Ethical aspects of telemedicine in the face of Covid-19 pandemic

Aspectos éticos de la telemedicina ante la pandemia de Covid-19

Jorge Alberto Álvarez Díaz*

https://doi.org/10.36105/mye.2021v32n1.07

Abstract

The article raises peculiar clinical-epidemiological conditions when humanity faces an emerging zoonosis. The example that has rudely struck humanity is the Covid-19 pandemic, a disease caused by the SARS-CoV-2 coronavirus. Although the history of humanity accounts for multiple pandemics caused by various infectious agents, it is true that uncertainty prevails when faced with a global problem of this nature. Before it, there is a moral obligation to provide the best possible health services; at the same time, research should be carried out to find specific pharmaceutical measures that contain and mitigate the damage to the population (specific drugs and/or vaccines). Meanwhile, knowing that in the case of the current Covid-19 pandemic the main and most efficient route of transmission is the spread by droplets of saliva, physical distancing is crucial. A medical consultation involves speaking during the questioning and physical proximity during the examination. There is data that indicates that telemedicine has a high degree of recommendation for the protection of the health of both professio-

Reception: September 20, 2020. Acceptance: October 15, 2020.

Medicina y Ética - Enero-Marzo 2021 - Vol. 32 - Núm. 1

^{*} Professor of the Department of Health Care, Division of Biological and Health Sciences, Universidad Autónoma Metropolitana, Unidad Xochimilco, Mexico City, México. Email: bioética_reproductiva@hotmail.com http://orcid.org/0000-0001-99 35-8632

nals and patients. It is recalled that a statement from the World Medical Association has addressed the issue of telemedicine; with its presentation, scope, limitations and future projections are indicated.

Keywords: SARS-CoV-2, telehealth, World Medical Association.

1. Uncertainty in the face of an emerging zoonosis

The advance that medicine has had along with other health sciences has been given in very good measure during the 20th century. In the 19th century a philosophical movement called positivism originated in France, under the pen of August Comte. A legacy of that movement is the application of the scientific method to the biomedical sciences. In a very general way, during the first half of the 20th century, the methodological approaches to carry out health research were generated and, in the second half of the same century, it was discovered that, in addition, ethical criteria for research should be incorporated. With all this, the birth of bioethics as an interdisciplinary field in the middle of that second half of the last century is not fortuitous.

Much older than this –as old as human history– is to speak of pandemics. Infectious diseases that are distributed throughout a country and actually or potentially reach the world appear in the Hippocratic texts, where the term «epidemic» is found. They already appear in Galen's work, (where the general sense is closer to the present one). One can find the same in biblical texts as in literature (*The Decameron*, by Giovanni Bocaccio, is written after a plague epidemic; in the same 20th century one can find texts such as *The Plague*, by Albert Camus, or *Love in the Time of Cholera*, by Gabriel García Márquez). Epidemics that acquire the degree of pandemic are phenomena of all history. We must not forget that in 1520, in the 16th century, in what is currently Mexico, there was a first great pandemic, that of *hueyzáhuatl* (smallpox). In the middle of that same century there was the *cocoliztli*, which, according to recent literature and based on molecular biology techniques, could have been a salmonellosis (1). A century ago, an influenza pandemic went down in history as the «Spanish flu»; it severely decimated humanity.

In addition to arriving at a historic moment in which there are already methodologies for doing health research and ethical regulatory criteria (and increasingly, legal criteria as well), the Covid-19 pandemic has at least a couple of peculiarities. First, the causal agent is a new coronavirus among humans, SARS-CoV-2 (originally named 2019-nCoV); because of influenza pandemics, it was thought that the next major pandemic might be this type of virus, rather than another respiratory virus, like the current coronavirus. Second, which has not been said with due force and frequency, it has come with devastating results for the lives and health of people in developed countries. SARS and MERS developed mainly in the East; Ebola, by contrast, in Africa. The «world» interest is the interest of developed nations in not having elements like this virus that would slow down their booming economies (hence the abundant research, clinical trials with drugs, vaccines, open publications in refereed and indexed journals, etc.; as is well known, this type of research is enormously expensive).

Thus, with the arrival of any emerging disease, research must be combined with clinical practice. What is known must be treated, and what is not, must be investigated. In the months when the world has survived the pandemic, much is already known and, as always, much more is unknown. From the beginning, it was recognized that Covid-19 was the first occupational disease described in the decade, and it was thought that the experiences with SARS and MERS would be useful in dealing with the new pandemic, especially in identifying health care workers as at-risk. They would then need to be trained in protection and good infection control practices; in addition, adequate support in terms of psychosocial health was already emphasized (2).

