

Teaching medical ethics and impacts on the physician-patient relationship

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Abstract

Medical ethics is a set of norms guiding the conduct of healthcare professionals, promoting equity and accountability. This study analyzes the impact of teaching ethics in medical schools on the physician-patient relationship, focusing on social media use. This qualitative-quantitative study was conducted with 167 medical students in Curitiba/PR. Results show that while 73.7% are aware of the Code of Medical Ethics, only 20.4% understand Federal Medical Council Resolution 1,974/11. The gap between theory and practice highlights the need for more robust ethical training, particularly in the digital context. It is concluded that ethical training must be continuously updated to meet contemporary demands.

Keywords: Medical ethics. Hospitals teaching. Social networking. Physician-patient relations. Codes of ethics. Schools, medical.

Resumo

Ensino da ética médica e impactos na relação médico-paciente

A ética médica é um conjunto de normas que orientam a conduta de profissionais de saúde, promovendo equidade e responsabilidade. Este estudo analisa o impacto do ensino da ética em escolas de medicina na relação médico-paciente, com foco no uso de redes sociais. A pesquisa qualitativa-quantitativa foi realizada com 167 estudantes de medicina em Curitiba, Paraná, e os resultados mostram que, embora 73,7% conheçam o Código de Ética Médica, apenas 20,4% compreendem a Resolução do Conselho Federal de Medicina 1.974/2011. A lacuna entre teoria e prática evidencia a necessidade de um ensino ético mais consistente, especialmente no contexto digital. Conclui-se que a formação ética deve ser continuamente atualizada para atender às demandas contemporâneas.

Palavras-chave: Ética médica. Hospitais de ensino. Redes sociais. Relações médico-paciente. Códigos de ética. Faculdades de medicina.

Resumen

Enseñanza de la ética médica e impactos en la relación médico-paciente

La ética médica es un conjunto de normas que orientan la conducta de los profesionales de la salud y promueven la equidad y la responsabilidad. Este estudio analiza el impacto de la enseñanza de la ética en las escuelas de medicina en la relación médico-paciente, con énfasis en el uso de redes sociales. Se realizó un estudio cualitativo-cuantitativo con 167 estudiantes de medicina en Curitiba/PR, y los resultados muestran que, aunque el 73,7% conoce el Código de Ética Médica, solo el 20,4% comprende la Resolución del Consejo Federal de Medicina 1.974/2011. La brecha entre teoría y práctica refleja la necesidad de una formación ética más sólida, especialmente en el contexto digital. Se concluye que la formación ética debe actualizarse continuamente para satisfacer las demandas contemporáneas.

Palabras clave: Ética médica. Hospitales de enseñanza. Red social. Relaciones médico-paciente. Códigos de Ética. Facultades de medicina.

The authors declare no conflict of interest.

Approval CEP/PUCPR6.107.596CAAE:67495723.8.0000.0020

Medical ethics is the set of norms and principles that define professional conduct for medical practice, in addition to the rights and duties that professionals are required to follow. That is, the Code of Medical Ethics (CME) is a compilation of rules of conduct, defined over the years, considered necessary for proper provision of medical services, such as health promotion, disease prevention and patient treatment¹. As service providers, physicians are subject to failures and mistakes, so the CME serves as regulation aimed at preserving the prestige of the profession¹, requiring professionals to follow the norms, ensuring accountability in case of infraction, and promoting equity among professionals.

In Brazil, ethics education was introduced in medical schools in the late 19th century, with legal medicine and medical deontology courses, oriented toward standardizing the future physicians' knowledge about the CME standards and their applications. This education not only provides a theoretical basis on ethical principles, but also aims to prepare students to face dilemmas and make decisions based on ethics in medical practice². In 1975, the Brazilian Federal Council of Medicine (CFM) instituted mandatory medical ethics education in undergraduate programs³, in order to clarify rights, commitments and responsibilities of medical practice.

