



## Uganda



Kindly describe a successful or challenging e-health initiative your country has taken.

Uganda is implementing many e-health initiatives. One of them is; "Enhanced Access to Health Services and Information through ICTs in Uganda" This was a three year (2000-2003) pilot project executed the Faculty of Medicine of Makerere University.

### Project components

- ✦ **Internal** videoconferencing between Mulago and Butabika national referral hospitals and audio-conferencing linkage between Mulago, Mbarara Medical School, Mbale regional referral hospital, Rakai and Lyantonde district health offices
- ✦ **External** email and internet service in Mulago and Butabika facilitating store and forward teleconsultation with external centres

### Project objectives

- ✦ Training of medical staff in basic computer skills and production of content and ICT-based teaching materials
- ✦ Provision of distance learning (lectures and seminars) and teleconsultation
- ✦ Collaboration with internal and external institutions/entities in e-health

### Project Outputs

- ✦ The participants were introduced to the concept of integrating ICTs into healthcare
- ✦ Awareness raised on the scope and usefulness of ICTs in terms of teleconsultation, tele-education and getting information from the net
- ✦ Acquisition of skills in computer use and production of ICT-enhanced health material
- ✦ Shared lectures and discussions between project sites

### Project challenges

- ✦ Resistance, as this was viewed as additional work without remuneration and technophobia especially among the elderly and those in remote areas
- ✦ Poor acoustics in the sites with background noise interfering with the sessions
- ✦ Limited network coverage, especially in remote areas and the old land lines creating a lot of background noise
- ✦ There was no direct advice or supervision by the project funders with understanding of the situation on the ground
- ✦ Low capacity for telecommunications, computer, network management and timely scheduling of sessions.

What were the financial challenges and costs associated with the implementation of this programme?

- ✦ Project budget hampered identification of affordable and durable equipment due to high equipment costs. However local communication companies were cooperative with health related projects and gave discount for communication costs.
- ✦ Process of disbursing funds from donors, equipment sourcing and procurement is long and yet the project duration is from the time of signing the funds. The entire process of deliberations, search and identification, adjustments, payment and installation stretched from December 2000 to November 2003, requiring a time extension.
- ✦ There was a one hundred and ten planned budget line for acoustics in the rooms and sustainability. Patients could not pay for teleconsultations since they did not fully understand the concept of telemedicine.

### What have been the main technological challenges to implementing e-health in your country?

- ✘ *Low computer literacy among health workers impacting on the limited use*
- ✘ *Non-existence/limited number of computers especially in rural health units.*
- ✘ *Limited technical expertise to plan, manage and maintain Information and Communication Technologies (ICTs) for health and rapidly changing technology hampering sustainability.*
- ✘ *High costs of hardware, software and connectivity.*
- ✘ *Lack of agreed standards, guidelines and specifications for communication and IT hardware and software to ensure equipment compatibility and interoperability.*
- ✘ *Numerous stand alone donor funded projects with limited collaboration leading to fragmentation, duplication and wastage of resources*
- ✘ *Rapidly changing technology for health workers with limited exposure to ICT*
- ✘ *Non existence of policy and relevant laws to support e-health.*

### Have any ethical issues been raised during the design and implementation of e-health programmes?

- ✘ *External doctors from another environment advising as third party professionals without consent of the patients.*
- ✘ *Security during teleconsultation and transfer of patient information.*
- ✘ *Involvement of non-medical providers especially technical ICT staff and information managers.*
- ✘ *Health workers more aware of the need for addressing ethical issues.*

### Has the implementation of e-health programmes required any legal or regulatory changes?

- ✘ *Legislation is recommended because existing laws do not cover issues of e-health. E-Commerce laws do not cover e-health.*
- ✘ *The National e-health Steering Committee is currently looking at areas of e-health that require legal and regulatory changes.*

### What have been the outcomes of your e-health initiatives?

- ✘ *Raised awareness among policy-makers leading to the appointment of the National e-health Steering Committee an advisory and supervisory body.*
- ✘ *Formulation of a national e-health policy, strategy and implementation which are in the final stage and lead by the national e-health Committee.*
- ✘ *A policy committing the Ministry of Health to using ICTs to improve healthcare delivery while addressing issues of sustainability.*
- ✘ *Increased computer and internet use among health workers. There is also increased demand for computer training and more computers for health workers, especially among the young ones.*
- ✘ *Development of ICTbased CME material and training on content creation and multimedia development.*
- ✘ *Health worker interaction through the Health Node that was established.*
- ✘ *Human resource capacity built in the use of ICTs for health.*

### E-Health Initiatives

1. Mulago Hospital – Fuerth Hospital (University of Erlangen-Germany)  
Internet robot dynamic Telepathology Project
2. Information and Data Management for Rural Health Units (UCMB)
3. Uganda Health Information Network (UHIN)
4. National e-health Policy, Strategy and Implementation Plan (Draft)