J. A. Álvarez Díaz

The first quantitative investigations showed that 60% of the health personnel who were infected by the new coronavirus were nurses, followed by medical personnel in 30%. Of the medical personnel, half held middle management positions (deputy directors), and a quarter were specialists in critical medicine and pneumology (3).

Three stages had been identified in that first quarter of the pandemic. In the first, Covid-19 was an unknown disease, with health care personnel poorly protected due to ignorance. In the second, the disease was gradually recognized. Once adequate protection was identified, some health workers remained inadequately or incompletely protected, due to lack of training or due to problems in the production, distribution and allocation of specialized resources (personal protective equipment or PPE). In a third stage, the severity of the disease would have been recognized. By then, health personnel should be fully protected from the technical-scientific point of view, identifying the best equipment according to professional activity and, from the administrative point of view, not only with adequate purchase and distribution, but also with clear policy guidelines and massive training (4).

At the time of writing this text, we are continuing with that third stage. By the time safe and effective pharmaceutical measures (drugs and/or vaccine) are established, a new stage will have been reached. At the beginning of this long stage, each country has had to be responsible for establishing appropriate ways to protect health workers. Care cannot be adequately provided if it is not staffed, or if it is being seriously decimated. Taking into account that in the 20th century people learn how to do health research and that this is regulated little by little ethically and legally, it is necessary to remember an important terminology: *evidence based medicine*. It has been translated as «evidence based medicine», a translation that is not very good; it would be better «evidence based medicine». Evidence is accumulating, for and against diagnostic and therapeutic practices. The research that has the greatest strength to provide evidence is that which is developed with clinical trial methodology. In addition to the different «levels of evidence», there is also talk of «degrees of recommendation». This terminology is adopted for the elaboration of clinical practice guidelines, with the objective of providing the best of scientific research to achieve the benefit of a particular patient (Sackett's idea of what evidence-based medicine is and should be). It is relevant because there are measures that do not have sufficient evidence (to continue with the most usual terminology), but there are data that indicate that they have a high degree of recommendation. For example: calling a patient by name during labor (data present in national guides in Mexico). There is no clinical trial in which a group in which patients are called by name is compared with another group in which other terms are used. In addition to appearing sensible, there are reasons based on the dignity of the person and reinforced with a gender perspective to recommend this practice. In all this, where does telemedicine fit in?

2. Degree of recommendation of telemedicine in the Covid-19 pandemic

A serious practical problem is that, in the face of an emerging zoonosis, there is not much time to think about clinical trials. Generating a new drug for a certain condition, or a specific vaccine, may take a decade or more. In several diseases it has not been possible (for example, in the face of the HIV pandemic of the 1980s. It has not been possible to develop a vaccine, but fortunately there are treatments that achieve that, if carried out properly, a person can have a practically normal life, to such an extent that a positive person, but with an undetectable viral load by laboratory, is considered clinically in transmissible). Clinical trials are not an epidemiological design that applies exclusively to pharmacological interventions; with variants (as well as difficulties and specifications), they should also be carried out to determine a diagnostic method and thera-

J. A. Álvarez Díaz

peutic methods (pharmacological or non-pharmacological) in any disease or condition.

Following this idea, if a face-to-face consultation or a distance consultation is offered (supported, for example, by electronic methods), a test should be done to determine whether or not the presence affects the diagnosis itself or some other factor. If there are no trials, meta-analyses cannot be done and therefore there is no evidence of the best quality. From what was said in the previous section, it turns out that the degree of recommendation is very high despite the lack of evidence. For this reason, the specialized literature already refers to the fact that part of the health systems' response to the Covid-19 epidemic should include a telemedicine system (5). This action, carried out immediately, helps to protect health personnel involved in care (6), mainly from the triage stage, to establish whether or not any intervention is required (knowing that most cases do not require hospital care). Thinking about all the possibilities has generated optimism regarding its use because of its multiple benefits (7). This is because the support with the use of electronic means, not only can help in the initial triage, but, analyzing specialty areas and recommendations by groups of cases or diagnoses, a remote consultation can be carried out (8).

