

# Reflections on remote consultation

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## Abstract

Information and communication Technologies are increasingly present in health care, as exemplified by the recourse to remote consultation. Such care delivery modality brings unquestionable benefits, such as helping to face the contemporary challenges plaguing health systems worldwide. But its ever-increasing use underlines the importance of safeguarding ethical issues related to autonomy, equity, privacy, and the quality of the user-professional relations. This paper reflects on the ethical challenges presented before, during, and after remote consultation as to optimize and shape its use.

**Keywords:** Remote consultation. Ethics, medical. Ethical theory. Information and communication technologies.

## Resumo

### Reflexão ética sobre a teleconsulta

As tecnologias da informação e comunicação têm influência cada vez maior na área da saúde, sendo o aumento significativo do recurso à teleconsulta um reflexo disso. Os benefícios que essa modalidade de prestação de serviços de saúde ocasiona são inquestionáveis, a começar pelo facto de auxiliarem a enfrentar os desafios contemporâneos que assolam os sistemas de saúde em todo o mundo. Todavia, a sua crescente utilização vem sublinhar a importância de salvaguardar questões éticas relacionadas com a autonomia, equidade, privacidade e qualidade da relação entre o utente e o profissional de saúde. Este artigo pretende estimular uma reflexão acerca dos desafios éticos que se colocam antes, durante e após o uso da teleconsulta, com o intuito de otimizar e modelar a sua utilização.

**Palavras-chave:** Teleconsulta. Ética médica. Deontologia. Tecnologia da informação e comunicação.

## Resumen

### Reflexión ética sobre la teleconsulta

Las tecnologías de la información y la comunicación tienen una influencia cada vez mayor en el área de la salud, y esto lleva a un aumento significativo en el uso de la teleconsulta. Muchos son los beneficios de esta modalidad de prestación de servicios sanitarios, comenzando por el hecho de que ayudan a abordar los desafíos contemporáneos que afectan a los sistemas de salud en todo el mundo. Sin embargo, su uso creciente destaca la importancia de salvaguardar las cuestiones éticas relacionadas con la autonomía, la equidad, la privacidad y la calidad de la relación entre el paciente y el profesional de la salud. Este artículo pretende incitar a una reflexión sobre los desafíos éticos que surgen antes, durante y después del uso de la teleconsulta, con el fin de optimizarlo y modelarlo.

**Palabras clave:** Teleconsulta. Ética médica. Teoría ética. Tecnología de la información y comunicación.

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Over the past few decades, healthcare services have been strongly influenced by new technologies, not only in terms of more modern equipment and means of diagnosis and treatment, but also of communication and interaction between patients and healthcare providers. The development of information and communication technologies (ICT)—state-of-the-art cell phones, mobile and desktop applications, videoconferencing programs, fiber optics, wireless network systems, etc.—has opened up new possibilities and created very useful tools for healthcare practice, such as remote consultation.

On the other hand, the increased use of ICT applied to healthcare provision has been favored by social, economic and political factors, such as: policies aimed at reducing health costs; shortage of human resources; constraints associated with geographic isolation and consequent inequalities in access to healthcare; increased demand for healthcare due to population aging, epidemics, noncommunicable diseases and multimorbidity; need for continuous and frequent contact between patients and health services; among others<sup>1-4</sup>.

All these factors have contributed to making the delivery of healthcare services at a distance, by means of ICT-mediated remote consultation, an emerging reality with strong prospects for expansion. However, although this form of healthcare has potential benefits for patients, it also poses important ethical challenges, as it involves multiple human dimensions.

The intention of the authors with this article is, on the one hand, to challenge the reader to

reflect, from an ethical point of view, on the main potentialities and risks of remote consultation and, on the other, to define some guidelines that make it possible to optimize its use.

### Information and communication technologies applied to healthcare

ICT-mediated health services have been provided in different contexts, at the individual (diagnosis and/or treatment, consultation mechanisms, home care, etc.) and social (disasters, online provision of health information, expert advice, continuing education/training and prevention) level<sup>5-7</sup>. In both cases the basic characteristics are the same: the distance between the actors and the use of ICT as a tool to mediate interactions rather than physical presence<sup>8</sup>.

We will focus on remote consultation, whose main risks and potentialities are summarized in Chart 1. Remote consultation is understood as the synchronous interaction between patient and healthcare provider using any form of telecommunication (telephone, cell phone, videoconferencing/video call software), without clinical examinations or the mandatory presence of a second healthcare provider<sup>2,9-11</sup>. This decision has three main reasons: 1) the exponential increase in remote consultations<sup>12</sup>; 2) the ethical challenges involved<sup>13</sup>; and 3) the fact that studies on remote consultation focus more on formal aspects, such as data protection and informed consent<sup>14</sup>, than on (multi)relational issues.

