



Editorial

Coronavirus disease 2019 (COVID-19): Opportunities and concerns



Since the World Health Organization declared the coronavirus disease 2019 (COVID-19) pandemic, the lives of all people have significantly changed. These changes range from economic, social, and personal freedom, all largely restrictive, while the characteristics of the virus and the serious and widespread repercussions on people's health are not yet fully clarified. In the biomedical field, stakeholders and scientific researchers are strongly focused on measures to stem the spread of the infection by searching for effective therapies and, above all, a vaccine. In the surgical field, the impact of the pandemic has led to a general reduction in operating activities following the reshaping of priorities based on urgency and severity and the availability of intensive care unit beds, largely given over to COVID-19-positive patients with serious clinical prognoses. However, the impact of the pandemic has also had positive effects, such as the reduction of fine dust pollution induced by global lockdowns, with consequent effects on people's health.¹ In a recent editorial, Behrns and Wexner² explained that some changes have been good for patients and surgeons and claimed that the use of telemedicine has become a positive element induced by COVID-19. While recognizing the advantages that telemedicine can manage many diseases, I have some concerns about it. There are 2 aspects to consider: the first concerns the relationship between doctor and patient, and the second is the impact on doctors in training, in particular on surgeons. For over 40 years, I have been teaching my students that what differentiates a medical graduate from a doctor is the relationship with the patient in terms of listening to their medical history, fears, and expectations, as well as having direct contact with his/her body and his/her state of illness. In a word, visit them. Thanks to improved information and communication technologies and the numerous tools³ that allow monitoring of various vital functions and immediate patient contact, telemedicine has made great strides but is very unlikely to mimic the sensation a doctor receives from a hand that palpates the abdomen either from auscultation of a thorax or from direct vision (and smelling) of an infected wound. I remember the first time I smelled a melena like it was yesterday, or what I learned from having to deal with sudden intraoperative bleeding. The relationship with the patient, which is based on trust, is altered because it is filtered by a vocal contact devoid of that "physical intimacy" that characterizes any patient's physical examination.

On the didactic level, the distortion is even greater. Our young colleagues are already conditioned by tight budgets, by not being able to investigate clinical conditions for fear of administrative retaliation,⁴ by the difficulty of accessing wards and operating rooms to complete their professional training, or familiarizing themselves with clinical cases of different gravity and complexity.

The experience gained in recent months with COVID-19 has generated fears of a passive and active contagion, of reduction of operative and collegial patient management activities, and of reduced opportunities for contact with the patient.

For a trainee, these aspects are fundamental, since they represent the essential steps for personal, technical, and human maturation, as argued by Gill et al.,⁵ who affirm that all this has made students and doctors in training lose months of training experience essential for their professional growth. While the characteristics and performance of a car, for example, remain the same whether it is purchased from dealer A or B, the outcome of a surgical procedure, even when performed with standard techniques and in operating rooms with the same technological equipment, is strongly conditioned by the skill of the operator. This in turn is strongly conditioned by the type of training they received: the qualitative relationship and training with a mentor and , training path, cases treated, their complexity and singularity. Telemedicine also understood as distance training or as simulation or virtual training, can be severely lacking from this point of view. This represents a penalizing element in doctor training, both in the learning phase and in the relational phase with the patient, if it is not continuously integrated by the direct relationship with the patient. In a world so conditioned by technicality, the very aspect of the ability to mix "humanitas" and "pietas" with the indispensable professional skills represents that element of transition from a medical graduate to a doctor, which I mentioned before. Our humanity, so valuable to patients, can only be expressed in the direct, personal relationship with the patient and his family. It is therefore not enough to talk about telemedicine in the abstract. Telemedicine, expanding its limits to include remote teaching in the surgical field, is a resource if it remains an option available to the doctor and not a recourse, forced by contingencies such as the pandemic, which excludes all the others. It is right to underscore the elements of innovation and positivity, but recourse to it must be, even in difficult times like these, diversified and modulated on the basis of parameters that consider the urgency of contact between patient and doctor but that still guarantees the possibility of resorting to a service center for visits. From the didactic point of view, it can be used for remote or simulator training but guaranteeing trainees access to the only real "text-book" useful for medical training: the patient. Is this a vision outdated by the times? Maybe. It depends on the future of surgery: will we still have operating rooms and dedicated wards, or will everything be resolved in laboratories of nanotechnology, molecular medicine, and genetic engineering? Currently our

commitment is here. Humanity will overcome COVID-19, like so many other pandemics in history, and will do so by also resorting to telemedicine but be careful not to make it an alibi to reduce sick people to interesting cases, to a medical record, which can be consulted remotely, not to an administrative practice to be processed.

Funding/Support

The author has indicated that no funding was received related to the content of this article.

Conflict of interest/Disclosure

The author has indicated that there are no conflicts of interest regarding the content of this article.

Michele Rubbini, MD*
Department of Medical Sciences, University of Ferrara, Ferrara, Italy

* Reprint requests.
E-mail address: rbb@unife.it (M. Rubbini).

References

1. Ju M, Oh J, Choi YH. Changes in air pollution levels after COVID-19 outbreak in Korea [e-pub ahead of print]. *Sci Total Environ.* 2020. <https://doi.org/10.1016/j.scitotenv.2020.141521>. Accessed October 20, 2020.
2. Behrns KE, Wexner SD. Times are changing and so is *Surgery*. *Surgery.* 2020;168:571.
3. Sim I. Mobile devices and health. *N Engl J Med.* 2019;381:956–968.
4. Armstrong K, Ranganathan R, Fishman M. Toward a culture of scientific inquiry - The role of medical teaching services. *N Engl J Med.* 2018;378:1–3.
5. Gill D, Whitehead C, Wondimagegn D. Challenges to medical education at a time of physical distancing. *Lancet.* 2020;396:77–79.