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UNIHEAL+ - Contextualizing UNIversal HEALth resilience through health professionals' re-skilling for digital health services provision

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Project Result 2 (PR2): The Adaptation and Training Guide for UNIHEAL+ Educators

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Project Result	Project Result 2 (PR2): *The Adaptation and Training Guide for UNIHEAL+ Educators*
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Contents

1. Introduction

The project UNIHEAL+ - **Contextualizing UNIversal HEALth resilience through health professionals're-skilling for digital health services provision**, focuses on the vocational training of health professionals in order to meet the needs of a more digitalized healthcare environment.

The concept of adult learning and vocational training plays a vital role when it comes to re-skilling and shaping the future of the professional environment in Europe. Adult learning includes a wide range of formal and informal learning activities, both general and vocational, undertaken by adults after leaving initial education and training (European Commission, n.d.). Adult learning is seen as a key factor leading to personal and professional development, social inclusion and meeting the demand for new skills that respond to the growing needs of the labour market. Additionally, adult learning strengthens social cohesion and promotes active citizenship; for these factors, adult learning has been identified as a focus topic of the European Education Area for the period 2021-2030 (Journal of the European Union C66/1, 2021). At the same time, Vocational Education and Training (VET), more centralized in labour market, prepares people for work and develops citizens' skills to remain employable and respond to the needs of the economy (European Commission, n.d.).

As mentioned above the UNIHEAL+ project is about re-skilling health professionals for digital health services provision. The concept of re-skilling is in line with the European agenda of digitalization of healthcare, in particular the Commission's eHealth Action Plan 2012-2020, which provides a roadmap for empowering health workers and includes actions to promote skills and digital literacy (European Health Parliament, 2016)

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The Adaptation and Training Guide for UNIHEAL+ Educators (PR2) is designed to give the essential context and support the VET stakeholders and particularly educators for the best exploitation of the UNIHEAL+ products, tools and materials; its development aims to provide specific guidelines on how to integrate the training package/framework courses in their (training) activities and how to utilize is as a VET educational component, in relation with the trainees potential needs, thus health professionals. The Adaptation and Training Guide for UNIHEAL+ Educators (PR2) consists of the following chapters: ***The basic framework of adult education*** (chapter 2), ***Uniheal+: Modules Curriculum*** (chapter 3), ***How to use the UNIHEAL+ Moodle platform: Useful "steps" for your navigation*** (chapter 4), ***Rubrics for the educational and digital knowledge*** (chapter 5), ***Educational Scenarios*** (chapter 6).

2. The basic framework of adult education

This chapter presents the basic framework of adult education. In particular, it presents the basic characteristics of adult learners, the principles of adult learning and barriers to adult education and differentiated instruction.

2.1 The basic characteristics of adult learners and the principles of adult learning

Adult or vocational education and training is very important as it prepares people for work and develops the skills of citizens to remain employable and responsive to the needs of the economy (European Commission, 2020). In order to successfully complete the adult education project and achieve the objectives set from the outset, it is necessary for adult educators to take into account the basic characteristics of adult learners and apply basic guidelines and principles.

➢ They participate in educational activities with **specific objectives**, which may be linked to a desire for personal development, professional ambitions, prestige issues or other. This assumption in itself makes the participation of an adult in an educational programme a perfectly conscious choice (especially when contrasted with the 'compulsory' participation of pupils in school).

➢ They "carry" a great burden of experience from the years they have already lived and therefore these experiences can be a starting point for new learning or sometimes even a starting point for new experiences while sometimes a barrier, as they influence the way they think, perceive and interpret new ideas and situations.

➢ Over the years they have learned the way they like to learn better, as they've been tested in different educational experiences. So, their decision to participate in an educational activity often implies **a preferred way of learning**.

➢ They tend to be **active participants**, that is, precisely because they have experiences and knowledge, they do not wish to remain passive recipients, but often want to express their opinion and of course criticize.

➢ They develop mechanisms of defense and resignation, which of course, is also true for juveniles, but in adults it may be more pronounced, precisely because of the personality and the entrenched beliefs they have.

➢ They face difficulties and **barriers to learning** because of their living conditions, their personalities and backgrounds, etc. (Institute of Education Policy, n.d.).

As regards the principles for adult learning, also known as andragogy, are a set of guidelines popularised by Malcolm Knowles that aim to optimise learning experiences for adults. Andragogy follows five basic premises:

1) Self-concept

As they grow up, children are more secure in their understanding of who they are and what they want. Adult education should respond to adults' sense of self-concept.

2) Experience

Employees have a variety of experiences and knowledge that can influence the way they learn. Adult learning should recognize this fact.

3) Readiness

Training must be relevant, feasible and applicable. Employers should recognize this when creating relevant, productive training materials.

4) Orientation

Education must be practical and future-oriented, which means that teachers must use sustainable teaching methods for adult education.

5) Motivation

Adult learners are guided by factors beyond professional development. Understanding this can help employers create satisfying training experiences.

2.2. Barriers to adult education and differentiated instruction

It is worth mentioning that the concept of "barriers" is the root cause of Adult Education as it is addressed to people who, due to some obstacles, are various obstacles of various natures could not be trained in some subject at some other time. The barriers to participation categorised as occasional, institutional -operational, social-demographic and dispositional barriers.

It is worth noting that learners bring different experiences, different needs, attitudes and expectations. It is therefore the learning that should be adapted to the learners, not the learners adapting to the learning. It is therefore necessary to apply the principles of differentiated instruction that tailors instruction to students' different learning needs.

There are some ways that the educator could follow in order to differentiate the teaching (e.g. Curriculum Mapping, Power Standards & Enduring Understandings, Project-Based Learning, Self-Directed Learning, Game-Based Learning, Grouping, Flipped Classroom e.t.c.).

1. UNIHEAL+: Modules (Curriculum)

In this chapter it is presented the summary of the 6 competence units that have been designed and reviewed in the period May 2022- June 2023:

CU1: Framework skills and aptitudes for digital communication

CU2: Computer literacy, data analysis, data protection programs

CU3: eHealth & mHealth context and content

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CU4: Medical devices compatibility

CU5: Mobile applications, cloud storage, internet usability-functionality

CU6: Universal digital health coverage

The UNIHEAL+ curriculum proposal is proposed based on tables with the following structure:

·*Learning objectives*

·*Contents: Short description of the Module contents*

·*Units per module*

·*Duration: total duration per module*

·*Learning outcomes of the whole module*

·*Training methodology*

·*Training tools for innovative training delivery*

·*Learning materials: list of resources needed to implement the training activities.*

·*Assessment methodology*

For module 1, Framework skills and aptitudes for digital communication, the curriculum proposal is:

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MODULE 1	MODULE TITLE: FRAMEWORK SKILLS AND APTITUDES FOR DIGITAL COMMUNICATION
AUTHOR	**XENIOS POLIS**
Objectives *(max. 100 words)*	The aim of this module is to provide learners/ health professionals with essential knowledge on skills and aptitudes for digital communication which are considered necessary in the personal and professional space. The module consists of the following sections:
Contents (Short description of the Module contents) *(max. 100 words)*	**1. The essence and the origin of communication** Communication has been a necessity for the human species since its appearance. Communication changes forms with the passage of time along with the evolution of the human species and the continuous evolution of technology. **2. Digital communication** In this section, the basic types/applications of digital communication are thoroughly presented and analysed. **3. Skills and aptitudes for digital communication** Digital communication doesn't happen naturally and automatically in contrast to physical communication. For this reason, its achievement presupposes the acquisition of certain skills**.** **4. New data concerning digital communication** The dynamic presence of digital technology in our lives requires the acquisition of new digital skills and the evaluation of those already acquired.

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Units (please limit the number of units between 3 and 6 per module) *(max. 100 words)*	**Unit 1: The essence and the origin of communication** Topic 1: Communication Topic 2: Verbal-nonverbal communication Topic 3: Communication skills **Unit 2: Digital communication** Topic 1: What is digital communication. Topic 2: Digital communication applications **Unit 3: Skills and aptitudes for digital communication** Topic 1: Digital communication skills Topic 2: Tips for improving your digital communication skills. Topic 3: Advanced digital communication skills **Unit 4: New data concerning digital communication.** Topic 1: Free Workshops for digital skills and how to complete them Topic 2: Digital communication skills self-assessment tool
Duration (total duration of each module = approx. 10 hours) *(max. 50 words)*	10 hours online
Learning outcomes (for the whole module) *(max. 200 words)*	By the end of the training participants will be able to: **The essence and the origin of communication:** The learner will gain knowledge about the history and concept of communication and will know what communication skills are.

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	Digital communication: The learner will come into contact with the concept of digital communication as well as its methods. **Skills and aptitudes for digital communication:** The learner will know the digital communication skills. Moreover, s/he will know manners to improve the digital communication skills and to obtain advanced digital communication skills. **New data concerning digital communication:** The learner will find out which methods he/she will be able to acquire digital communication skills and the related self-assessment tools that can be used.
Training methodology *(max. 50 words)*	The educational methodology will consist of: ppt presentations, videos, exercises
Training tools (for innovative training delivery) *(max. 100 words)*	- computers - tablets - smartphones - internet connection
Learning materials (list of resources needed to implement the training activities) *(max. 50 words)*	ppt presentations, links, videos
Assessment methodology *(max. 100 words)*	Self-assessment questionnaire with mainly multiple-choice answers based on a practical case.

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For module 2, Computer literacy, data analysis, data protection programs, the curriculum proposal is:

MODULE 2	MODULE TITLE: COMPUTER LITERACY, DATA ANALYSIS, DATA PROTECTION PROGRAMS
AUTHOR	**GRIPEN EUROPE**
Objectives *(max. 100 words)*	The module aims to provide learners with essential knowledge on computer literacy. Furthermore, it gives them the opportunity to know data analysis and data protection programs which are deemed necessary when browsing the internet.
Contents (Short description of the Module contents) *(max. 100 words)*	**1. Computer literacy** In the last decades, electronic computers, tablets, and mobile phones overwhelm the life of modern man. However, because knowledge of their use is not assumed, this unit provides basic information for anyone interested in acquiring navigational skills. **2. Data analysis** This unit will provide learners with a good understanding of data content and the data analysis process, as well as the importance and benefits of data analysis in the Health sector. **3. Data protection** This unit will explain the meaning of data protection with reference to the General Data Protection Regulation. Moreover, in the context of this unit will address the importance of data protection in the Healthcare sector and will present some best practices and data protection programmes.

Units (Please limit the number of units between 3 and 6 per module) *(max. 100 words)*	**Unit 1: Computer literacy** 1: Computer literacy 1.1: The importance of computer literacy 2: Digital skills 2.1: Main types of digital skills 2.2: The importance of digital skills 2.3: Ways to develop digital skills 3: Useful steps to navigate on the internet 3.1 Web browsers 3.2 How to navigate to Web Pages **Unit 2: Data analysis** 1: Data 1.1: Types of data 2: Data analysis 2.1: The importance of data analysis 3: Data and data analysis in Health sector 3.1: The importance of healthcare data analysis 3.2: Benefits of data analysis in healthcare 4: Main types of data analysis 5: Data analysis process **Unit 3: Data protection** 1: Data protection

	2: The General Data Protection Regulation (GDPR) 2.1: The importance of data protection 3: Data protection in Health sector 4: Data protection best practices 4:1 Data protection programs

Duration

(total duration of each module = approx. 10 hours) *(max. 50 words)*

10 hours online

Learning outcomes (for the whole module) *(max. 200 words)*	By the end of the training participants will be able to: ❖ **Computer literacy:** The learner will acquire basic digital skills. Moreover he/she will become familiar with the navigation on the internet via a computer or mobile device. ❖ **Data analysis:** The learner will acquire the meaning of data analysis and he/she will understand its main importance and benefits. The learner will also know the most important types of data analysis. ❖ **Data protection**: The learner will acquire the meaning and the importance of data protection Furthermore, the participant will be familiar with data protection in the Health sector and some data protection best practices and programs.

Training methodology

(max. 50 words)

The training methods will consist of:

❖ PPT presentations

❖ Educational videos

❖ Practical cases

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Training tools (for innovative training delivery) *(max. 100 words)*	For innovative training delivery **internet connection** is necessary. The training can be held through computers, tablets, or smartphones.
Learning materials (list of resources needed to implement the training activities) *(max. 50 words)*	PPT presentations, links, videos
Assessment methodology *(max. 100 words)*	Self-assessment questionnaire with mainly multiple-choice answers and several open questions based on a case study.

For module 3, e-health and m- health context and content, the curriculum proposal is:

MODULE 3 **AUTHOR**	**MODULE TITLE: E-HEALTH AND M- HEALTH CONTEXT AND CONTENT** **CSI**
Objectives (max. 100 words)	The aim of this module is to highlight the importance of currently prominent components of healthcare, the electronic health (eHealth) and mobile health (mHealth) and build and strengthen learners' knowledge of different healthcare services.
Contents (Short description of the Module contents) (max. 100 words)	**1. Fundamentals of eHealth and mHealth** eHealth and mHealth systems have been recognised as invaluable and indeed extremely necessary tools within the health system that are constantly growing. We will be introduced to eHealth and mHealth definitions, their role in the EU and their relevance to the new decade.

