

► E-health and the Universitas 21 organization: 1. Global e-health through synergy

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Summary

The Universitas 21 (U21) organization funded a one-year project to examine global e-health. An e-health steering committee surveyed the opinions of e-health researchers at U21 member schools and conducted a literature review. Information about key themes was analysed and the findings were summarized. The steering committee recommended an eight-step strategy to establish a sustainable endeavour in global e-health. This included implementing a dissemination strategy within the U21 organization to engage a progressively larger community of faculty members and others, and translating e-health knowledge into global practice in those areas in which the U21 has special expertise. While the recommendations in the discussion paper are specific to the U21 organization, the e-health steering committee believes they can be generalized and applied to any globally minded educational or research institutions seeking to contribute to e-health.

Introduction

Tremendous progress has been made in health research over the last few decades. The translation of this new knowledge into public health promotion and health practices has led to better health and improved health service delivery models. However, uptake of these models has been variable and uneven access to high-quality health services remains a problem, leading to wide variations in health outcomes around the world. For example, the healthy life expectancy rankings drawn up by the World Health Organization (WHO) reveal dramatic differences between countries, from the highest-ranking country (Japan, 74 years) to the lowest-ranking country (Sierra Leone, 26 years).¹ Although continuing investment in health research for better disease management remains vital, a central and arguably more urgent issue in global health is the need for equalization of access to high-quality health care.

Achievement of the WHO's objective of 'attainment by all peoples of the highest possible level of health'² will require all countries to work together. This implies

not only a commitment on the part of more affluent countries to help their less fortunate counterparts, but also the need for collaborative sharing of knowledge, best practices and innovations in health promotion and protection.^{3,4}

Global health challenges

Despite globalization of trade and commerce, there has been little success in mobilizing international health resources to help address regional issues.⁵ In addition, professional portability of health practitioners – the ability of health professionals to practise without borders – remains problematic.⁶ There is no common protocol to facilitate professional exchanges, nor a cohesive international institution to champion them. An even bigger challenge may be the absence of global policy to govern worldwide e-health planning and implementation.⁷ Managing global health-care costs is also a key issue.

Equalization using information and communication technologies

The emergence of affordable and interoperable information and communication technologies (ICTs), coupled with the ubiquity of the Internet, may help to solve global health challenges by breaking down

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geographical barriers and promoting communication in health. ICTs and the Internet can transform the provision of global health education and service delivery via e-health and e-learning.⁸ The concept of global e-health is of particular relevance in this domain. Scott and Palacios defined global e-health as:

The global integration of information and communications technologies into the practice of protecting and promoting health across geopolitical, socio-economic, cultural, and temporal barriers – including research and education – to facilitate health, public and community health, health systems development and epidemiology.⁹

Successful implementation of global e-health should equalize access to health services and enable unfettered knowledge exchange between health professionals and trainees.

The Universitas 21 e-health project

In 2003, the Universitas 21 (U21) organization funded a one-year project to examine global e-health.¹⁰ There were three objectives: (1) to identify challenges and issues in the delivery of global health care, particularly those faced by vulnerable populations; (2) to identify new ways that e-health and e-learning can contribute to global health-care delivery; and (3) to identify the strengths of the U21 consortium and to formulate a plan for it to contribute to e-health research and implementation.

Methods

The project was overseen by an e-health steering committee, which comprised faculty members with interests and research experience in e-health and e-learning (see Acknowledgements). The steering committee's work took place in four stages:

- (1) A survey was carried out to discover the opinions of e-health researchers at U21 schools.
- (2) A literature review of the major issues in global e-health was conducted and its findings clustered into key themes.
- (3) Information about the key themes was analysed and then critiqued by well known e-health experts (from both within and outside the U21 consortium schools).
- (4) The findings were summarized in a discussion paper and formed the basis for recommendations regarding the U21 organization's capacity to contribute to the advancement of global e-health.

Results

In its final discussion paper,¹¹ the U21 e-health steering committee clustered its findings and analysis into three key themes: telehealth for underserved populations,⁵ e-health policy⁷ and professional portability.⁶ In addition to the three key themes, the discussion paper also summarized the results of the U21 school survey.¹² The survey data suggest that e-health is seen as an important domain which is rapidly gaining worldwide attention. Moreover, there appears to be growing interest from individuals in academic institutions who are willing to assist in building capacity in global e-health.

