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## Commentary: Can we do better during a potential second wave of coronavirus disease 2019 (COVID-19)?

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As hospitals prepare for a second wave (or third wave, depending on who's counting) of novel coronavirus disease 2019 (COVID-19) and the United Kingdom considers another national lockdown,<sup>1</sup> we should pause to review our experiences providing cardiothoracic surgical care during the initial wave of the pandemic. In this month's *JTCVS Open*, Balmforth and colleagues<sup>2</sup> describe how they safely delivered major cardiac and thoracic surgery at a tertiary referral center in London during the first 7 weeks of the pandemic. Their comprehensive protocol included preoperative COVID-19 screening, full personal protective equipment during aerosol-generating procedures, and physical separation of COVID-19-positive patients—tactics that align closely with North American cardiothoracic societies' guidance statements.<sup>3,4</sup>

The authors report a 9% cardiac surgical mortality rate, with 12% of all patients testing positive for COVID-19.<sup>2</sup> No patients converted to COVID-19 positivity while hospitalized. During the study period, 1996 patients were admitted to their hospital with confirmed COVID-19 infection. Of these, 361 (18%) were admitted to the intensive care unit, 281 (14%) required mechanical ventilation, and 19 (1%) received extracorporeal membrane

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Practitioners must prepare for a second wave, learning from past experience.

### CENTRAL MESSAGE

Preoperative screening and isolation of COVID-19-positive patients permitted safe delivery of major cardiac/thoracic surgery in the initial wave of the pandemic and will be useful during future waves.

oxygenation. These percentages are consistent with US results.<sup>5</sup> A reduction in surgical volume was noted, primarily from reduced staff availability due to intensive care capacity reallocation to the treatment of COVID-19 patients. Some case selection triaging was undertaken to prioritize reduced resources. Because lower-risk patients who could reasonably defer surgery were discharged, the remaining operative cohort was a greater-risk group than before the pandemic.

This type of triaging has been previously reported.<sup>6,7</sup> The authors noted a 60% reduction in surgical volume compared with the previous year, consistent with the global 50% to 75% reduction similarly reported.<sup>8</sup> The protocol implemented to screen surgical candidates and isolate those with COVID-19 was successful in maintaining a COVID-19-secure environment for all patients. These efforts are consistent with recommendations for facilitating enhanced recovery during the pandemic.<sup>9</sup>

This pandemic may still be in its early phases. In the United States, <10% of adults had COVID-19 antibodies as of July 2020.<sup>10</sup> Although Balmforth and colleagues<sup>2</sup> suggest that parallel services can be provided safely despite high disease prevalence, resource scarcity may severely hinder any ramp-up of non-COVID-19 cases.<sup>3,4</sup> In addition, as we consider ways to better address a potential second wave, we must improve our surveillance testing of

asymptomatic health care workers, up to 40% of whom may test positive for COVID-19.<sup>11</sup>

The timing of testing also should be reassessed. In infected-but-asymptomatic individuals, the false-negative rate for polymerase chain reaction testing is 75% in the first 5 days after exposure but decreases to about 20% 6 to 10 days postinfection.<sup>12</sup> National policies governing facial coverings, social distancing, and indoor dining based on up-to-date scientific data and local disease prevalence would seem warranted. The US Centers for Disease Control reported that adults with confirmed COVID-19 were twice as likely as controls to have dined at a restaurant in the 14 days before becoming ill<sup>13</sup> (although correlation is not causation).

This manuscript correctly points out that we can maintain basic levels of urgent and emergency health care during a pandemic. However, data from 30 nations from the onset of the pandemic to the end of July indicate that the delays in elective and preventative care—along with social isolation, elevated stress, and job and food insecurity—have accelerated mortality to nearly 600,000 more deaths than would normally be predicted.<sup>14</sup>

In the United States, a consistent, sustained, national policy for routine COVID-19 testing and contact tracing has not been established. Testing rates fluctuate, and the turnaround for results lags. Widespread heterogeneity within and between states creates an inequitable case distribution. Without accurate, centralized data collection and analysis, epidemiologists cannot accurately predict the trajectory of COVID-19.

We must prevent further spread of COVID-19. The processes described by Balmforth and colleagues<sup>2</sup> will be instructive when another wave arises.

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