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Evaluating the CAREGIVERSPRO-MMD platform for supporting people with memory problems and caregivers: A usability study



CAREGIVERSPRO-MMD PROJECT





Document information

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Executive summary

This deliverable (D5.1) reports the findings of the usability of the CAREGIVERSPRO-MMD platform at the current stage of its development. In July 2016, a focus group study (T2.1) was conducted to explore the needs and opinions of end-users [people living with dementia, caregivers and health care professionals] of the previous version of the platform. The findings from the focus group study contributed to the development and improvement of the platform. The present study aims to measure the perceived usability, by end-users, for this improved version of the platform. The results from this study will be used to further develop the platform which will be tested during the 18-month pilot study of the project.

Previous research underlines the importance of the involvement of end-users in the development of technology-based products in order to ensure their usefulness and user-friendliness. Therefore, the present study aims to measure the usability of the current version of the CAREGIVERSPRO-MMD platform through the perceived user-friendliness, usefulness and satisfaction of end-users from all the pilot sites of the project: in France (CHU-ROUEN), England (UHULL), Italy (COOS) and Spain (FUB).

This deliverable reports the methods employed in the usability study for the CAREGIVERSPRO-MMD platform; including a description of the recruited population, usability questionnaires and experimental procedure. The findings of this study are reported as both quantitative data from usability questions, as well as qualitative data reflecting the requirements of users. These findings yield guidance for the further development and improvement of the CAREGIVERSPRO-MMD platform.



List of Acronyms

Acronym	Title
HCP	Health Care Professional
ICT	Information and Communication Technology
MCI	Mild cognitive impairment
PLWD	People living with dementia
SCP	Social Care Professionals



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1 Introduction

1.1 Purpose and Scope

There is growing interest in the development of information and communication technology (ICT) that can help PLWD and their caregivers to live more positive lives (Span, Hettinga, Vernooij-Dassen, Eefsting, & Smits, 2013). ICT interventions have been developed to provide cognitive stimulation, to maintain communication with family and friends (van der Roest, Meiland, Jonker, & Dröes, 2010) and to provide educational material (Torkamani et al., 2014). Bringing further developments to this flourishing, exciting and economically important area, the CAREGIVERSPRO-MMD platform takes a relationship centred care approach in targeting both members of the dyad (PLWD and their caregivers). The platform will offer web-based social contact, reminders, information on local resources offering help and support, health monitoring through questionnaires, and personalised interventions providing educational material for coping with health-related issues. The primary goals of the platform are to improve the quality of life of PLWD and to decrease the experienced burden for caregivers. Other goals concern the dyadic relationship between PLWD and their caregivers, delay in institutionalisation for PLWD and reducing the care costs for the family of PLWD.

It is necessary to involve users at the development stage of such ICT applications, in order to understand their preferences and needs, and to increase PLWD and caregivers' autonomy (Span et al., 2013). Therefore, usability studies aiming to evaluate ICT interventions should involve end-users from the early stages of the development of the intervention. Usability concerns the user-friendliness (e.g. easy to learn) and perceived usefulness in addressing users' needs (Meiland et al., 2012). This report specifies the methods employed in the usability study, as well as findings from the perspectives of PLWD, caregivers and HCPs in respect of the current version of CAREGIVERSPRO-MMD platform. The objectives of the present study were to explore the platform's perceived usefulness and ease of use, as well as users' satisfaction with each available function. Conclusions and directions for the future improvement of the platform are discussed at the end of this report.



1.2 Relation to other work packages and deliverables

This deliverable (D5.1) provides direction for the improvement of the CAREGIVERSPRO-MMD platform to meet the needs and requirements of end-users, PLWD, caregivers, HCPs and SCPs. This usability study is part of the development process of the platform. A previous version of the platform was evaluated and improved based on the findings from a focus group study (D2.1) in July 2016 which was conducted with PLWD, caregivers, HCP and SCPs. Platform improvements will also be implemented based on the results of the present usability study (T5.1) in order to ensure the development of a user-friendly and useful platform which meets end-users needs. This version of the platform with improvements required from the usability study, will be used in the pilot study (T5.3) from months 18 to 24.

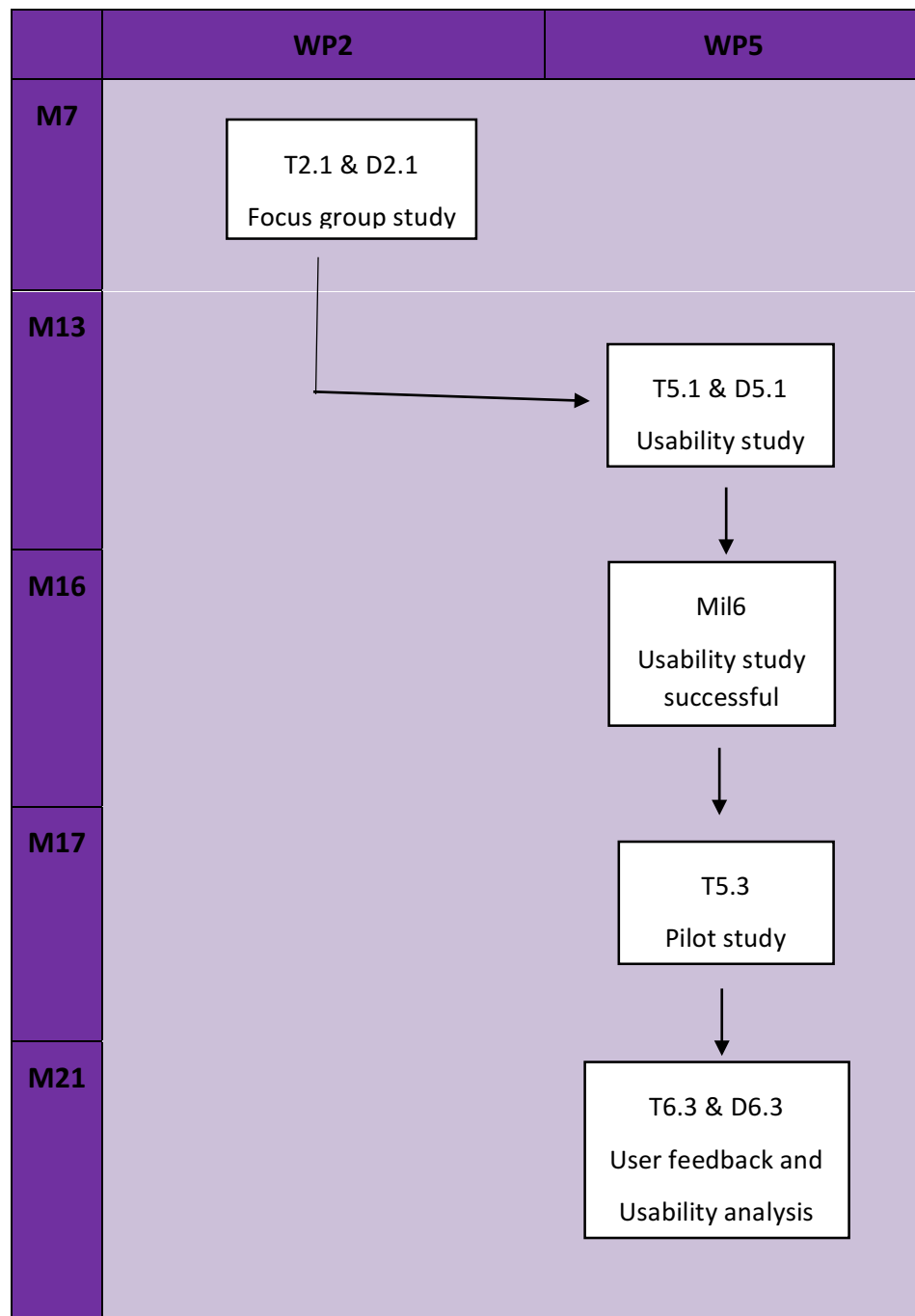


Figure 1. Relationship with other tasks and deliverables



2 Methods

2.1 Targeted user groups

The targeted populations were PLWD or people with mild cognitive impairment (MCI), caregivers and HPC and SCPs; which is the same as the targeted populations for the pilot study. The pilot inclusion and exclusion criteria are not strictly enforced in the usability study so the boundaries for inclusion could be tested.

2.1.1 *Inclusion criteria*

PLWD or MCI

- Be older than 50 years
- Have a self-reported diagnosis of dementia or MCI
- Have an informal, primary caregiver who is also willing to take part in the usability study
- Have adequate native language skills for each pilot site

Caregivers

- Be 18 years old or older
- Be an informal, primary caregivers of a PLWD/MCI
- Have adequate native language skills for each pilot site

Health and Social Care professionals

- Work with PLWD/MCI
- Be 18 years old or older
- Have adequate native language skills for each pilot site

2.1.2 *Participants per pilot site*

The usability study included 58 participants in total, 24 of which were PLWD/MCI, 24 were caregivers, and 10 were professionals. Table 1 illustrates the populations recruited by each pilot site.

*Table 1 Number of participants per user group in each pilot site*

	COOS (Italy)	FUB (Spain)	CHU- ROUEN (France)	UHULL (England)	Total
PLWD/MCI	5	10	1	8	24
Caregivers	5	10	1	8	24
Professionals	3	3	4	0	10

2.1.3 Recruitment

Participants were volunteers who were recruited from local institutions, from the caseload of CAREGIVERSPRO-MMD researchers and third party institutions, as well as people who had participated in the previous stage of development of CAREGIVERSPRO-MMD platform.

2.1.4 Demographic information for user groups from all pilot sites

The age and gender of participants are summarised in Table 2.

PLWD/MCI

In the user group of PLWD or MCI, 21 participants had a form of dementia (14 Alzheimer's disease, 3 mixed dementia, 1 vascular dementia, 3 unknown type of dementia) and 3 were diagnosed with MCI. The length of time people had been living with their diagnosis varied considerably, eight people received their diagnosis up to 5 years ago, 1 person up to 10 years ago, 5 people received their diagnosis more than 10 years ago, and 8 people could not report the year of diagnosis. In terms of education and employment history, all PLWD/MCI were retired (n=24). Nine PLWD/MCI were educated to degree level, 2 had undertaken vocational training, and 13 people did not hold a formal higher education qualification.



Table 2 Age and gender for each user group

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

Caregivers

In the group of caregivers, the family caregivers included spouse carers (n=9), children of care receivers (n=11), and one grandchild. Three caregivers reported being related to the care recipient but did not specify the nature of the relationship.

The amount of time dedicated to caregiving (or providing care) varied considerably (see Table 3) from 2 to 168 (24 hours per day) hours per week.

Table 3 Hours of caregiving per week

	2-14 hours	15-25 hours	40 hours	56-168 hours	Unspecified
Number of caregivers	9	1	1	7	6

The majority of caregivers had been providing care for fewer than five years (n=15). Five caregivers reported providing care for six to ten years, while four caregivers had provided care for more than ten years. Concerning the place where PLWD/MCI and caregivers spent most of their day and provided care, most caregivers provided care in the PLWD/MCI home, and the rest of the caregivers (n=3) provided care PLWD/MCI house. Sixteen people supported PLWD/MCI as full time caregivers and were not employed elsewhere, while eight caregivers were also in full-time employment. In terms of education, eighteen caregivers were educated to degree level, while one had undertaken vocational training and five caregivers had no formal qualifications.

HCPs and SCPs

In the user group of HCP and SCPs, the majority of participants were medics (neurologists or geriatricians; n=5). Three professionals were psychologists, one was a social worker and another was a nurse. Eight out of ten professionals worked in



hospital environments; one reported being based on a dementia unit and another at a day centre.

2.2 Procedure

The PLWD and caregiver dyads, or professionals, were visited twice by researchers at the start and end of a week. Participants were provided with information sheets and were asked to complete the consent forms and the demographic forms. The researchers created platform accounts for each participant and developed the login details (username and password). Initially researchers demonstrated the platform and verbally asked the usability study questions and recorded the responses. This involved participants being presented with each function of the platform and then asked to perform the available actions and to reply to the usability and qualitative questions relating to each function. The platform functions tested are summarised in Table 4. Participants were also shown scenarios illustrating the use of function (Appendix G). Participants were then asked to use the platform for one week at their own pace and in their familiar environments. The duration of the study was based on previous research (Meiland et al., 2012) and was thought to be sufficient for the purposes of the study. Testing of the social networking aspects of the platform is necessarily limited with such small numbers of users. Participants were able to contact the researchers if problems arose during the one week usability trial. In the follow-up visit a week later, participants were asked to reply to the same usability and qualitative questions. Of the total of 58 participants, 52 used the platform for one week (23 PLWD, 23 caregivers, 6 professionals). The rest of participants (n=6; 1 PLWD/MCI, 1 caregiver, 4 professionals) were not able to use the platform for one week due to winter holidays in France.



