

Module 5

Communication and connection with a health professional



HEAL
E-HEALTH LITERACY



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Imprint

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Learning Outcomes

After this training you will be able to:

1. recognize the value of telecommunication technologies and services used to enhance mental and physical health at a distance.
2. support the utilization of telehealth technologies.
3. understand the digital needs of low digital skills adults.
4. understand how to assist adults with low digital skills to integrate telemedicine practices in their everyday life.



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Activity No. 1

The eye, the hand and the ears

- **Steps:**
- Divide into groups of 3: One will become the Eye, one the Hand, and the rest the Ears.
- The first to enter is the Eye to whom you will provide the picture (Annex A) and ask him to memorize as much information as possible, because he will have to explain what he saw to the Ears without being able to see them or use gestures, only via speech.
- Give the Eye 1 minute to see the picture and remember as many details as possible.
- The rest will be waiting outside until you ask someone from the Ears to join. They are free to select their order of entrance, but the Hand should enter at the end.
- Once 1 minute has passed, remove the picture from a place with visible access and ask the Eye and the Ear to sit in two chairs leaning against each other, so they cannot see each other.



Activity No. 1

The eye, the hand and the ears

- The Eye will have 1 minute in its possession to explain what he saw by using as many descriptive details as possible.
- The Ears should memorize the details given by the Eye, but they are not allowed to keep notes or draw what they are being told. Also, they can only say and ask the Eye “Can you describe it again?”.
- When the time is up, the Eye has to get up and stay in a corner of the room without distracting the procedure or giving clues to the rest participants of the activity. The same applies to everyone who completes the task.
- Now you can ask another Ear to enter the room, sit against the previous Ears who received the picture information orally, and repeat the process.
- The same rules apply among Ears as well: a) 1 minute to describe the information about the picture they heard b) notes are prohibited and c) the only question allowed is “Could you please repeat?”.



Activity No. 1

The eye, the hand and the ears

- When the last Ear is over, ask the Hand to enter the room, sit back-to-back with the last Ears who heard the description of the picture, and repeat the process one last time.
- The same rules apply between the Ears and the Hand: a) 1 minute to describe the information about the picture Ears heard b) notes are prohibited and c) the only question allowed is to ask the one who describes repeating again.
- When time is up, give A4 paper and markers and ask the Hand to draw what he heard. Give 2 minutes.
- Show to the rest what the Hand has drawn. Is that what they had in their minds?
- Now reveal the original picture.





Telemedicine and Telehealth in 2 Minutes | What is Telemedicine? | Telemedicine | Telehealth

Source: <https://www.youtube.com/watch?v=hWWlez8j3og>

Lecture 1.

Telehealth

- Telehealth involves the use of electronic information and telecommunication to facilitate long-distance clinical health care, the education of patients and health care professionals, public health, and health administration.
- What services are usually provided under Telehealth umbrella?
 - Video-conferencing
 - Exchange of images, pictures, video, or documents
 - Remote patient monitoring regarding health and medicine data
 - Mobile health (mHealth)



Telemedicine

- Telemedicine refers to healthcare services that are delivered virtually, through information and communications technology (ICT), when health professionals and patients are not in the same location.
- Telemedicine is the interaction between patients and clinicians to support diagnosis, treatment, or disease prevention.
- Medical data and information are transmitted securely through text, sound, images or other forms needed for prevention, diagnosis, treatment, and follow-up of patients (EU Commission, 2008).
- So far, telemedicine solutions are most common in cardiology, pulmonology, endocrinology and psychotherapy.



Is telemedicine a recent need?

500 BCE: Patients receive medical advice from doctors using representatives in ancient Athens and Rome.

19th century: The invention of the electric telegraph and telephone allow doctors and patients to communicate remotely.

1959: University of Nebraska uses two-way interactive television to transmit neurological examinations to students.

1980s: Standards for the digital storage of medical images allow radiology images to be transmitted via a dedicated cable.