Thus, teaching ethics in medical schools is fundamental to ensure equity in professional training and adequate education⁴, in addition to directly influencing the physician-patient relationship, as it guides professionals to comply with the individual interests of patients by applying the principles of autonomy, justice, non-maleficence and beneficence¹. Considering the current situation of technology being more present in professional practice, it is necessary to emphasize the ethical principles involved in the use of electronic devices and social media in the medical context, as health care providers face challenges that can significantly impact the trust and quality of the physician-patient relationship, such as preservation of privacy, risk of sensationalism and dissemination of inaccurate information.

Therefore, it is necessary to analyze the teaching of medical ethics in medical schools and

its applicability during practical classes and hospital internships, determining whether students apply it in their activities and how effective is that application, in addition to tracing possible positive or negative impacts on the relationship with patients⁵. Thus, the following hypothesis was raised: the students' unawareness of the CME can lead to non-compliance with principles that are essential to medical practice; in turn, this can be corrected by adequate ethics education in medical training. Thus, the objective is to assess the educational quality of ethics education and analyze the importance medical students attribute to understanding ethics in professional practice, especially as to the physician-patient interaction^{6,7}.

Concept history

The word "ethics" derived from the Greek word "ethos," which means "habit," "custom." Thus, ethics can be understood as the expression of thought that guides human behavior towards a universal ideal⁸, serving as a beacon to organize medical rights and duties and provide security for professionals and patients regarding medical conduct and behavior. The first records of medical ethics appeared with the Hippocratic oath, whose basis is a medicine based on honesty, charity and science.

However, the first CME would only be organized in 1803, by the English physician Thomas Percival, during an outbreak of typhoid fever in the United Kingdom; this document would later serve as the basis for the creation of the American Medical Association (AMA) CME, in the United States, in 1847⁴. Finally, the International CME was created in 1949 by the 3rd General Assembly of the World Medical Association (WMA), and establishes guidelines, rights and duties of physicians. In addition, it addresses the physician-patient relationship, which, from the Renaissance onward, adopted an orientation-cooperation approach⁹, situating professionals and patients at the same level of importance.

In Brazil, ethical issues would be discussed much later, due to internal bureaucracy and dependence on external technologies. Brazil adopted the AMA CME in 1867, but only 1964 would see the creation

of the CFM Code of Ethics⁴, containing rights, commitments and responsibilities of medical practice. Currently, there are nine CME issued in Brazil¹⁰, which demonstrates that ethical principles are continuously updated and adjusted to demands. The current CME, of 2018, implemented in May 2019, establishes and regulates the rights and duties of medical practice, aiming to protect both professionals and patients.

In 2023, a new regulation was implemented, introducing significant changes in medical advertising permissions, in response to demands arising from the advanced communication technologies, the widespread use of social networks, and the increased visibility of health care professionals in the digital environment¹¹. Previously, medical advertising standards were more restrictive and aimed to protect patients from sensationalist or misleading practices. Now, the advent of social media has led to the necessity of revisiting such standards in order to balance patient protection with freedom of expression and the physicians' capacity to communicate with the public in a transparent and ethical manner.

The new regulation contains updated and detailed guidelines on medical advertising, emphasizing social network communication and the relaxation of rules that limited the dissemination of medical services (however, maintaining the requirement of conducting it ethically, without unfair competition or promised results). In addition, information confidentiality is strongly emphasized, seeking to restrain the use of images or testimonials that violate patient privacy¹². These changes reflect an effort to adapt the CME to the new realities of medical practice in the 21st century, ensuring that the fundamental principles are upheld, even in an ever-evolving digital environment.

When punishing physicians who, due to ignorance, violated the CME standards became a challenge for the CFM, it was decided that the medical ethics course should be implemented in medical schools, making medical ethics education a priority, in order to comply with the maxim "instructing to avoid punishing"¹³. Globally, the introduction of ethics and human rights into undergraduate medical training was recommended

by the WMA to promote appropriate ethical conduct among professionals¹⁴. In Brazil, the late 19th century saw the initial application of legal medicine and medical deontology courses, expanding the relation between the law and the professional practice.

