	➡ **If the systolic BP is less than 90 mmHg**, ACT NOW!—perform Rapid Initial Assessment (**page 3-90**) before proceeding. ➡ **If the diastolic BP is 90–110 mmHg**, ACT NOW!—see Severe Headache, Blurred Vision, or Elevated Blood Pressure (**page 3-108**) before proceeding. ➡ **If the diastolic BP is more than 110 mmHg**, ACT NOW!—perform Rapid Initial Assessment (**page 3-90**) before proceeding.
Temperature*	• Temperature is less than 38°C.	➡ **If temperature is 38°C or more**, ACT NOW!—see Fever or Foul-Smelling Vaginal Discharge (**page 3-115**) before proceeding.
Pulse*	• Pulse is 90–110 beats per minute.	➡ **If pulse is less than 90 or 110 or more beats per minute**, ACT NOW!—perform Rapid Initial Assessment (**page 3-90**) before proceeding.

*Once active labor begins, this element is recorded on a partograph and interpreted accordingly.

PE-3. Visual Inspection of the Breasts

Note: In general, this part of the examination should be performed immediately postpartum. It should only be performed at this point if the woman is in the latent (or early active) phase of the 1st stage of labor and is not in acute distress.

- Help the woman prepare for further examination; follow the steps shown in **Textbox 2-7** (**page 2-16**) with the following modification. If possible, give her a clean gown to wear (instead of having her remove or loosen individual items of clothing).
- Ask the woman to uncover her body from the waist up.
- Have her remain seated with her arms at her sides.
- Visually inspect the overall appearance of the woman's breasts, such as contours, skin, and nipples; note any abnormalities.

Element	Normal	Abnormal/Followup Action

Contours
 	
Skin
	• Contours are regular with no dimpling or visible lumps.
	• Skin is smooth with no puckering; no areas of scaliness, thickening, or redness; and no lesions, sores, or rashes.
	• **Normal variations:**
	  ◦ Breasts may be larger (and more tender) than usual.
	  ◦ Veins may be larger and darker, more visible beneath the skin.
	  ◦ Areolas may be larger and darker than usual, with tiny bumps on them.
		➡ **If findings are not within normal range**, facilitate nonurgent referral/ transfer (**Annex 7, page 4-63**) during the postpartum period.

Nipples	• There is no abnormal nipple discharge.
	• Nipples are not inverted.
	• **Normal variations:**
	  ◦ Nipples may be larger, darker, and more erectile than usual.
	  ◦ Colostrum (a clear, yellowish, watery fluid) may leak spontaneously from nipples after 6 weeks' gestation.
		➡ **If there is abnormal nipple discharge**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) during the postpartum period.
		➡ **If nipples appear to be inverted**, test for protractility (**Textbox 2-8, page 2-17**).
		  ➡ **If the nipples are inverted**, be alert for potential breastfeeding problems (e.g., problems with attachment of the newborn to the breast, suckling).

PE-4. Abdominal Examination

Note: The abdominal examination during labor is carried out between contractions. The abdomen becomes very hard during a contraction, making it difficult to feel the fetal parts or hear the fetal heart tones. In addition, it may be uncomfortable for the woman to remain still or have her abdomen palpated during a contraction. She should be encouraged to move, if necessary, during contractions.

- If you have not already done so, help the woman prepare for further examination; follow the steps shown in **Textbox 2-7** (**page 2-16**) with the following modification. If possible, give her a clean gown to wear (instead of having her remove or loosen individual items of clothing).
- Ask the woman to uncover her abdomen.
- Have her lie on her back with her knees slightly bent.

Element	Normal	Abnormal/Followup Action
Surface of the abdomen	• There are no scars (from previous cesarean section, uterine rupture, or other uterine surgeries) on the surface of the abdomen.	➡ **If there is a scar from a cesarean section, uterine rupture, or other uterine surgery**, ACT NOW!— facilitate urgent referral/transfer (**Annex 7, page 4-63**).

Element	Normal	Abnormal/Followup Action
Uterine shape	• The uterus is oval-shaped (longer vertically than horizontally).	➡ **If the uterus is longer horizontally than vertically**, consider in the context of further assessment • Be alert for signs/ symptoms of transverse lie.
Fundal height For the procedure, see **Textbox 2-9** (**page 2-19**).	• Fundal height is consistent (within 2 cm+/-, per local standards) with the gestational age, as previously calculated. • **At 34–38 weeks**, the uterus measures about 32 to 34 cm above the symphysis pubis and extends to the xiphoid process. • **At 39–40 weeks**, the uterus measures about 32 to 34 cm above the symphysis pubis, as the presenting part of the fetus settles into the pelvis. (See also **Figure 2-1** [**page 2-20**].)	➡ **If fundal height suggests less than 37 weeks' gestation and the onset of labor is apparent**, ACT NOW!—see Contractions before 37 Weeks' Gestation (**page 3-120**) before proceeding. ➡ **If the fundal height is more than would normally be expected for a term birth**, see Size-Date Discrepancy after 22 Weeks' Gestation (**page 3-73**) for additional information about assessment and care provision.

Fetal parts (and movement)
For the procedure, see **Textbox 2-10** (**page 2-20**).
	• The fetus is palpable within the uterus.
	• The buttocks are palpable in the uterine fundus, are softer and more irregularly shaped than the head, and cannot be moved independently of the body.
	• The head is palpable in the lower uterine segment, is harder than the buttocks, and can be moved back and forth between both hands.
	• **Normal variations:**
	  • Fetal movements may or may not be felt by the skilled provider during the abdominal examination.
	  • Multiple pregnancy may be suspected if:
	  • Multiple fetal poles and parts are palpated on abdominal examination.
	  • Fetal head is small in relation to the size of the uterus.
	  • The uterus is larger than expected for gestational age.
	  • More than one fetal heart can be heard with the fetoscope.
		➡ **If more than one fetus is suspected/confirmed**, see Multiple Pregnancy (**page 3-68**) for additional information about assessment and care provision.

Element	Normal	Abnormal/Followup Action

Fetal lie and presentation
 	
For the procedure, see **Textbox 2-10** (**page 2-20**).
 	
Note: Do not perform this assessment while the woman is having a contraction.
	• The fetus is longitudinal in lie and cephalic in presentation.
	• The head may be:
	  ◦ Fixed, engaged
	  ◦ Dipping into the pelvis
	  ◦ Free and floating
		➡ **If the fetus is in transverse lie**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
		➡ **If the fetus is in breech presentation**, ACT NOW!—see Breech Presentation in Labor (**page 3-47**) for additional information about assessment and care provision.

Descent*
 	
For the procedure, see **Textbox 2-19** (**page 2-61**).
	• Descent should progress continually throughout labor until childbirth.	• Use this information to:
		  ◦ Establish a baseline against which later findings can be evaluated
		  ◦ Help evaluate progress of labor

Fetal heart tones* Follow the procedure shown in **Textbox 2-11** (**page 2-21**). **Note**: Fetal heart tones are easily audible between contractions in a term fetus.	• Fetal heart rate is from 120 to 160 beats per minute before the woman is in the active phase of labor. • Fetal heart rate is from 100 to 180 beats per minute when the woman is in the active phase of labor. • **Normal variation:** In the active phase of labor, the fetal heart rate may slow during the peak of a strong contraction, but should return to normal within seconds of uterus relaxing.	➡ **If fetal heart tones are absent**, ACT NOW!—see Management of Absent Fetal Heart Tones (**Textbox 3-44, page 3-112**) before proceeding. ➡ **If fetal heart tones are not within normal range**, ACT NOW!—see Management of Abnormal Fetal Heart Rate (**Textbox 3-45, page 3-113**) before proceeding.
Bladder **Note:** Palpate above the symphysis pubis.	• Bladder is not palpable. • The woman is able to urinate when the urge is felt.	➡ **If the bladder is palpable or the woman is unable to urinate when the urge is felt**, see Urinary Retention during Labor and the Postpartum Period (**page 3-79**) for additional information about assessment and care provision.

*Once active labor begins, this element is recorded on a partograph and interpreted accordingly.

Element	Normal	Abnormal/Followup Action

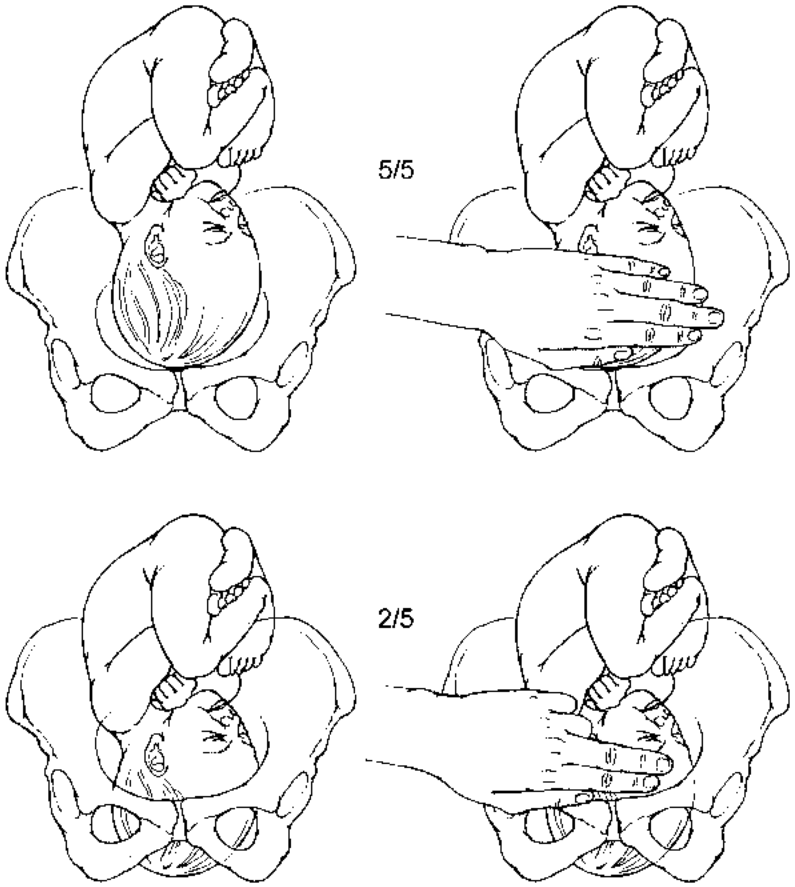
Contractions* (frequency and duration)
 	
For the procedure, see **Textbox 2-20** (**page 2-62**).
	• Effective contractions occur at regular intervals and continuously increase in strength, frequency, and duration.
	  • **1st stage/latent phase:** Contractions occur irregularly and last less than 20 seconds each.
	  • **1st stage/active phase:** Two to three contractions occur every 10 minutes and last 20–40 seconds each; as active phase progresses, contractions become more frequent and longer in duration, with three to five occurring every 10 minutes, lasting more than 40 seconds each.
	• The uterus completely relaxes between contractions.
		• Use this information to:
		  • Distinguish between true and false labor (**Table 2-8, page 2-68**).
		  • Evaluate the effectiveness of contractions (**Textbox 2-20, page 2-62**).
		  • Help assess stage and phase of labor (**Table 2-8, page 2-68**), which will be confirmed in the cervical examination.
		  • Establish a baseline against which later findings can be evaluated.
		➡ **If there are continuous uterine contractions that do not allow the uterus to relax**, ACT NOW!—see Vaginal Bleeding in Later Pregnancy or Labor (**page 3-102**) before proceeding.
		➡ **If there is constant pain that persists between contractions or is sudden in onset** (or if contractions cease altogether), ACT NOW!—see Severe Abdominal Pain in Later Pregnancy or Labor (**page 3-119**) before proceeding.

*Once active labor begins, this element is recorded on a partograph and interpreted accordingly.

Textbox 2-19. Determining Fetal Descent through Abdominal Palpation

- Stand at the woman's side.
- Palpate the head above the symphysis pubis.
- By abdominal palpation, assess descent in terms of fifths of fetal head palpable above the symphysis pubis (**Figure 2-7, page 2-62**):
  - A head that is entirely above the symphysis pubis accommodates five fingers and is five-fifths (5/5) palpable (**Figure 2-7, page 2-62, Top Right and Left**);
  - A head that is two-fifths (2/5) above the symphysis pubis accommodates two fingers above the symphysis (**Figure 2-7, page 2-62, Bottom Right and Left**);
  - A head that is entirely below the symphysis pubis is zero-fifths (0/5) palpable and engaged.

Figure 2-7. Abdominal Palpation for Descent of the Fetal Head



Textbox 2-20. Evaluating the Effectiveness of Contractions

Contractions provide the power to dilate the cervix and cause descent of the presenting part of the baby. They should be evaluated every 2 hours during the latent phase, every 30 minutes during the active phase, and every 15 minutes in the 2nd stage of labor.

To evaluate contractions:

- Place a hand on the woman's abdomen (at the upper portion of the uterus) and palpate the contractions from the start of one contraction until the start of the next contraction.
- Using a clock or watch while palpating, calculate frequency and duration of the contractions.
  - Frequency of contractions is the number of contractions in 10 minutes.
  - Duration of contractions is the number of seconds from the beginning of a contraction to the end of the contraction.

In general, effective contractions:

- Occur at regular intervals, and become more frequent and longer as labor progresses
- Start in back and move to the front
- Are increased in intensity by walking
- Cause cervical dilation and fetal descent
- Occur between periods of complete uterine relaxation

PE-5. Genital Examination

Note: A speculum examination is not recommended as a routine part of assessment of labor. It may be done for certain indications such as confirming rupture of membranes. For the procedure, see **page 4-27**.

- If you have not already done so, help the woman prepare for further examination; follow the steps shown in **Textbox 2-7** (**page 2-16**) with the following modification. If possible, give her a clean gown to wear (instead of having her remove or loosen individual items of clothing).
- Perform a genital/vaginal examination (for the procedure, see **Textbox 2-12** [**page 2-23**]).
- After the examination, perform the Post-Examination Steps (**Textbox 2-13, page 2-24**).

Element	Normal	Abnormal/Followup Action
Vaginal opening **Skin** **Labia**	• Nothing is protruding from the vagina. • There are no signs of female genital cutting. • The genital skin is free from sores, ulcers, warts, nits, or lice. • The labia are soft and not painful.	➡ **If there is a foot or hand protruding from the vagina**, ACT NOW!—see Fetal Hand or Foot Presenting (**page 3-114**) before proceeding. ➡ **If there is a cord protruding from the vagina**, ACT NOW!—see Prolapsed Cord (**page 3-114**) before proceeding. ➡ **If signs of female genital cutting are present**, see Female Genital Cutting during Pregnancy or Labor (**page 3-49**) for additional information about assessment and care provision. ➡ **If findings (other than signs of genital cutting) are not within normal range**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) during the postpartum period.

Element	Normal	Abnormal/Followup Action

Vaginal secretions	• There is no blood, foul-smelling or yellow/greenish discharge, urine, or stool coming from the vaginal opening.
	• **Normal variations:**
	  • There may be discharge of the gel-like "mucous plug," which is released from the cervix in latent phase or active labor; it may be pinkish or streaked with blood.
	  • There may be "bloody show," a pinkish-red discharge caused by broken capillaries during cervical dilation.
	  • There may be amniotic fluid coming from the vagina; it should be clear and may have a distinct (but not foul-smelling) mild odor. (See **Membranes and amniotic fluid** [**page 2-65**].)
		➡ **If blood (as opposed to normal bloody show) is coming from the vagina**, ACT NOW!—see Vaginal Bleeding in Later Pregnancy or Labor (**page 3-102**) before proceeding.
		➡ **If other findings are not within normal range**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) during the postpartum period.

PE-6. Cervical Examination

Element	Normal	Abnormal/Followup Action

Dilation*
For the procedure, see **Textbox 2-21** (**page 2-66**).
	• Dilation progresses continually during normal labor. (See also **Figure 2-8** [**page 2-66**].)
	
	Note: If 4 cm or more, start the partograph. Initial cervical dilation in active phase of labor is plotted on the alert line; cervical dilation should remain on or to the left of the alert line of the partograph as labor progresses.
		• Use this information to:
		  • Distinguish between true and false labor (**Table 2-8, page 2-68**).
		  • Evaluate the effectiveness of contractions (**Textbox 2-20, page 2-62**).
		  • Help assess stage and phase of labor (**Table 2-8, page 2-68**).
		  • Establish a baseline against which later findings can be evaluated.

*Once active labor begins, this element is recorded on a partograph and interpreted accordingly.

Element	Normal	Abnormal/Followup Action

Membranes and amniotic fluid*
 For the procedure, see **Textbox 2-22** (**page 2-67**).
	• Membranes rupture spontaneously during labor or birth.
	• Amniotic fluid is clear and has a distinct, but not foul-smelling, mild odor.
	• **Normal variations:**
	  • The presence of a smooth membrane palpated over the presenting part indicates the presence of the intact bag of waters. The membrane may be closely applied to the presenting part, or filled with amniotic fluid forming forewaters.
	  • If the bag of waters is ruptured, the presenting part will be felt directly. Pooling of fluid in the vagina or fluid flowing out of the vagina also confirms ruptured membranes.
		➡ **If the fluid is red**, ACT NOW!—see Vaginal Bleeding in Later Pregnancy or Labor (**page 3-102**) before proceeding.
		➡ **If the fluid is greenish/brownish**, ACT NOW!—see Meconium-Stained Amniotic Fluid (**Textbox 3-42, page 3-111**) before proceeding.
		➡ **If the fluid is foul-smelling**, ACT NOW!—see Fever or Foul-Smelling Vaginal Discharge (**page 3-115**) before proceeding.
		➡ **If it has been more than 18 hours since membranes have ruptured**, see Prelabor Rupture of Membranes or Membranes Ruptured for More than 18 Hours before Birth (**page 3-70**) for additional information about assessment and care provision.

Presentation For the procedure, see **Textbox 2-23** (**page 2-67**). **Note:** This is most easily done after the rupture of membranes.	• In active labor, presentation is cephalic (i.e., the top of the head is palpated).	➡ **If the presentation is not cephalic**, ACT NOW!—see Breech Presentation in Labor (**page 3-47**) for additional information about assessment and care provision. ➡ **If the presentation is cephalic and anything other than the top of the head is palpated** (i.e., a brow, face, or chin are palpated), ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

*Once active labor begins, this element is recorded on a partograph and interpreted accordingly.

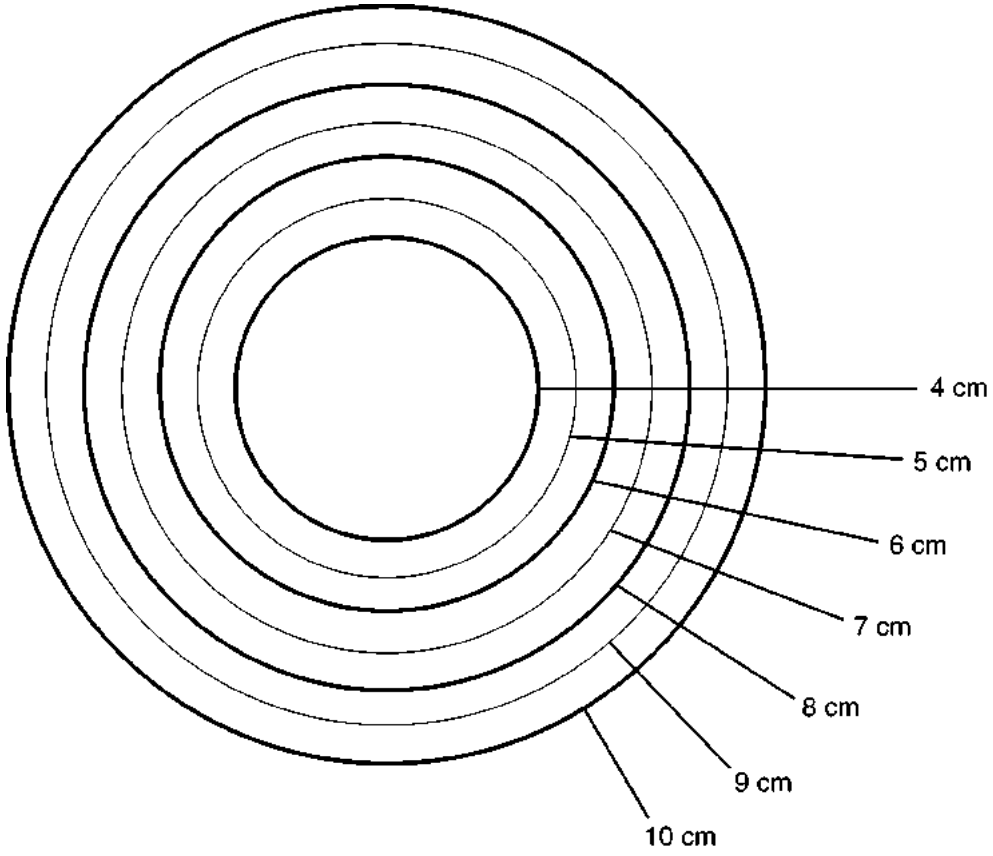
Element	Normal	Abnormal/Followup Action
Molding* For the procedure, see **Textbox 2-23** (**page 2-67**). **Note:** This is most easily done after the rupture of membranes.	• Bones of the fetal skull are separated or just touch each other. (See also **Figures 2-9 and 2-10** [**page 2-67**].)	➡ **If the bones overlap**, consider in the context of further assessment • Be alert for signs/symptoms of unsatisfactory progress of labor (e.g., fetal descent or cervical dilation is not progressing, contractions become more irregular).

*Once active labor begins, this element is recorded on a partograph and interpreted accordingly.

Textbox 2-21. Assessing Cervical Dilation

Insert the middle and index fingers into the open cervix and gently open them to the cervical rim. The distance between the outer aspects of both fingers is the dilation in centimeters (**Figure 2-8**, below).

Figure 2-8. Dilation of the Cervix in Centimeters



Textbox 2-22. Assessing the Condition of Amniotic Fluid and Membranes

- With your middle and index fingers still inserted into the cervix, evaluate whether the bag of waters is still intact or has ruptured.
  - The presence of a smooth membrane palpated over the presenting part indicates the presence of the intact bag of waters. The membrane may be closely applied to the presenting part, or filled with amniotic fluid forming forewaters.
  - If the bag of waters is ruptured, the presenting part will be felt directly. Pooling of fluid in the vagina or fluid flowing out of the vagina also confirms ruptured membranes.

Textbox 2-23. Assessing Presentation and Position of the Fetus and Molding

With your fingers still inserted:

- Feel the fetal skull to confirm cephalic presentation of the fetus.
- Assess molding, noting whether the bones touch each other or overlap. (**Figure 2-9** [below] shows the landmarks of a normal fetal skull; **Figure 2-10** [below] shows apposing bones in the fetal skull.)
- As you withdraw your examination hand, inspect your gloves for blood and/or meconium, as well as odor of fluid.
- After withdrawing fingers, note the color and odor of the fluid.

Figure 2-9. Landmarks of the Normal Fetal Skull

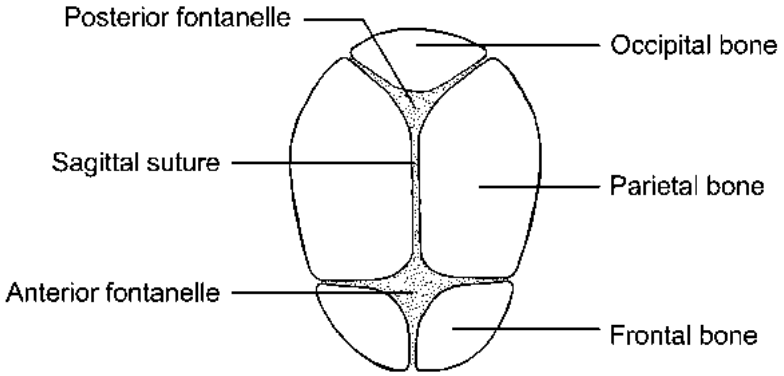


Figure 2-10. Apposing Bones (Bones Touching Each Other) in the Fetal Skull

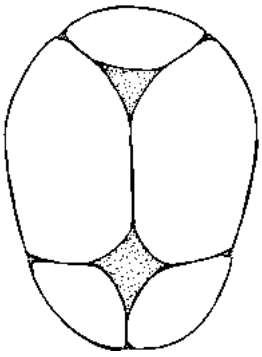


Table 2-8. Confirming True Labor and Assessing Stage/Phase of Labor

	CERVIX	CONTRACTIONS	VAGINAL SECRETIONS	DESCENT	OTHER SIGNS
False labor	• No dilation or dilation is not progressive	• Irregular • Frequency: fewer than three per 10 minutes • Duration: less than 20 seconds • Not progressively more frequent or longer in duration • Felt mainly in the front	• No bloody show	• No progressive descent of presenting part	• The woman is comfortable, is able to walk, and can eat and drink fluids.
1st stage of labor/ latent phase	• Dilation less than 4 cm	• Irregular • Frequency: variable, from one per 20 minutes to four per 10 minutes • Duration: less than 20 seconds • Progressively more frequent or longer in duration	• Possibly bloody show • Possibly mucous plug • Possibly ruptured membranes	• No progressive descent of presenting part	• The woman is relatively comfortable, is able to walk, and can eat lightly and drink fluids.
1st stage of labor/ active phase	• Increases from 4 cm to 10 cm • Rate: approximately 1 cm per hour	• Regular • Frequency: increases to at least three per 10 minutes • Duration: increases to more than 40 seconds each	• Possibly bloody show • Possibly ruptured membranes	• Presenting part is usually engaged in primiparas; may not be engaged in multiparas. • Descent through the birth canal begins.	• The woman is uncomfortable and needs support. • She finds it helpful to breathe in and out slowly during contractions. • She is focused on what is happening to her body. • She can walk but will need frequent rest periods. • She can drink fluids.

Table 2-8. Confirming True Labor and Assessing Stage/Phase of Labor *(continued)*

	CERVIX	CONTRACTIONS	VAGINAL SECRETIONS	DESCENT	OTHER SIGNS
2nd stage of labor	• Dilation is 10 cm.	• Regular • Frequency: at least three per 10 minutes • Duration: at least 40 seconds each	• Increase in bloody show • Membranes are usually ruptured (but if not may still rupture spon-taneously)	• Descent is steady. • More and more of presenting part is seen at introitus during pushing.	• The woman feels increasing rectal pressure. • She wants to bear down and gives short, involuntary pushes. • She may appear to be holding her breath. • The woman feels a progressively intense urge to push.

Testing (T)

When you have finished performing a physical examination, conduct testing; remember that the woman may "opt out" of HIV testing (see **Note**, below). Be sure to record all findings in the woman's chart.

Element	Normal	Abnormal/Followup Action
T-1. RPR[1] For the procedure, see **page 4-44**.	• Negative	➡ **If the test is positive for syphilis,** see Syphilis (**page 3-76**) for additional information about assessment and care provision.
T-2. HIV (See **Note** [**page 2-70**].)	• Negative	➡ **If the test is positive for HIV**, see HIV (**page 3-51**) for additional information about assessment and care provision. **Note**: **Always adhere to national guidelines for HIV testing**. In general: • If the test is positive for HIV, test again with a different type/preparation of test. • If the second test is positive, see HIV (**page 3-51**). • If the second test is negative, do a third test for discordant test results. • If the third test is positive, see HIV (**page 3-51**). • If the third test is negative, inform the woman that she is HIV-negative during post-test counseling (**page 2-34**).

[1] Use VDRL if RPR is not available.

Element	Normal	Abnormal/Followup Action
T-3. Blood group and Rh, if available	• Blood group is A, B, AB, or O. • Rh is positive.	➡ **If Rh is negative**, the woman is a candidate for anti-D immune globulin.

Notes:

- If the woman presents to the healthcare facility for the first time in labor and does not know her HIV status, she should be offered HIV counseling (**page 2-33**) and rapid testing at this time.
- The woman should be informed that HIV testing is recommended for all women during the childbearing cycle, but that she may "opt out" of being tested if she desires. If she opts out, be sure to offer testing at all subsequent visits. A woman who chooses not to be tested during the first visit may change her mind and choose to be tested after she has received counseling, considered the benefits of testing, and/or discussed testing with her partner.

LABOR/CHILDBIRTH CARE PROVISION

C-1. Key Actions for the 1st Stage of Labor

If the woman is in the 1st stage of labor (according to the diagnostic criteria shown in **Table 2-8** [**page 2-68**]), provide care as shown below.

- Throughout the 1st stage of labor, perform ongoing assessment (**Table 2-5, page 2-39**) and ongoing supportive care (**Table 2-7, page 2-47**).
- When the active phase begins (i.e., the cervix has dilated to 4 cm), start a partograph (**C-1.1, page 2-70**).

Table 2-9. Summary of 1st Stage of Labor

STAGE/PHASE	DIAGNOSTIC CRITERIA	COMMENTS
1st stage/ latent phase	• **Cervix:** Dilation is 1–3 cm. • **Contractions:** – Irregular – Frequency: variable, irregular – Duration: less than 20 seconds • **Descent:** Not progressive	• The latent phase begins with regular contractions and initial cervical dilation and continues until 4 cm dilated. This is the 1st stage/latent phase of labor, and cervical dilation may proceed slowly. It is variable in length and can last up to 20 hours in primiparas and 14 hours in multiparas. During this time, contractions are becoming coordinated and more frequent, last longer and are more efficient, and are causing the cervix to soften. • The woman may walk, sit, or lie down, as she desires. She should drink plenty of fluids and can eat small meals, if desired. She does not yet require constant attendance by a skilled provider.
1st stage/ active phase	• **Cervix:** – Dilation is 4–10 cm. – Rate of dilation is approximately 1 cm per hour. • **Contractions:** – Regular – Frequency: increases to three to five per 10 minutes – Duration: increases to more than 40 seconds • **Descent:** – Fetal descent begins. – Presenting part is usually engaged by this time in primiparous women.	• Active phase begins when the cervix reaches 4 cm dilation and lasts until it reaches 10 cm dilation. • With the onset of the active phase of labor (cervix dilated at least 4 cm), the skilled provider uses a partograph (**C-1.1**) to record information and make clinical decisions about the progress of the woman's labor. • The woman's care needs will increase (compared with the latent phase of labor); she will require more supportive care as her discomfort and anxiety increase with the increasing frequency and duration of contractions. The woman should not be left alone from this point on.

C-1.1. Start a Partograph

At the beginning of the active phase of the 1st stage of labor, when the dilation of the cervix reaches 4 cm, start a partograph (**Annex 3, page 4-7**) to evaluate fetal and maternal well-being as well as the progress of labor. From that point through childbirth, you should record findings (those marked with an asterisk [*] in this chapter) on the partograph. Be sure to record all other elements of assessment and care provision in the woman's chart.

Note: As a woman enters the late active phase of labor (or transition), she may need more intensive help managing the pain and discomfort as the experience of labor intensifies. Fear and anxiety may cause tension and increased pain. The laboring woman must cope with the contractions more purposefully; she may feel hot and sweaty, have increasing pelvic pressure and backache. She may become anxious, worried, and withdrawn, and feel as though she cannot go on. Labor support and comfort measures are critical during this phase of labor.

C-2. Key Actions for the 2nd and 3rd Stages of Labor

If the woman is in the 2nd or 3rd stage of labor (according to the diagnostic criteria shown in **Table 2-8** [**page 2-68**]), provide care as shown below.

- Throughout the 2nd and 3rd stages of labor, perform ongoing assessment (**Table 2-5, page 2-39**) and ongoing supportive care (**Table 2-7, page 2-47**).
- During the 2nd stage/pushing phase:
  - Assist the woman in pushing (**C-2.1, page 2-72**).
  - Continue recording appropriate information on the partograph; use this information to evaluate the progress of the woman's labor and make decisions about her care.
- During the 2nd stage/expulsive phase, assist in normal birth (**C-2.2, page 2-74**).
- Immediately after the baby is born, initiate immediate newborn care (**C-2.3, page 2-77**).
- During 3rd stage, perform active management (**C-2.4, page 2-78**).

Table 2-10. Summary of 2nd and 3rd Stages of Labor

STAGE/PHASE	DIAGNOSTIC CRITERIA	COMMENTS
2nd stage/ pushing and expulsive phases	• **Cervix:** Dilation is 10 cm. • **Contractions:** Urge to push becomes progressively stronger. • **Descent:** Progresses until presenting part of fetus reaches the pelvic floor	• The **early (pushing) phase of the 2nd stage** of labor begins with complete dilation and ends when the head reaches the pelvic floor, causing a spontaneous urge to push. The early phase of 2nd stage can last from a few minutes to up to an hour. It is a transition phase, during which contractions may become less frequent and of shorter duration. The woman may rest or fall into a light sleep. There may be no spontaneous desire to bear down. As the fetal head descends, the contractions continue to become more frequent and last longer. • The **late (expulsive) phase of the 2nd stage** of labor begins when the presenting part of the fetus has descended to the pelvic floor and triggers the bearing-down reflex; it ends with the complete birth of the baby. The contractions become more forceful, and the woman begins pushing spontaneously. The pushing phase can last from 1–2.5 hours in a primigravida, and from a few minutes to 1 hour in a multigravida. The descent that began in the 1st stage accelerates in the 2nd stage of labor. Steady descent of the fetus during the 2nd stage is the most accurate indicator of normal progress.

Table 2-10. Summary of 2nd and 3rd Stages of Labor *(continued)*

STAGE/PHASE	DIAGNOSTIC CRITERIA	COMMENTS
3rd stage	• The 3rd stage of labor begins with the birth of the baby and ends with the delivery of the placenta.	• The 3rd stage of labor begins with the birth of the baby and ends with the delivery of the placenta. Although the 3rd stage usually lasts less than 30 minutes, constant vigilance is especially important throughout because of the woman's increased risk of blood loss. A key action during this period is active management of the 3rd stage of labor, which has been demonstrated to significantly reduce the incidence of postpartum hemorrhage. • During this time, continue to observe the baby's breathing and general condition—the baby is making many adjustments to life outside the uterus, and her/his condition can change suddenly. Also, provide constant vigilance for the woman—she can start to bleed suddenly.

C-2.1. Assist the Woman in Pushing

- Encourage the woman to assume a position for pushing that is comfortable for her and aids in the descent of the fetus, such as semi-sitting/reclining (**Figure 2-11, page 2-73**), squatting (**Figure 2-12, page 2-73**), hands and knees (**Figure 2-13, page 2-73**), or lying on side (**Figure 2-14, page 2-73**).
- Help her rest between contractions by assisting her into resting positions (lying down, sitting, leaning over a chair or other stable piece of furniture) or encouraging her to stand or walk.
- Have the woman push in response to her natural bearing-down reflex. **Do NOT urge her to push!**
  - Encourage her to focus her attention inward on the movement of the presenting part as it moves down the birth canal with every push.
  - Coach her to exhale as she bears down, rather than hold her breath throughout the contraction. (For more information about breathing techniques, see **Textbox 2-24** [**page 2-73**].)
  - Encourage her to maintain pushing efforts only as long as she feels the urge.
- Encourage her to relax her legs, jaw, and perineum while pushing.
- Help her try different positions if descent is slow or her efforts are ineffective.
- Offer encouraging feedback after each push and praise her effort.
- Be patient. Slow steady progress is good.
- Wipe her brow between pushes and offer her sips of water.

Figure 2-11. Pushing Positions: Semi-Sitting/Reclining

Figure 2-12. Pushing Positions: Squatting

Figure 2-13. Pushing Positions: Hands and Knees

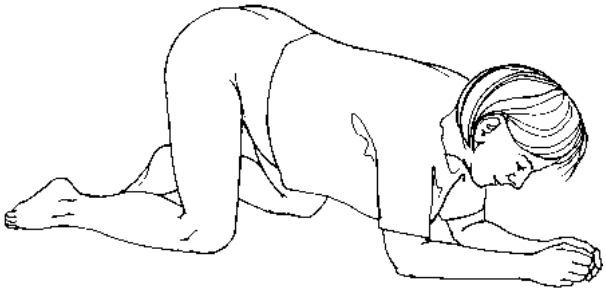
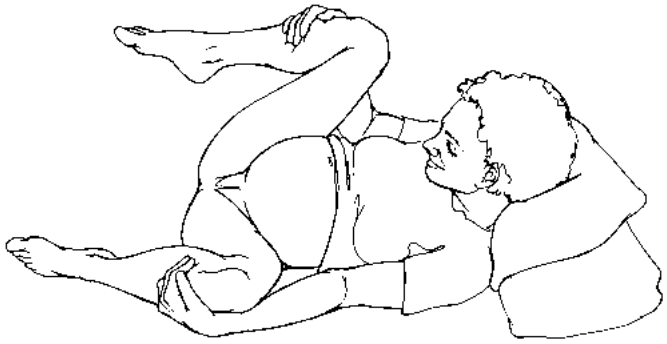


Figure 2-14. Pushing Positions: Lying on Side



Textbox 2-24. Breathing Techniques during Labor

Based on the woman's individual needs, advise her as follows:

1st stage/latent phase: During this part of labor, contractions are not very regular and are short in duration, so it is best for you to use your **natural, normal breathing patterns** at this time.

1st stage/active phase:

1. **Early active phase (4–7 cm)**
   Use **abdominal breathing**: take slow, deep breaths during contractions, making sure that the abdomen, not the chest, goes up and down with each breath. After each contraction, take a deep breath and let it out slowly, relaxing the entire body and letting yourself go loose all over.
2. **Late active phase (8–10 cm)**
   Use **superficial chest breathing**: breathe in and out more rapidly than in early active phase, taking shallower breaths. Now the chest should go up and down with each breath. You can use a pattern such as "pant-pant-blow" or "pant-blow-blow-pant" in which a shallow breath is followed by a quick blowing out before taking another shallow breath. Using this pattern helps you to concentrate more on breathing than on the contraction. If possible, have your birth companion do this breathing with you so that you have someone to concentrate on and "copy" when the contraction is very intense. After each contraction is over, take a deep breath and let it out slowly, relax the entire body, and let yourself go loose all over. *(continued on next page)*

Textbox 2-24. Breathing Techniques during Labor *(continued)*

2nd stage/pushing phase:

1. It is important to push only when you feel the urge, even if the cervix is completely open. The contractions will help the baby to descend to the point where you feel as though you want to push.
2. When you feel like pushing, it is important that you **do not hold your breath**, close off your throat, or push hard for a long time. Rather, push in the manner most natural and comfortable for you. Making noises while pushing is good, because this helps keep the throat open. Pushing for 5–10 seconds and then taking several breaths before pushing again helps ensure that the baby gets plenty of oxygen.
3. After each contraction is over, take a deep breath and let it out slowly, relaxing the entire body and letting yourself go loose all over.

It may be necessary to stop pushing so the baby can be born slowly. In order not to push, start panting: breathe rapidly through your mouth and throat while your chest goes up and down.

C-2.2. Assist in Normal Birth

- Once the cervix is fully dilated and the woman is in the 2nd stage, encourage the woman to assume the position she prefers (above) and encourage her to push when the urge is felt.

Note: The urge to push is very strong at this point and it is not always easy for a woman to control her pushing. Each small push will help stretch the perineum as the head crowns. Maintaining control during crowning and emergence of the head helps prevent tears.

- Continually assess the speed at which the baby is descending through the birth canal. Have the woman continue spontaneous bearing-down efforts until the baby's head crowns.
- Coach the woman to push and/or breathe so that the birth of the head will be slow, steady, and controlled.
- ➧ **If the baby is coming very fast**, help the woman stop pushing by asking her to blow repeatedly or breathe steadily, which makes it easier to refrain from pushing.

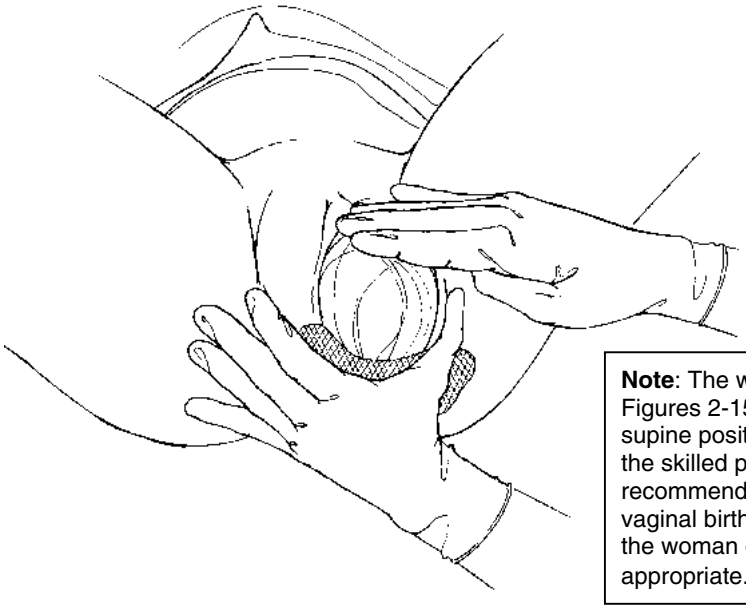
Note: Episiotomy is no longer recommended as a routine procedure. There is no evidence that routine episiotomy decreases perineal damage, future uterine prolapse, or urinary incontinence. In fact, routine episiotomy is associated with an increase of 3rd and 4th degree tears and subsequent anal sphincter muscle dysfunction. Episiotomy (**page 4-18**) should be considered only in the following cases:

- Complicated vaginal delivery (breech, shoulder dystocia, forceps, vacuum extraction)
- Scarring from female genital mutilation or poorly healed 3rd or 4th degree tears
- Fetal distress

Birth of the head:

- Clean the woman's perineum with a cloth or compress, wet with antiseptic or soap and water, wiping from front to back.
- Ask the woman to pant or give only small pushes with contractions as the baby's head is born.
- As the pressure of the head thins out the perineum, one way to control the birth of the head is with the fingers of one hand applying a firm, gentle downward (but not restrictive) pressure to maintain flexion, allow natural stretching of perineal tissue, and prevent tears (**Figure 2-15, page 2-75**).

Figure 2-15. Perineal Support during Normal Vaginal Birth



Note: The woman represented in Figures 2-15 to 2-19 is shown in supine position for ease in illustrating the skilled provider's hand maneuvers recommended for assisting in normal vaginal birth. Other birth positions, as the woman desires, may be equally appropriate.

- Use the other hand to support the perineum using a compress or cloth, and allow the head to crown slowly and be born spontaneously. **Do not manipulate the labia or perineum over the baby's head because this increases the risk of tears.**
- Wipe the mucus (and membranes, if needed) from the baby's mouth and nose with a clean cloth.
- Feel around the baby's neck to ensure that the umbilical cord is not around it:
  - ➧ **If the cord is around the neck but is loose**, slip it over the baby's head.
  - ➧ **If the cord is loose but cannot reach over the head**, slip it backwards over the shoulders.
  - ➧ **If the cord is tight around the neck:**
    - Tie or clamp the cord in two places 2 cm apart.
    - Cut the cord between the ties/clamps.
    - Unwind the cord from around the baby's neck and proceed.

Completion of birth:

- Allow the baby's head to turn spontaneously.
- After the head turns, place a hand on each side of the baby's head, over the ears, avoiding pressure around the neck with the fingers. Advise the woman to push gently with the next contraction.
- Then, apply slow, gentle pressure downward (toward the woman's spine) and outward until the anterior shoulder slips under the pubic bone (**Figure 2-16, page 2-76**).
  - ➧ **If there is difficulty delivering the shoulders**, ACT NOW!—perform the procedure for shoulder dystocia (**page 4-40**) before proceeding.
- When the axilla (arm fold) is seen, guide the head upward toward the woman's abdomen as the posterior shoulder is born over the perineum (**Figure 2-17, page 2-76**).
- Support the baby's head with one hand and the rest of the baby's body with the other hand as it slides out (**Figure 2-18, page 2-76**), and place the baby on the woman's abdomen (**Figure 2-19, page 2-77**).
  - ➧ **If the woman is unable to hold the baby**, ask her companion or an assistant to care for the baby.

Figure 2-16. Pulling Gently Downward to Deliver the Anterior Shoulder during Normal Vaginal Birth

Figure 2-17. Pulling Gently Upward to Deliver the Posterior Shoulder during Normal Vaginal Birth

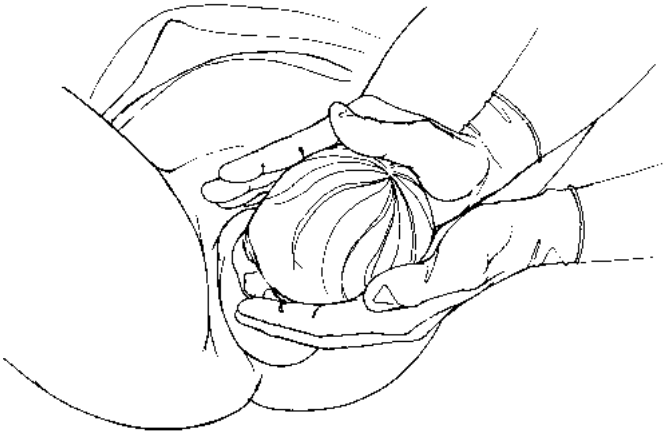


Figure 2-18. Supporting the Baby during Normal Vaginal Birth

Figure 2-19. Placing the Baby on the Woman's Abdomen Immediately after Normal Vaginal Birth

C-2.3. Initiate Immediate Newborn Care

After placing the baby on the woman's abdomen:

- Thoroughly dry the baby (removing maternal blood and other secretions) and cover with a clean, dry cloth, WHILE wiping the baby's eyes (using a separate clean swab or cloth for each eye) and assessing breathing.
  - ➡ **If the baby does not start breathing immediately**, ACT NOW!—perform newborn resuscitation (**page 3-99**) before proceeding.
  - ➡ **If the baby is crying or breathing** (chest rising at least 30 times per minute), leave the baby with the woman.
- Tie or clamp the umbilical cord in two places (at about 3 cm and 5 cm from the umbilicus) and cut the cord between the ties/clamps.
- Ensure that the baby is kept warm and in skin-to-skin contact on the woman's chest, and encourage breastfeeding.
- Cover the baby with a cloth or blanket; ensure that the head is covered to prevent heat loss.
- Palpate the abdomen to rule out the presence of an additional baby(s) and proceed with active management of the 3rd stage.

Remember: Immediate skin-to-skin contact and breastfeeding of the baby:
- Provide warmth for the baby (thermoregulation)
- Provide nourishment for the baby (prevents hypoglycemia)
- Facilitate mother-baby bonding
- Stimulate the production of oxytocin which promotes uterine contraction after delivery of the placenta

C-2.4. Perform Active Management of 3rd Stage of Labor

Administer oxytocin:

- Within 1 minute of birth of the baby, palpate the abdomen to rule out the presence of an additional baby (or babies) and give oxytocin 10 units IM.

> **Note:** Oxytocin is preferred because it is effective 2–3 minutes after injection, has minimal side effects, and can be used in all women. If oxytocin is not available, give ergometrine* 0.2 mg IM or misoprostol 600 mcg by mouth.
>
> * Do **NOT** give ergometrine to women with pre-eclampsia, eclampsia, or high blood pressure because it increases the risk of convulsions and cerebrovascular accidents.

Perform controlled cord traction:

- Clamp the cord close to the perineum. Hold the clamped cord and the end of the clamp in one hand.
- Place the other hand just above the pubic bone and gently apply countertraction (push upward on the uterus) to stabilize the uterus and prevent uterine inversion.
- Keep light tension on the cord and await a strong uterine contraction (2–3 minutes).
- When the uterus becomes rounded or the cord lengthens, very gently pull downward on the cord to deliver the placenta. **Do not jerk on the cord or pull on it between contractions. Do not wait for a gush of blood before applying traction on the cord.**
- Continue to apply countertraction (push upward on the uterus) with the other hand.
  - ➡ **If the placenta does not descend during 30–40 seconds of controlled cord traction**, relax the tension and repeat with the next contraction. (Normally the placenta will separate with 3 or 4 contractions when active management is used.)
    - ➡ **If the placenta does not deliver in 30 minutes**, ACT NOW!—perform manual removal of the placenta (**page 4-22**) before proceeding.

> **NEVER** apply cord traction (pull) without applying countertraction (pushing) above the pubic bone with the other hand at the same time.

Deliver and inspect the placenta:

- As the placenta delivers, hold it with both hands and twist it slowly so that the membranes are expelled intact.
  - ➡ **If the membranes do not slip out spontaneously**, gently twist them into a rope and move them up and down to assist separation without tearing them.
  - ➡ **If the cord is pulled off**, ACT NOW!—perform manual removal of placental fragments (**page 4-22**) before proceeding.
- Rapidly inspect the placenta, cord, and membranes for general completeness.
  - ➡ **If a portion of the maternal surface is missing or if there are torn membranes with vessels**, ACT NOW!—perform manual removal of placental fragments (**page 4-22**) before proceeding.
- Slowly pull to complete the delivery.
  - ➡ **If the membranes tear**, ACT NOW!—see Vaginal Bleeding after Childbirth (**page 3-103**) before proceeding.
  - ➡ **If uterine inversion occurs**, ACT NOW!—perform correction of uterine inversion (**page 4-15**) before proceeding.

Massage the uterus:

- Immediately massage the uterus through the woman's abdomen until it is contracted. Show the woman how to massage her fundus to maintain contraction.
- Repeat uterine massage every 15 minutes for the first 2 hours.
- Ensure that the uterus does not become relaxed (soft) after you stop uterine massage.
  - ➡ **If the uterus becomes soft**, ACT NOW!—see Vaginal Bleeding after Childbirth (**page 3-103**) before proceeding.

Examine the placenta, cord, and membranes.

Inspect for tears:

- Inspect the vagina and perineum for tears:
  - With your gloved nondominant hand, separate the labia and look carefully at the vaginal opening and perineum for any tears or hematomas (collection of blood under the tissue).
  - Press firmly on the back wall of the vagina with your gloved dominant fingers so that you can look deep into the vagina. Bleeding from a tear may ooze slowly or spurt from an artery.
  - Slowly press against the vaginal wall and move your fingers up the side wall of the vagina, one side at a time. Be sure to feel all the way up the vagina to the cervix. Assess findings, as shown below.
  - ➡ **If there are tears or you are not sure whether there are tears**, see Examination of the Vagina, Perineum, and Cervix for Tears (**page 4-20**) before proceeding.
- Continually assess for bleeding.
  - ➡ **If there is a continuous trickle of blood, a sudden gush of blood, or clots of blood larger than small lemons**, ACT NOW!—see Vaginal Bleeding after Childbirth (**page 3-103**) before proceeding.
- Gently cleanse the perineum with warm water and a clean cloth.
- Apply a clean pad/cloth to the vulva.
- Remove all wet and soiled bed linens and dispose of them appropriately.
- Ensure that the woman is comfortable and cover her with a blanket.

C-3. Key Actions for the 4th Stage of Labor

If you have determined that the woman is in the 4th stage of labor (according to the diagnostic criteria shown in **Table 2-11** [**page 2-80**]), provide care as shown below.

- Throughout the 4th stage of labor, perform ongoing assessment (**Table 2-5, page 2-39**) and ongoing supportive care (**Table 2-7, page 2-47**).
- Provide immediate postpartum care for the woman (**C-3.1**) and continue immediate newborn care (**C-3.2**).

Table 2-11. Summary of 4th Stage of Labor

STAGE/PHASE	DIAGNOSTIC CRITERIA	COMMENTS
4th stage	• The 4th stage of labor is the first 2 hours after childbirth.	• During this time, the woman is undergoing an intense period of recovery and the newborn is adjusting to life outside the uterus. It is very important to keep the woman and newborn together as much as possible during this time (preferably in skin-to-skin contact) to maintain warmth of the newborn, facilitate bonding, and promote breastfeeding. The skilled provider must also continue to monitor them both closely for signs of problems and conduct an initial assessment of the newborn. • Continue recording all elements of assessment and care provision for the woman in her chart. In addition, begin a chart for the newborn at this time.

C-3.1. Provide Immediate Postpartum Care for the Woman

Note: Vigilant monitoring of the postpartum woman is vital to averting maternal death from postpartum hemorrhage.

Measure the woman's temperature:

➡ **If temperature is 38°C or more**, ACT NOW!—see Fever or Foul-Smelling Vaginal Discharge (**page 3-115**) before proceeding.

Continue uterine massage:

- Repeat uterine massage every 15 minutes for the first 2 hours.
- Use the palm of one hand to massage the uterus.
- Ensure that the uterus remains firm and does not become relaxed (soft) after uterine massage.
  - ➡ **If uterus remains soft or quickly becomes soft after uterine massage**, ACT NOW!—see Vaginal Bleeding after Childbirth (**page 3-103**) before proceeding.
  - ➡ **If there is frank heavy bleeding, a steady slow trickle of blood, intermittent gushes of blood, or blood clots larger than lemons**, ACT NOW!—see Vaginal Bleeding after Childbirth (**page 3-103**) before proceeding.

Help initiate early breastfeeding:

- Encourage the **first feeding within the first hour of birth** by leaving the newborn in skin-to-skin contact with woman.
  - ➡ **If the woman has not yet decided whether she wants to breastfeed or use a breastmilk substitute**, see Breastfeeding versus Using a Breastmilk Substitute (**page 4-49**).
  - ➡ **If the woman cannot breastfeed (for whatever reason) or has chosen to use a breastmilk substitute**, see Using a Breastmilk Substitute (**page 4-51**).
- Give assistance at the first feed, if required, to ensure that the newborn is **correctly positioned and attached to the breast**.

➡ **If the woman requires additional guidance** (i.e., the newborn is having problems attaching, or the woman is having problems with positions or holds), see Breastfeeding Support (**page 4-47**).

- Allow **unrestricted time at the breast** once the baby starts to suckle.

Review the complication readiness plan:

- Review the woman's complication readiness plan, updating it to reflect postpartum/newborn needs. If she and her family have not yet developed a complication readiness plan, assist them in developing one according to the guidelines shown on **page 2-26**.
- Advise the woman and her family to enact the complication readiness plan if any of the danger signs shown in **Textbox 2-25** (below) arises.

Textbox 2-25. Danger Signs during the Immediate Postpartum/Newborn Period

Maternal danger signs:

- Vaginal bleeding (heavy or sudden increase)
- Breathing difficulty
- Fever (feeling of hotness)
- Severe abdominal pain
- Severe headache/blurred vision
- Convulsions/loss of consciousness
- Foul-smelling discharge from vagina
- Pain in calf, with or without swelling
- Verbalization/behavior that indicates she may hurt the baby or herself, or hallucinations

Newborn danger signs:

- Breathing difficulty
- Convulsions, spasms, loss of consciousness, or back arching (opisthotonos)
- Cyanosis (blueness)
- Hot to touch/fever
- Cold to touch
- Bleeding
- Jaundice (yellowness)
- Pallor
- Diarrhea
- Persistent vomiting or abdominal distention
- Not feeding or poor suckling (feeding difficulties)
- Pus or redness of the umbilicus, eyes, or skin
- Swollen limb or joint
- Floppiness
- Lethargy

Provide health messages and counseling:

- Based on the woman's history and any other relevant findings or discussion, individualize the following key messages:
  - Maintain the warmth of the newborn:
    - Keep the baby dry and covered with a clean, warm cloth.
    - Maintain skin-to-skin contact with the baby.
    - Do not bathe the baby for the first 6–24 hours.
    - If the baby's feet are cold, add a blanket/covering.
  - Continue uterine massage:
    - Repeat uterine massage every 15 minutes for the first 2 hours.
    - Use the palm of one hand to massage the uterus.
    - Inform the skilled provider immediately if the uterus remains soft or quickly becomes soft after uterine massage, and/or there is excessive vaginal bleeding.

C-3.2. Continue Immediate Newborn Care

Note: Although the following care measures should be provided in the early newborn period, usually **within 1 or 2 hours of birth**, continuing to protect the newborn from hypothermia is critical.

- Be sure to keep the newborn in skin-to-skin contact with the woman OR covered as much as possible during this time.
- Do not bathe the baby during the first 6 hours after birth as this can greatly increase the risk of hypothermia. Ideally, bathing should be delayed for 24 hours.

- Help initiate early breastfeeding.
- Securely attach an identification label to the baby's wrist or ankle.
- Provide eye treatment:
  - Immediately after birth, the baby's eyes should have been wiped using a separate clean swab or cloth for each eye.
  - **Instill an antimicrobial** into each eye within an hour of birth following the procedure shown in **Textbox 2-26** (below):
    - 2.5% polyvidone-iodine solution, one drop into each eye, OR
    - 1% silver nitrate solution, one drop into each eye, OR
    - 1% tetracycline ointment, which is applied on the inside of the lower lid.

Textbox 2-26. Procedure for Newborn Eye Treatment

- Wash hands thoroughly with soap and water and dry with a clean, dry cloth or allow them to air dry.
- Place the baby on her/his back.
- Wipe each eye with a separate clean swab or cloth, wiping from the inner eye outward.
- Place the thumb below the lower eyelid and the forefinger above the upper eyelid and gently open the eye.
- Apply a small amount of ointment to the inside of the lower lid, from the inside corner out, taking care not to contaminate the tip of the tube of ointment, **OR** drop one drop of solution onto the eye, being careful not to contaminate the tip of the container/dropper.
- Repeat the procedure on the other eye.
- Replace cap on tube/container.
- Wash hands thoroughly with soap and water and dry with a clean, dry cloth or allow them to air dry.
- Record procedure on birth record.

- Give vitamin K_1 1 mg IM in the anterolateral aspect of the thigh.
- Prepare for the newborn physical examination:
  - Inform the woman of what you are going to do, encourage her to ask questions, and listen to what she has to say.
  - Wash hands thoroughly with soap and water and dry them with a clean, dry cloth or allow them to air dry.
  - Place the baby on a clean warm surface or examine the baby in the woman's arms.
- Conduct the first complete newborn physical examination. (For the procedure, see **page 2-120**.)

Note: The first physical examination of the newborn is a form of screening to detect any abnormalities that may be present. It should be delayed for at least an hour or two after birth and longer if the newborn is unable to maintain a stable body temperature of 36.5–37.5°C. By this time, it is most likely that the woman will have carefully inspected her newborn and, if she is worried about anything, will have raised her concerns with the skilled provider.

CHAPTER SEVEN

POSTPARTUM CARE

OVERVIEW

After the woman has undergone the quick check (**Annex 6, page 4-61**), the postpartum care visit should be conducted according to the guidelines shown in **Chapter 4** (**page 2-1**) and the schedule shown below (**Table 2-12**).

Table 2-12. Schedule and Overview of Postpartum Care

COMPONENTS/ELEMENTS	1ST VISIT	SUBSEQUENT VISITS
ASSESSMENT		
Ongoing Assessment, page 2-84	Up to 6 hours after birth	–
History		
H-1. Personal information, page 2-87	✓	–
H-2. Daily habits and lifestyle, page 2-88	✓	–
H-3. Present pregnancy and labor/childbirth, page 2-89	✓	–
H-4. Present postpartum period, page 2-90	✓	✓
H-5. Obstetric history, page 2-92	✓	–
H-6. Contraceptive history/plans, page 2-93	✓	–
H-7. Medical history, page 2-93	✓	–
H-8. Interim history, page 2-94	–	✓
Physical Examination		
PE-1. General well-being, page 2-95	✓	✓
PE-2. Vital signs, page 2-96	✓	✓
PE-3. Breasts, page 2-97	✓	✓
PE-4. Abdomen, page 2-98	✓	✓
PE-5. Legs, page 2-99	✓	✓
PE-6. Genitals, page 2-101	✓	✓
Testing		
T-1. HIV, page 2-101	✓[1]	As needed[1]
CARE PROVISION		
Ongoing Supportive Care, page 2-84	Up to discharge	–
C-1. Breastfeeding and Breast Care, page 2-102 C-1.1. Breastfeeding guidelines, page 2-102 C-1.2. Additional advice for the woman, page 2-102 C-1.3. Breast care, page 2-102	✓	Reinforce key messages

Table 2-12. Schedule and Overview of Postpartum Care *(continued)*

COMPONENTS/ELEMENTS	1ST VISIT	SUBSEQUENT VISITS
CARE PROVISION (CONT.)		
C-2. Complication Readiness Plan, page 2-103	✓	Continue to develop as needed; reinforce key messages
C-3. Support for Mother-Baby-Family Relationships, page 2-103	✓	Reinforce key messages
C-4. Family Planning, page 2-104	✓	Reinforce key messages
C-5. Nutritional Support, page 2-105	✓	Reinforce key messages
C-6. Self-Care and Other Healthy Practices, page 2-105 C-6.1. Prevention of infection/hygiene, page 2-106 C-6.2. Rest and activity, page 2-106 C-6.3. Sexual relations and safer sex, page 2-107	✓	Reinforce key messages
C-7. HIV Counseling, page 2-107	✓	As needed
C-8. Immunizations and Other Preventive Measures, page 2-107 C-8.1. Tetanus toxoid (TT) immunization, page 2-107 C-8.2. Iron/folate, page 2-107 Intermittent preventive treatment and insecticide-treated bednets (for malaria)[2], page 3-59 Presumptive treatment (for hookworm infection)[2], page 3-59 Vitamin A supplementation[2], page 3-62 Iodine supplementation[2], page 3-61	✓	Reinforce key messages; replenish drugs as needed

[1] If woman "opts out" of HIV testing at one visit, she should be offered testing at subsequent visits.
[2] According to region/population specific recommendations

ONGOING ASSESSMENT AND SUPPORTIVE CARE

➡ **If within the first 6 hours after birth (or pre-discharge)**, the woman (and newborn) should be receiving:

- **Ongoing assessment**, according to the schedule shown in **Table 2-13** (**page 2-85**) (for guidance on ongoing assessment of the newborn, see **Table 2-16** [**page 2-111**]); and
- **Ongoing supportive care**, as shown in **Table 2-14** (**page 2-86**) (for guidance on ongoing supportive care of the newborn, see **Table 2-17** [**page 2-112**]).

Remember: To respect and maintain the mother-baby dyad, keep them together as much as possible throughout the postpartum/newborn period.

- Avoid separating the woman and newborn, even while individually assessing and caring for them.
- Place the baby in skin-to-skin contact immediately at birth, and facilitate immediate breastfeeding.
- Encourage and facilitate "rooming in"—keeping the baby with the woman day and night.
- Allow and encourage the woman's participation in examination and care of the baby.

Table 2-13. Ongoing Assessment of the Woman during the First 2–6 Hours after Birth

WHAT TO ASSESS	WHEN TO ASSESS	NORMAL	ABNORMAL/FOLLOWUP ACTION
Blood Pressure	• Every 2 hours	• Systolic BP (top number) is 90–140 mmHg. • Diastolic BP (bottom number) is less than 90 mmHg.	➡ **If the systolic BP is less than 90 mmHg**, ACT NOW!—perform Rapid Initial Assessment (**page 3-90**) before proceeding with ongoing assessment. ➡ **If the diastolic BP is 90–110 mmHg**, ACT NOW!—see Severe Headache, Blurred Vision, or Elevated Blood Pressure (**page 3-108**) before proceeding with ongoing assessment. ➡ **If the diastolic BP is more than 110 mmHg**, perform Rapid Initial Assessment (**page 3-90**) before proceeding.
Pulse	• Every 2 hours	• Pulse is 90–110 beats per minute.	➡ **If pulse is less than 90 or 110 or more beats per minute**, ACT NOW!—perform Rapid Initial Assessment (**page 3-90**) before proceeding with ongoing assessment.
Temperature	• Once	• Temperature is less than 38°C.	➡ **If temperature is 38°C or more**, ACT NOW!—see Fever or Foul-Smelling Vaginal Discharge (**page 3-115**) before proceeding with ongoing assessment.
Uterus **Note:** The uterus should be massaged every 15 minutes during the first 2 hours after birth.	• Every hour	• Uterus remains firm; feels like a firm ball at or below the umbilicus.	➡ **If uterus remains soft or quickly becomes soft after uterine massage**, ACT NOW!—see Vaginal Bleeding after Childbirth (**page 3-103**) before proceeding with ongoing assessment.
Vaginal Bleeding	• Every hour	• Amount of bleeding is similar to heavy menses. • **Normal variations:** Clots smaller than lemons may be passed.	➡ **If there is frank heavy bleeding, a steady slow trickle of blood, intermittent gushes of blood, or blood clots larger than lemons**, ACT NOW!—see Vaginal Bleeding after Childbirth (**page 3-103**) before proceeding with ongoing assessment.
Bladder	• Every hour	• Bladder is not palpable. • The woman is able to urinate when the urge is felt.	➡ **If the bladder is palpable or the woman is unable to urinate when the urge is felt**, see Urinary Retention during Labor and the Postpartum Period (**page 3-79**) for additional information about assessment and care provision.
Breastfeeding **Note:** At least once during the first 6 hours after birth.	• Whenever newborn nurses	• Woman and baby are positioned well; baby is correctly attached to the breast and feeds well.	➡ **If observations are not within normal range and attachment or suckling do not appear effective**, see Breast and Breastfeeding Problems (**page 3-43**) for additional guidance. ➡ **If the woman has not yet decided whether she wants to breastfeed or use a breastmilk substitute**, see Breastmilk versus Breastmilk Substitute (**page 4-49**). ➡ **If the woman has chosen to use a breastmilk substitute**, see Using a Breastmilk Substitute (**page 4-51**).

Table 2-14. Ongoing Supportive Care of the Woman until Discharge from the Healthcare Facility or in the Home

ELEMENT	MEASURE/RECOMMENDATION
Attendance/ Communication	• The skilled provider should attend to the woman at least every hour, and: – Focus on the woman; look for nonverbal cues of her needs and preferences. – Give her verbal encouragement and praise. – Provide continual information and reassurance about her condition and the well-being of the baby. – Encourage her to ask questions and express her feelings. – Advise the birth companion to remain with the woman during this time.
Mother-Baby Bonding	• Ensure that the woman and newborn are kept together as much as possible; facilitate rooming-in for the woman and newborn. • Maintain skin-to-skin contact between the woman and baby as much as possible. • Encourage the woman to hold and explore her baby freely. • Encourage the woman and family to cuddle and talk to the newborn as much as they wish; give them time alone if possible. • Help build the woman's confidence by verbal and nonverbal messages of encouragement and praise. • Encourage early and exclusive breastfeeding.
Comfort	• Ensure that the woman has a clean bed and enough blankets to maintain warmth. • Maintain a calm environment conducive to rest for the woman that facilitates bonding with her baby and initiation of breastfeeding.
Nutrition	• Encourage the woman to eat and drink, as she desires. • Encourage the woman to breastfeed on demand and exclusively as soon as possible after birth. ➡ **If the woman has not yet decided whether she wants to breastfeed or use a breastmilk substitute**, see Breastmilk versus Breastmilk Substitute (**page 4-49**). ➡ **If the woman has chosen to use a breastmilk substitute**, see Using a Breastmilk Substitute (**page 4-51**).
Elimination	• Encourage the woman to pass urine when the urge is felt or if the bladder is palpable. • Encourage sufficient fluids and culturally appropriate food to prevent constipation and soften stool.
Hygiene/Infection Prevention	• Replace soiled and wet clothing and bedding. • Dispose of the soiled/wet linen in a bucket, plastic bag, or other container that can be closed for transport to a washing facility. • Keep clean pads/cloths against the perineum.
Parenting Support	• Observe the parents' actions and behaviors; use this information to guide individualization of health messages and counseling and other elements of basic care provision. • Provide continual information and reassurance to the parents about the well-being of the baby. • Encourage them to ask questions and express their feelings. • Again, help build the parents' confidence by verbal and nonverbal messages of encouragement and praise, as appropriate.

POSTPARTUM ASSESSMENT

History (H)

Once you have welcomed the woman and her companion, and acknowledged the newborn, review the antenatal and birth records, if available. If not, take the woman's history. Be sure to record all findings in the woman's chart.

➡ **If this is the first encounter/visit**, take a complete history (elements **H-1** through **H-7**).

➡ **If this is a return visit**, a shortened history (elements **H-4** and **H-8**) may be sufficient.

H-1. Personal Information (First Visit)

Question	Use of Information/Followup Action

● What is the **woman's name**?
● What is the **baby's name**?
	● Use this information to:
	  • Identify the woman,
	  • Show her that the baby is important to you, and
	  • Help establish rapport.
	➡ **If there is no baby with the woman and you determine that the baby has died**, see Stillbirth or Newborn Death (**page 3-74**) for additional information about assessment.

● What is her **age** (her date of birth, if available)?	➡ **If the woman is 19 years of age or under**, see Adolescence (**page 3-37**) for additional information about assessment and care provision.

● What is her **phone number** (if available)?
● Where does she live (her **address**, if available)?
	● Use this information to:
	  • Contact the woman, and
	  • Guide development of the complication readiness plan.

● Does she have reliable **transportation**? ● What sources of **income/financial support** does she/her family have?	● Use this information to guide development of the complication readiness plan.
● How many **previous pregnancies** (gravida) and **childbirths** (para) has she had?	● Use this information to guide individualization of health messages and counseling and other aspects of basic care provision.

● Is she **currently** having a medical, obstetric, social, or personal **problem or other concerns**?
● Has she had any **problems during this postpartum period**?
	➡ **If YES:**
	  • Ask general followup questions to assess the nature of her problem (**Textbox 2-3, page 2-7**); and
	  • Consider this information in the context of further assessment.
	➡ **If the woman reports signs or symptoms shown in Textbox 2-27** (**page 2-88**), see the corresponding entry for additional information about assessment and care provision.

Question	Use of Information/Followup Action
• Has she received **care from another caregiver** (including a TBA, herbalist, traditional healer) during this postpartum period?	➡ **If YES**, why did she seek care? ➡ **If because of a problem**, ask the general followup questions in Set A (**Textbox 2-3, page 2-7**) to assess the nature of her problem. ➡ **If not because of a problem**, ask the general followup questions in Set B (**Textbox 2-3, page 2-7**) to assess the nature of care received. • Consider this information in the context of further assessment.

Textbox 2-27. Common Discomforts of the Postpartum Period

Abdomen, Breasts, and Legs
Afterpains, page 3-4

Digestion and Elimination
Bowel function changes, page 3-6

Genitals
Perineal pain, page 3-10

Skin
Stretch marks (striae gravidarum), page 3-13

Sleep and Mental State
Fatigue or sleepiness, page 3-14
Feelings of inadequacy, worry, or fear during the postpartum period, page 3-15
Insomnia, page 3-16

Miscellaneous
Back pain, page 3-18
Hair loss, page 3-20
Headache, page 3-21
Hemorrhoids, page 3-22

H-2. Daily Habits and Lifestyle (First Visit)

Question	Use of Information/Followup Action

• Does the woman work outside the home? Is her **daily workload** strenuous (i.e., how much does she walk, carry heavy loads, engage in physical labor)?
• Does she get adequate **sleep/rest**?
• Is her **dietary intake** adequate (ask what she eats in a typical day, or what she has eaten in the past 2 days)?
• Has she **given birth within the last year**?
• Is she currently **breastfeeding** another child?
	• Use this information to:
	  • Determine whether there is a balance between the physical demands of the woman's daily life and her dietary intake; and
	  • Guide individualization of Nutritional Support and other aspects of basic care provision.

• Does she smoke, drink alcohol, or use any other **potentially harmful substances**?	• Use this information to guide individualization of health messages and counseling and other aspects of basic care provision.
• With whom does she live (husband, partner, children, other **household members**)?	• Use this information to guide development of the complication readiness plan.

Question	Use of Information/Followup Action

• Inform the woman that you are going to ask her some questions of a **personal nature**, and that **you ask these questions of all clients**:
  • Has anyone ever **kept her** from seeing family or friends, **not allowed her** to leave the house, or **threatened her** life?
  • Has she ever been **injured**, hit, or forced to have sex by someone?
  • Is she **frightened** of anyone?
	➡ **If NO to ALL questions OR the woman does not want to discuss this issue**, inform her that she can discuss it with you at any time.
	➡ **If YES to ANY question OR you suspect abuse**, see Violence against Women (**page 3-81**) for additional information about assessment and care provision.
	