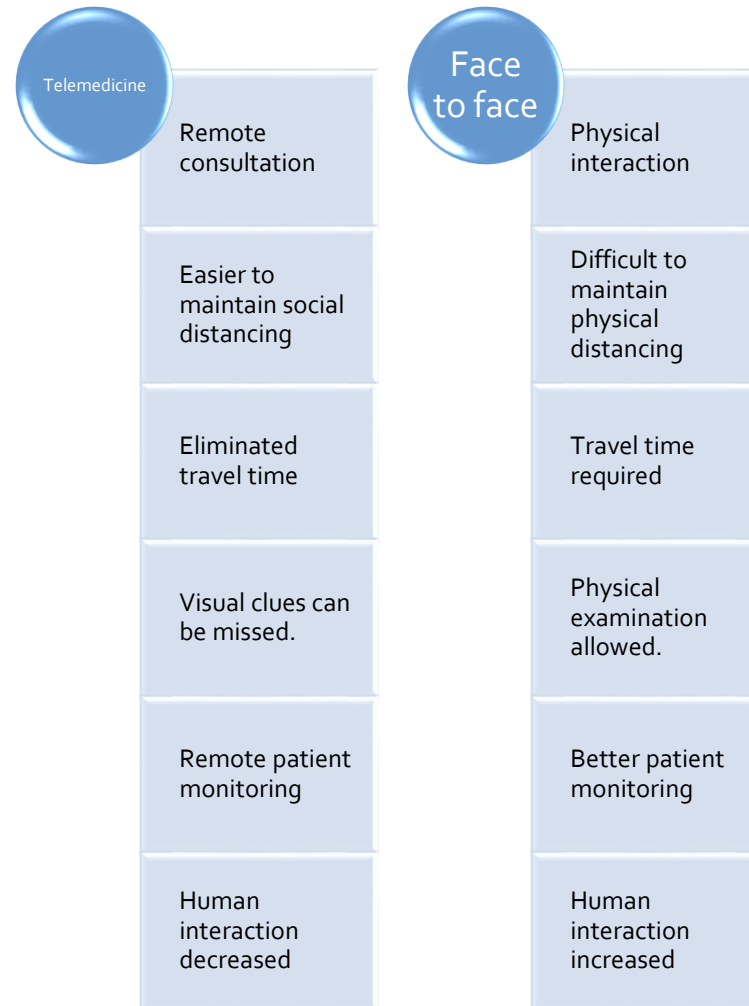
2010s: The extended use of the Internet allows telemedicine to evolve along with regulations and standards.

European Commission, 2018



Source: www.freepik.com

What is the difference between Telemedicine and Face to Face Medicine?

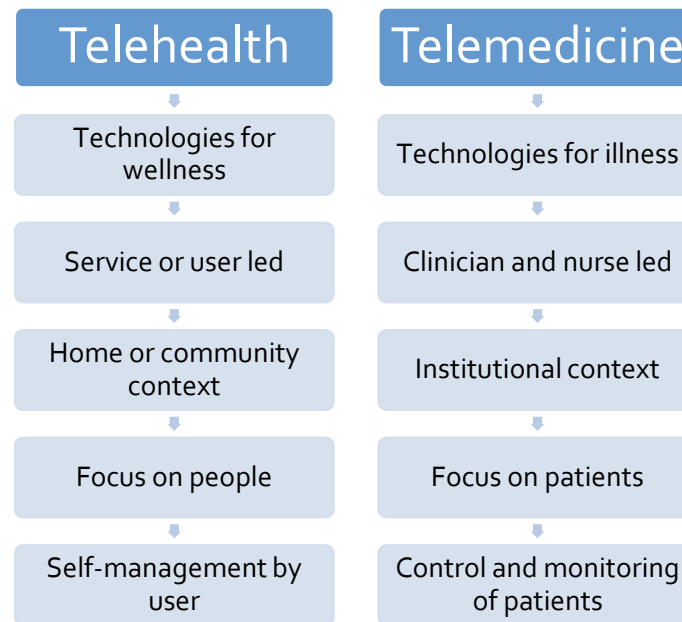


(Iyengar et al., 2020)

What is the difference between telehealth and telemedicine?

Telehealth > Telemedicine

- All telemedicine is telehealth, but all telehealth is not telemedicine.
- Telehealth includes non clinical services (f.i. administrative tasks and educational aspects), whereas telemedicine is specified to remote clinical services (f.i. monitoring).



