Industry, innovation and infrastructure: How can health literacy bridge the digital divide and develop knowledge societies?
Participants

- **Omaira Tejada**
  General Director of Health Promotion
  Ministry of Health, Panama

- **Hussain Rasheed**
  Minister of State for Health, Maldives

- **Jiang Lixin**
  Health Literacy Working Group
  WHO Global Coordination Mechanism on NCDs
  Director National Center of Cardiovascular Disease, China

- **Zee Yoong Kang**
  CEO, Health Promotion Board
  Ministry of Health, Singapore

- **Lincoln A Moura Jr** (Moderator)
  Past-President, International Medical Informatics Association (IMIA)
The Need for eHealth Strategies and how to build them

Lincoln A Moura Jr, EE, MSc, DIC, PhD
Past-President, IMIA – the International Health Informatics Association
lamoura@uol.com.br +55 11 984266276
Conclusion

- A **drastic change** from focusing in a single object at a time...
  - Signals (ECG, Arterial Pressure, Blood Flow, ....)
  - Images (MRI, X-rays, US, Nuclear Medicine,...)
  - The EMR, EHR, CCR...

- **...to gathering and processing** all available information of value:
  - Social determinants of health (stress, environment, habits, status...)
  - Individualized health data from several and disparate sources
  - Health surveillance data (georeferenced data on diseases)

- **Five “Vs” for Big Data:**
  - Variety
  - Velocity
  - Volume
  - Veracity
  - Value
Digital Disruption

**Social**
- Personalized Content
- Self-service
- Gamefication

**Mobile**
- Connected
- Visual
- Augmented
- Ubiquitous

**Analytics**
- Sources
- Processing
- Big Data
- Prediction

**Cloud**
- Architecture
- Interoperable
- Efficient
- Flexible

**Sensors**
- Wearables
- Digestible
- Implantable
- Internet of Things

Adapted from Accenture research
Clear Message to Us

- Patients from both public and private sector are more aware, want better services and are willing to use e-services, in general;
- Governments and health care organizations want to be more efficient so as to improve access to better and more resolutive care;
- Goal: better health at a suitable cost.
"In your own words, how would you define “value” in healthcare? Please be specific.” (unaided response)

eHealth Waves

- **First Wave – circa 2000**
  - Investment in eHealth in countries like UK, USA, Canada, Australia, Sweden, Denmark and New Zealand;
  - Successes, Disappointments and (some big) Failures

- **Second Wave**
  - Increased and widespread perception that eHealth is VERY IMPORTANT to all countries no matter their maturity level;
  - ISO
  - WHO-ITU
  - WHA 66.24
  - Several countries started working on National eHealth Strategies

- **Current State**
  - Consolidate the value of eHealth Strategies, including policies but not limited to them.
eHealth is Worth it: The economic benefits of implemented eHealth solutions at ten European sites

Source: eHealth Impact, 2006
ROI in eHealth in the European Community

Source: eHealth Impact, 2006
Important Observation

- The time required for eHealth benefits to overcome effort is around 7 years, which typically implies in a change in national or regional government, and, therefore, involves major risk of lack of continuity.

- Governance is a major problem when deciding for eHealth Programs.
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eHealth standardization and interoperability

URGES Member States:

(1) 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 ehealth and health data standards at national and subnational levels;

(2) 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 ehealth and health data standards by the public and private sectors, as appropriate, and the donor community, as well as to ensure the privacy of personal clinical data;

(3) to consider ways for ministries of health and public health authorities to work with their national representatives on the ICANN Governmental Advisory Committee in order to coordinate national positions towards the delegation, governance and operation of health-related global top-level domain names in all languages, including “.health”, in the interest of public health;
ISO TR 14.639 eHealth Architecture Roadmap
Some Countries with published eHealth Strategy Initiatives

- Argentina
- Australia
- Brazil
- Canada
- England
- Ghana
- Iran
- Ireland
- Kenya
- New Zealand
- Norway
- Philippines
- Qatar
- Rwanda
- Saudi Arabia
- Scotland
- South Africa
- Sweden
- Switzerland
- Tanzania
- United States
- Uruguay
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eHealth Strategy Objectives

- Define a Strategic Vision
  - Identify Strategic Recommendations
  - Likely to find the need for some Immediate Action (extension to the Toolkit)
National eHealth Strategy Toolkit

Part 1
National eHealth Vision

Part 2
National eHealth Action Plan

Part 3
National eHealth Monitoring & Evaluation
The ITU-WHO Method for a National eHealth Strategy

http://www.itu.int/pub/D-STR-E_HEALTH.05-2012
The Building Blocks of the Strategy

http://www.itu.int/pub/D-STR-E_HEALTH.05-2012
Example: *Legislation, policy and compliance*

- What data protection legislation and regulatory frameworks exist?
- Which areas do existing data protection legislation and regulatory frameworks address, such as individuals’ choice to opt in or opt out of the collection of their personal health information;
  - Do existing legislation and regulatory frameworks *support* or *constrain* the sharing of health information across geographical and health sector boundaries?
- Who is responsible for regulating compliance with data protection legislation, in particular across the nation’s health sector?
- What risks do existing data protection legislation and regulatory frameworks pose to the growth and development of the national eHealth environment?
- ..........
Estratégia e-Saúde para o Brasil

Brasília
2014
The Proposed Strategic Actions

1 – Reduce eHealth fragmentation within the National Health System
2 – Strengthen overall Governance of eHealth within the Federal Govmt
3 – Define thorough legislation to support eHealth
4 – Establish a robust eHealth Architecture
5 – Define and deploy interoperable eHealth services
6 – Promote infrastructure as a service (IaaS)
7 – Propose and deploy a reference Architecture for IaaS
8 – Develop eHealth capacity building / certificates for Health Workers
9 – Promote access to Health Information by the population
Conclusion

- eHealth can change Health
- Technology is a problem, but NOT “the” problem
- No single system can sort out all problems
- Need for Standards for Interoperability
  - Say “No” to Siloed-Systems
- National Unique IDs are Essential
- Need for ICT Infrastructure
- HR Capacity Building
- Good Methods are Required
- Think Big, Analyze the Roadmap, Walk Step by Step
  - Give ourselves time to learn