




LETTER TO THE EDITOR

The Effects of COVID-19 on Academic Activities and Surgical Education in Italy

Gaetano Gallo^{1,2}  and Mario Trompetto²

^aDepartment of Medical and Surgical Sciences, University of Catanzaro, Catanzaro, Italy; ^bDepartment of Colorectal Surgery, S. Rita Clinic, Vercelli, Italy

Dear Editor,

The outbreak of the novel beta Coronavirus infection in Italy, recently renamed as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), officially started on 31 January 2020, when two Chinese visitors tested positive for the virus.¹

This is the seventh outbreak of coronavirus in humans, the third after the severe acute respiratory syndrome coronavirus (SARS-COV), resulting in about 8000 cases and 774 deaths and with a mortality rate of around 9–11%,² and the Middle East respiratory Syndrome (MERS-COV).³

After less than 2 months, on 11th March, the World Health Organization characterized/declared the Corona Virus Disease (COVID-19) as a pandemic.⁴

Italy, with its 23% of the population aged over 65, just surpassed China as the country with the highest related COVID-19 deaths.

The northern part of the country is actually under pressure and if this situation will not rapidly improve the entire National health system (Sistema Sanitario Nazionale, SSN) could fail.

As of March 24, 3204 out of approximately 5200 beds in intensive care unit are occupied for patients with SARS-COV-2. Many departments for elective cares have been adapted for the increasing emergency and the Civil Protection is rapidly creating some new dedicated hospitals.

Personal protective equipment such as masks and coats are lacking as well as devices for artificial ventilation and specialized personnel but fortunately some helps are coming from all over the world.

The constantly worsening evolution of the pandemic is pushing Italian Political Authorities to take measures à la demande, often depending on the

local situation more than considering the global entity of the disease.

In such political and scientific chaos (no actual proven drugs but only empirical treatments adapted to the severity of the single case) it is difficult to imagine for Italy (and for all other nations in which SARS-COV-2 is beginning to spread) a short-term solution from this emergency. Europe has not understood, at least at the beginning of the epidemic, the real severity of the situation in Italy, contributing to the disinformation and confusion that has brought to a sanitary worsening and in future it will have to self-justify on it.

In Italy to try to cope with this unprecedented emergency retired doctors have been recruited (on voluntary base). This latter, even if easily understandable, could increase the number of the infections for the advanced age of the colleagues.⁵ On the contrary it is questionable the choice to put doctors in training to work in emergency departments serving in a job that is surely out of their possible competence. Moreover, also other European countries are thinking to draft senior medical students to help the National Health Services deal with the outbreak.⁶ This situation already occurred during the Spanish flu in 1918 when volunteer medical students were deployed to villages with insufficient medical personnel.⁷

Furthermore, it will be difficult to justify the hurried graduation of many doctors just to put them rapidly at work. While appreciating their willingness, they have nor basic knowledge nor enough experience to manage cases of extreme severity and only in future we will be able to know how much this hard psychological test will definitively influence their life.

At this point to discuss about possibilities of surgical training in Italy is at least risky if not

utopian because the COVID-19 pandemic expends all the best possible energies of our country. All levels of schools and also universities have stopped any type of lectures trying to rapidly move to some kinds of online courses. In surgery this can be very helpful for medical students in their first- and second-year but clinical students and residents are really in troubles. For them, education in medicine must be rapidly adapted to permit an almost normal interaction with patients using remote consultation technologies and the current crisis should be considered as a possible opportunity in this field not to be missed.⁸ Apart of its educational impact, a video-guided examination of possibly infected patients could diminish the pressure on the emergency departments for patients manageable as home-care cases.⁹

Similarly, the implementation of a program of telemedicine to manage patients in quarantine by qualified personnel could really bring to admit in the hospitals only cases needing of instrumental help.^{10,11}

Residents are also facing concerns not only for their education and subsequent future career but primarily for their health and roles in patients' care. In fact, they may be required to help with COVID-19 patients and many associations, such as the Association of Surgeons in Training, or the Asociación Española de Cirugía (AEC) have included special recommendations for them.^{12,13}

Of course, social media is a fast resource that can contribute to residents' training.¹⁴ Some hashtags in relation to COVID-19 and surgery as #COVID19surgery, #COVID19ESCP and #COVIDSurg can be helpful both for young surgeons and all health-care professionals all over the world.

