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Submissions from entities in the United Nations system and elsewhere on their efforts in 2010 to implement the outcome of the WSIS

Submission by

WHO

This submission was prepared as an input to the report of the UN Secretary-General on "Progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society at the regional and international levels" (to the 14th session of the CSTD), in response to the request by the Economic and Social Council, in its resolution 2006/46, to the UN Secretary-General to inform the Commission on Science and Technology for Development on the implementation of the outcomes of the WSIS as part of his annual reporting to the Commission.

World Health Organization

WHO Contribution to the 2010 UNSG report on the World Summit on the Information Society, to the Commission on Science & Technology for Development

eHealth action line (C7)

Priority areas in this World Summit on the Information Society (WSIS) action line include improving health information systems, facilitating access to knowledge and information in health, promoting the adoption of international standards for exchange of health data, and strengthening systems for disaster response and communicable diseases monitoring and alert.

Information and communication are core to effective public health action. Every field mission, country office, 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, the role of information gathering, analysis, reporting and dissemination remains fundamental.

The WSIS called for participation of all stakeholders. In the health sector, this includes: governments, multilateral agencies, development partners, health care organizations, academic, research and public health institutions, standards development organizations, health care workers, entrepreneurs, information and communication technology (ICT) experts from the public and private sectors, citizens and nongovernmental organizations.

The WSIS action line on eHealth aligns with World Health Assembly Resolution on eHealth, adopted by the Fifty-eighth World Health Assembly in 2005. Resolution WHA58.28[1] urges Member States to consider drawing up long-term strategic plans for the development and implementation of eHealth services. It calls on governments to form national eHealth bodies to guide policy and strategy development in eHealth including data security, privacy, interoperability, cultural and linguistic issues, infrastructure, funding, monitoring and evaluation. WHO recommends that each Member State establish a national-level body for eHealth, formally supported by the Ministry of Health as a key instrument in implementing the eHealth resolution.

WHO's Global Observatory for eHealth monitors country progress on the World Health Assembly Resolution and the WSIS agenda. Established by the World Health Organization in 2005, the Observatory is charged with monitoring, analyzing and reporting developments and trends in eHealth worldwide. Since the first global survey in 2005 there has been continued country progress in building the foundation policies, strategies and infrastructure for eHealth. The second global survey on eHealth in 2009 built on the knowledge base generated by the first survey, covering core actions at the national level in addition to focusing on specific eHealth themes. The survey has provided WHO with a rich source of data which is being used to create a series of eight publications, *The Global Observatory for eHealth series*, for 2010-2011. Thematic volumes in the series include: Telemedicine, Management of patient information, mHealth, Legal frameworks for eHealth, a systematic review of eHealth policies, eHealth foundation actions, eLearning, and eHealth country profiles. All reports will be available on the Observatory website (www.who.int/GOe/en).

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[1] *http://www.who.int/gb/ebwha/pdf_files/WHA58/WHA58_28-en.pdf*

Selected findings from the 2009 survey (policies, partnerships, mHealth, telemedicine) are summarized below. *National eHealth policies* lay out the vision and objectives to promote the adoption of ICT in the health sector. In 2009 just over half the responding countries reported having eHealth policies (55%)[2]. *Public-private partnerships* are potentially powerful mechanisms to support the development of eHealth. It is noteworthy that there was no growth between 2005 and 2009 in the number of countries reporting eHealth public-private partnerships, with the figure resting at 41%. The reason for this is not clear and remains an area for further investigation.

mHealth is a term used to describe health care or public health practice supported by mobile devices, such as mobile phones, patient monitoring devices, Personal Digital Assistants (PDAs) and other wireless devices. Applications include the use of mobile devices in collecting community and clinical data, delivery of healthcare information to practitioners, researchers and patients, real-time monitoring of patient vital signs, and direct provision of care. There are no comparative figures for mHealth activity as this area was still relatively new in 2005 and was not surveyed. In 2009 there is significant uptake by countries with the vast majority of responding countries (83%) reporting that they had introduced at least one mHealth initiative. Of these countries, three quarters indicate that they are implementing 4 or more types of mHealth initiatives. It is highly likely that the mHealth deployment will continue to expand rapidly as the penetration of mobile technologies now surpasses that of the internet including in developing countries. This makes the medium particularly suitable for health communication and public health programmes.

Telemedicine involves the use of ICT to deliver health care services where distance is a critical factor. It can be used for the exchange of information for diagnosis, treatment and prevention, for research and evaluation, and for the continuing education of healthcare providers. In 2009 teleradiology was reported as the most developed telemedicine service area globally, with just over 60% of responding countries offering some form of service. The proportion of countries with other services ranged from 40% for teledermatology and telepathology, to 25% for telepsychiatry. It is anticipated that the use of telemedicine for diagnosis, treatment and monitoring will continue to expand as technology, infrastructure and funding improve, and as policy and social issues of reimbursement and acceptance by professionals and patients are gradually resolved.