Different studies on the <u>use</u>, <u>benefits</u>, and effectiveness of those applications established worldwide will be presented.

2. Forms of eHealth and mHealth applications

We will learn various eHealth and mHealth applications that aim to promote more effective and user-friendly health services. This unit will explain how those applications can solve health and healthcare system-related problems. This unit will also enable us to identify the stages of eHealth activities and gaps in relation to eHealth and mHealth systems in EU countries.

3. Challenges of implementing eHeatlh and mHealth concepts

Besides the broad opportunities those systems can bring to the health field, it is undoubtable that several challenges exist. It is important to acknowledge those barriers to suggest potential solutions.

Units (Please limit the number of units between 3 and 6 per module) (max. 100 words)	**1. Fundamentals of eHealth and mHealth**. 1.1. eHealth and mHealth Definitions 1.2. Role and Benefits (i.e., Cost-effective and less time-consuming, improved quality of life, reduced hospitalisation) – *provision of examples/cases emphasising how digital transformation is affecting the health sector* 1.3. Relevance to the new decade **2. Forms of eHealth and mHealth applications** 2.1. eHealth applications (i.e., electronic patient record, electronic prescription, Remote medical consultations,) 2.2. mHealth applications **3. Challenges of implementing eHealth and mHealth concepts**

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	i.e., confidentiality and security, eLearning in health, limited quantitative data on the effectiveness of those programmes, ethical and legal issues arised and low digital skills of healthcare professionals.
Duration (Total duration of each module = approx. 10 hours) (max. 50 words)	10 hours online learning
Learning outcomes (for the whole module) (max. 200 words)	By the end of the training participants will be able to: ● Increase their knowledge regarding what eHealth and mHealth are, what **role** is in Healthcare systems and how they can **benefit** from them. ● Understand the barriers in deploying eHealth and mHealth, and potential ways to overcome them. ● Identify **eHealth and mHealth applications** currently available and their purposes with the aim to increase their understanding of their significance. ● Be aware of not only the opportunities they can offer, but also the **challenges**.
Training methodology (including information on the Video tutorials) (max. 50 words)	Online lectures, guidelines, video tutorials and case-studies
Training tools (for innovative training delivery) (max. 100 words)	Personal computers/laptops/tablets and/or smartphones. An internet connection

Learning materials (list of resources needed to implement the training activities) (max. 50 words)	PPT presentations with both audio and links to online sources (articles, websites, and YouTube videos). Detailed documents on the available eHealth and mHealth applications – available to be downloaded for easy access and future use.
Assessment methodology (max. 100 words)	Self-assessment questionnaire with mainly multiple-choice answers and several open questions based on a case study.

For module 4, Medical devices compatibility, the curriculum proposal is:

MODULE 4	**MODULE TITLE: MEDICAL DEVICES COMPATIBILITY**
AUTHOR	**PROLEPSIS**
Objectives *(max. 100 words)*	The module aims to provide learners with essential knowledge on digital medical devices and how they can be used in all aspects of clinical work and management. This module will cover the following:
Contents (Short description of the Module contents) *(max. 100 words)*	1. Fundamentals of medical and digital medical devices Medical and digital devices are used to diagnose, prevent, monitor, manage or treat a disease or condition. It is important that healthcare professionals know the fundamental requirements for how to effectively use and manage these devices. Thus, this unit includes fundamental information on medical devices. 2. Medical Devices and practical applications

This unit will provide learners with a good understanding of all relevant aspects of practical applications of medical device use and management. This includes good practices, maintaining and storage of different types of medical devices, and the responsibilities the use of medical devices has for healthcare organizations and staff.

3. Risk and Safety for using Medical Devices

Ensuring safe use of medical devices for patients and healthcare professionals is a crucial responsibility. This unit will provide an overview of the regulatory framework on digital medical devices and discuss some common threats that require hospitals and healthcare staff to evaluate and manage a set of risks.

4. Available trainings for digital medical devices and other resources

This unit will cover the available training courses and important resources for digital medical devices, for various health specialties across all partner countries.

Units (please limit the number of units between 3 and 6 per module) *(max. 100 words)*	**Unit 1: Fundamental of Digital Medical Devices** Topic 1: The origin and history of medical devices Topic 2: The need for medical devices Topic 3: Innovation in the digital medical devices sector **Unit 2: Medical Devices and practical applications** Topic 1: Good practices Topic 2: Compatibility with existing software

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	Topic 3: Benefits of using digital medical devices for health professionals and patients (e.g., remote auditing)
	Topic 4: Challenges of using digital medical devices (for health professionals and patients)
	Unit 3: Risk and Safety for using Medical Devices
	Topic 1: Regulatory overview for digital medical devices
	Topic 2: Risk management for digital medical devices
	Topic 3: Digital medical devices and patient safety
	Uni 4: Available trainings for digital medical devices and other resources
	Topic 1: List of online training courses for digital medical devices (for various health specialties all partner countries will contribute)
	Topic 3: Other resources
Duration (Total duration of each module = approx. 10 hours) *(max. 50 words)*	**10 hours online**
Learning outcomes (for the whole module) *(max. 200 words)*	By the end of this Module participants will be able to: • **Fundamental of Medical Devices:** The learner will know what is meant by a medical device, the difference with a digital medical device, how to use the basic elements of digital medical devices and emerging digital devices technology. • **Medical Devices and practical applications:** The learner will know how to apply good practices and insights from the program to their day-to-day work and business. The learner will also comprehend the basic

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compatibility concerns with existing medical software. The learner will identify the benefits of digital medical devices and contributions to healthcare as well as challenges for patients and staff.

• **Risk and Safety for using Medical Devices:** The learner will know how medical devices are regulated and how to evaluate and manage risks relevant to using medical devices. The learner will also acquire basic skills on accessing, storing, and managing patient data in line with the European ethical and regulatory guidelines.

• **Available training for digital medical devices and other resources:** The learner will become aware of the current training opportunities on digital medical devices, relevant to patient and healthcare professionals' needs and priorities.

Training methodology *(max. 50 words)*	The teaching methods will consist of practice exercises, presentations, video tutorials, group work activities, case studies, simulation scenarios and role play games.
Training tools (for innovative training delivery) *(max. 100 words)*	Personal computers, tablets, and smartphones. An internet connection.
Learning materials (list of resources needed to implement the training activities) *(max. 50 words)*	PPT presentations, links, and videos. Also, a real-life case scenario is provided including a narrative that explains a situation in the work environment where the concepts explained in the module would come into use.
Assessment methodology *(max. 100 words)*	Self-assessment questionnaire with mainly multiple-choice answers and several open questions based on a case study.

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For module 5, Mobile applications, cloud storage, internet usability-functionality, the curriculum proposal is:

MODULE 5	MODULE TITLE: MOBILE APPLICATIONS, CLOUD STORAGE, INTERNET USABILITY-FUNCTIONALITY
AUTHOR:	**FUNDACIÓN AYESA**
Objectives *(max. 100 words)*	This module aims to provide basic knowledge of how to use essential tools on phones and computers. We will explore basic functionalities of many common free apps and tools. This will give the learner a series of skills that will help make working with computers and smartphones a lot easier in the professional environment.
Contents (Short description of the Module contents) *(max. 100 words)*	Tools that will facilitate working in the digital environment. **A) Cloud storage services** We will learn how to use the main cloud storage services like Google drive, Microsoft OneDrive and Dropbox. This is very useful since you will be able to have all your files stored on the internet and access them from any device that is connected to the web. This makes life easier since you won't have to store your files on local storage devices and will protect you against losing them. It will also allow you to easily share them with your work colleagues and let them view and edit them. You will also be able to work on documents with other people simultaneously.

B) Video Call services

It is imperative these days to be able to communicate remotely with other workers and colleagues. Therefore, we will learn to use the main tools that are available for this. By learning to use Google meet, Zoom and Teams you will be well prepared to interact with other professionals or clients through the internet. This will allow you to connect to high-quality real-time video calls. You will also learn to broadcast your screen to the other people on the call. This is very useful when working with other people on a particular subject and gives everyone on the call an extra visual reference that is very effective.

C) Remote desktop tools

It is very useful to be able to have remote control of a computer or to let someone else control your computer. In this unit we will learn to use Google remote desktop, Teamviewer and VNC which will allow you to remotely access a PC or give someone else access to your PC so they can assist you.

D) Phone utility apps

In this unit we will learn how to use common apps like Google Maps, Gmail, and Microsoft Outlook. We will also learn how to link WhatsApp to your desktop so you can chat from your PC.

E) Web browsers

In this unit we will learn basic functionalities that all common web browsers have. We will learn how to save websites in your bookmarks, how to check your browsing history, how to edit your homepage, how to open new tabs and how to clean your cookies and cache.

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F) Cybersecurity

In this unit we will learn common safety practices that will help keep your information safe from cyber-attacks. We will learn about common cyber-attacks, and we will look at tools that will guarantee a higher level of internet security.

Units (please limit the number of units between 3 and 6 per module) *(max. 100 words)*	**Unit 1: Cloud storage services** • Google drive • One Drive • Dropbox **Unit 2: Video Call services** • Google meet • Zoom • Teams **Unit 3: Remote desktop tools** • Google remote desktop • Team Viewer • VNC **Unit 4: Phone utility apps** • Google Maps • Gmail • Outlook • WhatsApp web

	Unit 5: Web browsers • Google chrome • Firefox • Safari • Opera • Microsoft Explorer • Microsoft Edge **Unit 6: Cybersecurity** • Creating safe passwords and using a password manager (Keeweb) • Using 2FA Authentication for services that allow it. (Google Authenticator) • Avoiding phishing scams and social engineering attacks • What Ransomware is and how to avoid it.

Duration

(total duration of each module = approx. 10 hours) *(max. 50 words)*

10 hours of online learning including screen captures.

Learning outcomes (for the whole module) *(max. 200 words)*	By the end of the course the learners will have acquired the following skills: • **Use of cloud storage services:** the learner will know how to set up an account in each of the cloud services, how to create new documents, how to open, edit and save documents, how to convert documents from one format to another. The learner will also know how to share online files with other users and how to organize files and folders. We will also learn how to download files to a local PC.

• **Video calls:** the learner will know how to use Google meet, Zoom and Teams. We will learn how to connect to meetings, how to set up audio devices, how to mute your microphone during a conversation, how to send messages in the built-in chat, how to create a meeting and how to share your screen so you can display a presentation or broadcast your screen to other participants for any other functionality.

• **Remote desktop tools:** we will learn how to set up a remote session using Google remote desktop, Teamviewer and VNC. You will be able to set up your computer so you can access it from any other device, and you will also learn how to access another computer remotely. You will learn how to transfer files from a remote pc to yours and vice versa.

• **Phone utility apps:** The learner will be able to install and use apps like Google Maps, Gmail, Outlook, and web apps like WhatsApp web.

> ➤ **Google Maps**
> ● Searching for an address
> ● Starting turn by turn navigation
> ● Saving a location
> ● Sharing a location
> ➤ **Gmail**
> ● Configuring a Gmail account
> ● Configuring a POP or IMAP account
> ● Composing and sending emails
> ● Organising email folders
> ➤ **Outlook**
> ● Configuring a POP or IMAP account
> ● Composing and sending emails

	- Organising email folders - WhatsApp web ➤ Linking your mobile device to your PC and sending messages • **Web browsers:** The learner will know how to use all popular web browsers, how to navigate to a site, how to use tabs, how to bookmark websites, how to use and search your browsing history, how to clean cache and cookies and how to edit your homepage. • **Cybersecurity:** We will learn about the most common vulnerabilities that most PC users are exposed to, tools and best practices to follow in order to minimise the chances of becoming the victim of a cyber-attack.
Training methodology *(max. 50 words)*	• *Step by step tutorials* • *Screen captures illustrating each step* • *Practice exercises*
Training tools (for innovative training delivery) *(max. 100 words)*	*Personal computers and smartphones. An internet connection.*
Learning materials (list of resources needed to implement the training activities) *(max. 50 words)*	• *PPT presentations with key points* • *Detailed documents with step-by-step guides* • *Task sheets with exercises*
Assessment methodology *(max. 100 words)*	Self-assessment questionnaire with mainly multiple-choice answers and several open questions based on a case study.