(Fisk et al., 2012)



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Source: www.freepik.com

Telehealth's Pros

- Telehealth makes basic and uncommon health services accessible to residents of hardly accessible or totally inaccessible areas (f.i. islands and other remote areas).
- Telemedicine allows health care professionals to follow up with patients and ensure everything is going well. No matter if they're using a rare remote patient monitoring system, or having a typical video call to address questions, telemedicine can lead to better quality of life.



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Telehealth's Pros

- Technological advances, which support the use of big health data analytics and artificial intelligence, may be the vehicle for reaching Health 4.0.
 - Fast Internet connections covering a large area of Europe (f.i. 5G), allowing live and continuous video streaming (which is necessary for many telemedicine applications).
 - The majority of smartphones have already installed an application that can monitor the user's physical activity.
 - At the same time, a lot of people already wear smartwatches that can accurately monitor and feed data to a medical professional. This could be extremely useful for chronic disease patients (European Commission, 2018).
- Moreover, studies suggest that technology empowers patients (Calvillo et al., 2015) and increases their engagement.



Telehealth's Cons

- However, there are risks regarding the healthcare data privacy, as the exposure of data in networks increases, that may be eliminated by strong encryption procedures.
- The application of telehealth and telemedicine practices are highly depended on the country's level of digitalisation, including the digital skills of both patients and health professionals. Moreover, some cultural conditions may create a barrier against the implementation of telemedicine applications.
- Last, but not least, there are some challenges regarding the European legal framework, which should be common (Raposo, 2016).



Other barriers against telehealth establishment

Cultural conditions referring to a set of shared values, goals and practices, characterising the environment within which telemedicine is deployed and taken up (risk-taking vs. risk aversion of practitioners and patients)

Regulatory and policy conditions, i.e. regulations and the means to enforce them, usually established at national level to regulate the healthcare sector and associated activities.

Social security conditions, e.g. lack of incentives for doctors to provide care via telemedicine solutions; no clear support policy from social security providers for telemedicine; difficulties in implementing cross-border healthcare projects because of national barriers

Industrial and technical conditions referring to the availability, presence of medical technology in the global telemedicine market, the presence and the quality of the technological infrastructure, systems, networks and information flows.

Knowledge conditions referring to a system of higher-education and research organisations, their ability to deliver a skilled workforce relevant to the uptake and development of telemedicine solutions.

Financial conditions referring to a system of players and vehicles providing funds and incentives to support the deployment and uptake of telemedicine (availability of budgetary allocation, grants from foundations, loans/borrowing etc.

Market conditions referring to factors influencing the exchange of medical technology goods and services, interaction of supply and demand, and the presence of competition.

The barrier of digital literacy

- It goes without question that all people with the European Union do not share the same level of digital competencies.
- However, their inclusion in telehealth and telemedicine practices, could easily be managed, by building some basic skills, that could improve their confidence regarding IT.
- In fact, there are some European funded project, which are trying to promote digital inclusion of low skilled adult, like [DInSAd](#), [ALL DIGITAL AISBL](#), etc.



Activity 2

Unpr(e)dictable loop

- **Steps:**

- Divide participants into groups of 3 (with 4 members each maximum) in a way that participants will be in the same group.
- A person from each group chooses a card with scenario.
- At the same time, the rest members of the group randomly choose 2 cards showing the threats that could arise and burden the use of telehealth services in practice.
- The groups are told to see only the card with the case, and not the other 2 with the problems. These threat cards are left aside.
- The groups take approximately 15 minutes to reflect on the scenario randomly chosen, and brainstorm to find a way to resolve the problem presented.
- The group leader (that will be assigned by the group members) of each group has to share briefly with all participants the solution they suggest
- The groups, one by one, are told to open the other 2 cards left aside, so far.
- After approximately 10 minutes, groups have to come up with another solution that takes into account the problems that arose.
- Finally, the group leader has to present the final resolving approach.





Source: www.freepik.com

Lecture 2.

Some Electronic cross-border online health services

- **ePrescription and eDispensation** allows EU citizens to have their medication in a pharmacy located in any European country. This happens after the online transfer of a digital prescription from their home country to the country of travel.
- **Patient Summaries** inform on crucial health related issues (f.i. allergies, medication, previous illness and surgeries, treatment plans). This project is part of Health Record, a database, providing health care professionals with essential information, which will later include **medical images, lab results and hospital discharge reports**.