	Note: Violence against women is a difficult topic to address, especially if it is not clearly condemned in the woman's culture. To encourage the woman to discuss this issue with you:
	• Ensure complete confidentiality by asking these questions when she is alone (i.e., when no family members or friends are present).
	• Make it clear that no one deserves to be hit or abused by anyone and that it should never happen, even though some people may think there is nothing wrong with it.

H-3. Present Pregnancy and Labor/Childbirth (First Visit)

Question	Use of Information/Followup Action
• **When** was the birth (exact date and time, if possible)?	• Use this information to guide further assessment and care provision—the clinical significance of findings and the care the woman requires vary depending on how much time has elapsed since the birth.

• **Where** did the birth take place, and was it attended by a **skilled provider**?	➡ **If the birth took place in a healthcare facility and was attended by a skilled provider**, ask these followup questions and consider findings in the context of further assessment:
	  • From what provider/healthcare facility did she receive labor/childbirth care?
	  • What did the labor/childbirth care include (e.g., testing, immunizations, drugs/medications, counseling)?
	➡ **If the birth took place at home, was not attended by a skilled provider, and/or the care was not adequate**, consider findings in the context of further assessment:
	  • Be alert for signs of conditions or complications that may not have been adequately addressed during labor and childbirth.

• Did she have **vaginal bleeding** (**or hemorrhage**) during this pregnancy?	➡ **If YES**, see Anemia (**page 3-41**) for additional information about assessment and care provision.
• Did she have **convulsions** (**or pre-eclampsia/ eclampsia**) during this pregnancy or childbirth?	➡ **If YES**, see Maternal, Fetal, or Newborn Complications of Previous Pregnancy, Labor/Childbirth, or the Postpartum/Newborn Period (**page 3-64**) for additional information about assessment and care provision.

Question	Use of Information/Followup Action
● Did she have any of the following **complications** during this childbirth: • Cesarean section (or other uterine surgery)? • Vaginal or perineal tears? • Episiotomy? • Defibulation?	➡ **If YES**, see Tears and Incisions during the Postpartum Period (**page 3-78**) for additional information about assessment and care provision.
● Were there any **newborn complications** during this childbirth?	➡ **If there were newborn complications during this birth**, see Maternal, Fetal, or Newborn Complications of Previous Pregnancy, Labor/Childbirth, or the Postpartum/Newborn Period (**page 3-64**) for additional information about assessment and care provision.

H-4. Present Postpartum Period (Every Visit)

Question	Use of Information/Followup Action
● Has she had **heavy vaginal bleeding** (**or hemorrhage**) during this postpartum period?	● **Normal/normal variations:** • Day 1 postpartum: • Amount of bleeding is similar to heavy menses. • Clots smaller than lemons may be passed. • Day 2–week 6 postpartum: • Lochia (see below) • No bleeding ➡ **If the woman presently has frank heavy bleeding, a steady slow trickle of blood, intermittent gushes of blood, or blood clots larger than lemons**, ACT NOW!—see Vaginal Bleeding after Childbirth (**page 3-103**) before proceeding. ➡ **If the woman no longer has abnormal vaginal bleeding but had heavy vaginal bleeding (or hemorrhage) during this postpartum period**, see Anemia (**page 3-41**) for additional information about assessment and care provision.

Question	Use of Information/Followup Action

• What is the color and amount of her **lochia** (vaginal discharge)?	• **Normal/normal variations:**
	  • Day 1 postpartum: bleeding similar to heavy menses (see above)
	  • Days 2–4 postpartum (approximately): red lochia (lochia rubra)—the discharge is dark red or brownish with a fleshy odor (similar to that of menses); woman is changing pad/cloth every 2–4 hours
	  • Days 5–14 postpartum (approximately): pink lochia (lochia serosa)—discharge contains less blood and is pinkish brown with a musty, stale odor
	  • Day 11–week 3 or 4 postpartum (approximately): white lochia (lochia alba)—discharge becomes creamy white/yellowish
	  • Lochia may last for up to 6 weeks' postpartum.
	  • An increase in the amount of lochia may occur as the woman becomes more active.
	➡ **If lochia is foul-smelling**, ACT NOW!—see Fever or Foul-Smelling Vaginal Discharge (**page 3-115**) before proceeding.
	➡ **If color and amount of lochia are not within normal range for time frame**, see Uterine Subinvolution (**page 3-80**) for additional information about assessment and care provision.

• Has she had any problems with **bowel and bladder function** since childbirth, such as:
  • Incontinence?
  • Leakage of urine/feces from the vagina?
  • Burning on urination?
  • Inability to urinate when the urge is felt?
  • Constipation?
	➡ **If there is incontinence or leakage of urine/feces from the vagina**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.
	➡ **If she has burning on urination**, see Burning on Urination (**page 3-47**) for additional information about assessment and care provision.
	➡ **If she is unable to urinate when the urge is felt**, see Urinary Retention during Labor and the Postpartum Period (**page 3-79**) for additional information about assessment and care provision.
	➡ **If she has constipation**, see Bowel Function Changes—Constipation or Diarrhea (**page 3-6**) for additional information about assessment and care provision.

• What are **her feelings** about the baby and about her ability to care for her/him?	• Use this information to guide individualization of Support for Mother-Baby-Family Relationships and other aspects of basic care provision. ➡ **If she reports feelings of inadequacy, worry, or fear**, see **page 3-15** for additional information about assessment and care provision. ➡ **If she reports crying, feelings of sadness or of being overwhelmed, or irritability**, see Postpartum Sadness (**page 3-69**) for additional information about assessment and care provision.
• What are her **partner/family's feelings** about the baby?	• Use this information to guide individualization of Support for Mother-Baby-Family Relationships and other aspects of basic care provision.
• Does she feel that **breastfeeding** is going well?	➡ **If NO**, consider this finding in the context of further assessment: • Be alert for signs of breast and breastfeeding problems (e.g., breast pain, ineffective positioning or attachment). ➡ **If the woman has not yet decided whether she wants to breastfeed or use a breastmilk substitute**, see Breastmilk versus Breastmilk Substitute (**page 4-49**). ➡ **If the woman has chosen to use a breastmilk substitute**, see Using a Breastmilk Substitute (**page 4-51**).

H-5. Obstetric History: Previous Postpartum/Newborn Period (First Visit)

Note: Although a woman with previous postpartum/newborn complications does not necessarily require additional/specialized care, knowing about past complications helps you understand any concerns she may have during this postpartum/newborn period. In addition, discussing past complications provides an opportunity to emphasize the importance of having a complication readiness plan.

Question	Use of Information/Followup Action
• If this is not the woman's first child, are all **children still living**?	➡ **If NO**, ask whether any of them died within the first month of life. ➡ **If any died within the first month of life**, see Maternal, Fetal, or Newborn Complications of Previous Pregnancy, Labor/Childbirth, or the Postpartum/Newborn Period (**page 3-64**) for additional information about assessment and care provision.
• If this is not the woman's first child, has she **breastfed before**?	➡ **If NO**, explore the reasons why. • What prevented her from breastfeeding? • Did she stop because she had problems breastfeeding? ➡ **If YES**, ask these followup questions: • For how long did she breastfeed previous babies? • Did she have problems breastfeeding? ➡ **If she has had problems breastfeeding in the past**, consider this finding in the context of further assessment: • Be alert for signs of breast and breastfeeding problems (e.g., breast pain, ineffective positioning or attachment). • Use this information to guide individualization of health messages and counseling and other aspects of basic care provision.
• If this is not the woman's first childbirth, has she had convulsions (**pre-eclampsia/ eclampsia**) during previous postpartum periods?	➡ **If YES**, consider this finding in the context of further assessment: • Be alert for signs of pre-eclampsia/eclampsia (e.g., elevated blood pressure, proteinuria, headache/blurred vision).
• If this is not the woman's first childbirth, has she **vaginal bleeding** (hemorrhage) during previous postpartum periods?	➡ **If YES**, consider this finding in the context of further assessment: • Be alert for vaginal bleeding.
• If this is not the woman's first childbirth, has she had **postpartum depression/ psychosis** during previous postpartum periods?	➡ **If she has had previous postpartum psychosis/depression**, consider this finding in the context of further assessment: • Be alert for signs of postpartum depression/psychosis (e.g., severe anxiety or depression that lasts more than 2 weeks, desire to hurt or inability to care for self or baby, hallucinations or delusions).

H-6. Contraceptive History/Plans (First Visit)

Question	Use of Information/Followup Action
• How many **more children** does she plan to have?	• Use this information to guide individualization of Family Planning and other aspects of basic care provision.
• Has she used a **family planning method** before?	➡ **If YES**, ask these followup questions: • Which family planning method(s) did she use? • If one method: Did she like it? Why/why not? • If more than one method: Which did she like most? Which did she like least? Why? • Use this information to guide individualization of Family Planning and other aspects of basic care provision.
• Does she plan to start using a **family planning method**?	➡ **If YES**, ask these followup questions: • Which method does she want to use? • Would she like information on additional methods? • Use this information to guide individualization of Family Planning and other aspects of basic care provision.

H-7. Medical History (First Visit)

Question	Use of Information/Followup Action
• Does the woman have any **allergies**?	➡ **If YES**, avoid use of any known allergens.
• Has the woman been diagnosed with **HIV**?	➡ **If YES**, see HIV (**page 3-51**) for additional information about assessment and care provision.
• Has she been recently (within the last 3 months) diagnosed with **anemia**?	➡ **If YES**, see Anemia (**page 3-41**) for additional information about assessment and care provision.
• Has the woman been diagnosed with **syphilis?**	➡ **If YES**, see Syphilis (**page 3-76**) for additional information about assessment and care provision.
• Has the woman been diagnosed with **hepatitis, tuberculosis, heart disease, kidney disease, sickle cell disease, diabetes, goiter, or another serious chronic illness**?	➡ **If YES**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.
• Has she had any **previous hospitalizations or surgeries**?	➡ **If YES,** ask these followup questions: • What was the reason for the hospitalization or surgery? • When was it? • What was the outcome? ➡ **If the condition is unresolved or has the potential to complicate the postpartum period**, consider this information in the context of further assessment.
• Is she taking any **drugs/ medications**—including traditional/local preparations, herbal remedies, over-the-counter drugs, vitamins, and dietary supplements?	• Use this information to guide individualization of health messages and counseling and other aspects of basic care provision.

Question	Use of Information/Followup Action
• Has she had a complete series of five **tetanus toxoid** (TT) immunizations to date? • Has it been less than 10 years since her **last booster**?	• Use this information to assess the woman's need for TT, according to the recommended TT schedule (**Table 2-3, page 2-34**). ➡ **If NO to EITHER question OR the woman does not have a written record of prior TT immunizations**, proceed according to the recommended TT schedule (**Table 2-3, page 2-34**).

H-8. Interim History (Return Visits)

Note: The questions below, together with those in **H-4**, represent the minimum that you would ask a woman upon a return visit. Additional history may be necessary depending on the woman's individual needs.

Question	Use of Information/Followup Action

• Is she having a medical, obstetric, social, or personal problem or other concerns currently?
• Has she had any **problems (or significant changes)** since the last visit?
	➡ **If YES:**
	  • Ask general followup questions (**Textbox 2-3, page 2-7**) to assess the nature of the problem (or change); and
	  • Consider this information in the context of further assessment.
	➡ **If the woman reports signs or symptoms shown in Textbox 2-27** (**page 2-88**), see the corresponding entry for additional information about assessment and care provision.
	• Use this information to determine changes that need to be made in the current plan of care.

• Has she received **care from another caregiver** (including a TBA, herbalist, traditional healer) since the last visit?	➡ **If YES**, why did she seek care?
	  ➡ **If because of a problem**, ask the general followup questions in Set A (**Textbox 2-3, page 2-7**) to assess the nature of her problem.
	  ➡ **If not because of a problem**, ask the general followup questions in Set B (**Textbox 2-3, page 2-7**) to assess the nature of care received.
	• Consider this information in the context of further assessment.

Question	Use of Information/Followup Action

• Has there been a **change in the woman's personal information** (phone number, address, etc.) since the last visit?
• Has there been a **change in her daily habits or lifestyle** (increase in workload, decrease in rest/sleep or dietary intake, etc.) since the last visit?
• Has there been a **change in her medical history** since the last visit? For example, new or recent:
  ◦ Diagnoses
  ◦ Injuries
  ◦ Hospitalizations
  ◦ Drugs/medications
	• Use this information to:
	  ◦ Maintain accuracy of the woman's medical records, and
	  ◦ Determine changes that need to be made in the current plan of care.
	
	Remember: The questions in element **H-4** (Present Postpartum Period) should be asked at every postpartum care visit.

• Has she been **unable to carry out any part of the plan of care** (e.g., taking drugs/medications as prescribed, following dietary recommendations)?
• Has she had any **reactions or side effects** to immunizations or drugs/medications given at last visit?
	➡ **If YES to EITHER question:**
	  ◦ Consider this information in the context of further assessment.
	  ◦ Use this information to determine changes that need to be made in the current plan of care.

Physical Examination (PE)

When you have finished taking the woman's history, perform a physical examination. Be sure to record all findings in the woman's chart. Whether this is the **first encounter/visit** or a **return visit**, perform a complete physical examination (elements **PE-1** through **PE-6**).

PE-1. Assessment of General Well-Being (Every Visit)

Element	Normal	Abnormal/Followup Action

Gait and movements
 	
Facial expression
 	
Behavior
	• The woman **walks** without a limp.
	• Her **gait** and **movements** are steady and moderately paced.
	• Her **facial expression** is alert and responsive, yet calm.
	• Her **behavior** is appropriate to her culture.
		➡ **If findings are not within normal range**, ask these followup questions:
		  ◦ Has she been without food or fluids for a prolonged period?
		  ◦ Has she been taking drugs/medications, herbs, etc.?
		  ◦ Does she have an injury?
		  ➡ **If YES to ANY of the above questions**, consider the findings during further assessment and when planning/implementing care.
		  ➡ **If NO to ALL of the above questions:**
		  ◦ Ask general followup questions to assess the nature of her problem (**Textbox 2-3, page 2-7**); and
		  ◦ Consider this information in the context of further assessment.

Element	Normal	Abnormal/Followup Action
General cleanliness	• The woman is generally clean (i.e., there is no visible dirt, no odor, etc.).	➡ **If the woman appears unclean**, consider when individualizing health messages and counseling and other aspects of basic care provision. ➡ **If a foul odor is present**, consider this finding in the context of further assessment (e.g., vaginal examination): • Be alert for other signs of infection (e.g., foul-smelling lochia, fever).
Skin	• The woman's skin is free from lesions and bruises.	➡ **If there are lesions and bruises on the woman's skin OR you suspect abuse**, see Violence against Women (**page 3-81**) for additional information about assessment and care provision. ➡ **If there are lesions and bruises on the woman's skin AND you do not suspect abuse**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.
Conjunctiva (mucous membrane on insides of eyelids)	• The woman's conjunctiva is pink (not white or very pale pink) in color.	➡ **If her conjunctiva appears white or very pale rather than pink**, see Anemia (**page 3-41**) for additional information about assessment and care provision.

PE-2. Vital Signs Measurement (Every Visit)

- Have the woman remain seated or lying down with the knees slightly bent, ensuring that she is comfortable and relaxed.
- While taking her temperature, measure her blood pressure (BP) and check her pulse.

Element	Normal	Abnormal/Followup Action
Blood pressure	• Systolic BP (top number) is 90–140 mmHg. • Diastolic BP (bottom number) is less than 90 mmHg.	➡ **If the systolic BP is less than 90 mmHg**, ACT NOW!—perform Rapid Initial Assessment (**page 3-90**) before proceeding. ➡ **If the diastolic BP is 90–110 mmHg**, ACT NOW!—see Severe Headache, Blurred Vision, or Elevated Blood Pressure (**page 3-108**) before proceeding. ➡ **If the diastolic BP is more than 110 mmHg**, ACT NOW!—perform Rapid Initial Assessment (**page 3-90**) before proceeding.
Temperature	• Temperature is less than 38°C.	➡ **If temperature is 38°C or more**, ACT NOW!—see Fever or Foul-Smelling Vaginal Discharge (**page 3-115**) before proceeding.
Pulse	• Pulse is 90–110 beats per minute.	➡ **If pulse is less than 90 or 110 or more beats per minute**, ACT NOW!—perform Rapid Initial Assessment (**page 3-90**) before proceeding.

PE-3. Breast Examination (Every Visit)

- Help the woman prepare for further examination (follow the steps shown in **Textbox 2-7** [**page 2-16**]).
- Ask the woman to uncover her body from the waist up.
- Have her lie comfortably on her back.
- Visually inspect the overall appearance of the woman's breasts, such as contours, skin, and nipples; note any abnormalities.
- Gently palpate the breasts; note any abnormalities.

Element	Normal	Abnormal/Followup Action

Breast inspection (Contours and skin)	• Contours are regular with no dimpling or visible lumps.
	• Skin is smooth with no puckering; no areas of scaliness, thickening, or redness; and no lesions, sores, or rashes.
	• **Normal variations:**
	  ◦ If breastfeeding, breasts may look "lumpy" or irregular depending on emptying of milk ducts/lobes.
	  ◦ Breasts may be larger (and more tender) than usual.
	  ◦ Veins may be larger and darker, more visible beneath the skin.
	  ◦ Areolas may be larger and darker than usual, with tiny bumps on them.
		➡ **If findings are not within normal range**, facilitate nonurgent referral/ transfer (**Annex 7, page 4-63**) after providing basic care.

Breast palpation	• Soft and nontender.
	• No localized areas that are red or feel hot or are extremely tender.
	• **Normal variations:**
	  ◦ If breastfeeding, breasts may feel "lumpy" or irregular depending on emptying of milk ducts/lobes.
	  ◦ On Days 2 to 4, breasts may become swollen, hard/tense; usually resolves within 24 to 48 hours.
		➡ **If there are swollen, hard/tense, or general or localized areas of redness, heat, or tenderness**, see Breast and Breastfeeding Problems (**page 3-43**) for additional information about assessment and care provision.

Nipples	• There is no abnormal nipple discharge.
	  ◦ No pus is coming from nipples.
	  ◦ Only colostrum (on Days 1 or 2 postpartum) or milk is coming from nipples.
	• No cracks, fissures, or other lesions.
	• Nipples are not inverted.
	• **Normal variations:**
	  ◦ Nipples may be taut and shiny when breasts become engorged (on Days 2 to 4 postpartum).
	  ◦ Nipples may be sore.
		➡ **If there is abnormal nipple discharge or nipples develop cracks, fissures, or other lesions**, see Breast and Breastfeeding Problems (**page 3-43**) for additional information about assessment and care provision.
		➡ **If nipples appear to be inverted**, test for protractility (**Textbox 2-8, page 2-17**).
		  ➡ **If the nipples are inverted**, be alert for potential breastfeeding problems (e.g., problems with attachment of the newborn to the breast, suckling).

PE-4. Abdominal Examination (Every Visit)

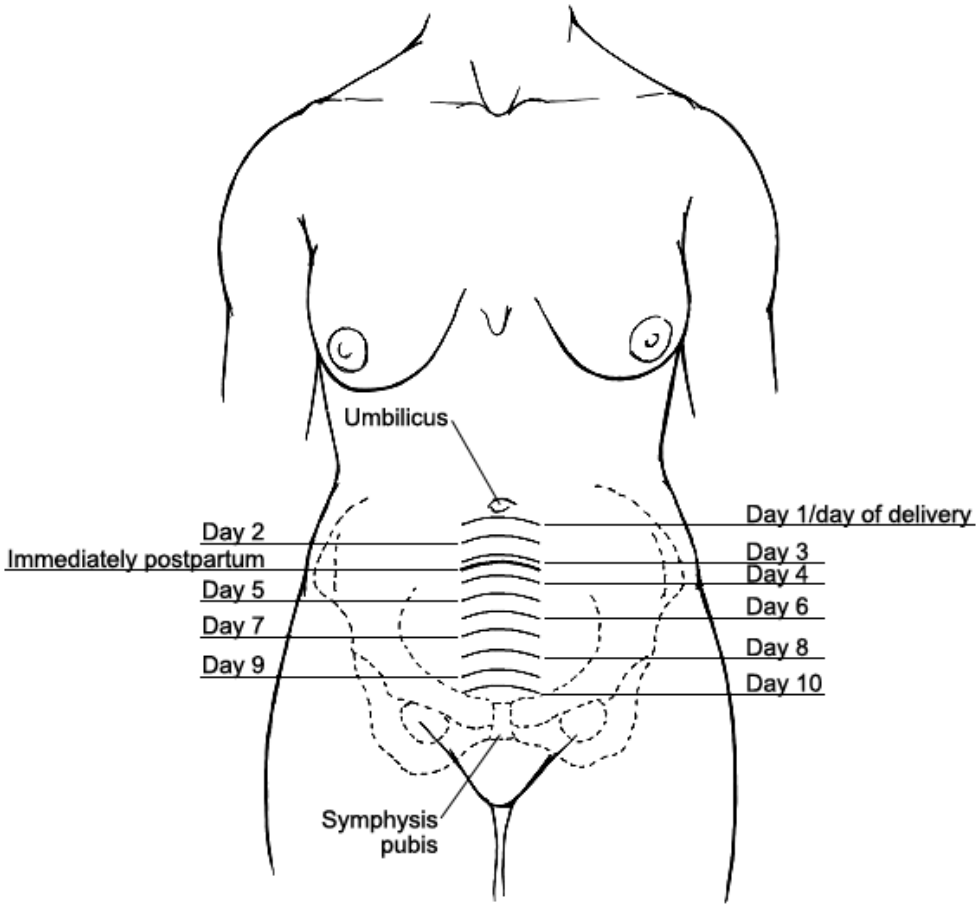
- If you have not already done so, help the woman prepare for further examination (follow the steps shown in **Textbox 2-7** [**page 2-16**]).
- Ask the woman to uncover her abdomen.
- Have her lie on her back with her knees slightly bent.

Element	Normal	Abnormal/Followup Action
Surface of the abdomen	• There is no incision (sutures)—from cesarean section, uterine rupture, or other uterine surgeries during this birth (as opposed to old scars)—on the surface of the abdomen.	➡ **If there is an incision (sutures) from cesarean section, uterine rupture, or other uterine surgeries during this birth**, see Tears and Incisions during the Postpartum Period (**page 3-78**) for additional information about assessment and care provision.

Uterus/ involution	• The uterus feels firm.
	• The uterus is not tender.
	• Fundal height decreases about 1 cm per day for the first 9–10 days postpartum. (See also **Figure 2-20** [**page 2-99**].)
	  ◦ Immediately after completion of 3rd stage of labor, the uterus is usually one fingerbreadth below the umbilicus.
	  ◦ At 24 hours after birth, the uterus may be at the level of the umbilicus or slightly above the umbilicus.
	  ◦ At 6 days' postpartum, the uterus is approximately midway between the umbilicus and the symphysis pubis.
	  ◦ At 6 weeks' postpartum, the uterus is no longer palpable abdominally.
	• **Normal variation:**
	  ◦ Involution may be slower in women who are multiparous or following multiple gestation, polyhydramnios, the birth of a large baby, or infection.
	  ◦ Although the rate of involution (decrease in uterine size) may vary in different women, the size should progressively decrease.
		➡ **If the uterus is severely tender**, ACT NOW!—see Vaginal Bleeding after Childbirth (**page 3-80**) before proceeding.
		➡ **If the uterus has increased or has not decreased in size since the last visit**, see Uterine Subinvolution (**page 3-80**) for additional information about assessment and care provision.

Bladder **Note:** Palpate just above the symphysis pubis.	• Bladder is not palpable. • Woman is able to urinate when the urge is felt.	➡ **If the bladder is palpable and the woman is unable to urinate when the urge is felt**, see Urinary Retention during Labor and the Postpartum Period (**page 3-79**) for additional information about assessment and care provision.

Figure 2-20. Postpartum Fundal Height: Involution



PE-5. Leg Examination (Every Visit)

Element	Normal	Abnormal/Followup action
Calves	• No pain in calf of leg when foot is forcibly dorsiflexed.	➡ **If pain in calf**, ACT NOW!—see Pain in Calf (**page 3-118**) before proceeding.

PE-6. External Genital Examination (Every Visit)

- If you have not already done so, help the woman prepare for further examination (follow the steps shown in **Textbox 2-7** [**page 2-16**]).
- Perform a genital/vaginal examination (for the procedure, see **Textbox 2-12** [**page 2-23**]).
- After the examination, perform the Post-Examination Steps (**Textbox 2-13** [**page 2-24**]).

Element	Normal	Abnormal/Followup Action
Overall appearance (vaginal opening, skin, and labia)	• Nothing is protruding from the vagina. • There is no urine or stool coming from the vagina. • There is no swelling. • There is no incision (sutures) from tears, episiotomy, or defibulation. • The genital skin is free from sores, ulcers, warts, nits, or lice. • The labia are soft and not painful.	➡ **If a purplish swelling appears in the vulva or is protruding from the vagina**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If there is an incision (sutures)**, see Tears and Incisions during the Postpartum Period (**page 3-78**) for additional information about assessment and care provision. ➡ **If other findings are not within normal range**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.

Lochia (color and amount)	• Day 1 postpartum: bright red blood (see Vaginal Bleeding, below)
	• Days 2–4 postpartum (approximately): red lochia (lochia rubra)—discharge is dark red or brownish with a fleshy odor (similar to that of menses); woman is changing pad/cloth every 2–4 hours
	• Days 5–14 postpartum (approximately): pink lochia (lochia serosa)—discharge contains less blood and is pinkish brown with a musty, stale odor
	• Day 11–week 3 or 4 postpartum (approximately): white lochia (lochia alba)—discharge becomes creamy white/yellowish
	• **Normal variations:**
	  ◦ Lochia may last for up to 6 weeks' postpartum.
	  ◦ An increase in the amount of lochia may occur as the woman becomes more active.
		➡ **If lochia is foul-smelling**, ACT NOW!—see Fever or Foul-Smelling Vaginal Discharge (**page 3-115**) before proceeding.
		➡ **If lochia rubra persists for 2 weeks or more**, see Uterine Subinvolution (**page 3-80**) for additional information about assessment and care provision.

Vaginal bleeding	• Day 1 postpartum: amount of bleeding is similar to heavy menses.
	• Day 2–week 6 postpartum:
	  ◦ Lochia (see **Lochia**, above)
	  ◦ No bleeding
	• **Normal variation:** Clots smaller than lemons may be passed.
		➡ **If the woman presently has frank heavy bleeding, a steady slow trickle of blood, intermittent gushes of blood, or blood clots larger than lemons**, ACT NOW!—see Vaginal Bleeding after Childbirth (**page 3-103**) before proceeding.
		➡ **If the woman no longer has abnormal vaginal bleeding but had heavy vaginal bleeding (or postpartum hemorrhage) during this postpartum period**, see Anemia (**page 3-41**) for additional information about assessment and care provision.

Element	Normal	Abnormal/Followup Action
Perineum	• No localized pain/tenderness, persistent swelling. • There is no urine or feces leaking from the vaginal opening. • There is no incision (sutures) from tears, episiotomy, or defibulation • **Normal variations:** ➡ **If a slightly tender perineum is reported**, see **page 3-10** for additional information about assessment and care provision. • If normal childbirth, bruising, swelling, and discomfort may last up to Day 3 or 4 postpartum. • Healing may be slower if there was prolonged pushing, an episiotomy or tear, or trauma of instruments during childbirth.	➡ **If perineum is severely tender**, ACT NOW!—see Pus, Redness, or Pulling apart of Skin Edges of Perineal Suture Line; Pus or Drainage from Unrepaired Tear; Severe Pain from Tear or Episiotomy (**page 3-118**) before proceeding. ➡ **If there is an incision (sutures) or tears**, see Tears and Incisions during the Postpartum Period (**page 3-78**) for additional information about assessment and care provision. ➡ **If there is incontinence or leakage of urine/feces from the vagina**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.

Woman-Newborn Observation

- For assessment of breastfeeding, see **page 2-127**.
- For assessment of mother-baby bonding, see **page 2-129**.

Testing (T)

When you have finished performing a physical examination, conduct testing. Be sure to record all findings in the woman's chart.

➡ **If this is the first encounter/visit or a return visit**, conduct an HIV test if the woman has not yet been tested and she does not "opt out" of testing (see **Note**, below).

Element	Normal	Abnormal/Followup Action
T-1. HIV (See **Note** [below].)	• Negative	➡ **If the test is positive for HIV**, see HIV (**page 3-51**) for additional information about assessment and care provision. **Note**: **Always adhere to national guidelines for HIV testing**. In general: • If the test is positive for HIV, test again with a different type/preparation of test. • If the second test is positive, see HIV (**page 3-51**). • If the second test is negative, do a third test for discordant test results. • If the third test is positive, see HIV (**page 3-51**). • If the third test is negative, inform the woman that she is HIV-negative during post-test counseling (**page 2-34**).

Note: The woman should be informed that HIV testing is recommended for all women in their reproductive years, but that she may "opt out" of being tested if she desires. If she opts out, be sure to offer testing at all subsequent visits. A woman who chooses not to be tested during the first visit may change her mind and choose to be tested after she has received counseling, considered the benefits of testing, and/or discussed testing with her partner.

POSTPARTUM CARE PROVISION

C-1. Breastfeeding and Breast Care

Note: If the woman is HIV-negative, exclusive breastfeeding for the first 6 months of life should be strongly encouraged. The following health messages and counseling should be provided to all women during the postpartum period unless they are HIV-positive or have said that they do not wish to breastfeed.

Based on the woman's breastfeeding history and any other relevant findings or discussion, individualize the key messages below.

C-1.1. Breastfeeding Guidelines

- The woman should breastfeed her baby **exclusively** for the first 6 months of life. This means that the baby should not be given anything else to drink or eat during that time—no water, juice, formula, rice, or any other drink or food.
- The baby should be breastfed whenever s/he wants, day and night (**on demand**), which should be about every 2–3 hours (or 8–12 times per 24 hours) during the first weeks of life.
- To ensure that the baby is getting enough to eat, the woman should note how often the baby urinates: at least 6 times per day during the first 2–7 days after birth indicates adequate intake.

C-1.2. Additional Advice for the Woman

- The woman should breastfeed in **positions that are comfortable** for her and **that help to ensure successful breastfeeding**. (For additional information about positioning, holding, attachment, etc., see Breastfeeding Support [**page 4-47**].)
- She should try to **use both breasts** during each feed if possible. The amount of time the baby sucks at either breast should not be limited. Instead, the baby should be allowed to continue feeding at a breast for as long as s/he wants and then offered the other breast.
- The breastfeeding woman needs **adequate rest and sleep**. Because the baby may wake during the night to be fed, the woman may become overtired during the day. It may help to rest or take naps during the day, whenever the baby is sleeping.
- The breastfeeding woman needs **extra fluid and food intake**. She should drink at least one glass of fluids every time the baby breastfeeds and eat the equivalent of one extra meal per day.

C-1.3. Breast Care

- To prevent engorgement, breastfeed at least every 2–3 hours on demand (including during the night) and use both breasts at each feeding.
- Wear a cotton bra or breast binder that is supportive but not tight/constrictive.
- Keep the nipples clean and dry.
- Wash nipples with a clean cloth and warm water only, no soap. Wash no more than once per day.
- After breastfeeding or washing the nipples, leave some breastmilk on the nipples and allow them to dry by exposing them to air.

Note: For information on the following related topics, see the page indicated: benefits of breastfeeding for the woman and newborn, **page 2-32**; general principles of early and exclusive breastfeeding, **page 2-32**; proper positioning for good attachment, **page 4-47**.

C-2. Complication Readiness Plan

Advise the woman and her family to enact the complication readiness plan if any of the danger signs shown in **Textbox 2-28** (below) arise.

- **As soon as possible after birth**: Review the woman's complication readiness plan, updating it to reflect postpartum/newborn needs. If she and her family have not yet developed a complication readiness plan, assist them in developing one according to the guidelines shown on **page 2-26**.
- On each **return visit**, review and update the plan:
  - What arrangements have been made since the last visit?
  - Has anything changed?
  - Have any obstacles or problems been encountered?

Textbox 2-28. Danger Signs during the Postpartum/Newborn Period

Maternal danger signs:

- Vaginal bleeding (heavy or sudden increase)
- Breathing difficulty
- Fever
- Severe abdominal pain
- Severe headache/blurred vision
- Convulsions/loss of consciousness
- Foul-smelling discharge from vagina or tears/incisions
- Pain in calf, with or without swelling
- Verbalization/behavior that indicates she may hurt the baby or herself, or hallucinations

Newborn danger signs:

- Breathing difficulty
- Convulsions, spasms, loss of consciousness, or back arching (opisthotonos)
- Cyanosis (blueness)
- Hot to touch/fever
- Cold to touch
- Bleeding
- Jaundice (yellowness)
- Pallor
- Diarrhea
- Persistent vomiting or abdominal distention
- Not feeding or poor suckling (feeding difficulties)
- Pus or redness of the umbilicus, eyes, or skin
- Swollen limb or joint
- Floppiness
- Lethargy

C-3. Support for Mother-Baby-Family Relationships

As soon as possible after the birth, discuss the following issues with the woman and, if she permits, her partner, her family, or other key decision makers in her life. On each return visit, assess the family's success in supporting the woman through the early postpartum period and integrating care of the newborn into their daily lives.

Bonding

- Encourage the family to touch, hold, and explore the newborn as much as they wish.
- Encourage rooming-in for the woman and newborn.

Challenges

- Assist the family in identifying any unique challenges they may face, especially in the immediate postpartum/newborn period, such as:
  - Woman's increased need for rest (and intake of food/fluids, if breastfeeding)
  - Increased workload and less time/energy available for other things, including other children and chores

Support
- Assist the family in devising strategies for overcoming these obstacles, such as having someone else care for the newborn when the woman is in need of rest.

Information
- In addition to ensuring complication readiness:
  - Discuss the key aspects of newborn care (as shown in **Chapter 8, page 2-131**) and postpartum care clearly and carefully.
  - Encourage the woman/partner/family to ask questions and express concerns.
  - Repeat explanations as often as they desire.

Encouragement and praise
- Help build the woman's confidence by verbal and non-verbal messages.
- Assure her that she is capable of caring for her newborn.

C-4. Family Planning

- Introduce the concepts of birthspacing and family planning.
  - Intervals of at least 3 years between births have health benefits for both the woman and the baby. Appropriate birth spacing lowers the risk of:
    - Maternal mortality
    - Anemia (woman)
    - Premature rupture of membranes (woman)
    - Postpartum endometritis (woman)
    - Malnutrition (woman)
    - Fetal death
    - Preterm birth
    - Small-for-gestational-age baby
    - Newborn death
    - Intrauterine growth retardation and low birthweight baby
- Discuss the woman's previous experience with and beliefs about contraception, as well as her preferences.
- Based on the woman's history and any other relevant findings and discussion, individualize the following key messages:
  - Women who do not breastfeed can become pregnant again very quickly. On average, women who do not breastfeed will begin:
    - Menstruating by 6 or 8 weeks, and
    - Ovulating by 11 weeks (sometimes even sooner).
  - Women who breastfeed **exclusively** may be protected from becoming pregnant for up to 4–6 months, because breastfeeding can inhibit ovulation (which is known as the lactational amenorrhea method, LAM). On average, women who breastfeed begin:
    - Menstruating at 7.5–9 months, depending on how often and how much they are breastfeeding
    - Ovulating by 4–5 months if they breastfeed for 3 months, and by 7 months if they breastfeed for 6 months.

➡ **If the woman is going to rely on LAM to prevent pregnancy during the postpartum period**, advise her on other important considerations shown in **Textbox 2-29** (below).

- Some women can ovulate, and even become pregnant, as early as 35 days after childbirth.
- Many postpartum women will ovulate before their menstrual periods resume. Once a woman begins ovulating, she can become pregnant. This means **a woman can become pregnant even if she has not resumed menstrual periods**.

Textbox 2-29. Important Considerations for Women Using LAM

- Risk of ovulating and becoming pregnant is higher if the baby is given fluids/food other than breastmilk.
- Consider another family planning method whenever the baby decreases the frequency or amount of feeding, or when you begin adding other foods to the baby's diet.
- Do not discontinue breastfeeding solely to begin use of a contraceptive method.

- Discuss the benefits and limitations of different methods, including LAM and dual protection with condoms.
- Advise on the availability/accessibility of family planning services and methods.
- If the woman desires to begin/resume family planning, assist her in choosing a contraceptive method that best meets her needs.

(For additional information on Postpartum Contraception, see **page 4-53**.)

C-5. Nutritional Support

Based on the woman's dietary history, the resources available to the woman and her family, and any other relevant findings or discussion, individualize the following key nutrition messages.

All women should:

Eat a balanced diet including a wide variety of foods. For more information about nutritional support for all women, see **page 2-26**.

Women who are breastfeeding should also:

- Eat at least **two** additional servings of staple food per day to supply the extra 300–500 extra calories needed.
- Eat at least **three** additional servings of calcium-rich foods (e.g., dark green leafy vegetables, rice, tofu, salmon/sardines, or milk/dairy products) to supply the extra 1200 mg of calcium needed.
- Drink at least 8 glasses of fluid (2 liters) each day; drinking a cup of fluids each time she breastfeeds is a good way to ensure enough fluid intake.
- Include a variety of fluids such as milk, water, and juices.
- Eat smaller, more frequent meals if unable to consume larger amounts in fewer meals.
- Avoid alcohol and tobacco, which can decrease milk production.
- Take micronutrient supplements as directed.
- Try to decrease the amount of heavy work and increase rest time.

C-6. Self-Care and Other Healthy Practices

Based on the woman's history and any other relevant findings or discussion, individualize health messages and counseling on the topics addressed below.

Although these issues should be addressed at the earliest opportunity, other topics—such as breastfeeding support and the basics of newborn care—can be included according to individual need. Ideally, the woman's partner would be present during these discussions.

Note: Women who have **common discomforts** of the postpartum period require additional care, which consists mainly of health messages and counseling. **Chapter 9** (**page 3-1**) contains information on additional care for women with common discomforts.

C-6.1. Prevention of Infection/Hygiene

In addition to practicing good general hygiene (**page 2-29**), the postpartum woman should be advised as follows:

- During the postpartum period, the woman may be more susceptible to infection and should be especially careful to practice **good genital hygiene**, including:
  - Keeping the vulvar and vaginal area as clean and dry as possible.
  - Wash hands before and after washing the genitals.
  - Use a clean cloth to wash and another to dry the genital area.
  - Wash the genital area with soap and water after using the toilet.
  - Wash/wipe genitals from front to back, starting with the vulva and ending with the anus.

Note: Before use, any basin or tub used for a sitz bath should be:
- Rinsed with chlorine solution;
- Washed with soap; and
- Rinsed with water.

  - Change perineal pads or cloths at least 6 times per day during the first week, and at least twice per day thereafter. (Cloths may be reused if washed thoroughly, boiled, and dried in the sun between uses.)
  - Wear cotton underpants and comfortable, loose-fitting clothing. **Avoid** nylon underpants and pantyhose.
- **Avoid** douching, having sex, and inserting tampons or anything else into the vagina for at least 2 weeks after birth or until:
  - There is no longer any lochia rubra or serosa, and
  - The lochia alba has diminished or ceased.

Note: Advise the woman to return for care if lochia rubra persists for more than 2 weeks or becomes foul-smelling.

C-6.2. Rest and Activity

Based on the woman's history and any other relevant findings and discussion, individualize the following key messages:

- During the postpartum period, a woman needs plenty of rest to facilitate healing after birth. Adequate rest will help the postpartum woman regain her strength and recover more quickly.
- A breastfeeding woman needs even more time to rest. Because she is breastfeeding, and her sleep at night will be interrupted, advise her to have periodic rest periods during the day when the newborn is sleeping. During the night, her partner or other family member may be able to care for the newborn when s/he is not feeding.

- Traditionally, women have been advised to delay returning to work for 6 weeks. Many will feel able to resume all activities by 4 or 5 weeks. Each woman is different. Advise the woman to start back into her usual routine gradually, and to pay attention to her body for signs that she may be overdoing it or may need more rest.

Note: In most cultures, women do not get permission to rest during the postpartum period. It may be your role to play advocate for the woman, and help her find creative ways to reduce her workload and find more time for rest.

C-6.3. Sexual Relations and Safer Sex

Based on the woman's history and any other relevant findings or discussion, individualize the following key messages:

- A woman should **avoid** having sexual intercourse for at least 2 weeks after birth or until:
  - There is no longer any lochia rubra or serosa, and
  - The lochia alba has diminished or ceased.

Note: Advise the woman to return for care if lochia rubra persists for more than 2 weeks or becomes foul-smelling.

- After that, the woman can decide when she is ready to resume sexual relations. Healing of episiotomy/tears and type/amount of lochia may influence her level of comfort with intercourse. Intercourse should be avoided, however, if she experiences:
  - Vaginal bleeding
  - Perineal pain
- A woman is more susceptible to sexually transmitted infections—such as HIV, syphilis, gonorrhea, or chlamydia—during the postpartum period while the reproductive tract is still healing and returning to its prepregnancy condition.
- Practicing safer sex can reduce the risk of HIV and other sexually transmitted infections (STIs):
  - Abstinence or mutually monogamous sex with a partner who is free from HIV or STIs is the only sure protection.
  - Consistent use of condoms is important, even during lactational amenorrhea.
  - Sexual practices that may further increase risk of infection (such as anal sex, "dry" sex, etc.) should be avoided.

C-7. HIV Counseling and Testing (First Visit/As Needed)

If the woman does not know her HIV status or has not been tested for HIV, provide HIV counseling and testing. (For more information, see **page 2-33**.)

C-8. Immunizations and Other Preventive Measures

C-8.1. Tetanus Toxoid (TT) Immunization

Provide TT vaccination as needed. (For more information, see **page 2-34**.)

C-8.2. Iron/Folate

- To prevent anemia, prescribe iron 60 mg + folate 400 mcg to be taken by mouth once daily for 3 months.
- Dispense a sufficient supply to last until the next visit.

- Provide health messages and counseling as follows:
  - Eat foods rich in vitamin C, as these help the body absorb iron. Sources of vitamin C include citrus fruits (oranges, grapefruit, lemons, limes), tomatoes, peppers, potatoes, cassava leaves, and yams.
  - Avoid tea, coffee, and colas, as these inhibit iron absorption.
  - Possible side effects of the iron/folate tablets include black stools, constipation, and nausea. Lessen side effects by:
    - Drinking more fluids (an additional 2–4 cups per day)
    - Eating more fruits and vegetables
    - Getting adequate exercise (such as walking)
    - Taking tablets with meals or at night

Region/Population-Specific Preventive Measures

- For women in areas with a high prevalence of **malaria**, see guidelines for prevention (**page 3-59**).
- For women in areas with a high prevalence of **hookworm infection**, see guidelines for prevention (**page 3-58**).
- For women in areas with a high prevalence of **vitamin A deficiency**, see guidelines for additional supplementation (**page 3-62**).
- For women in areas with a high prevalence of **iodine deficiency**, see guidelines for additional supplementation (**page 3-61**).

CHAPTER EIGHT

NEWBORN CARE

OVERVIEW

After the newborn has undergone the quick check (**Annex 6, page 4-63**), the newborn care visit should be conducted according to the guidelines shown in **Chapter 4** (**page 2-1**) and the schedule shown below (**Table 2-15**).

Table 2-15. Schedule and Overview of Newborn Care

COMPONENTS/ELEMENTS	1ST VISIT	SUBSEQUENT VISITS
ASSESSMENT		
Ongoing Assessment, page 2-110	Up to 6 hours after birth	–
History		
H-1. Personal information, page 2-113	✓	–
H-2. Present labor/childbirth, page 2-115	✓	–
H-3. Maternal obstetric history, page 2-116	✓	–
H-4. Maternal medical history, page 2-116	✓	–
H-5. Present newborn period, page 2-117	✓	–
H-6. Interim history, page 2-119	–	✓
Physical Examination/Observation		
PE/O-1. Overall appearance/general well-being, page 2-120 Weight, page 2-121 Respiration, page 2-121 Temperature, page 2-121 Color, page 2-121 Movements and posture, page 2-122 Level of alertness and muscle tone, page 2-122 Skin, page 2-123	✓	✓
PE/O-2. Head, face and mouth, eyes, page 2-124	✓	✓
PE/O-3. Chest, abdomen and cord, and external genitalia, page 2-126	✓	✓
PE/O-4. Back and limbs, page 2-127	✓	–
PE/O-5. Breastfeeding, page 2-127	✓	✓
PE/O-6. Mother-baby bonding, page 2-129	✓	✓
CARE PROVISION		
Ongoing Supportive Care, page 2-110	Up to discharge	–
C-1. Early and Exclusive Breastfeeding, page 2-130	✓	Reinforce key messages

Table 2-15. Schedule and Overview of Newborn Care *(continued)*

COMPONENTS/ELEMENTS	1ST VISIT	SUBSEQUENT VISITS
CARE PROVISION (CONTINUED)		
C-2. Complication Readiness Plan, page 2-130	✓	Continue to develop as needed; reinforce key messages
C-3. Newborn Care and Other Healthy Practices, page 2-131 C-3.1. Maintaining warmth, page 2-131 C-3.2. Prevention of infection/hygiene, page 2-132 C-3.3. Washing and bathing, page 2-132 C-3.4. Cord care, page 2-134 C-3.5. Sleep and other behaviors/needs, page 2-134	✓	Reinforce key messages
C-4. Immunizations and Other Preventive Measures, page 2-135 C-4.1. Immunization, page 2-135 C-4.2. Vitamin K_1, page 2-135 Intermittent preventive treatment and insecticide-treated bednets (for malaria)*	✓	Reinforce key messages; replenish drugs as needed

* According to region/population-specific recommendations

ONGOING ASSESSMENT AND SUPPORTIVE CARE

➡ **If within the first 6 hours after birth (or pre-discharge),** the newborn (and woman) should be receiving:

- **Ongoing assessment**, according to the schedule shown in **Table 2-16** (**page 2-111**) (for guidance on ongoing assessment of the woman, see **Table 2-13** [**page 2-85**]); and
- **Ongoing supportive care**, as shown in **Table 2-17** (**page 2-112**) (for guidance on ongoing supportive care of the woman, see **Table 2-14** [**page 2-86**]).

Remember: To respect and maintain the mother-baby dyad, keep them together as much as possible throughout the postpartum/newborn period.

- Avoid separating the woman and newborn, even while individually assessing and caring for them.
- Place the baby in skin-to-skin contact immediately at birth, and facilitate immediate breastfeeding.
- Encourage and facilitate "rooming in"—keeping the baby with the woman day and night.
- Allow and encourage the woman's participation in examination and care of the baby.

Table 2-16. Ongoing Assessment of the Newborn during the First 2–6 Hours after Birth

WHAT TO ASSESS	WHEN TO ASSESS	NORMAL	ABNORMAL/FOLLOWUP ACTION
Respiration	• Every hour	• Respiratory rate is 30–60 breaths per minute • No gasping • No grunting on expiration • No chest indrawing	➡ **If respiration is not within normal range**, ACT NOW!—perform Newborn Rapid Initial Assessment (**page 3-96**) before proceeding.
Color	• Every hour	• Baby's lips, tongue, and nailbeds are pink • No central cyanosis (blue tongue and lips) • No jaundice (yellowness) • No pallor • Hands and feet are sometimes "bluish"/ cyanotic	➡ **If there is central cyanosis or pallor**, facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If there is jaundice**, ACT NOW!—see Jaundice (**page 3-124**) before proceeding.
Cord stump	• Once	• Cord stump is not bleeding	➡ **If the cord stump is bleeding**, retie the cord. ➡ **If bleeding continues after 15 minutes**, ACT NOW!—see Bleeding (**page 3-126**) before proceeding.
Breastfeeding	• Whenever newborn nurses	• Woman and baby are positioned well; baby is correctly attached to the breast and feeds well	➡ **If observations are not within normal range and attachment or suckling do not appear effective**, see Breast and Breastfeeding Problems (**page 3-43**) for additional information on assessment and care provision.

Table 2-17. Ongoing Supportive Care for the Newborn until Discharge from the Healthcare Facility or in the Home

ELEMENT	MEASURE/RECOMMENDATION
Warmth	• Keep the woman and baby in skin-to-skin contact, covered with a clean, dry blanket/covering, as much as possible. ➡ **If the baby cannot be in immediate skin-to-skin contact with the woman or after 6 hours,** dress her/him in an extra layer or two (in addition to what is comfortable for adults) of clothing or blankets/coverings. • Avoid dressing the baby in tight, restrictive clothing or blankets/coverings because they reduce the retention of heat. • Cover the baby's head with a hat. • Keep the room warm (25°C or more) and free from drafts. • Do not bathe the baby for at least the first 6 hours after birth, and preferably not in the first 24 hours, and not until the baby's temperature is stable.
Nutrition	• Encourage the woman to breastfeed on demand and exclusively as soon as possible after birth. ➡ **If the woman has not yet decided whether she wants to breastfeed or use a breastmilk substitute**, see Breastmilk versus Breastmilk Substitute (**page 4-49**). ➡ **If the woman has chosen to use a breastmilk substitute**, see Using a Breastmilk Substitute (**page 4-51**).
Hygiene/Infection Prevention	• Replace soiled and wet clothing and bedding; dispose of soiled/wet linen in a bucket, plastic bag, or other container that can be closed for transport to a washing facility. • Keep the baby's cord stump clean and dry. • Encourage the woman to care for her own newborn as much as possible. • Avoid sharing baby equipment and supplies, or disinfect shared equipment and supplies before/after use if sharing is necessary. • Ensure that all facility staff wash their hands before and after caring for each newborn. • **Advise the woman, her partner, and other people to wash their hands before and after touching the newborn.** • **Keep sick children and adults away from the newborn because of the risk of cross-infection.**
Mother-Baby Bonding	• Ensure that the woman and baby are kept together as much as possible; facilitate rooming-in for them. • Encourage the parents to hold and explore their baby freely. • Encourage the parents to cuddle and talk to the newborn as much as they wish; give them time alone if possible. • Help build the parents' confidence by verbal and nonverbal messages of encouragement and praise, as appropriate. • Again, keep the woman and baby in skin-to-skin contact, covered with a clean, dry blanket/covering, as much as possible for the first 6 hours at least. • Again, encourage the woman to breastfeed on demand and exclusively as soon as possible after birth.
Parenting Support	• Observe the parents' actions and behaviors; use this information to guide individualization of health messages and counseling and other elements of basic care provision. • Provide continual information and reassurance to the parents about the well-being of the baby. • Encourage them to ask questions and express their feelings. • Again, help build the parents' confidence by verbal and nonverbal messages of encouragement and praise, as appropriate.

NEWBORN ASSESSMENT

History (H)

Once you have welcomed the woman and her companion, and acknowledged the newborn, take the newborn's history. Be sure to record all findings in the newborn's chart.

➡ **If this is the first encounter/visit**, take a complete history (elements **H-1** through **H-5**).

➡ **If this is a return visit**, a shortened history (elements **H-5** and **H-6**) may be sufficient.

H-1. Personal Information (First Visit)

Question	Use of Information/Followup Action

• What is the woman's **name**?
• What is the newborn's **name** and **sex**?
	• Use this information to:
	  • Identify the newborn, and
	  • Help establish rapport with the woman.

• When was the baby born (time and **date of birth**, if available)?	• Use this information to guide:
	  • Further assessment, because the clinical significance of many findings varies depending on the age of the baby; and
	  • Individualization of health messages and counseling and other aspects of basic care provision.

• What is the woman's **phone number** (if available)?
• Where does she live (her **address**, if available)?
	• Use this information to:
	  • Contact the woman, and
	  • Guide development of the complication readiness plan.

• Does the woman have reliable **transportation**?
• What sources of **income/financial support** does she/her family have?
	• Use this information to guide:
	  • Development of the complication readiness plan.
	  • Individualization of health messages and counseling and other aspects of basic care provision.

• How many **previous pregnancies** (gravida) and **childbirths** (para) has she had?	• Use this information to guide individualization of health messages and counseling and other aspects of basic care provision.

• Is the newborn having a **problem currently**?
• Has s/he had any **problems during this newborn period**?
	➡ **If YES:**
	  • Ask general followup questions to assess the nature of her/his problem (**Textbox 2-30, page 2-114**); and
	  • Consider this information in the context of further assessment.
	➡ **If the woman has concerns or reports newborn signs shown in Textbox 2-31** (**page 2-114**), see the corresponding entry for additional information about assessment and care provision.

• Has the newborn received **care from another caregiver** (including a TBA, herbalist, traditional healer) during this newborn period?	➡ **If YES**, why did the woman seek care for the newborn?
	  ➡ **If because of a problem**, ask the general followup questions in Set A (**Textbox 2-30, page 2-114**) to assess the nature of the problem.
	  ➡ **If not because of a problem**, ask the general followup questions in Set B (**Textbox 2-30, page 2-114**) to assess the nature of care received.
	• Consider this information in the context of further assessment.

Textbox 2-30. General Followup Questions (Newborn)

Set A: Questions to ask if the newborn has (or recently had) a problem:

- What is the problem, exactly?
- When did it first occur?
- Did it occur suddenly or develop gradually?
- When and how often does the problem occur?
- What may have caused the problem? Did anything unusual occur before its onset?
- How is the newborn affected by the problem? Is s/he eating, sleeping, and behaving normally?
- Has the problem become more or less severe?
- Are there accompanying signs/symptoms or conditions? If YES, what are they?
- Has s/he received care/treatment from another caregiver for this problem? If YES, proceed to Set B.

Set B: Questions to ask if the newborn has received care/treatment from another caregiver:

- Who (or what healthcare facility) provided this care?
- What did this care involve (drugs/medications, treatments, etc.)?
- What was the outcome of this care (i.e., Was it effective? If for a problem, did it eliminate the problem?)?

Textbox 2-31. Common Concerns during the Newborn Period

Chest, Abdomen, Cord Stump, and External Genitalia
Mucoid or bloody vaginal discharge, page 3-25
Swollen breasts, page 3-25
Swollen labia, page 3-25
Swollen scrotal sac, page 3-26
Tight foreskin, page 3-26
Umbilical hernia, page 3-26

Head, Face, Mouth, and Eyes
Caput succedaneum, page 3-27
Cephalohematoma, page 3-27
Epithelial “pearls”, page 3-27
Molding or chignon, page 3-28
Subconjunctival hemorrhage, page 3-28
Swollen or red eyelids, page 3-28
Tongue tie, page 3-29

Skin
Acne, page 3-29
Diaper/napkin rash, page 3-30
Erythema toxicum, page 3-30
Milia, page 3-31
Mongolian spots, page 3-31
Port wine stains, page 3-31
“Stork bites”, page 3-32

Miscellaneous
Crying, increased, page 3-32
Irregular breathing, page 3-32
Startle reflex, page 3-33
Vomiting, page 3-33

H-2. Present Labor/Childbirth (First Visit)

Question	Use of Information/Followup Action
• **Where** did the birth take place, and was it attended by a **skilled provider**?	➡ **If the birth took place in a healthcare facility and was attended by a skilled provider**, ask these followup questions and consider findings in the context of further assessment: • From what provider/healthcare facility did the woman receive labor/childbirth care? • What did the labor/childbirth care include (e.g., testing, immunizations, drugs/medications, counseling)? ➡ **If the birth took place at home, was not attended by a skilled provider, and/or the care was not adequate**, consider findings in the context of further assessment: • Be alert for signs of conditions or complications that may not have been adequately addressed during labor and childbirth.
• Did the woman have a **uterine infection or fever** during labor or after birth?	➡ **If YES and the baby is less than 3 days of age**, see Mother with History of Rupture of Membranes for More than 18 Hours before Birth and/or Uterine Infection or Fever during Labor or Birth (**page 3-86**) for additional information about assessment and care provision.
• Did the woman have **rupture of membranes for more than 18 hours before birth**?	➡ **If YES and the baby is less than 3 days of age**, see Mother with History of Rupture of Membranes More than 18 Hours before Birth and/or Uterine Infection or Fever during Labor or Birth (**page 3-86**) for additional information about assessment and care provision.
• Were there any **complications that may have caused injury**, such as shoulder dystocia, breech birth, large baby, or instrument assistance (vacuum extraction, forceps)?	➡ **If YES**, consider this finding in the context of further assessment: • Be alert for signs of birth injury (e.g., cuts or scrapes, bruises, swelling or tenderness of limbs or joints, asymmetrical movements of limbs).
• Did the baby require **resuscitation at birth**?	➡ **If YES**, consider this finding in the context of further assessment: • Be alert for signs of breathing difficulty (e.g., abnormal respirations, chest indrawing, grunting on expiration, gasping).
• What was the baby's **weight at birth**?	• **Normal:** Birthweight is 2.5–4.0 kg ➡ **If the birthweight was less than 2 kg**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If the birthweight was more than 4.0 kg**, see Large Baby (**page 3-84**) for additional information about assessment and care provision. ➡ **If the birthweight was 2–2.5 kg**, see Low Birthweight Baby (**page 3-85**) for additional information about assessment and care provision.

H-3. Maternal Obstetric History: Previous Newborn Period (First Visit)

Note: Although the baby of a woman who has had previous postpartum/newborn complications does not necessarily require additional/specialized care, knowing about past complications helps you understand any concerns she may have during this postpartum/newborn period. Also, discussing past complications provides an opportunity to emphasize the importance of having a complication readiness plan.

Question	Use of Information/Followup Action
● If this is not the woman's first child, are all **children still living**?	➡ **If NO**, ask whether any of them died before birth or within the first month of life. ➡ **If YES**, see Maternal, Fetal, or Newborn Complications during Previous Pregnancy, Labor/Childbirth, or the Postpartum/Newborn Period (**page 3-64**) for additional information about assessment and care provision.
● If this is not the woman's first child, has she **breastfed before**?	➡ **If NO**, explore the reasons why. • What prevented her from breastfeeding? • Did she stop because she had problems breastfeeding? ➡ **If YES**, ask these followup questions: • For how long did she breastfeed previous babies? • Did she have problems breastfeeding? ➡ **If she has had problems breastfeeding in the past**, consider this finding in the context of further assessment: • Be alert for signs of breast and breastfeeding problems (e.g., breast pain, ineffective positioning or attachment). ● Use this information to guide individualization of health messages and counseling and other aspects of basic care provision.

H-4. Maternal Medical History (First Visit)

Question	Use of Information/Followup Action
● Has the woman been diagnosed with **diabetes**?	➡ **If YES, and the baby is less than 3 days of age**, facilitate urgent referral/transfer (**Annex 7, page 4-63**).
● Has the woman been diagnosed with any of the following **infectious diseases**? • Hepatitis B • HIV • Syphilis • Tuberculosis	➡ **If YES**, see the corresponding entries for additional information about assessment and care provision: • Mother with Hepatitis B (**page 3-85**) • Mother with HIV (**page 3-87**) • Mother with Syphilis (**page 3-87**) • Mother with Tuberculosis (**page 3-87**)

Question	Use of Information/Followup Action
• What are **her feelings** about the baby and about her ability to care for her/him?	• Use this information to guide individualization of Support for Mother-Baby-Family Relationships and other aspects of basic care provision. ➡ **If she reports feelings of inadequacy, worry, or fear**, see **page 3-15**, for additional information about assessment and care provision. ➡ **If she reports crying, feelings of sadness or of being overwhelmed, or irritability**, see Postpartum Sadness (**page 3-69**) for additional information about assessment and care provision.
• What are her **partner/family's feelings** about the baby?	➡ Use this information to guide individualization of Support for Mother-Baby-Family Relationships and other aspects of basic care provision.

H-5. Present Newborn Period (Every Visit)

Question	Use of Information/Followup Action
• Does she feel that **breastfeeding** is going well?	➡ **If NO**, consider this finding in the context of further assessment: • Be alert for signs of breast and breastfeeding problems (e.g., breast pain, ineffective positioning or attachment). ➡ **If the woman has not yet decided whether she wants to breastfeed or use a breastmilk substitute**, see Breastmilk versus Breastmilk Substitute (**page 4-49**). ➡ **If the woman has chosen to use a breastmilk substitute**, see Using a Breastmilk Substitute (**page 4-51**).

• How often does the baby **feed**?
• Does the baby seem **satisfied** after feeding?
	• **Normal/normal variations:**
	  • The baby wakes every 2–3 hours to feed (but may sleep 4 hours between feeds at night).
	  • The baby feeds at least 8 times per day.
	  • The baby seems satisfied after feeding.
	➡ **If the baby's feeding habits are not within normal range**, consider the findings during further assessment to identify other signs of inadequate intake (e.g., urinating or passing stool too few times per day, dehydration).

• How often does the baby **urinate**?	• **Normal/normal variations:**
	  • The baby urinates at least once in the first 24 hours.
	  • After the first 48 hours after birth, the baby urinates at least 6 times per day.
	➡ **If the baby has not urinated within the first 24 hours or is urinating fewer than 6 times per day after the first 48 hours of life**, see Breast and Breastfeeding Problems (**page 3-43**) for additional information about assessment and care provision.

Question	Use of Information/Followup Action

• Has the baby passed the **first stool**?
• When was the **last time** the baby passed stool?
• How often does the baby **pass stool**?
• What is its **color/consistency**?
	• **Normal/normal variations** (**Table 2-18,** below)**:**
	  • The first stool is typically passed within the first 2 days after birth. This is the "meconium" stool and is thick, tarry, and dark green.
	  • From 3–7 days after birth:
	  • Stools change in color and consistency.
	  • The breastfed baby passes stool at least 4–10 times per day (approximately once per feeding).
	  • The breastmilk substitute (BMS)-fed baby passes stool at least 2–4 times per day.
	➡ **If the baby has not passed stool within the first 48 hours of life**, facilitate urgent referral/transfer (**Annex 7, page 4-63**).
	➡ **If the baby has or recently had diarrhea** (i.e., an increase in number of stools, watery stools), ACT NOW!—see Diarrhea (**page 3-125**) before proceeding.
	➡ **If, from 3–7 days after birth, the breastfed baby is passing stool fewer than 4 times per day or the BMS-fed baby is passing stool fewer than 2 times per day**, see Breast and Breastfeeding Problems (**page 3-43**) for additional information about assessment and care provision.

• Has the baby been diagnosed with a **congenital malformation**?	➡ **If YES and it has not yet been adequately addressed**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care OR urgent referral/transfer (**Annex 7, page 4-63**) as indicated in **Table 2-19** (**page 2-119**).
• Has the baby received all required **vaccines** to date (e.g., OPV, BCG, HBV)?	• Use this information to assess the baby's need for vaccines during this visit; proceed according to the recommended Newborn Immunization Schedule (**Table 2-20, page 2-135**). **Note:** A written record of immunization is best, but if none is available, try to ascertain which vaccines the baby has received. If the woman does not remember whether the baby received immunizations or you suspect that the baby has not been immunized, provide OPV, BCG, and HBV vaccines according to the recommended Newborn Immunization Schedule (**Table 2-20, page 2-135**).

Table 2-18. Newborn Stool Descriptions

STOOL TYPE	WHEN PASSED	COLOR	CONSISTENCY
Meconium	Within 1–2 days after birth	Tarry, black/dark green	Thick, sticky
Transitional	Within 3–5 days after birth	Brown to green	Thin
Breastmilk	After 5 days	Yellow	Watery, soft/mushy
Breastmilk substitute	After 5 days	Pale yellow	Formed, pasty

Table 2-19. Appropriate Followup Action for Congenital Malformations

CONGENITAL MALFORMATION	FOLLOWUP ACTION
Skin tags and extra digits (if no bony attachment)	Tie off; nonurgent referral
Cleft lip or palate	Nonurgent referral
Club foot	Nonurgent referral
Down syndrome or other genetic birth defect (may appear as abnormal facial features)	Link parents to support; nonurgent referral
Hydrocephalus	Nonurgent referral
Spina bifida/meningomyelocele (may appear as spinal malformations)	Urgent referral
Gastroschisis/omphalocele (may appear as abdominal malformations)	Urgent referral
Imperforate anus	Urgent referral
Congenital heart abnormality	Urgent referral

H-6. Interim History (Return Visits)

Note: The questions below, together with those in **H-5**, represent the minimum that you would ask the woman upon a return visit. Additional history may be necessary depending on the newborn's individual needs.

Question	Use of Information/Followup Action
● Is the newborn having a **problem**? ● Has the newborn had any **problems (or significant changes)** since the last visit?	➡ **If YES:** • Ask general followup questions to assess the nature of the problem (or change) (**Textbox 2-30, page 2-114**); and • Consider this information in the context of further assessment. ➡ **If the woman has concerns or reports newborn signs shown in Textbox 2-31** (**page 2-114**), see the corresponding entry for additional information about assessment and care provision. ● Use this information to determine changes that need to be made in the current plan of care.
● Has the newborn received **care from another caregiver** (including a TBA, herbalist, traditional healer) since the last visit?	➡ **If YES**, why did the woman seek care for the newborn? ➡ **If because of a problem**, ask the general followup questions in Set A (**Textbox 2-30, page 2-114**) to assess the nature of the problem. ➡ **If not because of a problem**, ask the general followup questions in Set B (**Textbox 2-30, page 2-114**) to assess the nature of care received. ● Consider this information in the context of further assessment.

Question	Use of Information/Followup Action

• Has there been a **change in the woman's personal information** (phone number, address, etc.) since the last visit?
• Has there been a **change in the baby's habits or behaviors** (e.g., decrease in feeding, urinating) since the last visit?
• Has there been a **change in the baby's medical history** since the last visit? For example, new or recent:
  • Diagnoses
  • Injuries
  • Hospitalizations
  • Drugs/medications
	• Use this information to:
	  • Maintain accuracy of the newborn's medical records, and
	  • Determine changes that need to be made in the current plan of care.
	
	Remember: The questions in element **H-5** (Present Newborn Period) should be asked at every newborn care visit.

• Has the woman been **unable to carry out any part of the newborn's plan of care** (e.g., breastfeeding, keeping clean, keeping warm)?
• Has the newborn had any **adverse reactions** to immunizations or drugs/ medications or any care provided?
	➡ **If YES to EITHER question:**
	  • Consider this information in the context of further assessment.
	  • Use this information to determine changes that need to be made in the current plan of care.

Physical Examination/Observation (PE/O)

When you have finished taking the newborn's history, perform a physical examination/observation. Be sure to record all findings in the newborn's chart.

➡ **If this is the first encounter/visit**, perform a complete physical examination (elements **PE/O-1** through **PE/O-6**).

➡ **If this is a return visit**, a shortened physical examination may be sufficient (elements **PE/O-1** through **PE/O-3, PE/O-5,** and **PE/O-6)**.

PE/O-1. Assessment of Overall Appearance/General Well-Being (Every Visit)

Before examining the baby, perform the steps shown in **Textbox 2-32** (below).

Textbox 2-32. Preparing for the Physical Examination (Newborn)

Complete the following steps before performing the physical examination:

- Inform the woman what you are going to do. Encourage her to ask questions, and listen to what she has to say.
- Wash hands thoroughly with soap and water and dry them with a clean, dry cloth or allow them to air-dry.
- Wear examination gloves if the baby has not been bathed since birth, if the cord is touched, or if there is blood, urine, and/or stool present.
- Place the baby on a clean, warm surface or examine her/him in the woman's arms.
- Have clean clothes or blankets/coverings ready to dress the baby immediately after the examination.

Element	Normal	Abnormal/Followup Action
Weight	• Birthweight is 2.5–4.0 kg. • Most babies lose up to 10% of their birthweight in the first few days after birth. • The full term baby regains her/his birthweight by approximately 7 days of age. • The low birthweight baby regains her/his birthweight by approximately 10 days of age.	➡ **If birthweight is/was less than 2 kg**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If birthweight is/was more than 4.0 kg**, see Large Baby (**page 3-84**) for additional information about assessment and care provision. ➡ **If birthweight is/was 2–2.5 kg**, see Low Birthweight Baby (**page 3-85**) for additional information about assessment and care provision.
Respiration	• Respiratory rate is 30–60 breaths per minute • No gasping • No chest indrawing • No grunting on expiration	➡ **If respiration is not within normal range**, ACT NOW!—perform a Newborn Rapid Initial Assessment (**page 3-96**) before proceeding.
Temperature (axillary)	• Temperature is 36.5–37.5°C	➡ **If axillary temperature is more than 37.5°C, or less than 36.5°C**, ACT NOW!—see Abnormal Body Temperature (**page 3-122**) before proceeding.
Color	• The baby's lips, tongue, nailbeds, palms of hands, and soles of feet are pink. • No central cyanosis (blue tongue and lips). • No jaundice (yellowness). • No pallor. • **Normal variation:** Cyanosis (blueness) of hands or feet in the first 12 hours	➡ **If there is pallor or central cyanosis**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If there is any jaundice within the first 24 hours or jaundice on arms, legs, hands, and feet on days 2–7**, ACT NOW!—see Jaundice (**page 3-124**) before proceeding.

Element	Normal	Abnormal/Followup Action
Movements and posture	• Movements are regular and symmetrical (equal on both sides of the body). • No convulsions (repetitive jerking movements of limbs or face; tonic extension or flexion of arms and legs, either synchronous or asynchronous; baby may be awake or unresponsive). • No spasms (involuntary contraction of muscles that lasts a few seconds to several minutes; may be triggered by light, touch, or sound; baby is conscious and often crying with pain; jaw and fists are tightly clenched). (See **Figure 2-21A** [**page 2-125**].) • No opisthotonos (extreme hyperextension of the body, with the head and heels bent backward and the body arched forward). (See **Figure 2-21B** [**page 2-125**].) • **Common concern:** ➡ **If the startle reflex (rapid, symmetrical "stiffening" of the body in response to a sudden noise or touch) is observed**, see **page 3-33** for additional information about assessment and care provision.	➡ **If there are convulsions, spasms, or back arching (opisthotonos)**, ACT NOW!—perform a Newborn Rapid Initial Assessment (**page 3-96**) before proceeding. ➡ **If there are irregular or asymmetrical arm or leg movements**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.
Level of alertness and muscle tone	• Responds actively to handling and other stimuli • Can easily be roused from sleep • Not floppy or lethargic • Can be consoled when upset; not overly irritable	➡ **If the baby is nonresponsive, floppy or lethargic, or inconsolable**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If there is loss of consciousness**, ACT NOW!—perform a Newborn Rapid Initial Assessment (**page 3-96**) before proceeding.

Element	Normal	Abnormal/Followup Action

Skin	• The skin is clear and free from bruises and cuts or abrasions.
	• **Common concerns:** If any of the following signs are observed, see the corresponding page number for additional information about assessment and care provision:
	  • Tiny white cysts on gums or roof of mouth at birth (epithelial "pearls") (**page 3-27**)
	  • Purplish-gray, flat marks on the lower back/buttock area at birth (Mongolian spots) (**page 3-31**)
	  • Red or purple flat marks on the face or neck at birth (Port wine stains) (**page 3-31**)
	  • Pink/light red marks on the nose, eyelids, or back of neck at birth ("stork bites") (**page 3-32**)
	  • Patchy red rash, with tiny white area in middle, all over body (except palm and soles) at 2 to 3 days after birth (erythema toxicum) (**page 3-30**)
	  • Tiny white bumps ("whiteheads") on the nose, cheeks, forehead, and/or chin in the first weeks of life (milia) (**page 3-31**)
	  • Diffuse redness/irritation of groin area during first weeks of life (diaper/napkin rash) (**page 3-30**)
	  • Pinpoint red bumps on face, back, and/or chest at 2 weeks of age (acne) (**page 3-29**)
		➡ **If bruises appear spontaneously within 2 to 3 days after birth, but there is no evidence of trauma at birth**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
		➡ **If there are cuts or abrasions and they are bleeding**, press on the bleeding site.
		  ➡ **If bleeding continues after 15 minutes**, ACT NOW!—see Bleeding (**page 3-126**) before proceeding.
		➡ **If there are cuts or abrasions and they are not bleeding**, see Cuts or Abrasions that Are Not Bleeding (**page 3-83**) for additional information about assessment and care provision.