For module 6, **Universal digital health coverage**, the curriculum proposal is:

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MODULE 6	MODULE TITLE: UNIVERSAL DIGITAL HEALTH COVERAGE
AUTHOR	XWHY

Objectives (max. 100 words)	The aim of this module is to develop and enhance learners' knowledge of the various digital health system coverage tools, including software, hardware and services that are relevant in the digital health transformation phase.
Contents (Short description of the Module contents) (max. 100 words)	We will cover tools that will facilitate working in the digital environment. **A. mHealth** We will introduce you to the basics of mHealth and wearable devices. We will also introduce the categories of mHealth. In addition, there will be an opportunity to learn about the benefits of mobile health applications and trends ranging from artificial intelligence and chatbots to virtual reality and blockchain. Finally, we will take some time to introduce mHealth phenomena and risks and opportunities. **B. eHealth** We will introduce you to the electronic health record (EHR), which is a real-time document that can be easily modified. We will also introduce the basic principles of the electronic medical record (EMR), as knowledge about a patient's EMR collected by doctors in a particular office, clinic or hospital is equally important, especially when it is used by providers for diagnosis and treatment. By presenting both EHRs and EMRs, we will also help to answer questions related to their usefulness and relevance, as well as

provide an overview of the differences and similarities. Moreover, the Unit will present case studies as good foreign examples and the top 3 Electronic Health Records (EHRs) with their specificities.

C. Telehealth

The ability to use telehealth services is important to keep in touch with patients over long distances and to provide the care and treatment they need. Among other things, it is a convenient way for health professionals to reach patients who have mobility restrictions or live in remote rural areas. Therefore, during this unit we will learn the basic principles of telehealth and instruments to ensure quality patient care.

D. Artificial Intelligence (AI) & Machine Learning (ML)

Artificial intelligence (AI) and machine learning (ML) brings a paradigm shift in the healthcare industry. These technologies enable computers to analyse large amounts of data and learn from it, which helps healthcare providers make more informed decisions about a person's care. This unit will provide basic knowledge about artificial intelligence (AI), machine learning (ML) in order for healthcare workers to be aware of technological advancements and provide information on usage cases as well as existing products and services they can implement in their practice right away.

Units (please limit the number of units between 3 and 6 per module) (max. 100 words)	**Unit 1: mHealth** • Introducing mHealth and Wearable Devices • Categories of mHealth • Benefits of Mobile Health Applications • mHealth Trends

• mHealth Phenomena

• Practical Case

Unit 2: eHealth

• Defining Electronic Health Records (EHRs) and Electronic Medical Records (EMRs)

• eHealth Good Practices

• Top 3 Electronic Health Records (EHRs)

• Practical Case

Unit 3: Telehealth

• Defining Telehealth and Telemedicine

• Guidelines on Video Consultations

• Telehealth Mobile Applications

• Practical Case

Unit 4: Artificial Intelligence (AI) & Machine Learning (ML)

• Introducing Artificial Intelligence (AI) and Machine Learning (ML) Applications

• Defining Artificial Intelligence (AI) and Machine Learning (ML)

• Areas of Artificial Intelligence (AI) and Machine Learning (ML) Application

• Critique on Artificial Intelligence (AI) and Machine Learning (ML)

• Application of Artificial Intelligence (AI) and Machine Learning (ML) in Products and Services on the Market

• Chatbots and Available Chatbot Production

• Practical Case

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Duration

(total duration of each module = approx. 10 hours) (max. 50 words)

10 hours online (screen captures included).

Learning outcomes

(for the whole module) (max. 200 words)

By the end of the course the learners will have acquired the following skills:

• **mHealth:** The learner will learn what mhealth is, what categories is it divided into, its benefits both for medical professionals and patients. Moreover, they will learn about the tendencies, future outcomes, risk and opportunities in mhealth sector.

• **eHealth:** The learner will learn why electronic health records (EHRs) and electronic medical records (EMRs) exist and are relevant, and case studies will be presented. In addition, the learner will learn the basic principles of EHR and EMR. The learner will learn the main differences and similarities between EHRs and EMRs. The learner will also learn about the top 3 Electronic Health Records (EHRs) and their specificities.

• **Telehealth**: The learner will learn how to perform digital transmission of medical images to the patient. In addition, the le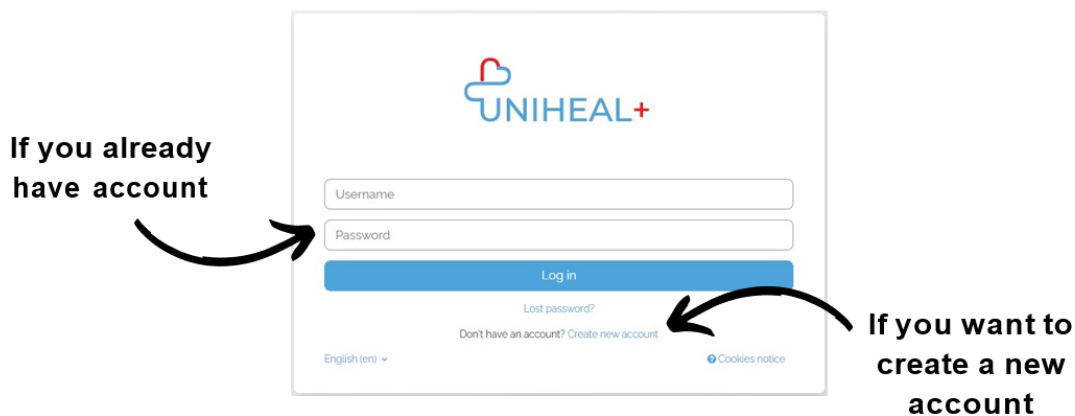arner will acquire the skills needed to perform remote medical diagnosis and evaluations. The learner will know how to conduct remote consultations via camera with patients and other professionals.

• **Artificial Intelligence (AI) & Machine learning (ML)**: The learner will have a basic understanding of technology. This knowledge will help them to identify products and services which are worth implementing in their practice. They will see artificial intelligence

(AI) and machine learning (ML) as tools which help to be more effective, provide better services and hopefully technological progress won't frighten them. It also introduces healthcare professionals to products and services on the market which utilises artificial intelligence (AI) and machine learning (ML).

Training methodology (max. 50 words)	• Step by step tutorials • Practice exercises • Practical cases • Video tutorials
Training tools (for innovative training delivery) (max. 100 words)	Personal computers, tablets and smartphones. An internet connection.
Learning materials (list of resources needed to implement the training activities) (max. 50 words)	• PPT presentations with key points • Detailed documents with step-by-step guides • Links
Assessment methodology (max. 100 words)	Self-assessment questionnaire with mainly multiple-choice answers and several open questions based on a case study.

4. How to use the UNIHEAL+ Moodle platform: Useful "steps" for your navigation

First, when accessing the UNIHEAL+ Moodle platform (https://learning.unihealplus.eu) you must select the language:
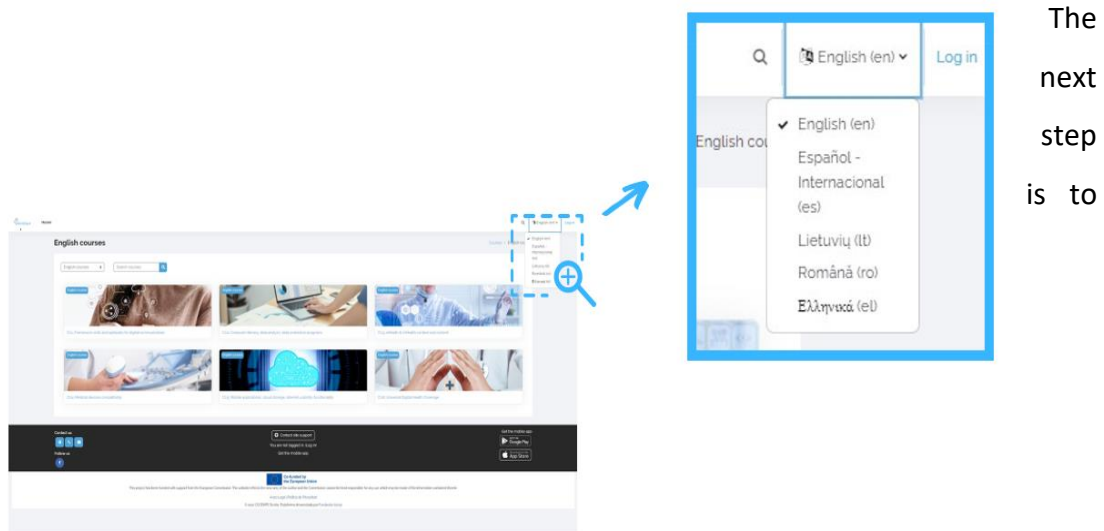
The next step is to create account if you already have it created just write your credentials and click on Log in:

If you already have account

If you want to create a new account

Otherwise, if you must create a new account, just fill in all the personal information the page asks you for, then just click on Create my new account.

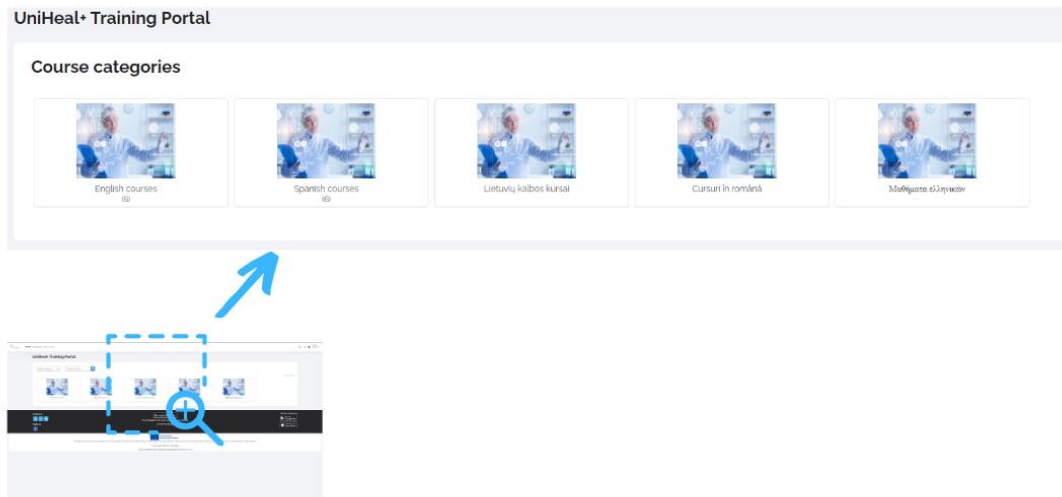When you are inside of the platform, you have to choose the language of the courses you want to do:

This project has been funded with support from the European Commission. This plan reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

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Select the courses of your language

Then, when you chose the module you are interested in, you have to enroll yourself on it:

Here, you will see the content of the module, on pdf, where you can learn about it, the test and the self-evaluation:

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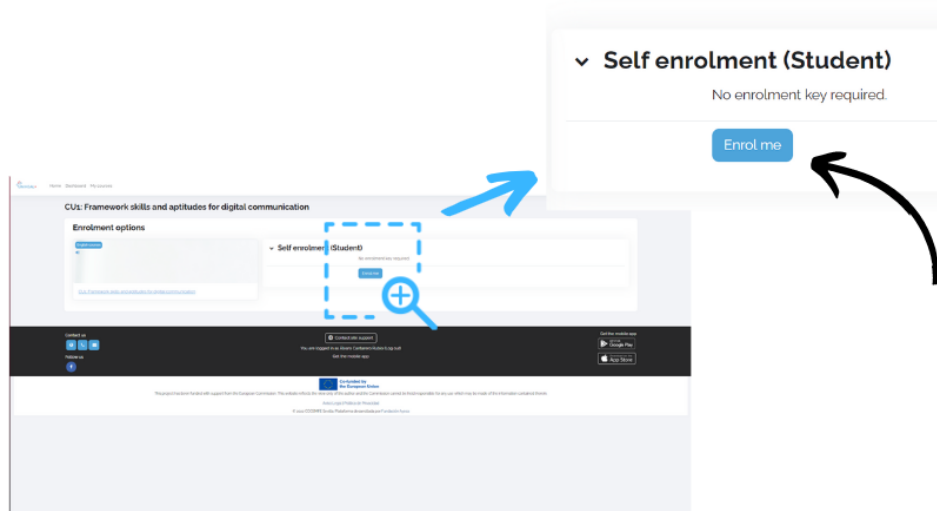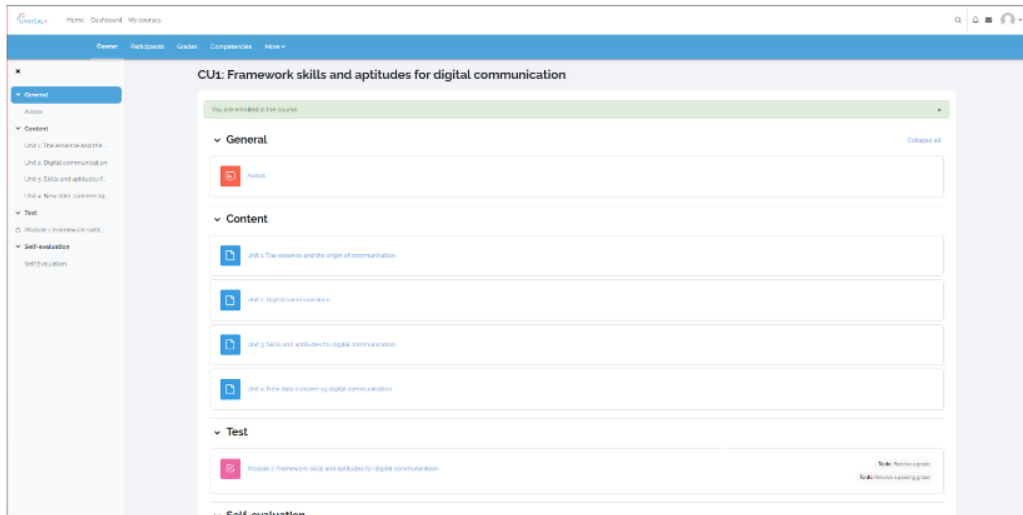
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Starting with the content, you will see all the unit on a PDF format, where you can download it, print it, or just read it on the platform on itself:

Once you feel you have acquired the knowledge you need for your teaching, you can take the test to feel more confident about your knowledge:

You must answer, at least, four of the six questions that the Moodle will give you.

