ACADEMIA NACIONAL DE
CIENCIAS DE BUENOS AIRES

A PERSONAL VIEW ON THE ROLE OF CLINICAL PHYSICIANS IN THE PANDEMIC

Ing. Juan Carlos Ferreri, Académico Presidente

This contribution is aimed at sharing some personal views on the COVID-19 pandemic, particularly on aspects that impressed me in the last months. Depending on the region where one lives, along with their peculiarities and means of clinical care, these aspects are different. Notwithstanding, some of them may be of common interest and I will try to describe my impressions in this writing. I have chosen quite a few examples of the many that I can portray. The impact of the pandemic on people's health and its associated cost in lives is, beyond any doubt, the most important aspect to consider, but several other features emerge in common, some way perplexing, real-life situations that affect physicians. *The possible role of physicians* will be analyzed in this sense. Before considering these particular aspects, it is essential to mention the solidary work of health care professionals of all types: intensive care physicians, the nurse personnel in charge of sick people's attention, cleaning personnel, administration personnel, and anyone else who are working at the forefront of the pandemic's victims attention. Quite often they fall sick too, because of their helplessness, inter alia due to the lack of adequate protective equipment provision. In these conditions, their work becomes heroic solidarity.

The *first aspect*[1] that affects clinical physicians is related to the temporary loss of the simplest, mediating technological tool of clinical care: *the chair*. Not any chair, but the one used to chat face to face with the physician, where I use to seat, on the patient's side of the desk to start the consultation with my cardiologist. It usually begins after handshaking, with a question from him: "How are you doing JC?". My usual answer is "Well… I believe I am doing well; I hope you will tell me about it…". In this way, and some minutes of an eye to eye conversation on everyday life and symptoms, he learns how I feel. After this, and some other simple comments, the quantitative auscultation begins. Finally, he conveys to me his anxiously expected wise advice. This is the magic of using the basic, mediating tool: *the chair*. No other artifact or virtual connection can replace it. Physicians should keep this basic tool in use for the benefit of patients, even in this time of overburden by the pandemic.

The *second aspect* is a more complex interaction, coming from the COVID-19 coronavirus outbreak and the role of science. I believe that even depending on the context, it may be accepted that the perception of *growing obscurantism and anti-*

[1] Dedicated to my very much-appreciated physicians Academician Angel Alonso and Alejandro L.Tomatti. Ángel told me about *the chair's role*. Alejandro is my personal cardiologist since more than two decades ago. I gratefully acknowledge the comments by Academicians Damasia Becu, Abel Julio González and Mirta Roses Periago that benefited this manuscript.

scientific attitudes in society is a commonplace among scientists. Examples of this may be a large number of followers of plane-earth theories taking part in meetings, the flourishment of esoteric rites and habits, and the participation of seers in public events or criminal investigations, just to mention a few. This is not new, and the advent of the Internet allowed the rebirth and spreading of these and other activities. Not the least among the motivations of the anti-scientific attitudes is a real need of setting up the ethical rules that must guide Artificial Intelligence developments; this is new and it is based on the near-future consequences of these advances on our lives, as perceived by the society, and has started –I would say- on wrong-foots: by confusing the intelligence with the conscience. The skepticism about the motivations of the advancement of science also helps to hide the real benefits of research and development. The avalanche of fake news, pseudo-experts presence in the mass media, the obvious rush of countries, companies, and laboratories to be first to get the vaccine, and other malpractices do not help to emphasize the real importance of the scientific method that must rule research. In this context, people become eager to learn about results on the development of a vaccine against the COVID-19 virus, but at last, and because of over-information, they become confused and disregard all the information. All scientists should engage in the promotion of scientific advancement according to the established rules. Physicians may help in this aim much more than anyone else because they have scientifically-based skills and are far more often in contact with people than scientists. It is an unexpected way to promote science and an imperative at this time of the pandemic.

Now, considering the physicians' lack of the question "How are you doing?", meaning, in this case, NO COVID-19 symptoms, leads to a *third aspect*. Depending on the place, an *important fall in the number of consultations* has been registered about common illnesses that cause thousands of deceases each year, like pulmonary infections and common flu, not to speak about delayed clinical treatments that have been suggested by clinical treatment institutions (private and public) and by physicians (too). The fall in vaccination of small children against measles also poses a threat to public health. Presumed expert physicians enrolled in anti-vaccination activism blogs, social nets and multimedia are the most harmful about health because of their high reach among the public. Persons are overly sensitive to the possibility of COVID-19´s virus contagion and abandon even cancer therapies, at the risk of losing their effectiveness. People, understandably, are refusing MRIs and CTs because they are afraid of contagion. Surgical interventions are also postponed, changing a controlled situation by a potential urgent one. In places where self-medication is usual and possible, many persons tend to diagnose themselves (often via the misuse of the Internet) instead of calling the physician. A partial solution to this situation by physicians could be to call patients under chronic treatment and suggest them to return to care. It seems that it is not a physician´s clear duty, especially in times of overburden by the pandemic, but this attitude may help to save many lives in these times of pandemic.

