Justyna Kięczkowska

Institute of International Relations of the Maria Curie-Skłodowska University
E-mail: justyna.kieczkowska@mail.umcs.pl
ORCID: https://orcid.org/0000-0002-9395-2363

Liliana Węgrzyn-Odzioba

Institute of International Relations of the Maria Curie-Skłodowska University
E-mail: liliana.wegrzyn-odzioba@mail.umcs.pl
ORCID: https://orcid.org/0000000238978843

ONLINE CONSULTATION – OPPORTUNITY OR THREAT TO HEALTH SECURITY

Abstract: Online consultation, as a form of remote medical consultation, has gained popularity, especially in the era of the COVID-19 pandemic, offering patients convenient and fast access to healthcare. On the one hand, tele-portfolios allow for the continuation of medical care without the need for the patient to be physically present in the medical facility, which reduces the risk of infection and allows for a faster response to health problems. In addition, they improve the accessibility of specialists, especially in rural areas and for people with limited mobility. On the other hand, online consultation comes with challenges, such as the difficulty of accurate diagnosis without a physical examination, the risk of misjudging health conditions, and issues related to the privacy and security of digitally transmitted medical data. The article analyses these risks and presents best practices and recommendations to minimise the risks, such as the use of advanced security technologies, training for medical staff and appropriate handling procedures. The article concludes that online consultation can represent a significant opportunity for the healthcare system, provided that it is implemented with appropriate security measures and professional ethics to ensure high-quality service delivery and patient protection.

Keywords: online consultation, health security, health system, patient.

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INTRODUCTION

In recent years, telemedicine, and in particular online consultation, has become an integral part of the healthcare system worldwide, including in Poland. Online consultation, defined as a remote medical consultation carried out by means of telecommunication technologies, allows patients to receive medical advice without having to be physically present in the doctor's office. The development of information and communication technologies and the growing demand for efficient and accessible healthcare have contributed to the rapid growth in popularity of online consultation. The COVID-19 pandemic significantly accelerated the adoption of online consultation, especially in Poland. The reduction of face-to-face interpersonal contacts, closing the healthcare system to direct patient contact, encouraged the introduction of alternative forms of healthcare delivery. Online consultation often proved to be the only form of provision in the context of ensuring continuity of healthcare, especially for patients with chronic diseases, the elderly and residents of rural and hard-to-reach areas. Despite the benefits, online consultation also brings with it a number of challenges and potential risks that can affect patient health safety. Lack of face-to-face contact, diagnostic limitations, technical issues and risks related to privacy and data security are just some of the issues that require detailed analysis. The aim of this article is to analyse whether online consultation represents an opportunity or a threat to patient health safety. By reviewing the available data and literature, we will discuss both the benefits and potential risks of online consultation. In particular, the focus is on aspects related to healthcare accessibility, quality of diagnosis, data security and acceptance of this form of consultation by both patients and physicians. The findings presented can help to better understand the role of telereading in the modern healthcare system and identify directions for further development and potential areas that require additional research and regulation.

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ONLINE CONSULTATION – DEFINITIONS

Online consultation is a form of telemedicine that involves the provision of medical advice remotely using telecommunications technology. It is defined as "a remote medical consultation between a patient and a physician or other health professional via electronic communication means such as telephone, video conferencing or online platforms" (Smith, 2020). Online consultation can take different forms, depending on the technology used and the specifics of the consultation. The most common types of telehealth consultations are telephone consultations: this is the simplest form of telehealth, involving a telephone conversation between patient and doctor. This type of consultation is widely available and easy to conduct, but has diagnostic limitations due to the lack of visual assessment of the patient (Brown, 2019). Another type is video consultations. Tele-consultations delivered via videoconferencing, which allow visual assessment of the patient and a more interactive consultation. Through the use of cameras and microphones, doctors can conduct more detailed medical interviews and observe the patient (Jones & Miller, 2019). Asynchronous consultations are also gaining popularity. Online consultations implemented through online platforms where patients can send their symptoms, questions and test results to a doctor who responds at a convenient time. These types of consultations are convenient for patients, but may delay response times to urgent health problems (Lee & Kim, 2019). In the Polish legislation and health care system, online consultation is regulated in several key aspects. The definition of online consultation and the rules for its use are mainly derived from the legislation on telemedicine and health services. In Poland, online consultation is defined and regulated by several legal acts, among others, the Act on Medical Activity of 15 April 2011 (Journal of Laws, 2011, no. 112, item 654), as amended. It introduced the basic regulations on telemedicine, including online consultation. According to this law, health services can be provided by means of electronic communication. In turn, the Regulation of the Minister of Health of 12 August 2020 (Journal of Laws, 2020, item 1395) sets out in detail the rules for the provision of online consultation. This document defines the online consultation as 'a health care service

