

Medical students in the COVID-19 pandemic response in Brazil: ethical reflections

Estudantes de Medicina no enfrentamento da pandemia da Covid-19 no Brasil: reflexões éticas

Cleide Aparecida de Freitas¹ dracleidefreitas@gmail.com

Gustavo Freitas Alves de Arruda² gu14freitas@gmail.com

Giovanna Cecília Freitas Alves de Arruda¹ giovannacecilia11@gmail.com

Saulo Ferreira Feitosa¹ sauloffeitosa@gmail.com

ABSTRACT

Introduction: In times of pandemics, the uncertainties and lack of evidence allow each country to conduct its response as it deems the most appropriate. This setting also facilitates the approval of public measures without adequate ethical analysis, due to its inherent urgency. With that said, the objective of this study is to promote a hermeneutical approach to the Brazilian Government proposals of including medical students in the fight against COVID-19 (Coronavirus Disease 2019) pandemic through an ethical perspective.

Development: The governmental resolutions, published in the Brazilian Official Gazette, were discussed in the light of the Universal Declaration on Bioethics and Human Rights (UDBHR) and the Brazilian Medical Student Code of Ethics (CEEM), as the first one guides the debate through a pluralist, multi-, inter- and transdisciplinary bioethics, and the latter brings specified guidance to the studied population group. To better articulate the discussion, the main measures were subdivided into 3 sections: about the risk assessment; about the participation of 5th- and 6th-year students; about the early graduation. In the first one, the creation of participation alternatives has been proposed, including remote participation, without direct contact with patients, aiming to ensure the students' integrity and to maximize the potential positive effects with minimum harm. After that, the predicted obligatory enrollment for undergraduate students attending the final years of medical school and the possibility of obtaining credit hours for the curricular internship in exchange for participation in the strategic action "O Brasil Conta Comigo" were assessed. Finally, the graduation anticipation and the need for a guarantee that the new graduates have the required knowledge and expertise for the medical profession were questioned.

Conclusions: For an effective response against the disease, it's necessary to collectively structure the adopted measures, benefiting from the capabilities that the students already have, while respecting their limitations, vulnerabilities, and freedoms. It should also be emphasized that any ethical decisions in the context of Medicine and of future generations of professionals can have immeasurable consequences for these individuals, their patients, and communities and thus, one must ensure that the benefits will be the best and greatest possible.

Keywords: Medical Education; Medical Students; Bioethics; Coronavirus Infections; Pandemics.

RESUMO

Introdução: Durante pandemias, as incertezas e a falta de evidências permitem que cada país conduza sua resposta da maneira que convencionar mais correta. Esse cenário abre oportunidade também para que medidas sejam aprovadas sem a devida análise ética, pela urgência implicada. Com isso, o objetivo deste estudo é promover uma abordagem hermenêutica das propostas do governo federal do Brasil para a inserção de estudantes de Medicina no combate à *coronavirus disease 2019* (Covid-19) a partir de uma perspectiva ética.

Desenvolvimento: As resoluções governamentais, publicadas no Diário Oficial da União, foram debatidas à luz da Declaração Universal sobre Bioética e Direitos Humanos (DUBDH) e do Código de Ética do Estudante de Medicina (CEEM), porque aquela pauta a discussão em uma bioética plural, multi, inter e transdisciplinar e este traz orientações destinadas ao grupo populacional estudado. Para melhor estruturar a discussão, as principais medidas foram subdivididas em três seções: "Sobre a avaliação de risco"; "Sobre a participação dos alunos do quinto e sexto anos"; "Sobre a antecipação de colação de grau". Na primeira, propôs-se a elaboração de alternativas para sua participação de modo remoto ou sem contato direto com os pacientes, a fim de garantir a integridade dos estudantes e maximizar os efeitos positivos com o mínimo de prejuízos. Em seguida, avaliaram-se a prevista obrigatoriedade de adesão dos alunos dos últimos anos do curso de graduação e a possibilidade de substituição da carga horária do estágio curricular obrigatório pela participação na ação estratégica "O Brasil Conta Comigo". Por último, questionaram-se a antecipação de formatura e a garantia de que os recém-graduados possuam os conhecimentos e a perícia necessários à profissão médica.

