eHealth Strategy in Sudan: experience and Lessons learned

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Outlines of the presentation

- Country overview
- Evolution of ICT use for health “ehealth implementation”
- Sudan ehealth strategy: development process
- Sudan ehealth strategy: vision, priority areas and components and contents
- Main achievements and progress so far
- Lessons learned and challenges
Sudan: country overview

1. Federal system
2. Bicameral
3. 17 states
4. 184 localities
5. Population: 34.1 million
6. > 4000 public health centers/units
7. > 350 hospital
8. >33 medical and nursing colleges
9. 67% Rural
10. 43.2 below 15 years
11. Literacy Rate 67%
12. GDP: 74.5 billion USD
13. Per capita GDP:
    Nominal 2,233 USD
Sudan: country overview

• ICT infrastructure and connectivity:
  • Well developed fiber optic and other infrastructure
    “state of the art building and hardware”
  • The NTC is the government regulatory authority for
    telecommunications and internet providers
NCT tower Khartoum
Sudan: country overview

- Mobile telecom operators: 3 operators (Zain, MTN, Sudani)
- More than 25 million subscribers (73% of the population)
- Landline operators: 2 operators (Canar and Thabit) using “wireless” connectivity “0.6 million subscribers”
Evolution of “ICT” use for health

- Early phase: (before 2004)
  - eMail within and outside the Sudan
  - simple Accounting (expenditure against a stipulated budget),
  - Personnel (mostly individual staff profiles)
  - Staff Salaries
  - Attendance (as a part of “incentives” payments)
  - Fellowships records and monitoring (mostly covering study/training abroad)
  - Voluntary Organization database and profiles
Evolution of “ICT” use for health

- Diseases Surveillance reporting,
- National Health Statistics (the oldest & best organized family of applications)
- Documents Listing,
- Registry of Pharmaceutical Services, and
- Drugs Information Centre.
Evolution of “ICT” use for health

- **2004-5**
  - Pilot project of telemedicine was started in early 2005 linking 4 remote hospitals with the KRT teaching hospital

- **2005-2010**
  - Development of ehealth strategy and its implementation
Evolution of “ICT” use for health

- 2010-2012
  - Electronic patient records and HMIS

- 2012-onward
  - Revisiting the e-health strategy
Sudan ehealth strategy: milestones and development process

- In 2004: study of the Sudan requirements for Telemedicine links
- In 2005: MOH Initiated the process of developing ehealth strategy “based on the telemedicine requirements assessment”
Sudan ehealth strategy: milestones and development process

- Supported by WHO/EMRO and ITU
- Part of an ongoing reform agenda for the health system
Sudan ehealth strategy: milestones and development process

• The underlying motives for the health sector reform are to:
  • increase the capacity of the health care institutions to deliver better quality medical care
  • increase accessibility of the citizens to health care services
  • explore more, and increase the current, uses of “Information & Communication Technologies (ICT)” in support to the National Health Care Services: (clinical, public health and management)
Sudan ehealth strategy: milestones and development process

- ehealth strategy was based on:
  - rigorous *analysis of the requirements* of a wide range of users in health care institutions
  - their various technical and administrative support services
  - analysis of the capacities and potential for running and managing eHealth technological support
Sudan eHealth Strategy

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Sudan eHealth strategy: vision, priority areas and components and contents

1. Establishment of Aafya-Net: a “national platform” for Health Information that connects and facilitates communications between all the institutions: contents include:

   - national repository of Health Statistics and Epidemiological databases;
   - national Standards (those agreed to and under consideration);
   - national directories and registers; and
   - national Health Legislation reference manuals.
Proposed design of Sudan Afya Net
Sudan ehealth strategy: vision, priority areas and components and contents

2. HMIS solutions

- Patient Registration & Master Patient Index including unique identifier
- Inpatient (includes: Admissions, Discharges and Transfers)
- Outpatients
- Etc...
Sudan ehealth strategy: vision, priority areas and components and contents

2. Development of National Health Data Dictionary
3. Expand the Telemedicine Network
4. Solutions for Continuing Professional Development/CME
Main achievements and progress so far

- Telemedicine solutions
  - Tele-radiology
  - Tele consultation
  - Tele-pathology
Main achievements and progress so far

- **HMIS solutions**
  - Currently the software is under development (support for the Turkish government and people)
  - Global fund

- **Data warehouse and health system observatory**
Lessons learned and challenges

1. Positive aspect/Strength:
   - The awareness gained about the importance of ICT and its utility for health
   - The assessment of the situation and requirements
   - The endeavor of the e-health strategy development
   - Some achievement related to HIS and CPD/Tele Medical Education
Lessons learned and challenges

2. Weakness/drawbacks:
   • Development process
     • Still not a full fledged e-health strategy
     • No wide stakeholders involvement
   • Contents
     • Governance was not well address
     • Inadequate operationalization of the strategy
     • No M&E framework
Lessons learned and challenges

- Implementation
  - Inadequate implementation arrangements
  - Capacity issues
  - No institutionalization
  - Inadequate financial resources
Thank you