PE/O-2. Head, Face and Mouth, Eyes (Every Visit)

Element	Normal	Abnormal/Followup Action

Head	• The head is symmetrical in shape.
	• Fontanelles are soft and flat.
	• The distance between sutures is within normal range (i.e., they are not widely separated).
	• The size of the head is proportionate to the body.
	• **Common concerns:** If any of the following signs are observed, see the corresponding page number for additional information about assessment and care provision:
	  • Swelling on the head that does not cross suture lines and feels firm to the touch (cephalohematoma); may take 12 weeks to resolve (**page 3-27**)
	  • Edematous swelling (caput succedaneum) over the part of the head that came first through the birth canal; unless excessive, usually resolves within 24 hours (**page 3-27**)
	  • Misshapen head caused by molding; usually resolves within 2 to 3 days (**page 3-28**)
		➡ **If any of the following signs are observed**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**):
		  • Anterior fontanelle is bulging
		  • Sutures are abnormally wide
		  • Swelling on the head crosses suture lines
		  • Circumference of head appears to be increasing
		  • Edematous swelling or misshapen head (caused by birth/molding) that is not resolved by 72 hours after birth
		➡ **If the head is very large or very small in proportion to the body**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.

Face and Mouth (First Visit)
For the procedure, see **Textbox 2-33** (**page 2-125**).
	• Facial features and movements are regular and symmetrical.
	• The lips, gums, and palate are intact.
	• **Common concern:** If tongue tie (a band of tissue between the underside of the tongue and floor of mouth seems short and tight) is observed, see **page 3-29** for additional information about assessment and care provision.
		➡ **If any of the following signs are observed**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care:
		  • Cleft lip (split in lip) or cleft palate (hole in upper palate connecting mouth and nasal passages)
		  • Unable to wrinkle forehead or close eye on one side
		  • Angle of mouth is pulled to one side
		  • Other features/movements are not within normal range

Eyes	• The baby's eyes have no swelling, redness, or pus draining from them. • **Common Concern:** If there is a bright red spot on sclera at birth (subconjunctival hemorrhage), see **page 3-28** for additional information about assessment and care provision.	➡ **If there is swelling, redness, or pus draining from the eyes**, ACT NOW!—see Pus or Redness of Eyes (**page 3-129**) before proceeding.

Textbox 2-33. Examining the Palate

- Put a clean glove on the examining hand.
- Use the little finger to feel the palate for any submucous cleft.
- A normal newborn will respond by sucking the finger.

Figure 2-21. Spasms (A) and Opisthotonos (B)*

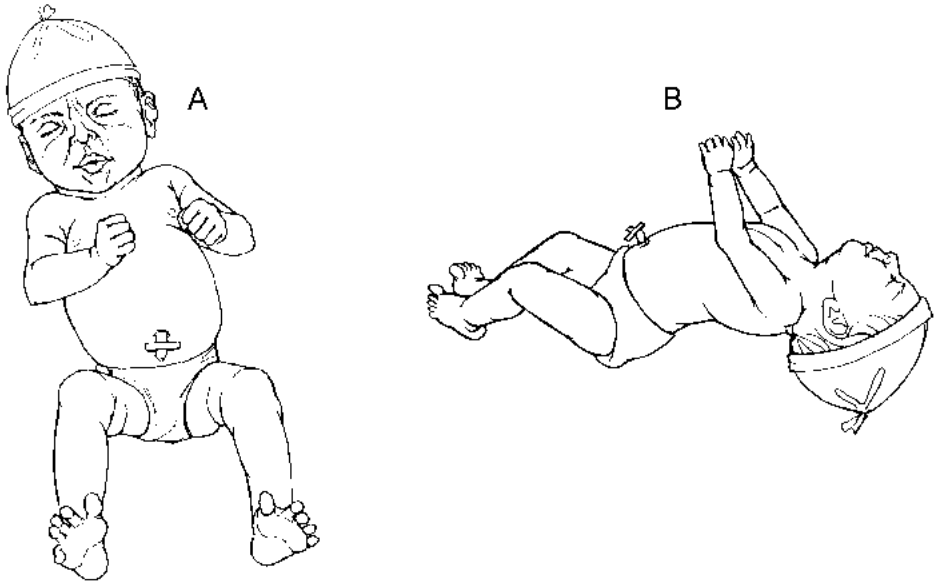
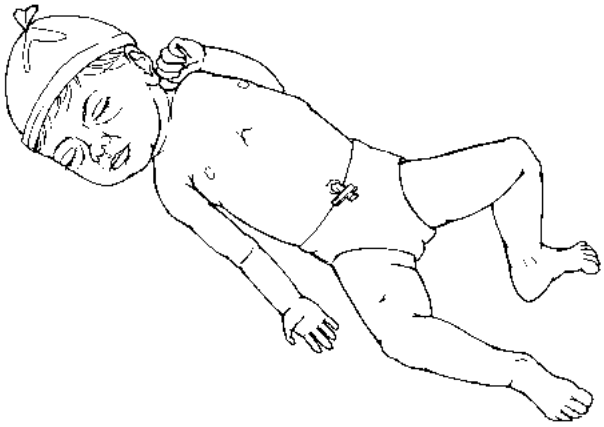


Figure 2-22. Facial Palsy*

Figure 2-23. Erb's Palsy*



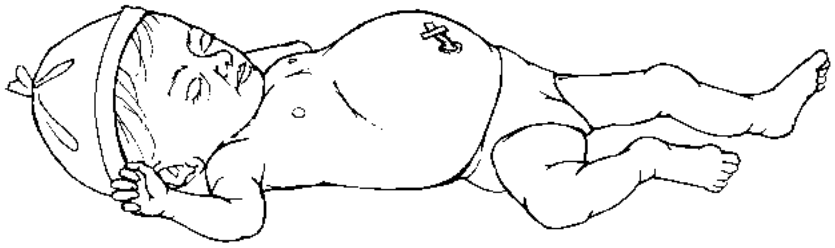
* Figures 2-21A and B through 2-25 are reprinted with permission from: World Health Organization (WHO). 2003. *Managing Newborn Problems: A Guide for Doctors, Nurses, and Midwives*. WHO: Geneva.

PE/O-3. Chest, Abdomen and Cord, and External Genitalia (Every Visit)

Element	Normal	Abnormal/Followup Action
Chest	• The chest movements are regular and symmetrical. • No chest indrawing • **Common concern: If swollen breasts are observed**, see **page 3-25** for additional information about assessment and care provision.	➡ **If chest movements are not within normal range**, ACT NOW!—facilitate urgent referral/ transfer (**Annex 7, page 4-63**).
Abdomen and cord stump	• The abdomen should be rounded, but not distended (**Figure 2-24, page 2-127**), with no protrusions. • The stump is dry. • No blood or pus oozing from the cord stump • No red, inflamed, swollen, or hardened skin around the umbilicus • No offensive smell • **Common concern:** If an umbilical hernia (protrusion at the base of the cord that is covered by skin) is observed, see **page 3-26** for additional information about assessment and care provision.	➡ **If there is a distended abdomen or any abnormal protrusion, particularly from the base of the cord or through a defect in the abdominal wall**, ACT NOW!—cover exposed protrusion with clean, moist cloth (if applicable) and facilitate urgent referral/ transfer (**Annex 7, page 4-63**). ➡ **If the cord stump is bleeding**, retie the cord. ➡ **If bleeding continues after 15 minutes**, ACT NOW!—see Bleeding (**page 3-126**) before proceeding. ➡ **If there is swelling, redness, a foul smell, or pus draining from the umbilicus**, ACT NOW!—see Redness or Foul Smell of Umbilicus (**page 3-130**) before proceeding.

External genitalia and anus
 	
Note: Do not insert anything into the anus to confirm patency. Patency of the anus is confirmed when meconium is passed.
	• Genitals are regular and symmetrical.
	• In boys, the urethral orifice is at the end of the penis.
	• The anus appears patent/intact.
	• **Common concerns:** If any of the following signs are observed, see the corresponding page number for additional information about assessment and care provision:
	  • Swollen labia at birth (**page 3-25**)
	  • Swollen scrotal sac at birth (**page 3-26**)
	  • Tight foreskin at birth (**page 3-26**)
	  • Mucoid or bloody vaginal discharge during first week of life (**page 3-25**)
		➡ **If anus appears imperforate**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
		➡ **If the genitals are not within normal range**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.

Figure 2-24. Abdominal Distention



PE/O-4. Back and Limbs (First Visit)

Element	Normal	Abnormal/Followup Action
Back	• The spine should be free of swelling, lesions, dimples, or hairy patches.	➡ **If the spine is not within normal range**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
Limbs	• Position and appearance of limbs, hands, and feet are normal and symmetrical. • Movement of limbs is regular and symmetrical. • No swelling over any bone. • No crying when arm, shoulder, or leg is touched.	➡ **If limbs are not within normal range**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.

PE/O-5. Breastfeeding (Every Visit)

After examining the baby and before observing breastfeeding, perform the steps shown in **Textbox 2-34** (below).

Textbox 2-34. Post-Examination Steps (Newborn)

Complete the following steps after examining the baby:

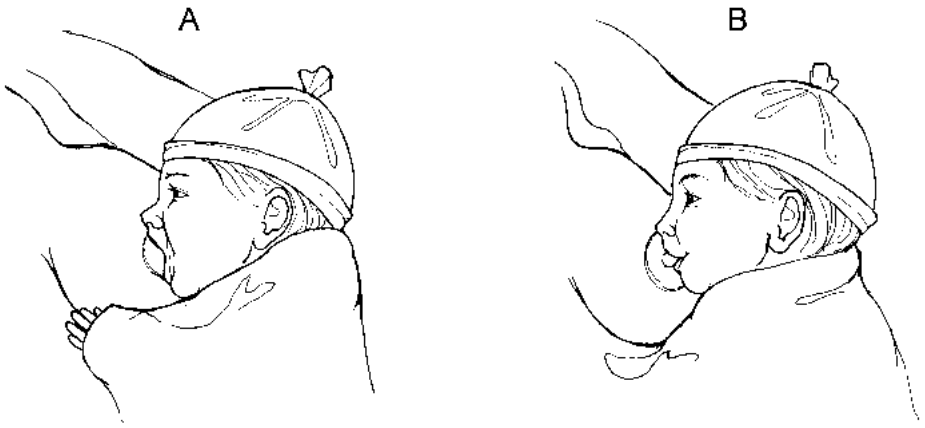
- If gloves have been worn:
  - Immerse both gloved hands in 0.5% chlorine solution.
  - Remove gloves by turning them inside out.
  - If disposing of gloves, place in leakproof container or plastic bag.
  - If reusing gloves, submerge in 0.5% chlorine solution for 10 minutes to decontaminate.
- Wash hands thoroughly.
- Assist the woman with the baby as necessary.

- Help the woman feel relaxed and confident throughout the observation.
- Reinforce, through words and nonverbal behavior, that you are present to provide help and support, not to judge the woman or her newborn in any way.
- Do not hurry the woman and her newborn.

Element	Normal	Abnormal/Followup Action
Positioning	• The woman is comfortable with back and arms supported. • Baby's head and body are aligned; baby's abdomen is turned toward the woman. • Baby's face is facing the breast with nose opposite nipple. • Baby's body is held close to the woman. • Baby's whole body is supported. • The baby is brought to the nipple height.	➡ **If positioning is not within normal range**, take this finding into consideration during the further assessment of breastfeeding: • Be alert for signs of ineffective attachment to the breast/suckling. • See Breastfeeding Support (**page 4-47**) for additional guidance on positioning.
Holding	• The woman may support the weight of her breast with her hand and shape her breast by putting her thumb on the upper part, so that the nipple and areola are pointing toward the baby's mouth; OR • She may support the breast by placing her fingers flat against the chest wall, while bringing the baby to her breast to suckle.	➡ **If holding is not within normal range**, take this finding into consideration during the further assessment of breastfeeding • Be alert for signs of ineffective attachment to the breast/suckling. • See Breastfeeding Support (**page 4-47**) for additional guidance.
Attachment and suckling	• Nipple and areola are drawn into the baby's mouth rather than only the nipple into the mouth. • The baby's mouth is wide open; lower lip is curled back below base of nipple. • The baby takes slow, deep sucks, often with visible or audible swallowing. • The baby pauses from time to time. • The baby may make "smacking" sounds. • See **Figure 2-25** (**page 2-129**).	➡ **If attachment does not appear effective**, see Breast and Breastfeeding Problems (**page 3-43**) for additional information about assessment and care provision.
Woman's comfort	• Woman does not complain of, or appear to have, nipple/breast pain during the breastfeed.	➡ **If the woman has pain during the breastfeed**, see Breast and Breastfeeding Problems (**page 3-43**) for additional information about assessment and care provision.

Element	Normal	Abnormal/Followup Action
Finishing the breastfeed	• The newborn should release the breast her/himself rather than being pulled from the breast. • Feeding may vary in length, anywhere from 4 to 40 minutes per breast. • Breasts are softer at the end of the feed compared to full and firm at the beginning. • Newborn looks sleepy and satisfied at the end of a feed.	➡ **If observations are not within normal range but attachment/ suckling appear effective and there have been no signs of inadequate intake**, use this information to guide individualization of health messages and counseling and other aspects of basic care provision. • See Breastfeeding Support (**page 4-47**) for additional guidance on positioning.

Figure 2-25. Correct (A) and Incorrect (B) Attachment of the Newborn to the Breast



PE/O-6. Mother-Baby Bonding

Note: The mother-child relationship begins during pregnancy and develops rapidly after the birth of the baby. Normal maternal feelings vary, from the rush of affection that some women feel immediately after birth, to less dramatic, more gradually developing feelings that other women experience. In a healthy relationship, however, the woman will begin to demonstrate some degree of concern/nurturing toward her baby immediately after birth. Through careful observation, you may detect early problems in this area and help uncover the underlying reasons, so that appropriate action can be taken to allow a healthy mother-baby bond to develop.

Element	Normal	Abnormal/Followup Action
Physical contact **Communication** **Empathy**	• The woman appears to enjoy physical contact with her newborn and appears contented with the newborn. • She caresses, talks to, and makes eye contact with the newborn. • When holding or feeding the newborn, she and the newborn are turned toward each other. • She responds with active concern to the newborn's crying or need for attention.	➡ **If findings are not within normal range for this cultural context**, ask her how she is/has been feeling (emotionally). ➡ **If she reports feelings of inadequacy, worry, or fear**, see **page 3-15** for additional information about assessment and care provision. ➡ **If she reports crying, feelings of sadness or of being overwhelmed, or irritability**, see Postpartum Sadness (**page 3-69**) for additional information about assessment and care provision. • Use this information to guide individualization of Support for Mother-Baby-Family Relationships and other aspects of basic care provision.

NEWBORN CARE PROVISION

C-1. Early and Exclusive Breastfeeding

Note: If the woman is HIV-negative, exclusive breastfeeding for the first 6 months of life should be strongly encouraged. The following health messages and counseling should be provided to all women during the postpartum period unless they are HIV-positive or have said that they do not wish to breastfeed.

Based on the woman's breastfeeding history and any other relevant findings or discussion, individualize health messages and counseling:

- The woman should give her colostrum (first milk) to her baby before her next milk "comes in." Colostrum is the perfect first food for a baby and contains important ingredients that boost immunity and provide all essential nutrients.
- The woman should breastfeed her baby **exclusively** for the first 6 months of life. This means that the baby should not be given anything else to drink or eat during that time—no water, juice, formula, rice, or any other drink or food.
- The baby should be breastfed whenever s/he wants, day and night (**on demand**), which should be about every 2–3 hours (or 8–12 times per 24 hours) during the first weeks of life.
- To ensure that the baby is getting enough to eat, the woman should note how often the baby urinates: at least 6 times per day during the first 2–7 days after birth indicates adequate intake.

Note: For information on the following related topics, see the page indicated: benefits of breastfeeding for the woman and newborn, **page 2-32**; general principles of early and exclusive breastfeeding, **page 2-32**; additional advice for the woman on breastfeeding (**page 2-102**) and breast care (**page 2-102**); proper positioning for good attachment, **page 4-47**.

C-2. Complication Readiness Plan

Advise the woman and her family to enact the complication readiness plan if any of the danger signs shown in **Textbox 2-35** (**page 2-131**) arise.

- **As soon as possible after birth:** Review the woman's complication readiness plan, updating it to reflect newborn needs. If she and her family have not yet developed a complication readiness plan, assist them in developing one according to the guidelines shown on **page 2-26**.
- On each **return visit**, review and update the plan:
  - What arrangements have been made since the last visit?
  - Has anything changed?
  - Have any obstacles or problems been encountered?

Textbox 2-35. Danger Signs during the Newborn Period

- Breathing difficulty
- Convulsions, spasms, loss of consciousness, or arching of the back (opisthotonos)
- Cyanosis (blueness)
- Hot to touch/fever
- Cold to touch
- Bleeding
- Jaundice (yellowness)
- Pallor
- Diarrhea
- Persistent vomiting or abdominal distention
- Not feeding or poor suckling (feeding difficulties)
- Pus or redness of the umbilicus, eyes, or skin
- Swollen limb or joint
- Floppiness
- Lethargy

C-3. Newborn Care and Other Healthy Practices

Based on the newborn's history and any other relevant findings or discussion, individualize health messages and counseling on the topics addressed below.

Although all of the issues that follow should be addressed at the earliest opportunity, other topics—such as breastfeeding support or using a breastmilk substitute—can be included according to individual need. Ideally, the woman's partner would be present during these discussions.

Remember: A woman who has **common concerns** during the newborn period requires additional care, which consists mainly of health messages and counseling. **Chapter 9** (**page 3-1**) contains information on additional care for women with common concerns.

C-3.1. Maintaining Warmth

Based on the woman's/baby's history and any other relevant findings or discussion, individualize the following key messages:

- The woman and baby should be kept in skin-to-skin contact, covered with a clean, dry blanket/covering, as much as possible for the first 6 hours after birth at least.
  - ➡ **If the baby cannot be in immediate skin-to-skin contact with the woman or after 6 hours**, dress her/him in an extra layer or two (in addition to what is comfortable for adults) of clothing or blankets/ coverings.
- Do not bathe the baby for at least the first 6 hours after birth, and preferably not in the first 24 hours, and not until the baby's temperature is stable.
- Avoid dressing the baby in tight, restrictive clothing or blankets/coverings because they reduce the retention of heat.
- Cover the baby's head with a hat.
- Keep the room warm (25°C or more) and free from drafts.

- Check the newborn's feet at least every 4 hours for the first 24 hours or until the temperature is stable.
  - ➡ **If the feet feel cold in comparison to normal adult skin**, extra warmth is required immediately: add a layer of clothing and blankets/coverings.
  - ➡ **If the feet feel hot in comparison to normal adult skin**, remove a layer of clothing and blankets/coverings.
  - ➡ **If the feet remain cold or hot for 1 hour after the above changes are made**, enact the complication readiness plan.
- Other practices that help maintain warmth include early and exclusive breastfeeding (**page 2-130**).

C-3.2. Prevention of Infection/Hygiene

Based on the woman's/baby's history and any other relevant findings or discussion, individualize the following key messages:

- The following practices are especially important in the first months of life because the baby's immune system is still developing and may be more susceptible to infection.
- In general, the woman, partner, and other people should wash their hands before touching or caring for the baby. They should also wash their hands after cleaning the baby or changing her/his diaper/napkin. (For more information about good general hygiene, see **page 2-29**.)
- When the baby's diaper/napkin is soiled/wet, the following actions should immediately be carried out:
  - Remove the diaper/napkin and properly dispose of it in a bucket, plastic bag, or other container that can be closed.
  - Wash the baby's bottom, from the groin/genitals toward the buttocks.
  - Dry the baby's bottom, from the groin/genitals toward the buttocks.
  - Until the cord falls off, place the cord outside the diaper/napkin to prevent contamination with urine and feces.
  - Put no lotions, powders, or other products on the baby's skin.
  - Put a clean diaper/napkin on the baby.
- The woman should care for her own baby as much as possible.
- Sharing of baby equipment and supplies with other babies and children should be avoided.
- Sick children and adults should be kept away from the baby because of the risk of cross-infection.
- The baby should be protected from smoke, which can result in respiratory problems.
- The woman should remain vigilant for signs of infection and other newborn danger signs. If any of these signs are seen, she should immediately enact the complication readiness plan.
- **Other practices that help protect the baby from infection include the following:**
  - Breastfeeding
  - Proper cord care
  - Getting the recommended immunizations
  - Sleeping under an insecticide-treated (bed)net in malaria-endemic areas

C-3.3. Washing and Bathing

- Show the woman how to bathe the baby before she leaves the healthcare facility (according to the guidelines shown in **Textbox 2-36** [**page 2-133**]).

- Based on the woman's/baby's history and any other relevant findings or discussion, individualize the following key messages:
  - The baby should not be bathed for at least the first 6 hours after birth, and preferably not the first 24 hours, and not until the baby's temperature is stable.
  - After 6 hours (preferably 24 hours) and once the baby's temperature is stable (36.5–37.5°C), the baby can be bathed according to the guidelines shown in **Textbox 2-36** (below).
  - Soap is not necessary and should never be used on a baby's face; mild soap can be used on the rest of the baby's body.
  - While bathing the newborn, the woman should remain vigilant for signs of infection and other danger signs, especially in skin fold areas behind ears, around neck, and in groin.
    - ➡ **If any of these signs are seen**, she should immediately enact the complication readiness plan.
  - It is not necessary to bathe the newborn daily, especially if it is difficult to ensure a warm environment for the bath; however, the baby's groin/genitals and buttocks should be washed and dried each time the diaper/napkin is soiled/wet.

Textbox 2-36. Procedure for Newborn Bathing

Before bathing and before the baby is undressed:

- Prepare equipment and supplies.
- Ensure that the room is warm (25°C or more) and free from drafts.
- Ensure that the water is warm, but not hot, to touch.

Until the cord has fallen off and the stump is completely healed, bathe the baby according to the following guidelines to ensure that the cord is kept dry:

- Lay the baby on a clean towel on a flat surface, or have somebody else hold the baby.
- First, undress the baby's **head and upper body**.
- Bathe the baby's **head and upper body** (remember: do not use soap on the baby's face):
  - Begin by washing the baby's head and face, using clean water and clean cloths.
  - Clean the eyes using separate clean cloths or cotton balls, wiping each eye from the inside to the outside edge.
  - Then wash the neck, arms, and rest of upper body.

Note: Wash around the cord and do not immerse it in water!

- Immediately dry and dress the baby's **head and upper body**, including a hat.
- Next, undress the baby's **lower body** (remember: properly dispose of the diaper/napkin).
- Bathe the baby's **lower body:**
  - Begin by washing the baby's legs.
  - Then wash the baby's bottom, from the groin/genitals toward the buttocks.
- Immediately dry and dress the baby's **lower body** (remember: fold the diaper/napkin so that it does not cover the cord).

After the cord has fallen off and the stump is completely healed, the baby can be bathed in a shallow pan of water while being held upright, and the upper body and lower body do not have to be bathed, dried, and clothed separately.

- Immediately after bathing, the baby should be:
  - Thoroughly dried;
  - Dressed and/or wrapped in a clean, dry blanket/covering; and
  - Put in close contact with the woman.
  - ➡ **If the baby becomes chilled during bathing**, rewarm the baby by placing her/him in skin-to-skin contact with the woman and covering with a clean, dry blanket.
- Put no lotions, powders, or other products on the baby's skin.

C-3.4. Cord Care

Based on the woman's/baby's history and any other relevant findings or discussion, individualize the following key messages:

- Wash hands before giving cord care.
- The cord should be kept dry, even while the baby is being bathed (as shown in **Textbox 2-36** [**page 2-133**]).
  - ➡ **If the cord becomes wet**, it should be gently dried.
- No dressings or substances of any kind should be applied to the cord stump.
- The cord should be carefully placed outside of the diaper/napkin (with the front of the diaper/napkin folded down) to prevent contamination with urine and feces.
  - ➡ **If the cord becomes contaminated**, it should be washed with soap and water, gently dried, and carefully placed outside of the diaper/napkin.
- The cord usually falls off 4–7 days after birth.
- After the cord falls off, the umbilicus should be kept clean. No dressings or substances of any kind should be applied to the umbilicus.
- Reinforce the importance of early recognition and appropriate response to the following danger signs.
  - ➡ **If the cord bleeds**, retie the cord.
    - ➡ **If bleeding does not stop within 15 minutes of being retied**, immediately enact the complication readiness plan.
  - ➡ **If there is swelling, redness, or pus draining from the cord**, immediately enact the complication readiness plan.
  - ➡ **If there is delayed separation of the cord**, immediately enact the complication readiness plan.

C-3.5. Sleep and Other Behaviors/Needs

Based on the woman's/baby's history and any other relevant findings or discussion, individualize the following key messages:

- The baby should be placed on her/his back or side to sleep or rest when not in skin-to-skin contact with the woman.
- Keep the baby from where s/he could roll over an edge and fall to the ground; be reached/harmed by another child or animal; or become covered by a pillow, other object, or person.
- Babies generally sleep about 20 hours per day and wake only for feeding. They do not distinguish day from night and therefore wake for night feeds.
- During the weeks following birth, the baby usually starts sleeping for longer periods at night and staying awake more during the day.
- The baby signals her/his need for attention by crying. The woman should respond by:
  - Picking up her baby;
  - Talking to her/him;
  - Establishing eye-to-eye contact; and
  - Addressing the cause of the crying (dirty diaper/napkin, hunger, other discomfort).
    - The baby will usually stop crying and gaze at her/his mother. This interaction promotes bonding between the woman and baby.

- In addition to the basic physical requirements of nutrition, warmth, sleep, and a clean and safe environment, the baby needs comfort and expressions of security and love (e.g., cuddling, talking, eye-to-eye contact).

Note: Caring for the newborn can be a joyful experience, but it can also be very challenging—requiring major adjustments on the part of all family members. The woman and her family may need help in integrating care of the newborn into their daily lives. For more information on support for mother-baby-family relationships, see **page 2-104**.

C-4. Immunizations and Other Preventive Measures

C-4.1. Immunization (First Visit)

- Before discharge, the newborn should be given the following vaccines (**Table 2-20**, below).
- These should be recorded on an immunization card, which is given to the woman, and the newborn's chart.
- Advise the woman to return for the additional newborn vaccines at 6, 10, and 14 weeks of age.

Table 2-20. Newborn Immunization Schedule

VACCINE	DUE
BCG to protect against tuberculosis	After birth, before discharge from healthcare facility
OPV-0 to protect against poliomyelitis	After birth, before discharge from healthcare facility
HB-1 to protect against hepatitis B	After birth, before discharge from healthcare facility

C-4.2. Vitamin K_1 Injection (less than 6 hours of age)

- Give vitamin K_1 1 mg IM in the anterolateral aspect of the thigh.

Region/Population-Specific Preventive Measures

For newborns in areas with a high prevalence of **malaria**, see guidelines for prevention (**page 3-59**).

CHAPTER NINE

COMMON DISCOMFORTS AND CONCERNS

OVERVIEW

This chapter contains guidance for skilled providers on how to respond to common discomforts and concerns (as described on **page 1-30**) that may be identified when caring for women and their newborn babies during pregnancy, labor and childbirth, and the postpartum/newborn period. Women and babies with common discomforts or concerns require care in addition to the core components of basic care (as shown in **Chapters 4–8**). General guidelines for providing this additional care are presented below. (For an index of common discomforts during pregnancy, labor and childbirth, and the postpartum period, see **Textbox 3-1** [**page 3-2**]; for an index of common concerns during the newborn period, see **Textbox 3-2** [**page 3-2**].)

During Assessment

Consider the relevant information in the following table (based on presenting **sign/symptom**, first column) to confirm that what the woman is experiencing or the newborn's physical examination findings are within the range of normal. Accompanying alert signs that may indicate a problem are listed in the fourth column.

During Care Provision

Once you have confirmed that the woman is experiencing a common discomfort or that the newborn has a common concern and not an abnormal condition:

- Reassure the woman that what she or her baby is experiencing is normal and does not pose a threat to her or the baby;
- Explain the anatomic/physiologic basis (second column) as appropriate;
- Counsel the woman on prevention and relief measures (third column) when appropriate; and
- Advise her to return for care or facilitate appropriate care and/or referral to a specialist if:
  - Signs or symptoms worsen;
  - Danger signs (**page 4-61**) arise; OR
  - Alert signs that may indicate a problem (fourth column) arise.

Note: If the woman or newborn presents with any of the alert signs that may indicate a problem (fourth column), see the relevant section in this manual or facilitate referral/transfer as necessary.

Textbox 3-1. Index of Common Discomforts during Pregnancy, Labor and Birth, and the Postpartum Period

Textbox 3-2. Index of Common Concerns during the Newborn Period

COMMON DISCOMFORTS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
WOMAN'S ABDOMEN, BREASTS, AND LEGS			
Abdominal (or groin) pain—Cramps, twinges, pulling sensations, or sudden pain on the sides of the lower abdomen (or groin) Most commonly occurs during the 2nd–3rd trimester and the 1st–2nd stage of labor and subsides after the birth of the baby.	• Enlarged uterus stretches surrounding ligaments and muscles. • During labor and birth: – Positions in labor and birth strain muscles and ligaments. – Uterine contractions	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • When lying down: – Lie on the side with the knees and hips bent; and – Place a pillow between the knees and another pillow under the abdomen. • If the pain becomes bothersome, try any of the following: – Gently massage or apply firm pressure over the painful area. – Apply a warm cloth or heating pad or take warm baths. – Sit or lie down. – Flex the knees onto the abdomen. **During labor and birth, advise the woman and/or birth companion as follows:** • Change positions frequently during labor, for example: – Walk intermittently. – Sit or squat. – Bend over bed. – Get on hands and knees. – Lie on one side and then the other. • If the pain/discomfort worsens, let the skilled provider know. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Loss of appetite—which may indicate appendicitis Upper abdominal pain that may be relieved by food but recurs 2–3 hours later, loss of appetite, nausea or vomiting, and intolerance to fatty foods—which may indicate gallbladder disease or peptic ulcer Fainting, shoulder pain—which may indicate ectopic pregnancy (**Note:** This is an unlikely diagnosis after the early 2nd trimester.) Uterine tenderness, abdominal distention, signs of fetal distress—which may indicate uterine infection or uterine rupture Flank/loin pain, increase in frequency and urgency of urination, burning on urination—which may indicate urinary tract infection

COMMON DISCOMFORTS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
WOMAN'S ABDOMEN, BREASTS, AND LEGS (CONTINUED)			
Afterpains—Cramps, contractions as in labor Most commonly occurs during the 4th stage of labor and days 2–4 postpartum. Especially common in the multipara.	• Uterus contracts intermittently after childbirth. • Breastfeeding stimulates production of hormones that increase uterine contractions. • A full bladder displaces the uterus and causes increased uterine contractions.	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Lie face down with a pillow under the abdomen. (This may be uncomfortable at first, but the pain will lessen and may disappear.) • If the pain becomes bothersome: – Gently massage or apply firm pressure over the painful area. – Apply a warm cloth or heating pad to the painful area. – Walk around or change position. – Empty bladder frequently. • After birth, if nonpharmacologic treatments do not provide relief, paracetamol (acetaminophen) 500 mg may be used 30 minutes before breastfeeding, as needed. **During labor and birth, advise the woman and/or birth companion as follows:** • Urinate frequently; a full bladder increases uterine contractions. • If the pain/discomfort worsens, let the skilled provider know. **Advise the woman to return for care if:** • Signs/symptoms worsen or do not diminish 3–4 days after birth; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Uterine tenderness, abdominal distention—which may indicate uterine infection or uterine rupture Flank/loin pain, increase in frequency and urgency of urination, burning on urination—which may indicate urinary tract infection Loss of appetite—which may indicate appendicitis
Breast changes—Bilateral increase in size; tenderness or tingling; thin, clear/yellowish nipple discharge Most commonly occurs during the 1st trimester.	• Hormonal changes cause various breast changes in preparation for breastfeeding.	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Wear a well-fitting, supportive bra. • Wear a bra while sleeping. • Keep nipples dry and clean to protect from infection. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	A lump; dimpling/puckering; areas of scaliness, redness, or thickness; or lesions, sores, or rashes—which may indicate carcinoma

COMMON DISCOMFORTS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
WOMAN'S ABDOMEN, BREASTS, AND LEGS (CONTINUED)			
Leg cramps—Sudden in onset and of short duration Most commonly occurs during the 2nd–3rd trimester and 1st–2nd stage of labor.	• Unclear cause • Occasionally from pressure of fetus's head on nerves as head descends during labor	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • If the pain becomes bothersome, try any of the following: – Gently massage or apply firm pressure over the painful area. – Apply a warm cloth or heating pad to the painful area. – Straighten knee and flex foot upward; stand on toes of affected leg and press heel toward the floor. – Wear support hose, especially if standing for long periods during the day. – Take frequent breaks from sitting or standing for long periods. – Change positions frequently during labor (see examples under Abdominal [or groin] pain [**page 3-3**]). **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Localized pain over a vein, swelling of the affected limb—which may indicate superficial thrombophlebitis Calf muscle tenderness, swelling of the affected limb—which may indicate deep vein thrombosis Numbness/tingling of fingers and toes, footdrop persisting after labor—which may indicate nerve damage
Swelling (edema) of ankles and feet—Appears at the end of the day, after sitting or standing for a long time; disappears after rest or elevating feet. Most commonly occurs during the 2nd–3rd trimester and 1st–2nd stage of labor.	• Hormonal changes cause: – Increase in levels of sodium; – Congestion in veins in lower legs; and – Easier fluid leakage from capillaries. • Enlarged uterus puts pressure on veins when the woman is sitting and lying down, leading to: – Blood pooling in leg veins, and – Varicose veins becoming swollen and twisting.	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • When lying down, lie on your left side with legs slightly elevated. • When sitting, slightly elevate your feet/legs. • **Avoid:** – Crossing the legs when sitting; – Tight garters or restrictive bands around legs; and – Sitting or standing for long periods. • Increase intake of fluids (2–3 liters per day). • Wear support hose if other remedies have not been successful. **During labor/birth, advise the woman and/or birth companion as follows:** • Change positions frequently during labor (see examples under Abdominal [or groin] pain [**page 3-3**]). • Drink plenty of fluids during labor. • If the symptoms worsen, let the skilled provider know. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Headache, blurred vision, nausea or vomiting, epigastric pain—which may indicate pre-eclampsia/eclampsia Fatigue or sleepiness, dizziness or fainting, pallor, breathlessness, and rapid heart beat—which may indicate severe anemia Localized pain over a vein, swelling of the affected limb—which may indicate superficial thrombophlebitis Calf muscle tenderness, swelling of the affected limb—which may indicate deep vein thrombosis

COMMON DISCOMFORTS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
WOMAN'S DIGESTION AND ELIMINATION			
Bowel function changes—Constipation or diarrhea Most commonly occurs during the 2nd–3rd trimester and throughout postpartum period.	**Constipation:** • Hormonal changes relax smooth muscles, slowing digestion and elimination. • Slowed digestion increases water absorbed from colon. • During pregnancy and labor, enlarged uterus puts pressure on the lower bowel, slowing movement through intestines. • Breastfeeding requires a lot of water and can lead to dehydration. • If the woman had an episiotomy, tear, or other perineal trauma, she may refrain from bowel movements because of the pain of defecation. • Other possible causes/factors include: – Poor diet; – Inadequate intake of fluids; and – Lack of exercise. **Diarrhea:** • Unclear cause during pregnancy • During labor and birth, hormones that cause uterine contractions also stimulate the bowel.	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Ensure a good diet: – Increase intake of fresh fruits and vegetables and whole grains. – Add prunes or prune juice to diet. – Increase intake of fluids (2–3 liters per day). If breastfeeding, drink a glass of fluid each time the baby feeds. – Drink hot or cold fluids (especially on an empty stomach). • Defecate when the urge is felt. • **Avoid** laxatives, mineral oil, lubricants, stimulants, saline, hyperosmotics, diphenylmethane, and castor oil. • Use a stool softener if the above measures do not work. • Begin walking within 6 hours of childbirth (if normal non-operative birth) and increase amount of exercise each day. **For diarrhea, also:** • Ensure adequate intake of electrolytes (e.g., rice water with salt, bananas, oral rehydration solutions). • **Avoid** opiates, bismuth subsalicylate, kaopectate, and adsorbents. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Rapidly progressing difficulty in defecating, gas, vomiting, rising pulse rate, and worsening general condition—which may indicate bowel obstruction Diarrhea, cramping, bloating, loss of appetite—which may indicate bacterial or parasitic infection

COMMON DISCOMFORTS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
WOMAN'S DIGESTION AND ELIMINATION (CONTINUED)			
Food cravings or eating nonfood substances (pica) Most commonly occurs during the 1st–3rd trimester, and is most severe in 1st trimester.	• Unclear cause, possibly influenced by tradition **Note:** Food cravings are of no concern as long as the diet is nutritionally adequate and cravings are not for unhealthy foods or unhealthy nonfood substances.	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Eat a balanced diet. • **Avoid** eating unhealthy foods (e.g., candy) and unhealthy nonfood substances (e.g., dirt, chalk, clay). Suggest an alternative activity or substituting healthy foods. **Advise the woman to return for care if:** • Signs/symptoms worsen; OR • Danger signs (**page 4-61**) arise.	
Gas, bloating, or loss of appetite Most commonly occurs during the 2nd–3rd trimester.	• Hormonal changes relax smooth muscles, slowing digestion and elimination. • Enlarged uterus puts pressure on lower bowel, slowing movement through intestines. • Respiratory changes cause increased swallowing of air.	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Eat a balanced diet. • **Avoid** gas-forming foods. • Get daily exercise and adequate rest. • Chew food thoroughly. • Defecate when the urge is felt. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Fatigue or sleepiness, loss of appetite, weakness, wasting, and poor general condition—which may indicate malnutrition or another chronic condition/illness Diarrhea or cramping—which may indicate bacterial or parasitic infection

COMMON DISCOMFORTS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
WOMAN'S DIGESTION AND ELIMINATION (CONTINUED)			
Heartburn or indigestion Most commonly occurs during the 2nd–3rd trimester.	• Enlarged uterus pushes stomach higher and compresses it, pushing gastric acids into lower esophagus. • Hormonal changes cause a decrease in tone and function of stomach and intestines, and relaxation of the valve between the stomach and esophagus.	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Use good body mechanics (see guidelines under Back pain [**page 3-18**]). • Adjust diet as necessary: – Eat a balanced diet. – Eat smaller, more frequent meals. – Drink fluids between meals rather than with meals. – Increase intake of high-fiber foods (e.g., fresh fruits and vegetables). • **Avoid:** – Overeating; – Eating fatty, fried, and spicy foods; – Smoking, coffee, alcohol, and chocolate; – Taking calcium, sodium bicarbonate, and bismuth subsalicylate; and – Lying down immediately after eating. • Rest and sleep with head higher than stomach. • If nonpharmacologic treatments do not provide relief, low-sodium antacids, cimetidine, or ranitidine may be used, but then only for short course and exactly as directed. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Epigastric pain, headache, blurred vision, nausea or vomiting—which may indicate pre-eclampsia or eclampsia Upper abdominal pain that is usually relieved by food but recurs 2–3 hours later—which may indicate peptic ulcer

COMMON DISCOMFORTS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
WOMAN'S DIGESTION AND ELIMINATION (CONTINUED)			
Nausea or vomiting Most commonly occurs during the 1st trimester, 1st stage of labor, and transition.	• Hormonal changes • Smooth muscle relaxation • Changes in carbohydrate metabolism • Slower emptying of the stomach during labor • Fatigue	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Adjust diet as necessary: – Eat crackers, dry bread, dry tortillas, dry chapattis, or other grain food. – Eat smaller, more frequent meals. – **Avoid** overeating and eating fatty, fried, and spicy foods. – Drink fluids between meals rather than with meals. – Drink herbal, ginger, or cinnamon teas. • Sit upright after meals. • Get plenty of fresh air: take short walks, sleep with window open, etc. • Use acupressure over appropriate point on the palmar side of the wrist. • If severe, take vitamin B6 capsules (one 50-mg capsule 2 times per day). • If nonpharmacologic treatments do not provide relief, the following medications may be used, but then only as directed: – Metoclopramide hydrochloride – Phenothiazines (promethazine hydrochloride, prochlorperazine, chlorpromazine) • **Avoid:** – Lying down immediately after eating. – Odors or other factors likely to induce vomiting. – Brushing the teeth or cleaning the tongue right after meals. • If the pain/discomfort worsens, let the skilled provider know. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Epigastric pain, headache, blurred vision—which may indicate pre-eclampsia or eclampsia Loss of appetite—which may indicate appendicitis Loss of appetite, intolerance to fatty foods—which may indicate gallbladder disease Back pain, dehydration, and poor general condition—which may indicate pancreatitis Excessive vomiting with dehydration and ketosis—which may indicate hyperemesis Fever or chills—which may indicate malaria or urinary tract infection
Salivation, increased Most commonly occurs during the 1st–3rd trimester.	• Unclear cause, but may be related to eating starchy foods	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Limit intake of foods containing starch. **Advise the woman to return for care if:** • Signs/symptoms worsen; OR • Danger signs (**page 4-61**) arise.	

COMMON DISCOMFORTS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
WOMAN'S DIGESTION AND ELIMINATION (CONTINUED)			
Urination, increased— Increase in frequency, especially at night (nocturia); leaking of urine when sneezing, coughing, or laughing Most commonly occurs during the 1st–3rd trimester and 1st–2nd stage of labor.	• Enlarged uterus puts pressure on the bladder. • During the day, the lower legs and feet become swollen; when the woman rests with her feet up, the fluid is reabsorbed and excreted by the kidneys. • Other possible causes/factors include: – Increased volume of fluid in body; – Increased blood flow to kidneys; and – Increased excretion of sodium and water.	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Void when the urge is felt. • Lean forward when voiding to help empty the bladder completely. • Limit intake of fluids containing natural diuretics (e.g., coffee, tea, cola with caffeine) but **do not** restrict fluid intake. • **Do not** decrease fluid intake in the evening to decrease nocturia, except if nocturia is preventing sleep and causing fatigue. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Flank/loin pain, burning on urination—which may indicate urinary tract infection Increased thirst—which may indicate diabetes
WOMAN'S GENITALS			
Perineal pain Most commonly occurs during weeks 1–2 postpartum.	• Tissue trauma from episiotomy/tears or bruising of tissue during birth	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Ensure good perineal hygiene (see **page 2-106**). • Soak area in warm tub or sitz bath in tub or bowl that has been disinfected before use. • Between sitz baths: – Keep the perineum dry if there are sutures or tears. – Use an ice pack or analgesic cream. (Place a piece of gauze or thin cloth between ice and perineum to avoid excessive chilling of the tissues.) • Use analgesics such as paracetamol (acetaminophen) or ibuprofen. • Breastfeed while lying down rather than sitting. • Sit on a cushion with an indentation or hole in the middle of it. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Sloughing, reddened suture line, or pus is seen on the perineal pad or coming from the wound—which may indicate an infection A purple swelling that appears in the vulva or protrudes from the vagina— which may indicate a vulvar hematoma

COMMON DISCOMFORTS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
WOMAN'S GENITALS (CONTINUED)			
Vaginal discharge Most commonly occurs during the 1st–3rd trimester and the 1st–4th stage of labor. (During the postpartum period, see **page 2-91** for information about assessment and care related to normal lochia and vaginal discharge.)	• Increased vascularity of genital tract increases mucus production. • As the cervix starts to thin and dilate before labor or in early labor, a mucous plug may be expelled. • As labor advances, bloody show may appear. • After birth, the lining of the uterus is shed and light bleeding (lochia rubra) occurs.	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Ensure good hygiene: – Keep the vulvar area as clean and dry as possible. – During labor, use a perineal pad/cloth if needed when out of bed. – Change pads/cloths as needed during the postpartum period. • Resume normal activities slowly over several weeks postpartum, or the amount of bleeding may suddenly increase. • **Avoid:** – Nylon underpants and pantyhose (wear cotton underpants and comfortable, loose-fitting clothing); and – Douching. • If the sign/symptom worsens, let the skilled provider know. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Profuse, watery, frothy, foul-smelling, or yellow or greenish discharge; sores, ulcers, or warts on genitals; or any of these signs in the woman's partner(s)—which may indicate sexually transmitted infection Itching, odorous discharge—which may indicate vaginitis A gush or persistent trickle of fluid prior to the onset of labor—which may indicate prelabor rupture of membranes with increased risk of amnionitis
WOMAN'S SKIN			
Itchiness Most commonly occurs during the 1st–3rd trimester.	• Enlarged uterus causes stretching and tightening of skin across the abdomen. • Familial tendency	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Use topical antipruritics and moisturizing cream. • If topical medications do not provide relief, antihistamines (diphenhydramine, doxylamine succinate) may be used, but then only for short course and exactly as directed. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Skin lesions such as papules, macules, or pustules—which may indicate dermatitis Loss of appetite, nausea or vomiting, intolerance to fatty foods—which may indicate gallbladder disease

COMMON DISCOMFORTS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
WOMAN'S SKIN (CONTINUED)			
Perspiration, increased Most commonly occurs during the 2nd–3rd trimester, increasing throughout pregnancy.	• An increase in sweat gland activity, possibly caused by: – Hormonal changes – Increase in thyroid activity – Increase in body weight and metabolic activity	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Wear light, loose-fitting clothing. • Increase intake of fluids (2–3 liters per day) and drink plenty of fluids during labor. • Bathe more frequently or sponge with cool washcloth. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Rapid heart beat, tremor, hyperactivity, weight loss, and/or heat intolerance—which may indicate hyperthyroidism Palpitations, nervousness/trembling, feeling of impending doom, tightness in the chest, dry mouth—which may indicate severe anxiety
Skin changes—Acne; blotchiness or darkening of skin on the face, breasts, and abdomen (chloasma); dryness or red/itchy palms of hands or soles of feet Most commonly occurs during the 1st–3rd trimester.	• Hormonal changes increase blood flow to skin. • Acne may be caused by an increase in oil gland activity. • Chloasma may be caused by an increase in melanin deposition in skin. • Familial tendency	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • To avoid skin darkening, cover skin or use nonallergenic sun-blocking cream when in the sun. • For dryness, use topical antipruritics and moisturizing cream. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Skin lesions such as papules, macules, or pustules—which may indicate dermatitis Generalized rashes associated with fever
Spider nevi—Vascular "spiders" (tiny, red, raised lines that branch out from a flat or slightly raised center), most prominent around eyes, neck, throat, and arms Most commonly occurs during the 1st–2nd trimester, increasing with pregnancy and fading after childbirth.	• Hormonal changes increase blood flow to skin, dilating veins and small arteries.	**Review the anatomic/physiologic basis with the woman and advise her to return for care if:** • Signs/symptoms worsen; OR • Danger signs (**page 4-61**) arise.	

COMMON DISCOMFORTS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
WOMAN'S SKIN (CONTINUED)			
Stretch marks (striae gravidarum)— Reddish or whitish streaks on breasts, abdomen, or upper thighs Most commonly occurs during 2nd–3rd trimester, fading after childbirth (permanent to some degree).	• Hormonal changes • Production of steroid hormones by the adrenal glands • Familial tendency	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Wear well-fitting, supportive garments for the breasts and abdomen. • If itching is severe, use topical emollients or antipruritics. **Advise the woman to return for care if:** • Signs/symptoms worsen; OR • Danger signs (**page 4-61**) arise.	
Varicose veins— Swollen blue veins on the legs or genitals; may be painful Most commonly occurs during the 2nd–3rd trimester and 1st–3rd stage of labor.	• Pressure of enlarged uterus causes venous congestion in lower veins. • Hormonal changes relax smooth muscles and weaken small veins. • Familial tendency	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Use good body mechanics (see guidelines under Back pain [**page 3-18**]): – When sitting, slightly elevate the feet/legs. – When lying down, lie on the left side and slightly elevate the feet/legs. • Get daily exercise. • Wear support hose. • **Avoid:** – Standing or sitting for long periods; – Tight clothing or girdles; and – Crossing the legs when sitting. **During labor/birth, advise the woman and/or birth companion as follows:** • Change positions frequently during labor (see examples under Abdominal [or groin] pain [**page 3-3**]). • Use physiologic pushing (pushing with contractions when she has the urge to push) during 2nd stage of labor to decrease congestion of vulvar varicosities. • If the pain/discomfort worsens, let the skilled provider know. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Localized pain over a vein, swelling of the affected limb—which may indicate superficial thrombophlebitis Calf muscle tenderness, swelling of the affected limb—which may indicate deep vein thrombosis Hematoma of vulvar varicosity—which may indicate rupture of varicosity

COMMON DISCOMFORTS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
WOMAN'S SLEEP AND MENTAL STATE			
Dreams (vivid) or nightmares Most commonly occurs during the 1st–3rd trimester.	• Hormonal changes	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • **Avoid** eating just before bedtime. **Advise the woman to return for care if:** • Signs/symptoms worsen; OR • Danger signs (**page 4-61**) arise.	
Fatigue or sleepiness Most commonly occurs during the 1st trimester and week 1 postpartum. **Normal/normal variation:** May persist if woman is not getting enough sleep	• Decreased metabolism in early pregnancy • Increase in blood volume and flow, which cause heart to work harder • Emotional stress • Normal reaction to the hard work of labor and birth • Enormous amount of energy expended in labor and birth • Emotional and physical stress of having to care for baby in addition to previous responsibilities • Interrupted sleep to feed and care for baby	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Ensure a good diet: – Eat a balanced diet. – Take micronutrient supplements as directed. • Get daily exercise. • Massage the back and/or abdomen. • During the postpartum period, get adequate rest and sleep, taking a nap when the baby sleeps whenever possible. • **Avoid:** – Overexertion; and – Smoking and alcohol. **Suggest that the woman's partner/family:** • Ensure that the woman has time for rest and sleep. • Avoid making unreasonable demands on her. • Share some of the responsibilities of newborn care. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Dizziness or fainting, pallor, breathlessness, rapid heart beat, swelling of limbs—which may indicate severe anemia Change in state of consciousness—which may indicate impending convulsions due to eclampsia or malaria Gas, bloating, loss of appetite, weakness, wasting, poor general condition—which may indicate malnutrition or another chronic condition/illness Insomnia, excessive or inappropriate sadness or guilt, feelings of worthlessness and/or anxiousness lasting for more than 1 week—which may indicate postpartum depression Hallucinations, delusions, morbid or suicidal thoughts—which may indicate postpartum psychosis

COMMON DISCOMFORTS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
WOMAN'S SLEEP AND MENTAL STATE (CONTINUED)			
Feelings of inadequacy, worry, or fear during the postpartum period Most commonly occurs during weeks 1–2 postpartum. **Note:** Especially common among adolescents and primiparas	• Especially common in first pregnancies as the woman confronts the: – Reality of a new and very dependent life in her care – Challenge of learning about child care when she is feeling physically vulnerable	**Review the anatomic/physiologic basis with the woman and reassure her through your words as well as your actions:** • Assure her that she is of inestimable worth in her baby's well-being and that no one else can care for her baby as well as she can. • Point out things she is doing well/right, even if they are small things. • Give her clear and careful advice/counseling on newborn care and self-care. • Allow her to ask questions and discuss her anxieties. Do not overwhelm her with too much information at one time. **Advise the woman and/or her companion as follows:** • Eat a balanced diet and get daily exercise. • Take time for herself and resume social contacts as soon as feasible. • Avoid unrealistic expectations for herself. • Take a nap when the baby sleeps whenever possible. **Suggest that the woman's partner/family:** • Ensure that the woman has time for rest and sleep. • Avoid making unreasonable demands on her. • Allow her time alone with her partner (if culturally appropriate, suggest that the partner take her out). • Be sensitive to the woman's needs. • Care for the woman in an attentive and compassionate way. • Share some of the responsibilities of newborn care. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Crying, feelings of sadness or of being overwhelmed, irritability between 3 and 6 days after birth—which may indicate postpartum sadness ("blues"). Insomnia, excessive or inappropriate sadness or guilt, feelings of worthlessness and/or anxiousness lasting for more than 1 week—which may indicate postpartum depression Hallucinations, delusions, morbid or suicidal thoughts—which may indicate postpartum psychosis

COMMON DISCOMFORTS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
WOMAN'S SLEEP AND MENTAL STATE (CONTINUED)			
Feelings of worry or fear about pregnancy and labor Most commonly occurs during the 1st–3rd trimester and 1st–2nd stage of labor.	• Hormonal changes • Anxiety about labor and birth • Normal reaction to the hard work/pain of labor and birth	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • **Discuss** the normalcy of worry and fear during labor and birth and ways to positively manage emotions; involve partner and family in discussions about normalcy of worry and fear during pregnancy, as appropriate. • **Discuss** ways to positively manage worry and fear. • **Involve** the birth companion, partner, and/or family in helping the woman cope with labor through breathing and relaxation techniques and communication/encouragement. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Perspiration, palpitations, nervousness/trembling, feeling of impending doom, tightness in the chest, dry mouth—which may indicate severe anxiety
Insomnia Most commonly occurs during the 2nd trimester and week 1 postpartum. **Normal/normal variation:** May persist if no relief measures	• Anxiety • Increased REM (rapid eye movement) phase of sleep, which is less restful • Discomfort caused by enlarged uterus and other pregnancy-related changes • Fear of sleeping through newborn's cry or need for her • Discomfort caused by perineal trauma	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Use relaxation techniques before trying to sleep. • When lying down: – Lie on the side with the knees and hips bent; and – Place a pillow between the knees and another pillow under the abdomen. • **Avoid** caffeine, alcohol, and sleep medications, especially long-term use of benzodiazepines. **Suggest that the woman's partner/family:** • Ensure that the woman has time for rest and sleep. • Share some of the responsibilities of newborn care (e.g., the partner can listen for baby during the night). **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Excessive or inappropriate sadness or guilt, feelings of worthlessness and/or anxiousness lasting for more than 1 week—which may indicate postpartum depression Hallucinations, delusions, morbid or suicidal thoughts—which may indicate postpartum psychosis

COMMON DISCOMFORTS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
WOMAN'S SLEEP AND MENTAL STATE (CONTINUED)			
Mood swings—May feel happy/chatty in early labor; may want no one to be near or touch her during transition Most commonly occurs during the 1st trimester and 1st–2nd stage of labor.	• Hormonal changes • Stress, fatigue • Normal reaction to the hard work/pain of labor and birth	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • **Discuss** ways to positively manage mood swings; involve partner and family in discussions about normalcy of mood swings. • **Discuss** the normal mood swings during labor and birth and ways to positively manage emotions. • **Involve** the birth companion, partner, and/or family in helping the woman cope with labor through breathing and relaxation techniques and communication/encouragement. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Mood swings lasting more than 1 week with depression, suicidal thoughts, hyperactivity and/or grandiose ideas—which may indicate bipolar affective disorder Insomnia, excessive or inappropriate sadness or guilt, feelings of worthlessness and/or anxiousness lasting for more than 1 week—which may indicate postpartum depression Hallucinations, delusions, morbid or suicidal thoughts—which may indicate postpartum psychosis

COMMON DISCOMFORTS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
MISCELLANEOUS (WOMAN)			
Back pain Most commonly occurs during the 2nd–3rd trimester, 1st–2nd stage of labor, and week 1 postpartum. **Normal/normal variation:** May persist due to poor body mechanics or poor posture, especially while breastfeeding	• Hormonal changes cause connective tissue to become softer and looser; joints in pelvis relax. • A shift in woman's center of gravity causes compensations in posture and movement. • Muscles along the front of the abdomen separate. • Other possible causes/factors include: – Increase in breast size; – Fatigue; – Poor body mechanics; – Pressure of the fetus's head on the nerves as the head descends during labor; and – Poor posture when breastfeeding baby.	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Reinforce the importance of using good **body mechanics**: – When squatting or rising from squatting position, spread feet apart and place one foot slightly in front of the other, so there is a broad base for balance. – When lifting, squat (keeping the spine erect), rather than bend, so that the legs (thighs) bear the weight and strain. – Do not lift anything heavier than the baby for the first few weeks postpartum. – **Avoid** uncomfortable working heights, lifting heavy loads, and overexertion. – Practice good posture when standing or sitting. – Do not cross legs when sitting. • When lying down: – Lie on the side with the knees and hips bent; – Place a pillow between the knees and another pillow under the abdomen; and – Slightly elevate the feet/legs. • Practice the "angry cat" exercise: get on your hands and knees with back flat, push the lower back up, return to flat back, and repeat. • Wear a well-fitting, supportive bra. • Sleep on a firm mattress or surface. • If the pain becomes bothersome, try any of the following: – Apply an ice pack and/or a warm cloth or heating pad to the painful area. – Gently massage or apply firm pressure over the painful area. • If nonpharmacologic treatments do not provide relief, paracetamol (acetaminophen) 500 mg may be used as needed. **During labor/birth, advise the woman and/or birth companion as follows:** • Assume the hands and knees or knee-chest position to aid in rotation and descent of the fetal head. • If the pain/discomfort worsens, let the skilled provider know. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Uterine contractions that are progressively longer/frequent and cervical dilation—which may indicate labor Flank/loin pain, burning on urination—which may indicate urinary tract infection Numbness, muscular weakness or wasting, difficulty urinating or defecating—which may indicate neurologic disease Lower abdominal tenderness, uterine tenderness, abdominal distention—which may indicate uterine infection

COMMON DISCOMFORTS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
MISCELLANEOUS (WOMAN) (CONTINUED)			
Bleeding or painful gums Typically most severe during the 2nd trimester.	• Hormonal changes cause an increase in blood flow to the mouth, which results in: – Increase in growth of small blood vessels and swelling of gums; – Rapid turnover of cells that line gums; – Decrease in thickness of gum tissue, making it more fragile; and – Edema in connective tissues.	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Rinse mouth with warm salt water. • Practice good dental hygiene. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Localized swelling of the gums that may or may not bleed—which may indicate gingivitis
Difficulty getting up and down Most commonly occurs during the 2nd–3rd trimester.	• Hormonal changes cause connective tissue to become softer and looser; joints in pelvis relax. • Other possible causes/factors include: – Changes in posture due to enlarged uterus; and – Fatigue.	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • When getting up from a lying position: – Roll to one side; – Push up on the knees; and – Then stand up. • When sitting, prop a pillow against the back and place a pillow under the knees; or elevate the feet. • When lying down: – Prop a pillow against the back and place a pillow under the knees; OR – Lie on the left side with the knees and hips bent, and place a pillow between the knees and another pillow under the abdomen; and – Slightly elevate the feet/legs. • **Avoid** lying flat on the back. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Numbness, muscular weakness or wasting, difficulty urinating or defecating—which may indicate neurologic disease Severe lower back pain that radiates into the legs

COMMON DISCOMFORTS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
MISCELLANEOUS (WOMAN) (CONTINUED)			
Dizziness or fainting Most commonly occurs during the 1st–3rd trimester.	• Drop in blood pressure caused by changes in position • Blood pools in vessels in lower legs and feet • Other possible causes/factors include: – Stress; – Fatigue; – Hunger; and – Hyperventilation.	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Get up slowly from a sitting or lying position. • When lying down, lie on the left side. • Eat smaller, more frequent meals. • **Avoid** standing in warm or stuffy places for long periods. • **Avoid** lying flat on the back. • **Avoid** hyperventilation by placing hands in front of the mouth and breathing into them or by breathing into a small paper or plastic sack. • If the discomfort worsens, let the skilled provider know. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Fatigue or sleepiness, pallor, breathlessness, rapid heart beat, swelling of limbs—which may indicate severe anemia Shoulder pain—which may indicate ectopic pregnancy (**Note:** This is an unlikely diagnosis after the early 2nd trimester.)
Feeling hot Most commonly occurs during the 1st–3rd stage of labor.	• Muscular activity of labor causes sensation of heat.	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Use cool drinks, cool compresses, and gentle fanning. **Advise the woman to return for care if:** • Signs/symptoms worsen; OR • Danger signs (**page 4-61**) arise.	
Hair loss Most commonly occurs during the 3rd trimester and is more likely during the postpartum period.	• Hormonal changes alter normal hair-growth process.	**Review the anatomic/physiologic basis with the woman and advise her to return for care** if danger signs (**page 4-61**) arise.	

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
MISCELLANEOUS (WOMAN) (CONTINUED)			
Headache Most commonly occurs during the 1st–3rd trimester, 1st–3rd stage of labor, and days 1–2 postpartum.	• Hormonal changes may cause: – Nasal congestion; – Mild increase in oxygen levels; and – Swelling of eyeball, which can result in eyestrain. • Other possible causes/factors include: – Muscle spasms; – Emotional stress; – Fatigue; – Low blood sugar; – Dehydration; – Poor posture while holding and breastfeeding baby; and – Inability to rest, relax, or sleep during labor. • Dehydration immediately after birth due to: – Fluid lost during labor/childbirth – Increased urination postpartum to rid body of fluid accumulated during pregnancy	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Eat a balanced diet (including adequate fluid intake) and get adequate rest. • Apply heat or ice to the neck, or take warm baths. • Massage the neck and shoulder muscles. • If nonpharmacologic treatments do not provide relief, paracetamol (acetaminophen) 500 mg may be used as needed. • **Avoid** aspirin, ibuprofen, narcotics, sedatives, or hypnotics. **During labor/birth, advise the woman and/or birth companion as follows:** • Rest as much as possible in early labor and between contractions. • Drink plenty of fluids and eat small meals during labor. • If the pain/discomfort worsens, let the skilled provider know. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Pain with blurred vision, nausea or vomiting, epigastric pain—which may indicate pre-eclampsia or eclampsia Unilateral pain with nausea, vomiting, or visual disturbances—which may indicate migraine Pain over the sinuses with purulent nasal discharge, nasal stuffiness or bleeding—which may indicate acute sinusitis
Heart palpitations—Fluttering or pounding sensation around the heart, as though it has skipped a beat Most commonly occurs during the 1st trimester.	• Increase in blood flow to and from heart during pregnancy • Anxiety about possible heart disease (because of symptoms)	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Shortness of breath that worsens on exertion, chest pain—which may indicate heart disease Perspiration, nervousness/trembling, feeling of impending doom, tightness in chest, dry mouth—which may indicate severe anxiety

COMMON DISCOMFORTS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
MISCELLANEOUS (WOMAN) (CONTINUED)			
Hemorrhoids—Swollen veins in and around the rectum, associated with pain, itching, and bleeding Most commonly occurs during the 2nd–3rd trimester, 1st–3rd stage of labor, and week 1 postpartum.	• Hormonal changes cause enlargement and congestion of rectal veins. • Enlarged uterus puts pressure on rectal veins. • Constipation • Venous congestion occurs with fetal descent and pushing during labor, causing or aggravating existing hemorrhoids. • Extreme pressure exerted on rectal veins during pushing in labor	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Ensure a good diet: – Eat a balanced diet (including adequate fluid intake). – Increase intake of high-fiber foods (e.g., fresh fruits and vegetables). • Soak affected area in a warm tub or sitz bath. • If the hemorrhoid is protruding, apply ice packs to the area and gently reinsert the hemorrhoid into the rectum. • Use topical anesthetic ointments, if necessary. • **Avoid:** – Becoming constipated (see Bowel function changes—constipation or diarrhea [**page 3-6**]); – Straining during bowel movements; and – Sitting for long periods, especially on hard surfaces. **During labor/birth, advise the woman and/or birth companion as follows:** • Use positions that take pressure off the perineum and anus (e.g., hands and knees). • Use physiologic pushing (pushing with contractions when she has the urge to push) during the 2nd stage of labor. • If the pain/discomfort worsens, let the skilled provider know. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Constipation with anal pain, bleeding on defecation—which may indicate an anal fissure
Hip pain—Usually on one side only Most commonly occurs during the 3rd trimester.	• Hormonal changes cause connective tissue to become softer and looser; joints in pelvis relax. • Change in posture due to enlarged uterus	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Practice exercises to strengthen the back and abdomen, such as: – Raising legs from a lying-down position – Abdominal strengthening exercises – The “angry cat” exercise (see guidelines under Back pain [**page 3-18**]) • If the pain becomes bothersome, apply a warm cloth or heating pad. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Numbness, muscular weakness or wasting, difficulty urinating or defecating—which may indicate neurologic disease Severe waddling, hip/pelvis instability—which may indicate separation of the symphysis pubis (spontaneous symphysiotomy) or of one of the sacroiliac joints during labor

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
MISCELLANEOUS (WOMAN) (CONTINUED)			
Hyperventilation or shortness of breath Most commonly occurs during the 3rd trimester and 1st–2nd stage of labor.	• Hormonal changes cause lower levels of carbon dioxide and higher levels of oxygen; hyperventilation helps maintain normal levels. • Enlarged uterus pushes diaphragm out of place, decreasing lung capacity and causing shortness of breath. • Rapid, shallow breathing during contractions	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Use good body mechanics (see guidelines under Back pain [**page 3-18**]). • When lying down: – Lie on the left side with the knees and hips bent; and – Place a pillow between the knees and another pillow under the abdomen. • **Avoid** hyperventilation by placing hands in front of the mouth and breathing into them or by breathing into a small paper or plastic sack. • If the pain/discomfort worsens, let the skilled provider know. **During labor/birth, advise the woman and/or birth companion as follows:** • Try to use slow, regular breathing during contractions. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Cough, production of sputum, wheezing—which may indicate a respiratory disorder (e.g., infection, asthma) Shortness of breath that worsens on exertion, chest pain, heart palpitations—which may indicate heart disease Dizziness or fainting, fatigue or sleepiness, pallor, rapid heart beat, swelling of limbs—which may indicate severe anemia Rapid heart beat; cough, production of pink, frothy sputum—which may indicate pulmonary edema
Nasal stuffiness or nasal bleeding Most commonly occurs during the 2nd–3rd trimester and 1st–3rd stage of labor.	• Hormonal changes cause: – Increase in blood flow to the capillaries; and – Dilation of veins. • Increased blood flow to mucous membranes, causing increased mucus production • Nasal bleeding may result from local trauma (e.g., nose picking) or nasal polyps.	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • To stop a nosebleed: – Sit up (do not lie down or tilt head back); – Gently pinch nostrils shut for a few minutes and then release; and – Repeat several times until bleeding stops. • For stuffiness, use normal saline drops. • If topical medications do not provide relief, antihistamines (diphenhydramine, doxylamine succinate) may be used, but then only for short course and exactly as directed. • **Avoid** systemic decongestants and combination drugs. • If the pain/discomfort worsens, let the skilled provider know. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Pain over the sinuses with purulent nasal discharge, headache—which may indicate acute sinusitis Stuffiness with headaches, watering eyes—which may indicate allergies

COMMON DISCOMFORTS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SIGN/SYMPTOM	ANATOMIC/PHYSIOLOGIC BASIS	PREVENTION AND RELIEF MEASURES—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
MISCELLANEOUS (WOMAN) (CONTINUED)			
Numbness/ tingling of fingers and toes—May also occur in buttocks, hips, and thighs Most commonly occurs during the 2nd–3rd trimester, increasing throughout pregnancy, and the 1st–2nd stages of labor.	• Shift in woman's center of gravity causes compensations in posture, putting pressure on spinal nerves. • Other possible causes/factors include: – Swelling/edema compresses surrounding nerves; and – Hyperventilation during contractions.	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Use good body mechanics (see guidelines under Back pain [**page 3-18**]). • When numbness/tingling becomes bothersome, try the following: – Lying down (on the unaffected side); and – Soaking in a warm tub. • If the pain/discomfort worsens, let the skilled provider know. **During labor/birth, advise the woman and/or birth companion as follows:** • Use slow, regular breathing during contractions. • **Avoid** hyperventilation by placing hands in front of the mouth and breathing into them or by breathing into small paper or plastic sack. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Numbness and pain in fingers—which may indicate carpal tunnel syndrome Muscular weakness or wasting, difficulty urinating or defecating—which may indicate neurologic disease Footdrop persisting after labor—which may indicate nerve damage
Shivering/quivering Most commonly occurs during the 4th stage of labor.	• Cessation of intense muscular activity and decrease in caloric consumption	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Reassure that this is a normal response after labor and birth. • Provide blankets/coverings, and eliminate drafts. **Advise the woman to return for care if:** • Signs/symptoms worsen; OR • Danger signs (**page 4-61**) arise.	Fever—which may indicate malaria or another infection
Walking awkwardly (waddling) or clumsiness Most commonly occurs during the 2nd–3rd trimester and 1st stage of labor.	• Hormonal changes cause connective tissue to become softer and looser; joints in pelvis relax. • Enlarged uterus tilts pelvis forward, shifting the woman's center of gravity. • Decreased tone of abdominal muscles	**Review the anatomic/physiologic basis with the woman and advise her and/or companion as follows:** • Use good body mechanics (see guidelines under Back pain [**page 3-18**]). • Wear supportive shoes with flat heels. **Advise the woman to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Numbness, muscular weakness or wasting, difficulty urinating or defecating—which may indicate neurologic disease Severe waddling, hip/pelvis instability—which may indicate separation of the symphysis pubis (spontaneous symphysiotomy) or of one of the sacroiliac joints during labor

COMMON CONCERNS DURING THE NEWBORN PERIOD

SIGN OR FINDING	ANATOMIC/PHYSIOLOGIC BASIS	COUNSELING POINTS—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
NEWBORN'S CHEST, ABDOMEN, CORD STUMP, AND EXTERNAL GENITALIA			
Mucoid or bloody vaginal discharge Onset most commonly in first week of life.	• Caused by baby's exposure to the woman's hormones during pregnancy	**Review the anatomic/physiologic basis with the woman and advise her and/or the family as follows:** • Vaginal discharge should disappear within 7 days after birth. • No special care is needed. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	
Swollen breasts Onset most commonly in first week of life. **Normal/normal variation:** May produce a tiny quantity of milk	• Caused by baby's exposure to the woman's hormones during pregnancy	**Review the anatomic/physiologic basis with the woman and advise her and/or the family as follows:** • The breasts may stay swollen for up to 6 months. • No special care is needed. • Never squeeze or manipulate the breasts. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Redness, streaking, tenderness—which may indicate infection
Swollen labia Noted most commonly at birth.	• Caused by baby's exposure to the woman's hormones during pregnancy	**Review the anatomic/physiologic basis with the woman and advise her and/or the family as follows:** • The swollen labia should return to normal within 2–4 weeks after birth. • No special care is needed. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; OR • Danger signs (**page 4-61**) arise.	