Discussion

On the basis of the discussion paper, the e-health steering committee recommended an eight-step strategy for the U21 consortium to contribute to the development of e-health:

- (1) formation of a U21 e-health advisory board with representation from all member schools;
- (2) establishment of a mechanism to continually gather data and evidence through literature research about current and evolving issues in e-health;
- (3) formulation of an organizational vision identifying areas of pursuit, clustering around the three key themes established in the discussion paper;
- (4) establishment of three working groups to advance the three key themes (telemedicine for the underserved, e-health policy, professional portability);
- (5) implementation of a dissemination strategy within the U21 organization to engage a progressively larger community of faculty members and individuals as early adopters, coaches, advisers and enablers;
- (6) engagement of regional, national and international policy makers and health organizations (e.g. local and national governments, the World Health Organization, the European Union), through U21 member institutions' local connections and U21's collective voice, to bring policy innovation and action towards improved e-health;
- (7) translation of e-health knowledge into global practice in those areas in which the U21 has special expertise and could therefore exert unique influence (e.g. optimum e-learning

models, sharing of best practices in e-health, capacity building to support e-health implementation);

- (8) establishment of a sustainable endeavour in the global e-health domain.¹³

Conclusion

While the recommendations in the discussion paper were specific to the U21 organization, the e-health steering committee believes that they can be generalized and applied to any globally minded educational or research institutions that wish to contribute to e-health. It is also worth emphasizing that an educational and research institution such as the U21 cannot alone realize the promise of – or solve the challenges inherent in – global e-health. Rather, it needs a strong partnership with policy makers, health administrators and health professionals. Such collaborative efforts will foster a positive e-health environment that will improve health access and health outcomes globally. It is our conviction that a shared vision and collaborative spirit will ultimately drive like-minded organizations to work together towards success in global e-health.

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References

- 1 WHO issues new healthy life expectancy rankings. Japan number one in new 'Healthy Life' system. See <http://www.who.int/inf-pr-2000/en/pr2000-life.html> (last checked 11 February 2005)
- 2 World Health Organization. See <http://www.who.int/about/en/> (last checked 11 February 2005)
- 3 Global Health Council. See http://www.globalhealth.org/view_top.php3?id=25 (last checked 11 February 2005)
- 4 Office of Global Health. See <http://www.cdc.gov/ogh/> (last checked 11 February 2005)
- 5 Wootton R, Jebamani LS, Dow SA. E-health and the Universitas 21 organization: 2. Telemedicine and underserved populations. *J Telemed Telecare* 2005;**11**:221–4
- 6 Goldberg MA, Sharman Z, Bell B, Ho K, Patil N. E-health and the Universitas 21 organization: 4. Professional portability. *J Telemed Telecare* 2005;**11**:230–3
- 7 Scott RE, Lee A. E-health and the Universitas 21 organization: 3. Global policy. *J Telemed Telecare* 2005;**11**:225–9
- 8 Ho K. Telemedicine: where is its rightful place in the medical profession? *BC Med J* 2000;**42**:249–50
- 9 Scott RE, Palacios M. E-health – challenges of going global. In: Scott CM, Thurston WE, eds. *Collaboration in Context*. Calgary, AB: Institute for Gender Research and Health Promotion Research Group, University of Calgary, 2003:45–55
- 10 Universitas 21. See <http://www.universitas21.com> (last checked 14 February 2005)
- 11 Universitas 21 e-Health Steering Committee. *Global e-Health: Identification of Opportunities of Technological Innovations to Address Issues of Global Health*. Birmingham: Universitas 21 Secretariat, 2004 (available from the UBC Division of Continuing Medical Education)
- 12 Sharman Z, Bell B, Ho K. U21 school survey report. In: Universitas 21 e-Health Steering Committee. *Global e-Health: Identification of Opportunities of Technological Innovations to Address Issues of Global Health*. Birmingham: Universitas 21 Secretariat, 2004:33–41 (available from the UBC Division of Continuing Medical Education)
- 13 Ho K. Advantage U21: opportunities in global e-health. In: Universitas 21 e-Health Steering Committee. *Global e-Health: Identification of Opportunities of Technological Innovations to Address Issues of Global Health*. Birmingham: Universitas 21 Secretariat, 2004:42–4 (available from the UBC Division of Continuing Medical Education)