



# CAREGIVERS PRO

MMD

Usability study of a web-based intervention to support people living with dementia and their caregivers

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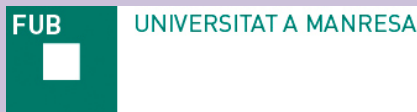
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# Project identity card

## Consortium



- H2020 Project (H2020-PHC-2015-25)
- Grant Agreement: 690211
- Research and Innovation action
- Start: January 1<sup>st</sup>, 2016
- Duration: 36 months
- Target groups: People living with dementia (PLWD), Mild cognitive impairment, informal caregivers, health and social care professionals

The aim of the project is to create an digital platform for people with dementia (PwD) or Mild Cognitive Impairment (MCI) and their caregivers that will provide services based on social networks, tailored interventions, clinical strategies and gamification in order to improve quality of life, wellbeing and medication compliance.

# Background

- Adequate care through ICT (Meiland et al., 2012)
- Web-based fora (Torkamani et al., 2014)
- Educational programs (Cristancho-Lacroix et al., 2015)
- Social networks (van der Roest et al., 2010)

## Involving end-users in the development of ICT interventions

- Understand preferences and needs
- Increase autonomy (Span et al., 2013)
- Usability
- User-friendliness/ease of learn or use, usefulness (Meiland et al., 2012)



# Background

## CAREGIVERSPRO-MMD platform

### Services

- Social network
- Reminders for medication and appointments
- Localised information (support & events)
- Online health questionnaires
- Educational Information
- Monitored by healthcare professionals
- Gamification
- Cognitive interventions



# Background

## CAREGIVERSPRO-MMD platform

### Aims & objectives

- Improve QoL of PLWD
- Reduce caregiver burden
- Reduce administration time to health services and professionals
- Reduce or delay hospitalisations or admission to care homes

Aim of presented study: findings from a usability study for CAREGIVERSPRO-MMD platform



# Methods

## Participants

- MCI, mild, mild to moderate dementia
- 50 years old
- Informal caregiver

	<b>PLWD (n=24)</b>	<b>Caregivers (n=24)</b>	<b>Professionals (n=10)</b>
<b>Age [mean (SD)]</b>	<b>78.30 years (9.70)</b>	<b>53.58 years (13.71)</b>	<b>40.78 years (10.44)</b>
<b>Age range</b>	<b>55-91 years</b>	<b>30-77 years</b>	<b>26-53 years</b>
<b>Gender</b>	<b>14 females 10 males</b>	<b>20 females 4 males</b>	<b>7 females 3 males</b>

# Methods

## Material

### Usability questionnaire:

- Perceived usefulness
- Ease of use
- Satisfaction of users
- Qualitative questions for neutral or negative responses
- Likert scale: strongly disagree (0) to strongly agree (4)

### Procedure

- Platform access and manual
- Create user accounts
- Training
- 1-week follow up



# Results

	PLWD		Caregivers		Professionals	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Usefulness	65.6%	65.9%	81.6%	87.2%	77.7%	84.6%
Ease of use	56.1%	56.8%	79.6%	78.9%	80.4%	90.0%
Satisfaction	60.0%	58.4%	79.4%	81.2%	63.9%	81.0%

- Usage benefits professionals
- Usefulness and ease of use vary for user groups
- Priorities for PLWD differ from other user groups





# Results

## Qualitative comments

### PLWD

- Interface with bigger colour contrast, more icons, less text
- Unsure how to upload photos
- Find emoticons unnecessary
- Missing privacy settings
- Shows appointments from past days
- Explain who has access to the forums
- Monitoring for abuse is necessary



# Results

## Qualitative comments

### Caregivers

- Not appealing sign in page
- Privacy issues about appointments
- Appointments and messages from others are mixed
- Replace text with icons
- Appointments should be presented in chronological order
- Personalisation for fonts is not enough (colours and backgrounds)
- Statements about information visibility



# Results

## Qualitative comments

### Professionals

- Difficulty to find other users
- Interface is not user-friendly – bigger icons, less busy pages
- No interest to upload photos

### All user groups

- Remote monitoring



# Conclusions

- Above 80% satisfaction for caregivers and professionals
- Lower satisfaction (58.4%) and ease of use (56.8%) for PLWD
- Different account per user group
- Simpler for PLWD
- Professionals and caregivers rated the platform higher than PLWD
- Unfamiliar with ICT
- Common concern about security and privacy settings, sharing information and monitoring inappropriate use



# Conclusions

## Priorities for services

### PLWD

- Local resources
- Social network

### Caregivers & Professionals

- Social network
- Appointments
- Invitations to connect with other users

## Improvements needed

- Interface
- Functionality
- Security
- Interaction with professionals
- Gamification





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 CAREGIVERSPRO\_MMD Project (group)

<http://caregiversprommd-project.eu/>



<http://dziraquaponique.blogspot.co.uk/?view=snapshot>

Thank you



# References

- Cristancho-Lacroix V, Wrobel J, Cantegreil-Kallen I, *et al.* (2015). A Web-Based Psychoeducational Program for Informal Caregivers of Patients With Alzheimer's Disease: A Pilot Randomized Controlled Trial. *J Med Internet Res*, 17, e117.
- Span, M., Hettinga, M., Vernooij-Dassen, M., Eefsting, J., & Smits, C. (2013). Involving people with dementia in the development of supportive IT applications: A systematic review. *Ageing Research Reviews*, 12(2), 535–551.
- Meiland, F. J. M., Bouman, A. I. E., Sävenstedt, S., Bentvelzen, S., Davies, R. J., Mulvenna, M. D., Nugent, C.D., Moelaert, F., Hettinga, M.E., Bengtsson, J.E. & Dröes, R.-M. (2012). Usability of a new electronic assistive device for community-dwelling persons with mild dementia. *Aging & Mental Health*, 16(5), 584–91.
- Torkamani, M., McDonald, L., Saez Aguayo, I., Kanios, C., Katsanou, M.-N., Madeley, L., Limosin, P.D., Lees, A.J., Haritou, M., Jahanshahi, M. & the ALADDIN Collaborative Group. (2014). A randomized controlled pilot study to evaluate a technology platform for the assisted living of people with dementia and their carers. *Journal of Alzheimer's Disease: JAD*, 41(2), 515–23.
- van der Roest, H. G., Meiland, F. J. M., Jonker, C., & Dröes, R.-M. (2010). User evaluation of the DEMentia-specific Digital Interactive Social Chart (DEM-DISC). A pilot study among informal carers on its impact, user friendliness and, usefulness. *Aging & Mental Health*, 14(4), 461–470.

