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Maternal and Child
Survival Program

Therapeutic Early Stimulation Toolkit

Training Guide

Helping Young Children with Disabilities Meet Their
Potential



MCSP is a global USAID initiative to introduce and support high-impact health interventions in 25 priority countries to help prevent child and maternal deaths. MCSP supports programming in maternal, newborn, and child health, immunization, family planning and reproductive health, nutrition, health systems strengthening, water/sanitation/hygiene, malaria, prevention of mother-to-child transmission of HIV, and pediatric HIV care and treatment. MCSP will tackle these issues through approaches that also focus on household and community mobilization, gender integration, and digital health, among others.

This manual is made possible by the generous support of the American people through the United States Agency for International Development (USAID) under the terms of the Cooperative Agreement AID-OAA-A-14-00028. The contents are the responsibility of the Maternal and Child Survival Program and do not necessarily reflect the views of USAID or the United States Government.

June 2018

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Abbreviations

CZS	congenital Zika syndrome
ECD	early child development
TES	therapeutic early stimulation
ZIKV	Zika virus

I.0 Introduction and Goals

The overall goal of this training resource is to provide structured and effective training for community health workers, early intervention therapists, midwives, clinical officers, and other service providers who will be implementing the Therapeutic Early Stimulation (TES) Package as well as coaching parents in their catchment areas. The 3- to 4-day training is designed to equip services providers and parents with useful information, tools, and techniques to support the development of young children with disabilities, including those with congenital Zika syndrome (CZS).

With a strong focus on brain development in the early years, these sessions cover the four domains of early child development (ECD) and relevant pediatric therapies through hands-on activities. Each session day requires approximately 8 hours. The sessions are intended to be implemented as a consecutive, uninterrupted 3- to 4-day training. Refresher trainings may be delivered based on the specific needs of a country or program team.

Language

Given the presence of roving caregiver programs to support young children with disabilities, the word “parent” is used herein. Parent in this sense does not exclusively refer to the biological mother or father of a young child, but rather to any adult who provides care in a home-based setting. As such, parent can refer to mothers, fathers, grandparents, foster parents, relatives, and other adults who have young children in their care.

Acknowledgments

This training was developed using resources from Harvard University’s Center on the Developing Child and the US Centers for Disease Control and Prevention’s Learn the Signs. Act Early. Furthermore, this training integrated components from Save the Children’s Building Brains parenting sessions and toolkit, and the Emergent Literacy and Math Toolkit.

This toolkit was developed for the United States Agency for International Development (USAID) Maternal and Child Survival Program (MCSP) in the eastern and southern Caribbean. Renee Perez, MCSP/Save the Children, was the principal writer, with contributions by Lauren Pisani, Romilla Karnati, Cassandra Scarpino, Caroline Dusabe, and Fabiola Lara.

We acknowledge our local stakeholders and partners in the eastern and southern Caribbean and El Salvador, who informed the content of the toolkit: the Ministry of Public Health in Guyana; the ministries of Education and Human Resource Development, Social Development, and Health in Grenada; the Ministry of Health and Wellness in St. Lucia; the Child Development and Guidance Centre in St. Lucia; the Ministry of Health in Trinidad and Tobago; the Ministry of Health in Barbados; and the Save the Children El Salvador country office.

We wish to thank the following colleagues for their review and contributions to providing direction on the technical content of the toolkit: Alana Shury and Mary Vandenbrouke from USAID; Jessica Williams and Stella Abwao from MCSP/Save the Children; Goldy Mazia from MCSP/PATH; and Lisa Noguchi, Brianne Kallam, Kathryn Smock, and Elana Fiekowsky from MCSP/Jhpiego.

Illustrations were developed by MCSP.

2.0 Resources

The TES Toolkit includes several resources to support participant learning and practice. In all, the resources include:

- A training guide
- Training PowerPoint slides
- Training worksheets and handouts
- TES activity cards

3.0 Expected Outputs

By the end of the training, participants will:

- Have an understanding of the effects of CZS and other disabilities on ECD.
- Have an understanding of pediatric therapies to support the development of young children with disabilities.
- Be able to provide holistic TES interventions.
- Be able to counsel parents on TES activities.

Trainer/Participants

Trainer: Ideally, the trainer (or facilitator) is an experienced trainer and is familiar with the content of this training. The trainer has extensive knowledge of ECD, early stimulation, and supporting children with mild to severe disabilities. Additionally, the trainer has experience working with young children (ages 0–3) or parents of young children, including those with disabilities.

Participants: The participants of this training will ideally have some knowledge of ECD, disabilities, and pediatric therapies.

4.0 Training Preparation

Contextual Considerations

This training has been created to be used in many different countries. However, before beginning, the training needs to be adapted to both the country and the Zika virus (ZIKV) context. This adaptation will:

- Allow the training to align with existing policies and guidelines around ECD, disabilities, and ZIKV infection.
- Ensure that all content is appropriate and relevant in the country and cultures of training.

How to Prepare to Deliver the Training

This training is organized in an easy-to-follow manner. However, the most successful trainer will prepare extensively before each training. The following steps are recommended for optimal preparation:

I Week before Training

1. Gain a good understanding of the country-specific challenges posed by CZS, as well as general ZIKV epidemiological data.
2. Review the training from start to finish, noting any areas that are unclear.
3. Review notes regarding difficult sections and resolve them through closer reading, independent research, or by contacting technical ECD focal points.
4. Gather all the materials necessary for each of the training days.
5. Practice each of the suggested activities to ensure full capacity in leading them.
6. Practice the delivery of all the content, creating a script if necessary.
7. Decide the timing of the training. It is recommended that the training be offered over the course of four consecutive 8-hour days, but you may choose to alter this according to the needs, preferences, or schedules of your trainees.

I Day before Training

1. Read the content for the following day and compare it with your own informal or formal script.
2. Ensure that any script follows the schedule of the day and satisfies all learning objectives.
3. Ensure that all required materials are prepared and available, including an adequate number of copies of relevant handouts and worksheets.
4. Prepare any additional materials, such as chart paper, before each training day.

General Facilitation Tips

Below are useful tips for skillful facilitation. These may be helpful if there are issues with participants or if you anticipate a training session will be difficult.

Icebreakers, Openers, and Energizers

- Use a variety of icebreakers, openers, and energizers to begin new sessions or to use when participants appear disengaged.
- Be conscious of other people's boundaries—different people will be comfortable with different levels of physical and emotional intimacy, discussion of professional and personal information, and public speaking.
- Decide and let participants know the purpose of the icebreaker.
- Ensure the activity is culturally appropriate.
- Participate enthusiastically to encourage others to do the same.
- Use activities that are engaging, short (less than 10 minutes), and simple to follow.
- Adapt activities in accordance with group size, session objectives, or time constraints.

Energizer Ideas

- **Sing and Sign:** Put a chart showing the alphabet in sign language and sing the alphabet while signing each letter. Ensure use of country-specific sign language alphabet. Note: The English sign language alphabet typically does not change from country to country.
 - If appropriate, try this activity with tactile sign language. Sitting in a circle, each person signs the alphabet into the open left palm of the person to his or her right.

- **Do What I Said, Not What I Say:** The leader says an action (“Hop on your foot”), and participants do nothing. The leader says a second action (“Clap your hands”), and the participants do the previous action (hop on foot).
- **Jump In, Jump Out:** In a circle and holding hands if appropriate, give a series of jump commands: “Jump in, jump out, jump left, jump right, jump big and small, jump on your left leg, jump on your right leg.” Give the same commands a second time, but participants will do the opposite. Example: When you say “jump left,” participants will jump right.
- **Fruit Salad:** Give each person a different fruit name and then shout out the name of a fruit. If it is yours, then you have to swap seats. Use fruits found in-country.
- **Action Songs:** Sing action songs, such as “Itsy Bitsy Spider,” “Head, Shoulders, Knees, and Toes,” and “Row, Row, Row Your Boat.”

Time Management

- Build in extra time to account for extending explanations, debriefing, or any other unexpected delays that may arise.
- Set an example for your participants by arriving early and starting on time.
- Have an assigned timekeeper and prearranged time signals with any cofacilitator.
- Be sure to relay the main content and points of the session early in the day in the event that time runs out.
- Be prepared go off schedule to better explain an unclear concept or continue an important discussion. Adjust the schedule as needed.
- Have a clock strategically placed on a table or wall so that you can keep track of the time without checking your watch while participants are speaking.

Participant Support

- With the help of participants, establish ground rules at the beginning, adding other rules as needed. Display a poster with these rules throughout the training.
- Remind participants throughout the training that this may be new content and as such, questions are always welcome.
- Designate a flip chart for recording difficult “parking lot” questions to address at a later time.
- Be open to new views and ideas. Remember that participants come with knowledge—use it!
- Not all comments need an answer. For some, just a “thank you” will do.
- Open up tough questions to the group for discussion (e.g., “I can see how that would be a difficult situation to handle. Has anyone in the group ever been faced with this issue?”).
- Know how to bring discussions back from topics not related to the training (e.g., state the question again if the discussion gets off topic).
- If participants get into unending, back-and-forth debate, do not try to settle it. Instead, say something like, “In this training (curriculum), we define it as...” or “The major researchers support...”
- When there is no response from the participants, give them some time to process the information, then state the question in a different way or make it a statement and ask for their thoughts.
- When participants are angry or frustrated about their jobs or outside situations, you can:

- Validate their feelings (e.g., “That sounds really frustrating.”).
- Admit you do not have the solution to the problem.
- Ask the group for ideas.
- Talk to group member(s) on breaks, etc., to “check in” on how they are feeling.

Content Delivery

- Open with a review of previous content and address any questions from previous sessions.
- Maintain a steady pace, allowing time for questions and for participants to process information.
- Address all participants and make use of the entirety of the training space.
- Incorporate interactive activities where applicable.
- Organize participants in new groups several times throughout the training to facilitate knowledge sharing among participants with different skill sets.

Handouts and Flipcharts

- Be sure handouts are relevant to the material covered in that session.
- Be sure handouts are easy to read—not blurry, not too much information.
- Share handouts before or after presentations so as not to distract the participants.
- Be sure handouts are numbered for easy reference during sessions.
- Know what is in handouts and how they are organized.
- Prepare flip chart sheets with main points, agenda, concepts, small-group questions, etc., ahead of time whenever possible.

Debriefing Strategies

- Write up participant responses in print so everyone can read them easily.
- Include participants in debrief by asking for their ideas and opinions.
- Always allot time to debrief. Participants need closure and connection back to session content or prior sessions.
- Review and clarify main concepts. Prepare main points written up ahead of time.
- Ask questions of the participants to be sure they understood the main concepts.
- Prepare a debrief tool so that all role-plays and small-group presentations are debriefed consistently.
- Avoid asking “why” or “how” questions in your debrief. They are unclear and can get participants off-track. Instead, use “what,” “when,” or “where” questions, which are clearer and ask for concise information. Avoid asking “closed” questions, which only allow for “yes/no” responses.
- Thank participants for sharing and repeat/explain what participants say to confirm understanding.
- Use a variety of debriefing techniques, such as:
 - Have participants pair off and discuss main points.
 - Ask, “What worked? What didn’t work?”

- Ask, “What did we just do?”
- Ask participants to reflect on one idea that resonated with them.
- Ask participants what aspect of the session they believe will impact their work with young children. “What aspect of the session do you believe will help your work with young children?”
- Ask participants what about the session affirms their own experiences with young children with disabilities.
- Have participants use anonymous index cards for their questions or comments. Collect the cards and share.