The *fourth aspect* deals with the deepening of *social inequity* that manifests *in access to the Internet to continue elementary and secondary education* outside the classrooms. Even in developed countries with a solid mid-class, the pandemic generates strong differences. Typically, in a family with three children, three laptops and rooms are needed because virtual lessons are delivered at the same time and some privacy, at least no surrounding noise, is needed for concentration and participation. In the case of families belonging to minorities or being economically marginalized, even the use of plain access to the Internet is not so common. In this way, poorer people get degraded education, with the so-added handicap. It may be argued that the loss of one year in twelve is not too much, but the consequences must be solved shortly. The inequity reflects also in the impossibility of parents to working remotely, in a home office context. This impacts in reduced income directly and leads to health care deficiencies, feedbacking the third *aspect*. It is an added charge for physicians.

The following and last aspect to be discussed, the *fifth one*, needs some understanding in common. In the first place (i), I strongly believe that any persons' life is invaluable because it is unique and irreplaceable. However, valuations are common in real life. Examples are different life insurance costs -a common feature of everyday life-; occupational protection criteria are usually different than those of the general public, namely according whether, for a given activity, a person is a worker or belongs to the public; moreover the worker acceptance of incurring higher risks is usually compensated by higher payment (another implicit valuation of a person's life). In the second place (ii), triage is also another example of valuations, the most difficult that physicians must face in times of a pandemic plus resource scarcity. Practice justification, (iii), is the third example to consider because of its ethical nature, meaning that the introduction of any practice must produce more benefits than harm to be justified.

We are now able to analyze what is a more subtle way of individuals' life valuation. It is the development of *hyper-personalized medicine*. It has been introduced about twenty years ago, in the form of N-of-1 trials for medical care. In this way, a non-conventional treatment -like drug prescription- may be applied many times to a single person, leading to success in some cases. Since the treatment is the responsibility of the physician and the evaluation of results depends on his criteria, it seems that the statistical significance of the treatment may be obviated. Knowledge of these situations passed on word of mouth leads to the popularization of such, almost magical, procedures. It depends on the ethical position of the physician whether to go forward. In the worst case, small, dedicated clinics profit on these procedures. The ethics of these procedures has been the subject of well-documented discussions. In passing, it may be mentioned that the presentation of case problems of the type just considered, used to be quite common in clinical medicine meetings.

Recently, the concept of N-of-1 trials has been considered in another way. It consists of the application of a huge amount of monetary resources to the cure of one individual. Strict adherence to (i) above allows the analysis. Consequently, the criterion (iii) may be applied because the practice is justified. However, the cost of

the practice may lead to relativize this linear reasoning. A specific example may help to clarify. Let us consider the case of the so-called Mila's-miracle, as reported early in 2019. This is the case of a girl, diagnosed to suffer a neurodegenerative disease. Her illness was one of the so-called too-rare-to-care. Through the CRISPR technique, the gene was found, and a specific, patient-only drug was developed. It was named MILASEN after the name of the patient. Its administration allowed a substantial benefit for her health condition. This case opened a new way to consider medical care, where clinical physicians may have reduced participation. The cost of the treatment was, at least, about three million dollars. This cost was afforded mostly by crowdfunding and a Foundation was created to emphasize the potential benefits for many other persons.

Now it is the moment to introduce what impressed me as the *fifth aspect*: it is the *people´s empathy-driven facilitation of funds collection for the search and development of a cure for one single person at a cost in money and human resources that almost impairs its justification*, (iii) above. Many aspects may be considered. I will only refer to two of them. The first is subjective: would one have any doubt on justification if this child is our child or our grandchild? The second may be related to a sort of triage. Suppose for a moment that you have the following situation: one crowd-funding campaign is allowable in-line and choosing one among three possible candidates for a hyper-personalized, life-saving or life-improving treatment is the only case to promote. Cases are a) a provable gifted child (about 10 years old), b) a middle-aged (about 45 years old), highly recognized medicine researcher, head of an important research laboratory, and c) a senior, Nobel-class, medicine scientist (about 75 years old), perhaps the mentor of the scientist before. My impression is that, given the choices, the child will be selected, because of the above-mentioned crowd-empathy. This is against utilitarian criteria and would also be in line with international declarations that forbid the application of utilitarian criteria when dealing with children. To leave apart feelings or beliefs is a challenging task for any person and, in the case of physicians, something to face in the near time. They are unique in the sense to help considering all aspects of hyper-personalized medicine, social cost included.

To conclude: five aspects that impressed me concerning tools, attitudes, and socio-ethical questions on clinical health care have been considered. They are not unique and other persons may have different, also valid beliefs. What seems true to me is that supposing obscurantism does not advance, that social inequity may be reduced, that personal contact between physician and patient does not decline, that the people understand the role of science and the time and method needed for it to be effective and all the social aspect of clinical medicine, physicians will stay forever in high consideration. Should this not be the case, these statements only open the door to consider the Ethics of utopias or, perhaps, the utopia of Ethics.