Table 4 Platform functions, descriptions, targeted user group and pictures

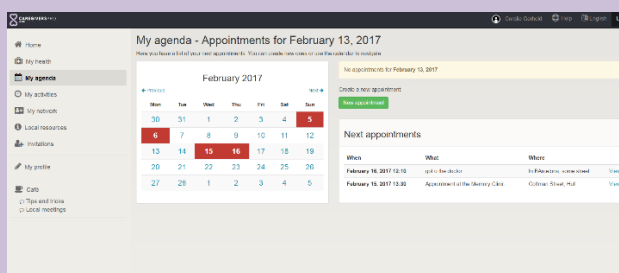
Platform functions	User group	Picture
Sign In Gives access to the platform	PLWD/MCI Caregivers Professionals	
Home Publish messages and reply to messages from others	PLWD/MCI Caregivers Professionals	
My network Send invitations to others to join the platform and review users' profiles	PLWD/MCI Caregivers Professionals	
My profile Complete or change personal information and upload profile picture	PLWD/MCI Caregivers Professionals	



My agenda

Create new appointments which can be reviewed in the home page

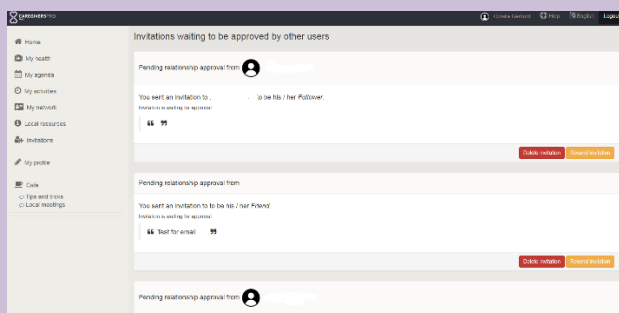
PLWD/MCI
Caregivers
Professionals



Invitations

Review invitations send or received from others to connect in the platform

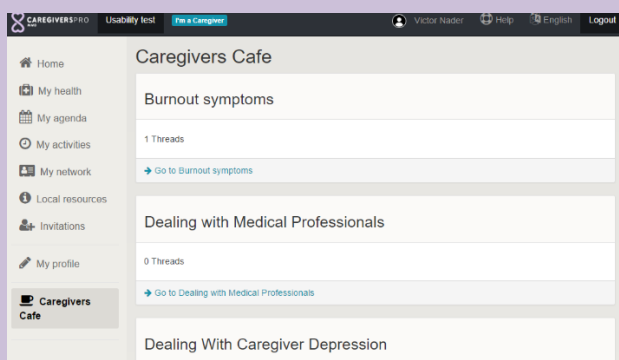
PLWD/MCI
Caregivers
Professionals



Café

Publish and reply to messages about dementia-related topics

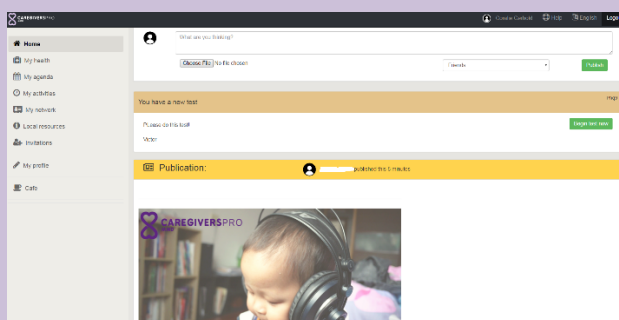
PLWD/MCI
Caregivers
Professionals



My health

Complete online questionnaire about mood in the home page

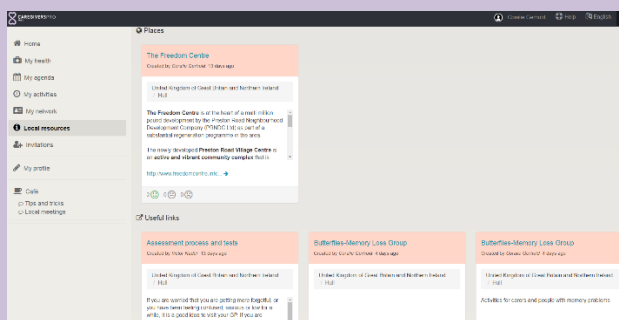
PLWD/MCI
Caregivers
Professionals

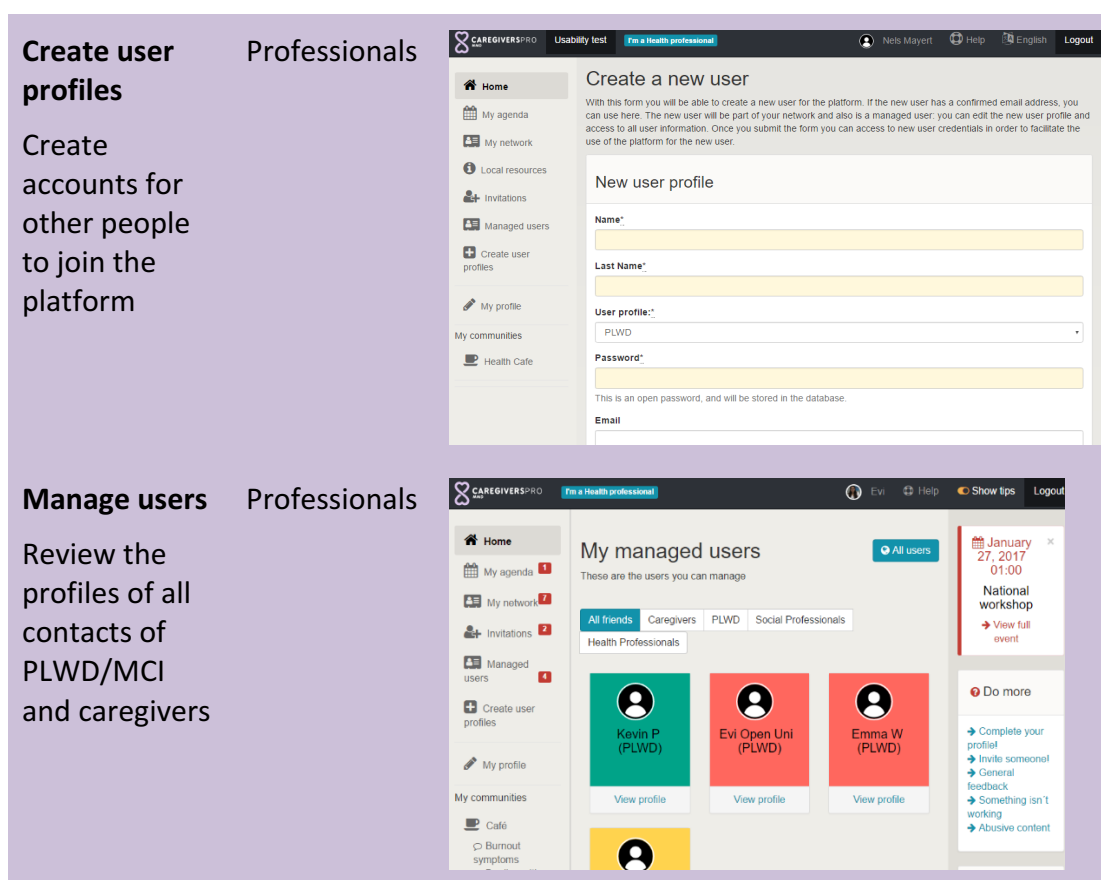


Local resources

View all the available local support services in the local area

PLWD/MCI
Caregivers
Professionals





2.3 Usability evaluation and study material

All usability questionnaires were created in English and translated into the languages of the other pilot sites. The study materials included Participant Information sheets, Informed Consent forms, Demographic Sheets and Usability Questionnaires specific to each user group, as well as scenarios describing each function of the platform (see Appendices 6.1-6.7).

The usability questionnaires included questions relating to each function of the platform currently available to the user.

The available platform functions investigated were:

- Home (publishing/replying to messages)
- My network (invite users, contacts)
- Profile (personal info, profile photo)
- My agenda (appointments, events)
- Invitations (review invitations)
- Forum (publishing and reading)



-
- My health (online questionnaires)
 - Local resources (help and support)

These functions are described in further detail in Appendix G.

The questionnaires measured the user-friendliness and usefulness of the platform, as well as the satisfaction of users. Moreover, the questionnaires measured the willingness of users to continue using the platform, to recommend it to other users, as well as the perceived usefulness for all the user groups. These outcome variables for the usability of technology-based interventions are frequently reported in research (Table 4).



Table 5 Technology-based intervention and usability outcome variables

Authors (year)	Interventions	Outcome measures
Hattink et al. (2016)	Digital Alzheimer Centre: An online portal with information about dementia, events and news, summary of appointments and dossiers, advice on practical, financial and legal issues, forums for communication between PLWD, carers and professionals, and private communication with users from the same area with a similar diagnosis	<ul style="list-style-type: none">- Ease of use- Usage (e.g. whether they would use the portal)- Attractiveness
Meiland et al. (2012)	COGKNOW: A digital intervention with reminders for day and time, for appointments and medicine, picture dialling for making and receiving calls, radio and music player, and safety warnings	<ul style="list-style-type: none">- Satisfaction- Difficulty of learning/use- Usefulness
Span et al. (2015)	DecideGuide: A web tool with a chat function for communication between PLWD, caregivers and professionals, a deciding together function for decision-making, and an individual opinion function for expressing opinions about dementia-related topics.	<ul style="list-style-type: none">- Ease of use- Satisfaction- Acceptance
Torkamani et al. (2014)	ALADDIN: A platform providing educational material relating to dementia to carers, and facilitating clinicians to monitor PLWD and their carers, as well as facilitating communication between carers and clinicians	<ul style="list-style-type: none">- Ease of use- Willingness to continue using the platform
Van der Roest et al. (2010)	DEM-DISC: An interactive forum where caregivers can seek answers to their questions about dementia care and available support services	<ul style="list-style-type: none">- Satisfaction- Ease of learning- Usefulness



In the CAREGIVERSPRO-MMD usability study, responses to the usability questionnaires for each available function of the platform were reported on a 5-point Likert scale from 0 to 4, where 0 means that participants strongly disagree with the statements about the ease of use, the usefulness and their satisfaction with each platform function; and 4 means strong agreement with the perceived usability of each function. In the event where participants disagreed or were neutral with the usability of each platform function, they were asked to clarify the reasons and provide suggestions for improvement. These qualitative responses were deemed important to provide the necessary guidance for the development of the platform.

2.4 Data analysis

Quantitative data were analysed by converting usefulness, easiness and satisfaction scores into percentages. Each participant score was converted into a percentage by multiplying the score with 100 and dividing the result with the maximum obtainable score which in this case was number 4. Total scores for the overall usefulness, easiness and satisfaction for the platform were calculated by averaging percentage-scores from all platform functions for each outcome variable. The qualitative data recorded is listed in full in Section 3.1 and conclusions drawn from the main themes are outlined in Section 4.

3 Results

3.1 Quantitative Analysis

Table 6 shows the perceived usefulness and ease of use, for each user group, as well as the satisfaction of users for each platform function at the baseline. Table 7 summarizes similar results from the 1-week follow up visit. All scores are converted into percentages to show users' agreement with the usability of the platform i.e. the proportion who agree or strongly agree with each statement.



Table 4 Usability from the first research visit of each function of the platform

Platform functions	Question	PLWD/ MCI	Caregivers	Professionals
Sign In	Usefulness	60%	80%	N/A
	Ease of use	58%	79%	N/A
	Satisfaction	60%	80%	N/A
Home	Usefulness	68%	83%	70%
	Ease of use	58%	77%	75%
	Satisfaction	65%	81%	68%
My network	Usefulness	60%	78%	82%
	Ease of use	58%	77%	78%
	Satisfaction	65%	80%	68%
My profile	Usefulness	63%	77%	74%
	Ease of use	50%	80%	74%
	Satisfaction	59%	80%	58%
My agenda	Usefulness	60%	80%	89%
	Ease of use	63%	82%	88%
	Satisfaction	59%	78%	76%
Invitations	Usefulness	70%	82%	73%
	Ease of use	58%	76%	83%
	Satisfaction	65%	72%	78%
Café	Usefulness	65%	83%	80%
	Ease of use	50%	81%	88%
	Satisfaction	48%	73%	83%
My health	Usefulness	68%	80%	N/A
	Ease of use	50%	80%	
	Satisfaction	55%	81%	
Local resources	Usefulness	78%	90%	N/A
	Ease of use	63%	83%	



Create user profiles	Satisfaction	65%	89%	
	Usefulness	N/A	N/A	80%
	Ease of use			88%
	Satisfaction			88%
Manage users	Usefulness	N/A	N/A	75%
	Ease of use			73%
	Satisfaction			68%
Platform usage		53%	80%	75%
Platform usefulness for other user groups		57%	85%	75%
Total scores	Usefulness	65.6%	81.6%	77.7%
	Ease of use	56.1%	79.6%	80.4%
	Satisfaction	60.0%	79.4%	63.9%

The usability scores indicate that caregivers and professionals find most of the platform functions more useful and easy to use than PLWD/MCI. Therefore, caregivers and professionals scored higher in the overall usage and usefulness of the platform. As a result, the platform for PLWD/MCI should be significantly different from the caregivers and professionals' accounts. PLWD/MCI scores are lower in the ease of use of each platform function than in the perceived usefulness and their satisfaction and thus, it is likely that they require a simpler interface than the other user groups.