In 1975, the CFM determined that medical ethics education should be mandatory for undergraduate medical students³; however, there are disagreements on the ideal time to teach medical ethics, with some arguing that it should be taught in the initial stage of the program, while others argue that it is better learned near the end of the program. Therefore, it can be concluded that teaching ethics in medical schools is of paramount importance to ensure adequate training and equity in professional practice, reducing violations of norms and expanding medical practice based on moral principles. In addition, ethics education strengthens the physician-patient relationship, humanizing professionals and guiding them to respect individual interests.

Literature review

The literature review of scientific articles used the electronic databases SciELO, PubMed, Lilacs and Cochrane, with the keywords "codes of ethics", "ethics, medical" and "education, medical", "technology", "medical advertising" and synonyms. After critically evaluating the consistency of the evidence, we selected articles discussing the history of medical ethics, the importance of ethical knowledge, and the inclusion of ethics in medical training.

Objective

The main objective of this study was to analyze the understanding and applicability of medical ethics taught in medical schools, especially in relation to professionally using social networks. It seeks to understand how students use ethical principles during their practical and academic activities, assessing whether the current education is sufficient to prepare them for the contemporary challenges of the medical profession.

Methods

This is an applied qualitative, cross-sectional, and descriptive study, carried out in Curitiba/PR, Brazil, between August 2023 and April 2024. The sample consisted of Brazilian medical students, of both sexes, aged over 18 years, who conduct health care internship activities, curricular or voluntary, who agreed with the informed consent form (ICF) and with free participation within the teaching hospitals of Curitiba. Students who did not want to participate voluntarily, those under the age of 18 and those who did not accept the ICF were excluded from the sample.

Participants answered a questionnaire with semi-structured questions (subjective and objective) based on interviews using a guiding model¹⁵. The questionnaire had 26 questions and was divided into four sections: the first was the ICF, the second with identification and demographic factors (nine questions), the third with questions about social media use (nine questions) and the fourth about medical ethics (eight questions). The form was made available on Google Forms and sent via digital media, such as WhatsApp, email and Instagram, in addition to being delivered through active searches within teaching hospitals, in a direct approach to students in activities. At the end, a link containing CFM Resolution 1,974/2011⁸ was made available to the research participants so they could access it after answering the questionnaire.

Despite the chosen approach being focused on and relevant to the research context, difficulties arose in obtaining all the necessary answers for the study, such as the students' unavailability to answer the questionnaire during their practical activities, the overload of academic commitments and the lack of adherence by some students, even after several attempts of contact. These difficulties limited the number of responses collected, resulting in a reduced number, which may have impacted the representativeness of the data and the comprehensiveness of the study's conclusions. We also emphasize the importance of alternative strategies to increase the response rate in future studies, such as holding face-to-face sessions dedicated to collecting data or offering incentives that motivate greater participation.

This study is guided by the *Declaration of Geneva*¹⁶, aiming to share medical knowledge for the benefit of patients, disseminate updated precepts on medical ethics education and correlate these norms to the physician-patient relationship.

The results were transposed to an Excel spreadsheet, prepared especially for this study, and data analysis was performed with the aid of the Statistical Package for the Social Science Version 22.0 IBM (SPSS). Initially, there was a descriptive analysis of the data set: qualitative variables are expressed by frequencies and percentages, and quantitative variables by means, medians, minimum and maximum values, and standard deviations. Then, for the distribution analyses, Kolmogorov-Smirnov and Shapiro Wilk normality tests were applied for quantitative variables. And *p*-values below 0.05 were considered significant.

Results

A total of 167 responses were obtained from students from five different medical schools in Curitiba/PR, Brazil, among which 113 were women and 54 men, with an average age of 21.9 years. Of these students, 52.7% were in the basic cycle (1st to 4th period); 35.3% in the clinical cycle (5th to 8th period); and 12% in internship (9th to 12th period) (Table 1).

Regarding activities in hospitals, outpatient clinics or health care units, the students reported different levels of experience, with practice time ranging from one month to five years. In addition, the students spent an average of 9.6 hours per week in the hospital setting. Finally, 100% of the students reported having access to mobile internet network, with Instagram being the social network most used by them, with which they spend approximately three hours a day, ranging from one to 10 hours.

