eHealth
Monthly Focus
CLEAR

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

For any healthcare systems, chronic diseases represent the heaviest cost burden. A plethora of ICT based applications have been developed in recent years, allowing a partial tackling of problems related to specific diseases.

However, even the most advanced deployments have had limited impact, mostly focusing on pilot applications entailing little or no change on the whole healthcare system.

Clinical challenge

CLEAR proposes the implementation of a tele-rehabilitation service in four European Member States (IT, ES, NL, PL).

The ambition is to convert the project, after its completion, to a European service for tele-rehabilitation and to contribute to the harmonization of e-health services in the EU.

What does "tele-rehabilitation service" mean?

In general terms *it is a service allowing patients to extend greatly part of the rehabilitation treatment at home (or at the point of their need, home or rehabilitation kiosks) under the supervision of a clinical team guaranteeing efficacy, safety, privacy and ethical methods.*

With this scenario in mind, CLEAR approaches three different goals:

- ➤ To implement and validate sustainable ICT based clinical models for the management of chronic diseases;
- ➤ To treat at least 800-1000 patients affected by common diseases;
- ➤ To establish a group of European interest, "Habilis Europe", for the deployment of this service.

The service is implemented through the "HABILIS interoperable platform" used within different clinical pathways. The platform allows to design rehabilitation sessions for common diseases affecting the elderly people (musculoskeletal, neurological chronic pain, pulmonary diseases, cognitive disorders and stroke).

Its main functionalities, from the users perspective, are described in figure 1.

Figure 1: main functionalities of the Habilis platform

Exercise, proactive self care and environment, will allow people to maintain their abilities for a longer period of time.
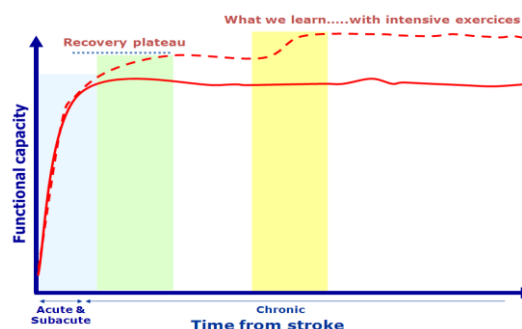
Current Status

The service has been successfully implemented in four European clinical centres of excellence where the clinical trials are on progress.

Currently more than 400 patients are on treatment. The project is in its last year where a complete HTA tailored to the different characteristics of the clinical studies is on progress.

Clinical Results achieved so far in the 4 centres

Rehabilitation Centre Het Roessingh (NL)
At RCR, 174 chronic patients (chronic pain and COPD) are informed about the CLEAR project/ treatment so far. The first results show a clinical benefit for chronic low back pain (CLBP) patients (see figure 2). For this group, pain intensity decreased: 9 points (0-100) for the control group and 19 points (0-100) for the intervention group. A decrease of 13 is considered clinically relevant (Todd, 1996).
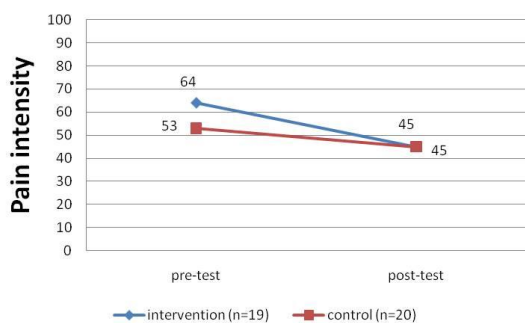

Figure 2: pain intensity score pre- and post-test for control group (n=20) and intervention group (n=19)

Azienda Unità Sanitaria Locale 11-Empoli (IT)
At AUSL11, the service is implemented through "kiosks" spread in the territory. 186 patients are currently on treatment. Clinical results on stroke upper limb rehabilitation have shown efficacy and clinical acceptance for both patients and professionals.

Fundaciò Privada Institut de Neurorehabilitaciò Guttmann (ES)
41 patients have started their cognitive personalised tele-rehabilitation treatments. Data retrieval is on progress.

Warszawski Uniwersytet Medyczny (PL)
At the Medical University of Warsaw (MUW) 924 patients before and after total hip/knee replacement were invited to use CLEAR treatment. One hundred and three patients responded to the invitation. These patients were instructed how to work with Habilis Platform during in hospital interview session. Evidence has been obtained regarding patients and professional satisfaction. Clinical trials are ongoing.

Assessment and Validation
A complete Health Technology Assessment (HTA) framework has been designed taking into account all the relevant HTA dimensions – such as clinical, social, organizational, economical –. Data are currently in the retrieval process at each of the four clinical centres.

Join Habilis
The Habilis network has been set up to provide European guidelines for the harmonisation of tele-rehabilitation services in Europe (www.habiliseurope.eu).

Partners
• **Hospitals:** Fundaciò Privada Institut de Neurorehabilitaciò Guttmann (ES), Rehabilitation Centre Het Roessingh (NL), Warszawski Uniwersytet Medyczny (PL), Azienda Unità Sanitaria Locale 11-Empoli (IT);

• **Platform integrators**: Signo Motus Srl (IT), Universidad Politécnica de Madrid, (ES);

• **Assessors and validators**: Istituto Superiore di Sanità (IT), Roessingh Research and Development and Menzis Beheer (NL), Regione Toscana (IT),Centrum Systemow Informacyjnych (PL), Fundaciò Privada Centre Tic I Salut (ES), Fundaciò Institut Català de l'Envellinment (ES);

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