This is an extension of the culture of prevention that must remain in place throughout the pandemic period: potential health care users must be protected from becoming infected with SARS-CoV-2. The best way to protect them is to avoid the risk of exposure to the virus in a hospital environment: if they do not move, physical distancing is maintained; this prevents and, with the support of telemedicine, provides the service in cases where this is possible. One of the first examples reported in the literature of the current pandemic is tele dermatology (9). Dermatology is a specialty in which lesion inspection is essential. It is true that sometimes palpation of lesions provides additional information, but a good medical history with inspection, even at a distance, can be very informative (at least to determine if any face-to-face evaluation is required).

There are other possibilities that can be considered, such as mental health services (10). It could be argued that, with speech being the crucial instrument for a psychotherapy session, there would not be too many problems. Soon after analyzing it, one realizes that trust in establishing a therapeutic relationship or alliance can be more complicated precisely because of distance, a difficulty that has already been encountered in some initial empirical research. Mental health professionals indicate that, while there are some advantages to not moving, there are some other ethical challenges, such as managing confidentiality in the spaces of both the professional and the person consulting (11). In this sense, it should be evaluated if the distance intervention is for the first time or with people with whom previous sessions have already been established.

Probably the field that has found the greatest arguments in favor of a distance consultation is that which avoids the arrival of people with a high risk of infection or complications to a faceto-face consultation. This includes older people or people with chronic non-communicable diseases, among which hypertension, obesity, diabetes mellitus, cardiovascular diseases, etc., stand out. This is complex because, even though some consultations cannot be provided in person, it may not be possible to go for medication, have laboratory tests done for follow-up control, etc., with a telemedicine strategy (12). For this reason, it is important to think in general terms and develop health policies, but with the ideal of respecting the autonomy of the people, so that they can responsibly evaluate whether or not they are coming for a certain situation of their suffering.

If one thinks not only in terms of telemedicine, but in terms of also more broadly in telehealth, education, prevention or promotion strategies can be carried out through electronic means, avoiding the displacement of the population to receive the interventions. The social response of the population to the pandemic can also be monitored (13).

As with any strategy, there are advantages, disadvantages and limitations. It is often thought that the population with some conditions of vulnerability, such as living in remote rural environments, would be at a disadvantage. Conditions that may harm the historically most vulnerable population should be considered in depth when establishing health policies; a person, usually health personnel, may be assigned to establish remote communication to transmit information, follow up patients, etc.

It is also true that new technologies pose some peculiar challenges, such as the possibility of contact tracing which, although it sounds epidemiologically attractive, should not be implemented without an adequate ethical and legal analysis, so as not to violate the dignity and confidentiality of individuals or infringe their rights (14). A challenge, from several points of view, is to determine what is to be considered a «normal» or «standard» health care assignment, after all the experiences and theory generated from the experiences during the pandemic (15).

3. Telemedicine in Mexico: its application in the Covid-19 pandemic

The WHO has defined telemedicine as «providing health services, where distance is a critical factor, for any health professional, using new communication technologies for the valid exchange of information in diagnosis, treatment and prevention. disease or injury, research and evaluation, and continuing education of health providers, all with the interest of improving the health of individuals and their communities»(16). For its part, PAHO has said that «telehealth (including telemedicine) involves the delivery of health services using ICTs, specifically when distance is an obstacle to health services» (17). Although there is abundant literature sufficient to distinguish «medicine» from «health», this broad distinction is left, where telehealth includes telemedicine.

Telemedicine can be carried out in two ways in relation to the development of activities over time: asynchronously and synchronously. In the first case, the information is recorded, stored and transmitted by health professionals, who are usually those who are far away from the centers of specialization or those who need to consult a specialist or another level of specialization; once the information is received and analyzed, a response is issued. In the second case, the emission and reception of the information occurs in real time between the person who demands the services and the person who provides them, so that the recommendation and/or diagnosis does not differ in time.

In the case of the Covid-19 pandemic, the idea has been to develop synchronous telemedicine, not necessarily by physical distance, but precisely to avoid physical contact. Knowing that the most efficient mechanism of contagion is saliva drops, what has been sought in telemedicine services is to avoid that component. For this reason, there has been a special emphasis on screening the population, (to recommend whether or not to go to the health services, as well as the measures to be taken at home), but also for paraclinical examinations (such as inter-consultations in imaging), mental health support (for health professionals, but also for information to family members...), continuous training (such as the educational activities of the National Medical Coordination of INSABI) (18), and so on.

