

## Preparing for the Aftermath of COVID-19: Important Considerations for Health Care Providers and Hospital Administrators

### To the Editor

It has been 5 months since the initial outbreak of the new Coronavirus Disease 2019 (COVID-19). Worldwide, more than 2.5 million cases have been reported in 185 countries with an overall mortality of 171,810 patients as of April 21, 2020.<sup>1</sup> Epidemiological trends now show a flattening of the pandemic curve in many areas of the world. As this first wave of the COVID-19 pandemic might be losing its momentum, many countries are actively discussing the lifting of short-term emergency measures. As governments make plans to restart economic activities and normalize daily life, there are important considerations for health care providers and hospital administrators that should be highlighted to prepare for the period following the first wave of COVID-19.

First, during the initial worldwide outbreak of COVID-19, operative procedures and medical care were limited to essential interventions only. When short-term emergency measures are lifted by governments, increasing activity in non-COVID-19-related health care is expected. As the number of daily elective surgery cases returns to normal, hospitals will have to deal with a backlog of patients that could not be treated during the pandemic. With daily routine resuming, we have to expect the number of emergency cases from all possible causes (eg, traffic, work, and sporting accidents) to start increasing again. At the same time, a steady number of COVID-19 patients will continue to occupy a percentage of the available intensive care unit (ICU) beds and normal wards for a currently unknown period. Thus, even though the first wave of COVID-19 cases is declining, hospitals will likely continue to face a period of intensified workload and should start planning for this transition period early on.

Moreover, as routine COVID-19 testing of all patients will likely be impossible for most health care systems, health care providers will have to remain vigilant in their work. In the face of the COVID-19 pandemic, a variety of recommendations were published to help health care providers adapt to rapidly changing circumstances. Dexter et al<sup>2</sup> published a guideline for perioperative infection control and operating room management of COVID-19 patients.

The authors included a section on perioperative considerations for patients who do not have a confirmed case of COVID-19. Anesthesia providers and other specialties with a high risk of aerosol exposure should continue to implement preventative guidelines to limit in-hospital transmission of COVID-19 by asymptomatic patients. These earlier publications will therefore maintain their relevance during the upcoming period.

As we develop strategies to limit perioperative viral transmission during the period following the first wave of infections, we should consider minimizing staff exposure to COVID-19 patients by optimizing work shifts. According to a recent analysis, a planning system using 12-hour shifts for 7 days every other week could improve health care worker safety when treating COVID-19 patients.<sup>3</sup> If such shifts were to be implemented, however, continued efforts should be made to monitor staff health and prevent health care worker burnout and fatigue as was described during the height of the pandemic.<sup>4</sup>

Finally, in preparation of a potential second wave of infections, hospitals should prioritize the replenishment of existing personal protective equipment (PPE) stocks and look into new, innovative PPE solutions (eg, 3-dimensional printing of face shields or other aerosol-limiting protective equipment through collaboration with local businesses). Strategies to rapidly reduce medical interventions and operative procedures in case of a new increase in COVID-19 cases should also be put in place. Open communication on the current status of hospital capacity and PPE stocks is important to health care workers who are on the front lines every day and should be encouraged as it helps maintain confidence in the work environment. Hospital administrators should also be encouraged to establish information and treatment protocols in conjunction with ongoing training opportunities for staff that will remain in contact with potential COVID-19-positive patients. Specific recommendations, for example, for pediatric and obstetric anesthesia can be helpful for providers who do not have regular contact with such patient groups.<sup>5,6</sup>

In summary, it appears that a combination of effective patient testing strategies, intelligent work planning, and thoughtful resource-management will help hospital administrators and health care providers prepare for uncertain times once the first wave of COVID-19 patients has subsided. By implementing such strategies, hospital administrators could optimize treatment capacity, limit health care worker exposure, limit unnecessary use of PPE, and ensure high-quality patient care while avoiding staff overexertion. Although our health care systems will continue

to face significant difficulties for some time to come, thorough, thoughtful, and timely preparation for the aftermath of the first wave of the COVID-19 pandemic will help us both to overcome these challenges and to learn sustainably for the future.

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