J. STEWART (Convener). **ICTs for informal care givers.** *Gerontechnology 2012;11(2):392;* doi: 10.4017/gt.2012.11.02.530.00 **Participants:** *J. STEWART* (Spain), *F. BARBABELLA* (Italy), *S.E. LEVKOFF* (USA), and *S. PEEK* (Netherlands). **ISSUE** Information and communication technologies are slowly being integrated in to the fabric of the provision of care for elderly people, with a range of established and novel services across Europe demonstrating that use of ICTs can support success-ful home care[1-10]. Informal carers provide the majority of care to elderly people in Europe, and are crucial to the success of home care in providing quality of life and quality of care to the older population. The expertise and role of informal carers are often overlooked in the provision of formal long-term care (LTC) and in the design of technology-based services to support aging. Carers are predominantly older women, who can suffer poverty, isolation, and other forms of social exclusion, leading to poor quality of care, and eventual breakdown of home care. ICTs-supported services are needed that will support these carers, but there is scant knowledge about how this can be done, how impact can be measured, and who should be involved in creating the new services that effectively supports and empowers different types of carers and older peo-ple and delivers sustainability in LTC. **CONTENT** This session will bring together various per-spectives and empirical evidence on the impact and innovation of ICT-based services to support carers and care in order to better understand how to exploit the possibilities of ICTs in sustain-able LTC that recognises the role of the informal carer. **STRUCTURE** The symposium will con-sist of presentations with individual question and answer, and a short panel session to discuss research and policy priorities. **CONCLUSION** The symposium will draw conclusions on how the design and implementation of ICT-technologies and services can be supported to best serve the needs of older people, their carers within a sustainable LTC-system, and to identify the areas of research and dissemination of practice that will best support this goal.

References
1. Belle SH, Burgio L, Burns R, Coon D, Czaja SJ, Gallagher-Thompson D, Gitlin LN, Klinger J, Koepke KM, Lee CC, Martindale-Adams J, Nichols L, Schulz R, Stahl S, Stevens A, Winter L, Zhang S. Enhancing the quality of life of dementia caregivers from different ethnic or racial groups. Annals of Internal Medi-cine 2006;145(10):727-738
2. Chen H, Levkoff SE. The Multiverse of Inquiry: Introduction to the Special Issue on "Dementia Care and Chinese Culture". Ageing International 2010;35(2):85-95
3. Glendinning C, Tjadens F, Arksey H, Morée M, Moran N, Nies H. Care Provision within Families and its Socio-Economic Impact on Care Providers. Report for DG EMPL. Working Paper EU 2342. York: Social Policy; 2009
4. Kluzer S, Redecker C, Centeno C. Long-term Care Challenges in an Ageing Society: The Role of ICT and Migrants. JRC Scientific and Technical Report: EUR 24382 EN. Luxembourg: Publications Office of the European Union; 2010
5. Lamura G, Mnich E, Nolan M, Wojszel B, Krevers B, Mestheneos L, Döhner H. Family carers' experi-ences using support services in Europe: empirical evidence from the EUROFAMCARE study. The Geron-tologist 2008;48(6):752-771
6. Hanson MLE, Borg M. A literature review study of information and communication technology as a sup-port for frail older people living at home and their family carers. Technology and Disability 2004;16(4):223-235
7. Mollenkopf H, Kloé U, Olbermann E, Klumpp G. The Potential of ICT in Supporting Domiciliary Care in Germany. JRC Scientific and Technical Report. Luxembourg: Publications Office of the European Union; 2010
8. OECD. Help Wanted? Providing and Paying for Long-Term Care: Chapter 4, Policies to Support Family Carers; 2011; www.oecd.org/dataoecd/52/30/47884889.pdf; retrieved April 20, 2012
9. Read J. Carers' Perspectives on the Internet: Implications for Social and Health Care Service Provision. British Journal of Social Work 2005;35(7):1175-1192
10. Yeandle S, Fry G. The Potential of ICT in Supporting Domiciliary Care in England. JRC Scientific and Technical Report: EUR 24150 EN. Luxembourg: Publications Office of the European Union; 2010