In Mexico, telemedicine has been institutionalized since January 2004 following the creation of the National Center for Technological Excellence in Health (CENETEC), named in 2009 as a WHO collaborating center. Following these events, meetings have been held and literature produced on this subject in the region of the Americas (19), analyzing theoretical aspects and practical experiences in different parts of the country (20). A Certificate of Legal Instruments applicable to the practice of telehealth in Mexico was published in 2017 and updated in 2019 (21). In it, it is understood that the same instruments are applied as those for the face-to-face medical practice, varying only the procedure (synchronized at a distance). These analyses come from the publication in the Official Gazette of the Federation, on December 21, 2015, of the Draft Mexican Official Standard PROY-NOM-036-SSA3-2015, for the regulation of remote medical care. In the same newspaper, on April 27, 2018, the Notice of Cancellation of the Project of Mexican Official Norm PROY-NOM-036-SSA3-2015, for the regulation of medical attention at a distance, published for public consultation on December 21, 2015, was published.

It has been found that telemedicine offers advantages in Mexico, mainly by breaking the barrier of physical distance, allowing greater coverage, potentially a greater attachment to treatments and a clear decrease in travel, stay and productivity costs (22). Its limitations have also been found, derived from the fragmentation of the National Health System, the concentration of technologies in some regions of the country, the high costs of some ICTs, as well as the lack of knowledge about them on the part of administrative and health personnel, as well as on the part of people who demand attention (23).

In addition to what has already been analyzed about telemedicine in Mexico, the pandemic must be placed in this context. As a country classified as low –and middle income–, special socioeconomic considerations must be made (24). There is abundant literature to affirm that the worst part of most acute and chronic diseases falls on the poor, and it is very likely that the poor socioeconomic status will affect the spread and outcome of the SARS-CoV-2 epidemic in Mexico. Densely populated cities (megalopolises), food insecurity, poor access to basic services such as water, crowded public transportation, high prevalence of chronic non-communicable diseases, etc., are factors that promote high transmission of the coronavirus. To this series of factors must be added a health service infrastructure deteriorated by decades of neoliberal health policies, which have also failed to hire sufficient personnel. In view of the shortage of hospital beds, intensive care facilities and insufficient health personnel, conditions must be created to optimize work. Policies are decisive in trying to keep as much of the population at home as possible (quantitatively and over time). To help the population know if they are suffering from Covid-19 so that they can stay at home and not become infected, to promote that only those who need to go to the health services go, and to do so as early to avoid overcrowding as much as possible. The challenge has been and is immense.

Several strategies have been derived from this complex reality. One of them is that it is essential to recognize suspicious cases. The epidemiological guideline generated since February 2020, and later updated in March and August of this year, is clear that for clinical purposes (not epidemiological), a suspected case should be treated at home as if it were positive. In case of complications suggesting severity or seriousness, or in case of having comorbidities that increase the risk of complication and eventually death, they should receive medical evaluation and timely referral to the appropriate level of care. This demands many complex processes, starting with screening. The Government of Mexico has created an application for cell phones and its potential use at the national level, Covid-19mx (available for free download in the different platforms). It allows the creation of a personal profile, a screening test for suspected diagnosis, and the receipt of information. In addition, if geolocation is activated, health institutions and their capacity to provide care are identified on a map according to their degree of saturation in the services. The Mexico City government has created a text messaging service with a similar *chatbot*: sending the word Covid19 to 51515, you also have a screening test. In case of alarm data, there is the possibility for health personnel trained in Covid-19 to make a video call to evaluate the patient's condition, by means of an inspection directed to the alarm data. Depending on the result, it is indicated whether the person requesting the services

must remain at home (receiving food and economic support and continuous medical monitoring), or whether he or she must go to the health services for follow-up. This same evaluation can be done on a web page (25). The Government of Mexico City also has an application, APP CdMx 911, which provides information on hospital capacity. At the present time of the pandemic, there is also a program of special attention to priority colonies, those where the incidence rate is higher.

Before moving on to the next section, two points should be highlighted: first, it should be remembered that the health system in Mexico, although legally considered unique, is fragmented; therefore, agreements have had to be generated to make care efficient between the private and public sectors, and within the latter, between the IMSS, ISSSTE, PEMEX, SEDENA, SEMAR, etc., subsystems. Second, the role of the Regulatory Center for Medical Emergencies (CRUM) and coordination with the 800 line services are essential for the timely referral of patients to services that can receive and provide care. This is necessary in order not to make people exclusively responsible for their care, but rather it represents a part of the responsibility of State institutions with respect to the health of the population.