You can repeat the test a total of three times.
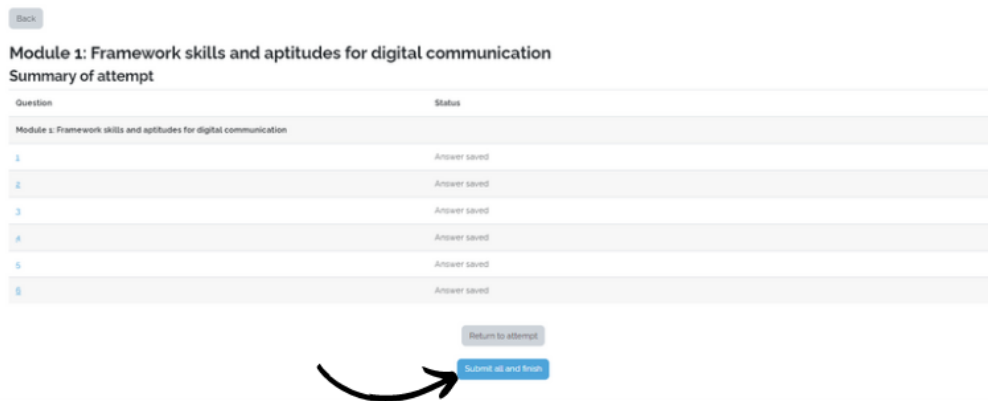
Then, when you have passed the test, you must do the self-evaluation, there you will have to ask some questions:

You must rate from 1 to 10 the questions it will give you, there is no need to lie, it will give you the pass whatever you want to answer.

Then, when you have done everything, read the content, pass the test, and answered the self-evaluation, a new section will appear, giving you the certificate of the module, congratulations!
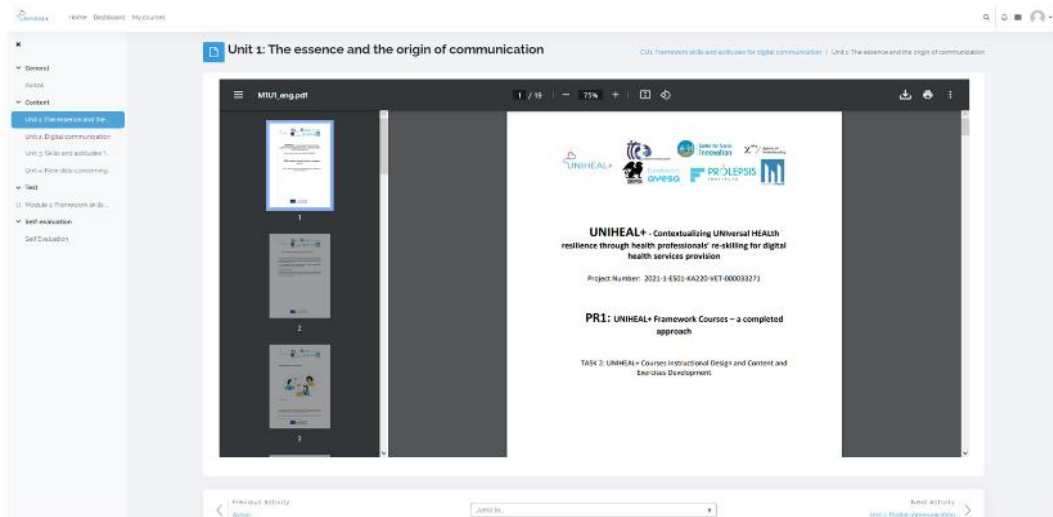

5. Rubrics

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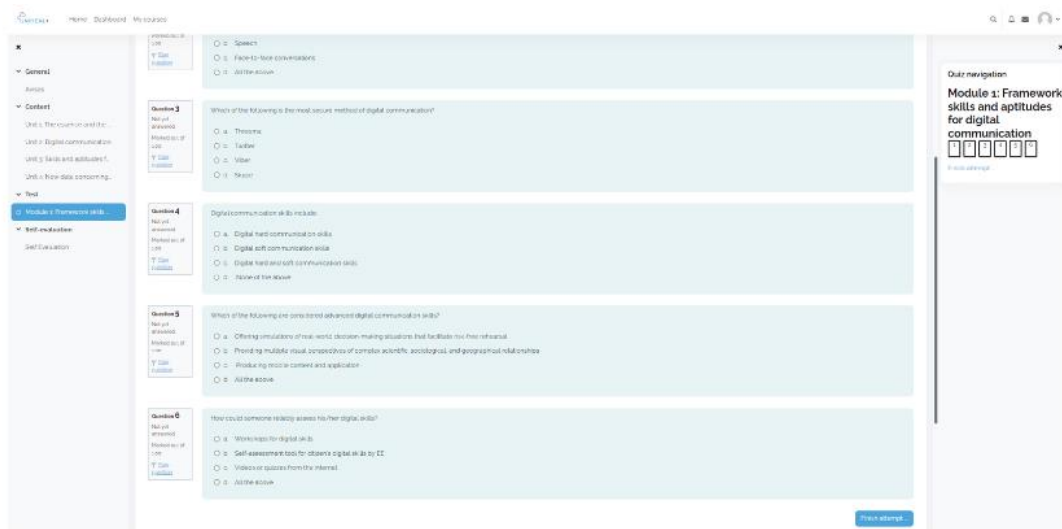
The following rubrics are intended for adult educators who will teach health professionals the content of the modules of the Uniheal+ and introduce them to the e-learning platform.

5.1 Rubric for the educational process

The following rubric aims evaluate through self assessment the effectiveness of adult educators in 5 areas: Learning material and content, Use of the educational platform, Principles of adult education, Time management, Management of unexpected events.

A. Learning material and content		
4	I was able to have a great facility to browse and teach the learning material and content.	
3	I managed with the relative facility to meet the demands of management and teaching the learning material and content.	
2	I encountered significant difficulties in understanding and teaching the learning material and content.	
1	I have not been able to respond to the understanding and teaching of the learning material and content.	
B. Use of the educational platform		
4	I was able to have a great facility to handle and use the educational platform.	
3	I managed with the relative facility to handle and use the educational platform.	

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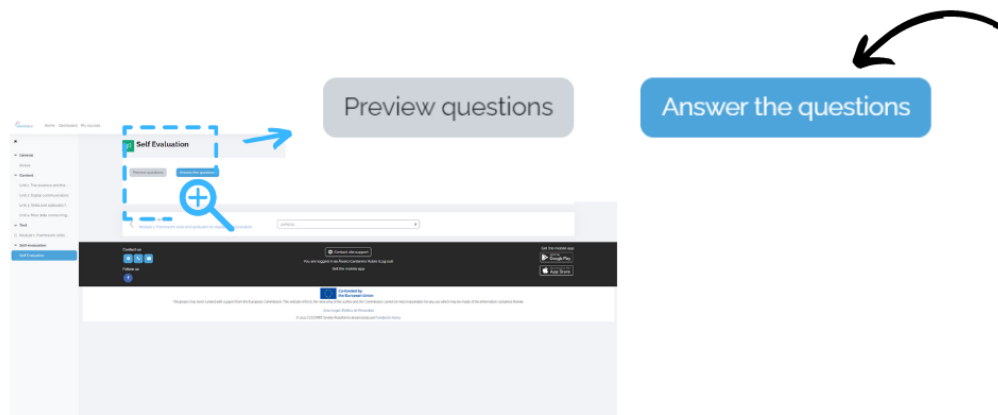**UNIHEAL+** - Contextualizing UNIversal HEALth resilience through health professionals' re-skilling for digital health services provision

2	I encountered significant difficulties in managing and using the educational platform.	
1	I have not been able to handle and use the educational platform.	

C. Principles of adult education

4	I was able to have a great facility to follow the basic principles of adult education.	
3	I managed with the relative facility to follow the basic principles of adult education.	
2	I encountered significant difficulties in following the basic principles of adult education.	
1	I have not been able to follow the basic principles of adult education.	

D. Time management

4	I was able to have a great facility to manage time well and complete the teaching of the modules I was aiming for within the prescribed time frame.	
3	I managed with the relative facility to manage time well and complete the teaching of the modules I was aiming for within the prescribed time frame.	
2	I found difficulties in time management and in the completion of the teaching of the modules I was aiming for within the prescribed time frame.	
1	I was not able to manage time well and complete the teaching of the modules I was aiming for within the prescribed time frame.	

E. Management of unexpected events

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4	I was able to have a great facility to manage the unexpected events that occurred during the teaching process.	
3	I managed with the relative facility to manage the unexpected events that occurred during the teaching process.	
2	I found difficulties in managing the unexpected events that occurred during the teaching process.	
1	I was not able to manage the unexpected events that occurred during the teaching process.	

5.2 Rubric for the digital knowledge

The following rubric aims evaluate through self assessment the effectiveness of adult educators in 5 areas related to the digital platform of the Uniheal+ : Accessing the platform and selecting the language, Create an account and log in using your credentials, Selecting and Enrolling yourself in the chosen module, Questionnaire (test) and Self-Assessment checklist, Completion of module and receive of certificate.

A. Accessing the platform and selecting the language		
4	I can easily access the platform through the link provided and change the language to the desired one from the dropdown list	
3	I can easily access the platform through the link provided but cannot easily locate the dropdown list to set the language	
2	I found some difficulty accessing the platform through the link provided and could not easily locate the dropdown language list	
1	I could not access the platform through the link provided	

B. Create an account and log in using your credentials		
4	I could easily create an account with all of my necessary information and then log in into my account using my credentials	
3	I had to repeat the registration process as I experienced some difficulties but later managed to log in into my account using my credentials	
2	I had to repeat the registration process as I experienced some difficulties but did not manage to log in into my account	
1	I could not create an account on the platform	
C. Selecting and Enrolling yourself in the chosen module		
4	I was able to select and enroll myself in the chosen learning modules. Inside the modules I could locate and choose the listed units/ topics I am most interested in.	
3	I was able to select and enroll myself in the chosen learning modules. Inside the modules I experienced difficulties locating the listed topics / units.	
2	I found difficulties in selecting and enrolling from the list of the learning modules. I could not locate the listed topics / units inside the module.	
1	I was not able to select the learning modules therefore I did not enroll.	
D. Questionnaire (test) and Self-Assessment checklist		
4	I was able to navigate inside each module with ease and at the end of each one I was able to locate the test and self-assessment checklist and complete them both.	
3	I was able to navigate inside each module with ease but found difficulties locating and completing the test and self-assessment checklist.	
2	I found difficulties navigating inside the learning modules and could not locate the test and self-assessment checklist at the end of each module.	
1	I could not navigate inside each learning module	

E. Completion of module and receive of certificate		
4	I was able to complete each module and received my certificate. I was able to download the certificate on my device to utilise it in the future.	
3	I was able to complete each module and received my certificate. I was not able to download the certificate.	
2	I managed to navigate to some extent inside the modules but found difficulties completing them. I did not receive the certificate.	
1	I was not able to complete the learning modules.	

6. Educational Scenarios

"As a teaching scenario we consider the description of a teaching with focused cognitive object(s), specific educational objectives, teaching principles and practices. A teaching scenario may have a duration of more than one teaching hours".

Below are six (6) educational scenarios designed by the Uniheal+ stakeholders. The scenarios are teaching suggestions for adult educators to teach part of the content of each module in a more effective way.

Module 1: *"Today's nurse in the digital era"*

Title of scenario: *"Today's nurse in the digital era"*

Module: *1, XENIOS POLIS*

Creator: *Maria Papadopoulou*

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Target Group: *graduates of nursing schools who have several years of work experience, are close to retirement and wish to improve their digital communication skills and their digital identity.*

Subject of the scenario: *digital communication skills of nurses*

Duration: *4 hours*

General purpose-Learning principles:

The main purpose of the proposed teaching scenario is to strengthen the digital communication skills of nurses of older age, who lack this knowledge.

The teaching scenario is based on the teaching methods of the lecture and collaborative learning.

