

Ethical considerations on the impacts of the telehealth platform in the doctor-patient relationship

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Abstract

Objective: To review the available scientific literature considering the ethical aspects of the use of telemedicine according to ethical recommendations in Brazil. **Method:** This is an integrative review prepared according to the five stages of the integrative review, proposed by Whittemore. The SciELO, Medline, and Lilacs databases were consulted as sources of study. The keywords used for the database search were “Telemedicine”, “Telehealth”, “Ethic”. Articles in English, Spanish, and Portuguese, published from 2015 to 2020, were included, as were resolutions from the Federal Council of Medicine and American Medical Association’s reports, from which the Code of Medical Ethics is derived. **Results:** This study considered the ethical aspects concerning the recommendations of the use of telemedicine for medical care and tele-education, the validity of the CFM Resolution no. 1756/2020, and current ethical recommendations in other countries, as well as health telemedicine activities similar to those conducted by the Telehealth Platform. Thus, telemedicine services performed by the Telehealth Platform follows the recommended ethical standards, requiring in-person care by a doctor to proceed with the recommendations from medical specialists registered by the platform. **Conclusions:** Therefore, the use of telemedicine by the Telehealth Platform does not violate the current recommendations. **Key-words:** Telemedicine; Telehealth; Ethics; Privacy.

Resumen

Consideraciones éticas sobre el impacto de la plataforma de telesalud en la relación médico-paciente
Objetivo: Revisar la literatura científica considerando los aspectos éticos del uso de la Telemedicina y su impacto en la relación médico-paciente. **Método:** Se trata de una revisión elaborada según las cinco fases de la revisión integradora, propuesta por Whittemore. Se consultaron las bases de datos SciELO, Medline y Lilacs. Como palabras clave se utilizaron los términos “Telemedicina”, “Telesalud” y “Ética”. Se incluyeron artículos en inglés, español y portugués publicados entre 2015 y 2020, además de Resoluciones del Consejo Federal de Medicina e informes de la Asociación Médica Americana, a partir de los cuales se genera el Código de Ética Médica. **Resultados:** Considerando los aspectos éticos actuales de las recomendaciones para el uso de la telemedicina para la asistencia y la teleeducación, aún vigentes de la Resolución CFM N° 1756/2020 y las recomendaciones éticas vigentes en otros países, verificadas a partir de la revisión de artículos seleccionados sobre realizando actividades de salud similares a las que realiza la Plataforma de Telesalud, las prácticas de telemedicina por estos medios respetan los preceptos éticos vigentes, ya que requieren la asistencia presencial entre médico y paciente para proceder con las recomendaciones realizadas por un médico especialista registrado en la plataforma. **Conclusión:** Por lo tanto, el uso de la telemedicina por parte de la plataforma Telesalud no viola las recomendaciones vigentes. **Palabras clave:** Telemedicina; Telesalud; Ética; Privacidad.

Considerações éticas sobre o impacto da plataforma telessaúde na relação médico-paciente

Objetivo: Revisar a literatura científica considerando aspectos éticos da utilização da Telemedicina e seu impacto na relação médico-paciente. **Método:** Trata-se de uma revisão elaborada de acordo com as cinco fases da revisão integrativa, propostas por Whittemore. Foram consultados as bases de dados SciELO, Medline e Lilacs. Como palavras-chave utilizou-se os termos “Telemedicina”, “Telessaúde” e “Ética”. Incluiu-se artigos em inglês, espanhol e português publicados entre 2015 e 2020, além Resoluções do Conselho Federal de Medicina e reports da American Medical Association’s, a partir dos quais é gerado o Code of Medical Ethics. **Resultados:** Considerando-se aspectos éticos vigentes sobre as recomendações do uso da telemedicina para assistência e tele-educação, ainda na vigência da Resolução CFM Nº 1756/2020 e recomendações éticas vigentes em outros países, verificadas a partir da revisão dos artigos selecionados quanto a realização atividades em saúde semelhantes às realizadas pela Plataforma Telessaúde, as práticas da telemedicina por estes meios respeitam os preceitos éticos vigentes, pois requerem assistência presencial entre médico e paciente de forma a procederem com recomendações realizadas por um médico especialista registrado na plataforma. **Conclusão:** Portanto, a utilização da telemedicina pela plataforma Telessaúde não fere as recomendações vigentes. **Palavras-chave:** Telemedicina; Telessaúde; Ética; Privacidade.

