Remote communication, examination and training in neurological care and rehabilitation

Martin Rydmark

The Sahlgrenska Academy, University of Gothenburg, SWEDEN

ABSTRACT

Organization and tools for home or remote ICT-based patient centered care for individuals with neurological disease or brain damage have been developed and tested on patients during the last 15 years by our research group; this will be briefly presented and further improvements are suggested. Neurologic disease and damage cause profound alterations to a person's life. The conditions are often life long and demand continuous treatment and rehabilitation, as well as support in the activities of daily life. Communication with health care as well as relatives and friends often become cumbersome and travel to and from 'doctors and rehabilitation' are tiresome. We have documented experience of developing systems and telemedical tools for rehabilitation of stroke victims; tools including serious games, 3D visualization and haptics. For Parkinson's disease we now develop tools for remote assessment of motor function together with experts in clinical care and the ICT industry.



BIO-SKETCH

Martin Rydmark, MD, PhD, is professor of Medical Informatics and Computer Assisted Education. He graduated MD and PhD from the Karolinska Institutet in the early '80s, became associate professsor of anatomy at Gotheburg University (GU) in '85, director of the medical faculty computer laboratory – Mednet – at the Sahlgrenska Academy (GU) in the early '90s, and, finally professor of Medical Informatics and Computer Assisted Education, at GU, in 2010. Presently, he heads a research group/network at GU, focused on ICT based R&D in neurological care and rehabilitation. Earlier research has been in the fields of image analysis, 3D reconstruction, multimedia and educational development.