Table 5 Usability from the follow up research visit of each function of the platform

Platform functions	Questions	PLWD/MCI	Caregivers	Professionals
Sign In	Usefulness	57%	91%	N/A
	Ease of use	54%	79%	N/A
	Satisfaction	51%	91%	N/A
Home	Usefulness	72%	87%	83%



My network	Ease of use	65%	76%	83%
	Satisfaction	68%	84%	83%
	Usefulness	67%	88%	85%
My profile	Ease of use	59%	75%	88%
	Satisfaction	59%	76%	73%
	Usefulness	63%	88%	90%
My agenda	Ease of use	54%	78%	85%
	Satisfaction	54%	77%	67%
	Usefulness	67%	85%	94%
Invitations	Ease of use	63%	81%	93%
	Satisfaction	62%	79%	88%
	Usefulness	68%	86%	83%
Café	Ease of use	54%	70%	96%
	Satisfaction	60%	73%	92%
	Usefulness	63%	84%	80%
My health	Ease of use	57%	84%	96%
	Satisfaction	54%	80%	83%
	Usefulness	63%	84%	N/A
Local resources	Ease of use	63%	83%	
	Satisfaction	60%	83%	
	Usefulness	74%	94%	N/A
Create user profiles	Ease of use	60%	84%	
	Satisfaction	58%	88%	
	Usefulness	N/A	N/A	88%
Manage users	Ease of use			92%
	Satisfaction			88%
	Usefulness	N/A	N/A	75%
	Ease of use			88%
	Satisfaction			75%



Platform usage		68%	90%	92%
Platform usefulness for other user groups		72%	89%	86%
Total scores	Usefulness	65.9%	87.2%	84.6%
	Ease of use	56.8%	78.9%	90.0%
	Satisfaction	58.4%	81.2%	81.0%

The results from the follow up visit confirmed that caregivers and professionals gave higher usability scores for the platform than PLWD/MCI, suggesting that PLWD/MCI may require different interfaces to help them engage with technology. Similar to the first research visit, PLWD/MCI reported low ease of use for the platform. In users' overall evaluation for the platform, caregivers and professionals were more than 80% satisfied with the platform. These user groups also reported high usefulness and ease of use for the platform. On the other hand, PLWD/MCI considered the usefulness and ease of use of the platform to be increased after one week of using it. This was also the case for caregivers who provided higher scores for the usability of the platform in the follow up visit than in baseline, suggesting that people become more familiar with the platform over now.

3.2 Qualitative Analysis

While completing the Usability Questionnaires, the users were asked if they had any comments to expand on their scores, particularly when they disagreed or strongly disagreed. These comments were paraphrased by the researchers and, if necessary, translated into English. These comments have been reproduced in the sections below. Some comments were made several times and these have been listed in **bold**.

3.2.1 Person Living with Dementia or MCI

3.2.1.1 Sign In

- Username not obvious as we didn't choose nickname
- **It automatically tried to sign me in using my nickname** that I saved on the platform - but it doesn't work when logging in. Need to re-enter my username and password again.
- If you forget to log out, it comes up with an error message on the page and can't log in again, have to re-enter web address in the browser.
- Don't know where to find the website.
- Show my Profile details (name, photo, etc.) as big as possible.



- A little bit confused at the beginning. Please, make it more easy-to-use.
- Continually needs a person to assist them in all his daily activities.

3.2.1.2 Home

- Needs bigger colour contrast - cannot read grey letters.
- It is too small for me, and too coloured.
- **I'd prefer icons, big images describing contents.**
- Publication...less than a minute 'ago' ('ago' to be added).
- Don't like the black bar at the top of the page. Prefer blue for more contrast with white text.
- 'Attach a file' is confusing - not sure how it works.
- **Don't understand the purpose of the smiley faces** - thought I was sending a smiley face to my friend but it was for my own message.
- After you click on a notification it disappears, but I would like to keep a record. So it is ok that it disappears but would like to click back on it again to see recent notifications (like Facebook).
- My messages do not save on the comments thread - no track record of my comments.
- Would be helpful if it said "message sent".
- Too cluttered. Can see everyone's appointments - not helpful.
- I thought that when I sent a message to an individual, only that person would see it, however this is not the case as I saw that a caregiver commented on it.
- Would like to have private messages because may not want carer/supporter to see what I'm saying.
- I am used to my computer and my Home Page. Why should I publish any messages or photos? Who are the "friends/contacts?"
- I'm not familiar with using a computer.
- I need assistance to interact with the platform.
- **Multiple friends with same name.**
- **Too much texts, a little bit confusing.** I'd like to have big images or icons representing each area (i.e. a big picture of me representing "My profile" area).
- **I'd like to share memories and see pictures of relatives living far from me.** But I could not find memories in the platform as it is. I'd like to have a place in the platform with the pictures of my past, with the songs I like, with videos remembering me my story. In the profile? I don't know, but I'd like it and it would make the platform very attractive for me.
- It is too small for me, and too much coloured. I have some problems with notifications because I saw someone commented on a post of mine, but the notification was not active and nothing happened when I made tap on it.
After log out and in again, notifications disappeared.

- **I'd prefer icons, big images describing contents.** I have a Windows phone, and I like it because it has very big buttons with icons instead of text and I immediately can find what I look for. I'd like the Platform to be like it.
- I like it. I like to share comments and chat with friends but there are also posts from persons I don't know. I'd like to have a wall with posts from my network only. Maybe another public wall with "others" posts would be recommended.
- Attach a file is confusing - not sure how it works.

3.2.1.3 *My Network*

- Need a sorting function to filter 'PLWD', 'caregivers', 'healthcare professionals' etc when trying to find / invite new friends
- Would be helpful to find friends through shared interests, e.g. age / gender / hobbies / specific conditions.
- Needs to say: "Click here to find new friends" rather than "All platform users"
- Would be better to say "invite new friends" than "All users".
- Home page is too complicated
- I didn't know how to add people. Would like filter button to select males/females when finding / inviting friends.
- Rename "My Network" to "My Friends".
- **Rename 'all platform users' to 'all users'. Don't use the word 'platform'**
- When finding friends, the page is not full (2/3 empty squares at the bottom of the page), so you think there are no more friends to find, yet it shows more than one page of friends to find.
- I'd like to see in my wall only posts from my network's members. Why do I see posts of persons I don't know, even of different nationalities and I cannot understand what they write? Also, I'd like the Platform to suggest to me who, outside my network, has same interests as me, or the same needs; so that, I could contact her or him.
- **It's not so easy to find known persons for me and the profiles without pictures don't help me to recognize them.**
- I need bigger picture to recognise people. And I'd like that the platform would be able to suggest to me someone to get in contact with, according to where we both live or just because we have the same hobbies.
- I'd like to have known persons more visible, and somehow different colours for "friends" as from "caregivers" or "health professional's". Also in the café area there should be somehow a way to identify who I'm going to interact with, if a public audience or someone in particular. I'd suggest private chats and public forums to be differentiated properly.
- Would be helpful to find friends through shared interests, e.g. age/sex/hobbies/specific conditions. Don't use the word 'platform'. "Click here to find new friends". Home page is too complicated.



- Couldn't find how to add people. Would like filter button to select males/females.

3.2.1.4 *My Profile*

- Rename "My Profile" to "About Me".
- It's a mixture of stuff - needs redesigning.
- Don't like User Info.
- Don't think we need to have personal contact info like telephone/address - I don't want other people to see where I live - maybe just have it so people can put the area where they live / postcode.
- This section should just be about your gender / D.O.B. / hobbies / photos / email address / general location.
- Visual/personalisation settings/ changing password and username details, shouldn't be in My Profile. Instead, you could create a "Settings" tab in left side bar - this could contain different things like privacy settings (which is important), visual / personalisation settings, change my password/username, delete my account etc
- Unclear what is 'is visible in searching users'?
- Wouldn't think to click on the tabs - need boxes around them and coloured.
- Get rid of 'honorific prefix' (what is it?) and country.
- **Couldn't upload photo - says it's too large**
- Need delete button to get rid of name of photo if you change your mind.
- Concerns about entering telephone number and address. **Where are privacy settings?**
- Demographic info should be renamed 'Personal info'.
- Get rid of living status and education and computer use status – not necessary
- Visual settings can be useful but would like more, such as adjusting colour background. Doesn't change text size in left hand side bar.
- Needs option to personalise colours/fonts/background. Too clinical
- **Needs privacy settings.**
- Profile needs to be more personal and user-friendly.
- **When you upload a photo, should appear on the screen straightaway** - not helpful having to scroll down to save it.
- Can't change fake email address
- If password is in the first page so that people can change it, it needs to say that.
- Some details seems to be redundant, whilst some more are missing, i.e. if I live alone or not or health issues. I'd like to personalize my profile, with pictures, as I do in my house where I put photos, pictures etc. I'd like also the platform to adapt to my impairments, i.e. to my visual difficulties: therefore the texts shall be reduced and substituted with icons.



- It's easy for me to introduce personal information, but my health status should be more detailed in order to let my health pro to understand my conditions.
- What's "My activities" page for? I don't need it, or I cannot understand it. If the doctor needs to know my activities it's ok, but why shall I see it?
- My health profile shall be more detailed, but my doctor should introduce information, or monitor and confirm the information I give.
- **Needs privacy settings.** Profile needs to be more personal and user-friendly. Uploading a photo didn't work - said it was too large. When you upload a photo, should come up straightaway - **not helpful having to scroll down** to save it. Needs option to personalise colours/fonts/background. Too clinical.
- Need help from caregiver.
- Change name to "About Me". It's a mish-mash of stuff - needs redesigning. Don't like User Info. Don't think we need to have personal contact info like telephone/address - I don't want other people to see where I live - maybe just have it so people can put their area where they live /postcode. This section should just be about your gender / D.O.B. / hobbies / photos / email address / general location. Visual settings/password and username details shouldn't be in there. Instead, create a "Settings" tab in left side bar - this could contain privacy settings (which is important), visual/personalisation settings, change my password/username etc. Wouldn't let me upload photo - said it was too big/large.

3.2.1.5 *My Agenda*

- Instead of using single minutes change to 15 minutes as most appointments are set like this.
- Don't use 24hr clock - I prefer am/pm
- **Part of the calendar is missing on the right (viewed on a tablet).**
- Time is not clear - use the word 'Time' above when selecting the time.
- Need to highlight today's date on calendar and have today's date, clock/time visible on the top bar on each page.
- Have setting to choose between 24hr vs 12hr clock.
- Need to have 'past/previous appointments'.
- Need different settings for views of calendar, e.g. monthly/weekly/daily.
- View appointments in Home page only if it's today's or tomorrow's appointment, not past appointments or lots of future ones – too confusing. Home page is too cluttered with appointments.
- Today's appointment needs to be shown at the top of the home page, with a reminder. Don't like scrolling.
- Past appointments should be taken off the home page. **Don't show other people's appointments**
- Couldn't see My Agenda (the calendar) properly (using a tablet).

- **The right side of the calendar is missing/not displayed correctly.**
- **Home page quite cluttered**
- Needs to show the appointment on the actual calendar for each day.
- Would be good if caregivers could insert/send appointments in the calendar to remind me.
- **They do not appear immediately and with big font.** I cannot read it, it seems there are other information more important than my appointments.
- Notification to remember appointments, add maps.
- I already use a notebook and a blackboard/slate to note things to remember. My children already manage these things for me.
- I find it very useful but without help some functions are complicated.
- Calendar is missing on the right (tablet). Time is not clear-have the word time. Needs to highlight today's date on calendar and have it on page top bar-date and **clock/time, and have setting to choose 24hr vs 12hr**. Need to have 'ast/previous appt'. Need different settings for views of calendar, e.g. month/weekly/daily. View appt in home page only if it's today's or tomorrow's not past appt or lots of future ones.
- Appointments have to be classified as "personal" and **"visible for" and let me decide who can see it.**
- They do not appear immediately and with big font. I cannot read it, it seems there are other information more important than my appointments.
- Notification to remember appointments, add maps.
- Did not show appt in home page in one account), maybe because he has 2 accounts.
- Too cluttered. Today's appointment needs to be shown at the top of the home page. Don't like scrolling.
- Past appt should be taken off. Don't show other people's apt.
- Couldn't see my Agenda properly (using a tablet). Home page quite cluttered.
- Don't think I would personally use it, but others might. **Need different calendar viewing options e.g. monthly, weekly, and daily.** Needs to show the appointment on the actual calendar for each day. The right side of the calendar is missing/not displayed correctly. Would be good if caregivers could insert/send appointments in the calendar to remind me. Today's appointments need to be at the top of the Home page with a reminder.

3.2.1.6 *Invitations*

- Invitations should be a 'sub bar' to 'my network'
- Would be better for invitations to come up in home page to alert me to a friend request - like a red flag.
- If you don't have any pending friend requests or friend invites, the invitations tab on the left side bar disappears – this is confusing.
- Need a red notification to let me know I have a friend request.



- I'm not so familiar with invitations via "email". Is there another possible way? And, also, who I'm expected to invite? Persons I already know outside the platform? Only persons already in the platform? I feel a little bit disoriented in this area. I'd like the Platform to guide me more, at least with some tutorials.
- **Too much text for me, profiles should be classified per different colours and with more pictures.**
- Looks easy. Perhaps the research of new contacts shall be easier and more guided (i.e. introduce more research criteria).
- Might be better for invitations to come up in home page to alert me to a request - like a flag.
- **Need a red notification to let me know I have a friend request.** Invitations should be part of My Network.

3.2.1.7 Café

- Rename 'Café' to 'online help' or 'online chat' – people will think of an actual café where you get a cup of tea...
- Change 'café' to 'online chat' or 'chat with friends'.
- Rename 'café' to 'online forum'
- Don't like the word 'tips'. What is 'local meetings'? Maybe put 'Help and Support'
- Text functions not needed for discussions. Not helpful and confusing.
- Want option for adding pics/files.
- Just want one online chat option - not Home and Café
- **It needs to be monitored to avoid abuse**
- Is this just for PLWD? It's important not see anything posted by caregivers and vice versa. **This needs to be made clear in the café/forum, that it is for PLWD only!**
- Too many fields of discussions, but few discussions. It's a pity because I was looking for useful information. Forums have to be developed further and made more visible.
- I like this tool.
- Not so satisfied, it's not easy to find immediately what I can get from this feature.
- Don't think the functions to change text are helpful.
- Rename café to forum or online forum. **It needs to be monitored to avoid abuse.**
- Don't like the word "Tips" and "Local meetings". Don't like the design, layout or words used. Is this just for PLWD? It's important not see anything posted by caregivers and vice versa. This needs to be made clear.