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provided with the use of information and communication systems or communication systems that enable communication at a distance between a patient and a doctor or other authorised medical professional'. In Polish law, the key elements of the definition of online consultation should also be set out. Firstly, it is a health service. Online consultation is a form of health benefit, which means that it is a service provided to preserve, save, restore or improve the health of a patient.

The manner in which online consultation is implemented is through ICT systems or communication systems. Online consultation must be implemented through ICT systems (such as the Internet, e-Health platforms) or communication systems (e.g. telephone). It is a form of distance communication, so a key element of tele-treatment is the ability for a patient and a doctor or other authorised health professional to communicate at a distance, without the patient having to be physically present in a medical facility. Medical records regulations are also an important element. Online consultations must be properly documented, just like traditional visits. The medical record should contain information about the course of the tele-treatment, the doctor's recommendations and any prescribed medication.

Polish law also defines the rules for the proper implementation of the online consultation. And in this aspect, it is crucial to specify the practical conditions and requirements. According to Polish regulations, online consultation may be provided by doctors and other authorised medical professionals who are qualified and authorised to practise their profession in Poland. Prior to the provision of an online consultation, the patient must give his or her consent to this form of consultation. The consent may be given orally or in writing, and its form should be properly documented. Online consultation must be carried out in a way that ensures the security and confidentiality of the patient's medical data. The ICT and communications systems used for tele-lectures must meet certain security standards in accordance with data protection legislation (RODO). It is important that the systems used for online consultation ensure that the quality of the connection is adequate so that the consultation can run smoothly. Each online consultation must be properly documented in the patient's medical history. The documentation

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should include information about the course of the online consultation, the diagnosis made, the medical recommendations and the medication prescribed. The documentation of the online consultation must be kept in accordance with the applicable legislation on the protection of personal data and medical records. Doctors and other medical staff are obliged to maintain the confidentiality of the information obtained during the online consultation, in accordance with the applicable legislation on medical confidentiality. In emergency situations where online consultation is not sufficient to provide adequate medical care, the patient should be advised to contact a medical facility directly or call for medical assistance.

If, for technical or other reasons, online consultation cannot be provided, the patient should be provided with information on alternative forms of obtaining medical assistance (*ibidem*). The definition and principles of providing online consultation in Poland are precisely defined by current legal regulations, which aim to ensure the efficiency and safety of this form of medical service provision. Online consultation, as a remote medical consultation carried out by means of ICT or communication systems, enables patients to obtain medical advice without the need for physical presence in a medical facility.

