UNITED NATIONS COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD)

Contribution to the CSTD ten-year review of the implementation of WSIS outcomes

Submitted by

WORLD HEALTH ORGANIZATION

Contribution from the World Health Organization to the Commission on Science and Technology Development on the World Summit on the Information Society: eHealth action line (C7)

Priority areas in the action line include improving health information systems, facilitating access to knowledge and information, promoting international standards for exchange of health data, and strengthening systems for disaster response and communicable diseases monitoring and alert.

The WSIS decade

Ten years after the second WSIS Summit (Tunis, 2005), ICT has changed the world in ways unforeseen a decade ago. The transformative nature of ICT has also been evident in the health sector, as eHealth. Across the world, countries are using ICT for health promotion, clinical care, professional education and research. ICT has also opened up access to the world's vast store of medical knowledge. Yet progress in eHealth has not been systematic or certain. And some of the core challenges of the information society, such as security and privacy, remain an ongoing threat to its broad adoption.

The World Health Organization (WHO) has long recognized the potential of ICT for health. Since the beginning of the WSIS process, WHO, as the facilitator of Action Line on eHealth, has promoted and supported a broad range of eHealth actions. The Organization has aligned its work in eHealth, mandated by the World Health Assembly in 2005[1], with the WSIS action line, encouraging the linkage of health and ICT sectors at the ministerial level and working closely with other UN agencies in providing strategic guidance to countries. The sections that follow highlight progress, challenges and lessons learned in the process.

Achievements and challenges

Information and communication are essential to the delivery of health services, building health systems and ensuring effective public health action. Every field mission, country office, health ministry, partnership and programme depends on reliable and timely information to do their work. As a basis for health action and advocacy the world over, information gathering, analysis, reporting and exchange is fundamental. The WSIS called for participation of all stakeholders. In the health sector, there are many: governments; multilateral agencies and development partners; health care organizations and businesses; academic, research and public health institutions; standards development organizations; health workers and professional associations; ICT entities; nongovernmental organizations; and individuals, families and communities.

World Health Assembly resolutions in 2005 and 2013[2] urged countries to develop long-term strategic plans for eHealth to guide policy development, plan for implementation, and address data security, privacy, interoperability, cultural and linguistic issues, workforce development, infrastructure, financing and evaluation. In addition to WHO

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[1] http://www.who.int/gb/ebwha/pdf_files/WHA58/WHA58_28-en.pdf
[2] http://apps.who.int/gb/ebwha/pdf_files/WHA66/A66_R24-en.pdf

resolutions, other global initiatives[3] have encouraged countries to integrate the use of ICT in health[4].

WHO's Global Observatory for eHealth monitors country progress, trends and developments in eHealth. Since 2005 there has been continued progress in building foundations for broader eHealth adoption. Globally ICT has become central to health security, services delivery, professional education and the transformation of health systems worldwide. The Internet has far-reaching implications for public health including for the quality of information, data security and privacy, and the promotion and sales of medical products and services online.

Progress in eHealth on the national level has been encouraging, although there remain vast disparities. Developing a *national eHealth strategy* is a goal of many countries, as a basis for reaching health and development goals and improving *health services and information systems*. A national plan can make the best use of resources while providing a solid foundation for investment and innovation, and achieving longer-term goals such as health sector efficiency, reform or more fundamental transformation. Globally, 85 national eHealth strategies have been developed[5]. There is an increasing demand for eHealth tools to support integrated care, improve access to and the quality and safety of care, and to monitor the performance of health services and systems.

Public-private partnerships play an important role in eHealth implementation, combining knowledge and experience, and enabling new models of collaboration towards innovative solutions and impact on health[6]. For example, responding to the call for *improving access to the world's health information*, initiatives such as the HINARI Access to Research in Health Programme set up by WHO and major publishers, today enables some 5,700 institutions in 100 low- and low-middle-income countries to gain access to one of the world's largest collections of biomedical and health literature, with over 13,000 journals and 24,000 books online. The joint WHO-ITU "Be Healthy-Be Mobile" uses mobile technology to support national efforts in prevention and management of noncommunicable diseases, towards minimizing illness and disability, and reducing their social and economic burden.

The adoption of eHealth standards is essential to health systems development. Effective and timely transmission of individual or population data requires adherence to health data standards and related technology standards. There is growing commitment among stakeholders from the public and private sector to build capacity and promote the adoption of standards at all levels of health systems[7].

