

eHealth Standardization and Interoperability and related eHealth activities at WHO Headquarters

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Objectives

- To introduce e-health related activities of each organization and group
- To discuss further collaboration of each organization and group



WHO's Organizational Structure



Mission

WHO is the directing and coordinating authority for health within the United Nations system.

It is responsible for providing leadership on global health matters, shaping the health research agenda, setting norms and standards, articulating evidence-based policy options, providing technical support to countries and monitoring and assessing health trends

Source: <http://www.who.int/about/en/>



World Health Organization

Director-General

Clusters

**Family, Women's and Children's
Health (FWC)**

**HIV/AIDS, TB, Malaria and
Neglected Tropical Diseases
(HTM)**

General Management Cluster

**Noncommunicable Diseases
and Mental Health (NMH)**

**Health Security and Environment
(HSE)**

**Polio, Emergencies and Country
Collaboration (PEC)**

**Health Systems and Innovation
(HIS)**



Health Systems and Innovation Cluster

Assistant Director-General

Enabling Functions
(Management and External Relations)
Secretariat Independent Expert Review Group
Technology Transfer Initiative

Core
Departments

Partnerships

Essential Medicines and
Health Products

Ethics and Social
Determinants

Global Health Workforce
Alliance

Health Statistics
and Information Systems

Health Systems Policies
and Workforce

Alliance for Health Policy
and Systems Research

Health Systems Financing

Knowledge
Management and
Sharing

eHealth Unit

Public Health, Innovation
and Intellectual Property

Patient Safety
Programme

WHO Centre for
Health Development



eHealth Standardization and Interoperability



Standardization and Interoperability

- Normative work:
 - *WHO Handbook on eHealth Standardization and Interoperability*
 - *Health Workforce Registry Minimum Data Elements*
- Provide guidance to Member States in assessing and implementing interoperability standards for eHealth systems and services.



eHealth Milestones

RESOLUTIONS AND DECISIONS		123
122	FIFTY-EIGHTH WORLD HEALTH ASSEMBLY	
RESOLUTIONS AND DECISIONS	121	
<p>WHA58.28 eHealth</p> <p>The Fifty-eighth World Health Assembly,</p> <p>Having considered the report on eHealth;¹</p> <p>Noting the potential impact that advances in information and communication technologies could have on health-care delivery, public health, research and health-related activities for the benefit of both low- and high-income countries;</p> <p>Aware that advances in information and communication technologies have raised expectations for health;</p> <p>Respecting human rights, ethical issues and the principles of equity, and considering differences in culture, education, language, geographical location, physical and mental ability, age, and sex;</p> <p>Recognizing that a WHO eHealth strategy would serve as a basis for WHO's activities on eHealth;</p> <p>Recalling resolution WHA51.9 on cross-border advertising, promotion, and sale of medical products through the Internet;</p> <p>Stressing that eHealth is the cost-effective and secure use of information and communications technologies in support of health and health-related fields, including health-care services, health surveillance, health literature, and health education, knowledge and research,</p> <p>1. URGES Member States:</p> <p>(1) to consider drawing up a long-term strategic plan for developing and implementing eHealth services in the various areas of the health sector, including health administration, which would include an appropriate legal framework and infrastructure and encourage public and private partnerships;</p> <p>(2) to develop the infrastructure for information and communication technologies for health as deemed appropriate to promote equitable, affordable, and universal access to their benefits, and to continue to work with information and telecommunication agencies and other partners in order to reduce costs and make eHealth successful;</p> <p>(3) to build on closer collaboration with the private and non-profit sectors in information and communication technologies, so as to further public services for health and make use of the eHealth services of WHO and other health organizations, and to seek their support in the area of eHealth;</p> <p>(4) to endeavour to reach communities, including vulnerable groups, with eHealth services appropriate to their needs;</p>	<p>Health standards effective models, e principles of</p> <p>practice, policy ent, information</p> <p>alth information ce of, and rapid</p> <p>to improving s in the area of</p> <p>gular reports, to in countries, and</p> <p>with appropriate e for eHealth;</p> <p>acts and services on telemedicine velopment, and</p> <p>including in the is inadequate, in prove access to,</p> <p>Health Academy,</p> <p>application and collate available alth information Member States;</p> <p>or those among</p> <p>pport of learning.</p>	<p>cific activities l services that ssary, and an</p> <p>5 May 2005 – eventh report)</p>

¹ Document A58/21.