Brief description: *The proposed scenario is addressed to nurses, who, although they have a long professional experience, wish to improve their digital communication skills and their digital identity in order to them to be helped in their work. The scenario consists of a short motivation, the main part and the evaluation.*

Key words: *Digital communication skills, Digital identity, Digital communication applications*

Requirements and appropriate learning environment:

In order to be able to follow this teaching scenario, nurses should have basic digital skills in using a smartphone or tablet and navigating the internet.

The implementation of the teaching scenario is going to be done face-to-face. It is necessary that the classroom in which it will be implemented has internet access. In addition, a projector is necessary to carry out the teaching scenario. Finally, the trainees need to have a smartphone or a tablet with them. Alternatively, the teaching

scenario can be implemented using the distance education method and through the Teams, Zoom or Skype etc. applications.

Learning objectives:

Participants are expected to:

- *obtain better digital communication skills*
- *learn how to use applications that were designed for medical professionals*
- *communicate better with your patients and colleagues digitally*
- *learn how to enhance their digital communication skills*

Learning outcomes:

After completing the teaching scenario the participants are expected to:

- *obtain better digital communication skills*
- *learn how to use applications that were designed for medical professionals*
- *communicate better with your patients and colleagues digitally*
- *learn how to enhance their digital communication skills*

Phases of the scenario:

Motivation -1ˢᵗphase (1 hour):

The trainees are organised in 4 groups of 5 people. The trainer welcomes the participants to the seminar and after introducing themselves to each other, he/she informs them about the main purpose and the objectives of the teaching scenario. The trainer projects two images of nurses in contrast through a projector. The first is from the 1960s and the second is from the contemporary era.

The trainer asks the participants to discuss in groups how the daily work routine of nurses today differs from that of nurses in the 1960s, due to the integration of technology in their work. Do they know ways to communicate with patients and colleagues through technology? In this way he/she tests their prior knowledge on the subject.

Once the groups have discussed with each other, the trainer gives the floor to representatives from each group to present their thoughts, followed by a general discussion n including the final conclusions.

Main Part

2ⁿᵈphase (1 hour):

During the second phase of the teaching scenario, the trainer will present with the help of a digital projector three of the most popular and safe telecommunication methods/applications that help nurses to be in contact with their colleagues and patients at all times. Indicatively will be presented Siilo, Thremma, Signal. At the same time, the benefits of each of these will be discussed at length.

After the presentation of these applications, all trainees will download and install on their mobile phones/tablets the application Siilo. It is chosen to put more emphasis on the Siilo application because it is an application designed specifically for health professionals. Any trainee who encounters any difficulty will be assisted either by the trainer or a colleague.

At the end of the second phase of the teaching scenario, participants are encouraged to use the Siilo application and communicate through it with their colleagues in their group.

3*nd*phase (1 hour):

During the third phase of the teaching scenario, some tips will be presented in PowerPoint format to help nurses improve their digital skills. These are tips and resources that will prove extremely useful in their future career path, which must be in tune with the modern digital age. This will be followed by an extensive discussion on the topic.

Evaluation (1 hour):

The teaching scenario is completed with the assessment of the trainees through a matching exercise and a gap-filling exercise related to the topic of the scenario. Each participant completes the exercises on a personal level. Then the trainees, in the presence of the instructor, answer the questions in public and solve any possible questions.

Training risks of the educational scenario

As teaching is a dynamic and multifactorial process, many unexpected things can happen. For this reason, the experienced educator has to show foresight and make provisions for any unpleasant unexpected events that are likely to occur in the proposed teaching scenario, so that the normal course of the educational process is not affected.

1ˢᵗ Potential Training Risk

The training scenario is addressed to nurses older than 55 years and above. This audience does not consist of digital natives and technology is relatively new in their lives. It is therefore very likely that some of them do not own smartphones and do not even know how to use them. If something like this is detected during the conduct of the training scenario, it is bound to create a lot of disruption and delays in the second phase of the scenario and of course during its continuation.

Potential Solution of the 1ˢᵗ Potential Training Risk

In order to avoid surprises for the trainer, but also to avoid any of the trainees being in a bad position and this affecting the training process, it is advisable to take appropriate precautions. A mini quiz could therefore be distributed to the participants, which would test their level of digital skills, or they could even be interviewed by telephone so that their level of digital skills could be communicated to the trainer. Thus, the trainer can modify the teaching process to the trainee's knowledge.

2ⁿᵈ Potential Training Risk

The training scenario foresees the application of the cooperative learning method. However, it is very likely that some of the participants will show either reluctance or difficulties in cooperating with their group members. Therefore, this will negatively affect the smooth running of the teaching scenario.

Potential Solution of the 2ⁿᵈ Potential Training Risk

In order to strengthen and facilitate cooperation between participants, it is necessary to take a number of crucial steps from the outset. The most important of these is to enable participants to choose their own teams and to work with colleagues they already know. If the above is not possible, it will be necessary for the first phase of the implementation of the teaching scenario to emphasize ice-breaking between team members with the active intervention of the trainer.

3 nd Potential Training Risk

The scenario is expected to last 4 hours. Of course, in any educational process, many unexpected things can happen, especially when it is related to the use of the Internet and the use of electrical appliances. It is possible that the electrical devices discharge during the training process or problems occur with the internet connection, which will affect the training process.

Potential Solution of the 3 nd Potential Training Risk

So to avoid the above-mentioned pitfalls, it is required that the trainer has chosen a room with a very good internet connection and with many outlets so that the participants can charge their devices. Alternatively, the use of power banks is recommended.

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Image 1

Photographer: Gordon A. Larkin Date: 1954 Archives: Mount Saint Vincent University Archives, Photograph Collection, 825

Image 2

Credit: Charday Penn, Getty Images

Additional resourses:

Hellzén, O., Kjällman Alm, A. & Holmström Rising, M. (2022). *Primary Healthcare Nurses' Views on Digital Healthcare Communication and Continuity of Care: A Deductive and Inductive Content Analysis.* Nursing Reports, 12, pp. 945-957. DOI: https://doi.org/10.3390/nursrep12040091

Isidori, V. et al. (2022). *"Digital Technologies and the Role of Health Care Professionals: Scoping Review Exploring Nurses' Skills in the Digital Era and in the Light of the COVID-19 Pandemic"*, JMIR Nursing, 5(1), p. e37631. Doi: 10.2196/37631. https://nursing.jmir.org/2022/1/e37631/

Krick, T., Huter, K., Seibert, K., Domhoff, D. & Wolf-Ostermann, K. (2020). *Measuring the effectiveness of digital nursing technologies: development of a comprehensive digital nursing technology outcome framework based on a scoping review. BMC Health Services Research*. DOI: https://doi.org/10.1186/s12913-020-05106-8

Laukka, E., Hammarén, M, Pölkki, T. & Kanste, O. (2022). *Hospital nurse leaders' experiences with digital technologies: A qualitative descriptive study.* Journal of Advanced Nursing. Volume 79, Issue 1, pp. 297-308. DOI: https://doi.org/10.1111/jan.15481

Lorenzi, N. (2023). *Nurse communication systems keep advancing. Greater connectivity and improved ease of use drive recent innovations. Health Facilities Managment*. Available at: https://www.hfmmagazine.com/articles/4663-nurse-communication-systems-keep-advancing

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Shahar, T., Tadmor, O., Dior, U. et al. *"Siilo" – A New Instant Messaging Application for Medical Professionals and a Novel Platform for Medical Education*, 20 April 2023, PREPRINT (Version 1). Available at: https://doi.org/10.21203/rs.3.rs-2062455/v1

Toshniwal Paharia, T. (2022). *The present and future role of nurses in the new digital health era.* Available at: https://www.news-medical.net/news/20221006/The-present-and-future-role-of-nurses-in-the-new-digital-health-era.aspx

Matching Game

- **Match the data in column A with those in column B.**

	A		B
1.	Siilo	.	heavily encrypted and it requires no phone number or email address to sign up
0.	Threema	B.	secure, reliable and ethical
0.	Signal	C.	secure instant messaging application that was designed for medical professionals, which ensures information security, data encryption, and a built-in blurring tool to maintain patient privacy.

- Fill in the gaps with the correct word (body, digital, communication, cooperation, positive).

The main tips for improving your digital communication skills are:

Make sure you project a presence of trust and……….

Stay ……….. in all remote work situations.

Review your ……….. identity.

Be attentive about………… channels.

Attend a digital …………. language course.

Module 2: *"Exchanging Health Data safely"*

Title of scenario: "Exchanging Health Data safely"

Creator: Sintorela Chamiti

Target Group: Health professionals

Subject of the scenario: Data protection and Health professionals

Module: M2, GRIPEN EUROPE

Duration: 4 hours

General purpose-Learning principles: The main purpose of this exemplary scenario is to make health professionals more familiar with data protection in the health sector and patient's personal data.

The teaching scenario is based on the teaching methods of the lecture and collaborative learning.

Brief description: The proposed scenario is aimed to health professionals who wish to increase their knowledge on the importance of data protection in healthcare sector and want to learn how to use of data protection programs.

Key words: data protection, patient's personal data, data protection programs

Requirements and appropriate learning environment: In order to be able to follow this teaching scenario, health professionals should have basic digital skills in using electronic devices (e.g. smartphones, tables), navigating the internet and sharing digital content.

The implementation of the teaching scenario is going to be done face-to-face. It is necessary that the classroom in which it will be implemented has internet access. In addition, a projector is necessary to carry out the teaching scenario. Finally, the trainees need to have a smartphone or a tablet with them. Alternatively, the teaching scenario can be implemented using the distance education method and through the Teams, Zoom or Skype etc. applications.

Learning objectives:

Participants are expected to:

- o Learn about the importance of data protection
- o Learn about dangers related to personal data like fraud, hacking, phishing and identity theft
- o Learn about data protection measures

Learning outcomes:

After completing the teaching scenario the participants are expected to:

- o Learn about the significance of data protection
- o Have a better understanding of the threats that pertain to personal data, such as fraud, hacking, phishing, and identity theft.
- o Be familiar with data protection programs

Phases of the scenario:

Motivation -1st phase (1 hour):

The trainees are organized in small groups of 3-4 people. The trainer welcomes the participants to the seminar and, after introducing themselves to each other, he/she informs them about the main purpose and the objectives of the teaching scenario. The training starts with short quiz with simple questions in order for the trainer to ascertain the level of knowledge on the topic. This is followed by a theoretical introduction on personal data theory and data protection in general and especially in the health sector.

Main Part

2nd phase (1 hour):

In the second phase of the teaching scenario, the trainer gives a lecture on the main point of data protection. Starting with the definition of personal data and the importance of data protection and then moving on to several steps that health professionals should keep in mind to protect their patient's data. Specifically, the lecture will include a brief presentation of the steps which include:

- Implementing a security management system
- Data encryption

- Backing up data

- Data monitoring and access to logs

- Implementing access control

- Conduct regular risk assessments

- Implementation of an incident response plan

- Compliance with legal and regulatory requirements

3ndphase (1 hour):

During the third phase of the teaching scenario, the trainer is going to present to the health professionals using a power point presentation some of the most popular data protection programs. The aim of this phase if to introduce to trainees some data protection programs so they can use them to make sure that their patient's data are protected. In this phase will be presented two programs, the Acronis and Polar security.

These programs where chosen because firstly **Acronis** provides backup and restoration for individual files or entire systems. Users select their files that need continuous protection so that each change to those files is also backed up and **Polar** was designed to monitor dynamic data flows and alert in real-time of any non-compliance.

Evaluation (1 hour):

Training risks of the educational scenario

Due to the dynamic and multifaceted nature of education, many unanticipated events can occur. Because of this, the experienced teacher must be proactive and foresee any unpleasant unforeseen occurrences that are likely to take place in the suggested teaching scenario in order to maintain the efficiency of the educational process.

1st Potential Training Risk

One of the risks often found in training processes is the lack of team spirit and cooperation among trainees.

Potential Solution of the 1st Potential Training Risk

A possible solution to limit this risk is for the trainer to let the trainees divide themselves into groups and in general to be flexible in allowing the trainees to organise themselves even if in the end there are groups that do not have the same members. Indeed, in this particular training process, it is not necessary for the members of the groups to be equal so that there is flexibility in the formation of the groups.

2 nd Potential Training Risk

A second risk that should be taken into account is that the training process may turn into a purely theoretical and tedious one, possibly without gaining the interest of the trainees. due to the content of the subject of the training, i.e. data protection, which is quite theoretical, this risk is particularly high.