A total of 73.7% of the students said they were familiar with the rules and principles established in the CME, while 26.3% admitted not knowing them, and the majority (79.6%) reported not knowing CFM Resolution 1,974/2011⁸. Regarding medical posts on social networks, opinions were quite

different (Table 2): while 38.9% agree and 9% fully agree that, with patient authorization, physicians can publish patient images to advertise technique, method or result, 12% have no formed opinion, 17.4% disagree and 22.8% fully disagree.

Table 1. Cycle

Cycle attended by students	N	Percentage (%)
Basic cycle	88	52.7%
Clinical cycle	59	35.3%
Internship	20	12%

The result was similar when participants were asked if physicians can publish client expressions of gratitude and compliments on social networks.

In turn, as for posting, with patient authorization, “before and after” images of procedures in physician profiles, 33.5% agree, 10.2% fully agree, 12.6% have no formed opinion, 15% disagree and 28.5% fully disagree. Regarding physician profiles on social networks, 35.9% of respondents agree and 35.9% fully agree that physicians should have separate professional and personal profiles.

Finally, almost all respondents (95.8%) believe that informative health promotion publications in physician profiles can encourage their patients to follow healthy habits and, when asked whether certain publications (such as photos at parties with alcohol) in the physician’s personal profile can influence their professional reputation, most also answered affirmatively.

Table 2. Questions about ethical issues

Question	Fully agree (%)	Agree (%)	No opinion (%)	Disagree (%)	Fully disagree (%)
With authorization, can physicians expose patient images?	9.0	38.9	12.0	17.4	22.8
Can physicians advertise client compliments?	15.0	36.5	18.6	16.2	13.8
With authorization, can physicians post “before and after” images?	10.2	33.5	12.6	15.0	28.7
Should physicians have separate professional and personal profiles?	35.9	35.9	14.4	9.6	4.2
Do informative health-related posts in physicians’ profiles encourage healthy habits?	65.9	29.9	3.0	0.6	0.6
Do photos at parties with alcohol affect professional reputation?	34.7	40.7	6.0	16.8	1.8

Discussion

When analyzing the results, it is evident that teaching medical ethics and its application in social network use is an emerging and relevant issue in the professional training of future physicians. Professional use of social media is seen positively by most students, reinforcing the need for proper ethics education to deal with the new demands of the digital environment. However, despite the issue being disruptive and relevant in professional practice, studies on the subject are scarce, which

limits in-depth analysis in this study and indicates the importance of further research in this field.

There was a predominance of women among the participants and an average age of 21.9 years, corroborating findings of studies that indicate the phenomenon of the increasing number of female students in the program and the entrance of increasingly younger students^{17,18}. The variation in time and exposure to hospital setting represents a range of practical experiences that directly influence the application of ethical principles in the daily routine of students, although,

as responses are voluntary, the correlation may have been affected by the bias of interest of those who agreed to participate.

The entire sample uses social networks, with Instagram being the most accessed (89.8%). In addition, all reported having access to mobile internet network, with an average use of three hours per day, corroborating data from the 2023 Households ICT survey¹⁹, which indicate increased internet and social network use by Brazilians, in addition to increased time spent in these media. It is noted that medical students recurrently use social networks, showing the importance of integrating digital ethics education into medical training²⁰.

With regard to the CME, although 73.7% of the students reported knowing the rules, only 20.4% are familiar with CFM Resolution 1,974/2011⁸, which specifically addresses medical advertising. This leads to the questioning of whether the participants in fact know the CME. This gap is concerning, as it shows a disconnect between ethics theoretical education and practice; therefore, the students were asked practical questions that required applying the CME to advertising.

When asked about publications with patient image to disseminate techniques, methods or results, about 48% of the responses were favorable. As for posting client expressions of gratitude and compliments, the majority (51.5%) say that it is allowed. In turn, on the publication of “before and after” images of procedures, the result were consistent with previous questions, since 43.7% agree with this practice. Therefore, it is noted that, with reference to CFM Resolution 1,974/2011⁸, most students neither discern nor apply the rules declared by the CME, which corroborates the hypothesis of this study on the efficiency of ethics education in medical schools. Accordingly, Neves²¹ addresses the need for a new methodology to enhance the quality of medical training, especially as to ethics and the physician-patient relationship.