Recognized the value that ICT bring to health

Source: <http://www.who.int/healthacademy/media/WHA58-28-en.pdf>



eHealth Milestones

<p>WHA66.24</p> <p>SIXTY-SIXTH WORLD HEALTH ASSEMBLY</p> <p>Agenda item 17.5</p> <p>eHealth standardization and interoperability</p> <p>The Sixty-sixth World Health Assembly, Having considered the report by the Secretariat,¹ Recalling resolution WHA58.28 on eHealth; Recognizing that information and communication technologies have been incorporated in the Millennium Development Goals; Recognizing that the Regional Committee for Africa adopted resolution AFR/RC60/R3 on eHealth in the African Region and that the 51st Directing Council of the Pan American Health Organization adopted resolution CD51.R5 on eHealth and has approved the related Strategy and Plan of Action;² Recognizing that the secure, effective and timely transmission of personal data or population data across information systems requires adherence to standards on health data and related technology; Recognizing that it is essential to make appropriate use of information and communication technologies in order to improve care, to increase the level of engagement of patients in their own care, as appropriate, to offer quality health services, to support sustainable financing of health care systems, and to promote universal access; Recognizing that the lack of a seamless exchange of data within and between health information systems hinders care and leads to fragmentation of health information systems, and that improvement in this is essential to realize the full potential of information and communication technologies in health system strengthening; Recognizing that, through standardized electronic data: health workers can gain access to fuller and more accurate information in electronic form on patients at the point of care; pharmacies can receive prescriptions electronically; laboratories can transmit test results electronically; imaging and diagnostic centres have access to high-quality digital images; researchers can carry out clinical trials and analyse data with greater speed and accuracy; public health authorities have access to electronic reports on vital events in a timely manner, and can implement public health measures based on the analysis of health data; and individuals can gain access to their personal medical information, which supports patient empowerment;</p>	<p>WHA66.24</p> <p>27 May 2013</p>	<p>ial increase in the her related fields, s more data about ns and, therefore, operability issues</p> <p>ssion of personal</p> <p>data using health ires adherence to urate exchange of</p> <p>comes of health ccessary to justify</p> <p>lemented, in order standards, and in</p> <p>1 data, given their</p> <p>guages, including enting the further alth products and</p> <p>holders, including ic institutions, in ndards at national</p> <p>isms linked to an on of ehealth and ; and the donor</p> <p>to work with their ittee in order to n of health-related interest of public</p>	<p>to the application Health strategies horities, relevant</p> <p>otion of the full</p> <p>the coherent and dth interventions,</p> <p>es for health and related research,</p> <p>ization agencies,</p> <p>mental Advisory top-level domain al public health</p> <p>N Governmental al organizations, al organizations,</p> <p>solution and report bly, using that</p>
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¹ Document A66/26.
² See document CD51/13.



Recognized the value of adoption of standards for interoperability and Health on the Internet

Source: http://apps.who.int/gb/ebwha/pdf_files/WHA66/A66_R24-en.pdf



Standardization and Interoperability

WHO Forum on Health
Data Standardization
and Interoperability



3-4 December 2012
Geneva, Switzerland



- Facilitates the *Global Forum on eHealth Standardization and Interoperability*
- **Next Forum: February 2014**
Inter-Ministerial Policy Dialogue on 2nd WHO Forum on eHealth Standardization and Interoperability