Potential Solution of the 2nd Potential Training Risk

A possible solution to this problem is for the trainer to try to make the teaching process as interactive as possible, either by encouraging the participation of trainees by asking them questions or by incorporating interactive presentations and quizzes into the training process

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<u>**Additional resourses:**</u>

Balaban, D. (2021). Top 10 Data Protection Software Solutions for 2022. Cyberady. https://cybeready.com

MEDESK, (n.d.). Patient Data Protection Tips for Healthcare Professionals. https://www.medesk.net

Professional Evaluation and Certification Board, (2021). *Why is Data Protection Important?* https://pecb.com

SNIA, (n.d.). *What is Data Protection?* https://www.snia.org/education

World Health Organization, (2021). *The protection of personal data in health information systems – principles and processes for public health*. https://apps.who.int

Activity

Fill in the gaps with the correct word (code, loss back up, exchanging, compromise, information)

1. Patient's data include any …. that relates to an identified or identifiable patient.
2. Data protection is the process of safeguarding important data from … or …
3. Data protection in health sector is important due to the increasing need for … patient's health-related information among different health institutions.
4. Data encryption includes data in a form of …
5. Acronis provides among other the ab ability to … data.

Correct answers

1. Information
2. Compromise or loss
3. Exchanging
4. Code
5. Back up

Module 3: *"Learning to effectively choose and installing the most useful mHealth applications available"*

Title of scenario: *"Learning to effectively choose and installing the most useful mHealth applications available".*

Creator(s): *Xenia Hadjikypri*

Target Group: *Healthcare professionals*

Subject of the scenario: *Guidelines to healthcare professionals as to how to choose the best available mHealth applications and what to consider before installing.*

Module: *M3, CSI*

Duration: *3 – 5 hours*

General purpose-Learning principles: *This scenario aims to provide healthcare professionals of different backgrounds with practical instructions and guidelines for choosing the most appropriate mHealth applications to install and utilize in the line of work. It incorporates collaborative learning and teamwork activities that will promote and encourage active participation of the people involved to engage into discussions,*

support their ideas and conclude to practical suggestions as to how to best use the guidelines given.

Brief description: *This scenario explores the implementation of a training session involving healthcare professionals that desire to advance their digital skills concerning their ability to choose the most appropriate and most helpful mHealth applications and learn the considerations that need to be taken into account before the install of such an application.*

Key words: *mHealth, eHealth, mHealth applications, install, permissions.*

Requirements and appropriate learning environment: *Participants should have a basic understanding of what an application on a mobile device is. The scenario can be conducted either face to face in an appropriate setting such a conference room, either through distance learning, by using online platforms for communication and collaboration. This training session will require access to a smartphone device with internet connectivity.*

Learning objectives:

- *Obtain better digital skills concerning mobile applications in general.*
- *Learn the procedure of an mHealth application installation.*
- *Appreciate the factors that need to be taken into consideration before the installation.*
- *Learn to choose and sort the best mHealth applications available on the market.*

Learning outcomes:

After completing the teaching scenario, the participants are expected to:

- *Participants should be able to explain what an mHealth application is, its use and its importance.*

- *Participants will be able to execute the installation procedure of a mobile application.*

- *Participants will be able to estimate the risks taken when installing a mobile application and choose wisely the best ones to install, eliminating these risks as much as possible.*

- *Participants will be able to sort and choose the best mHealth applications available on the market based on their everyday job-related needs.*

Phases of the scenario:

Phase 1: Introduction to mHealth applications (1 hour)

The participants are organized in groups of 3 to 4 people. The trainer welcomes the participants to the seminar and after introducing themselves to each other, he/she informs them about the main purpose and the objectives of the teaching scenario.

Through a PowerPoint presentation the trainer gives various mHealth definitions and introduces the term mHealth applications, their role and significance. The trainer asks the participants to discuss in groups whether they already know and use such kind of applications or whether they are unfamiliar with the concept. The ones that use such kind of applications are asked to share their experiences with the rest of the group.

Once the groups have discussed with each other, the trainer asks from representatives from each group to present their experiences and thoughts, followed by a general discussion regarding mHealth applications.

Phase 2: The installation process of an mHealth application (1 hour)

During the second phase of the teaching scenario, the trainer will present during his/her PowerPoint presentation the steps and guidelines that someone needs to follow to be able to install an application successfully on their mobile device whether this device is a laptop or a smartphone. These guidelines involve only the practical aspects of the application installation process, which are the search and install steps for the application in the respective platforms.

Following the presentation, all participants will be asked to install on their mobile smartphones/laptops the application Google Fit: Activity Tracking. This application is going to be chosen as it is one of the most popular activity tracking fitness applications available now on the market with more than a hundred million installations. It is an application widely used by people that want to improve their physical condition and is also often suggested by healthcare professionals to their patients. Any participant who encounters any difficulty will be assisted either by the trainer or a colleague.

At the end of the second phase of the teaching scenario, participants are encouraged to spend around 15 minutes to use the Google fit application and navigate into its different capabilities.

Phase 3: Learning to estimate and evaluate the risks taken when installing a mobile application (1 hour)

The trainer following the successful completion of the first two phases of the training, will introduce the participants to the data and safety section that always need to be taken into account before the install of any mobile application on their devices. The trainer will guide the participants to locate this section on the platform they previously used to install Google fit. Then the participants are strongly encouraged to go through this section that deals with how developers collect and share the data given by the users. The participants are instructed by the trainer to carefully read all the information provided in this section and also select the more details button to go through in more detail the data acquired by the developer of the application when the

user accepts to install the application on their device. The participants are informed about the cases where the data required and later acquired by the application developer, interfere with their mobile's function and the user's privacy. If yes, they are strongly suggested to not install the application and search for alternatives.

Phase 4: Choosing the best mHealth applications available on the market (from 45 minutes to 1 hour)

During the last phase of the training scenario, the trainer informs the participants about the different categories of mHealth applications that exist. Based on their field of work and their interests, the participants are informed about the different options they have regarding mHealth applications and the fact that they can always search on their own about more specific options. The participants are informed about the parameters that need to be taken into account when choosing the best application such as the users' review comments, the ratings and the number of downloads.

Evaluation (1 hour):

The teaching scenario is concluded with the assessment of the participants through the completion of a short quiz exercise related to the topic of the scenario to assess the participant's understanding on the guidelines given and evaluate whether any more instructions / material is needed to be given. Each participant completes the quiz on its own and later the participants share their answers with the group and discuss possible mistakes / misunderstandings.

Training risks of the exemplary scenario:

- ***Potential training risk 1: Technical difficulties***

In the unfortunate event that the participants may encounter technical or connectivity problems with their devices these could disrupt or cancel the training session.

- *Potential solution of training risk 1*

It is necessary to provide a training setting with adequate internet connectivity and also make sure that all the participants have their own functional devices prior to the training session. In the event of a participant not having such a device, the trainer should provide beforehand all the necessary equipment to all the people participating.

- *Potential training risk 2: Limited participant engagement*

Participants may feel reluctant to engage in conversations with the rest of the people in their groups and these might affect their willingness to share their personal ideas/experiences. This could be especially true when we refer to older people that might be hesitant and unsure when using technology in their everyday routines. This could negatively affect the training session as the training is based on the method of collaborative learning.

- *Potential solution of training risk 2*

This risk could be addressed when designing the training scenario to be interactive and collaborative as possible, incorporating discussions, group activities and opportunities for participants to express their opinions and ideas without criticism. Another way to address this is to allow participants to choose their own teams if possible, involving friends or colleagues they already know. If the participants don't know each other, it is necessary for the first phase of the teaching scenario to use ice-breaking group activities that will promote and enhance the active participation of everyone.

- *Potential training risk 3: Privacy and security risks*

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Some healthcare professionals may be reluctant in adopting routines installing and using mHealth applications because of having concerns regarding privacy and security risks, such as unauthorized access to sensitive user information or breaches in data confidentiality.

- ***Potential solution of training risk 3***

During the training session it should be emphasized by the trainer that it is crucial to follow privacy guidelines and read the data and security section carefully before installing an application on any device. The trainer should also mention that if these guidelines are followed then the use of any mHealth application should not cause any concern to the user.

Additional resourses:

Tan YY, Woulfe F, Chirambo GB, Henn P, Cilliers L, Fadahunsi KP, Taylor-Robinson SD, O'Donoghue J. (2022) Framework to assess the quality of mHealth apps: a mixed-method international case study protocol. BMJ Open.

Xcertia mHealth App Guidelines 2019

https://www.himss.org/sites/hde/files/media/file/2020/04/17/xcertia-guidelines-2019-final.pdf

Alkhaldi O, McMillan B, Maddah N, Ainsworth J. (2023) Interventions Aimed at Enhancing Health Care Providers' Behavior Toward the Prescription of Mobile Health Apps: Systematic Review. JMIR Mhealth Uhealth.

Woulfe F, Fadahunsi KP, O'Grady M, Chirambo GB, Mawkin M, Majeed A, Smith S, Henn P, O'Donoghue J. (2022) Modification and Validation of an mHealth App Quality Assessment Methodology for International Use: Cross-sectional and eDelphi Studies.

mHealth Use of appropriate digital technologies for public health (2018) WHO.

https://apps.who.int/gb/ebwha/pdf_files/WHA71/A71_20-en.pdf

Activities:

1. Matching Exercise: Please match the applications with the right description of each, following research on application stores online.

Application	*Description*
Google Fit	*Application with free access to the latest medical news, expert commentary, clinical tools, drug and disease information, medical podcasts etc.*
Lifesum: Healthy Eating & Diet	*Learn and practice both basic and advanced skills that save lives quickly and easily*
Medscape	*Health monitor application that helps you keep track of your fitness goals*

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Pharmacology for Nursing 2023	Test preparation application that will help you succeed in pharmacology examinations
MediCode: ACLS, BLS & PALS	Application that helps you create a personalized nutrition and healthy eating habits (following consultation with a dietician or a relevant healthcare professional)

2. Questionnaire: *Please choose the right answer from the multiple-choice options.*

. *What is the term used to put software on a computer?*
- *Download*
- *Upload*
- *Install*
- *Uninstall*

B. *An mHealth application refers to:*
- *A mobile application regarding mobile technologies*
- *A mobile application regarding retail and shopping*
- *A mobile application regarding cultural activities*
- *A mobile application regarding access to medical information*

C. *If I want to download a mHealth application on my Apple mobile device I should visit the:*
- *The Google play store*
- *The Apple store*
- *The Google*
- *The settings on my phone*

D. *Which of the following parameters you need to consider before installing an application?*

- *The color scheme of the application profile*
- *Its catchy logo*
- *The number of high ratings*
- *Its release date*

Module 4: *Digital Medical Devices: Meeting the needs of patients, healthcare professionals, and the healthcare system*

Title of scenario: Digital Medical Devices: Meeting the needs of patients, healthcare professionals, and the healthcare system

Creator(s): Vasiliki Radaiou

Target Group: Healthcare professionals

Subject of the scenario:

Module: M4, Prolepsis

Duration: 3-5 hour

General purpose-Learning principles: This scenario's purpose is to provide healthcare professionals with information on what digital medical devices are, explore the need for their use to promote and monitor health, understand thoroughly best practices on

how to use these devices, as well as how to mitigate the different risks that arise from using digital medical devices.

Brief description: The proposed scenario addresses health professionals with varying knowledge and understanding of digital medical devices. These health professionals want to improve their knowledge of digital medical devices and how they can be of practical use to ease their workflow and relationship with the patient and provide more fluidity and independence in their workflow.

Key words: digital medical devices, medical software, digital medical device application,

Requirements and appropriate learning environment:

In order to follow this teaching scenario, health professionals should ideally have some basic knowledge surrounding some of the material; however, it is catered to all levels of knowledge. Moreover, health professionals should have basic digital skills with regards to using a smartphone, tablet, computer/laptop, and navigating the internet.

The implementation of the teaching scenario will be completed in person. The meeting room must have access to the internet and a projector or television screen to conduct the scenario. Otherwise, the training can also occur online using Teams, Zoom, Skype, Google Teams, etc.

Learning objectives:

Participants are expected to:

- *Define digital medical devices and their purpose in healthcare*
- *Analyze the need for digital medical devices for patients, healthcare professionals, and the healthcare system overall*
- *Learn about the challenges health professionals and patients may encounter when using digital medical devices and explore strategies for overcoming them*

- *Explore key recommendations, guidelines, and good practices for using digital medical devices effectively, efficiently, and safely*

Learning outcomes:

After completing the teaching scenario, participants are expected to:

- *Identify the specific reasons for the significance of digital medical devices in promoting patient care, treatment outcomes, and overrall quality of life*

- *Analyse the role of digital medical devices in empowering healthcare professionals to make data-driven decisions to improve patient outcomes*

- *Identify various types of digital medical devices*

- *Use identified resources and trainings to promote continual learning and knowledge building*

- *Recognize potential risks and safety concerns associated with the use of digital medical devices, understanding how to address them, and having risk assessment and mitigation strategies to ensure the safe and effective use of digital medical devices*

Phases of the scenario:

Phase 1: Presentation of what digital medical devices are and why they are significant for healthcare providers and patients alike (1 hour)

The trainer will welcome the participants to the seminar, introduce themselves, and inform the participants of the objectives and ideal learning outcomes following the educational learning scenario. The trainer will begin the presentation with an introduction to digital medical devices, defining digital medical devices and their

purpose in healthcare. The trainer will briefly discuss the evolution and history of these devices and the transition to digital modern digital medical devices. The trainer will also discuss generally how digital medical devices contribute to improved patient monitoring, diagnostics, and treatment. The trainer will outline how digital medical devices assist healthcare professionals in streamlining workflow by supporting data collection, analysis, and communication, as well as allows for remote monitoring and promotes preventative care.