3.2.1.8 *My Health*

- Need to have 'don't know' / 'unsure' button when answering questions
- **PHQ9 - not very good. Need more friendly questionnaires**
- Online questionnaires are not shown in My Health section.
- Don't like the questions/answers for the PHQ-9.
- **Once I've completed the questionnaire, there's no record of it.**
- Needs a record of completed questionnaires
- Needs a progress bar to show how far through I am in completing a questionnaire - number each question.
- Would be nice to have an online diary to record symptoms to remember for GP appointment – maybe in My Health section?
- I don't know like this page. It's easy yes, but useless. **I want the Platform to tell me something about my health and not vice versa!!!**
- The questionnaire is a good way to express and share my feelings and conditions, but there should be questionnaires about other issues that persons like me face during life.
- But I would like to have more information about my health and I do not like that the only question is if I have dementia or not. I do not have dementia, but **all my health problems are not listed.**
- More items would better define my health status.
- Online questionnaires are not shown in my health section. Don't like the questions/answers for the PHQ-9. Once I've completed the questionnaire, there's no record of it. Needs a progress bar to show how far through I am in completing a questionnaire - number each question.
- Needs a record of completed questionnaires.
- Could be useful for healthcare professionals/supporters/caregivers, but I wouldn't want to reflect on my health or previous moods.

3.2.1.9 *Local Resources*

- Don't like length of boxes - should say 'click here to find more info'. Need to reduce sizes
- Don't see the point in using smiley faces to rate the resources. Also, doesn't tell you who liked/disliked (just the number).
- **Need a comments box underneath each resource so people can leave reviews on whether they find this resource helpful or not.**
- Break down Local Resources into subheadings.
- Need a 'Back' button on the page, so it brings me back to Local Resources.
- The layout is too cluttered.
- Phone numbers could be personalised - e.g. my GP's number, my district nurse's number.
- Really appreciated the possibility to add personal contacts as a reminder.



- It is not clear which kind of support they can give me, and how much does it cost.
- **Insert "search" for local resources.**
- **Don't see the point in using smiley faces on the resources.** Also, doesn't tell you who liked/disliked. **Need a comments box so people can leave reviews.** Break down resources into subheadings. Need a 'Back' button on the page.
- **The layout is too cluttered. Would like to put my postcode in to find resources near me - Hull and East Riding is massive! Could have a map with local resources around me.** Phone numbers could be personalised - e.g. my GP's number, my district nurse number.

3.2.1.10 General Questions

- If they listen to our feedback and get it right, then yes. It has huge potential.
- I think I'd recommend it, in order to find useful tips and get in touch with caregiver and health pro.
- Only if more features will be added and only if the graphics will be improved.
- Yes, mainly because they can have the professional opinions and suggestions of experts.
- Probably they can find here some tips, as well as a way to express their worries and care-related issues. Also find tips and solutions.
- I generally agree, but I think that it would be more suitable to PLWD or health/social professionals.
- Only if further functions will be developed, and only if users will be not recognized and "tagged" as "MCI or "PLWD".
- Yes, why not to propose some games?
- I hope so! **I'd like to have some serious games, such as "Brain trainer" or memory games.** It would make the Platform more friendly, and they would take my mind trained!
- Yes, I think that doctors/ social professionals may be interested in interacting with patients from home, monitoring in remote their status



3.2.2 Care Givers

3.2.2.1 Sign in

- **Give instructions about which sign in name to use.**
- Can't sign in with nickname - change 'email/nickname' on sign in page to just Username.
- I would not say it is useful, as registration page it doesn't provide any specific information.
- It is easy to sign in and log in/log out.
- Too sad, unwelcoming. This page doesn't make me want to use it. I would like anything more joyful.
- **Improve colour and contrast in some cases.**
- Not at all intuitive.
- Give instructions about which sign in name to use.
- **Can't sign in with nickname/change 'email/nickname' on sign in page.**
- I would not say it is useful, as registration page it doesn't provide any specific information.
- It is easy to sign in and log in/log out.

3.2.2.2 Home

- **Appointments/publications are all muddled up.**
- I am able to view and edit other people's appointments!!
- When I clicked on a YouTube link someone had shared, it didn't open up a new page - not helpful.
- Change the wording for "Selected content was successfully destroyed" to "successfully deleted" and when you want to delete something, and a box comes up saying "are you sure?", it needs to be more specific - for example "are you sure you want to delete?"
- Specify type of files that can be uploaded (e.g. photo / word file)
- Don't think the neutral/unhappy faces are appropriate in the context of what we are doing.
- As long as personal info is not shared.
- Couldn't find out who can see my messages
- **When I post a comment on someone else's message it doesn't stay there**
- **Shouldn't be able to see friends' and non-friends' appointments**
- Home page is too complicated.
- When I click to view someone's profile, I'd expect to see a photo and something personal about that person.
- **When you view someone's profile, you can see their appointments mixed with their 'wall' stuff - not helpful.** When you view someone's profile it should be more personal/about them.



- Easy to post contents, anyway I'd prefer to use the Platform for more work-oriented information. In general it seems to be too much text and too few images. A PLWD may dislike this.
- But I think presentation is austere. You have to change colours.
- It is complicated to share information.
- Don't know how to contact others in the platform.
- **Too much text in general.** It's not hard to learn how to move through the functions, but it is not immediate. This would be discouraging for users.
- **Confusing home screen; simplify colours and use icons!**
- The main wall is confusing. I see posts from anyone, while I'd like to see my contacts' posts only.
- Easy to post contents, anyway I'd prefer to use the Platform for more work-oriented information. In general it seems to be too much text and too few images. A PLWD may dislike this.
- **There should be some type of supervision.**
- **Don't think the neutral/unhappy faces are appropriate in the context of what we are doing.**
- As long as not personal info is shared. **Couldn't find out who can see my messages.**
- When I post a comment on someone else's message it doesn't stay there. **Don't like neutral or unhappy faces.**
- Appointments/publications are all muddled up. I am able to view and edit other people's appointments!! When I clicked on a YouTube link someone had shared, it didn't open up a new page - not helpful. Change the wording for "Selected content was successfully destroyed" to "successfully deleted" and when you want to delete something, and a box comes up saying "are you sure?", it needs to be more specific - for example "are you sure you want to delete?"

3.2.2.3 My Network

- Would be helpful to have a filter to search for different people when inviting as a friend, e.g. caregiver/PLWD/professional.
- Labels need to be clearer.
- **When a PLWD gets a friend request, would be good idea to notify caregiver.**
- Same friend exists many times.
- Clicking on 'all users' is not easy to understand.
- Don't show professionals' friends for ethical reasons / protect anonymity of participants
- Caregivers might want something more advanced like design/functions
- **When rejecting friend request, should not send notification to other person because it might be upsetting**
- It's not clear how this works



- Would be helpful to find/invite friends through shared interests, e.g. age / gender / hobbies / specific conditions.
- **Don't use the word 'platform'.**
- "Click here to find new friends" instead of "All platform users / All users"
- Couldn't find how to add people?
- Maybe a little bit confusing the identification of known persons. Pictures may help.
- Maybe a contact's Summary would be more practical, just below the Profile's picture.
- I am not interested by social network on platform. Moreover, it is not attractive and not positive.
- I do not find it attractive to invite other people.
- I do not like receiving messages from people I do not know. I just want to interact with the information.
- Is not an intuitive platform.
- **Same friend exists many times. Click all users is not easy to understand.** Don't show professionals' friends for ethics/protect anonymity participants.
- Caregivers might want something more advanced like design/functions.
- It's not clear how this works.
- Maybe a little bit confusing the identification of know persons. Pictures may help.
- Maybe a contact's Summary would be more practical, just below the Profile's picture.
- **When I see someone's post, I'd like to click and the name in order to view the profile (like in Facebook).** It would be a very intuitive feature and it could facilitate the growth of the personal network.
- **Would be helpful to find friends through shared interests, e.g. age/sex/hobbies/specific conditions.** Don't use the word 'platform'. "Click here to find new friends". Home page is too complicated. When I click to view someone's profile, **I'd expect to see a photo** and something personal about that person.
- **Would be helpful to have a filter to search for different people** when inviting as a friend, e.g. caregiver/PLWD/professional. Labels need to be clearer. When a PLWD gets a friend request, would be good idea to notify caregiver. **When you view someone's profile, you can see their appointments mixed with their 'wall' stuff - not helpful.** When you view someone's profile it should be more personal/about them.
- **Should not be able to choose from 'all users'.**
- Couldn't find how to add people?

3.2.2.4 *My Profile*

- **Needs privacy settings.**



- Profile needs to be more personal and user-friendly.
- **Uploading a photo didn't work** - said it was too large.
- When you upload a photo, should come up straightaway - not helpful having to scroll down to save it.
- **Needs option to personalise colours/fonts/background.** Too clinical
- Need to have an 'Update my profile' button at the top as well as the bottom of the page (so don't have to scroll down).
- Photos displayed need to be larger.
- Remove "upload a different picture" - confusing to be under the photo. Put these words for where you select a new photo.
- Could have some 'stock photos' for people to choose from if they don't have a photo / don't want to upload a photo of themselves.
- It didn't save my information.
- Would be helpful if you could click on logo to go back to home page.
- **Should have a statement saying who can see this personal info.**
- **Why, as a caregiver, I have to define my cognitive level?** This question shall not be in CG's profiles.
- I am not interested. Furthermore, the page is not attractive, not positive.
- There is some information that I do not want to make known.
- I find it difficult to share information.
- I do not think he shares any photos.
- **Says 'delete account' everywhere.** Are a second question 'are you sure you want to delete your ACCOUNT?' FOR SECURITY.
- No clear space or signposting.
- In my care receiver's profile there should be always visible the name of her, the time and date, and the place where she is. As she is going to have some problems with memory loss, this information may be precious to reduce the risk of disorientation and sense of being lost.
- I've no cognitive problem or no dementia, I do not understand why the platform ask me that. And I cannot understand the other questions. I would like to upload more information about my health, also to clear up I have no disease.
- **Needs privacy settings.** Profile needs to be more personal and user-friendly. **Uploading a photo didn't work - said it was too large.** When you upload a photo, should come up straightaway - not helpful having to scroll down to save it. Needs option to personalise colours/fonts/background. Too clinical.
- Concerned about privacy for personal information. I like the demographic info. Would like to have colour contrasts in addition to visual settings - personalisation. Need to have an 'Update my profile' button at the top as well as the bottom of the page (so don't have to scroll down). Photos displayed need to be larger. Remove "upload a different picture" - confusing



to be under the photo. Put these words where you select a new photo. Could have some stock photos for people to choose from if they don't have a photo / don't want to upload a photo of themselves.

- It didn't save my information. Would be helpful to click on logo to go back to home page.
- **Should have a statement saying who can see this info.**

3.2.2.5 *My Agenda*

- **24hour clock not easy to use. Prefer 12hour clock.**
- **Need sound / alert otherwise wouldn't check my appointments**
- Confusing to have all past appointments. Just have today's or next 3 days. Or say 'no appointments today'.
- Should highlight today's date on calendar.
- Need to add date, time, day, year in top bar for each page
- **I wouldn't use it unless it synced to my phone calendar.**
- Don't like having to scroll down loads on the home page - needs to be like a gateway to access things rather than scrolling everywhere.
- They need to be in order according to the date in home page
- **Home page too busy. Need new appointment to be on top of the home page and get rid of or archive the old ones**
- **Would be good if I could sync with my iPhone calendar.**
- Change the name "My Agenda" to "My Calendar".
- Need a different coloured box or outline to show today's date on the calendar.
- Would be helpful to be able to create a new appointment when you click on the date on the calendar as well as having the "add new appointment" button.
- When making a new appointment, split the "When" box into "Date" and "Time" separately.
- When selecting "Where" for a new appointment, could link with local resources section to select from.
- The appointments in the Home page are not in chronological order. Today's appointment should be at the top of the page in bold or different colour.
- **Past appointments should be archived separate from home page (otherwise confusing).**
- Couldn't see My Agenda when viewing on a tablet.
- Home page quite cluttered
- Need to add someone in an appointment e.g. caregiver to add/send appointment to PLWD, needs a function to add user.
- **Appointments shall not be visible in others' profiles, but only if I decide to share.**



- Those should be highlighted more, like the notification alarm in the smartphone.
- Hours and minutes more visible. Also, when I click on a date the system allows me to create an appointment but then I have to select a date again!
- It would be interesting that the caregiver could directly access the agenda of the person living with dementia.
- **I use android which sync to my calendar so would need to have a sync option.**
- **24hour clock not easy to use. Need sound/alert otherwise wouldn't check. Prefer hand-written notes than electronic.**
- I'd like to add appt for my mum.
- **Appointments shall not be visible in others' profiles, but only if I decide to share.**
- **I wouldn't use it unless it synced to my phone calendar. Don't like having to scroll down loads on the home page - needs to be like a gateway to access things rather than scrolling everywhere.**
- **They need to be in order according to the date in home page.**
- Would be good if I could sync with my iPhone calendar. Change the name "My Agenda" to "My Calendar". Need a different coloured box or outline to show today's date on the calendar. Would be helpful to be able to create a new appointment when you click on the date on the calendar as well as having the "add new appointment" button. When making a new appointment, split the "When" box into "Date" and "Time" separately. When selecting "Where" for a new appointment, could link with local resources section to select from. The appointments in the Home page are not in chronological order. Today's appointment should be at the top of the page in bold or different colour. Past appointment should be archived separate from home page (otherwise confusing).
- Couldn't see My Agenda when viewing on a tablet. **Home page quite cluttered.**
- need to add someone in an appt e.g. caregiver to add/send appt to PLWD, needs a function to add user.