COMMON CONCERNS DURING THE NEWBORN PERIOD *(CONTINUED)*

SIGN OR FINDING	ANATOMIC/PHYSIOLOGIC BASIS	COUNSELING POINTS—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
NEWBORN'S CHEST, ABDOMEN, CORD STUMP, AND EXTERNAL GENITALIA (CONTINUED)			
Swollen scrotal sac—Edema or hydrocele Noted most commonly at birth. **Normal/normal variation:** Swelling from a hydrocele may increase when the baby is upright or cries, and decrease when the baby lies down and is at rest.	• Edema of the scrotal sac may be caused by pressure during labor and birth, especially if breech. • Hydrocele is caused by fluid leaking into the scrotal sac from the peritoneal cavity when a small hole connecting the peritoneal cavity and scrotum has not yet closed.	**Review the anatomic/physiologic basis with the woman and advise her and/or the family as follows:** • Edema of the scrotal sac will disappear within 7 days after birth. • Hydrocele will disappear within 6–12 months. • No special care is needed for either condition. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	A lump in the groin when the baby cries, persistent swelling extending from the groin to the scrotum—which may indicate inguinal hernia
Tight foreskin Noted most commonly at birth. **Note:** Most males are born with foreskins that cannot be retracted to view the head of the penis.	• Cause unknown	**Advise the woman and family as follows:** • Tight foreskin will usually resolve by 1 year of age. • No special care is needed. • Do not retract the foreskin. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Swelling of the penis, inability to pass urine—which may indicate infection or anatomic abnormality
Umbilical hernia—Protrusion at base of umbilicus that is covered by skin Noted most commonly at birth. **Normal/normal variation:** May be more pronounced when the baby cries	• Caused by fluid from the abdomen or by a loop of bowel that emerges through the muscles of the abdomen	**Review the anatomic/physiologic basis with the woman and advise her and/or the family as follows:** • The umbilical hernia usually disappears by 1 year of age. • No special care is needed. • Do not bind the baby's abdomen to "flatten" the bulge. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Persistent vomiting, abnormal bowel movements—which may indicate bowel obstruction

COMMON CONCERNS DURING THE NEWBORN PERIOD *(CONTINUED)*

SIGN OR FINDING	ANATOMIC/PHYSIOLOGIC BASIS	COUNSELING POINTS— PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
NEWBORN'S HEAD, FACE, MOUTH, AND EYES			
Caput succedaneum—Edematous swelling over the part of the head that came first through the birth canal Onset most commonly at birth.	• Caused by pressure on the head during birth	**Review the anatomic/physiologic basis with the woman and advise her and/or the family as follows:** • Caput usually disappears within 2–3 days after birth. • No special care is needed. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Failure of the head to regain normal shape within 72 hours—which may indicate brain or skull malformation Large head with wide sutures—which may indicate hydrocephalus Swelling under the entire scalp (not limited by suture lines) that may feel spongy and baby cries when touched; and increase in circumference of head after birth—which may indicate subgaleal hemorrhage
Cephalohematoma—Swelling on the head that does not cross suture lines and feels firm to the touch; usually only on one side of the head Onset most commonly at birth or within first 24 hours after birth.	• Caused by bleeding between the outer surface of the skull bones and the scalp due to pressure on the head during birth	**Review the anatomic/physiologic basis with the woman and advise her and/or the family as follows:** • The size of the cephalohematoma may increase slightly 3–5 days after birth, or it may remain stable. • It may take up to 12 weeks to disappear completely. • No special care is needed. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Failure of the head to regain normal shape by 12 weeks—which may indicate brain or skull malformation Swelling under the entire scalp (not limited by suture lines) that may feel spongy and baby cries when touched; and increase in circumference of head after birth—which may indicate subgaleal hemorrhage Blueness of mouth, tongue, and/or limbs—which may indicate cyanosis Yellowness of skin –which may indicate jaundice
Epithelial "pearls"—Tiny white cysts on gums or roof of mouth Noted most commonly at birth.	• Cause unknown	**Advise the woman and family as follows:** • The cysts should disappear within 1–2 months. • No special care is needed. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Thick white areas in mouth—which may indicate fungal infection (thrush)

COMMON CONCERNS DURING THE NEWBORN PERIOD *(CONTINUED)*

SIGN OR FINDING	ANATOMIC/PHYSIOLOGIC BASIS	COUNSELING POINTS—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
NEWBORN'S HEAD, FACE, MOUTH, AND EYES (CONTINUED)			
Molding or chignon—Misshapen head, artificial caput from vacuum extractor cup Onset most commonly at birth.	• Caused by the bones of the skull adapting to the pelvis during labor and birth	**Review the anatomic/physiologic basis with the woman and advise her and/or the family as follows:** • Molding or chignon should disappear within 2–3 days after birth. • No special care is needed. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Failure of the head to regain normal shape within 72 hours—which may indicate brain or skull malformation Large head with wide sutures—which may indicate hydrocephalus Very small head—which may indicate brain malformation Swelling under the entire scalp (not limited by suture lines) that may feel spongy and baby cries when touched; and increase in circumference of head after birth—which may indicate subgaleal hemorrhage
Subconjunctival hemorrhage—Bright red spot on sclera Onset most commonly at birth.	• Caused by bleeding from capillaries in sclera due to pressure on the head and eyes during labor and birth	**Review the anatomic/physiologic basis with the woman and advise her and/or the family as follows:** • Subconjunctival hemorrhage should disappear within 2–3 weeks. • No special care is needed. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Redness does not disappear by 3 weeks of age—which may indicate trauma or another abnormal condition (e.g., infection, hemorrhagic conjunctivitis, congenital anomaly)
Swollen or red eyelids Onset most commonly at birth.	• Caused by pressure on the face and eyes during labor and birth • May also be due to temporary local irritation from antibiotic drops or ointments	**Review the anatomic/physiologic basis with the woman and advise her and/or the family as follows:** • Swelling and irritation should disappear within 48 hours. • Cleanse eyes with sterile saline or boiled, cooled water 4 times daily until redness/swelling disappears. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Swelling/irritation does not improve, pus or watery discharge appears—which may indicate infection

COMMON CONCERNS DURING THE NEWBORN PERIOD *(CONTINUED)*

SIGN OR FINDING	ANATOMIC/PHYSIOLOGIC BASIS	COUNSELING POINTS—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
NEWBORN'S HEAD, FACE, MOUTH, AND EYES (CONTINUED)			
Tongue tie—Band of tissue between the underside of the tongue and floor of mouth seems short and tight. Noted most commonly at birth.	• Cause unknown	**Advise the woman and family as follows:** • The band will loosen and stretch as the baby grows. • The band should never be "clipped." • No special care is needed. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; OR • Danger signs (**page 4-61**) arise.	
NEWBORN'S SKIN			
Acne—Pinpoint red bumps on face, back, and/or chest Onset most commonly by 2 weeks of age.	• Caused by baby's exposure to the mother's hormones during pregnancy	**Review the anatomic/physiologic basis with the woman and advise her and/or the family as follows:** • Acne should last only a few weeks but may not disappear until 6 months of age. • No special care is needed. • Do not use special soaps or apply creams or ointments; these will not help and may make the acne worse. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Pustules or blisters with clear fluid—which may indicate skin infection

COMMON CONCERNS DURING THE NEWBORN PERIOD *(CONTINUED)*

SIGN OR FINDING	ANATOMIC/PHYSIOLOGIC BASIS	COUNSELING POINTS— PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
NEWBORN'S SKIN (CONTINUED)			
Diaper/napkin rash—Diffuse redness/ irritation of groin area Onset most commonly in first weeks of life.	• Usually caused by prolonged exposure to wet and dirty diapers/napkins	**Review the anatomic/physiologic basis with the woman and advise her and/or the family as follows:** • Diaper/napkin rash will resolve either when the baby stops wearing diapers/napkins or when the diaper/napkin is changed more often or is left open so the area can dry. • Cleanse and dry the groin area thoroughly each time the diaper/napkin is changed. • Change the diaper/napkin more frequently. • Leave the diaper/napkin area exposed to air if environment is warm enough. • If diapers/napkins/cloths are reusable, rinse them thoroughly after washing to avoid irritation from soaps. • Do not use special soaps or apply creams or ointments; these will not help and may make the rash worse. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	White patches in diaper/napkin area—which may indicate fungal infection (thrush) Generalized edema (body swelling), blistering skin rash on palms and soles, profuse runny nose ("snuffles"), abdominal distention (from enlarged liver and/or spleen, or from fluid in the abdomen)—which may indicate congenital syphilis
Erythema toxicum—Patchy red rash, with tiny white area in middle, all over body except palms and soles Onset most commonly at 2–3 days of age.	• Cause unknown	**Advise the woman and family as follows:** • Erythema toxicum usually disappears spontaneously in the first 2–4 weeks of life. • No special care is needed. • Do not use special soaps or apply creams or ointments; these will not help and may make the rash worse. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Pustules or blisters with clear fluid—which may indicate skin infection

COMMON CONCERNS DURING THE NEWBORN PERIOD *(CONTINUED)*

SIGN OR FINDING	ANATOMIC/PHYSIOLOGIC BASIS	COUNSELING POINTS— PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
NEWBORN'S SKIN (CONTINUED)			
Milia—Tiny white bumps ("whiteheads") on nose, cheeks, forehead, and/or chin Onset most commonly in first weeks of life.	• Caused by blockage of the oil glands	**Review the anatomic/physiologic basis with the woman and advise her and/or the family as follows:** • Milia should disappear within 1–2 months of age. • No special care is needed. • Do not use special soaps or apply creams or ointments; these will not help and may make the milia worse. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Pustules or blisters with clear fluid—which may indicate skin infection
Mongolian spots—Purplish-gray, flat marks on lower back/buttock area Noted most commonly at birth. **Note:** More common in Asian, Hispanic, and African babies	• Cause unknown	**Advise the woman and family as follows:** • Mongolian spots may fade away by 2–3 years of age. • No special care is needed. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; OR • Danger signs (**page 4-61**) arise.	
Port wine stains—Red or purple flat marks on the face or neck Noted most commonly at birth.	• Cause unknown	**Advise the woman and family as follows:** • Port wine stains will not disappear spontaneously. • No special care is needed. • Treatment can be initiated when the child is older. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; OR • Danger signs (**page 4-61**) arise.	

COMMON CONCERNS DURING THE NEWBORN PERIOD *(CONTINUED)*

SIGN OR FINDING	ANATOMIC/PHYSIOLOGIC BASIS	COUNSELING POINTS—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
NEWBORN'S SKIN (CONTINUED)			
"Stork bites"—Pink/light red marks on the nose, eyelids, or back of neck Noted most commonly at birth.	• Cause unknown	**Advise the woman and family as follows:** • "Stork bites" usually disappear by 1–2 years of age. • No special care is needed. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; OR • Danger signs (**page 4-61**) arise.	
MISCELLANEOUS (NEWBORN)			
Crying, increased Most commonly occurs in first weeks of life. **Normal/normal variation:** Often occurs for a few hours around the same time every day.	• May be caused by hunger, fatigue, or colic (a common intestinal condition)	**Review the anatomic/physiologic basis with the woman and advise her and/or the family as follows:** • Increased crying usually disappears by 2–3 months of age. • Try to find the cause of the crying: feed and burp the baby; change wet diapers/napkins; make sure there are no pins that could be sticking the baby. • Soothe the baby by holding/cuddling, wrapping in blankets, rocking, talking gently, and bathing. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Inconsolable crying and/or feeding difficulties, fever, change in bowel movements—which may indicate infection or acute conditions such as bowel obstruction High-pitched, persistent crying—which may indicate brain trauma/damage
Irregular breathing—Respirations between 20 and 60 breaths per minute with occasional pauses lasting less than 6 seconds Most commonly occurs in first weeks of life.	• Due to the immaturity of baby's central nervous system	**Advise the woman and family as follows:** • The irregular breathing should improve in the first month as the baby matures. • No special care is needed. **Advise the woman and family to return for care if:** • Signs worsen; OR • Danger signs (**page 4-61**) arise.	

SIGN OR FINDING	ANATOMIC/PHYSIOLOGIC BASIS	COUNSELING POINTS—PROVIDE REASSURANCE AND:	ALERT SIGNS THAT MAY INDICATE A PROBLEM
MISCELLANEOUS (NEWBORN) (CONTINUED)			
Startle reflex—Rapid, symmetrical "stiffening" of the body in response to sudden noise or touch Noted most commonly at birth. **Normal/normal variation:** The arms curve outward then return towards the body in one smooth movement.		**Advise the woman and family as follows:** • The startle reflex is a normal reflex in mature newborn babies and does not indicate danger of convulsions or other brain problems. • This reflex will disappear by 2–4 months of age. • No special care is needed. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Continuous jitteriness (symmetrical rapid movements and rapid, isolated jerking of the limbs)—which may indicate low blood glucose or sepsis Asymmetrical movements of arms and/or legs—which may indicate birth injury
Vomiting Most commonly occurs in first week of life. **Normal/normal variation:** Occurs after some or all feedings and/or during burping when a small amount of milk comes back up.		**Advise the woman and family as follows:** • Continue to feed the baby on demand. If the woman is feeding the baby using a cup or cup and spoon, be sure that she is not overfeeding the baby. Encourage more frequent, small feeds. • Encourage the woman to hold or lay the baby with the head higher than the stomach immediately after feedings. • When the baby finishes one breast, gently sit her/him up to burp to rid the stomach of excess air before offering the second breast. • Handle the baby gently after feedings. **Advise the woman and family to return for care if:** • Signs/symptoms worsen; • Danger signs (**page 4-61**) arise; OR • Key alert signs (next column) arise.	Feeding difficulties, forceful vomiting—which may indicate gastric irritation or gastrointestinal malformation or obstruction Lack of weight gain, feeding difficulties, fever, changes in bowel movements—which may indicate infection and/or intestinal problems Blood or bile in vomit—which may indicate necrotizing enterocolitis or gastrointestinal malformation or obstruction Persistent vomiting—which is a danger sign requiring referral/transfer

CHAPTER TEN

SPECIAL NEEDS

OVERVIEW

This chapter contains guidance on how to respond to special needs (as described on **page 1-30**) that a skilled provider may identify when caring for women and their newborn babies during pregnancy, labor and childbirth (see **Note**, below), and the postpartum/newborn period. Women and babies with special needs require care in addition to the core components of basic care (as shown in **Chapters 4–8**). General guidelines for providing this additional care are presented below. (For an index of maternal special needs, see **Textbox 3-3** [**page 3-36**]; for an index of newborn special needs, see **Textbox 3-4** [**page 3-36**].)

Note: An important goal in caring for the woman with special needs during **labor and childbirth** is to determine whether her needs require additional care during labor and birth or are more appropriately addressed during the postpartum period. It is the childbirth care skilled provider's responsibility to ensure that all relevant information is made available to the skilled provider(s) giving care after the immediate postpartum period through the time of discharge. This may include:

- Providing all information related to special needs identified
- Making special recommendations about the woman's care during the early postpartum period, for example, regarding complication readiness or referral to a specialist, higher level of care, or supportive services
- Facilitating linkage during the postpartum period to appropriate local sources of support (women's advocacy groups, public health agencies, peer support groups, community service organizations)

During Assessment

Consider the relevant information in the following table (based on presenting special need, first column) to confirm that the woman or newborn does not have a condition beyond the scope of basic care and to assess the exact nature (related factors, severity, etc.) of the need(s). This assessment may include:

- Focusing on various elements of basic assessment, as described in **Chapters 4–8**; and
- Conducting additional assessments (e.g., additional questions, tests).

During Care Provision

Once you have completed the additional assessment and confirmed that the woman's pregnancy, labor and birth, or postpartum period is progressing normally or that the newborn does not have a life-threatening condition and that basic care can adequately address the special need(s)—

- Talk to the woman about how addressing her special need(s) can improve the outcome of her pregnancy, labor and birth, or postpartum period, as well as her overall health;
- Talk to the woman, partner, and/or other caregiver about how addressing the newborn's special need(s) can protect or improve her/his overall health; and
- Consider the relevant information (based on presenting special need) in this chapter when planning and implementing the woman's or newborn's plan of care, which may include one or many of the following interventions:
  - Reinforcing various elements of basic care provision, as described in **Chapter 4** (**page 2-1**)
  - Adding special health messages and counseling and other elements of care provision
  - Making special recommendations regarding birth preparedness and complication readiness (e.g., a particular healthcare facility as the place of birth)

- Scheduling additional antenatal care or postpartum care visits to monitor the woman more closely, or additional newborn care visits to monitor the baby more closely
- Providing treatment (e.g., drugs/medications) to cure, alleviate, or manage the condition
- Advising any other providers involved in the woman's or newborn's care about problems identified, as well as appropriate action to take to address these problems
- Ensuring that any other providers involved in the woman's or newborn's care are given all information relevant to the health and survival of the woman or newborn
- Linking the woman to appropriate local sources of support (women's advocacy groups, public health agencies, peer support groups, community service organizations)

Note: A woman who is pregnant, in labor, or in the postpartum period or a newborn who presents with any of the special needs described in this chapter may also present with **abnormal signs/symptoms** that indicate a condition whose diagnosis or treatment lies beyond the scope of basic care. Or, the woman's or baby's needs may be so complex that basic services cannot adequately address them. In either case, the skilled provider should facilitate appropriate care and/or referral/transfer to a specialist, higher level of care, or supportive services.

Textbox 3-3. Index of Special Needs during Pregnancy, Labor and Birth, and the Postpartum Period

Textbox 3-4. Index of Special Needs during the Newborn Period

SPECIAL NEEDS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Adolescence (19 years of age and under) (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) **Note:** While assessing and caring for the adolescent woman, focus on the interpersonal skills outlined in **Textbox 3-5** (**page 3-38**). **General considerations:** Important goals in providing care to the adolescent woman are to: • Provide her with the information she needs to meet immediate challenges; for example, she may not have cared for a newborn before and may lack basic parenting skills. • Identify and help her overcome obstacles in her own life; for example, she may need extra assistance in obtaining necessary resources (e.g., funding, transportation, social support) to put her birth preparedness/complication readiness plan into action. • Help her recognize her right to high-quality care; for example, be sure that she feels welcome, knows what services are available, and understands how to access these services.	Perform basic assessment, as shown in **Section 2**, with the following additions and/or emphases. • Determine the circumstances surrounding the pregnancy, which may be the result of an abusive or unsafe relationship (e.g., unprotected sex or multiple partners; incest, sexual abuse, rape, or forced sex; sexual exploitation, prostitution, or forced marriage). ➡ **If the pregnancy is the result of any form of sexual abuse**, see Violence against Women (**page 3-81**) for additional information about assessment and care provision. • Focus on identifying barriers to care, as well as harmful behaviors and practices. • **During pregnancy:** – Confirm pregnancy, if needed, through physical examination or testing. – An adolescent who presents with signs/symptoms of pregnancy may not know that she is pregnant. – An adolescent may become pregnant before menstruation starts or her menstrual periods become regular. – Determine whether she feels worried or afraid about pregnancy or labor. ➡ **If YES**, see Feelings of Worry or Fear about Pregnancy and Labor (**page 3-16**) for additional information about assessment and care provision. • **During labor and birth:** Determine whether she received adequate antenatal care. • **During the postpartum period:** – Determine whether she received adequate antenatal or childbirth care. – Determine whether she feels insecure in terms of her ability to care for her newborn. ➡ **If YES**, see Feelings of Inadequacy, Worry, or Fear during the Postpartum Period (**page 3-15**) for additional information about assessment and care provision.	If the woman is in good health and her pregnancy, labor, or postpartum period is progressing normally, provide basic care as shown in **Section 2**, with the following additions and/or emphases. • Help her identify her "personal support system" (**Textbox 3-6, page 3-38**). • Provide appropriate nutritional support (**Textbox 3-7, page 3-39**). • Assist in development of the birth preparedness and complication readiness plan, ensuring that she: – Understands and participates in formulating the plan. – Is supported in securing the resources she needs to put her birth preparedness/ complication readiness plan into action. • Provide health messages and counseling with appropriate emphases (**Textbox 3-8, page 3-39**). • Facilitate linkage to appropriate local sources of support (**Textbox 3-9, page 3-40**) with the following additions, as appropriate: – Other young mothers, who can demonstrate the basics of newborn care (bathing, feeding, dressing) and other parenting skills to a first-time mother – School or vocational centers (for continuing her education)

Textbox 3-5. Interpersonal Skills to Focus on with the Adolescent Woman

When providing basic care to the adolescent woman:

- Use a kind, direct, honest, and matter-of-fact approach to communication. Adolescents' discomfort or shyness in talking to adults (especially embarrassment about sexual issues and their own body) requires such an approach.
- Ensure that she is heard/listened to by all in attendance.
- Avoid treating her as a child. Treat her with respect, foster her self-esteem, and build trust so that she can feel safe in addressing any issue during the birth process.
- Ensure complete confidentiality and privacy during her visits.
- Answer any questions she has, and encourage her to ask questions.
- Encourage her to bring a companion of choice to each visit.
- Involve family decision makers and other influential people as much as possible (with her permission/consent) when planning and implementing her care or if complications arise.
- Respect her right to make decisions about her care and her own life and the life of her newborn. Allow her the time she needs to make important decisions. If complications arise, ensure that she understands the situation and allow her the time she needs to make important decisions.
- If a pelvic examination is necessary, keep in mind that this may be the woman's first gynecologic examination and she may be very anxious about it. It is especially important, therefore, to explain to her what to expect, obtain her permission/consent, listen to her concerns, and answer her questions before proceeding.
- The adolescent woman may be very anxious about being examined. It is especially important, therefore, to explain to her what to expect, obtain her permission/consent, listen to her concerns, and answer her questions before proceeding.
- If she needs information about the process of pregnancy or labor and birth, explain these topics to her in language that she understands and in a way that is not overwhelming to her.

For more information on **Interpersonal Skills**, see **page 1-42**.

Textbox 3-6. Assisting the Adolescent Woman in Identifying Her Support System

The woman's support system should include people with whom she has positive relationships who can:

- Accompany her to basic care visits;
- Encourage her during the birth process;
- Assist her in planning for the birth and securing resources, such as reliable transportation and adequate funds for possible complications;
- Support her in adhering to the plan of care, especially during the postpartum/newborn period; and
- Assist her in caring for herself and her newborn.

Textbox 3-7. Nutritional Support for the Adolescent Woman

The adolescent woman may still be growing and developing, possibly intensifying her nutritional needs. The following measures, in addition to those covered in **Section 2**, can help address these needs:

- Involve family decision makers and other influential people as much as possible (with her permission/consent) in ensuring that the physical demands of the woman's daily life are balanced with her dietary intake; that is, that she:
  - Has access to food when she is hungry,
  - Can avoid heavy physical labor, and
  - Is able to get adequate rest.
- Counsel the woman to:
  - Eat and drink more frequently (extra servings and snacks), especially if she is very young. The younger the adolescent, the greater the nutritional requirements for her own growth. Remember, her own development is competing with that of the fetus or production of breastmilk for nutrients.
  - Avoid skipping meals. The adolescent may be especially concerned about her body image and therefore tempted to reduce her dietary intake to avoid gaining weight during pregnancy or to quickly lose pregnancy weight. Reassure her that she will be able to lose the weight after pregnancy, and emphasize the importance of adequate nutrition to her baby and herself, especially when breastfeeding.
- Reinforce the importance of:
  - Increasing her dietary intake of iron and taking her iron/folate supplements as directed (anemia is common during the adolescent growth spurt, even without pregnancy);
  - Increasing her dietary intake of calcium to help meet the demands of her continuing skeletal development, in addition to those of pregnancy and breastmilk production; and
  - Drinking fluids each time she breastfeeds her baby.

Note: If the adolescent woman has difficulty swallowing pills, advise her to crush them and/or take them in pureed fruit or some other food product.

Textbox 3-8. Health Messages and Counseling for the Adolescent Woman

Discussing the following issues may be of special importance to the adolescent woman:

- Early and consistent attendance to all healthcare visits
- Self-care
- Pregnancy and birth processes
- Safer sex, as well as negotiation skills, such as for using condoms or abstaining from sex
- Family planning
- Mother-baby-family relationships
- Techniques for successful breastfeeding (**Annex 5, page 4-47**)—in particular, helping the adolescent mother get familiar with her baby and feel comfortable and confident in breastfeeding
- Newborn care
- Benefits of continuing her formal education and possibilities for doing so

Note: Use simple visual aids—such as placental and pelvic models or diagrams—when teaching about fetal development and other issues relating to pregnancy. When discussing what will happen during labor and childbirth, use whatever simple visual aids (diagrams, wall charts, etc.) may be available. Use simple hands-on demonstrations of newborn care as well as self-care. Adolescents are typically concrete, rather than abstract, thinkers.

Textbox 3-9. Facilitating Linkages to Appropriate Local Sources of Support

Based on specific areas of need that you have identified in the woman's life, encourage and/or facilitate linkages to appropriate local sources of support/assistance, for example:

- Women's service and advocacy groups
- Public health agencies
- Peer support groups
- Community service organizations
- Religious leaders, organizations, churches
- Local leaders and elders
- Appropriate legal agencies
- International relief and donor organizations
- Workers groups and cooperatives
- Various sources of support she can access to assist her in caring for the baby after birth

Note: It is important to maintain an up-to-date list of local sources of support/assistance, so that you can quickly and effectively link the woman to the appropriate services.

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Anemia (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) **General considerations:** A fundamental goal of caring for a woman with anemia during pregnancy or the postpartum period is the prevention of severe anemia through nutritional counseling; prevention and treatment of infections causing anemia, such as malaria and hookworm; and iron/folate supplementation. During labor and birth, the goal of care is to use measures that prevent blood loss (such as active management of the 3rd stage of labor) and manage conditions associated with hemorrhage (such as uterine atony). *(For additional information on differential diagnosis and treatment, see MCPC.)*	Perform basic assessment, as shown in **Section 2**, with the following additions and/or emphases. • Determine whether the woman was diagnosed with anemia in the last 3 months. • Recognize the signs and symptoms of anemia. – Woman reports symptoms of anemia, such as weakness, tiredness, shortness of breath (especially with exercise), dizziness, and fainting. – You observe signs of anemia, such as pallor of the conjunctiva. ➡ **If there are signs/symptoms of anemia or the woman has been diagnosed with anemia in the last 3 months**, test the woman's hemoglobin level (**page 4-43**) before proceeding: ➡ **If the woman's hemoglobin level is less than 7 g/dL**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If the woman's hemoglobin level is 7–11 g/dL**, proceed with additional assessment. • Try to determine the possible cause of anemia based on the woman's history or medical records (if available) (**Textbox 3-10, page 3-42**).	If the woman is in good health (except for the presence of mild/moderate anemia: hemoglobin is 7–11 g/dL), and her pregnancy, labor, or postpartum period is progressing normally, provide basic care as shown in **Section 2**, with the following additions and/or emphases. • Address any possible causes of anemia (**Textbox 3-10, page 3-42**). • Reinforce the following nutritional support messages: – Eat foods containing iron with foods that are rich in vitamin C (e.g., citrus fruits, tomatoes, potatoes) to enhance absorption. – Avoid eating iron-rich foods with foods that inhibit iron absorption (e.g., tea, coffee, bran). – Avoid eating unhealthy nonfood substances such as clay (pica). • Counsel the woman on the importance of taking iron/folate (as directed in **Section 2**) daily. – Discuss any concerns or misconceptions the woman has about taking iron. – Address side effects: – Black stools, which are normal – Constipation, which is a common discomfort (**page 3-6**) – Advise her to return if she has problems taking iron tablets. • Retest the woman's hemoglobin level in 1 month to ensure that she is responding to iron therapy.

Textbox 3-10. Possible Causes of Anemia and Appropriate Followup Actions

- Determine whether the woman has a history of vaginal bleeding/hemorrhage during pregnancy or after birth.
  - During pregnancy, ask the following questions: Did she bleed heavily after her last pregnancy? How long ago was her last pregnancy?
    - ➡ **If she bled heavily after her last pregnancy and her last pregnancy was within the last 2–3 years**, see Maternal, Fetal, or Newborn Complications of Previous Pregnancy, Labor/Childbirth, or the Postpartum/Newborn Period (**page 3-64**) before proceeding with additional care provision.
  - During the postpartum period, ask the following questions: Did she bleed heavily before, during, or after this birth?
    - ➡ **If YES but the woman is no longer bleeding**, take this finding into consideration during further assessment.
    - ➡ **If YES and the woman is still bleeding**, ACT NOW!—see Vaginal Bleeding after Childbirth (**page 3-103**) before proceeding.
- Does the woman live in an area endemic for malaria or hookworm infection?
  - ➡ **If YES**, see Living in an Area of Endemic Malaria (**page 3-59**) or Hookworm Infection (**page 3-58**) before proceeding with additional care provision.
- Is she HIV-positive?
  - ➡ **If YES**, see HIV (**page 3-51**) for additional information about assessment and care provision.
- Does she have a chronic infection such as tuberculosis, malaria, syphilis, or another infectious disease; a genetic disorder such as sickle cell disease or thalassemia major; or is she losing blood in her urine or stool?
  - ➡ **If YES OR if the cause of anemia is unknown**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.

SPECIAL NEEDS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Breast and Breastfeeding Problems: • Ineffective attachment/ suckling • Improper technique (holding, positioning) • Pain or discomfort due to engorged breasts, blocked ducts, sore/cracked nipples, or mastitis* • Flat or inverted nipples • Maternal concern about insufficient milk supply • Signs of inadequate intake (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) * *(For additional information on differential diagnosis and treatment, see MCPC.)*	Perform basic assessment (including observation of breastfeeding), as shown in **Section 2**, with the following additions and/or emphases based on presenting signs/symptoms or condition. • Look for signs of inadequate intake (the baby is urinating less than 6 times per day after the first 48 hours). ➡ **If there are signs of inadequate intake**, assess for possible causes: – Baby or woman is ill (according to basic assessment as shown in **Chapter 7 or 8** [**page 2-83 or 2-109**]). – Baby has a cleft palate or lip. – Baby is preterm or low birthweight. – Ineffective attachment/suckling. • Observe the woman and her baby while breastfeeding to ensure effective attachment/suckling. ➡ **If there are signs of ineffective attachment/suckling**, assess for possible causes: – Improper technique (holding, positioning). – Baby or woman is ill (according to basic assessment as shown in **Chapter 7 or 8** [**page 2-83 or 2-109**]). – Baby has a cleft palate or lip. – Woman has pain or discomfort due to breast problems (e.g., engorged breasts, blocked ducts, sore/cracked nipples, mastitis). – Woman has flat or inverted nipples. ➡ **If the baby and/or woman are ill (according to basic assessment) but have no danger signs, or if the baby has a cleft palate or lip**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care. ➡ **If the baby and/or woman are not ill (according to basic assessment) and the baby does not have a cleft palate or lip**, provide additional care, as shown in the next column, based on the presenting signs/symptoms or condition. ➡ **If an abscess (hard lump or red, fluctuant lesion) develops in the breast,** see Fever or Foul-Smelling Vaginal Discharge (**page 3-115**) before proceeding.	If the postpartum/newborn period is progressing normally (except for breast/breastfeeding problems), provide basic care as shown in **Section 2**, with the following additions and/or emphases. • Encourage the woman to continue exclusive breastfeeding. (For additional information about the benefits of breastfeeding, see Breastfeeding Versus Using a Breastmilk Substitute [**page 4-49**].) • Follow the guidance below as appropriate: – For ineffective attachment/suckling, see **Textbox 3-11** (**page 3-44**). – For improper technique: – Provide breastfeeding support (**page 4-47**). – Advise her to return for care if difficulties persist or worsen. – Review the danger signs and the woman's complication readiness plan: – Ensure that emergency transportation and funds are immediately accessible. – Ensure that she knows where to go for help if a danger sign arises. – For engorged breasts/blocked ducts, see **Textbox 3-12** (**page 3-44**). – For sore/cracked nipples, see **Textbox 3-13** (**page 3-45**). – For mastitis, see **Textbox 3-14** (**page 3-45**). – For flat or inverted nipples, see **Textbox 4-1** (**page 4-48**). – For maternal concern about insufficient milk supply, see **Textbox 3-15** (**page 3-46**). – For inadequate intake, see **Textbox 3-16** (**page 3-46**).

Textbox 3-11. Additional Care for Ineffective Attachment/Suckling

- Encourage skin-to-skin contact so that the baby can explore the woman's breasts, find the areola and nipple, and attach on her/his own, in a relaxed (for woman and baby) manner.
- Help the woman position her baby in the way that is most comfortable for her and her baby.
  - The underarm position may give the woman more control of the baby's head.
  - Leaning over the baby so that the breast is allowed to drop into the baby's mouth may help the baby to take more of the breast into the mouth.
  - For more information on positioning, see Breastfeeding Support (**page 4-47**).
- Help the woman position the baby close to her with hips flexed, so that the baby does not have to turn her/his head to reach the breast. Her/his mouth and nose should be facing the nipple. Have the woman:
  - Aim the baby's bottom lip toward the underside of the areola, and the top lip at the same level as the nipple. Bring the baby to the height of the nipple. Pull the baby close by supporting the back rather than the back of the head.
  - Support the breast so it is not pressing on the baby's chin. The baby's chin should drive into the breast.
  - For more information on supporting the breast, see Breastfeeding Support (**page 4-47**).
  - ➡ If the position is appropriate and the baby still does not suckle well, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
- Advise her to return for care if difficulties persist or worsen.
- Review the danger signs and the woman's complication readiness plan.
  - Ensure that emergency transportation and funds are immediately accessible.
  - Ensure that she knows where to go for help if a danger sign arises.

Textbox 3-12. Additional Care for Engorged Breasts/Blocked Ducts

- Explain to the woman that breast engorgement is normal when the milk starts to come in around 2–3 days after birth. Explain that although it is painful, it should get better with time.
- Advise the woman to use the following method to empty the breasts:
  - Use warm water or compresses 5–10 minutes before feeding and gently massage the breast to allow milk to flow more easily.
  - Express a small amount of milk (**Textbox 4-2, page 4-49**) before feeding to soften the breast and make it easier for the baby to latch on.
  - Feed the baby as frequently as every 2 hours around the clock.
  - Let the baby suckle as long as s/he wants on each breast.
  - Change her position each time the baby nurses so that all ducts will be emptied.
- Also advise her as follows:
  - To relieve pain, apply cool compresses between feeds.
  - If nonpharmacologic treatments do not provide relief, paracetamol (acetaminophen) 500 mg may be taken 30 minutes before breastfeeding, as needed.
  - Wear a well-fitting, supportive bra.
  - Avoid wearing a tight bra, which can press on a duct and cause it to block.
- Advise her to return for care if the pain or discomfort persists or if the breasts become red, warm, more painful, or if she develops fever and chills.
- Review the danger signs and the woman's complication readiness plan.
  - Ensure that emergency transportation and funds are immediately accessible.
  - Ensure that she knows where to go for help if a danger sign arises.

Textbox 3-13. Additional Care for Sore/Cracked Nipples

Note: Do NOT perform the steps shown in this textbox until AFTER all relevant steps in the additional assessment and care provision columns are completed.

- Advise the woman as follows:
  - Be sure that the baby is well attached when feeding and that the baby's mouth encircles the whole areola.
  - Start feeding on the side that is less sore.
    - ➡ **If cracking is severe on only one nipple**, breastfeed using only the other breast for 2 or more days while the affected nipple heals, or feed the baby expressed breastmilk. Express milk regularly from the breast not used to ensure continued breastmilk production.
  - When removing the baby from the breast, break the suction gently by:
    - Pulling on the baby's chin or corner of the mouth; OR
    - Placing one finger in the corner of the baby's mouth.
  - Rub breast milk on the nipple and areola after each feed, and allow it to dry.
  - Apply pure lanolin to the nipples between feeds.
  - Wash breasts only once per day, and do not use soaps or alcohol on the breasts.
  - If nonpharmacologic treatments do not provide relief, paracetamol (acetaminophen) 500 mg may be taken 30 minutes before breastfeeding, as needed.
  - Wear a well-fitting, supportive bra.
  - Avoid wearing a tight bra, which can irritate nipples.
- Advise her to return for care if the pain or discomfort persists or worsens.
- Review the danger signs and the woman's complication readiness plan.
  - Ensure that emergency transportation and funds are immediately accessible.
  - Ensure that she knows where to go for help if a danger sign arises.

Textbox 3-14. Additional Care for Mastitis

Note: Do NOT perform the steps shown in this textbox until AFTER all relevant steps in the additional assessment and care provision columns are completed.

- Treat the woman with:
  - cloxacillin 500 mg by mouth 4 times per day for 10 days; OR
  - erythromycin 250 mg by mouth 3 times per day for 10 days.
- Encourage the woman to:
  - Continue breastfeeding
  - Wear a well-fitting, supportive bra
  - Apply cool compresses to the breasts between feedings to reduce pain and swelling
  - Drink at least 12 glasses of fluid each day
  - Wash her hands as frequently as possible prior to touching her breast(s)
- Give paracetamol (acetaminophen) 500 mg 3 times per day by mouth as needed.
- Advise her to return in 3 days to ensure response, or earlier if the pain or discomfort persists or worsens or if a hard lump or red, fluctuant lesion develops in the breast.
- Review the danger signs and the woman's complication readiness plan.
  - Ensure that emergency transportation and funds are immediately accessible.
  - Ensure that she knows where to go for help if a danger sign arises.

Textbox 3-15. Additional Care for Maternal Concerns about Insufficient Milk Supply

Most concern about insufficient milk is anxiety rather than insufficient milk supply. If the baby is urinating at least 6 times per day (after the first 48 hours), the baby is getting enough milk.

➡ **If the baby is urinating less than 6 times per day (after the first 48 hours)**, see Inadequate Intake (**Textbox 3-16**, below).

- Help the woman to relax in confidence that the baby will get enough milk. If a woman is very worried or upset, her let-down reflex may temporarily not work well and it may seem as if there is not enough milk.

➡ **If the woman's milk has not yet come in (before day 2 or 3)**, reassure the woman that the colostrum she is producing is sufficient for the needs of the baby at this time.

- Remind the woman that almost all women produce enough milk for one or more babies, and if the baby is not getting enough milk it is usually because s/he is not suckling often enough or long enough, not because the woman is not producing enough milk.
- Explain to the woman that as the baby's intake increases, the breasts are emptied at each feed, giving the woman the impression that there is not enough milk.
- Ensure that the woman has enough to eat and is able to rest and sleep when her baby sleeps.
- The woman should drink a sufficient amount of fluids to satisfy her thirst (and about one glass per breastfeed, or 2 liters per day), but she does not need to force herself to drink fluids in order to produce enough breastmilk. The woman should limit her intake of caffeine-containing drinks that increase urination.
- The woman should not use the combined oral contraceptive pill (COC) during the first 6 months after birth as this may decrease the milk supply. Also, alcohol and smoking may decrease the milk supply.
- Advise her to return for care if difficulties persist or worsen.
- Review the danger signs and the woman's complication readiness plan.
  - Ensure that emergency transportation and funds are immediately accessible.
  - Ensure that she knows where to go for help if a danger sign arises.

Textbox 3-16. Additional Care for Inadequate Intake

Note: Do NOT perform the steps shown in this textbox until AFTER all relevant steps in the additional assessment and care provision columns are completed.

If the baby has inadequate intake, as evidenced by the baby urinating less than 6 times per day after the first 48 hours:

- Have the woman supplement breastfeeding by expressing breastmilk between feedings and giving the expressed breastmilk to the baby, using a cup/spoon, immediately after breastfeeding (**page 4-52**).
- Ensure that the woman is allowing the baby to suckle often and on demand to sustain adequate milk production:
  - Feed the baby as frequently as s/he wants—as much as every 2 hours around the clock. Awaken the baby every 3 hours for feeding if s/he sleeps for longer periods of time.
  - Let the baby suckle as long as s/he wants on each breast.
  - Manually empty breasts by expressing milk (**Textbox 4-2, page 4-49**) if the baby stops feeding when the breasts still feel full.
- Advise her to return for care if difficulties persist or worsen.
- Review the danger signs and the woman's complication readiness plan.
  - Ensure that emergency transportation and funds are immediately accessible.
  - Ensure that she knows where to go for help if a danger sign arises.

SPECIAL NEEDS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Breech Presentation in Labor (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) *(For additional information on differential diagnosis and treatment, see MCPC.)*	Perform basic assessment, as shown in **Section 2**, with the following additions and/or emphases. • Determine the woman's stage/phase of labor (**Table 2-8, page 2-68**) if not already done. ➡ **If the woman is in the 1st stage of labor**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If the woman is in the 2nd stage of labor**, perform a vaginal examination, if not already done, to determine the type of breech (**Figure 4-3, page 4-12**): frank, complete, or footling. ➡ **If footling breech**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If frank or complete breech**, proceed with additional care provision (next column).	If the woman is in good health and her labor is progressing normally (except for the breech presentation), provide basic care as shown in **Section 2**, with the following additions and/or emphases. ➡ **If the woman is in the 2nd stage of labor and the fetus is in frank or complete breech presentation**, see **page 4-11** for the procedure for breech birth.
Burning on Urination (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) *(For additional information on differential diagnosis and treatment, see MCPC.)*	Perform basic assessment, as shown in **Section 2**, with the following additions and/or emphases. ➡ **If the woman is in the postpartum period**, confirm that burning is not "external," caused by urine passing over an injured perineum (tear or episiotomy), before proceeding. ➡ **If the burning is external**, see Tears and Incisions during the Postpartum Period (**page 3-78**). ➡ **If the burning is not external**, continue with additional assessment. • Perform culture and sensitivity on a clean-catch urine specimen, if facilities/staff are available. • Assess the woman for fever (temperature of 38°C or more) and flank/loin pain. ➡ **If the woman has a fever or flank/loin pain**, ACT NOW!—see Fever or Foul-Smelling Vaginal Discharge (**page 3-115**) before proceeding. ➡ **If the woman does not have a fever or flank/loin pain**, proceed with additional care provision (next column).	If the woman is in good health (except for burning on urination), and her pregnancy, labor, or postpartum period is progressing normally, provide basic care as shown in **Section 2**, with the following additions and/or emphases. • Begin treatment for cystitis while awaiting the results of culture and sensitivity. Change treatment according to sensitivity, if necessary. Give: – amoxicillin 1 tablet (500 mg) every 8 hours for 3 days; OR – trimethoprim/sulfamethoxazole (160 mg/800 mg) 1 tablet every 12 hours for 3 days. • Encourage her to increase her intake of fluids. • Advise her to return for care if symptoms persist or worsen, OR if she notices fever or flank/loin pain—which may indicate acute pyelonephritis. • Review the danger signs and the woman's complication readiness plan. – Ensure that emergency transportation and funds are immediately accessible. – Ensure that she knows where to go for help if a danger sign arises or if her condition does not begin to improve after 2 days.

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
False Labor (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) **General considerations:** Even when a woman presents with contractions, she may be experiencing false labor. If false labor is suspected, based on the diagnostic criteria shown in **Table 2-8** (**page 2-68**), the woman should receive additional assessment and care as shown.	➡ **If the woman is experiencing contractions and is less than 37 weeks' gestation**, facilitate urgent referral/transfer (**Annex 7, page 4-63**). • Continue to monitor the woman's vital signs and the fetal heart rate. ➡ **If more than 37 weeks' gestation**, encourage her to walk and move around. • Re-examine the woman after 4 hours to assess for signs/symptoms (cervical dilation, contractions, vaginal secretions) of the onset of labor: – Progressive cervical dilation is diagnostic of the onset of labor. – Contractions that become progressively more frequent and/or longer in duration (with or without bloody show, mucous plug, and ruptured membranes) often herald the onset—but are not diagnostic of the onset—of labor. ➡ **If the cervix has dilated since the last examination**, proceed with basic care during labor and birth (**Chapter 6, page 2-37**). ➡ **If the contractions have become progressively more frequent and/or longer in duration (with or without bloody show, mucous plug, and ruptured membranes), but the cervix has NOT dilated since the last examination:** – Encourage the woman to continue to walk and move around. Re-examine her after 4 hours to assess for signs/symptoms (cervical dilation, contractions, vaginal secretions) of the onset of labor. ➡ **If cervical dilation has reached 1–3 cm, but then progressive dilation stops**, see Unsatisfactory Progress of Labor (**page 3-109**) for information about additional assessment and care. ➡ **If there is no change in cervical dilation, contractions, or the presence of bloody show, a mucous plug, or ruptured membranes, and all other parameters are normal**, the woman is not in labor and should not be admitted to the labor ward (or prepared for childbirth) at this time. Proceed with additional care provision (next column). ➡ **If the cervix has dilated since the last examination**, proceed with basic care during labor and birth (**Chapter 6, page 2-37**).	• Provide support and encouragement, thank the woman for coming in, and provide health messages and counseling on the following: – Importance of adequate rest and food/fluid intake – Differences between true and false labor – When to return to the facility or call the skilled provider • Review the danger signs and the woman's birth preparedness and complication readiness plan: – Ensure that emergency transportation and funds are immediately accessible. – Ensure that she knows where to go for help if a danger sign arises.

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Female Genital Cutting (FGC) during Pregnancy or Labor (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) **General considerations:** The goal in providing care for the woman with FGC should be on preventing it, or its complications, from adversely affecting the outcome of the pregnancy and the woman and her baby during labor and birth.	Perform basic assessment, as shown in **Section 2**, with the following additions and/or emphases. • Determine the type of FGC that the woman has. There are three common types of FGC: – Clitoridectomy (Type I), in which part or all of the clitoris has been removed (**Figure 3-1, page 3-50**). – Excision (Type II), in which part or all of the clitoris and prepuce has been removed, along with the partial or total excision of the labia minora (**Figure 3-2, page 3-50**). – Infibulation (Type III), in which the clitoris and labia minora have been removed and the incised sides of the labia majora have been stitched together, creating a hood of skin over the urethra and anterior part of the vaginal orifice (**Figure 3-3, page 3-50**). – A number of other unclassified procedures may also be encountered, such as: – Piercing, incising, or stretching the clitoris and/or labia – Cauterizing the clitoris and surrounding tissue – Scraping or cutting the vagina or introducing corrosive substances into the vagina • Determine whether the scar is complicated by other factors (e.g., large keloids or dermoid cysts, which may obstruct the vaginal opening; infected mucosal ulcers; benign cysts). ➡ **If the woman has FGC Type I or II and the scar is not complicated by other factors**, proceed with additional care provision (next column). ➡ **If the woman has FGC Type III and the scar is not complicated by other factors**, proceed with additional care provision (next column), which must include defibulation. ➡ **If the FGC scar is complicated by other factors**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care. – **During labor:** ➡ **If the FGC scar is complicated by other factors that obstruct the vaginal opening**, facilitate urgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.	If the woman is in good health and her pregnancy or labor and birth is progressing normally, provide basic care as shown in **Section 2**, with the following additions and/or emphases. **Uncomplicated Type I or II FGC:** • **Before childbirth:** Reassure the woman that the cutting will not complicate childbirth. If this type of FGC is common in her culture, she will probably understand that she will not need any special procedure in order to give birth, but reassurance is often helpful. • **At any point in the childbearing cycle:** Counsel the woman and her partner on the potentially harmful effects of FGC during pregnancy, labor and childbirth, and the postpartum period, especially if the newborn is a girl. **Uncomplicated Type III FGC:** • **Defibulation is necessary** to remove the obstruction to the vaginal opening before the birth. See **page 4-17** for the defibulation procedure. Although defibulation can be performed during the 2nd stage of labor, as the baby's head is crowning, the optimal time is during the 2nd trimester of pregnancy—to avoid subjecting the woman to an increased chance of infection and bleeding during childbirth. • **Before defibulation:** Counsel the woman and her partner about the procedure as well as the importance of not attempting to re-infibulate after childbirth. Depending on the culture, the woman's partner or other decision maker may need to be included in this counseling. The couple should understand that re-infibulation is not necessary and is associated with many medical risks. Allow the woman time to absorb the information and answer her questions. • **At any point in the childbearing cycle:** Counsel the woman and her partner on the harmful effects of FGC during pregnancy, labor and childbirth, and the postpartum period, especially if the newborn is a girl.

Figure 3-1. Type I Area Cut (Left) and Healed (Right)

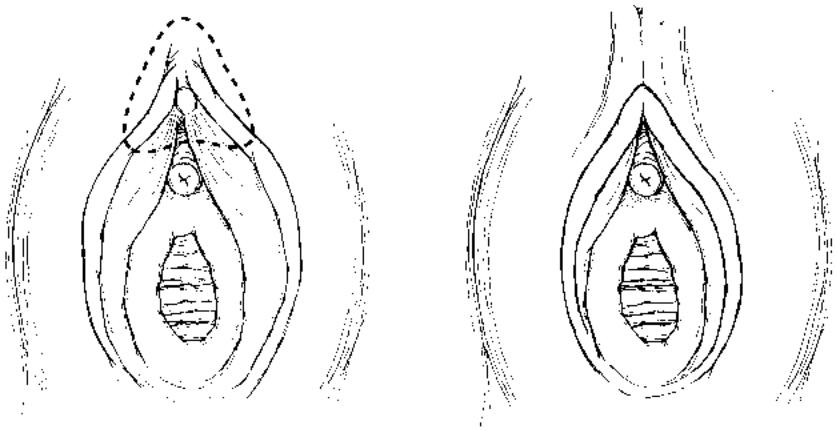


Figure 3-2. Type II Area Cut (Left) and Healed (Right)

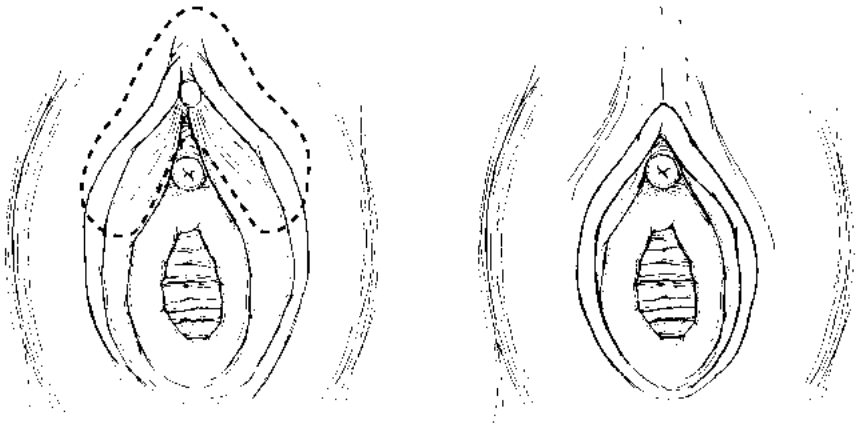
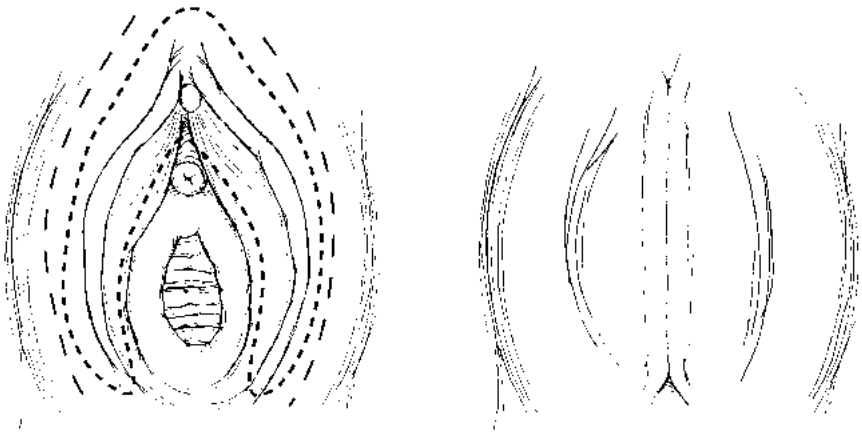


Figure 3-3. Type III Area Cut (Left) and Healed (Right)



SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
HIV (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) **Note:** Throughout assessing and caring for the HIV-positive woman, focus on the following interpersonal skills: • Always respect the confidentiality of the woman and family. • Provide reassurance and encouragement. • Be empathetic and nonjudgmental. **Programmatic Considerations** WHO has a four-prong strategy for preventing mother-to-child transmission (MTCT) of HIV: • Prevention of HIV in women • Prevention of unintended pregnancies in HIV-infected women • Prevention of MTCT of HIV • Support for the HIV-positive woman and her family The skilled provider should consider this strategy when providing care to all women of reproductive age. **General considerations:** The woman with HIV should receive the same basic care provided to all women plus additional care, as described in this section. The health and well-being of the woman should never be ignored in an effort to prevent mother-to-child transmission of HIV. Some of the main goals of care for the HIV-positive woman are to:	Perform basic assessment, as shown in **Section 2**, with the following additions and/or emphases. • Ensure that the woman (and newborn, if applicable) is receiving care from an HIV specialist for management of her disease, additional testing, prophylactic drugs against opportunistic infections, and antiretroviral (ARV) therapy (as available and appropriate). ➡ **If not receiving care from an HIV specialist**, link the woman (and newborn, if applicable) to an HIV specialist after providing basic care. • Assess the quality of the woman's support systems and her risk of abandonment or abuse. • Determine whether the woman (or newborn, if applicable) has received ARV therapy. • Identify coexistent conditions and signs/symptoms of other opportunistic infections (**Textbox 3-17, page 3-53**). ➡ **If the woman has tuberculosis**, advise her to initiate/continue care with an appropriate specialist. (See also Mother with Tuberculosis [**page 3-87**], for information about additional assessment and care of the newborn.) ➡ **If the woman has any signs/ symptoms of coexistent conditions and opportunistic infections**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care. ➡ **If the woman does not have any signs/symptoms of coexistent conditions and opportunistic infections**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.	If the woman is in good health (except for HIV status) and her pregnancy, labor, or postpartum period is progressing normally, provide basic care as shown in **Section 2**, with the following additions and/or emphases. **WARNING:** Invasive procedures (e.g., external version, amniocentesis, artificial rupture of membranes, use of fetal scalp electrodes, episiotomy) should be avoided in caring for the HIV-positive woman. ➡ **If the woman has not yet received her test result and her test result is positive**, provide post-test counseling according to the guidelines in **Textbox 3-18** (**page 3-53**). • Help the woman identify her "personal support system": people in her life—friends, family members, other HIV-positive people—with whom she has positive relationships, who can: – Provide emotional and practical support, and – Help her secure resources and plan for the future. • Assist the woman in planning for the future, addressing the following issues: – Who will care for the woman and her children if she becomes ill? – Will her children be at risk of neglect, abuse, or abandonment? – Does she have access to healthcare services and drugs/medications specifically for HIV-positive people? • Discuss antiretroviral (ARV) therapy treatment options: ➡ **If the woman is already on ARV therapy**, advise her to continue with therapy in consultation with her HIV specialist. ➡ **If the baby is already on ARV therapy**, advise the woman to continue the baby's therapy in consultation with the baby's HIV specialist, or follow local guidelines. If no local guidelines are in place, provide ARV therapy according to the guidelines shown in **Tables 3-1** (**page 3-54**) and **3-2** (**page 3-55**). ➡ **If the pregnant or laboring woman or the newborn is not already on ARV therapy**, follow local guidelines for ARV therapy. If no local guidelines are in place, provide ARV therapy according to the guidelines shown in **Tables 3-1** (**page 3-54**) and **3-2** (**page 3-55**).

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
HIV, *continued*		
• Maximize and maintain the health of the woman and newborn. • Prevent mother-to-child transmission of HIV. • Assist the woman in identifying/building her personal support system. • Refer or link the woman and newborn to appropriate healthcare or support services. • Prevent HIV transmission to uninfected partner(s). • Provide emotional support and counseling during pregnancy, labor and birth, and the postpartum period, and in planning for the future. • Ensure that the woman has the care and support she needs to provide adequate care for her newborn. (See **page 2-33** for further information about HIV counseling and testing.)		• Counsel the woman about her newborn feeding options—exclusive breastfeeding or replacement feeding (**Textbox 3-19, page 3-56**). • Reinforce the importance of complication readiness: The woman is more prone to infection and should seek help as soon as possible if she has any signs/symptoms of coexistent conditions or opportunistic infections (**Textbox 3-17, page 3-53**) or any of the danger signs listed on **page 4-61**. • Encourage referral for testing for sexually transmitted infections and screening for cervical cancer. • Discuss family planning (**page 4-53**): – The use of condoms for dual protection against both pregnancy and transmission of HIV and other STIs is recommended. – Fertility awareness-based methods may not be appropriate due to changes in menstrual cycle and temperature due to HIV or treatment. • Provide the appropriate preventive measures: ➡ **If the woman lives in an area endemic for any of the following diseases or deficiencies**, see the page(s) indicated: – Malaria (**page 3-59**) – Hookworm infection (**page 3-58**) – Vitamin A deficiency (**page 3-62**) – Iodine deficiency (**page 3-61**) • Provide nutritional support (**Textbox 3-20, page 3-56**). • Provide health messages and counseling (**Textbox 3-21, page 3-57**). • Facilitate linkage to appropriate local sources of support (**Textbox 3-9, page 3-40**) with the following additions: peer and community support groups for people living with HIV/AIDS (PLWHA), and other HIV programs. • **During pregnancy:** – Reinforce the importance of arranging for a skilled provider to attend the birth. – Recommend giving birth at a site where the woman and newborn can be given ARV therapy before and after birth, if feasible, to reduce the risk of MTCT. • **During labor and childbirth:** – Discuss measures you will take to decrease the risk of MTCT. – Encourage relaxation techniques and adequate intake of fluids/food to avoid exhaustion. – Wipe maternal blood and body secretions from the newborn with a clean cloth.

Textbox 3-17. Signs/Symptoms of Coexistent Conditions and Opportunistic Infections in the HIV-Positive Woman

The following signs/symptoms may indicate coexistent conditions and opportunistic infections:

- Signs/symptoms of respiratory infections (cough, breathing difficulties)
- Signs/symptoms of tuberculosis (cough, bloody sputum, fever)
- Signs/symptoms of urinary tract infection (burning on urination, increased urgency/frequency of urination, fever)
- Signs/symptoms of anemia (pallor, fatigue)
- Signs/symptoms of malaria (fever, chills, joint pains, headache, anorexia)
- Persistent diarrhea
- Enlarged lymph nodes
- Oral or vaginal candidiasis
- Skin eruptions, lesions, rashes, and infections
- Sexually transmitted infections
- Weakness/numbness of the lower extremities
- Difficulty swallowing
- Severe weight loss

Textbox 3-18. Post-Test Counseling for an HIV-Positive Result

If the woman has chosen counseling and testing for HIV, has had her test, and her test result is positive, provide the following post-test counseling and care.

- Provide the results, reassuring the woman that they are confidential.
- Provide emotional support:
  - Recognize and deal with her immediate emotional response, such as denial, anger, or sadness. Be alert for signs of self-destructive behavior and threats of suicide.
  - Ensure that she will not be alone and that she will have support during the next hours and days.
  - Be understanding and reassuring in response to her uncertainty/anxiety about her baby's well-being. For example, the slightest illness in her newborn may be evidence to her that she has infected her baby and may cause intense feelings of guilt.
- Assess the risk of abandonment or abuse.
  - Ask about the partner's typical expression of anger and fear:
    - Does the partner resort to physical violence or withdrawal?
    - Is the partner able to discuss problems in a helpful way?
  - Ask about her sense of the stability of the relationship:
    - How have she and her partner dealt with problems in the past?

  ➡ **If you suspect abuse**, see Violence against Women (**page 3-81**) for additional information about assessment and care provision before proceeding with additional care provision.
- Discuss the following issues, as appropriate:
  - Referral for care—depending on locally available resources such as an HIV program, specialist, or community support group
  - Disclosure of HIV status to family and friends, including issues such as timing, approach, and to whom it may or may not be safe/appropriate to disclose this information (Role-play disclosure techniques if the woman desires.)
  - The impact of HIV on pregnancy and breastfeeding (e.g., risk of low birthweight, MTCT)
  - The need to use condoms throughout pregnancy, the postpartum period, and after the postpartum period to reduce the risk of transmission of HIV
  - How she plans on spending the next few hours or days
  - The conditions of other household members who may be HIV-positive
  - Partner referral for HIV counseling and testing

Table 3-1. Antiretroviral (ARV) Prophylaxis Regimens for Prevention of Mother-to-Child Transmission of HIV[1]

COURSE	ANTENATAL (WOMAN)	INTRAPARTUM (WOMAN)	POSTNATAL (NEWBORN)	COMMENT
NEVIRAPINE				
Nevirapine (NVP)[a]	None	200 mg by mouth oral tablet at onset of labor	1 dose of 2 mg/kg body weight syrup within 72 hours of birth[b]	• Oral regimen • Can be directly observed • Treatment expensive
ZIDOVUDINE[c]				
Short course of Zidovudine (ZDV, AZT, Retrovir)[d]	300 mg by mouth twice per day from 36 weeks' gestation	300 mg by mouth every 3 hours from onset of labor to birth	None	• Requires adherence by woman • Oral regimen • No newborn dosing required
Long course of Zidovudine (ZDV, AZT, Retrovir)[d]	from 14–34 weeks' gestation and continuing until the onset of labor give either: 100 mg by mouth 5 times per day ***OR*** 300 mg every 12 hours ***OR*** 200 mg every 8 hours ***OR*** 200 mg by mouth every 8 hours	2 mg/kg body weight IV for first hour, then 1 mg/kg body weight per hour IV until birth	2 mg/kg body weight ZDV syrup every 6 hours for 6 weeks[b]	• Requires intravenous ZDV formulation and administration • Requires ongoing adherence by woman and newborn • Mild reversible anemia can occur with newborn regimen
ZIDOVUDINE + LAMIVUDINE				
Zidovudine (ZDV, AZT, Retrovir) and Lamivudine (3TC)	None	ZDV 600 mg by mouth at onset of labor and 300 mg every 3 hours until birth PLUS 3TC 150 mg by mouth at onset of labor and 150 mg every 12 hours until birth	ZDV 4 mg/kg body weight PLUS 3TC 2 mg/kg body weight by mouth every 12 hours for 7 days[b]	• Oral regimen • Requires administration of two drugs • Requires adherence by woman and newborn

[a] For guidelines on using NVP in additional scenarios, see Table 3-2.
[b] The newborn should receive ARV in addition to—not in place of—the dose given to the woman.
[c] Zidovudine, AZT, ZDV, and Retrovir are all different names for the same drug.
[d] The woman should receive both the antenatal and intrapartum doses of ZDV.

[1] *Adapted from*: World Health Organization (WHO)/Centers for Disease Control (CDC). Mother-to-Child Transmission of HIV Prevention: Generic Training Course. September 2003 (Draft).

Table 3-2. Guidelines for the Use of Nevirapine (NVP) for Prevention of Mother-to-Child Transmission of HIV in Different Scenarios[2]

SCENARIO	GUIDELINE
No Antenatal Care	**If the woman presents to the healthcare facility for the first time in labor:** • Give the woman 1 dose of NVP (200-mg tablet) by mouth as soon as possible after labor begins (to improve efficacy, NVP should be given at least 2 hours before childbirth). • Give the baby 1 dose of NVP syrup (2 mg/kg body weight) within 72 hours of birth.
False Labor	**If the woman receives NVP in labor, but it turns out to be false labor:** • Give a repeat dose of NVP (200-mg tablet) when labor is established. ➡ If the woman is still not in active labor after a second dose of NVP, facilitate nonurgent referral/transfer.
Childbirth Less than 2 Hours after Receiving NVP	**If the woman gives birth less than 2 hours after receiving NVP:** • Give the baby 1 dose of NVP syrup (2 mg/kg body weight) immediately after birth. • Give the baby a second dose of NVP syrup (2 mg/kg body weight) within 72 hours after birth or at discharge.
Cesarean Section	**If the woman requires an emergency cesarean section**, give the woman 1 dose of NVP (200-mg tablet) by mouth before urgent referral/transfer. **If the woman will have an elective cesarean section**, ensure that woman receives 1 dose of NVP (200-mg tablet) at least 3 hours before surgery.
Home Birth	**If the woman is likely to give birth at home:** • Give the woman 1 dose of NVP (200-mg tablet) at 28–32 weeks' gestation, and instruct her to take it when she goes into labor or when her membranes rupture. • Give the woman 1 dose of NVP for the baby (6 mg syrup), and instruct her to give it to the baby within 72 hours after birth. • Advise the woman to return to the healthcare facility as soon as possible after the baby's birth.

[2] *Adapted from*: World Health Organization (WHO)/Centers for Disease Control (CDC). Mother-to-Child Transmission of HIV Prevention: Generic Training Course. September 2003 (Draft).

Textbox 3-19. Newborn Feeding Options for the HIV-Positive Woman

Counsel the woman about her feeding options—breastfeeding or replacement feeding:

- The woman's decision to breastfeed or use replacement feedings must be made after careful consideration of the risks and benefits. Support the woman in making an informed choice of feeding method. See Breastfeeding Versus Using a Breastmilk Substitute (**page 4-49**) for information on breastfeeding versus using a breastmilk substitute.
- Emphasize that breastfeeding increases the risk of MTCT, and the decision to breastfeed should be made after careful consideration of the options.
- In areas where use of breastmilk substitutes is feasible, acceptable, safe, affordable, and available/accessible, avoidance of all breastfeeding is recommended—but it is still the woman's decision to make.
- Whatever the woman decides, support her decision and provide her with information to help reduce the risk of MTCT and other potential problems.

> **Note:** "Mixed feeding" (alternating breastfeeding with anything else, including breastmilk substitute, local porridges, tea, water, etc.) may carry a higher risk of MTCT than either exclusive breastfeeding or exclusive replacement feeding.

- Counsel to discontinue breastfeeding as early as possible, between 4 and 6 months after childbirth, to minimize the risk of MTCT. Weaning should be abrupt, not gradual, and followed by exclusive replacement feeding.
- Teach proper latch-on/attachment techniques and recommend on-demand feeding to prevent damage to nipples or breast engorgement. Lesions of the breast are associated with an increased risk of MTCT. (As needed: see Breastfeeding Support [**page 4-47**]; or Breast and Breastfeeding Problems [**page 3-43**].)
- Advise her to seek prompt medical attention for conditions such as mastitis, breast abscess, and fungal infection (thrush) of the nipples, as well as oral thrush in the newborn, which are associated with an increased risk of MTCT.

Textbox 3-20. Additional Nutritional Support for the HIV-Positive Woman

The HIV-positive woman may be undergoing many physical processes and changes that intensify her nutritional needs. The following measures, in addition to those covered in **Section 2**, can help address these needs:

- Explain how HIV/AIDS affects nutrition through three, sometimes overlapping, processes:
  - By causing a loss of appetite and therefore a decrease in food intake;
  - By impairing the digestion and absorption of nutrients consumed; and
  - By altering metabolism—or the way the body transports, uses, stores, and excretes nutrients.
- Reinforce the importance of:
  - Eating an adequate amount and variety of food
  - Taking micronutrient supplementation as directed
  - Practicing safe food-handling to prevent food-borne illness
  - Using safe drinking water to prevent diarrhea
- Also recommend the following practices:
  - Eat four meals per day that include protein (e.g., yogurt, meat/fish, nuts, milk).
  - Increase intake of calories, protein, and micronutrients each day.
  - Increase intake of antioxidant-rich foods from food sources (e.g., vegetables, nuts, meats, legumes, grains, fruits) and multivitamin supplements.
  - Increase intake of foods rich in Omega-3 fatty acids (e.g., fish, nuts, seeds).
- Provide specific instructions on maintaining dietary intake during periods of decreased appetite, diarrhea, or infection.
- Facilitate linkage to food support programs where possible.

Textbox 3-21. Health Messages and Counseling to Focus on with the HIV-Positive Woman

Discuss the importance of the following issues:

- Avoiding alcohol, tobacco, and drugs
- Reducing her workload and increasing periods of rest
- Practicing good hygiene/infection prevention
- Practicing safer sex (e.g., consistent condom use to prevent infection of her partner(s) and transmission of other STIs)
- Having a skilled provider attend the birth
- Future family planning options (**page 4-53**; see also, above)
- Adhering to the plan of care
- Receiving consistent care for herself (and her newborn, if applicable) from an HIV specialist

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Living in an Area of Endemic Hookworm Infection (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) **General considerations:** The fundamental goal of providing care for women living in an area of endemic hookworm infection is to prevent the infection or its complications from developing. A pregnant woman living in an endemic area may be aware of the risk of hookworm infection—she may even have it; what she might not know is that it can lead to anemia or protein deficiency during pregnancy or postpartum. In addition to providing preventive measures, the skilled provider should focus on increasing the woman's awareness with health messages and counseling about the risks to herself and her baby, as well as practical information on how to reduce these risks. *(For additional information on differential diagnosis and treatment, see MCPC.)*	When performing basic assessment, as shown in **Section 2**, focus on identification of signs/symptoms of endemic hookworm infection (e.g., itching and rash at site where skin touches soil, usually feet; diarrhea; anemia; weight loss; anorexia).	If the woman is in good health and her pregnancy or postpartum period is progressing normally, provide basic care as shown in **Section 2**, with the following additions and/or emphases. • Care for women in areas endemic for hookworm infection must include the following interventions (as described in more detail below): – Presumptive antihelminthic treatment; and – Health messages and counseling about other preventive measures. • Provide **presumptive antihelminthic treatment**: – In regions where hookworm is endemic (prevalence of 20% or more), if the woman has not received treatment within the past 6 months, or is found by laboratory testing to have hookworm infection: – Give mebendazole 500 mg by mouth once, OR – Prescribe mebendazole 100 mg by mouth twice daily for 3 days, OR – Give albendazole 400 mg by mouth once. – In regions with a high prevalence of hookworm infection, provide an additional dose after 12 weeks. **Note:** Do **NOT** give pregnant women mebendazole or albendazole during the 1st trimester. • Provide **health messages and counseling** about other preventive measures to help the woman further reduce her risk of hookworm infection. Encourage her to ask questions if there is something she does not understand. – Hookworm is transmitted through the skin from soil that contains hookworm larvae. – Hookworm infection can cause maternal anemia and protein deficiency. – Some ways to avoid hookworm infection are as follows: – Wear shoes outdoors. Do not walk barefoot. – Dispose of feces carefully (e.g., using a pit latrine). – Do not touch soil with bare hands, especially soil that is likely to contain feces. – Use good hygiene and infection prevention practices.

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Living in an Area of Endemic Malaria Infection (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) **General considerations:** The fundamental goal of providing care for women living in an area of endemic malaria infection is to prevent the condition, or complications of the condition, from developing. A pregnant woman living in an endemic area may be aware of her risk of developing the disease—she may even have it; what she might not know is that the consequences of the disease may be more detrimental during pregnancy or postpartum. In addition to providing preventive measures, the skilled provider should focus on increasing the woman's awareness with health messages and counseling about the risks to herself and her baby, as well as practical information on how to reduce these risks. *(For additional information on differential diagnosis and treatment, see MCPC.)*	When performing basic assessment, as shown in **Section 2**, focus on identification of signs/symptoms of endemic malaria infection (e.g., fever, chills/rigors, headache, muscle/joint pain, anemia, coma/convulsions). ➡ **If the woman presents with signs/symptoms of malaria illness**, treat according to local guidelines/protocols or facilitate urgent referral/transfer (**Annex 7, page 4-63**).	If the woman is in good health and her pregnancy or postpartum period is progressing normally, provide basic care as shown in **Section 2**, with the following additions and/or emphases: • Care for women in areas endemic for malaria must include the following interventions (as described in more detail below): – Intermittent preventive treatment, – Use of insecticide-treated (bed)nets, – Health messages and counseling about other preventive measures, – Early detection and treatment (according to local guidelines), and – Case management of malaria illness. • **Intermittent preventive treatment (IPT) with SP (sulfadoxine + pyrimethamine):** All pregnant women in areas of stable transmission (and, where recommended, in areas of unstable transmission) should receive three doses of IPT (a single dose of SP is 3 tablets of sulfadoxine 500 mg + pyrimethamine 25 mg) according to national protocol or the following guidelines: – Give a dose at the first antenatal care visit after fetal movement (quickening) begins, and – Give a dose at the next two antenatal care visits—but not more often than monthly. – Do **NOT** give IPT to women who are less than 16 weeks (4 months) pregnant. – Do **NOT** give SP to women who are allergic to sulfa drugs. Follow national guidelines for malaria prevention for sulfa-allergic women. **Note:** Be sure to give the woman a cup of clean water and directly observe her swallowing the tablets. • **Use of insecticide-treated (bed)nets (ITNs):** – The woman should sleep beneath an ITN (with her baby) consistently (every night), keeping it tucked well around the sleeping mat or mattress to prevent entry of mosquitoes. – The net should be re-dipped in insecticide every 6 months (or according to local guidelines) to remain effective against mosquitoes. • **Health messages and counseling** about other preventive measures (**Textbox 3-22, page 3-60**).

Textbox 3-22. Health Messages and Counseling for Women Living in Malaria-Endemic Areas

Provide the woman with the following additional health messages and counseling to help her further reduce her risk of malaria. Encourage her to ask questions if there is something she does not understand.