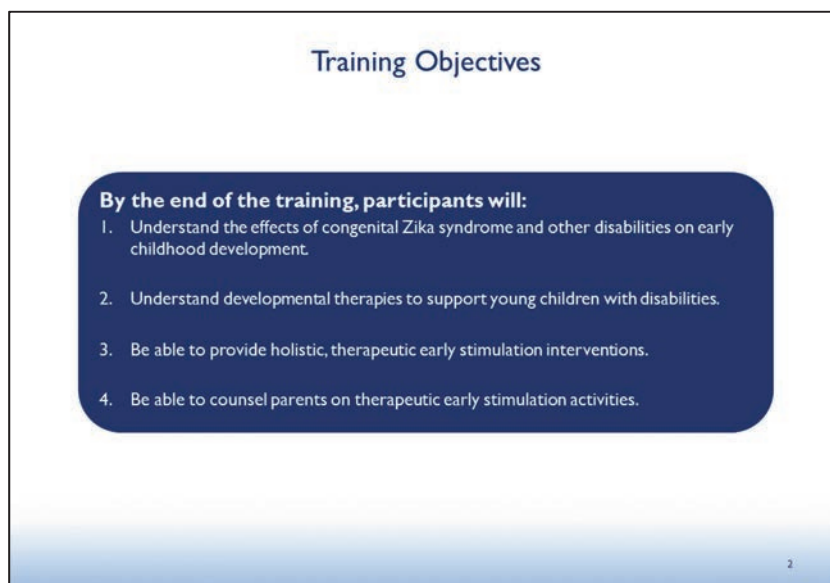
5.0 Training

Time	Day 1	Day 2	Day 3	Day 4
8:30–9:00 a.m.	Trainer Preparation and Welcome	Trainer Preparation and Welcome	Trainer Preparation and Welcome	Trainer Preparation and Welcome
9:00–9:15 a.m.	Introductions	Review	Review	Review
9:15–9:45 a.m.	Warm-Up Activity, Training Objectives	Warm-Up Activity	Warm-Up Activity	Warm-Up Activity
9:45–10:00 a.m.	Ground Rules	CZS and Development	Spectrum of Needs/Levels, Gaps in Milestones	Language and Communication Activity Practice
10:00–10:45 a.m.	Early Stimulation: True or False			
10:45–11:00 a.m. Tea/Coffee Break				
11:00 a.m.–noon	Play Dough, Brain Development, Early Stimulation (with Examples)	Bias, Stigma, Discrimination, Guiding Principles	Social-Emotional Practice	Cognitive Activity Practice
Noon–1:00 p.m.	ECD Milestones, Developmental Delay, Disability, Three Categories	Developmental Therapies	Parents as End Users, Natural Environment	Motor Activity Practice
1:00–2:00 p.m. Lunch Break				
2:00–3:30 p.m.	Early Warning Signs, CZS	Five Steps to Gently Engage Children, Therapy Practice	Supporting Parents, Coaching Guidelines, TES Activity Practice	Review of Training Objectives, Planning for Poem/Song
3:30–3:45 p.m. Break				
3:45–4:45 p.m.	Range of Severity, Early Intervention	TES	Severe Disability Learning Theory	Performing Songs
4:45–5:00 p.m.	Debrief	Debrief	Debrief	Closing

Time	Day 1	Day 2	Day 3	Day 4
8:30–9:00 a.m.	Trainer Preparation and Welcome	Trainer Preparation and Welcome	Trainer Preparation and Welcome	Trainer Preparation and Welcome
9:00–9:15 a.m.	Introductions and Warm-Up Activity	Review and Warm-Up	Review and Warm-Up	Review and Warm-Up Activity
9:15–9:45 a.m.	Training Objectives and Ground Rules	CZS and Development	Spectrum of Needs/Levels, Map of House, What Is Feasible with Parents?	MEAL
9:45–10:00 a.m.	Pre-Test		Natural Environments, Supporting Parents, Coaching Guidelines	Review of Training Objectives, Planning for Poem/Song
10:00–10:45 a.m.				Performing Songs
10:45–11:00 a.m. Tea/Coffee Break				
11:00 a.m.–noon	Early Stimulation: True or False Play Dough, Brain Development, Early Stimulation, Early Stimulation Examples	Bias, Stigma, Discrimination, Guiding Principles	Severe Disability Learning Theory, Materials	Performing Songs
Noon–1:00 p.m.	ECD Milestones, Developmental Delay, Disability, Three Categories	Developmental Therapies	0–6 Months Practice and Demonstrate	Post-Test
1:00–2:00 p.m. Lunch Break				
2:00–3:30 p.m.	30-Minute Early Stimulation Review, Early Warning Signs, CZS	2:00–2:30 p.m.: Developmental Therapies Therapy Poster (Therapy Practice) Five Steps to Gently Engage Children (Give the whole group one scenario; it's more general than just doing one therapy.)	6–12 Months Practice and Demonstrate 12–24 months	
3:30–3:45 p.m. Break				
3:45–4:45 p.m.	Range of Severity, Early Intervention (Heckman Graph)	Therapeutic Early Stimulation Introduce Cards (They know how the cards are structured. Practice one activity.) Homework: Familiarize yourself with the cards.	24+ Months Practice and Demonstrate	
4:45–5:00 p.m.	Debrief	Debrief	Debrief	

Training Objectives

- After the welcome and warm-up activity, review the training objectives.



The slide is titled "Training Objectives" and features a dark blue rounded rectangle containing the following text:

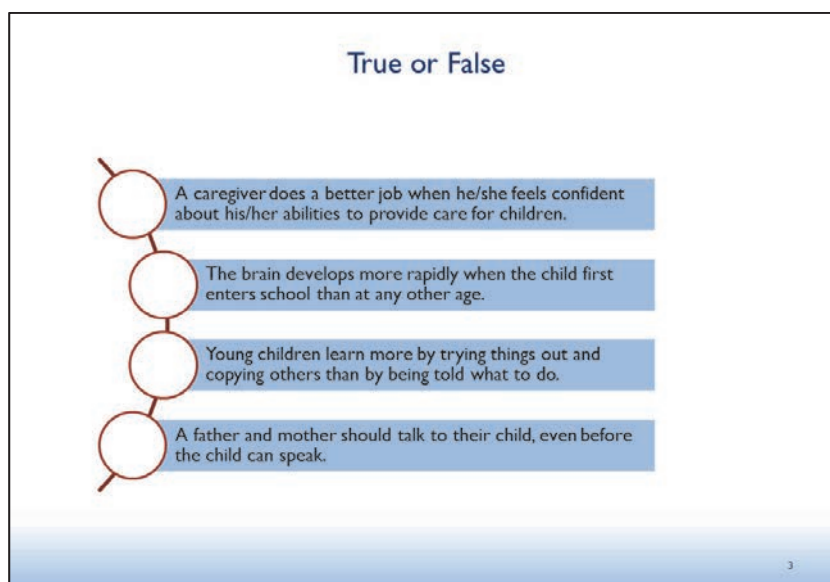
By the end of the training, participants will:

1. Understand the effects of congenital Zika syndrome and other disabilities on early childhood development.
2. Understand developmental therapies to support young children with disabilities.
3. Be able to provide holistic, therapeutic early stimulation interventions.
4. Be able to counsel parents on therapeutic early stimulation activities.

A small number "2" is visible in the bottom right corner of the slide.

Early Stimulation Introduction

- Distribute the “Facts and Misconceptions” sheet to small groups. Allow for 5–10 minutes for participants to complete the sheet.
- **SAY:** We are going to begin by reviewing common facts and misconceptions about children from birth to age 3 and what supports their development. We will review each question, and I want you to explain your reasoning.



The slide is titled "True or False" and features a vertical list of four statements, each preceded by a red circle with a magnifying glass icon. The statements are:

1. A caregiver does a better job when he/she feels confident about his/her abilities to provide care for children.
2. The brain develops more rapidly when the child first enters school than at any other age.
3. Young children learn more by trying things out and copying others than by being told what to do.
4. A father and mother should talk to their child, even before the child can speak.

A small number "3" is visible in the bottom right corner of the slide.

True or False

- Before a child speaks, the only way the child communicates is by crying.
- A baby can hear at birth.
- A baby cannot see at birth.
- Physical punishment is good for babies' learning and development.

4

True or False

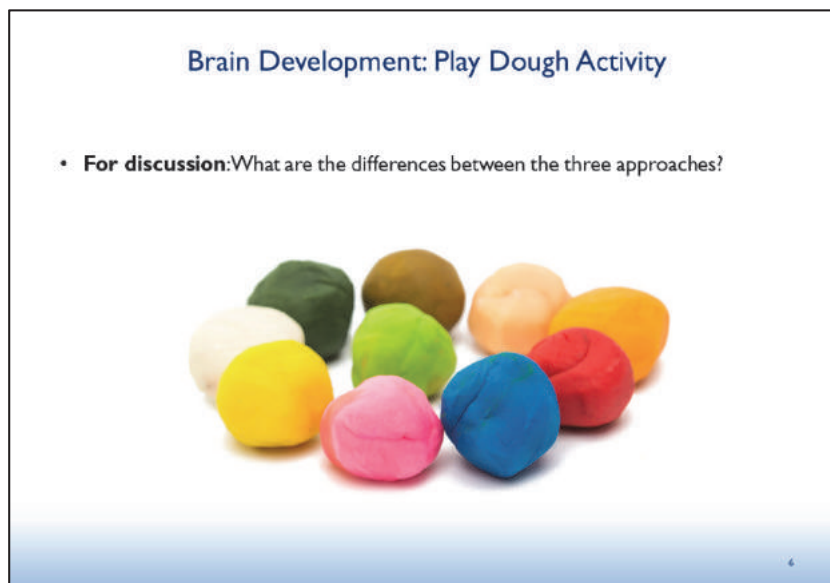
- A child drops things just to annoy the father and mother.
- A child begins to play around the age of 2.
- Children can learn by playing with pots and pans, cups, and spoons.
- Talk to your child, but do not talk to the child while breastfeeding. It will distract the child from eating.

5

Facts/Misconceptions			Comment
1. A mother does a better job when she feels confident about her abilities to provide care.	True		Before a mother leaves, she should have a chance to practice any new activity with you and be confident that she will be able to do the activity at home.
2. The brain develops more rapidly when the child first enters school than at any other age.		False	The brain develops most rapidly before birth and in the first 2 years of life. The efforts to help the child learn at this age will benefit the child for his/her whole life.
3. Young children learn more by trying things out and copying others than by being told what to do.	True		Evidence shows that children learn by doing things.
4. A father should talk to his child, even before the child can speak.	True		The father is preparing the child for speech and how people communicate.
5. Before a child speaks, the only way the child communicates is by crying.		False	Young infants communicate by moving and reaching. For example, they communicate hunger by sucking their hands, shaping their mouth, and turning to the mother's breast. Help parents see the child's signs and interpret them. Waiting until the child cries is stressful to the child and to the parent.
6. A baby can hear at birth.	True		There is even evidence that a child hears before birth and recognizes the voices of persons closest to her or him, including mother and father.
7. A baby cannot see at birth.		False	A child can see at birth, although sight becomes more refined as the days go on. A child is most attracted to faces. Studies show that a child can even begin to react and mimic the facial expressions of others within 2 to 3 weeks. Some have found imitation even earlier, within the first few days of life.
8. Physical punishment is good for babies' learning and development.		False	Physical punishment slows cognitive development.
9. A child drops things just to annoy the father and mother.		False	Dropping can be by accident. The child is also learning by trial and exploring the world around him or her, including what happens, how long before there is a sound, how other persons react, etc.
10. A child begins to play when she or he is old enough to play with other children.		False	A parent can begin to play with a child from birth. Children learn through play. A parent can play with a young infant through movements, touching, and attracting the attention and interest of the child with simple noises and colorful objects.
11. Children can learn by playing with pots and pans, cups, and spoons.	True		Children do not need store-bought toys. They can learn from many household items.
12. Talk to your child, but do not talk to the child while breastfeeding. It will distract the child from eating.		False	A mother can talk softly to a child and be gently affectionate to a child who is breastfeeding without distracting the child from feeding. It helps the mother become close to her child. The child is comforted by the sounds and touch of the mother.

Play Dough Activity

- Divide participants into three groups and distribute play dough.
- **SAY:** You have each received play dough, which represents a young child's brain. The first group will ignore the play dough. The second group will repeatedly crush the play dough in anger. The third group will make a figure with the play dough. You have 1 minute.
- **SAY:** What are the differences in the three approaches?



- **SAY:** Parents have choices: They can ignore the child, and the brain will stay as it is. They can take out their anger and frustration on the child, and the brain will be harmed. They can interact with the child in a nurturing manner and help the child's brain reach its full potential.
- **SAY:** Reaching the child's potential means helping the child to become as great as that child can be. The play dough can become anything with help from a loving and caring parent.

Brain Development

- Complete the quiz as a group.

Quick Quiz

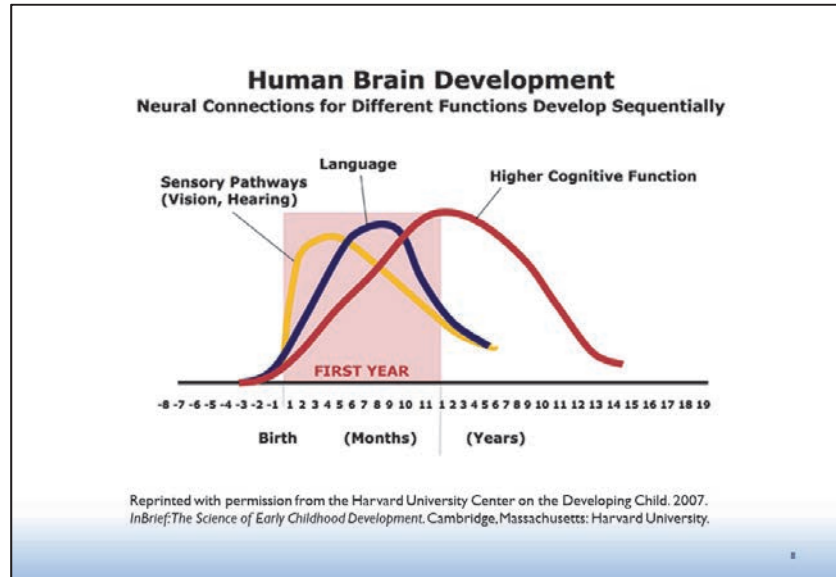
90% of brain development happens before

- Age 5
- Age 16
- Age 21

A human brain has the greatest density of brain cell connectors (synapses) by

- Age 3
- Age 9
- Age 21

- Fill in the blank: 90% of brain development happens before _____.
 - Age 5
- A human baby's brain has the greatest density of brain cells connectors (synapses) by _____.
 - Age 3
- **SAY:** This graph shows the brain connections for different skills from the period in utero, the first 12 months after birth, and then up to 19 years old.



