



# H-PASS

## **Deliverable 4.3**

H-PASS Training Materials



Co-funded by  
The European Union



## **D4.3 H-PASS Training Materials**

NATIONAL DIRECTORATE GENERAL FOR HOSPITALT (OKFŐ)

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Public document

|                           |                                                                                   |
|---------------------------|-----------------------------------------------------------------------------------|
| <b>Title</b>              | <b>“H-PASS – Health Professionals’ and the “DigitAI team” Skills advancement</b>  |
| <b>Acronym</b>            | H-PASS                                                                            |
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|----------|------------|-------------------------------|------------------|
| 0.1      | 31/03/2026 | Nóra Fazekas, Zoltán Cserhádi | Final draft      |
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## Table of abbreviations

| Acronym | Description                |
|---------|----------------------------|
| GA      | Grant Agreement            |
| SC      | Steering Committee         |
| HWF     | Health workforce           |
| HRH     | Human Resources for Health |
| LMS     | Learning management system |
| DCA     | Digital Change Agent       |

## Applicable and reference documents

The following documents contain requirements applicable to the generation of this document.

| Reference | Document title  |
|-----------|-----------------|
| GA        | Grant Agreement |

## List of tables

*Table 1 – H-PASS Training package overview*

## 1. Introduction to the H-PASS project

Health workforce (HWF) education is a key component in HRH management and development to keep health professionals' knowledge, competences and skills fit to practice. The digital transformation resulted in new ways of care provision, modified care pathways and scopes of practice and altered professional-client or team relationships by the growing use of digital solutions. This acceleration of technology brings an inevitable opportunity to improve healthcare team competences, skill-mix, task shifting, upgrade qualifications and upscale HWF skills.

Responding to the “Call for proposals to provide training for health workforce, including digital skills” of the EU4Health Programme, the "Health Professionals' and the “DigitAl team” Skills advancement" (H-PASS) project aims to support EU Member States in developing digital and transversal skills for health professionals to support team resilience and to adapt to the challenges of digital transformation.

The main objective of H-PASS is to design and pilot a training programme with thoroughly developed modules and appropriate synchronous and asynchronous activities, training materials and tools concerning transversal skills that ensure up-to-date and evolving knowledge and respond to skills gaps. H-PASS particularly develops digital skills of the clinical staff in an innovative environment. By targeting various health professions: medical doctors, nurses, and pharmacists as well as training the trainers for more effective change management and educating digital change agents, more advanced digital maturity, literacy, readiness and integration in healthcare can be realised. H-PASS performs pilot implementations in Cyprus, Greece, Hungary, Italy, Lithuania and Romania. Pilots tested and validated the new training programme and the innovative learning environment, and incorporated lessons from 6 EU MS. H-PASS dedicates a significant attention to stakeholder involvement and engagement at various levels (e.g. national, regional and EU), intends to monitor the synergies with other EU initiatives, and to enable maximising the uptake, impact and continuation of the H-PASS training in the EU.



## 2. H-PASS training package overview

This document is part of the deliverable “D4.3 Training Materials”. The whole H-PASS training package consists of the following documents and materials:

| Component                                 | Description                                                                                                                                   | Role in the training programme                                                                   |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| <b>Training Plan (D3.1)</b>               | Defines the conceptual framework, modular structure, learning outcomes, training methods, and implementation rules of the H-PASS programme.   | Serves as the core reference document for designing and adapting the training.                   |
| <b>Training Materials (D4.3)</b>          | Includes the educational content developed for the modules and components (e-learning content, exercises, case studies, presentations, etc.). | Provides the practical content used during training delivery.                                    |
| <b>Online Learning Environment (D5.1)</b> | The digital platform used to deliver asynchronous learning elements, manage participants, and support interaction and feedback.               | Enables the delivery of e-learning content and supports the learning process.                    |
| <b>VR Environment (D5.2)</b>              | A virtual reality-based learning tool integrated into the training to support experiential learning.                                          | Supports the synthesis and practical application of learning outcomes in the simulated scenario. |
| <b>Training Monitoring Report (D1.2)</b>  | Documents the implementation of pilot trainings, including participant feedback, evaluation results, and lessons learned.                     | Provides evidence for training quality and supports future implementation and scaling.           |

*Table 1 – H-PASS Training package overview*

The English-language course is available here: <https://hpass.healthworkforce.eu/courses/hpass-training-course/>

The training materials prepared in the national languages of the six countries (English, Greek, Hungarian, Italian, Lithuanian and Romanian) can be downloaded here: <https://hpass.healthworkforce.eu/country-level-training-materials/>

### 3. The H-PASS Training Materials Deliverable

The Training Materials deliverable of the H-PASS project is a complex package of the vast work the partners have done in the endeavour to bring the H-PASS training course to life.

Most of the training materials are not possible to simply include in a text document format, accordingly we have packaged these in the learning management system (LMS) platforms used during the H-PASS pilots, that are exportable to share with newly adapting institutions in the sustainability phase of the project. However, for a better understanding of the delivery of the training course and better support for future implementation, we have created this report, that mainly includes two sets of documents: the Training Guide, originally used to support the piloting H-PASS trainers; and the Training Adaptation Report, providing a detailed explanation how the training plan and training materials were organized and utilized during the local pilots.

#### 3.1 Training Guide

We have created this document before the prototype training and updated before the module adaptation process for the pilots, and finally after the pilots closed. We found necessary to have a common trainers' guide like this, as there were several colleagues of the project partners from 6 countries involved, who have contributed exercises to this training, however, we needed a common language how to deliver them, beyond just the training materials (presentations, handouts, case descriptions, etc.). Furthermore, we knew that the exercises will be delivered by more and/or different people than those who have originally come up with them. Consequently, this guide is an integral part of the training materials: the “how” to the “what”.

#### **How to use this guide?**

This guide follows the structure of the H-PASS training, defined in the D3.1 H-PASS Training Plan, and has a standard structure to describe the exercises. It helps every implementing professional understand how the team behind H-PASS imagined the training to look like, as well as it offers different possible variations of the training delivery, providing ideas for the implementers how to adjust the original exercises for different target groups with or for different contextual settings.

You need to use this guide together with the H-PASS training package, integrated into the LearnDash platform (h5p files, task descriptions, handouts), as well as the Training Plan to understand the H-PASS training's concept and content in completeness.

#### 3.2 Training Adaptation Report

This report aims to provide information on the local partners' training planning and delivery activities to show local efforts and decision-making processes carried out based on the guidelines of the core English-language H-PASS training developed together.

The activities explained cover WP3- (training framework), WP4- (training materials) and WP5- (training platform) related activities, as the complete and complex delivery of the H-PASS training requires conceptual and operational, as well as technical considerations.

The report is an extension to and supports the understanding of the training material package determined in the grant agreement.

## 4. Training Guide

### M1 B2 Reflecting on MedTech

|                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Title</b>                         | Reflecting on MedTech                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Author(s)</b>                     | OKFŐ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Module</b>                        | Module 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Component</b>                     | Digital technologies in healthcare                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Method</b>                        | Individual learning exercise                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Learning Outcome(s)</b>           | <p><b>m1i2-</b> Can identify needs and plan adequate responses related to digital health tools, services, is able to implement digital solutions and tools in his/her work</p> <p><b>m1i3</b> - Is ready to learn about and try new tools, applications</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Task Outline</b>                  | Students, after learning about digital technologies applied in healthcare, are tasked to reflect on them from the perspective of their own profession and own work context, which should also push them to research tools and solutions applicable for their practice. This task can be delivered either completely asynchronously or via groupwork/individual work in a classroom environment.                                                                                                                                                                                                                                                                                                                                                               |
| <b>Estimated time for completion</b> | 30-60 mins (+ synchronous training reflection)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Tips for Delivery</b>             | <p>The task can be delivered <b>exclusively online</b>, without trainer feedback, or a group-level trainer feedback uploaded to the e-learning platform (e.g., summary of typical areas for implementation, further resources based on these, short statistics based on the texts (e.g. opinions on usefulness) done by AI, summary of the most creative implementation ideas, etc.). In this case the exercise has no participant number limit, and no time constraints.</p> <p>It is advisable though to provide short feedback individually, that can completely be previously defined, or better if done along 2-3 main assessment aspects.</p> <p><b>Synchronous</b></p> <p>The exercise can be discussed in a synchronous training context shortly.</p> |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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|  | <p>The discussion can focus on the results of the mapping exercise sharing the results on the most relevant digital technologies (10-20 min). For online discussion, the individual results, impressions can also be shared in the chat.</p> <p>Questions:</p> <ol style="list-style-type: none"> <li>1. Based on your mapping, which digital tool has most changed the way you work? Focus on the digital tools that have become popular in the last 10 years.</li> </ol> <p>If time allows, a more thorough discussion (additional 30-60 mins) can take place on how digital transformation changed our lives along the guiding questions:</p> <ul style="list-style-type: none"> <li>• In what ways can digital health technologies enhance patient outcomes and operational efficiency in your work environment?</li> <li>• How could digital health technologies be utilized to improve procedures, treatment outcomes, or patient care in your area of expertise?</li> <li>• Given unlimited resources, which digital health technologies would you prioritize implementing in your work and why?</li> <li>• Can you identify potential challenges in integrating these technologies into your practice?</li> </ul> <p>Further optional questions</p> <ol style="list-style-type: none"> <li>1. What were your initial thoughts and feelings about the exercise?</li> <li>2. Did anything surprise you about the digital health technologies you researched?</li> <li>3. How did you approach the research component of the exercise? What resources did you find most valuable, and why?</li> <li>4. What was the most important thing you learned from this exercise? How has it changed your perspective on digital health technologies in your field?</li> <li>5. Did you come across any innovative ideas or practices from other fields that you think could be applied to your own? How could interdisciplinary collaboration enhance the use of digital health technologies?</li> <li>6. Based on what you learned, what do you think the future holds for digital health technologies in your field? How should healthcare professionals prepare for these changes?</li> </ol> |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             | <p>7. How has this exercise influenced your willingness or readiness to adopt new digital health tools? What further training or resources do you feel you need?</p> <p>8. What aspects of the exercise did you find most beneficial, and why? Is there anything you would suggest improving for future iterations of this exercise?</p> <p>The discussion can be organised in a plenary setting with smaller group (ca. 15-20) or started in pairs with questions about the experience (e.g., questions 1-2.) and then opening the discussion for the whole group.</p> |
| <b>Additional Resources</b> | Task description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

#### M1 B3a Patient Centred AI Use

|                                      |                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Title</b>                         | Patient Centred AI Use                                                                                                                                                                                                                                                                                                                                |
| <b>Author</b>                        | EUC                                                                                                                                                                                                                                                                                                                                                   |
| <b>Module</b>                        | Module 1                                                                                                                                                                                                                                                                                                                                              |
| <b>Component</b>                     | Digital technologies in healthcare                                                                                                                                                                                                                                                                                                                    |
| <b>Method</b>                        | Individual learning exercise                                                                                                                                                                                                                                                                                                                          |
| <b>Learning Outcome(s)</b>           | <p><b>m1i4</b> - Knows trends in Healthcare in connection with digital health in a specific professional field</p> <p><b>m1i6</b> - Is ready to learn about and try new tools, applications</p>                                                                                                                                                       |
| <b>Task Outline</b>                  | Students are tasked to read a case and assume the role of the patient. They have to apply generative-AI-based apps to collect experience about how well these tools can assist patients and professionals. Lastly, training participants fill out a survey (medical profession / non-medical professional) to reflect on the usability of these apps. |
| <b>Estimated time for completion</b> | 60 mins (+ synchronous training reflection)                                                                                                                                                                                                                                                                                                           |
| <b>Tips for Delivery</b>             | <p><b>Asynchronous</b></p> <p>The task is designed to be completed entirely online, with no need for trainer feedback. However, group-level feedback can be provided by uploading a summary to the e-learning platform, including common ethical concerns, innovative uses of AI in patient</p>                                                       |

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             | <p>care, and potential future trends in AI healthcare applications. Statistics of the survey can be shared with the participants as well.</p> <p><b>Synchronous</b></p> <p>If conducted in / complemented by a classroom setting, the exercise can be followed by a discussion (additional 15-20 minutes) focused on:</p> <ol style="list-style-type: none"> <li>1. How do AI tools currently influence patient care in your field?</li> <li>2. What ethical considerations are most pressing when integrating AI in healthcare?</li> <li>3. How can AI be used to personalize patient care while maintaining empathy and human connection?</li> </ol> <p>This discussion can be done in small groups (4-5 participants) or as a plenary session, depending on the group size and available time.</p> |
| <b>Additional Resources</b> | Task description, handout/ppt and survey                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

#### M1 B3b Artificial intelligence in healthcare

|                            |                                                                                                                                                                                                                                                                                                             |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Title</b>               | Artificial intelligence in healthcare; Patient Simulation: Online Investigation of a Health Problem Using AI and Non-AI Tools                                                                                                                                                                               |
| <b>Author</b>              | UO                                                                                                                                                                                                                                                                                                          |
| <b>Module</b>              | Module 1                                                                                                                                                                                                                                                                                                    |
| <b>Component</b>           | Digital technologies in healthcare                                                                                                                                                                                                                                                                          |
| <b>Method</b>              | Individual learning exercise                                                                                                                                                                                                                                                                                |
| <b>Learning Outcome(s)</b> | <p><b>m1i4</b> - Knows trends in Healthcare in connection with digital health in a specific professional field</p> <p><b>m1i6</b> - Is ready to learn about and try new tools, applications</p>                                                                                                             |
| <b>Task Outline</b>        | <p>Students are provided with a structured patient simulation describing a middle-aged patient presenting with chest discomfort and relevant risk factors.</p> <p>Participants are required to: Investigate the case using at least one generative AI tool and one non-AI medical information resource.</p> |

|                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                      | <p>Compare the outputs in terms of:</p> <ul style="list-style-type: none"> <li>• Suggested diagnoses</li> <li>• Identification of red flags/emergencies</li> <li>• Quality and clarity of advice</li> <li>• Commercial influence or bias</li> </ul> <p>Reflect on:</p> <ul style="list-style-type: none"> <li>• Clinical plausibility and completeness of results</li> <li>• Differences in reasoning patterns</li> <li>• Patient usability and accessibility</li> <li>• Potential risks of relying on these tools</li> </ul> <p>The exercise concludes with a short written reflection evaluating the strengths, weaknesses, and responsible use of AI in patient-oriented contexts.</p>                                                                                                                                                                                                                                                                                                                                |
| <b>Estimated time for completion</b> | 60 mins (+ synchronous training reflection)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Tips for Delivery</b>             | <p><b>Asynchronous</b></p> <p>The task can be completed independently online. Students submit a short structured comparison or reflection. A summary of common findings (e.g., differences in triage quality, handling of red flags, emotional tone, commercial bias) can be uploaded to the e-learning platform.</p> <p><b>Synchronous (optional extension)</b></p> <p>If implemented in a classroom setting, the exercise may be followed by a guided discussion (20 minutes) focusing on:</p> <ol style="list-style-type: none"> <li>1. How do AI and non-AI tools differ in clinical reasoning and risk communication?</li> <li>2. What are the potential dangers of incomplete triage or over-reassurance?</li> <li>3. How should healthcare professionals guide patients who use AI tools before consultation?</li> <li>4. What criteria should professionals apply when evaluating digital diagnostic tools?</li> </ol> <p>Discussion may take place in small groups (4–5 participants) or in plenary format.</p> |
| <b>Additional Resources</b>          | Handout                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |



### M1 B5 Exploring reactions to change (New teleconsultation service 1.)

|                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Title</b>                         | Exploring reactions to change (New teleconsultation service 1.)                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Author</b>                        | OKFŐ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Module</b>                        | Module 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Component</b>                     | Leading digital change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Method</b>                        | Individual learning exercise                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Learning Outcome(s)</b>           | <b>m1i5</b> Can identify the need for change and plan the change process and manage change and engage stakeholders to attain strategic goals.                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Task Outline</b>                  | <p>Students are tasked to read a short case and answer questions connected to it based on the lexical material.</p> <p>Note: The whole exercise is made up of three parts that build on each other, each of which relates to different blocks and different lexical content of the H-PASS training. This exercise is the first part of the complete exercise.</p>                                                                                                                                               |
| <b>Estimated time for completion</b> | 30 mins (+ synchronous training reflection)                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Tips for Delivery</b>             | <p><b>Asynchronous</b></p> <p>The task is designed to be completed entirely online, with no individual or short trainer feedback. Group-level feedback can be provided by uploading a summary to the e-learning platform or creating some statistics of the answers with the help of AI.</p> <p><b>Synchronous</b></p> <p>The exercise can be supplemented by a brief discussion (10-20 min) highlighting the most relevant elements of the lexical content and providing a summary of the written results.</p> |
| <b>Additional Resources</b>          | Task description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

### M1 B6 Case of an organisational change (New teleconsultation service 2.)

|                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Title</b>                         | Case of an organizational change (New teleconsultation service 2.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Author</b>                        | OKFŐ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Module</b>                        | Module 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Component</b>                     | Leading digital change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Method</b>                        | Sync training activity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Learning Outcome(s)</b>           | <p>m1i4 - Is familiar with leadership and management functions, basic concepts change management in connection with digitalization</p> <p><b>m1i5</b> Can identify the need for change and plan the change process, and manage change and engage stakeholders to attain strategic goals.</p> <p>m1i6 - Is ready to change his/her own practices and be proactive in change process.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Task Outline</b>                  | Synchronous exercise on a case discussion by utilising the knowledge gained in the previous exercises on digital technology in healthcare and change management.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Estimated time for completion</b> | 1 hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Tips for Delivery</b>             | <p>The exercise can be conducted online or in a classroom setting. First, a plenary introduction is suggested highlighting the most relevant parts of the lexical content (e.g. change process, ADKAR model, Kotter model). After the introduction, participants discuss the questions in small groups (4-6 participants) and collect their answers on a sheet of paper or in a digital tool. A plenary discussion concludes the exercise based on reports from the small groups or interactive plenary discussions on the questions, depending on the group size and available time.</p> <p>General</p> <p>Facilitating questions for context summaries:</p> <ol style="list-style-type: none"> <li>1. How would you structure the change process?</li> <li>2. What are aspects to consider when implementing change to reduce resistance?</li> </ol> |

