Utilizing Telemedicine and eHealth to help with Capacity Building of Healthcare Professionals in Africa.

Excerpt from Proposed West Africa Telemedicine Center of Excellence at the University of Ilorin Teaching Hospital/College of Health Sciences, Kwara State, NIGERIA.

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Background

• The demand on the healthcare systems in Africa are becoming more complex due to the fragmented nature of healthcare delivery and shortage of healthcare professionals.

• Due to an increasing population, increasing healthcare costs, overstretched social & educational resources and Brain Drain there is shortage of healthcare professionals in Africa. In 1997 only 16 doctors is available per 100,000 inhabitants.

• Information and communications technologies allow for better coordination of care, easy exchange of information and greater continuity of health services regarding continuous medical education.

• Telemedicine is the use of information and communication technologies to provide or support health services where distance separates the healthcare providers and users.

• eHealth/Telehealth is the use of electronic information and telecommunications technologies (ICT) to support long distance clinical healthcare, patient and professional health related education, public health and health administration.
Background

- Recent advances in technology have led to rapidly declining costs in ICT and boosted the symbiosis between the fields of healthcare and information communications technologies.

- Application of telemedicine/eHealth as an economical means in healthcare systems in Africa will play an ever-increasing role to education, training of healthcare professionals and eventually building capacity for the 21st century healthcare industry in Africa.

- Africans through NEPAD objectives on ICT have resolved to establish regional distance learning and health education programmes to improve the situation in the health and education sectors, it is time to take advantage of the benefits of telemedicine/eHealth to achieve this.
Background

- It is against this backdrop that the Africa Telehealth Group www.africatelehealth.org initiates Regional Telemedicine centres across Africa (Nigeria, Tunisia, Ethiopia & South Africa) that will act as a hub for knowledge to other countries by connecting the national healthcare facilities.

- Society for Telemedicine and eHealth in Nigeria www.sftehin.org, a national representative member of International Society for Telemedicine and eHealth Switzerland www.isft.net, is a partner to this initiative of Africa Telehealth Group to establish West Africa center of excellence in Nigeria.
West Africa Telemedicine Center of Excellence

- From Centre to the Periphery
  - building a national centre and expanding knowledge gained to other countries
- Help Desk Approach
  - building a centre of excellence with capacity to support others
- National Telehealth projects
  - focus on single country

It is the belief of the Africa Telehealth Project that the use of these three techniques together in regional telehealth centres will improve the quality of healthcare delivery.
West Africa Telemedicine Center of Excellence

- The Centre should:
  - Create elaborate national and Regional plans
  - Expand the content to be shared at the regional level by creating a clearing house for telehealth in the sub-region
  - Evolve as a centre of best practices for the sub-region, document and disseminate knowledge
  - Act as a networking hub if necessary
  - Basic network access for health practitioners
  - Projects on basic telemedicine and health content
  - National awareness on health communication and telemedicine
  - Work on national telehealth policy
  - Project on national health informatics training and course
  - Plan for overall promotion of information communication technologies for continuous medical education
Elements of the Center

• Distance Education:
  • Continuing Practical Education modules would be created by various member sources and interoperability ensured by the Telehealth Training Development Section (TTDS).
  • All material will have been validated through peer review. This would provide a resource library of up-to-date educational material on a wide variety of medically related subjects.
  • Access to educational materials would be controlled through password access.
  • A fee would be charged for each student and CPE credits issued through the appropriate educational facility (University of Ilorin and a collaborating American or Canadian University).
  • Sponsorship opportunities may become available whereby modules could be delivered free-of charge and credit given to the sponsoring agency.
Elements of the Center

The TTDS would initially focus on development of distance educational programmes in three distinct areas:

a) technical training for maintenance professionals
b) general introduction to Telemedicine/Telehealth technologies and their application
c) health professional training in the use of various telehealth applications such as electronic medical record (EMR), database, videoconferencing (VTC), medical peripheral, legal aspects of telehealth, etc. The aim of the section would be to work with telehealth research section and develop telehealth programs for: the general public health care givers technical support personnel; and health administrators and executives.

Professional Forum:
The website would provide a number of secure areas that would promote the sharing of knowledge and experience. For example a Doctor's lounge would allow physicians to discuss topics of common interest.
Elements of the Center

- **Telehealth Research Section:**
  - The telehealth research section would investigate the areas of greatest need and subsequently follow-up with research activities.
  - As mentioned, the section would collaborate with research organizations regionally, nationally and internationally.
  - Enhanced communication with all appropriate stakeholders will benefit all member nations.
  - One similar concept is that employed by the Human Interface Technology (THAT) Lab at the University of Washington, where all member organizations can benefit from research undertaken and financially support its development.
  - This research section would be tasked with various evaluation and investigations. For example, it would investigate the level of effectiveness within telehealth programs and act as an honest broker for feasibility studies, telehealth marketing plans etc.
Elements of the Center

• Lecture Series

Each Centre would provide a series of in-person lectures in a variety of topics. These would be presented by TTDS personnel or by professional educators from the medical school involved, as appropriate. A schedule of lectures, and locations would be posted on a separate area of the website. Registration would also be provided on-line and any applicable fee collected.
Elements of the Center
Medical Teleconsulting Unit:

Medical specialists, physicians and nursing personnel will be able to employ telehealth technology (real-time and store-and-forward) to refer and discuss patient treatment. This includes sub-sets of Telehealth, which include telecardiology, teleradiology, teledermatology, telepsychiatry and teleophthalmology to name a few. The Electronic Medical Record (EMR) to be provided will aid in providing current and past medical history as well as key patient data including radiology images. It is predicated that each TCE will develop its own area of expertise and a Global Network The University of Ilorin Centre will be the focal hub of telemedicine expertise within Nigeria as well as West Africa and for that matter, Africa as a whole and will also act as a resource to internationally based organizations within and without the network. These may be consulted as required. As an example, Oxford University medical School has developed a particular expertise for telepathology.
Next Steps

- Efforts to build capacity of healthcare professionals in Africa through the use of ICT should be considered by all.
- Regional cooperation to establish Teletraining centers for healthcare professionals across Africa linked to each other.
- Africa Health Diaspora should support similar initiative of Africa Telehealth Group by coordinating participation of institutions abroad in virtual learning/healthcare centers in Africa for knowledge sharing.
- Need to enhance current investments in information based technology resources in order to advance widespread health promotion, disease prevention, treatment and training of healthcare professionals in Africa using telemedicine and ehealth applications.
- Identify an appropriate policy and program support framework(s) that would best facilitate successful telemedicine /ehealth services within Africa and between various countries abroad.
- NEPAD, World Health Organization and Africa Development partners in a Public Private Partnership should explore the potentials of telemedicine and ehealth to achieve this year’s theme of World Health Day in Africa.
• Thank you for listening.