Several conferences and courses globally have had to be delayed, or often canceled. Many of the ongoing studies have been postponed because of the overload of researches needed for SARS-COV-2 or because it's simply impossible to carry out studies in such demanding and challenging conditions. Research opportunities like COVIDSurg, have been launched as part of an international collaborative effort to improve patients' surgical management in this pandemic period.¹⁵

Surgery, considered as the whole field of invasive medicine, has canceled elective procedures, reserving operations only for emergencies or selected cases of malignancies with the aim of avoiding patients' risk to COVID-19 exposure and to prevent the shortage of hospital and ICU beds. In the next months the real impact of the cancelation of these elective surgeries on residents' training and workload will be clarified.¹⁶

We hope to recover an almost normal surgical activity as soon as possible, allowing these surgeons in training to recover the time they are wasting

because of this pandemic. Chiefs of all surgical units, who are responsible not only for their patients but also for the training of their residents, will have to devolve more time in teaching in their theaters. The National Health Authorities will have the duty to promote centers that have always been involved in practical training, also increasing the number of interested departments. Universities will play an important role and we hope they will demonstrate their great didactic capacities that seemed to be lost in the last years. Of course, now it is time to stay together, behaving as correctly as possible respecting this necessary period of quarantine. The future for surgery and for us will depend first of all on our capacity to remember this period, drawing from it a new sap for a more human science, available to all people.

DECLARATION OF INTEREST

No potential conflict of interest was reported by the author(s).

ORCID

Gaetano Gallo  <http://orcid.org/0000-0003-1066-4671>

REFERENCES

- [1] ANSA Agency. Two coronavirus cases found in Italy. January 31, 2020. http://www.ansa.it/english/news/general_news/2020/01/31/two-coronavirus-cases-found-in-italy_981d57c5-67b9-4043-95d5-f6bd47e389df.html.
- [2] Peiris JS, Guan Y, Yuen KY. Severe acute respiratory syndrome. *Nat Med*. 2004;10(S12):S88–S97. doi:10.1038/nm1143.
- [3] Zaki AM, van Boheemen S, Bestebroer TM, Osterhaus AD, Fouchier RA. Isolation of a novel coronavirus from a man with pneumonia in Saudi Arabia. *N Engl J Med*. 2012;367(19):1814–1820. doi:10.1056/NEJMoa1211721.
- [4] World Health Organisation. WHO director general's opening remarks at the media briefing on COVID-19–11 March 2020. Geneva: WHO; 2020.
- [5] Italia News. Medici per Covid-La Protezione Civile ha pubblicato il bando per 300 medici volontari. <https://www.italia-news.it/la-protezione-civile-ha-pubblicato-il-bando-per-300-medici-volontari-18652.html>.
- [6] Pulse. Government is considering using medical students to help in coronavirus outbreak. <http://www.pulsetoday.co.uk/clinical/clinical-specialties/infectious-diseases/government-is-considering-using-medical-students-to-help-in-coronavirus-outbreak/20040272.article>.
- [7] Trilla A, Trilla G, Daer C. The 1918 "Spanish flu" in Spain [published correction appears in *Clin Infect Dis*. 2008 Oct 1;47(7):987]. *Clin Infect Dis*. 2008;47(5):668–673. doi:10.1086/590567.

- [8] Bramstedt KA, Prang M, Dave S, Shin PNH, Savy A, Fatica RA. Telemedicine as an ethics teaching tool for medical students within the nephrology curriculum. *Prog Transpl*. 2014;24(3):294–297. doi:10.7182/pit2014289.
- [9] Lurie N, Carr BG. The role of telehealth in the medical response to disasters. *JAMA Intern Med*. 2018;178(6):745–746. doi:10.1001/jamainternmed.2018.1314.
- [10] Hollander JE, Carr BG. Virtually perfect? Telemedicine for Covid-19. *N Engl J Med*. 2020. doi:10.1056/NEJMp2003539. [published online ahead of print, 2020 Mar 11]
- [11] Wong TW, Lee CK, Tam W, et al. Cluster of SARS among medical students exposed to single patient, Hong Kong. *Emerg Infect Dis*. 2004;10(2):269–276. doi:10.3201/eid1002.030452.
- [12] ASIT. RE: COVID-19. The implications for surgical trainees in the delivery of care and training. Vol. 44. 2020:6–9. http://www.bapras.org.uk/docs/default-source/covid-19-docs/asit_the_15_speciality_associations_letter_to_surgical_trainees_covid19-02.pdf?sfvrsn=2.
- [13] Asociación Española de Cirujanos. Recomendaciones para los residentes de cirugía general ante la pandemia por SARS COV-2. 2020. https://www.aecirujanos.es/files/noticias/152/documentos/Recomendaciones_residentes.pdf.
- [14] Gallo G, Sturiale A, De Simone V, Mayol J. Epistemic networks on Twitter: A new way to learn. *J Invest Surg*. 2019;1–9. doi:10.1080/08941939.2019.1656787. [published online ahead of print, 2019 Sep 1]
- [15] Global Surgery. About Covid Surg. <http://globalsurg.org/covidsurg/>.
- [16] Gunner CK, Oliphant R, Watson AJ. Crises drive innovation. *Colorec Dis*. 2020. doi:10.1111/codi.15043. [published online ahead of print, 2020 Mar 17].