F. BARBABELLA, A. SCHMIDT, C. CHIATTI, G. LAMURA. **A theoretical framework for assessing the impact of ICT-based interventions for carers.** *Gerontechnology 2012;11(2):393;* doi: 10.4017/gt.2012.11.02.571.00 **Purpose** Initiatives using information and communication technologies (ICTs) as support for carers of dependent older people are reported since the early 1990s, mainly in form of phone services, computer networks, and video respite. Although the role of ICTs in home care gained increasing relevance in the last decades – for instance in the areas of social integration, care coordination and ambient assisted living (AAL) – few attempts have been made to systematically understand the potentialities of such technologies, overcoming single technology or intervention domains. In this respect, the issues of terminology ambiguity and lack of comparability represented major barriers, so that most of evaluation studies in this area led to mixed and/or inconclusive results. Drawing on the findings of the CARICT-project[1], this paper discusses the development of a theoretical and conceptual framework to assess the impact of ICT-based interventions for carers. **Method** Literature review and a mapping exercise of 52 ICT-based initiatives for carers in 8 countries. **Results & Discussion** We will provide the results of a mapping exercise of 52 case studies, showing the diversity of existing good practices across Europe and carrying out a review of available impact assessment of these initiatives from a social ecological perspective (at micro-, meso- and macro-level). Subsewquently, we will discuss a theoretical and conceptual framework that is built on the basis of available evidence, leading to a proper classification of ICT-based interventions in relation to types of interactions between actors they support: an attempt is made to group the solutions in coherent and comprehensive classes, with related implications for impact assessments and comparative analysis. Main classes include: alarms, home automation, auto-communication, meta-services, information and training, cognitive stimulations and mental exercises, support group sessions, individual care and support services, and social participation tools. Finally, recommendations for future research in the field are formulated with regard to the assessment and comparability of these services, as well as to the testing and development of new solutions.

References

1. CARICT. ICT-based solutions for caregivers: assessing their impact on the sustainability of long-term care in an ageing Europe; 2010; www.euro.centre.org/detail.php?xml_id=1850; retrieved April 17, 2012

S.E. LEVKOFF, H. CHEN, X. LU, L. XING. **A supporting website for Chinese dementia caregivers.** *Gerontechnology 2012;11(2):393-394;* doi:10.4017/gt.2012.11.02.587.00 **Purpose** Ethnic Chinese family caregivers of elders with dementia experience significant unmet needs to improve health literacy and enhance social support[1-3]. This study evaluates a culturally-sensitive website as an online intervention to provide educational information and social support to Chinese dementia caregivers. **Method** Formative evaluation was performed, which included two parts: (i) two rounds of in-depth interviews were conducted after eight ethnic Chinese family dementia caregivers reviewed the content and features of the website, and the results of these interviews were incorporated into the website intervention design to ensure cultural sensitivity and user relevance of both website content and features; and (ii) a questionnaire survey was conducted at the end of website development to assess usability of, and viewer satisfaction with, the website. Twenty-eight Chinese-speaking dementia caregivers participated in the evaluation study. **Results & Discussion** Based on the information obtained from the formative evaluation, and also principles of health behavioural theories (e.g., social cognitive theory, and stress and coping model)[4,5], the website was developed with features designed to ensure its cultural sensitivity and intended impacts on caregiver health outcomes such as reducing emotional distress and perceived caregiver burden. The website includes a combination of educational information, expert opinion, caregiver stories, educational tools, and an online community. The content is generated by both experts (e.g., information about dementia, caregiving skills, and caregiver self-care) and users (e.g., caregivers' personal stories and experiences with caregiving), and presented in multiple

media (text and video) and multiple languages (simplified and traditional Chinese), as well as in interactive formats (caregivers ask experts for advice online and comment on other caregivers' stories and experiences). The survey results indicate that 89% of users found information they needed, 72% found it easy to use, and 92% would recommend it to friends, suggesting overall user satisfaction with the website. Users preferred video files over text only content, and expressed strong interest in the 'Expert Questions and Answers' section. Users showed a strong and growing willingness to participate in the online community that is managed on Chinese twitter, where they share personal experiences and provide mutual support.

References
1. Ho C, Cui X, Weitzman P, Levkoff S. Stress and service use among minority caregivers to elders with dementia. Journal of Gerontological Social Work 2000;33:67-88; doi:10.1300/J083v33n01_06
2. Torti FM Jr, Gwyther LP, Reed SD, Friedman JY, Schulman KA. A multinational review of recent trends and reports in dementia caregiver burden. Alzheimer Disease & Associated Disorders 2004;18(2):99-109; doi:10.1097/01.wad.0000126902.37908.b2
3. Chen H, Levkoff SE. The Multiverse of Inquiry: Introduction to the Special Issue on Dementia Care and Chinese Culture. Ageing International 2010;35(2):85-95; doi:10.1007/s12126-010-9061-4
4. Bandura A. Health promotion by social cognitive means. Health Education & Behavior 31(2):143-64; doi:10.1177/1090198104263660
5. Folkman S, Greer S. Promoting psychological well-being in the face of serious illness: when theory, research and practice inform each other. Psychooncology 2000;9(1):11-9; doi:10.1002/(SICI)1099-1611(200001/02)9:1<11::AID-PON424>3.0.CO;2-Z

