To a New Normal

Surgery and COVID-19 During the Transition Phase

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The SARS-CoV2 (COVID-19) pandemic has been described as a ''black swan'': a rare and unexpected event of large magnitude whose consequence will likely have a major role in history.[1] Healthcare facilities have been challenged to adapt rapidly to treat an increasing number of COVID-19 patients.[2–4] In the absence of vaccines or effective pharmaceutical treatments, hospitals have struggled to reorganize their processes and procedures. Public authorities prepared emergency policies, and the medical community have had to reconsider their preparedness measures and supply of personal protective equipment (PPE).[5,6]

The surgical community has also been hit by the COVID-19 outbreak necessitating 2 radical actions: transferring part of the surgical workforce to COVID-19 care and abruptly stopping nonurgent operations and outpatient services. The concept of resilience is defined ''as the ability to recover from setbacks, adapt well to change, and keep going in the face of adversity.''[7] Resilience is a mandatory characteristic of surgical departments for a timely response and effective interventions for the survival of many patients. Part of the surgical activity had to go on with new procedures and safety regulations to triage urgent cases because ''business as usual'' was not an option. Although resilience appears as the primary paradigm for the COVID-19 era, several issues arise. Addressing such topics now in the midst of the COVID-19 pandemic may allow medical systems and surgical departments to become stronger in response to the challenges of the current situation, thereby develop antifragile strategies so that they will be better equipped to handle future unexpected challenges.[1]

When disasters happen, the crisis management literature reports several stages that must be addressed until a new equilibrium is reached. In the case of COVID-19, a first ''Emergency'' phase during the initial wave of the outbreak is now being followed by a ''Transition'' phase in which the number of infected patients decreases as a result of social restrictions. In both phases, procedures related to patient-centered ethics have been replaced by public health ethics in which the ''greater good'' overcomes a single patient's needs.[6] After the ''Transition'' phase, the ''Full Recovery'' phase will occur with the establishment of a ''new'' normal. However, it is unclear when this final phase will occur. The 3 distinct phases of the COVID pandemic are illustrated in Figure 1.

It is now time for most surgical departments to move to the Transition Phase. It seems clear that the entire surgical system will not go back to the ''old'' normal but will rather move towards a ''new'' normal where regular surgical activities need to be gradually resumed in the presence of many COVID-19 patients.[8] In the paragraphs below, we raise some important considerations and potential actions for optimizing resources and preventing the risks associated with future COVID-19 outbreaks that might follow in the months or years to come. We raise some calls for action to be addressed in preparation for the Full Recovery Phase.

During the Transition Phase, the entire system will still be based on controlling SARS-CoV2 spread; however, healthcare providers cannot rest upon determination of the immunological status of surgical candidates because there are few reliable tests with no precise data about the effectiveness and duration of post-COVID-19 immunity. The following considerations encompass the duties that surgeons of all specialties must carry on in their daily practice.

ELECTIVE SURGICAL ACTIVITY

The recovery of elective surgery must be undertaken as early as possible to cope with the significant amount of backlogged cases accumulated over the last few months. The Transition Phase requires effort on re-triaging patients still on the waiting list whose operations have been delayed. Systematic guidelines or recommendations from the scientific societies are needed and must be customized for the new COVID-19 era to guide clinicians in appropriately prioritizing cases based on the available resources at each center. Constant monitoring of waiting lists, and an appropriate scoring system must be used via adequate information systems, working on a networking basis to control the hospital capacity in terms of available intensive care unit beds. Some surgical departments may thus be able to run more operations than others, but the situation may change rapidly due to eventual COVID-19 waves and the subsequent inpatient needs. All elective patients should be tested shortly before their operations to detect the possible infection, thus allowing the management of COVID-19 patients with designated surgical pathways. The potential ethical implications of operating on patients in the age of COVID should be carefully discussed with patients. The potential COVID-19 related risks of surgery should routinely be part of the informed consent process that every patient agrees to before hospital admission.[8] The acknowledgment of the many unknown risks is essential in the ethical care of surgical patients going forward. In the Emergency Phase, the potential added risks of surgery if a patient is COVID-positive have been largely underrated due to the need for rapid decision making and the urgency of the surgery performed. As the Transition Phase is entered, it is now time to address the risks of surgery more systematically.