**Chart 1.** Potentialities and risks of remote consultation

Potentialities	Risks/barriers
Expands access to specialist care where it is not available <sup>14-16</sup>	Problems with ensuring data privacy and security <sup>5,6,16,17</sup> Risk of technical failures that jeopardize the quality of the service provided <sup>14,31</sup> Difficulties of actors to use ICT <sup>17,29</sup>
Enables better follow-up <sup>12,14,17</sup>	Possible weakening of the relationship between patient and healthcare provider <sup>13-16</sup>
Improves the quality of services provided <sup>3,5</sup>	Aversion to change/complacency/lack of interest and/or knowledge on the part of healthcare providers <sup>2,10,12,17,20,26</sup> and patients <sup>6,27</sup>

continues...

**Chart 1.** Continuation

Potentialities	Risks/barriers
Encourages autonomy and self-care of patients <sup>2,5,18</sup>	Excessive reduction of in-person and home consultations <sup>32,33</sup>
Assists in the monitoring/follow-up of care without the need for in-person interaction <sup>10,19-21</sup>	Lack of defined rules and regulations <sup>6,14,25,27,34,35</sup>
Reduces individual (travel, absenteeism at work) <sup>5,12,14,16,22</sup> and public <sup>3,5,18</sup> costs	Difficulties in digital access/exclusion <sup>5,6,9</sup>
Reduces the risk of transmitting infectious diseases <sup>10</sup>	High pace of change <sup>12,17</sup>
Increases security in providing care to potentially dangerous patients <sup>23</sup>	Work overload/difficulty for healthcare providers to integrate this methodology into their workflow <sup>12,20</sup>
Decreases social stigma, especially in small environments <sup>23,24</sup>	Absence of physical examination and other indicators that can only be collected in person <sup>12,16</sup>
Increases patient satisfaction <sup>4,23,25-27</sup>	Consumerism/increased demand for trivial matters and ease of access <sup>5,10,30,33,35,36</sup>
Improved communication between patient and healthcare provider <sup>20,25,28,29</sup>	Patients may consider that the remote consultation should not be charged <sup>37</sup>
Increases the job satisfaction of healthcare providers <sup>23,30</sup>	Need for organizational changes <sup>5,18</sup>

ICT: information and communication technology

This context requires urgent reflection on the ethical and relational aspects underlying remote consultation from a practical perspective and taking into account its multidimensionality.

### Ethical guidelines for remote consultation

Several organizations, associations and researchers have been guided by the goal of defining rules and guidelines regarding healthcare provision through remote consultation. Thus, there is a consensus that the main ethical concerns relate to the quality of the healthcare provider-patient relationship, the technical ability of patients and respect for the various ethical principles: competence, responsibility, justice/equity, autonomy, non-maleficence, beneficence, dignity, confidentiality, privacy, honesty and transparency<sup>2,3,11,29,34,38-41</sup>.

It is certainly not by chance that ethical concerns have focused on those domains. Although new technologies and new forms of healthcare provision continue to emerge, the fundamental ethical responsibilities of healthcare providers remain unchanged<sup>6,42</sup>,

mainly because the provision of healthcare services is based on a “confidence pact” between patient and healthcare provider<sup>3,29</sup>, regardless of the care model involved.

Consequently, the maintenance of such a pact requires healthcare providers to have adequate qualifications and experience to respond to the needs of patients (competence); to place the well-being of patients above other interests (beneficence and non-maleficence); to provide patients with the information they need to make decisions (respect for autonomy), considering risks and limitations as well as existing alternatives (honesty and transparency); to respect and promote the protection of patients’ personal and health data (confidentiality and privacy); and to provide each individual, without discrimination, with the care they need (equity)<sup>6,39,43</sup>.

In addition, when health issues are associated with increasingly advanced technologies (as is the case of remote consultation), the proficient, conscientious and prudent use of these resources entails new challenges and additional responsibilities, requiring skill to safeguard the fundamental ethical principles that are eminently challenged. Next, we will reflect on four of these challenges.

### Equal access

Despite its numerous advantages, remote consultation is not the most suitable healthcare model for all patients or clinical conditions<sup>12</sup>. Therefore, prior evaluation is required on the type and severity of the health problem, the nature of the necessary intervention and the patient's ability and resources to use this type of technology<sup>44</sup>.

