Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

perhaps transplants would be performed more commonly during the day, and many general adult cardiac operations would be performed at night), and not just prioritized, but actively sought out from referring centers (which would increase urgent and emergent operative volumes further, and decrease or at least delay less urgent or elective cases)? Second, the aforementioned question should be posed across service lines—between cardiac surgery and general thoracic surgery, or vascular surgery, or general surgery; if so, concepts such as operating rooms dedicated to specific services or surgeons, or "block time," become obsolete.

On the other hand, coming back to the COVID-19 pandemic, is it possible that decision-making is faulty? Should elderly patients or those with multiple comorbid conditions, both of whom have diminished hospital and long-term survival in comparison with younger and healthier patients, undergo intensive care unit admission, invasive mechanical ventilation, or more advanced care? If the answer to that question is no in general, then the negative impact of the pandemic upon cardiac surgery and other disciplines would be far less. And thus, although honesty and duty are necessary conditions, they are not sufficient. We have to humbly ask and answer the difficult questions of what our duties ought to be, and how to prioritize them.

Reference

1. George I, Salna M, Kobsa S, Deroo S, Kriegel J, Blitzer D, et al. The rapid transformation of cardiac surgery practice in the COVID-19 pandemic: insights and clinical strategies from a center at the epicenter. *J Thorac Cardiovasc Surg*. 2020;160:937-47.e2.

See Article page 937.

Commentary: Pandemic deployment and surgical soldiership

Daniel J. Goldstein, MD

With the onslaught of the Coronavirus Disease 2019 (COVID-19) pandemic, institutions, particularly those in the eye of the New York storm, had to rapidly and thoroughly devise and implement strategic plans to face the unprecedented myriad challenges posed by this wretched pathogen. In this article[1] by the members of the Department of Surgery at Columbia Presbyterian Medical Center in northern Manhattan, the authors describe in luxurious detail their comprehensive, cogent, and commonsensical approach to optimizing care of patients, use of manpower, and maximizing use of vital space and equipment.

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CENTRAL MESSAGE

A necessary quality for aspiring and practicing surgeons is preparedness. Precious lessons in how to manage resources, deploy personnel, and prioritize cardiac surgery patients in the midst of a pandemic are presented.

The first half of the article discusses the tactics used that include transitioning to telemedicine platforms for outpatient visits, halting elective surgery (the main revenue-generating activity in any hospital), and redeploying staff at all levels to serve the explosive need for COVID-19 intensive care unit (ICU) staffing. None of these actions are

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unique to the institution because they were born out of a common necessity faced by all hospitals in the New York and New Jersey region. The authors advanced other, less frequently advertised initiatives such as the use of a "SWAT" team, a group of nomadic surgeons who, like soldiers on the battlefield, are loaded with the necessary equipment and entrusted with carrying out invasive procedures, not on the enemy's frontlines but in the crowded ICUs. The transformation and repurposing of surgical suites and operating rooms into functional ICUs are not small tasks given the positive air pressure nature of the chambers, the opaque windows, and the unfamiliar locale to bedside nurses. Additionally, the use of anesthesia machines that are not meant for the long-term ventilation of patients and require daily maintenance imposes additional challenges in oversight.

The focus of the article[1] and what separates it from several others emerging in the rapidly expanding literature lie squarely on the actions taken by the cardiothoracic surgery division with regard to the provision of care for their prospective and ongoing patients. To their credit, they created a tiered system of urgency in which clinical diagnoses were assigned acceptable waiting periods for surgery, thereby prioritizing those with the highest risk of deterioration and possibly death. The first effort in those deemed needing true urgent intervention was to exhaust medical management and less-invasive percutaneous interventions of the coronary circulation and aortic or mitral valve. Ultimately, the decision to proceed with conventional surgery was made after deliberate weighing of resource availability and likelihood of success, and with the input of the Chair of the Department. The authors categorized active ischemia with critical coronary anatomy, left-sided endocarditis with hemodynamic compromise, salvageable aortic dissections, and high status heart transplantation as highest priority procedures. Of note, although the authors briefly discuss the potential use of venoarterial extracorporeal membrane oxygenation, they make no mention of their position on the use of venovenous extracorporeal membrane oxygenation, a procedure that has been used for pulmonary support in more than 300 critically ill patients with COVID-19 in the United States. Finally, the authors emphasize the importance of close follow-up of postponed patients to ensure stability of symptoms.

The frequently heard aphorism "failing to prepare is preparing to fail" seems most appropriate here. The lessons shared by the authors who are living at the epicenter of the disease should be widely shared and memorialized. Recent pronouncements from the Centers for Disease Control and Prevention suggest that we may witness a dreadful second wave of coronavirus in the fall, compounded by the arrival of the typical flu season. It is clear that "novel" viruses that historically have inflicted more casualties than any war or natural catastrophe will continue to test our societies. On the heels of the pandemic, hospitals will need to reexamine their posture on stockpiling of medications, personal protective equipment, and vital equipment, and redeployment and replacement of staff. Unfortunately, the sacrifices made by frontline healthcare workers and the unparalleled scientific and humanitarian collaboration that have defined this pandemic are likely to be forgotten as weeks and months of "normalcy" set in. We cannot allow for this convenient amnesia to ensue.

Reference

1. George I, Salna M, Kobsa S, Deroo S, Kriegel J, Blitzer J, et al. The rapid transformation of cardiac surgery practice in the coronavirus disease 2019 (COVID-19) pandemic: insights and clinical strategies from a center at the epicenter. *J Thorac Cardiovasc Surg*. 2020;160:937-47.e2.