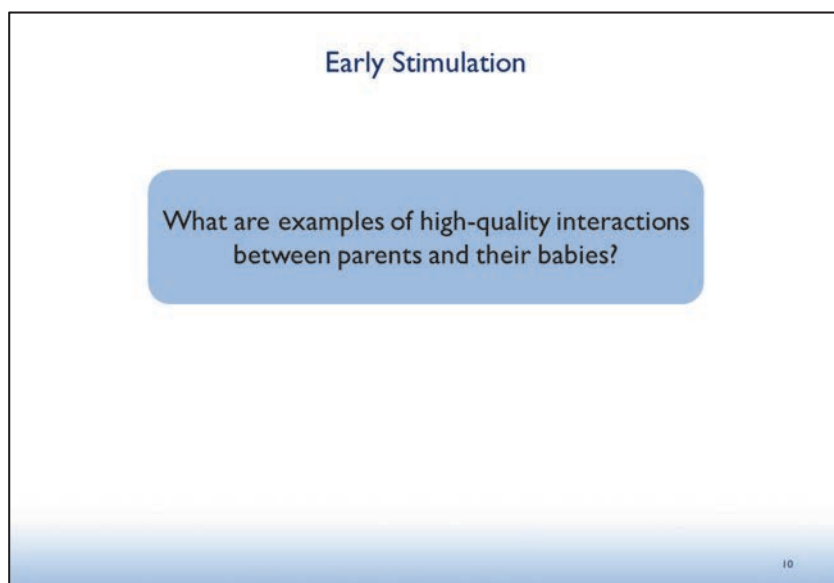
- **SAY:** How old are children when language pathways peak?
 - Around 7 months
- **SAY:** How old are children when higher cognitive pathways peak?
 - Around 1 year
- **SAY:** How old are children when vision and hearing pathways peak?
 - Around 4–5 months
- **SAY:** The first 12 months are a period of rapid brain development. For instance, in the first year, babies learn how to differentiate sounds in their mother tongue. Later in life, these brain circuits are difficult to change.
- **SAY:** These brain connections are made through interactions with parents. Relationships with a significant caregiver form the building blocks for healthy brain development.



- **SAY:** The quality and frequency of interactions with a parent influence the number of neural connections.


Early Stimulation Examples

- **SAY:** Besides food, a child needs stimulation to grow and develop.
- **SAY:** What are examples of high-quality interactions between parents and their babies?



- **SAY:** When a mother sings and talks to her baby, even before her baby can talk, her baby learns to communicate back.

High-Quality Interactions



When a mother sings and talks to her baby, even before her baby can talk, her baby learns to communicate back.

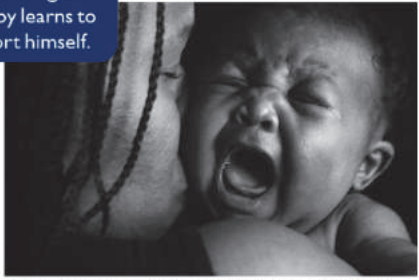
Reprinted with permission from tostada-photo.com. 2006. Mom and daughter: Flickr website. <https://www.flickr.com/photos/alvarez-tostado/363243434/>. [September 4.]

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- **SAY:** When a parent responds to a baby's cries by calming and soothing, the baby learns to calm and comfort itself.

High-Quality Interactions

When a parent responds to a baby's cries by calming and soothing, the baby learns to calm and comfort himself.



Reprinted with permission from tostada-photo.com. 2006. Mom and daughter: Flickr website. <https://www.flickr.com/photos/alvarez-tostado/363243449/in/photostream/>. [September 4.]

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SAY: When a father encourages a child's interest and curiosity, the child reaches out to explore and learn more. Play is a chance for parents to provide undivided attention to the child and to see the world from the child's perspective.¹

¹ SickKids Centre for Community Mental Health. Learning Through Play. SickKids website. <http://www.sickkidscmh.ca/Home/Resources-And-Publications/Learning-through-Play/Learning-through-Play.aspx>.

High-Quality Interactions



When a father encourages a child's interest and curiosity, the child reaches out to explore and learn more.

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- **SAY:** In sum:
 - The first 3 years of life are the most critical period of brain development.
 - These years lay the foundation for all future learning, behavior, and health.
 - Brain development depends on high-quality and high-frequency interactions with caregivers or parents.

Birth to 3: Most Critical Period of Brain Development

Children have the greatest **density of brain cell** connectors at age 3.

Neural connections depend on the **quality and frequency** of interactions.

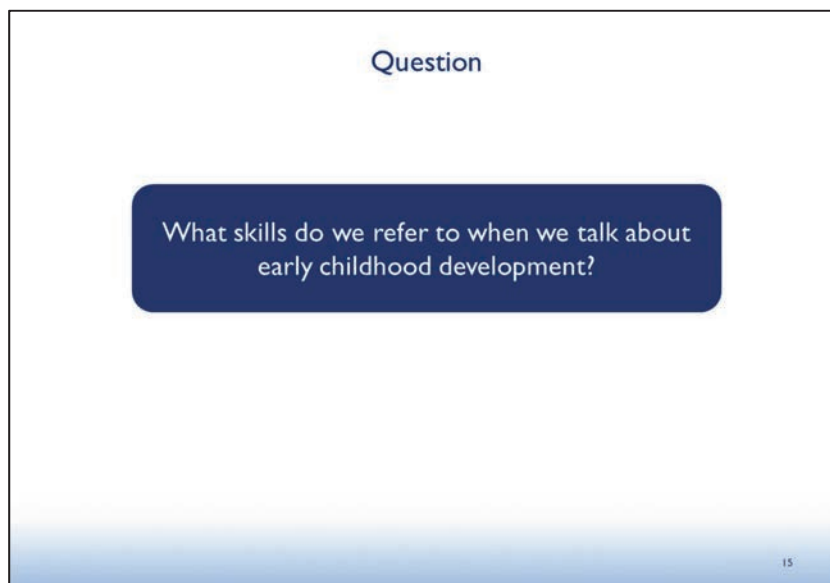
Early experiences provide the foundation for **future learning, behavior, and health**.*

* Harvard University Center on the Developing Child. 2007. *InBrief: The Science of Early Childhood Development*. Cambridge, Massachusetts: Harvard University.

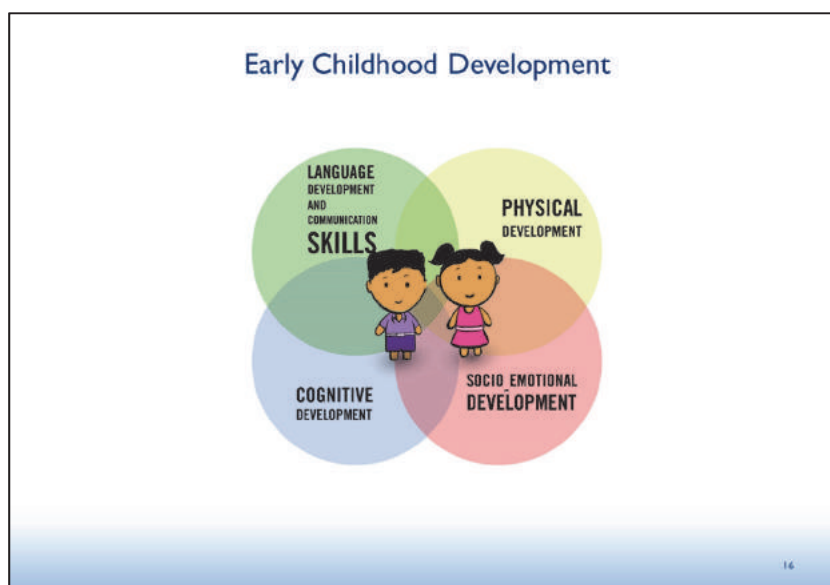
14

Early Childhood Development Milestones

- **SAY:** What skills do we refer to when we talk about ECD?



- **SAY:** We will focus on four main domains or skill areas when we talk about ECD: socioemotional, cognitive, language, and motor/physical.



- **SAY:** What are some examples of the developmental changes you would expect in the first year? Think of these four skill areas. (Invite answers.)
 - The baby starts by lying down, then rolling over, then sitting up, then standing, etc.
- **SAY:** What about between the first and second birthday? (Invite answers.)
 - The baby starts walking, saying a few words, pointing to things, etc.
- **SAY:** What about between the second and third birthday? (Invite answers.)
 - The child starts putting words together, responds to simple directions, imitates adults, etc.

Milestones

- What are some examples of the developmental changes expected in the first year?
- What about between the first and second birthday?
- What about between the second and third birthday?

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- **SAY:** Children progress through these in chronological order: Children roll over, then they crawl, then they walk. Some children might skip a step (such as walking before crawling), but there is usually a sequence.

Reaching New Milestones

6 MONTHS

- Sits up without your help
- Responds to sound by making sounds
- Reaches for and grasps objects
- Babbling (e.g., "ba" or "da")
- Crawls or gets on hands and knees
- Pulls to stand

12 MONTHS (1 YEAR)

- Stands up alone
- Says one or two words (e.g., "mama" or "dada")
- Follows simple instructions
- Plays with toys (e.g., stacking blocks)
- Requests items (e.g., "milk")

18 MONTHS (1½ YEARS)

- Walks independently
- Uses simple words (e.g., "mama" or "dada")
- Plays with toys (e.g., stacking blocks)
- Requests items (e.g., "milk")

2 YEARS

- Follows simple instructions
- Uses simple words (e.g., "mama" or "dada")
- Plays with toys (e.g., stacking blocks)
- Requests items (e.g., "milk")

3 YEARS

- Follows simple instructions
- Uses simple words (e.g., "mama" or "dada")
- Plays with toys (e.g., stacking blocks)
- Requests items (e.g., "milk")

4 YEARS

- Follows simple instructions
- Uses simple words (e.g., "mama" or "dada")
- Plays with toys (e.g., stacking blocks)
- Requests items (e.g., "milk")

These are just a few of many important milestones to look for. For more complete checklists by age visit www.cdc.gov/actearly or call 1-800-368-9610.

18

- **SAY:** This is a look at the four domains at age 1. At this age, children may cry when mom leaves the room. They are trying to say words their parents say, like “bathroom.” They can follow directions, such as “Drink your milk.” They may take some steps on their own.

Milestones by Domain at Age 1

Developmental Milestones Reached by Year 1			
Social/Emotional	Language/Communication	Cognitive	Motor/Physical
Has favorite people (like caregivers, siblings, friends).	Responds to simple requests.	Follows simple directions (like "Drink your water").	Can sit up without help.
Cries when caregivers leave.	Uses simple gestures (like shaking head no).	Explores things in different ways, like shaking, banging, and throwing.	Pulls up to stand and walks by holding onto furniture.
Has favorite objects (like a ball or a stick).	Tries to say words caregivers say.	Finds hidden things easily.	May take a few steps without holding on.
Shows fear in some situations.	Has names for caregivers (like "mama").	Copies gestures (like clapping).	May stand alone.

18

Developmental Delays

- **SAY:** Using what we know about milestones, what do we mean by the term developmental delay?

Question

What does the term "developmental delay" mean?

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- **SAY:** Children reach milestones at different times. Usually, there is a range of several months.
- **SAY:** For example, copying sounds like "ah" is a milestone for 9 months. If a child starts doing this at 11 months, this is within the typical range of development.
- **SAY:** A developmental delay refers to when a child is not reaching milestones within that typical range; there is a significant delay in reaching a milestone. For instance, if a child is 24 months (or 2 years old) and not shaking his or her head "no" or saying "no," then this is a language delay because this a milestone at age 1.

Developmental Delay

- Children **reach milestones at different times**. Usually, these milestones fall within a range of several months.
- A developmental delay refers to when a child does **not reach milestones within a typical range**.
- A developmental delay does not always mean a child will have a long-term disability.

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Developmental Delay

Developmental Milestones Reached by Year 1			
Social/Emotional	Language/Communication	Cognitive	Motor/Physical
Has favorite people (like caregivers, siblings, friends).	Responds to simple requests.	Follows simple directions (like "Drink your water").	Can sit up without help.
Cries when caregivers leave.	Uses simple gestures (like shaking head no).	Explores things in different ways, like shaking, banging, and throwing.	Pulls up to stand and walks by holding onto furniture.
Has favorite objects (like a ball or a stick).	Tries to say words caregivers say.	Finds hidden things easily.	May take a few steps without holding on.
Shows fear in some situations.	Has names for caregivers (like "mama").	Copies gestures (like clapping).	May stand alone.

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- **SAY:** A developmental delay does not always mean there will be a long-term disability. If a child is not walking by 18 months, this is a big concern and requires intervention. At 5 years old, we may find that this child is developing like his or her peers. Nonetheless, it is essential to pay attention to delays and provide children with the necessary interventions needed for optimal development.

Multiple Definitions of Disability

- **SAY:** There are two models for looking at disability. The first is the medical model, which looks at specific issues within an individual's body, and the treatment focuses on the individual. For instance, if a child's legs are paralyzed, the focus will be getting the child a wheelchair.
- **SAY:** If we look at the picture on the right, what does the child receive to address his or her special needs? The second approach is the social model, which focuses on the individual within the context of a larger society. If a child's is paralyzed in the lower half, the focus/treatment involves providing the child a wheelchair but also understanding that the child will not just need a wheelchair but ramps and other forms accessible environments, built on open and respectful attitudes. **The social model is the current best practice. The medical model is seen as outdated and exclusionary.** Later in this training, we will take a look at useful and harmful beliefs when working with children with disabilities.