- Malaria is a parasitic infection that can cause spontaneous abortion, severe anemia, renal failure, pulmonary edema, and high fever in the pregnant woman, and stillbirth, low birthweight, or congenital malaria in the fetus or newborn.
- The drugs (and doses) that are prescribed to prevent and treat malaria during pregnancy are safe for both the woman and the fetus.
- Malaria is transmitted through a mosquito bite. Some ways to avoid mosquitoes are as follows:
  - Sleep every night under an ITN, starting as early as possible in pregnancy and continuing throughout the postpartum period.
  - Get rid of standing water, thick foliage, and other potential mosquito-breeding areas around the house.
  - Cover arms and legs around twilight and sunrise.
  - Use a repellant if available.
- Emphasize the importance of taking iron/folate (ferrous sulfate or ferrous fumarate 60 mg plus folate 400 mcg) daily as malaria contributes to anemia.
- If signs of malaria illness develop (such as fever, chills, joint pains, headaches, and anorexia), seek medical attention. (Advise the woman exactly where to go.)
- A woman's immunity to malaria may be compromised by HIV, so be especially alert to signs of malaria in HIV-positive women.
- It is very important to get all of the recommended doses of IPT. (Inform the woman when her next dose of IPT is due and where to go for it.)

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Living in an Area of Endemic Iodine Deficiency (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) **General considerations:** The fundamental goal of providing care for women living in an area of endemic iodine deficiency is to prevent the deficiency, or complications of the deficiency, from developing. A pregnant woman living in an endemic area may be aware of her risk of developing the deficiency—she may even have it; what she might not know is that the consequences of the deficiency may be more detrimental during pregnancy or postpartum. In addition to providing preventive measures, the skilled provider should focus on increasing the woman's awareness with health messages and counseling about the risks to herself and her baby, as well as practical information on how to reduce these risks.	When performing basic assessment, as shown in **Section 2**, focus on identification of signs/symptoms of iodine deficiency. ➡ **If the woman has a significant goiter or other signs/symptoms of iodine deficiency**, facilitate nonurgent referral/transfer after providing basic care.	If the woman is in good health and her pregnancy or postpartum period is progressing normally, provide basic care as shown in **Section 2**, with the following additions and/or emphases: • **Micronutrient supplementation:** Care for women in areas endemic for iodine deficiency must include iodine supplementation: – As early as possible in pregnancy: – Give a one-time dose of 2–3 capsules of iodine 400–600 mg by mouth, OR – Inject a one-time dose of iodine 240 mg (0.5 mL Lipiodol) IM. – If the woman received iodine supplementation during the 1st or 2nd trimester, give her another dose of iodine postpartum. **Note:** In areas with a high prevalence of iodine deficiency, it is actually best to start iodine supplementation before pregnancy in order to not miss the early, critical stage of fetal brain development; however, this practice is not always possible or feasible. • **Health messages and counseling:** Care for women in areas endemic for iodine deficiency must include health messages and counseling. Provide the woman with the following information to help her further reduce her risk of iodine deficiency. Encourage her to ask questions if there is something she does not understand. – Iodine deficiency can have many harmful effects on the woman's baby, such as mental retardation. – Iodine deficiency may be prevented by: – Increasing dietary intake of locally available foods that are rich in iodine, such as fish, shellfish, and seaweed; and – Using iodized salt instead of regular table salt.

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Living in an Area of Endemic Vitamin A Deficiency (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) **General considerations:** The fundamental goal of providing care for women living in an area of vitamin A deficiency is to prevent the deficiency, or complications of the deficiency, from developing. A pregnant woman living in an endemic area may be aware of her risk of developing the deficiency—she may even have it; what she might not know is that the consequences of the deficiency may be more detrimental during pregnancy or postpartum. In addition to providing preventive measures, the skilled provider should focus on increasing the woman's awareness with health messages and counseling about the risks to herself and her baby, as well as practical information on how to reduce these risks.	When performing basic assessment, as shown in **Section 2**, focus on identification of signs/symptoms of vitamin A deficiency (e.g., night-blindness, serum retinol concentration less than 20 mcg/dL).	If the woman is in good health and her pregnancy is progressing normally, provide basic care as shown in **Section 2**, with the following additions and/or emphases: • **Micronutrient supplementation:** Care for women in areas endemic for vitamin A deficiency must include micronutrient supplementation: **During pregnancy:** – Prescribe vitamin A supplements: – In the 1st–3rd trimesters—prescribe 10,000 IU of vitamin A once per day by mouth; OR – In the 2nd and 3rd trimesters—prescribe 25,000 IU of vitamin A once per week by mouth. – Dispense a sufficient quantity of tablets to last the woman until her next visit. – Advise the woman that she should NOT take more vitamin A than is prescribed. **During the postpartum period:** – Prescribe vitamin A supplements: ➧ **If the woman is breastfeeding**, give 200,000 IU of vitamin A in a single dose by mouth immediately postpartum up to 8 weeks' postpartum. ➧ **If the woman is NOT breastfeeding**, give 200,000 IU of vitamin A in a single dose by mouth immediately postpartum up to 6 weeks' postpartum. – Advise the woman that she should NOT take more vitamin A than is prescribed or take it more than 8 weeks after birth. • **Health messages and counseling:** Care for women in areas endemic for vitamin A deficiency must include health messages and counseling about increasing the intake of foods rich in vitamin A. Provide the woman with the following information to help her further reduce her risk of vitamin A deficiency. Encourage her to ask questions if there is something she does not understand. – Vitamin A deficiency may be prevented by increasing dietary intake of locally available foods that are rich in vitamin A, such as yellow and orange fruits and vegetables (e.g., carrots, mangoes, pumpkin, squash), red palm oil, and dark green leafy vegetables. – In the HIV-positive woman, vitamin A deficiency can increase the risk of mother-to-child transmission (MTCT) of HIV.

SPECIAL NEEDS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Living in an Area of High Prevalence of Diabetes during Pregnancy (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) **General considerations:** For women living in an area with a high prevalence of diabetes or gestational diabetes, one goal of care during pregnancy is screening of all women to detect diabetes, which can affect the pregnancy and cause serious complications in the newborn.	Perform basic assessment, as shown in **Section 2**, with the following additions and/or emphases. • During an antenatal care visit, test the woman's urine for glucose. ➡ **If the woman's urine is positive for glucose**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care. ➡ **If the woman's urine is negative for glucose:** – Continue with basic care, and – Repeat the test early in the 3rd trimester (around 28 weeks' gestation).	N/A

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Maternal, Fetal, or Newborn Complications of Previous Pregnancy, Labor/Childbirth, or the Postpartum/Newborn Period (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) **General considerations:** In some cases, a poor obstetric history may indicate a need for specialized care, including referral/transfer to a higher level of care. Similar problems may occur during this childbearing cycle or newborn period. Usually, however, no specialized care is needed. Either way, knowing about past complications helps you understand concerns/anxieties the woman may have so that you can provide reassurance; and discussing past complications provides an opportunity to reinforce the importance of having a complication readiness plan and a skilled provider at every birth.	Perform basic assessment, as shown in **Section 2**, with the following additions and/or emphases. • Determine the nature of the previous complications. • Perform additional assessment and appropriate followup, as shown in the Textbox indicated, for the following complications: – For previous convulsions, see **Textbox 3-23** (**page 3-65**) – For three or more spontaneous abortions, see **Textbox 3-24** (**page 3-65**) – For previous cesarean section or other uterine surgery, see **Textbox 3-25** (**page 3-66**) – For previous 3rd or 4th degree tear, see **Textbox 3-26** (**page 3-66**) – For previous newborn complications or death, see **Textbox 3-27** (**page 3-67**) ➡ **If the woman had any complication not mentioned above**, proceed with additional care provision (next column).	If the woman is in good health and her pregnancy, labor and birth, or postpartum period is progressing normally, no special care is needed. Provide basic care as shown in **Section 2**, with the following additions and/or emphases. • Listen to the woman's story and provide reassurance. • Provide appropriate followup as shown in the Textbox indicated, for specified complications (previous column). • **For all previous complications**, emphasize the importance of the following: – Preparing for normal birth and possible complications – Having a skilled provider to attend the birth – Adhering to the plan of care • **For previous pregnancy complications**, provide basic care with: emphasis on the importance of practicing good self-care and continuing basic care for early detection of possible problems. • **For previous labor/childbirth complications**, provide basic care with: special attention to ongoing assessment during labor and using a partograph to assess maternal and fetal well-being and identify unsatisfactory progress of labor. • **For previous postpartum complications**, provide basic care with: special attention to performing active management of the 3rd stage of labor and vigilantly monitoring the woman during the immediate postpartum. • **For previous newborn complications**, provide basic care with: special attention to immediate newborn care, including drying the baby; and emphasis on the importance of practicing good newborn care and continuing basic care for early detection of possible problems.

Textbox 3-23. Additional Assessment/Followup for Convulsions in Previous Pregnancy, Labor/Birth, or Postpartum Period

Determine the cause of convulsions based on the woman's history or medical records, if available. Some causes of convulsions require specific treatment and management.

- **If the convulsions were due to known malaria:**
  - Reinforce the importance of receiving intermittent preventive treatment (IPT) for malaria and continued use of insecticide-treated (bed)nets (ITNs);
  - Be alert for early signs/symptoms of the disease; and
  - Proceed with additional care provision (third column, **page 3-64**).
- **If the convulsions were due to known eclampsia:**
  - Reinforce importance of regular antenatal and postpartum visits to have blood pressure checked;
  - Check blood pressure every 2 hours during labor;
  - Be alert for early signs/symptoms of the disease during pregnancy and up to 24 hours' postpartum; and
  - Proceed with additional care provision (third column, **page 3-64**).
- **If the convulsions were due to known tetanus:**
  - Reinforce the importance of tetanus toxoid immunization (according to the schedule shown on **page 2-34**); and
  - Proceed with additional care provision (third column, **page 3-64**).
- **If the convulsions were due to known epilepsy or an unknown cause**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.

Textbox 3-24. Additional Assessment/Followup for Three or More Spontaneous Abortions in Previous Pregnancy

Determine when the abortions occurred (in terms of gestation):

- **If the woman has had three or more spontaneous abortions**, be especially alert to early pregnancy danger signs of vaginal bleeding or severe abdominal pain.
- **If the woman has had three or more spontaneous abortions after 14 weeks**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**), as she may need a cervical cerclage.

Textbox 3-25. Additional Assessment/Followup for Cesarean Section or Other Uterine Surgery in Previous Pregnancy or Birth

Determine the cause of the uterine surgery based on the woman's history or medical records, if available. There are several possible causes, some of which will have implications for this pregnancy and childbirth and can be used to guide development of the birth preparedness and complication readiness plan. Some possible causes include:

- Ectopic pregnancy (excision of pregnancy in cornua)
- Ruptured uterus
- Previous cesarean section, due to:
  - Cephalopelvic disproportion
  - Complications requiring immediate delivery, such as placenta previa or placental abruption
  - Twin or breech delivery
  - Fetal distress

During pregnancy:

- Reinforce the importance of the following when assisting in the development of the birth plan:
  - Giving birth in the appropriate healthcare facility (**every woman with a scarred uterus from a previous uterine surgery should give birth in a healthcare facility equipped to perform emergency obstetric surgery**);
  - Getting to the facility in early labor (some scars may rupture before labor or during the latent phase); and
  - Having adequate finances available in case surgical intervention is needed.
- Ensure that the woman gives birth in a healthcare facility equipped to perform emergency obstetric surgery (as part of her birth plan).
  - ➡ **If the woman has had one previous cesarean section with low transverse uterine incision**, she may have a "trial of labor" in a healthcare facility if judged by a skilled provider to be safe.
  - ➡ **If the woman has had a previous uterine rupture or two or more cesarean sections**, she must give birth by cesarean section.
- Proceed with additional care provision (third column, **page 3-64**).

During labor:

➡ If the woman has had a previous cesarean section or other uterine surgery, facilitate urgent referral (**Annex 7, page 4-63**).

Textbox 3-26. Additional Assessment/Followup for 3rd or 4th Degree Tear in Previous Birth

Determine whether the repair was adequate and if there were any related complications (e.g., fistula, rectal sphincter dysfunction).

➡ **If the repair was inadequate, or a fistula or rectal-sphincter dysfunction is present**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.

➡ **If the repair was adequate and there were no related complications,** proceed with additional care provision (third column, **page 3-64**).

Textbox 3-27. Additional Assessment/Followup for Previous Newborn Complications or Death

- To determine the nature of the complication or death and possible cause (e.g., complications during pregnancy, childbirth, or the postpartum/newborn period, or other maternal/newborn problems), ask these followup questions:
  - What was the timing of the complication or death in relationship to labor and birth?
  - Were there complications during childbirth (e.g., malpresentation, instrument-assisted birth, cesarean section)?
    - ➡ **If the complication or death was associated with cesarean section or other uterine surgery**, see **Textbox 3-25** (**page 3-66**).
  - Did the baby have jaundice, feeding difficulties, or other problems, conditions, etc.?
    - ➡ **If there is a history of newborn jaundice**, closely observe this newborn for the first 5 days after birth.
    - ➡ **If the newborn complication or death was apparently related to sepsis, diarrhea, feeding problems, birth injury, birth defect, preterm birth, or low birthweight**, use this information to guide further assessment and individualization of health messages and counseling.
  - Are there aspects of the woman's lifestyle (e.g., use of potentially harmful substances such as alcohol or local drugs) that may have contributed to the complication or death?
    - ➡ **If YES**, use this information to guide individualization of health messages and counseling.
  - Did the woman have other problems, conditions, etc.?
    - ➡ **If the complication or death was associated with maternal convulsions**, see **Textbox 3-23** (**page 3-65**).
    - ➡ **If the complication or death was due to maternal disease or condition**, facilitate nonurgent referral (**Annex 7, page 4-63**) after providing basic care.
- Reinforce the importance of:
  - Continuing basic care;
  - Having a skilled provider attend the birth; and
  - Returning for postpartum/newborn care.
- Proceed with additional care provision (third column, **page 3-64**).

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Multiple Pregnancy (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) *(For additional information on differential diagnosis and treatment, see MCPC.)*	Perform basic assessment, as shown in **Section 2**, with the following additions and/or emphases. • Confirm multiple pregnancy through the woman's history and physical examination: – Ask if the woman has noted either of the following during her pregnancy: – Rapid uterine growth in the 2nd and 3rd trimesters – Constant fetal movement – Examine for: – Fundal height larger than expected for gestational age – Fetal head small in relation to the size of the uterus – Palpation of three or more fetal poles and multiple small parts – Auscultation of more than one fetal heart with a difference of at least 10 beats per minute, and distinct from the maternal pulse • Perform an ultrasound examination, if available, to confirm multiple pregnancy. ➡ **If the woman is in labor**, determine the woman's stage/phase of labor (**Table 2-8, page 2-68**). ➡ **If the woman is in the 1st stage of labor**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If the woman is in the 2nd stage of labor**, proceed with additional care provision (next column). ➡ **If the woman is NOT in labor,** facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.	If the woman is in the 2nd stage of labor and in good health, no special care is needed. Provide basic care as shown in **Section 2**, with the following additions and/or emphases. • Ensure that an assistant is available to help during the birth and in the immediate care of the babies. • Start an IV infusion and slowly infuse fluids. • Monitor the fetuses by intermittent auscultation of the fetal heart tones. Record findings on the partograph using a different color to represent each fetus. • Check the presentation of the first fetus (**page 2-60**) if not already done: ➡ **If a cephalic presentation**, allow labor to progress as for a single fetus, and monitor progress in labor using a partograph. ➡ **If a breech presentation**, apply the same guidelines as for a singleton breech birth (**page 4-12**). • See Multiple Pregnancy Birth (**page 4-25**) for additional information on assisting in the birth.

SPECIAL NEEDS DURING PREGNANCY, LABOR AND BIRTH, AND THE POSTPARTUM PERIOD *(CONTINUED)*

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Postpartum Sadness ("Blues") (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) **Note:** If the woman is in severe psychological/ emotional distress, provide vigilant emotional support and comfort throughout your assessment and referral. **General considerations:** Although the birth of a new baby is a happy time for most women, some experience postpartum "blues" on days 3–6 after birth—crying, feelings of sadness or of being overwhelmed, or irritability.	Perform basic assessment, as shown in **Chapter 7** (**page 2-83**), with the following additions and/or emphases. • Assess the woman for the following signs/symptoms of postpartum depression: – Insomnia and changes in appetite – Excessive or inappropriate sadness or guilt – Feelings of worthlessness or anxiousness – Signs/symptoms lasting more than 1 week – History of postpartum depression • Assess the woman for the following signs/symptoms of postpartum psychosis: – Visual or auditory hallucinations or delusions – Morbid, suicidal, or frightening thoughts – Desire to, or belief that she will, hurt herself or the baby – Severe depression lasting more than 2 weeks – History of postpartum psychosis • Ask family members if they are concerned about the woman's emotional health and her ability to care for herself or her baby. ➡ **If ANY of the above signs/symptoms of postpartum depression is present**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care. ➡ **If ANY of the above signs/symptoms of postpartum psychosis is present**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**) before proceeding. Do not leave the woman alone at any time. ➡ **If NONE of the above signs/symptoms is present**, proceed with additional care provision (next column).	If the postpartum/newborn period is progressing normally, provide basic care as shown in **Chapter 7**, with the following additions and/or emphases. • Provide reassurance that feelings of inadequacy, worry, or fear may be normal (up to 34% of women experience some depression during the initial week after birth). For more information, see Feelings of Inadequacy, Worry, or Fear during the Postpartum Period (**page 3-15**). • Advise her to return for care if symptoms persist or worsen. • Review the danger signs and the woman's complication readiness plan. – Ensure that emergency transportation and funds are immediately accessible. – Ensure that she knows where to go for help if a danger sign arises. • Arrange to see the woman and newborn again within the week of diagnosis.

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Prelabor Rupture of Membranes or Membranes Ruptured for More Than 18 Hours before Birth (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) **General considerations:** Prelabor rupture of membranes is rupture of the membranes before the onset of labor, and can occur at any time during pregnancy. It is important to know how long the membranes have been ruptured in order to provide appropriate antibiotic treatment and/or facilitate referral/ transfer to a higher level of care.	Perform basic assessment, as shown in **Chapter 6** (**page 2-37**), with the following additions and/or emphases. • Before proceeding, confirm that the membranes have ruptured by assessing the odor of the fluids. Or, if membrane rupture is not recent or the leakage is gradual, use one of the methods shown in **Textbox 3-28** (**page 3-71**). **Warning:** Do NOT perform a digital vaginal examination as this will not help confirm rupture of membranes and can introduce infection. ➡ **If less than 37 weeks' gestation**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). See below to determine if the woman requires antibiotics before referral. • Assess the woman for the following abnormal signs/symptoms: – Fever – Foul-smelling fluid – Tender abdomen – Fetal heart rate more than 160 beats per minute if not in labor or more than 180 beats per minute if in labor ➡ **If the woman has a fever or foul-smelling fluid**, ACT NOW!—see **Table 3-4** (**page 3-116**) to begin antibiotic treatment as for amnionitis before facilitating urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If ANY of the other above abnormal signs/symptoms is present**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If labor has begun and it has been more than 18 hours since the membranes have ruptured**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). Complete the following step in addition to those in Annex 7: ➡ **If less than 37 weeks' gestation**, give the woman erythromycin 250 mg by mouth PLUS amoxicillin 500 mg by mouth every 8 hours. ➡ **If 37 weeks' gestation or more**, give the woman benzathine benzylpenicillin 2 million units IV OR ampicillin 2 g IV every 6 hours. ➡ **If labor has not begun and it has been more than 4 hours since the membranes have ruptured**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). If it is likely that the membranes will be ruptured for more than 18 hours by the time the woman reaches the referral center, complete the following step in addition to those in Annex 7: ➡ **If less than 37 weeks' gestation**, give the woman erythromycin 250 mg by mouth PLUS amoxicillin 500 mg by mouth every 8 hours. ➡ **If 37 weeks' gestation or more**, give the woman benzathine benzylpenicillin 2 million units IV OR ampicillin 2 g IV every 6 hours. ➡ **If labor has not begun, it has been less than 4 hours since the membranes have ruptured, and there are no abnormal signs/symptoms**, proceed with additional care (next column).	If more than 37 weeks' gestation, labor has not begun, it has been less than 4 hours since the membranes have ruptured, and there are no other abnormal signs/symptoms, provide basic care as shown in **Chapter 6** (**page 2-37**), with the following additions and/or emphases. • Monitor fetal heart and maternal vital signs hourly. • Palpate and monitor contractions as soon as the woman reports onset of contractions. • Ensure that the woman is drinking enough fluids/well hydrated. • While waiting for labor to begin, do NOT perform any vaginal examinations. • Once contractions are occurring at a frequency of at least three in 10 minutes and lasting at least 40 seconds each, a vaginal examination may be performed to determine if the woman is in labor. A vaginal examination may also be performed if there are signs of fetal distress or the woman has the urge to push.

Textbox 3-28. Methods for Confirming Rupture of Membranes

- Place a perineal pad/cloth over the vulva and examine it 1 hour later visually and by odor. Amniotic fluid before labor will usually appear clear (or greenish, if meconium is present) and have a typical odor. Urine, by contrast, will be yellow in color and have a characteristic odor.
- Use a high-level disinfected speculum for examination of the vagina and cervix:
  - Fluid may be seen coming from the cervix or forming a pool in the posterior vaginal fornix.
  - Ask the woman to cough. This may cause a gush of fluid from the cervix, which can be seen with the speculum.
- Perform the following tests:
  - The **nitrazine test** works by detecting the alkalinity of amniotic fluid (vaginal secretions and urine are both acidic). Touch a piece of nitrazine paper against the fluid pooled on the speculum blade or taken by using a sterile cotton-tipped applicator. A change from yellow to blue indicates the presence of amniotic fluid. Blood and some vaginal infections may give false-positive results.
  - For the **ferning test**, obtain an amniotic fluid sample from the posterior vaginal fornix during a speculum examination using a sterile cotton-tipped applicator. Spread some fluid on a slide, let it dry, and examine it under a microscope. Amniotic fluid crystallizes and may leave a fern-leaf pattern. False negatives are frequent.

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Size-Date Discrepancy through 22 Weeks' Gestation (Fundal height/uterine size is larger or smaller than expected for gestational age.) (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) **Note:** Use locally appropriate fetal growth standards for fetal growth assessment.	Perform basic assessment, as shown in **Chapter 5** (**page 2-5**), with the following additions and/or emphases. • Confirm measurement with a second skilled provider, if possible and appropriate. • Confirm pregnancy, by urine or serum pregnancy test, if necessary. • Confirm gestational age through menstrual and contraceptive history, signs/symptoms of pregnancy, presence of fetal movements or fetal heart tones, abdominal examination (for gestational age "landmarks," see **page 2-17**), and/or pelvic examination. ➡ **If an error in calculation of dates is found**, correct the estimated date of childbirth and the present number of weeks' gestation based on the revised date. Advise the woman of her new dates. Proceed with basic care provision. ➡ **If an error in calculation of dates is NOT found**, question and/or examine the woman for the following signs/symptoms: – Vaginal bleeding – Abdominal cramping/pain/tenderness – Dilated cervix – Cervical motion tenderness – Tender adnexal mass – Soft, boggy uterus larger than expected for dates – Recent history of malaria or other severe disease that causes fever ➡ **If ANY of the above signs/symptoms is present**, ACT NOW!—perform Rapid Initial Assessment (**page 3-90**) and then provide care for Vaginal Bleeding in Early Pregnancy (**page 3-102**) before proceeding. ➡ **If NONE of the above signs/symptoms is present and dates are correct**, proceed with additional care provision (next column).	If the woman is in good health and her pregnancy is progressing normally, provide basic care as shown in **Chapter 5** (**page 2-5**), with the following additions and/or emphases. • Provide reassurance. • Have the woman return in 2 weeks to re-measure uterine size. Some women have a growth spurt between 20 and 24 weeks, so you may notice that she is large for dates at one visit, but then the growth evens out. ➡ **If there is still more than 2 cm difference in measurement (or more than 2 weeks' difference in uterine size) after 2 weeks**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Size-Date Discrepancy after 22 Weeks' Gestation (Fundal height/uterine size is larger or smaller than expected for gestational age.) (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) **Note:** Use locally appropriate fetal growth standards for fetal growth assessment.	Perform basic assessment, as shown in **Section 2**, with the following additions and/or emphases: • Confirm measurement with a second skilled provider, if possible and appropriate. ➡ **If there is still more than 2 cm difference in measurement (or more than 2 weeks' difference in uterine size)**, continue as follows. **Small for dates:** • Assess for the following conditions: – Fetal death (e.g., absent fetal movements, absent fetal heart tones) ➡ **If absent fetal movements**, see **Textbox 3-43** (**page 3-111**) before proceeding. ➡ **If absent fetal heart tones**, see **Textbox 3-44** (**page 3-112**) before proceeding. – Transverse lie ➡ **If the baby is in transverse lie and the woman is greater than 36 weeks' gestation and is NOT in labor**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**). ➡ **If the baby is in transverse lie and the woman is greater than 36 weeks' gestation and IS in labor**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If the baby is in transverse lie and the woman is less than 36 weeks' gestation and is NOT in labor**, proceed with additional care provision (next column). ➡ **If the baby is in transverse lie and the woman is less than 36 weeks' gestation and IS in labor**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If NONE of the above conditions are present**, proceed with additional care provision (next column). **Large for dates:** • Assess for the following signs: – Palpation of multiple fetal parts – Auscultation of more than one fetal heart – Palpation of a single large fetus (i.e., too large for pelvis) – Palpation of too much amniotic fluid ➡ **If ANY of the above signs is present and the woman IS in labor**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**) before proceeding. ➡ **If the woman is in advanced labor and it is likely that she will give birth before referral/transfer can occur and multiple pregnancy is suspected**, see Multiple Pregnancy (**page 3-68**). ➡ **If NONE of the above signs are present and the woman is NOT in labor**, proceed with additional care provision (next column).	If the labor/childbirth is progressing normally, provide basic care as shown in **Section 2**, with the following additions and/or emphases. **Small for dates:** • Provide reassurance. • Be alert for signs of maternal and fetal distress. • Be alert for a very low birthweight baby (less than 2 kg), who requires urgent referral/transfer (**Annex 7, page 4-63**). • Be alert for a low birthweight baby (2–2.5 kg), who has special needs that require additional care (**page 3-85**). • **If the baby is in transverse lie and the woman is less than 36 weeks' gestation and is NOT in labor**, followup after 36 weeks to recheck the baby's lie. **Large for dates:** • Provide reassurance. • Use a partograph for early detection of obstructed labor. • Be alert for signs of maternal and fetal distress. • Be alert for a large baby (more than 4 kg), who has special needs that require additional care (**page 3-84**).

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Stillbirth or Newborn Death (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) **General considerations:** Stillbirth or the death of a newborn is very disturbing for all concerned and evokes a range of emotions that can have significant consequences. The woman whose baby is born dead or whose newborn has died is often placed in the ward with other women and their healthy babies. This may worsen the pain and grief the woman and her family are enduring. In addition, healthcare workers often tend to avoid the woman who has given birth to a stillborn or to a baby who died at, or after, birth. Attention is often lavished upon the woman with a healthy baby, while the woman whose baby has died may be left to grieve alone and without basic regular assessment and care. How the woman and each member of the family reacts to the death of a newborn may depend on: • Social situation of the woman/couple and their cultural and religious practices, beliefs, and expectations • Personalities of the people involved and the quality and nature of social, practical, and emotional support • Marital status of the woman and her relationship to her partner • Emotional and physical support received from skilled providers • Cause of death	Perform basic assessment just as you would for a woman who has a living baby, as shown in **Chapter 7** (**page 2-83**), with the following additions and/or emphases. • Assess the emotional/psychological reactions of the woman and family. Common reactions to newborn death include: – Denial (feelings of "it can't be true") – Guilt regarding perceived responsibility – Anger (which may be directed toward healthcare workers but often masks parents' anger at themselves for "failure") – Depression and loss of self-esteem, which may be long-lasting – Isolation (feeling of being different or separate from others), which may be reinforced by healthcare workers if they avoid people who have experienced loss – Disorientation • Be alert to any signs that the woman may hurt herself. ➡ **If signs/symptoms of postpartum depression/ psychosis**, facilitate urgent referral/transfer (**Annex 7, page 4-63**). • Observe the interactions between the woman and her partner/ family to assess the support she has and to detect any harmful/destructive patterns that may require intervention.	If the woman is in good health and the postpartum period is progressing normally, provide **the same basic care given to the woman with a living baby** as shown in **Chapter 6**, with the following additions and/or emphases. • Follow additional guidelines for interpersonal skills (**Textbox 3-29, page 3-75**). • Provide help with the grieving process: – Allow the parents to see and hold the baby after death **if this is appropriate**. Avoid separating the parents and baby too soon (before they indicate they are ready), as this can delay the grieving process. – Where it is a custom to name the baby at birth, encourage the parents (and facility staff) to call their baby by the name they have chosen. – If culturally appropriate, offer the parents some mementos of the baby, such as a name tag, a lock of hair, or a palm print, as this will help with the grieving process. • Assist with final arrangements: – Even if the baby will not be buried by the family, allow the woman/family to prepare the baby for the burial if they wish. – Encourage locally accepted burial practices and ensure that medical procedures (such as autopsies) accommodate them. – Help the family as much as possible with all paperwork necessary to register the baby's birth and death. • Arrange to see the family a few weeks after the death to answer questions and provide any necessary support in the grieving process. • Link the family to support provided by a religious person or a community support group if the family desires.

Textbox 3-29. Interpersonal Skills for Use with a Woman and Family with a Stillbirth or Newborn Death

Remember: Although the circumstances surrounding each newborn death are unique and there is no one method for approaching all families, communication and genuine empathy are the most important keys to effective care in such situations. When providing basic care to the woman whose baby has died:

- Listen to the family's concerns and questions and communicate clearly, keeping the family in mind.
- Provide the necessary privacy when talking to the family and when they are talking with each other.
- If you do not speak a language the family understands, use a sensitive translator. Give simple, honest information about the baby's death and what has happened; understanding the situation can reduce their anxiety and guilt and help with the grieving process.
- Ask open-ended questions to assess the parents' need for more information.
- Be honest. Do not hesitate to admit what you do not know. Maintaining trust matters more than appearing knowledgeable.
- Use non-verbal communication techniques, such as nodding your head, to show the family that you are focusing on them and listening to their fears and sadness.
- Show that you care about the woman and her family and that you respect them.
- Express your feelings of concern for the family and encourage them to express their emotions, if culturally acceptable.
- Respect traditional beliefs and customs and accommodate the family's needs as much as possible.
- Do not place blame on the family if there is a question of neglect or intervening too late.
- Remember to care for other facility staff who themselves may experience guilt, grief, confusion, and other emotions.

For more information on Interpersonal Skills, see **page 1-42**.

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Syphilis (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) **Note:** A woman who reports a positive test for syphilis (whether or not she has signs/symptoms of syphilis, and whether or not she has a record of the test), and has received no treatment or inadequate treatment, MUST be treated at this time. Her baby will also need evaluation and treatment immediately after birth.	Perform basic assessment, as shown in **Section 2**, with the following additions and/or emphases. **Woman** • During assessment, identify signs/symptoms of syphilis in the woman: – Chancre (ulcerous lesion) at the site of infection, usually around the genitalia – Rash on the palms of the hands and/or soles of the feet – Patchy hair loss on the scalp, eyebrows, and/or eyelashes – Low-grade fever, sore throat, headache, loss of appetite – Condylomata lata (flat, moist, wart-like lesions around the genitalia) ➡ **If the woman has signs/symptoms of syphilis (but has not been diagnosed)**, perform a serologic test for syphilis (RPR/VDRL; **page 4-44**), even if she was tested earlier in pregnancy. ➡ **If the woman tests positive for syphilis**, proceed with additional care provision (next column). ➡ **If the woman has been diagnosed with syphilis**, ask whether she received treatment for syphilis and determine whether treatment was adequate (i.e., 2.4 million units of penicillin at least 30 days before birth). ➡ **If the woman has been diagnosed with syphilis and has not been adequately treated**, proceed with additional care provision (next column). ➡ **If the woman has been diagnosed with syphilis but has been adequately treated, shows no signs/symptoms of syphilis, AND has a negative RPR/VDRL**, no additional care is needed.	If the pregnancy, labor, birth, and/or postpartum period are progressing normally, provide basic care as shown in **Section 2**, with the following additions and/or emphases. **Woman** • Provide treatment according to the following guidelines. ➡ **If the woman has been diagnosed with syphilis and has not been adequately treated:** ➡ **If she has newly acquired signs/symptoms of syphilis**, give the woman benzathine benzylpenicillin 2.4 million units IM (1.2 million units in each buttock at the same visit). ➡ If she has signs/symptoms of syphilis of unknown duration, give the woman benzathine benzylpenicillin 2.4 million units IM once per week for 3 weeks (1.2 million units in each buttock at the same visit.) – Follow local country protocols for followup management of the woman with a positive RPR/VDRL. (WHO recommends that after treatment, quantitated non-treponemal serologic tests should be performed at monthly intervals until birth, and the woman re-treated if there is serologic evidence of re-infection or relapse.) Be sure that the woman knows that she should have her antibody titers followed postpartum. • Exchange all information in a private setting, and reassure the woman that the conversation will be kept confidential. • Give emotional support to the woman and help her deal with possible effects of syphilis on the newborn. • Provide additional health messages and counseling on the following: – Mode of transmission and possible effects of syphilis on the woman and her baby: – Untreated syphilis can cause the woman to lose her baby during this or a subsequent pregnancy. – The baby may be born seriously ill with congenital anomalies. – Importance of consistent condom use to prevent STIs – Importance of having sexual partners tested and treated for syphilis • Teach the woman to watch for danger signs in the baby that could indicate congenital syphilis (see below), and seek medical care immediately if any of these signs appear.

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Syphilis, *continued*	**Newborn** ➡ **If the mother was diagnosed with syphilis and was not treated, or was not treated adequately, or her treatment status is unknown or uncertain**, conduct additional assessment as follows: – During physical examination, look for signs of syphilis: – Generalized edema (body swelling) – Blistering skin rash on the palms and soles – Profuse runny nose (“snuffles”) – Abdominal distention (from enlarged liver and/or spleen, or from fluid in the abdomen) ➡ **If the newborn shows signs of syphilis**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If the newborn shows no signs of syphilis**, proceed with additional care provision (next column). ➡ **If the mother was adequately treated (2.4 million units of penicillin at least 30 days before birth) AND the newborn shows signs no of syphilis**, no additional care is needed.	**Newborn** • Provide treatment according to the following guidelines: – Give the baby antibiotics: – procaine benzylpenicillin 100 mg/kg body weight IM as a single injection, OR – benzathine benzylpenicillin 75 mg/kg body weight IM as a single injection. • Followup in 4 weeks to examine the baby for signs of congenital syphilis.

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Tears and Incisions during the Postpartum Period: • Abdominal incisions • Vaginal or perineal tears • Episiotomy • Defibulation (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.)	Perform basic assessment, as shown in **Chapter 7**, with the following additions and/or emphases. **Abdominal incision:** • Inspect the incision/sutures for signs of infection. ➡ **If there is pus, redness, or pulling apart of the skin edges of the suture line**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If there are no signs of infection**, proceed with additional care provision (next column). **Vaginal or perineal tears, episiotomy, or defibulation:** • In sufficient light, inspect the genital area. ➡ **If unrepaired 1st or 2nd degree tear or episiotomy:** ➡ **If less than 24 hours since birth**, see Repair of 1st or 2nd Degree Vaginal and Perineal Tears (**page 4-38**) or Repair of Episiotomy (**page 4-37**). ➡ **If more than 24 hours since birth**, allow the incision or tear to heal unrepaired and proceed with additional assessment. ➡ **If unrepaired 3rd or 4th degree tear**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). • Inspect the genital area for the following signs/symptoms: – Pus, redness, or pulling apart of the skin edges of the suture line – Pus or drainage from unrepaired tear, episiotomy, or defibulation – Severe pain from tear, episiotomy, or defibulation ➡ **If ANY of the above signs/symptoms is present**, ACT NOW!—see Pus, Redness, or Pulling Apart of Skin Edges of Perineal Suture Line; Pus or Drainage from Unrepaired Tear; Severe Pain from Tear or Episiotomy (**page 3-118**) before proceeding. ➡ **If NONE of the above signs/symptoms is present**, proceed with additional care provision (next column).	If the postpartum period is progressing normally, provide basic care as shown in **Chapter 7**, with the following additions and/or emphases. **Abdominal incision:** • Advise the woman to followup as directed with the skilled provider who performed the procedure. ➡ **If the woman reports (or there are obvious signs of) any problems related to the procedure**, facilitate urgent referral/transfer (**Annex 7, page 4-63**). **Vaginal or perineal tears, episiotomy, or defibulation:** • Ensure good perineal/genital hygiene to prevent infection (see **page 2-29**). • Advise the woman as follows: – Breastfeed while lying on her side rather than sitting (**page 4-47**). – Wait to resume sexual intercourse for at least 2 weeks after birth or until: there is no lochia rubra or serosa, lochia alba has diminished or decreased, the vagina and perineum are healed, and there is no perineal pain. ➡ **If the woman has burning on urination due to urine passing over the injured perineum**, advise her that this will improve as the incision or tear heals. ➡ **If the woman has a repaired 3rd or 4th degree tear or episiotomy**, advise her to increase her intake of fluids (2–3 liters per day), fruits, vegetables, and whole grains or use a stool softener to prevent constipation or prevent further damage or pain from constipation. • **ALL tears and incisions:** Advise her to return for care if signs/symptoms persist or worsen, or if signs/symptoms of infection develop. • Review the danger signs and the woman's complication readiness plan. – Ensure that emergency transportation and funds are immediately accessible. – Ensure that she knows where to go for help if a danger sign arises.

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Urinary Retention during Labor and the Postpartum Period (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) **General considerations:** The pressure of the fetus's head on the urethra and bladder during prolonged labor can lead to bruising, edema, and even spasm of the internal sphincter of the bladder. Any of these effects can result in urinary retention in labor or the early postpartum period.	Perform basic assessment, as shown in **Chapter 6 or 7** (**page 2-37 or 2-83**), with the following additions and/or emphases. • Assess the woman for fever (temperature 38°C or more). ➡ **If the woman has a fever**, ACT NOW!—see Fever or Foul-Smelling Vaginal Discharge (**page 3-115**) before proceeding. ➡ **If the woman does not have a fever**, proceed with additional assessment. • Assess the woman (ask about and observe) for urine leaking from the vagina. ➡ **If urine is leaking from her vagina**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care. ➡ **If there is no urine leaking from her vagina**, the probable diagnosis is urinary retention. Proceed with additional care provision (next column).	If labor or the postpartum period is progressing normally, provide basic care as shown in **Chapter 6 or 7** (**page 2-37 or page 2-83**), with the following additions and/or emphases. • Help the woman urinate. – Assist her in finding a comfortable position—perhaps out of bed. – Provide privacy for her. – Run tap water that she can hear, and/or pour warm water over her vulva to help her urinate. ➡ **If all noninvasive methods to help her urinate are unsuccessful:** – **During labor**, insert a straight catheter using aseptic technique, drain urine, and remove catheter. – **During the postpartum period:** – Insert a self-retaining catheter using aseptic technique. ➡ **If it appears that the bladder contains more than one liter of urine**, drain the urine at intervals, no more than 1/2 liter at a time. – Leave the catheter in for 24–48 hours, draining into a closed bag or container. – Give amoxicillin 500 mg by mouth every 8 hours for 3 days OR trimethoprim/sulfamethoxazole (160 mg/800 mg) by mouth every 12 hours for 3 days. **Note:** The woman may need much encouragement to pass urine frequently because doing so may be painful. • Encourage her to increase her fluid intake. • Advise her to return for care if symptoms persist or worsen, OR if she notices burning on urination, fever, or flank/loin pain—which may indicate urinary tract or kidney infection. • Review the danger signs and the woman's complication readiness plan. – Ensure that emergency transportation and funds are immediately accessible. – Ensure that she knows where to go for help if a danger sign arises.

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Uterine Subinvolution (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) **Note:** Uterine subinvolution is defined as an increase in lochia or when the uterus has increased, or is not decreasing, in size (as shown in **Figure 2-20, page 2-99**) since the last postpartum visit.	Perform basic assessment, as shown in **Chapter 7**, with the following additions and/or emphases. • Assess the woman for fever (temperature of 38°C or more). ➧ **If the woman has a fever**, ACT NOW!—perform Rapid Initial Assessment (**page 3-90**) before proceeding. ➧ **If the woman does not have a fever**, continue with additional assessment. • Assess the woman for abdominal pain. ➧ **If the woman has abdominal pain**, **ACT NOW!**—perform Rapid Initial Assessment (**page 3-90**) before proceeding. ➧ **If the woman does not have abdominal pain**, continue with additional assessment. • Assess the woman's lochia/bleeding. ➧ **If there is heavy bleeding**, ACT NOW!—perform Rapid Initial Assessment (**page 3-90**) before proceeding. ➧ **If there is no more lochia than normal**, proceed with additional care provision (next column).	If there is no fever, abdominal pain, or heavy bleeding and her postpartum period is progressing normally except that the uterus is still not decreasing in size and/or the lochia is not decreasing in amount, provide basic care as shown in **Chapter 7** (**page 2-83**), with the following additions and/or emphases. • Give a uterotonic drug (**Table 3-3, page 3-106**), preferably ergometrine 2 mg by mouth 3 times per day for 3 days. • Review the danger signs and the woman's complication readiness plan: – Ensure that emergency transportation and funds are immediately accessible. – Ensure that she knows where to go for help if a danger sign arises.

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Violence against Women (For the rationale for providing additional care to a woman with this special need, see **Table 1-12, page 1-31**.) **Note:** While assessing and caring for the woman who has suffered from violence or abuse, focus on the interpersonal skills outlined in **Textbox 3-30** (**page 3-82**). **General considerations:** Violence against women affects both their physical and mental health. Although you may not have had training in how to deal with these problems, you may confront them as you counsel, assess, and care for women seeking care during pregnancy, labor and birth, or the postpartum period. Your role in responding to violence against women is critical but limited. Four especially important goals are to: • Identify any abuse-related conditions or injuries, • Help her recognize abuse in her own life and encourage her to take steps to protect herself and her children, • Ensure that she feels safe while receiving care, and • Encourage and/or facilitate linkage to appropriate local sources of support.	Perform basic assessment, as shown in **Section 2**, with the following additions and/or emphases. • Recognize the signs of violence against women. The first step in responding to violence against women is to identify it. Even if the woman does not admit to abuse when specifically asked, there are other factors that may suggest abuse, for example: – The woman has a history of abuse (as stated by her or as noted on her medical record). – She has a history of depression and/or suicide attempts. – Her explanation of cause is inconsistent with any injuries observed. – She has wounds, bruises, and lesions on the abdomen, chest, or genital area. – She is malnourished, has unexplained pain, or appears to be in generally poor condition. – She is often late for visits or attends them sporadically, or she may not have received care during pregnancy. • Determine the nature of the abuse by asking about it: – What has been done to her? – How long has it been going on? – Has it gotten worse? – How is it currently affecting her life? • Use this information to help individualize health messages and counseling and other aspects of basic care provision. • Keep the following in mind: – The woman may deny abuse even if it is occurring, and she may feel uncomfortable discussing abuse in front of her companion. It is very important, therefore, to talk with her alone (e.g., ask the companion to leave the room until you have addressed this issue). If she says that she is not being abused but you strongly suspect she is, let her know that "the door is open" and that she can talk to you about this issue at any time. – If the woman is suffering from abuse, be aware that she may feel uncomfortable taking her clothes off for the physical examination or being examined during labor. Give her extra time, if needed, to undress, and ensure adequate draping. Be especially careful to ask her permission/consent to touch her before each examination.	If the woman is in good health and her pregnancy, labor and birth, or postpartum period is progressing normally, provide basic care as shown in **Section 2**, with the following additions and/or emphases. **Health Messages and Counseling** If the woman reports abuse, listen attentively to her and respond in a sympathetic, supportive, and nonjudgmental manner: • Validate her experience; avoid denying or minimizing the abusive experience or situation. • Acknowledge the injustice of the abuse and emphasize that it is not her fault by making statements such as: "Sometimes people feel it's okay if they are hit or abused. But this is something that should not happen. No one ever deserves to be hit or abused in any way." • Help the woman to feel that she is not alone: – Asking about violence is also an intervention in responding to violence. Women often feel alone and isolated, so being able to confide in someone about the violence is often a step toward admitting that there is a problem, as well as seeking and accepting help. – Make reassuring statements, such as, "I'm glad that you have told me this. We often think we are alone, but abuse happens to many women." • Help her to feel empowered by encouraging her and sharing information with her. **Safety Action Plan** Help the woman develop a "safety action plan," which can help her to protect herself and her unborn child from incidents of abuse. This plan may include all items shown in **Textbox 3-31** (**page 3-82**). **Linkage to Appropriate Local Sources of Support** Facilitate linkage to appropriate local sources of support (**Textbox 3-9, page 3-40**) with the following addition: • Faith-based organizations and local nongovernmental organizations may provide services needed by the woman. Such organizations may also be a mechanism for facilitating adoption for victims of rape or others with unwanted babies.

Textbox 3-30. Additional Interpersonal Skills for Women Suffering from Violence

When providing basic care to a pregnant woman or new mother who is suffering from violence:

- Help her recognize her right to high-quality care: be sure that she feels welcome, knows what services are available, and understands how to access these services.
- Demonstrate sympathy and understanding.
- Help her feel safe by ensuring a pleasant environment and using a kind, nonjudgmental approach to communication.
- Ensure complete confidentiality and privacy during her visits.
- Respect her right to make decisions about the care she receives. Allow her the time she needs to make important decisions.
- Be aware of, and gently responsive to, a possible fear of vaginal examinations or any invasive procedure.

For more information on **Interpersonal Skills**, see **page 1-42**.

Textbox 3-31. Safety Action Plan for Women Suffering from Violence

Help the woman develop a "safety action plan," which can help her to protect herself and her baby from incidents of abuse. This plan may include the following steps:

- Identify neighbors, friends, or relatives who are willing to offer assistance or a "refuge."
- Tell a trusted neighbor about the violence, and ask that person to call the police or other trusted authority if loud noises are heard coming from the house.
- Know the contact information for community agencies that can provide emergency assistance.
- Keep a bag packed with money, clothes, and important papers in case it is necessary to leave home quickly.
- Plan and rehearse an "escape route."

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Cuts or Abrasions that Are Not Bleeding (For the rationale for providing additional care to a baby with this special need, see **Table 1-12, page 1-31**.) *(For additional information on differential diagnosis and treatment, see MNP.)*	Perform basic assessment, as shown in **Chapter 8** (**page 2-109**), with the following additions and/or emphases. ➡ **If the cuts or abrasions are bleeding**, see Bleeding (**page 3-126**) before proceeding. • Be alert for signs of a more serious condition: – Swelling or tenderness over bone or joint – Bruises – Pallor – Inconsolable crying ➡ **If ANY of the above signs is present**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**) before proceeding. ➡ **If NONE of the above signs is present**, proceed with additional care provision (next column).	If the newborn is in good health and the newborn period is progressing normally, provide basic care as shown in **Chapter 8** (**page 2-109**), with the following additions and/or emphases. • Clean the cut or abrasion using gauze soaked in an antiseptic solution (e.g., 2.5% polyvidone iodine; note that other antiseptic solutions may sting). • Keep the wound clean and dry and instruct the woman how to do so. ➡ **If the baby has a cut**, cover the cut with a simple bandage to keep it clean and dry. ➡ **If the edges of the cut are open**, pull them closed with a butterfly bandage. • Ask the woman to bring the baby back if she sees signs of local infection (e.g., redness, heat, swelling of skin around cut or abrasion). ➡ **If signs of local infection are seen**, treat with a topical antibiotic ointment 3 times per day for 5 days, leaving the cut or abrasion uncovered. • Help the woman determine the cause of the cuts or abrasions so that they can be prevented in the future. • Have the woman return with the baby in 1 week. If there is no infection, no further followup is needed.

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Large Baby (4 kg or more) (For the rationale for providing additional care to a baby with this special need, see **Table 1-12, page 1-31**.) *(For additional information on differential diagnosis and treatment, see MNP.)*	Perform basic assessment, as shown in **Chapter 8**, with the following additions and/or emphases. • Determine whether the baby's mother has been diagnosed with diabetes. • Observe the baby closely for the following problems, which are more likely to occur in a large baby: – Birth injuries—be sure that the baby is able to move all limbs and that there are no lumps or knots on any bones. – Signs of low blood glucose—be alert for extreme lethargy (sleepiness), apnea, convulsions, or jitteriness. – Meconium aspiration—if thick meconium is present in the amniotic fluid, be alert for signs of breathing difficulty. – Respiratory distress—be alert for signs of breathing difficulty. ➡ **If the baby's mother has diabetes and the baby is less than 3 days of age**, **OR the baby has ANY of the above problems**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If the baby's mother does NOT have diabetes, and the baby has NONE of the above problems**, proceed with additional care provision (next column).	If the newborn is in good health and the newborn period is progressing normally, provide basic care as shown in **Chapter 8** (**page 2-109**), with the following additions and/or emphases. • Be sure that the baby starts breastfeeding within the first hour and that s/he is allowed to suckle as long and as frequently as desired.

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Low Birthweight Baby (less than 2.5 kg) (For the rationale for providing additional care to a baby with this special need, see **Table 1-12, page 1-31**.) **Note:** A baby who weighs less than 2.5 kg at birth is generally considered low birthweight, regardless of gestational age. In some populations, however, smaller babies are not considered to be low birthweight, and local standards will need to be established. Whatever the cause of low birthweight or the maturity of the low birthweight baby, the small baby requires additional care.	Perform basic assessment, as shown in **Chapter 8** (**page 2-109**), with the following additions and/or emphases. ➧ **If the baby weighs less than 2 kg**, **ACT NOW!**—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➧ **If the baby weighs 2–2.5 kg**, observe the baby every 15 minutes during the 4th stage and be alert to the following problems, which are more likely to occur in a low birthweight baby: – Breathing problems—if the baby is preterm, the lungs may not be mature. – Low body temperature—the low birthweight baby has little or no fat for insulation, and the temperature regulating system of the preterm baby is immature. – Feeding problems—the low birthweight baby may have little strength to suckle vigorously and has a small stomach so must feed more frequently. ➧ **If the baby has ANY of the above problems**, ACT NOW!—perform Newborn Rapid Initial Assessment (**page 3-96**) before proceeding. **Note:** The baby with a low birthweight is more at risk of infection and jaundice, but these problems may not be evident during the first 2 hours after birth.	If the newborn is in good health and the newborn period is progressing normally, provide basic care as shown in **Chapter 8** (**page 2-109**), with the following additions and/or emphases. • Keep the baby in skin-to-skin contact between the woman's breasts. Keep the baby's head covered, and place a secure cover over the woman and baby. • Ensure that the room is kept warm (at least 25°C). • Ensure that the baby starts breastfeeding within the first hour and that s/he nurses at least every 2–3 hours. • Ensure that the baby receives vitamin K_1 1 mg IM within the first 6 hours after birth. • Keep the woman well-informed of the baby's condition and explain the reasons the baby may have special problems with breathing, feeding, or keeping warm. • To determine if the baby is maintaining warmth, the woman can check the baby's hands and feet each time she breastfeeds. If they are cold, she can keep the baby in skin-to-skin contact until the next time she breastfeeds. This contact also helps to stabilize the baby's breathing, protects the baby from infection, and enhances breastfeeding.
Mother with Hepatitis B (For the rationale for providing additional care to a baby with this special need, see **Table 1-12, page 1-31**.) *(For additional information on differential diagnosis and treatment, see MNP.)*	N/A	If the newborn period is progressing normally, provide basic care as shown in **Chapter 8** (**page 2-109**), with the following additions and/or emphases: • Give the first dose of 0.5 mL hepatitis B vaccine IM in the upper thigh as soon as possible after birth (preferably within 12 hours after birth). • If available, give hepatitis immune globulin 200 IU IM in the other thigh within 24 hours after birth. • Reassure the woman that it is safe to breastfeed. • Advise the woman to initiate or continue care for herself with an appropriate specialist.

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Mother with history of rupture of membranes for more than 18 hours before birth and/or uterine infection or fever during labor or birth (For the rationale for providing additional care to a baby with this special need, see **Table 1-12, page 1-31**.) *(For additional information on differential diagnosis and treatment, see MNP.)*	Perform basic assessment, as shown in **Chapter 8** (**page 2-109**), with the following additions and/or emphases. **Baby 3 days old or less:** ➡ **If the mother had rupture of membranes for more than 18 hours without uterine infection or fever during labor or birth**, assess the newborn for the following **signs of sepsis:** – Foul smell – Poor feeding/suckling after having fed well – Breathing difficulty (e.g., respiratory rate less than 30 or more than 60 breaths per minute, grunting on expiration, chest indrawing) – Severe vomiting – Diarrhea – Floppiness or lethargy – Unstable body temperature – Convulsions/spasms – Abdominal distention ➡ **If ANY signs of newborn sepsis**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**) before proceeding. Complete the following step in addition to those in Annex 7: – Give the baby ampicillin 50 mg/kg body weight IM PLUS gentamicin 5 mg/kg body weight IM (if 2 kg or more) or 4 mg/kg body weight IM (if less than 2 kg). ➡ **If NO signs of newborn sepsis**, proceed with additional care provision (next column). ➡ **If the mother had uterine infection or fever during labor or childbirth**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**) before proceeding. Complete the following step in addition to those in Annex 7: – Give the baby ampicillin 50 mg/kg body weight IM PLUS gentamicin 5 mg/kg body weight IM (if 2 kg or more) or 4 mg/kg body weight IM (if less than 2 kg). **Baby more than 3 days old:** ➡ **If ANY signs of newborn sepsis (see list above)**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**) before proceeding. Complete the following step in addition to those in Annex 7: – Give the baby ampicillin 50 mg/kg body weight IM PLUS gentamicin 5 mg/kg body weight IM (if 2 kg or more) or 4 mg/kg body weight IM (if less than 2 kg). ➡ **If NO signs of newborn sepsis (see list above)**, no additional care is necessary.	If the newborn is in good health and the newborn period is progressing normally, provide basic care as shown in **Chapter 8** (**page 2-109**), with the following additions and/or emphases. • Observe the baby for signs of sepsis every 4 hours for 5 days. • Teach the woman to watch for signs of sepsis and to seek medical care immediately if any of these signs appear.

SPECIAL NEEDS OF THE NEWBORN PERIOD *(CONTINUED)*

SPECIAL NEED	ADDITIONAL ASSESSMENT	ADDITIONAL CARE PROVISION
Mother with HIV (For the rationale for providing additional care to a baby with this special need, see **Table 1-12, page 1-31**.)	For information on additional assessment for the baby of a woman who is HIV-positive, see **page 3-51**.	For information on additional care provision for a baby of a woman who is HIV-positive, see **page 3-51**.
Mother with Syphilis (For the rationale for providing additional care to a baby with this special need, see **Table 1-12, page 1-31**.) *(For additional information on differential diagnosis and treatment, see MNP.)*	For information on additional assessment for the baby of a woman with syphilis (diagnosis or signs/symptoms of), see **page 3-76**.	For information on additional care provision for the baby of a woman with syphilis (diagnosis or signs/symptoms of), see **page 3-76**.
Mother with Tuberculosis (For the rationale for providing additional care to a baby with this special need, see **Table 1-12, page 1-31**.) *(For additional information on differential diagnosis and treatment, see MNP.)*	Perform basic assessment, as shown in **Chapter 8**, with the following additions and/or emphases. • Determine whether the woman's infection is active (fever; night sweats; weight loss; chronic, productive cough; pleurisy; positive sputum culture or X-ray). • Determine whether she was diagnosed (sputum-positive) within 2 months before the birth. • Determine whether she was treated for less than 2 months before the birth. ➡ **If the mother has active tuberculosis and has not been treated or was treated for less than 2 months before birth, OR if the mother was diagnosed (sputum-positive) within 2 months of the baby's birth**, treat according to local protocol and proceed with additional care provision (next column).	If the newborn is in good health and the newborn period is progressing normally, provide basic care as shown in **Chapter 8** (**page 2-109**), with the following additions and/or emphases. • Immunizations and other preventive measures: – Do NOT give BCG at birth. – Give the baby prophylactic isoniazid 5 mg/kg body weight daily for 6 months. • Followup: – Counsel the woman to have the baby re-evaluated by a specialist at the age of 6 weeks to check for signs/symptoms of tuberculosis and to perform an X-ray of the chest. – Two weeks after the 6-month treatment with isoniazid therapy, give BCG (if there are no signs of tuberculosis). – Advise the woman to initiate or continue care for herself with an appropriate specialist.

CHAPTER ELEVEN

LIFE-THREATENING COMPLICATIONS

OVERVIEW

This chapter contains guidance for skilled providers on how to respond to life-threatening complications (as described on **page 1-37**) that they may encounter when caring for women and their newborn babies during pregnancy, labor and childbirth, and the postpartum/newborn period. A woman or newborn who presents with a **danger sign** (a sign/symptom that may indicate a life-threatening complication) during the quick check (**Annex 7, page 4-63**)—or at any other point in the course of basic care during pregnancy, labor and childbirth, or the postpartum/newborn period (as shown in **Chapters 4–8**)—should immediately receive additional care by a skilled provider, according to the guidelines shown below. (For an index of life-threatening complications for the woman and newborn, see **Textbox 3-32** [**page 3-90**].)

Responding to Danger Signs Identified during the Quick Check

- Every woman or newborn who presents with a danger sign during the quick check should immediately receive a **Rapid Initial Assessment** (for the woman: **page 3-90**; for the newborn: **page 3-96**), by a skilled provider, to determine the following:
  - Degree of illness
  - Need for emergency care/stabilization
  - Appropriate course of action to be taken

➡ **If the woman IS in need of stabilization or the newborn IS in need of resuscitation**, the skilled provider should follow the appropriate procedure (for the woman: **page 3-92**; for the newborn: **page 3-99**) before proceeding.

➡ **If the woman or newborn IS NOT in need of stabilization/resuscitation or HAS BEEN stabilized/resuscitated**, the skilled provider should treat her or the newborn according to guidelines under the presenting life-threatening complication, which may involve:

- Referral/transfer to a specialist or higher level of care if appropriate (**Annex 7, page 4-63**); OR
- Provision of basic care with certain additions and/or emphases.

Responding to Danger Signs Identified in the Course of Basic Care[1]

- Every woman or newborn who presents with a danger sign at any other point in the course of basic care (i.e., after the quick check) should immediately receive additional care by a skilled provider, according to guidelines under the presenting danger sign, which may involve:
  - Referral/transfer to a specialist or higher level of care if appropriate (**Annex 7, page 4-63**); OR
  - Provision of basic care with certain additions and/or emphases.

[1] Some danger signs identified in the course of basic care required Rapid Initial Assessment (and the steps that follow, as needed) by a skilled provider. These are clearly indicated as such throughout Section 2.

Textbox 3-32. Index of Life-Threatening Complications

Maternal Rapid Initial Assessment, page 3-90 (breathing difficulty, convulsions, shock)
Stabilization of the Woman, page 3-92
Newborn Rapid Initial Assessment, page 3-96 (breathing difficulty, shock, convulsions or spasms)
Newborn Resuscitation, page 3-99

WOMAN	NEWBORN
Vaginal bleeding in early pregnancy (through 22 weeks' gestation), page 3-102 Vaginal bleeding in later pregnancy (after 22 weeks' gestation) or labor, page 3-102 Vaginal bleeding after childbirth, page 3-103 Severe headache, blurred vision, or elevated blood pressure, page 3-108 Unsatisfactory progress of labor, page 3-109 Inadequate uterine contractions, page 3-109 Meconium-stained amniotic fluid, decreased or absent fetal movements, absent fetal heart tones, or abnormal fetal heart rate, page 3-110 Prolapsed cord, page 3-114 Fetal hand or foot presenting, page 3-114 Fever (temperature 38°C or more) or foul-smelling vaginal discharge, page 3-115 Pain in calf, page 3-118 Pus, redness, or pulling apart of skin edges of perineal suture line; pus or drainage from unrepaired tear; severe pain from tear or episiotomy, page 3-118 Severe abdominal pain in early pregnancy (through 22 weeks' gestation), page 3-119 Severe abdominal pain in later pregnancy (after 22 weeks' gestation) or labor, page 3-119 Severe abdominal pain after childbirth, page 3-120 Contractions before 37 weeks' gestation, page 3-120 Verbalization/behavior that indicates woman may hurt herself or the baby, or hallucinations, page 3-121	Abnormal body temperature, page 3-122 Jaundice, page 3-124 Diarrhea, page 3-125 Abdominal distention, page 3-125 Bleeding, page 3-126 Pus or lesions of skin, page 3-127 Pus or redness of eyes, page 3-129 Redness or foul smell of umbilicus, page 3-130 Swollen limb or joint, page 3-130

MATERNAL RAPID INITIAL ASSESSMENT

Note: For Rapid Initial Assessment of the newborn, see **page 3-96**.

When danger signs are identified, immediately perform this Rapid Initial Assessment to determine the woman's degree of illness, her need for emergency care/stabilization, and the immediate course of action that must be taken. **Note that many assessments can be conducted simultaneously.**

- Assess the woman for the following signs/symptoms of **breathing difficulty**:
  - Not breathing
  - Rapid breathing (30 breaths per minute or more)
  - Obstructed breathing or gasping
  - Wheezing or rales
  - Pallor or cyanosis (blueness) of skin
  - ➡ **If the woman HAS ANY signs/symptoms of breathing difficulty**, call for help. Follow the stabilization procedure under Breathing Difficulty (**page 3-92**) before proceeding.

➡ **If the woman DOES NOT HAVE ANY signs/symptoms of breathing difficulty**, proceed with this Rapid Initial Assessment.

- Assess the woman for convulsions or loss of consciousness.

  ➡ **If the woman IS convulsing or unconscious**, follow the stabilization procedure under Convulsions, Unconsciousness, or Diastolic Blood Pressure More than 110 mmHg with Proteinuria 2+ or More (**page 3-93**) before proceeding.

  ➡ **If the woman IS NOT convulsing or unconscious**, proceed with this Rapid Initial Assessment.

- Measure the woman's blood pressure and take her temperature and pulse.

  ➡ **If the woman has low blood pressure (systolic less than 90 mmHg) or a rapid pulse (110 beats per minute or more)**, assess for other signs/symptoms of **shock**, which may include:

  - Pallor of conjunctiva
  - Perspiration
  - Cool and clammy skin
  - Rapid breathing (30 breaths per minute or more)
  - Anxiousness or confusion
  - Unconscious or nearly unconscious
  - Scanty urine output (less than 30 mL per hour)

  ➡ **If the woman IS in shock**, call for help. Follow the stabilization procedure under Shock (**page 3-95**) before proceeding.

  ➡ **If the woman IS NOT in shock**, proceed with this Rapid Initial Assessment.

Note: Even if the woman shows no evidence of shock at this time, this does not mean she will not go into shock; therefore, **constant vigilance is necessary**. Suspect or anticipate shock if ANY of the following has occurred/is present:

- Vaginal bleeding
- Infection
- Trauma

➡ **If the woman's diastolic blood pressure is more than 110 mmHg**, test her urine for protein (**Annex 4, page 4-41**).

➡ **If the woman's urine IS POSITIVE for protein 2+ or more**, call for help. Follow the stabilization procedure under Convulsions, Unconsciousness, or Diastolic Blood Pressure More than 110 mmHg with Proteinuria 2+ or More (**page 3-93**) before proceeding.

➡ **If the woman's urine IS NEGATIVE for protein or is positive but less than 2+**, proceed with this Rapid Initial Assessment.

➡ **If the woman's temperature is 38°C or more (fever)**, proceed to Presenting Danger Sign (below).

Presenting Danger Sign

➡ **If the woman presents with any single danger sign**, proceed to the relevant information in this chapter according to life-threatening complication (**page 3-92**) to provide appropriate management.

➡ **If the woman presents with more than one danger sign**, proceed first to the entry for the life-threatening complication that is most severe, ensuring that management is provided for EACH of the woman's life-threatening complications before referral/transfer or before returning to basic assessment and care

provision. If it is not clear which presenting life-threatening complication is most severe, proceed to the entry for each life-threatening complication based on the order in which they appear below.

➧ **If determination of gestational age is necessary**, see **page 2-8** for the procedure.

Life-Threatening Complications

- Vaginal bleeding in early pregnancy (through 22 weeks' gestation), **page 3-102**
- Vaginal bleeding in later pregnancy (after 22 weeks' gestation) or labor, **page 3-102**
- Vaginal bleeding after childbirth, **page 3-103**
- Severe headache, blurred vision, or elevated blood pressure, **page 3-108**
- Unsatisfactory progress of labor, **page 3-109**
- Inadequate uterine contractions, **page 3-109**
- Meconium-stained amniotic fluid, decreased or absent fetal movements, absent fetal heart tones, or abnormal fetal heart rate, **page 3-110**
- Prolapsed cord, **page 3-114**
- Fetal hand or foot presenting, **page 3-114**
- Fever (temperature 38ºC or more) or foul-smelling vaginal discharge, **page 3-115**
- Pain in calf, **page 3-118**
- Pus, redness, or pulling apart of skin edges of perineal suture line; pus or drainage from unrepaired tear; severe pain from tear or episiotomy, **page 3-118**
- Severe abdominal pain in early pregnancy (through 22 weeks' gestation), **page 3-119**
- Severe abdominal pain in later pregnancy (after 22 weeks' gestation) or labor, **page 3-119**
- Severe abdominal pain after childbirth, **page 3-120**
- Contractions before 37 weeks' gestation, **page 3-120**
- Verbalization/behavior that indicates woman may hurt herself or the baby, or hallucinations, **page 3-121**

STABILIZATION OF THE WOMAN

Breathing Difficulty

- Stabilize the woman according to the following guidelines before proceeding:
  - ➧ **If the woman IS NOT breathing:**
    - Keep woman in supine position with her head tilted backwards.
    - Lift her chin to open the airway.
    - Inspect her mouth for foreign body and remove if found.
    - Clear secretions from her throat.
    - Ventilate with bag and mask until the woman starts breathing.
  - ➧ **If the woman IS breathing:**
    - Rapidly evaluate vital signs (pulse, blood pressure, breathing) if not already done.
    - Prop the woman on her left side.

  - Give oxygen at 6–8 L per minute.
  - Continually ensure that her airway is clear.

- As soon as the Rapid Initial Assessment is complete and the woman is stabilized, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

(For complete differential diagnosis and management of breathing difficulty, see MCPC.)

Convulsions, Unconsciousness, or Diastolic Blood Pressure More than 110 mmHg with Proteinuria 2+ or More

- Rapidly evaluate vital signs (pulse, blood pressure, breathing) if not already done.
- Stabilize the woman according to the following guidelines before proceeding:
  - Never leave her alone.
  - Protect her from injury, but do not actively restrain her.

➧ **If the woman IS unconscious:**

- Check her airway;
- Prop her on her left side; and
- Check for neck rigidity.

  ➧ **If her neck is rigid**, use appropriate isolation precautions to protect facility staff and other patients in case the woman is found to have meningitis.

➧ **If the woman IS convulsing**, turn her on her side to minimize the risk of aspiration if she vomits and to ensure that an airway is open.

- Give a loading dose of magnesium sulfate solution (**Textbox 3-33, page 3-94**).

> **Note: If magnesium sulfate IS NOT available**, use diazepam. For treatment guidelines, see **Textbox 3-34** (**page 3-95**).

(For complete differential diagnosis and management of headache, blurred vision, convulsions or loss of consciousness, elevated blood pressure, see MCPC.)

Textbox 3-33. Loading Dose and Maintenance Dose Schedule for Magnesium Sulfate

- Give magnesium sulfate solution*, 4 g IV slowly over 5 minutes. Advise the woman that she will experience a feeling of warmth when magnesium sulfate is given.
- Follow promptly with 10 g of magnesium sulfate solution, 5 g in each buttock as deep IM injection, with 1 mL of 2% lidocaine in the same syringe. Ensure that aseptic technique is used when giving a deep IM injection.

➡ **If convulsions persist or recur after 15 minutes**, give magnesium sulfate, 2 g IV over 5 minutes.

- As soon as the Rapid Initial Assessment is complete and the woman is stabilized, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

➡ **If referral/transfer is delayed or the woman is in advanced labor**, continue to give magnesium sulfate according to the maintenance dose schedule (see warning, below):

– Give magnesium sulfate 5 g IM plus 1 mL of 2% lidocaine (into alternate buttocks) every 4 hours.
– Continue treatment for 24 hours after birth or after the last convulsion, whichever occurs last.

WARNING!

Before giving the woman another dose of magnesium sulfate, ensure that the woman's:

- Respiratory rate is at least 16 breaths per minute;

➡ **If respiratory arrest occurs**, assist ventilation with a mask and bag, and give calcium gluconate 1 g (10 mL of 10% solution) IV slowly over 10 minutes.

- Patellar reflexes are present; and
- Urinary output is at least 30 mL per hour over 4 hours.

* Magnesium sulfate comes in different concentrations (e.g., 20%, 40%, 50%). When giving injections IM, it is best to use higher concentrations (e.g., 50%) to decrease the total volume required.

Textbox 3-34. Loading Dose and Maintenance Dose Schedule for Diazepam

ONLY if magnesium sulfate IS NOT available, treat with diazepam as follows:

Intravenous Administration

- Give a loading dose of diazepam, 10 mg IV slowly over 2 minutes.
- ➡ **If convulsions persist or recur**, repeat loading dose.
- As soon as the Rapid Initial Assessment is complete and the woman is stabilized, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
  - ➡ **If referral is delayed or the woman is in advanced labor**, give a maintenance dose according to the following guidelines:
    - Give diazepam 40 mg in 500 mL IV fluids (Ringer's lactate or normal saline) over 6–8 hours, titrated to keep the woman sedated but rousable.
      - ➡ **If respiratory rate drops below 16 breaths per minute**, stop the maintenance dose.
    - Do not give more than 100 mg of diazepam in 24 hours.

Rectal Administration

- When IV access is not available, give diazepam rectally.
- Give a loading dose of diazepam, 20 mg in a 10 mL syringe, according to the following guidelines:
  - Remove the needle, lubricate the barrel, and insert the syringe into the rectum to half its length.
  - Discharge the diazepam and leave the syringe in place, holding the buttocks together for 10 minutes to prevent expulsion of the drug.
  - Alternatively, the drug may be given through a catheter inserted into the rectum.
- ➡ **If convulsions are not controlled within 10 minutes**, administer an additional 10 mg or more, depending on the size of the woman and her clinical response. Be prepared to assist ventilation.
- As soon as the Rapid Initial Assessment is complete and the woman is stabilized, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
  - ➡ **If referral is delayed or the woman is in advanced labor,** give a maintenance dose according to the following guidelines:
    - Give diazepam 40 mg in 500 mL IV fluids (Ringer's lactate or normal saline) over 6–8 hours, titrated to keep the woman sedated but rousable.
      - ➡ **If respiratory rate drops below 16 breaths per minute**, stop the maintenance dose.
    - Do not give more than 100 mg of diazepam in 24 hours.

Shock

- Stabilize the woman according to the following guidelines before proceeding:
  - Turn the woman on her side to minimize the risk of aspiration if she vomits and to ensure that an airway is open.
  - Ensure that she is breathing.
  - Keep the woman warm, but do not overheat her.
  - Elevate her legs to increase the return of blood to the heart (if possible, raise the foot-end of the bed) before and during transfer.
  - Start an IV infusion or give oral rehydration solution (ORS) if the woman is fully conscious (see **Textbox 3-35** [**page 3-96**]).
  - Monitor vital signs (pulse, blood pressure, breathing) and skin temperature every 15 minutes.
- As soon as the Rapid Initial Assessment is complete and the woman is stabilized, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

(For further guidance on stabilization of the woman in shock, see MCPC.)

