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### The Elderly, Who (e-)Cares?

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In the far north of Norway, the Tromsø Telemedicine and eHealth Conference (TTeC) 2007 took place from 11 to 13 June in Tromsø. This conference, organised by the Norwegian Centre for Telemedicine, focused on telemedicine and e-health in elderly care. The ambiguous title "The Elderly-Who (e-)Cares?" tickled a lot of researchers and key players of the healthcare sector and industry to join the conference to exchange their knowledge and to debate this theme.

#### Need for a Broad Focus

Demographic aging of the European population is already visible and will soon start to accelerate. The TTeC strengthened effort to maximise the potential for innovative telemedicine and e-health initiatives in this process towards better healthcare and quality of life for the elderly.

First of all, it was clear that care has to be seen on a larger scale than medical care. Quality of care for the elderly also includes physical activity, a high quality range of health services, the ability to remain active in the professional world, access to cultural and religious inspiration, training in ICT, lifelong living and home modification, etc. Living independently in the own home is an objective for most elderly people. To meet this desire and to keep healthcare cost effective, home care gains momentum and patient days in hospitals shrink.

ICT-supported independent living systems aim to maximise the empowerment, independence and productivity of individuals, as well as their integration and inclusion into society. This trend of shrinking patient days requires a close cooperation between formal and informal care and between home and institutional care.

ICT can play an important role to support the communication between the different stakeholders. ICT applications can actively or passively monitor the patient's health situation or bring specialist consultation to the patient to enable an early discharge from the hospital or to prevent (re)admittance. But introducing eHealth in the home poses important interoperability, legal, financial, ethical, security, privacy and responsibility issues.

#### Electronic Patient Record

The introduction of an electronic patient record (EPR) can contribute to an increased information exchange between different healthcare members. It will however be a challenge to provide accurate and timely information to the appropriate healthcare when hospitalized elderly people need post hospital home healthcare. An EPR can also give the control and ownership of personal health information back to the patient. Mobile access for district nurses to the EPR and videoconferencing communication between doctors and nurses and other health personnel can contribute to the quality of treatment and care of the elderly and can decrease transport for patients, staff, carers and relatives.

Information on the users' real and practical needs in everyday life and their view on early prototypes is essential. The user has to be in control of the technology. Especially the role of the informal care is not to be neglected, as ICT applications have potential to assist informal carers and their care receivers in keeping the home care situation maintainable. Education and training that encompass the use of the technology and the interactions between professional, patient and carer, are important in the implementation phase and support has to be available during the entire period of use.

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## **TRANSECARE Project**

Despite the fact that ehealth initiatives for the elderly often have promising opportunities, they also often fail. Developing these systems introduces important choices, which have to be considered. Our presentation on the TTeC was about this agony of choice in developing a generic system that fits the need of a heterogenic group of elderly people. This was illustrated by the IBBT project TRANSeCARE, which aims to develop a new ICT platform that supports independent living services for people with degenerative impairment caused by age.

Three areas of choice are argued: First of all a boundary, to delimit the target group, has to be chosen. 'Birth age' is a frequently-used selection criterion because age is combined with an inevitable physical and/or cognitive decline. 'Birth age' also plays a considerable role in public goods and services in Europe.

Moreover, it is easy to use because it does not have to be scaled or measured. But 'birth age' does not correspond with the biological and social age of a person. There is a large variation of needs and goals in life between ageing peers. A 'birth age' approach makes people dependent whether they are or not. Therefore it is not a good criterion from which to create a relatively homogenous target group. ICT systems have important challenges in the cost-effectiveness of healthcare systems for the elderly in the home care. This economic reason, as well as the medical rationale of helping as many people as possible, made a lot of projects focus on chronic illnesses like heart diseases or diabetes. This pathology-centric approach is often chosen because pathology is susceptible of a cure and deserves sympathy. Also the health sector is still mainly cureoriented and organised.

But the success of a cure approach is limited and there is a large individual variation of symptoms and progression in the same pathology group. Furthermore, old age is often accompanied with physical and memory decline and with multiple pathologies, which involve other dependencies and design rules of the independent living system.

A pathology focus refers to the cureapproach, which successes are limited. (Preventive) care is at least equally important in the (home) healthcare. The restrictions of these two criteria make us focus on the criterion 'dependency' to delimit the target group. A specific dependency of a specific field goes together with a group of elderly people with more homogeneous goals linked to this dependency.

Second, older age is not stipulated by birth age but with biological and social deterioration that makes the elderly dependent. They are inevitably faced with physical and/or cognitive decline influenced by a variety of interwoven factors (gender, country of birth, education, marital state, general ill health, stress, social networks,...).

Social deterioration in later life is due to role changes and social convoy. Dependencies caused by biological and social deterioration in later life influence the network. In general, the network becomes smaller in function of support. The elderly have to deal with this variety of undesirable changes accompanied with ageing. Adapting and coping strategies are important to learn how to deal with losses, disappointments and decline. Concerning independent living systems, proactive coping can be supported by introducing the system before the stressors, related to the ageing process, appear in middle and late adulthood, with a focus on individuals with lower adapting skills. Equipment, personal assistance and the house environment are supportive for the elderly with dependencies and have important implications to consider.

Third, the choices to develop an ICT system that supports the goals and needs of independent living in the home care for the elderly with a specific dependency, have to align with the objectives of the consortium partners and the care partners, the informal carer, the home healthcare nurse and the general practitioner.

## **Conclusion**

Implementing ICT systems for the elderly will influence the current care organisation. Ehealth and telemedicine will keep/bring people who need intensive care at their home to respect independent living and to keep healthcare cost effective.

Cooperation between the homecare and hospital-based specialists will gain importance and will require effort from both sides.

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