Disability: Multiple Definitions

The **medical model** focuses on the individual.



The **social model** looks at the individual, the environment, and larger society.



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<https://www.flickr.com/photos/concordnc/5063147840/in/album-72157624997028539/> [October 2,]

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Categories

- **SAY:** We are going to focus on three categories for this age range:
 - Intellectual disabilities
 - Physical disabilities
 - Sensory disabilities
- **SAY:** Just a note: There are many other ways to categorize disabilities.
- **SAY:** We are going to do a sorting activity. In groups, you will match definitions and examples for the three categories. Each complete set will have a definition, specific disabilities, and an example.

Disability Categories: Sorting Activity

Intellectual Disability	Physical Disability	Sensory Disability
Definition	Definition	Definition
Specific Disability	Specific Disability	Specific Disability
Example	Example	Example

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Intellectual Disability	Physical Disability	Sensory Disability
This disability refers to limits in cognitive function.	This disability refers to limits in motor function.	This disability refers to limits or dysfunction in the five senses, with vision and hearing loss being main concerns.
Examples include Down syndrome and some autism spectrum disorders.	Examples of this disability include paralysis and loss of limbs.	Examples include blindness and deafness.
Six-month-old Jacob has this disability and does not show affection to his parents (he does not smile or cuddle them).	Ten-month-old Esther cannot sit up, even with the help of her dad. She does not have enough strength or balance.	Eighteen-month-old Charlie does not seem to notice when his mom leaves or enters the room. He also does not respond to sounds or noises around him.

- Review the answers as a group.

Disability Categories: Answers



Intellectual disabilities affect cognitive ability so there is limited intellectual functioning.

- Some Autism spectrum disorders
- Down syndrome



Physical disabilities affect motor function.

- Paralysis
- Loss of limbs



Sensory loss refers to vision and hearing loss of varying severity.

- Low vision or blindness
- Low hearing or deafness

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https://commons.wikimedia.org/wiki/File:Infant_with_cochlear_implant.jpg [January 20.]

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Early Warning Signs

- **SAY:** These three disability types become more apparent as children get older, specifically once they enter primary school. But there are early warning signs in these early years.
- **SAY:** In small groups, match the warning signs with the category. Some of these warning signs may apply to two or more groups, but do your best to place each in one category.

Early Warning Signs

Intellectual	Physical	Sensory

- Extremely tight muscles
- Disordered sleep
- Doesn't respond to noises
- Doesn't follow objects with eyes
- Has very poor balance
- Squints or rubs eyes often
- Extreme aggression
- Extremely weak muscles
- Talking late

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- Review the answers as a group.

Early Warning Signs

Intellectual	Physical	Sensory
<div style="background-color: #003366; color: white; padding: 5px; border-radius: 5px; margin-bottom: 5px;">Disordered sleep</div> <div style="background-color: #003366; color: white; padding: 5px; border-radius: 5px; margin-bottom: 5px;">Extreme aggression</div> <div style="background-color: #003366; color: white; padding: 5px; border-radius: 5px;">Talking late</div>	<div style="background-color: #003366; color: white; padding: 5px; border-radius: 5px; margin-bottom: 5px;">Extremely tight muscles</div> <div style="background-color: #003366; color: white; padding: 5px; border-radius: 5px; margin-bottom: 5px;">Extremely weak muscles</div> <div style="background-color: #003366; color: white; padding: 5px; border-radius: 5px;">Has very poor balance</div>	<div style="background-color: #003366; color: white; padding: 5px; border-radius: 5px; margin-bottom: 5px;">Doesn't respond to noises</div> <div style="background-color: #003366; color: white; padding: 5px; border-radius: 5px; margin-bottom: 5px;">Doesn't follow objects with eyes</div> <div style="background-color: #003366; color: white; padding: 5px; border-radius: 5px;">Squints or rubs eyes often</div>

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Intellectual Disability	Physical Disability	Sensory Disability
Disordered sleep (sleeping too much, sleeping too little)	Extremely tight muscles in some areas	Indifference or inattention to loud noises
Extreme aggression	Extremely weak or floppy muscles	Unable to follow object with eyes
Talking late or has trouble with talking	Poor balance	Frequent eye squinting or rubbing

- **SAY:** Important note: The warning signs do not indicate that the child will absolutely have a disability. For example, a child with unusual sleep patterns may grow up to be a typical child.
- **SAY:** These are the types of concerns to mention to the pediatrician or the service provider, who can provide further screening.

With Congenital Zika Syndrome

- **SAY:** There is a specific pattern of central nervous system anomalies that have certain consequences. On the left, you will see a list of some of the anomalies associated with CZS, and on the right, you will see their consequences.
- **SAY:** Not all babies with CZS will have these manifestations. We may see a child with several but not all of these anomalies.

Congenital Zika Syndrome

Anomalies	Consequences
<ul style="list-style-type: none">• Congenital microcephaly (+/-)• Intracranial calcifications• Cerebral atrophy• Abnormal cortical formation (polymicrogyria, lissencephaly)• Corpus callosum abnormalities• Fetal brain disruption sequence (collapsed skull, prominent occiput, scalp folds)	<ul style="list-style-type: none">• Congenital contractures (e.g., clubfoot, arthrogryposis, and/or congenital hip dysplasia)• Congenital deafness• Problems with swallowing• Convulsions• Extreme irritability• Vision problems

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Range of Severity

- **SAY:** What do we mean when we say that there is a range of severity in disabilities? Can you provide examples?

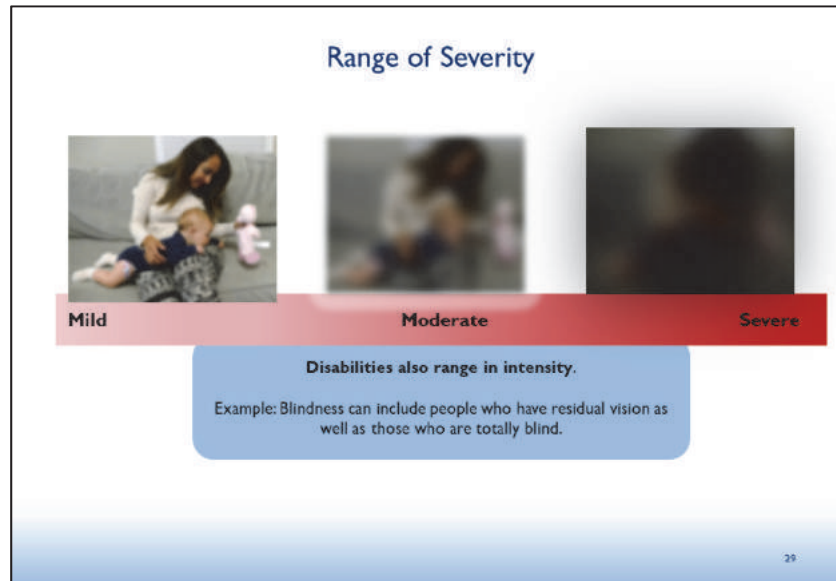
Question

What do we mean when we say that there is a range of severity in disabilities?
Can you provide examples?

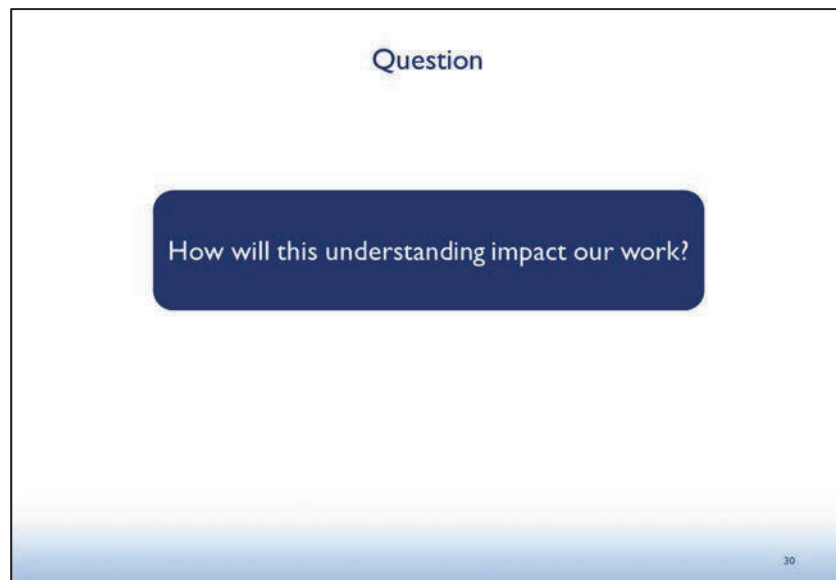
28

- **SAY:** We can describe the intensities as:
 - Severe
 - Moderate
 - Mild
 - Typical

- **SAY:** For instance, in this picture, both children have cerebral palsy. The child on the left has some control of her legs, some control of her head, and some control of her arms. The child on the right has more severe cerebral palsy. It appears that she has extremely limited motor function in her legs, limited motor function in her arms, and limited control of her head.



- **SAY:** There can be varying degrees of severity in microcephaly. The same is true for all the disabilities and CZS manifestations. There are varying degrees of vision loss.
- How will this understanding of different intensities impact our work?
 - Every child will require different types of therapies and at different dosages and frequencies.



Overview on Importance of Early Intervention

- **SAY:** Based on what you know about brain development and ECD in general, when is the best time to begin early interventions for children with special needs?
 - As early as possible, and early means early! Just like the play dough, we can work best with the brain when it is still malleable.

Question

Based on what you know about brain development and early childhood development in general, when is the best time to begin early interventions for children with special needs?

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- **SAY:** High-quality early intervention services can change a child's developmental trajectory and improve outcomes for children, families, and communities.
- **SAY:** Intervention is likely to be more effective and less costly when it is provided earlier in life rather than later.
- **SAY:** Services to young children who have or are at risk of developmental delays have been shown to positively impact outcomes across developmental domains, including health, language and communication, cognitive development, and social/emotional development.²

Birth to 3: Early Intervention

- Is more effective and less costly when provided early in life.
- Results in greater outcomes in health, communication, cognitive, and social-emotional development.
- Takes advantage of rapid brain development.



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Source: Child Development Institute of the University of North Carolina at Chapel Hill

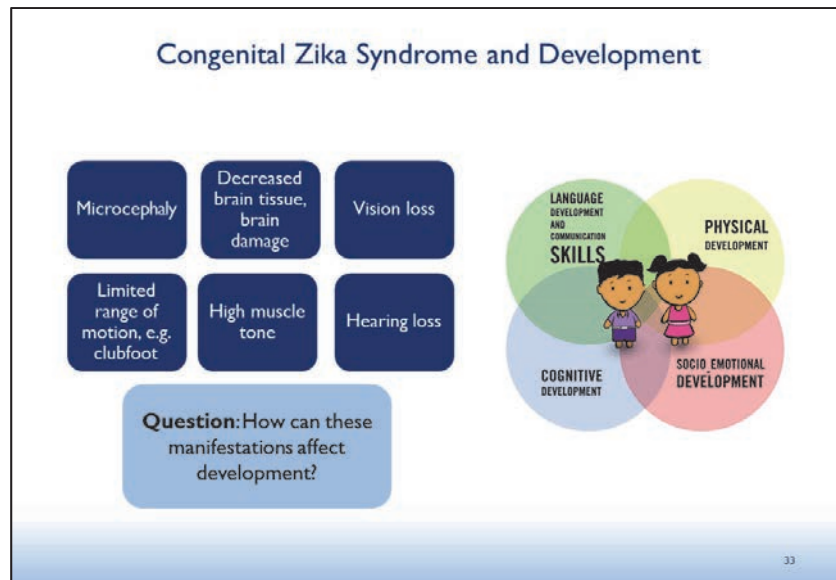
32

Congenital Zika Syndrome and Development

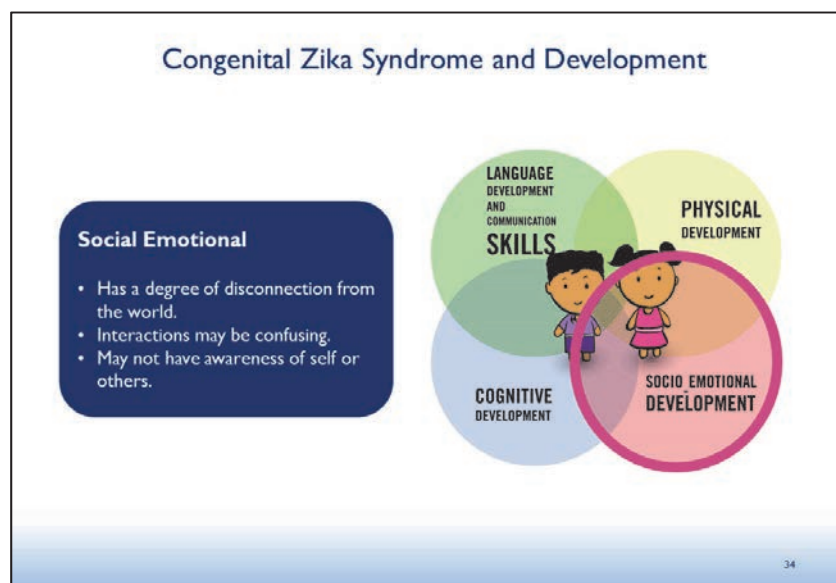
- Hand out milestone charts showing the four domains by age. Split participants into four groups. Groups will present what they have brainstormed, and the facilitator will provide feedback and add information following the slides.

