Competitive Health Services

March 2009

eNewsletter

Promoting innovative eHealth services across the Northern Periphery

Telemedicine and eHealth provide an alternative way of delivering healthcare services to people in remote or rural communities where access to health services might be limited. This is particularly relevant in the Northern Periphery, which is geographically vast and sparsely populated.

The Competitive Health Services project aims to develop health services for the residents of the Northern Periphery by

- developing and implementing innovative eHealth solutions and
- promoting transfer of the best practices in the Northern Periphery

Particular focus will be on eHealth services for primary care, chronic conditions and remote specialist services.

The project implementation is carried out in three phases. In the first phase good eHealth practices and innovative solutions are mapped and identified in partner countries along with service needs and gaps analysis. In the second phase the potential pilot sites are assessed for the eHealth "readiness" utilizing a whole systems approach. Once these phases have been completed, we will launch and test new pilot eHealth services in Finland, Sweden, Norway and Scotland.

A portfolio of eHealth Applications

The first phase of the project has now been completed and the results have been published as a report "A portfolio of eHealth Applications in European Sparsely Populated Areas". This portfolio describes the context and development of eHealth services in the northern parts of Finland, Sweden, Norway and Scotland. In addition to describing the most prominent eHealth services and initiatives currently in use, it also aims at identifying some of the most important aspects of health care sector infrastructure that influence the introduction of eHealth services. The portfolio is available on-line at www.ehealthservices.eu/downloads.

A database of eHealth Applications

We have also summarized our mapping results in a database, which is available on our project website (extranet). The database contains descriptions of eHealth services from Finland, Sweden, Norway and Scotland.

Matchmaking eHealth services conference in Inverness, Scotland

Project partners from Finland, Sweden and Norway converged on Inverness in early February for the third international project meeting, hosted by the Scottish team from the Centre for Rural Health, University of Aberdeen. This was a major event within the project programme, where the shortlisted eHealth initiatives from each country were presented, with the help of technical and clinical experts who have practical experience of how the applications work in their 'home' setting. The aim was to 'match' the identified best transferable eHealth practice or service model with the most appropriate pilot site.

The first day was open to a wider invited audience, who showed a high level of interest in the country presentations and in the practical demonstrations of eHealth equipment on display. Delegates came from across Scotland and included NHS Highland clinical and management staff, researchers and local health-related businesses. Patients were also represented.

In the match-making sessions, intensive discussion took place to establish the most suitable matches for import and export between partner regions. Innovations being considered for possible transfer include remote speech therapy from Sweden, tele-dialysis from Norway, a mobile eye screening for diabetes and glaucoma from Finland, remote ECG transmission from Scotland and The Bag - a unit for remote monitoring of physiological data- from Sweden.

Match-making sessions

Remote Speech Therapy from Sweden

This was of interest to both Finland and Scotland. Several speech and language therapists from NHS Highland explored the potential of the Swedish model to deliver a higher quality of service to people living in a particularly remote area of NW Scotland, using video conferencing.

This service is aimed at people who have problems with speech formulation. Diagnostic groups include, for example, people who suffer from aphasia, dyslexia or Parkinson's disease. All of the health care centres in Västerbotten County are equipped with video-conference systems and are able to connect to the main hospitals in the area for access to services provided by speech therapists. By providing this e-health service the accessibility to speech therapy has increased tremendously within the county, saving both the speech therapists' and the patients' the time and travel costs. An advantage if this is that the patient gets more sessions and at the same time the County Council can provide its residents with a higher quality care at reduced cost. According to a recent survey, patients are very satisfied with this innovative way of providing speech therapy and have indicated that they would recommend it to others.

Tele-Dialysis from Norway

Representatives of the renal service in NHS Highland (a consultant and several senior nurses, including two from remote satellite dialysis units) met with an expert from the Norwegian Centre for Telemedicine to discuss the service which links the university hospital in Tromso with outlying dialysis units via video conferencing, for both staff and patient consultations.

This service was run as a pilot project in 2000-2002 between the main dialysis unit at the University Hospital of North Norway and units located at Hammerfest (548 km by road from Tromso) and Alta (408 km away). The aim was to create a common workplace across these centres, by means of regular video conferencing, thereby increasing professional support for staff at the outlying units, improving the quality of patient follow up, and reducing travel by nephrologists and patients. Teledialysis has since become established as a routine service within northern Norway. Some modifications have been made to the original project, as it was found unnecessary in practice to include an electronic stethoscope, ultrasound, or monitoring software for the dialysis machines. Although distances are less extreme in northern Scotland, it was felt that this system (in its revised form) could potentially deliver similar benefits to the renal service in NHS Highland.

Mobile Eye Screening Unit from Finland

A Mobile Eye unit, EyeMo, has been developed in the Northern Ostrobothnia Hospital District for screening of diabetic retinopathy and follow-up of glaucoma patients. This unit offers intraocular pressure readings, fundus imaging and visual field examinations for patients who live in remote and rural locations. Sweden showed particular interest in this application, with the intention of piloting it at an inland rural hospital.