S.T.M. PEEK, E.J.M. WOUTERS. **Home health care professionals' perceptions on automatic monitoring**. *Gerontechnology 2012;11(2):394-395;* doi:10.4017/gt.2012.11.02.565.00 **Purpose** Automatic monitoring systems can provide security for home care clients who are unwilling or unable to use a personal alarm button[1,2]. An example of this type of technology is the attended autonomous surveillance (UAS) system. This system consists mainly of motion sensors. Additionally, one camera is placed in the living room[3]. Several studies investigated attitudes and perceptions of clients regarding automatic monitoring systems[4-6]. However, research on reactions of home care professionals is limited. In order to increase the likelihood of a successful implementation of automatic monitoring systems it is necessary to understand the views and attitudes of these professionals as well[7]. **Method** Semi-structured interviews were held with 8 home care professionals. Interviews started with questions on current care delivery by both professional and informal carers and current use of technology, general attitude towards technology and perception of needs by clients. Next, the UAS-system was explained through a standardized and illustrated description. This was followed by questions on first impressions of the system (practicality, perceived benefits, and doubts), suggestions for improvements to the system and implementation tips. Interviews were recorded and fully transcribed. Member-checking was performed. Key themes were extracted through open and axial coding and were peer-reviewed[8]. **Results & Discussion** Most of the home health care professionals have doubts about the safety of their clients due to understaffing. All of the participants expect the UAS system to increase (perceived) security. At the same time most participants were concerned about privacy issues, although all of them were convinced these can be overcome by asking clients for permission to transmit video footage in case of emergency, such as falls (the system does not record or transmit video in normal circumstances). Some professionals indicate the system needs to be fully reliable in the sense that it sends an alarm immediately and every time an incident occurs. Others mention that the system needs to be unobtrusive, i.e., hardly noticeable by the client. Professionals would like to involve clients and informal caregivers in the implementation process. As a result of the low

number of participants these findings can only be considered exploratory at this time. Extra interviews with professionals and informal carers have been scheduled to increase data saturation. Interviews with clients of these professionals have also been planned. Results are expected later this year.

References

1. Hessels V, Le Prell GS, Mann WC. Advances in Personal Emergency Response and Detection Systems. Assistive Technology 2011;23(3):152-161
2. Heinbüchner B, Hautzinger M, Becker C, Pfeiffer K. Satisfaction and use of personal emergency response systems. Zeitschrift für Gerontologie und Geriatrie 2010;(43):219-223
3. ROSETTA. Unattended Autonomous Surveillance (UAS); 2009; www.aal-rosetta.eu/smartsite.dws?id=135331; retrieved March 8, 2012
4. Londei ST, Rousseau, J, Ducharme, F, Saint-Arnaud A, Meunier J, Saint-Arnaud J, Giroux F. An intelligent videomonitoring system for fall detection at home: perceptions of elderly people. Journal of Telemed Telecare 2009;15(8):383–390
5. Wild K, Boise L, Lundell J, Foucek A. Unobtrusive in-home monitoring of cognitive and physical health: Reactions and perceptions of older adults. Journal of Applied Gerontology 2008;27(2):181-200
6. Marquis-Faulkes F, McKenna SJ, Newell AF, Gregor P. Gathering the requirements for a fall monitor using drama and video with older people. Journal Technology and Disability 2005:17(4):227-236
7. Cardinaux F, Bhowmik D, Abhayaratne C, Hawley MS. Video based technology for ambient assisted living : A review of the literature. Journal of Ambient Intelligence and Smart Environments 2011;3(3):253-269
8. Boeije HR. Analysis in qualitative research. London: Sage; 2010

J. STEWART, C. CENTENO. **ICT-enabled services for carers and care: Lessons for policy and innovation.** *Gerontechnology 2012;11(2):395;* doi:10.4017/gt.2012.11.02.570.00 **Purpose** Policy makers, entrepreneurs, carers associations and health and care service providers are exploring how information and communication technologies can be deployed to support home care of elderly people, in particular as part of services that support the informal carers provide. Central to this are services that empower informal carers, through training, information, counselling, respite, effective coordination with health and care services, and increase the autonomy of older people in need of care. However, evidence of successful deployment of this type of services, and how to achieve it, is not systematically available. Using findings of the CARICT[1] study this paper explores the pathways to successful use of ICTs in care that improves the quality of care and quality of life of elderly people their carers, and the sustainability of local care services. **Method** An innovation-based approach was used to help understand the development and diffusion of ICT-enabled services for carers in the highly local and human-centred field of care for the elderly. The paper explores the barriers to engagement of a range of stakeholders and end-users in field of elderly care, and illustrates empirically how these were overcome with leadership, partnerships, and evidence using the 12 case studies of the CARICT-research. **Results & Discussion** The role of intermediaries such as private companies and carers associations which bring new resources and focus long-term care (LTC) is highlighted as key to success in both innovation and developing sustainable services. Pointers are given to how policy makers can address the future sustainability of LTC by focusing on the deployment of ICT-enabled services to empower older people, their carers, and those who a provide range of services to support aging at home. We also discuss what steps could be taken to transfer successful services across Europe and stimulate new innovation.

References

1. CARICT. ICT-based solutions for caregivers: assessing their impact on the sustainability of long-term care in an ageing Europe; 2010; www.euro.centre.org/detail.php?xml_id=1850; retrieved April 17, 2012