² Goode S, Diefendorf M, Colgan S. 2011. *The Importance of Early Intervention for Infants and Toddlers with Disabilities and Their Families*. Washington, DC: Technical Assistance and Dissemination Network.

- Social/emotional
 - Language/communication
 - Cognitive
 - Motor
- **SAY:** How can CZS affect development? For instance, if a child is completely blind and has high muscle tone, how will this affect language, motor, cognitive, and social/emotional development? What milestones may be delayed or missed?



- **SAY:** Social-emotional: When vision, hearing, or cognitive function are impacted, children do not have complete access to information. There is a degree of disconnection from this world. Behavior is significantly impacted. Children may find interactions to be confusing or not entirely meaningful. They may not have an awareness of self or others.



- **SAY:** Language/communication: Formal language is going to be extremely difficult and likely may not occur. Children may express themselves in informal ways that are confusing or inappropriate to others such, as screaming, crying excessively, or banging their head.

Congenital Zika Syndrome and Development

Language/Communication

- Formal language likely impossible.
- May use inappropriate or dangerous communication (such as head banging).

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- **SAY:** Cognitive: Children may not have complete access to information and may have a distorted perception of their world. Children may have limited short-term and long-term memory. They may not have object permanence (the understanding that objects continue to exist even when not perceived) or cause/effect (where one event causes another), among other pivotal milestones.

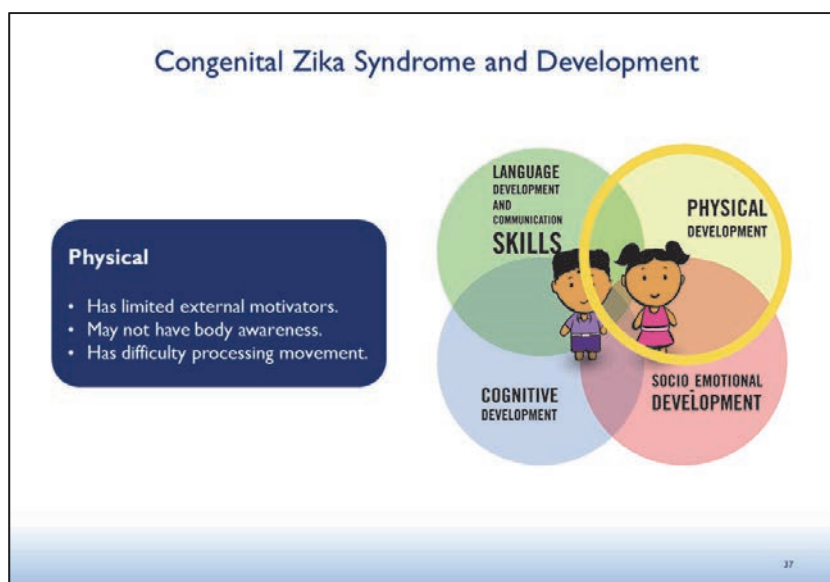
Congenital Zika Syndrome and Development

Cognitive

- Has limited short-term and long-term memory.
- May not understand basic concepts, e.g., object permanence and cause/effect.

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- **SAY:** Physical/motor: If a child has vision loss, hearing loss, or limits to cognitive function, he or she may not access the environment in such a way that encourages physical/motor development. For instance, if a child is not aware of the small red ball in front of him, he has no motivation to crawl to it. Children with severe disabilities often have difficulty processing movement and may not have fully developed body awareness (i.e., they do not have a sense of their own body and strength). In addition, pain and discomfort limit the typical behaviors that encourage motor development.



Addressing Bias, Stigma, and Discrimination

- **SAY:** What are some of the beliefs around disabilities that could be barriers when supporting children? Common negative beliefs include:
 - Disabilities are caused by bad luck or punishment for bad behavior.
 - Disabilities are contagious.
 - People with disabilities should stay at home and not be included in the community.
 - Services and resources are wasted on people with disabilities.

Question

What are some of the **harmful beliefs** around disabilities that could be a barrier when supporting children?

38

- **SAY:** What are some of the harmful actions toward children with disabilities?
 - Children with disabilities are three to four times more likely to experience physical and sexual violence and neglect than nondisabled children.³

³ UNICEF. 2005. *Violence against Disabled Children: UN Secretary General's Report on Violence against Children*. New York: UNICEF.

- In many countries, children with disabilities are significantly more likely to experience severe physical punishment.⁴
- Violence can take place everywhere: in the home, in places of worship, and in the community.

Question

What are some of the **harmful actions** toward children with disabilities?

39

- **SAY:** What does nondiscrimination mean to you?
 - Nondiscrimination does not mean that all children should be treated the same.
 - Nondiscrimination means that children receive the level of support that they need.

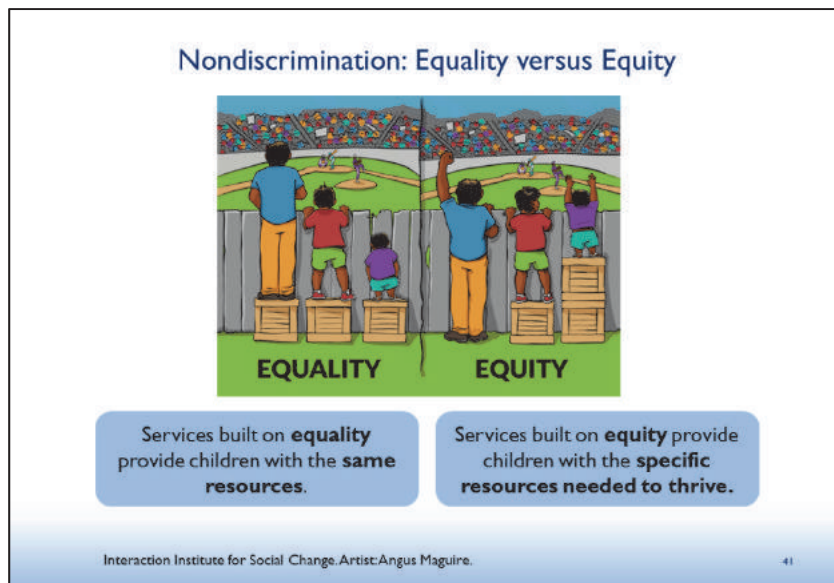
Question

What does **nondiscrimination** mean when working with children who have disabilities?

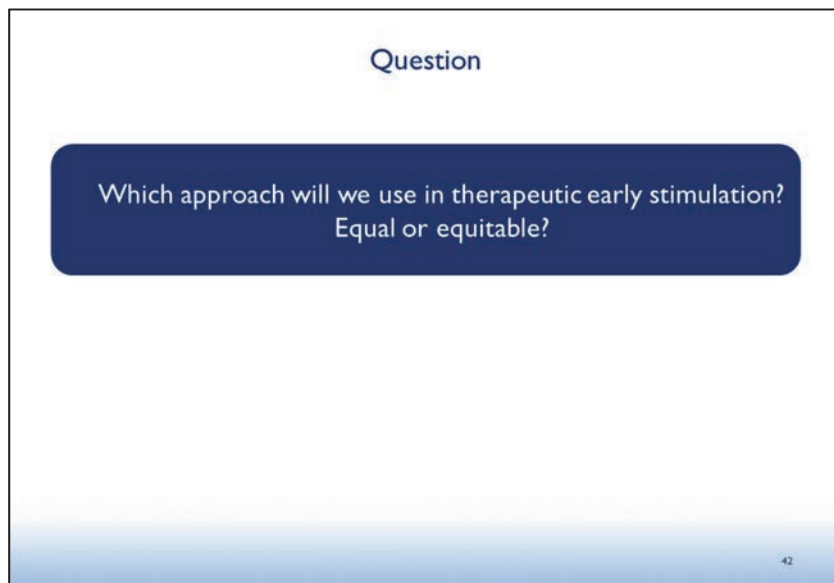
40

- **SAY:** People often talk about equality and equity in early intervention.
 - Services built on equality provide children the same resources.
 - Services built on equity provide each child the specific resources needed to thrive.

⁴ UNICEF. 2005. *Violence against Disabled Children: UN Secretary General's Report on Violence against Children*. New York: UNICEF.



- **SAY:** Which approach will we use in TES: equal or equitable?
- We will use an equitable approach to give each child what he or she needs to reach his or her full potential.




Guiding Principles for Working with Children

- **SAY:** The following are beliefs and principles that will help us as we support children with varying needs and disabilities.
- **SAY: All children learn** and have a right to care and development!

Guiding Principles for Working with Children

ALL CHILDREN LEARN and have a right to care and development!




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- **SAY:** Emphasize or add a sensory dimension.

Guiding Principles for Working with Children



Emphasize or **add** a sensory dimension.

This early literacy activity has objects, large braille, and letters.



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- **SAY:** Modify the activity for the child's level. The same activity can look very different depending on the child.

Guiding Principles for Working with Children

Modify the activity for the child's level! The same activity can look very different depending on the child.

Both children are working on their fine motor skills.

Reprinted with permission from <https://www.maxpixel.net/Play-Wooden-Blocks-Tower-Kindergarten-Child-Toys-1864718>.

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- **SAY:** Build on children's interests to create opportunities for success.

Developmental Therapies

- **SAY:** There are different therapies that will provide targeted interventions for children with developmental delays. Today, we will talk about four therapies and answer key questions:
 - Occupational therapy
 - Physical therapy

Guiding Principles for Working with Children

Build on children's interests to create opportunities for success.




This child enjoys music, so this physical therapy session uses drums.


Reprinted with permission from <https://www.maxpixel.net/Music-Children-Tambourine-Play-Xylophone-Kids-818459>.

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Developmental Therapies



**Occupational
Therapy**




**Physical
Therapy**

1. What is the goal of this therapy?
2. When would a child receive this therapy?
3. What are possible activities?


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- Speech/language therapy
- Orientation and mobility
- **SAY:** We want to get to the essence of this therapy, so we have three key questions to guide us:
 - What is the goal of this therapy?
 - When would a child receive this therapy?
 - What are possible activities?

Developmental Therapies



**Speech and
Language Therapy**

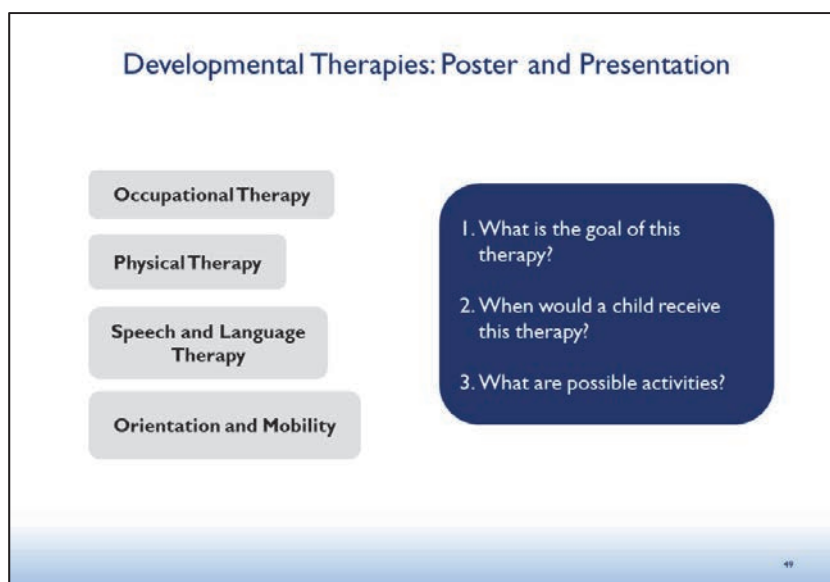


**Orientation and
Mobility**

1. What is the goal of this therapy?
2. When would a child receive this therapy?
3. What are possible activities?

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- Ask participants to split into four groups. Assign each group a therapy and distribute the therapies “cheat sheet.” Each group will create a poster (encourage participants to draw pictures) and present it to the whole group, answering the following questions:
 - What is the goal of this therapy?
 - When would a child receive this?
 - What are possible activities?




Occupational	Physical	Speech/Language	Orientation and Mobility
Goal: Participate in everyday activities.	Goal: Reduce pain, restore function, and prevent further disability.	Goal: Improve communication and swallowing.	Goal: Travel through environments safely and as independently as possible.
Concern: Baby drops most items after a few seconds. Exercise: Squeeze balls for hand strength.	Concern: Baby is very weak and floppy and cannot sit up while supported. Exercise: Use tummy time on towels to increase strength. Dangle toys to encourage baby's movement.	Concern: Baby will only eat very soft foods, such as boiled yams or pureed beans. Exercise: Safely place foods with different textures in baby's mouth for oral stimulation.	Concern: Child who is blind often bumps into objects when walking. Exercise: Practice in home with bright lights and in the darkness.
Concern: Baby always cries when being swung side to side. Exercise: Move a child gently back and forth for sensory processing.	Concern: Baby's muscles are very tight and appear to be curling in. Exercise: Use stretching and massage to increase mobility and reduce pain.	Concern: Baby does not respond to loud noises; hearing loss is suspected. Exercise: Teach baby simple sign language to communicate.	Concern: Child who is blind only wants to be carried in his parents' arms and does not want to walk on his own. Exercise: Safely touch everyday items to understand surroundings.
Concern: Baby becomes extremely upset during diaper changes. Exercise: Gently and slowly rub different textures on the baby's hands, feet, legs, tummy, arms, and cheek.	Concern: Baby can only walk on balls of feet (tiptoe walk). Exercise: Gently flex baby's toes toward head to provide a leg stretch.	Concern: Baby does not babble at 9 months. Exercise: Play games that involve eye contact and turn taking with highly motivating toys.	Concern: Child who is blind does not follow directions (such as slow down, turn right, etc.). Exercise: Play games that involve following directions, such as left, right, forward, and backward, for spatial awareness.

