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Training program for enhancing the  
adoption of mobile health technologies  
by persons with mild-dementia

#### **DETA 4: mHealth for communication and planning**



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## **DESIGNED EXPERIENTIAL TRAINING ACTIVITY 4 - mHealth for communication and planning**

### **Objectives:**

The DETA 4 “mHealth for communication and planning” focuses on mobile health solutions to facilitate the communication of persons with dementia (PwD) with other persons (caregivers, health professionals, etc.) as well as mobile health solutions to enhance the planning of daily and/or care activities.

It should summarize the most important and applicable solutions to support communication and planning activities related to the care of elderly and/or PwDs.

A specific focus is set on promoting a practical understanding of the opportunities for the elderly and carers to reduce the barrier to implementing mHealth technologies in their daily lives.

An additional objective of this DETA is to offer content to enable participants to adapt communication, support planning activities to the individual particularities of elderly or people in the initial stage of dementia, and provide support to the individual particularities of those who care for these people.

### **Participants & roles:**

- PWD: 10 persons
- Caregivers:
  - 5 formal caregivers
  - 5 informal caregivers



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### Competences:

- Increased knowledge about communication difficulties related to dementia and about available mobile health solutions related to communication and planning.
- Ability to implement these technologies in daily life activities and care procedures.
- Understanding how to expand the planning of care with mHealth technologies.
- Planning for future scenarios that might arise due to Alzheimer's impairments.

### Training contents:

- To get to know different Mobile Health Solutions for communication and planning.
- To get a first understanding of planning activities that support elderly people in their daily life activities and/or the (informal) carer in the care procedures.
- To identify communication aspects that can improve with the correct guidance and thus improve the quality of life.
- To distinguish between helpful functions and unnecessary ones to present preselected applications.
- To acquire skills in organizing and planning their activities concerning health.

### Duration of the session: 5,5 hours.

- Face-to-face session: 4.5 hours
- Online session: 1 hour



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### Transversal training:

- Digital skills
- Social skills
- Language skills
- Ability of teamwork
- Skills to put in practice theoretical content into practice.
- Skills to communicate with additional instruments (digital / musical / artistic)

### Methodology:

- Active and participative
- Face-to-face training:
  - Dialogue
  - Teamwork
  - Practical activities (Use of different mHealth technologies)
  - PPT presentation: Introduction to communication and planning
- Online training:
  - Videos
  - Use of different mHealth technologies
  - Online material that the participants will use (games, documents, guides)



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### Training materials:

- **Face to face sessions:**
  - PowerPoint presentations
  - Word or PPT documents. Explaining the main concepts
  - Survey
  - mHealth technologies
  - Videos
- **Online sessions:**
  - Videos
  - Topic related to mHealth technologies.

### Organizational and technical requirements:

- Computer
- Beamer
- mHealth technology
- Classroom
- Documents/ training materials
- Sound system



## FACE2FACE 1.1 SESSIONS: GUIDELINES, DURATION, AND TOOLS

### Action 1.1 Opening

- Welcome and get to know each other!
- Identification of individual expectations
- Objectives of the session, including learning objectives, activities, and planning

The main objective of this session is to create a positive and relaxed atmosphere for the group. The trainer should present him/herself and start the session by getting to know all participants. The seating should be aleatory to prevent the separation into three groups (elderly, informal carers, and formal carers) and avoid stigmatization. At the time of entering the room, each participant should receive a nametag to facilitate communication. At any time, the trainer should adapt the training to the needs of the participants and adapt the training rhythm accordingly. To get to know the participants, the trainer should take turns and direct a welcome to each participant while including some additional information that can be taken from the inscription data for the course. When finishing the introduction round, the trainer should ask the group about their expectations and hopes for this module. This question should be directed to the entire group to avoid someone feeling obliged to answer who is not yet prepared to do so. After receiving an answer, the trainer should repeat this expectation to the rest of the group (e.g. “Does anyone else hope to learn about ... in this class?”)

Once expectations have been identified, the trainer should start to present the official objectives of the session, as well as learning objectives and planned activities. This presentation should follow a previously structured PowerPoint.

- **Duration:** 20 minutes
- **Tools:** PPT\_1.1\_Introduction to DETA 4 – Introduction and learning objectives



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**Action 1.2 Introductory sessions-** Physiological and psychological parameters for mHealth technologies for communication and planning activities

DETA 1 provides a first introduction to mHealth technologies in general, which should be presented again at this point of the course in case participants seem to not recall this information. Otherwise, this section should relate to the specific needs a PwD may have for mHealth technologies related to communication and planning activities.

Practical Activity:

A good start is to ask all participants how they experience impediments to their communication. The trainer should use this feedback to create a first list of important physiological and psychological parameters related to communication and planning activities.

Also, ask them about their experience and attempts to use technological solutions to communicate and planning. The trainer should now discuss and explore their experiences of using technology in their everyday lives.

This information should be exchanged among all participants, and any strategies to improve should be taken up.

Afterwards, the trainer can pick up some of the experienced impediments and try to present helpful apps and devices. Participants should be asked to evaluate the potential benefit and / or risk of the presented solutions.