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|                             | <p>Facilitating questions for exercise summary:</p> <ul style="list-style-type: none"> <li>• How is digitalisation changing our lives? How do people react to change? (Follow-up to the individual exercise)</li> <li>• What can people themselves do to reduce their resistance?</li> <li>• What does organisational change mean? Who should lead organisational change? What role can non-managerial health professionals play in a change management process?</li> <li>• What steps could you identify when structuring the process?</li> <li>• Let us summarise the aspects to reduce change collected by the small groups? What are the common ones? Can we design a “toolbox” to reduce resistance?</li> </ul> <p>Online</p> <p>In an online environment participant group should be assigned to breakout rooms, these can be created in advance. The handout can be shared with the link of an online document or attached as a file. We can suggest the groups to appoint a moderator among themselves. It is advised for the trainer to go around in the breakout rooms and provide support if needed. It is suggested to have at least two trainers for smooth technical coordination and training delivery.</p> <p>Onsite</p> <p>Prepare the printed handouts or make sure that the participants can open it on their devices.</p> <p>Note: The whole exercise is made up of three parts that build on each other, each of which relates to different blocks and different lexical content of the H-PASS training. This exercise is the second part of the complete exercise. The case description of the first part is included in this case.</p> |
| <b>Additional Resources</b> | Handout                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## M1 B7 Implementing Digital Ecosystems

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| <b>Title</b>                         | Digital Ecosystems in the Healthcare Sector: Practical Toolkits to Drive Implementation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Author(s)</b>                     | UCSC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Module</b>                        | Module 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Component</b>                     | Leading digital change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Method</b>                        | Synchronous, onsite/online                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Learning Outcome(s)</b>           | M1i7 - Can identify drivers for change to implement digital ecosystems in the healthcare sector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Task outline</b>                  | <p>Participants are involved in a plenary session to introduce digital ecosystems applied to the healthcare sector. The lecturer presents theoretical concepts and seeks participants' cooperation through active involvement in answering questions (see Teacher Guide).</p> <p>Participants are split into groups of 5-6 students and are given handouts to the task they are asked to carry out.</p> <p>Task 1: Populating the Maturity Model - Each group will populate the maturity model with at least three items per domain. Participants have the time to read the description of the model and then discuss it in their groups. It must collect its ideas on a given template to summarise them later (see Handout 1).</p> <p>Ideas will be discussed in a plenary session and a final theoretical framework will be developed, through the facilitation of the trainer. This exercise ensures a deep understanding of and a practical contribution to the development of the model.</p> |
| <b>Estimated time for completion</b> | 1 hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Tips for Delivery</b>             | <p>Online</p> <p>In an online environment participant group should be assigned to breakout rooms, these can be created in advance. The handout can be shared with the link of an online document or attached as a file. The template for groupwork should be prepared on an online platform separately for all groups with editing access to all</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

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|                             | <p>participants. We can suggest the groups appoint a moderator among themselves. It is advised for the trainer to go around in the breakout rooms and provide support if needed. It is suggested to have at least two trainers for smooth technical coordination and training delivery.</p> <p>Onsite</p> <p>Prepare the printed handouts or make sure that the participants received the document previously and can open it on their devices. The template can be pre-made, or you can just distribute flipcharts, markers, post-its to taste. You can, similarly to the online version, create the templates on an online platform; make sure to create links/QR codes for the groups leading to their own template (this version can help to present the results more visibly).</p> |
| <b>Additional Resources</b> | Teacher Guide, Handout(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

#### M2 B2a Case discussions on communication in health care

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| <b>Title</b>               | Case discussions on communication in health care                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Author(s)</b>           | LSMU, OKFÖ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Module</b>              | Module 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Component</b>           | Communication                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Method</b>              | Sync training activity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Learning Outcome(s)</b> | <p>m1i2 - Can identify needs and plan adequate responses related to digital health tools, services, is able to implement digital solutions and tools in his/her work</p> <p>m2i2 - Can communicate clearly and concisely with various stakeholders (internal and external) both face-to-face and in online interactions.</p> <p>m2i3 - Is ready to adapt his/her communication style and strategies to stakeholder needs and backgrounds.</p> <p>m2i8 - Can recognize and resolve conflicts within a healthcare team to maintain a positive and collaborative work environment and a high-level patient care</p> |

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| <b>Task outline</b>                  | <p>Participants are introduced to two real-life inspired digital health cases from Frennert, S., Petersson, L. &amp; Erlingsdottir, G. “More” work for nurses: the ironies of eHealth. BMC Health Serv Res 23, 411 (2023). <a href="https://doi.org/10.1186/s12913-023-09418-3">https://doi.org/10.1186/s12913-023-09418-3</a>:</p> <ol style="list-style-type: none"> <li>1. <b>Digital triage application</b> supporting primary care communication and nurse-led triage.</li> <li>2. <b>Remote dialysis monitoring application</b> enabling home dialysis supervision and nurse-driven data review.</li> <li>3. <b>eHealth Follow-up Application (Post-Myocardial Infarction)</b> allowing patients’ self-reporting of parameters (BP, weight), chat communication, color-coded alerts, irregular data submission, nurse-led monitoring, physician review before visits.</li> </ol> <p>Before discussion, the facilitator briefly introduces the main theoretical concepts of the cases (telemedicine, task shifting)</p> <p>Using Slido polls and guided discussion, participants analyse:</p> <ul style="list-style-type: none"> <li>• Benefits and disadvantages for patients</li> <li>• Impact on healthcare professionals’ workload and role distribution</li> <li>• Responsibility and accountability questions</li> <li>• Preconditions for effective and safe task shifting</li> <li>• Organizational and system-level implications</li> </ul> <p>The session emphasizes critical reflection rather than identifying a single “correct” solution.</p> |
| <b>Estimated time for completion</b> | 1 hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Tips for Delivery</b>             | <p><b>General considerations</b></p> <ul style="list-style-type: none"> <li>• Prepare Slido questions in advance for all three cases if you want to use it as a tool</li> <li>• Arrange seating in plenary format to encourage open discussion.</li> <li>• Display each case summary visually before discussion.</li> <li>• Encourage individual poll responses before opening group reflection.</li> <li>• Use a whiteboard or projector to synthesize recurring themes across cases.</li> <li>• Maintain a neutral facilitation style, especially when discussing professional role boundaries and workload concerns.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

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|                                    | <p><b>Steps for onsite delivery</b></p> <p><b>1. Introduction (10 minutes)</b></p> <ul style="list-style-type: none"> <li>• Introduce the concept of task shifting.</li> <li>• Clarify that digital tools often redistribute—not remove—work.</li> <li>• Present the structure of the session (three cases, interactive polling, integrative reflection).</li> </ul> <p><b>2. Case 1 – Digital Triage (15 minutes)</b></p> <p><b>Questions to discuss:</b></p> <ul style="list-style-type: none"> <li>• What advantages does this solution offer patients?</li> <li>• What disadvantages may arise?</li> <li>• What impact does it have on healthcare workers?</li> </ul> <p><b>3. Case 2 – Remote Dialysis Monitoring (15 minutes)</b></p> <p><b>Questions to discuss:</b></p> <p>What conditions are necessary for effective task shifting?</p> <ul style="list-style-type: none"> <li>• On the side of task assigners</li> <li>• On the side of task receivers</li> <li>• On the patient side</li> <li>• On the digital system side</li> <li>• On the health system level</li> </ul> <p><b>4. Case 3 – eHealth Follow-Up App (15 minutes)</b></p> <p><b>Questions to discuss:</b></p> <ul style="list-style-type: none"> <li>• What risks arise from irregular patient data submission?</li> <li>• Does visualizations simplify or oversimplify decision-making?</li> <li>• Who is responsible if data is missing or delayed?</li> <li>• Does this increase or reduce nurse workload?</li> </ul> <p><b>5. Integrative Reflection (5 minutes)</b></p> <p>Conclude by summarizing 4–6 key principles for responsible digital task shifting.</p> |
| <p><b>Additional Resources</b></p> | <p>PPT, case descriptions (Case1-3)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## M2 B2b Improving Patient Medication Adherence and Comprehensive Care

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| <b>Title</b>                         | Improving Patient Medication Adherence and Comprehensive Care                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Author(s)</b>                     | CJFBH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Module</b>                        | Module 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Component</b>                     | Mix/Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Method</b>                        | Sync training activity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Learning Outcome(s)</b>           | <p>m2i2 Can communicate clearly and concisely with various stakeholders (internal and external) both in face-to-face and in online interactions.</p> <p>m2i3 Is ready to adapt his/her communication style and strategies to stakeholder needs and backgrounds.</p> <p>m2i5 Can effectively collaborate in teams both in face-to-face and in online interactions.</p> <p>m2i6 Promotes collaboration among diverse healthcare professionals, technologists, researchers, and industry experts to exchange ideas and develop interdisciplinary solutions.</p> <p>m2i12 Demonstrates respect for cultural differences and avoiding cultural/generational stereotypes or biases in healthcare interactions</p> |
| <b>Task outline</b>                  | <p>After the introduction of role-play scenario training participants simulate a discussion among a patient, a pharmacist and a doctor with the help of scenario cards. The groups will have the opportunity to reflect on the experience among themselves and later together in a plenary setting with the help of the trainer(s) as well. The debriefing and session feedback can be supported by an online survey too.</p>                                                                                                                                                                                                                                                                               |
| <b>Estimated time for completion</b> | 1 hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Tips for Delivery</b>             | <p><b>Questions for the groupwork:</b></p> <ul style="list-style-type: none"> <li>• What strategies did you use to ensure the patient felt heard? Any specific techniques?</li> <li>• How did you incorporate the patient's cultural beliefs into the discussion?</li> <li>• How did you address concerns about side effects or dependency? Can you share an example?</li> </ul>                                                                                                                                                                                                                                                                                                                            |



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|  | <ul style="list-style-type: none"> <li>• What communication techniques helped explain the need for medication alongside lifestyle changes? Any effective phrases?</li> <li>• Can you describe a moment when trust was built between the providers and the patient? What contributed to that?</li> </ul> <p><b>Additional Tips</b></p> <p>Scenario Context: Provide background on patient condition beforehand.</p> <p>Reflection Questions: Encourage reflection on communication and cultural sensitivity after the role-play.</p> <p><b>Steps for online delivery:</b></p> <ol style="list-style-type: none"> <li>1. Introduction (3 minutes): Briefly introduce the purpose of the session and the role-play scenario involving the patient. Highlight the importance of communication and cultural sensitivity.</li> <li>2. Group Formation &amp; Instructions (5 minutes): Divide participants into small groups of 4-6 using breakout rooms. Provide clear instructions on the discussion format and share access to scenario cards and discussion points via a shared document.</li> <li>3. Role-Play Execution (15 minutes): In their breakout rooms, participants will conduct the role-play, taking turns in their assigned roles (doctor, patient, pharmacist). Encourage them to explore key concerns and communication strategies.</li> <li>4. Group Reflection (10 minutes): After the role-play, groups will spend 10 minutes reflecting on their experience. They should discuss what worked well, challenges faced, and how cultural beliefs were addressed. They can note key points in the shared document.</li> <li>5. Report Back (10 minutes): Bring everyone back to the main room. Each group will have 2 minutes to summarize their role-play experience and share key insights with the larger group.</li> <li>6. Facilitated Discussion (10 minutes): Lead a group discussion to compare experiences. Highlight common themes, effective communication strategies, and approaches to managing patient concerns about medication and lifestyle changes.</li> </ol> |
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|  | <p>7. <b>Wrap-Up &amp; Feedback (7 minutes):</b> Conclude the session by summarizing key takeaways. Encourage participants to share feedback via a quick online survey or in the chat.</p> <p><b>Onsite</b></p> <ul style="list-style-type: none"> <li>• <b>Room Setup:</b> Arrange the room with small tables or clusters of chairs to accommodate smaller groups of 4-6 participants, fostering a collaborative environment.</li> <li>• <b>Scenario Materials:</b> Prepare physical copies of the scenario cards for each group. Alternatively, display the scenarios on a projector or screen for easy access.</li> <li>• <b>Recording Supplies:</b> Provide flipcharts and markers for groups to record their thoughts.</li> <li>• <b>Cross-Group Learning:</b> Review other groups' flipcharts, promoting cross-group learning and sharing of insights.</li> <li>• <b>Facilitator Support:</b> Ensure facilitators are available to assist groups with any questions or guidance needed during the role-play and discussions.</li> <li>• <b>Feedback Mechanism:</b> Prepare a simple feedback form or survey for participants to complete at the end of the session, capturing their thoughts on the experience.</li> </ul> <p><b>Steps for onsite delivery:</b></p> <ol style="list-style-type: none"> <li>1. <b>Introduction (3 minutes):</b> Briefly introduce the purpose of the session and the role-play scenario involving the patient. Highlight the importance of communication and cultural sensitivity.</li> <li>2. <b>Group Formation &amp; Instructions (5 minutes):</b> Divide participants into small groups of 4-6 using breakout rooms. Provide clear instructions on the discussion format and share access to scenario cards and discussion points via a shared document.</li> <li>3. <b>Role-Play Execution (15 minutes):</b> participants will conduct the role-play, taking turns in their assigned roles (doctor, patient, pharmacist). Encourage them to explore key concerns and communication strategies.</li> <li>4. <b>Group Reflection (10 minutes):</b> After the role-play, groups will spend 10 minutes reflecting on their experience. They should discuss what worked well, challenges faced, and</li> </ol> |
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|                             | <p>how cultural beliefs were addressed. They can note key points in the shared document.</p> <ol style="list-style-type: none"> <li>5. Report Back (10 minutes): Bring everyone back to the main room. Each group will have 2 minutes to summarize their role-play experience and share key insights with the larger group.</li> <li>6. Facilitated Discussion (10 minutes): Lead a group discussion to compare experiences. Highlight common themes, effective communication strategies, and approaches to managing patient concerns about medication and lifestyle changes.</li> <li>7. Wrap-Up &amp; Feedback (7 minutes): Conclude the session by summarizing key takeaways. Encourage participants to share feedback via a quick online survey or in the chat.</li> </ol> <p><b>Main discussion points to touch on:</b></p> <ul style="list-style-type: none"> <li>• Effective communication is crucial in conveying treatment plans clearly to patients, ensuring they understand their options.</li> <li>• Incorporating the patient’s cultural beliefs into discussions promotes trust and enhances patient engagement.</li> <li>• Addressing patient concerns about side effects and dependency helps alleviate anxiety and encourages adherence to treatment.</li> <li>• Suggesting lifestyle changes alongside medication can empower patients and improve health outcomes.</li> <li>• Building trust and rapport with patients fosters a supportive environment and enhances patient-provider relationships.</li> <li>• Establishing clear follow-up plans ensures ongoing monitoring of the patient’s progress and encourages open communication.</li> <li>• Reflecting on role-play experiences provides valuable insights for improving real-life patient interactions.</li> </ul> |
| <b>Additional Resources</b> | PPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## M2 B3/B4/B5 Plenary discussion ideas

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| <b>Title</b>               | Plenary discussion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Author(s)</b>           | OKFŐ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Module</b>              | Module 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Component</b>           | Mix/Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Method</b>              | Sync training activity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Learning Outcome(s)</b> | <p>m2i3 Is ready to adapt his/her communication style and strategies to stakeholder needs and backgrounds.</p> <p>m2i6 Promotes collaboration among diverse healthcare professionals, technologists, researchers, and industry experts to exchange ideas and develop interdisciplinary solutions.</p> <p>m2i9 Is open to constructive resolution of conflicts</p> <p>m2i12 Demonstrates respect for cultural differences and avoiding cultural/generational stereotypes or biases in healthcare interactions</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Task outline</b>        | <p>The goal of this plenary discussion is to highlight and deepen the key messages from the e-learning materials and online work. This includes emphasizing the importance of teamwork, conflict management, and cultural competence in healthcare, as well as reinforcing understanding of the Belbin team roles and their practical application in resolving conflicts and improving communication within diverse teams.</p> <p><b>1. Teamwork in healthcare (15 minutes)</b></p> <p>Present key points on teamwork dynamics and the stages of team development (Forming, Storming, Norming, Performing, Adjourning).</p> <p>Highlight how each team stage relates to real-world healthcare settings, with particular attention to conflict during the "Storming" phase.</p> <p>Introduce the Belbin Test, explaining its purpose in identifying individual team roles and how these roles contribute to effective teamwork and conflict resolution.</p> <p>Questions to facilitate discussion:</p> <ul style="list-style-type: none"> <li>• "What turns a group into a real team?"</li> <li>• This question introduces the key differences in teamwork and the team development process.</li> </ul> |