- As each group presents, display the relevant PowerPoint slide and add any missing information.

Therapies: Physical Therapy


Goal: Reduce pain, restore function, and prevent further disability.

- Address high muscle tone, clubfoot, etc.
- Stretching, massages, and other exercises increase motor function.
- Encourage overall physical and motor development.



Tummy time on sensory blankets

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Ankle stretching for clubfoot

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Five Steps to Gently Engage with Children

- **SAY:** We are going to practice some therapeutic activities, but first, we are going to review how to gently engage with children.
- **SAY:** What are some of the strategies we can use when working with babies and young children with disabilities? Remember, they may be scared of new experiences and new people, and these activities may be very uncomfortable at first.

Question


What are some of the strategies we can use when working with babies and young children with disabilities?

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- Approach the child.
 - Move slowly and make sure that the child is aware of your presence. You can softly sing the child's name and stay in his/her line of vision. The child needs to see that you are not going to hurt him/her.
 - If the child is not afraid of you, sit down near the child.
 - Wait for the child to touch you. If several moments have passed and the child has not moved toward you, gently rub the back of the hands or the top of the feet. Do not move forcefully or quickly toward the child. **Note: Many children with disabilities have tactile defensiveness, meaning they cannot tolerate certain textures (typically on face and palms).**

- Get the child's attention.
 - Show the child a small item of interest or gently rub it on the tops of the child's feet or back of hands. Move the item slowly in front of the child and make small tapping noises with the item. See if the child grabs it. Give it to the child to hold.
- Follow the child's lead.
 - Make sure that you have the child's attention and that you are looking at each other. If the child has vision loss, gently keep contact with the child's feet or arms.
 - Wait until the child moves or makes a sound. Then, copy the child's movements in an exaggerated and happy way. Wait for the child to repeat it or make a new response, which you then copy again.
 - Repeat until you get a responsive "conversation" going with sounds and gestures.
- Gently engage in the activity.
 - Select a therapeutic activity that is appropriate for the child's age and disability type.
 - Use only one item at a time. Engage the child in playing with the item, if possible, before adding more items. Praise the child and show delight in the child's accomplishments.
 - Increase the level of activity. For example, start with a small item, then add more items.
- Increase the child's level of activity and use of new skills.
 - When the child becomes more active and can do the activity, select another activity, addressing another need if possible.
 - For instance, if the child completed an activity targeting physical development primarily, choose a language/communication activity.

Five Steps to Gently Engage with Children



1. Approach the child.
2. Get the child's attention.
3. Follow the child's lead.
4. Gently engage in the activity.
5. Increase the child's level of activity and use of new skills.

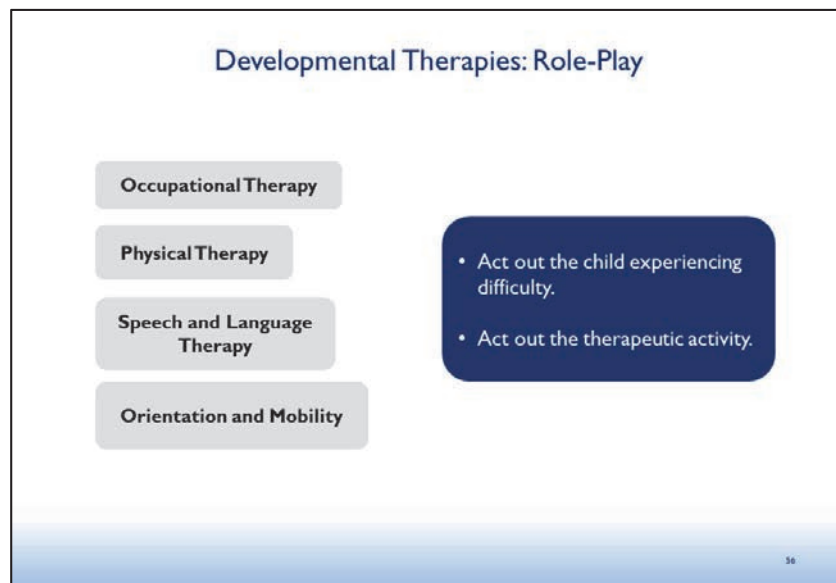
Reprinted with permission from
<https://www.maxpixel.net/Love-Baby-Adult-Outdoors-Man-Father-Son-People-3371732>.

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Practice Each Therapy

- **SAY:** In pairs, role-play each of the four activities. Participants will switch off role-playing as the child and as the parent/health worker (only role-play each activity once).
- Distribute the role-play sheet and explain each activity.
 - **Physical Therapy:** Practice side-lying play. The child is positioned to lay on his or her side, and the parent introduces different toys to play in this position (the parent can be seated). Help the child turn to the other side. Side-lying play helps with strength and body awareness (specifically midline awareness).

- **Orientation and Mobility:** Blindfold the child to simulate vision loss. As the child holds the parent's elbow, guide the child around the room and help him/her feel different objects in his/her path. Describe it to him/her in detail. This activity helps the child become aware of his/her surroundings to encourage safe and independent travel.
- **Occupational Therapy:** Gently grab slightly above and slightly below the child's ankle. Gently push into the joint and back out. Practice this with the wrists and elbows. This helps the child with body awareness. Joint compressions are also known to have a calming, soothing effect.
- **Speech/Language Therapy:** Memory boxes are filled with items that represent activities of the day. For instance, if the child and parent went to the grocery store, they may include a bus ticket, a grocery bag, and a juice box. Using the memory box, recount the events of the day. Allow the child to explore each object as you describe it. Gently brush the object on the child's hands and arms. This activity helps with memory, building vocabulary, and tactile stimulation.



Therapeutic Early Stimulation

- Distribute TES activity cards to all participants.
- **SAY:** TES activities combine what we know about brain science with evidence-based practices from these four therapies.
- **SAY:** We want those high-quality interactions that lead to brain development, and we want to add a boost of therapy for development in the four skill areas.

Therapeutic Early Stimulation

- Combines what we know about **brain science** with **evidenced-based practices** from these therapies.
- Adds a **boost of therapy** to high-quality interactions for **development in the four skill areas**.



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- **SAY:** The activity cards are divided by age and skill area. They incorporate the four therapies we have discussed. We can see here that we have already tried some of these activities.
- Review the four age cohorts activity overview.

Therapeutic Early Simulation: 0 to 6 months

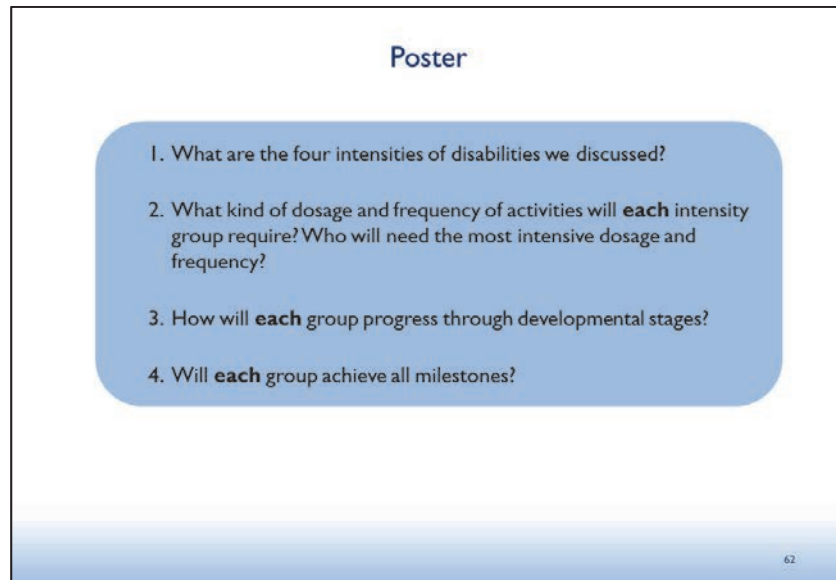
0 to 6 months			
Social/Emotional	Language/Communication	Cognitive	Motor/Physical
<p>SE1. Help baby find hands and feet by placing brightly colored item (such as sock or tape) on her hands or feet.</p> <p>SE2. When crying, swaddle your baby, turn him onto his stomach while being held, and swing back and forth, producing a loud, even "sh" sound. Help him reach his hand or finger to his mouth.</p> <p>SE3. Introduce your baby to others using names, describing relationship, and using tactile identifying signals, such as glasses, long hair, etc.</p>	<p>L1. Begin and end each activity with tactile exploration of a meaningful object (such as a spoon for eating a diaper for changing time, etc.).</p> <p>L2. Sit face to face with your baby. Imitate her sounds and gestures, and introduce new sounds/gestures.</p> <p>L3. Gently tap and brush your baby with objects of different shapes, sizes, and textures. Make sure to include all body parts and spend extra time on her hands and feet. Let her hold objects. Make sure to describe all the objects.</p>	<p>C1. Arrange safe space with sound-producing objects in your baby's immediate perimeter. Dangle objects. As your baby moves, she should come in contact with the objects.</p> <p>C2. Isolate everyday sounds from the indoors and outdoors, and describe what is happening. Let your baby safely touch and explore different items.</p> <p>C3. As you read a book aloud, act out the scenes to bring the story to life. Allow your baby to touch and explore the book.</p>	<p>M1. Tummy time! Place your baby on her tummy over your chest, legs, or on the floor. Move toys in front of her to encourage her to reach and track the toys.</p> <p>M2. Give your baby a whole-body massage while she is sitting up, on her back, on her sides, and on her tummy.</p> <p>M3. Give your baby gentle joint compression on knees, hips, wrists, elbows, and shoulders by gently squeezing and pressing your hands in and out of her joints.</p>

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Responding to a Spectrum of Needs and Levels

- **SAY:** TES is different from early intervention in that this is not as targeted in just providing one therapy.
- **SAY:** This does not replace specialized early intervention services that children receive. It complements early intervention and looks to encourage holistic development in every skill area.
- **SAY:** They are also appropriate for children of all needs—from those who are developing typically to those who have severe disabilities.
- Distribute poster/chart paper to small groups and ask them the following prompts:
 - **SAY:** What are the four intensities of disabilities we discussed?
 - **SAY:** What kind of dosage and frequency of activities will **each** intensity group require? Who will need the most intensive dosage and frequency?

- **SAY:** How will **each** group progress through developmental stages? For example, when a child goes from rolling over to crawling, which group will likely make the quickest progress?
- **SAY:** Will **each** group achieve all milestones? For example, will all children go from rolling over, to crawling, to walking? **Note: Many children may learn how to walk before crawling, but this is still considered typical development, since all milestones are reached within a range of a few month.**



- **SAY:** Who can tell us about the dosage/frequency, progress, and milestones for children with disabilities? Ask groups to present on severe disabilities, moderate disabilities, mild disabilities, and typical development.

Severe Disabilities		
Intensive dosage and frequency	Children may progress through developmental stages very slowly.	May not achieve all milestones.
Moderate Disabilities		
Dosage and frequency are high	Children slowly progress through stages.	May not achieve all milestones.
Mild Disabilities		
Dosage and frequency slightly higher than typical	Children progress through stages within a slightly longer than typical range of several months.	Will likely achieve all milestones.
Typical Development		
Activities integrated into daily routines	Children progress through appropriate stages within the typical range of a few months.	Achieve all milestones.

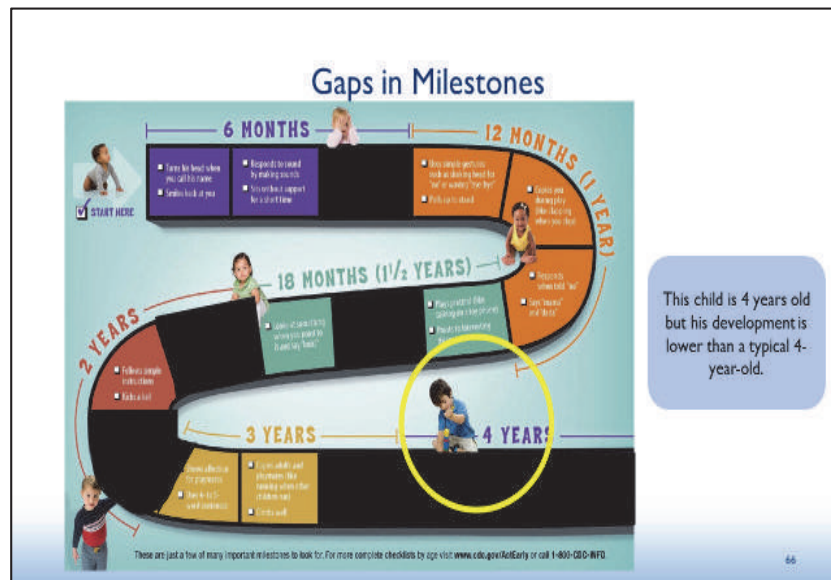
- Display the answers and distribute the handouts.