Textbox 3-35. Guidelines for Starting an IV Infusion or Giving ORS

Starting an IV infusion

- Start two IV infusions, if possible.
- Use a large-bore needle (16-gauge or largest available).
- Rapidly infuse normal saline or Ringer's lactate at the rate of 1 L per 15–20 minutes.
- Give at least 2 L of fluid in the first hour.
  - ➡ **If managing shock or bleeding**, infuse more rapidly, replacing 2–3 times the estimated fluid lost.
    - ➡ **ONLY if unable to start an IV infusion**, give the woman ORS according to the guidelines below.

Giving ORS

- See **Textbox 3-36** (below) for instructions on how to make ORS.

➡ **If the woman IS ABLE to drink, IS conscious, and IS NOT having (and has not recently had) convulsions**, give ORS 300–500 mL by mouth over a 1-hour period.

> **Note:** Unless the woman is fully conscious and alert, do NOT give the woman fluid by mouth.

➡ **If the woman IS UNABLE to drink, IS NOT conscious, or IS having (or has recently had) convulsions**, give ORS 500 mL rectally over a 20- to 30-minute period, according to the following guidelines:

- Fill an enema bag/can with 500 mL of ORS.
- Run the ORS to the end of the tube and clamp off.
- Insert the lubricated tube about 10 cm (3–4 inches) into the rectum.
- Run the ORS in slowly.

> **Note:** It will take 20–30 minutes for the ORS to run into the woman. If you run it in too rapidly, the woman will get abdominal cramps and push the ORS out.

Textbox 3-36. How to Make ORS

- Wash a 1-liter container and one teaspoon with soap and water, and rinse with boiled water.
- Boil and cool 1 liter of clean (no visible particulate matter or cloudiness) water.
- Add 8 level teaspoons sugar.
- Add 1/2 level teaspoon salt.
- Stir and store in the covered clean container.
- Discard unused ORS after 24 hours.

CAUTION: Before giving ORS, taste it and be sure it tastes no saltier than tears.

NEWBORN RAPID INITIAL ASSESSMENT

When danger signs are identified, immediately perform this Newborn Rapid Initial Assessment to determine the newborn's degree of illness, her/his need for emergency care/stabilization, and the immediate course of action that must be taken. **Note that many assessments can be conducted simultaneously. These guidelines assume that a provider skilled in establishing an intravenous line in a newborn is NOT available.**

- Place the baby on a warm surface that is adequately lit.
- Assess the baby for the following signs of **breathing difficulty:**
  - Not breathing
  - Gasping
  - Abnormal breathing (less than 20 or more than 60 breaths per minute)

- Indrawing of the chest or grunting on expiration
- Asymmetrical or irregular movement of the chest
- Central cyanosis (blue tongue and lips)

➡ **If the baby IS NOT breathing, IS gasping, or HAS a respiratory rate less than 20 breaths per minute**, immediately perform resuscitation (**page 3-99**) before proceeding.

➡ **If the baby HAS ANY other signs of breathing difficulty or has NO signs of breathing difficulty**, proceed with this Newborn Rapid Initial Assessment.

- Measure the baby's heart beat.

➡ If the baby has a rapid heart beat (180 beats per minute or more), assess for other signs of **shock**, which may include:

– Pallor

– Central cyanosis (blue tongue and lips)

– Cold to the touch

– Rapid breathing (more than 60 breaths per minute)

– Unconscious or nearly unconscious (baby is unresponsive to voice, touch, and light; cannot be awakened)

➡ **If the baby IS in shock:**

– ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**) as soon as the Newborn Rapid Initial Assessment is complete. Complete the following steps in addition to those in Annex 7:

– Assess the baby for bleeding.

➡ **If the baby is bleeding**, press on the bleeding site with a sterile compress, and continue compression before and during transfer.

– Keep the baby warm throughout assessment and care.

(For further guidance on stabilization of the newborn in shock, see MNP.)

➡ **If the baby IS NOT in shock**, proceed with this Newborn Rapid Initial Assessment.

Note: Even if the baby shows no evidence of shock at this time, this does not mean s/he will not go into shock; therefore, **constant vigilance is necessary**. Suspect or anticipate shock if ANY of the following has occurred/is present:

- Breathing difficulty
- Bleeding
- Loss of consciousness
- Signs of sepsis (lethargy, floppiness, poor feeding, persistent vomiting, inconsolability, foul smell)

- Assess the baby for **convulsions or spasms**:

- **Convulsions:** Repetitive jerking movements of limbs or face; tonic extension or flexion of arms and legs, either synchronous or asynchronous; a straining look; "chomping" and "smacking" of lips; baby may be awake or unresponsive.

➡ **If convulsions are suspected**, see also **Textbox 3-37** (**page 3-98**).

- **Spasms:** Involuntary contraction of muscles that lasts a few seconds to several minutes; may be triggered by light, touch, or sound; baby is conscious and often crying with pain; jaw and fists are tightly clenched.

  ➡ **If spasms are suspected**, see also **Textbox 3-37** (below).

Textbox 3-37. Distinguishing between Jitteriness and Convulsions/Spasms

- Like convulsions, jitteriness is characterized by rapid, repetitive movements.
- Unlike convulsions, movements associated with jitteriness are of the same amplitude and in the same direction.
- Unlike spasms, jitteriness is usually stopped by cuddling, feeding, or flexing the baby's limb.

➡ **If the baby is having convulsions or spasms**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**) as soon as the Newborn Rapid Initial Assessment is complete. In addition to the steps in Annex 7, give a single dose of phenobarbital 20 mg/kg body weight IM.

➡ **If the baby has arching of the back (opisthotonos) or is unconscious**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**) as soon as the Newborn Rapid Initial Assessment is complete.

(For complete differential diagnosis and management of newborn convulsions or spasms, see MNP.)

➡ **If the baby IS NOT having convulsions, spasms, arching of the back (opisthotonos), or loss of consciousness**, proceed with this Newborn Rapid Initial Assessment.

- Assess the baby for the following signs of **sepsis**:
  - Lethargy
  - Floppiness
  - Poor feeding
  - Persistent vomiting
  - Other signs such as inconsolability or foul smell

  ➡ **If the baby DOES have signs of sepsis**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). Complete the following steps in addition to those in Annex 7:

  – Give the baby antibiotics:

    – ampicillin 50 mg/kg body weight IM; PLUS

    – gentamicin 5 mg/kg body weight IM (if 2 kg or more) or 4 mg/kg body weight IM (if less than 2 kg).

  ➡ **If the baby DOES NOT have signs of sepsis,** proceed to Presenting Danger Sign (below).

Presenting Danger Sign

➡ **If the baby presents with any single danger sign**, proceed to the relevant information in this chapter according to the life-threatening complication (**page 3-99**) to provide appropriate management.

➡ **If the baby presents with more than one danger sign**, proceed first to the entry for the life-threatening complication that is most severe, ensuring that management is provided for EACH of the baby's life-threatening complications before referral/transfer or before returning to basic assessment and care provision. If it is not clear which presenting life-threatening complication is most severe, proceed to the entry for each life-threatening complication based on the order in which they appear below.

Life-Threatening Complications

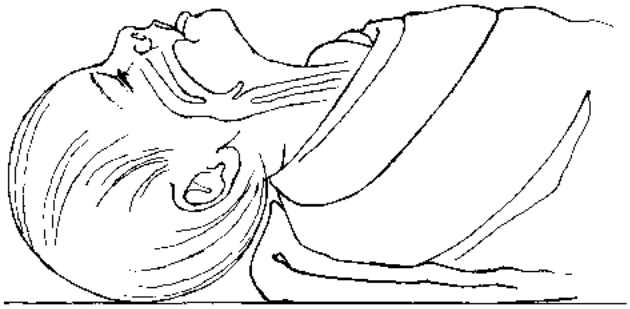
- Abnormal body temperature, **page 3-122**
- Jaundice, **page 3-124**
- Diarrhea, **page 3-125**
- Abdominal distention, **page 3-125**
- Bleeding, **page 3-126**
- Pus or lesions of skin, **page 3-127**
- Pus or redness of eyes, **page 3-129**
- Redness or foul smell of umbilicus, **page 3-130**
- Swollen limb or joint, **page 3-130**

NEWBORN RESUSCITATION

➧ **If the baby is not breathing, is gasping, or respirations are less than 20 breaths per minute**, immediately perform resuscitation as described below:

- Dry the baby, remove the wet cloth, and wrap the baby in a dry, warm cloth.
- Clamp and cut the cord, if not already done (**page 2-79**).
- Place the newborn on her/his back on a clean, warm surface and keep covered except for the face and chest.
- Position the head (**Figure 3-4**, below) so that it is slightly extended to open the airway (a rolled-up piece of cloth placed under the newborn's shoulders may be used to extend the head).

Figure 3-4. Correct Position of the Head for Ventilation



- Clear the airways by suctioning the mouth first and then each nostril using a suction apparatus (e.g., DeLee mucus trap or rubber bulb syringe).
  - Insert suction tube 5 cm into the baby's mouth and suction during withdrawal.
  - Insert suction tube 3 cm into each nostril and suction during withdrawal.
  - ➧ **If there is blood or meconium in the mouth or nose**, be especially thorough with suctioning.

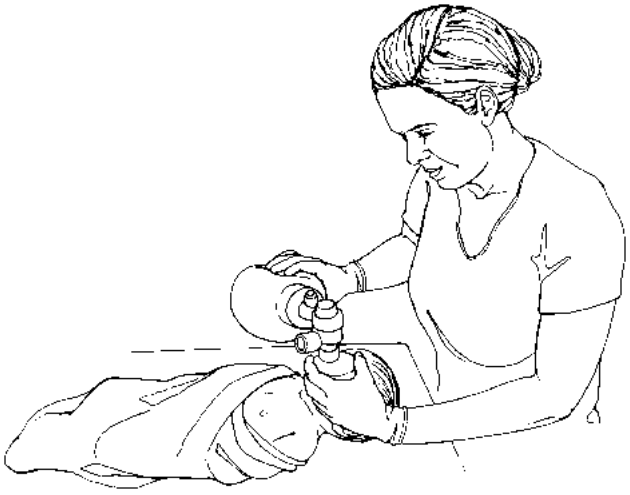
Note: Do not suction deep in the throat as this may cause the baby's heart to slow or the baby to stop breathing. Do not suction every baby at birth, but only if there is blood or meconium in the mouth or nose or if the baby requires resuscitation.

- ➡ **If the baby is not breathing well after the airway has been suctioned**, begin ventilation.
- ➡ **If the baby begins to breathe well after the airway has been suctioned**, see **Textbox 3-38** (**page 3-101**) for care after newborn resuscitation.

Ventilation

- Quickly recheck the position of the head to make sure that it is slightly extended.
- Place the mask over the baby's chin, mouth, and nose to form a seal (use mask size 1 for normal birthweight newborn and size 0 for low birthweight newborn).
- Squeeze the Ambu bag (**Figure 3-5**, below) attached to the mask two or three times, using the whole hand if the bag is small, or using two fingers if the bag is large. Ventilate the baby with oxygen, if available; otherwise, use room air. Be sure the fingers holding the mask are not over the baby's throat or in the baby's eyes.
- Observe the chest to determine whether it is rising:
  - ➡ **If the chest is rising**, proceed with ventilation at about 40 breaths per minute.
  - ➡ **If the chest is not rising:**
    - Check the position of the head to make sure that it is slightly extended.
    - If the seal with the face is not adequate, reposition the mask.
    - Increase ventilation pressure.
    - If the above measures are not successful, repeat suctioning of mouth and nose to remove mucus, blood, or meconium.

Figure 3-5. Positioning the Mask and Checking the Seal



- Ventilate for 1 minute or until the baby begins to cry or breathe spontaneously. Then stop to quickly assess the baby's breathing.
  - ➡ **If the baby has a respiratory rate of at least 20 breaths per minute and there is no chest indrawing:**
    - Stop ventilation.
    - Put the baby in skin-to-skin contact with the woman.
    - Explain to the woman what happened and what you did for the baby.
    - Provide appropriate followup care (**Textbox 3-38, page 3-101**), including vigilant observation of color and vital signs every 15 minutes for 2 hours.

➡ **If, after 20 minutes of ventilation, the baby is making some effort to breathe but has a respiratory rate of less than 30 breaths per minute or more than 60 breaths per minute and/or continues to have chest indrawing, central cyanosis (blue tongue and lips), or grunting on expiration:**

- ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). Complete the following steps in addition to those in Annex 7:
  - ➡ **If respirations are less than 20 breaths per minute**, continue to ventilate before and during transfer, giving oxygen at a moderate flow rate during transfer, if possible.
  - ➡ **If respirations are 20–30 or more than 60 breaths per minute**, give oxygen at a moderate flow rate during transfer, if possible.
  - Provide emotional support to the woman and family.

(For complete differential diagnosis and management of breathing difficulty, see MNP.)

➡ **If there is no gasping or breathing at all after 20 minutes of ventilation:**

- Stop ventilating.
- Provide emotional and psychological support to the family.
- See Stillbirth or Newborn Death (**Chapter 10, page 3-74**) for additional information about assessment and care provision.

Textbox 3-38. Care after Newborn Resuscitation

- Leave the baby in skin-to-skin contact with the woman and cover with a warm, dry blanket.
- Observe the newborn for at least 4 hours for:
  - Breathing problems (e.g., rapid breathing, indrawing of chest, or grunting on expiration); and
  - Changes in body temperature.
- Encourage early breastfeeding to reduce the risk of low blood glucose.
- Proceed with basic newborn care (**Chapter 8, page 2-109**).
- Explain to the parents that there is a slight risk of complications such as feeding problems or convulsions. Emphasize the need to seek immediate medical help if any of these problems occur.

MATERNAL LIFE-THREATENING COMPLICATIONS

SIGN OR SYMPTOM	ASSESS FOR THESE ALERT SIGNS/SYMPTOMS	IF ANY ALERT SIGNS/SYMPTOMS PRESENT	IF NO ALERT SIGNS/SYMPTOMS PRESENT
Vaginal bleeding in early pregnancy (through 22 weeks' gestation) (For information on possible diagnoses associated with this sign/symptom, see **Table 1-13** [**page 1-38**].)	• Fainting • History of expulsion of tissue (products of conception) • Cramping/lower abdominal pain • Tender uterus • Tender adnexal mass or cervical motion tenderness (for the procedure for Pelvic Examination, see **Annex 4, page 4-26**) • Uterus soft and larger than expected for gestational age	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If the woman is bleeding HEAVILY and access to referral care is not immediate**, give 0.2 mg ergometrine IM (repeated after 15 minutes if necessary) or misoprostol 400 mcg by mouth (repeated once after 4 hours if necessary). *(For complete differential diagnosis and management of vaginal bleeding in early pregnancy, see MCPC.)*	Proceed with basic care provision with the following additions and/or emphases: • Provide reassurance and explain that she may be experiencing the early stages of an abortion, but that no treatment (e.g., bedrest, administration of hormones) has been found to be beneficial. • Ensure that she has a sufficient supply of iron/folate tablets to last until her next scheduled antenatal care visit. • Review the danger signs and the woman's birth preparedness and complication readiness plan: – Ensure that emergency transportation and funds are immediately accessible. – Ensure that she knows where to go for help if a danger sign arises. – Advise the woman to seek care at a facility capable of providing comprehensive essential obstetric care services (see **page 1-9**) if her bleeding increases, tissue is expelled, or she has cramping.
Vaginal bleeding in later pregnancy (after 22 weeks' gestation) **or labor** **Note:** Do **NOT** perform a pelvic examination on a woman in later pregnancy or labor who is experiencing bleeding or ANY of the signs/symptoms in the next column. (For information on possible diagnoses associated with this sign/symptom, see **Table 1-13** [**page 1-38**].)	• Moderate to heavy bleeding • Tender or tense uterus or abdomen • Severe abdominal pain • Intermittent or constant abdominal pain (not contractions) • Continuous contractions that do not allow the uterus to relax • Relaxed uterus (no contractions, not tense) • Easily palpable fetal parts • Decreased or absent fetal movements • Abnormal or absent fetal heart tones • Fetal presenting part not in pelvis • Significant blood in amniotic fluid	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). • Complete the following steps in addition to those in Annex 7: – Start an IV infusion or give oral rehydration solution (**Textbox 3-35, page 3-96**). *(For complete differential diagnosis and management of vaginal bleeding in later pregnancy or labor, see MCPC.)*	➡ **If the bleeding is light**, assess the woman for onset of labor (**Table 2-8, page 2-68**). ➡ **If the woman IS NOT in labor**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If the woman IS in labor:** ➡ **If less than 37 weeks' gestation**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If 37 weeks' gestation or more**, proceed with basic care for normal labor and birth (**Chapter 6, page 2-37**).

SIGN OR SYMPTOM	ASSESS FOR THESE ALERT SIGNS/SYMPTOMS	IF ANY ALERT SIGNS/SYMPTOMS PRESENT	IF NO ALERT SIGNS/SYMPTOMS PRESENT
Vaginal bleeding after childbirth **WARNING:** More than half of all maternal deaths occur within 24 hours of childbirth, mostly due to excessive bleeding. Postpartum hemorrhage (PPH) causes more than one-quarter of all maternal deaths worldwide, with uterine atony being the major factor. Rapid action in response to PPH is therefore critical. Tears of the birth canal are the second most frequent cause of PPH. PPH with a contracted uterus is usually due to a cervical or vaginal tear, but tears may be present at the same time as uterine atony. Check the uterine fundus to determine whether it is contracted. ➡ **If the uterus IS NOT well contracted**, perform the following while continually monitoring the woman's condition: – Massage the uterus to expel blood and blood clots. – Have an assistant give oxytocin 10 units IM. – Start an IV infusion or give oral rehydration solution (**Textbox 3-35, page 3-96**). Add oxytocin 20 units to 1 liter of IV fluids and run at 60 drops per minute. – Keep the woman warm and elevate her legs. – Help the woman urinate, or catheterize her bladder using aseptic technique. ➡ **If the uterus IS well contracted**, perform the following while continually monitoring the woman's condition: – Examine the vagina, perineum, and cervix for tears (for the procedure, see **Annex 4, page 4-20**). – Start an IV infusion or give oral rehydration solution (see **Textbox 3-35, page 3-96**). – Keep the woman warm and elevate her legs. – Help the woman urinate, or catheterize her bladder using aseptic technique.			
(For information on possible diagnoses associated with this sign/symptom, see **Table 1-13** [**page 1-38**].)	• Uterine atony: uterus soft and not contracted	➡ **If the uterus is atonic**, manage according to the guidelines shown in **Textbox 3-39** (**page 3-105**).	Proceed with basic care provision with the following additions and/or emphases: • Provide reassurance that some bleeding (similar to heavy menses, with or without clots) after childbirth is normal. For more information on lochia rubra, see **page 2-91**. • Palpate the uterus every 15 minutes for 4 hours to ensure it remains contracted. • Observe the woman for at least 24 hours before allowing her to go home. • Review the danger signs and the woman's complication readiness plan: – Ensure that emergency transportation and funds are immediately accessible. – Ensure that she knows where to go for help if a danger sign arises.
	• Tears of the vagina, perineum, labia, and/or cervix	➡ **If the woman has extensive tears (**3rd or 4th degree tears; extensive tears of vagina, perineum, and/or labia; or cervical tears extending into lower uterine segment), ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If there are 1st or 2nd degree tears**, repair according to the guidelines shown on **page 4-38**. ➡ **If there are cervical tears not extending into lower uterine segment**, repair according to the guidelines shown on **page 4-36**.	
	• Retained placenta: placenta not delivered by 30 minutes after birth	➡ **If the placenta is retained**, manage according to the guidelines shown in **Textbox 3-40** (**page 3-107**).	

SIGN OR SYMPTOM	ASSESS FOR THESE ALERT SIGNS/SYMPTOMS	IF ANY ALERT SIGNS/SYMPTOMS PRESENT	IF NO ALERT SIGNS/SYMPTOMS PRESENT
Vaginal bleeding after childbirth, *continued*	• Retained placental fragments: portion of maternal surface of placenta missing, or torn membranes and vessels	➡ **If there are retained placental fragments**, manage according to the guidelines shown in **Textbox 3-40** (**page 3-107**).	
	• Ruptured uterus: PPH within 1 hour of birth, severe abdominal pain that may decrease after rupture, possibly with shock or tender abdomen	➡ **If the woman has a ruptured uterus**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).	
	• Inverted uterus: uterine fundus not felt on abdominal examination, slight or intense uterine pain, uterus possibly visible at vulva	➡ **If the uterus is inverted**, manage according to the guidelines shown on **page 4-15**.	
	• Delayed PPH: bleeding beginning more than 24 hours after birth	➡ **If there is delayed PPH**, manage according to the guidelines shown in **Textbox 3-41** (**page 3-107**).	
	Note: If the bleeding does not stop after uterine massage and oxytocin, and the placenta is not available for inspection, manage as for retained placental fragments.	*(For complete differential diagnosis and management of vaginal bleeding after childbirth, see MCPC.)*	

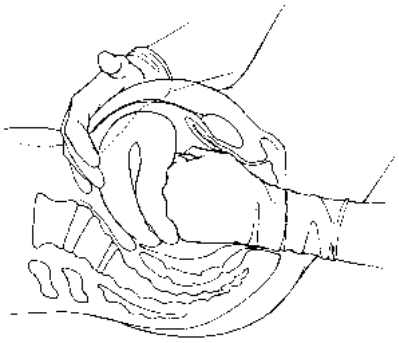
Textbox 3-39. Management of Uterine Atony

- Continue to massage the uterus through the abdominal wall to expel clots and cause uterine contractions.
- Catheterize the bladder using aseptic technique, if not already done.
- Give a uterotonic drug (**Table 3-3**, **page 3-106**).

➡ **If bleeding continues:**

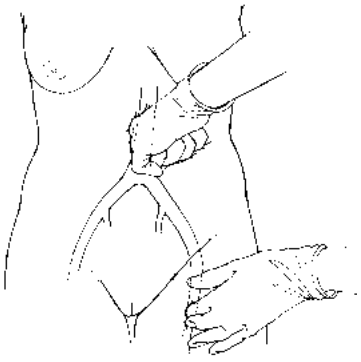
– Perform **bimanual compression of the uterus** (**Figure 3-6**, below):
  – Wearing high-level disinfected gloves, insert a hand into the vagina and form a fist.
  – Place fist into the anterior fornix and apply pressure against the anterior wall of the uterus.
  – With the other hand, press deeply into the abdomen behind the uterus, applying pressure against the posterior wall of the uterus.
  – Maintain compression until the bleeding is controlled and the uterus contracts.

Figure 3-6. Bimanual Compression of the Uterus



– Alternatively, perform compression of the abdominal aorta (**Figure 3-7**, below):
  – Apply downward pressure with closed fist over abdominal aorta directly through the abdominal wall:
    – The point of compression is just above the umbilicus and slightly to the left.
    – Aortic pulsations can be easily felt through the anterior abdominal wall in the immediate postpartum period.
  – With the other hand, palpate femoral pulse to check adequacy of compression:
    ➡ **If pulse is palpable**, pressure exerted by fist is inadequate.
    ➡ **If pulse is not palpable**, pressure exerted is adequate.
  – Maintain compression until bleeding is controlled.

FIGURE 3-7. Compression of the Abdominal Aorta and Palpation of the Femoral Pulse



Note: Packing the uterus is ineffective and wastes precious time.

➡ **If the bleeding continues,** ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

➡ **If the bleeding stops**, provide basic care as shown in Chapter 6 with the following addition:

– Two to three hours after bleeding stops, measure the woman's hemoglobin.
  ➡ **If hemoglobin is less than 7 g/dL**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
  ➡ **If hemoglobin is 7–11 g/dL**, see Anemia (**Chapter 10, page 3-41**).

Table 3-3. Uterotonic Drugs

	OXYTOCIN	ERGOMETRINE/ METHYL-ERGOMETRINE	15-METHYL PROSTAGLANDIN $F_{2\alpha}$	MISOPROSTOL
Dose and route	IV: Infuse 20 units in 1 L IV fluids at 60 drops per minute IM: 10 units	IM or IV (slowly): 0.2 mg	IM: 0.25 mg	Rectal, oral, or sublingual: 600 mcg
Continuing dose	IV: Infuse 20 units in 1 L IV fluids at 40 drops per minute*	Repeat 0.2 mg IM after 15 minutes If required, give 0.2 mg IM or IV (slowly) every 4 hours	0.25 mg every 15 minutes	Refer if an additional dose is needed.
Maximum dose	Not more than 3 L of IV fluids containing oxytocin	5 doses (total 1 mg)	8 doses (total 2 mg)	
Precautions/ Contraindications	Do not give as an IV bolus	Pre-eclampsia, hypertension, heart disease	Asthma	

* If the woman is already receiving oxytocin 20 units in 1 L IV fluids at 40 drops per minute and the bleeding continues, give a different uterotonic drug.

WARNING: Prostaglandins should NOT be given intravenously. They may be fatal.

Textbox 3-40. Management of Retained Placenta or Placental Fragments

Retained Placenta

- ➡ **If you can see the placenta**, ask the woman to push it out.
- ➡ **If you can feel the placenta in the vagina**, remove it.
- ➡ **If the placenta is still not delivered:**
  - Give oxytocin 10 units IM, if not already done for active management of the 3rd stage of labor, and attempt controlled cord traction with the next uterine contraction (**page 2-77**).
  - Catheterize the bladder using aseptic technique, if not already done.
  - ➡ **If controlled cord traction is unsuccessful**, attempt manual removal of the placenta (**Annex 4, page 4-22**).

Notes:

- Do NOT give ergometrine because it causes tonic uterine contraction, which may delay expulsion of the placenta.
- Avoid forceful cord traction and fundal pressure as they may cause uterine inversion.

  - ➡ **If the bleeding continues**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
  - ➡ **If the bleeding stops**, provide basic care as shown in **Chapter 6** with the following additions:
    - Two to three hours after bleeding stops, measure the woman's hemoglobin.
      - ➡ **If hemoglobin is less than 7 g/dL**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
      - ➡ **If hemoglobin is 7–11 g/dL**, see Anemia (**Chapter 10, page 3-41**).

Retained Placental Fragments

- Perform manual exploration of the uterus, which is similar to the procedure for manual removal of the placenta (**Annex 4, page 4-22**).
- Remove placental fragments by hand.
  - ➡ **If the bleeding continues**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
  - ➡ **If the bleeding stops**, provide basic care as shown in **Chapter 6** with the following additions:
    - Two to three hours after bleeding stops, measure the woman's hemoglobin.
      - ➡ **If hemoglobin is less than 7 g/dL**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
      - ➡ **If hemoglobin is 7–11 g/dL**, see Anemia (**Chapter 10, page 3-41**).

Note: Very adherent tissue may be placenta accreta. Efforts to extract fragments that do not separate easily may result in heavy bleeding or uterine perforation, which usually requires hysterectomy.

Textbox 3-41. Management of Delayed Postpartum Hemorrhage (more than 24 hours after birth)

Note: Delayed PPH may be a sign of uterine infection.

- Give a uterotonic drug (**Table 3-3, page 3-106**).
- ➡ **If the cervix is not dilated,** ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
- ➡ **If the cervix is dilated**, perform manual exploration of the uterus, which is similar to the procedure for manual removal of the placenta (**Annex 4, page 4-22**), to remove large clots and placental fragments.
  - ➡ **If the bleeding continues**, perform bimanual compression of the uterus or compression of the abdominal aorta (**Textbox 3-39, page 3-105**).
    - ➡ **If the bleeding continues despite above measures,** ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
  - ➡ **If the bleeding stops,** provide basic care as shown in **Chapter 6** with the following addition:
    - Two to three hours after bleeding stops, measure the woman's hemoglobin.
      - ➡ **If hemoglobin is less than 7 g/dL**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
      - ➡ **If hemoglobin is 7–11 g/dL**, see Anemia (**Chapter 10, page 3-41**).

SIGN OR SYMPTOM	ASSESS FOR THESE ALERT SIGNS/SYMPTOMS	IF ANY ALERT SIGNS/SYMPTOMS PRESENT	IF NO ALERT SIGNS/SYMPTOMS PRESENT
Severe headache, blurred vision, or elevated blood pressure (BP) (For information on possible diagnoses associated with this sign/symptom, see **Table 1-13** [**page 1-38**].)	➡ **If the woman HAS diastolic BP 110 mmHg or more with proteinuria 2+ or more**, follow the stabilization procedure for convulsions, unconsciousness, or diastolic blood pressure 110 mmHg or more with proteinuria 2+ or more (**page 3-93**) before proceeding. ➡ **If the woman does NOT HAVE diastolic BP 110 mmHg or more with proteinuria 2+ or more**, assess her for the following signs/symptoms: – Diastolic BP more than 90 mmHg with proteinuria (To test the woman's urine for protein, see **Annex 4, page 4-41**.) – Difficulty chewing and opening the mouth – History of convulsions – Fever/chills/rigors – Stiff neck – Muscle/joint pain – Spasms of face, neck, trunk – Arched back – Board-like abdomen	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). *(For complete differential diagnosis and management of headache, blurred vision, convulsions or loss of consciousness, elevated blood pressure, see MCPC.)*	➡ **If the woman's BP is 90–110 mmHg with no proteinuria:** – Allow the woman to sit comfortably and measure her blood pressure again after 1 hour. ➡ **If the woman's blood pressure remains 90 mmHg or more after 1 hour**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). ➡ **If the woman's BP is within normal range**, proceed with basic care provision with the following additions and/or emphases: – Provide reassurance that headache during pregnancy may be normal. For more information about headache as a common discomfort of pregnancy and the postpartum period, see Headache (**Chapter 9, page 3-21**). – Review the danger signs and the woman's birth preparedness and complication readiness plan: – Ensure that emergency transportation and funds are immediately accessible. – Ensure that she knows where to go for help if a danger sign arises.

MATERNAL LIFE-THREATENING COMPLICATIONS *(CONTINUED)*

SIGN OR SYMPTOM	ASSESS FOR THESE ALERT SIGNS/SYMPTOMS	IF ANY ALERT SIGNS/SYMPTOMS PRESENT	IF NO ALERT SIGNS/SYMPTOMS PRESENT
Unsatisfactory progress of labor (For information on possible diagnoses associated with this sign/symptom, see **Table 1-13** [**page 1-38**].)	• Fever • Foul-smelling amniotic fluid/vaginal discharge • Abnormal pulse and blood pressure • Abnormal or absent fetal heart tones • Decreased or absent fetal movements • Ballooning of lower uterine segment (between symphysis and umbilicus) or formation of retraction band (transverse or oblique ridge across uterus between symphysis and umbilicus) • No descent of baby's head after 30 minutes of pushing in nonsupine position • Sutures of fetal head overlapped and not reducible, large caput	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). • Complete the following steps in addition to those in Annex 7: – Monitor the woman's vital signs and the fetal heart tones every 15 minutes. *(For complete differential diagnosis and management of unsatisfactory progress of labor, see MCPC.)*	➡ **If the woman is in the 1st stage of labor**, see Inadequate Uterine Contractions (below) for additional information about assessment and care provision. ➡ **If the woman is in the 2nd stage of labor**, proceed with basic care provision with the following additions and/or emphases: – Remain vigilant for signs of maternal or fetal distress (abnormal pulse and blood pressure; abnormal or absent fetal heart tones or decreased or absent fetal movements). – Do not encourage prolonged pushing or holding of breath. – Provide physical comfort and emotional support to facilitate rest between contractions and to support the woman's ability to cope. – Ensure adequate hydration and calories.
Inadequate uterine contractions (For information on possible diagnoses associated with this sign/symptom, see **Table 1-13** [**page 1-38**].)	• Fever • Foul-smelling amniotic fluid/vaginal discharge • Pulse 110 beats per minute or more • Systolic BP less than 90 mmHg • Diastolic BP 90 mmHg or more • Abnormal or absent fetal heart tones • Decreased or absent fetal movements • In latent phase, cervical dilation does not reach 4 cm after 8 hours of progressively more frequent and longer lasting contractions • In active phase, cervical dilation does not progress at the rate of at least 1 cm per hour; on partograph, cervical dilation is plotted to right of alert line	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). • Complete the following steps in addition to those in Annex 7: – Monitor the woman's vital signs and the fetal heart tones every 15 minutes. *(For complete differential diagnosis and management of unsatisfactory progress of labor, see MCPC.)*	➡ **If contractions occur less than three times in 10 minutes and last less than 40 seconds each:** – Test the woman's urine for ketones. ➡ **If ketones are present**, give at least 1 liter of juice or other sweet fluid by mouth. ➡ **If ketones are present and the woman is unable to drink fluids**, give 1 liter of dextrose 5% in ½ normal saline IV within 1 hour. ➡ **If there is no improvement in contractions within 1 hour,** ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

MATERNAL LIFE-THREATENING COMPLICATIONS *(CONTINUED)*

SIGN OR SYMPTOM	ASSESS FOR THESE ALERT SIGNS/SYMPTOMS	IF ANY ALERT SIGNS/SYMPTOMS PRESENT	IF NO ALERT SIGNS/SYMPTOMS PRESENT
Meconium-stained amniotic fluid, decreased or absent fetal movements, absent fetal heart tones, or abnormal fetal heart rate (For information on possible diagnoses associated with this sign/symptom, see **Table 1-13** [**page 1-38**].)	N/A	*(For complete differential diagnosis and management of fetal distress in labor, see MCPC.)*	➡ **If there is meconium-stained amniotic fluid**, manage according to guidelines shown in **Textbox 3-42** (**page 3-111**). ➡ **If fetal movements are decreased or absent**, manage according to guidelines shown in **Textbox 3-43** (**page 3-111**). ➡ **If fetal heart tones are absent**, manage according to guidelines shown in **Textbox 3-44** (**page 3-112**). ➡ **If the fetal heart rate is abnormal**, manage according to guidelines shown in **Textbox 3-45** (**page 3-113**).

Textbox 3-42. Management of Meconium-Stained Amniotic Fluid

Slight Degree of Meconium

- Prop the woman up or place her on her left side.
- Listen to the fetal heart rate both during and between contractions at least once every 30 minutes.
  - ➡ **If fetal heart rate remains normal**, the meconium staining may only be a sign of fetal maturing and not a sign of fetal distress. Proceed with basic care provision (**Chapter 6, page 2-37**).
  - ➡ **If fetal heart tones are absent**, see **Textbox 3-44** (**page 3-112**).
  - ➡ **If fetal heart rate is abnormal**, see **Textbox 3-45** (**page 3-113**).

Thick Meconium

➡ **If the woman is in the 1st stage of labor**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). Give oxygen to the woman at 4–6 L per minute during preparation and transfer.

➡ **If the woman is in the 2nd stage of labor:**

- Deliver the baby as quickly as possible, using episiotomy (**Annex 4, page 4-18**) and vacuum extraction (**Annex 4, page 4-45**), if necessary. In order to use vacuum extraction, the head must be at least at 0 station or no more than 2/5 palpable above the symphysis pubis.
  - ➡ **If these conditions are not met**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). Give oxygen to the woman at 4–6 L per minute during preparation and transfer.
- Prepare, or have assistant prepare, for resuscitation of the newborn (**page 3-99**).

Textbox 3-43. Management of Decreased or Absent Fetal Movements

- Palpate abdomen to feel for fetal movements.
- Ask if the woman has had a sedative drug.

Woman IS NOT in Labor

➡ **If the woman has had a sedative drug**, wait until the effect of the drug has worn off and then listen for fetal heart tones.

➡ **If the woman has not had drugs**, listen for fetal heart tones.

- ➡ **If fetal heart tones are absent**, see **Textbox 3-44** (**page 3-112**).
- ➡ **If fetal heart rate is heard and is normal**, proceed with basic care provision (**Chapter 6, page 2-37**).
- ➡ **If fetal heart rate is heard and is abnormal**, see **Textbox 3-45** (**page 3-113**).

Woman IS in Labor

- Listen for fetal heart tones.
  - ➡ **If fetal heart tones are absent**, see **Textbox 3-44** (**page 3-112**).
  - ➡ **If fetal heart rate is heard and is normal**, proceed with basic care provision (**Chapter 6, page 2-37**).
  - ➡ **If fetal heart rate is heard and is abnormal**, see **Textbox 3-45** (**page 3-113**).

Textbox 3-44. Management of Absent Fetal Heart Tones

Woman IS NOT in Labor

- Ask several other persons to listen, use an electronic fetal stethoscope, or obtain an obstetric ultrasound, if available.
  - ➡ **If fetal heart tones are not detected on obstetric ultrasound**, there is no need to refer/transfer the woman because the fetus is dead. Deliver the baby in a manner that is safest for the woman. See Stillbirth or Newborn Death (**Chapter 10, page 3-74**) for additional information about assessment and care provision.
  - ➡ **If still unable to hear fetal heart tones (using methods other than obstetric ultrasound)**, wait 1 hour and then repeat.
    - ➡ **If fetal heart rate is heard and is normal**, proceed with basic care provision (**Chapter 6, page 2-37**).
    - ➡ **If fetal heart rate is heard and is abnormal**, see **Textbox 3-45** (**page 3-113**).
    - ➡ **If fetal heart tones are still not heard:**
      - Inform the woman and her partner that the baby may be dead. See Stillbirth or Newborn Death (**Chapter 10, page 3-74**) for additional information about assessment and care provision.
      - Provide emotional support.
      - Facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.

Woman IS in Labor

- Ask several other persons to listen, use an electronic fetal stethoscope, or obtain an obstetric ultrasound if available.
  - ➡ **If fetal heart tones are not detected on obstetric ultrasound**, there is no need to refer/transfer the woman because the fetus is dead. Deliver the baby in a manner that is safest for the woman. See Stillbirth or Newborn Death (**Chapter 10, page 3-74**) for additional information about assessment and care provision.
  - ➡ **If still unable to hear fetal heart tones (using methods other than obstetric ultrasound)**, wait for 15 minutes and then repeat. Place the woman on her left side and give her oxygen at 4–6 L per minute.
    - ➡ **If fetal heart rate is heard and is normal**, proceed with basic care provision (**Chapter 6, page 2-37**).
    - ➡ **If fetal heart rate is heard and is abnormal**, see **Textbox 3-45** (**page 3-113**).
    - ➡ **If fetal heart tones are still not heard:**
      - ➡ **If the woman is in the 1st stage of labor,** ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). Complete the following steps in addition to those in Annex 7:
        - Inform the woman and her partner that the baby may be dead, and provide emotional support.
        - Continue giving oxygen to the woman at 4–6 L per minute during preparation and transfer.
        - Prop up the woman or place her on her left side during preparation and transfer.
      - ➡ **If the woman is in the 2nd stage of labor:**
        - Inform the woman and her partner that the baby may be dead, and provide emotional support.
        - Give oxygen to the woman at 4–6 L per minute.
        - Prop up the woman or place her on her left side.
        - Deliver the baby as quickly as possible, using episiotomy (**Annex 4, page 4-18**) and vacuum extraction (**Annex 4, page 4-45**), if necessary. In order to use vacuum extraction, the head must be at least at 0 station or no more than 2/5 palpable above the symphysis pubis.
          - ➡ **If these conditions are not met**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). Continue to give oxygen at 4–6 L per minute during preparation and transfer.
        - Prepare, or have assistant prepare, for resuscitation of the newborn (**page 3-99**).

Textbox 3-45. Management of Abnormal Fetal Heart Rate

Note: A very slow fetal heart rate (less than 100) in the absence of contractions or persisting after contractions or a rapid fetal heart rate (more than 180) in the absence of a rapid maternal heart rate during labor should be considered a sign of fetal distress. Likewise, a fetal heart rate less than 120 or more than 160 when the woman is **not** in labor is a sign of fetal distress.

Woman IS NOT in Labor

- Try to identify a maternal cause (e.g., maternal fever, drugs).
  - ➡ **If a maternal cause is identified**, initiate appropriate management.
  - ➡ **If a maternal cause is not identified**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

Woman IS in Labor

- Listen to the fetal heart rate throughout at least three contractions.
  - ➡ **If fetal heart rate remains abnormal throughout at least three contractions:**
    - ➡ **If the woman is in the 1st stage of labor:**
      - Place the woman on her left side and give her oxygen at 4–6 L per minute. Listen to the fetal heart rate throughout the next three contractions.
        - ➡ **If fetal heart rate remains abnormal throughout at least three contractions**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). Continue giving oxygen to the woman at 4–6 L per minute during preparation and transfer.
    - ➡ **If the woman is in the 2nd stage of labor:**
      - Deliver as quickly as possible, using episiotomy (**Annex 4, page 4-18**) and vacuum extraction (**Annex 4, page 4-45**), if necessary. In order to use vacuum extraction, the head must be at least at 0 station or no more than 2/5 palpable above the symphysis pubis.
        - ➡ **If these conditions are not met**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
      - Prepare, or have assistant prepare, for resuscitation of the newborn (**page 3-99**).
  - ➡ **If fetal heart rate is normal**, proceed with basic care provision (**Chapter 6, page 2-37**).

SIGN OR SYMPTOM	ASSESS FOR THESE ALERT SIGNS/SYMPTOMS	IF ANY ALERT SIGNS/SYMPTOMS PRESENT	IF NO ALERT SIGNS/SYMPTOMS PRESENT
Prolapsed cord		• Cord is pulsating. **Woman in 1st Stage of Labor** • ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). Complete the following steps in addition to those in Annex 7: – Wearing high-level disinfected gloves, insert a hand into the vagina and push the presenting part up to decrease pressure on the cord and dislodge the presenting part from the pelvis. – Place the other hand above the symphysis pubis to keep the presenting part out of the pelvis, or have an assistant do this, and elevate the woman's hips on pillows or rolled blankets. – Once the presenting part is firmly held above the pelvic brim, remove the other hand from the vagina. – Keep the hand above the symphysis pubis before and during transfer to the referral healthcare facility until a cesarean section can be performed. **Woman in 2nd Stage of Labor** • Deliver the baby as quickly as possible, using episiotomy (**Annex 4, page 4-18**) and vacuum extraction (**Annex 4, page 4-45**), if necessary. In order to use vacuum extraction, the head must be at least at 0 station or no more than 2/5 palpable above the symphysis pubis. ➡ **If these conditions are not met**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). • Prepare, or have assistant prepare, for resuscitation of the newborn (**page 3-99**). *(For complete differential diagnosis and management of prolapsed cord, see MCPC.)*	➡ **If the cord is not pulsating, there is no need to refer/transfer the woman because the baby is dead.** – Deliver the baby in a manner that is safest for the woman. – See Stillbirth or Newborn Death (**Chapter 10, page 3-74**) for additional information about assessment and care provision.
Fetal hand or foot presenting (For information on possible diagnoses associated with this sign/symptom, see **Table 1-13** [**page 1-38**].)		ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). *(For complete differential diagnosis and management of malpositions and malpresentations, see MCPC.)*	

SIGN OR SYMPTOM	ASSESS FOR THESE ALERT SIGNS/SYMPTOMS	IF ANY ALERT SIGNS/SYMPTOMS PRESENT	IF NO ALERT SIGNS/SYMPTOMS PRESENT
Fever (temperature 38°C or more) or foul-smelling vaginal discharge (For information on possible diagnoses associated with this sign/symptom, see **Table 1-13** [**page 1-38**].)		**Woman Has a Fever** ➡ **If the woman is postpartum and has ONLY a painful/tender breast without any fluctuant swelling or pus**, see Breast and Breastfeeding Problems (**Chapter 10, page 3-43**). ➡ **If the woman has a fever with or without ANY other signs/symptoms**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). Complete the following steps in addition to those in Annex 7: – Start an IV infusion or give oral rehydration solution (**Textbox 3-35, page 3-96**). – Provide antibiotics as shown in **Table 3-4** (**page 3-116**). – Provide supportive care, including use of a fan or tepid sponge to reduce temperature before referral/transfer. **Woman Has Foul-Smelling Vaginal Discharge** • ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). Complete the following steps in addition to those in Annex 7: – Start an IV infusion or give oral rehydration solution (see **Textbox 3-35, page 3-96**). – Provide antibiotics as shown in **Table 3-4** (**page 3-116**). – Provide supportive care, including use of a fan or tepid sponge to reduce temperature before referral/transfer. *(For complete differential diagnosis and management of fever during pregnancy and labor or after childbirth, see MCPC.)*	

Table 3-4. Antibiotic Treatment for Fever during Pregnancy, Labor, or Postpartum

SIGNS/SYMPTOMS TYPICALLY PRESENT IN ADDITION TO FEVER	SIGNS/SYMPTOMS SOMETIMES PRESENT	PROBABLE DIAGNOSIS	ANTIBIOTIC OF CHOICE
• Chills • Foul-smelling, watery vaginal discharge after 22 weeks' gestation • Abdominal pain	• History of loss of fluid • Tender uterus • Rapid fetal heart rate • Light vaginal bleeding	**Amnionitis**	Ampicillin 2 g IV every 6 hours PLUS gentamicin 5 mg/kg body weight IV every 24 hours until the woman is fever-free for 48 hours
• Chills • Lower abdominal pain • Purulent, foul-smelling lochia • Tender uterus	• Light vaginal bleeding • Shock	**Metritis**	Ampicillin 2 g IV every 6 hours PLUS gentamicin 5 mg/kg body weight IV every 24 hours PLUS metronidazole 500 mg IV every 8 hours until the woman is fever-free for 48 hours
• Burning on urination • Spiking fever/chills • Increased urgency/frequency of urination • Abdominal pain	• Retropubic/suprapubic pain • Flank/loin pain • Tenderness in rib cage • Anorexia • Nausea/vomiting	**Acute pyelonephritis**[a]	Ampicillin 2 g IV every 6 hours PLUS gentamicin 5 mg/kg body weight IV every 24 hours PLUS metronidazole 500 mg IV every 8 hours until the woman is fever-free for 48 hours
• Lower abdominal pain and distention • Persistent spiking fever/chills • Tender uterus	• Poor response to antibiotics • Swelling in adnexa or pouch of Douglas	**Pelvic abscess**	Ampicillin 2 g IV every 6 hours PLUS gentamicin 5 mg/kg body weight IV every 24 hours PLUS metronidazole 500 mg IV every 8 hours until the woman is fever-free for 48 hours
• Fever/chills • Lower abdominal pain • Absent bowel sounds	• Rebound tenderness • Abdominal distention • Anorexia • Nausea/vomiting • Shock	**Peritonitis**	Ampicillin 2 g IV every 6 hours PLUS gentamicin 5 mg/kg body weight IV every 24 hours until the woman is fever-free for 48 hours
• Firm, very tender breast • Overlying erythema	• Fluctuant swelling in breast • Draining pus	**Breast abscess**	Cloxacillin 500 mg by mouth every 6 hours OR erythromycin 250 mg by mouth every 8 hours for 10 days

[a] For treatment of cystitis, see Burning on Urination (**Chapter 10, page 3-47**).

Table 3-4. Antibiotic Treatment for Fever During Pregnancy, Labor, or Postpartum *(continued)*

SIGNS/SYMPTOMS TYPICALLY PRESENT IN ADDITION TO FEVER	SIGNS/SYMPTOMS SOMETIMES PRESENT	PROBABLE DIAGNOSIS	ANTIBIOTIC OF CHOICE
• Painful and tender wound • Erythema and edema beyond edge of incision	• Hardened wound • Purulent discharge • Reddened area around wound	**Wound cellulitis or necrotizing fasciitis**	➡ **If superficial**, give ampicillin 500 mg by mouth every 6 hours PLUS metronidazole 400 mg by mouth every 8 hours for 5 days ➡ **If deep, involving muscles and causing necrosis**, give penicillin G 2 million units IV every 6 hours PLUS gentamicin 5 mg/kg body weight IV every 24 hours PLUS metronidazole 500 mg IV every 8 hours until the woman is fever-free for 48 hours. Then, give ampicillin 500 mg by mouth every 6 hours PLUS metronidazole 400 mg by mouth every 8 hours for 5 days
• Chills/rigors • Headache • Muscle/joint pain • Anemia (complicated malaria only) • Coma (complicated malaria only)	• Enlarged spleen • Convulsions (complicated malaria only) • Jaundice (complicated malaria only)	**Malaria**	Follow national treatment guidelines
• Breathing difficulty • Cough with expectoration • Chest pain	• Consolidation • Congested throat • Rapid breathing • Ronchi/rales	**Pneumonia**	Erythromycin 500 mg by mouth every 6 hours for 7 days
• Headache • Dry cough • Malaise • Anorexia • Enlarged spleen	• Confusion • Stupor	**Typhoid**	Ampicillin 1 g by mouth every 6 hours OR amoxicillin 1 g by mouth every 8 hours for 14 days
• Breast pain and tenderness • Reddened, wedge-shaped area on breast 3–4 weeks after birth	• Inflammation preceded by engorgement • Usually only one breast affected	**Mastitis**[b]	Cloxacillin 500 mg by mouth every 6 hours for 10 days OR erythromycin 250 mg by mouth every 8 hours for 10 days

[b] For additional information on care provision for mastitis, see **Textbox 3-14** (**page 3-45**).

MATERNAL LIFE-THREATENING COMPLICATIONS *(CONTINUED)*

SIGN OR SYMPTOM	ASSESS FOR THESE ALERT SIGNS/SYMPTOMS	IF ANY ALERT SIGNS/SYMPTOMS PRESENT	IF NO ALERT SIGNS/SYMPTOMS PRESENT
Pain in calf (For information on possible diagnoses associated with this sign/symptom, see **Table 1-13** [**page 1-38**].)	• Spiking fever • Positive Homans' sign (pain in calf muscle when foot is forcibly flexed upward) • Swelling of one leg • Hardness deep in calf muscle	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). • In addition to the steps in Annex 7, before and during transfer ensure that the woman does not walk and that the leg is not massaged or manipulated in any way.	Proceed with basic care provision with the following additions and/or emphases as appropriate: • Provide reassurance and explain that the symptoms she is experiencing may be normal. For more information about leg cramps as a common discomfort during pregnancy and the postpartum period, see Leg Cramps (**Chapter 9, page 3-5**). • Review the danger signs and the woman's complication readiness plan. – Ensure that emergency transportation and funds are immediately accessible. – Ensure that she knows where to go for help if a danger sign arises.
Pus, redness, or pulling apart of skin edges of perineal suture line; pus or drainage from unrepaired tear; severe pain from tear or episiotomy (For information on possible diagnoses associated with this sign/symptom, see **Table 1-13** [**page 1-38**].)	• Excessive swelling of the vulva or perineum • Infection involving muscles or deeper layers of tissue • Necrotic tissue • Hardened wound with redness and swelling beyond the edge of the incision • Stool or urine coming from the vagina • Fever • Cellulitis • Necrotizing fasciitis	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). Complete the following steps in addition to those in Annex 7: ➡ **If the woman has any of the following alert signs**, start an IV infusion or give oral rehydration solution (see **Textbox 3-35** [**page 3-96**]) and provide antibiotics as shown in **Table 3-4** (**page 3-116**): – Infection involving muscles or deeper layers of tissue – Necrotic tissue – Hardened wound with redness and swelling beyond the edge of the incision – Fever – Cellulitis – Necrotizing fasciitis *(For complete differential diagnosis and management of infection of perineal wounds, see MCPC.)*	Proceed with basic care provision with the following additions and/or emphases as appropriate: ➡ **If pus is draining or there is redness or pulling apart of perineal suture line**, remove sutures and debride the wound. • Clean the wound from front to back with antiseptic (or soap) and rinse with clean water. • Instruct the woman on perineal hygiene (**page 2-106**). • For more information about perineal pain as a common discomfort of the postpartum period, see Perineal Pain (**Chapter 9, page 3-10**). • Advise the woman to wait until the wound has healed before resuming sexual intercourse. • Advise her to return for care if symptoms persist or worsen. • Review the danger signs and the woman's complication readiness plan. – Ensure that emergency transportation and funds are immediately accessible. – Ensure that she knows where to go for help if a danger sign arises.

MATERNAL LIFE-THREATENING COMPLICATIONS *(CONTINUED)*

SIGN OR SYMPTOM	ASSESS FOR THESE ALERT SIGNS/SYMPTOMS	IF ANY ALERT SIGNS/SYMPTOMS PRESENT	IF NO ALERT SIGNS/SYMPTOMS PRESENT
Severe abdominal pain in early pregnancy (through 22 weeks' gestation) (For information on possible diagnoses associated with this sign/symptom, see **Table 1-13** [**page 1-38**].)	• Vaginal bleeding • Nausea/vomiting • Loss of appetite • Fever/chills • Rebound tenderness • Size-date discrepancy • Tender adnexal mass or cervical motion tenderness (for the procedure for Pelvic Examination, see **Annex 4, page 4-26**) • Burning on urination • Increased urgency/frequency of urination	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). *(For complete differential diagnosis and management of abdominal pain in early pregnancy, see MCPC.)*	Proceed with basic care provision with the following additions and/or emphases: • Provide reassurance that abdominal pain may be normal during pregnancy. For more information about abdominal or groin pain as a common discomfort of pregnancy, see Abdominal (or Groin) Pain (**Chapter 9, page 3-3**). • Review the danger signs and the woman's birth preparedness and complication readiness plan: – Ensure that emergency transportation and funds are immediately accessible. – Ensure that she knows where to go for help if a danger sign arises.
Severe abdominal pain in later pregnancy (after 22 weeks' gestation) **or labor** (For information on possible diagnoses associated with this sign/symptom, see **Table 1-13** [**page 1-38**].)	• Continuous pain persisting between contractions or sudden in onset • Contractions that cease altogether • Palpable contractions or cervical dilation before 37 weeks' gestation • Blood-stained mucus or watery vaginal discharge before 37 weeks' gestation • Foul-smelling, watery vaginal discharge • Vaginal bleeding • Nausea/vomiting • Loss of appetite • Fever/chills • Rebound tenderness • Tender uterus • Easily palpable fetal parts • Decreased or absent fetal movements • Abnormal or absent fetal heart tones • Burning on urination • Increased urgency/frequency of urination	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). • In addition to the steps in Annex 7, start an IV infusion (**Textbox 3-35, page 3-96**). *(For complete differential diagnosis and management of abdominal pain in later pregnancy, see MCPC.)*	• Assess the woman for onset of labor (**Table 2-8, page 2-68**). ➡ **If the woman IS in labor:** – Proceed with basic care for normal labor and birth (**Chapter 6, page 2-37**). – Continue to evaluate the woman for danger signs during labor and birth. ➡ **If the woman IS NOT in labor:** – Provide reassurance that abdominal pain may be normal. For more information about abdominal or groin pain as a common discomfort of pregnancy and labor, see Abdominal (or Groin) Pain (**Chapter 9, page 3-3**). – Assess the woman for constipation. For more information on bowel function changes as a common discomfort of pregnancy, see Bowel Function Changes—Constipation or Diarrhea (**Chapter 9, page 3-6**). – Review the danger signs and the woman's birth preparedness and complication readiness plan: – Ensure that emergency transportation and funds are immediately accessible. – Ensure that she knows where to go for help if a danger sign arises.

MATERNAL LIFE-THREATENING COMPLICATIONS *(CONTINUED)*

SIGN OR SYMPTOM	ASSESS FOR THESE ALERT SIGNS/SYMPTOMS	IF ANY ALERT SIGNS/SYMPTOMS PRESENT	IF NO ALERT SIGNS/SYMPTOMS PRESENT
Severe abdominal pain after childbirth (For information on possible diagnoses associated with this sign/symptom, see **Table 1-13** [**page 1-38**].)	• Vaginal bleeding • Purulent, foul-smelling lochia • Nausea/vomiting • Loss of appetite • Fever/chills • Rebound tenderness • Tender uterus • Tender adnexal mass or swelling in the pouch of Douglas (for the procedure for Pelvic Examination, see **Annex 4, page 4-26**) • History of prolonged rupture of membranes, retained placenta, or untreated or inadequately treated sexually transmitted infection	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). • In addition to the steps listed in Annex 7, start an IV infusion (**Textbox 3-35, page 3-96**). *(For complete differential diagnosis and management of abdominal pain after childbirth, see MCPC.)*	Proceed with basic care provision with the following additions and/or emphases. • Assess the woman for constipation. For more information about bowel function changes as a common discomfort of the postpartum period, see Bowel Function Changes—Constipation or Diarrhea (**Chapter 9, page 3-6**). • Provide reassurance that abdominal pain after childbirth may be normal. For more information about afterbirth pains as a common discomfort of the postpartum period, see Afterpains (**Chapter 9, page 3-4**). • Review the danger signs and the woman's complication readiness plan: – Ensure that emergency transportation and funds are immediately accessible. – Ensure that she knows where to go for help if a danger sign arises.
Contractions before 37 weeks' gestation (For information on possible diagnoses associated with this sign/symptom, see **Table 1-13** [**page 1-38**].)	• Cervical dilation (for procedure for determining cervical dilation, see **Textbox 2-21, page 2-66**) • Palpable contractions • Blood-stained mucus or watery vaginal discharge • Vaginal bleeding	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). *(For complete differential diagnosis and management of possible preterm labor, see MCPC.)*	Proceed with basic care provision with the following additions and/or emphases: • Determine if the woman is in false labor (**Table 2-8, page 2-68**): ➡ **If the woman is in false labor**, provide the additional care described on **page 3-48**. In addition: – Conduct a urine test to rule out urinary tract infection. – Reinforce the importance of adequate rest and fluid intake. – Review the signs of labor and allow the woman to go home until signs of labor appear. Advise her to return for care if symptoms persist or worsen. • Review the danger signs and the woman's birth preparedness and complication readiness plan: – Ensure that emergency transportation and funds are immediately accessible. – Ensure that she knows where to go for help if a danger sign arises.

MATERNAL LIFE-THREATENING COMPLICATIONS *(CONTINUED)*

SIGN OR SYMPTOM	ASSESS FOR THESE ALERT SIGNS/SYMPTOMS	IF ANY ALERT SIGNS/SYMPTOMS PRESENT	IF NO ALERT SIGNS/SYMPTOMS PRESENT
Verbalization/ behavior that indicates the woman may hurt herself or her baby, and/or hallucinations (For information on possible diagnoses associated with this sign/symptom, see **Table 1-13** [**page 1-38**].)		ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). • In addition to the steps listed in Annex 7, ensure that the woman is not left alone at any time before and during transfer.	

LIFE-THREATENING COMPLICATIONS DURING THE NEWBORN PERIOD

SIGN OR SYMPTOM	ASSESS FOR THESE ALERT SIGNS/SYMPTOMS	IF ANY ALERT SIGNS/SYMPTOMS PRESENT	IF NO ALERT SIGNS/SYMPTOMS PRESENT
Abnormal body temperature (axillary temperature less than 36.5°C or more than 37.5°C) (For information on possible diagnoses associated with this sign/symptom, see **Table 1-14** [**page 1-40**])	• Poor feeding after having fed well • Lethargy, drowsiness, or floppiness • Vomiting and/or abdominal distention • Irritability • Breathing difficulty • Temperature less than 32°C	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). Complete the following step in addition to those in Annex 7: • Give the baby ampicillin 50 mg/kg IM PLUS gentamicin 5 mg/kg body weight IM (if 2 kg or more) or 4 mg/kg body weight IM (if less than 2 kg). *(For complete differential diagnosis and management of abnormal body temperature, see MNP.)*	➡ **If the baby's temperature is less than 36.5°C**, proceed with basic care provision with the additions and/or emphases shown in **Textbox 3-46** (**page 3-123**). ➡ **If the baby's temperature is more than 37.5°C**, proceed with basic care provision with the additions and/or emphases shown in **Textbox 3-47** (**page 3-123**). • Review the danger signs and the complication readiness plan. – Ensure that emergency transportation and funds are immediately accessible. – Ensure that the woman knows where to go for help if a danger sign arises.

Textbox 3-46. Management of Newborn Axillary Temperature Less than 36.5°C

➡ **If the woman (or other family member) is present**, have her rewarm her baby with skin-to-skin contact.

➡ **If the woman (or other family member) is NOT present:**
- Dress the baby in warm clothes and a hat, and cover with a warm blanket.
- Rewarm the baby using a radiant warmer or incubator.
- Alternatively, use a covered hot water bottle:
  - Make sure that the baby's skin does not touch the water bottle or any other object that could cause burns.
  - Turn the baby frequently.
  - Ensure that the source of warmth is replaced before it becomes cold, and that the room is warm (at least 25°C) and free from drafts.

- Encourage the woman to breastfeed more frequently than on demand (at least every 2 hours).
- Ask the woman to observe for danger signs (breathing difficulty, convulsions, unconsciousness) and to call for/seek help if any are noted.
- Measure the baby's body temperature every hour.
  - ➡ **If the baby's body temperature rises at least 0.5°C per hour**, the rewarming measures have been successful; continue measuring body temperature every 2 hours until it returns to normal, and proceed with basic care provision for the newborn as shown in **Chapter 8** (**page 2-109**).
  - ➡ **If the baby's body temperature does not rise at least 0.5°C per hour or return to normal (36.5°C to 37.5°C) after performing the thermoregulation measures indicated**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

Textbox 3-47. Management of Newborn Axillary Temperature More than 37.5°C

WARNING: Do not give antipyretic drugs to babies.

➡ **If the elevated body temperature IS NOT likely due to exposure to high environmental temperature**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). Complete the following steps in addition to those in Annex 7:
- Undress the baby partially or fully before and during transfer.
- ➡ **If the temperature is more than 39°C**, sponge the baby or give the baby a bath for 10–15 minutes before or during transfer, using water that is about 4°C lower than the current body temperature. **Do NOT use water colder than this.**
- Allow the baby to breastfeed or give expressed milk by cup before and during transfer to prevent dehydration.

➡ **If the elevated body temperature IS likely due to exposure to high environmental temperature**, complete the steps below.
- ➡ **If the temperature is more than 39°C**, sponge the baby or give the baby a bath for 10–15 minutes, using water that is about 4°C lower than the current body temperature. **Do NOT use water colder than this.**
- ➡ **If it is likely that the elevated body temperature is due to overheating (such as from a radiant warmer or incubator):**
  - Place the baby in a normal temperature environment (25–28°C).
  - Undress the baby partially or fully, if necessary.
- Encourage the woman to breastfeed frequently or, if the baby is unable to suckle, give expressed milk by cup to prevent dehydration.
- Ask the woman to observe for danger signs (breathing difficulty, convulsions, unconsciousness) and to call for/seek help if any are noted.
- Measure the baby's axillary temperature every hour until it returns to normal:
  - ➡ **If the baby's body temperature returns to normal (36.5–37.5°C) within 2 hours of performing the thermoregulation measures indicated**, proceed with basic care provision for the newborn as shown in **Chapter 8** (**page 2-109**).
  - ➡ **If the baby's body temperature does NOT return to normal (36.5–37.5°C) within 2 hours of performing the thermoregulation measures indicated**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

LIFE-THREATENING COMPLICATIONS DURING THE NEWBORN PERIOD *(CONTINUED)*

SIGN OR SYMPTOM	ASSESS FOR THESE ALERT SIGNS/SYMPTOMS	IF ANY ALERT SIGNS/SYMPTOMS PRESENT	IF NO ALERT SIGNS/SYMPTOMS PRESENT
Jaundice (For information on possible diagnoses associated with this sign/symptom, see **Table 1-14** [**page 1-40**].)	• Woman had previous children with jaundice on day 1 • History of hemolytic jaundice, glucose-6-phosphate dehydrogenase (G6PD) deficiency, or Rhesus factor or ABO blood group incompatibility in previous baby • Family history of severe anemia, enlarged liver, or removal of spleen • Jaundice visible anywhere on baby's body during the first 24 hours of life • Jaundice seen on arms and legs by day 2 • Jaundice seen on hands and feet at any time • Pallor noted at birth • Birthweight less than 2.5 kg • Jaundice that persists after 2 weeks in a term baby (or 3 weeks in a low birthweight baby)	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). *(For complete differential diagnosis and management of jaundice, see MNP.)*	Proceed with basic care provision with the following additions and/or emphases: • Advise the woman that the baby is normal and that the yellow will gradually disappear, but she must: – Keep the baby warm. – Breastfeed on demand and frequently (at least every 3 hours). • Review the danger signs and the complication readiness plan. – Ensure that emergency transportation and funds are immediately accessible. – Ensure that the woman knows where to go for help if a danger sign arises.

LIFE-THREATENING COMPLICATIONS DURING THE NEWBORN PERIOD *(CONTINUED)*

SIGN OR SYMPTOM	ASSESS FOR THESE ALERT SIGNS/SYMPTOMS	IF ANY ALERT SIGNS/SYMPTOMS PRESENT	IF NO ALERT SIGNS/SYMPTOMS PRESENT
Diarrhea **Note:** Breastfed babies tend to pass more water in stools—this is not diarrhea. (For information on possible diagnoses associated with this sign/symptom, see **Table 1-14** [**page 1-40**].)	• Skin makes a tent that does not disappear within 2 seconds of gently pinching the abdominal skin and letting go • Stool is green or contains mucus or blood • Birthweight less than 2.5 kg • Vomiting • Poor or no feeding • Floppiness or lethargy • Abdominal distention • Temperature instability	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). Complete the following steps in addition to those in Annex 7: • Advise the woman to continue breastfeeding during referral/transfer. • Teach the woman to give sips of oral rehydration solution (ORS) during referral/transfer. (For instructions on preparing ORS, see **Textbox 3-36** [**page 3-96**].) • Encourage the woman to keep her baby in skin-to-skin contact to keep the baby warm during referral/transfer. • Give the baby ampicillin 50 mg/kg body weight IM PLUS gentamicin 5 mg/kg body weight IM (if 2 kg or more) or 4 mg/kg body weight IM (If less than 2 kg). *(For complete differential diagnosis and management of diarrhea, see MNP.)*	Proceed with basic care provision with the following additions and/or emphases: ➡ **If the woman is breastfeeding**, advise her as follows: – Continue breastfeeding and feed more often and for longer periods of time. – If the baby spits up while breastfeeding, wait 10 minutes and then continue. ➡ **If the woman is using a breastmilk substitute:** – Observe the preparation of the substitute to ensure that the feed is prepared properly (correct concentration, no contaminants, clean utensils, etc.). (For additional guidance, see **page 4-51**.) – Advise the woman that if the baby spits up while feeding, she should wait 10 minutes and then continue slowly. • Assess hydration by gently pinching abdominal skin and letting go: ➡ **If no tent forms**, give 125 mL/kg body weight ORS (for instructions on preparing ORS, see **Textbox 3-36** [**page 3-96**]) daily and an extra 50 mL after each loose stool. ➡ **If tent forms but disappears within 2 seconds**, give 200–400 mL ORS daily and an extra 50 mL after each loose stool. (For instructions on preparing ORS, see **Textbox 3-36** [**page 3-96**].) ➡ **If the baby spits up while giving ORS**, wait 10 minutes and then continue slowly. • Review the danger signs and the complication readiness plan. – Ensure that emergency transportation and funds are immediately accessible. – Ensure that the woman knows where to go for help if a danger sign arises.
Abdominal distention (For information on possible diagnoses associated with this sign/symptom, see **Table 1-14** [**page 1-40**].)		ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). *(For complete differential diagnosis and management of abdominal distention, see MNP.)*	

LIFE-THREATENING COMPLICATIONS DURING THE NEWBORN PERIOD *(CONTINUED)*

SIGN OR SYMPTOM	ASSESS FOR THESE ALERT SIGNS/SYMPTOMS	IF ANY ALERT SIGNS/SYMPTOMS PRESENT	IF NO ALERT SIGNS/SYMPTOMS PRESENT
Bleeding Stop bleeding, if possible: ➡ **If bleeding is from umbilicus**, reclamp or retie if not already done. ➡ **If bleeding is from male circumcision site or another cut/injury**, press on bleeding site with sterile compress until bleeding stops. (For information on possible diagnoses associated with this sign/symptom, see **Table 1-14** [**page 1-40**].)	• Bleeding continues for more than 15 minutes after the measures listed in column to left • Signs of shock develop (heart rate 180 beats per minute or more, pallor, central cyanosis, cold to the touch, respiratory rate more than 60 breaths per minute, unconscious or nearly unconscious)	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). Complete the following steps in addition to those in Annex 7: • Give vitamin K_1 1 mg IM before transfer. • Continue to press on the bleeding site with sterile compress before and during transfer. *(For complete differential diagnosis and management of bleeding, see MNP.)*	Proceed with basic care provision with the following additions/ emphases. • **To care for cuts and abrasions**, see Cuts or Abrasions that Are Not Bleeding (**Chapter 10, page 3-83**) for additional information about assessment and care. • Review the danger signs and the complication readiness plan: – Ensure that emergency transportation and funds are immediately accessible. – Ensure that the woman knows where to go for help if a danger sign arises.

LIFE-THREATENING COMPLICATIONS DURING THE NEWBORN PERIOD *(CONTINUED)*

SIGN OR SYMPTOM	ASSESS FOR THESE ALERT SIGNS/SYMPTOMS	IF ANY ALERT SIGNS/SYMPTOMS PRESENT	IF NO ALERT SIGNS/SYMPTOMS PRESENT
Pus or lesions of skin **Note:** Skin infections in babies are extremely contagious. Observe strict infection prevention practices at all times to prevent the spread of one baby's infection to other babies. Dispose of all items in direct contact with lesions (e.g., gauze) in a plastic bag or leakproof, covered waste container. (For information on possible diagnoses associated with this sign/symptom, see **Table 1-14** [**page 1-40**].)	• More than 10 skin lesions • Lesions covering more than half the body • Red skin and swollen subcutaneous tissue anywhere on the body • Fluctuant area/lesion • Generalized edema • Blistering skin rash on palms and soles • Profuse runny nose • Jaundice or pallor • Poor feeding after having fed well • Abdominal distention or vomiting • Lethargy, drowsiness, or floppiness • Fever • Mother with positive serology for syphilis who was not treated or was not treated adequately	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). Complete the following step in addition to those in Annex 7: ➡ **If the baby has any of the following alert signs**, give cloxacillin 50 mg/kg body weight IM PLUS gentamicin 5 mg/kg body weight IM (if 2 kg or more) or 4 mg/kg body weight IM (if less than 2 kg): – More than 10 skin lesions or lesions covering more than half the body – Red skin and swollen subcutaneous tissue anywhere on the body – Fluctuant area/lesion – Poor feeding after having fed well – Abdominal distention or vomiting – Lethargy, drowsiness, or floppiness – Fever – Irritability – Bulging fontanelle *(For complete differential diagnosis and management of skin and mucous membrane problems, see MNP.)*	Proceed with basic care provision with the following additions and/or emphases: ➡ **If there are fewer than 10 skin lesions or the lesions cover less than half the body**, see **Textbox 3-48** (**page 3-128**). ➡ **If there are white patches in the mouth or the diaper/napkin area**, see **Textbox 3-49** (**page 3-128**). • Review the danger signs and the complication readiness plan: – Ensure that emergency transportation and funds are immediately accessible. – Ensure that the woman knows where to go for help if a danger sign arises.