Introduction

Technological developments over the years have contributed to improvements in health care, not only concerning the production of new medicines and treatment possibilities, but also by expanding access to healthcare services via globalization, thus increasing the access to information and impacting the doctor-patient relationship¹.

Technology, in addition to changing the dynamic of access to services can aid in one’s professional development through the Distance Learning (EAD, in Portuguese) and has an impact on the upgrading of one’s professional skills, on diagnostic aids, and the solving of doubts online².

This type of technology is used in a wide range of human activities and in medical care, called telemedicine. Although it inspires many debates both for and against its use, telemedicine has undeniably become a healthcare tool to provide support to remote healthcare services, which is already widely used around the world, providing remote access to all stratifications of health care³.

In Brazil, faced with limitations imposed by telemedicine, the Telehealth Platform is an assistive technological tool which provides support to healthcare activities³, regulated by Decree no. 35/GM/MS, which instituted the Telehealth Brazil Program within the Ministry of Health as an action of the Greater Health Program, and which later, in 2010, was repealed by Decree no. 402/GM/MS. After its repeal, a new nationwide program was instituted to reinforce the Family Health Program, currently called the National Telehealth Brazil Program Networks and is a part of the Requalification Program of Basic Health Units (BHU), which served to integrate teaching and remote care through information technologies^{4,5}.

The core objective of the platform is to expand the capacity to resolve health problems within Primary Health Care (PHC) and diminish the inequality of access to health services, thereby increasing agility and reducing costs of the displacement of basic healthcare patients⁴.

In remote regions, such as the North of Brazil, the difficult access to health services is partially justifiable, and to minimize this problem, the use of telemedicine can even be used to diminish the costs associated with patient transportation and provide treatment options to these populations. However, some question to what extent remote doctor’s consultations can be beneficial, given the possible risks associated with the practice, including the impact upon the doctor-patient relationship, since the care provided does not necessarily involve in-person contact between the patient and the medical specialist⁶.

As regards the ethical considerations of the use of telemedicine, amidst major debates within the scientific community concerning its use since 2002, the Federal Council of Medicine (CFM, in Portuguese), issued Resolution no. 1643/2002, which sets forth stipulations concerning the use of telemedicine in Brazil, followed by Resolution no. 1974/2011 in 2011 and Resolution no. 2227/2018 in 2018. Finally, on an exceptional and temporary basis due to the COVID-19 pandemic, the CFM, in March 2020 and through an official decree, regulated some practices to aid in the health care provided to combat COVID-19 during the pandemic^{7,8,9,10}.

In this light, the present article aims to review the available scientific literature, considering the ethical aspects and the impacts related to the doctor-patient relationship as regards the use of telemedicine through the Telehealth Platform used in Pará state, according to the current ethical recommendations in Brazil.

Method

This article is an integrative review formulated according to the five stages of an integrative review, as proposed by Whittemore¹¹, conducted in five different stages, as follows: (1) Problem formulation, (2) Literature search, (3) Data evaluation, (4) Analysis and interpretation of collected data, and (5) Presentation of collected data.

Through the theoretical development of the theme, the

following was defined as the core research question: “How does the application of telemedicine, through the Telehealth Platform, impact the doctor-patient relationship as concerns the current ethical recommendations for the use of telemedicine in Brazil?”

The literature search was conducted by means of a search for articles related to the theme, together with other documents relevant to the review, specifically the

resolutions from the Ministry of Health concerning Telehealth and the resolutions from the CFM. The following descriptors were used in the MEDLINE and LILACS platforms: “Telemedicine”, “Telehealth”, and “Ethics”. The search strategy used for the MEDLINE database (PUBMED interface) was conducted in 2020 and is presented in Chart 1, with all descriptors referent to MeSH terms, with only articles from 2015 to 2020 having been selected.

Chart 1. Study search strategy in the National Library of Medicine (Medline).