4. Bioethics in the face of telemedicine and telehealth

As can be analyzed at this point of reflection, creating telemedicine services has an ethical component at its core, which is to prevent the harm that can potentially occur to both health professionals and people who demand care. In addition to this initial consideration, it must be clear that any application of techno science brings with it specific challenges.

The World Medical Association (WMA) frequently refers to the Declaration of Helsinki (1964) *Ethical Principles for Medical Research Involving Human Subjects in Research*. However, being a worldwide

Ethical aspects of telemedicine in the face of Covid-19 pandemic

organization, it has many other statements that address ethical aspects of medical practice in specific clinical settings, in response to defined problems, in defined situations. One of them deals precisely with telemedicine. A first version, *the World Medical Association Declaration on Responsibilities and Ethical Guidelines in the Use of Telemedicine,* was adopted by the 51st General Assembly of the World Medical Association in Tel Aviv, Israel, in October 1999. It was subsequently rescinded at the WMA General Assembly in Pilanesberg, South Africa, in October 2006. It was subsequently revised and updated so that the current version, *the World Medical Association Declaration on the Ethics of Telemedicine*, was adopted by the 58th WMA General Assembly in Copenhagen, Denmark, in October 2007, and then amended by the 69th WMA General Assembly in Reykjavik, Iceland, in October 2018 (26).

Like other documents of the World Medical Association, the *Declaration on the Ethics of Telemedicine* has a short, concise structure, intended to be applicable. In its organization it presents the following topics: definition, introduction (with four basic points); a series of four principles (respect for ethical standards in five points; autonomy and privacy of the physician in four points; responsibilities of the physician in seven points; and quality of care in two points), to end with six recommendations. Given the relevance of the text, it is transcribed and some comments are made.

The definition used as a starting point is as follows: «Telemedicine is the practice of medicine at a distance, whose interventions, diagnoses, therapeutic decisions and subsequent treatment recommendations are based on patient data, documents and other information transmitted through telecommunication systems. Telemedicine can be performed between a physician and a patient or between two or more physicians, including other health professionals. The Declaration of Helsinki said something in its second point that needs to be rethought here: «Although the WMA is composed of medical professionals, the recommendations reasonably achieve other practices in health care. In the case of Covid-19 this could be nursing staff, inhalation therapy, physical therapy, etcetera.

The four points in the introduction refer to something similar to the Mexican regulatory framework: what is fundamental is faceto-face care, so telemedicine must be justified and have a common ethical and legal framework with face-to-face practice. These points indicate the following:

The development and implementation of information and communication technology create new and different ways of practicing medicine and providing medical care to patients. Telemedicine is used for patients who cannot see a physician in a timely manner because of inaccessibility due to distance, physical disability, employment, family commitments (including care of others); because of cost to the patient; and because of physicians' schedules. It has the ability to reach some patients with limited access to health care and has the potential to improve health care. However:

- Face-to-face consultation between doctor and patient is the golden rule of clinical care.
- Telemedicine services must be consistent with face-to-face services and supported by evidence.
- The principles of medical ethics that are binding on the profession must also be respected in the practice of telemedicine.

The densest part of this Declaration from the ethical point of view is undoubtedly the one entitled «Principles» which, in turn, lists to establish standards with some concreteness. Returning to what was said in previous sections of this text; it is possible to build an idea of an ethical practice of telemedicine:

When practicing telemedicine, physicians should respect the following ethical standards:

 The physician-patient relationship must be based on personal examination and sufficient knowledge of the patient's medical history. Telemedicine should be used primarily in situations where the physician cannot be physically present at an acceptable and safe time. It can also be used in the management of chronic diseases or in follow-up after initial treatment, when it has been proven safe and effective.

- 2. The doctor-patient relationship in telemedicine must be based on mutual trust and respect. Therefore, it is essential that the physician and the patient can identify each other with confidence when using telemedicine. In the case of consultations between two or more professionals, in or between different jurisdictions, the primary physician is responsible for the care and coordination of the patient with the distant medical team.
- 3. The physician should seek to ensure that patient confidentiality, privacy and data integrity are not compromised. Data obtained during a telemedicine consultation should be secured, to prevent unauthorized access and breaches of patient identifiable information, through appropriate and up-to-date security measures in accordance with local legislation. Electronic transmission of information should also be protected against unauthorized access.
- 4. Adequate informed consent requires that all necessary information about the various aspects of telemedicine consultations be thoroughly explained to patients, including, but not limited to: explanation of how telemedicine works and how to book appointments; privacy issues; the possibility of technological failures, including breaches of confidentiality; contact protocols during virtual consultations; prescription policies and coordination of care with other health professionals, in a clear and understandable manner, without influencing the patient's decision.
- 5. Physicians should be aware that certain telemedicine technologies may be unavailable to patients and, as a result, may impede their access. Unequal access to telemedicine can further widen the health gap between rich and poor.