Remote Monitoring of Physiological Data (The Bag) from Sweden

Both Finland and Norway attended demonstrations of 'The Bag', with a view to piloting it in their primary care services. Remote monitoring of physiological parameters is another recent innovation, developed by Västerbotten County Council and a local company - Explizit. This service enables home monitoring of patients whose physiological parameters must be controlled continuously. Portable health monitoring equipment is used to take physiological measures including ECG, spirometry, pulse oximetry, and readings of pulse and blood pressure. The equipment is located in the patient's home and is so user-friendly that it can be used by the patients themselves. Health care professionals have access to the monitoring results at all times and are alerted if any of the monitored values are abnormal. By providing home monitoring of physiological parameters doctors are able to make early and accurate diagnoses, provide close follow-ups, and costly hospitalizations can often be avoided.

Remote ECG Transmission from Scotland

Finland and Norway met with Inverness-based company DanMedical to view a compact unit which captures, analyses and transmits ECG, blood pressure and spirometry readings directly from primary care to hospital specialists.

An ECG recorded in the general practitioner's surgery can be sent as a secure e-mail attachment to the cardiology department at the main hospital, preserving not only the original quality of the recording, but also confidentiality of patient data. The cardiologist responds within a short time, advising on whether the patient should be referred for specialist investigation or can continue to be treated in the primary care setting. This system has been trialled successfully for over a year in two practices, including one on an island some distance from the main hospital. Feedback is positive, indicating that remote practices appreciate the speed of response, ease of use, and the combination of several functions within one PC unit.

Palliative care from Scotland

Representatives from Norwegian municipalities and the oncology department of the University of North Norway hospital met with a palliative care consultant from Highland Hospice to learn about the 'virtual hospice' initiative, in particular the monitoring of a range of symptoms from home.

A small scale trial has been conducted in which cancer patients receiving palliative care at home recorded the severity of symptoms, such as pain and sickness, on a hand-held device which transmitted data for review by clinicians at the central hospice. A positive response from patients has led to commissioning of a wider study, with a view to developing 'virtual hospice' care, complemented by home visiting. Ways of delivering creative therapies via the internet are also being explored, as part of a holistic approach.

The next phase of the project will see the selected eHealth applications introduced into pilot sites, at least one in each country.

Providing eHealth services to everybody: a report from Västerbotten, Sweden

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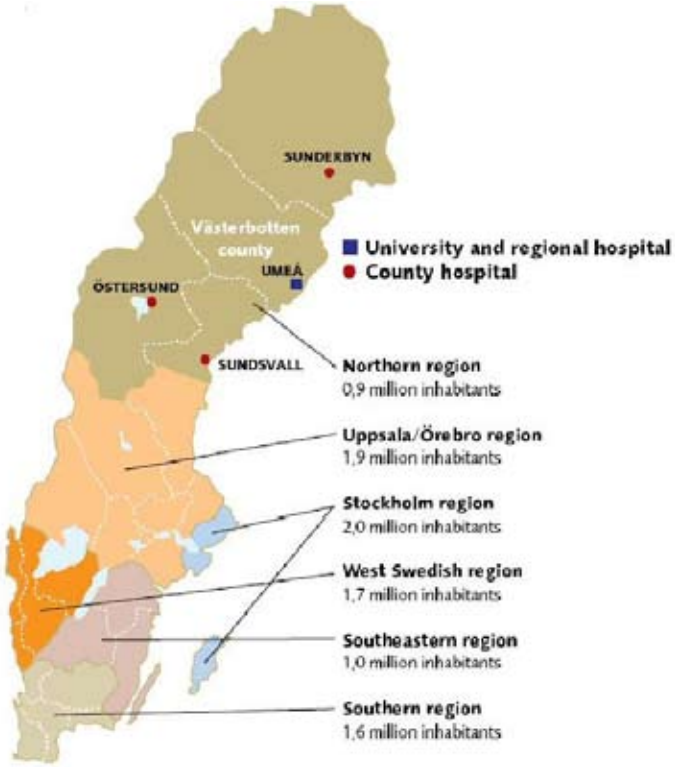
In Sweden, the state controls the overall policies of health and medical services. However, the responsibility for delivering health care is split between the County Councils or the Regions, and the municipalities. To a lesser extent, health care is provided by private practitioners and private hospitals.

The responsibility of the County Councils or Regions is public health and medical care, which means providing high quality care to its residents both in cities and in rural areas. The municipalities provide care for the elderly and disabled, and give support and services to those who have finished their treatment at the hospital.



Sweden, with its 9 million inhabitants, is divided into six health care regions (Figure 1). The northernmost region covers almost half of the geographical are but has only one tenth of the population.

The north region covers almost half of the geographical area but has only 0.9 million inhabitants. Figure 1 Medical regions in Sweden

The elderly population of Sweden has increased in recent years. The demand on County Councils to provide specialist and primary care is high and will keep increasing as the population structure will continue to change, leading to an even larger elderly population. As a way of trying to foresee and resolve the problems related to increased demands and to give equal access to health care services in northern Sweden, the County Council of Västerbotten has been focusing on developing telemedical applications. The County Council has been working with telemedicine since the late 1990´s and has developed many successful telemedical applications that have increased access to healthcare services, especially in the rural areas of Northern Sweden. A basic prerequisite for this is a sufficient digital infrastructure. Sweden in general has a very good infrastructure that can provide e-health services even in the rural areas. In addition, the County of Västerbotten has a separate net, AC-net, that provides all the different institutions of the county with fast access and can transfer images and videos at high speed between different users.