#1 Search (telemedicine) OR (telemedicina) OR (telemedicina)
 #2 Search AND (ethics) OR (ética) OR (etica)
 #3 Search AND (telehealth) OR (telessaúde) OR (telesalud)

The database study search found 73 articles, of which, after reading the titles, 42 articles were selected for the reading of the abstracts. According to this reading, 28 articles were selected to be read in full, excluding those after this reading that were opinion-based articles, documental investigations, and reviews, as these did not meet the inclusion criteria, since they did not present healthcare activities or education that are also reproduced in the Telehealth Platform or that presented conflicts of interest. Of this total, seven articles were considered to be relevant to this study, as indicated in Flow Chart 1.

Another four important documents were added to the theme treated in this study, all edited by the CFM. These Resolutions treat the regulations of telemedicine in Brazil, totaling 11 documents that made up this review.

The present review included articles in Portuguese, English, and Spanish, published between 2015 and 2020, which described the telemedicine that is also used on the Telehealth Platform, mandatorily including, in its themes, the ethical aspects related to the practice of telemedicine, collected from the described databases.

The justification of this inclusion occurs due to the fact that telemedicine is already a reality and is being applied in many countries around the world; however, due to the major debates geared toward its regulation in Brazil, clarifications regarding the ethical relations and the use of telemedicine applied to the Telehealth Platform thus become necessary.

The analysis and interpretation of the study data was conducted in three distinct stages: reading and selection of the titles, reading of the abstracts, and finally, reading of the full articles. During the entire development of this article, constant readings of articles were performed, including reviews in PubMed to recover crossed references.

Results and Discussion

Through the analysis of the documents, a total of four questions from the CFM and seven articles were selected to be included in this review. The studies were classified as regards the type of applied methodology, including quantitative (2), qualitative (2), guideline supplementary materials (2), and resolutions and consensus (4) about telemedicine identified in Table 1. Of these, one study treated the providing of services via telemedicine¹², one about American Medical Association reports (document that gave rise to the Code of Medical Ethics)¹³, about patient perceptions and the health team about patient follow-up via e-Health^{14,15}, medical curriculum^{16,17}, and professional consensus¹⁸. The oldest article was from 2015 and the most current from 2019, while the oldest resolution was from 2002 and the most current from 2020.

Telemedicine

Telemedicine emerged in an attempt to make health care more accessible even in rural and remote locations, when there are means of communication technology in these locations, specifically aiding populations with minimal resources¹³.

The application of telemedicine can be found in a wide range of activities, such as online doctor's appointments (Teleconsultation), in which, during the appointment, there is a direct interaction between the doctor and the patient, as well as in the Teleconsultancy, where an interaction takes place among the health professionals about clinical cases to be discussed. There may also be an interaction between the doctors and the surgical robotic equipment, called Telesurgery, and between the collection sensors and equipment, called, respectively, Telesurveillance and Telediagnosis¹⁹. These activities

Flow Chart 1. Strategy for the selection of articles for review.