The trainer should proceed to show the importance of mHealth solutions concerning communication and planning. To demonstrate relevance and application, the trainer may use a few video examples and a use case. An example for a use case may be the use of a pill reminder app.

One of the first symptoms related to dementia is related to communication skills. People with dementia usually often need more time to search for the right word or they do not remember what they wanted to say from one moment to another. They also sometimes don't comprehend the





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meaning of a word, although they might have used this word frequently before or cannot concentrate on a longer conversation or a group discussion.

Considering all these impacts it is no surprise that the decline of communication skills is an exasperating experience for the person with dementia and for the caregiver.

The session should be wrapped up by presenting two additional use cases for physiological and psychological conditions that might benefit from mHealth technologies.

- **Duration:** 45 minutes
- **Tools:** PPT\_1.2\_Introductory session\_- Physiological and psychological parameters for mHealth technologies for communication and planning activities

#### **BREAK 10-15 Minutes**

#### **Action 1.3 Introductory session - mHealth for planning activities**

This session should lead the participants through identifying barriers to the use of mHealth solutions for communication and planning as well as present them with strategies to overcome these barriers. The session should present existing mHealth technologies for communication and planning activities and show several related use cases.

Barriers:

The overall low level of technology literacy among elder persons is one of the main impediments to the successful use of mHealth solutions for communication and planning. Another drawback is the availability of smartphones and the lack of knowledge on the potential benefits of using mHealth solutions.

The trainer should present some barriers that exist in using mHealth solutions. Additionally, he should explore those barriers, fears, and doubts which the group has when thinking about that



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including mHealth solutions to their lives. The trainer should make a list and address some of them by pointing out the benefits of using technology in our everyday communication and planning.

Strategies to overcome barriers:

Educating people about their concerns over private data and who has access to it is one way to get around these obstacles. Also, try to make a connection between real life and learnability. To help them, the trainer can present a strategy plan to facilitate learning:

1. Acquisition
2. Application
3. Adaptation

The trainer can then implement the aforementioned plan and move on to presenting some use cases. An example might be to download an app about **Dementia/Digital Diary/clock** and presenting all the steps that need to be done.

Moreover, another application that can be presented is MyMedSchedule **Plus**,. This application is used in order to help patients and caregivers follow their med schedules. A separate list can be created for each family member. The trainer can present the steps and their usability.

The session should finish with a practical activity about Digital Diary. The participants should use the application to create a weekly schedule with reminders. Firstly, have them write down their schedule on a piece of paper. As a second step, they digitalise their daily plan.

Finally, all the participants should be asked about their experience and whether their position towards using the application has changed or whether it was a useful experience.

The trainer should close this session by reminding the participants to get together again on the date and hour foreseen for the second day. He /she should ask them if they want that any part of the module shall be conducted in a different way than it was implemented in this first session.

- **Duration:** 45 minutes
- **Tools:** PPT\_1.3. –mHealth for communication and planning



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**END OF FIRST DAY**

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## **SECOND DAY**

*Proceed like day 1 e.g. short Welcoming, summary of the first day and continue with the next action points.*

### **Action 1.4 Self-Management and Empowerment**

Dementia can cause changes in daily life at an early stage and while it progresses, the person is confronted with further challenges regarding health and personal independence. In this context, the topic of self-management and creating useful routines might be relevant for the elder person, its relatives, and caregivers. Here, mHealth solutions can also be a supporting element to strengthen physical and mental health.

The aim of this activity is to explore the concept of self-management in the context of mHealth solutions in theoretical and practical ways. As patients and their relatives face different challenges in daily life, both should engage in this topic. The action will consist of three different parts:

#### 1. Concept of Self-Management

First, the course leader will give a brief theoretical introduction to the topic of self-management, while the main focus should be on self-management regarding healthcare. The participants are asked by the trainer if they already know anything about self-management and if they could explain in short words (brainstorming). Examples from the areas of physical and mental health care will be presented and discussed in the group, so a practical insight is given.

As the topic of daily routines is closely related to self-management and could be quite important in the environment of elderly and their relatives, this will also be explained. The trainer should make sure to keep theoretical explanation on a practical and simple level as well as possible.

## **BREAK 10-15 Minutes**



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2. Current Status Self-Management PWD/relatives

In the first part, examples for “Best Practice” of self-management were given by the trainer and discussed with the participants. In the second part of this action, self-management will be related to daily life of elderly and their relatives. The trainer will lead the participants to reflect upon their current routines, needs and resources regarding self-management in health care. As PWD and relatives are both challenged by the physical and mental changes of Dementia, it is important that they discuss on this topic together.

**BREAK 10-15 Minutes**

3. Creating an Individual Self-Management routine for monitoring health indicators (Practical Part)

In the last part, the participants will prepare one specific content that they could actually implement into their everyday life (e.g. blood pressure, sleep quality, mood, activity, blood glucose level, heart beat, oxygen level, ...). It should be something their relatives could help them with, or even the relatives would like to use as a new routine. The trainer will help to set up one concrete goal (example: “Every evening I will summarise the day in a short diary note in the app”). Additionally, the trainer will show the participants an example on his or her own device. Afterwards, the participants get enough time to work on their individual goal. The trainer will be present for questions the whole period. Finally, the participants can present their individual goal to the whole group. If possible, the participants could also try to perform their set action on the devices during the session. The trainer will be available for questions and concerns all the time.