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|  | <ul style="list-style-type: none"> <li>• "How can a team work effectively with different roles and task distribution?"<br/>This leads into the Belbin team roles and their significance in teamwork.</li> <li>• "What challenges does a newly formed team face?"<br/>This helps introduce the early stages of team development (Forming, Storming).</li> <li>• "Why is diversity within a team (e.g., different experiences, skills) important for effective collaboration?"<br/>This emphasizes the value of different backgrounds and knowledge in team dynamics.</li> <li>• "What happens if a team fails to move beyond the conflict (Storming) phase?"<br/>This highlights the importance of conflict and its management in team development.</li> </ul> <p><b>2. Conflict (15 minutes)</b></p> <p>Discuss conflict as a natural part of the "Storming" phase in team development. Emphasize the reasons of the conflict and how effective conflict management can lead to team growth and improved decision-making.</p> <p>Questions to facilitate discussion:</p> <ul style="list-style-type: none"> <li>• "Why do conflicts occur more often in a newly formed team?"<br/>This question introduces the natural causes of conflict in the "Storming" phase, such as unclear roles, differing opinions, or uncertainty.</li> <li>• "How do teams typically handle their first disagreements, and what experiences do you have with this?"<br/>This allows participants to share their experiences on what strategies or approaches have led to successful or unsuccessful conflict resolution.</li> <li>• "What do you think is the difference between a well-managed conflict and a neglected one?"<br/>This question highlights the importance of conflict management and how resolving or ignoring conflict can impact team performance and dynamics.</li> </ul> |
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|  | <ul style="list-style-type: none"> <li>• "How do you think different roles and task distribution in a team affect conflicts?"<br/><br/>This question introduces the Belbin roles and their significance in teamwork, exploring how varying strengths and tasks can influence team dynamics and conflict.</li> <li>• "Why do you think conflict can sometimes be useful for a team?"<br/><br/>This sets the stage for discussing how conflict, when well-managed, can lead to growth, better decisions, and improved team performance.</li> <li>• "What tools or methods do you know that help resolve conflicts?"<br/><br/>This question prepares the ground for discussing conflict resolution techniques</li> </ul> <p><b>3. Culture (15 minutes)</b></p> <p>Organizational culture refers to the shared values, beliefs, and behaviours that shape how employees interact within an organization. In healthcare, culture plays a significant role in influencing how teams work together, how decisions are made, and how patient care is delivered. Emphasize points: values, Goldmann iceberg model</p> <p>Questions to facilitate discussion:</p> <ul style="list-style-type: none"> <li>• "What is the first word that comes to mind when you think of organizational culture?"<br/>This question encourages participants to share their initial thoughts and feelings about organizational culture, helping to establish a personal connection to the topic and the values of a culture</li> <li>• "What is the first thing you notice when you enter a new workplace? How does this reflect the organization's culture?"<br/>Participants can share their first impressions, allowing you to introduce visible and invisible elements of organizational culture.</li> <li>• "Have you experienced a situation where an organizational culture helped or hindered teamwork in healthcare?"</li> </ul> |
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|                                      | <p>This question provides an opportunity for participants to share personal examples, highlighting the impact of culture on collaboration.</p> <ul style="list-style-type: none"> <li>"What do you think makes an organization's culture more open or closed?"</li> </ul> <p>This question introduces the importance of communication, flexibility, and leadership style in shaping organizational culture.</p>                                                                                                                                                                                                           |
| <b>Estimated time for completion</b> | 3x15mins                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Tips for Delivery</b>             | <p><b>Tips:</b></p> <ul style="list-style-type: none"> <li>Start with an icebreaker related to the session's themes.</li> <li>Consider using polls or interactive tools (like Mentimeter or Slido) to gather participants' thoughts on certain questions in real-time. This encourages engagement and can provide a visual representation of their responses.</li> <li>If the participants are not opened to the planary discussion work with them in pairs.</li> <li>After each section, briefly summarize the main points discussed. This reinforces learning and helps participants retain the information.</li> </ul> |
| <b>Additional Resources</b>          | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

#### M2 B6 Cultural sensibility survey

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| <b>Title</b>               | Cultural sensibility survey                                                                                                                                                                                                                                           |
| <b>Athur(s)</b>            | LSMU                                                                                                                                                                                                                                                                  |
| <b>Module</b>              | Module 2                                                                                                                                                                                                                                                              |
| <b>Component</b>           | Culture                                                                                                                                                                                                                                                               |
| <b>Method</b>              | Online individual work                                                                                                                                                                                                                                                |
| <b>Learning Outcome(s)</b> | m2i12 - Demonstrates respect for cultural differences and avoiding cultural/generational stereotypes or biases in healthcare interactions.                                                                                                                            |
| <b>Task outline</b>        | Participants will complete the Cultural Competence Self-Assessment Checklist. The goal is to help participants reflect on their cultural awareness, knowledge, and skills, which are essential for delivering culturally sensitive care. By identifying strengths and |

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|                                     | <p>areas for growth, healthcare professionals can improve their interactions with patients and colleagues from diverse cultural backgrounds, ultimately enhancing patient outcomes. The checklist covers different dimensions of cultural competence, such as recognizing biases, adapting to different cultures, and fostering respectful healthcare interactions.</p> <p><b>How to Fill the Checklist</b></p> <ol style="list-style-type: none"> <li>1. Complete each section (Awareness, Knowledge, Skills) by choosing the response that best reflects your typical behavior or thoughts.</li> <li>2. Use the following rating scale: <ul style="list-style-type: none"> <li>- Never: 1 point</li> <li>- Sometimes/Occasionally: 2 points</li> <li>- Fairly Often/Pretty Well: 3 points</li> <li>- Always/Very Well: 4 points</li> </ul> </li> <li>3. Calculate your score for each section and reflect on the areas where you are strong and where improvement is needed.</li> </ol> <p><b>Reflection</b></p> <p>After completing the checklist, participants are encouraged to reflect on the following:</p> <p>What specific experiences have shaped your understanding of cultural competence?</p> <p>Can you think of a situation in your work where cultural competence was important? How did you handle it, and what could you improve?</p> |
| <b>Estimate time for completion</b> | 30 mins.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Tips for Delivery</b>            | <p>This exercise is designed for self-reflection. Trainers can use the following tips for delivery:</p> <ul style="list-style-type: none"> <li>- Encourage participants to focus on personal growth rather than scores.</li> <li>- The task can be done individually online using the downloadable checklist PDF.</li> <li>- Trainers may facilitate optional group discussions for peer learning, where participants share their reflections.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |



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|                             | <b>Group Discussion (Optional)</b><br><br>Trainers can encourage group discussions. For group discussions, ask participants to share one strength they identified and one area for improvement. Facilitate discussions on how these areas affect their work and explore solutions together. This helps foster a deeper understanding of how cultural competence impacts healthcare interactions. |
| <b>Additional Resources</b> | Survey in .pdf format                                                                                                                                                                                                                                                                                                                                                                            |

#### M2 B7 Complex case study (New teleconsultation service 3.)

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| <b>Title</b>               | Complex case study (New teleconsultation service 3.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Author(s)</b>           | OKFŐ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Module</b>              | Module 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Component</b>           | Mix/Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Method</b>              | Online group work (async)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Learning Outcome(s)</b> | <p><b>m2i2</b> Can communicate clearly and concisely with various stakeholders (internal and external) both face-to-face and in online interactions.</p> <p><b>m2i3</b> Is ready to adapt his/her communication style and strategies to stakeholder needs and backgrounds.</p> <p><b>m2i5</b> Can effectively collaborate in teams both in face-to-face and in online interactions.</p> <p><b>m2i6</b> Promotes collaboration among diverse healthcare professionals, technologists, researchers, and industry experts to exchange ideas and develop interdisciplinary solutions.</p> <p><b>m2i8</b> Can recognize and resolve conflicts within a healthcare team to maintain a positive and collaborative work environment and a high level patient care</p> <p><b>m2i9</b> Is open to constructive resolution of conflicts</p> |
| <b>Use</b>                 | Online, Asynchronous                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Task outline</b>        | In groups of 3-5, participants get familiar with a case study and discuss it based on the theoretical framework provided in the e-learning material. They have to submit answers to the given                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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|                                      | questions in the task description and will be guided by technical instructions that help to experience online teamwork as well.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Estimated time for completion</b> | 2 hours                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Tips for Delivery</b>             | <p>To facilitate the group work is practical to create the group assignment in advance and provide help for students to establish online connection.</p> <p>Feedback:</p> <ul style="list-style-type: none"> <li>• It is encouraged to provide detailed feedback after the sync. training event of the Module, as major questions can be discussed there.</li> <li>• You can provide feedback 1) on the completeness of their submission package, 2) on the correctness of the first two answers (based on the Team and the Conflict lexical materials), 3) about how effective their suggestions seem in questions 3. (Communication, Team, Conflict materials).</li> </ul> <p>There will be an opportunity to discuss the exercise later at the sync training event.</p> |
| <b>Additional Resources</b>          | Task description, Handout, PPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

#### M2 B8 Reflection on digital communication and collaboration

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| <b>Title</b>               | Reflection on digital communication and collaboration                                                                                                                                                                                               |
| <b>Author(s)</b>           | OKFÓ                                                                                                                                                                                                                                                |
| <b>Module</b>              | Module 2                                                                                                                                                                                                                                            |
| <b>Component</b>           | Mixed/Summary                                                                                                                                                                                                                                       |
| <b>Method</b>              | Individual learning exercise                                                                                                                                                                                                                        |
| <b>Learning Outcome(s)</b> | <p>m2i2 Can communicate clearly and concisely with various stakeholders (internal and external) both face-to-face and in online interactions.</p> <p>m2i5 Can effectively collaborate in teams both in face-to-face and in online interactions.</p> |

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| <b>Task outline</b>                  | <p>Students will reflect on their recent online group work experience by evaluating the digital communication and collaboration aspects involved. The reflection should focus on identifying the benefits and barriers encountered during the group discussion and offer suggestions for improvement. This reflection will be based on the generational conflict scenarios discussed in the group activity, where participants explored how technology and communication styles can impact interprofessional interactions.</p> <p><b>Reflection:</b></p> <p>Through the reflection, students are expected to:</p> <ul style="list-style-type: none"> <li>• Analyze the experience with digital communication tools used during the group work (e.g., virtual meeting platforms, collaborative documents).</li> <li>• Highlight the strengths of these tools in fostering teamwork and communication.</li> <li>• Identify any challenges or barriers that emerged, including technological difficulties, generational differences, or communication issues.</li> <li>• Suggest strategies for overcoming these barriers and improving future digital collaboration, particularly in professional healthcare settings.</li> </ul> |
| <b>Estimated time for completion</b> | 30 mins                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Tips for Delivery</b>             | <p><b>Reflective essay:</b></p> <p>The reflection should be written in a structured format, addressing the following questions:</p> <ol style="list-style-type: none"> <li>1. What were the benefits of using digital tools for group collaboration?</li> <li>2. What barriers or challenges did you encounter?</li> <li>3. How could communication and collaboration be improved in similar settings?</li> </ol> <p>The essay should be a maximum of <b>one A4 page</b>, using the following formatting guidelines:</p> <ul style="list-style-type: none"> <li>• Font size: 12pt</li> <li>• Font style: Times New Roman or Arial</li> <li>• Line spacing: 1.5</li> <li>• Word count: approximately 300-500 words</li> <li>• Character limit: up to 3000 characters (including spaces)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                               |

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|                             | <p><b>For trainers evaluating</b> the reflective essays, here's some advice:</p> <ul style="list-style-type: none"> <li>• Focus on self-awareness: Trainers should assess how well students have understood their individual test results and their role within a team. Look for a genuine reflection on the insights provided by the Belbin test. Did the student grasp the key message? Did they acknowledge their strengths and areas for development?</li> <li>• Depth of reflection: The quality of the reflection is crucial. Evaluate if students provide thoughtful, specific examples of how they might apply the feedback in real-life teamwork or future collaborations. Are they able to connect their personal experiences with their Belbin role?</li> <li>• Impact on teamwork: Check if the students recognize how their identified roles influence their contributions to a team. Do they discuss how these results could affect dynamics within a group? Ideally, they should mention specific strategies for improving their participation based on the test.</li> <li>• Concise communication: Since the essay has strict limits (300-500 words), evaluate how concisely students express their thoughts. They should be able to distill their reflection into clear, coherent insights without over-explaining.</li> </ul> |
| <b>Additional Resources</b> | Task description, sync training templates, PPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## M2 B9 The Role and Impact of Community Facilitators and Digitalization in Improving Access to Healthcare Services for Vulnerable Migrant Populations

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| <b>Title</b>               | The Role and Impact of Community Facilitators and Digitalization in Improving Access to Healthcare Services for Vulnerable Migrant Populations    |
| <b>Author(s)</b>           | SSSA                                                                                                                                              |
| <b>Module</b>              | Module 2                                                                                                                                          |
| <b>Component</b>           | Mix/Summary                                                                                                                                       |
| <b>Method</b>              | Sync training activity                                                                                                                            |
| <b>Learning Outcome(s)</b> | <b>m2i12</b> - Demonstrates respect for cultural differences and avoiding cultural/generational stereotypes or biases in healthcare interactions. |

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| <b>Task outline</b>                  | <p>This case study can be used to analyse the implementation and impact of Community Facilitators (qualified and trained figures who work within communities to promote access to socio-educational, health and employment services to people at risk of social exclusion) and digital technologies in healthcare settings, with particular attention to vulnerable migrant populations with linguistic and cultural barriers.</p> <p>Imagine working in an urban area with a high concentration of migrants who face significant linguistic and cultural barriers to accessing healthcare services. Your healthcare organisation has decided to introduce a Community Facilitator role and implement digital solutions to improve access to services.</p>                                                                                                                                                                                                                                                                                            |
| <b>Estimated time for completion</b> | 1 hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Tips for Delivery</b>             | <p><b>Overview and Process</b></p> <ol style="list-style-type: none"> <li>1. Introduction (5 minutes): Provide a summary of the case study context, explaining the role of Community Facilitators, the project objectives, and the importance of digitalization.</li> <li>2. Group Formation (5 minutes): Assigning roles (i.e. group facilitator, community facilitators expert, digitalization expert, report coordinator, risk and challenges analyst) to participants and possibly dividing them into groups (of 4-5 people).</li> <li>3. Group Discussion (20 minutes): Each group answers key questions and discusses main points, with an additional focus on digital solutions.</li> <li>4. Sharing and Discussion (10 minutes): Each group briefly presents their answers and reflections, followed by a collective discussion.</li> <li>5. Summary and Conclusions (5 minutes): Summarise the main ideas that emerged, discuss possible practical applications, and how digital technologies can be integrated into the project.</li> </ol> |

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|  | <p><b>Discussion Points</b></p> <ul style="list-style-type: none"> <li>• The ability of Community Facilitators to recognize and respond to users' implicitly stated needs, supported by digital tools</li> <li>• The importance of cultural and linguistic mediation in reducing barriers to accessing healthcare services and how digital solutions can facilitate this process</li> <li>• The effectiveness of community networks, integration between healthcare and social services, community actors, and the use of digital technologies in improving access to services</li> </ul> <p><b>Key Questions to Facilitate Discussion</b></p> <ul style="list-style-type: none"> <li>• What possible added values do you find (if any) in the figure of the Community Facilitator? Both towards the users and towards you as a health professional;</li> <li>• What impact do you see this figure having on the rest of the service chain?</li> <li>• What would be your expectations if you were confronted with such a service, if it were activated in your reality and professional context?</li> <li>• What implementation challenges do you foresee? How "feasible" do you think it would be? And what would be needed to make this project scalable and transferable to other realities?</li> <li>• If you could outline the profile of the Community Facilitator, what digital skills, educational background, and soft skills should they possess? How would you define the scope of their responsibilities in relation to yours?</li> </ul> <p><b>Key messages</b></p> <ul style="list-style-type: none"> <li>• Understand the role and value of Community Facilitators in a healthcare context</li> <li>• Identify the potential impacts of Community Facilitators and digitalisation on the healthcare service delivery chain</li> <li>• Formulate expectations and identify challenges in implementing Community Facilitator programs and digital solutions</li> </ul> |
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|                             | Design a competency framework for Community Facilitators, with an emphasis on digital skills suitable for various professional contexts |
| <b>Additional Resources</b> | Handout – Case study                                                                                                                    |

## M2 B10 Intergenerational Conflicts in Healthcare Setting

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| <b>Title</b>                         | Intergenerational Conflicts in Healthcare Setting                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Author(s)</b>                     | OKFŐ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Module</b>                        | Module 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Component</b>                     | Mix/Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Method</b>                        | Sync training activity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Learning Outcome(s)</b>           | <p>m2i8 Can recognize and resolve conflicts within a healthcare team to maintain a positive and collaborative work environment and a high level patient care</p> <p>m2i9 Is open to constructive resolution of conflicts</p> <p>m2i11 Can adapt health processes and care plans to cultural preferences and beliefs</p> <p>m2i12 Demonstrates respect for cultural differences and avoiding cultural/generational stereotypes or biases in healthcare interactions</p>                                                |
| <b>Task outline</b>                  | Each group will receive a scenario card detailing a typical interprofessional or health professional-patient interaction involving members from different generations. The scenarios represent situations in which generational differences may lead to misunderstandings or conflicts in healthcare settings. The group is tasked with discussing the case and answering specific questions to explore potential conflicts, performance implications, disadvantages, and opportunities for learning and improvement. |
| <b>Estimated time for completion</b> | 1 hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Tips for Delivery</b>             | <p><b>Questions for the groupwork:</b></p> <ul style="list-style-type: none"> <li>• What do you think about the situation? Is it realistic?</li> <li>• Could this situation result in a decrease in performance? Please, list some examples.</li> </ul>                                                                                                                                                                                                                                                               |

- What challenges, disadvantages could arise from this situation? Please, list some examples.
- What opportunities does this situation present? Please, list some examples.

### **Online groupwork**

General considerations:

- Use a virtual meeting platform (e.g., Zoom, Microsoft Teams) that allows for breakout rooms.
- Prior to the session, prepare a shared document or a virtual whiteboard (e.g., Google Docs, Miro, Padlet) where scenario cards and discussion points are accessible to all participants.
- Assign a facilitator to each breakout room if needed or designate a group leader in each room for self-facilitation.
- Ensure that participants are familiar with the breakout room feature and any collaboration tools (e.g., Google Docs, whiteboards).
- Monitor breakout rooms to ensure productive discussions and provide support where needed.
- Encourage participants to turn on their cameras and engage fully in discussions to foster interaction.
- Provide a backup plan (e.g., in-chat discussions) in case of technical issues.

