Implementing eHealth: The Nigerian Experience

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Outline

• Definition
• Implementation of eHealth in Nigeria
• Some of the eHealth initiatives
• Implications for the Cloud
• Drivers for Cloud Computing in eHealth
• Impact of the Cloud on eHealth
• Conclusion
Defination

- eHealth: the use of ICT for Health
- ICT provide opportunities for individuals, healthcare providers and administrators to
  - obtain information,
  - communicate with professionals,
  - deliver first-line support especially where distance is a critical factor and
  - promote preventive medicine programmes
Implementing eHealth in Nigeria so far

Approach

• Piecemeal, uncoordinated
• Largely pilots yet to be scaled up
• No comprehensive eHealth national strategy developed yet.
• Efforts made to develop eHealth in Nigeria

• Efforts to develop telemedicine and eHealth in Nigeria started in 1994.

• Department of Planning, Research and Statistics/FMOH tried to produce necessary documents for eHealth development and deployment in 1996.

• FGN first showed commitment to the use of ICT to deliver health services as explained in the NEEDS document( eHealth seen as a component of eGovernment)
Some of the eHealth initiatives

- A pilot project initiated by National eGovernment Strategies Ltd in 2006 to provide teleconsulting in cardiology with the use of video conferencing equipment and digitalized electrocardiography machine to Abuja communities.

- A pilot project initiated by the National Space Research and Development Agency (NASRDA) in collaboration with FMOH in 2007 through provision of services by tertiary in
  - India Pan African eHealth Network project at the Universities of Ibadan and Lagos Teaching Hospitals to help provide trans-border teleconsultation and training of workforce.

- Intel telemedicine/eHealth project between Federal Medical Centre, Bida, and the National Hospital, Abuja, for critical pediatric care as well as surgical cases.

- FCT eHealth pilot (the FCT eHealth web Portal Initiative) – an online portal that seeks to manage patient data/statistics and to close any existing gap between primary and secondary health systems by linking data across health facilities.

- mHealth project with the National Primary Health Care Development Agency (NPHCDA) used in the Midwives Service Scheme (MSS).

- Mobile Community Based Surveillance (mCBS) project designed to give traditional birth attendants the ability to report vital MCH events in real time using mobile phones. Mobile health unit set up to shuttle across 8 states for a period of 2 months.
Some of the eHealth initiatives

• UNICEF supported an mHealth initiative which involves the implementation of Rapid SMS to track the supply of malaria bed nets as well as using Rapid SMS to pilot a child nutrition monitoring system.

• Made in Nigeria Primary Health Care and Hospital Information System (MINPHIS) application that keeps patient records and generates various reports for health management and research purposes.

• Adoption of District Health Information System (DHIS) as a national tool for reporting aggregate data from the lowest to the highest level.

• Establishment of a national eHealth data/documentation centre to provide central coordination for national health data/information warehousing and management and hosting databases for all health programmes of FMOh.

• Lagos State Government’s implementation of eHealth in 13 General Hospitals in the state enabling the hospitals to practise health care system supported by electronic processes and telecommunications technology.
Lessons learnt from implementation

- eHealth projects implemented so far have merely created small-scale applications of eHealth that are unable to effectively communicate or share information with other health systems or across geographies, technologies or programs.

- There are barriers to scaling up most of the projects to support a larger patient and care provider base.

- Some of the projects are not running currently or are under-utilized.

- Most of the projects lacked adequate stakeholders’ involvement in all phases from conception to implementation.

- Most of them are funded in ways that may threaten their sustainability/scalability.
- Most of them have not been evaluated to determine their impact on health system, patient health outcomes and their cost-effectiveness.

- There is currently no integration of the multiple and wide variety of health information systems in the country.
Barriers to eHealth in Nigeria

- Lack of National eHealth Strategy and Policy.
- Lack of eHealth Legislative Framework.
- Epileptic electric power supply.
- Inadequate government commitment (policy, legislation, funding etc.)
- Lack of/inadequate ICT infrastructure.
- Underfunding of the health sector - little or no funding for eHealth.
- Low awareness of eHealth and its importance.
- Poor attitude to wanting to change the old way of doing things.
- Inadequate human resource capacity.
- Prevalence of cyber crimes.
- Low internet connectivity.
Context for eHealth development

- Context for eHealth development
- Source: National eHealth Strategy Tool Kit

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Implications for the Cloud

e-health solutions

Access to care
Target: Social and political stakeholders
- Telemedicine
- Teleconsultation
  - Home Care
  - Monitoring
- Electronic health record (EHR)
- Global digitalised health systems
  - Hospital and health information systems
  - Regional Networks
  - eReimbursement and Procurement
  - Smart cards

Quality of care
Target: Health professionals
- ePrescription
  - 2nd Medical opinion
  - Computer-assisted imaging
  - Continuous education

Economy of care
Target: Economists

JC Healy, 2005
Drivers for Cloud Computing in eHealth
Internet population 2007 vs 2012, a 2x increase in 5 years

North America
233M → 273M

Europe
322M → 501M

Asia
418M → 1B

Latin America
110M → 236M

Africa
34M → 140M

The Middle East
20M → 77M

Oceania
19M → 24M

World
1.15B → 2.27B

Data source: Internet World Stats
Drivers for Cloud Computing in eHealth

• New imperative to secure rapid and reliable transferability of data between health decision-makers in today’s healthcare environment
• The need to be able to transfer data reliably 24/7 to effect optimal care
• Changing demographics, health systems constraints /cost pressures that demand new effective solutions
• Cost-sustainable
• The nature and impacts of health systems reforms
• The availability of significant experience from other industry that have adopted the cloud
• The amount of data that health care providers must deal with is daunting
Impact of the Cloud on eHealth

- Increased transparency and governance to health systems
- Security
- Scalability
- Mobility
- Cost Reduction
- Sharing
Conclusion

• Growing expectations, changing demographics, and resource limitations require wise investment in eHealth solutions that address major health needs

• Cloud in eHealth presents new opportunities for access to quality health care, for all

• Enabling eHealth strategy, policies are required to ensure that these opportunities are fully harnessed

• Solutions that are designed and implemented now must form the foundation (practice and technology infrastructure) for decades to come
Health is an **universal** right

eHealth

eHealth requires a **glocal** approach
For Our Sakes & Future Generations

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