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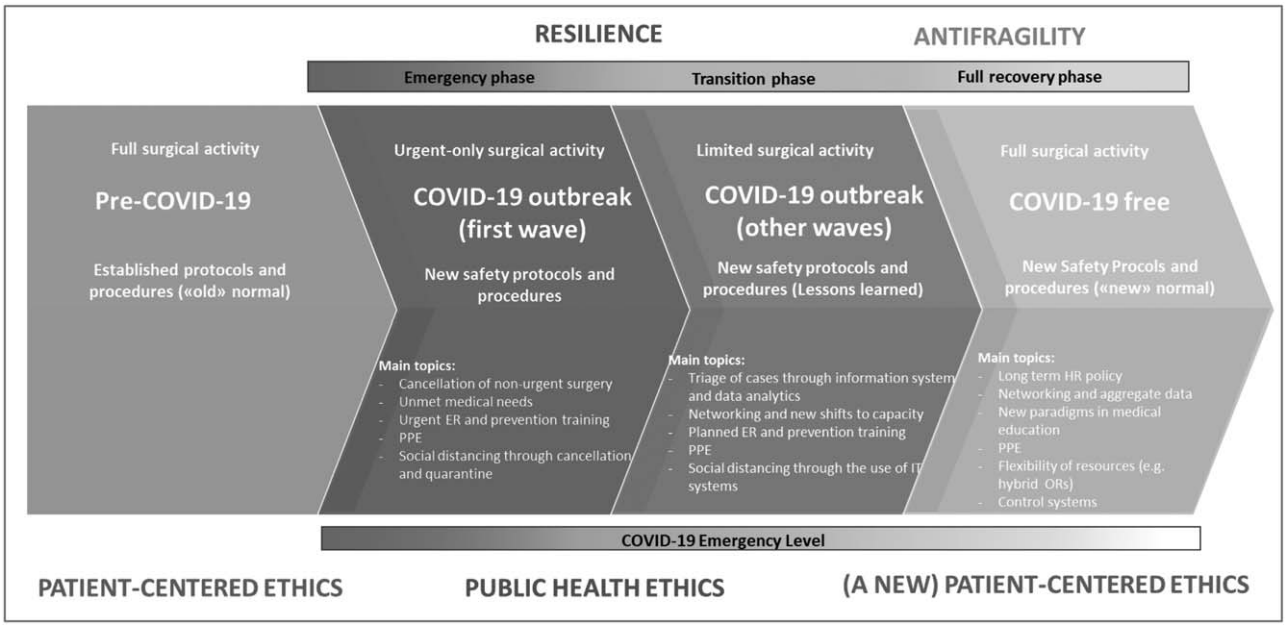

FIGURE 1. Phases of the COVID and post-COVID era.

OUTPATIENT CLINICS

Outpatient clinic activity should follow the safety procedures and the best practices developed during the emergency phase. All personnel must be constantly trained for routine adoption of PPE and appropriate use should be frequently assessed.[5] Patient care logistics require the acknowledgment that some people may be COVID-19-positive or particularly vulnerable to it due to preexisting conditions or ongoing therapies. Pathways should be designed to allow for social distancing of patients even in waiting rooms. Access to the hospital should be thoroughly regulated with restrictions for visitors, with appropriate temperature screening. The duration of each appointment should be strictly controlled to prevent large gatherings in waiting rooms. Web and mobile apps may be used to keep patient flows under strict control. These tools can help to monitor people to be admitted to the hospital facilities. The apps can also potentially offer informative documents about the surgery and hospital stay for patients. A reduction in the daily number of patients coming to clinics may be necessary to maintain social distancing in the outpatient setting. Therefore, new scheduling templates should be arranged appropriately if necessary.

SURGICAL WARD ACTIVITY

The regular use of PPE guarantees high safety standards for all people involved. Physical separation between COVID-19 positive and negative patients is crucial, and wards should be restructured accordingly. Back-up rooms/areas for patients positive for SARS-CoV2 during the hospital stay (ie, in the postoperative course) must be available to guarantee prompt relocation of patients if necessary. Rotation of the staff should follow the same principle. Frequent monitoring of inpatients for symptoms of potential SARS-CoV2 infection should be adopted as a routine practice, with isolation until further assessment. Visitors should be limited. However, the dramatic lack of contact between patients and families during the emergency phase must be addressed. A room ensuring social distancing may be dedicated for ambulatory patients. Bedbound patients may be equipped with tablets or other devices supporting web-based communication platforms allowing visual contact with families during hospitalization.

SURGICAL STAFF ADJUSTMENTS

Some members of the surgical staff in many departments were redeployed to the care of hospitalized COVID-19 patients during the emergency phase. One issue is the high level of stress for staff after the emergency phase—these workers often had to do unusual tasks such as intensive respiratory assistance or compassionate care for terminal COVID-19 patients. In the light of the increasing workload of departments to address all the unmet surgical needs, personnel rotation should be considered including among networked hospitals. Such strategies should comply with the local labor and safety regulations. The potential shortage of working staff due to infection with SARS-CoV2 is a great challenge for the transition phase. This adds to the worrisome general lack of clinicians.[9] Such issues must be addressed by policymakers in the long run together with a paradigm shift in surgical education that not only concerns technical skills but also the way these are delivered (remote teaching/learning, virtual simulation, etc). Significant educational opportunities will arise for new generations of surgeons that must encompass further duties and abilities beyond those strictly pertinent to the surgical environment including emergency medicine and intensive care training, risk management, team building, and leadership.

CONCLUSIONS

The Transition Phase requires identifying a variety of issues that represent challenges to be addressed. Hospitals will need to cope with the discontinuous presence of COVID-19. These issues affect routine surgical activities and workload in multiple ways. Resource sharing may thus represent the right strategy to confirm that waste is minimized. While most literature stresses the need for healthcare systems to be resilient,[10] we highlight the call for antifragile strategies at all levels, including surgery departments.[1] The system can thus become stronger after a black swan, addressing all challenges posed by the enforced circumstances for successful management of the Transition Phase while on guard against another pandemic. A call to concrete action by

policymakers in terms of resource upgrades, sharing, and enhancement in healthcare systems is imperative. The lessons learned from the COVID-19 emergency must lead to new strategies for a substantial rearrangement of the routine surgical practice; ensuring that the quality standards and the safety of workers and patients are preserved.[6]

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