As of 16 March 2021, restrictions have been placed on the provision of online consultation in primary care in Poland by decree of Minister Adam Niedzielski.[1]

[1] According to the referenced organisational standard for online consultation in primary care, from 16 March 2021, there shall be a restriction of the possibility of performing online consultation : in cases where the patient or his/her legal guardian has not consented to the provision of a service in the form of a online consultation (excluding the issuance of a prescription necessary for the continuation of treatment and an order for the supply of medical devices as a continuation of the supply of medical devices, if this is justified by the patient's state of health reflected in the medical records and excluding the issuance of a certificate); during the first visit carried out by a doctor, nurse or midwife of the Primary Health Care, indicated in the declaration of choice referred to in art. 10 of the Act of 27 October 2017 on Primary Health Care; in connection with a chronic disease in the course of which there has been a worsening or change in symptoms; in connection with a suspected malignant disease; for children under 6 years of age in addition to control advice

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The legal basis for online consultation in Poland sets out in detail the rules for the organisation and implementation of online consultation. These regulations define who is authorised to provide online consultation, how it should be conducted and what technical and organisational requirements must be met. The key elements of the regulations are the qualifications of the medical personnel, the patient's consent, technical preparation, medical documentation and the protection of personal data. Online consultation is used in many areas of medicine, including primary care, chronic disease management, mental health and specialist care. With online consultation, patients in remote locations, those with limited mobility and patients requiring constant monitoring can receive the medical care they need without frequent visits to health facilities (Patel & Jackson, 2022).

Online consultation, of course, offers numerous benefits, including increased accessibility to healthcare, time and cost savings, and increased efficiency when it comes to administrative activities: exemptions, prescriptions, referrals. The data presented in the table illustrate how frequent the use of online consultation is.

Year	Number of online consultations in all types of services	Number of online consultations in POZ
2021	58 662 365	45 585 229
2022	28 513 421	20 961 176
2023	21 220 761	16 358 236
01.–03.2024	5 334 782	4 220 330

Source: Ezdrowie.gov.pl (2024).

during treatment, determined by personal examination of the patient, which can be provided without a physical examination; by a doctor who provides primary health care services, in the context of patient care related to the prevention, prevention and eradication of COVID-19 in relation to children under the age of 2 year of age and in the situation of referral of a patient to undergo home isolation; and when, by a primary care physician, he or she provides the patient, no earlier than on the eighth day of undergoing such isolation, with either an advice or a online consultation during which he or she assesses the patient's state of health, Online consultations from 16 March 2021, https://www.medexpress.pl/blogosfera/teleporady-od-16-marca-2021-r-tylko-poz-z-ograniczeniami-inni-lekarze-bez-ograniczen-80978/ (19–06–2024).

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However, the implementation of online consultation also presents some challenges, such as diagnostic limitations, technical issues and the need to ensure a high level of patient data protection. Clearly, this is an important element of a modern healthcare system, the effectiveness of which depends on the proper application of regulations and the adaptation of the technology to the needs of patients and medical staff. As technology develops and regulations continue to improve, online consultation has the potential to become an even more integral and effective form of healthcare delivery in Poland. Online consultation has gained widespread acceptance as a modern and convenient form of medical service delivery, particularly in the context of the COVID-19 pandemic. However, its effective use requires further refinement of the technology, ensuring adequate data security and adapting the healthcare system to new realities. For patients, online consultation is first and foremost a way to access healthcare more easily and quickly, while for healthcare professionals it is a tool for more efficient time management. Key challenges include diagnostic limitations and the need to ensure data privacy and security, which requires constant monitoring and improvement of existing practices and technologies.

The Committee on Medical Ethics of the Supreme Medical Council drafted Article 9 of **the Code of Medical Ethics** in 2023, which was to set out the most important rules regarding online consultation. The Supreme Medical Council proposed the following rules for the provision of online consultation services:

- personal contact between doctor and patient is the most appropriate form of doctor-patient relationship;
- the doctor is required to verify the identity of the patient and to ensure that the conditions of the online consultation are confidential before the provision of the service by online consultation;
- it is the doctor's responsibility to inform the patient of the limitations of online consultation compared to face-to-face contact, and in particular to indicate the symptoms that justify a face-to-face visit or, if necessary, to recommend contact with a medical facility;
- online consultation may be provided, particularly in the treatment of chronic conditions, for consultation in the course of

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ongoing treatment or to ensure continuity of treatment until the next possible in-person visit. Online consultation is not recommended for patients who have not yet been treated by a doctor or who present a new health problem;
- it is unacceptable to carry out the patient's diagnosis and treatment only by means of online consultation (*Report. Investigations conducted…*, 2021).

