

CLEAR

Clinical Leading Environment for the Assessment and Validation of Rehabilitation Protocols in Home Care



The CLEAR project sets up an innovative e-Health service based on the development of protocols for rehabilitation and chronic disease management therapies, which can be implemented at home following well-defined procedures under the control of medical staff. The ambition is to contribute to the harmonisation of eHealth and rehabilitation services in Europe.

Piero is a 49-year-old who suffered from a stroke leaving him with left upper limb impairments. Before his stroke he lived at home with his family. The doctors decided he needed mass practice to improve his upper limb functionality. So his physiotherapists gave him a therapy plan to train the functional skills of his left arm. In this plan, Piero was assisted by physio- and occupational therapists to train for several hours per day, five days a week. At the end of the rehabilitation programme Piero had to go home. He made important improvements, but the therapists thought Piero could have improved even more if there had been more time to practice. His doctor therefore asked Piero to use the CLEAR system, which he could use to practice outside the clinic whilst it was still possible for him to contact his therapists. In this way he could expand the period of practicing functional tasks with his arm, while he was again living at home.

Further rehabilitation areas are cognitive diseases, chronic pain, pulmonary diseases as well as post-surgery rehabilitation for hip and knee replacement.

Objectives

CLEAR is a 2.74 million euro project funded by the European Commission, bringing together 13 European public and private organisations. It has two main objectives:

- to set-up a tele-rehabilitation service allowing doctors to design, develop and implement clinical based protocols for home rehabilitation and tele-care
- to contribute to the establishment of a "European standard" for rehabilitation services freely accessible from the web.

The project aims at treating at least 800 European patients affected by cognitive, neurological, orthopaedic and pulmonary pathologies or by chronic pain in Italy, Spain, Poland and The Netherlands through the "Habilis platform". The CLEAR project's objective is to increase patients' autonomy and their quality of life, and to decrease the burden on the family, the stress and the isolation



Expected results

1. an open, interoperable and robust platform, independent from specialised hardware at home
2. integrated e-rehabilitation modules helping to optimise healthcare centre resources
3. individually tailored clinical exercises and treatment protocols for home rehabilitation, remote patient supervision and self-care management
4. Data accessibility to enable the interpreting of results on patient progress/deterioration
5. Customised and defined service operational modes inside the four participating hospitals.

Current status

- Web based platform for service provision already implemented and tested on a consistent target group of patients;
- Clinical protocols prepared and standardized among the participant clinical centres;
- Health Technology Assessment methodological approach designed and set up;
- Clinical trials have started in May 2010.

Current status

The economic impact of the service on the health structure concerned is assessed during the project life accounting local policies of national/regional governments as well as individual health centres.

Socio-economic benefits

The expected socio economic benefits are:

1. **Improved quality of life for patients** through a reduced need to attend healthcare centres;
2. **Improved healthcare centre effectiveness** by treating more patients at the same time;
3. **Greater understanding** of the socio-economic impact of the e-Health services proposed, which will help both the future adaptability and economic viability of healthcare systems;
4. **Standardisation and coordination** of the activities of national companies, to provide a pan-European service customised in each Member State;
5. **Contribute to the impact of the ICT PSP** as the project is conceived as a platform to deliver services for patient's , and particularly elderly people, benefit;
6. **Increased European SME market potential** as the structure of the service attributes an important role to the Local Service Providers, whose main task is the technical support of the local hospitals and healthcare centres;
7. **Increased quality of European rehabilitation practice** through the push for common standards, making it possible to design rehabilitation paths that can be implemented remotely.



At a Glance

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Partners:

- **Hospitals:** Fundació Privada Institut de Neurorehabilitació Guttmann (Spain), Rehabilitation Centre Het Roessingh (Netherlands), Warszawski Uniwersytet Medyczny (Poland), Azienda Unità Sanitaria Locale 11-Empoli (Italy);
- **Platform integrators:** Signo Motus Srl (Italy), Universidad Politécnica de Madrid, (Spain);
- **Project development assessors and validators:** Istituto Superiore di Sanità (Italy), Roessingh Research and Development and Stichting Menzis Beheer (Netherlands), Regione Toscana (Italy), Centrum Systemow Informacyjnych (Poland), Fundació Privada Centre Tic I Salut and Fundació Institut Català de l'Envel·linment (Spain);
- **Local service providers:** enrolled by the hospital under a sub-contract basis.

Timetable: September 2008 - August 2011

Total cost: € 5.6 million

EC funding: € 2.74 million

Instrument:

ICT Policy Support programme under the Competitiveness and Innovation Framework Programme (CIP)

Project identifier:

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KEYWORDS

Rehabilitation, Home-care, Chronic disease management, Telemedicine, Tele-care, eHealth services