At the end of the session there will be another short summary by the course instructor.

- **Duration:** 50 minutes
- **Tools:** PPT\_1.1\_Module 1\_mHealth for monitoring health indicators (Slide xx – xx), Whiteboard, Paper & Pencil



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### **Action 1.5 mHealth for communication activities**

*“Most studies show that the communication between healthcare professionals and patients living at home was improved by using various ICT applications, as improvement in management of symptoms in daily life.”<sup>[1]</sup>*

The aim of this part is to explore the concept of communication in the context of mHealth solutions in theoretical and practical ways. As patients and their relatives face different challenges in daily life, both should engage in this topic. The action will consist of two different parts:

#### *1. Concept Communication*

The trainer will give a brief theoretical introduction to the topic of communication, while the main focus should be on communication regarding mhealth solutions. The trainer queries the participants regarding their prior experience with communication apps or gadgets. Examples should be presented and their gains.

It is important for the trainer to keep theoretical explanations as simple and applicable as possible.

#### *2. Practical activity*

In the last part, the participants will prepare one specific piece of content that they can actually implement into their everyday lives. The trainer will help to set up real communication via an app. At this point, relatives can help them realising this part.

- **Duration:** 45 minutes
- **Tools:** PPT\_1.1\_Module 1\_mHealth for monitoring health indicators (Slide xx – xx)

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<sup>1</sup> [i] Lindberg B, Nilsson C, Zotterman D, Söderberg S, Skär L (2013) Using information and communication technology in home care for communication between, family members, and healthcare professionals: A systematic review. *Int J Telemed Appl* 2013, 461829.



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## **BREAK 10-15 Minutes**

### **Action 1.6 mHealth solutions for PWD**

The trainer should conclude this activity by showcasing various tools, apps, or gadgets that can be used for communication and planning. An overview of available solutions can be presented in a table. The solution itself and its implementation and advantages should be introduced, as should how easy it is to find them.

If some devices are available on site, they should be tried out together. Furthermore, some videos about mHealth solutions can be shown to introduce some devices.

#### Online activity:

Below we can find some suggestions (links) for videos that explain some apps, specifically those that show diaries and medication reminders. Below are some recommendations (links) for videos describing various apps, particularly those that display diaries and medication reminders:

<https://www.youtube.com/watch?v=ZZQd9R9IN54>

<https://www.youtube.com/watch?v=RigLlaoBXsA>

<https://www.youtube.com/watch?v=d-1K3HUjqDY>

- **Duration:** 45 minutes
- **Tools:** PPT\_1.1\_Module 1\_mHealth for monitoring health indicators

### **Action 1.7 Closure**

The trainer summarises the content of the session and tries to clarify possible doubts and questions. After that, a short summary of the training programme is given. Each trainer asks for feedback for the training programme, e.g. with an App such as Kahoot! or questionnaires for the evaluation. The results of the feedback are presented at the end of the closure.

- **Duration:** 10-15 minutes



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- **Tools:** PPT

### **Action 1.8 Home Activities:**

Activity to be done on your own at home to practice the training contents.

Here are some activities that can help you get familiar with communication and planning applications:

- Action 1: Please use the Google Calendar to schedule some events, like an appointment with a doctor and schedule a walk with a friend. Some useful thoughts would be about: It helped me during my daily routine. I could organize my activities better.
- Action 2: Connect with family and friends through video calls using applications like Skype and Viber.
- Action 3: Please use an application to remind you of your medication for a day.

### **Action 1.9 Recommendations for Trainers**

Key aspects that help to create a positive and fun learning experience:

- try to make the activity joyful.
- explain clearly the objectives and potential benefits to the participant
- motivate participants to engage in brainstorming,
- offer different perspectives or scenarios
- provide time for communication that allows for reflection, debate, and empowerment of the participants

#### How to conduct group dynamic activities with people with dementia?

When planning the activity, make sure that it will be simple, but interesting and won't take longer than 30 minutes in total as PwDs tend to get restless in more extended activities. It helps to include daily life objects (watch, cup, mirror, etc.) as the person with dementia can relate to them. The focus of the activity should be cooperative and not competitive in order to avoid frustration. Make sure you conduct the activity in a safe environment and don't include rapid movements, tiny objects, or





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scissors. When creating the group, ensure participants are at a similar stage of dementia and have comparable cognitive and physical capacities.

Once you conduct the activity, make sure you remain flexible with the implementation and allow changes to content and materials depending on the capacity of the participants. Start off as simple as possible to allow that the PwD has a positive first experience and him/herself feels prepared to conduct this type of activity. Help participants to identify a short-term as well as a long-term goal for the training activity.

If you see that participants can go on longer than planned, congratulate them on their capacity to focus and extend the activity a little.