The use of *ICT in education and training* of health personnel can help address critical shortages and gaps. There have been significant advances by universities, governments and civil society in making content available and affordable for audiences such as policy-makers, researchers, health personnel and agencies. The adoption of versatile, adaptable eLearning and online open learning courses and methods has provided real

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[3] http://www.everywomaneverychild.org
[4] http://www.who.int/topics/millennium_development_goals/accountability_commission/en/
[5] www.who.int/goe/en
[6] http://www.everywomaneverychild.org/resources/innovation-working-group
[7] http://www.who.int/ehealth/en/

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alternatives to traditional instruction, and is already changing the face of education and training across the world.

Improving access to *quality health information* for policy-makers, health care workers and the public is a shared goal of many stakeholders. Governments focus on policies for consumer protection, safety and privacy in the online world. Health professional and civil society initiatives advocate for inclusiveness and free access to health information in all its forms, including for open access to health research data and prospective research registration in publicly accessible research registries. Major challenges still include ensuring that information is accurate, current and relevant to diverse cultures; leveraging the right technologies; and developing governance and business models for equitable, affordable, sustainable access.

The crucial importance of ICT in *systems for emergency preparedness and response* has been highlighted by a decade of global earthquake activity, cyclones and floods. ICT enables timely local reporting and mapping, the rapid and secure sharing of information, the use of web-based and mobile technologies alongside traditional media for public information exchange, public communication through social media, and the connection of communities with front-line personnel for health action and response.

Public health reporting is addressed through the revised International Health Regulations (IHR)[8], which entered into force in 2007 and were tested with the Influenza A (H1N1) pandemic in 2009. At that time, new media emerged as a factor in global health communication. The IHR commit all countries to collectively apply agreed rules for preventing and managing public health risks. An important challenge for the future lies in strengthening global systems for monitoring disasters and coordinating emergency response. This requires systematic collaboration between countries and organizations, effective and durable public-private partnerships, and investment across sectors.

In many countries, *barriers to scaling up eHealth* reflect the need for further evidence, including on the impact of eHealth for health systems development and universal health coverage. The experiences of more advanced countries can provide useful insights. *Improving awareness and capacity* of policy-makers and the health workforce requires further efforts in advocacy, education and training. On-going challenges include updating national *legal and regulatory landscapes* for incorporating ICT into health services, and ensuring citizen protection and equity of access. The *adoption of health data standards and health information technology standards* is a challenge that must be addressed, to facilitate interoperability among systems and devices, and provide for privacy and security in health information systems. Concerted action by governments must give people the assurance they need that their personal information is secure from potential misuse, as well as extend access to eHealth services to all societal groups. Maintaining trust in the eHealth environment has emerged as a central requirement to enable the growth of eHealth services going forward. The effective governance of critical resources and a shared policy response has become a global as well as a national responsibility, due to the proliferation of cybercrime, Internet fraud and related criminal activity across the world.

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[8] www.who.int/ihr

In global health, partnerships form and re-form: learning by doing, building on lessons learned and having more of an impact as they become better governed and country led. The complexity and dynamics of development goals, and the fact that there are many stakeholders, means that new skills are required to manage relationships, ensure good governance, and respond to the increased expectations of the public. Making partnerships work is an ongoing process, but one that underpins eHealth development. The complementarity of the WSIS action lines is a good illustration: Action line C2 on improving ICT connectivity; C6 on the need for an enabling environment; and C7 on ICT applications, including eHealth, in all aspects of life (ITU, 2005).

ICTs can contribute to safety, security and quality of life and health, yet further innovation is required to ensure that they are effective, appropriate, reliable and affordable in all contexts. The WSIS process made it clear that the contribution of all stakeholders is needed to make the most of ICTs, so that they benefit all of society. This is true for health, where stakeholder engagement is essential to understanding people's priorities, needs and capabilities. There is no doubt that global health depends on advances in science and technology and that eHealth will benefit enormously from this progress.

Conclusions

A decade after WSIS, WHO as facilitator of the action line recognizes the growing scope and evolution of ICT in the health sector, and the major effort still required to meet the first WSIS commitments. Themes such as bridging the digital divide, promoting inclusiveness and improving information literacy are still timely, important and relevant. The global economic scenario underscores that scarce funds must be invested strategically, including in research to guide eHealth policy and practice, particularly in emerging economies. It is important to assess how the changes in communications platforms, applications and services impact health services and systems. Policy makers need to develop consensus around the pertinent policy problems and possible solutions. In this respect, all stakeholders have an essential contribution to make towards implementing this critical action line.