Responding to Spectrum of Abilities and Levels

Severe Disabilities		
Intensive dosage and frequency	Children may progress through stages very slowly	May not achieve all milestones
Moderate Disabilities		
Dosage and frequency are high	Progress through stages slowly	May not achieve all milestones
Mild Disabilities		
Dosage and frequency slightly higher than typical	Progress through stages within a slightly longer than typical range of several months	Will likely achieve all milestones
Typical Development		
Activities integrated into daily routines	Progress through appropriate stages within typical range of few months	Achieve all milestones

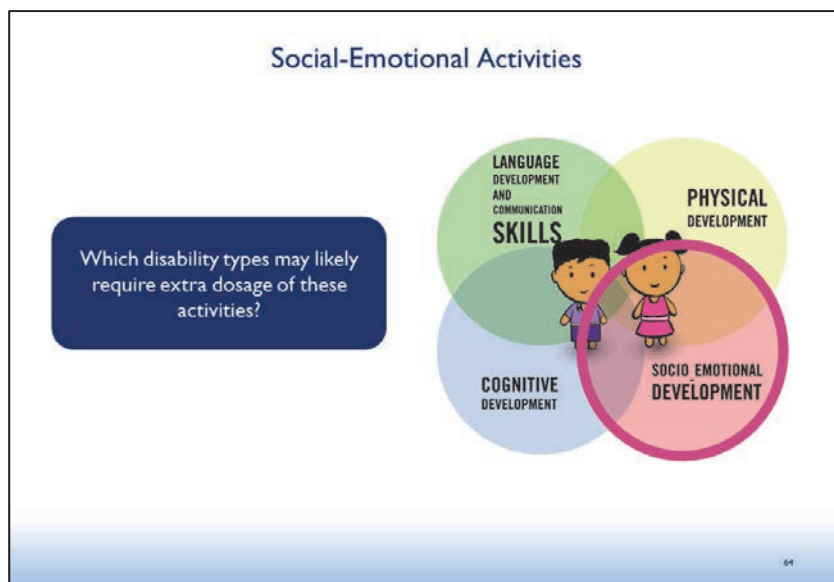
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- **SAY:** For a child with moderate disabilities, we may see gaps in milestones. For instance, a 4-year-old child may be chronologically 4 years old, but his development is closer to a 3-year-old with significant gaps.



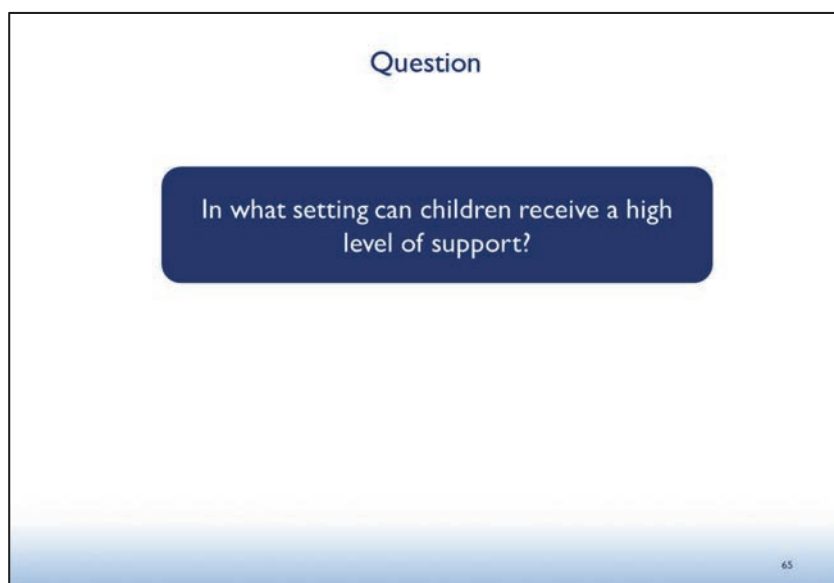
Social/Emotional Practice

- **SAY:** Now that we know about the development of young children with disabilities and their potential needs, we are going to dive into the TES activities. You have already practiced some of them, but now we will look at them according to the four skill areas.
- **SAY:** First up, we will practice social-emotional activities. Activities in this skill area are beneficial for all children. If we are thinking of the three disability categories (intellectual, sensory, and physical), which disability types may likely require extra dosage of these activities?
 - Children with **intellectual disabilities** and **sensory disabilities** may have incomplete access to information from their environment. Interactions may be confusing. They may require extra practice to reach social-emotional milestones.



End User: Parents

- **SAY:** We know that young children with severe disabilities will need high dosage and frequency of intervention. In what setting can children receive this level of support?
 - Answer: The main environment for children to receive the high dosage and frequency needed is the home.



- **SAY:** Empowering parents is crucial. The TES activities are designed for parents as the end user and are therefore highly visual and easy to follow. Parents may be struggling with stress and/or depression, and we want to empower them to support their young children.
- **SAY:** Programs that combine support for families with carefully designed services for young children appear to have the greatest impact.⁵

⁵ Guralnick MJ. 2007. The system of early intervention for children with developmental disabilities. In: Jacobson JW, Mulick JA, Rojahn J, eds. *Handbook of Intellectual and Developmental Disabilities: Issues on Clinical Child Psychology*. Boston: Springer; 465–80.

End User: Parents

- Practice **high dosage and frequency** at home.
- Combine **services for children and support for families** for greatest impact.
- Introduce **highly visual, simple to follow** activities.
- Ensure **psychosocial well-being** of parents.
- **Empowering parents** is crucial.

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Natural Environments

- **SAY:** What is a child's natural environment?
 - A natural environment is where children live, learn, and play, such as the home, places of faith, community areas, etc.

Question

What is a child's natural environment?

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- **SAY:** What are the advantages of working with families in their natural environments?

Question

What are the advantages of working with families in their natural environments?

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- The comfort of the child is increased with familiar materials and settings.
- Activities can be used throughout the child's daily routines, at times when the young child is physiologically and psychologically ready for interaction.
- The parents' concerns, resources, and priorities are taken into account.
- Children receive support with real-life activities and materials.
 - Example: If a child has feeding issues, she/he needs to use the foods and utensils in environments that she/he actually encounters in her/his life (as opposed to foods and utensils at a clinic).
- **Important note:** This may not be possible when health workers counsel parents in clinical settings. If children receive interventions in a clinical setting, this is not to take that intervention away but to try to infuse it with more elements found in the children's everyday lives.

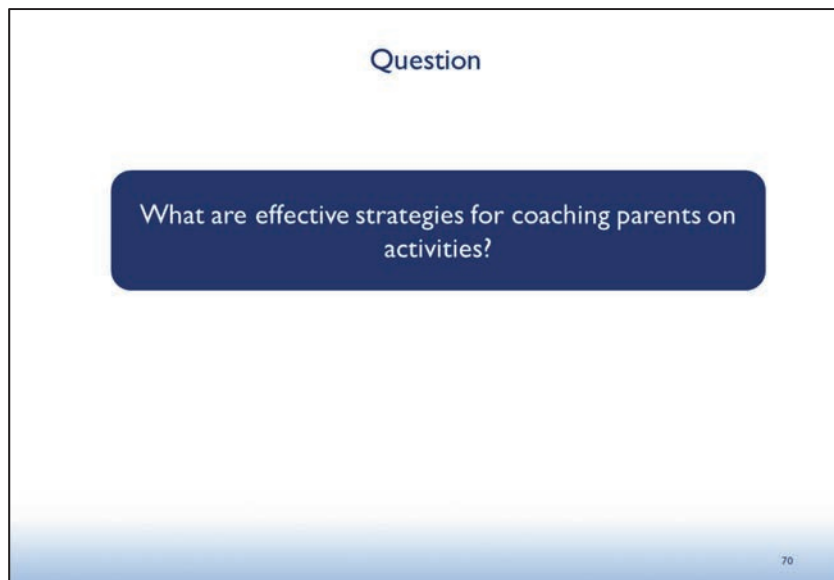
Natural Environments

- A natural environment is where children **live, learn, and play**.
- A child's **comfort is increased**.
- **Parents' priorities and resources** are taken into account.
- The child and caregiver receive support for **real-life activities**.

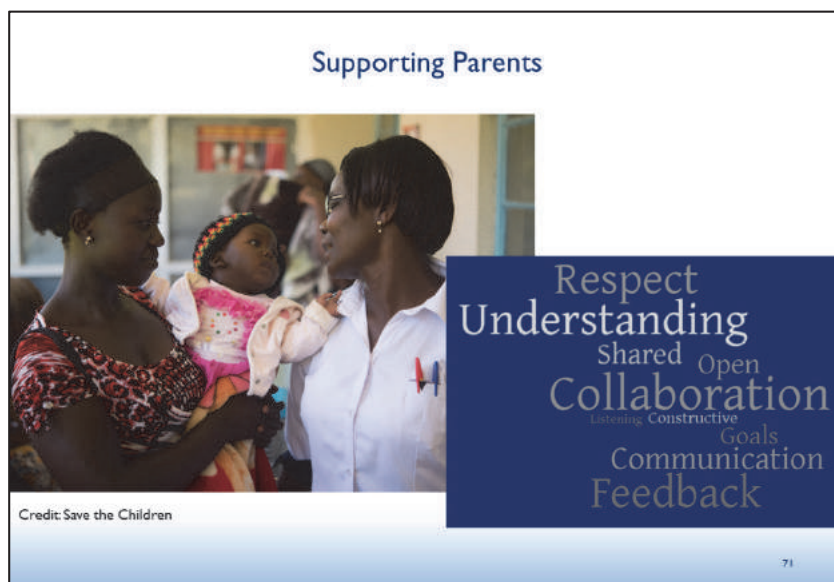
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Supporting Parents

- What are effective strategies for coaching parents on activities?



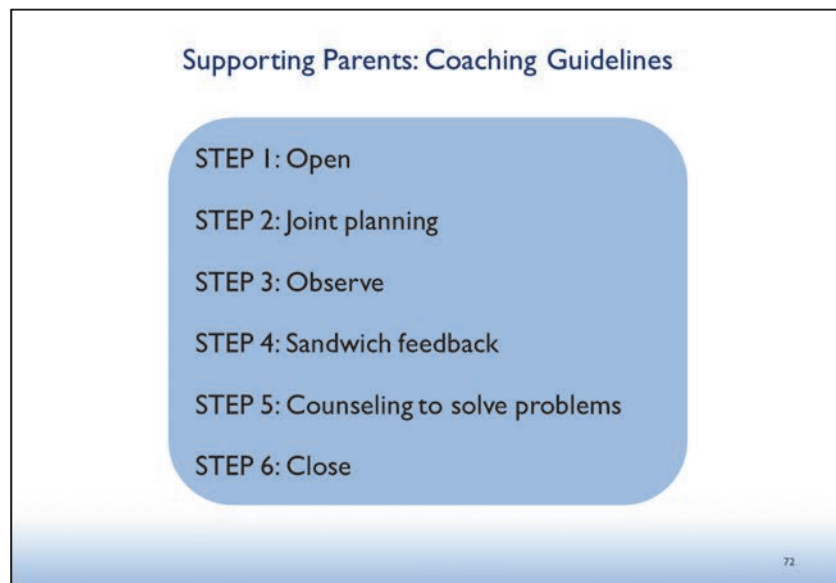
- **SAY:** The primary role of a home visitor in early intervention is to work with and support family members in children’s lives because:
 - Infants and toddlers learn best through everyday experiences and interactions with familiar people in familiar contexts.
 - Families can enhance their children’s learning and development with the necessary supports and resources.
- **SAY:** By and large, parents want what is best for children. In this model, service providers work with parents as partners to refine and build their knowledge and practices. This model requires mutual respect, where service providers and parents work alongside one another.
 - Distribute the Coaching Guidelines handout.



Coaching Guidelines

- **SAY:** The Coaching Guidelines help frontline workers support parents and families implement the home activities with their children. Health workers should take no more than 5–10 minutes on this part of the visit.

- **Open:** Explain that you are conducting a home visit to follow up on support for the young child with disabilities.
- **Joint review and planning:** Review the activity and ask how the parents will carry out the activity step-by-step.
- **Observe:** Ask the parents to show you the activity.
- **Sandwich feedback:** Praise the parents, expand on the activity (demonstrate again if needed), and explain the benefits of the TES.
- **Counseling to solve problems:** Address the parents' questions or issues.
- **Close:** Schedule the next visits. Thank the parents and the family. Encourage the parents to go to the clinic if needed and practice the activities at least once a day, but preferably several times a day, as it will become easier for child and parents to carry out the TES activities. All children learn from and like repetition.

