J. LEMBERGER (Convener). **Incorporating new technologies in health-care systems**. *Gerontechnology 2012;11(2):131;* doi:10.4017/gt.2012.11.02.133.00 **Partcipants:** *D. IDAR* (Israel), *A. STERNS* (USA), *H.S.M. KORT* (Netherlands), *J. VAN HOOF* (Netherlands) **ISSUE** The coming years will see many advances in technology to assist older adults in their homes. These technologies might include robots, sensor-based networks, interactive media, mobile health (m-health) applications, emergency call systems, to name just a few. The question we address regarding these technologies is this: can health care systems, insurers, governments and municipalities adapt these technologies to meet the growing needs of older adults, or will cost, compatibility, and adaptability of the older users themselves work as a counter-force to utilizing new technologies? **CONTENT** Presenters from different settings and countries will describe how they are coping with, and planning for, this technological surge and how they deal with the challenges of scaling distribution. **STRUCTURE** Each presenter will in 20 minutes present the situation in his/her setting, country or institution. Helianthe Kort will present an overview of the e-Health projects in The Netherlands and the barriers that need to be overcome for successful implementation[1]. Joost van Hoof will present an overview of user needs in relation to ambient-assisted living projects which support ageing in place in The Netherlands[2]. Anthony Sterns will present an overview of challenges and strategies from the perspective of a start-up m-health business in the U.S.[3] Dalia Idar will present telemedicine as implemented in the Maccabi Healthcare Services in Israel, focusing on the challenges of integrating call centers, medical sensors, tele-health in a large healthcare system[4]. **CONCLUSION** The symposium will demonstrate that despite the challenges, there are creative solutions for adapting technologies, which may incur initial costs, however by effective utlilization of manpower and obviating , in many cases, superfluous home visits will lead to cost-savings in the medium and long run.

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J. LEMBERGER, D. IDAR. **Barriers and success factors in implementing advanced technologies to benefit the elderly: A perspective from Israel**. *Gerontechnology 2012;11(2):131-132;* doi:10.4017/gt.2012.11.02.297.00 **Purpose** Our aim is to present the implementation of advanced technologies for the elderly as part of a strategic view of health care in a major service system in Israel, Maccabi Healthcare Services, serving 1.8 million members of whom 8% are aged 65+.We will demonstrate that leadership commitment to technology, innovative treatment modes, and ongoing research and evaluation, together with cooperative efforts in IT and health technologies especially in Europe, advance the service methodology, efficiency in addressing current and future needs of the elderly1. **Method** We will address ongoing, and planned research projects intended to help elderly members of society to maintain their independence, increase their confidence, and insure ongoing medical care, even when they are unable to access services directly due to functional limitations or distance from major medical centers. Specifically, we will describe the program for congestive heart failure patients utilizing home-based sensors and proactive monitoring of medical teams (including the use of videoconferencing between patient and health professional), tele-homecare with housebound patients, the projected nurse-based chronic disease care program, and finally a description of initial results in the FP7-

project KSERA (Knowledgeable Service Robots for Aging)2. **Results & Discussion** The specific programs will be reviewed demonstrating the efficacy and importance of utilizing advanced technologies to assist the elderly, especially those who are lonely and confined to their homes. The barriers addressed include technological, financial, and adaptability issues. These barriers exist both for the health professional–specifically physicians and nurses–and for the elderly. When considering systemic barriers we will briefly present financial and business, structural, cultural, and technical and professional considerations. To overcome these there is a need for management and organizational commitment, envisioning a long-term savings in expenditures both in health outcomes and potential cost savings, integrated responsibility, and a clear incentive for the doctors and other health professional involved. Finally, it is vital that in adapting new technologies planning must include ongoing training and support for the professionals who, in essence, are using new language and tools for improving health outcomes for the elderly.

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A.A. STERNS. **Succeeding in mHealth in the USA.** *Gerontechnology 2012;11(2):132-133;* doi:10.4017/gt.2012.11.02.306.00 **Purpose** There are particular challenges and barriers to succeeding as an mHealth start-up in the U.S. These challenges, however, are to a great extent applicable to all entrepreneurial endeavours globally; they include: The US healthcare information system, the (lack of) understanding of health behavior change by healthcare professionals, and the design challenges for older adults. A review of these issues will be presented in the context of Creative Action's experience with bringing two products to market, The Memory Magic program (http://www.memorymagic.com), a cognitive intervention therapy for dementia sufferers, and the iRx Reminder system (http://www.irxreminder.com), a smartphone-based data gathering and monitoring system for research settings. **Method** Using advanced marketing research and user-centered design approaches, two gerontechnology healthcare products were developed and demonstrated in randomized control trials[1]. Both products address behaviour challenges that are exhibited by older adults with cognitive impairments. The Memory Magic program was compared to other similar activities and rated by staff[2]. The iRxReminder smartphone app was compared to a booklet[3]. Various marketing programs were used to publicize the products including digital marketing, direct marketing, tradeshow attendance, scientific presentations, and direct sales. **Results & Discussion** The Memory Magic program is now used in over 1.400 facilities in 7 countries including Australia, Canada, Japan, and the United States. iRxReminder is just coming to market and is being used in 7 projects in the United States, with interest from universities in Canada, Germany, and The Netherlands, and Clinical Research Organizations in Asia, Europe, South America, and the United States. Both the low-tech Memory Magic Program and the high-tech iRxReminder system are successful because they act as cognitive prosthetics™ that allow older adults to extend their independence. The older adults' experience is that they feel more competent when using these products and experience a higher quality of life. Professionals, both in healthcare and government must be educated to overcome their ageism and assumptions about older adult limitations. With an understanding of health behaviour change methods many new interventions can be placed and improve outcomes. This requires changes to the US healthcare information system infrastructure. These necessary changes are bringing the patient inside the medical record system which is currently health-professional-focused (i.e. physicians) and expanding the community support infrastructure to support self-management of chronic conditions. These changes will result in improved health outcomes and greater independence for