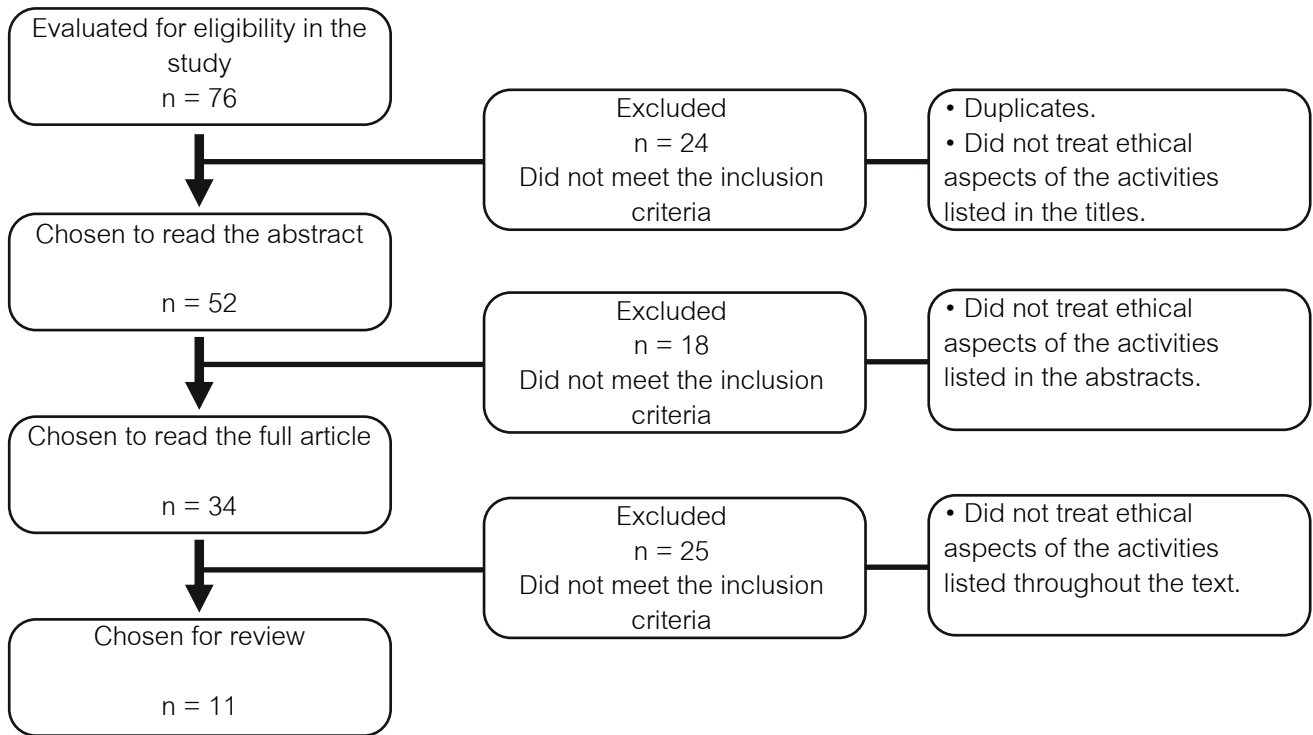


Table 1. Description of the work and Resolutions chosen to be part of the review.

Authors	Title	Year	Journal	Classification
CFM ⁷	Resolution no. 1.643/2002	2002	-	Resolution
CFM ⁸	Resolution no. 1.974/2011	2011	-	Resolution
CFM ⁹	Resolution no. 2.227/2018	2018	-	Resolution
CFM ¹⁰	Resolution no. 1756/2020	2020	-	Resolution
Wrape and McGinn ¹²	Clinical and ethical considerations for delivering couple and family therapy via telehealth	2018	Journal of Marital and Family Therapy	Supplementa-ry material -Guideline
Chaet et al. ¹³	Ethical practice in Telehealth and Telemedicine	2017	Journal of General Internal Medicine	Supplementa-ry material -CODE
Macdonald et al. ¹⁴	eHealth Technologies, Multimorbidity, and the Office Visit: Qualitative Interview Study on the Perspectives of Physicians and Nurses	2018	Journal of Medical and Internet Research	Qualitative
Towsend et al. ¹⁵	eHealth, Participatory Medicine, and Ethical Care: A focus group study of patients' and health care providers' use of health-related internet information	2015	Journal of Medical and Internet Research	Qualitative
Yeung et al. ¹⁶	Teledermatology and teledermatopathology as educational tools for international dermatology: a virtual grand rounds pilot curriculum	2018	International Journal of Dermatology	Quantitative
Rienits et al. ¹⁷	Teaching telehealth consultation skills	2015	The Clinical Teacher	Quantitative
La Flamme et al. ¹⁸	Targeting ethical considerations tied to image-based mobile health diagnostic support specific to clinicians in low-resource settings: the Brocher proposition	2019	Global Health Action	Consensus

must comply with the current regulatory laws in each country in such a way as to provide safety in the medical procedures, maintaining autonomy and privacy of the information collected from the patient¹².

Although applicable in many activities, the information technologies associated with medicine are still in need of definitive regulations in Brazil in order to protect the autonomy of the patients, information security, and justice in their use, in addition to guaranteeing equal access to health services, mainly in the use of applications, the exchange of messages, and instantaneous images in the context of telemedicine^{9,10,18,19}. In this context, there is also the emergence of digital medicine, in which, besides the free and informed consent form filled out by the patient, it is also necessary for the patient to agree with the terms of use of this technology¹³.

As regards one of the main objectives, that of guaranteeing equal access and social justice, telemedicine has shown progress, though ethical concerns still continue, such as the fine-tuning of the system, as set forth in Resolution 2227/2018 of the CFM, considered to be a controversial methodology, given that it presented the possibility of substituting the doctor for another professional at the time of the physical exam performed during the doctor's appointment, one of the main reasons why it was later repealed^{19,21}.