Conclusões: Para o combate eficaz à doença, é necessária uma estruturação coletiva das ações adotadas, beneficiando-se das capacidades que os estudantes já oferecem, com respeito às suas limitações, vulnerabilidades e liberdades. Deve-se ressaltar que quaisquer decisões éticas no contexto da medicina e das futuras gerações de profissionais podem ter repercussões inquantificáveis para esses indivíduos, seus pacientes e suas comunidades, devendo-se ter a garantia de que os benefícios serão os melhores e maiores possíveis.

Palavras-chave: Educação Médica; Estudantes de Medicina; Bioética; Infecções por Coronavírus; Pandemias.

¹ Universidade Federal de Pernambuco, Caruaru, Pernambuco, Brazil.

² Universidade Federal de Pernambuco, Recife, Pernambuco, Brazil.

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INTRODUCTION

The occurrence of pandemics throughout human history has always been an important factor for the design of social evolution, just as during wars, revolutions or economic crises¹. In these periods of social upheaval, ethical standards can be altered by the need for a balance between justice and benefit^{2,3}. Differently from what is happening in this pandemic, in which the press provides important collaboration to health managers by informing the population, during the Spanish flu pandemic of 1918 many health authorities refused to disclose the real picture of the disease dissemination to avoid panic and uprisings^{3,4}.

Situations such as these create health system fragilities, expressed by uncertainties and lack of knowledge about the main pathogenic opponent and how to fight it, in addition to the inherent urgency for answers⁵. This is also observed in the current scenario, with all the questions that still surround the fight against the Coronavirus Disease-2019 (COVID-19) pandemic. Caused by the second coronavirus of severe acute respiratory syndrome (SARS-CoV-2), the disease has already infected more than 66.6 million people and has caused the death of more than 1.5 million individuals⁶, with many questions still unanswered. The evidence is insufficient and the reports of experiences in other countries can be quite divergent, especially regarding medical education and how it could be included, or not, into this context.

Therefore, each nation deals with the medical student community in the way it deems the most coherent. In Brazil, the Ministry of Health published Public Notice n. 04, of March 31st, 2020, which calls for undergraduate students in Medical, Nursing, Pharmacy and Physiotherapy courses to face the pandemic, justifying this decision as being an emergency circumstance⁷.

Thus, the objective of this study is to analyze, from a hermeneutic exercise and in the light of the Universal Declaration on Bioethics and Human Rights (UDBHR) and the Brazilian Medical Student Code of Ethics (CEEM, *Código de Ética do Estudante de Medicina*), the proposals of the Federal Government of Brazil for the inclusion of medical students in the fight against COVID-19. The strengthening of this debate becomes especially relevant in this situation, since the uncertainties of the current scenario can lead, due to pressure caused by the urgency circumstances, to the approval of conducts that can relativize or neglect ethical principles⁵.

BRIEF HISTORY OF ETHICS APPLIED TO HEALTH

Initially, one understands that it is relevant to define the role of ethics and how it was designed over time, especially in Latin America and Brazil. This is due to the fact that each society has its own values, morals, which reflect what is socially

accepted or not⁵. The word 'morals' comes from the Latin term *mos*, from which comes the expression *moralis*, created by Cícero as a translation of the Greek word *éthika*⁸.

Therefore, from an etymological point of view, morals and ethics can be understood as synonymous; however, their historical context resulted in different understandings⁸. Ferrer and Álvarez make this distinction between moral life and moral knowledge, with the first being involuntary, as part of each person's biography, experienced from the uses, customs and traditions of their society⁸. As for moral knowledge, it can only be acquired through critical reflection on moral life, and what they call "ethics"⁸.

Therefore, ethics is the reflected morals, the science that solves dilemmas that may possibly arise, analyzing intentions, implications and probable consequences^{5,8}. In the field of Medicine, the study of ethics takes on particular importance because medical work is not merely technical; it deeply affects interpersonal relationships and the directions of public health, inexhaustible fields of moral clashes^{9,10}.

Throughout history, there have been several attempts to adopt codes or oaths as a normative ethical imperative to be followed in medical practice¹¹, such as the Hippocratic Oath, which addresses the doctor-patient relationship with emphasis on care³, using an imposing and patronizing approach¹². This view was accompanied by the virtue ethics, which persisted until the emergence of modern Medicine at the end of the 18th century, when a need was felt to guide the conduct of professionals through duties, and not just individual abilities^{9,10}. This is because, as Foucault describes, it was necessary to associate Medicine to the State, punishing professional abuse and deviations from morality¹³.

