



## EDITORIAL

# COVID-19 and resuming elective surgery. How do we get back to normal?



## COVID-19 e a retomada das cirurgias eletivas. Como voltaremos à normalidade?

COVID-19 will still be present in our population in the coming months (or until a vaccine is available), and in addition to restrictions on individual liberties, we will have to face the negative impacts on the economy<sup>1</sup> and its social aftermath: unemployment, depression, hunger, suicide, violence against women, drug abuse, among others. Conditions knowingly associated with increase in deaths.

Specifically taking into account our activity, the scenario we are facing has had no equal in modern history and, therefore, there is no available information for comparing and projecting what effect interrupting surgeries will have on public health.<sup>2</sup>

In order to resume elective surgeries safely the effective participation of anesthesia services in management committees is indispensable, aimed at making all resources available to face the pandemic, to manage possible lack of supplies, and also aimed at developing and adapting care protocols.

For elective surgeries in non-infected patients, high-alert surveillance and social distancing principles, protection gear for patients and care teams must be kept for all cases. During elective surgeries, increase in mortality and adverse events, upon developing COVID-19, are concerning and the rationale for additional care such as previous testing and isolation.<sup>3,4</sup>

Due to associated costs and scarcity of protection equipment, hospital management tends to recommend using maximum protection only for positive cases of COVID-19, even if it leads to some uncertainty as to the protection of all individuals involved. This is another sensitive and delicate issue that needs to be faced.

On the other hand, available access to surgery is acknowledged worldwide as a scarce resource, resulting in a global challenge to provide safe surgery and anesthesia as a priority.<sup>5,6</sup> Estimates suggest that roughly 330 million surgeries are performed annually worldwide,<sup>7</sup> most of them in developed countries. Considering the global average

of roughly six million procedures per week, surgery containment, and the new safety requirements will require innovating solutions.

As an example of the harsh scenario, according to the WHO Global Cancer Observatory, 500,000 patients are diagnosed with colorectal cancer annually in Europe, being four million for any kind of cancer. In two months of pandemic there seems to be the diagnosis of 83,000 patients with colorectal cancer and over 660,000 patients with any type of cancer. The estimate did not include the time required for getting activities back to normal and solving lists of pending issues, therefore the negative impact can be greater,<sup>8</sup> mainly because we are not aware of the consequences of containment of surgeries on the deterioration of patients' clinical conditions, health and well-being.<sup>1</sup>

The virus officially arrived in Brazil on February 25, in the city of São Paulo.<sup>9</sup> The crisis has been lasting, therefore, five months already and will probably continue until the end of 2020 in different parts of the country, which leads us to assume that the scenario may be even more critical, and that hospitals and the health system will suffer major economic impacts. Taking into account the severity of the scenario being faced, some questions to anesthesiologists and their representative entities surface: How can anesthesia services add value and reduce costs? What attitudes/measures should be prioritized? After all what will our contribution be?

Data from the Instituto de Estudos de Saúde Suplementar (IESS)<sup>10</sup> appoint that hospital admissions account for 61% of the Medical Hospital Cost Index, a medical-hospital inflation measure in Brazil. Therefore, a greatly representative priority will be reducing inpatient stay.<sup>11</sup>

Given the fixed costs of the operating suite are high, reducing operation time of each surgery is also required, ramping up surgical suite use. However, performing surgeries faster cannot compromise patient safety, given costs

associated with surgery increase significantly when there are complications.<sup>12</sup>

The most frequent perioperative complication alone is infection. In fact, surgical wound infections are one of the most serious and common perioperative complications, and probably cause more morbidity than all other anesthetic complications together,<sup>13</sup> half of which can be prevented.<sup>14</sup> A patient with infection is five times more likely to be readmitted<sup>15</sup> and increase average inpatient stay in 3 to 4 days.<sup>16</sup>

Given the challenges presented, special attention should be given to controlling risk factors for the development of perioperative infection. Mainly hypothermia,<sup>17</sup> malnutrition,<sup>18</sup> and insulin resistance.<sup>19</sup>

Protocols such as the Aceleração da Recuperação Total Pós-Operatória – ACERTO (Speeding Up Total Postoperative Recovery)<sup>20</sup> project and Enhanced Recovery After Surgery (ERAS),<sup>21</sup> based on evidence, have already been tested in Brazil and in several parts of the world, and should receive special attention when elective surgeries are resumed, as they are easy alternatives to perform in order to reduce perioperative morbidity-mortality, inpatient stay, and associated costs.

