Co-funded by the European Union

THCS

RooMMate

ACRM
AMERICAN CONGRESS OF REHABILITATION MEDICINE

PP-195

rehabweek
Chicago '25

Co-creation of a technology-supported ecosystem for sub-acute stroke care: preliminary results of the ROOMMATE project

Francesca Cecchi 1, 2, Stefano Giuseppe Doronzio 1,2, Chiara Castagnoli 2, Ileana Ciobanu 3, Mihai Berteanu 3

1 - University of Florence, Italy; 2 - IRCCS Fondazione Don Carlo Gnocchi, Florence, Italy;
3 - "Elias" University Hospital, University of Medicine and Pharmacology "Carol Davila," Bucharest, Romania

BACKGROUND

The prevalence of stroke survivors is estimated to increase by 27% between 2017 and 2047

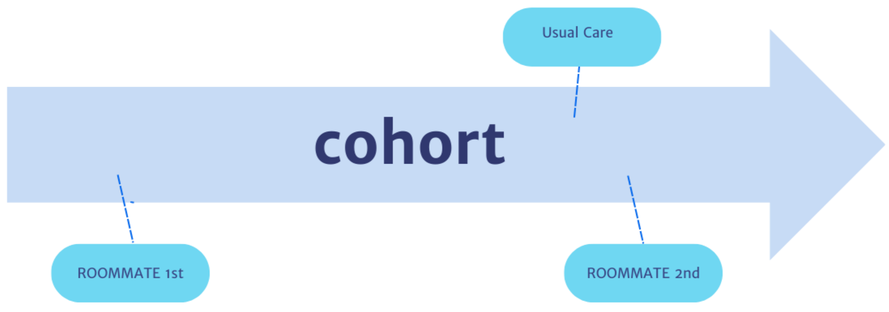
Only 1 in 4 stroke survivors return to their pre-stroke levels of participation.

Patients addressing postacute rehabilitation and their caregivers often report unmet needs on education, training, and emotional support.

To address these issues, the primary aim of ROOMMATE is to innovate stroke rehabilitation pathways by the co-creation of an user friendly and sustainable rehabilitation ecosystem.

STUDY DESIGN

ROOMMATE is a cohort multiple RCT, involving 100 post-stroke patients, in the subacute phase per clinical center (Italy and Romania). Every intervention lasts 3 weeks, which is the average duration of post-stroke rehabilitation hospitalization in Italy and Romania.



ROOMMATE 1st: VRRS + usual care
ROOMMATE 2nd: VRRS + SensMode + usual care

The primary outcome is evaluate of the effects of a co-created ttechnological ecosystem on the global functional recovery in basic Activities of Daily Living (bADL) (Modified Barthel Index).

TECHNOLOGIES

Tablet at the patient's bedside (Virtual Reality Rehabilitation System - VRRS) without (VRRS) and with co-created multimedia content (VRRS1)



Khymeia

Inertial sensors



UNIVERSITÀ DEGLI STUDI FIRENZE
DIEF DIPARTIMENTO DI INGEGNERIA INDUSTRIALE

Soft exoskeleton for the hand



emovo
rediscover movement

Intuitive robotic solutions



TU Delft

CO-CREATION METHOD

A total of 10 stroke patients, 10 caregivers and 54 professionals have been involved in the **focus groups**, observing:

- need of a personalized intervention
- need of the technological coach
- presence of human being in the videos
- enhancement of activity extension beyond therapeutic hours
- user friendly interfaces
- real time feedbacks

→ These feedbacks have been analyzed and used to define the user's journey.
The solutions will be tested by the end users during the living labs

Contacts:
Francesca Cecchi
francesca.cecchi@unifi.it;
fcecchi@dongnocchi.it
Stefano Doronzio
sdoronzio@dongnocchi.it

PROMISE@LAB
Roessingh Centrum voor Revalidatie
Fondazione Don Carlo Gnocchi Onlus
TU Delft
UNIVERSITÀ DEGLI STUDI FIRENZE
DIEF DIPARTIMENTO DI INGEGNERIA INDUSTRIALE
MEDEA
emovo rediscover movement

@ROOMMATE project
@roommate_thcs
@ROOMMATE project