Steps for online delivery:

1. Introduction (2 minutes): Start with a brief introduction of the groupwork
2. Group formation & instructions (5 minutes): Divide participants into small groups of 4-6 using the breakout room feature. Provide clear instructions on how the discussion will proceed and give each group access to the scenario cards via the shared document.
3. Scenario discussion (10 minutes): Once in their breakout rooms, participants will have 10 minutes to discuss their assigned scenario based on the key questions provided. They can record their thoughts in the shared document or whiteboard.
4. Report (15 minutes): Bring everyone back to the main room. Each group will have 3 minutes to summarize their discussion and present key insights to the larger group.
5. Facilitated discussion (10 minutes): Lead a group discussion to compare the different scenarios and insights. Highlight



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|  | <p>common themes, generational conflicts, and strategies to manage them.</p> <p><b>Onsite groupwork</b></p> <p>General considerations:</p> <ul style="list-style-type: none"> <li>• Organize the room with small tables or clusters of chairs for groups of 4-6 participants.</li> <li>• Prepare physical copies of the scenario cards for each group or display them on a projector or screen.</li> <li>• Provide large sheets of paper or flipcharts and markers for groups to record their thoughts or use a whiteboard for group notes during discussions.</li> <li>• If time permits, encourage groups to move around the room and review other groups' notes or flipcharts to promote cross-group learning.</li> </ul> <p>Steps for onsite delivery:</p> <ol style="list-style-type: none"> <li>1. Introduction (2 minutes): Start with a brief introduction of the groupwork</li> <li>2. Group formation &amp; instructions (5 minutes): Assign participants into small groups. Distribute the scenario cards to each group (either physically or digitally). Provide clear instructions on the discussion process and assign a group leader for each team.</li> <li>3. Scenario discussion (10 minutes): Each group will discuss the scenario and answer the key questions. They should write their main points on the flipcharts or paper provided.</li> <li>4. Report back (15 minutes): Each group selects a spokesperson to present their findings to the whole class. Groups share their insights and discuss the generational conflicts and opportunities they identified.</li> <li>5. Facilitated discussion (10 minutes): Lead a group-wide conversation, connecting insights from each group. Use the whiteboard or projector to capture key themes and strategies discussed.</li> </ol> <p><b>Main discussion points to touch on:</b></p> <ul style="list-style-type: none"> <li>• Generational differences significantly contribute to workplace tensions in healthcare settings, often leading to misunderstandings and conflicts.</li> </ul> |
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|                             | <ul style="list-style-type: none"> <li>• Effective communication and understanding between healthcare professionals from different generations are essential to reduce conflicts and improve teamwork.</li> <li>• Generational conflicts can negatively impact patient care and healthcare outcomes, leading to inefficiencies, miscommunication, and coordination issues.</li> <li>• Turning generational differences into opportunities for learning and innovation can improve interprofessional collaboration and patient outcomes.</li> <li>• Addressing generational gaps through education, training, and policy development can foster a more inclusive and efficient healthcare environment.</li> </ul> |
| <b>Additional Resources</b> | PPT, Handout with optional cases                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

#### M2 B11 Analysis and Resolution of Conflicts Impacting Pharmaceutical Practice Generated by Cultural Differences in Healthcare

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|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Title</b>               | Analysis and Resolution of Conflicts Impacting Pharmaceutical Practice Generated by Cultural Differences in Healthcare                                                                                                                                                                                                                                                                                                                                                 |
| <b>Author(s)</b>           | UO                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Module</b>              | Module 2                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Component</b>           | Mix/Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Method</b>              | Sync training activity                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Learning Outcome(s)</b> | <p>m2i8 Can recognize and resolve conflicts within a healthcare team to maintain a positive and collaborative work environment and a high level patient care</p> <p>m2i9 Is open to constructive resolution of conflicts</p> <p>m2i11 Can adapt health processes and care plans to cultural preferences and beliefs</p> <p>m2i12 Demonstrates respect for cultural differences and avoiding cultural/generational stereotypes or biases in healthcare interactions</p> |
| <b>Task outline</b>        | Participants work in small groups with a series of short case scenarios representing culturally sensitive and ethically complex situations in community pharmacy practice.                                                                                                                                                                                                                                                                                             |

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|                                      | <p>For each scenario, learners are required to:</p> <ol style="list-style-type: none"> <li>1. Identify the type(s) of conflict present (e.g., linguistic, ethical, trust-related, value-based).</li> <li>2. Analyse the stakeholders involved and possible consequences for patient safety, professional integrity, and team dynamics.</li> <li>3. Select and justify an appropriate conflict management strategy (e.g., collaboration, compromise, adaptation).</li> <li>4. Propose practical solutions, including preventive measures.</li> <li>5. Reflect on the potential role of digital tools in resolving or mitigating the conflict.</li> </ol> <p>The activity concludes with an individual reflection focusing on professional self-awareness, cultural competence, and the responsible integration of digital solutions in pharmacy practice.</p>                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Estimated time for completion</b> | 1 hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Tips for Delivery</b>             | <p><b>General considerations:</b></p> <ul style="list-style-type: none"> <li>• Organize the room with small tables or clusters of chairs for groups of 4–6 participants.</li> <li>• Prepare printed copies of the conflict scenarios for each group or display them on a projector/screen.</li> <li>• Provide flipcharts or large sheets of paper and markers so groups can structure their analysis (types of conflict, risks, strategies, digital solutions).</li> <li>• Make available a short summary of conflict management strategies (e.g., collaboration, compromise, adaptation) for reference.</li> <li>• If time allows, encourage participants to review other groups' flipcharts to compare approaches and identify similarities and differences in handling intercultural conflicts.</li> </ul> <p><b>Steps for onsite delivery:</b></p> <p><b>1. Introduction (5 minutes)</b><br/>Briefly introduce the objective of the exercise: identifying and resolving culturally sensitive conflicts in pharmaceutical practice. Emphasize the importance of patient safety, empathy, and professional responsibility.</p> <p><b>2. Group formation &amp; instructions (5 minutes)</b><br/>Divide participants into small groups (4–6 members).</p> |

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|                             | <p>Assign each group one or two scenarios from the worksheet.<br/>Clarify expectations:</p> <ul style="list-style-type: none"> <li>• Identify the type(s) of conflict</li> <li>• Analyse risks and consequences</li> <li>• Select and justify a conflict management strategy</li> <li>• Propose practical and digital solutions</li> </ul> <p>Appoint a facilitator or spokesperson in each group.</p> <p><b>3. Scenario analysis (20 minutes)</b><br/>Groups discuss their assigned case(s) and record their main findings on flipcharts.<br/>Encourage structured thinking:</p> <ul style="list-style-type: none"> <li>• What is the core conflict?</li> <li>• Who is affected?</li> <li>• What risks arise?</li> <li>• What would be the most appropriate professional response?</li> <li>• Can digital tools support resolution?</li> </ul> <p><b>4. Report back (20 minutes)</b><br/>Each group presents their analysis (5–7 minutes per group).<br/>Presentations should highlight:</p> <ul style="list-style-type: none"> <li>• Key conflict elements</li> <li>• Chosen strategy and justification</li> <li>• Preventive measures</li> <li>• Role of digitalization</li> </ul> <p><b>5. Facilitated plenary discussion (10 minutes)</b><br/>Lead a whole-group reflection connecting themes across cases:</p> <ul style="list-style-type: none"> <li>• Recurring types of conflict</li> <li>• Influence of personal values and bias</li> <li>• Balancing empathy and professional standards</li> <li>• Limits and opportunities of digital solutions</li> </ul> <p>Summarise key takeaways on a whiteboard or projector.</p> |
| <b>Additional Resources</b> | Handout                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

### M3 B2 Strengths and weaknesses of contemporary health systems - Forum debate

|                  |                                                         |
|------------------|---------------------------------------------------------|
| <b>Title</b>     | Strengths and weaknesses of contemporary health systems |
| <b>Athor(s)</b>  | UOC                                                     |
| <b>Module</b>    | Module 3                                                |
| <b>Component</b> | Leading digital change                                  |

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| <b>Learning Outcome(s)</b> | m3i3 Demonstrates a holistic view about the healthcare system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Use</b>                 | Forum debate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Task outline</b>        | <p>In the <b>first part</b> of this asynchronous online learning activity – which will be asynchronously moderated by the trainer- the participants will be introduced to an online forum, where they will be asked to provide their feedback on:</p> <ul style="list-style-type: none"> <li>a) What they perceive as effectiveness and efficiency of the health system;</li> <li>b) What they regard as the major improvements in the healthcare system during the last decade;</li> <li>c) In what regard has the healthcare system been deteriorating over the years recently;</li> </ul> <p><i>Importantly, 5 to 10 participants should be in the forum simultaneously.</i></p> <p>Trainees' feedback will be provided by answering multiple choice questions and/or completing a free text field (maximum length: 200 words).</p> <p>In the <b>second part</b> of the activity, they will be invited to answer 3 questions on a dichotomous approach (choice A or choice B), to reflect their opinion on the trend of healthcare digitalization from the professional's and patient's perspective, as well as on the state of interprofessional relationships within the health system. A free text field will be available below each question for the participants to provide arguments supporting their answer (optional).</p> <p>The tasks outlined above will be active for completion for the duration of 1 week, starting at the time a given participant first enters the forum. Upon conclusion of this time period, the trainer, who will already have evaluated participants' responses, will introduce trainees to the <b>third part</b> of the exercise, by re-introducing the case study presented in the theoretical section (lexical content, M3B1), and asking the participants to comment on the forum (free text):</p> |

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|                                      | <p>a) Where exactly -in the flow of the case study- each one of the forum questions / considerations are applicable;</p> <p>b) Think of a way in which digital solutions can ameliorate the issues highlighted in the case, which will be focused on in the next part (online synchronous) described below.</p> <p>At this point, the trainer will be actively participating in the forum, in an asynchronous manner.</p> <p>The exercise will be completed with the trainer summarizing the conclusions of the trainees' answers, reflecting them upon the contents and references of M3B1 (lexical content block).</p> |
| <b>Estimated time for completion</b> | 30 minutes per participant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Tips for Delivery</b>             | <p>The answers to the questions posted in this forum should not be treated in a correct-or-wrong basis, as the aim is to offer participants the stimulus for creative and holistic thinking, rather than to evaluate them.</p> <p>It is recommended to supporting final conclusions with evidence (included in M3B1) wherever possible, and primarily on health fragmentation and its impact on patient outcomes, as well as on the potential of digital solutions to aid interprofessional cooperation within the health system.</p>                                                                                    |
| <b>Additional Resources</b>          | LearnDash task description, Survey ? Forum discussion (the survey should be migrated to a Forum Discussion, LearnDash doesn't have this function)                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

### M3 B5 Let's develop healthcare solutions!

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|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Title</b>               | Let's develop healthcare solutions!                                                                                                                                   |
| <b>Author(s)</b>           | OKFÓ                                                                                                                                                                  |
| <b>Module</b>              | Module 3, Block 5                                                                                                                                                     |
| <b>Component</b>           | Developing Healthcare solutions                                                                                                                                       |
| <b>Method</b>              | Online group work (async)                                                                                                                                             |
| <b>Learning Outcome(s)</b> | <b>m3i5</b> - Is able to analyse processes along efficiency and effectiveness, define suggestions for improvement, and consider the involvement of digital solutions. |

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|                                      | <b>m3i6</b> - Questions inefficient/ineffective routines and systems.<br><b>m3i8</b> - Is able to plan and manage innovation projects.<br><b>m3i9</b> - Has a systematic approach when working on improvements.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Use</b>                           | Online, Asynchronous                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Task outline</b>                  | In groups of 2-3 the training participant identify and define one process in their work context (1 process/group) and analyse it based on the theoretical framework provided in the e-learning material. They define a process improvement action that would help to make the process more efficient or effective.                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Estimated time for completion</b> | 3 hours                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Tips for Delivery</b>             | <p>To facilitate the group work is practical to create the group assignment in advance and provide help for students to establish online connection.</p> <p>Feedback:</p> <ul style="list-style-type: none"> <li>• It is highly advisable to provide feedback on the submitted materials before the next online group exercise task starts.</li> <li>• You can provide feedback 1) on the completeness of their submission package, 2) correctness of process identification, 3) correctness of process chart and description, 4) concept of process improvement, 5) sensibility of the project plan's tasks and scheduling, 6) correctness of its transit to the Gantt chart, 7) completeness of possible stakeholders.</li> </ul> |
| <b>Additional Resources</b>          | Task description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### M3 B6 Let's provide feedback

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|------------------|----------------------------------|
| <b>Title</b>     | Let's provide feedback           |
| <b>Author(s)</b> | OKFŐ                             |
| <b>Module</b>    | Module 3, Block 6                |
| <b>Component</b> | Managing healthcare developments |
| <b>Method</b>    | Individual exercise              |

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| <b>Learning Outcome(s)</b>           | <p><b>m3i7</b> Knows the basics concepts of project management and its digital or non-digital tools.</p> <p><b>m3i9</b> Has a systematic approach when working on improvements.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Use</b>                           | Online, Asynchronous                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Task outline</b>                  | Training participants are asked to evaluate the submission(s) of (an) other team(s) based on their knowledge through the LMS system or a survey along given questions/criteria.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Estimated time for completion</b> | 30 mins                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Tips for Delivery</b>             | <p>Suggested questions for evaluation are:</p> <ul style="list-style-type: none"> <li>• Is the process to be improved well defined? [1-5]</li> <li>• Is the focus of development (problem definition) clear (focus + time/cost/quality)? [1-5]</li> <li>• Is the development suggestion a good solution to the defined problem? [1-5]</li> <li>• Are all relevant tasks included and scheduled realistically? [1-5]</li> <li>• Are all essential stakeholders included? [1-5]</li> <li>• Please summarize your opinion very shortly based on your evaluation. [Free text]</li> </ul> <p>You can share summary of the anonymous evaluations with the groups. and/or discuss the at the asynchronous training session.</p> |
| <b>Additional Resources</b>          | Task description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

### M3 B7 Presenting the development projects

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|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Title</b>               | Presenting the development projects                                                                                                                                        |
| <b>Author(s)</b>           | OKFŐ, EUC                                                                                                                                                                  |
| <b>Module</b>              | Module 3, Block 7                                                                                                                                                          |
| <b>Component</b>           | Mixed                                                                                                                                                                      |
| <b>Method</b>              | Sync training                                                                                                                                                              |
| <b>Learning Outcome(s)</b> | <p><b>m3i5</b> Is able to analyse processes along efficiency and effectiveness, define suggestions for improvement, and consider the involvement of digital solutions.</p> |



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|                                      | <p><b>m3i6</b> Questions inefficient/ineffective routines and systems.</p> <p><b>m3i8</b> Is able to plan and manage innovation projects.</p> <p><b>m3i9</b> Has a systematic approach when working on improvements.</p>                                                                                                                                                                               |
| <b>Use</b>                           | Onsite/Online synchronous                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Task outline</b>                  | Best evaluated submissions get chosen (in advance) and presented by the groups. The presentations get discussed with the facilitation of the trainers.                                                                                                                                                                                                                                                 |
| <b>Estimated time for completion</b> | 2-3 hours                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Tips for Delivery</b>             | <p>Trainers should review submissions and participant evaluations and invite the chosen groups to prepare for a presentation (doesn't need to be a ppt, they can use their submitted document) in advance.</p> <p>The trainers should prepare for the training by preparing questions to discuss with the group along the presentations, that help participants to understand the material better.</p> |
| <b>Additional Resources</b>          | PPT, mentimeter slides, training outline                                                                                                                                                                                                                                                                                                                                                               |

### M3 B8 Introduction of Electronic Medical Records (EMR) in a Big Hospital

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|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Title</b>               | Introduction of Electronic Medical Records (EMR) in a Big Hospital                                                                                                                               |
| <b>Author(s)</b>           | SSSA                                                                                                                                                                                             |
| <b>Module</b>              | Module 3                                                                                                                                                                                         |
| <b>Component</b>           | Mixed                                                                                                                                                                                            |
| <b>Method</b>              | Online group/individual exercise                                                                                                                                                                 |
| <b>Learning Outcome(s)</b> | <p><b>m3i8</b> Is able to plan and manage innovation projects.</p> <p><b>m3i9</b> Has a systematic approach when working on improvements.</p>                                                    |
| <b>Use</b>                 | Online asynchronous                                                                                                                                                                              |
| <b>Task outline</b>        | Working in small groups or individually, participants design a structured management plan for the introduction of an Electronic Medical Records system in a healthcare organization. Following a |

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|                                      | <p>phased framework, they analyse the organizational context, identify key stakeholders and existing processes, define objectives and requirements, and develop an operational implementation plan addressing technological, regulatory, and risk-related aspects. The task concludes with defining verification methods and presenting the proposed EMR implementation strategy in a concise project-based presentation format.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Estimated time for completion</b> | 1 hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Tips for Delivery</b>             | <p>General considerations</p> <ul style="list-style-type: none"> <li>• Provide the exercise brief and template via the e-learning platform.</li> <li>• Offer a structured planning template to guide participants through the five phases.</li> <li>• Encourage the use of collaborative digital tools (e.g., shared documents, online whiteboards, project planning software).</li> <li>• Clarify expectations regarding depth of analysis versus feasibility within time limits.</li> <li>• If teamwork is required, encourage role allocation (e.g., clinical lead, IT lead, compliance lead, project manager).</li> </ul> <p>Asynchronous Individual Work</p> <p>Participants complete the task independently and upload their final plan.</p> <p>The trainer may provide:</p> <ul style="list-style-type: none"> <li>• Written feedback</li> <li>• A model answer outline</li> <li>• A summary of common strengths and weaknesses observed</li> </ul> <p>Optional reflective prompt:</p> <ul style="list-style-type: none"> <li>• What was the most challenging dimension: organizational, technological, or regulatory? Why?</li> </ul> <p>Online Team-Based Version (Optional)</p> <p>Step 1 – Kick-off (synchronous, optional – 15 minutes)</p> <p>Short live session to clarify expectations and answer questions.</p> <p>Step 2 – Independent Team Work (asynchronous)</p> <p>Teams collaborate online to complete the five phases.</p> <p>Step 3 – Submission &amp; Peer Review (optional)</p> |

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|                             | <p>Teams upload their presentation and provide short peer feedback to another group using predefined criteria (clarity, feasibility, risk awareness, monitoring quality).</p> <p>Step 4 – Reflection Forum Discussion</p> <p>Participants discuss:</p> <ul style="list-style-type: none"> <li>• Common barriers to EMR implementation</li> <li>• Managing resistance and workflow disruption</li> <li>• Importance of stakeholder alignment</li> <li>• Lessons learned about digital transformation planning</li> </ul> |
| <b>Additional Resources</b> | Handout                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