Physician autonomy and privacy

- 6. A physician should not use telemedicine if it violates the legal or ethical framework of the country.
- 7. Telemedicine can potentially violate a physician's privacy due to its 24-hour availability. Physicians should inform patients about the availability of and recommend services, such as emergency care, when it is not accessible.
- 8. Physicians should exercise their professional autonomy in deciding whether a telemedicine consultation is appropriate versus a face-toface one.

J. A. Álvarez Díaz

9. Physicians should exercise their autonomy and discretion in selecting the telemedicine platform they will use.

Responsibilities of the physician

- 10. The physician who is asked for his or her opinion through telemedicine should keep a detailed record of the advice he or she gives, as well as the information received, on which he or she based his or her advice to ensure traceability.
- 11. If the decision is made to use telemedicine, it is necessary to ensure that the users (the patient and the health professionals) can use the necessary telecommunication system.
- 12. The physician should try to ensure that the patient has understood the advice and treatment suggestions given, and where possible take steps to promote continuity of care.
- 13. The physician who asks another physician for advice or a second opinion is responsible for the treatment and other decisions and recommendations given to the patient.
- 14. The physician should be aware of and respect the difficulties and uncertainties that may arise when he/she is in contact with the patient through telecommunication. The physician should be prepared to recommend direct patient-physician contact when he/she believes it is in the best interest of the patient.
- 15. A physician should only use telemedicine in countries/jurisdictions where he/she is licensed to use it. Cross-jurisdictional consultations should only be permitted between two physicians.
- 16. The physician should ensure that his/her health insurance includes telemedicine.

Quality of care

- 17. Quality of care assessment measures should be used regularly to ensure patient safety and the best possible diagnostic and treatment practices in telemedicine. The provision of telemedicine services should follow evidence-based standards of practice to the extent available to ensure patient safety, quality of care and positive health outcomes. As with all health interventions, the efficacy, safety, feasibility and cost-effectiveness of telemedicine should be tested.
- 18. The possibilities and weaknesses of telemedicine in emergencies should be properly identified. If it is necessary to use telemedicine

during an emergency, advice and treatment suggestions are influenced by the severity of the patient's condition and the competence of the people with the patient. Entities providing telemedicine services should establish protocols for emergencies.

Any declaration of ethical standards or principles ultimately seeks action. All ethics establishes, in different ways (and foundations), worlds that are ideal, that do not exist, but the ethical obligation of human beings is to try to realize them as completely as possible in the shortest time possible. Perhaps you lead your life in this, but it is the way to act ethically. Thus, the WMA'S Declaration of 2018 on the ethics of telemedicine ends with a series of recommendations that invite action:

- 1. Telemedicine should be appropriately adapted to local regulatory frameworks, which may include the licensing of telemedicine platforms for the benefit of the patient.
- 2. Where appropriate, the WMA and National Medical Associations should promote the development of ethical standards for this practice; national legislation and international agreements on issues related to the use of telemedicine, while protecting the patient-physician relationship, confidentiality and the quality of medical care.
- 3. Telemedicine should not be considered equal to face-to-face medical care, and should not be used only to reduce costs or as a perverse incentive for excessive services and increased profits for physicians.
- 4. The use of telemedicine requires the profession to explicitly identify and manage adverse consequences on peer relationships and benchmarks.
- 5. New technologies and styles with the integration of this practice may require new norms and standards.
- 6. Physicians must push for ethical telemedicine for the benefit of the patient.
- 5. Final words.