Moreover, it is important to highlight the change in the dynamic of the doctor-patient relationship, since during the Teleconsultation, the interaction between the two would not be conducted through the observance of the patient's body language during anamnesis and especially during the physical exam. However, during the doctor's appointment conducted during the Teleconsultancy, the initial interaction is between the patient and the doctor. Later, the doctor will contact other specialists using information technology via Teleconsultancy^{14,15}.

Nevertheless, faced with the COVID-19 pandemic, new regulations set forth by Brazilian health agencies were necessary, considering the risk of contamination that health professionals are submitted to daily and the need to flatten the contagion curve¹⁰.

Telehealth Platform

The Telehealth platform, since its creation, works as a means for the application of telemedicine in PHC, in an attempt to improve the system's capacity to resolve problems⁵. In the state of Pará, the available health activities are conducted through Teleconsultancy, in which the medical specialists solve doubts about the clinical cases described by general clinicians or family and community doctors using the platform. The specialists can also recommend safe and up-to-date

scientific literature to the general clinicians working in the countryside of the state. This recommendation can be sent through Teleconsultancy answers or even through the recording of video-classes made available on the platform, called tele-education²⁰. The interaction promoted by the Telehealth Platform is schematically presented in Figure 1.

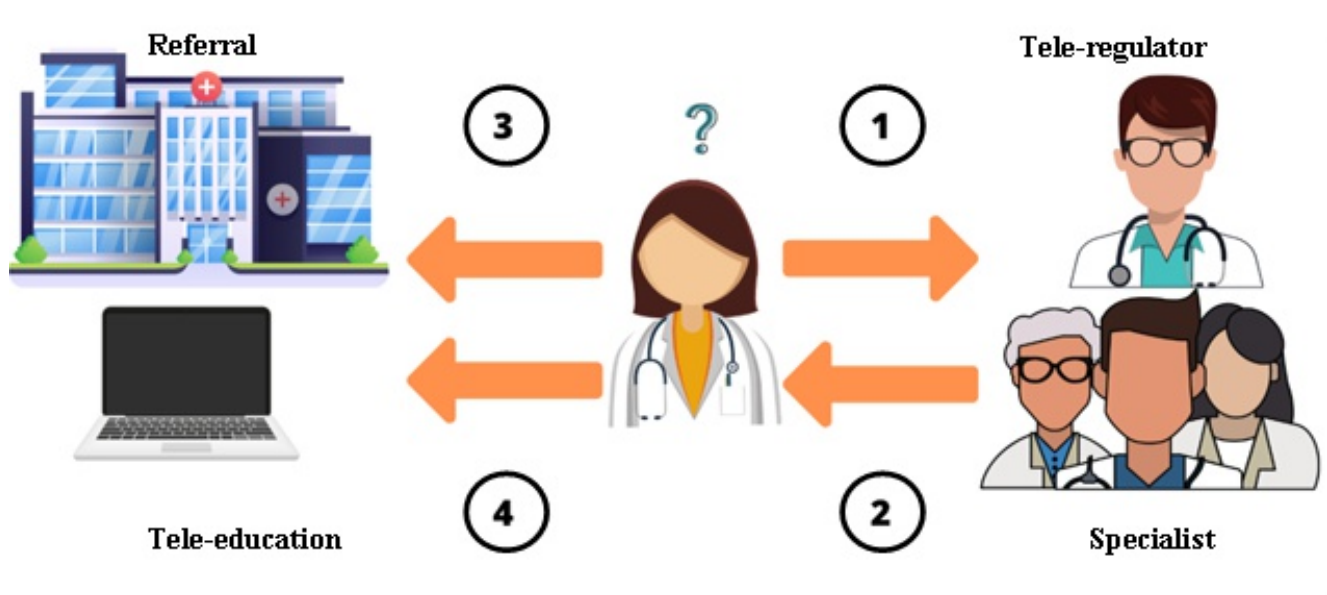
However, the platform has some key limitations, since it is impossible to safely predict the patient outcome. Therefore, the longitudinal follow-up that telemedicine can offer does not cover these patients whose cases were requested through Teleconsultancy on the Telehealth Platform¹³. In this sense, updates that allow one to check the longitudinal follow-up can verify improvements made to the platform in such a way as to include information about the resolution of each case and at what care level this consultation was fully contemplated¹⁸.