The newly adopted Code of 18.05.2024 did not include such a provision but only stated that it: "The doctor shall choose such a form of consultation (in particular, in-patient visit, online consultation) that ensures the patient the available quality and continuity of medical care" (NIK, 2024).

The legislation on telehealth in Poland is an important step towards modern and socially adapted healthcare. However, it is necessary to continuously monitor and adapt the legislation to changing technological and social conditions in order to ensure the safety, efficiency and high quality of medical services provided.

BENEFITS AND RISKS OF PROVIDING ONLINE CONSULTATION

Powered by rapid technological developments, modern medicine is undergoing a revolution in the way healthcare services are delivered. One of the most innovative solutions that has gained prominence in recent years is online consultation. They are a form of remote medical consultation that allows patients to receive medical advice without the need for physical contact with a doctor. Online consultation not only reflects advances in technology, but also addresses many of the significant challenges of modern healthcare, such as accessibility of services, cost-effectiveness and health and epidemiological safety. By reducing the need to travel to medical facilities and enabling rapid access to medical advice, online consultations address society's growing expectations for easy and rapid access to healthcare.

In this part of the article, I will analyse the main benefits of online consultation as well as the risks. We will focus on aspects such as increased accessibility to specialists, time and cost savings, as well as the impact on health security in the context of the global COVID-19 pandemic, as it seems crucial to present

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a comprehensive picture of the benefits of online consultation, highlighting its role as part of a modern healthcare system. When analysing the benefits associated with the use of online consultation in the health care system, the first place should be given to the potential of increasing access to medical care, especially for people living in remote regions of the country, characterised by limited mobility. Thus, it should be stated that online consultation eliminates in some way geographical barriers by enabling patients with Internet access to receive medical consultations regardless of their location. People living in smaller towns or villages can obtain medical advice without having to make long journeys to specialists located in large urban centres (Journal of Laws, 2011, No. 112, item 654).

A second important aspect related to improved accessibility is that, thanks to telemedicine, patients can obtain specialist advice more quickly, which is often crucial in cases requiring immediate medical intervention. Waiting times to see a specialist are significantly reduced, which can speed up the diagnostic and therapeutic process (OECD, 2024). Online consultation is also an effective solution for people with limited mobility, who can and most often do find it difficult to access traditional medical facilities on a regular basis. Thanks to telemedicine, older people, people with disabilities or patients after surgery can receive healthcare without having to leave their home (Wright, 2024). Seniors or people with disabilities, in order to stay under medical care, have to go through a series of often strenuous activities beyond their physical capabilities. Many times, in addition to physical dysfunctions dictated by age or illness, there is the inability to obtain support and assistance from other people/family. The specific requirements of this patient group are to be met by online consultation, which offers the possibility of simplifying and speeding up necessary medical procedures. The patient has access to the attending physician as well as to high-level specialists regardless of his or her location. The possibility of direct, quick access to medical services, carrying out urgent consultations with a doctor without the need to leave home and wait in long queues at specialists' offices, make online consultation a very convenient solution for seniors and people with disabilities (Bujanowska-Fedak *et al.*, 2013).

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In analysing the benefits of online consultations, it is impossible not to consider their practical application dimension. Online consultation is used in various fields of medicine, including family care, psychiatry, dermatology, paediatrics and many other specialities. Doctors can remotely assess a patient's condition, perform diagnostic consultations, monitor the course of treatment and provide therapeutic advice. For example, in psychiatry, online consultation allows patients to receive regular therapeutic consultations without having to attend the doctor's office in person (Gutiérrez-Rojas *et al.*, 2023). Studies show that patients are satisfied with the ability to receive medical advice quickly without having to wait long for an appointment (Smith & Jones, 2018).