### M3 B9 Final case study: [Clinical scenario – AI and cardiac risk stratification](#)

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|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Title</b>               | Final case study: Clinical scenario – AI and cardiac risk stratification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Author(s)</b>           | SSSA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Module</b>              | Module 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Component</b>           | Mixed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Method</b>              | Sync training                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Learning Outcome(s)</b> | <p><b>m3i5</b> Is able to analyse processes along efficiency and effectiveness, define suggestions for improvement, and consider the involvement of digital solutions.</p> <p><b>m3i6</b> Questions inefficient/ineffective routines and systems.</p> <p><b>m3i8</b> Is able to plan and manage innovation projects.</p> <p><b>m3i9</b> Has a systematic approach when working on improvements.</p>                                                                                                                                                                                                                                                               |
| <b>Use</b>                 | Onsite/Online synchronous                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Task outline</b>        | <p>Participants work with a complex clinical case involving the use of an AI-based cardiac risk stratification tool in an acute care setting. Divided into small groups with different analytical perspectives, they examine professional conflicts, clinical decision-making processes, and organizational workflows arising from the introduction of AI into practice. The task guides participants to assess the impact of AI on autonomy, coordination, patient involvement, and equity, and to propose practical solutions, recommendations, and monitoring strategies for the responsible implementation of AI-supported decision-making in healthcare.</p> |

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| <b>Estimated time for completion</b> | 1,5 hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Tips for Delivery</b>             | <p><b>General considerations</b></p> <ul style="list-style-type: none"> <li>• Arrange seating in clusters for 4–6 participants per group.</li> <li>• Provide printed copies of the case description and clearly assign analytical focus areas to each group.</li> <li>• Prepare flipcharts or large sheets for structured reporting (conflict, process map, risks, recommendations).</li> <li>• Provide a whiteboard or projected screen to synthesize key themes during plenary discussion.</li> <li>• Encourage each group to assign roles (clinical expert, organizational analyst, ethics lead, rapporteur).</li> <li>• If time allows, groups may briefly review others' flipcharts before final discussion to foster cross-group integration.</li> </ul> <p><b>Steps for onsite delivery</b></p> <p><b>1. Introduction (5 minutes)</b></p> <p>Present the case and emphasize that the objective is not to determine the “correct” clinical decision, but to analyse how AI changes professional dynamics, workflow, and responsibility.</p> <p>Clarify that this is a pilot implementation scenario, which adds governance and evaluation complexity.</p> <p><b>2. Group formation &amp; instructions (5 minutes)</b></p> <p>Divide participants into six groups and assign each analytical focus area.</p> <p>Explain expected outputs:</p> <ul style="list-style-type: none"> <li>• Identification of critical issues</li> <li>• Structured reasoning</li> <li>• Practical and realistic recommendations</li> </ul> <p>Assign a spokesperson for each group.</p> <p><b>3. Group analysis (30 minutes)</b></p> <p>Groups analyse the case from their assigned perspective.</p> <p>Encourage structured outputs:</p> <ul style="list-style-type: none"> <li>• What is the core challenge?</li> <li>• Where does conflict arise?</li> <li>• What risks are present?</li> </ul> |

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|                             | <ul style="list-style-type: none"> <li>• What practical solution would you propose?</li> <li>• What long-term implications should be considered?</li> </ul> <p>Groups document findings on flipcharts.</p> <p><b>4. Report back (30 minutes)</b></p> <p>Each group presents its findings (5 minutes per group).<br/>Encourage presenters to focus on:</p> <ul style="list-style-type: none"> <li>• Key insights</li> <li>• Identified risks</li> <li>• Practical recommendations</li> <li>• Governance or monitoring proposals</li> </ul> <p><b>5. Facilitated plenary discussion (20 minutes)</b></p> <p>Guide a synthesis discussion focusing on:</p> <ul style="list-style-type: none"> <li>• AI vs. professional autonomy</li> <li>• Impact on interdisciplinary coordination</li> <li>• Risk of overreliance or underuse of AI</li> <li>• Organizational readiness for digital transformation</li> <li>• Patient trust and communication challenges</li> </ul> <p>Summarize cross-cutting principles for responsible AI implementation on the board.</p> <p><b>Optional Extension (if time permits)</b></p> <p>Ask participants to collectively outline 3–5 institutional principles for AI adoption in clinical settings.</p> |
| <b>Additional Resources</b> | Handout                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

#### M4 B3 Digital Wellbeing Checklist

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|------------------|------------------------------|
| <b>Title</b>     | Digital wellbeing checklist  |
| <b>Author(s)</b> | OKFŐ                         |
| <b>Module</b>    | Module 4, Block 3            |
| <b>Component</b> | Safety                       |
| <b>Method</b>    | Individual learning exercise |

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| <b>Learning Outcome(s)</b>           | <b>m4i6</b> - Demonstrates an ethical mindset in handling healthcare data, and is conscious about online threats and personal digital wellbeing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Task Outline</b>                  | Students, after learning about digital wellbeing, are tasked to fill out the Digital wellbeing checklist in a survey format in order to reflect on their own practice and define areas of intended improvement. This task should enable self-reflection and a better understanding of the increasingly digitalized healthcare system in which they work.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Estimated time for completion</b> | 15 mins                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Tips for Delivery</b>             | <p>The task can be delivered exclusively online, without trainer feedback, or group-level trainer feedback uploaded to the e-learning platform (e.g., the survey report, summary of typical areas of shortcomings or improvement areas, further resources based on them, etc.). In this case the exercise has no participant number limit, and no time constraints.</p> <p>The exercise can be discussed in a synchronous training context shortly (additional 15-20 mins) as well along the questions like:</p> <ol style="list-style-type: none"> <li><i>1. Are you satisfied with your practice? How did it feel to reflect on it? Did the exercise help your understanding about digital wellbeing?</i></li> <li><i>2. What do you think, do higher scores in all cases indicate more conscious usage?</i></li> <li><i>3. Do you think that older or younger generations are more conscious about digital wellbeing in general?</i></li> </ol> <p>The discussion can be organized in a plenary setting with a smaller group (ca. 15-20) or started in pairs with questions about the fill-out experience and then opening up the discussion for the whole group.</p> |
| <b>Additional Resources</b>          | Handout                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

#### M4 B4 AR-in-Box – Test your cybersecurity knowledge

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| <b>Title</b>                         | AR-in-Box – Test your cybersecurity knowledge                                                                                                                                                     |
| <b>Author(s)</b>                     | OKFŐ                                                                                                                                                                                              |
| <b>Module</b>                        | Module 4                                                                                                                                                                                          |
| <b>Component</b>                     | Safety                                                                                                                                                                                            |
| <b>Method</b>                        | Individual learning exercise                                                                                                                                                                      |
| <b>Learning Outcome(s)</b>           | m4i5 Can protect personal and other sensitive data.<br><br>m4i6 Demonstrates an ethical mindset in handling healthcare data and is conscious about online threats and personal digital wellbeing. |
| <b>Task outline</b>                  | Training participants participate in the online game created by ENISA.                                                                                                                            |
| <b>Estimated time for completion</b> | 30 mins                                                                                                                                                                                           |
| <b>Tips for Delivery</b>             | The instructions are provided on the EU Academy website, no specific assistance is needed. The experience will be discussed at the sync. training session.                                        |
| <b>Additional Resources</b>          | Link to the game: <a href="https://academy.europa.eu/courses/ar-in-a-box-game#/">https://academy.europa.eu/courses/ar-in-a-box-game#/</a>                                                         |

#### M4 B6 Working with healthcare data: Which data type should we rely on?

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| <b>Title</b>               | Working with healthcare data: Which data type should we rely on?                                                                                                                                                                                                                                                                                                               |
| <b>Author(s)</b>           | UOC                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Module</b>              | Module 4                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Component</b>           | Working with Data                                                                                                                                                                                                                                                                                                                                                              |
| <b>Learning Outcome(s)</b> | m4i7 Knows various sources of healthcare data, types and characteristics of data (incl. AI generated) and tools to present data insights.<br><br>m4i8 Can manage, interpret, analyse and present healthcare data for (collaborative) decision-making with digital tools.<br><br>m4i9 Demonstrates critical thinking connected to data (e.g, biases, source, potential impact). |

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| Use                   | Synchronous training exercise                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Activity / Case Study | <p><b><u>1st part (introduction – targeted recap):</u></b></p> <p>This activity begins with the 1<sup>st</sup>, introductory <b>part</b> (presented live by the trainer, if the synchronous option is chosen, or solely by a short slideset in the asynchronous mode) that re-caps the characteristics of two primary health data types where information of patient diagnosis can be found:</p> <p>a) <u>Electronic medical records (EMR)</u>: Focus is given to the wide range of data types the term encompasses, including patient admission records and <u>medical reports</u>, and in particular to their comprehensiveness and large volume;</p> <p>b) <u>Administrative / insurance claims data</u>: The coded nature of this data type is emphasized –and in particular the ICD-10 diagnosis coding system), as well as the fact that data entry is typically performed by administrative personnel based on physician / nurse admission reports, which often consist of handwritten notes.</p> <p>c) <u>Disease registries</u>: A key fact is that they are characterized by a very consistent way of data entry from physicians (high data quality), but are generally readily accessible to fewer professionals and usually do not cover all regions of a given country. In addition, in most cases informed consent is required for a given patient’s data to be registered, with the exception of diseases in which reporting is obligatory.</p> <p><b><u>2<sup>nd</sup> part (familiarization with ICD10 codes):</u></b></p> <p>The objective of this of the exercise is to help participants get familiar with the ICD10 disease coding system, in the way that they can have their own experience of its advantages and shortcomings.</p> <p>More precisely, they will be invited to enter the following freely accessible link:</p> <p><a href="https://www.icd10data.com/ICD10CM/Codes">https://www.icd10data.com/ICD10CM/Codes</a></p> <p>Their <b><u>first task</u></b> will be to navigate through the page in order to find the ICD10 code of:</p> <p>a) A disease of their choice, b) A symptom of their choice.</p> |



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|  | <p>The aim of this task is to ensure understanding of the fact that coded diagnoses recorded on claims data can overlap with one another considerably, can be more generic or more specific and indeed can in some cases refer to symptoms rather than a specific disease.</p> <p>Subsequently, a brief introduction to Acute Coronary Syndrome (“heart attack”) categories is provided; <b><i>only the following 4 key facts have to be understood:</i></b></p> <p><b>-Key fact 1:</b> The term “<b>Acute Coronary Syndrome (ACS)</b>” encompasses three entities, which, by increasing severity and urgency, are:</p> <ul style="list-style-type: none"> <li>● <b>Unstable angina (UA)</b></li> <li>● <b>Non-ST-elevation Myocardial Infarction (NSTEMI)</b></li> <li>● <b>ST-elevation Myocardial Infarction (STEMI)</b></li> </ul> <p><b>-Key fact 2:</b> Distinguishing <b>STEMI</b> from the other 2 types is particularly important, because this type of ACS (<b>but not the other types</b>) <b>mandates the performance of an invasive treatment procedure called primary percutaneous coronary intervention (primary PCI – coronary stenting) within 2 hours of first medical contact</b>, if feasible. <b><i>This procedure is performed in Cardiac Catheterization laboratories which have the expertise and resources to function 24/7.</i></b></p> <p><b>-Key fact 3:</b> To simplify, <b>we consider that all types of ACS should be admitted to a Coronary Care Unit</b> (but could also be hospitalized on Cardiology ward if Coronary Care Unit beds are not available). <b><i>Discharge is typically from the Cardiology ward (clinic) for all patients.</i></b></p> <p><b>-Key fact 4:</b> The most typical symptom of an ACS (all categories) is <b>chest pain</b> at rest, and if chest pain has the typical characteristics, it is termed <b>angina</b> (angina is a sub-category of chest pain). <b>Dyspnea</b> (i.e. difficulty in breathing) can also be a symptom. <b><i>However, only a minority of chest pain or dyspnea episodes are ACS.</i></b></p> |
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|  | <p>Then, we proceed to the <b><u>second task</u></b>, which is to locate:</p> <ul style="list-style-type: none"> <li>a) all ICD10 codes that fall within the spectrum of Acute Myocardial Infarction and Acute Coronary Syndrome, and</li> <li>b) ICD10 codes that are allocated to the symptoms of “chest pain”, “angina”, “dyspnea”.</li> </ul> <p>At the end of the 2<sup>nd</sup> part of the exercise, the <b><i>trainer leads a short discussion</i></b> (which can be in written form if the exercise is performed asynchronously), <b><i>highlighting pros and cons of the coding system:</i></b></p> <p><b><i>-Pros: Standardization, easier analysis</i></b></p> <p><b><i>-Cons: Overlap between codes, both symptoms and diagnoses are coded.</i></b></p> <p><b><u>3<sup>rd</sup> part (evaluation of different datasets):</u></b></p> <p>The participants are provided with:</p> <ul style="list-style-type: none"> <li>a) A dataset from a hospital’s admissions electronic platform, where the list of patients admitted to- and discharged from the Cardiology clinic within a specified time interval is visible. In the dataset, both admission diagnoses and discharge diagnoses are visible, in a coded manner (ICD-10 codes).</li> <li>b) An indicative set of 3 medical discharge summaries, authored by attending physicians; discharge diagnosis is mentioned explicitly (the small number of discharge summaries is sufficient for the trainee to understand the way these reports are authored).</li> <li>c) A dataset from an Acute Coronary Syndrome registry, where pre-specified fields regarding medical history, clinical condition and treatment are meticulously and consistently completed by delegated physicians.</li> </ul> <p><b><u>Question to the participants:</u></b></p> <p><b><i>Which dataset(s) would be more appropriate to analyse:</i></b></p> |
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|                                 | <p>a) If we would like to estimate the staff required for the hospital's Cardiac Catheterization laboratory to fulfil the demand for primary PCI?</p> <p>b) If our task is to evaluate the adequacy of the total number of Cardiology beds in the hospital for fulfilling the needs of the population served by this facility?</p> <p>c) If we have to estimate the annual incidence of ACS in the population the hospital serves?</p> <p>d) If we need robust information on ACS medical treatment in this population.</p> <p><b>Correct answers:</b></p> <p>A: Medical reports (or registry, if nearly all suitable patients provide informed consent and thus are included)</p> <p>B: ICD10 data</p> <p>C: Potentially all types of datasets, but ICD10 data are the easiest to analyse and are a good option if ACS subtypes are not of interest (note: discharge diagnosis and not admission diagnosis should be analysed)</p> <p>D: Registry</p> <p><b>4<sup>th</sup> part: Q&amp;A and closing remarks</b> (see: Discussion points")</p> |
| <p><b>Discussion Points</b></p> | <p>Key points deserving particular focus are the following:</p> <ul style="list-style-type: none"> <li>• The ICD-10 system (claims data) provides the opportunity to register a more general or a more specific diagnosis, or even a symptom rather than a diagnosis. This translates into the fact that ICD-10 diagnosis entries are not mutually exclusive. Misinterpretations of handwritten notes by the person who performs entries into the system can also occur.</li> <li>• The general frame of mind with respect to entering ICD-10 codes can vary between healthcare or administrative personnel (tendency to be more specific vs generic, or tendency to register symptoms rather than diagnosis), or even for the same person over periods of time.</li> <li>• Discharge diagnosis is generally more accurate than admission diagnosis, but the aforementioned limitations do exist.</li> </ul>                                                                                                                                    |

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|                                      | <ul style="list-style-type: none"> <li>• Diagnosis reported on discharge summaries typically have the maximum degree of accuracy and are always entered by physicians. Additionally, medical reports / discharge summaries are composed for each and every patient discharged from a clinic. Thus, they are the most suitable sources of information when precision in diagnosis is paramount.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Estimated time for completion</b> | 1 hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Tips for Delivery</b>             | <ul style="list-style-type: none"> <li>• <i>In preparation of exercise delivery, it is strongly advised for the trainer to first perform the two tasks outlined in its 2<sup>nd</sup> part, i.e. to navigate through various ICD10 codes, as a trainee (especially for non-physicians). This will quickly result in realization of pros and cons of this coding system (and claims data in general)'</i></li> <li>• <i>Both (non-physician) trainers and trainees might be at first unfamiliar with some medical terms included in the exercise; nonetheless, for completion of the training, understanding only the 4 key facts highlighted in the exercise's 2<sup>nd</sup> part is all that is needed. The focus point is distinguishing broader (more generic) from narrower (more specific) terms and realizing that a specific diagnosis mandates a difference in patient management, rather than fully understanding the medical entities. It is advised to emphasize this to trainees during treatment, so that they are not discouraged by initial unfamiliarity with the terms.</i></li> <li>• <i>The primary scope of the exercise is gaining own experience on 3 different health data categories, and the questions are to be viewed as tools to stimulate critical thinking (not on a pass-or-fail basis). It is advised to transmit this idea to participants.</i></li> </ul> |
| <b>Additional Resources</b>          | Presentation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

#### M4 B7 Digital health and smart device-based patient follow up: A case study

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| <b>Title</b>     | Digital health and smart device-based patient follow up: A case study |
| <b>Author(s)</b> | UOC                                                                   |
| <b>Module</b>    | Module 4                                                              |

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| <b>Component</b>             | Working with data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Learning Outcome(s)</b>   | <p>m4i7 Knows various sources of healthcare data, types and characteristics of data (incl. AI generated) and tools to present data insights.</p> <p>m4i8 Can manage, interpret, analyze and present healthcare data for (collaborative) decision-making with digital tools.</p> <p>m4i9 Demonstrates critical thinking connected to data (e.g, biases, source, potential impact).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Use</b>                   | Sync training activity (online or onsite)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Activity / Case Study</b> | <p><b><u>1st part:</u></b></p> <p>The exercise begins with an <b>introduction</b> that captures the increasing adoption of digital health (e-health) solutions for the facilitation of remote patient follow-up, with cardiovascular disease being at the epicenter.</p> <p>The present case study involves an outpatients' department that has been using an Internet-of-Things (IoT)-based e-health system for home-based monitoring of a population of patient with established cardiovascular disease.</p> <p>The system consists of:</p> <ul style="list-style-type: none"> <li>a) A series of smart medical devices (<b>blood pressure monitor, pulse oximeter, weight scales</b>) with <b>wireless connectivity</b>;</li> <li>b) A state-of-the-art <b>smartwatch</b>, which is approved as a medical device and provides a vast variety of biological parameters; including <b>heart rate</b> (near-continuous measurements) and <b>physical activity</b>. Importantly, the watch also features an <b>electrocardiogram (ECG) recording functionality</b>.</li> <li>c) A latest generation <b>smartphone</b>, where a <b>purpose-built application</b> is installed.</li> </ul> <p>This application is <b>coupled to a web-based platform</b>, via which the attending physician and nurse can:</p> <p><b>-view on demand all measurements performed by the patient</b> using the aforementioned devices that are successfully transmitted through the mobile app;</p> |