As reported in previous years, a number of WHO's programmes respond to the call for *improving access to the world's health information*, in partnership with the private sector. Chief among them, the HINARI Access to Research in Health programme provides free or low-cost online access to health sciences journals to local, not-for-profit institutions in more than 100 developing countries. Since its launch in 2002 with 6 major publishers, the number of participating publishers and of journals and other full-text resources has grown continuously. Today more than 150 publishers are offering their content in HINARI (www.who.int/hinari/en/). The agriculture and environmental sectors have replicated this successful public-private partnership model, with sister programmes sponsored by the Food and Agriculture Organization (FAO) of the United Nations and the United Nations Environment Programme (UNEP) launching initiatives in the same model (see www.aginternetwork.org/en/, www.oaresciences.org/en/). Similarly, the Global Health Library brings together national and regional initiatives to increase access to information and scientific evidence on health, as well as to provide the support necessary to increase visibility of scientific and health information produced in developing regions. Through a network of librarians the initiative connects local, national, regional and international information on health (http://www.globalhealthlibrary.net).

Improving access to *quality health care information* for policymakers, health care workers, patients and their families is a shared goal of many stakeholders. Governments are concerned with consumer trust and therefore focus on policy measures to advance consumer protection, safety and privacy in the online world. There are notable professional and civil society initiatives advocating for inclusiveness and free access to health information in all its forms. However, major challenges remain to achieving this. Examples include ensuring that health information is

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[2] *Data reflect responses to the GOe survey from 114 countries.*

accurate, relevant to diverse cultures, and up-to-date; leveraging the right technologies; and developing sustainable business models to enable equitable, affordable access and outreach to underserved populations.

The crucial importance of ICT in *systems for emergency response* was highlighted again in 2010 following the earthquake in Haiti. Examples such as timely local reporting and mapping, the rapid and secure sharing of information at the global level, the use of web-based and mobile technologies alongside traditional media for public information exchange highlighted the world's reliance on ICT in preparedness and response. It also underscored the need to connect communities and those on the front lines of care in emergencies. As was seen in 2009 with the advent of the Influenza A (H1N1) global pandemic, ICT plays a vital role in all public health events, connecting research, academic, laboratory and clinical institutions, professionals, communities, and citizens for health action.

In addition, *public health reporting* is formally addressed through the revised International Health Regulations (IHR). The IHR entered into force in 2007 and were tested with the Influenza A (H1N1) pandemic in 2009 when, in addition to formal communication channels, new media emerged as an important factor in global health communication. The IHR commit all countries to collectively apply agreed rules for preventing and managing public health risks. WHO has designated IHR contact points in each of its 6 Regional Offices and developed additional tools, training materials and guidance to support countries in implementing the IHR. Countries have designated national IHR focal points and are in the process of implementing national action plans. The success of the IHR depends on all stakeholders. In particular rapid sharing of information, and actions based on trust and transparency are vital to achieving a safer world (www.who.int/ihr/).

The improvement of *health information systems,* in partnership with countries, international organizations and the private sector is addressed through such partnerships as the Health Metrics Network (HMN) (www.who.int/healthmetrics/). An important milestone for strengthening health information systems was reached when the World Health Assembly in May 2007 called on health information and statistical communities, international organizations, global health initiatives and other stakeholders to "provide strong, sustained support for strengthening health information systems, including use of the standards and guiding principles set out in the Framework of the Health Metrics Network." As of 2010, over 80 countries have applied the HMN Framework and Standards (URL 2009) to assess their national health information systems. More than 20 countries have since applied the findings of these assessments and developed costed investment plans. A growing number of countries have secured financing from multilateral, bilateral and domestic sources to implement improvements based on this work.

As in previous years, continuing challenges to national health information systems development include the design, governance, funding, and ability to manage complex ICT deployments. Building and improving these systems depends on how key institutions and stakeholders function and interact. WHO, in collaboration with major international partners, supports sub-regional *Leadership Forums on Country Ownership*, to strengthen country capacity in working with diverse sectors, stakeholders and systems. These forums enable inter-sectoral interaction, south-south solution sharing, and serve to link country teams with technical and financial resources to carry the work forward.

On the technical level, interoperability and standards are an ongoing challenge for the health sector with competing standards, versions and implementations. WHO is engaged in *health informatics standards governance* through participation in international health informatics activities. In particular, WHO through an International Organization for Standards technical committee represents low-income country interests, interpreting standards for those country contexts. Major upcoming technical reports, including *eHealth architecture roadmap* and *Framework for national health information systems,* will support low-income countries in adopting international standards. Further work is under way to establish interoperable monitoring systems with indicator definitions managed in the WHO Indicator and Measurement Registry.

In any global economic scenario the coming years bring unsettling prospects for ICT in health, as the results of the global economic downturn have made a significant impact on investment in infrastructure, products and services. More than ever, the strategic use of ICT in health is vital in order to ensure that scarce funds are well spent. Going forward, it will be important to invest in research that can guide eHealth policy and practice in countries and particularly in emerging economies. Given the current fundamental transformation of communications platforms, applications and services in health, it is important to develop a better understanding of the wide-ranging implications of these changes as they affect health systems and services. As the number of stakeholders participating in ICT and eHealth increases, the effects of policies on the overall evolution of the sector are more difficult to assess. Policy makers at national level need to develop shared models and consensus around the pertinent policy problems and possible solutions. In this respect, policy experts in communications, media and health all have an essential contribution to make towards implementing this action line.

WHO as facilitator of this action line recognizes the broad scope of ICT in health and the significant effort still required to meet the WSIS commitments. A priority for the coming years will be addressing common concerns related to the legal and regulatory landscape as well as the improvement of systems for monitoring disaster and emergency response, which requires collaboration between countries, effective and durable public-private partnerships, and investment across sectors.