Telecommunications in Health Care
(eHealth)
Innovative Areas of Business

Introduction

Development in information and communication technology (ICT) has ushered in an era of profound opportunity and potential for worldwide advancement in health and healthcare. eHealth, the use of electronic ICT in health, can help health professionals not only in keeping pace with the exponential growth in volume and complexity of information and knowledge, but also in applying more of what we know individually and collectively, to help resolve the health problems of the world, and in particular, the health-related Millennium Development Goals (MDGs) set up by the United Nations.

Target eighteen of the goals aims at working with the private sector to make available the benefits of new technologies, especially information and communications, as a means of achieving the MDGs. The ICT-based knowledge coupling system can build the "know-do" bridge by removing distance and time barriers to the flow of information and knowledge for health, and provide immediate up to date, high quality, relevant information to health professionals.

Developing countries have an overwhelming need for the provision of medical and health care services, especially in areas outside the cities and that eHealth/telemedicine services could be an economic means of achieving national health policy objectives with regard to improvement and/or extension of medical and health care, especially to non-urban and remote areas.

The following reasons justify a more serious approach to eHealth:
- E-Health is the single most important revolution in healthcare since the advent of modern medicine and hygiene
- There are numerous success stories all over the world, particularly in the developed world

- eHealth has the potential to extend healthcare efficiently to nearly 40% of the population of developing world, where healthcare is almost non-existent.

Recently, in October 26, 2009, the Digital He@lth Initiative (DHI) has been announced in New York. As a unique, multi-stakeholder collaboration between the ICT and healthcare sectors, the DHI aims to harness digital health care solutions for the catalytic scaling up of interventions in even the most poor settings.

Project objectives

- to raise the awareness of decision-makers, health professionals, partners, beneficiaries and other key players about the benefits of telecommunications for the e-Health applications by preparing reports, Making publications and participating in seminars/conferencing
- to support e-Health projects in developing countries by providing the relevant information
- to work with the health sector to identify models for sustainability of e-Health applications, particularly in remote and rural areas of developing countries, exploring possibilities for sharing infrastructure with other services and applications
- to involve undergraduate and graduate students in research activities
- to provide information on the role of telecommunication in eHealth applications to training courses in the University such as "Management Information System" and "Managing Information and Technology".

Project team

Professor

Dr. L. Androuchko

Students/ Alumni

Said A. Basamh (MIB Program)
Charles Mohun (MBA Program)
Mohammad Zameer Takun Jauhan (BBA Program)
Anna Leonchik (BBA Program)
Vladimir Androuchko (Alumni, MBA Program)
Vusal Rustamov(MIB Program)
Turki Al Jeaid (MIB Program)
Oyungerel Bat- Ochir (MIB Program)
Artem Gavrilov (BBA Program)
Valon Hyseni (MIB Program)
Cheryl Arndt (BBA Program)
Artur Bagramyan (BBA Program)

Research students 2012-2013
Jasmine Hoti
Larissa Rate
Fatima Al Khereiji
Kamal Huseynli
Fagan Asadoz

Cooperation

International Telecommunication Union, ITU-Development Sector Study
Group 2, Question 14 – Telecommunications for eHealth

Tokai University School of Medicine, Japan

University Putra Malaysia, Faculty of Medicine and Health Sciences, Kuala
Lumpur, Malaysia

Maternal and Child Health Research Center, Mongolia

Rural Government Hospital, Wellawa, Sri Lanka

Jakutsk State University, Russia

Results

Publications
1. **Avian Influenza and Expected Satellite Technology** by Isao Nakajima, Yasumitsu Tomoika, Toshihiko Kitano, Hiroshi Juzojo, and Leonid Androuchko. Trans.JSASS Space Technology, Japan, Vol. 1, 2009.
2. **Medical Professionals' Behavioral Intention to use eHealth services in Developing Countries: A Conceptual Model,** by Patrice Anne Nug, and Vladimir Androuchko, Journal of eHealth Technology and Application, Vol. 7, No 2, December 2009, pp 170-17

Report (06.2009 – 0.6. 2010)

Summary

1.The development of the business model for the introduction of telemonitoring services in developing countries was studied and included in the Master thesis of following students:

Said Ali Basamh "Introduction of eHealth/telemedicine services in the Kingdom of Saudi Arabia".

Vusal Rustamov "Introduction of the telecardiology monitoring service in Azerbaijan".

Turki Ayed Al Jeaid "Management Information system with telemonitoring service for the hospital in the Kingdom of Saudi Arabia".

Charles Mohun "Feasibility study for eHealth/Telemedicine in Switzerland"

2. The similar study for a few other countries (Mongolia, Jordan) will be finished in the end of 2010.

3. Mohammad Zameer Takun Jauhan, BBA Program student from Mauritius, is working on the feasibility study for innovative healthcare services based on modern information technology for his home country. He just finished the literature review.

4. Anna Leonchik has joined the team recently. She will be doing the market study for telemedicine services in Belarus.

5. Vladimir Androuchko, the University alumni, published his article on "How to speed up the introduction of eHealth services" in the ITU Report Mobile eHealth Solutions for Developing Countries, May 2010, Geneva, pp.26-32.

6. As a result of cooperation with Tokai University in Japan, a joint article "Avian Influenza and Expected Satellite Technology" was published in the Journal of the Japan Society for Aeronautical and Space Sciences", Vol. 1, 2009.

7. Professor L. Androuchko made the presentation at "eHealth Side Forum" during the ITU TELECOM 2009 in October 2009 in Geneva. The title of his presentation was " eHealth services in developing countries".

8. Professor L. Androuchko participated in a capacity of the Chairman of the session at the Conference and Exhibition MedeTel 2010 in Luxembourg in April 2010. He also made a presentation on "The Current Study Programme for the Question Telecommunications for eHealth in the ITU-Development Sector; study Group 2, International Telecommunication Union".