Invitations

- **Rejecting a friend request should not send notifications**
- There is a flaw in the system as I am able to invite already approved friends again!
- It is not easy to understand the level of relationship when inviting someone- Who is related to who?
- **Notifications are not "Clickable".**
- Only for people I know well (my friends, my family...).

- Don't know how to do this.
- It is not easy to understand the level of relationship when inviting someone- Who is related to who?
- **Might be better for invitations to come up in home page to alert me to a request - like a flag.**

3.2.2.6 *Café*

- Café can be useful depending on who has access to it. Need to have option to be anonymous, especially in small communities.
- **Avoid professionals / PLWD reading it. Keep just for caregivers only.**
- Would be helpful if there were some set topics already there to start off discussions. Looks a bit 'bland'
- When I saw someone's post in the café, I wanted to click on their name to view their profile and add them as a friend - but I was unable to do this and had to manually search for their name. It would be nice to just be able to click on their name within the Cafe to view their profile/invite as a friend.
- Might be helpful if administrators starts off threads for discussion.
- Rename "Your title" to "Discussion title" when posting a new discussion.
- Cannot find any discussion yet.
- **I do not know where to put the domain of discussion I want to start, it would be better to leave an 'open' domain.**
- It's violent, words are strong, negative. This page has me anxious. To be careful with words. We need to find positive. Colours are sad.
- Never felt the need to use resources online.
- Café can be useful depending on who has access to it/need to be anonymized especially in small communities. Avoid professionals reading it
- I do not know where to put the domain of discussion I want to start, it would be better to leave an 'open' domain. Is there someone answering me in any case (an expert, a professional)? Or I have to wait for someone participating to the discussion?
- Would be helpful if there were some set topics already there to start off discussions. Looks a bit 'bland'.
- Keep it just for caregivers rather than professionals reading it.
- When I saw someone's post in the café, I wanted to click on their name to view their profile and add them as a friend - but I was unable to do this and had to manually search for their name. It would be nice to just be able to click on their name within the Cafe to view their profile/invite as a friend. Might be helpful if administrators starts off threads for discussion. Change "Your title" to "Discussion title" when posting a new discussion.

3.2.2.7 *My Health*

- I'm not sure who can see this info? Is it private?



- Online questionnaires need context - why am I doing it? Where does the answers go? Is it confidential? Can it be anonymous?
- I would prefer to answer questions that provide contributions to improving services/provisions than on my health.
- Don't like the questions asked or the range of answers to choose from - not easy to answer / confusing.
- Once I've completed the questionnaire there is no record of it, so I can't refer back to it?
- **I am a caregiver so I don't need to choose my cognitive level or date of diagnosis???**
- What is the purpose of My Health?
- There should be a statement saying who can see this info.
- I would expect some more information about my health section, as already said for the section My Profile.
- More tests are recommended, to monitor my personal feelings, status and care efforts.
- I don't understand why this questionnaire was submitted to caregiver.
- I do not like to share information of this nature.
- Would like to see questionnaires on social care services-want to be broad.
- **I'm not sure who can see this info.**
- Useless for a caregiver.
- More tests are recommended, to monitor my personal feelings, status and care efforts.
- **Online questionnaires need context - why am I doing it?** Where does the answers go? Is it confidential? Can it be anonymous? I would prefer to answer questions that provide contributions to improving services/provisions that on my health.
- **Don't like the questions asked or the range of answers to choose from - not easy to answer / confusing. Once I've completed the questionnaire there is no record of it, so I can't refer back to it?** I am a caregiver so I don't need to choose my cognitive level or date of diagnosis???
- **What is the purpose of My Health?**
- **There should be a statement saying who can see this info. It would be simpler if the platform had less in it, in which case the online questionnaire is not in priority.**

3.2.2.8 *Local Resources*

- **Link with satnav / Google maps to give driving instructions and bus instructions**
- Too cluttered - Use tabs/subheadings to break the info down more.
- Would be helpful to have a Comments box under each resource so people can leave reviews.



- I don't think users should be able to add a new resource - could have a 'suggestion' box instead where people can leave suggestions to add a resource, and administrators could approve or reject it.
- It would be described what they do.
- Use tabs/subheadings to break the info down more - too cluttered. **Would be helpful to have a Comments box under each resource so people can leave reviews.**
- I don't think users should be able to add a new resource - could have a 'suggestion' box instead where people can leave suggestions to add a resource, and administrators could approve or reject it.

3.2.2.9 General Questions

- **Rename PLWD to 'Person with Memory Problems' – not everyone has dementia.**
- Local resources and café need to be different between people with memory problems and carers – different needs.
- Could be useful to have online blog/notes so healthcare professionals can see how I am (My Health?)
- Helpful for healthcare professional for info and feedback gathering. Don't think nurses/doctors would have time to use it.
- Professionals should not rely on platform data. Face to face visit is better
- Once problems are ironed out I would use it / recommend it
- Would like to access it from my iPhone.
- **Needs to be simpler for people with memory problems.**
- Left hand side bar - would be good if the page that you're on is highlighted in bold/different coloured box to clearly show what page you are on.
- Yes, for sure, particularly I'd recommend it to my friends working as caregivers; in this way we can share tips, suggestions and get in contact with experts. Often we surf the web looking for practical info about care activity, but sometimes we're not sure about the source of the information. we expect CGP to be a reliable and guaranteed source of information.
- **Only if more features will be included/developed:** i.e. direct messaging only between CG and experts. Forums to be public but divided for categories of users (forums for CG not available for PLWD, but accessible for Experts who shall grant the reliability of information shared within).
- Yes, particularly if it will be available on smartphones, for immediate and real time consultation, as Facebook.
- I think that they (HCP) may benefit too, because they can have patients' overview in real time
- Yes, **for remote monitoring mainly**, and also for the support to be given to caregiver.

- Don't know, it depends on how attractive and convincing will be the final version. **The "health" page in the caregiver profile is useless.** There should be a sort of free area for me, where I can write down my feelings, my problems. I'd like here simply a question: "How do you feel today?" and if I reply "Bad" (i.e. with the icon :-()) the platform may provide me with more questions in order to intervene to solve or reduce my problem.
- I think I'm going to do it, but I'd like a place, somewhere in the platform, where I can define what I need, in order to have back contents or persons to get in contact with who could give me a response. Instead of "My health" page, as a caregiver I'd like a square like "What do you need?" or "What are you looking for?". At least with a menu, a set of items to select.
- Yes, particularly if it will be available on smartphones, for immediate and real time consultation, as Facebook.
- Only if more features will be included/developed: i.e. direct messaging only between CG and experts. Forums to be public but divided for categories of users (forums for CG not available for PLWD, but accessible for Experts who shall grant the reliability of information shared within).
- **Yes, but it would be graphically easier and simpler for them, more attractive, more intuitive**
- PLWD, as soon as they are independent, may benefit from it. But please, improve the tests and questionnaires, and make results available for CGs too. My care receiver is used to interact with Windows 10: I'd suggest to use similar bigger icons than texts.
- Yes, to keep memory of past posts about feelings (i.e. in a sad day, I can see how happy I was in the past when I published something and then I can restore my good feelings).
- If properly used, yes. They can monitor regularly also other aspects, like mood.
- **Yes, for remote monitoring mainly, and also for the support to be given to caregivers.**

3.2.3 Health and Social Care Professionals

3.2.3.1 Home

- **Visually too much text; messages get lost easily.**
- **Messages need to be better organized to be more visible.**
- A better distribution within the main page may favour the interaction.
- **The use of the platform may be discouraged by words not in local language (ex : items still in English).**
- Publishing messages seems to be easy but lack of interest. Tool that seems to be non-specifically designed for caregivers. Platform non attractive.



- **Visually too much text; messages get lost easily.**
- Messages need to be better organized to be more visible.
- A better distribution within the main page may favour the interaction.

3.2.3.2 *My Network*

- Would more information required, i.e. their social life and conditions outside the platform (Is he or she living alone?)
- Too few information.
- More info needed, and a button such as "Extract a User Profile" containing the tests results /trends, average, etc.), their activities online and the messages sent to the doctor.

3.2.3.3 *My Profile*

- Some info not required, better to share and update contact details, useful for PLWD/MCI.
- Some info are not useful.
- **Too many info not related to the platform scope.**
- Page not very attractive, can be dissuasive for completing profile. Photo profile should be changed just by clicking on it.
- Platform not very user-friendly. Modifications of personal info not easy to do. **No real interest in uploading photos.**
- I wondering about profiles... Above all, PLWD and caregivers needs information and help. It should not be a social network like Twitter, Facebook..., it will be less constructive.
- Some info not required, better to share and update contact details, useful for patients.

3.2.3.4 *My Agenda*

- Why I see others' events/appointments?
- **Visual of Agenda not attractive. Lack of visibility of appointments. Not user-friendly enough.**
- I don't understand utility of this function.
- **They should be viewed only by those I authorize to see.** Otherwise confusing

3.2.3.5 *Invitations*

- More visibility for the contacts list.
- **A little bit difficult to find other people, a new format for the homepage is recommended.**
- More visibility for the contacts list.
- Decline or confidentiality button/list should be available for people choosing not to be invited by others than their own network.
- Publications and appointments are mixed and non-readable at first glance.



3.2.3.6 *Create User Profiles*

- MMSE/GDR and other scores have to be included.
- More health information for PLWD are needed.
- I don't understand utility of this function.

3.2.3.7 *Managed Users*

- There is no possibility to have an overview of progresses nor the possibility to compare tests scores with activities. A "User Summary" may help.
- Scores alone are not significant if not compared with other key info. More tests and a user's overview are recommended.
- Platform completion level doesn't allow to answer the last 2 questions.
- I don't understand the mean. I am struggling about know patient's health on a website. It must to be very secure and focused.

3.2.3.8 *Café*

- All forums have to be accessible for specialists, because, even they do not intervene often, they can monitor on the circulation of fake/wrong information and intervene when needed.
- Interesting section however Confidentiality button seems to be absent. Not very attractive section (display, subjects raising more anxiety than motivation to go through). Forum section still a good idea.

3.2.3.9 *General Questions*

- **All texts have to be bigger, particularly icons: as it is, the platform is not user-friendly.**
- Re-arrange the main page with 5/6 main areas, with different colours instead of a list of pages on the left.
- The wall is not so easy to use; all posts are similar while the author and the quality of the contents have to be differentiated each other (i.e. posts from specialists should have different colours than my friend's photos!)
- Quality of info is the key for success: I suggest to avoid private messaging among caregivers/users, because their conversations couldn't be monitored so wrong information could circulate.
- More tests, more interaction with experts, both for PLWD and, even more, for caregivers.
- **Remote monitoring would be very important, the monitoring of online activities would provide significant information which could hardly raise during face-to-face visits.**
- I'd like to use it, as long as the platform will be able to collect more information about the cognitive attitude of users.



4 Conclusions

The findings from this study support the need to develop simpler user accounts for PLWD/MCI than for caregivers and professionals. In this way, the perceived ease of use for PLWD/MCI will be increased which will enable users to engage with the platform. The findings from this study also illustrate users' priorities. For example, PLWD/MCI rated the local resources function to be more useful than other users and this indicates their perceived need to find local support.

The main qualitative results of this study are summarised below:

1. Many PLWD (54.17%) were unfamiliar with ICT, although a willingness to engage was a prerequisite for inclusion. Much of the platform terminology and functionality was unfamiliar to these users and this was a barrier to use.
2. Due to the relative immaturity of the platform development, many comments addressed minor errors, such as words in other languages, information not relevant to the users, problems with uploading image files, users appearing several times in the network, appointments taking time to appear on the home page, etc. These are minor matters and will be addressed over the coming weeks of development.
3. Many PLWD and caregivers (27%) found the interface to be cluttered and too text orientated. The use of icons and images, to replace text/hypertext features, could simplify the interface.
4. Security and privacy of information was a major concern for all user groups. Users wanted flexible and transparent controls so it was clear who had access to information they put on the platform. Several also expressed concerns about the veracity of information provided by other users and the potential for offensive material being added. Moderation of information by HCP was suggested.
5. Opinions were mixed on colours and themes used in the platform pages, with some users finding busy images and coloured text to be confusing, while others described grey backgrounds and the lack of images on some pages as austere and depressing. Personalisation of the platform should both increase satisfaction and provide useful data on how best to present information to different categories of users.
6. Some caregivers (12.5%) suggested the platform to operate with other well-known apps, such as Google calendar. Several caregivers stated that the My Agenda feature should sync with their existing online calendars. Many users also wanted Local Resources to link with mapping apps such as Google Maps, to provide route and transport information.
7. Some caregivers and PLWD (6.48%) wanted the platform to facilitate more frequent interactions with HCP, whereas a major objective of the platform is to reduce pressure on health service providers. Hopefully with increased numbers of users, and



as users become more familiar with the platform, the communities will become more self-sufficient through the sharing of information.

8. The use of emoticons was, in general, not appreciated. The gamification of the platform will need to be done in a sensitive manner to avoid perceived infantilisation. The development of gamification elements should be performed in collaboration with end-users to ensure that they can be engaged with the platform.