Several points are striking. On the one hand, that the Declaration of the WMA has not been widely disseminated in the specialized literature. For example, in the well-known *PubMed* database it does not reach a dozen papers where it is cited. One of them, which is

J. A. Álvarez Díaz

well documented and critical, presents scenarios with opportunities for clinical care in telemedicine, ethical problems that are generated and forms of approach taking into account the Declaration (27). It is also noteworthy that in many places, there have been very diverse telemedicine initiatives in the face of the Covid-19 pandemic, ranging from strategies that seek to be comprehensive to others that are more specific; however, there are no specialized articles that discuss the Declaration, although there are quite a few that make ethical analyses or comments. At the time of writing this text, 1,604 citations including Covid-19 and Ethics can be found in the same PubMed database, while if Covid-19 is combined with Bioethics, 280 results appear. None mentions the Declaration. It is not a question of basing all analysis on the WMA Declaration, but it must be recognized that it is an input that can provide elements for the construction of an ethics of telemedicine in situations of disaster in general and of pandemics in particular. Moreover, all ethics seeks to guide or orient the concrete act, and not be limited merely to reflection; thus, there must be particular analyses for each pandemic (it is not the same to speak of Ebola, influenza or coronavirus). It will be necessary to analyze the rest of the course of the pandemic to determine which practices were the best. If evidence is generated in some way or if it is mere experience, and how to integrate all this information in the construction of a bioethics directed to a pandemic, such as the one that has made so many aspects of humanity as a whole to be rethought.

Finally, it must be clear that a Declaration on ethical issues is always guiding, but not limiting. That is to say, it offers reasonable guidelines for ethical action that can never exhaust the problems derived from the subject dealt with in the Declaration. The starkest example for the near future in the face of the current Covid-19 pandemic is the issue of contact tracing applications. It would be desirable that at some meeting of the World Medical Association the subject be analyzed and a position taken, not with the intention of resolving the problem, but rather to establish lines for deliberation. The wait continues.

Bibliographic references

1. Vagene AJ, Herbig A, Campana MG, Robles García NM, Warinner C, Sabin S, Spyrou MA, Andrades Valtueña A, Huson D, Tuross N, Bos KI, Krause J. Salmonella enterica genomes from victims of a major sixteenth-century epidemic in Mexico. *Nat Ecol Evol.* 2018; 2(3): 520-528. https://doi.org/10.1038/s41559-017-0446-6.

2. Koh D. Occupational risks for Covid-19 infection. *Occup Med* (Lond). 2020; 70(1): 3-5. https://doi.org/10.1093/occmed/kqaa036.

3. Wang J, Zhou M, Liu F. Reasons for healthcare workers becoming infected with novel coronavirus disease 2019 (Covid-19) in China. *J Hosp Infect.* 2020; 105(1): 100-101. https://doi.org/10.1016/j.jhin.2020.03.002.

4. Chen W, Huang Y. To protect healthcare workers better, to save more lives. *Anesth Analg.* 2020; 131(1): 97-101. https://doi.org/10.1213/ANE.00000000000 4834.

5. Rockwell KL, Gilroy AS. Incorporating telemedicine as part of Covid-19 outbreak response systems. *Am J Manag Care.* 2020; 26(4): 147-148. https://doi.org/ 10.37765/ajmc.2020.42784.

6. Moazzami B, Razavi-Khorasani N, Dooghaie Moghadam A, Farokhi E, Rezaei N. Covid-19 and telemedicine: Immediate action required for maintaining health-care providers well-being. *J Clin Virol.* 2020; 126: 104345. https://doi.org/10.1016/j.jcv.2020.104345.

7. Hollander JE, Carr BG. Virtually perfect? Telemedicine for Covid-19. *N Engl J Med.* 2020; 382(18): 1679-1681. https://doi.org/10.1056/NEJMp2003539.

8. Greenhalgh T, Wherton J, Shaw S, Morrison C. Video consultations for Covid-19. *BMJ.* 2020 Mar 12; 368: m998. https://doi.org/10.1136/bmj.m998.

9. Rismiller K, Cartron AM, Trinidad JCL. Inpatient teledermatology during the Covid-19 pandemic. *J Dermatolog Treat.* 2020; 31(5): 441-443. https://doi.org/10.10 80/09546634.2020.1762843.

10. Sousa A, Karia S. Telepsychiatry during Covid-19: Some clinical, public health, and ethical dilemmas. *Indian J Public Health.* 2020; 64(Supplement): S245-S246. https://doi.org/10.4103/ijph.IJPH_511_20.

11. Olwill C, Mc Nally D, Douglas L. Psychiatrist experience of remote consultations by telephone in an outpatient psychiatric department during the Covid-19 pandemic. *Ir J Psychol Med.* 2020 May 22: 1-8. https://doi.org/10.1017/ipm.2020.51

12. Basu S. Non-communicable disease management in vulnerable patients during Covid-19. *Indian J Med Ethics*. 2020; V(2): 103-105. https://doi.org/10.20529/ IJME.2020.041.