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|  | <p>-<b>actively interact with the patient</b> by sending messages, providing advice or prescribing exercise;</p> <p>-<b>view all alerts generated by the application</b> upon detection of abnormal values or abnormal patterns of biological parameters</p> <p>-<b>some of them are triggered by pre-specified biological parameter values (levels determined by the physician) and others by AI algorithms.</b></p> <p>(note: handout to include a schematic representation of the system)</p> <p>Apart from hosting the application, <b>the phone also has an accelerometer and can also in itself register step count</b>, which is also transmitted through the app if input from the smartwatch is missing.</p> <p>Importantly, <b>successful transmission of measurements (so that they are visible to the physician / nurse) requires:</b></p> <ul style="list-style-type: none"> <li>-<b>the patient to perform the measurements</b> by using the medical devices (blood pressure monitor, pulse oximeter, weight scale) <b>or to wear the watch</b> (watch-derived measurements), i.e. adherence to device use;</li> <li>-<b>the patient to perform a simple action on the application</b>, i.e. adherence to application use;</li> <li>-<b>good contact of sensor to the wrist (smartwatch)</b></li> <li>-<b>charged status</b> (all devices)</li> <li>-<b>device-to-phone connection;</b></li> <li>-<b>internet connection.</b></li> </ul> <p><b>Subsequently, 2 patients with different profiles are introduced:</b></p> <p><b>a) Patient A: 49-year-old male with heart failure: In this patient population</b>, daily body weight measurement is particularly important, because an abrupt increase in body weight may indicate fluid retention (excess of fluids) that must be managed promptly with medical management adjustment to avoid the need for emergency room presentation or hospitalization.</p> |
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|  | <p>Regular physical activity is also crucial, within prescribed limits. In this patient, at least 8000 steps per day (on average), with peak heart rate at exercise higher than 100 (for the exercise session to be adequate) but not exceeding 140 beats per minute (for the exercise session to be safe).</p> <p><b>b) Patient B: A 31-year-old female with frequent episodes of palpitations (abnormal sensation of heartbeat) and dizziness</b> (but otherwise without established heart disease), where heart rate monitoring is useful, but the most important action to be taken is to obtain a smartwatch-derived ECG tracing at the time symptoms occur.</p> <p><b><u>2<sup>nd</sup> part:</u></b></p> <ul style="list-style-type: none"> <li>-Two datasets (one from each patient – A, B) of biological parameter measurements covering an approximately 2-month period.</li> <li>-It is clarified that physical activity data (minutes of activity, step count) and heart rate data (minimum, maximum and average daily heart rate and maximum heart rate during exercise) are derived from the smartwatch.</li> <li>-In addition, it is emphasized that maximum heart rate during exercise is typically the maximum heart rate value within a day, or at least near that value, if exercise is performed at sufficient intensity / duration. Moreover, if a patient does not register the initiation of an exercise session on the app, no exercise heart rate value will be available.</li> <li>-The participants are requested to carefully navigate through the datasets and reflect their opinion on data consistency. In particular, they will be asked to locate any dates in which data have values than they believe stand out.</li> </ul> |
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### 3<sup>rd</sup> part:

Questions to participants:

a. **Patient A:**

Question 1: Given the clinical context provided in the 1<sup>st</sup> part, is data volume sufficient (overall) to facilitate follow-up?

*Answer: Yes, because we have available biological parameter values on almost daily basis and of all the recommended categories (step count, heart rate, blood pressure, body weight, exercise data). This suggests that the patient is compliant to both performing measurements by using the medical devices and to application use, as the vast majority of measurements are successfully transmitted and have values within expected range.*

Question 2: During the week 16/4/2023-22/4/2023, we see that heart rate data are absent, while step counts indicate minimal physical activity.

The more probable explanation is:

- a) The patient is not compliant to the instruction to wear the watch
- b) The patient had an acute health issue and therefore limited his activity
- c) A technical problem with the watch arose (such as disconnection / uncoupling from the phone)
- d) The mobile application stopped working
- e) Bad internet connection

*Answer: C*

*Rationale: During this period, the consistent availability of blood pressure and body weight data suggest that it is a smartwatch-specific issue and that the patient was absolutely adherent to app use. Although option A cannot be excluded, it is highly unlikely for a person almost 100% adherent to using the app and performing all other measurements. In addition, an acute health issue would be more likely to prevent the patient from performing other measurements, as well, and could have had an impact on vital signs (although option B cannot be excluded, either). Lastly, an internet or app issue would have affected transmission of other biological*



*parameter values, as well. The very low (but existing) step count values are registered by the phone itself (phone movement).*

Question 3:

During the period 11-14/3/2023, the notification generated and transmitted to the patient (last column):

- a) Is probably inappropriate and could have been triggered due to inaccurate heart rate measurement from the watch (for example, inadequate contact of the sensor to the wrist)
- b) Is most likely appropriate and the patient should be instructed to increase exercise duration / intensity.

*Answer: A*

*Rationale: Measured peak exercise heart rate is much lower than maximal daily heart rate. Given that step count during this period remained at the standard levels of the patient, it is unlikely that the patient had actually decreased exercise intensity or duration.*

**b. Patient B:**

Question 1:

Based on available data, the attending physician contacted the patient by sending a message via the app to ask the patient if she had been experiencing symptom worsening. On which day was this probably done?

- a) 18/3/2023
- b) 29/3/2023
- c) 11/4/2023

*Answer: B*

*Rationale: Until 25/3/2023, the patient had been performing blood pressure measurements on a roughly weekly basis (which is more than enough for a person without arterial hypertension). However, the patient started measuring blood pressure daily on 26/3/2023 and until 29/3/2023, which is a common reaction of patients when feeling unwell.*

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|                                      | <p><u>Question 2:</u></p> <p>On 27/3/2023, the validated AI-algorithm of the smartwatch raised a notification to the patient that an arrhythmia (atrial fibrillation) was detected, prompting her to obtain an ECG tracing from the watch (a validated functionality). This was done, and the automated diagnosis stated “atrial fibrillation”.</p> <p>The physician is notified on 29/3/2023, accordingly.</p> <p>What should he/she do?</p> <ul style="list-style-type: none"> <li>a) Ask for the ECG tracing to validate it and then decide on management.</li> <li>b) Treat as atrial fibrillation based on the AI-generate4d diagnosis.</li> </ul> <p><i>Answer: A (reference to Module 4 lexical content)</i></p> <p><u>4th part:</u></p> <p>Closing remarks</p> |
| <b>Estimated time for completion</b> | 1 hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Tips for Delivery</b>             | <ul style="list-style-type: none"> <li>• <i>Performing the exercise as a trainee first is strongly advised.</i></li> <li>• <i>The participants should ideally work in groups of 3-4 persons (not more), while the answers of the questions should be discussed between the trainer and all trainees simultaneously. The same applies for the final remarks.</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Additional Resources</b>          | <i>Handout - Datasets</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

#### M4 B8 Discussing digital wellbeing and cyber security

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|------------------|-------------------------------------------------|
| <b>Title</b>     | Discussing digital wellbeing and cyber security |
| <b>Author(s)</b> | OKFŐ                                            |
| <b>Module</b>    | Module 4                                        |
| <b>Component</b> | Mix/Summary                                     |
| <b>Method</b>    | Sync training activity                          |

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| <b>Learning Outcome(s)</b>           | <p>m4i3 Is conscious about choosing data/information sources.</p> <p>m4i6 Demonstrates an ethical mindset in handling healthcare data and is conscious about online threats and personal digital wellbeing.</p> <p>m4i9 Demonstrates critical thinking connected to data (e.g, biases, source, potential impact).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Task outline</b>                  | <p>The goal of this plenary discussion is to highlight and deepen the key messages from the e-learning materials and online work. This includes emphasizing the importance of data-understanding, data handling and cybersecurity.</p> <p><b>Introduction (5 minutes)</b></p> <p>Welcome participants, introduce the session's</p> <p><b>AR-in-a-Box (10 minutes)</b></p> <p>Questions to facilitate discussion:</p> <ul style="list-style-type: none"> <li>• what was the exercise about? (ask somebody to explain the exercise)</li> <li>• how was the experience?</li> <li>• did you find the exercise useful for learning about cybersecurity in practice?</li> <li>• if you found it useful, what did you learn?</li> </ul> <p><b>Digital wellbeing checklist (10 minutes)</b></p> <ul style="list-style-type: none"> <li>• presenting results from the survey</li> <li>• discuss in pairs: how does digital wellbeing appear in your personal and in your professional life</li> <li>• plenary discussion: <ul style="list-style-type: none"> <li>○ was it easy to reflect on your behaviour?</li> <li>○ was it easy for you to define action steps for improvement?</li> <li>○ in general, how does digital wellbeing in health work appear, what are the challenges and possible solutions?</li> </ul> </li> </ul> |
| <b>Estimated time for completion</b> | 30 mins                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Tips for Delivery</b>             | <p><b>Tips:</b></p> <ul style="list-style-type: none"> <li>• Start with an icebreaker related to the session's themes.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             | <ul style="list-style-type: none"> <li>Consider using polls or interactive tools (like Mentimeter or Slido) to gather participants' thoughts on certain questions in real-time. This encourages engagement and can provide a visual representation of their responses.</li> <li>If the participants are not opened to the plenary discussion work with them in pairs.</li> <li>After each section, briefly summarize the main points discussed. This reinforces learning and helps participants retain the information.</li> </ul> |
| <b>Additional Resources</b> | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

#### M4 B9 Biases

|                                      |                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Title</b>                         | Biases                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Author(s)</b>                     | UOC, OKFÖ                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Module</b>                        | Module 4                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Component</b>                     | Working with data                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Learning Outcome(s)</b>           | <p>m4i7 Knows various sources of healthcare data, types and characteristics of data (incl. AI generated) and tools to present data insights.</p> <p>m4i8 Can manage, interpret, analyze and present healthcare data for (collaborative) decision-making with digital tools.</p> <p>m4i9 Demonstrates critical thinking connected to data (e.g, biases, source, potential impact).</p> |
| <b>Use</b>                           | Sync training activity (online or onsite)                                                                                                                                                                                                                                                                                                                                             |
| <b>Task outline</b>                  | We present a set of pre-designed data-displays based on different visual biases. We present them and discuss what kind of biases we might fall for in the different cases.                                                                                                                                                                                                            |
| <b>Estimated time for completion</b> | 30 mins                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Tips for Delivery</b>             | <p><b>Tips for the exercise guided by the ppt</b></p> <p>You present and discuss the potential biases with the training participant after a short recap about the relevant “Working with data” segment. You can find the point to emphasize in the ppt notes. There are also visualization techniques included, here you can identify these and discuss its pros and cons.</p>        |

### Tips for a separate worldometer exercise

- Either in groups of 3 persons or individually, participants will be invited to elaborate on the **COVID-19 Worldometer database**, which is freely accessible at the website:

<https://www.worldometers.info/coronavirus/>

- They will be asked to navigate through the platform and sequentially **select all available data presentation options for: a) worldwide COVID-19 cases; b) worldwide COVID-19 related deaths.**

Available data presentation options include:

- Daily cases/deaths; bar chart
- Cumulative cases/deaths; linear scale graph
- Cumulative cases/deaths; logarithmic scale graph

### **1<sup>st</sup> task:**

*In a short paragraph of no more than 300 words, please reflect on:*

*-In which settings do you believe it would be most appropriate to use each type of data display?*

*-In which way could one of these data display option be used to mislead the viewer?*

Subsequently, they will be instructed to navigate **to the table presenting COVID-19 cases/deaths by country.**

By clicking on the title of the appropriate column, they will be able to view a list of countries by decreasing (or increasing) number of COVID-19 cases and COVID-19 related deaths, both in terms of absolute numbers and per 1 million of population.

Participants will be prompted to select one country out of the 20 with the highest and one of the 20 with the lowest number of cases per 1 million of population.

Then, for each country selected, they will be instructed to calculate mortality of COVID-19 disease, by dividing number of deaths by number of cases.

## 2nd task:

*Consider that these country-specific data are used to evaluate the effectiveness of the respective health systems in terms of:*

- a) preventing COVID-19 spread;*
- b) preventing death from COVID-19.*

*With the aid of the M4C3 lexical content, please provide one or more examples on pitfalls that could lead to data misinterpretation if presented selectively, as well as on which type(s) of bias is applicable.*

## Discussion:

- The **bar graph** of daily COVID-19 cases / deaths is ideal to have an overview of event rate burden at specific time intervals / time points and the respective trend over time, but does not readily provide data on total (cumulative) event burden.
- Trends of event rates (cases / deaths) over time can also be estimated on **total (cumulative) events linear scale plot over time**, but the key parameter here changes the curve's slope. The total COVID-19 case burden from pandemic onset until a selected time point –which is what is directly depicted- is particularly useful in settings such as estimating the potential burden of long-term consequences of COVID-19 on a health system.
- The **logarithmic plot of total events over time** is particularly useful in epidemiology, as the flattening of a previously steeply-inclined line indicates exit from a period with an exponential increase in events. However, it is prone to misinterpretation by healthcare professionals not familiar with this type of graph, as a non-exponential increase in events can still be steep enough to pose challenges to health systems. Potentially, scale manipulation such as presenting logarithmic plots without emphasizing on this can grossly mislead audiences.
- For correctly interpreting whether –for example- a lower COVID-19 case rate per 1M population (not absolute number!) in a country -as compared to another- indicates a more effective health system in terms of prevention, one should meticulously consider confounding factors, with the

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             | <p>most obvious being consistency in reporting cases (a primary source of bias). Another confounding factor could be the effect of geographical isolation of a country, which is independent of policies applies (such as travel restrictions).</p> <ul style="list-style-type: none"> <li>• Regarding COVID-related deaths per 1M population –and thus mortality rates- a key confounding factor is inter-country variations in definition of a COVID-related death (were cases where positive COVID-19 status did not contribute to death excluded, or not?).</li> </ul> |
| <b>Additional Resources</b> | ppt                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## 5. Training Adaptation Report

### 5.1 Consortium-level adaptations after the prototype and pilot processes

Adaptation of the H-PASS Training Plan and the utilisation of the training materials happened in several steps. Based on the collectively created training plan, first, an on-site train-the-trainer session was organised with the participation of the core trainers from the implementing partners, complemented by an additional online session. These activities aimed to test the functioning of synchronous online training, deepen the shared understanding of the concept, reach final consensus among partners, train the central trainer pool, and test the training exercises.

As the next step of this process, a prototype training was delivered with the participation of future H-PASS trainers. This consisted of the full H-PASS course in English, including e-learning exercises on the central H-PASS platform and synchronous online sessions. The prototype allowed the consortium to test the training structure, methods, materials and the assessment and evaluation framework in practice. Feedback from the prototype training was collected and discussed during a consortium meeting, and based on the learnings we finalized the pilot package.

Following this, training materials were translated and adapted to national context and pilot trainings were implemented in the participating countries. The below country-level implementation reports are reflecting this phase, the main phase of the implementation efforts, that can be helpful and informative for future implementers as well. Feedback from the pilot trainings was collected and discussed during a pilot training evaluation workshop. The results of this evaluation process were then incorporated into the final version of the training plan and the related H-PASS training materials.

### 5.2 Country reports

#### 5.2.1 Cyprus

The H-PASS programme in Cyprus was coordinated by the European University Cyprus (EUC), a leading educational institution located in Nicosia. The Cyprus implementation team comprised faculty members and research associates of the EUC School of Medicine. The training programme was promoted to healthcare workers practicing within the Republic of Cyprus.

#### **Work Package 3 (WP3):**

EUC prepared two iterations of the H-PASS program delivered in English and in Greek. This strategy was designed to maximize outreach by offering the training in the nation's primary official language (Greek) and the 2nd most populous language (English) which also caters to graduates of the numerous English-language medical programs offered in the country. The training material included an introductory module, all four training Modules, and the Virtual Reality (VR) Module. The material was organized in two courses available through the



Blackboard Learn Ultra LMS of the EUC which were delivered online. The training duration per participant was calculated at 40 hours, allocated as follows:

- Module 1: 10 hours comprising 8h of asynchronous online and 2h of synchronous online training
- Module 2: 10 hours comprising 7h of asynchronous online training and 3h of synchronous training delivered in two sessions of 1,5 hours each
- Module 3: 10 hours comprising 8h of asynchronous online and 2h of synchronous online training
- Module 4: 10 hours comprising 8h of asynchronous online and 2h of synchronous online training
- VR module: 0,5 hours online exercise

Synchronous online activities proved challenging for students in both the Greek and English programs. Many participants reported conflicts with their afternoon professional obligations, including on-call duties, private practice appointments, and academic responsibilities. This issue was particularly prominent among the physicians enrolled in the program. Several participants in this group also expressed concerns about engaging in demanding synchronous sessions after working more than eight hours, noting increased fatigue and, in some cases, conflicts with personal commitments. In response, we limited the synchronous online activities for Modules 2, 3, and 4 to two hours each. For Module 1, the activities were divided into two shorter sessions of 1.5 hours each.