Motivated by this demand, Englishman Thomas Percival became the first to publish a code of medical ethics in Modern Age, in 1803¹⁰, taking another step towards normativity¹⁰. His work has also become a reference for the first national codes of medical ethics, adapted to the reality of each country¹⁰.

However, in the second half of the twentieth century, after several technical-scientific advances¹², it was no longer enough for Medicine to be guided only by deontological aspects. It was also required for it to turn to the environment and human survival. Thus, American physician Van Rensselaer Potter, in his book 'Bioethics: bridge to the future' (1971), suggests the creation of a discipline that would combine ethics and biological knowledge, which he called bioethics¹⁴.

This new field of knowledge gained more strength when reports of ethical conflicts involving research with human beings were brought up in the United States, forcing the country's government to create a specific commission to oversee these studies. From this organization came the

Belmont Report, which contained 3 principles considered to be basic for any biomedical research: respect for the autonomy, beneficence and justice¹². To these, the principle of non-maleficence was added with the publication of the book 'Principles of biomedical ethics', by Beauchamp and Childress in 1979, introducing Principlist bioethics or Principlism¹². However, the very use of the term "principles" generates ambiguity, since they do not provide moral theories or action guidelines, acting more as ethical ideals^{12,15}.

In addition, its intention to generate universal tools makes moral and cultural differences between societies invisible in the context of the World System and reinforces relations of domination by "developed" countries over "underdeveloped" ones, legitimizing a false intellectual superiority of the European-North American axis¹². This alleged hegemony of the Principlist theory imposes limitations on the bioethical debate by reducing Potter's original concept of a multidisciplinary and environmental bioethics, to its clinical and scientific context only, making it insufficient for discussions on collective health^{12,16}.

Beyond individualism, the collective health dilemmas deal with topics that go past interpersonal relationships and affect large population groups in actions of prevention, health promotion and quality of life. Moreover, in the current situation, the ability to predict the effects of the adopted policies may be compromised, making Principlist unsustainable, since there is no certainty regarding the possible benefit or harmfulness of the proposals¹⁶.

Therefore, for this study, the base document that will guide the ethical discussions is the UDBHR, prepared by the United Nations Educational, Scientific and Cultural Organization (Unesco) in 2005, which also extends the debate to the environmental, health and social settings¹². This declaration appears in a context of consolidating the defense of a plural, multi, inter and transdisciplinary bioethics, considering fundamental freedoms, human dignity and international human rights treaties^{12,17}.

Moreover, the CEEM 2018 of the Brazilian Federal Council of Medicine (CFM) will also be considered, which provides special guidelines for the assessed population group, even if still guided by a Principlist standard¹⁸.

PARTICIPATION OF UNDERGRADUATE MEDICAL STUDENTS IN ACTIONS TO FIGHT COVID-19

As a result of the need to fight COVID-19 and after the national Declaration of Public Health Emergency¹⁹, the Ministry of Health started adopting measures aimed to control the disease progress, in cooperation with other ministries and governmental bodies, at national, state and municipal levels.

Among these is Ordinance N. 492, published on March

23, 2020, which established the strategic action "O Brasil Conta Comigo" ("Brazil Counts on Me") with the inclusion of students from the health area²⁰. The ordinance contains a set of temporary measures that began to be implemented after Public Notice n. 4 was published on March 31, 2020, which invited undergraduate students from the Medical, Physiotherapy, Nursing and Pharmacy courses⁷.

Moreover, the Presidency of the Republic of Brazil, through Provisional Measure N. 934 published on April 1, 2020, also authorized students from the abovementioned courses to graduate earlier, using as justification the need to fight the pandemic^{21,22}.

In this study, the main measures adopted in medical education, published in the Brazilian Official Gazette, will be discussed with the help of the UDBHR and CEEM guidelines. Analyzed as in relation to medical students, the considerations were subdivided into 3 sections: about the risk assessment; about the participation of 5th and 6th-year students; about the early graduation.