It is important to highlight that, through the Telehealth Platform, communication is performed entirely among the health professionals; therefore, there is no direct communication between the patient and the specialist. Hence, although the medical specialist can aid in the handling of the patient, the responsibility to build the doctor-patient relationship ends up being completely between the PHC doctor, generally the family doctor or the general clinician, and the patient. Thus, according to article 4 of Resolution no. 1643/2002 of the CFM, the responsibility concerning the patient lies in the hands of the doctor who conducts the in-person appointment. At that time, the same resolution also made it mandatory for those who render telemedicine services to be registered in the Regional Council of Medicine, as set forth in article 58.

The educational practices within Telehealth occur by means of asynchronous video-classes. The themes are generally selected through recurring doubts about clinical cases requested through the platform. By contrast, teleconsultancy is considered to be a care modality in which the given clinical case is handled jointly by the PHC doctor and the specialist linked to the Telehealth Platform¹⁹. Taking into account that tele-education is a valuable tool, this can be implemented in the medical curriculum or even provide support to continued education through the platform.

The method through which Telehealth activities are conducted has common applications in other countries, especially the use of these strategies in the follow-up of chronic diseases^{14,15}, the availability of tele-education through recorded classes, and the introduction of telemedicine in early medical curricula. Previous studies have already demonstrated the successful use of tele-education among medical students, general clinicians, and residents, providing these groups with a greater acquisition of knowledge^{16,17}.

Figura 1. Ilustración que muestra el flujo de una teleconsulta realizada por la Plataforma de Telesalud.



(1) The basic health doctor consults the patients in the Basic Health Unit (BHU) and considers the need to refer the him/her to a new level of complexity, with the possibility of resorting to the Telehealth Platform, sending the doubt through Teleconsultancy within the Telehealth Platform. (2) The Tele-regulator is responsible for identifying a new demand in the platform and sending this to the proper team of medical specialists. The medical specialist receives this demand through the platform, reads it, answers the initial request, and sends it on to the BHU doctor. At this moment, if the BHU doctor agrees with the specialist's answer and decides that it is coherent with the present case, he/she can implement the appropriate therapy and resolve the medical problem within the PHC itself. (3) If there is not an agreement between the professionals regarding the case, the referral can be made to a new level of complexity. (4) The general clinician can also benefit from the tele-education provided through the references used by the specialist to make a decision on the case or through access to tele-education video-classes offered on the platform.

Ethical considerations in the doctor-patient relationship

In this context, considering the principles of bioethics, the beneficence and the non-maleficence are directly related to the use of telemedicine, given that, through this, one can ensure access to health for isolated and limited-resource populations. However, depending on the laws and regulations of this country, this can be considered to be a compromising medical practice^{13,14,15,18}. In Brazil, faced with the imposed limitations, Teleconsultancy is a proposal from the

Ministry of Health that has not, to date, violated the legal precepts and resolutions set forth by the CFM. The broad spectrum of e-Health has ethical implications that can vary considerably according to local laws, considering that the ethical responsibilities also vary according to the method of choice for the application of telemedicine^{12,13}. Chaet et al.¹³ exemplify these differences by comparing the responsibilities acquired through the availability of medical information on the internet, considering that, though reliable, the patients can use this information as they see fit, which implies a lesser responsibility on the part of the doctor when compared to methods of teleconsultation or teleinterconsultation, since in these last two, the care professional is held accountable for the consultation, indicated recommendations, as well as their ethical duty with the patient. Moreover, the authors highlight that their use in remote areas can be seen as a care option, taking into account that synchronous or asynchronous remote care can be better than no care at all¹³.

Specifically in teleconsultations, the doctor interacts directly with the patient, while in the teleconsultancy the medical specialist interacts with another health professional, normally a doctor, and this specialist's report influences the conduct of the general clinician with the patient. In both activities, the doctor who attends to the patient has a greater ethical responsibility, considering that, although the type of care may change, the doctor is still held accountable for the care, must remain loyal to the interests of the patient in question, and should be transparent regarding the confidentiality and privacy of information¹³.