older adults, great satisfaction for professionals in serving and supporting the care of older adults, and improve the efficiency and lower the overall cost of care.

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H.S.M. KORT, J. VAN HOOF. **Overview of e-Health projects in The Netherlands: Barriers to implementation**. *Gerontechnology 2012;11(2):133-134;* doi:10.4017/gt.2012.11.02.270.00 **Purpose** e-Health projects in the Netherlands have various backgrounds. First, the number of persons aged 65 and over will have increased by 400,000 between 2008 and 20131. Over the same period, the potential workforce will have decreased from 4.2 persons at present to 3.6 persons for each 65 plus. Second, there is a shift from institutional care to care provided at home. The Dutch government promotes healthy behaviour and emphasises the importance of disease prevention2. People prefer to continue living in the community, even when their health is declining. Finally, Dutch policies stimulate the use of e-health in order to (i) support ageing-in-place (AiP), (ii) to enhance the quality of life of older adults, and (iii) to reduce the workload of professional carers. **Method** Vilans' Centre of Excellence for Long-Term Care3 database of 85 projects was analyzed. The projects included in the database date from 2004 and after. Some of these projects have been completed and terminated; other projects are still ongoing. Although the database includes the majority of the projects, a complete coverage of all projects in The Netherlands is not guaranteed. To analyse the barriers, all projects were sorted according to one type of e-Health project (videoconferencing, activity monitoring, other types). In this study, basic, functional and economic values from the Model of Integrated Building Design4 were considered as relevant stakeholder values deemed necessary for a successful implementation. **Results & Discussion** Most projects in the database use e-Health for the support of older adults with (48 projects) or without (35 projects) care needs. In addition, dementia (19 projects), COPD and diabetes (both 11 projects) are the three health conditions that e-Health applications are most often used for. A major barrier for implementation is that only 11 out the 85 projects have a social business case. Another barrier is that requirements to building construction, building systems, e-Health applications or (building) services are hardly ever considered in the projects that also aim to support ageing-in-place. There are many stakeholders involved in the e-Health projects, and not all of the needs of these stakeholders are met in the design and implementation of the accompanying technologies. The execution of these projects seems to consist merely of an analysis of the technological applications with emphasis on the needs of the care recipient and other primary users. To date, e-Health projects in The Netherlands have not been fully implemented5. As well as a failure to include stakeholder needs and accounting for potential barriers, another reason may be that use of e-Health in care will imply innovating care protocols. Care provision shifting from a medical disease oriented model towards a care and well-being model. A structural exchange of knowledge and experience in functionalities and user needs will be necessary to take away barriers to a large-scale and successful implementation of e-Health in The Netherlands.

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J. van Hoof, E.J.M. Wouters. **User needs and ambient-assisted living in the Netherlands.** *Gerontechnology 2012;11(2):134;* doi:10.4017/gt.2012.11.02.201.00 **Purpose** Building services technologies such as home automation systems and remote monitoring are increasingly used to support people in their own homes. In order for these technologies to be fully appreciated by the end-users (mainly older care recipients, informal carers and care professionals), user needs should be understood[1,2]. In other words, supply and demand should match. Steele et al.[3] state that there is a shortage of studies exploring perceptions of older users towards technology and the acceptance or rejection thereof. This paper presents an overview of user needs in relation to ambient assisted living (AAL) projects, which aim to support ageing-in-place in The Netherlands. **Method** A literature survey was made of Dutch AAL projects, focusing on user needs. A total of 7 projects concerned with older persons, with and without dementia, were included in the overview. **Results & Discussion** By and large technology is considered to be a great support in enabling people to age-in-place. Technology is, therefore, accepted and even embraced by many of the end-users and their relatives. Technology used for safety, security, and emergency response is most valued. Involvement of end-users improves the successful implementation of ambient technology. This is also true for family involvement in the case of persons with dementia. Privacy is mainly a concern for care professionals. This group is also key to successful implementation, as they need to be able to work with the technology and provide information to the end-users. Ambient technologies should be designed in an unobtrusive way, in keeping with indoor design, and be usable by persons with sensory of physical impairments. In general, user needs, particularly the needs of informal carers and care professionals, are an understudied topic. These latter two groups play an important role in implementation and acceptance among care recipients. They should, therefore, deserve more attention from the research community.
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