About the risk assessment

Before any decisions can be made in the field of Public Health, it is necessary to perform an assessment of the risks inherent to the proposed measures, also aiming at maximizing their beneficial effects and predicting and minimizing the harmful effects to which individuals would be subjected, as defended in articles 4 and 20 of the UDBHR²³. Would it then be the most appropriate solution to bring medical students to the forefront of the fight against an epidemic for which there is little evidence?

Historically, the inclusion of these students to deal with epidemiological crises results in divergence. When the second wave of the Spanish flu epidemic appeared in 1918, voluntary undergraduate students were called in to meet the needs of the Spanish health system, as a result of a significant quantitative reduction in the number of health professionals due to their death^{24,25}. In contrast, during the 2003 outbreak of Severe Acute Respiratory Syndrome in Hong Kong, the participation of medical students in direct contact with patients was prohibited after 17 students tested positive for the disease, after caring for a patient who did not have signs of contamination^{25,26}.

This increased risk of contamination is inherent to being in the front line and can be confirmed with epidemiological data from the current fight against COVID-19. Until December 6, 2020, around 12.3% of the notified cases in the state of Pernambuco²⁷ comprised health professionals. That is, when students are put in direct contact with patients, there is also a greater risk of infection.

Moreover, the benefits are also limited. On the one hand,

the inclusion of students could increase the work capacity of the health care system, as idealized by the public notice itself, and could provide students with a unique opportunity for clinical learning. On the other hand, it is known that the current hospital reality no longer follows the undergraduate routine as it used to, considering the exhaustion of health professionals²⁸ and the suspension of outpatient consultations, which makes the teaching-learning process²⁹ planned in the sectors of Internal Medicine, Pediatrics and Public Health inadequate⁷. In addition, according to an April 2020 survey by the São Paulo Medical Association (APM), at least half of the doctors suffer from a lack of personal protective equipment (PPE), such as N95 masks, in the workplace, putting their own safety at risk when facing the pandemic³⁰. That said, the rationing of this equipment to allow medical education increases the risk of infection for both undergraduate students and service employees and their families. Therefore, would it be worthwhile taking the risk for the supposed benefits for education?

It is also possible that there are other alternatives for student adherence, which consider their limitations as undergraduate students and that decrease the risks of contamination. Some activities can be carried out remotely, such as the production of digital material aimed at educating the medical community and the population in general. It is possible to encourage the creation of platforms with updated scientific evidence and social networks for the dissemination of news, fighting against fake news and solving doubts of the local and national community, as the students from Harvard Medical School are doing²⁹. Volunteers could also prepare safety protocols with management and regulation teams and train professionals for the rational use of PPE²⁹, among the several possible actions.

Therefore, it is believed that the decision-making for the inclusion of medical students in the fight against COVID-19 has a utilitarian ethical justification, understanding that the public manager uses the utilitarian calculation aiming to allow providing the greatest benefit to the greatest possible number of people³¹. However, as seen before, this is not a simple equation, because it involves multiple actors and factors involved in the process. It should be preceded by a detailed analysis of the risk-benefit ratio and, after deliberation, should be anchored in a series of risk mitigation measures, guaranteeing the personal integrity of the students involved in it and encouraging the prudent use of the best of their intellectual capacity, as defended by article 8 of the UDBHR²³.

About the participation of 5th and 6th-year students

Considering the inclusion of medical students, it is important to make an initial criticism of the proposal for the

participation of 5th and 6th-year students of the medical course. For these students, enrolling was mandatory, making the registration action an "obligation", according to item 3.2.1 of the Public Notice⁷. Simultaneously, in item 3.2.4.3, the characteristic of informed consent is attributed to this same registration, valid "for all legal purposes"⁷.

Even if the Ordinances are not normative, any attempt to harm individual freedoms and disrespect autonomy is unethical and goes against articles 3 and 5 of the UDBHR, which deal with human dignity and individual responsibilities²³. Moreover, the power of agreement attributed to the mandatory registration of these students truly works as a contract¹⁰, only to exempt the State "from any liability if something went wrong in the development of its practices" (Garrafa, 2016, p. 448).