9. The PLWD, in general, did not like the current questionnaires in the My Health section. They found them unfriendly and thought they did not summarise their health well. They will need significant incentives to engage with this area. The platform developers can take into account the preferences of users for the questionnaires. Several users expected the platform to provide them with more information on their health, including information input by a HCP.

10. Users appreciated the Local Resources area but would like extra features to allow searching for resources based on several aspects such as location and TripAdvisor style comments.

The qualitative and quantitative analyses in Section 3 suggests a range of major modifications and features to be added to the platform, identified some minor bugs to be fixed, and suggests the following list of developments to improve the usability of the platform:

User requirements

- Simplifying the home screen layout;
- Replacing text in menus with icons;
- Using images in contact's profiles;
- Categorizing uses using colours;
- Having a 12 hour/24 hour clock option;
- Create private messaging function
- Do not show all users' appointments
- Be able to find friends with similar interests
- Include cognitive training games, such as memory games
- Implementing a wide range of personalisation options in terms of colours, text sizes and layout;
- Making notifications of invitations and appointments much more visible;
- Arranging appointments in temporal order and making today's appointments prominent;
- Replacing computing terminology with more colloquial language e.g. "online chat" rather than "café";
- Allowing and recording comments on posts;
- Add security and privacy settings



- Monitor content for abuse
- Providing clear indications of who can see information put on the platform;
- Menu items should not disappear, but should become faint, if inactive

Unnecessary and not useful elements of the platform

- Nicknames
- Adding contact details such as telephone and address
- Sending Invitations via email
- Neutral and unhappy faces

The consortium will need to consider this usability data and use the feedback in the further development of the platform, in advance of the pilot study. Usability data will continue to be an important part of the platform development over the course of the project.



5 References

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6 Appendices

6.1 Appendix A: **Example of Participant Information sheet from the English pilot site**

Participant Information Sheet (PwD / Caregivers)

Evaluating CAREGIVERSPRO-MMD website for supporting people with memory problems and caregivers: A usability study.

We would like to invite you to take part in our research study. The study will explore people's thoughts about using a new internet-based support tool. We would first like you to know why the research is being carried out, and what will happen if you take part. You may want to talk to other people before you decide whether you want to take part. The researcher will also talk through the information with you, and answer any questions.

What is the purpose of the study?

As technology has increased and improved over time, more and more people are now using hi-tech devices, such as smart phones, laptops and iPads, to access the Internet and socialise with other people on social networking sites as well as seek support, information and guidance.

This study is part of a larger study taking place across Europe, which is developing and piloting an online internet-based website for caregivers and people with dementia called CAREGIVERS-PRO-MMD. This website aims to provide (1) general and personalised information; (2) support with regard to the symptoms of dementia; (3) social contact and company; and (4) Questionnaires to keep track of your health and wellbeing.

As we start to develop this website, we would like to learn more about your thoughts on this, such as whether you think the website is easy to use and whether you it could be useful for you.

We are inviting people to take part in this study if they have dementia or memory problems or if they are a carer for someone with memory problems: for this study



both people need to be willing to take part, as we want to find out the views of people with memory problems and their carers. Volunteers need to own a device (computer, touch screen or smartphone) to have access to the website.

Why have I been invited?

We have sent you this information if you gave us your contact details after being told about the study or because you contacted us after seeing the study advertised.

Do I have to take part?

You do not have to take part if you do not want to. If you agree to take part, but later change your mind, you can ask to be taken out of the study. You do not have to give a reason for this. Your decision will not affect your healthcare or legal rights.

What will happen if I want to take part?

1. The researcher will have a brief talk with you to make sure that you meet all the criteria to take part in the study. If you do not meet all of the criteria, unfortunately you will not be able to take part.
2. The researcher will then arrange with you the date to visit you
3. In this visit, you will be asked to sign a consent form saying you agree to take part.
4. You will be shown the website by the researchers. You will then be asked questions about your opinion about the website and whether you have any suggestions about how it might be improved.
5. After this first visit, you will be asked to use the website for two weeks. At the end of each week, the researchers will visit you again to ask you questions about the website.

What are the possible disadvantages or risks of taking part?



Meeting with the researchers will involve sitting and using the website. This may be inconvenient or slightly tiring for some. However, you are welcome to take a break at any time.

During the usability testing the participants will have the opportunity to complete questionnaires relating to depression and quality of life and receive the results. You may not wish to complete these questionnaires if they cause you distress.

What are the possible benefits of taking part?

We cannot promise that you will directly benefit by taking part in the study. However, we hope that you will enjoy evaluating this new online website. We also hope that your information will help us to create a better, more useful and informative website to help better support people with dementia and their caregivers.

What if there is a problem?

If you have a concern about the study, you can contact the researchers using the contact details provided on page 4.

Will my taking part in the study be kept confidential?

- All of your personal information provided to the research team will be kept strictly confidential, and will only be seen by the researchers.
- Your information will be stored under a code, not under your name or anything else that could identify you.
- After the research is finished, all data will be stored securely, and destroyed after 10 years.
- **There is one situation in which your information could not be kept confidential.** This would be if you tell the researcher something that suggests that you or someone else may be at risk of serious harm. If this happens, the researcher would need to contact the appropriate organisations to make sure that people are kept safe.
- Information you decide to insert in the website may be accessed by other participants in the study but you can select who you wish to share this information with.



What will happen to the results of the study?

The results will be written in a report and submitted to all of the project partners involved in designing the new website (see information in the section below), this will help us to improve the design of the website. This report will also be written up for publication in an academic journal. The researcher may give a talk about the results, for example, to local groups or at scientific conferences. Some direct quotes from the information you insert in your website account may be used in these cases, but these will be anonymised. No information that could identify you will be included.

Who is organising and funding the research?

The research is funded by the European Commission, Horizon 2020. The University of Hull is collaborating with France (Hospital Centre University Rouen), Spain (Polytechnic University of Catalonia; University Foundation of Bages; MobilesDynamics), Italy (Social Cooperative of Marche) and Greece (Centre for Research and Technology Hellas; Q-Plan International Advisors) on this project. You can find out more about Horizon research projects here <https://ec.europa.eu/programmes/horizon2020/>

Who has reviewed the research?

A Research Ethics Committee is an independent group of people who review research studies. They want to make sure that researchers protect the rights and well-being of people who take part in their study. This study has been reviewed by the Faculty of Health and Social Care Research Ethics Committee on 30/01/17 and received ethical approval.



What happens now?

You can either (1) contact the researchers if you decide to take part (see contact details on page 4), or (2) immediately share your contact details with the researcher who will contact you within 7 days to confirm your participation.

For each individual interested in participating, a brief check will be conducted by the researcher over the phone to ensure that they fit within inclusion and exclusion criteria. This will involve asking the individual a brief series of questions relating to these criteria.

Participants meeting the inclusion criteria will be asked if they are willing to take part in the study. For those willing to participate a convenient time and location will be arranged.



Contact details

Rosie Dunn or Paraskevi Zafeiridi (*Research Assistants*)

Tel: 01482 464571

Email: R.J.Dunn@hull.ac.uk
P.Zafeiridi@hull.ac.uk

Address: Room 106
Aire Building
Department of Psychological Health and Wellbeing
The University of Hull
Cottingham Road
Hull
HU6 7RX

Dr Emma Wolverson (*Chief Investigator*)

Tel: 01482 464170

Email: E.Wolverson@hull.ac.uk

Address: Room 130
Aire Building
Department of Psychological Health and Wellbeing
The University of Hull
Cottingham Road
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HU6 7RX



6.2 Appendix B: Example of Informed consent form from the English pilot site

Consent Form

Project: **Evaluating CAREGIVERSPRO-MMD platform for supporting people with memory problems and caregivers: A usability study.**

Researchers: Paraskevi Zafeiridi and Rosie Dunn

Chief Investigator: Dr Emma Wolverson

Please initial
all boxes

1. I agree that I have read and understand the information sheet dated **[12.01.17]** (version **[1]**) for the above study. I have been able to consider this information and ask questions. I am satisfied that any questions I asked have been answered. ☐
2. I understand that I am volunteering to take part in this study. I understand that I have the right to withdraw from the study at any point. I understand that I do not need to give a reason for this, and that it will not affect my healthcare or legal rights. ☐
3. I understand that CAREGIVERSPRO-MMD is a social networking website and that I can choose which information will remain hidden from other users. However, I understand that the website will be monitored and so my personal information may be accessed by the researchers. However, this will remain strictly confidential within the Research Team. ☐
4. I understand that I will be withdrawn from the study if I am found to be posting abusive or malicious content on the CAREGIVERSPRO-MMD website that others might find offensive or upsetting. ☐
5. I agree to a visit by a member of the research team to complete questionnaires at the beginning of the study and then again at 1 and 2 weeks later. This will include questions about my opinions for the website. I understand that I do not have to complete these if they cause me distress. ☐
6. I understand that my responses to the questionnaires will be anonymized. ☐
7. I agree that my anonymous data may be used in presentations or published reports about the study and this will remain anonymous. ☐
8. I agree to take part in this study. ☐

Optional:

9. I would like to be contacted again to see the next version of the website ☐



and give my feedback (*Optional*).

_____	_____	_____
Name of Participant	Date	Signature
_____	_____	_____
Name of Person taking consent	Date	Signature



6.3 Appendix C: Demographic questionnaire PLWD

Questionnaire – People with memory problems or mild cognitive impairment

Name:

Age:

Gender:

When were you first diagnosed as having memory problems? (approximately):

Please tick or ring as appropriate

Type of memory problem (if known):	
Dementia	
Mild cognitive impairment	
I don't know	
Other (please indicate):	
First language:	
English	
French	



Spanish	
Italian	
Other (please indicate):	
Work status:	
Retired	
Unemployed	
Part time employed	
Full time employed	
Student on a training/education programme	
Other (please indicate):	
Current job role (if not retired):	
Level of education:	



No formal qualifications	
A-levels or equivalent	
Higher education	
Degree	
Trade/technical/vocational training	
Number of people in your household including yourself:	
1	
2	
3	
4+	
Living status:	
Living at home independently	
Living at home with support provided by a family member	
Living at home with support provided by professional carer(s)	
Supported / sheltered housing	
Living in a care home	



Other (please indicate):	
--------------------------	--



6.4 Appendix D: Demographic questionnaire caregiver

Questionnaire – Caregivers

Name:

Age:

Gender:

Number of hours caring per week (approximately):

Please tick or ring as appropriate

First language:	
English	
French	
Spanish	
Italian	
Other (please indicate):	
How many years have you been providing help and support to a person/ people with memory problems?	
Less than 5 years	
6-10 years	



11-15 years	
16-20 years	
More than 20 years	
Where do you provide care:	
Day care / voluntary service	
In a person's home	
Hospital/Clinic	
Community mental health team	
Other (please indicate):	
Your work status:	
Relative/Family caregiver	
Employed part-time as a caregiver	
Employed full-time as a caregiver	
A student on training/education programme	
Other (please indicate):	



Level of education:	
No formal qualifications	
A-levels or equivalent	
Higher education	
Degree	
Trade/ technical/ vocational training	
What is your relationship with the person with memory problems you support?	
Spouse or partner	
Grandchild	
Parent	
Brother/Sister	
Friend	
Neighbour	
Other (please indicate):	



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6.5 Appendix E: Demographic questionnaire professionals

Questionnaire – Professionals

Name:

Gender:

Age:

Job title:

Place of work:

What is your relationship with the volunteers?

How often do you meet them?

Please tick or ring as appropriate

First language:	
English	
French	
Spanish	
Italian	
Other (please indicate):	



Years of professional experience:	
Less than 5 years	
6-10 years	
11-15 years	
16-20 years	
More than 20 years	
Where are you based:	
Hospital/ Clinic/ Memory clinic	
Community Mental Health Team	
Voluntary sector	
University	
Other (please indicate):	
Number of people living with dementia on your current caseload (approx.)?	
Less or equal to 25	



26-50	
51-100	
More than 100	



6.6 Appendix F: Usability questionnaire PwD and caregivers

Sign in					
The sign in page is useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
It is easy to use the sign in page	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I am overall satisfied with the sign in page	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? (<i>hints: colours, font size, information displayed, functionality, suggestions for improvement</i>)					
Home					
Publishing messages and replying to messages is useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
It is easy to publish messages and images, and reply to messages	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree



I am overall satisfied with publishing messages and images, and replying to messages from others	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? <i>(hints: colours, font size, information displayed, functionality, suggestions for improvement)</i>					
My network					
Inviting others to join the website is useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
It is easy to send invitations to others to join the website	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I am overall satisfied with sending invitations to others to join the website	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? <i>(hints: colours, font size, information displayed, functionality, suggestions for improvement)</i>					
Reviewing my contacts' profile is useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree



It is easy to review my contacts' profile	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I am overall satisfied with reviewing my contacts profile	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? <i>(hints: colours, font size, information displayed, functionality, suggestions for improvement)</i>					
My profile					
Completing and updating personal information is useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
It is easy to complete and update personal information	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I am overall satisfied with completing and updating personal information	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? <i>(hints: colours, font size, information displayed, functionality, suggestions for improvement)</i>					



Uploading profile photos is useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
It is easy to upload profile photos	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I am overall satisfied with uploading profile photos	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? (<i>hints: colours, font size, information displayed, functionality, suggestions for improvement</i>)					
My agenda					
Creating new appointments is useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
It is easy to create a new appointment	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I am overall satisfied with creating new appointments	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree



If strongly disagree, disagree, or neutral, why? <i>(hints: colours, font size, information displayed, functionality, suggestions for improvement)</i>					
Viewing information about events in my home page is useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
It is easy to view information about events in my home page	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I am overall satisfied with viewing information about events in my home page	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? <i>(hints: colours, font size, information displayed, functionality, suggestions for improvement)</i>					
Invitations					
Invitations to connect with others are useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree



It is easy to review invitations to connect with others	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I am overall satisfied with receiving requests to connect with others	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? <i>(hints: colours, font size, information displayed, functionality, suggestions for improvement)</i>					
Café					
Publishing and reading information published from others is useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
It is easy to publish and read information from others	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I am overall satisfied with publishing and reading information with others	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? <i>(hints: colours, font size, information displayed, functionality, suggestions for improvement)</i>					



My health					
The online questionnaires are useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
It is easy to complete the online questionnaires	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I am overall satisfied with the online questionnaires	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? <i>(hints: colours, font size, information displayed, functionality, suggestions for improvement)</i>					
Local resources					
Information about local resources for support are useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
It is easy to find information about local resources	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree



I am overall satisfied with information about local resources	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? (<i>hints: colours, font size, information displayed, functionality, suggestions for improvement</i>)					
General questions					
I would you recommend the website to others	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I will continue using the website after the completion of the study	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
The website can be very useful for carers	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
The website can be very useful for people with memory problems	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
The website can be very useful for health professionals	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree

Usability questionnaire professionals

Home					
Publishing messages and replying to messages is useful for me	Strongly disagree	Disagree	Neither Agree	Agree	Strongly agree

			nor Disagree		
It is easy to publish messages and images, and reply to messages	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I am overall satisfied with publishing messages and images, and replying to messages from others	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? <i>(hints: colours, font size, information displayed, functionality, suggestions for improvement)</i>					
My network					
Inviting others to join the website is useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
It is easy to send invitations to others to join the website	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I am overall satisfied with sending invitations to others to join the website	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? <i>(hints: colours, font size, information displayed, functionality, suggestions for improvement)</i>					



Reviewing my contacts' profile is useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
It is easy to review my contacts' profile	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I am overall satisfied with reviewing my contacts profile	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? <i>(hints: colours, font size, information displayed, functionality, suggestions for improvement)</i>					
My profile					
Completing and updating personal information is useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
It is easy to complete and update personal information	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree



I am overall satisfied with completing and updating personal information	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? (<i>hints: colours, font size, information displayed, functionality, suggestions for improvement</i>)					
Uploading profile photos is useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
It is easy to upload profile photos	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I am overall satisfied with uploading profile photos	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? (<i>hints: colours, font size, information displayed, functionality, suggestions for improvement</i>)					
My agenda					
Creating new appointments is useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree



It is easy to create a new appointment	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I am overall satisfied with creating new appointments	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? <i>(hints: colours, font size, information displayed, functionality, suggestions for improvement)</i>					
Viewing information about events in my home page is useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
It is easy to view information about events in my home page	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I am overall satisfied with viewing information about events in my home page	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? <i>(hints: colours, font size, information displayed, functionality, suggestions for improvement)</i>					



Invitations					
Invitations to connect with others are useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
It is easy to review invitations to connect with others	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I am overall satisfied with receiving requests to connect with others	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? (<i>hints: colours, font size, information displayed, functionality, suggestions for improvement</i>)					
Create user profiles					
Creating a new profile is useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
It is easy to create a new profile	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I am satisfied with the function for creating a new profile	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree



If strongly disagree, disagree, or neutral, why? <i>(hints: colours, font size, information displayed, functionality, suggestions for improvement)</i>					
Managed users					
Evaluating the progress of my clients through the website is useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
It is easy to use the function for evaluating the progress of my clients	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I am satisfied with the function for evaluating the progress of my clients	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? <i>(hints: colours, font size, information displayed, functionality, suggestions for improvement)</i>					
Café					
Sharing and reading information from others is useful for me	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree



It is easy to share and read information from others	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I am overall satisfied with sharing and reading information with others	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
If strongly disagree, disagree, or neutral, why? (<i>hints: colours, font size, information displayed, functionality, suggestions for improvement</i>)					
General questions					
I would you recommend the website to others	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I will continue using the website after the completion of the study	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
The website can be very useful for carers	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
The website can be very useful for people with memory problems	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
The website can be very useful for health professionals	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree



6.7 Appendix G: Scenarios

6.7.1 Log in

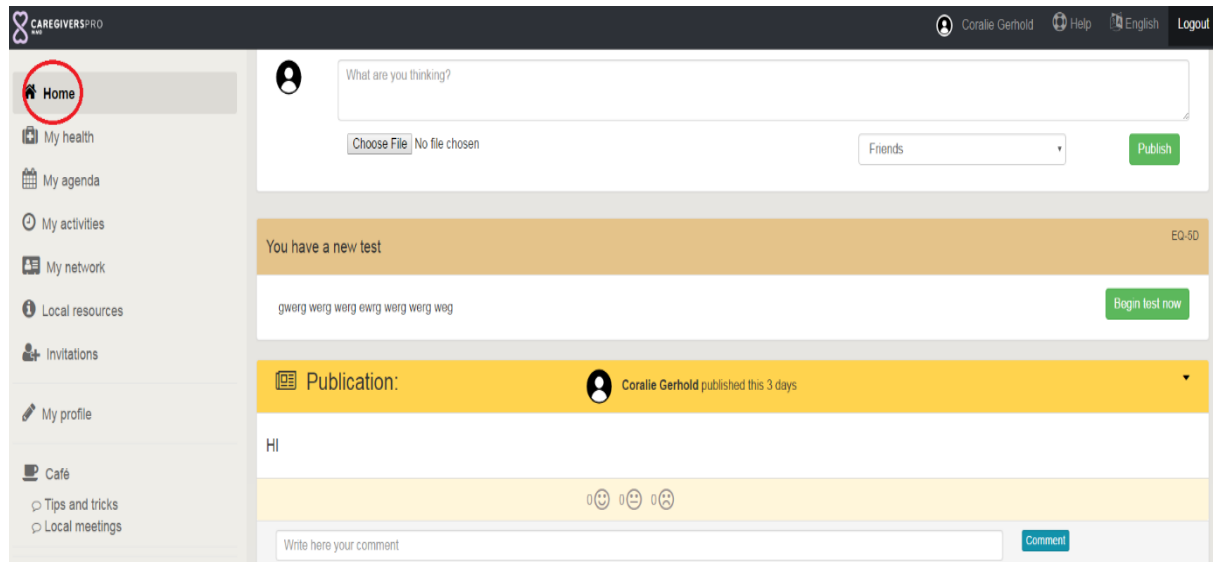
Insert this link in your browser: <https://www.caregiverspro-mmd.eu>

Click on the yellow box under 'Email or Nickname' and type in your user name

Click on the yellow box under 'Password' and type in your password

Click the 'Log in' button

6.7.2 Home



Click on the 'Home' button on the left column of the screen

Click on the top white box on 'What are you thinking?' to type in a message to be seen by your contacts

Click on 'Choose File' to upload a file from your computer

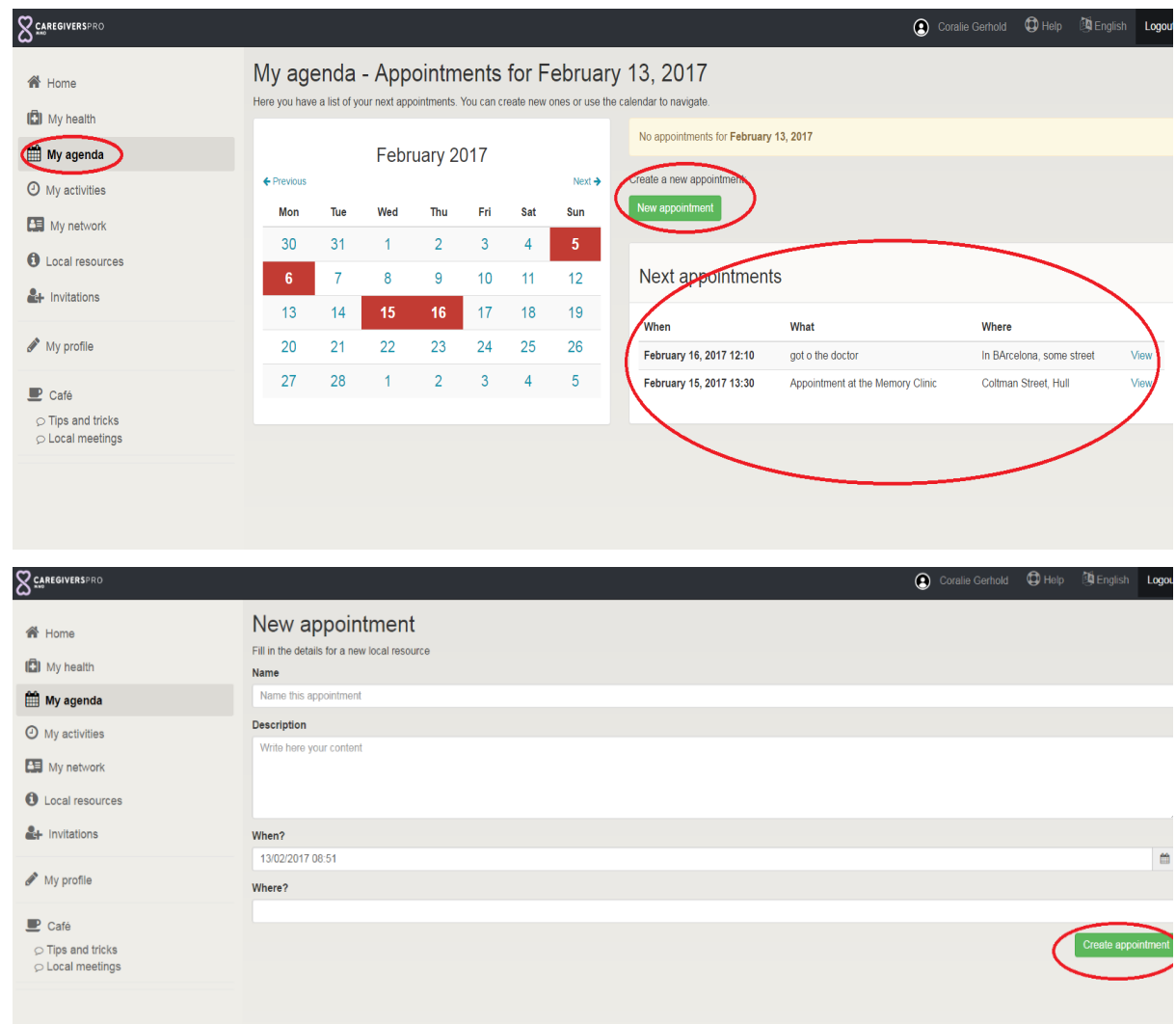
Click on 'Friends' to select who you would like to see this message

Click on 'Publish' to publish your message

Type in in the yellow box under a person's text to reply and then click 'Comment' on the left of your text

6.7.3 My agenda

View and create appointments



The screenshot displays the 'My agenda' page in the CAREGIVERSPRO application. The left sidebar contains a navigation menu with 'My agenda' highlighted. The main content area shows a calendar for February 2017, a 'New appointment' button, and a table of next appointments. Red circles highlight the 'My agenda' button in the sidebar, the 'New appointment' button, and the 'Next appointments' table.

When	What	Where	
February 16, 2017 12:10	got o the doctor	In BArcelona, some street	View
February 15, 2017 13:30	Appointment at the Memory Clinic	Coltman Street, Hull	View

The 'New appointment' form includes fields for Name, Description, When?, and Where?, and a 'Create appointment' button.

- Click on the 'My agenda' button on the left column of the screen
- Review your appointments on the right column
- Click on the 'New appointment' button in the middle of the screen to create a new appointment
- Click on the white box under 'Name' to add a title for your appointment
- Click on the white box under 'Description' to add a description for this appointment