Textbox 3-48. Management of Fewer than 10 Skin Lesions or Lesions That Cover Less than Half the Body

- Wearing clean examination gloves, wash the affected area(s) of the skin using an antiseptic solution (chlorhexidine or 2.5% polyvidone-iodine) and clean gauze or cloth 4 times per day until the lesions are gone:
  - Gently wash off any pus or dry crusts.
  - Apply 0.5% gentian violet solution to any lesions.
  - Have the woman do this whenever possible, reminding her to wash her hands carefully before and after caring for the baby.
- Continually observe for danger or alert signs, and teach woman to observe for these signs and seek care immediately if any of these signs develops.
- ➡ **If pustules/blisters are still present after 5 days of the above treatment**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

Textbox 3-49. Management of White Patches in Mouth or Diaper/Napkin Area

White Patches in Mouth

- Test to distinguish thrush from milk patches by gently wiping the tongue with clean gauze to see if the white patches come off; milk patches can be removed this way but thrush cannot be removed.
- Swab the patches in the baby's mouth with nystatin oral solution or 0.5% gentian violet solution 4 times per day, continuing for 2 days after the patches have disappeared.
- Have the woman apply nystatin cream or gentian violet solution to her nipples after breastfeeding for as long as the baby is being treated. Remind the woman to keep her breasts dry between feeds. She does not need to wipe off the medicine before the baby breastfeeds.
- Remind the woman to use clean cloths for applying solution and to wash her hands carefully before and after handling the baby.

White Patches in Diaper/Napkin Area

- Apply nystatin cream to the lesions or swab the lesions with 0.5% gentian violet solution at every diaper/napkin change, continuing for 3 days after the lesions have disappeared.
- Ensure that the diaper/napkin is changed whenever it is wet or soiled.
- Remind the woman to use clean cloths for applying the solution and to wash her hands carefully before and after handling the baby.

LIFE-THREATENING COMPLICATIONS DURING THE NEWBORN PERIOD *(CONTINUED)*

SIGN OR SYMPTOM	ASSESS FOR THESE ALERT SIGNS/SYMPTOMS	IF ANY ALERT SIGNS/SYMPTOMS PRESENT	IF NO ALERT SIGNS/SYMPTOMS PRESENT
Pus or redness of eyes (For information on possible diagnoses associated with this sign/symptom, see **Table 1-14** [**page 1-40**].)	• Pus draining from one or both eyes • Mother with history of recent or untreated sexually transmitted infection	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). *(For complete differential diagnosis and management of eyes that are red, swollen, or draining pus, see MNP.)*	Proceed with basic care provision with the following additions and/or emphases: ➡ **If there is a bright red spot under the conjunctiva of one or both eyes but the baby is well otherwise and there is no pus or redness of eyes**, see Subconjunctival Hemorrhage (**Chapter 9, page 3-28**) for additional information about assessment and care. ➡ **If the eyelids are red and/or swollen:** – Wearing clean examination gloves, clean the eyelids 4 times per day: – Clean from the inside edge of the eye to the outside edge. Use sterile normal saline or clean (boiled and cooled and kept in boiled covered container) water and a clean swab for each eye. – Have the woman do this when possible, reminding her to wash her hands carefully before and after caring for the baby. – Have the woman wash the baby's face once a day (or more often if necessary) using clean water and dry with a clean cloth. – Advise the woman not to put other substances into the baby's eye. ➡ **If there is no improvement after 2 days**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). • Review the danger signs and the complication readiness plan: – Ensure that emergency transportation and funds are immediately accessible. – Ensure that the woman knows where to go for help if a danger sign arises.

LIFE-THREATENING COMPLICATIONS DURING THE NEWBORN PERIOD *(CONTINUED)*

SIGN OR SYMPTOM	ASSESS FOR THESE ALERT SIGNS/SYMPTOMS	IF ANY ALERT SIGNS/SYMPTOMS PRESENT	IF NO ALERT SIGNS/SYMPTOMS PRESENT
Redness or foul smell of umbilicus (For information on possible diagnoses associated with this sign/symptom, see **Table 1-14** [**page 1-40**].)	• Pus draining from umbilicus • Area of redness or swelling extends beyond 1 cm • Skin lesions • Abdominal distention • Skin around umbilicus is red and hardened • Axillary temperature more than 37.5°C or less than 36.5°C • Answer to either of these questions is "Yes": – Were unclean or harmful substances (e.g., animal dung) applied to the umbilical cord? – Was the umbilical cord covered (e.g., with a bandage)?	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). Complete the following step in addition to those in Annex 7: • Give the baby cloxacillin 50 mg/kg body weight IM PLUS gentamicin 5 mg/kg body weight IM (if 2 kg or more) or 4 mg/kg body weight IM (if less than 2 kg). (*For complete differential diagnosis and management of an umbilicus red and swollen, draining pus, or foul-smelling, see MNP.)*	Proceed with basic care provision with the following additions and/or emphases: • Wearing clean examination gloves: – Wash the umbilicus using an antiseptic solution (e.g., chlorhexidine or 2.5% polyvidone-iodine) and clean gauze. – Paint the umbilicus and the area around it with an antiseptic solution (e.g., 0.5% gentian violet or 2.5% polyvidone-iodine) 4 times per day until there is no more pus coming from the umbilicus. – Have the woman do this whenever possible, at least 2 times per day, reminding her to wash her hands carefully before and after caring for the baby. • Advise the woman not to put other substances on the cord stump. ➡ **If there is no improvement after 2 days**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). • Review the danger signs and the complication readiness plan: – Ensure that emergency transportation and funds are immediately accessible. – Ensure that the woman knows where to go for help if a danger sign arises.
Swollen limb or joint (For information on possible diagnoses associated with this sign/symptom, see **Table 1-14** [**page 1-40**].)		ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). *(For complete differential diagnosis and management of birth injury, see MNP.)*	

ANNEX ONE

PREPARATION OF THE CARE SITE

The care site is where the healthcare visit (history taking, physical examination, care provision, etc.) takes place. Whether in a healthcare facility or a home setting, this area should meet the basic requirements outlined below. (For more information about the essential equipment and supplies mentioned in this section, see **Annex 2, page 4-3**.)

GENERAL CLEANLINESS, COMFORT, AND ORDER

- The area is warm, clean, and free from clutter. The room temperature should be maintained at approximately 25–32°C.
- Surfaces are wiped with chlorine solution (0.5%) before use.
- Essential equipment and supplies are available, easily accessible, and ready for use (i.e., clean, high-level disinfected, and/or sterile).
- Contaminated objects and waste from previous visits (if in the healthcare facility) or from activities of daily living (if in the home) have been removed or placed in the appropriate containers.
- Separate containers for soiled linen (to be laundered) and contaminated instruments (to be processed) are conveniently located.
- Separate containers for proper disposal of different kinds of waste are conveniently located, including:
  - Containers for general (nonmedical, nontoxic) waste, such as paper, bottles, cans, etc.;
  - Covered containers for medical waste, such as blood, bandages, etc.; and
  - Puncture-proof containers for sharps, such as needles, glass slides, etc.

(For more information about the infection prevention practices mentioned above, see **page 1-47**.)

CLEAN WATER SUPPLY

A supply of clean, running water is available. The water may come from a faucet, pump, or portable container with a tap, or it may be poured from a container or basin.

LIGHT SOURCE

- There is a reliable source of adequate light, which may be artificial or natural.
- Natural light, as from a window, may be adequate for a general physical examination. The examination surface should be positioned toward the window, but it should not be possible to see into the care site from outside of the room.
- Artificial light sources, such as a lamp or torch (flashlight), may provide more intense light. These light sources are better for certain procedures, such as a pelvic examination, repair of the cervix or vagina, or examination of the inside of a newborn's mouth.

FURNISHINGS

The care site should contain:

- An examination table, bed, or other clean, comfortable, washable surface;
- Seating for the woman, her companion (partner, friend, or family member), and the skilled provider;
- A writing surface, such as a desk, table, or clipboard; and
- A clean, conveniently located table or other surface for instruments, supplies, and equipment.

During labor/childbirth, including the immediate newborn period: The care site should also have sufficient space for a woman in labor to walk around and a bed with a clean, comfortable, washable surface. Equipment for newborn resuscitation—including a surface on which a newborn can be resuscitated if necessary—should be easily accessible and in working order.

ANNEX TWO

ESSENTIAL EQUIPMENT AND SUPPLIES

Table 4-1. Essential Equipment and Supplies: Routine Care (Section 2)

FURNISHINGS

- Examination surface (table or bed covered with a washable surface and clean linen)
- Bed covered with a washable surface and clean linen[4]
- Clean, washable, conveniently located surface (e.g., table) on which to resuscitate the baby[4,6]
- Clean, washable, conveniently located surface for equipment and supplies
- Curtains (if needed) for privacy
- Writing surface (e.g., desk or clipboard)
- Seating for the woman, her companion(s), and the skilled provider
- Lamp or torch (with spare light bulbs and batteries) if adequate natural light is not available
- Kettle or other means of warming water for bathing the baby[6]
- Clock (or watch)
- Room thermometer[1]

RECORDS AND FORMS

- Registration logbook
- Charts to be kept by the healthcare facility or skilled provider
- Clinic cards (on which immunizations and other key elements of care received can be summarized) to be kept by the client
- Partographs
- Referral forms

WOMAN

- Drape or blanket to cover the woman
- Gown[1,4]
- Pillow[1]
- Clean cloths or towels to dry the woman after washing/bathing

WOMAN (CONTINUED)

- Thermometer
- Gestational age calculator or calendar[1,3]
- Blood pressure apparatus
- Adult and fetal stethoscopes
- Tape measure[1]
- Syringes and needles
- Collection tubes appropriate for samples (e.g., blood, urine)[2]
- Laboratory equipment/supplies for conducting hemoglobin, RPR/VDRL, HIV, blood group (ABO, Rh) tests[2]
- Clean cloths or sanitary pads[4,5]
- Container for placenta[4]

*For essential drugs, see also **Table 4-4 (page 4-6)**.*

NEWBORN

- Umbilical cord clamp(s) and/or tie(s)
- Scissors or blade for cutting the cord[4]
- Clean gauze, swab, or cloth for wiping the baby's eyes
- Baby weigh scale
- Thermometer
- Syringes and needles
- Clean, dry cloths to dry the baby and to wrap after drying
- Hat or covering for the baby's head
- Diapers/napkins

*For essential drugs, see also **Table 4-4 (page 4-6)**.*

[1] Highly recommended but optional
[2] Should at least be available at a facility to which the skilled provider or woman has access
[3] For antenatal care only
[4] For childbirth care only
[5] For postpartum care only
[6] For newborn care only

Table 4-2. Essential Equipment and Supplies: Infection Prevention

HANDWASHING/ANTISEPSIS

- Clean water supply
- Soap or alcohol-based antiseptic handrub
- Soft brush[1]
- Towel for drying hands
- Cotton wipes and alcohol

PERSONAL PROTECTIVE EQUIPMENT

- Gloves
  - Clean examination gloves (e.g., starting an IV, drawing blood, handling blood or body fluids)
  - Sterile or high-level disinfected gloves for birth, examination during labor, or any contact with broken skin or tissue under the skin
  - Sterile or high-level disinfected elbow-length ("gauntlet") gloves for when the hand and forearm will be inserted into the vagina[1]
- Face mask
- Protective eyewear
- Rubber or plastic apron
- Footwear that covers the entire foot

SAFE HANDLING OF SHARPS

- Pan (e.g., sterile kidney basin) for passing sharps
- Puncture-proof container for sharps disposal

INSTRUMENT PROCESSING AND STORAGE

- Individual wrappings/packaging (for instruments pre-sterilization)
- Autoclave, dry heat, chemical sterilization (e.g., a glutaraldehyde solution or formaldehyde), or covered pan with heat source for boiling
- Plastic container for decontaminated instruments
- Chlorine solution (0.5%)
- Brush

HOUSEKEEPING AND WASTE DISPOSAL

- Cloth or rag for cleaning
- Chlorine solution (0.5%)
- Clean water supply
- Separate covered receptacles for soiled linens, contaminated waste, and noncontaminated waste
- Sterile or high-level disinfected container (if instruments are not packaged)
- Plastic container
- Clean, dry area for storage
- Utility gloves

[1] Highly recommended but optional

Table 4-3. Essential Equipment and Supplies: Emergency/Special Care (Section 3)

WOMAN

- 16- to 18-gauge IV cannulas
- Absorbable, nonreactive sutures (e.g., polyglycolic or chromic catgut sutures) and suture needles
- Adhesive tape
- Ambu self-inflating bag and face masks (adult size)
- Amniotic hook or Kocher clamp
- Bandage scissors
- Closed bag or container for catheter drainage
- Dextrose solution (5%)
- Diagrams or wall charts (for explaining labor and childbirth)[1,3,4]
- Insecticide-treated (bed)nets (in malaria endemic areas only)
- Intravenous (IV) administration set
- Laboratory equipment/supplies for conducting nitrazine and ferning tests[2]
- Oral rehydration solution
- Oxygen[1]
- Oxygen tubing[1]
- Ringer's lactate or normal saline
- Ring or sponge forceps
- Scissors (for cutting sutures or episiotomy)

WOMAN (CONTINUED)

- Needle holder
- Tourniquet
- Urinary catheter
- Vacuum extractor
- Vaginal speculum
- Water-based lubricant[1]

*For essential drugs, see also **Table 4-4** (**page 4-6**).*

NEWBORN

- Ambu self-inflating bag and face masks (newborn sizes 0 and 1)
- Oral rehydration solution
- Oxygen[1]
- Oxygen tubing[1]
- Radiant warmer, incubator, or covered hot water bottle
- Suction apparatus (e.g., DeLee mucus trap with catheter)
- Thermometer

*For essential drugs, see also **Table 4-4** (**page 4-6**).*

[1] Highly recommended but optional
[2] Should at least be available at a facility to which the skilled provider or woman has access
[3] For antenatal care only
[4] For childbirth care only

Table 4-4. Essential Equipment and Supplies: Drugs/Vaccines (Sections 2 and 3)

WOMAN

Routine Care

- Tetanus toxoid (needs to be refrigerated)
- Iron/folate tablets
- Oxytocin

Emergency/Special Care

- 15-methyl prostaglandin $F_{2\alpha}$[1]
- Albendazole or mebendazole (in hookworm-endemic areas only)
- Amoxicillin
- Ampicillin
- Antiretroviral (ARV) therapy: Zidovudine (AZT), Nevirapine (NVP), Lamivudine (3TC)[2]
- Benzathine benzylpenicillin (or procaine benzylpenicillin)
- Benzylpenicillin
- Calcium gluconate
- Cloxacillin (if no erythromycin is available)
- Diazepam[1]
- Diphenhydramine
- Ergometrine/methylergometrine[1]
- Erythromycin
- Gentamicin
- Lidocaine (2%)
- Iodine supplements (in areas endemic for iodine deficiency only)
- Magnesium sulfate
- Metronidazole
- Misoprostol[1]
- Paracetamol (acetaminophen)
- Pethidine
- Stool softener[1]
- Sulfadoxine-pyrimethamine (in malaria-endemic areas only)
- Trimethoprim/sulfamethoxazole
- Vitamin A supplements (in areas endemic for vitamin A deficiency only)

NEWBORN

Routine Care

- Antimicrobial eye prophylaxis (1% silver nitrate solution OR 2.5% polyvidone-iodine OR 1% tetracycline eye ointment)
- Vaccines: OPV, BCG, HBV (need to be refrigerated)
- Vitamin K_1

Emergency/Special Care

- Ampicillin
- Benzathine benzylpenicillin (or procaine benzylpenicillin)
- Cloxacillin
- Gentamicin
- Hepatitis immune globulin[1]
- Isoniazid[1]
- Nystatin cream (or 0.5% gentian violet)
- Nystatin oral solution (or 0.5% gentian violet)
- Phenobarbital
- Polyvidone-iodine (2.5%)
- Topical antibiotic ointment

[1] Highly recommended but optional
[2] Should at least be available at a facility to which the skilled provider or woman has access

ANNEX THREE

THE PARTOGRAPH

USING THE PARTOGRAPH

The WHO partograph (**Figure 4-2, page 4-9**) has been modified to make it simpler and easier to use. The latent phase has been removed, and plotting on the partograph begins in the active phase when the cervix is 4 cm dilated. Record the following on the partograph:

Patient information: Fill out name, gravida, para, hospital number, date and time of admission, and time of ruptured membranes OR time elapsed since rupture of membranes (if rupture occurred before charting on the partograph began).

Fetal heart rate: Record every half hour.

Amniotic fluid: Record the color of amniotic fluid at every vaginal examination: I: membranes intact; R: membranes ruptured; C: membranes ruptured, clear fluid; M: meconium-stained fluid; B: blood-stained fluid.

Molding: 1: sutures apposed; 2: sutures overlapped but reducible; 3: sutures overlapped and not reducible.

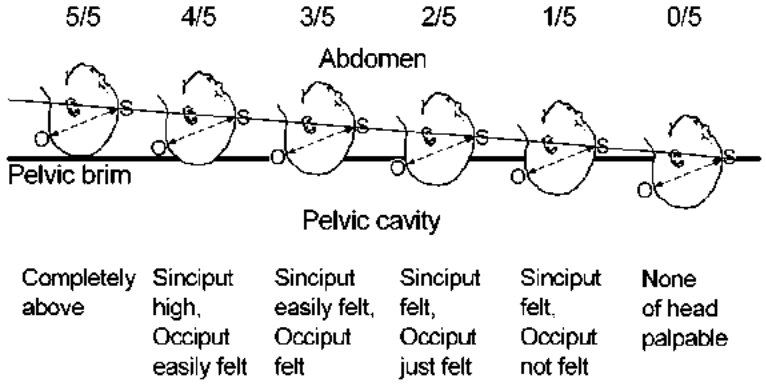
Cervical dilation: Assessed at every vaginal examination and marked with a cross (X). Begin plotting on the partograph at 4 cm.

Alert line: A line starts at 4 cm of cervical dilation to the point of expected full dilation at the rate of 1 cm per hour.

Action line: Parallel and 4 hours to the right of the alert line.

Descent assessed by abdominal palpation (**Figure 4-1,** below): Refers to the part of the head (divided into five parts) palpable above the symphysis pubis; recorded as a circle (O) at every abdominal examination. At 0/5, the sinciput (S) is at the level of the symphysis pubis.

Figure 4-1. Fetal Descent by Abdominal Palpation*



Hours: Refers to the time elapsed since onset of active phase of labor (observed or extrapolated).

Time: Record actual time.

* Figures 4-1 and 4-2 are reprinted with permission from: World Health Organization (WHO). 2000. *Managing Complications in Pregnancy and Childbirth: A guide for midwives and doctors*. WHO: Geneva.

Contractions: Chart every 30 minutes; count the number of contractions in a 10-minute time period, and their duration in seconds.

- Less than 20 seconds: 
- Between 20 and 40 seconds: 
- More than 40 seconds: 

Oxytocin: Record the amount of oxytocin per volume IV fluids in drops per minute every 30 minutes when used.

Drugs given: Record any additional drugs given.

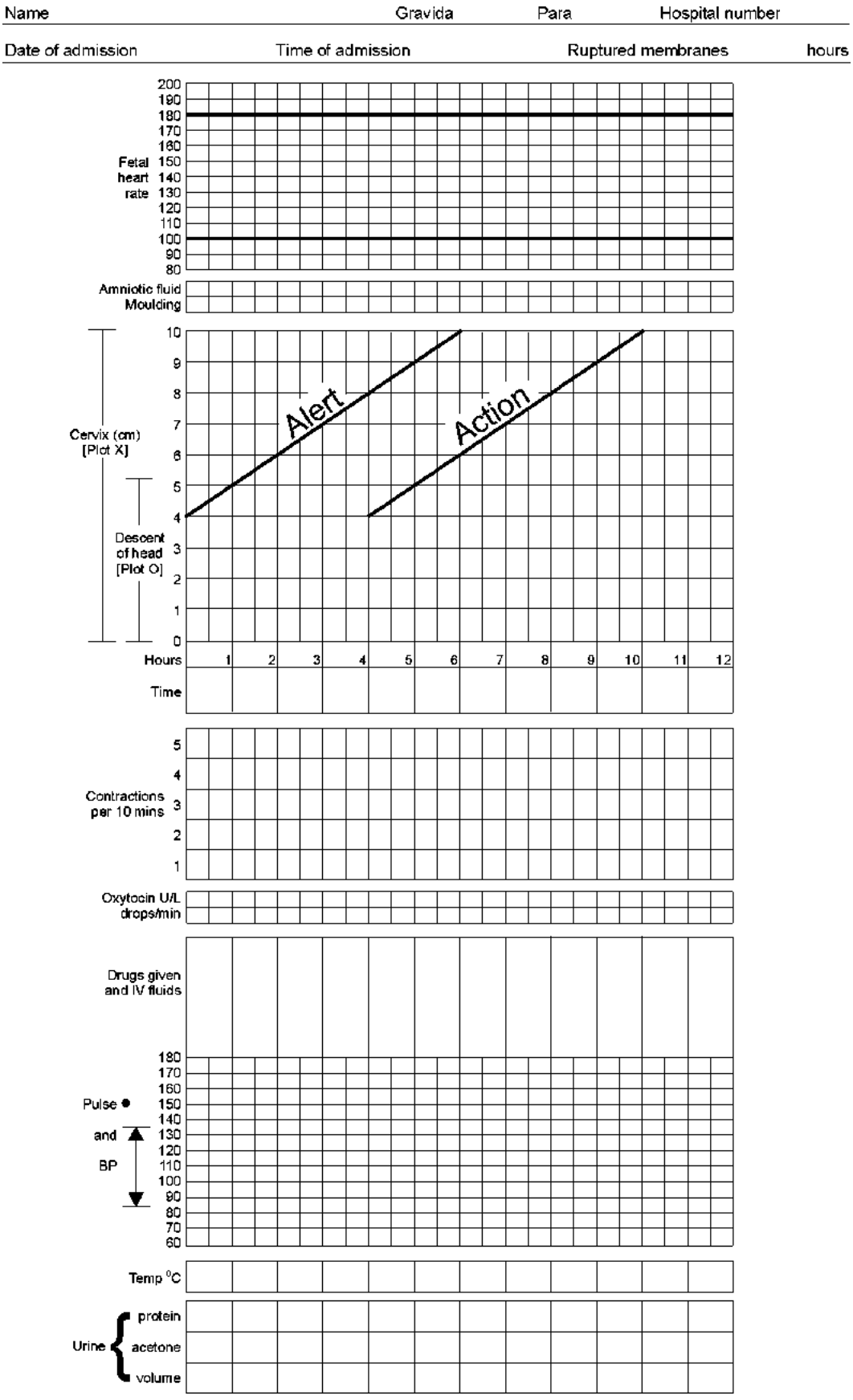
Pulse: Record every 30 minutes and mark with a dot (●).

Blood pressure: Record every 4 hours and mark with arrows.

Temperature: Record every 2 hours.

Protein, acetone, and volume: Record when urine is passed.

Figure 4-2. The Modified WHO Partograph



ANNEX FOUR

ADDITIONAL PROCEDURES

ARTIFICIAL RUPTURE OF MEMBRANES

Indications

This procedure is not a routine part of basic care. It should be performed only if membranes have not ruptured spontaneously before application of vacuum cup (when performing vacuum extraction is necessary).

Note: In areas where HIV and/or hepatitis are highly prevalent, the membranes should be left intact for as long as possible to reduce mother-to-child transmission of infection.

Pre-Procedure Steps and Considerations

- In performing the following procedure, adhere to the general principles of basic care as outlined in **Chapter 1** (**page 1-5**).

Procedure

- Listen to and note the fetal heart rate.
- Ask the woman to lie on her back with her legs bent, feet together, and knees apart.
- Wearing high-level disinfected or sterile gloves, use one hand to examine the cervix and note the consistency, position, and dilation.
- Use the other hand to insert an amniotic hook or a Kocher clamp into the vagina.
- Guide the clamp or hook toward the membranes along the fingers in the vagina.
- Place two fingers against the membranes and gently rupture the membranes with the instrument in the other hand. Allow the amniotic fluid to drain slowly around the fingers.
- Note the color of the fluid (clear, greenish, bloody).
    - **If thick meconium is present**, ACT NOW!—see **Textbox 3-42** (**page 3-111**) before proceeding.

Post-Procedure Steps and Considerations

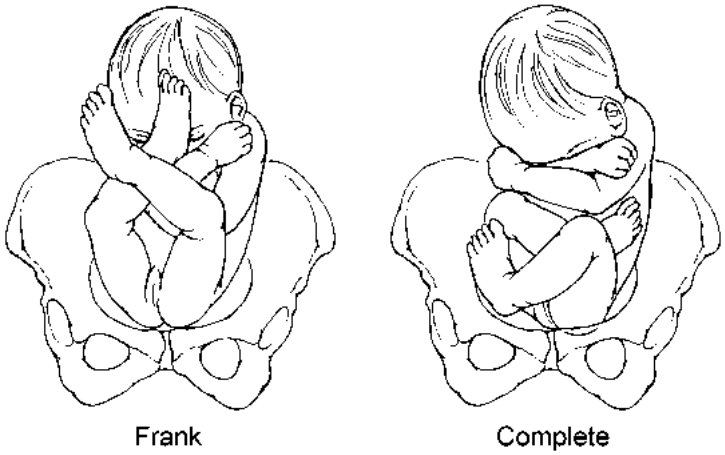
- Listen to the fetal heart rate during and after a contraction.
    - ➡ **If the fetal heart rate is abnormal** (less than 100 or more than 180 beats per minute), ACT NOW!—see **Textbox 3-45** (**page 3-113**).

BREECH BIRTH (IN EMERGENCY SITUATIONS ONLY)

Indications

This procedure is not a routine part of basic care. It should be performed only in the case of frank or complete breech presentation (**Figure 4-3, page 4-12**), when the cervix is completely dilated, there is no evidence of cephalopelvic disproportion, **AND there is no time for urgent referral/transfer (i.e., the woman was already in the 2nd stage of labor when condition was detected)**.

Figure 4-3. Breech Presentation: Frank (Left) and Complete (Right)



Pre-Procedure Steps and Considerations

- In performing the following procedure, adhere to the general principles of basic care as outlined in **Chapter 1** (**page 1-5**).
- Plot all parameters on a partograph as would be done for cephalic presentation.
- Start an IV infusion (**Textbox 3-35, page 3-96**).
- Provide emotional support and encouragement.
- Perform all maneuvers gently and without undue force.

Procedure

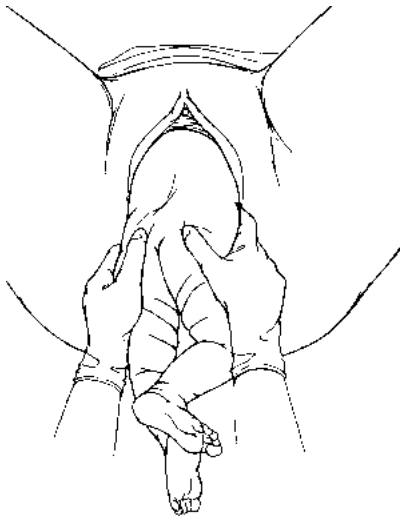
Delivery of the Buttocks and Legs

- Once the buttocks have entered the vagina and the cervix is fully dilated, inform the woman that she can bear down with the contractions.
  - ➧ **If the perineum is very tight**, perform an episiotomy (**page 4-18**).
- Allow the buttocks to deliver until the lower back and then the shoulder blades are seen.
- Gently hold the buttocks in one hand, **but do not pull**.
  - ➧ **If the legs do not deliver spontaneously**, deliver one leg at a time:
    - Push behind the knee to bend the leg.
    - Grasp the ankle and deliver the foot and leg.
    - Repeat the above two steps for the other leg.

WARNING: Do not pull the baby while the legs are being delivered!

- Hold the baby by the hips (**but do not pull**), as shown in **Figure 4-4** (**page 4-13**). Do not hold the baby by the flanks or abdomen, as this may cause kidney or liver damage.

Figure 4-4. Holding the Baby at the Hips



Delivery of the Arms

If the arms are felt on the chest:

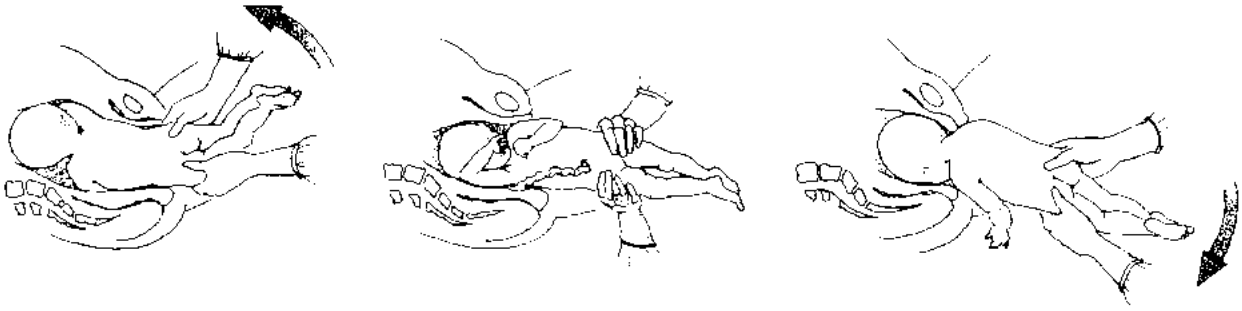
- Allow the arms to disengage spontaneously one by one. Only assist if necessary.
- After spontaneous delivery of the first arm, lift the buttocks toward the woman's abdomen to allow the second arm to deliver spontaneously.
  - ➧ **If the arm does not deliver spontaneously**, place one or two fingers in the elbow and bend the arm, bringing the hand down over the baby's face.

If the arms are stretched above the head or folded around the neck:

Use Lovset's maneuver (**Figure 4-5**, below):

- Hold the baby by the hips and turn half a circle, keeping the back uppermost while applying downward traction to allow the arm that was posterior to become anterior and be delivered under the pubic arch.
- Assist delivery of the arm by placing one or two fingers on the upper part of the arm. Draw the arm down over the chest as the elbow is flexed, allowing the hand to sweep over the face.
- To deliver the second arm, turn the baby back half a circle, keeping the back uppermost while applying downward traction, and deliver the second arm in the same way under the pubic arch.

Figure 4-5. Lovset's Maneuver[1]



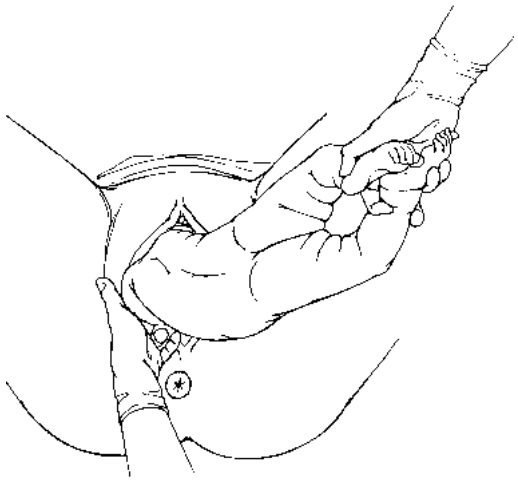
[1] Figure 4-5 is reprinted with permission from: World Health Organization (WHO). 2000. *Managing Complications in Pregnancy and Childbirth: A guide for midwives and doctors*. WHO: Geneva.

If the baby's body cannot be turned to deliver the anterior arm first:

Deliver the posterior shoulder (**Figure 4-6,** below):

- Hold and lift the baby up by the ankles.
- Move the baby's chest towards the woman's inner leg. The shoulder that is posterior should deliver.
- Deliver the arm and hand.
- Lay the baby back down by the ankles. The shoulder that is anterior should now deliver.
- Deliver the arm and hand.

Figure 4-6. Delivery of the Shoulder That Is Posterior



Delivery of the Head

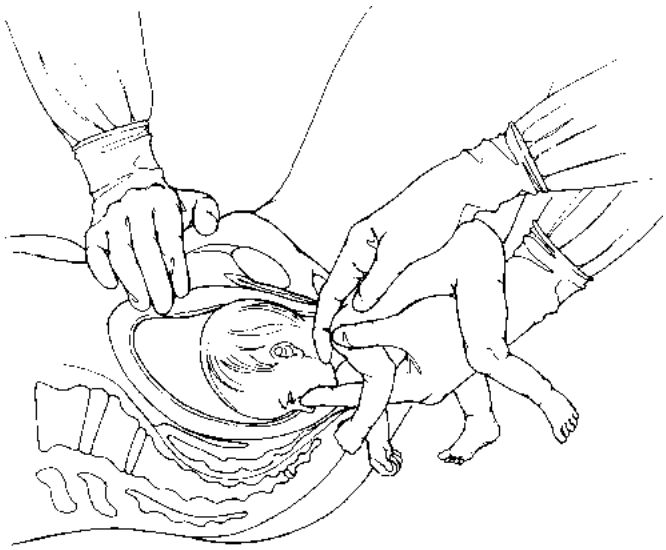
Deliver the head by the Mauriceau-Smellie-Veit maneuver (**Figure 4-7, page 4-15**) as follows:

- Lay the baby face down with the length of her/his body over your hand and arm.
- Place the first and third fingers of this hand on the baby's cheekbones and place the second finger in the baby's mouth to pull the jaw down and flex the head.
- Use the other hand to grasp the baby's shoulders.
- With two fingers of this hand, gently flex the baby's head toward the chest while pulling on the jaw to bring the baby's head down until the hairline is visible.
- Pull gently to deliver the head.

Note: Ask an assistant to push above the woman's pubic bone as the head delivers. This helps to keep the baby's head flexed.

- Raise the baby, still astride the arm, until the mouth and nose are free.

Figure 4-7. Mauriceau-Smellie-Veit Maneuver



If the head is entrapped (stuck):

- Catheterize the bladder.
- Have an available assistant hold the baby while you apply Piper or long forceps.
- Be sure the cervix is fully dilated.
- Wrap the baby's body in a cloth or towel and hold the baby up.
- Place the left blade of the forceps.
- Place the right blade and lock handles.
- Use the forceps to flex and deliver the baby's head.
- Have the assistant apply firm pressure above the woman's pubic bone to flex the baby's head and push it through the pelvis.

Post-Procedure Steps and Considerations

- Suction the baby's mouth and nose.
- Clamp and cut the cord.
- Give oxytocin 10 units IM within 1 minute of birth and perform active management of the 3rd stage of labor (**Chapter 6, page 2-77**).
- Examine the woman carefully for tears of the vagina, perineum, and cervix (**page 4-20**) or repair episiotomy (**page 4-37**).

CORRECTING UTERINE INVERSION

Indications

This procedure is not a routine part of basic care. It is performed if the uterus turns inside-out during delivery of the placenta.

Pre-Procedure Steps and Considerations

- In performing the following procedure, adhere to the general principles of basic care as outlined in **Chapter 1** (**page 1-5**).

Procedure

- Start an IV infusion (**Textbox 3-35, page 3-96**).
- If available, give pethidine and/or diazepam IV slowly (do not mix in the same syringe).

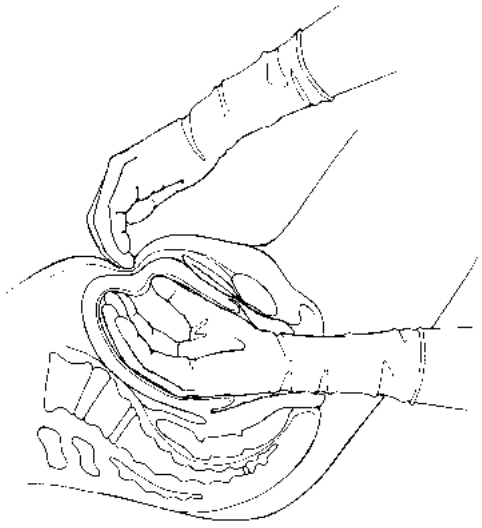
> **Note:** Do not give uterotonic drugs until the inversion is corrected.

- Thoroughly cleanse the inverted uterus using an antiseptic solution.
- Apply compression to the inverted uterus with a moist, warm sterile towel until ready for the procedure.

Manual Correction

- Wearing high-level disinfected or sterile gauntlet gloves, grasp the uterus and push it through the cervix toward the umbilicus to its normal position, using the other hand to support the uterus (**Figure 4-8**, below).
  - ➡ **If the placenta is still attached**, perform manual removal after correction.
- It is important that the part of the uterus that came out last (the part closest to the cervix) goes in first.
  - ➡ **If the procedure fails**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

Figure 4-8. Manual Replacement of the Inverted Uterus



After repositioning:

- Infuse oxytocin 20 units in 500 mL IV fluids (normal saline or Ringer's lactate) at 10 drops per minute.
  - ➡ **If hemorrhage is suspected**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**). Complete the following step in addition to those in Annex 7:
    - Increase the infusion to 60 drops per minute and continue the infusion before and during transfer.
  - ➡ **If the uterus does not contract after oxytocin infusion**, give a different uterotonic drug (**Table 3-3, page 3-106**).

Post-Procedure Steps and Considerations

- Give a single dose of prophylactic antibiotics after correcting the inverted uterus:
  - ampicillin 2 g IV PLUS metronidazole 500 mg IV; OR
  - cefazolin 1 g IV PLUS metronidazole 500 mg IV.
- Give paracetamol (acetaminophen) 500 mg by mouth as needed.
- Two to three hours after bleeding stops, measure hemoglobin.
  - ➡ **If the woman's hemoglobin is less than 7 g/dL**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
  - ➡ **If the woman's hemoglobin is 7–11 g/dL**, see Anemia (**Chapter 10, page 3-41**).

DEFIBULATION

Indications

This procedure is not a routine part of basic care. It should be performed only if the woman has female genital cutting (FGC) Type III and the scar is well-healed (to remove the obstruction to the vaginal opening). For an illustration of Type III female genital cutting (area cut and healed), see **Figure 3-3** (**page 3-50**).

> **Note:** Although the optimal time to perform defibulation is during the 2nd trimester of pregnancy (to avoid subjecting the woman to an increased chance of infection and bleeding during childbirth), the procedure can also take place during the 2nd stage of labor. It is also best to provide counseling during pregnancy, rather than during labor, so that the woman and her partner have time to discuss and ask questions about the procedure.

➡ **If defibulation is being performed during the 2nd stage of labor**, perform the procedure as the baby's head begins to crown.

Pre-Procedure Steps and Considerations

- In performing the following procedure, adhere to the general principles of basic care as outlined in **Chapter 1** (**page 1-5**).
  - ➡ **If the woman has not already been counseled about defibulation**, she should receive counseling before performing the procedure (**Chapter 10, page 3-49**).

Procedure

- Proceed gently, ensuring adequate privacy and draping, and explain what the woman should expect before each step of the procedure.
- Wash both hands and wear sterile or high-level disinfected gloves.
- Give local anesthesia:
  - Make sure there are no known allergies to lidocaine or related drugs.
  - Insert one or two fingers (index or index and middle) gently under the hood of the skin anteriorly.
  - Inject local anesthesia along a line of skin stretched between the fingers. An extra injection of lidocaine may be applied on the right and left of the central line.
  - Aspirate (pull back on the plunger) to be sure that no vessel has been penetrated.

➡ **If blood is returned in the syringe with aspiration**, remove the needle, recheck the position carefully, and try again. **Never inject if blood is aspirated** (the woman can suffer convulsions and death if IV injection of lidocaine occurs).

- Wait 2 minutes, and then pinch the incision site with forceps.

➡ **If the woman feels the pinch**, wait 2 more minutes and then retest.

Note: Anesthetize early to provide sufficient time for effect.

- Insert the blunt end of bandage scissors in front of the fingers and cut the skin anteriorly for 2–3 inches (5–8 cm) to the level of the urethra. Do not cut beyond the urethra. **Be careful not to injure the intact parts of the clitoris that may be buried under the anterior part of the hood**.
- Inspect the cut skin edges for bleeding, and stop bleeding with hemostatic (artery) forceps.
- During labor and childbirth, proceed with the birth of the baby, active management of the 3rd stage of labor, immediate care of the newborn, and placental inspection.
- Suture each cut skin edge with a running absorbable, nonreactive 2-0 suture. (Polyglycolic is preferable, but chromic catgut is an acceptable alternative.)

➡ **If necessary**, provide more local anesthesia to each cut skin edge before suturing.

Post-Procedure Steps and Considerations

- Wash the perineal area with antiseptic, pat dry the area, and clean away all soiled linens.

➡ **If the procedure was performed during the 2nd trimester of pregnancy**, position a sterile sanitary pad/cloth over the vulva and perineum.

- Dispose of all bloody linens in a closed or closeable container for transport to laundry.
- Gently lay the woman's legs down together at the same time, and make her comfortable. Make sure she is not wet or cold. Always maintain privacy and modesty.
- Advise the woman as follows:
  - Review care of the wound and hygiene measures to prevent infection (**Chapter 7, page 2-106**).
  - Abstinence from sexual intercourse for 4–6 weeks is advisable.
  - Sitz baths (warm water and salt) three times a day, followed by gentle drying of the area, may be advisable to provide some relief during the first 2–4 weeks.
  - Counsel the woman that she may experience increased sensitivity in the area, but that it will be temporary and will disappear.
- Oral or parenteral antibiotics are not routine.

EPISIOTOMY

Indications

Episiotomy should not be performed routinely. It should be considered only in the following cases:

- Complicated vaginal delivery (breech, shoulder dystocia, vacuum extraction)
- Scarring from female genital cutting or poorly healed 3rd or 4th degree tears
- Fetal distress

Pre-Procedure Steps and Considerations

- In performing the following procedure, adhere to the general principles of basic care as outlined in **Chapter 1** (**page 1-5**).

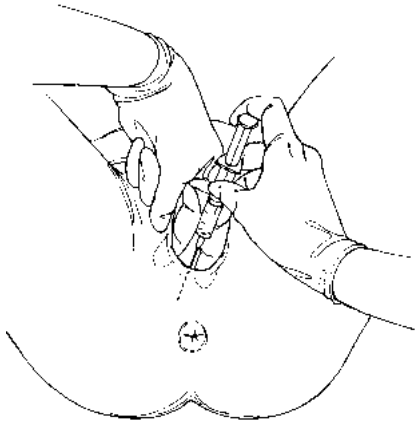
Procedure

- Apply antiseptic solution to the perineal area.
- Use local infiltration with lidocaine.
- Make sure there are no known allergies to lidocaine or related drugs.
- Infiltrate beneath the vaginal mucosa, beneath the skin of the perineum, and deeply into the perineal muscle (**Figure 4-9**, below) with approximately 10 mL 0.5% lidocaine solution.
- Aspirate (pull back on the plunger) to be sure that no vessel has been penetrated.
  - ➡ **If blood is returned in the syringe with aspiration**, remove the needle, recheck the position carefully, and try again. **Never inject if blood is aspirated** (the woman can suffer convulsions and death if IV injection of lidocaine occurs).
- At the conclusion of the set of injections, wait 2 minutes and then pinch the incision site with forceps.
  - ➡ **If the woman feels the pinch**, wait 2 more minutes and then retest.

Note: Anesthetize early to provide sufficient time for effect.

- Wait to perform episiotomy until the perineum is thinned out and 3–4 cm of the baby's head is visible during a contraction.

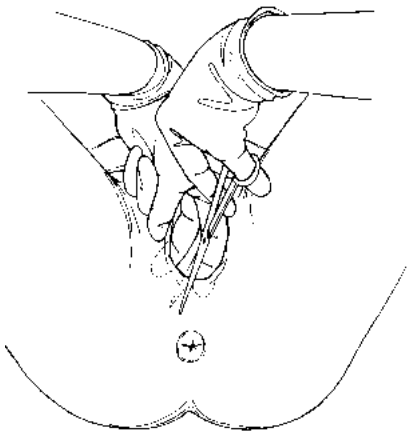
Figure 4-9. Infiltration of Perineal Tissue with Local Anesthetic



Note: Performing an episiotomy will cause bleeding. Therefore, it should not be done too early.

- Wearing high-level disinfected or sterile gloves, place two fingers between the baby's head and the perineum.
- Use scissors to cut the perineum about 3–4 cm in the mediolateral direction (**Figure 4-10, page 4-20**).
- Use scissors to cut 2–3 cm up the middle of the posterior vagina.
- Control the baby's head and shoulders as they deliver, ensuring that the shoulders have rotated to the midline to prevent an extension of the episiotomy incision.

Figure 4-10. Making Incision while Inserting Two Fingers to Protect the Baby's Head



Post-Procedure Steps and Considerations

- Examine the woman carefully for tears of the vagina, perineum, and cervix, or extension of the episiotomy incision (**page 4-20**), and repair episiotomy (**page 4-37**).
- Dispose of all bloody linens in a closed or closeable container for transport to laundry.

EXAMINATION OF THE VAGINA, PERINEUM, AND CERVIX FOR TEARS

Indications

- Steps 1–3 of the procedure below are a routine part of basic care.
- Steps 4–8 of the procedure below should be done if vaginal bleeding continues despite a firm uterus and repair of vaginal and perineal tears.

Pre-Procedure Steps and Considerations

- In performing the following procedure, adhere to the general principles of basic care as outlined in **Chapter 1** (**page 1-5**).
- If the woman is not lying down already, have the woman lie in a semi-sitting position with her legs apart and knees bent. Always assure privacy and modesty.
- Ensure that there is a good source of light (lamp, torch, etc.).

Procedure

1. With your gloved nondominant hand, separate the labia and look carefully at the vaginal opening and perineum for any tears or hematomas (collection of blood under the tissue).
2. Press firmly on the back wall of the vagina with your dominant fingers so that you can look deep into the vagina. Bleeding from a tear may ooze slowly or spurt from an artery.
3. Slowly press against the vaginal wall and move your fingers up the side wall of the vagina, one side at a time. Be sure to feel all the way up the vagina to the cervix. Assess findings, as shown on **page 4-21**.
4. Next, have an assistant press gently and firmly down on the woman's uterus from above, and explain to the woman what you are doing. This will move the cervix lower into the vagina so that you may examine it carefully. Press firmly on the back wall of the vagina with two fingers to visualize the entire circumference of the cervix, moving in a systematic way around the cervix. Assess findings, as shown on **page 4-21**.

5. If you cannot see the entire cervix, or if you see bleeding or tears on the cervix, take your sponge forceps (ring forceps) and clamp the entire rounded part of the forceps onto the anterior lip (top) of the cervix. Pull on the forceps gently toward you. **If you do not clamp the forceps well onto the tissue of the cervix, you can tear off a piece of the cervix and cause more bleeding.**

Note: A tenaculum should never be applied to the postpartum cervix.

6. Look carefully at all sides of the cervix. Tears occur most frequently on the sides of the cervix at the 3 or 9 o'clock position (mid-right and mid-left). Assess findings, as shown below.
   - ➡ **If blood blocks your view so that it is difficult to see where the bleeding is coming from**, use a sterile gauze pad to soak up the blood.
   - ➡ **If blood is coming from the uterus**, ACT NOW!—see Vaginal Bleeding after Childbirth (**Chapter 11, page 3-103**) before proceeding.
7. Inspect the area from the lower perineal area to the rectum for tears or extension of the episiotomy incision if an episiotomy was performed.
8. Examine the rectum:
   - Always inform the woman that you are going to examine her rectum before you do.
   - Place a gloved finger in the anus.
   - Gently lift the finger and identify the sphincter.
   - Feel for the tone or tightness of the sphincter.
   - When rectal examination is complete, change to clean, high-level disinfected or sterile gloves and proceed with repair as indicated below.

Note: Following are classifications of the degrees of tears. These classifications are related to the anatomic structures that have been traumatized.

Level of Tear	Diagnostic Criteria	Followup Action
1st degree tear	Involves the vaginal mucosa and perineal skin	Repair (**page 4-38**).
2nd degree tear	Involves the vaginal mucosa, perineal skin, and the superficial perineal muscles	Repair (**page 4-38**).
3rd degree tear	In addition to the above-mentioned structures, there is also damage to the external anal sphincter and the deeper perineal muscles.	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
4th degree tear	Trauma extends into the rectal wall.	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
Cervical tear	Tear of cervix	Repair (**page 4-36**)
Extensive cervical tear	Tear of cervix extending deep beyond vaginal vault	ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

Post-Procedure Steps and Considerations

- If there are tears, perform followup action indicated according to tear classification, as shown above.
- If there are no tears, or very small ones that do not bleed and can heal without sutures, inform the woman about your findings.
- Review danger signs with her and/or her family so they recognize signs of infection. Make sure they know how and where to access care when needed.
- Counsel about good nutrition and plenty of rest.
- Counsel to delay sexual intercourse until the wound is completely healed.
- Encourage the woman to ask questions, and answer them using understandable words (in her own language).
- Give paracetamol (acetaminophen) 500 mg by mouth as needed.

MANUAL REMOVAL OF THE PLACENTA OR PLACENTAL FRAGMENTS

Indications

This procedure is not a routine part of basic care. It should be performed only if the placenta is not delivered in 30 minutes after oxytocin stimulation and attempted controlled cord traction with contraction(s), or if there are retained placental fragments (the placenta was incomplete when delivered).

➧ **If hours or days have passed since childbirth**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

Pre-Procedure Steps and Considerations

- In performing the following procedure, adhere to the general principles of basic care as outlined in **Chapter 1** (**page 1-5**).
- Start an IV infusion (**Textbox 3-35, page 3-96**).

Procedure

- Provide emotional support and encouragement.
- Give pethidine and diazepam IV slowly (do not mix in the same syringe).[2]
- Catheterize the bladder or ensure that it is empty, if not already done.
- Give a single dose of prophylactic antibiotics:
  - ampicillin 2 g IV PLUS metronidazole 500 mg IV; OR
  - cefazolin 1 g IV PLUS metronidazole 500 mg IV.
- Hold the umbilical cord with a clamp. Pull the cord gently until it is parallel to the floor.
- Wearing high-level disinfected or sterile gloves (use elbow-length/gauntlet gloves if available), insert the other hand into the vagina and up into the uterus (**Figure 4-11, page 4-23**).
  - ➧ **If the placenta is retained due to a constriction ring**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

[2] Give pethidine 1 mg/kg body weight (but not more than 100 mg) IM or IV slowly or give morphine 0.1 mg/kg body weight IM. AND give diazepam in increments of 1 mg IV and wait at least 2 minutes before giving another increment. A safe and sufficient level of sedation has been achieved when the woman's upper eye lid droops and just covers the edge of the pupil. Monitor the respiratory rate every minute. If the **respiratory rate falls below 10 breaths per minute**, stop administration of all sedative or analgesic drugs. (*Source* : World Health Organization (WHO). 2000. *Managing Complications in Pregnancy and Childbirth: A guide for midwives and doctors.* WHO: Geneva.)

- Let go of the cord and move the hand up over the abdomen in order to support the uterus and to provide countertraction during removal to prevent inversion of the uterus (**Figure 4-12**, below).
  - ➡ **If uterine inversion occurs**, reposition the uterus (**page 4-15**).
- Move the fingers of the hand in the uterus laterally until the edge of the placenta is located.

➡ **If the cord has been detached previously or if there are retained placental fragments:**

- Insert one hand into the uterine cavity and place the other hand up over the abdomen in order to support the uterus and to provide countertraction during removal to prevent inversion of the uterus (**Figure 4-12**, below).
- Explore the entire cavity until a line of cleavage is identified between the placenta or placental fragments and the uterine wall.

Figure 4-11. Introducing One Hand into the Vagina along the Cord

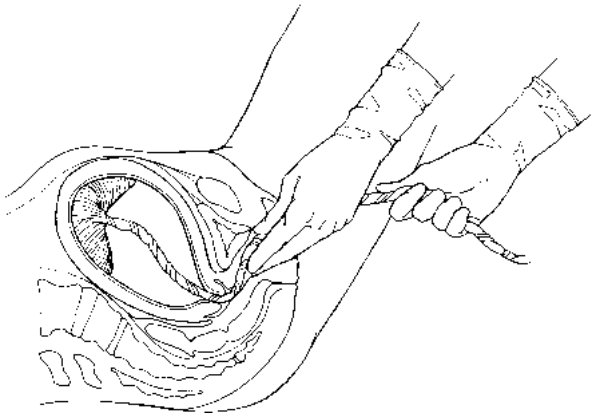
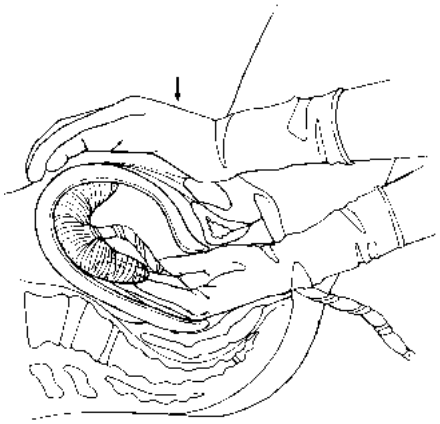


Figure 4-12. Supporting the Uterus while Detaching the Placenta

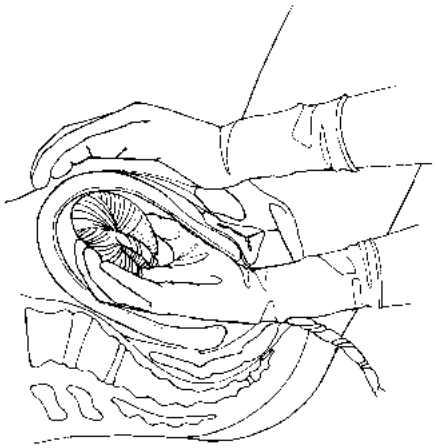


- Detach the placenta from the implantation site by keeping the fingers tightly together and using the edge of the hand to gradually make a space between the placenta and the uterine wall.
- Proceed slowly all around the placental bed until the whole placenta is detached from the uterine wall.
  - ➡ **If the placenta does not separate from the uterine surface by gentle lateral movement of the fingertips at the line of cleavage**, remove placental fragments.
    - ➡ **If the tissue is very adherent**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

Note: Very adherent tissue may be placenta accreta. Efforts to extract fragments that do not separate easily may result in heavy bleeding or uterine perforation, which usually requires a hysterectomy.

- Hold the placenta and slowly withdraw the hand from the uterus, bringing the placenta with it (**Figure 4-13**, below).
- With the other hand, continue to provide countertraction to the uterus by pushing it in the opposite direction of the hand that is being withdrawn.

Figure 4-13. Withdrawing the Hand from the Uterus



- Palpate the inside of the uterine cavity to ensure that all placental tissue has been removed.
- ➡ **If the woman is not already receiving oxytocin IV**, give oxytocin 20 units in 1 L IV fluids (normal saline or Ringer's lactate) at 60 drops per minute.
- Ask an assistant to massage the uterus to encourage uterine contractions.
- ➡ **If bleeding continues**, perform bimanual compression of the uterus or compression of the abdominal aorta (**Textbox 3-39, page 3-105**).
  - ➡ **If bleeding continues despite bimanual compression of the uterus or compression of the abdominal aorta**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
- Examine the placenta to ensure that it is complete.
  - ➡ **If any placental lobe or tissue is missing**, explore the uterine cavity to remove it.
- Examine the vagina, perineum, and cervix for tears (**page 4-20**); repair any tears of the vagina or perineum (**page 4-38**) or cervix (**page 4-36**); or repair episiotomy (**page 4-37**).

Post-Procedure Steps and Considerations

- Observe the woman closely until the effect of IV sedation has worn off.
- Monitor vital signs (pulse, blood pressure, respiration) every 30 minutes for the next 6 hours or until stable.
- Palpate the uterus every 15 minutes for the next 4 hours to ensure that the uterus remains contracted.
- Check for excessive bleeding.
- Continue infusion of IV fluids.
- Two to three hours after bleeding stops, measure hemoglobin.
  - ➡ **If the woman's hemoglobin is less than 7 g/dL**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
  - ➡ **If the woman's hemoglobin is 7–11 g/dL**, see Anemia (**Chapter 10, page 3-41**).
- Provide basic care as shown in **Chapter 6**.

MULTIPLE PREGNANCY BIRTH (IN EMERGENCY SITUATIONS ONLY)

Indications

This procedure is not a routine part of basic care. It should be performed only in the case of multiple pregnancy **AND when there is no time for urgent referral/transfer (i.e., the woman was already in the 2nd stage of labor when the condition was detected)**.

Pre-Procedure Steps and Considerations

- In performing the following procedure, adhere to the general principles of basic care as outlined in **Chapter 1** (**page 1-5**).

Procedure

- Immediately after the birth of the first baby:
  - Palpate the abdomen to determine the lie of the additional baby or babies.
  - Check fetal heart rate(s).
- Leave a clamp on the maternal end of the umbilical cord. **Do not give oxytocin or attempt to deliver the placenta until the last baby is born.**
- Perform a vaginal examination to determine the following:
  - Whether the cord has prolapsed:
    - ➡ **If the cord is prolapsed:**
      - Deliver as quickly as possible, using episiotomy (**page 4-18**) and vacuum extraction (**page 4-45**), if necessary. In order to use vacuum extraction, the head must be at least at 0 station or no more than 2/5 palpable above the symphysis pubis.
        - ➡ **If these conditions are not met**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
      - Prepare, or have assistant prepare, for resuscitation of the newborn (**Chapter 11, page 3-99**).
  - Whether the membranes are intact or ruptured.
- Continue to monitor contractions, maternal pulse and blood pressure, and fetal heart rate until the birth of the last baby.

Cephalic Presentation

- ➡ **If the head is not engaged**, maneuver the head into the pelvis manually (hands on the abdomen, if possible).
- ➡ **If the membranes are intact**, rupture the membranes (**page 4-11**) with an amniotic hook or a Kocher clamp between contractions.
- Check fetal heart rate between contractions.
  - ➡ **If contractions are inadequate after the birth of the first baby (fewer than three contractions in 10 minutes lasting at least 40 seconds)**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
  - ➡ **If spontaneous birth does not occur within 2 hours of adequate contractions or if there are fetal heart rate abnormalities (less than 100 or more than 180 beats per minute in the absence of contractions or persisting after contractions)**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

Breech Presentation

➡ **If the baby is estimated to be no larger than the first baby, and if the cervix has not contracted**, proceed with vaginal breech birth (**page 4-12**).

➡ **If contractions are inadequate after the birth of the first baby or if there are fetal heart rate abnormalities (less than 100 or more than 180 beats per minute)**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

Post-Procedure Steps and Considerations

- After the birth of each baby, perform Newborn Rapid Initial Assessment (**Chapter 11, page 3-96**).
- After the last baby is born:
  - Perform active management of the 3rd stage of labor (**Chapter 6, page 2-77**).
  - Assist the woman in carrying out skin-to-skin contact with her newborn babies and in breastfeeding them within 1 hour after birth.
  - Examine the placenta and membranes for completeness, as there may be one placenta with two umbilical cords or a separate placenta and umbilical cord for each baby.
- Assist the family in identifying appropriate resources (other family members, community and faith-based organizations, etc.) to help care for multiple newborn babies.

PELVIC EXAMINATION

The pelvic examination consists of two components, the speculum examination and the bimanual examination, and is not a routine part of basic care. The skilled provider may need to perform only one part of the examination. Both examinations should be performed only when indicated.

Indications

The **speculum examination** should be performed only in the following cases:

- Cervical lesion is suspected
- Pregnancy is in question (under 12 weeks' gestation)
- Tissue is felt protruding through the cervix during the antenatal or postpartum periods
- When it is necessary to gather additional information about the woman's condition

The **bimanual examination** should be performed only in the following cases:

- When information about uterine size is needed
- When it is necessary to gather additional information about the woman's condition

Pre-Procedure Steps and Considerations

- In performing the following procedure(s), adhere to the general principles of basic care as outlined in **Chapter 1** (**page 1-5**).
- Before beginning, you should have already completed the steps indicated in **Textbox 2-7** (**page 2-16**) and performed a vaginal examination (**Textbox 2-12, page 2-23**).
- Ask the woman to let you know if she feels discomfort or pain at any time during the examination. In addition, observe her facial and body reactions for evidence of discomfort.

Speculum Examination

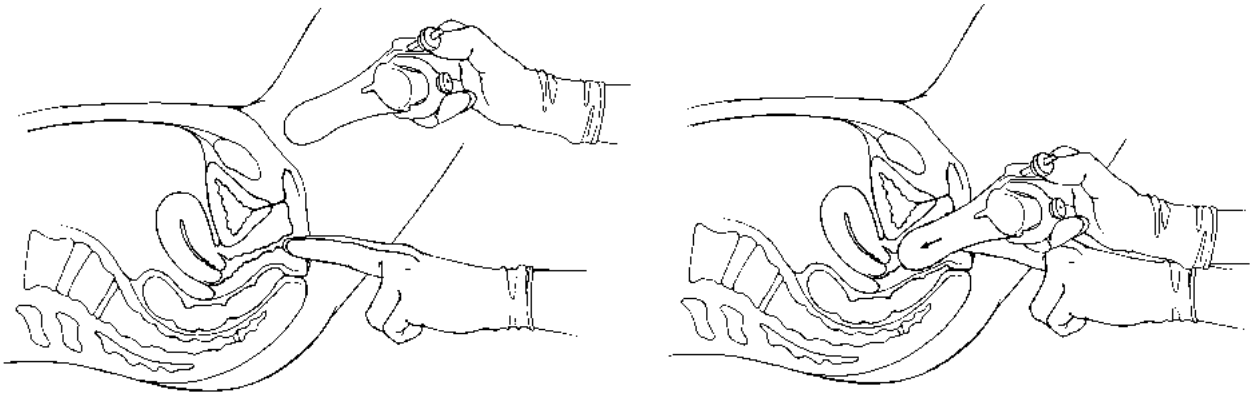
Procedure

- Select the smallest bivalve speculum that will allow you to see the vagina and cervix adequately.

> **Note:** Using a large or even a medium speculum for a woman with a small or traumatized perineum and vaginal opening can be very uncomfortable for her.

- Before inserting the speculum, show it to the woman and explain that you are going to insert part of it into her vagina. As you proceed through the examination, inform the woman what you are going to do before performing each step.
- If the speculum is cold, warm it by holding it under clean, warm, running water; close to the light source; or in your gloved hand (if warm water is not available).
- When inserting the speculum, ask the woman to breathe in deeply and then breathe out slowly through her mouth. This will help her to relax and avoid contracting her vaginal muscles.
- To insert the speculum:
  - Immediately before inserting the speculum, gently touch the inside of the woman's thigh with the back of your wrist and inform her that she will feel your fingers touching her vulva and perineum.
  - Gently insert the index and middle finger of one hand just inside the vaginal opening and push down firmly on the perineum toward the rectum (**Figure 4-14 Left,** below). (This relaxes the vaginal muscles and makes it easier to insert the speculum.)
    - ➡ **If the vagina is dry**, lubricate the blades of the speculum with water before insertion.
  - With the other hand, hold the closed speculum so that the closed blades are in a vertical plane and at a slightly oblique angle (**Figure 4-14 Left,** below).
  - Inform the woman that she will now feel the speculum entering her vagina.
  - As you gently insert the speculum obliquely into the vagina in a posterior direction, remove your fingers. Doing this avoids pressure on the urethra, which is painful (**Figure 4-14 Right,** below).

Figure 4-14. Inserting the Speculum (Left and Right)



> **Note:** Be careful not to pull on the pubic hair or pinch the labia with the speculum.

- As you advance the speculum, gently rotate the blades into a horizontal position with the handle down. Be sure the labia do not fold inward while you advance the speculum. Insert it fully or until resistance is felt (**Figure 4-15, page 4-28**).
- Gently open the blades (**Figure 4-16, page 4-28**) until the cervix comes into full view (**Figure 4-17, page 4-28**); then fix the blades in an open position by tightening the upper thumbscrew.

Figure 4-15. Rotating the Speculum

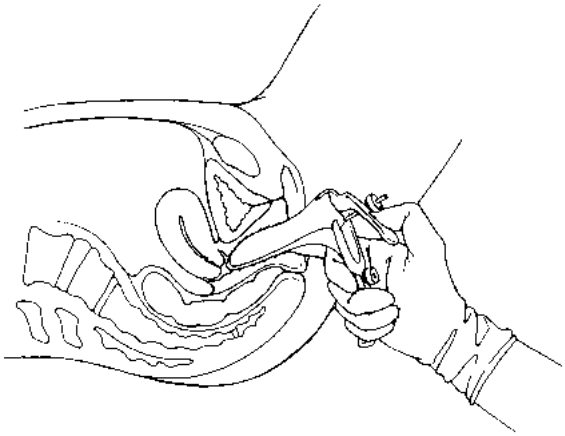


Figure 4-16. Opening the Speculum Blades

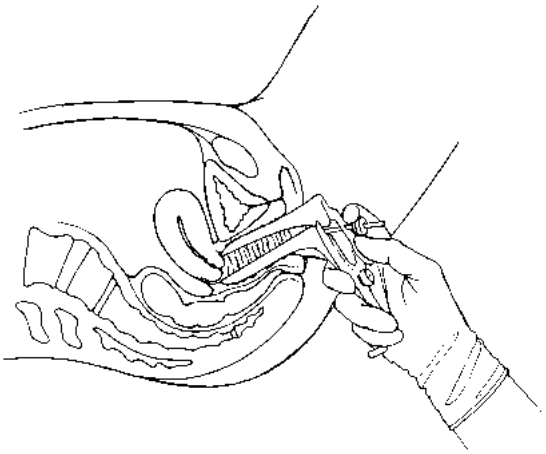
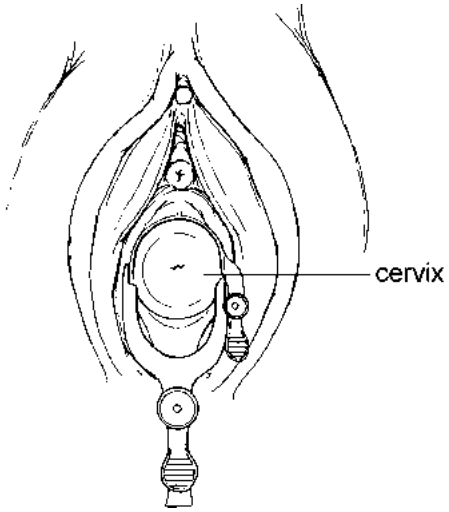
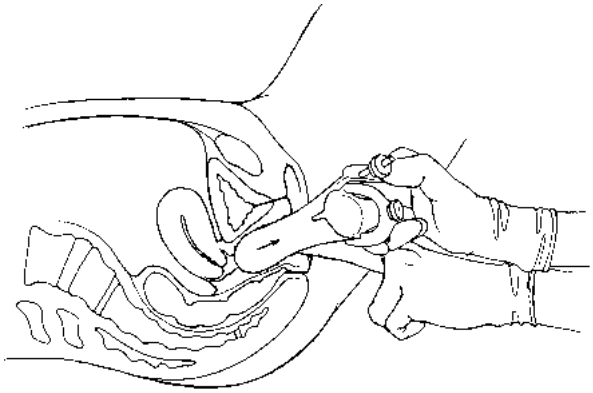


Figure 4-17. Speculum in Place with Blades Open



- Examine the vaginal walls and secretions. Assess findings, as shown below and on **page 4-30**.
- Examine the cervix and cervical opening (os). Assess findings, as shown on **page 4-30**.
  - ➡ **If you are having difficulty locating the cervix**, withdraw the speculum slightly, move the speculum so that it points more posteriorly, gently advance the speculum again, and open the blades slowly to see if the cervix has come into view.
- Note the color, position, and overall appearance of the cervix.
- Note any cervical secretions.
- After completing the inspection and obtaining any specimens, unlock the speculum blades by keeping your thumb on the lever and loosening the thumbscrew(s).
- While keeping the blades partly separated, rotate the speculum 90°.
- Remove the speculum slowly so that you can look at the anterior and posterior vaginal walls (**Figure 4-18**, below). The speculum should be removed at an oblique angle to avoid urethral pressure.

Figure 4-18. Removing the Speculum



Element	Normal	Abnormal/Followup Action

Vaginal wall and mucosa	• The vaginal wall is moist and smooth or folded (rugae).
	• The vagina is free of inflammation, ulcers, and sores.
	• The mucosa in a nonpregnant woman is pink in color.
	• **During pregnancy:**
	  • The vagina may be bluish in color.
	• **During the postpartum period:**
	  • Between approximately 2 hours' and 6 weeks' postpartum, there will be a gradual healing of any tears or trauma, but this will vary depending on degree of trauma. By 6 weeks' postpartum, the mucosa of the vagina should return to normal.
		➡ **If findings are not within normal range**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.

Element	Normal	Abnormal/Followup Action
Vaginal secretions	• Normal secretions are usually thin, clear, or cloudy (white), and are odorless. • No watery, bubbly, foul- or "fishy"-smelling, "cheesy" white, or gray discharge is present.	➡ **If findings are not within normal range**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.
Cervix: overall appearance	• A nonpregnant cervix is pink. • The surface should be smooth and the color evenly distributed. • The higher the parity, the more distended and spread apart the cervix may be. • **During pregnancy:** • The cervix may be blue.	➡ **If polyps, nodules, or cysts are found**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care. ➡ **If any erosion or shiny red tissue around the os (ectropion) is found**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care. ➡ **If the cervix bleeds easily**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.

Cervical os	• The cervical os of a nulliparous woman is small and round or oval.
	• The os of a multiparous woman is usually a horizontal slit, but may be irregular or open.
	• **During pregnancy and labor:**
	  • The fetal membranes may be visible (if they have not yet ruptured).
	• **During active labor:**
	  • The cervix is dilated.	

Cervical secretions	• Normal cervical secretions should be clear or cream-colored and odorless.	➡ **If there is bleeding or discharge containing pus**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.

Post-Procedure Steps and Considerations

- After gently removing the speculum, place it in 0.5% chlorine solution for 10 minutes for decontamination.
- Explain to the woman that you will now proceed with the bimanual examination (if indicated).

  ➡ **If a bimanual examination is not indicated**, proceed with the additional post-procedure steps and considerations (**page 4-35**).

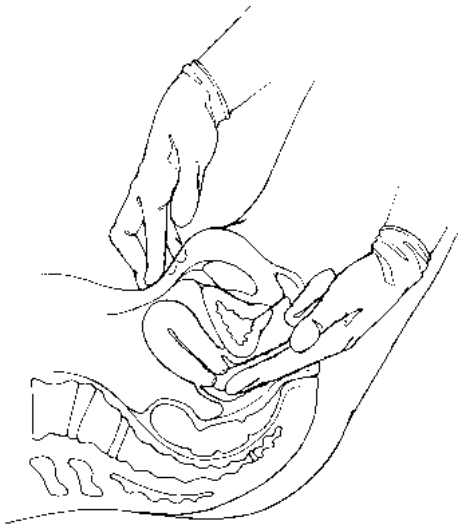
Bimanual Examination

Procedure

Note: The hand placed in the vagina usually is the dominant hand (the right hand for most people). In these instructions, it is referred to as the pelvic hand. The hand not in the vagina is referred to as the abdominal hand.

- Lubricate the index and middle fingers of the pelvic hand with clean water or lubricant using aseptic technique.
- Gently separate the labia with two fingers of the abdominal hand and insert the lubricated tips of the index and middle fingers of the pelvic hand slowly and gently into the vagina.
- While exerting slight downward pressure (away from the urethra and bladder), gradually insert your fingers fully while slowly turning your hand, palm upward, until you touch the cervix. At this point, your thumb should be pointing anteriorly with your ring and little fingers folded in your palm (**Figure 4-19**, below). **Avoid** placing your thumb on the woman's clitoris because this is uncomfortable for her.

Figure 4-19. Inserting the Fingers into the Vagina



Palpating the Cervix

- Begin gently palpating the cervix:
  - The normal cervix is smooth and closed. During pregnancy, the cervix is softer and larger and feels like your lip. A nonpregnant cervix will feel like the tip of your nose.
- The position of the cervix often indicates the position of the body of the uterus. A cervix pointing down usually means an anteriorly directed uterus (anteverted; **Figure 4-20**, below), while a cervix pointing up usually means the body of the uterus is directed posteriorly (retroverted; **Figure 4-21, page 4-32**).