Then, the inclusion of interns in the services of Internal Medicine, Pediatrics and Public Health is proposed, making it possible to use the dedicated hours as substitute of the course load of the mandatory curricular internship of these disciplines^{7,20,22}. Once again, an assessment of the benefits and damages that such a measure could generate must be proposed to stimulate the ethical debate. While the exemption from the mandatory workload can be a "fair" reward for students who volunteered to work with the pandemic, it can also be unfair, as there are no opportunities for students in the risk groups for COVID-19, disregarding the equal chances of participation and treatment, as defended in article 10 of the UDBHR²³. Therefore, alternatives that would make their enrollment feasible, if they so wish it, should be assessed, keeping them away from direct assistance to patients suspected of being infected with the new coronavirus, as recommended by the National Health Council³².

On the other hand, making this experience equivalent to the mandatory curricular internship can impair the quality of medical education, since health services are not currently capable of providing regular teaching-learning conditions²⁹ and their supervisors may be unprepared for preceptorship, since the training for this position has not been predicted. Therefore, the acquired experience may not match the objectives proposed for Medical Internship in the National Curriculum Guidelines (DCNs, *Diretrizes Curriculares Nacionais*) and in the Pedagogical Project of the Course (PPC, *Projeto Pedagógico do Curso*), or their future routine medical practice. Would it be beneficial, then, to establish this equivalence to encourage participation in the Public Notice?

It is understood that this question does not presuppose an easy answer, as the entire teaching-learning process will always be exposed to possible unforeseen events, with the pandemic being only one of them. However, taking into account the logic of applying the utilitarian ethics, all consequences of the actions must be evaluated before being implemented³³,

which is considered of extreme relevance to obtain a good answer to the question formulated herein.

About the early graduation

The most recent measure related to medical education in the context of COVID-19 was issued by the Presidency of the Republic, authorizing the early graduation of students who completed at least 75% of the medical internship workload^{21,22}. Bringing the decision to the more biomedical scope of professional ethics, by allowing the certification of students, the accountable regulatory institutions confirm that they are formally qualified for professional performance, in this case, as medical professionals and for the benefit of patients¹². Therefore, the main question that arises is: would an early graduation still provide the guarantee that the graduates have the necessary knowledge and expertise for the medical profession?

To ponder the benefits and risks of this measure, it is important to remember that the Medical Internship represents at least 35% of the entire course load of the undergraduate medical course, according to the 2014 DCNs³⁴, in addition to being the educational phase with the highest number of practical class-hours. Decreasing the duration of this phase, according to a CFM note, would jeopardize the learning and experience of future professionals, and it also does not guarantee that they will actually work at the front line, since there are no clear mechanisms for doing so³⁵.

For this reason, it is important to highlight that, even though the public administration used the utilitarian calculation to justify this decision, according to a previously declared comprehension, it must be considered that, when using utilitarian ethics, it also becomes necessary to ensure that the greatest achieved benefit will keep for as long as possible – and that the latter aspect is not necessarily guaranteed.

FINAL CONSIDERATIONS

An attempt was made to perform a careful e detailed analysis of the most recent government measures (at the time of the article submission) for the national fight against the COVID-19 pandemic, which implies changes in the way medical students are included into this context. The questions raised were constructed based on a pluralist ethic and reflect possible impacts for both medical education in Brazil and our society, making the ethical discussion about these topics of utmost importance for the progress towards the well-being of all, while respecting the human rights, dignities and freedoms. For the effective fight against the disease, it is necessary to collectively structure the adopted actions, benefiting from the capabilities that students already have, but still within their limitations as undergraduate students and within their vulnerabilities as human beings.

For this reason, even when recognizing the emergency nature of government actions to fight COVID-19, it should be emphasized that any ethical decisions, in the context of Medicine and future generations of professionals, may have unquantifiable consequences for these individuals, as well as for their patients and communities^{16,23}. And when health issues are being debated, one must be assured that the benefits will be the best and greatest possible.

AUTHORS' CONTRIBUTION

Cleide Aparecida de Freitas is responsible for the study concept and participated in the data analysis and writing of the manuscript. Gustavo Freitas Alves de Arruda and Giovanna Cecília Freitas Alves de Arruda participated in the literature review, data collection and analysis and the writing of the manuscript. Saulo Ferreira Feitosa was the study advisor and participated in the preparation and final review of the manuscript.

CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest in this study.

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