13. Fagherazzi G, Goetzinger C, Rashid MA, Aguayo GA, Huiart L. Digital health strategies to fight Covid-19 worldwide: Challenges, recommendations, and a call for papers. *J Med Internet Res.* 2020 Jun 16; 22(6): e19284. https://doi.org/10.21 96/19284.

14. Vokinger KN, Nittas V, Witt CM, Fabrikant SI, von Wyl V. Digital health and the Covid-19 epidemic: An assessment framework for apps from an epidemiological and legal perspective. *Swiss Med Wkly.* 2020 May 17; 150: w20282. https://doi. org/10.4414/smw.2020.20282.

15. Garrett JR, McNolty LA, Wolfe ID, Lantos JD. Our next pandemic ethics challenge? Allocating «normal» health care services. *Hastings Cent Rep.* 2020; 50(3): 79-80. https://doi.org/10.1002/hast.1145. PMID: 32596905.

16. WHO (World Health Organization). Telemedicine. Opportunities and developments in member states. Report on the second global survey on eHealth. Global Observatory for eHealth series. Volume 2. [Accessed on October 10, 2020]. Available from: http://www.who.int/goe/publications/goe_telemedicine_2010.pdf https:// doi.org/10.4258/hir.2012.18.2.153

17. OPS (Organización Panamericana de la Salud). Telesalud. [Accessed on October 10, 2020]. Available from: https://www.paho.org/ict4health/index.php?option =com_content&view=article&id=9684:telehealth&Itemid=193& lang=es

18. National Medical Coordination of INSABI. Continuous training on clinical management for health professionals. [Accessed on October 10]. 2020. Available from: https://coviduti.salud.gob.mx/registro/ https://doi.org/10.29193/rmu.36.2.2

19. Dos Santos AF, Fernández A. (Eds.) Development of telehealth in Latin America. Conceptual aspects and current status. Santiago de Chile: Economic Commission for Latin America and the Caribbean (ECLAC); 2013. [Accessed on October 10, 2020]. Available from: http://www.saludzac.gob.mx/home/docs/Telesalud/TelesaludMexico/Desarrollo.pdf https://doi.org/10.20983/reij.2018.2.6

20. González Rétiz ML, Pacheco López A. Telehealth Development in Mexico. Santiago de Chile: Economic Commission for Latin America and the Caribbean (ECLAC); 2013. [Accessed on October 10, 2020]. Available from: https://reposito-rio. cepal.org/bitstream/handle/11362/4055/1/S2012935_es.pdf https://doi.org/ 10.20 983/reij.2018.2.6

21. Ministry of Health, CENETEC-Salud. Certificate of Legal Instruments applicable to the practice of telehealth in Mexico. 2nd ed. Mexico: Ministry of Health, National Center for Technological Excellence in Health; 2019. [Accessed on 10 October 2020]. Available from: https://www.gob.mx/cms/uploads/attachment/file/534418/ CedulaIns trumentosJuridicosTelesalud_feb2020.pdf https://doi.org/10.1590/ s0036-36342 000000300012

22. Dabaghi Richerand A, Chávarri A, Torres Gómez A. Telemedicine in Mexico. *An Med (Mex).* 2012; 57(4): 353-357.

23. Mariscal Avilés J, Gil García JR, Ramírez Hernández F. e-Salud in Mexico: background, objectives, achievements and challenges. *Public Spaces*. 2012; 15(34): 65-94. Ethical aspects of telemedicine in the face of Covid-19 pandemic

24. Hodkinson B, Singh P, Gcelu A, Molano WB, Pons Estel G, Alpízar Rodríguez D. Navigating Covid-19 in the developing world. *Clin Rheumatol*. 2020; 39(7): 2039-2042. https://doi.org/10.1007/s10067-020-05159-4.

25. The CdMx government cares about your health. [Accessed on October 10, 2020]. Available from: https://test.covid19.cdmx.gob.mx.

26. World Medical Association Statement on the Ethics of Telemedicine [Accessed on October 10, 2020]. Available from: https://www.wma.net/es/policies-post/decla-racion-de-la-amm-sobre-la-etica-de-la-telemedicina/ https://doi.org/10.3989/isego-ria .1994.i10.269

27. Humbyrd CJ. Virtue ethics in a value-driven world: Ethical telemedicine. *Clin Orthop Relat Res.* 2019; 477(12): 2639-2641. https://doi.org/10.1097/CORR.0000 00000000908