

Guest Editorial

Technology in Dementia Care

A guide to using technology within dementia care – the ASTRID Guide – was published in 2000 [1]. With funding from the Telematics Programme of the European Commission the ASTRID project looked at the potential offered by assistive technologies to support people with dementia. One conclusion was that there was a lack of awareness at all levels and that none of the main parties concerned had yet appreciated the potential. As a family caregiver some years ago I experienced the truth of this conclusion. Even simple assistive technologies that could have been of much help at the time were not available. Nobody seemed to perceive that dementia implies disability and that people affected need assistive aids to support them. Until recently, it was neither a topic on conferences on dementia nor on those on assistive technology.

Professor Mary Marshall at the University of Stirling has been in the forefront to change this. She emphasised the need to ensure that advances in technology are used to benefit people with dementia and their carers. She argued that we need to make sure people with dementia and their carers benefit from technology to the same extent as older people generally [4]. Most technologies had until then focused on safety and monitoring systems in an institutional setting. However, a much broader perspective is needed in order to take advantage of the potential of technology in dementia care, both for the person with dementia their caregivers and the society.

By the funding of projects such as TED [2,7], ASTRID [1] and ENABLE [3] the European Commission has played an important role in the development of knowledge and demonstration of effects of using technology within dementia care. Addressing ethical aspects and the steps of the decision process, the TED guidebook has become a reference and support for professionals [2]. The TED project also interviewed family caregivers and professionals about what problems they prioritised as most important in the daily life of

people with dementia and investigated possible technological solutions [6]. The development of the picture gramophone that aimed to support activity and pleasure for people with dementia was an innovative result of TED and the later ENABLE project [3,7]. The picture gramophone is a PC with touch screen displaying pictures associated with popular singers or songs. Upon touching a picture the song associated with it will be played while the text is shown on the screen – as a PC-based karaoke. The videos from the projects showing people with dementia using the picture gramophone convincingly demonstrates that people with dementia can use technology provided its design and function are adapted to their needs. Development of technology to support activity, entertainment and social interaction of people with dementia is so far an almost unexplored field. The approach taken by the UK based INDEPENDENT project described by Orpwood and co-workers in this issue will hopefully inspire to further engagement by researchers and companies.

This issue contains an introduction chapter on dementia and the use of technology by Cahill et al. followed by four articles on methodology. Alwin and coworkers describe a model for health economic assessment of assistive technology which includes the important intervention process. The project is a part of the programme “Technology and Dementia” funded by the Swedish Handicap Institute. This institute also supports the work by Molin et al. described in the article “Living at home with acquired cognitive impairment – Can technology help?” In addition to exploring appropriate problem-solving technologies, the project addresses organisational and administrative obstacles in the delivery of services.

Methodology developed in ENABLE for cost-benefit analysis and results of using assistive technology in practice are described by Duff and Dolphin. The part 1 of their contribution concerns a methodological approach to cost-benefit analysis, followed in part

2 by the presentation of the results of employing the methodology in practice. Their conclusion is encouraging – demonstrating that relatively cheap technology can have a positive impact on a person's independence or reduce the burden on their carers. However, a coherent system for provision of assistive technology is important for releasing the potential. More results from the ENABLE project are presented by Cahill and coworkers from the assessment study in Ireland and by Topo et al. on the results with an electronic calendar to support time orientation.

Due to reduced orientation people with dementia can get lost when they walk about. Rasquin et al. report different solutions to reduce the problem of walking about and discuss the potential applicability of using GSM/GPS. The design and function of the technology tested was not yet developed to a stage to be useful for people with dementia and their caregivers. However, if the user requirements for these products are communicated to and taken into account by the developers it is hoped new and better versions will be available.

According to Anja Leppo referred by Marshall [5] technology is part of the triangle of care: staff, buildings and technology. A so-called smart house technology for people with dementia was first demonstrated at Lillehammer in 1994 and similar demonstration houses have since been equipped, in particular in the UK. Martin et al. describes the use of ICT to provide information to care staff about the needs of the tenants in an apartment house for people with dementia and thereby support them. The authors also discuss ethical and legal aspects of using the technology.

National programmes have been launched in different countries, as in the UK [8] and Sweden and the theme is now highlighted at conferences organised by organisations such as AAATE and Alzheimer Europe. However, despite the increased focus and interest in the use of technology in dementia care the last few

years it is still a challenge to raise the awareness – at all levels and among stakeholders. Many factors have been shown to be important for a positive outcome of implementing technology for people with dementia. It is important to bear in mind that technology always must be seen in a social context and that introducing technology in the home of a person with dementia can also result in confusion and irritation. The knowledge and competence of all people involved in the process from user needs analysis to implementation and follow-up as well as good co-ordination between the different levels are prerequisites for successful results.

Inger Hagen

Guest Editor

E-mail: post@ihagen.no

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