The undoubted benefit, both for doctors and patients when using online consultation, is the time saving. By eliminating the need to travel to a medical facility, it is possible to get help more quickly and reduce the waiting time for a consultation. Online consultation can therefore significantly reduce the time needed to obtain medical advice, which is important especially in emergency cases.

In situations such as an exacerbation of a chronic disease or a sudden injury, a quick remote consultation can be crucial for appropriate clinical case management. Online consultation should enable clinicians to quickly assess the patient's condition and decide on further medical management, which can significantly reduce the time needed to provide assistance. In cases requiring a specialist medical opinion, online consultation allows patients to be referred to the appropriate specialist more quickly. This is particularly important in situations where time is crucial to the effectiveness of treatment, such as in cases of stroke or heart attack (Achenbach, 2024). Cardiac tele-portals allow physicians to monitor patients with heart disease,[2] assess

[2] Electrocardiographic telemonitoring (TM-EKG) using external recorders is a fundamental tool for cardiac telediagnosis and involves the analysis of ECG recordings recorded remotely and transmitted to a surveillance centre. Electrocardiographic telemonitoring makes it possible to detect, document and evaluate abnormal electrical function of the heart during daily activity and increases the chance of an accurate diagnosis. Some TM-EKG devices are also equipped with the ability to monitor, among other things, respiratory function, physical activity, blood pressure (Piotrowicz *et al.*, pp. 698–707).

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test results and adjust drug therapy in real time. Patients can also receive advice on healthy lifestyles and cardiovascular disease prevention. Debatable yet applicable is the use of tele-portals for oncology patients. Oncologic online consultations enable cancer patients to receive regular oncology consultations, evaluation of laboratory results and monitoring of side effects of cancer therapy. Through telemedicine, patients can receive support and advice on managing their disease symptoms. Online consultations enable doctors to monitor and manage side effects of cancer therapy, such as nausea, pain or fatigue. Through remote consultations, patients can quickly receive advice on symptom relief and treatment changes, significantly improving quality of life. Cancer is often associated with tremendous stress and mental strain for patients. Online consultations can include psychological and psychiatric consultations that support patients to cope with anxiety, depression and other mental health problems associated with the disease (Smith *et al.*, 2023).

Online consultation also became an indispensable part of the healthcare system during the Covid-19 pandemic. This time was a period of significant change in the global healthcare system, forcing rapid adaptation and innovation in healthcare delivery. One of the most important tools in the fight against the spread of the virus has just become online consultation, aimed at continuing medical care while minimising the risk of infection. According to health system managers at the state level, online consultation was supposed to eliminate the need for in-person visits to medical facilities, significantly reducing the risk of SARS-CoV-2 virus transmission among both patients and medical staff. Through remote consultations, patients were able to receive the care they needed without having to leave their homes, which was particularly important for those at higher risk (WHO, 2020). Online consultation was also intended to help reduce the number of people physically going to healthcare facilities. Such a solution was expected to reduce the risk of infections within health care facilities and allow health care staff to focus on caring for patients requiring hospitalisation. It is also indicated that online consultation enabled continuity of healthcare even in conditions of lockdown and movement restrictions. Patients were able to continue chronic disease

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management, specialist consultations and health monitoring without interruption, which was crucial for their health.

Online consultations were expected to make a significant contribution to modern healthcare, particularly in the face of the challenges posed by the COVID-19 pandemic. The stated benefits of online consultations include increased accessibility to healthcare by eliminating geographical barriers and reducing waiting times for consultations. Online consultations provide patients with the opportunity to contact doctors more quickly and easily, virtually 24 hours a day. The effectiveness of tele-portfolios is also reflected in time and cost savings for both patients and medical facilities. Patients can avoid the costs and time associated with travel, and medical facilities can better manage their resources. Indications are that online consultation has the potential to become a sustainable part of healthcare, offering benefits for both patients and the healthcare system. However, despite the numerous benefits, online consultation also carries risks.