The program delivery consisted of 30 hours of online asynchronous learning, 9.5 hours of synchronous online training, and 30 minutes of asynchronous VR activity. Trainers included Dr Violetta Raffay, Dr Victoria Polydrou, Dr Gabriella Tsalamandris, Dr Lawko Brwa Ahmed, Dr Nikos Filippou, Dr Stavroula Bernitsa, Dr Andreas Yiallouris, and Dr Dimitrios Ntourakis. The course was endorsed by EUC and the Cyprus Medical Association and awarded 40 CME credits. Modules 1 and 2 and the VR exercise were compulsory, after which participants were given the opportunity to choose between Module 3 and Module 4. The optional modules were completed as follows:

- Module 3: 30 participants
  - 15 English cohort
  - 15 Greek cohort
- Module 4: 26 participants
  - 11 English cohort
  - 15 Greek cohort
- Of these participants, 24 (9 English cohort, 15 Greek cohort) completed both Module 3 and 4.

Several challenges were encountered during implementation, particularly in meeting the target of 75 trained healthcare workers. As Cyprus has a population of less than one million, the pool of healthcare professionals is smaller than in other participating countries. In addition, the Cyprus Medical Association does not currently require CME credits for professional reaccreditation, which reduced motivation for participation. The ongoing restructuring of the national healthcare system (GESY) has increased physician workloads,

limiting time available for professional development and contributing to lower completion. Participation in synchronous sessions was also reduced due to heavy workloads and afternoon consultations.

To address these challenges, EUC offered two distinct training programmes in both languages and adopted a flexible, predominantly asynchronous approach, providing extensions when needed. The Faculty maintained regular contact with participants to provide support and encouragement. A third training cohort is active, following an open call disseminated through the Cyprus Medical Association, EUC departments, and social media channels. This third training cohort delivery started on December 15th, to support participants who were unable to join the first Greek training period and to also allow enrollment of new participants in the program. This third training cohort includes Modules 1, 2, 4 and the VR training exercise.

A total of 91 individuals initially expressed interest in the training programme, and 81 of them proceeded to complete their formal enrolment on the Blackboard Learn Ultra learning management system, indicating a strong initial commitment to participate. At the programme's launch, 42 participants were allocated to the Greek-language course and 46 to the English-language course. Completion data from these cohorts showed that 15 participants successfully concluded the Greek programme and 17 completed the English programme, resulting in an overall completion rate of 36% (32 out of 88 participants formally enrolled in these two cohorts). In December 2025, a third cohort of the Greek programme commenced, enrolling an additional 44 participants, including four individuals who had been part of earlier cohorts but had not completed their training. At the time of preparing this report, approximately 20 participants from this third cohort were actively engaging with the course content, indicating ongoing participation but with outcomes yet to be determined.

A detailed analysis of participant attrition across the earlier cohorts revealed distinct patterns. In the English-language programme, 16 participants did not initiate any of the required learning activities, demonstrating a complete absence of engagement, while 13 participants engaged only partially, completing selected activities from a single module before discontinuing. In contrast, within the Greek-language cohort, 25 participants did not commence any activities throughout the duration of the programme, and only 2 participants partially completed limited components of the first module. To address these attrition trends and to enhance overall completion rates, targeted support measures were implemented. All participants who had not completed the programme were contacted individually via personal messages and email on two separate occasions during the course cycle. These communications aimed to offer guidance, provide technical or pedagogical support, and explore potential modifications that could encourage sustained participation. Despite these efforts, individuals who showed no initial interaction with the course did not respond to outreach attempts, whereas those who had completed portions of the material reported that the programme's demands exceeded their available time and conflicted with their personal or professional schedules. Several of these partially engaged participants, however, expressed interest in revisiting and completing the training at a later date when their circumstances would allow for more consistent involvement.

**Work Package 4 (WP4):**

For material adaptation, the LearnDash English prototype content was used as the source for the Blackboard Learn Ultra English course.

During the Module 1 synchronous training session (M1B2b), a productive synergy emerged with the ongoing PhD research of a team member, which examines the use of connected medical devices to enhance postoperative assessment and care for surgical patients. This alignment provided an opportunity to enrich the session's discussion with practical insights drawn from current research activities.

To further stimulate engagement and promote reflective dialogue among participants, an additional discussion question was incorporated into session M1B2: "What challenges must be overcome to effectively integrate digital technologies into your field, and how can these challenges be addressed?" This prompt was introduced to encourage deeper exploration of discipline-specific barriers and to facilitate a more interactive group discussion.

Minor pedagogical adaptations were also implemented in Module 2 (M2B9). Specifically, the wording of the cultural skills content was revised to more accurately reflect the multicultural composition of Cyprus, which includes international students from the Middle East and Eastern Europe, as well as migrant workers originating from Asian and African countries. Following review, the remainder of the module's content was deemed appropriate and relevant for the Cypriot healthcare context without requiring further modification.

The M3B5 exercise was divided into two distinct tasks. The first required participants to map a problematic process within their work environment that they believed needed improvement. The second task involved developing an implementation plan outlining the changes they identified as necessary based on their process-mapping analysis. To provide participants with additional time and reduce workload, the feedback component originally planned for the M3B6 exercise was incorporated into the M3B5 activity sequence. Thus, the initial 3-hour duration of the M3 synchronous training activities was reduced to two hours.

Greek-language adaptation was undertaken in collaboration with the Greek team, with each team translating specific modules; translated content was cross-checked and validated by the partner team. Synchronous training was delivered through Blackboard, with interactive elements (including voting and discussion) supported by Blackboard tools such as Polls and the Whiteboard. Sessions were recorded to support participants unable to attend live; however, Blackboard course rooms do not allow recording within breakout rooms, and recorded content was therefore limited to the main room. All lexical H5P content was adapted for the Greek programme, and Synthesia videos in Greek were created for each lecture. This task was mainly overseen by the University of Crete and INHWE, with EUC reviewing materials and providing feedback.

**Work Package 5 (WP5):**

The Cyprus H-PASS programme was hosted on the EUC Blackboard Learn Ultra LMS, with two distinct courses created for the English and Greek cohorts. Evaluations and questionnaires

were migrated from Google Forms to Blackboard quizzes and anonymous surveys. Synchronous sessions were delivered through the native Blackboard Ultra classroom environment, enabling live delivery with breakout groups, recording and storage of sessions, automated attendance tracking, and real-time polling. The LMS also supported centralised communication through announcements and personalised messaging, while dedicated forums enabled structured asynchronous discussion between participants and faculty.

The decision to use a single unified platform aimed to centralise educational content and reduce fragmentation across multiple tools. The LMS gradebook enabled tracking of graded activities and monitoring of participant progress. While implementation required substantial initial material migration and relied on commercial licensing and IT management, centralised administration supported consistent delivery.

The VR component was provided in both English and Greek. Participants could complete the exercise remotely (using a personal PC or VR headset) or onsite at EUC with instructor support via a request-based booking system. Across both cohorts, participants opted for the remote online format, completing the VR exercise via their personal computers.

### **DCA training:**

The Digital Change Agent (DCA) training in Cyprus was implemented jointly by the European University Cyprus (EUC) and the University of Crete (UOC) H-PASS teams, following the consortium's unified pedagogical framework. As in Greece, Cypriot trainees participated in two synchronous two-hour sessions and accessed a shared repository of supporting material through a dedicated private Facebook group—a format intentionally selected for its low long-term maintenance requirements and because it aligns with the daily digital habits reported by healthcare professionals in both countries. The decision to deliver the Cypriot training jointly with the Greek team was strategic: it ensured alignment in instructional quality, maximized trainer resources, and fostered a mixed learning environment that encouraged cross-country exchange. Greece and Cyprus share important cultural similarities, including the Greek language, and a common ancestry facilitating the collaboration between the participants and instructors. Furthermore, this approach was especially relevant given the structural similarities between the two national healthcare systems, which are both universal in intent yet face operational pressures. Cyprus operates the General Healthcare System (GESY), a single-payer model launched in 2019 that contracts both public and private providers to deliver comprehensive care with low out-of-pocket costs and a GP-based gatekeeping mechanism. Greece's National Health System (ESY), while also universal, is characterized by chronic underfunding, lower public financing (60% vs. Cyprus's more comprehensive single-payer funding), and persistent challenges in access, workforce shortages, and regional service disparities. Despite these differences, both systems share ongoing digital-transformation priorities, including the expansion of electronic health records and telemedicine capabilities. This common reform trajectory makes joint training beneficial, as participants from Cyprus and Greece can approach the enhanced case-study scenario—which includes two competing digitalisation proposals—through comparable healthcare-system lenses. To facilitate collaborative engagement, trainees worked collectively rather than in subgroups, using a

shared Zoom Workplace Whiteboard designed for co-creation, and were offered multiple scheduling windows to accommodate participants of both national cohorts.

### 5.2.2 Greece

The 1st Greek H-PASS pilot training was organized and delivered by the University of Crete (UOC) H-PASS team, during the period April 2025 – September 2025. Promotion was carried out through the University Hospital of Heraklion, the 4 Medical associations of the island of Crete, as well as the Hellenic Regulatory Body of Nurses. Primarily aiming to meet interest in participation, a 2nd Greek-language pilot was organized, with educational activities having commenced in early December 2025 and being currently underway.

#### **Work Package 3 (WP3):**

Both for the 1<sup>st</sup> and for the 2<sup>nd</sup> Greek pilot training courses, UOC adopted the 4-Module structure, with the additional, shorter Virtual Reality (VR)-focused Module also included in the training schedule. Participants completing the activities of at least 3 Modules (1, 2, 3 or 1, 2, 4) were -or are about to be- granted the Certificate of Completion from the Project's Coordinator; however, for a participant to be awarded the Certificate of Completion from UOC, with the associated 40 European Credits of Continued Medical education (ECMECs), completion of all training activities (all 4 Modules plus the VR Module) is required.

Training duration per participant was calculated at 40 hours, allocated as follows:

- Module 1: 9 hours; asynchronous training activities of a total duration of 6 hours, plus one (1) 3-hour-long synchronous online training activity.
- Module 2: 10 hours; asynchronous training activities of a total duration of 7 hours, plus one (1) 3-hour-long synchronous online training activity.
- Module 3: 10 hours; asynchronous training activities of a total duration of 7 hours, plus one (1) 3-hour-long synchronous online training activity.
- Module 4: 10 hours; asynchronous training activities of a total duration of 7 hours, plus one (1) 3-hour-long synchronous online training activity.
- VR Module: 1 hour; participants were/are offered the choice to complete the Module either as an asynchronous individual online activity, or as an onsite activity.

Thus, out of the 40 training hours per participant, twenty-seven (27) correspond to asynchronous online training activities, one (1) corresponds to an activity that can be completed either onsite or online as an asynchronous activity, while the remaining 12 correspond to synchronous online activities.

It should be noted that, both for the 1<sup>st</sup> and for the 2<sup>nd</sup> training period, multiple time windows were offered to participants for enrolment in each Module's synchronous online activity (up to 12 per Module). This was decided, in order to maximize flexibility, given the very unpredictable -and frequently overloaded- work schedule of health professionals in Greece, as well as taking the high total number of participants into consideration. In the same context, although participants were/are instructed to aim to complete each Module's activities within

3-4 weeks (an “ideal date of activities completion” was stated in the schedule), the actual deadline was the universal end-of-course date for all activities.

Concerning educational methodology, as well as module-specific activities included, the philosophy and schedule of the prototype English-language pilot was largely adopted; nevertheless, the following minor adaptations were deemed appropriate:

- Synchronous online activities: As outlined above, the duration of each synchronous activity was set at 3 hours (versus 2, in the English prototype course), whereas Module 2 included a single 3-hour synchronous activity, instead of two separate 2-hour sessions. This was decided to maximize inter-module consistency and to simplify training schedule to the appropriate degree, so that learning objectives would not be compromised. The 3-hour duration of each session allowed for more comprehensive conversations, while providing participants with the opportunity to have all their questions addressed.
- Activity M2B2b: This component of one of the original English pilot’s synchronous Module 2 activities, characterized as optional in the original schedule, was omitted, primarily to fit all Module 2-associated synchronous activities into a single 3-hour-long session, but also due to uncertainty of whether UOC team could deliver it at the same standards as all other exercises. Nonetheless, we strongly believe that its learning objective was emphasized at various points throughout the course.
- Activities M2B7 and M3B5: For activity M2B7, completion as an online group work exercise was strongly encouraged, emphasizing on the potential benefits of both interprofessional cooperation and usage of digital collaboration tools. However, the option to complete the task as an individual activity was offered to participants, acknowledging the objective difficulties of synchronization between trainees that could arise from their unpredictable everyday schedules and workload. Similarly, activity M3B5 could be treated as an online group work exercise by teams that had already collaborated successfully in M2B7, and as an individual exercise by the remainder.
- Activity M2B8: For trainees for whom activity M2B7 could not be completed as an online group work exercise (but rather as an individual asynchronous one), it was recommended to summarize prior online group work experiences in activity M2B8.
- Activity M2B9: The respective learning objective was indeed focused on during Module 2 synchronous training, albeit using a landmark clinical trial highlighting the value of cultural competence as template.
- Activity M3B6: This exercise was omitted, primarily because of the complexity of obtaining approval from participants to have their submissions commented by fellow trainees, but also due to the fact that near-simultaneous submissions for exercise M3B5 by a sufficient number of participants would be required. However, providing feedback was practiced during the synchronous trainings of Module 3, whereby a specific flowchart of a process was provided to participants, who were asked to comment on its clarity and comprehensiveness.



- Activity M4B4: This activity was included in the Greek training schedule; however participants were explicitly instructed to focus primarily on its first part (identification of spam-suspicious emails), which was deemed much more relevant for health professionals than the second.
- M4B6: This exercise was included as a standalone asynchronous individual activity, rather than as component of Module 4 synchronous activity.

#### **Work Package 4 (WP4):**

With respect to training content of each Module's activities, the prototype pilot's training materials were largely adopted without significant changes.

Meticulous attention was paid to translation of all lexical H5P content into Greek, to ensure appropriate use of scientific and technological terms, where applicable. In particular, Synthesia videos in the Greek language were created for each lecture, in collaboration with INHWE and EUC, with a considerable part of the effort focused on eventually producing clearly understandable voiceovers that both support and complement associated slides. In this context, it should be stressed that Greek-language scripts do not always constitute precise translation of the original English ones, as efforts were made to make content even more understandable (e.g., brief introductions and/or clarifications added at some points), and at the same time concise (duplicate information omitted) and with the smoothest possible transitions between sections.

Moreover, on a limited basis, some additional external material links and references were added to the asynchronous interactive lectures, but other than that, in terms of content and slide structure, the degree of consistency between English prototype and Greek-language adaptation is very high.

Lastly, besides WP3-associated changes outlined above, the detailed structure of synchronous trainings was amended as compared to the original one, aiming to make overall session flow more convenient for UOC trainers and engaging for trainees (extensive use of interactive elements, such as interpolated multiple choice and open-ended questions), as well as in order to use some elements that could potentially contribute to meeting the course's learning objectives. Examples include using the human heart (with its differentiated cell groups and structures) as a model of complementary roles in a well-functioning team (Module 2), leveraging the research process (background, hypothesis, methodology, outcomes) to make the Quality Improvement concept even clearer (Module 3), and structuring the synchronous session of Module 4 in a way that it captures the "journey" of a health professional navigating through the complex digital health data landscape, from evaluating data quality, through selecting the appropriate dataset for a given purpose, assuring secure navigation, data privacy protection and avoidance of bias, to understanding the value of digital wellbeing.

**Work Package 5 (WP5):**

For both the 1<sup>st</sup> and the 2<sup>nd</sup> Greek H-PASS pilot training courses, all e-learning materials (asynchronous activities) were/are hosted on the LearnDash LMS, as was the case for the English-language prototype pilot, due to the fact that UOC team had already been familiarized to it, to the degree that the conditions for a sufficiently seamless course delivery were met. For similar reasons, synchronous sessions were conducted through the Zoom Workplace environment.

Throughout the duration of the 1<sup>st</sup> Greek pilot, efforts were made to make the course's layout on the LMS platform (including automated notifications) as intuitive as possible, also taking into account observations of trainees' activities. For instance, the observation that participants frequently proceeded with multiple (identical) submissions to the same exercise mandated a change in the platform's settings, so that an automated e-mail is triggered by every submission, explaining to trainees that instructor's approval of their submission is required before they can mark the activity as complete.

Having now taken all the lessons learned from the 1<sup>st</sup> Greek pilot into account, the e-learning platform settings for the 2<sup>nd</sup> course have been optimized, and -as of January 2026- our experience indicates that navigation through all LMS activities is practically free of significant issues for trainees.

As outlined above, the Virtual Reality (VR) Module has been included in the Greek pilots, and can be completed either as an onsite activity, or as an asynchronous individual activity on the e-learning platform.

Due to Crete's geographical isolation from mainland Greece, only a small number of participants residing in Crete opted to complete the activity onsite during the 1<sup>st</sup> pilot, using UOC's VR headsets, and thus only a minority was able to take advantage of the considerably more comprehensive learning experience. The overwhelming majority of trainees that completed the 1<sup>st</sup> pilot training enrolled in the VR Module through the online e-learning platform, while none of them reported having their own VR headsets at home.

Lastly, it is worth noting that -apart from enrolling in the H-PASS-specific VR exercise- participants that completed the VR Module onsite also had the opportunity to learn the basics of VR headset function and overall philosophy.

**DCA training:**

The Greek-language Digital Change Agent (DCA) training course was jointly conducted by UOC and EUC H-PASS teams and followed the general consortium-wide guidelines.

More precisely, as per original training plan, consisted of two (2) 2-hour-long synchronous training sessions.

In addition, a repository of useful materials and links was also created, in the form of a dedicated group on Facebook, only accessible to H-PASS trainees. The rationale for creating a dedicated group on social media, rather than a DCA webpage, largely lies in the fact that the resources required for long-term sustainability are considerably lower, while -per DCA



trainees' feedback- this option fits better with the everyday schedule and needs of most healthcare professionals in Greece and Cyprus.

