



SafeMove – Boost for Home Care Efficiency and Service Quality



BACKGROUND

The Finnish Hospital District of Itä-Savo has been fully digital since 1 January 2005. Since that day, all information management of its core functions has been carried out entirely electronically. The hospital district is equipped with a secure internal data network with both wired and WLAN connectivity. But the line was not drawn there. The next strategic step for the district was to further support and improve its operations by extending secure wireless connectivity for its personnel beyond the confines of the hospital.

The aim of the project was to investigate and implement a suitable mobile solution for the Itä-Savo Hospital District area and to assess its performance and suitability for use by district nurses and social workers in the provision of home care services, as well as by standby specialised medical and health care personnel. The goal was also to determine the impact of the mobile technology both on the carrying out of the core task of providing social and health services and on the costs involved. A total of 25 homecare service workers* and 10 standby specialised health care doctors took part in the mobile technology trial.

CHALLENGES

The challenge of the experiment was to find a solution in which the ease of use, mobility, real-time access to the services offered by the organisation's internal network, sufficient bandwidth, session persistence and strong authentication and smart card login would be combined.

* district nurses, practical nurses and homecare workers

Project

The Mobile Technology Utilisation Project of the Itä-Savo Hospital District's IT Unit was carried out during 1 June – 31 December 2007. The starting point and objective of the project was the practical need to develop and rationalise existing client-oriented efforts aimed at strengthening the functional capacity of both the medical and health care personnel and the clients themselves. The implementers of the project were the Itä-Savo Hospital District IT Unit together with home care providers in the field.

Solution

Three separate software programs were trialled by the pilot project, of which SafeMove was identified as the most effective solution. The SafeMove software enabled hospital, clinic and health centre staff real-time access not only to the Internet and e-mail, but also to vital organisational information systems such as patient information, lab results, house call related client software, the pharmacy system and materials management, both securely and irrespective of time or place.

SafeMove enables seamless and secure mobility between IP networks. The secure remote connection is not disrupted when changing networks, so the application in use remains active with no new intranet logon required. This chosen solution uses special 1 Mbps wireless network technology. The connections were protected in accordance with international security standards (IPsec, IKE, PKI).

Results

The project showed that use of mobile technology introduces a revolutionary operational approach to home care, and that use of real-time information considerably improves the quality of service received by the health care client.

PROGRESS OF THE PROJECT

The basic idea of the project was to provide a secure, time and place independent wireless network connection to the electronic patient record system, to the internal network systems of hospital district organisations, and also to other key Web-applications. The usability of all applications and drive-based services used by the medical staff was tested during the project using all latest wireless data communications technologies. Due to its extensive coverage area, the special 1 Mbps wireless network technology was finally selected for the hospital district.

The total benefit and effectiveness of the project were assessed in terms of the direct effects and benefits to the client, the experiences of the medical and health care workers, and the impact on the work process and care chain as a whole. The objective of the switch to mobile homecare operations is to rationalise and enhance the work of the medical and health care personnel and social workers and, as the core objective, to provide maximum benefit to the client from the homecare service process.

EXPERIENCES IN HOME CARE

Regarding working efficiency, the clearest changes brought by the project concerned information, in terms of improved flow, flexibility of use and real-time access, all factors resulting in improved quality of service. Homecare workers were able to fully process all client documentation during their house calls, the result being that more working time was focused on the client care work itself – one of the district's key home care objectives for 2008.

The impact on working time spent on preparing the following day's home care tasks and queuing for computers was measured during the project. Measured according to these factors alone, and calculated for the hospital district as a whole, the total effect amounts to at least 3.5 and possibly up to 5 person years. This newly freed-up work output can be channelled into providing care for an additional 25 weekly home care clients, providing additional direct client care, assessing client functional capacity or developing other areas of care work.

Examples of key savings:

	Change	Total effect
Time spent on next-day planning	-35min/day/person	-16 workdays/person/year
Time queuing for computers	-8min/day/person	-3,66 workdays/person/year
Home nursing in total (26 workers)		-1,9 person-years
Home services in total (90 workers)		-1,6 person-years

=> -3,5 person-years

The project shows that mobile technology boosts the resources and reinforces the operations of medical staff. It can be used to modernise and improve work organisation and cooperation, and to generate a totally new home care operations model that is truly time and place independent.

EXPERIENCES IN STANDBY NURSING AND CARE SERVICES

The main benefit to standby specialized health care services was the availability of real-time patient information in the home or elsewhere outside the hospital. Standby nurses and doctors were given direct access to client-specific medical treatment information without having to call in at the hospital. This key benefit enabled immediate patient treatment and more efficient use of working time. In enabling doctors and nurses to react more quickly to patient condition, and thus saving lives, the benefits of the project are undisputable.

Benefits brought by Safe-Move to the project:

- The amount of time focused on direct client care and treatment increased, as patient record entries could be performed directly at the client premises
- Use of real-time information considerably improved the quality of the service received by the client
- Client care was concluded fully during a single visit, thus reducing the number of unnecessary client house calls (e.g. to dispense prescriptions) and eliminating costs related to repeat visits.
- Incidences of miscommunication were reduced or totally eliminated due to the ability to deal with client cases more fully on a face-to-face basis.
- Effective planning of working hours was made possible and the use of working time more rational, information was readily accessible, and task overlap was reduced
- Service response times were accelerated as it was possible to conduct, e.g., lab referrals immediately, and lab results could be read in real time

Study sources: Ari Pätö and Aulikki Hautsalo, Itä-Savo Hospital District