Despite its many advantages, online consultation carries significant risks and hazards that require careful analysis and appropriate countermeasures. This section of the article will discuss the main risks associated with the use of online consultation. We will focus on aspects related to healthcare quality, data security, technological barriers and ethical challenges. The analysis of these risks aims to identify areas that need attention and improvement so that online consultation can be used effectively and safely as part of the healthcare system.

In the dimension related to the quality of healthcare, the following risks can be delineated. Firstly, there are limitations in diagnosis. This is one of the main risks associated with online consultation. The limited possibility to perform a full diagnosis, the lack of physical examination of the patient, can lead to diagnostic errors, inappropriate treatment or delayed detection of serious diseases. Research indicates that the lack of face-to--face contact can limit a doctor's ability to fully assess a patient's condition. Diagnostic errors are one of the most common safety issues in ambulatory care, and a virtual visit can increase this risk. During an in-person interaction, the doctor can get a more complete picture of the patient's condition. Furthermore, doctors

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often rely on other forms of face-to-face interview to fully assess the patient's condition. Observation of body language, personal behaviour and other individual characteristics can provide a more complete picture and reveal opportunities for intervention. In addition, telemedicine visits typically involve interaction between one doctor and the patient, whereas office visits often involve interaction with other healthcare professionals, including nurses, medical assistants and technicians, who can assist in making a definitive diagnosis (Ihi.org, 2022). Another diagnostic risk associated with telemedicine is an over-reliance on technology. Over the past 20 years, healthcare systems have recognised that diagnostic errors often occur when clinicians rely on electronic medical records or other technology during diagnosis. Online consultation can generate the risk of relying on descriptions, charts and patient records for diagnosis. With the relatively limited physical examination possible during a virtual visit, the doctor may be too dependent on the patient's history and laboratory results. Doctors must therefore perform the tele-visit with due diligence, check the information and determine if and when an in-person visit is really necessary. However, it should be emphasised that direct contact with the patient often plays a key role in building the doctor-patient relationship and in understanding subtle health signals. In online consultation it is more difficult to notice some symptoms or they may not be noticed at all. Patients may also feel a lack of trust and security, which can affect the effectiveness of communication and treatment. While telemedicine provides numerous benefits in the delivery of care to patients, it also deprives the interaction of a degree of humanity and depth. Another risk in the area of the quality of telehealth services is therefore the disruption of the doctor-patient relationship. However, bearing in mind that a thorough history and physical examination is not always possible or justifiable for every patient, it is important to remember that the real potential for value lies in the cultivation of the patient-doctor relationship. Both the nature and importance of the physical examination and the full spectrum of the role physicians play in restoring patients to health must not be forgotten (Lapow, 2023). Further evidence of the value of the physical examination is its centrality to preclinical medical

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education. Learning in the discipline of medical science is not just an academic exercise, but rather a broader education about what it means to be a doctor.

The area of key importance for the proper implementation of online consultation, which at the same time generates the most risks, is that related to data security and privacy. Online consultation involves the transmission and storage of medical data online, which creates the risk of data breaches. Hacking attacks, inadequate system security and human error can lead to the leakage of sensitive patient health information. Ensuring adequate security measures are in place is key to protecting patient privacy. In 2018, cyber-security was identified as one of the biggest industry challenges in the healthcare industry (Healthcare Executive Group, 2018). Since then, the development of the online consultation during the pandemic has highlighted security challenges in healthcare. As of 2020, less than half of providers across the healthcare continuum meet the standards set by the National Institute of Standards and Technology for cybersecurity (Cynergistek, 2020). As virtual care grows in popularity, security measures have not kept pace with the demand for telemedicine services. Cyber-security is not typically a fashionable word in patient safety conversations. However, secure cyber behaviour can protect patient data security (Crystal *et al*., 2021). Another threat is the diversity of data protection regulations in different countries. It can complicate the international provision of telehealth. Medical facilities need to comply with privacy and data protection regulations, which can be challenging in the context of the globalisation of telemedicine services.