Regarding the creation of separate profiles for physicians—a professional profile and a personal profile—most participants (approximately 72%) agree. Regarding posts on

the personal profile, almost 90% of participants say that photos at parties and other acts can have an impact on the physician’s reputation. According to Moubarak²², for many patients, seeing the physician consuming alcohol on social networks is something that can lead them to doubt the professionalism of the clinician, even if that happened during the leisure period. Thus, the results of the present study confirm the ideas presented by the author.

Authors such as George⁵ already stressed the importance of creating a community in which patients could share fears, motivations and desires, as well as be encouraged by their physicians, providing greater comfort during consultations. A study in the United States also corroborates the need for physician presence on social media, since having a presentable profile impacts patient perception of the physician²³. Thus, it is noted that the young students interviewed already pointed out the need for a revision of the CME, updating concepts and advertising rules for the current globalization context, indicating that the previous resolution, of 2011, no longer met the current needs.

During this study, new rules for the advertising of medical activity entered into force, through CFM Resolution 2,336/2023²⁴. The new norms break paradigms and represent an evolution for Brazilian physicians¹², in view of the urgent need for update arising from the advanced communication technologies and the increased influence of social media. Therefore, this context required a revision of the regulations to ensure ethics, transparency and safety in the dissemination of medical services.

The new medical advertising rules introduced by the CFM include the following updates:

1. Transparency and clarity in advertising information, ensuring that messages are truthful and based on scientific evidence.
2. Prohibition of sensationalism, preventing promises, aiming to protect patients from unrealistic expectations and misleading advertisements.
3. Identification of the medical professional with full name, registration number with the Regional Council of Medicine and specialty.

4. Respect for patient privacy: The use of images, testimonials or any patient identification in advertisements is prohibited without documented consent.
5. Prohibition of promotional campaigns, avoiding unfair competition.

The new guidelines seek—in addition to updating medical advertising on social media—to preserve ethics in medicine, protecting patients and promoting responsible communication between professionals and patients. The implementation of these rules reinforces the integrity and quality of the services provided in a context of expanding digital platforms as a means of reaching a broad and diverse public. Therefore, it is imperative to constantly revise ethical rules, as communication technologies evolve, so they remain relevant and effective, aligning regulations with contemporary practices and societal needs. In addition, ethics education needs to be continuous throughout medical training, in order to ensure full knowledge of the rules in force and strengthen the physician-patient relationship, ensuring that it is ethical, transparent and safe.

Final considerations

This study aimed to analyze the medical students' understanding and application of medical ethics, with a particular focus on social

media use in the professional context. It showed the importance of adequate and continuous ethics education in medical schools, in addition to the emphasis on ethical rules for social network use in professional settings. The results indicate that, while most students recognize the importance of medical ethics, there is a significant gap between knowledge and practical application of established norms, particularly as to medical advertising on social media. Thus, we found inconsistency between theoretical education and practical application.


Moreover, the study showed that the medical students' ethics education, although present in medical schools, requires continuous enhancement and update to remain consistent with the changes in society and in communication technologies. The recent update of medical advertising standards—with CFM Resolution 2,336/2023²⁴—reflects this need for adaptation to the new digital realities, seeking to ensure that medical practice remains ethical and safe. Therefore, the study showed the importance of enhancing and updating medical ethics education in medical schools, especially as to conduct on social media, to ensure that future physicians are prepared to deal with the ethical challenges that arise in a digitally connected world. The findings indicate the need for continuous review of educational practices and regulations, aiming to ensure that the ethical principles are properly understood and applied in professional practice.

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Julia Caldas Alves, Leticia Brunetto de Lara and João Pedro da Silva Munhoz participated in data collection and analysis, manuscript drafting, and manuscript review. Adonis Nasr participated in academic supervision, methodological support; critical review of the work. All authors actively participated in the research, article writing, final version approval, and content integrity supervision.

Data availability: All data used or generated in this study are described and presented in full in the body of the article.

Editor in charge: Dilza Teresinha Ambrós Ribeiro

Received: 2.4.2025

Revised: 7.31.2025

Approved: 8.5.2025