The trainer will divide the participants into three groups and assign each group a milestone in medical device history. Each group will conduct research on the purpose of their medical device, its history and how it's adapted to modern technology, and most importantly, how patients and healthcare providers have benefited from its use. Finally, each group will summarize their findings to the rest of the participants.

Once all groups have presented their findings, the trainer will ask further about the advantages of using digital medical devices and encourage the participants to share their insights, ask questions, and engage in a dialogue about the impact of digital medical devices on patient care, healthcare professionals' workflow, and healthcare systems overall.

Phase 2: Identifying and addressing challenges with using digital medical devices for health professionals and patients (1 hour)

The trainer will present the challenges associated with using digital medical devices. This will include technical issues regarding connectivity, data accuracy, the importance of adequate training to the user to ensure effective utilization, as well as concerns related to data security and privacy, cybersecurity breaches, etc. Moreover, the trainer will present the Risk Management Framework that healthcare professionals can use to create a comprehensive risk management plan to protect patient data and their systems from cyber-attacks and other threats. The presentation

will end with how healthcare professionals can respond to their patients' concerns about cybersecurity in an effective way.

Following the presentation of the various challenges healthcare professionals and patients may encounter with digital medical devices, the presenter will divide participants to 3 groups and provide them with sample scenarios depicting a challenge outlined earlier. The participants will act out the scenarios and address the specific challenges and potential risks assigned by using the strategies identified in the presentation in order to practice this type of communication. Finally, participants will all come together at the end for a group discussion of their role-play experience and share their strategies to overcome the challenge they encountered. It is important to encourage participants to share their personal experiences with these challenges and create a dialogue on potential solutions.

Phase 3: Types of digital medical devices, their purpose, & how to use them.

The trainer will deliver a short presentation about the different digital medical devices and their purpose, including wearable devices, implantable devices, monitoring devices, as well as medical software. The presenter will discuss the different types of wearable devices available in healthcare, such as fitness trackers, smartwatches, and glucose monitors, discussing their use, benefits, and potential applications in patient monitoring, wellness tracking, and chronic disease management. The presenter will then discuss various implantable devices, including pacemakers and insulin pumps, and how these devices are used to treat medical conditions and improve patient outcomes. The presenter will then discuss monitoring devices used in healthcare, such as telehealth devices, home vital sign monitors, respiratory monitors, etc., and their role in facilitating remote patient care. Finally, the presenter will discuss medical software applications, including electronic health records and health monitoring applications, and explain how these software provide

solutions to patient care, streamline work flows, and further enable individualized data-driven care.

Following the presentation on the different types of medical devices, their purpose and use, and how one uses them, the presenter will have demonstration stations where participants can interact with wearable devices, explore the features of monitoring devices, and test medical software. The presenter will encourage participants to ask questions and engage in discussions about the devices' functionalities, usability, and their potential benefits.

Evaluation (30 min):

Following the teaching scenario, the participants will complete a short quiz that concerns the topic of the scenario in order to assess the participants' knowledge on digital medical devices, their purpose in supporting healthcare professionals and patients, their challenges, and the different types of digital medical devices. The quiz will be used to assess whether more educational material is required. Although the participants will complete the quiz individually, the answers will be discussed collectively in the group so that misunderstandings can be immediately addressed.

Training risks and solutions of the education scenario:

☐ Potential training risk 1: Technical difficulties with digital medical devices, internet, applications, etc.

Participants may encounter technical difficulties when attempting to use digital medical devices, whether the device itself is faulty, the internet connection is not strong, or applications used to support the full functionality of the digital medical device are glitching. This may impede the active engagement of participants in the scenario. Thus, it is imperative that all instructions are clearly relayed and tailored to the participant's abilities, and also teach the participants how to troubleshoot technical difficulties so that they can address these issues if they arise.

▢ Potential training risk 2: Insufficient understanding of participants' prior knowledge and experience with digital medical devices

Insufficient understanding of the participants' prior knowledge and experience with digital medical devices will result in either overly basic or overly complex content delivery. It is important to balance the need for general recommendations with the specificity required for different types of digital medical devices and healthcare settings. It is important to ensure that the participants effectively apply the key recommendations and good practices in their personal unique contexts following the training scenario.

▢ Potential training risk 3: Insufficient engagement and participation from participants

Participants may feel nervous or hesitant to share their lived experience with the collective group, resulting in an unenthusiastic or productive discussion expanding on the educational material. The information presented may overwhelm or, on the contrary, bore participants, making it difficult to retain important information regarding good practices regarding the use of digital medical devices. It is essential to foster an interactive learning environment by incorporating active group discussions and hands-on activities (role-play) that encourage participation. Assigning roles or tasks to each participant during group activities can also ensure active involvement and contribution.   The use of multimedia tools such as videos, interactive presentations, or quizzes increases participation engagement and maintains the participants' attention throughout the training.

▢ Potential training risk 4: Challenge applying this knowledge into practical life

Participants may struggle to apply the information learned in real-life scenarios, requiring additional support and guidance. Therefore, it is imperative to incorporate practical exercises or simulations that emulate real-life scenarios to allow participants

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to apply the knowledge and good practices learned in a safe environment. By providing a scenario that reflects the participants' specific healthcare setting and context, the opportunity to enhance the relevance and applicability of the training content is enforced. Moreover, this will encourage participants to share their own experiences with digital medical devices and challenges during group discussions, allowing them to learn from one another and collectively brainstorm solutions using the educational content just acquired as a foundation.

Additional resourses:

- The Future on Medical Devices

Video https://www.youtube.com/watch?v=fIU3gbVvj6E

- Short course on the Medical Device Regulation (EU) 2017/745

  Video https://www.youtube.com/watch?v=O9nV7rJMicQ

- Risk management for medical devices and ISO 14971 - Online introductory course

  Video https://www.youtube.com/watch?v=y_mD3i8EWnE

- Digital EU: Coronavirus: First EU disinfection robots arrive in hospitals

Video https://www.youtube.com/watch?v=MDoxteMbi5c

Activities

Questionnaire: Please choose the right answer from the following multiple-choice options. More than one option may be correct

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1. Which of the following is a benefit of digital medical devices for patients?

- Improved data security

- Enhanced patient outcomes and improved healthcare delivery

- Enhanced decision making due to individualized data collected

- Accessibility and affordability for patients and healthcare facilities

2. Which of the following is an example of a wearable device in healthcare?

   a) Magnetic resonance imaging (MRI) machine

   b) Electrocardiogram (ECG) monitor

   c) Electronic health record (EHR) software

   d) Digital blood glucose monitor

3. What is a potential risk associated with digital medical devices?

   a) cybersecurity threats & data breaches

   b) reduced administrative burden and streamlined workflows

   c) efficient remote patient monitoring & reduced hospital readmissions

   d) enhanced communication & coordination among healthcare professionals

4. Which of the following is a strategy for managing the risks of using digital medical devices?

   a) sharing device access credentials with unauthorized colleagues

   b) relying solely on manual record-keeping and data entry

   c) dismissing patient feedback and concerns

   d) regularly engaging in preventive device maintenance, skills building on relevant devices, and talking through concerns with patients

5. What is a significant benefit of using digital medical devices for health professionals?

a) streamlined workflow that allows for regular monitoring of patients

b) enhanced patient engagement, better communication, and adherence to treatment plans

c) reduced need for professional training and skills-building

d) decreased reliance on data-driven insights for decision making

6. What is a common challenge health professionals encounter when using digital medical devices?

a) limited access to patient data & medical history

b) ensuring continual skills building and capacity building training to remain up to date with technological advancements

c) enhanced patient safety and independence regarding self-monitoring

compatibility with existing software systems and se

Module 5: *"Learning how to create and connect to meetings on the Google*

Meet, Zoom and Microsoft Teams® platforms".

Title of scenario: *"Learning how to create and connect to meetings on the Google*

Meet, Zoom and Microsoft Teams® platforms".

Creator(s): *Gloria Venegas*

Target Group: *Healthcare professionals*

Subject of the scenario: *Guidelines to healthcare professionals as to how to conducting effective video-call services*

Module: *M5, FAY*

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Duration: 3 – 4 hours

General purpose-Learning principles: This scenario aims to provide healthcare professionals with practical guidelines for conducting video-call services. Incorporates collaborative learning and teamwork activities that will promote and encourage the active participation of those involved in video calls and apply the guidelines in simulated scenarios.

Brief description: This scenario explores the implementation of the process of conducting video-call services, focusing on platform selection, create or join a video-call, add people to the meeting, raise hand, share your screen, how to communicate with the participants through the chat messages and hang up the call. They will also learn how to choose the right platform and make high-quality real-time video calls effectively.

Key words: video-call services, communicate remotely.

Requirements and appropriate learning environment: Participants should have basic knowledge of how to access a browser to download a platform. The scenario can be conducted through distance learning, utilizing online platforms for communication and collaboration. Participants will need access to a computer or mobile device with a camera, microphone, and internet connectivity.

Learning objectives:

- *Identify suitable platforms for conducting video-calls.*
- *Appreciate the factors that need to be taken into consideration before the installation.*
- *Learn the procedure of a video-call service installation.*
- *Learn how to make high-quality real-time video calls effectively.*

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Learning outcomes:

After completing the teaching scenario, the participants are expected to:

- *Participants will be able to choose the right platform based on needs.*
- *Participants will be able to create or join a video-call.*
- *Participants will be able to add people to the meeting, raise hand, share their screen, how to communicate with the participants through the chat messages and hang up the call.*
- *Participants will be able to make high-quality real-time video calls effectively.*

Phases of the scenario:

Phase 1: Presentation of video call services (which ones exist and what possibilities they offer) (1 hour)

The trainer welcomes the participants to the seminar and, after introducing himself/herself, informs them about the main purpose and objectives of the didactic scenario. Then the trainer will present the functionalities of the video call platforms based on the power point presentation.

Next, the trainer will create 3 groups. Each group will discuss the advantages and disadvantages of communicating via video call platform.

Once each group has been discussed advantages and disadvantages of communicating via video call platform, the trainer will ask each group to present their conclusions to the other groups.

Once the groups have presented their experience, the trainer will ask each group questions such as: What are the advantages of communicating via a video call platform? What are the disadvantages of communicating via a video call platform? Do

you think it is difficult to use this type of platform? What is the biggest challenge for you? so that the representatives of each group can present their experiences and reflections, followed by a general discussion.

Phase 2: Steps on how someone can use one of these video call services (1 hour)

During the second phase of the teaching scenario, the participants organize themselves into 3 groups. each group will be assigned a video call platform: Google Meet, Zoom or Microsoft Teams®. Each group based on the pdf of unit 3 of module 5 will follow the steps to perfectly handle the video call platform they have been assigned.

Once each group has practiced with their chosen video call platform, the trainer will ask each group to present their experience using the platform to the other groups.

Once the groups have presented their experience, the trainer will ask each group questions such as What are the advantages of the platform? Is it easy to use? Have they encountered any difficulties? so that the representatives of each group can present their experiences and reflections, followed by a general discussion.

Phase 3: Communication between participants through the video call service presented (1 hour)

The trainer following the successful completion of the first two phases of the training, will make groups of 2 people so that they can put into practice what they have learnt. The trainer will assign each partner a video call platform.

Each pair will have to create or join a video call, add people to the meeting, raise their hand, share their screen, communicate with the partner via chat messages and hang up the call.

Once each pair has had that conversation, a group meeting will be held in which all participants will present their experience managing the platform. Finally, the trainer

will ask the same questions he asked in phase 2 such as What are the advantages of the platform? Is it easy to use? Have they encountered any difficulties?

The idea is for them to see the difference between what they thought they saw in theory before using the platform themselves and after making a video call.

Evaluation (30min):

The teaching scenario is concluded with the assessment of the participants through the completion of a short quiz exercise related to the topic of the scenario to assess the participant's understanding on the guidelines given and evaluate whether any more instructions / material is needed to be given. Each participant completes the quiz on its own and later the participants share their answers with the group and discuss possible mistakes / misunderstandings.

Training risks of the exemplary scenario:

- *Potential training risk 1: Technical difficulties*

Participants may encounter technical issues with their devices, internet connectivity, or video call platforms, which could disrupt the training session or hinder their ability to fully engage in the activities. It is essential to provide clear instructions and troubleshoot common technical problems beforehand to minimize the risk.

- *Potential training risk 2: Limited participant engagement*

Participants may feel reluctant to engage in conversations with the rest of the people in their groups and these might affect their willingness to share their personal ideas/experiences. This could be especially true when we refer to older people that might be hesitant and unsure when using technology in their everyday routines. This could negatively affect the training session as the training is based on the method of collaborative learning.