Key adaptations and details:

- Content of the DCA synchronous trainings: The original case study scenario (both parts, 1st and 2nd synchronous sessions) was enriched with the addition of a second - partially competing- digitalization proposal. More precisely, apart from the e-health application solution, which was proposed by the clinic's head nurse in the case study, the option of integrating a robotic surgery system was also available. In this way, DCA participants had the opportunity to consider two different potential ways to take advantage of a fund targeted to digitalization, with their distinct advantages and disadvantages.
- Structure of the DCA synchronous trainings: While the original training plan was largely followed, the participants were not divided into groups; rather, they jointly approached all questions posed -which were adopted without changes. To achieve this, an accordingly designed Zoom Workplace Whiteboard was used as an interaction tool, to which all trainees were granted access.
- Details on overall scheduling: For participants that had been enrolled in the UOC core H-PASS training, five (5) different time windows were available for them to join each one of the two DCA synchronous sessions (DCA sync training GR 1 and DCA sync training GR 2, respectively); one DCA sync training GR 1 session and one DCA sync training GR 2 session were performed jointly with the EUC H-PASS team, and with a mixed audience comprised of both Greek and Cypriot participants.

### 5.2.3 Hungary

#### **Work Package 3 (WP3):**

The Hungarian pilot was organised by OKFŐ, based in Budapest, in four courses over 2025 (2025.03.19.-05.15. 1 hybrid and 1 online group; 2025.05.06.-07.03. hybrid; 2025.09.30.-11.28. hybrid). The course, same as the core training, was designed to take 40 hours altogether, 12 hours in a synchronous setting. In Hungary we delivered all 4 modules with an additional 1-hour onboarding session. The timing of the training consequently was organized as follows: 1 week for the onboarding, 8 weeks for completing the asynchronous materials and participating at the synchronous sessions, 2 weeks for finishing the course, fill out the closing test and complete the VR exercise, designed as a closing exercise. The structure of the training was the same for all participants, the only difference was in the organization of the synchronous sessions: the online group more, shorter online training sessions five 2-hour sessions and one 1-hour closing session, while the hybrid group spent 2 days (5-5 hours) onsite in Budapest in OKFŐ's and Semmelweis University's facilities, with an additional 2-hour online session in between the two occasions.

From the core exercises the Hungarian pilot didn't implement the M1B7, M2B2b, M2B6, M2B9, and M4B6 exercises in the synchronous sessions, instead allocated time to bring back

exercises from the asynchronous ones and deepened discussions and created debates around them.

Accreditation and CME credits were provided through OFTEX for doctors, and through SZAFTEX for nurses and allied health professionals. Pharmacists were included in the training and received an H-PASS certificate, but no CME credits were awarded.

The trainers in the synchronous trainings were Zoltán Cserháti, Nóra Fazekas, Orsolya Lőrincz, while other colleagues supported the trainings onsite and on zoom, as well as on Moodle and onsite. The DCA training also included Melinda Szögi as a trainer.

#### **Work Package 4 (WP4):**

Core asynchronous training materials were translated and implemented almost without changes in the content. Modifications were done within Culture in Module2, where focus was put on generational cultures instead of diversity of national cultures, as this focus fitted the Hungarian organizational challenges better. Furthermore, some of the scripts of Module2 were extended with further examples (taken partly from the original, unshortened scripts created by the partners).

Visually the original H5P materials from the prototype training were redesigned: new backgrounds and standard layout with standard icons for different additional materials (e.g. further reading, youtube videos, etc.) were created. Some slides were merged (also in the script), longer texts were transferred into pop-up windows to make the materials visually more clear and interactive. Additional H5P interactions were also created to make the materials more engaging and supporting action during the learning process.

Also, as mentioned above, instead of some (partly optional) core synchronous exercises we continued and deepened discussions on asynchronous exercises. This helped training participants to engage with the new knowledge more, as well as debate ideas and share experiences, good and bad practices with each other. Such discussions were designed for example for the MedTech in own practice, Generative AI exercises in Module1, the Online group work exercise in M2, Forum discussion in M3 as well as the Cyber security exercise and Digital Wellbeing checklist in Module4. Methodologies were quite diverse; we have used tools like mentimeter or slido, group discussions, voting, building a scale in space based on agreeing or disagreeing with statements, etc.

#### **Work Package 5 (WP5):**

As Semmelweis University, our partner in the training delivery uses Moodle and was ready to provide the platform for the training, and as our trainers were the most familiar with this platform's functionalities (that surpass LearnDash's functionalities), we have decided to choose Moodle as our training platform. This platform is both accepted by the accreditation, and conforms with the H-PASS training's training requirements and materials, such as the H5P material format. For the online training sessions Zoom was used.

The VR exercise was implemented as a closing exercise. The exercise was offered to be completed in three different setups: 1) on the PC, 2) on personal VR headset available through a browser link, 3) in person at Semmelweis University's facility on the project's VR headsets supported by one of our colleagues. Participants completed the exercise mostly on PC (technical difficulties with availability arose, feedback to SS3D was sent) and e.g. 10% onsite (one-by-one in pre-booked slots), who overall were excited about the new experience.

#### **DCA training:**

The DCA training in Hungary was organized along the guidelines included in the Training Plan. Alumni of the H-PASS training and also current participants in-training have been invited to sign up for the two times two-hours long training course (without any preparatory or follow-up exercises except for the fill-out of the surveys). For the online groupwork exercises we used the breakout rooms of Zoom and the whiteboard integrated into the system, along with scrumblr.ca, however, the latter one seemed to be too inflexible for the exercise's purposes. After the training with the follow-up survey a repository document was shared with the participants as a tool for sharing resources for further learning.

#### **5.2.4 Italy**

The Italian version of the H-PASS pilot course was implemented and delivered thanks to the collaboration between the Università Cattolica Del Sacro Cuore (Unicatt) and the Sant'Anna School of Advanced Studies of Pisa (SSSA), with the support of Agenas (Agenzia Nazionale per i Servizi Sanitari Regionali), especially for the accreditation phase and promoted by ProMIS (Programma Mattone Internazionale Salute).

#### **Work Package 3 (WP3):**

The Italian pilot has been held fully online; the following structure was chosen for the synchronous part (15 hours):

- Module 0 - (one hour)
- Module 1 - (4 hours)
- Module 2 - (4 hours)
- Module 3 - (4 hours)
- Final Session - (2 hours)

Plus 21 hours in asynchronous mode between the various modules (7 hours before each of the three modules) for a total of 40 hours. The first training event took place between 30 May and 29 September 2025. The second training event took place from 4 September to 21 December 2025.

The course included the provision of 50 CME credits for the participants who completed it.

**Work Package 4 (WP4):**

Regarding the training prototype in the Italian version, some changes have been introduced, especially on some types of exercises, to make them better usable by learners.

In particular, for the asynchronous part, the case studies included in the prototype training were replaced with cases contextualised to the local culture and aligned with the participants' professional experiences. With regard to the theoretical component, the basic structure was preserved; however, where possible, the content was adapted to the local cultural context. In particular, links to explanatory videos produced using Synthesia were embedded on each slide, and Italian subtitles were added to the videos already included in the prototype training slides.

For the synchronous part, small-group work was introduced with the aim of encouraging participants to reflect on the core competencies required for effective teamwork and to define effective behaviours for putting these competencies into practice.

In the Final Session, a brief summary of all the topics covered was provided, followed by a course-wide recap exercise in the form of a case study. The activity, carried out in groups and based on specific work objectives, concluded with a final plenary discussion on the key points that emerged.

The pilot was delivered entirely in Italian and all materials were translated.

**Work Package 5 (WP5):**

Regarding the web platform, Blackboard was used, the learning management system officially adopted by Università Cattolica. The choice of this platform was dictated by several reasons: first, its integration with the University's digital infrastructure ensured full compatibility with institutional services and uniform access for students and teachers. In addition, Blackboard offers consolidated and reliable tools for managing both synchronous activities, through environments dedicated to real-time lessons, and asynchronous activities, allowing for the structured sharing of teaching materials, the traceability of activities, and the monitoring of participation. This configuration made it possible to effectively support a blended learning model, ensuring continuity, flexibility, and quality in the delivery of the course.

In the "Final Session" Virtual Reality was introduced, with a synchronous presentation of the scenario and, subsequently, the participants were able to complete the simulation independently via PC.

**DCA training:**

The DCA training was conducted in a one-day synchronous session. All materials, including case studies and presentations, were translated into Italian.

Although the overall architecture of the DCA training programme remained unchanged, selected elements were tailored to increase contextual coherence and stimulate active

engagement. Interactive group work, structured case discussions, and participant presentations were delivered consistently with the original methodological framework.

The training concluded with a forward-looking discussion, during which participants explored avenues for future cooperation and mechanisms to sustain knowledge sharing after the completion of the course.

#### 5.2.5 Lithuania

The Lithuanian pilot of the H-PASS training programme was implemented by the Lithuanian University of Health Sciences as an accredited continuing education programme delivered through the University's Centre for Postgraduate Studies and registered in the national Competence Platform.

#### **Work Package 3 (WP3):**

The selection of modules for the Lithuanian pilot was guided by their relevance to everyday clinical practice and their applicability to the professional roles of nurses and midwives. Modules M1, M2, and M4 were prioritised, while Module 3 was not included in the pilot. As a result, the workload initially planned across four modules was redistributed, and each of the implemented modules was extended by an additional 3 hours. The total training workload per participant amounted to 40 hours over 8 weeks, structured as follows:

- Module 0 – 1 hour
- Module 1 – 13 hours
- Module 2 – 13 hours
- Module 4 – 13 hours

In Module 1, the original structure was retained, and the additional 3 hours were delivered asynchronously. These hours were used for additional theoretical content and reflective questions related to digital technology use, allowing participants to consolidate foundational concepts independently.

In Module 2, the additional 3 asynchronous hours were allocated to case-based situation analyses, focusing on teamwork and the use of smart digital technologies in everyday healthcare practice. This extension enabled deeper reflection on interprofessional collaboration and the practical integration of digital tools into routine clinical work.

In Module 4, the module duration was likewise extended by 3 asynchronous hours, which consisted of additional theoretical content and reflective questions related to cyber security. This supported a more in-depth understanding of data protection, cyber hygiene, and safe digital practices within healthcare organisations.

Module 3 was excluded from the Lithuanian pilot due to its lower perceived relevance to the immediate professional responsibilities of nurses and midwives and the constraints of the accredited training framework. This structural decision allowed the pilot to prioritise depth of learning and practical relevance within the selected modules.

Regarding delivery structure, the training model itself remained unchanged. Of the total 40 hours, 12 hours were delivered as synchronous onsite sessions, while the remaining 28 hours were completed asynchronously through digital learning materials and individual tasks. This structure was applied consistently across all participant groups.

#### **Work Package 4 (WP4):**

Compared to the prototype training, the Lithuanian pilot introduced substantial adaptations in both training materials and delivery methods, with a strong emphasis on language localisation, interactive digital content, and face-to-face engagement.

All training materials, including lectures, learning tasks, and supporting resources, were fully translated into Lithuanian, ensuring accessibility and clarity for participants. Lectures were developed using H5P in the Lithuanian language, enabling interactive and structured asynchronous learning. In many cases, lecture content was first recorded by the lecturers in Lithuanian and later adapted into automated video formats using Synthesia, allowing participants to revisit key topics while maintaining linguistic and contextual consistency.

In addition to language adaptation, the training content itself was adjusted to the local context. Additional training materials related to cyber security were introduced, and case-based situations were adapted to reflect the Lithuanian healthcare system, particularly in relation to digitalisation, technological change, and data protection. These adaptations enhanced the practical relevance of the training for nurses and midwives.

#### **Work Package 5 (WP5):**

Moodle was selected as the learning management system for the Lithuanian pilot due to its convenience and compatibility with existing institutional systems. Course participants registered for the training through a system already linked to Moodle, which ensured a smooth enrolment process and reduced technical barriers. The platform enabled trainers to monitor participants' progress, verify the completion of all required learning activities, and issue certificates once the course requirements were fulfilled. Compared to the prototype training based on LearnDash, the use of Moodle allowed for better integration of administrative processes with training delivery and accreditation requirements. The use of a single LMS also enabled the centralisation of learning materials, asynchronous activities, and progress monitoring, avoiding the need to combine multiple digital tools.

Virtual reality activities were implemented as a separate technical component of the Lithuanian pilot. All participants completed the VR exercise using a standardised at-home PC-based format (type d), which ensured equal access regardless of location or work schedule. In addition, participants were offered the opportunity to experience the same VR scenario onsite using VR headsets, supported by an instructor (type a); however, this option was not used during the pilot implementation.

This technical setup ensured that VR activities were accessible and feasible, while still allowing for the exploration of immersive technologies within the pilot framework.

**DCA training:**

The DCA training was implemented over two days using a blended format. The first day was conducted face-to-face, while the second day was delivered online in synchronous mode. This structure allowed flexibility for participants and ensured continuity of engagement. All training materials, including the session outlines and case studies, were translated into Lithuanian to ensure accessibility and full comprehension for participants. The case studies were not only translated but also adapted to the Lithuanian healthcare system context. This included adjusting organisational structures, stakeholder roles, and practical scenarios to reflect local healthcare governance and professional responsibilities. The core structure of the DCA training package was maintained. However, minor contextual adaptations were introduced to enhance relevance and participant engagement. Group discussions, case analysis, and presentation components were preserved as outlined in the original training plan. The repository concept was introduced and discussed in the context of sustainability. Participants reflected on possibilities for continued collaboration and knowledge exchange after the training.

### 5.2.6 Romania

The H-PASS programme in Romania was coordinated by the University of Oradea (UO) in collaboration with the College of Pharmacists from Bihor County (CJFBH) and was promoted to pharmacists practicing in Romania (Bihor County) as part of continuing professional education.

**Work Package (WP3)**

The Romanian pilot implemented Modules 1, 2 (Part 1 and Part 2) and 4 of the training programmes, without introducing structural changes to the original module design.

The module selection was based on their relevance to pharmacists' professional practice and their suitability for continuing education within the national context. In addition to the core training modules, an onsite introductory session (Modul 0) was organised to familiarise participants with the structure, objectives, and methodology of the training programme.

While the overall structure of the modules remained unchanged, all practical components were fully adapted to the pharmacy profession. Exercises and case studies were redesigned to reflect real-life situations encountered in community pharmacies, ensuring that all applied learning activities were directly relevant to pharmacists' daily work.

To maximise accessibility for working professionals, each module was delivered twice on the same day, once in the morning and once in the afternoon. This approach allowed participation both for pharmacists working morning shifts in pharmacies and for those working afternoon shifts. Each module session had a duration of 3 hours.



As a result, each participant who completed the full training programme attended:

- 4 onsite sessions,
- 3 hours per session,
- resulting in a total of 12 hours of onsite, synchronous training per participant.

The full training programme had a total duration of 40 hours per participant, combining onsite synchronous sessions with online learning activities delivered via the LMS.

Trainers involved in the Romanian pilot were:

- Module 1 and Module 2.1 (University of Oradea): Jurca Tünde, Pallag Annamaria, Karetka Anett, Radu Andrei, Gligor Octavia.
- Module 2.2 and Module 4 (College of Pharmacists from Bihor County): Nemeth Sebastian, Vicaş Laura, Bănică Florin, Teaha Diana, Costea Claudia.

Accreditation was provided for pharmacists, with 84 pharmacists receiving 40 Continuing Pharmacy Education (CPE) credit points each upon successful completion of the training programme.

#### **Work Package 4 (WP4):**

Compared to the prototype training, the Romanian pilot introduced several significant adaptations and innovations, while preserving the original pedagogical framework and learning objectives.

A key difference was the adaptation of the training content to the pharmacy profession. Textual materials, examples, and exercises were rewritten to directly address pharmacists' roles, responsibilities, and professional realities. This profession-specific adaptation significantly increased relevance, engagement, and practical applicability.

Another important innovation was related to the delivery format of synchronous sessions. In the Romanian pilot, all synchronous meetings were delivered exclusively onsite. Based on participant feedback and local experience, this format proved to be the most effective training method, enabling stronger interaction, deeper discussion, and more efficient practical work.

The training was delivered entirely in Romanian language. Additionally, video materials were created in Romanian for all learning units using Synthesia, ensuring linguistic consistency and accessibility across the course.

This adaptation process was supported at project level:

This task was mainly overseen by the University of Crete and INHWE, with the University of Oradea reviewing the materials and providing feedback, ensuring alignment with the prototype while allowing for national contextualisation.

#### **Work Package 5 (WP5):**

The Romanian pilot used [portal.net-dd.com](https://portal.net-dd.com) as its Learning Management System (LMS), a platform owned and managed by the College of Pharmacists from Bihor County. The LMS was



selected due to its established use within the national continuing pharmacy education framework, its reliability, and its suitability for accredited professional training.

Compared to LearnDash used in the prototype training, portal.net-dd.com offered more efficient participant management, progress tracking, and certification processes, particularly in relation to Continuing Pharmacy Education (CPE) credit allocation.

Regarding VR implementation, the Romanian pilot applied:

Onsite group training exercises supervised by instructors, led by the College of Pharmacists from Bihor County.

VR-related activities were integrated as guided, instructor-led exercises during onsite sessions, ensuring proper facilitation, technical support, and pedagogical coherence. This approach ensured effective learning while remaining feasible and accessible for all participants.

### **DCA training:**

The DCA training in Romania was implemented in a fully face-to-face format, as it was considered more effective for participant engagement and interaction. The sessions were delivered on-site to a group of pharmacists, enabling direct communication, active participation, and dynamic exchange of ideas. In total, 18 pharmacists participated in the training.

The training took place over one day and was structured into two sessions of two hours each, with a break in between. This format ensured a balanced pace and allowed participants to remain focused and actively involved throughout the day.

All original training materials were translated from English into Romanian to ensure accessibility and full comprehension. In addition to translation, the practical components of the training were adapted to reflect pharmacist-specific contexts. Case discussions focused on real-life scenarios relevant to pharmacy practice, making the content more applicable and meaningful for the participants.

A particularly valuable outcome of the training was the roundtable discussion, during which participants actively shared their perspectives and experiences. It was encouraging to observe the high level of enthusiasm and commitment among the pharmacists, especially regarding their willingness to promote digital advancement and take on the role of Digital Change Agents within their workplaces.

The training was hosted at the headquarters of the College of Pharmacists from Bihor County and was jointly organised by the University of Oradea and the College of Pharmacists from Bihor County. This collaboration contributed to the successful delivery and strong professional relevance of the training.



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