Threats in the area of telehealth use also arise from technological and accessibility barriers. Here, inequalities in access to technology are a serious problem in the first place. When analysing this threat, it is pointed out that there is a group of patients who do not have unequal access to the technology necessary to use online consultation. Older people, those with lower economic status or those living in regions with poor Internet infrastructure are most often excluded from this type of healthcare. This phenomenon, known as 'digital exclusion' (Dijk, 2010), can exacerbate inequalities in access to healthcare.

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There are two categories in the catalogue of causes of digital exclusion. The first is infrastructural barriers. These most often relate to restrictions on access to ICT infrastructure, such as apparatus, medical equipment, computer equipment in the broad sense and telephone equipment and networks. This category also includes software, including all kinds of applications, e-services or e-products. Due to the increasing affordability of computer equipment, the growing popularity of mobile devices, the ease of access to the Internet and the dynamic increase in Internet bandwidth (Batorski, 2015), it should be concluded that in the patient group, technological, and therefore financial, limitations will increasingly generate the occurrence of digital exclusion. This problem becomes relevant from the position of health-care providers. This is because it is they who bear the greatest responsibility related to the implementation, maintenance, development and, consequently, financing of ICT solutions in health care. Financial barriers and difficulties constitute one of the most effective blockades to the implementation of ICT solutions in health care (Korczak, 2014; Korczak, 2016). In the case of the second category, psychological barriers should be pointed out (Stawicka, 2015). These are linked to a lack of digital skills and a lack of motivation (not realising the benefits) to use ICT (Lew-Starowicz & Lorecka, 2013).

There is still a group in society characterised by greater apprehension, lack of motivation, interest, knowledge or skills to use the increasingly available ICT solutions. This situation is created by technological progress, which requires ICT users to constantly update their knowledge and skills. Unfortunately, not everyone, especially not the elderly and senior administrative staff of hospitals, is able to keep up with the dynamic development of ICT. Even the most proficient ICT users sometimes get lost in the flood (noise, overload) of information, unable to find what they were looking for (Fazlagić, 2013). Psychological barriers are much more difficult to overcome than infrastructural barriers and pose serious challenges for decision-makers implementing solutions and technologies in the area of digitisation of the health system.

The risks associated with tele-visits are also the possible medical errors arising during their provision and the determination of

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liability for them. These are most often more complicated than in traditional visits. Determining who is liable in the event of diagnostic or technical errors is key to protecting both patients and doctors. Some of the most common reasons that can lead to a medical error in the implementation of an online consultation include: lack of prior preparation for the online consultation – providing the service without prior, reminder review of the documentation; failure to take the full necessary medical history – the frequently encountered annotation "not examined"; unreflective continuation of pharmacotherapy under the "prescription ordering" system – the patient asks for a prescription and the doctor, without checking the effects of the previously prescribed medicine, prescribes the medicine again; failure to check the effects of the prescribed therapy – continuation of treatment without check-ups; denying the patient the right to an in-person visit – despite the patient's wish to do so; being relied on by other staff (nurses or registrars) to provide e-prescription codes and recommendations on the use of the prescribed medicines – if the person providing the information makes a mistake, it will be charged to the doctor; an error in the subsequent completion of the documentation – entering data into the electronic system from handwritten notes, after the completion of services, which may result in the data being saved to the wrong patient to whom they belong; this is prevented by the doctor being equipped with devices (headphones, microphone) allowing the conversation to take place and the content to be saved into the computer at the same time. It should be emphasised that the doctor may be liable civilly, before a criminal court or disciplinarily for any adverse consequences for the patient of the inappropriate use or misuse of "remote" or "telephone" treatment (Karkut, 2023).