On the other hand, remote consultation cannot improve access to healthcare for individuals who do not intend to use this kind of service or do not have the necessary means to effectively use the technologies involved in remote consultation, including access and/or capacity. Some examples are: seriously mentally ill patients; older adults without social/family support; illiterate individuals; people with impaired perceptual, cognitive or psychomotor abilities; people without housing conditions that allow them to obtain such care; residents in areas without internet connection; people who are in environments that do not allow privacy conditions, among others<sup>10,12,14,29,30,34,43,45</sup>.

In this context, it is necessary to ensure that people who most need better access to healthcare are not the first to be excluded when using allegedly inclusive technologies. In other words, it is crucial to make an effort to ensure that these technologies mitigate rather than worsen issues of equity and social justice.

Some of the precautions and measures that can be taken to minimize unequal access to remote consultation are: 1) developing and choosing equipment, programs and applications based on criteria such as user-friendliness, low cost and possibility of distance training for patients<sup>5,46</sup>; 2) promoting digital literacy<sup>7,32,34</sup> (for example, through prior training programs); 3) creating spaces dedicated to remote consultation (such as in drugstores, nursing homes, government agencies, etc.) and/or recruiting local intermediaries skilled in using ICT<sup>10</sup>; 4) raising awareness in the technology industry to the fact that current telehealth systems tend to be "one size fits all," requiring everyone to adapt to technology rather than technology adapting to each individual context<sup>2,6,47</sup>.

In short, unequal access to remote consultation is an important ethical issue, since it increases the risk of the health system becoming unfair<sup>2,5,10,34</sup>.

However, with due adjustments and precautions, this tool can significantly contribute to improving global health, equal access opportunities and inclusion of unprotected population groups<sup>5,42,48</sup>. Therefore, if offered in a fair and inclusive manner, the opportunities offered by remote consultation may offset the potential disadvantages<sup>34,49</sup>.

### Risks to privacy and data protection

A key aspect of remote consultation, as well as of other telehealth resources and the traditional provision of healthcare services, is the safeguarding of privacy and the protection of information which, if not ensured, is considered a violation of the dignity of patients<sup>9,10,28</sup>.

In fact, the provision of healthcare services with the use of ICT involves a wider range of devices and actors than face-to-face healthcare<sup>29,50</sup>, which implies increased risks to data protection and requires measures aimed at ensuring it. Therefore, as patients relate privacy more closely to the relationship with healthcare providers than to the systems through which they communicate with them<sup>16</sup>, those professionals have two additional responsibilities:

1. To be aware of the limitations of the technologies they use<sup>34</sup> and, aided or not by IT technicians, take precautionary measures, namely: systematically assess the adequacy, safety and reliability of the equipment, systems, programs and software they use, to guarantee their continuous functionality<sup>7,10,26</sup>; keep operating systems updated (including antivirus protection) and select the latest versions of the various applications used; check whether the local network they use (in the various locations where they operate) is safe and reliable<sup>14,26</sup>; use firewalls to improve network security<sup>3,16</sup>; only use software that is reliable and for which they have sufficient knowledge and training<sup>26</sup>; store data so as to prevent unauthorized patients from accessing them (through hacking or other types of fraud), with the possibility of using passwords<sup>26,35,37</sup> and end-to-end encryption<sup>3,14,16,26,49</sup>; check the identity of the patient in all consultations (with greater care when performed without a video system, in which, if visual recognition is not possible, a password may be requested, for example)<sup>16,26</sup>;

2. To warn patients and/or their legal agents of possible problems with data security and inform them about the measures that must be taken to protect confidential information<sup>10,34,49</sup>.

Health data are considered sensitive and therefore enjoy increased protection under the General Data Protection Law<sup>51</sup> of Portugal and the deontological codes and codes of ethics (when available) that regulate the performance of the various professionals involved. In the absence of specific formal guidelines, such protection is supported by the moral principles of all those involved in the provision of healthcare services with the use of ICT resources—such as healthcare providers, patients, administrators, managers and also technicians from various areas, including information technology—who must be aware of their responsibilities regarding the privacy of patients and the protection of health information<sup>9,10,34</sup>.

### **Impact on the healthcare provider-patient relationship**

The conventional form of healthcare involves in-person interaction<sup>29,38</sup>. However, innovation in ICT is radically changing the way patients perceive time and distance, contributing to reshaping the frequency, space and way in which they interact and relate to healthcare providers<sup>43</sup>.