Figure 4-20. Palpation of an Anteverted Uterus

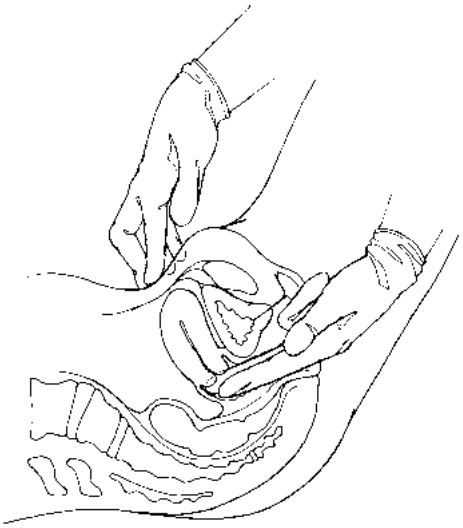
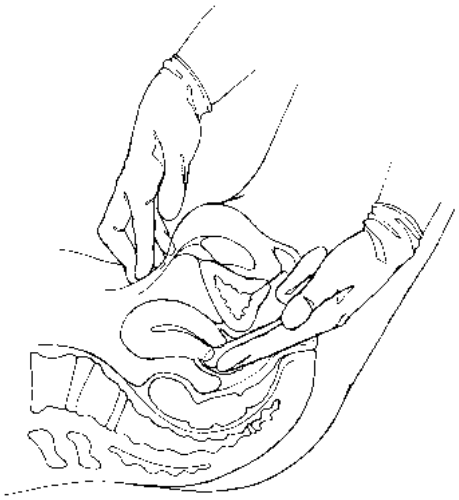
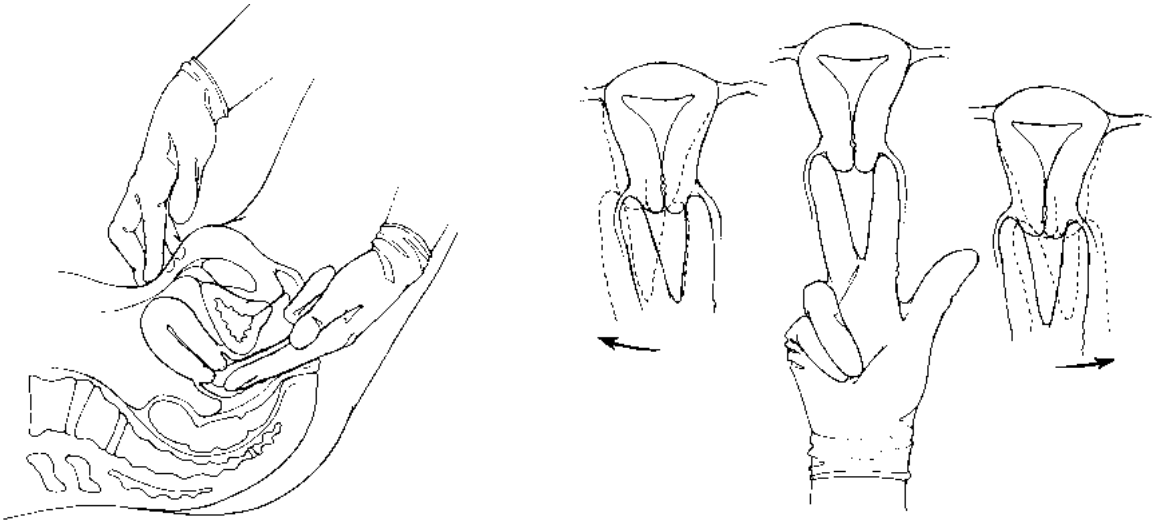


Figure 4-21. Palpation of a Retroverted Uterus



- Move the cervix gently from side-to-side between your fingers (**Figure 4-22 Left and Right**, below). It should move 1–2 cm in each direction without causing the woman discomfort or pain.
  - ➡ **If the woman feels pain on cervical motion**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.
  - ➡ **If ANY other sign is present in addition to cervical motion tenderness**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

Figure 4-22. Checking Cervical Movement (Left and Right)



Palpating the Uterus

- To feel the body of the uterus, place the fingers of your pelvic hand in the space behind the cervix with the palm up. Next, place your other hand flat on the abdomen, midway between the umbilicus and the pubic bone.
- Slowly slide your abdominal hand toward the symphysis pubis, pressing downward and forward (toward the uterus) with the flat part (pads) of your fingers.
- At the same time, push inward and upward with the fingers of the hand in the vagina, trying to trap the uterus between the fingers of your two hands.

- If you feel the uterus between the fingers of your two hands, about 2–4 cm above the level of the pubic bone, the uterus is anteverted (**Figure 4-20, page 4-31**).

> **Note:** The woman may tighten the muscles of her abdomen and buttocks. To help you to feel the uterus more easily, ask her to take a deep breath, exhale, and relax the muscles of her buttocks.

  - ➧ **If you cannot feel the uterus**, it may be either horizontally directed or, more likely, retroverted (**Figure 4-21, page 4-32**). To check this, you will need to do one of the following:
    - Move the uterus upward by placing the fingers of the pelvic hand under the cervix and gently lifting up (anteriorly) (**Figure 4-21, page 4-32**).
    - Push down more deeply with the fingers of your abdominal hand.
      - ➧ **If you still cannot find the uterus**, move your fingers to each side of the cervix and press inward as far as you can without causing discomfort. Then press downward with your other hand as deeply as possible.
- Examine the uterus. Assess findings, as shown below and on **page 4-34**.

Element	Normal	Abnormal/Followup Action

Size	• The size of the nonpregnant uterus in a woman of childbearing age varies according to parity, but is about 5–8 cm long, 3–5 cm wide, and 2 cm thick. If it is enlarged and soft, consider pregnancy.
	• **During pregnancy:**
	  ◦ **8 weeks**: The uterus cannot be palpated abdominally, is about the size of a tennis ball on bimanual palpation, and is softer and rounder than a nonpregnant uterus.
	  ◦ **12 weeks**: The uterus is about 8 cm in diameter and rises out of the pelvis to be palpated at about the symphysis pubis.
	  ◦ **16 weeks**: The uterus is about halfway between the symphysis pubis and the umbilicus (7.5 cm above the symphysis pubis).
	• **During the postpartum period:**
	  ◦ **6 hours**: The uterus will still be about 15 cm long, 12 cm wide, and 8–10 cm thick (about twice the size of the nonpregnant uterus).
	  ◦ **6 weeks**: The size of the uterus is about 5–8 cm long, 3–5 cm wide, and 2 cm thick. The uterus of a woman who has had a number of children may be larger.	

Element	Normal	Abnormal/Followup Action

Shape	• The body of the uterus should be rounded and pear-shaped.
	• **During pregnancy:**
	  ◦ As the pregnant uterus enlarges, its shape changes, becoming first globular and then an ovoid of increasingly larger size.
	  ◦ **12 weeks:** The uterus becomes globular in shape.
	  ◦ **16 weeks:** The uterus is beginning to become more ovoid.
	• **During the postpartum period:**
	  ◦ The body of the uterus will feel rounded and firm at the 2- to 6-hour postpartum visit. By the 6-day and 6-week postpartum visits, the uterus will feel more pear-shaped.
		➡ **If the body of the uterus is irregular**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.

Location	• The uterus should be located in the midline.	➡ **If the top of the uterus is pushed either to the right or left**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.

Consistency	• The body should feel smooth and firm.
	• **During pregnancy:**
	  ◦ The uterus is uniformly soft. Hegar's sign of early pregnancy is a marked softening of the isthmus of the uterus.
	• **During the postpartum period:**
	  ◦ At the 2- to 6-hour postpartum visit, the uterus should feel firm. By the 6-day and 6-week postpartum visits, the uterus will feel even more firm (almost hard).	

Mobility	• The uterus should be easy to move anteriorly or posteriorly.	➡ **If the uterus is fixed (not mobile)**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.
Tenderness	• Normally, the uterus is not tender with movement or on palpation.	➡ **If tenderness is present**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**) after providing basic care.

Locate the Ovaries

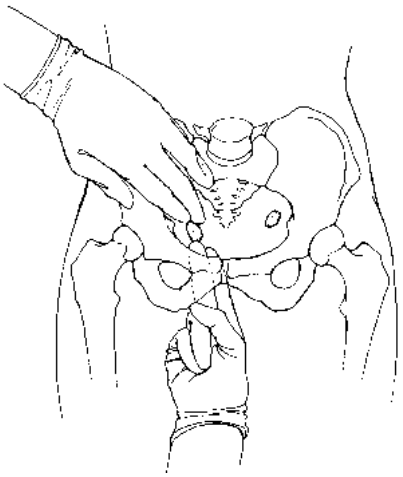
- The ovaries are usually located behind and to either side of the uterus. To locate the right ovary:
  - Move the fingertips of the pelvic hand just under and to the side of the cervix, deep in the lateral fornix.
  - Move your abdominal hand to the same side and just lateral to the uterus.
  - Press down (posteriorly) with this hand and reach up (anteriorly) with your vaginal fingers.

- Gently bring the fingers of both hands together and move them toward the symphysis pubis (**Figure 4-23**, below). You should feel the ovary slip between your fingers. Hold the ovary gently—pressure on a normal ovary can cause pain.

- Repeat the above procedure for the other ovary.

Note: It is often easier to feel the ovary on the same side of the body as the hand that is in the vagina (i.e., right hand in the vagina and the right ovary).

Figure 4-23. Locating the Ovaries



Note: Finding ovaries is a skill that takes much practice to develop. Keep the woman's comfort in mind. If you are just learning, you may not be able to feel the ovaries of every woman. Not being able to feel the ovaries or other adnexal structures generally suggests that they are normal size (approximately 3 cm long, 2 cm wide, and 1 cm thick), which is important to know.

- Note any tenderness or masses in the adnexa.

  ➡ **If a tender adnexal mass is found during pregnancy (or possible pregnancy)**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

- Before removing the fingers of your pelvic hand, gently push posteriorly to check for tenderness or masses in the cul-de-sac (space behind the uterus and in front of the rectum).

Post-Procedure Steps and Considerations

- After completing the examination, immerse both gloved hands in 0.5% chorine solution.
- Remove the gloves by turning them inside out.
- If disposing of gloves, place them in a leakproof container or plastic bag.
- Wash your hands thoroughly with soap and water and dry them with a clean, dry cloth or allow them to air dry.
- Ask the woman to move toward the head of the table and help her into a sitting position.
- When lubrication is used for the bimanual or speculum examinations, or if the woman still has lochia or discharge, offer her a tissue or napkin to wipe off her external genitalia and rectum before she dresses. Show her where to dispose of the tissue.
- Evaluate your findings to determine the need for treatment and plan for counseling.
- After the woman is dressed, explain your findings to her, and answer any questions she may have.

- Record your findings.
- If a rubber sheet was used, wipe with 0.5% chlorine solution.

REPAIR OF CERVICAL TEARS

Indications

This procedure is not a routine part of basic care. It is performed if cervical tear(s) are identified upon examination.

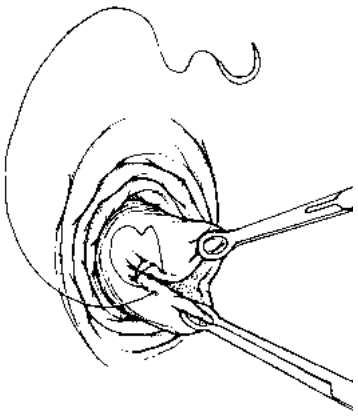
Pre-Procedure Steps and Considerations

- In performing the following procedure, adhere to the general principles of basic care as outlined in **Chapter 1** (**page 1-5**).
- Complete the examination of the cervix for tears (**page 4-20**) if not already done.
- Apply antiseptic solution to the vagina and cervix.
- Provide emotional support and encouragement.
- Anesthesia is not required for most cervical tears.
- Have the woman empty her bladder; catheterize the bladder, if necessary.

Procedure

- Ask an assistant to gently provide fundal pressure to help push the cervix into view.
- Gently grasp the cervix with ring or sponge forceps. Apply the forceps on both sides of the tear and gently pull in various directions to see the entire cervix (**Figure 4-24**, below). There may be several tears.
  - ➡ **If the cervical tear is difficult to reach or extends deep beyond the vaginal vault**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).
- Close the cervical tears with continuous 0 chromic catgut (or polyglycolic) suture starting at the apex (upper edge of tear) (**Figure 4-24**, below), which is often the source of bleeding.
  - ➡ **If a long section of the rim of the cervix is tattered**, under-run it with continuous 0 chromic catgut (or polyglycolic) suture.

Figure 4-24. Repair of a Cervical Tear



Post-Procedure Steps and Considerations

- Wash the perineal area with antiseptic solution, pat dry the area, clean away all soiled linens, and position a sterile sanitary pad over the vulva and perineum.
- Dispose of all bloody linens in a closed or closeable container for transport to laundry.
- Gently lay the woman's legs down together at the same time, and make her comfortable. Make sure she is not wet or cold. Always maintain privacy and modesty.
- Make sure she understands the nature of the trauma. Review hygiene measures to prevent infection:
  - Change perineal pads/cloths frequently enough to prevent unpleasant odor.

REPAIR OF EPISIOTOMY

Indications

This procedure should be performed after all episiotomies.

Pre-Procedure Steps and Considerations

- In performing the following procedure, adhere to the general principles of basic care as outlined in **Chapter 1** (**page 1-5**).
- Provide emotional support and encouragement.

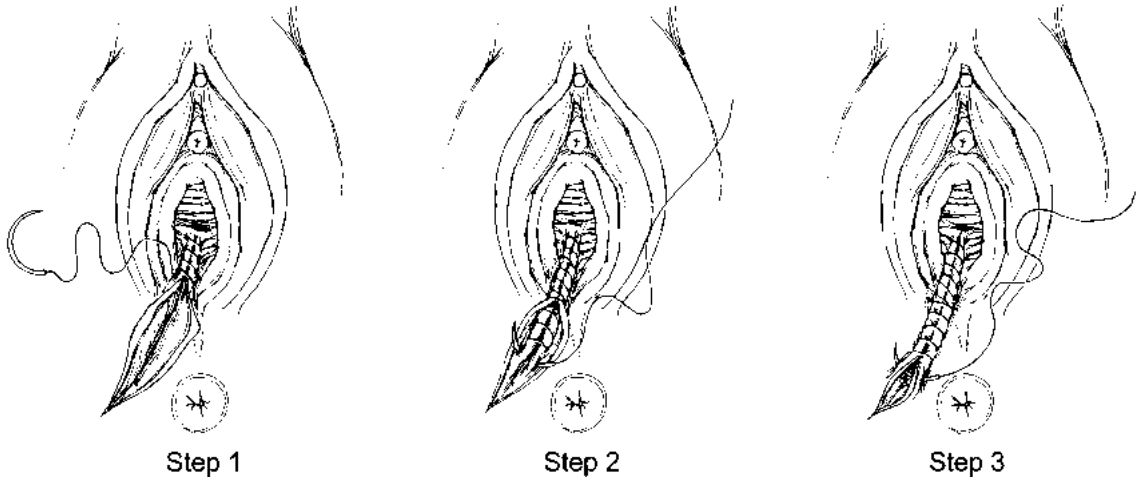
Procedure

- Apply antiseptic solution to the area around the episiotomy.
- Ensure that the local anesthetic infiltrated before the episiotomy is still effective (i.e., pinch the site with forceps. If the woman feels the pinch, additional anesthesia is required).
  - ➡ **If additional anesthesia is required**, infiltrate as described on **page 4-18** for episiotomy.
- Close the vaginal mucosa using continuous 2-0 suture (**Figure 4-25 Step 1, page 4-38**):

> **Note:** It is important that absorbable sutures be used for closure. Polyglycolic sutures are preferred over chromic catgut for their tensile strength, non-allergenic properties, and lower probability of infectious complications and episiotomy breakdown. Chromic catgut is an acceptable alternative, but it is not ideal.

  - Start the repair approximately 1 cm above the apex (top) of the episiotomy. Continue the suture to the level of the vaginal opening.
  - At the opening of the vagina, bring together the cut edges of the vaginal opening.
  - Bring the needle under the vaginal opening and out through the incision, and tie.
- Close the perineal muscle using interrupted 2-0 sutures (**Figure 4-25 Step 2, page 4-38**).
  - ➡ **If the episiotomy is deep**, place a second layer of the same stitch to close the space.
- Close the skin using interrupted (or subcuticular) 2-0 sutures starting at the vaginal opening (**Figure 4-25 Step 3, page 4-38**).
  - ➡ **If the episiotomy was deep**, make sure no stitches are in the rectum. Inform the woman that you are going to examine her rectum. Then place a gloved finger in the anus and feel for stitches.

Figure 4-25. Repair of Episiotomy (Steps 1, 2, and 3)



Post-Procedure Steps and Considerations

- Wash the perineal area with antiseptic solution, pat dry the area, clean away all soiled linens, and position a sterile sanitary pad over the vulva and perineum.
- Dispose of all bloody linens in a closed or closeable container for transport to laundry.
- Gently lay the woman's legs down together at the same time, and make her comfortable. Make sure she is not wet or cold. Always maintain privacy and modesty.
- Make sure she understands the nature of the trauma (tears or incisions). Review care of the wound and hygiene measures to prevent infection:
  - Pour clean water over the perineum after urinating.
  - Clean with mild soapy water and rinse the perineum after each bowel movement.
  - Change perineal pads/cloths frequently enough to prevent unpleasant odor.
  - Leave the perineum open to air as much as possible.

REPAIR OF 1ST AND 2ND DEGREE VAGINAL AND PERINEAL TEARS

Indications

This procedure is not a routine part of basic care. It is performed if a 1st or 2nd degree tear is identified according to classifications previously described (**page 4-21**).

➡ **If a 3rd or 4th degree tear is identified**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

Note: Most 1st degree tears close spontaneously without sutures.

Pre-Procedure Steps and Considerations

- In performing the following procedure, adhere to the general principles of basic care as outlined in **Chapter 1** (**page 1-5**).
- Complete the examination of the vagina and perineum for tears (**page 4-20**) if not already done.
- Provide emotional support and encouragement.

Procedure

- Ask an assistant to check the uterus and ensure that it is contracted.
- Carefully examine the vagina, perineum, and cervix.
- Apply antiseptic solution to the area around the tear.
- Use local infiltration with lidocaine.
- Make sure there are no known allergies to lidocaine or related drugs.
- Infiltrate beneath the vaginal mucosa, beneath the skin of the perineum, and deeply into the perineal muscle (**Figure 4-9, page 4-19**) with approximately 10 mL 0.5% lidocaine solution.
- Aspirate (pull back on the plunger) to be sure that no vessel has been penetrated.
  - ➡ **If blood is returned in the syringe with aspiration**, remove the needle, recheck the position carefully, and try again. **Never inject if blood is aspirated** (the woman can suffer convulsions and death if IV injection of lidocaine occurs).
- At the conclusion of the set of injections, wait 2 minutes and then pinch the area with forceps.
  - ➡ **If the woman feels the pinch**, wait 2 more minutes and then retest.

Note: Anesthetize early to provide sufficient time for effect.

- Repair the vaginal mucosa using a continuous 2-0 suture (**Figure 4-25 Step 1, page 4-38**):

Note: It is important that absorbable sutures be used for closure. Polyglycolic sutures are preferred over chromic catgut for their tensile strength, non-allergenic properties, and lower probability of infectious complications. Chromic catgut is an acceptable alternative, but it is not ideal.

  - Start the repair about 1 cm above the apex (top) of the vaginal tear. Continue the suture to the level of the vaginal opening.
  - At the opening of the vagina, bring together the cut edges of the vaginal opening.
  - Bring the needle under the vaginal opening and out through the perineal tear and tie.
- Repair the perineal muscles using interrupted 2-0 suture (**Figure 4-25 Step 2, page 4-38**).
  - ➡ **If the tear is deep**, place a second layer of the same stitch to close the space.
- Repair the skin using interrupted (or subcuticular) 2-0 sutures starting at the vaginal opening (**Figure 4-25 Step 3, page 4-38**).
  - ➡ **If the tear was deep**, make sure no stitches are in the rectum. Inform the woman that you are going to examine her rectum. Then place a gloved finger in the anus and feel for stitches.

Post-Procedure Steps and Considerations

- Wash the perineal area with antiseptic solution, pat dry the area, clean away all soiled linens, and position a sterile sanitary pad over the vulva and perineum.
- Dispose of all bloody linens in a closed or closeable container for transport to laundry.
- Gently lay the woman's legs down together at the same time, and make her comfortable. Make sure she is not wet or cold. Always maintain privacy and modesty.

- Make sure she understands the nature of the trauma (tears or incisions). Review care of the wound and hygiene measures to prevent infection:
  - Pour clean water over the perineum after urinating.
  - Clean with mild soapy water and rinse the perineum after each bowel movement.
  - Change perineal pads/cloths frequently enough to prevent unpleasant odor.
  - Leave the perineum open to air as much as possible.

SHOULDER DYSTOCIA (STUCK SHOULDERS)

Indications

This procedure is not a routine part of basic care. It is performed only if the baby's head has been delivered but the shoulders are stuck and unable to be delivered.

Pre-Procedure Steps and Considerations

- In performing the following procedure, adhere to the general principles of basic care as outlined in **Chapter 1** (**page 1-5**).
- Perform **an episiotomy** to reduce soft tissue obstruction and/or make room for manipulation (**page 4-18**).

Procedure

Perform the McRoberts maneuver:

- With the woman on her back, ask her to flex both knees, bringing her knees up as far as possible toward her chest (**Figure 4-26, page 4-41**). Ask two assistants to push her flexed knees firmly up onto her chest.
- At the same time, have an assistant apply pressure above the symphysis pubis toward the woman's spine to dislodge the anterior shoulder from behind the symphysis pubis.

> **Note:** Do not apply fundal pressure to dislodge the anterior shoulder. This will further impact the shoulder and can cause rupture of the uterus.

- With one hand on each side of the fetal head, apply firm, continuous traction downward to move the anterior shoulder under the symphysis pubis.
- Avoid excessive traction on the head as this may cause brachial plexus injury.

If the shoulder is still not delivered:

- Insert a hand into the vagina and apply pressure to the anterior shoulder in the direction of the baby's sternum to rotate the shoulder and decrease the shoulder diameter.
- If needed, apply pressure to the posterior shoulder in the direction of the baby's sternum.

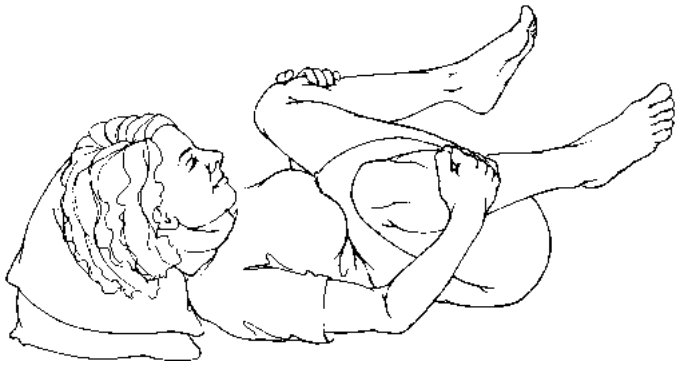
If the shoulder is still not delivered despite the above measures:

- Insert a hand into the vagina.
- Grasp the humerus of the posterior arm and, keeping the arm flexed at the elbow, sweep the arm across the chest, grasp the hand, and deliver the entire arm.
- With one hand on each side of the fetal head, apply firm, continuous traction downward to move the anterior shoulder under the symphysis pubis.

If the posterior arm cannot be extracted, perform the corkscrew maneuver:

- Pass a hand along the back of the posterior shoulder and rotate the baby 180° to bring the anterior shoulder posteriorly, and the posterior shoulder anteriorly.
- Rotate the body of the baby with the back up (or anterior).
- Continue to rotate the body in this manner until the baby is "screwed" out.

Figure 4-26. Flexed Knees Pushed Firmly toward Chest



If all of the above measures fail to deliver the anterior shoulder:

- Another option is to fracture the baby's anterior clavicle to decrease the width of the shoulders and free the anterior shoulder from under the symphysis. This is done by pressing the anterior clavicle against the symphysis pubis. After birth, facilitate urgent referral/transfer (**Annex 7, page 4-63**) of the newborn.

If the above measures do not result in the birth of the baby:

- ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

If the above measures result in the birth of the baby:

- Perform a Rapid Initial Assessment of the woman (**page 3-90**) and a Newborn Rapid Initial Assessment (**page 3-96**) before proceeding.

Post-Procedure Steps and Considerations

- Repair the episiotomy (**page 4-37**).
- If needed, provide emotional support to the woman and family following a traumatic birth and possible death of the newborn (**page 3-74**) or injury to the baby.

TESTING

Urine Test for Protein

Indications

This test should be performed on every woman who is pregnant or has just given birth and who also has hypertension in order to rule out or diagnose pre-eclampsia/eclampsia.

Pre-Procedure Steps and Considerations

- In performing the following procedure, adhere to the general principles of basic care as outlined in **Chapter 1** (**page 1-5**).
- Give the woman a labeled container and explain where she can go to urinate.
- Teach the woman how to collect a clean-catch specimen. (Vaginal secretions or amniotic fluid may contaminate urine specimens. Only clean-catch, mid-stream specimens should be used. Catheterization for this purpose is not justified due to the risk of urinary tract infection.)
- To get a clean-catch, mid-stream specimen, the woman should:
  - Clean the vulva with water.
  - Spread the labia with fingers.
  - Urinate in a free stream. (Do not allow urine to dribble over vulva, as this will contaminate urine.)
  - Catch the urine in mid-stream. Remove container before urine stops.

Procedure

- Analyze the urine for protein using either the dipstick or boiling procedure (below).

Dipstick Procedure

- Remove one strip from the bottle and replace the cap.
- Completely immerse reagent areas of the strip in fresh urine and remove immediately to avoid dissolving out reagents.
- While removing the strip, run the edge of the strip against the rim of the urine container to remove excess urine. Hold the strip in a horizontal position to prevent possible mixing of chemicals from adjacent reagent areas and/or contaminating the hands with urine.
- Compare reagent areas to corresponding color chart on the bottle label, at the time specified (usually after 60 seconds):
  - Hold the strip close to the color blocks and match carefully. Avoid placing the strip directly on the color chart, as this will result in the urine soiling the chart.
  - Development of any greenish color is due to the presence of protein. Colors range from yellow for negative reactions through yellow-green and green to green-blue for positive reactions.

Boiling Procedure

- Place urine in a clean test tube and heat until it boils.
- After boiling, allow the test tube to stand until it is cool enough to touch. A thick precipitate at the bottom indicates protein.

➡ **If acetic acid is available**, add 2–3 drops of 2–3% acetic acid after boiling the urine (even if the urine is cool).

  ➡ **If the urine becomes cloudy**, protein is present in the urine.

  ➡ **If the urine remains clear**, protein is not present in the urine.

Post-Procedure Steps and Considerations

- Follow infection prevention measures for supplies and equipment used during testing.
- Give the woman her test result and related counseling as appropriate, even if the result is normal or negative.

Measuring Hemoglobin

Indications

This procedure is a routine part of basic care during pregnancy. At other times, it should be performed only if anemia is suspected.

Pre-Procedure Steps and Considerations

- In performing the following procedure, adhere to the general principles of basic care as outlined in **Chapter 1** (**page 1-5**).

Procedure

Obtaining a Blood Sample

- Wash your hands thoroughly with soap and water, dry them, and put examination gloves on both hands.
- Clean the tip of the woman's finger with alcohol on a swab, cotton, or gauze.
- Prick her finger using a lancet using a swift motion. A slow motion can be uncomfortable for the woman.
- Squeeze blood into a capillary tube or collect it in a pipette.
- Apply gentle pressure to the puncture site with a dry cotton-wool ball for several minutes.
- Dispose of all equipment using recommended infection prevention procedures (**page 1-47**).
- Measure hemoglobin using either a hemoglobinometer or the WHO Haemoglobin Colour Scale (below).

Using a Hemoglobinometer

- Place a drop of blood on one side of the hemoglobinometer's glass piece containing the H-shaped depression.
- Stir the blood with the end of a hemolysis applicator until the blood appears transparent rather than cloudy.
- Position the flat piece of glass on top of the blood plate and slide both pieces into the metal clip. Slide the blood chamber into the slot on the side of the hemoglobinometer.
- Hold the hemoglobinometer to the eye and press the light switch so that a green split-field appears.
- When the two halves of the field appear to be the same shade of green, note the concentration of hemoglobin in the sample (grams of hemoglobin per 100 mL).

Using the WHO Haemoglobin Colour Scale

- With a pipette or capillary tube, place a drop of blood at one end of the test paper so that it forms a stain 8–9 mm in diameter. Wait 30 seconds.
- In good light (but not direct sunlight), compare the stain with the color scale, keeping the color scale booklet open in one hand, and avoiding shadow and direct sunlight.
- Slide the bloodstain up and down behind the color-scale apertures.

- If the bloodstain closely matches one of the shades on the scale, record its hemoglobin value. If the color of the stain lies between two of the shades, record the lower value (e.g., if it lies between 6 and 8 g, record it as 6).
- Wipe the surfaces that have been in contact with the test paper with a damp tissue.

Post-Procedure Steps and Considerations

- Follow infection prevention measures for supplies and equipment used during testing.
- Give the woman her test result and related counseling as appropriate, even if the result is normal or negative.

Rapid Plasma Reagent Test (RPR)

Indications

This test, or a VDRL, is a part of basic care during pregnancy to screen for syphilis infection.

Pre-Procedure Steps and Considerations

- In performing the following procedure, adhere to the general principles of basic care as outlined in **Chapter 1** (**page 1-5**).

Procedure

- Draw the specimen carefully into the Dispenstir®. Avoid picking up cells and bubbles.
- Hold the Dispenstir vertically and squeeze firmly so that 1 drop (approximately 0.05 mL) falls freely into the test card circle. Do not touch card surface.
- Use the sealed end of the Dispenstir to spread the specimen until it fills the entire circle. Do not spread outside the circle.
- Gently invert the antigen bottle several times. Hold vertically and dispense 4–5 drops into the dispensing bottle cap to check that the needle passage is clear. Put one drop onto the test circle. The drop must not cling to the shaft of the needle. Do not mix the specimen and antigen.
- Recover the antigen from the bottle cap.
- Rotate the test card for 8 minutes under the humidifying cover.
- To facilitate interpretation, tilt the card back and forth by hand three or four times, and read it immediately under a bright light or daylight. (A fluorescent light source may cause errors in interpretation.)
- Report as reactive or nonreactive:
  - Reactive: Characteristic clumping, includes minimal to moderate reactives
  - Nonreactive: Slight roughness or no clumping

Post-Procedure Steps and Considerations

- Follow infection prevention measures for supplies and equipment used during testing.
- Give the woman her test result and related counseling as appropriate, even if the result is normal or negative.

VACUUM EXTRACTION

Indications

This procedure is not a routine part of basic care. It is performed only in the case of fetal distress (if no time to refer) and prolapsed cord, and only when the following conditions are met:

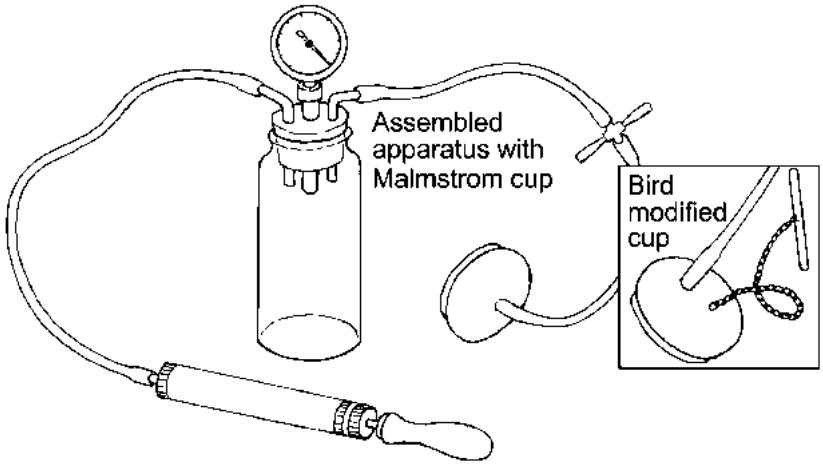
- Vertex presentation
- Term fetus
- Cervix fully dilated
- Fetal head at least at 0 station or no more than 2/5 palpable above symphysis pubis
- Membranes are ruptured

➡ **If the above conditions are not met**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

Pre-Procedure Steps and Considerations

- In performing the following procedure, adhere to the general principles of basic care as outlined in **Chapter 1** (**page 1-5**).
- Ensure that the equipment is complete (**Figure 4-27,** below).
- Check all connections and test the vacuum on a gloved hand.
- Provide emotional support and encouragement.

Figure 4-27. Vacuum Extractor

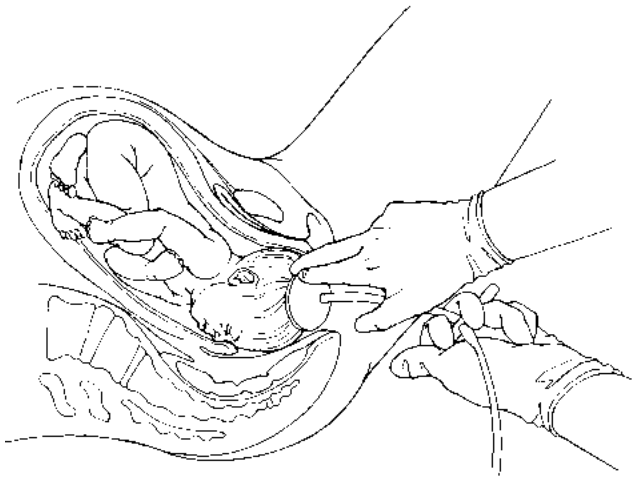


Procedure

- Wearing high-level disinfected or sterile gloves, assess the position of the fetal head by feeling the sagittal suture line and the fontanelles.
- Identify the posterior fontanelle (**Figure 2-9, page 2-67**).
- Apply the largest cup that will fit, with the center of the cup over the flexion point, 1 cm anterior to the posterior fontanelle. This placement will promote flexion, descent, and autorotation with traction.
- An episiotomy (**page 4-18**) may be needed for proper placement at this time.
  - ➡ **If an episiotomy is necessary for placement**, delay the episiotomy until the head stretches the perineum or the perineum interferes with the axis of traction. This will avoid unnecessary blood loss.
- Check the application. Ensure that there is no maternal soft tissue (cervix or vagina) within the rim. Keep the index finger in contact with both the cup and the baby's head.

- With the pump, create a vacuum of 0.2 kg/cm² negative pressure and check the application.
- Increase the vacuum to 0.8 kg/cm² and check the application.
- After maximum negative pressure, start traction (**Figure 4-28**, below) in the line of the pelvic axis and perpendicular to the cup.

Figure 4-28. Applying Traction with the Malmstrom Cup



  - ➡ **If the fetal head is tilted to one side or not flexed well**, traction should be directed in a line that will try to correct the tilt or deflexion of the head (i.e., to one side or the other, not necessarily in the midline).
- With each contraction, apply traction in a line perpendicular to the plane of the cup rim. Place a finger on the scalp next to the cup during traction to assess potential slippage and descent of the vertex.
- Between contractions check:
  - Fetal heart rate
  - Application of the cup

Remember:
- Never use the cup to actively rotate the baby's head. Rotation of the baby's head will occur with traction.
- The first pulls help to find the proper direction for pulling.
- Do not continue to pull between contractions and expulsive efforts.
- With progress, and in the absence of fetal distress, continue the "guiding" pulls for a maximum of 30 minutes.
- ➡ **If there is no descent with every pull**, do not persist with vacuum extraction.

➡ **If any of the following occur**, discontinue vacuum extraction:
- Fetal head does not advance with each pull;
- Fetus is undelivered after three pulls with no descent, or after 30 minutes; OR
- Cup slips off the head twice at the proper direction of pull with a maximum negative pressure.

➡ **If vacuum extraction fails**, ACT NOW!—facilitate urgent referral/transfer (**Annex 7, page 4-63**).

Post-Procedure Steps and Considerations

- Repair episiotomy (**page 4-37**) if applicable.
- If needed, provide emotional support to the woman and family following a traumatic birth or possible injury to the baby.

ANNEX FIVE

ADDITIONAL HEALTH MESSAGES AND COUNSELING

Health messages and counseling on the following topics should be provided according to the woman's individual need. As is true of all aspects of care, this guidance should be individualized based on the woman's history and physical examination, as well as on her previous experiences and any questions she asks during her visit.

BREASTFEEDING SUPPORT

In addition to discussing the benefits and principles of early and exclusive breastfeeding, some women may need additional guidance on how to breastfeed.

Positioning

The woman should position herself so that she is comfortable and her arm and back are supported. Some options include:

- Sitting in a chair (or on the floor against a wall, or on the ground against a tree) with an armrest and/or pillow (or folded blanket) (**Figures 4-29 to 4-31**, below)
- Lying down on her side (**Figure 4-32**, below)

Figure 4-29. Breastfeeding: Cradle Position

Figure 4-30. Breastfeeding: Cross-Cradle Position

Figure 4-31. Breastfeeding: Football/Clutch Position

Figure 4-32. Breastfeeding: Side-Lying Position

The woman should position the baby so that her/his:

- Head and body are in a straight line (i.e., the neck is not twisted or bent);
- Mouth is facing the breast, with the top lip opposite the nipple;
- Body is held close to the woman; and
- Entire body is supported—not just the head and shoulders.

Holds

As the woman holds her newborn in any of these positions, she may need to support her breast with her free hand. This removes the weight of the breast from the newborn's chin. The following techniques will help her do this.

- **"C" hold**—The woman supports her breast with her thumb on top, well back from her areola, and with her fingers underneath. This is a good hold for the clutch position.
- "**U**" **hold**—The woman places her fingers flat on her ribcage underneath her breast, with her index finger in the crease under her breast. She drops her elbow so that her breast is supported between her thumb and index finger. Her thumb will be on the outer area of the breast with her fingers on the inner area.

Attachment/Suckling

The woman can help the baby attach well ("latch on") to the breast by ensuring that:

- The baby takes as much as possible of the areola into the mouth—not just the nipple—so that the nipple and areola stretch out to form a long "teat";
- The baby does not just take the tip of the nipple into her/his mouth and suck (as through a straw), but rather presses the areola against the roof of the mouth with her/his tongue (i.e., the milk is emptied from the breast by compression, not suckling);
- More of the areola can be seen above the baby's mouth than below;
- The baby's mouth is wide open when s/he attaches; and
- The baby's chin touches the breast.

Other Breastfeeding Problems

➡ **If the woman has inverted nipples**, see **Textbox 4-1** (below) for additional guidance.

➡ **If the woman needs to express breastmilk for any reason** (e.g., the baby is ill and cannot suckle), see **Textbox 4-2** (**page 4-49**) for additional guidance.

Textbox 4-1. Additional Guidance for Women with Inverted Nipples

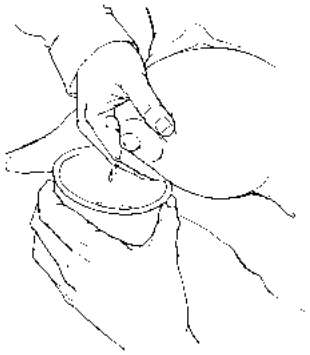
- Reassure the woman that most women with flat or inverted nipples can breastfeed without problems.
- Provide health messages and counseling to the woman on the following issues:
  - Protractility (i.e., the degree to which the nipple is protracted): This improves during pregnancy and the first week postpartum.
  - Correct attachment: The baby sucks from the areola and the nipple—not just the nipple—forming a "teat." (The nipple is only about one-third of this "teat" in the baby's mouth.)
  - Avoid putting a pacifier, bottle, or finger into the baby's mouth to assess the suck.
  - It is important to breastfeed frequently during the immediate postpartum period. At this time, the breast tissue is softer and can be molded into the baby's mouth more easily while the baby learns to latch on.

Textbox 4-2. Expressing Breastmilk[1]

Teach the woman how to express breastmilk herself. The woman should:

- Obtain a clean (washed, boiled or rinsed with boiling water, and air-dried) cup or container to collect and store the milk.
- Wash her hands thoroughly.
- Sit or stand comfortably and hold the container underneath her breast.
- Express the milk (**Figure 4-33,** below):
  - Put her **thumb** above the areola and her first finger below the areola (opposite the thumb). Support the breast with her other fingers.
  - Compress the breast between her finger and thumb. Pressing her finger and thumb toward the chest at the same time as compressing may help the milk to flow.
  - Press and release repeatedly all around the sides of the breast to make sure milk is **expressed** from all the lobes. This should not hurt; if it does, slightly reposition the thumb and forefinger. Milk may not come at first, but after compressing a few times, it should start to drip and then spurt or flow out. Each woman will develop her own rhythm for compression and release.
  - Use a rolling, rather than rubbing, movement of the fingers to avoid friction damage.
  - **Avoid** squeezing, pressing, or pulling the nipple itself.
- Express one breast for 3 to 5 minutes until the milk flow slows, and then express the other breast. Repeat expressing milk from both sides until the flow ceases. (This may take 20–30 minutes.)

Figure 4-33. Expressing Breastmilk



- If the milk does not flow well:
  - Ensure that the woman is using the correct technique;
  - Have the woman apply warm compresses to her breasts; and
  - Have someone massage the woman's back and neck.
- If the expressed breastmilk is not going to be used immediately, label the container and either refrigerate the milk and use within 24 hours, or freeze the milk (if freezing conditions can be reliably maintained) at –20°C for no more than 6 months. If a refrigerator or freezer is not available, keep the milk covered at room temperature for up to 6 hours.
- Ensure that the milk is at room temperature before giving it to the baby:
  - Warm frozen or refrigerated milk in a warm water bath (approximately 40°C), but avoid overheating the milk.
  - Use the rewarmed milk promptly.

BREASTFEEDING VERSUS USING A BREASTMILK SUBSTITUTE

Throughout your interaction with an HIV-negative woman, strongly encourage her to breastfeed, but do not force her into a decision she is not comfortable with. All HIV-negative women should be informed of the advantages of breastfeeding and counseled on the following benefits of breastfeeding.

[1] *Adapted from:* World Health Organization. 2003. *Managing Newborn Problems: A Guide for Doctors, Nurses, and Midwives*. WHO: Geneva.

Note: If the woman is HIV-positive, see **page 3-51**.

	Exclusive Breastfeeding	Exclusive Use of Breastmilk Substitute
Nutrition	• Contains all the nutrients the baby needs for the first 6 months • Is easily digested	• Various types of breastmilk substitutes contain various combinations of nutrients, which vary in similarity to breastmilk. None is as perfectly composed as breastmilk.
Warmth	• Provides the newborn with warmth	
Protection	• Boosts the immune system • Helps protect the baby from infection and allergies	
Safety	• Is a clean source of food	• Risk of contamination of utensils and milk substitute • Risk of spoiling
Bonding	• Promotes mother-baby bonding	
Health Benefits to the Woman	• Helps the uterus to return to normal size • Helps delay another pregnancy by delaying ovulation • Reduces risk of anemia by delaying menses	
Cost-Effectiveness and Accessibility	• Is less expensive than buying replacement feeds • Is very accessible	• May be expensive • Not always accessible • Not always feasible
Acceptability/ Appropriateness	• Is usually more culturally appropriate	• Not always appropriate (goes against cultural norms) • May become a source of stigma
Convenience	• Requires less time in preparation as there are no utensils to clean or formula to mix and store	• Requires time to prepare and store

- Whatever the woman decides regarding breastfeeding, support her in her method of choice by providing her with the information she needs to feed her baby safely and effectively.
  - ➡ **If the woman has chosen to use a breastmilk substitute:**
    - Assess the overall feasibility and appropriateness of using a breastmilk substitute (see **Textbox 4-3, page 4-51**).
    - Assess her current practices (i.e., how she is currently preparing breastmilk substitute) and provide counseling, as necessary, regarding the safe preparation and administration of the breastmilk substitute.
    - See also Using a Breastmilk Substitute (**page 4-51**).
  - ➡ **If the woman has decided to breastfeed**, see Early and Exclusive Breastfeeding (**page 2-130**).

Textbox 4-3. Assessing the Feasibility of Using a Breastmilk Substitute

To assess the overall feasibility and appropriateness of using a breastmilk substitute in the population being served, consider the following issues and/or discuss them with the woman:

- Is replacement feeding acceptable in the woman's culture?
- Is the breastmilk substitute safe and nutritionally adequate?
- Is there an affordable, available/accessible, and sustainable supply?
- Is there access to clean water or sufficient fuel to boil water and prepare utensils and feeds correctly?
- Is there someone who can educate the woman about how to properly prepare and provide replacement feedings?
- Is there another form of contraception the woman can use, in lieu of exclusive breastfeeding?

USING A BREASTMILK SUBSTITUTE

If the woman decides to use a breastmilk substitute, advise and counsel her on the following issues:

- Ensure that she has made her decision based on careful consideration of the benefits and drawbacks of both methods: exclusive breastfeeding for 6 months or using a locally available breastmilk substitute.
- If the woman is not firm in her decision, support the woman in making an informed choice of feeding method (see Breastfeeding versus Using a Breastmilk Substitute [**page 4-49**]).
- If she is firm in her decision to use a breastmilk substitute, help her decide on a replacement feed that is affordable, practical, easily accessible, and nutritious.

Safe Preparation and Storage of Breastmilk Substitute

If the woman chooses to use a breastmilk substitute, advise her to:

- Use aseptic technique to prepare the breastmilk substitute using utensils, containers, and feeding implements (cups and/or spoons) that have been boiled and air-dried.
- Wash hands with soap and water before preparing the breastmilk substitute.
  - ➡ **If the woman chooses to use goat or cow milk**, counsel her about the need to mix 2 parts goat or cow milk with 1 part boiled water* and 1 level teaspoon of sugar. This mixture should be brought to a boil and then cooled before use.
  - ➡ **If she chooses to use canned evaporated milk**, she should mix 2 parts canned evaporated milk with 3 parts boiled water* and 1 level teaspoon of sugar.
  - ➡ **If she chooses to use powdered canned formula**, she should follow the directions on the can (and use boiled water*).
  - ➡ **If she chooses to use powdered skimmed milk**, she should mix 1 cup boiled water* with 12 level teaspoons of skimmed powdered milk, 2 level teaspoons of sugar, and 3 teaspoons of oil.

* **Note:** It is essential that **all water** used in mixing or diluting milk be **boiled for 10 minutes and then cooled** before use.

- Milk should not be left at room temperature for more than 2 hours. Milk may be stored in a refrigerator for up to 24 hours.
- Do NOT use condensed milk.

Feeding Guidelines

- It is safer to feed the baby with a cup and spoon than with a baby bottle because bottles and nipples are difficult to clean (see Feeding by Cup, Cup and Spoon, or Other Device, below).
- The baby should feed whenever s/he wants (on demand), which should be about every 2–3 hours or 8–12 times per day during the first days of life.
- The baby is getting enough to eat if s/he is urinating at least 6 times per day during the first 2–7 days after birth, and passing stool at least twice per day during the first 2–7 days after birth.

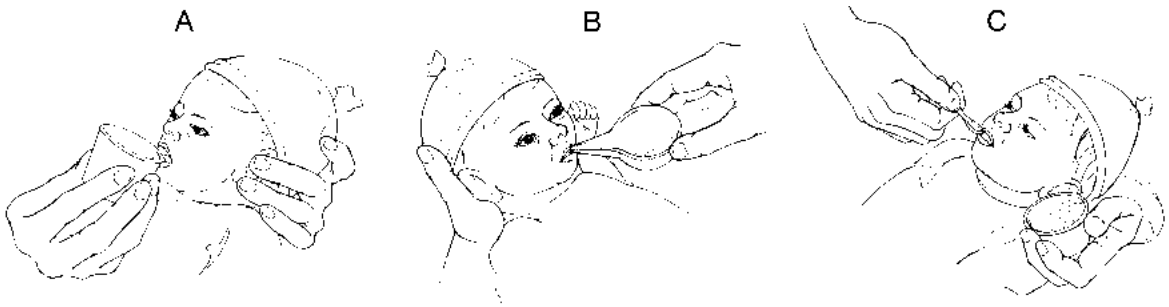
FEEDING BY CUP, CUP AND SPOON, OR OTHER DEVICE[2]

If the woman is feeding the baby by a cup, a cup and spoon, or other suitable device (e.g., paladai), advise her as follows:

- Use clean (washed, boiled or rinsed with boiled water, and air-dried) utensils and feeding devices for each feed.
  - ➡ **If feeding expressed breastmilk**, give the milk to the baby immediately after it is expressed, if possible.
  - ➡ **If feeding a breastmilk substitute**, give the milk to the baby immediately after it is prepared, if possible.
    - ➡ **If the baby does not consume all of the expressed breastmilk or breastmilk substitute**, remaining milk may be stored in the refrigerator for up to 24 hours.
  - ➡ **If giving oral rehydration solution (ORS)**, give the solution to the baby immediately after it is prepared (**Textbox 3-36, page 3-96**), if possible. Discard unused ORS after 24 hours.
- Have the woman feed the baby if she is available. The woman should:
  - Measure the quantity of breastmilk, breastmilk substitute, or ORS in the cup.
  - Hold the baby sitting semi-upright on her lap.
  - Rest the device (e.g., cup, spoon) lightly on the baby's lower lip and touch the outer part of the baby's upper lip with the edge of it (**Figure 4-34, page 4-53**).
  - Tip the device (e.g., cup, spoon) so the milk just reaches the baby's lips; allow the baby to take the fluid (rather than pouring it into the baby's mouth).
  - End the feeding when the baby closes her/his mouth and is no longer interested in feeding.
    - ➡ **If the baby does not take the necessary volume of breastmilk, breastmilk substitute, or ORS**, have the woman encourage the baby to feed for a longer time or feed more often.
    - ➡ **If the baby is not feeding well using a feeding device, or if the woman prefers not to use it but cannot breastfeed**, facilitate nonurgent referral/transfer (**Annex 7, page 4-63**).

[2] *Adapted from:* World Health Organization. 2003. *Managing Newborn Problems: A Guide for Doctors, Nurses, and Midwives*. WHO: Geneva.

Figure 4-34. Alternative Feeding Methods: Cup (A), Paladai (B), Spoon (C)[3]



POSTPARTUM CONTRACEPTION

Many postpartum women want no more children or would like to delay pregnancy for at least 2 years. Unfortunately, many women leave obstetric services without receiving counseling about family planning or contraceptive methods. All postpartum women should be provided with family planning options. The International Planned Parenthood Federation (IPPF) recommends the following guidelines for counseling postpartum women:

- Encourage full breastfeeding for all postpartum women.
- Do not discontinue breastfeeding to begin use of a contraceptive method.
- Contraceptive methods used by breastfeeding women should not adversely affect breastfeeding or the health of the baby.

Postpartum Infertility

After childbirth, every woman experiences a period of infertility. In **nonbreastfeeding** women it may be less than 6 weeks (on average, the first ovulation occurs 45 days postpartum). For **breastfeeding** women, the period of infertility is longer because frequent suckling blocks ovulation. The return of fertility, however, is not predictable (conception can occur before the woman has any signs or symptoms of the first menses).

Lactational Amenorrhea Method (LAM)

It has long been recognized that breastfeeding could be an effective, temporary contraceptive if a woman could reliably know when she is no longer protected. LAM provides the means to do this. It provides effective contraception for a breastfeeding woman if she is fully or nearly fully breastfeeding, her menses have **not** returned (lactational amenorrhea), and she is less than 6 months postpartum. If these criteria are met, then LAM will provide more than 98% protection from pregnancy during the first 6 months after childbirth. When any one of these criteria changes, however, another contraceptive method—one that does not interfere with breastfeeding—should be started if the woman does not want to become pregnant. In addition, use of LAM enables both woman and newborn to take full advantage of the numerous other benefits of breastfeeding.

When to Start Contraception

Although all methods of contraception are appropriate for postpartum women, the time for starting each method depends on a woman's breastfeeding status. Methods that can be used whenever a couple resumes sexual intercourse, even in the immediate postpartum period, include:

- Lactational amenorrhea method;

[3] Figure 4-34 is reprinted with permission from: World Health Organization (WHO). 2003. *Managing Newborn Problems: A Guide for Doctors, Nurses, and Midwives*. WHO: Geneva.

- Spermicides;
- Condoms (lubricated condoms may help overcome vaginal dryness); and
- Withdrawal.

A diaphragm cannot be used until after 6 weeks postpartum because it cannot be properly fitted. Attempting to do so earlier than this may cause discomfort, especially in women who have had an episiotomy or vaginal, perineal, or cervical tears.

Breastfeeding Women

Women who are breastfeeding do not need contraception for at least 6 weeks postpartum—up to 6 months if they are using LAM. **Figure 4-35** (**page 4-55**) shows the recommended time of starting contraception for breastfeeding women. If a breastfeeding woman decides to use a contraceptive method other than LAM, she should be counseled about the potential effect of some contraceptives on breastfeeding and the health of the baby. For example, combined oral contraceptives (COCs) and combined injectable contraceptives (CICs) are considered to be the methods of last choice for any woman who is breastfeeding. All COCs, even low-dose pills (30–35 mcg ethinyl estradiol) decrease breastmilk production, and there is theoretical concern that they may affect the normal growth of a baby during the first 6–8 weeks postpartum.[4] Waiting at least 8–12 weeks postpartum before starting COCs or CICs has the advantage of permitting breastfeeding to be better established.

Nonbreastfeeding Women

Although most nonbreastfeeding women will resume menstrual cycles within 4–6 weeks after childbirth, only about one-third of first cycles will be ovulatory, and even fewer will result in pregnancy. If a couple wishes to avoid all risk of pregnancy, however, contraception should be started at the time of (barriers, spermicides, withdrawal) or before (hormonal methods, intrauterine devices [IUDs], or voluntary sterilization [VS]) the first sexual intercourse. Because the pregnancy-induced risk of blood clotting problems (elevated coagulation factors) is still present until 2–3 weeks postpartum, COCs and CICs should not be started before that time. By contrast, progestin-only contraceptives (POCs) can be started immediately postpartum because they do not increase the risk of blood clotting problems. Other differences in the recommended time for starting contraception in nonbreastfeeding women are depicted in **Figure 4-36** (**page 4-55**).

Table 4-5 (**page 4-56**) and **Table 4-6** (**page 4-56**) provide additional information about the use of contraceptive methods by postpartum women.

[4] These restrictions do not apply to women who are doing only token (i.e., minimal) breastfeeding.

Figure 4-35. Recommended Time to Start Contraceptives for Breastfeeding Women[5]

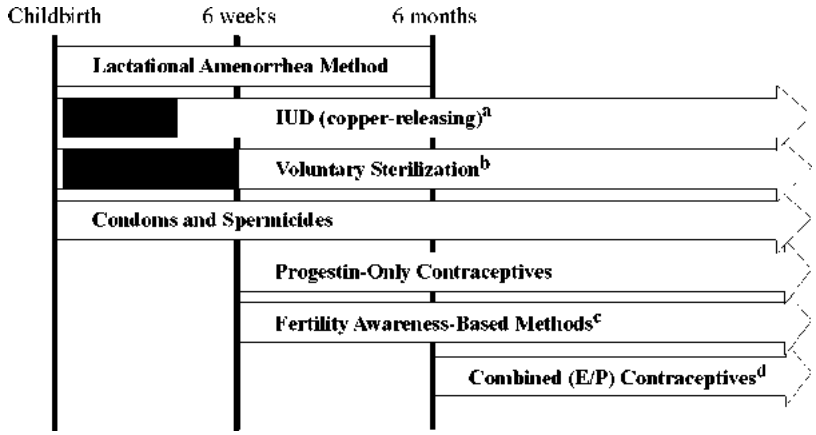
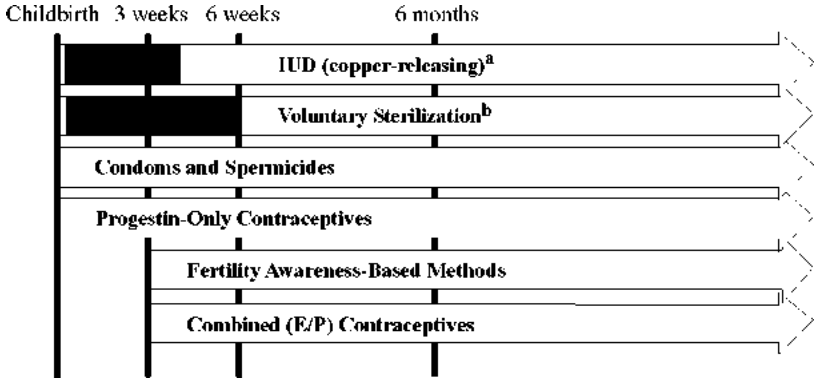


Figure 4-36. Recommended Time to Start Contraceptives for Nonbreastfeeding Women[5]



[a] If childbirth is in a hospital or other healthcare facility, immediate postplacental or postpartum (less than 48 hours) IUD insertion is appropriate under certain circumstances (i.e., with adequate counseling and a specially trained skilled provider).

[b] Vasectomy can be performed at any time.

[c] Fertility awareness-based methods may be harder for breastfeeding women to use because reduced ovarian function makes fertility signs (e.g., changes in mucus, basal body temperature) more difficult to interpret. As a result, fertility awareness-based methods can require prolonged periods of abstinence during breastfeeding.

[d] During the first 6 months' postpartum, COCs and CICs may affect the quantity of breastmilk and the healthy growth of the baby. If a woman is breastfeeding but not using LAM, she may start COCs or CICs as soon as 6 weeks' postpartum if other methods are not available or acceptable. (WHO class 3)

[5] *Adapted from:* Family Health International (FHI) 1993. Postpartum Contraception. Contraceptive Technology Update Series. FHI: Research Triangle Park, North Carolina.

Table 4-5. WHO Medical Eligibility Criteria Programmatic Classification

CLASSIFICATION	WITH CLINICAL JUDGMENT	WITH LIMITED CLINICAL JUDGMENT
1	Use method in any circumstance	Yes—Use the method
2	Generally use the method	Yes—Use the method
3	Use of method not usually recommended	No—Do NOT use the method
4	Method not to be used	No—Do NOT use the method

Table 4-6. Counseling Outline for Postpartum Contraceptive Use

METHOD	TIMING AFTER CHILDBIRTH	RELATED METHOD CHARACTERISTICS	REMARKS
Lactational Amenorrhea Method (LAM)	Should begin breastfeeding immediately after childbirth. Highly effective for up to 6 months if fully breastfeeding and no menstrual bleeding.	Considerable health benefits for both the woman and baby. Gives time to choose and arrange for surgical or other contraceptive methods.	For greatest effectiveness, must be fully breastfeeding. Effectiveness declines as weaning takes place or breastfeeding is supplemented.
Combined Oral Contraceptives (COCs) and Combined Injectable Contraceptives (CICs)	**If breastfeeding:** • Should not be used during the first 6–8 weeks' postpartum. (WHO class 4) • Should be avoided from 6 weeks' to 6 months' postpartum unless other, more appropriate methods are not available or acceptable. (WHO class 3) **If using LAM:** • Delay for 6 months. • Start COCs or CICs when weaning begins. (WHO class 2) **If not breastfeeding:** • Can be started after 3 weeks' postpartum. If the woman has resumed menses and sexual activity, start COCs or CICs only if reasonably sure she is not pregnant.	During the first 6–8 weeks' postpartum, COCs and CICs **decrease** the amount of breastmilk and may affect the healthy growth of the baby. (This effect may continue for up to 6 months.) During the first 3 weeks' postpartum, the estrogen in COCs and CICs slightly increases the risk of blood clotting problems.	COCs and CICs should be the last choice for breastfeeding women. COCs and CICs may be given for women who were pre-eclamptic or had hypertension during pregnancy as long as blood pressure is in normal range when starting COCs or CICs. There is no increased risk of blood clotting beyond 3 weeks' postpartum.

Table 4-6. Counseling Outline for Postpartum Contraceptive Use *(continued)*

METHOD	TIMING AFTER CHILDBIRTH	RELATED METHOD CHARACTERISTICS	REMARKS
Progestin-Only Contraceptives (POCs) (implants, PICs, and progestin-only pills [POPs])	**If breastfeeding:** • Avoid before 6 weeks' postpartum unless other, more appropriate methods are not available or acceptable. (WHO class 3) **If using LAM:** • Delay for 6 months. • Start POCs when weaning begins. (WHO class 1) **If not breastfeeding:** • Should be started immediately. If the woman has resumed menses and sexual activity, start POCs only if reasonably sure she is not pregnant.	During the first 6 weeks' postpartum, progestin may affect the healthy growth of the baby. After 6 weeks' postpartum, there is no effect on quantity or quality of breastmilk or health of the baby.	Irregular bleeding may occur with POC use, even in breastfeeding women.
Intrauterine Devices (IUDs) (copper-releasing)[6]	May be inserted immediately (preferably within 10 minutes) after delivery of placenta or within 48 hours after childbirth. (WHO class 2) If not inserted within 48 hours' postpartum, insertion should be delayed until 6 weeks' postpartum. (WHO class 1) If the woman has resumed menses and sexual activity, insert an IUD only if reasonably sure she is not pregnant.	No effect on quantity or quality of breastmilk or health of the baby. Fewer postinsertion side effects (bleeding, pain) when IUD inserted in breastfeeding women.	Requires skilled provider trained in postplacental or postpartum insertion. Women should be screened and counseled during antenatal care visits for postplacental insertion. First-year IUD removal rates are lower among breastfeeding women. Spontaneous expulsion rate higher (6–10%) than for interval insertion (lowest rates if inserted high in the uterus within 10 minutes after placenta delivered). After 6 weeks' postpartum, the skilled provider does not have to be trained in postpartum IUD insertion (technique same as for interval insertion).

[6] Progestin-releasing IUDs should not be inserted until after 6 weeks' postpartum. (WHO class 3)

Table 4-6. Counseling Outline for Postpartum Contraceptive Use *(continued)*

METHOD	TIMING AFTER CHILDBIRTH	RELATED METHOD CHARACTERISTICS	REMARKS
Condoms and Spermicides (foam, cream, film, suppositories, tablets)	May be used any time postpartum.	No effect on quantity or quality of breastmilk or health of the baby. Useful as interim methods if initiation of another chosen method must be postponed.	Lubricated condoms and spermicides help overcome vaginal dryness during intercourse (common problem in breastfeeding women).
Diaphragm with Spermicides (foam or cream)	Best to wait until the immediate postpartum period is over (6 weeks' postpartum) before fitting diaphragm.	No effect on quantity or quality of breastmilk or health of the baby.	Requires fitting (pelvic examination) by skilled provider. Diaphragm fitted before pregnancy may be too small due to changes in vaginal tissue or cervix after childbirth. Use of spermicides helps overcome vaginal dryness during intercourse (common problem in breastfeeding women).
Fertility Awareness-Based Methods	Not recommended until resumption of regular menses. Client may begin charting at 6 weeks' postpartum but should continue to use LAM.	No effect on quantity or quality of breastmilk or health of the baby.	Cervical mucus is difficult to "read" until menses have resumed and are regular (ovulatory). Basal body temperature fluctuates when the woman awakens at night to breastfeed. Thus, measuring "early morning" basal body temperature elevation after ovulation may not be reliable.
Withdrawal (Coitus Interruptus) **or Abstinence**	May be used any time postpartum.	No effect on quantity or quality of breastmilk or health of the baby. Abstinence is 100% effective.	Some couples find withdrawal or long periods of postpartum abstinence difficult. Acceptable in cultures in which postpartum abstinence is traditional.
Tubal Occlusion	May be performed immediately postpartum or within 48 hours. If not performed within 48 hours' postpartum, should be delayed until 6 weeks' postpartum. The ideal time for the procedure is after recovery from childbirth and once the health of the newborn is more certain.	No effect on quantity or quality of breastmilk or health of the baby. Postpartum mini-laparotomy is easiest to perform within first 48 hours of childbirth because the position of the uterus makes the fallopian tubes easier to find and see.	Perform using local anesthesia/sedation. This minimizes risk to the woman and possible prolonged separation of woman and child due to anesthetic complications. Ideally, counseling and informed consent should take place before labor and birth (during antenatal care visits).

Table 4-6. Counseling Outline for Postpartum Contraceptive Use *(continued)*

METHOD	TIMING AFTER CHILDBIRTH	RELATED METHOD CHARACTERISTICS	REMARKS
Vasectomy	May be performed at any time. The ideal time for the procedure is once the health of the newborn is more certain.	Not immediately effective. An interim method should be provided for 3 months (or at least 20 ejaculations) if the couple is sexually active.	In cultures in which postpartum abstinence is traditional, vasectomy performed at this time leads to less disruption of intercourse for the couple. The woman's contact with the healthcare system may be a good time for the man to use services.

ANNEX SIX

QUICK CHECK

The person[1] who has first contact[2] with the woman or newborn should perform the following quick check to ensure that life-threatening conditions are recognized as soon as possible, and to eliminate delay in obtaining the potentially life-saving attention required.

- **Observe and ask** the woman whether she has any signs/symptoms of labor or if she and/or her newborn has or has recently (in the past 24 hours) had **any** danger sign (**Table 4-7, page 4-62**).
  - ➡ **If the woman has signs/symptoms of labor but has NO other danger sign**, provide basic labor/childbirth care as described in Chapter 6 (**page 2-37**).
  - ➡ **If the woman and/or newborn has any danger sign(s)**, **immediately** perform the following steps:
    - Call for help;
    - Initiate the designated emergency-response procedures; and
    - Notify the skilled provider:
      - The skilled provider should perform a Rapid Initial Assessment (**page 3-90** [for the woman] or **page 3-96** [for the newborn]) to assess the woman and/or newborn's needs for stabilization and referral/transfer.
  - ➡ **If none of the danger signs or signs/symptoms of labor is present (or was present in the past 24 hours)**, proceed with basic care—have the woman and/or newborn wait to be seen by the skilled provider.
    - ➡ **If it is within 6 hours after birth (or pre-discharge)**, the woman and/or newborn should receive:
      - Ongoing assessment according to the schedules shown in **Table 2-13** (for the woman, **page 2-85**) and **Table 2-16** (for the newborn, **page 2-111**); and
      - Ongoing supportive care according to the schedules shown in **Table 2-14** (for the woman, **page 2-86**) and **Table 2-17** (for the newborn, **page 2-112**).

[1] This is a designated healthcare facility staff member (whether a clerk, guard, doorkeeper, etc.) who is trained and equipped to recognize and respond appropriately to danger signs and signs of advanced labor.

[2] First contact might take place in a healthcare facility, a different part of the same healthcare facility (e.g., the postpartum/newborn care ward), or the woman's home. If providing care in the woman's home, the skilled provider should do the quick check while helping the woman and her family feel comfortable in her/his presence; all measures should be modified as appropriate and demonstrate the skilled provider's respect for the client's home, family, and the norms thereof.

Table 4-7. Danger Signs or Signs/Symptoms of Advanced Labor to Observe for/Ask about at Every Quick Check

WOMAN	NEWBORN
SIGNS/SYMPTOMS OF ADVANCED LABOR • Strong, regular contractions • Urge to push • Leaking of fluid from the vagina • Grunting or moaning **DANGER SIGNS** **At any time during the childbearing cycle:** • Severe headache/blurred vision • Convulsions/loss of consciousness • Breathing difficulty (abnormal respiration, gasping, wheezing or rales, pallor or cyanosis [blueness], not breathing) • Fever (feeling of hotness) • Foul-smelling discharge/fluid from vagina **During pregnancy, also:** • Vaginal bleeding • Severe abdominal pain **During labor, also:** • Vaginal bleeding • Decreased/absent fetal movement • A cord or fetal part visible at the vaginal opening • Leaking of greenish/brownish (meconium-stained) fluid from the vagina • Severe, continuous abdominal pain **During the postpartum period, also:** • Vaginal bleeding (heavy or sudden increase) • Pain in calf, with or without swelling • Foul-smelling discharge from tears/incisions • Severe abdominal pain • Verbalization/behavior that indicates she may hurt herself or the baby, or hallucinations	**DANGER SIGNS** • Breathing difficulty (abnormal respiration, chest indrawing, grunting on expiration, gasping, not breathing) • Convulsions, spasms, loss of consciousness, or arching of the back (opisthotonos) • Cyanosis (blueness) • Pallor • Floppiness • Lethargy • Hot to touch (fever) • Cold to touch • Bleeding • Jaundice (yellowness) • Not feeding or poor suckling • Diarrhea • Persistent vomiting or abdominal distention • Pus or redness of the umbilicus, eyes, or skin • Swollen limb or joint

ANNEX SEVEN

GUIDELINES FOR REFERRAL/TRANSFER

If the woman or newborn requires urgent referral/transfer, complete a Rapid Initial Assessment (for the **woman**, **page 3-90**; for the **newborn**, **page 3-96**) and stabilization procedure(s), if necessary, before proceeding.

If a woman or newborn presents with a problem whose diagnosis and management require more than the services described in this manual, the skilled provider must weigh the potential risks and benefits of referring/transferring the woman or newborn to a skilled provider/healthcare facility that has the capabilities and resources to effectively manage the problem.

- First, the skilled provider should consider the following factors when deciding whether **referral/transfer** should be carried out **immediately** or **postponed**:
  - **Distance to the closest skilled provider/healthcare facility with the appropriate capabilities and resources**—How long will it take to get there? If the woman is in labor, is it likely that the baby will be born before they reach their destination?
  - **Nature of the woman's or newborn's problem**—Is the death of the woman or baby likely if she or s/he is not referred/transferred immediately? If the woman is in labor, will normal progress likely be impeded by the problem?
  - **Availability of necessary resources for referral/transfer** (e.g., transportation, medical and personal support needed during transit).

Note: During labor and childbirth, nonurgent referral generally means postpartum referral.

- If the skilled provider decides that it is necessary to refer/transfer the woman or newborn to another location for appropriate care, the guidelines shown in **Textbox 4-4** (**page 4-64**) should be followed when preparing for and during the transfer.

Note: Referral to a site with surgical capabilities does not require transfer to another healthcare facility if the site where services are currently being provided has surgical capabilities. At times, referral may only require transfer to another department in the same healthcare facility or may not require transfer to a different location at all.

Textbox 4-4. Guidelines for Referral/Transfer of the Woman or Newborn

- Explain to the woman and/or family the reason for the referral/transfer.
- Arrange or assist the family in arranging for transfer without delay.
- Notify the referral site (if possible) about the condition of the woman/newborn and their estimated time of arrival.
- Stabilize the woman/newborn (if necessary) before leaving the healthcare facility.
- Send the woman's/newborn's records to the referral site; charts should include findings of examinations, treatments given, and the reason for referral/transfer. If records are not available, carefully record general information about the woman/newborn, findings of examinations, treatments given, and the reason for referral/transfer on a referral note to give to the skilled provider at the referral site.
- If the woman is in labor, ensure the availability of supplies needed for a clean and safe birth during transfer.
- Ensure an adequate supply of appropriate drugs/medications as needed during transfer. Give oxygen if the woman or baby is having breathing difficulty, or if the woman is in shock or has any other problem requiring oxygen.
- If possible, have a skilled provider accompany the woman/newborn to the referral site to ensure that fluids and/or medications continue to be given (if appropriate), provide support and care, and attend the birth if it occurs during transfer.
- Ensure that the woman's/newborn's condition (i.e., vital signs, intake and output) is monitored before and during transfer, and that all findings are recorded.
- Request that the referral site/skilled provider return information to the referring site/skilled provider regarding management of the woman/newborn's condition.

For the woman, also:

- Ensure that she is kept warm (but not overheated, as this will increase peripheral circulation and reduce blood supply to the vital organs) before and during transfer.

For the newborn, also:

- Ensure that s/he is kept warm before and during transfer:
  - Maintain warmth by transporting the newborn in skin-to-skin contact with the mother.
  - Cover the mother and the baby with warm blankets/coverings and ensure that the baby's head is covered.
  - If the climate is very hot, use fewer coverings, but protect the baby from direct sun.
- If possible, have the woman or other caregiver hold the baby securely in her/his lap during transfer, and encourage the woman to breastfeed her baby during the journey.