In brief, at this time of major uncertainties, it is essential to use the best scientific evidence, adapt protocols, use available resources and structures correctly, and prepare a recovery plan for services, prioritizing patients that present clinical status with a higher risk of deterioration.

## Conflicts of interest

The author declares no conflicts of interest.

## References

1. Søreide K, Hallet J, Matthews JB, et al. Immediate and long-term impact of the COVID-19 pandemic on delivery of surgical services. *Br J Surg.* 2020; <http://dx.doi.org/10.1002/bjs.11670>. Online ahead of print.
2. Spinelli A, Pellino G. COVID-19 pandemic: perspectives on an unfolding crisis. *Br J Surg.* 2020;107:785–7.
3. Aminian A, Safari S, Razeghian-Jahromi A, et al. COVID-19 Outbreak and surgical practice: Unexpected fatality in perioperative period. *Ann Surg.* 2020;272:e27–9.
4. Brat GA, Hersey S, Chhabra K, et al. Protecting surgical teams during the COVID-19 outbreak: A narrative review and clinical considerations. *Ann Surg.* 2020; <http://dx.doi.org/10.1097/SLA.0000000000003926>. Online ahead of print.
5. Holmer H, Bekele A, Hagander L, et al. Evaluating the collection, comparability and findings of six global surgery indicators. *Br J Surg.* 2019;106:e138–50.
6. McDermott FD, Kelly ME, Warwick A, et al. Problems and solutions in delivering global surgery in the 21st century. *Br J Surg.* 2016;103:165–9.
7. Weiser TG, Haynes AB, Molina G, et al. Size and distribution of the global volume of surgery in 2012. *Bull World Health Organ.* 2016;94:201F–9F.
8. International Agency for Research on Cancer. Global Cancer Observatory of the World Health Organisation. *Cancer Today.* <https://tinyurl.com/w9w9msq>.
9. Simões CM, Lima LHNE, et al. The Anesthesiologist and COVID-19. *Rev Bras Anestesiol.* 2020;70:77–81.
10. Instituto de Estudos de Saúde Suplementar. Conjuntura - Saúde Suplementar. Ed. 2019. Disponível em: <https://www.iess.org.br/cms/rep/conj.pdf>. Acessado em 30 de Junho de 2020.
11. Gathe-Ghermay JC, Liu LL. Preoperative programs in anesthesiology. *Anesthesiol Clin N Am.* 1999;17:335–53.
12. Waltz PK, Zuckerbraun BS. Surgical site infections and associated operative characteristics. *Surg Infect (Larchmt).* 2017;18:447–50.
13. Galway UA, Parker BM, Borkowski RG. Prevention of post-operative surgical site infections. *Int Anesthesiol Clin.* 2009;47:37–53.
14. Link T. Guideline implementation: Design and maintenance of the surgical suite. *AORN J.* 2019;109:479–91.
15. Berger A, Edelsberg J, Yu H, Oster G. Clinical and economic consequences of post-operative infections following major elective surgery in U.S. hospitals. *Surg Infect (Larchmt).* 2014;15:322–7.
16. Sullivan E, Gupta A, Cook CH. Cost and consequences of surgical site infections: A call to arms. *Surg Infect (Larchmt).* 2017;18:451–4.
17. Berrios-Torres SI, Umscheid CA, Bratzler DW, et al. Centers for Disease Control and Prevention guideline for the prevention of surgical site infection. *JAMA Surg.* 2017;152:784–91.
18. Correia MITD, Perman MI, Waitzberg DL. Hospital malnutrition in Latin America: A systematic review. *Clin Nutr.* 2017;36:958–67.
19. Melnyk M, Casey RG, Black P, Koupparis AJ. Enhanced Recovery After Surgery (ERAS) protocols: Time to change practice? *Can Urol Assoc J.* 2011;5:342–8.
20. de-Aguilar-Nascimento JE, Salomão AB, Waitzberg DL, et al. ACERTO guidelines of perioperative nutritional interventions in elective general surgery. *Rev Col Bras Cir.* 2017;44:633–48.
21. Teixeira UF, Fontes PRO, Conceição CWN, et al. Implementation of Enhanced Recovery After Colorectal Surgery (ERAS) protocol: initial results of the first Brazilian experience. *Arq Bras Cir Dig.* 2019;32:e1419.

Florentino Fernandes Mendes   
*Universidade Federal de Ciências da Saúde de Porto Alegre (UFCSPA), Porto Alegre, RS, Brazil*  
*E-mail:* florentinomendes@gmail.com

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