

A SHORT OVERVIEW OF eHEALTH IN SWEDEN*

Introduction - a short history of telemedicine in Sweden

Telemedicine has a long history in Sweden, as in many other countries. In Sweden, the first known telemedicine trial took place around 1915, in the field of remote reading of ECG signals across the campus at Lund University. Sea-to-shore telemedicine started in the beginning of the 1920s from Sahlgren University Hospital, in Gothenburg, to Swedish vessels around the world, a service that is still operational today. This makes Sweden one of the pioneering countries in telemedicine.

However, after these first initiatives, nothing much happened until the 1960s. Then, along with developments in telecommunications and computers, a new era started in telemedicine and trials. In the late 1960s, remote reading of EEG signals was experimented with, with Uppsala University Hospital at the centre. Other early telemedicine applications introduced during the 1970s included radiology and pathology. In the 1980s, telemedicine was introduced in pre-hospital care by connecting a "blue light" moving ambulance with Uppsala University Hospital for the triage of patients and to prepare the hospital team for an adequate level of care. In a number of projects, telemedicine boomed in Sweden during the 1990s, with applications that included ophthalmology, odontology, transplantation surgery (video-conferences), ENT, dermatology, psychiatry, geriatrics, home-care and cross-border projects.

The term telemedicine, referring to "medicine at a distance", has been used, and is still heavily in use in Sweden. It stands for a broad interpretation of remote services in health-care. However, the extensive widening of applications which enter into the domain of public health and cover almost all parts of health-care services, including fields such as empowerment, prevention, administration, screening, diagnosis, treatment, monitoring, follow-up and rehabilitation, opens possibilities for the use of a broad "umbrella" term. In this regard, "eHealth" has come into recent use in Sweden.

In this report, "eHealth" will be used as an umbrella term for distance-bridging applications in public health and health-care.

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*Disclaimer: The views developed in this article are those of the authors and do not necessarily reflect the position of the European Commission.

Examples of local and regional eHealth projects and programmes

There are many leading examples of local and regional eHealth projects and programmes in Sweden, but the mandate of this report is to be brief. So, we concentrate here on a selected, few initiatives.

The public part of health-care in Sweden is provided by the county councils (hospital care and primary health-care) and the municipalities (care of the elderly, home-care). These two levels have their own political powers to set priorities, run health-care and, consequently, launch eHealth initiatives. However, the government sets the overall framework for health-care by holding national legislative power. There are eHealth initiatives in all of the 21 county councils (regions) and in many of the approximately 300 municipalities in Sweden.

A few examples of local eHealth initiatives with a focus on home-care are described below.

An initiative in the Stockholm area supports children with severe diseases which can be managed at home, by mobile teams and advanced information and telecommunication technologies, rather than in a highly specialised hospital, such as Karolinska hospital. After a test-period with 350 episodes of care, the positive outcome resulted in a permanent project.

eHealth resources are being used in the Stockholm area to support specialised palliative care at home, destined mainly for patients with cancer. This aims to enhance the quality, security and access to care, as well as to provide a more efficient use of resources. Other patient groups include patients suffering from bone decay, infection, post-surgery treatment and chronic obstructive lung disease.

"ACTION" is a project in western Sweden aiming to support family members who care, at home, for their partners experiencing psychological disorders, such as senile dementia. This project received financial support from the European Commission. Work included the development and assessment of education and other support programmes to empower the family members to cope better with the daily situation and to plan for the future more effectively.

Examples of regional eHealth initiatives

In the scattered populated and waste rural area of the county council of Västerbotten (in the far north of Sweden), a systematic approach by the management of the county council has led to extensive coverage of eHealth services between the hospitals and the primary health centres (centres where the general practitioners are located) in the county.

A network for consultations and second opinions within the neurophysiology speciality has been built up over a long period of time, covering the Uppsala-Örebro health-care region. This pioneering work was started in the 1960s and the approach is now firmly established.

Teleradiology is the most deployed eHealth application in Sweden, and virtually all hospitals in Sweden have access to it. Teleradiology is also used - although not country-wide - between radiology departments and the homes of radiologists, in order to ensure after-hours and call services.

National eHealth initiatives

A national organisation, Carelink, was created in 2000 to coordinate and stimulate the use of information technologies in the Swedish health-care system. The founders of Carelink are the Federation of County Councils, the Swedish Association of Local Authorities, the Swedish Pharmacy chain – Apoteket AB, and the Association of Private Care Providers.

Carelink works with supportive services, such as the SJUNET, which is a national broadband secure communication network infrastructure within the health-care system. The development of SJUNET started as a regional project in 1997 and, presently, the network interconnects all the county councils in Sweden and about 20 municipalities.

As in many other countries, there is considerable interest in having electronic health records available across the health-care system. In Sweden, electronic health records have already been introduced into the vast majority of primary health-care centres and a substan-

tial number of hospitals. However, the lack of general interoperability between different electronic health record systems severely reduces their versatility. In 2004, Carelink launched a project with the aim of developing an interoperable national mini-set of the electronic health records within two years.

The Swedish Pharmacy chain, Apoteket, has introduced a national scheme for e-prescriptions. Progress is ongoing. In September 2004, 32% of all national prescriptions were in electronic format, up from 9%, in November 2001.

The ministry of health and social affairs in Sweden has increased its involvement in eHealth. In 2002, the ministry of health published the "Vård ITiden" report, which delineates strategies and proposes possible measures to broaden the use of eHealth.

In the government's office, during 2004, committee work is ongoing with the aim of proposing strategic actions for the further use of information and telecommunications technologies in different sectors of society, including health-care. In this respect, the work on eHealth will be coordinated with the 2004 Communication from the European Commission, entitled "An Action Plan for a European eHealth Area".

Sweden is involved in a number of cross-border eHealth initiatives. One of the most recent is a project called "Baltic eHealth – empowers regional developments". In this project, financially supported by the European Commission, the Scandinavian countries (Denmark, Norway and Sweden), together with Estonia and Lithuania, co-operate on eHealth activities. They have the overall goal of bringing about fully developed eHealth solutions that can be used in the Baltic Sea Region. Another dimension of the project analyses how eHealth can combat rural migration most effectively.

RELEVANT LITERATURE

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