
GFMER on-line training course on mHealth for sexual and reproductive

Online presentation

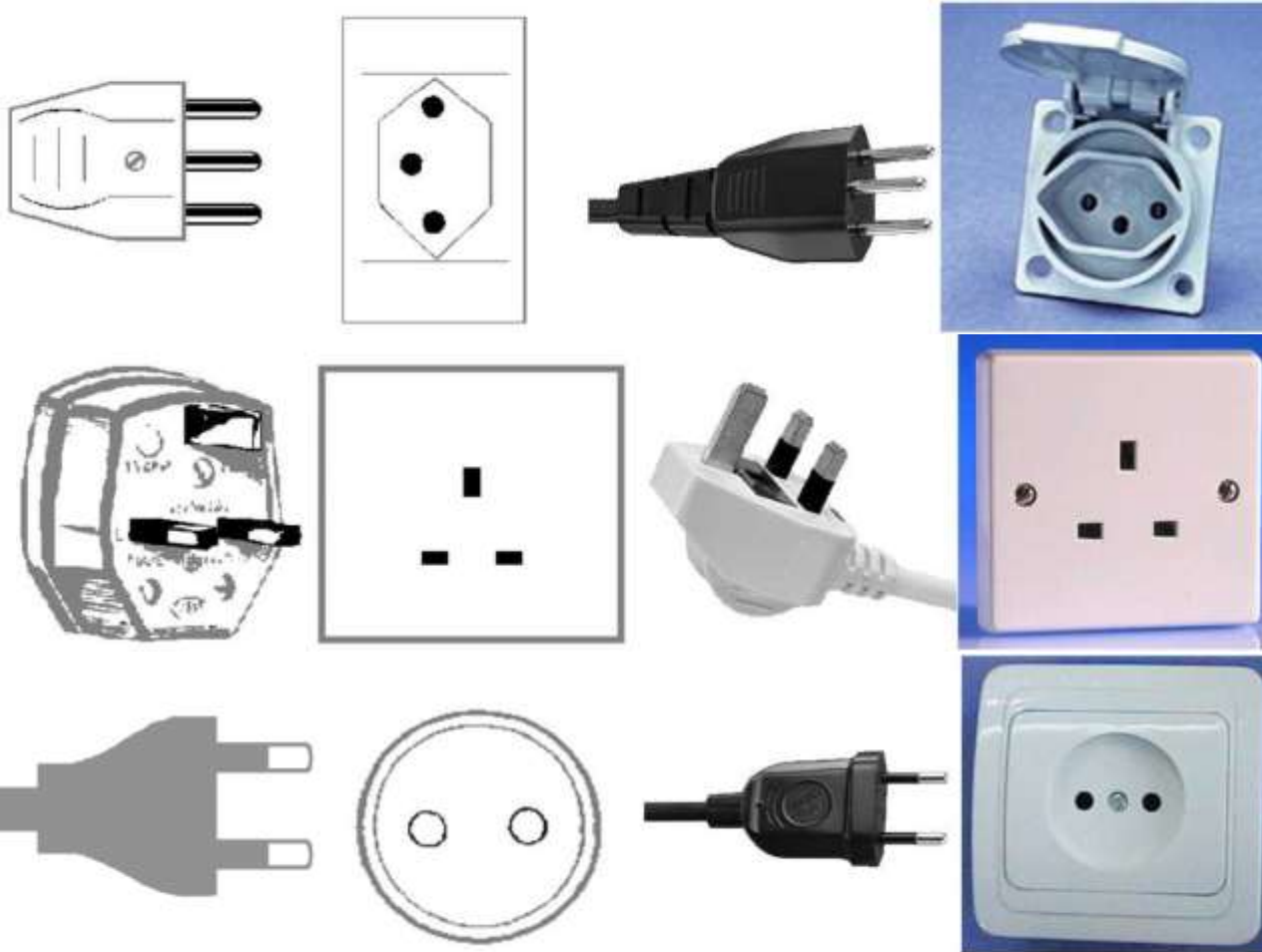
11 March 2013

Health data standards: presence and challenges

Najeeb Al-Shorbaji

*Knowledge Management and Sharing department
World Health Organization*

How many plugs should I have?



