

The Baltic eHealth Project

Connecting Regions – Optimising healthcare in the Baltic Sea Region

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In September 2004, a project part-financed by the European Union (European Regional Development Fund) within the BSR INTERREG III B Neighbourhood Programme was initiated, bringing together the Baltic Sea Regions. The aim of the Baltic eHealth project is to encourage the use of eHealth and thereby counteract rural migration by creating a large transnational IT-infrastructure for eHealth; a Baltic Health Network.

eHealth in the Baltic Sea Region

Over the past ten years, the Baltic countries have implemented eHealth in order to optimise and increase efficiency in the delivery of healthcare services. In three of the Baltic countries (Denmark, Norway and Sweden) national networks have been established on top of the existing regional, secure and Internet-based healthcare networks connecting almost all healthcare institutions and organisations (including hospitals, general practitioners, laboratories and home care).

The networks make electronic communication (such as ePrescription) possible as well as more advanced communication (such as videoconferencing). However, until now it has only been possible to communicate electronically within a country - and not across national borders. And it has not been possible to optimise healthcare by making use of the surplus of specialist health professionals in some regions – where other regions lack specialists. The assumption is that eHealth opens up the possibility for the creation of a range of specialised healthcare services delivered by small local hospitals in rural areas by the use of specialist assessments from larger urban hospitals.

The aim of the Baltic eHealth project (www.baltic-ehealth.org) is to illustrate that eHealth can be an effective means of increasing access to healthcare of high quality, thereby optimising healthcare in rural areas and hopefully contributing to counteracting rural migration.

The infrastructure of the Baltic Health Network

During the three-year project period (2004-2007), electronic communication over the Baltic Health Network will be tested in pilot projects in two different medical specialities: eRadiology between the Funen hospital (Denmark) and the East-Tallinn Central Hospital (Estonia) and the Vilnius University Hospital Santariškių Clinic (Lithuania); And eUltrasound between Norrland's University Hospital (Västerbotten County Council - Sweden) and the St. Olav's Hospital (Mid-Norway).

Since the initiation of the project, IT managers and technicians have worked hard to connect the national networks of Denmark, Sweden and Norway to regional networks in Estonia and Lithuania, thereby establishing the first cross-border health data network of its kind – the Baltic Health Network - connecting over 200 hospitals, 6000 general practitioners practices etc. Through the Baltic Health Network, it will be possible to exchange data even though every small part of

the different health systems and networks have their own firewall, security, administration, access control mechanisms etc. The solution has been to connect the different networks through an *agreement system*.

On the agreement system anybody in the network can find everybody, anytime and anywhere. The agreement system eliminates the need for administering a huge number of Virtual Private Network (VPN) tunnels and it establishes documentation. In addition, it also simplifies security administration and it is a simple and inexpensive solution to a problem that is common to all nationwide healthcare systems. The agreement system has been the foundation for securing data on the Baltic Health Network. The network is not yet fully operational. However, it is expected that by September 2005 the network will be in place and it will be ready for the first clinical trials. In addition, other networks from other regions or countries will have the possibility to connect to the Baltic Health Network as well.

eHealth on a clinical level

The clinical trials conducted in eRadiology and eUltrasound on the Baltic Health Network will test the infrastructure. In the eRadiology pilot, radiologists from Estonia and Lithuania will carry out the assessment of digital images from the Funen hospital. In June 2005 on an eRadiology work shop three radiologists (one from each of the participating departments) assessed the same 39 digital images of knees and produced reports using a standardised reporting tool. The workshop had two main goals. The first goal was to examine if specialists from the three participating hospitals would reach the same conclusions when assessing the same images. Secondly, the usefulness of the developed structured reporting tool needed to be tested.

The conclusion was that the differences in the knee reports were insignificant, as differences were only found in ten per cent of the assessments and it was agreed that these differences could be found internally in any radiological department. The second conclusion was that the structured reporting approach was useful as it eases translation matters. It was therefore decided to develop the structured reporting tool further and to integrate it into the Collaboration Platform (see www.cittis.org).

Regarding eUltrasound, the Swedish and Norwegian partners are ready to start a second opinion in ultrasound scans on pregnant women. In Sweden and in many other countries it is common practice to offer an ultrasound scan at 18 weeks of pregnancy. The objective is not only to assess the estimated day of delivery, but also to scan for foetal abnormalities. If any are found, it is frequently necessary to have a second opinion from an experienced colleague. In such a situation, eHealth and the establishment of the Baltic Health Network can be of assistance. In the clinical trials specialists in obstetrics and ultrasound from the urban hospital at the St. Olav's Hospital in Trondheim, Norway will assist health professionals at a local hospital in Umeaa, Sweden thereby optimising healthcare in the rural area of Västerbotten.

Issues to be resolved

Establishing the network is not enough. What is also of importance is to look at how it affects rural migration and how barriers can be overcome in conducting eHealth across regions and borders. eHealth is still in a field of massive and rapid development and this is obviously affecting legislation and legal issues. In that sense, the recently published "*Report on identified legal issues of the Baltic eHealth project*" addresses and identifies some of the most important

legal issues and problems, which the project raises, and it is based on general knowledge of issues usually relevant to eHealth projects. Issues covered in the report vary from patient security and rights to reimbursement and licensure.

However, not all imaginable issues or questions are covered in the report. Therefore, the report only covers the issues relevant to the Baltic eHealth project. During the project period, a second deliverable will be published from the legal group, and this will be a set of guidelines on legal issues. As the project moves forward, other reports on issues and barriers will also be published.

Conclusion

Over the next two years, it will be seen if the establishment of the Baltic Health Network will be able to counteract rural migration by optimising healthcare. The pilots conducted will be a clear indication of the many possibilities which eHealth brings to healthcare - not only in the Baltic countries but also in other regions as they have the possibility to connect to the network.

Already now the Baltic eHealth project is discussed in many Baltic as well as European regions. The first cross-national health network of its kind will soon be a reality – and the possibilities are almost endless.

Read more about the project on www.baltic-ehealth.org or contact the Danish Centre for Health Telematics at www.cfst.dk or phone +45 6543 2030.

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