Some international and country – specific, online health services

- www.bookingclinic.com
 - Booking Clinic is a global platform connecting patients with Clinics and Doctors, informing on health care professionals, services and fees, and offering direct booking.
 - Bookingclinic makes the health care system extrovert by providing new digital services to patients who save time and money and gain easy access to Clinics in their country and abroad.
 - Booking clinic currently operates in Greece and Cyprus.
- www.derma2go.com
 - Derma2go is an online platform connecting patients with dermatologists who carry out an online diagnosis within 24 hours. Patients can also have a referral for an in-person consultation and medication delivered to their homes.
 - Derma2Go currently operates in Switzerland, Germany, Austria and Spain.



Some international and country – specific, online health services

- www.doctoranytime.gr
- Doctoranytime is an online platform through which health professionals showcase their profiles and services they offer, but also their availability for appointments.
- Users can also cancel their appointments, see all the doctoranytime services they have used, review the professional who attended them, receive newsletters on medical matters that interest them, and submit questions to be answered by medical staff by chat.
- Moreover, the platform offers the doctoranytime chat service, via which patients can contact available doctors and get reliable answers to basic medical questions, without needing to make an appointment with a doctor.
- Doctoranytime currently operates in Greece, Mexico, Colombia, Ecuador and Brazil.



Some international and country – specific, online health services

- www.atlas.app
- Atlas is an online platform for mental health and well-being available to B2B and B2C users.
- More than 200 professionals are available on the platform - psychotherapists, psychiatrists and psychologists, as well as coaches, nutrition specialists and parenting counsellors.
- Corporate users gain access by subscribing their employees to healthcare packages offered by health care providers in Romania.
- Atlas currently operates in Romania.
- www.mediquo.com
- MediQuo is a chat-based app specialised in health, giving professionals time control, incorporating patient medical history and phone privacy.
- Allowing also video and audio communication. It is a place for discussion, appointments or medical consultation with your doctor or any new health professional.
- Also includes immediate 24/7 medical response and a network, for health information and professional discovery.
- MediQuo currently operates in Spain.



Activity No. 3

1st Sub-Activity

E-healthy navigation

- The module instructor will give a short presentation and navigation in two different telehealth platforms (www.bookingclinic.com, www.doctoranytime.gr) for 10 minutes.
- Then groups, as divided into previous activities, will be given the task: the creation of a list of pros and cons for each platform.
- Then participants will take approximately 5 minutes to have a hands-on experience, aiming to identify the pros and cons of each platform.
- When the time is finished, participants will take 5 minutes to list the traits found.
- The group leader of each group will present the results and all participants together will take 10 minutes to find what was common in the lists.



Lecture 3.

Near future technologies

- Having realized the significance of telehealth, virtual and augmented reality can bring more in its evolution and adaptation in everyday practice and it can take it to a next level.
- So far, virtual reality (VR) is used in **surgical procedures, medical visualization** and consultation, **neuropsychological assessment and rehabilitation, psychotherapy** (Galunder, 2018)
- Some of their advantages are: improved services and results because of VR accuracy, resource savings (especially during trainings).



Near future technologies



Virtual Reality for Surgical Planning

Source: <https://www.youtube.com/watch?v=myU58xuvslU>



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Activity No. 3

2st Sub- Activity

E-healthy navigation

- The module instructor browses the quiz that is made for this activity through www.kahoot.it (<https://play.kahoot.it/v2/lobby?quizId=5fbbc66c-e40b-49e2-afd2-2a07224f54a6>)
- A team member from each group gets access to the quiz by scanning a QR code or by filling in the code needed.
- Group members sit close to one another, as they will have to use only one phone to answer the questions, shown on the projector.
- The instructor starts the quiz, consisting of 20 multiple-choice and true or false questions.
- Each question must be answered within 20 seconds. The instructor motivates group members to elaborate on their choice and justify the areas that once made them choose it, as some questions have more than one correct answer.
- As the questions, the answers, and the discussions unravel, a competitive, yet funny, feeling motivates participants to get more points and win.



Assessment

There are two basic methods of assessment, the direct and the indirect.

