Telemedicine development perspectives in Latvia

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Authors of presentation

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All countries faced a problem of providing medical care to people working or living in situations that are remote or inaccessible to use of health care services.

Over the past years, there has been an explosion of interest in the use of E-health solutions in accession countries.

(L. Androuchko Professor of Telecomunication in the International University, Geneva)
Goals of Telemedicine and Videoconference Group of Riga City Council Information Technologies Centre

- Development and coordination of telemedicine development projects in the City of Riga
- Development of a single telemedicine network in Riga
- Organisation of practical telemedicine consultations
- Attraction of the EU financing and other international finances to the City of Riga
Main fields of medicine where implementation of telemedicine is essential

- Teleradiology
- Telecardiology
- Telemedicine system in emergency assistance
- Telemedicine system in disaster medicine
- Telemedicine system in anti-terror systems
- Home telemedicine
Main directions of telemedicine development in the City of Riga

- To put in order exchange of information between municipal authorities and medical institutions of in-patient and out-patient care.

- To develop centralized information aggregation capacities in hospitals and out-patient care institutions of Riga as well as exchange of information and consultations of specialists.

- To develop home telemedicine network in the City of Riga and train practicing family doctors in provision of telemedicine services.
Social benefits of telemedicine

- Reduction of time passed from the moment when a patient falls ill till the moment of provision of medical assistance
- Telemedicine ensures monitoring of patients during convalescence period
- There is formed a data base for the needs of medical staff, which contains collection of histories of patients available at any time
- Possibility to attract both local and foreign qualified staff in the case of complicated or non-standard medical problems
- Possibility to carry out complicated medical diagnostics in one and the same medical institution
- Reduction of medical care costs
- Implementing of the project is important also because of reduction of number of physicians in Latvia
International cooperation partners of Telemedicine and Videoconference Group

- Bakulev Institute Telemedicine Centre (Moscow; Head - Professor V. Stolyarov)
- Russian Telemedicine Association (Head – pilot cosmonaut O. Atkov)
- European Telemedicine Association (Head Professor M. Nerlich)
- Regensburg University Telemedicine Centre (Head - M. Kleiner)
Pilot projects developed by Telemedicine and Videoconference Group in 2003

- **Development of Riga City teleradiology system**
  Egils Stumbris M.D.
  Head of Telemedicine and Videoconference group of Riga City Council Information Technologies Centre,
  Vice-President of Latvian Telemedicine Association,
  Zanda Baidekalna
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- **Development of telemedicine communications system in telecardiology in the City of Riga**
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RD ITC Telemedicīnas un videokonferenču grupa
Pilot project “Development of Riga City teleradiology system”

Project goal

To develop the radiological information system RIS, the medical image archivation and communication system PACS and a videoconference system for Riga City medical institutions that would ensure linking of the medical institutions through the Internet and ISDN lines with Latvian hospitals and competence centres of foreign radiologists.
Beneficiaries

- Residents of Riga
- Physicians of Riga medical institutions
- Latvian health protection system in general
In the result of implementing of the teleradiology project

- Patient consultation time will be significantly reduced
- Diagnosis will be set in a substantially shorter period of time
- Therapy of the patient will be started earlier
- Period of time spent by the patient in a hospital will be reduced
- General health condition of residents of Riga will be improved
Implementing of the teleradiology system will result in:

- Gradual transition to filmless radiology that would allow to save about 70% of the funds required for X-ray film purchasing and development and storage of X-ray images
Dynamics of costs of radiological images after implementing of the teleradiology system (Hospital „Gaijezers”, Riga 1st Hospital - LVL)
Medical institutions involved in the pilot project

- Municipal NPO LLC Clinical Hospital „Gaižezers“
- Municipal NPO LLC „Bolderājas poliklīnika“
- Municipal NPO LLC „Rīgas 1. slimnīca“
- NPO State JSC Hospital „Linezers“
- Hospital of Public JSC „Latvijas Jūras medicīnas centrs“
- RD ITC Telemedicīnas un videokonferenču grupa
Telecardiology

- It is estimated that 2%-4% of the world population suffer from heart diseases.
- Heart disease is the single most fatal disease of modern society. Heart attacks became the No1 killer.
- Many of these deaths are result of the time elapsed between the cardiac event and the medical assistance provided to the patient.

(L. Androuchko Professor of Telecomunication in the International University, Geneva)
Pilot project “Development of telemedicine communications system in telecardiology in Riga City”

Project goal

To develop a telecommunications system in telecardiology, which would ensure provision of telecardiology services in Riga on the basis of a single system.
Implementing of telecardiology system in Riga is necessary because of:

- Increasing number of patients suffering from ischemic heart disease
- Increasing number of elder patients
- Increasing number of late hospitalisation
- Need of upgrading of medical services onboard the passenger ferry “Baltic Kristina” that would increase the tourist flow to Riga City (indirect advantage)
Institutions included in the teleradiology system:

- Municipal NPO LLC Clinical Hospital „Gaiķezers“
- Municipal NPO LLC „Rīgas 1. slimnīca“
- Riga Ambulance Station
- Disaster Medicine Centre of the Health Ministry of the RL
- Riga City Council Telemedicine and Videoconference Group
- Passenger ferry „Baltic Kristina“
Results of implementing of the project:

- Telecommunications system in telecardiology linking Riga Ambulance Station, Disaster Medicine Centre of the HM, municipal hospitals – 1st Hospital and Hospital “Gaižezers” and passenger ferry „Baltic Kristina”

- Telemedicine communications system linking passenger ferry „Baltic Kristina” and Disaster Medicine Centre of the HM, Riga Telemedicine and Videoconference Centre and the Swedish Coast Guard and Gothenburg clinics linked with the latter
Benefits of the project

- Improved quality and efficiency of cardiological assistance rendered to residents of Latvia and foreign tourists
- Unnecessary hospitalisations reduced by 50-83% and, thus, reduced maintenance costs for municipal hospitals
- Optimised hospitalisation (patients are hospitalised in the establishment that is most relevant to the specific type of illness)
- Maximum safety ensured to passengers and the crew of the passenger ferry during voyage
- Increased competitiveness of the passenger ferry "Baltic Kristina" among other ferries
Thank you for your attention!