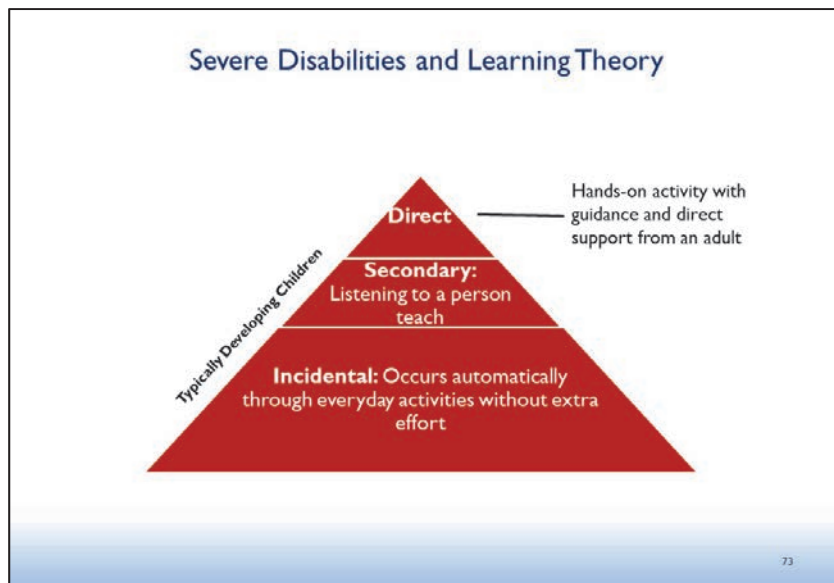


Therapeutic Early Stimulation Activity Practice

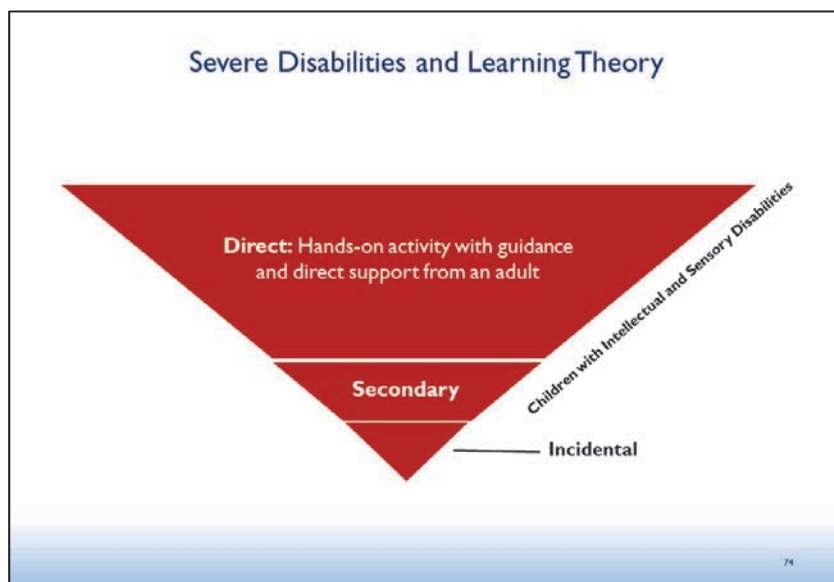
- **SAY:** Using these six steps, we will practice more TES activities by role-playing in groups of three. One person is the service provider, one is the parent, and one is the child. Make sure to give each other feedback and switch roles.

Severe Disabilities and Learning Theory

- **SAY:** For children who are developing typically, most learning is incidental—it occurs through observation and participation in everyday activities.
 - For example: Children learn that objects exist even when you cannot see them or hear them (object permanence) through simple games and observing that their parents leave and return.



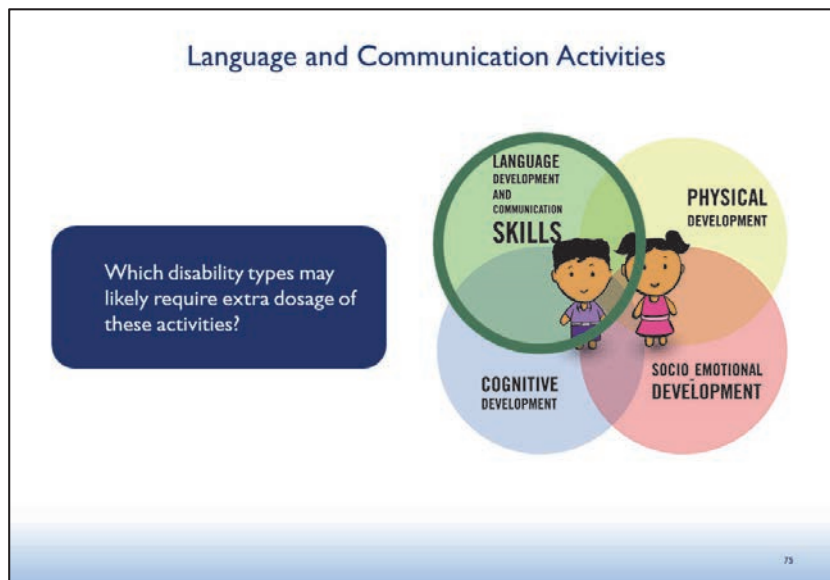
- **SAY:** For children with severe disabilities, especially those with hearing or vision loss, these concepts have to be explicitly taught through hands-on experiences.
 - For example: Children will need repeated exposure to activities that teach object permanence. One activity that teaches this is modified peekaboo. Hide only part of your face and make noises, and then take the cloth away. Eventually, you can cover your entire face without making any noises, but there are gradual steps to get there.
 - One of the milestones that often has to be taught is awareness of self and others. Children with intellectual disabilities and those who are deaf and/or blind may not have an understanding that they are separate entities in this world. One way to teach awareness of self is to teach children that there are things around them.



Language/Communication Activity Practice

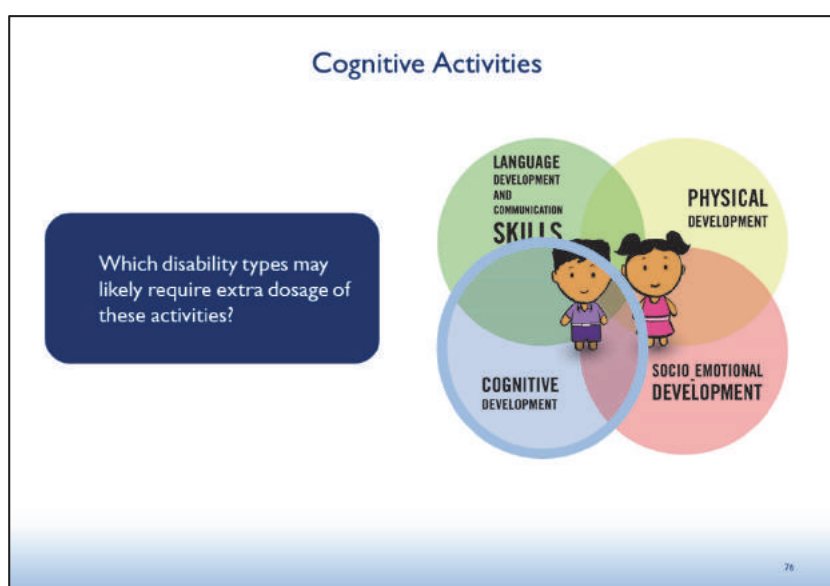
- **SAY:** We practiced social-emotional activities. Now, we will explore another skill area: communication. These activities are beneficial for ALL children. If we are thinking of the three disability categories (intellectual, sensory, and physical), which disability types may likely require extra dosage of these activities?

- Children with **intellectual disabilities** and **sensory disabilities** may have incomplete access to information from their environment. Children with these disabilities will likely express themselves in informal ways and may never attain formal language. We want to make sure we are minimizing inappropriate/dangerous communication (such as head banging) and encouraging communication through vocalizations/verbalizations, sign language, pictures, or objects.
- **SAY:** This time, we will role-play coaching parents. Please refer to the six steps!



Cognitive Activity Practice

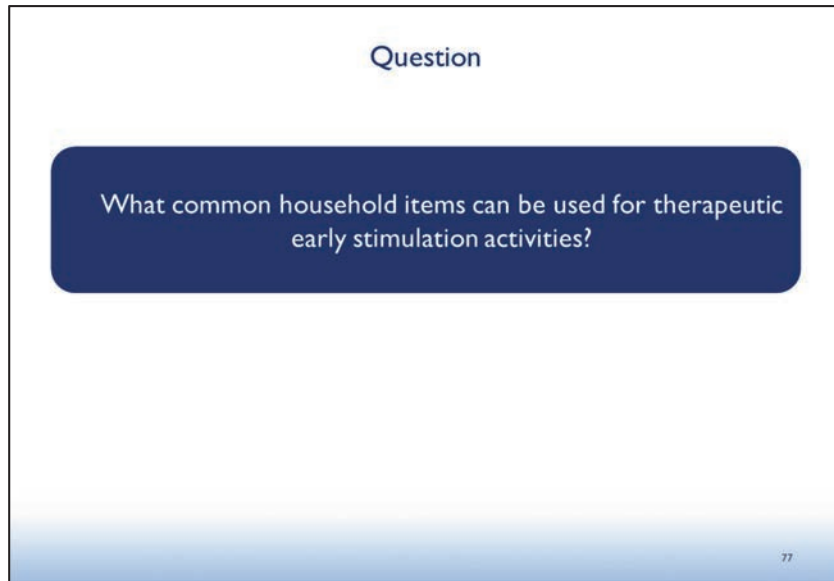
- **SAY:** The next skill area is cognitive, which involves learning, thinking, and problem-solving. These activities are beneficial for all children. If we are thinking of the three disability categories (intellectual, sensory, and physical), which disability types may likely require extra dosage of these activities?
- Children with **intellectual disabilities** and **sensory disabilities** may have incomplete access to information from their environment. Children with these disabilities will likely require extra practice with problem-solving activities. These activities can be particularly frustrating, so it is important to introduce them one at a time. Resist the urge to step in too frequently, as this can result in learned helplessness.



- **SAY:** Please refer to the six steps for coaching parents.

Materials

- **SAY:** What common household items can be used for TES activities?

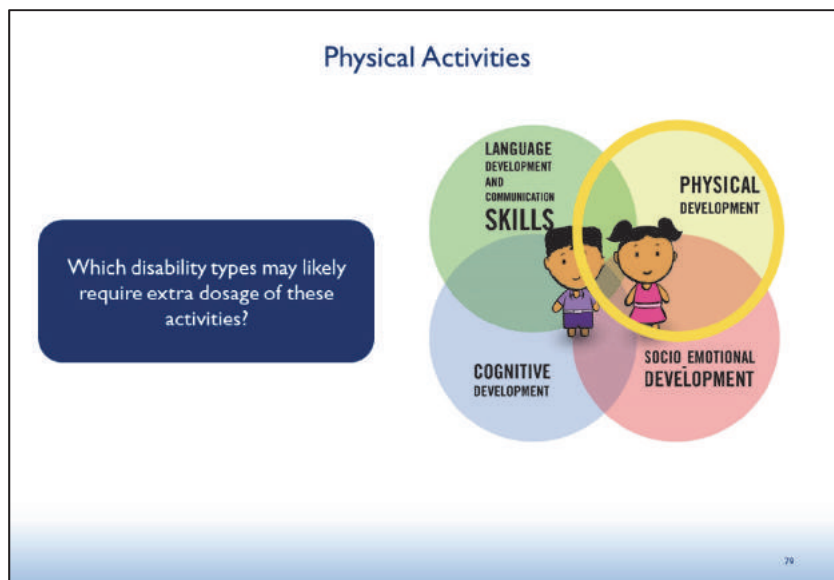


- **SAY:** In groups, brainstorm simple, everyday items found around the house that can be used for the TES activities we have practiced.
 - Parents can use magazines, picture books, keys, toilet paper rolls, pots, pans, socks, etc. **Note: Items MUST be larger than the size of a fist so that they are not choking hazards.**
- Provide each group with an assortment of different materials and ask them to make items to use for early stimulation activities.
- **SAY:** Parents do not need to buy extra or specialty items to support their children's development.
 - **Note:** This activity can be used several times throughout the training to emphasize that everyday household items can be used in TES activities. Whenever time permits, encourage participants to brainstorm a list of household items for specific activities. For example, participants could brainstorm a list of household items for social-emotional activities.
- **SAY:** If you have specialty items, such as mats or physical therapy wedges, continue to use them. However, make sure you spend some time coaching parents on using everyday materials found in their homes.



Motor Activity Practice

- **SAY:** Finally, we will practice motor activities. Activities in this skill area are beneficial for all children. If we are thinking of the three disability categories (intellectual, sensory, and physical), which disability types may likely require extra dosage of these activities?
 - The most obvious answer is children with **physical disabilities**. Children with **intellectual disabilities** and **sensory disabilities** will need practice with motor activities as well because they may not be able to fully perceive motivating elements from the environment. If they cannot hear their parents or see a bright red ball, they do not have any incentive to move around, roll, crawl, etc.
- **SAY:** Remember to practice coaching parents!



Wrap-Up: Song/Poem

- **SAY:** For our final activity, get into small groups and write a song or a poem that could be aired on the radio where you will cover why early stimulation and intervention matter, and how to support young children with disabilities in their development. Make sure to cover the four skill areas and the developmental therapies.



Wrap-Up Song/Poem

1. Why early intervention matters
2. How to support children with disabilities
 - Four skill areas
 - Developmental therapies

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