- In the **Direct Assessment** the trainer reviews the work and the outcomes that learners complete and present directly from the training. Quizzes, exams, evaluations, are examples of Direct Assessment.
- In the **Indirect Assessment** the trainers tries to collect learning outcome data through Groups Discussions, Reflection Groups, etc.



Quizzes

1) Telehealth emphasizes on wellness, whereas telemedicine on therapy.

a) **True**

b) False

2) Private companies have already invested in Telemedicine Platforms, after realizing its significance.

a) **True**

b) False

Quizzes

- 1) Telehealth emphasizes on wellness, whereas telemedicine on therapy.
 - a) **True**
 - b) False

- 2) Please choose the incorrect answer:
 - a) **So far, laws of European countries are common regarding telemedicine.**
 - b) There is solid evidence, that technology boosts patients' engagement in therapy.
 - c) Insufficiency of digital skills is a barrier of telemedicine's consolidation within the European union.

Quizzes

3) Can you explain the differences between telehealth and telemedicine in a few words? (maximum 100 words)

4) Please fill in the blank. Select from the list: ePrescription, digital skills, European Union,

The significance of telehealth and telemedicine have already been recognized by the _____. Apart from projects aiming to cultivate _____, there are cross-border databases, like

_____.

(European Union, digital skills, ePrescription)

Debriefing questions

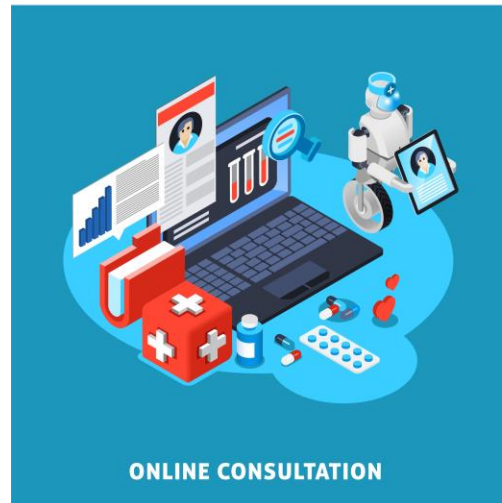
- 1) From your point of view, how the residents of your region could be benefited from the applications of telehealth and telemedicine?
- 2) What health services providers of your region could do in order to attract more telehealth applications users?
- 3) What should happen so more people gain health-related digital competencies?



POCKET DOCTOR



ONLINE PRESCRIPTION



ONLINE CONSULTATION



MEDICAL TECHNOLOGY

Source: www.freepik.com

Further Reading

- Silas Olsson, Andreas Lymberis & Diane Whitehouse (2004) European Commission activities in eHealth*, International Journal of Circumpolar Health, 63:4, 310-316
- <https://biolegis.com/wp-content/uploads/2021/09/EU-Legal-Framework-on-Telemedicine.pdf>
- <https://digitalhealtheurope.eu>



Bibliography

- Galunder, S. S., Gottlieb, J. F., Ladwig, J., Hamell, J., Keller, P. K., & Wu, P. (2018, May). A VR ecosystem for telemedicine and non-intrusive cognitive and affective assessment. In 2018 IEEE 6th International Conference on Serious Games and Applications for Health (SeGAH) (pp. 1-6). IEEE
- European Commission. (2018). Market study on telemedicine [Review of Market study on telemedicine]. Publications Office of the European Union.
- Fisk, Malcolm & Rudel, Drago & R, Roze. (2011). Definitions of Terms in Telehealth. Informatica Medica Slovenica. 16. 28-46.
- Iyengar, Karthikeyan & Jain, Vijay. (2020). ApolloMed- COVID-19 and role of Telemedicine in Health care in India. Apollo Medicine. 10.4103/am.am_62_20.
- Matamala-Gomez M, Bottiroli S, Realdon O, Riva G, Galvagni L, Platz T, Sandrini G, De Icco R and Tassorelli C (2021) Telemedicine and Virtual Reality at Time of COVID-19 Pandemic: An Overview for Future Perspectives in Neurorehabilitation. Front. Neurol. 12:646902.
- Raposo V. L. (2016). Telemedicine: The legal framework (or the lack of it) in Europe. GMS health technology assessment, 12, Docoz. Calvillo, J., Roman, I., & Roa, L. M. (2015). How technology is empowering patients? A literature review. Health Expectations, 18(5), 643-652.