Generalized Categories of Standards relevant to healthcare



Generalized Categories of Standards

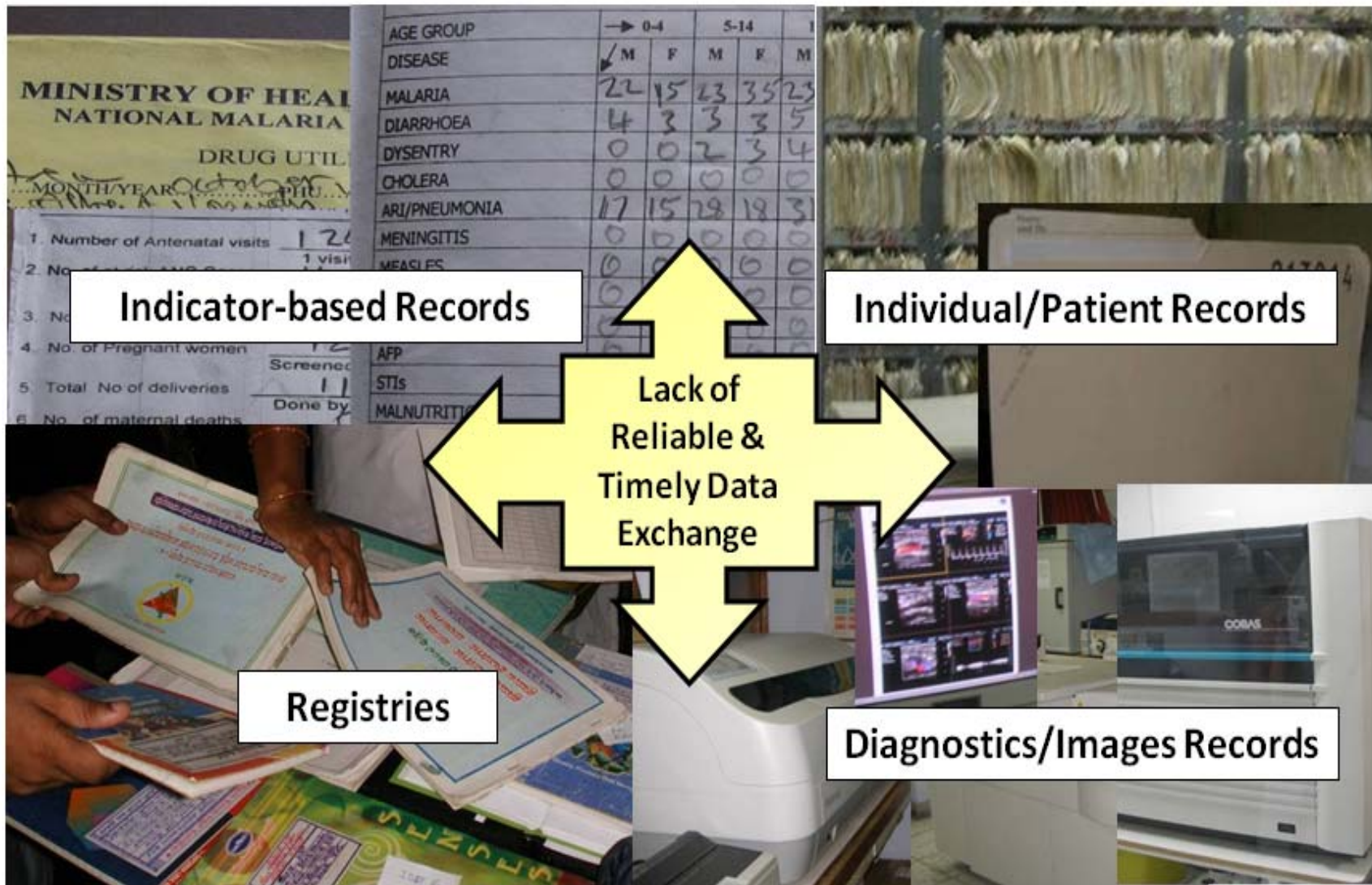
- **Health Data Standards**
(Primary area of World Health Organization)
 - Data Standards, Information Content Standards, Information Exchange Standards, Entity/Person Identifiers Standards, Privacy and Security Standards
- **Information Technology Standards**
(Primary area of International Telecommunications Union)
 - Telecommunication, Machine to Machine Communications, and other Technical Standards related to ICT

Source: Public Health Data Standards Consortium; <http://www.phdsc.org/>; Accessed: June 3, 2012



Standards Relevant to Health Data





Standards Relevant to Health Data

- Data Standards
- Information Content Standards
- Information Exchange Standards
- Entity/Person Identifiers Standards
- Privacy and Security Standards
- (*Functional Standards; Business Requirements*)

Source: Public Health Data Standards Consortium; <http://www.phdsc.org/>; Accessed: June 3, 2012



Data Standards

- Disease Classification
- Drugs Classification
- Laboratory Data Standards
- Digital Images
- Medicinal Products,
Pharmaceutical Doses,
Units, Common
Terminology Services

Examples only
(non exhaustive list)



Data Standards

- Clinical Procedure Terminology
- Pharmacy Terminology
- Nursing/HRH Terminology
- Payer Terminology
- Financial/Business Transactions Terminology
- Units of Measurements

Examples only
(non exhaustive list)



Information Content Standards

- Healthcare Content
- Public Health Card
- Medical Device Communication

Examples only
(non exhaustive list)



Information Exchange Standards

- Digital Images
- Pharmacy Business Transactions
- Country-specific Mandated Transactions Terminology
- Financial/Business Transactions Terminology

Examples only
(non exhaustive list)



Entity/Person Identifier Standards

- Patient Identifier
- Provider Identifier
- Employer Identification Number
- Country Identifier
- Health (Insurance) Card Issuer Identifier

Examples only
(non exhaustive list)



Privacy and Security Standards

- Anonymization and Pseudonymization Standards
- Security Standards
- Confidentiality Standards
- Patient Consent Standards
- Data Audit Trails

Examples only
(non exhaustive list)



Standards Relevant to Information Technology



Information Technology Standards

- Standard Generalized Markup Language (SGML)
ISO 8879:1986
- HyperText Markup Language (HTML)
ISO 8859-1
- Extensible Markup Language (XML)
- Simple Object Access Protocol (SOAP)
ISO/IEC 40210:2011

Examples only
(non exhaustive list)



Areas of current focus



Areas of current focus

- Data interoperability within and between Electronic Health Records (EHRs)
- Data interoperability between
 - Devices to Device
 - Device to EHRs
 - Diagnostics platforms and EMRs

Source: Public Health Data Standards Consortium; <http://www.phdsc.org/>; Accessed: June 3, 2012



Thank you