There are authors and healthcare providers who argue that true therapeutic interaction is established and strengthened by personal contact<sup>33</sup>, by touch<sup>52</sup>, and that despite advances in technology, it is not yet possible to remotely transmit feelings resulting from physical contact<sup>9</sup>. Some even believe that without physical examination the healthcare service cannot be called a “consultation”<sup>4</sup>. In turn, other authors claim that this form of interaction with healthcare providers is easier and more accessible for patients, increases their empowerment, improves communication between the parties<sup>20,25,28,29</sup> and ensures empathy<sup>23</sup>.

In any case, it will always be understood that remote consultation should be a complement to in-person healthcare<sup>4,29,34,37</sup> and should occur when the healthcare provider already has a previous clinical relationship with the patient and adequate knowledge about his/her problem<sup>11,52</sup>,

and that its use in initial consultations is not recommended<sup>12,44,53</sup>.

Several studies show that remote consultation has contributed to increasing patient satisfaction<sup>23,25-27</sup>. Some of the reasons are: reduction of costs associated with face-to-face consultations (for example, travel, loss of income<sup>22,23</sup>), more time for patients to speak<sup>12</sup> (about two minutes in face-to-face consultations and 10 minutes in remote consultations<sup>25</sup>), greater eye contact with the healthcare provider<sup>4,23</sup>, reduced social stigma (especially associated with mental illness<sup>22</sup>), greater facility to address embarrassing topics and a greater sense of control (especially in consultations using videoconferencing<sup>23</sup>).

The analysis of those reasons reveals that the ethical principles to be safeguarded and the precautions the healthcare provider must take in remote consultation are the same as those that apply to face-to-face consultations<sup>10</sup>, plus a few others that can help mitigate the negative effects of physical distance<sup>3,23,28</sup>. It is important that healthcare providers make sure the sound and/or image system is working properly and, in the case of remote consultation using video, that the image is good and the digital camera is as close as possible to increase the sense of intimacy.

Maintaining eye contact and using active listening techniques are also essential. Another fundamental precaution relates to checking patients’ understanding of what was conveyed to them and the possible need to request the participation of family members/caregivers, especially when addressing issues that are more sensitive and/or involve treatment instructions and or changes.

When used correctly, voluntarily and cautiously, remote consultation does not subvert the principles that support and dignify the relationship between healthcare provider and patient, which must be built up through empathy, trust and mutual respect.

### **Beneficence, non-maleficence and autonomy**

Activities involving the life, health and physical, mental and social integrity of individuals must be guided by different principles and values (which may clash), such as respect for autonomy without prejudice to beneficence. Healthcare providers



often face ethical dilemmas that are difficult to solve, even more so in a context of increasing supremacy of the principles of autonomy over principles derived from Hippocratic ethics.

Concretely speaking, healthcare providers have freedom and independence to decide whether to recommend remote consultation, but that decision should be based on the benefit and safety of the patient<sup>5,49,52</sup> and only be suggested when it is considered the best option available (in terms of quality, access and cost). In turn, it should only be recommended if it does not result in direct or indirect harm to the patient<sup>2</sup>. Therefore, it should be avoided when involving vulnerable people or when its use may increase a patient's vulnerability.

In the healthcare provider-patient relationship, the former's technical-scientific autonomy coexists with latter's autonomy, which grants patients the right to have their opinions and decisions respected<sup>13,46,54</sup>. Therefore, the patient's refusal is a reason not to use remote consultation<sup>23</sup>, which the healthcare provider must respect without detriment to the quality and agility of his service<sup>10</sup>.

Nevertheless, despite the patient's request, healthcare providers are still responsible for the results stemming from their intervention, and it is up to them to discern the cases in which remote consultation is appropriate or not, so the decision should be shared<sup>10,55</sup> and based on various eligibility criteria.

In keeping with respect for autonomy, the healthcare provider should ensure that patients (or their legal agents) are able to understand both the information provided and their responsibility in the process<sup>11,31</sup>. On the other hand, to ensure patients are able to fully exercise their autonomy, they must be provided with all relevant, individualized and timely information on the risks, benefits and implications of remote consultation, thus enabling them to make free, conscious and informed decisions<sup>10,34</sup>. It is in this context that informed consent in the practice of remote consultation is decisive and mandatory<sup>10,11,56</sup>.

According to the common rules of informed consent, the information provided must cover the nature, benefits, risks and alternatives to remote healthcare. In addition, it should contain elements that are not merely structural but also accessible

and informative, and result in a patient decision that truly reflects their autonomous choice.