This risk could be addressed when designing the training scenario to be interactive and collaborative as possible, incorporating discussions, group activities and opportunities for participants to express their opinions and ideas without criticism. Another way to address this is to allow participants to choose their own teams if possible, involving friends or colleagues they already know. If the participants don't know each other, it is necessary for the first phase of the teaching scenario to use ice-breaking group activities that will promote and enhance the active participation of everyone.

- ***Potential solution of training risk 3: Lack of prior knowledge:***

If participants do not have basic knowledge of video calls, they may have difficulty understanding the concepts and guidelines presented in the scenario. This risk can be mitigated by assessing participants' prior knowledge and providing them with the necessary background information or pre-training material.

- ***Potential solution of training risk 4: Resistance to change:***

Some healthcare professionals may be resistant to adopting new technologies and moving from face-to-face meetings to video calls. Addressing potential concerns, providing evidence of benefits and offering support during training can help overcome resistance and promote successful implementation.

- ***Potential training risk 5: Privacy and security risks***

Video calls pose potential privacy and security risks, such as unauthorised access to sensitive patient information or breach of data confidentiality. Training should emphasise the importance of following privacy guidelines, using secure platforms and implementing appropriate measures to protect patient data during video calls with other professionals.

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It is crucial to anticipate and address these risks through careful planning, clear communication, adequate support, and ongoing evaluation to ensure a successful and effective training experience for healthcare professionals.

Additional resourses:

Car J, Koh G C, Foong P S, Wang C J. (2020). Video consultations in primary and specialist care during the covid-19 pandemic and beyond. BMJ; 371: m3945

https://www.bmj.com/content/371/bmj.m3945

Fahy, N., Williams, G.A. (2021). Use of digital health tools in Europe: before, during and after COVID-19. COVID-19 Health System Response Monitor Network. Policy brief 42. World Health Organization.

Activities:

1. Questionnaire: Please choose the right answer from the multiple-choice options.

1. *What is a video call in the context of healthcare?*

    1. *A phone call between healthcare professionals.*

    2. *A virtual meeting where healthcare professionals interact via video call.*

    3. *An in-person meeting between healthcare professionals.*

    4. *An email between healthcare professionals.*

2. *Which of the following platforms are commonly used for video call in the healthcare sector?*

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1. *Google Meet, Zoom and Microsoft Teams*

2. *Skype and Facetime*

3. *WhatsApp*

4. *Facebook Messenger and Instagram Video*

2. *If I want to download a video call application on my Apple mobile device I should visit?*

   1. *The Google play store*

   2. *The Google*

   3. *The settings on my phone*

   4. *The Apple store*

2. *Why is it important to double-check internet connection and equipment before starting a video call?*

   1. *To ensure a high-quality video transmission*

   2. *To prevent disruptions and interruptions during the video call*

   3. *To maintain clear audio and video communication*

   4. *All of the above*

2. *True or False: Video calls can be conducted using any mobile device with audio and video capabilities.*

   1. *True*

   2. *False*

2. *What steps to follow to create a video call with Teams?*

1. *You log in with your Microsoft Teams® account and schedule a meeting for later.* Thean, w*rite a title to identify the meeting. Assign a date and time for the meeting.*

2. *You log in with your Microsoft Teams® account and when the day of the meeting arrives, participants will enter the lobby.*

3. *You log in with your Microsoft Teams® account and when the day of the meeting arrives, the meeting is conducted normally and once the meeting is over, the caller hangs up.*

4. *You log in with your Microsoft Teams® account and when the day of the meeting arrives, participants will enter the lobby. When there are several participants, click on Admit all and they will join the call.*

Answers:

1.b) A virtual meeting where healthcare professionals interact via video call.

2.a) Google Meet, Zoom and Microsoft Teams

3.d) The Apple store

4. a) All of the above

5. a) True

6. a) You log in with your Microsoft Teams® account and schedule a meeting for later. Thean, write a title to identify the meeting. Assign a date and time for the meeting.

Module 6: *"Optimizing Video Consultations in Telehealth: Guidelines for Healthcare Professionals"*

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Title of scenario: *"Optimizing Video Consultations in Telehealth: Guidelines for Healthcare Professionals"*

Creator(s): *Žemartas Budrys*

Target Group: *Healthcare professionals*

Subject of the scenario: *Guidelines for conducting effective video consultations in telehealth*

Module: *M6, Xwhy*

Duration: *3-5 hours*

General purpose-Learning principles: *This scenario aims to provide healthcare professionals with practical guidelines for conducting video consultations in telehealth. It incorporates collaborative learning principles, encouraging participants to actively engage in discussions and apply the guidelines in simulated scenarios.*

Brief description: *This scenario explores the process of conducting video consultations in telehealth, focusing on preparation, platform selection, and execution. Participants will learn about the VVAA steps (Virtual appointment availability, Virtual consultation format, Awareness on technical issues and challenges, and Assurance of user-friendly experience) to prepare for video consultations. They will also gain insights into choosing the appropriate platform and executing video consultations effectively.*

Key words: *Video consultations, telehealth, telecommunication*

Requirements and appropriate learning environment: *Participants should have a basic understanding of healthcare delivery and patient care. The scenario can be conducted through distance learning, utilizing online platforms for communication and collaboration. Participants will need access to a computer or mobile device with a camera, microphone, and internet connectivity.*

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Learning objectives:

1. *Define video consultations and their role in telehealth.*

2. *Understand the VVAA steps for preparing for video consultations.*

3. *Identify suitable platforms for conducting video consultations.*

4. *Demonstrate proficiency in executing video consultations effectively.*

5. *Apply feedback and continuous improvement strategies to enhance video consultations.*

Learning outcomes:

1. *Participants will be able to explain the concept and importance of video consultations in telehealth.*

2. *Participants will be able to implement the VVAA steps to adequately prepare for video consultations.*

3. *Participants will be able to select appropriate platforms for conducting video consultations based on patient and organizational needs.*

4. *Participants will demonstrate proficiency in executing video consultations, including scheduling appointments, addressing technical issues, and maintaining patient engagement.*

5. *Participants will integrate feedback from patients to improve their video consultation skills and enhance the patient experience.*

Phases of the scenario:

Phase 1: Introduction to Video Consultations in Telehealth (from 30 minutes to 1 hour)

- *Definition and significance of video consultations in telehealth*

- *Discussion on the role of telecommunication technologies in connecting healthcare professionals*

- *Exploration of the benefits and challenges of video consultations*

Phase 2: Preparation for Video Consultations (from 30 minutes to 1 hour)

- *Introduction to the VVAA steps: Virtual appointment availability, Virtual consultation format, Awareness on technical issues and challenges, and Assurance of user-friendly experience*

- *Collaborative exploration of each step and its importance*

- *Group discussions and case studies to apply the VVAA steps*

Phase 3: Choosing the Platform for Video Consultations (from 45 minutes to 1 hour)

- *Overview of popular video conferencing platforms (e.g., Google Meet, Microsoft Teams, Zoom)*

- *Discussion on the factors to consider when selecting a platform*

- *Hands-on practice with different platforms and their features*

Phase 4: Execution of Video Consultations (from 45 minutes to 1 hour)

- *Best practices for scheduling appointments and ensuring punctuality*

- *Preparing necessary information and reviewing patient details before the consultation*

- *Creating a conducive environment for video consultations (quiet space, stable internet connection)*

- *Role-playing exercises and simulations of video consultations*

Phase 5: Feedback and Continuous Improvement (from 15 to 30 minutes)

- *Importance of patient feedback in improving video consultations*

- *Strategies for soliciting and utilizing feedback effectively*

- *Group discussions on implementing improvements based on feedback*

Evaluation (from 15 to 30 minutes): *a quiz at the end of the scenario to assess participants' understanding of the guidelines and best practices for video consultations. Additionally, participants can be evaluated based on their performance in simulated video consultations and their ability to incorporate feedback into their practice.*

Training risks of the exemplary scenario:

Training risks related to this exemplary scenario may include:

1. *Technical difficulties: Participants may encounter technical issues with their devices, internet connectivity, or video conferencing platforms, which could disrupt the training session or hinder their ability to fully engage in the activities. It is essential to provide clear instructions and troubleshoot common technical problems beforehand to minimize the risk.*

2. *Lack of prior knowledge: If participants do not have a basic understanding of video consultations or telehealth, they may struggle to grasp the concepts and guidelines presented in the scenario. Assessing the participants' prior knowledge and providing necessary background information or pre-training materials can mitigate this risk.*

3. *Limited engagement: Video-based training scenarios may face challenges in capturing participants' attention and maintaining their engagement throughout the session. It is crucial to design the scenario in an interactive and collaborative manner, incorporating activities, discussions, and opportunities for participants to apply the guidelines in realistic scenarios.*

4. ***Inadequate practice opportunities:*** *Without sufficient practice and feedback, participants may not develop the necessary skills and confidence in conducting video consultations effectively. Providing ample opportunities for participants to engage in role-plays, case studies, or simulated video consultations can help mitigate this risk and enhance their learning experience.*

5. ***Resistance to change:*** *Some healthcare professionals may be resistant to adopting new technologies or transitioning from traditional face-to-face consultations to video consultations. Addressing potential concerns, providing evidence of the benefits, and offering support during the training can help overcome resistance and promote successful implementation.*

6. ***Privacy and security risks:*** *Conducting video consultations introduces potential privacy and security risks, such as unauthorized access to sensitive patient information or breaches in data confidentiality. Training should emphasize the importance of following privacy guidelines, using secure platforms, and implementing appropriate measures to protect patient data during video consultations.*

It is crucial to anticipate and address these risks through careful planning, clear communication, adequate support, and ongoing evaluation to ensure a successful and effective training experience for healthcare professionals.

<u>Additional resourses:</u>

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Quiz: Guidelines on Video Consultations

1. *What is a video consultation in the context of healthcare?*

    1. *A phone call between healthcare professionals and patients*

    2. *An in-person meeting between healthcare professionals and patients*

    3. *A virtual meeting where healthcare professionals and patients interact via video conferencing*

    4. *A written exchange of messages between healthcare professionals and patients*

2. *What are the VVAA steps for preparing for video consultations?*

UNIHEAL+ - Contextualizing UNIversal HEALth resilience through health professionals' re-skilling for digital health services provision

1. *Virtual appointment availability, Virtual consultation format, Awareness on technical issues and challenges, Assurance of user-friendly experience*

2. *Virtual assessment, Video conferencing setup, Audio quality check, Assuring privacy*

3. *Video conferencing platform selection, Audio-visual setup, Appointment scheduling, User training*

4. *Video consultation planning, Virtual patient engagement, Technical troubleshooting, Availability confirmation*

2. *Which of the following platforms are commonly used for video consultations?*

   1. *Skype and Facetime*

   2. *Google Meet, Microsoft Teams, and Zoom*

   3. *WhatsApp and Viber*

   4. *Facebook Messenger and Instagram Video*

2. *Why is it important to double-check internet connection and equipment before a video consultation?*

   1. *To ensure a high-quality video transmission*

   2. *To prevent disruptions and interruptions during the consultation*

   3. *To maintain clear audio and video communication*

   4. *All of the above*

2. *What should healthcare professionals do at the end of a video consultation?*

   1. *Provide next steps and instructions to the patient*

2. Schedule a follow-up appointment if necessary

3. Request feedback from the patient

4. All of the above

2. How can healthcare professionals improve video consultations based on patient feedback?

   1. Actively listen to patient feedback and address any concerns or issues

   2. Continuously update and improve their technical knowledge and skills

   3. Enhance patient engagement and communication during video consultations

   4. All of the above

2. True or False: Video consultations can be conducted using any mobile device with audio and video capabilities.

   1. True

   2. False

2. Which of the following is NOT a best practice for conducting video consultations?

   1. Choosing a quiet and well-lit environment for the consultation

   2. Keeping the camera at eye level for better eye contact

   3. Minimizing distractions and interruptions during the consultation

   4. Using a speakerphone instead of a headset for better audio quality

2. Why is it important to familiarize yourself with the patient's concerns and needs before a video consultation?

1. *To build trust and credibility with the patient*

2. *To provide personalized and effective healthcare recommendations*

3. *To ensure a patient-centered approach during the consultation*

4. *All of the above*

2. *Which of the following is an appropriate way to solicit patient feedback after a video consultation?*

   1. *Sending a post-consultation survey via email*

   2. *Asking the patient directly for feedback during the consultation*

   3. *Providing a feedback form on the healthcare professional's website*

   4. *All of the above*

Answers:

1. *c. A virtual meeting where healthcare professionals and patients interact via video conferencing*

2. *a. Virtual appointment availability, Virtual consultation format, Awareness on technical issues and challenges, Assurance of user-friendly experience*

3. *b. Google Meet, Microsoft Teams, and Zoom*

4. *d. All of the above*

5. *d. All of the above*

6. *d. All of the above*

7. *a. True*

8. *d. Using a speakerphone instead of a headset for better audio quality*

9. *d. All of the above*

10. *d. All of the above*

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