International Telemedicine and eHealth: Transforming Systems of Care in the Global Community

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Dale C. Alverson, MD
Center for Telehealth and Cybermedicine Research
THE EARTH IS BUT ONE COUNTRY

And Mankind Its Citizens

JOHN HUDDLESTON
The Potential

- Telehealth and e-health are providing a means to transform systems of care throughout the world, providing greater access to clinical service and consultation, as well as sharing knowledge, education, training and local capacity building.

- Leap-frogging over prior barriers, these information and communication technologies (ICT) also have the potential to offer greater access to these services in developing countries.

- The use of telehealth must be put in the context of the critical health needs in each country, cultural perspectives, current and future communication infrastructure, other supportive resources, and likelihood for sustainability.
The Potential

- Fundamental steps in addressing global health issues include reducing poverty; improving education and health promotion strategies; ensuring access to clean water; and investment in sustainable waste removal and renewable energy programs.

- The mounting concerns related to the HIV/AIDS epidemic, the re-emergence of tuberculosis, increasing issues related to hepatitis C, malaria and the threat of pandemic influenza, all highlight the importance and value of telehealth and international collaboration.
Defining Telemedicine and Telehealth

1. “Tele-” comes from the Greek root word meaning “distant or remote”/“at a distance”.
   - Tele-phone
   - Tele-vision
   - Tele-graph
   - Tele-scope
   - Tele-Etc, etc, etc
Value of Telehealth

- Using Information, Communication Technologies:
  - Transform systems of care
  - More Efficient Distribution of Limited Resources
  - Increase access and close gaps in health disparities
  - Share knowledge, experience and best practices
  - Increase healthcare workforce
  - Improve health and wellness
  - Decrease costs
How will the Enhanced Telehealth Grid be used?

- Clinical
- Educational
- Research
- Administrative
- Health Information Exchange
- Enhanced Disaster Response
The Center for Telehealth and Cybermedicine Research

Center: Developing New Programs
Telehealth Networks
Rural/Remote Health Providers Can Access Expert Medical Opinions, Knowledge, Education via Telehealth

- Rural or Remote Location
- Patient
- Student
- Local Health Provider

Telehealth Network
- Audio
- High-Resolution Images & Video

- Consultation
- Direct Patient Care
- Case Reviews
- Education
- Training
- Health Information Exchange
- Community-Based Research

Specialty Medical Center
- Medical Specialist
Case Reviews or Consultation
Direct Patient Care

Maternal Fetal Medicine-High Risk Pregnancy
“Store and Forward”

- Capturing an image and **storing** it to then be **forwarded** for review by a medical specialists
- Examples include teleradiology, telepathology, and teledermatology

*Teleradiology and Image Transfer*
Family Visitation: Video Phone and VOIP
Trauma Triage

Consulting Questions

Step A: Before reviewing the case with the supporting information
Question 1: Based on your current knowledge would you have accepted this patient for transport?
Answer: ○ Yes ○ No

Step B: After reviewing the case with the supporting information
Question 2: Did you accept the patient for transport?
Answer: ○ Yes ○ No

Question 3: Did your management recommendations change?
Answer: ○ Yes ○ No

Comments:

Ready to submit advice?

Submit Advice
World braces for flu siege
Quick action may stop global bird flu epidemic

Many animals destroyed: A health officer collects ducks to be killed at a farm north of Bangkok last year.

Millions may die if H5N1 virus spreads, agency says

H5N1
Distributed Medical Intelligence

- Knowledge Sharing Networks/Just in Time/On Demand
- Best Practices
- Evidence based
Programa Nacional de Telemedicina Ecuadoriana
Programa Nacional de Telemedicina
San Cristóbal, Galápagos
1350 Km.

UTE

NUEVO ROCAFUERTE
850 Km.
Hand Held Devices
“mHealth”

BlackBerry

Treo/Palm

iPhone
La Lancha Medica en la Amazonia
Other Critical Concepts

- Preventive Medicine and Integrating Community Health Workers/Promotores de Salud
Different cultures with unique health issues
Exchange of Students and Faculty
Next Steps

- Develop potential new telehealth services that meet needs as defined in each country that utilizes an expanding international network of networks.

- Emerging new information technologies, wireless systems and handheld devices can provide complimentary systems for global connected health and cultural exchange.

- These approaches will provide platforms for sharing knowledge and best practices that can be realistically customized to the needs of each country based upon existing resources and future potential improvements in their healthcare systems and ICT infrastructure.
Next Steps

- Additional efforts should focus upon provision of access to affordable educational and training materials, as well as electronic journals. As needed, multi-lingual materials and modes of communication should be provided.

- Lastly, recognition of traditional healing practices should be integrated that build upon unique cultural perspectives related to holistic health and wellness.
Traditional Healers
INTER UNIVERSITY MEDICINAL PLANT FOR NURTURE & THERAPEUTICS (IMPLANT) (2004 - 2007)
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SAURASHTRA UNIVERSITY-RAJKOT
The American Telemedicine Association (ATA), http://www.americantelemed.org, has also developed a Web-based International Telemedicine Resource Center designed to facilitate links to several international programs, addressing telehealth initiatives in a host of countries.

The ATA international resource center offers an expanding inventory of international telehealth programs, as well as provides a point of contact for promoting coordination and awareness of these projects, as well as a platform for improved relations between developed and developing countries, that is a forum for health diplomacy.
Conclusions

- ICT applications to healthcare called telehealth, eHealth, mHealth, or overall “connected health”, offer the opportunity to transform systems of care in profound ways that can improve the health and wellness of children and their families in the global community, at individual, community and population levels.

- These approaches can improve access to care, education, training, sharing knowledge, and health research throughout the world in culturally appropriate ways that address fundamental needs, as well as specific unique health needs of each country.
Conclusions

Ultimately telehealth can improve local capacity to manage health and wellness, improving the quality of life of all people through partnerships by

“thinking globally but acting locally.”
Questions?

http://hscl.unm.edu/som/telehealth

dalverson@salud.unm.edu