

Health@Home – A new paradigm for prevention and chronic disease management

Networking session N.29

26 November 2008, 9 – 10:30, Lyon, France

Summary of the session

At the Health@Home networking session about 60 participants from network operators, service providers, manufacturers and e-health experts discussed the research challenges to create Health@Home applications and services.

Health@Home concept

Milon Gupta from Eurescom presented an outline of the Health@Home concept, which aims at empowering citizens to manage their own health in the home environment with optimal medical support through remote monitoring and reliable on-demand health advice.

This is particularly relevant in the context of an ageing European society and dramatic increases in chronic diseases that have already led to a cost explosion which threatens the financial stability of the healthcare system.

ICT-enabled active health management and treatment in the home environment offer the opportunity to address these societal and financial challenges.

The Health@Home paradigm on health-supporting ICT solutions will integrate health management, disease prevention and treatment of chronic conditions in the home environment. The Health@Home vision entails the seamless continuation of healthcare from the hospital to the home.

Technical requirements and research objectives

Dr. George Dimitrakopoulos from the University of Piraeus presented technical requirements and research objectives relevant for a Health@Home service platform. The emergence of cognitive networks will enable new ways of providing healthcare services in the home.

As a central objective, Dr. Dimitrakopoulos identified the design, development and validation of a distributed, mobile service management platform for providing improved pervasive healthcare conditions at home and on the move, through the exploitation and integration of a number of key technologies and solutions.

In order to get there, a number of challenges have to be addressed, including the development of a user-centric service management platform to ease users' lives, the unobtrusive management of complexity, and the enabling of fast and effective decision-making.

A physician's view on the Health@Home service concept

After this technical presentation, Dr. Alevizos Alevizos from the Health Center of Vyronas presented his physician's view on the Health@Home service concept.

He made a strong case for the societal need of healthcare services in the home. The rising number of elderly people prefer independent living to institutionalization. In order to enable a self-determined life at home, ICT-based healthcare services need to be provided in the home.

However, there are a number of barriers that need to be overcome to make this happen. Barriers include, for example, the current healthcare system's focus on acute care, the lack of integrated information systems and the lack of comprehensive support services.

Discussion: liability, service integration, and patient-centredness

The ensuing discussion on opportunities and challenges of Health@Home particularly highlighted some of the critical points that need to be addressed.

Telenor and some other network operators consider extension of in order to provide H@H services

A big issue for companies and organisations providing Health@Home services is liability, i.e. how to solve responsibility issues in case of failures on various levels in the service chain: local devices, e.g. sensors, data transmission, decisions of medical personnel from a distance, etc.

Einar Paul Edvardsen from Telenor R&D made it clear that his company as a provider of the networking platform and extended home gateway functionalities could not accept total responsibility for all elements in the service chain, beyond their own service. Current regulation is not yet shaped to deal with such novel healthcare scenarios and needs to be modernised.

Although the discussion focused on the elderly generation (65+), a similarly designed Health@Home service would also apply for other age groups with a rising share of chronic diseases. A participant pointed out that the chances to learn health-preserving behaviour in regard to one's own chronic disease are higher the earlier the patients start learning.

There was wide agreement that the provisioning of Health@Home services is not so much dependent on revolutionary new technologies, but rather on a proper integration of already existing technologies and appropriate servicing and business models that integrate the relevant stakeholders.

In order to achieve such an integrated service model, the development of interoperable platforms for Health@Home services was considered very important.

Another important aspect of remote healthcare provisioning in the home environment is education. Patients need to learn more about their own chronic disease and how to handle it. Serious games could play an important role in such a scenario, as they could combine education with motivation towards health-supporting behaviour.

A participant cautioned researchers to avoid a network-centric view in designing a Health@Home service platform. The service design should be user-centric and start with a close analysis of the real needs of patients. This should go beyond a limited view of the disease and how to manage it, but include the whole life of the patient and how to increase his or her quality of life.

Conclusion

The conclusion of the discussion was that the discussion of the plethora of topics related to Health@Home could not be concluded in the short time and needs to be continued.

The discussion will be continued via Eurescom's ICT and Healthcare mailing-list. Anybody interested to join the mailing-list can register by sending an e-mail to gupta@eurescom.eu with the subject line 'Subscribe ICT-Healthcare'.

References

The presentation slides from the session are available on Eurescom's ICT and Healthcare Forum page at <http://www.eurescom.eu/activities/ict-healthcare.asp>

The networking session page on the ICT Event website is available at http://ec.europa.eu/information_society/events/cf/item-display.cfm?id=615