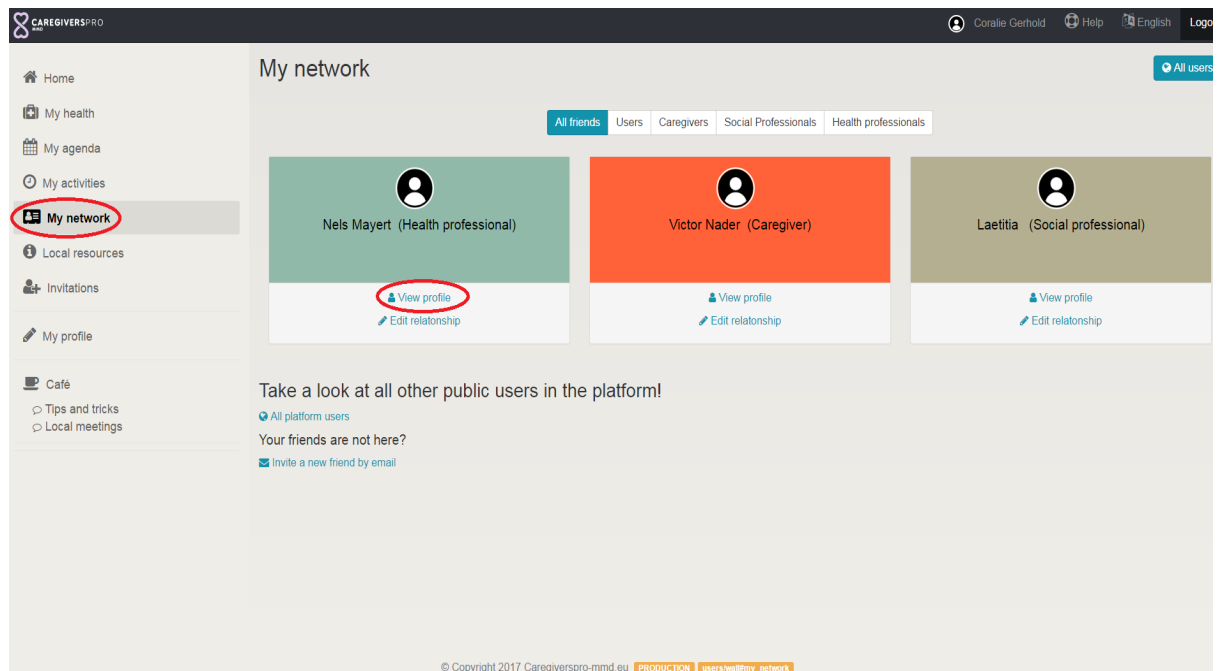


Click on the white box under 'When?' to add a date and time for this appointment

Click on the white box under 'Where?' to add a place for this appointment

Click on 'Create appointment' to save the information you have typed in

6.7.4 My network

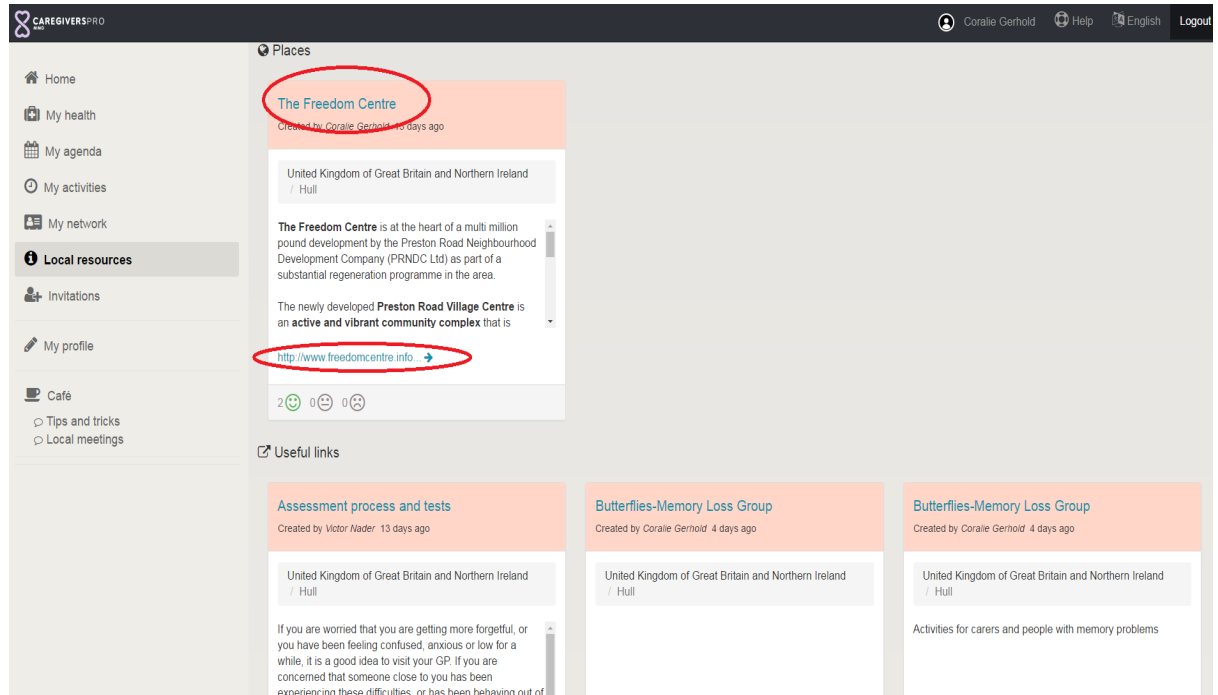


Click on the 'My network' button on the left column of the screen

Click on 'View profile' under each contact's box to review their profile information



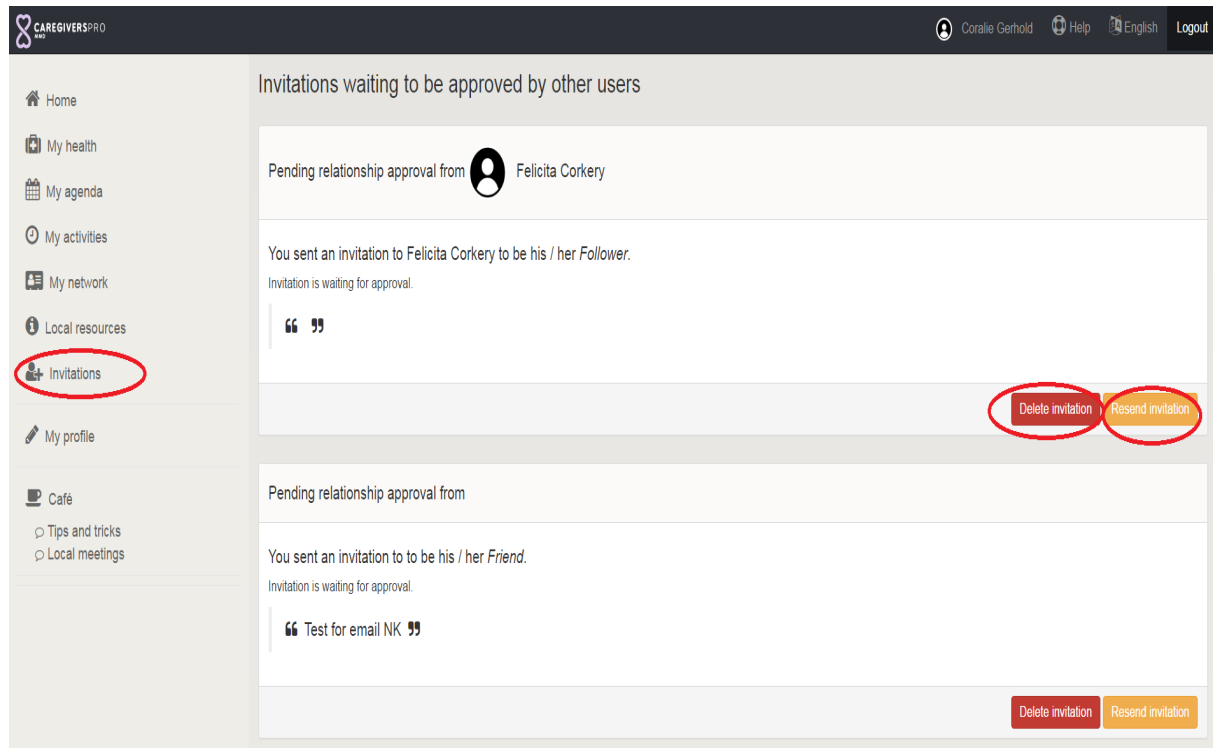
6.7.5 Local resources



Click on the 'Local resources' button on the left column of the screen

Click on each place to see more information

6.7.6 Invitations



Click 'Invitations' button on the left column of the screen

Review the invitations you have send

Click on 'Delete invitation' to delete an invitation

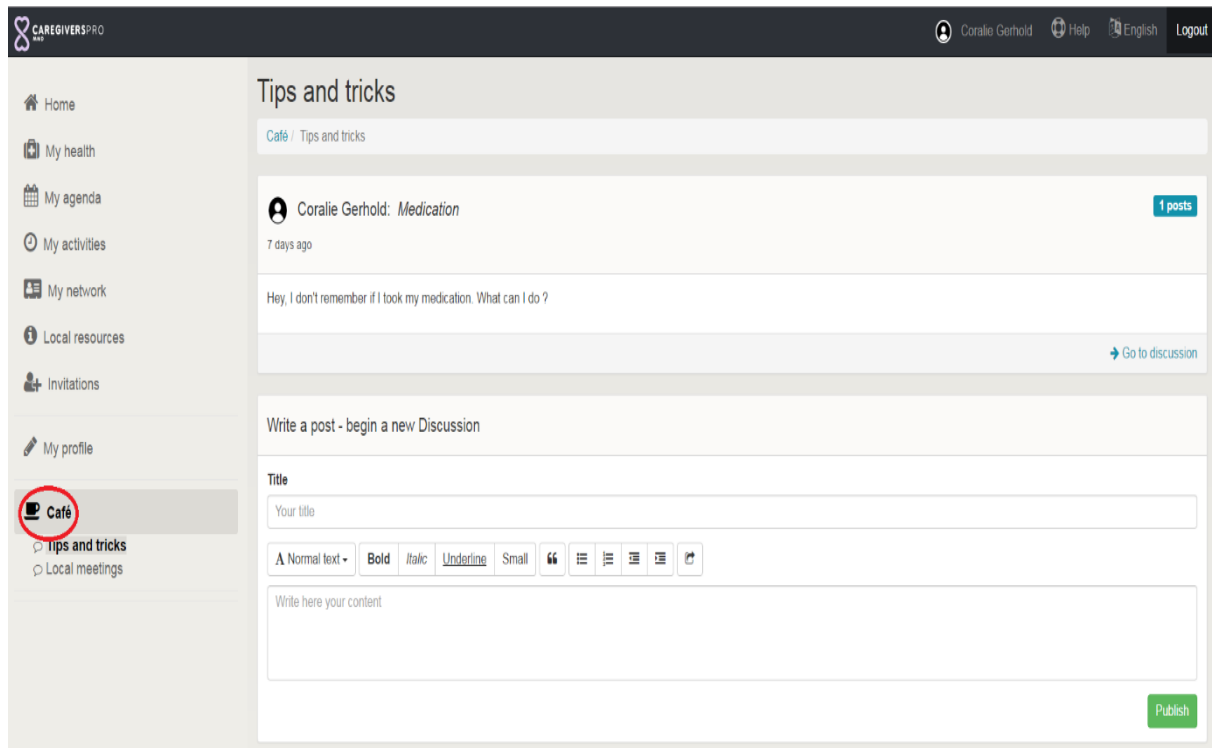
Click on 'Resend invitation' to send an invitation again



6.7.7 My profile

Click on the 'My profile' button on the left column of the screen
Click on 'user picture' to upload a picture of your preference
Click under each box to type in the information requested

6.7.8 Café



Click on the 'Café' button on the left column of the screen

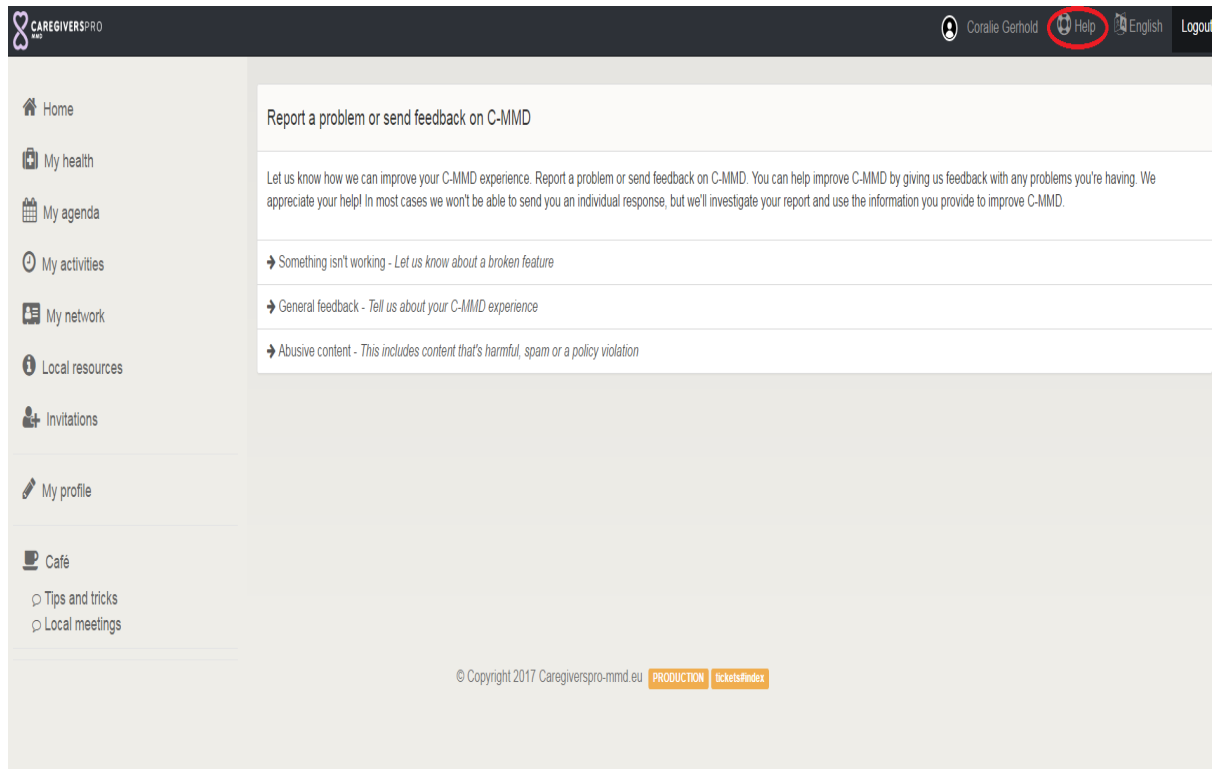
Click on 'go to discussion' of each topic to read information published by other users

Click on 'Title' to type in the title of a topic you would like to discuss

Click on 'Write here your content' to type in the content of the topic you would like to discuss



6.7.9 Help



Click on the 'Help' button on the top right corner

Select and click: 'Something isn't working' for technical help

'General feedback' to give feedback for the website

'Abusive content' to report inappropriate content
published by another user