With regard to risks, it is worth looking at the Ombudsman Report 2019–2021 (*Report. Investigations*..., 2021). In the area of Primary Health Care, in which telehealth is most widely used, 15% of all completed investigations dealt with by the Ombudsman in 2019–2021 were recorded. The most common irregularities cited in the report include lack of access to health services in family medicine and, to a lesser extent, paediatrics. Violations of patient rights were confirmed in 93% of cases. A recurring problem, was primarily:

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- not being able to register for an appointment with a primary care doctor, particularly during a pandemic, and being refused in the event of a sudden deterioration in health;
- lack of telephone contact with the facility due to overloading of the telephone line;
- lack of information on the standard of online consultation – patients were not given information on when online consultation could safely replace a face-to-face visit to a doctor and when there were indications for face-to-face contact;
- lack of online consultation, as well as lack of due diligence during online consultation (e.g., despite medical indications, the patient was denied an in-patient visit or information on the condition) (*ibidem*).

At the same time, for the Covid-19 pandemic period, the Ministry of Health and the National Health Fund prepared a report based on a survey of a sample of 13,961 people. This was the largest survey of patient satisfaction with online consultation conducted in Poland. It covered 15,462 patients, of whom as many as 80 percent (14,245 people) had used online consultation in the last four months. 13,961 people agreed to take part in the survey and answer the questions (Koscielniak, 2023). The survey was conducted from 7 July to 1 August 2020. The survey showed that only about 18 percent of patients used an in-person clinic visit during the COVID-19 outbreak. The remainder, nearly 82 percent, were diverted to a remote clinic. The majority of these appointments (81.5 percent) were made in the form of a phone call to a doctor. Only 0.3 percent (45 people taking part in the survey) used a online consultation in the form of a video call. Patients who used online consultation were also asked about the availability of doctors and any problems with the connection. It turned out that 76.4 percent of those surveyed did not have any problems calling the OPD. More than 14 percent needed several attempts, but eventually the online consultation took place. Less successful was e-registration, which was used by 2 percent of respondents. A small group (1.5 percent) of patients said that they did not call in. Almost 6 percent of patients, which shows what absurdities occurred, went to their GP surgery in person to make a tele-registration appointment. 92 percent of those surveyed said that the issue they had called the doctor about was resolved

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positively. Only 8 percent of patients felt that they needed advice or assistance of another kind (*ibidem*). The majority of respondents found online consultation to be beneficial, substantive and at least as good as in-patient advice. As many as 16 percent of patients felt that online consultation was better than seeing a doctor in person. More than 41 percent of patients said that the quality of e-visits was comparable to an in-person visit; however, as many as one third of those asked believed that a traditional "face-to-face" consultation was better (*ibidem*). A year later, the Polish Society of Family Medicine conducted a similar survey prepared by the same author (Dr Agnieszka Mastalerz-Migas). The survey was aimed at both patients and medical staff; unfortunately, the results of this survey are not available.

SUMMARY

Online consultation, despite its many advantages, brings with it a number of risks that need to be properly managed. Diagnostic limitations, risk of data breaches, technological barriers and ethical challenges are just some of the issues that need attention. It is most important to ensure adequate security measures, patient and physician education and the creation of inclusive telemedicine systems.

In the future, further developments in technology and the adaptation of regulations can help minimise these risks, making online consultation a safer and more effective tool in healthcare. For several years, the Ministry of Health has been organising Telemedicine Round Table meetings to develop and elaborate high standards for telemedicine services. Currently, the Home Medical Care project is being implemented and developed, which makes it possible to carry out a number of examinations at home to correctly diagnose the patient's state of health. Currently, it is possible to auscultate the heart and lungs and perform spirometry; soon it will be possible to perform imaging examinations of the ear, throat, skin and whole body. In combination with online consultation, it can provide an alternative and complement to the traditional patient-doctor interaction. However, for online consultation to realise its full potential, it is necessary

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to address and minimise the associated risks. Challenges such as difficulties in accurate diagnosis, the risk of misdiagnosis, and risks related to the privacy and security of medical data require special attention. It is therefore important to implement advanced security technologies, training for medical staff and appropriate operating procedures to ensure the protection of patient data and the high quality of services provided.

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