Concerns regarding the secrecy of the exchanged information are still common, but the literature

reviewed here offers possible solutions to these problems. As a means to protect the patient's privacy and confidentiality during tele-care, it is necessary to guarantee that the exchanged information will be end-to-end encrypted and the data will be protected by software or hardware¹².

Likewise, there is also the questioning of how the quality of care impacts the relationship between the doctors and the patients when using telemedicine. However, they tend to focus on the importance of recognizing patients' needs in order to set up the teleconsultancy, as well as the recognition of the search for the best possible care and the best chances of correct diagnosis, especially those in which time is not a crucial factor in the care process or when it is not possible to define a quality standard when obtaining patient data, recognizing the right time to refer the patient to an in-person consultation with a medical specialist¹³.

The insertion of telemedicine practices in education, be it through tele-education or through the introduction of telemedicine in the curriculum of medical colleges, has pointed to the acquisition of new skills, improvements in student achievements, and reflections on the positive and negative points of tele-care. This is especially true for care provided to populations without technological resources that would enable full care via information technology^{16,17,18}.

Considering the principles of the bioethics of autonomy, justice, beneficence, and non-maleficence, and the application of these to rational ethics, we have, as the main factors to be analyzed regarding the impact upon the doctor-patient relationship, the shared decision-making concerning the elements of care, understanding such questions as mutuality, commitment, respect, and reliability, in addition to aspects of vulnerability when faced with the paternalistic care model, which still lingers in health care^{14,15}.

This relationship dynamic, which has been in place for decades, in which the doctor assumes the position of decision-maker, as he/she has the technical and scientific knowledge, can still be verified even in telemedicine, but there are major possibilities for change in this paradigm. Macdonald et al.¹⁴ highlight the transformational potential of telemedicine in doctor-patient relationships, since it allows for greater support to be provided to clinical decision-making shared between the medical professionals and their patients, in addition to offering greater independence and security when accessing information. However, it is necessary to engage the medical team in the knowledge about the current and prior conditions of the patients in such a way as to maintain a good doctor-patient relationship, showing that the medical professionals take care of the patients and not the disease^{14,15}.

In Brazil, though a country with continental dimensions, the paternalistic care model is still predominate, and it is undeniable that there is a significant space in the doctor-patient dynamic that this relationship model presents. Changes in this dynamic, driven by technology, have caused small but significant changes in clinical practices. The CFM, in its attempt to regulate telemedicine, has been issuing resolutions since 2002, given that the first considers the autonomy of the doctor and his/her decision to use or not telemedicine, which remained in effect until 2011. Also, in 2011, article 3 of Resolution 1974/2011, forbids the doctor from providing consultancy to the patients who had not previously had an in-person consultation, used as a substitution of doctor's consultations or diagnostic methods and prescriptions⁸.

In 2018, there was even more controversy concerning the Resolutions, since these would leave room for interpretations, that the consultation could be mediated, in person, by a non-medical professional, which was later repealed by the CFM itself⁹.

Motivated by the COVID-19 pandemic, a new resolution was edited, in a temporary and emergency nature, in which teleorientation, which gives medical advice to patients who were in social isolation; telesurveillance, which provides remote medical follow-up on parameters of health and disease; and teleinterconsulting among health professionals were regulated, whereas teleconsultations were not regulated¹⁰.

Conclusion

From the first documentations of the use of telemedicine and telehealth, ethical concerns regarding the application of medicine via information technology have been described, especially as regards how this new dynamic affects the doctor-patient relationship³.

In Brazil, the creation of the Telehealth Platform seeks to modernize public health, aligning itself with the doctrinal principles of universality, equity, and integrality through the reduction of costs and the diminishing of distances¹. However, the activities that have been conducted, even if in the molds performed in other countries and within that considered internationally as the level of good practices for telemedicine, need to comply with the laws and ethical recommendations in effect in each country^{12,13,16,17,18}.

These recommendations, disclosed by means of resolutions, culminated in the last registered resolution, which, motivated by the COVID-19 pandemic, enabled care modalities that are currently authorized by the CFM, in addition to health education services also promoted by the platform. Therefore, the Telehealth Platform complies with the ethical norms currently in effect in the country.

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