Switzerland
SWZ
CH
756

Jordan
JOR
JO
400

Egypt
EGY
EG
818

Five prerequisites for transforming healthcare with ICT standards

- 1) Emphasizing greater interoperability;
- 2) Increasing coordination over eHealth standardization;
- 3) Ensuring privacy, security and safety;
- 4) Reducing the standardization gap in the Developing World;
- 5) Leveraging existing ICTs like mobile devices and social media.

Source: E-health standards and interoperability: ITU-T Technology watch report, April 2012.

World Health Assembly Resolution

Urged Member States to:

□ Mobilize multisectoral collaboration for determining evidence-based eHealth standards and norms, to evaluate eHealth activities & to share the knowledge of cost-effective models, thus ensuring quality, safety and ethical standards and respect for the principles of confidentiality of information, privacy, equity and equality.



World Health Assembly Resolution

Urged the WHO Director General to:

□ Provide support to Member States to promote the development, application and management of national standards of health information; and to collect and collate available information on standards with a view to establishing national standardized health information systems in order to facilitate easy and effective exchange of information among Member States.



Are standards being used: Results of GOf 2nd survey

- ☐ 114 countries completed the survey in 2010;
- ☐ International standards, guidelines, norms, etc.
- ☐ National standards, adopted and developed to meet country needs.

Adoption of international standards

- 1) International Classification of Diseases 82%
- 2) Health Level Seven – HL7 50%
- 3) Systematized Nomenclature of Medicine – Clinical Terms - SNOMED CT 25%
- 4) Logical Observation Identifiers Names and Codes LOINC 23%
- 5) Global Fund for AIDS, Tuberculosis and Malaria Monitoring and Evaluation (M&E) toolkit 19%

Adoption of international standards

- 6) UNAIDS/United States Government
Confidentiality and Security Guidelines 18%
- 7) Statistical Data & Metadata eXchange–SDMX
9%
- 8) Dublin Core Metadata Initiative – DCMI 5%
- ISO TC 215 and CEN/TC 251 18%

National standards adoption (GOe results)

1. National health data standards, 58%
2. National health indicators, 54%
3. Patient identifier standards, 46%
4. Individual patient data standards 38%
5. Vocabulary standards (additional subsets of ICD), 32%

Standards and standardization

- **Standardization** (WHO) refers to creation of accepted specifications (e.g. definitions, norms, units, rules) that establishes a common language as a basis for understanding and exchange of information between different parties.
- **Standard**: Technical or semantic requirement providing the specifications necessary for systems to communicate meaningfully with each other. Standards are thus crucial to achieve interoperability. *European Information Society*

What is interoperability?

- IEEE: Two or more parts of a system exchanging information, then using it.
- It is the ability to communicate and exchange data accurately, effectively, securely and consistently with different IT systems, software applications and networks in various settings, and to exchange data so that the clinical or operational purpose and meaning of the data are preserved and unaltered.

Why interoperability?

- *Interoperability is essential* to achieve the full potential of information and communication technologies and medical devices in support of health systems development.
- Lack of data interoperability within and between systems hinders care and leads to fragmentation of health information systems.

Why interoperability?

- Effective and timely transmission of personal data or population data across information systems requires adherence to health data standards and related technology standards.

eHealth report to the WHO Executive Board, January 2013.

Barriers to implementation of standards

- Presence of numerous standards, too many of them;
- Lack of coordinated approach among Standards Development Organizations (SDOs);
- Lack of clear implementation guidelines for country adoption of standards;

Barriers to implementation of standards

- ☐ Developed in isolation from end users (healthcare professionals) and software developers;
- ☐ Mainly in English;
- ☐ Mostly available at cost;
- ☐ Knowledge and skills at national level not enough;
- ☐ Costly to implement.