However, given the specificities of remote consultation—the patient not only agrees with the actual consultation but also with the remote way in which it will be undertaken—it is advisable to adjust the traditional models of informed consent, in both content and format, to address the additional challenges posed by remote consultation<sup>14,34</sup>. Thus, in this context, consent must be expressed and submitted in writing<sup>26</sup>—in person or sent by post or email (in this last case it may be difficult to verify the identity of the person signing the document)<sup>27</sup>—and complemented with oral information.

It should also include clear and accurate information about:

- The limitations of remote diagnosis and intervention/treatment<sup>39,40</sup>;
- The technology involved in the consultation and data collection and storage<sup>50</sup>;
- The possibility of technological systems failing due to circumstances beyond the control of the healthcare provider (for example, internet connection crash, digital camera malfunction, etc.);
- The possibility of the systems making it difficult for the healthcare provider to transmit information to the patient as in an in-person interaction (e.g., sharing images or documents);
- That the confidentiality of patient information cannot be guaranteed due to issues of unauthorized access common to all electronic systems (hacking);
- The revocability of consent<sup>13,26,46</sup>, enabling the patient to resume exclusive face-to-face healthcare<sup>3</sup> with no penalty or harm to the quality of the service<sup>10</sup>;
- The fact that although it is not possible to check the presence of other people during the consultation, both parties undertake to ensure that does not occur without the prior consent of the other;
- How the remote consultation works (expected duration, subject to programming and prior appointment, etc.)<sup>26</sup>.

It should be noted that this entire procedure (design, presentation and submission of informed consent) will always follow a first phase in

which the healthcare provider must evaluate the suitability of using remote consultation and consider the benefits and risks of each case. Then, they should discuss with the patient whether the use of this tool is appropriate and what kind of problems can be addressed in this way, clarifying expectations<sup>49</sup> and stressing that remote consultation cannot replace face-to-face consultation in all situations.

It is also necessary to inform the patient about the technical and security aspects involved—such as the need for an identity check system before starting each remote consultation—and, whenever possible, the patient should be provided with written information on the proper use of the remote consultation. Still at this stage, it is important to explain (if applicable) the fees associated with the service and the payment method<sup>31,39,40</sup>.

Lastly, it should be noted that respect for autonomy is bilateral, that is, it is a right of both healthcare provider and patient. Regarding the latter, it is essential that the decision be free, never motivated by any kind of incentive (including prioritization in care) and/or avoidance of negative consequences in case of refusal (such as delay or lack of access to healthcare services)<sup>34</sup>. As for the healthcare provider, the use of resources such as remote consultation should not be imposed, lest it generate significant resistance<sup>5,8</sup>.

A more conservative *modus operandi*, the maintenance of certain work routines and procedures, uncertainties and fear of risk and error, among other aspects, are personal issues that should be respected. However, adequate instruction and training are the most effective way to empower and encourage healthcare providers to use remote consultation as an additional work tool.

In short, remote consultation does not create problems, but it reveals (and may increase) problems that already exist in the traditional healthcare services system. This kind

of relationship with the patient poses important ethical challenges to healthcare providers, which is why its use requires extra caution. In this context and after analyzing all the issues addressed, the authors present a proposal for guidance on the proper use of remote consultation (Appendix 1).

## Final considerations

Technological advances applied to health suggest a scenario of countless opportunities but not fewer ethical responsibilities. Unquestionably, remote consultation has great potential to improve the quality and access to healthcare services. However, the complexity of technological innovation, the lack of scientific evidence on the effectiveness of providing healthcare at a distance and the associated risks require the creation of safe conditions to implement remote consultation in healthcare services. Such conditions immediately imply a collaborative effort between science, healthcare practice, law, politics and ethics, not to mention grounding in scientific evidence that validates the quality, benefits and effectiveness of remote consultation. At the same time, it must be ensured that the service provided is complementary to but never a substitute for in-person interaction, prioritizes inclusion (for all) and individualization (for each one), and does not lead to objectification, but rather to humanized care and enhanced relationships.

The guidelines and guarantee of suitable conditions for the use of remote consultation are the foundation of an adequately protective ethical conduct, with a view to providing safe and quality healthcare. Even so, the use of ICT in the provision of healthcare services, not least due to its fast progress, will continue to raise ethical questions which will serve as a guide for action in search of solutions and the reduction of vulnerabilities.

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## Appendix

Figure 1. Guidance for appropriate remote consultation