Draft EB resolution on standardization and interoperability

☐ URGES Member States:

- ☐ to consider, as appropriate, options to collaborate with relevant stakeholders, including national authorities, relevant ministries, health-care providers, and academic institutions, in order to draw up a road map for implementation of health data standards at national and subnational levels;

Draft resolution on standardization and interoperability

- URGES Member States:
 - To consider developing, as appropriate, policies and legislative mechanisms linked to an overall national eHealth strategy, in order to ensure compliance in the adoption of health data standards by the public and private sectors, as appropriate,

WHO role

- REQUESTS the Director-General:
 - to provide support to Member States, as appropriate, in order to integrate the application of health data standards and interoperability in their national eHealth strategies through a multi-stakeholder and multisectoral approach including national authorities, relevant ministries, relevant private sector parties, and academic institutions;

WHO role

- to provide support to Member States, as appropriate, in their promotion of the full implementation of health data standards in all eHealth initiatives;
- to provide guidance and technical support, as appropriate, to facilitate the coherent and reproducible evaluation of information and communication technologies in health interventions, including a database of measurable impacts and outcome indicators;

WHO role

- to promote full utilization of the network of WHO collaborating centres for health and medical informatics and eHealth in order to support Member States in related research, development and innovation in these fields;
- to promote, in collaboration with relevant international standardization agencies, harmonization of eHealth standards;

Mobile health (mHealth)

“mHealth or mobile health is medical and public health practice, supported by mobile devices such as mobile phones, patient monitoring devices, personal digital assistants (PDAs), and other wireless devices.

Source: World Health Organization. mHealth New horizons for health through mobile technologies. 2011. http://www.who.int/goe/publications/goe_mhealth_web.pdf.

Most common initiatives as per GOe survey

- ☐ Health call centres
59%
- ☐ Toll-free emergency (e.g. poisons)
55%
- ☐ Emergency and disasters
54%
- ☐ Mobile telemedicine
49%
- ☐ Appointment reminders
44%

Medullan Survey Results: mHealth Drivers and Barriers

From April-July 2012, Medullan surveyed 106 healthcare providers, insurers and other healthcare-related organizations on their mHealth strategies and drivers.

Findings:

- ☐ Nearly **one in four** organizations is pursuing an mHealth initiative **without a specific driver**.
- ☐ Those who have a driver **the top choices were** “**Increased member/customer/patient engagement**” followed by “**Pressure to compete with other organizations.**”

-
- The **number one barrier** to achieving their mHealth objectives is, **“No clear strategy or objective,”** followed closely by, **“Lack of leadership for the initiative.”**
 - Other barriers include **“Lack of funding”** and **“Lack of skillset in-house.”**

Source: <http://www.medullan.com/index.php/whitepapers>

Interoperability for mHealth

- Three key challenges that mHealth advocates must overcome:
 - Are your systems interoperable?
 - Are you using open standards?
 - How will you evaluate?

A Reality Checkpoint for Mobile Health: Three Challenges to Overcome
(editorial PLOS Medicine), February 2013.

<http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1001395>

Get the most out of going mobile: best practices in mHealth implementation

- Five key steps to success to ensuring success when establishing and mobile technology plan:
 - Choosing the right device;
 - Choosing application/software;
 - Connectivity;
 - Integration;
 - Workflow transformation.

Source: White Paper: Get the most out of going mobile: best practices in mHealth implementation. Fierce Market Custom Publishing, January 2013.

http://www.fiercehealthcare.com/offer/mobile_best_practices/thankyou?sid=64849117

mHealth for Midwives: A Call to Action

Integrating the strengths of midwifery care and mHealth technology into the strategy for achieving the critical Millennium Development Goals related to maternal and child health is a powerful way forward. Midwifery involvement in the mHealth revolution, particularly at this critical point in its development, could benefit midwifery education and access to midwifery care, creating the shift needed to make real strides in decreasing maternal mortality globally.

Source: mHealth for Midwives: A Call to Action. Anna Maria Speciale and Maria Freytsis. <http://onlinelibrary.wiley.com/doi/10.1111/j.1542-2011.2012.00243.x/full>



Thank you

Q & A