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Editorial

Research in the context of coronavirus disease 2019: Considerations for critical care environments

Disasters and public health emergencies, such as coronavirus disease 2019 (COVID-19), by their very nature, overwhelm the operational capacity of health services to provide their normal level and array of services. From a health service perspective, this may include any event that results in the need for a health service to adapt their business as usual practices in an attempt to restore and maintain the normal day-to-day health services and standards of care.1 This is of importance as the inability to provide normal operational capacity results in increased morbidity and mortality for those patients in the health service and for those needing access to the health service. There is a paucity of research regarding the impact of disasters and public health emergencies on intensive care units. This was exemplified in a recent review of the literature published in Australian Critical Care examining the impact of mass casualty incidents, such as pandemics, earthquakes, and deliberate acts of harm.2 This review identified seven articles which highlighted a number of impacts on intensive care units such as insufficient bed numbers, a lack of resources and supplies, a decline in staffing levels over the duration of the incident, and the need for staff education and training. The authors called for further research regarding mass casualty incidents and the impact on intensive care units due to the lack of research in this area. This editorial echoes the call regarding the need to undertake research in the critical care context of disasters and public health emergencies, such as COVID-19; however, this call is balanced with some key considerations for individual researchers, organisations that facilitate research, and journals that publish research. In particular, these considerations focus on overlapping concepts such as the need to balance opportunity with research purpose and quality.

For many researchers, disasters and public health emergencies represent opportunities to better understand from a patient, family, clinicians, or health service perspective our preparedness, response, and recovery to inform future preparedness. However, just because there is an opportunity to do research, this does not mean that the opportunity should be grasped. Broad stroking, nonspecific, and superficial research floods the disaster and public health research landscape. Often this research would be considered a low-hanging fruit, boosting an individual researcher's output; however, the meaning may be insufficient to enhance in-depth understandings. Robust research takes time, and the opportunistic researcher may have a sense of urgency, not wanting to take stock of the purpose and quality of their work. Furthermore, during disasters and public health emergencies, collaboration between researchers could be strengthened. At the time of publishing this editorial, there are at least five national surveys requesting critical care nurses as participants. Many of these surveys are overlapping in terms of aims and questions. On examination, some are superficial, lacking any depth to provide a meaningful contribution.

There are a number of governing organisations that facilitate research, including human research ethics committees and membership associations, that allow access to their membership database. Clinicians, patients, and families have a heightened level of vulnerability during disasters and public health emergencies. As such, researchers should not seek exemption from an ethical review, nor should ethics committees offer it. We have seen examples of research during COVID-19 that would normally require full ethical review, instead ‘slipping through’ with an exemption to ethical review. The assumption is that such a strategy is to expedite the research progress and to collect data that is timely. Instead, during disasters and public health emergencies, rigour in research ethics and the protection of research participants should be strengthened. During disasters and public health emergencies, requests to access members of associations may increase. Such an increase places burden on both the association and membership. Associations should place time and value in upcoming missions received in the 2020 time period, one-quarter has had a threefold increase in submissions compared with the same time period in 2019 (1 March to 30 June). Of the submissions received in the 2020 time period, one-quarter (n = 32) have been related to COVID-19. Few have progressed through to peer review. Of course, there are many more articles,
including research, letters, and opinion papers, published in other critical care, general medical, or infectious diseases journals. An even greater number are published in preprint servers such as medRxiv where just using the search COVID resulted in 4671 results. The nature of preprint servers means that this work is not published and is widely available but has not undergone a peer-review process.

Preprint servers might facilitate the perceived need for urgency to disseminate information; however, maintaining rigour and quality in publication practices is essential. For Australian Critical Care, this has meant that any COVID-19–related submission is immediately prioritised for editorial review and, if the manuscript progresses to peer review, the reviewers are asked to provide comment in 7–10 working days. Accepted manuscripts are fast-tracked by the publisher through the publication process so that the work is made available online as quickly as possible.

Sometimes, however, the need to expedite publishing may mean that errors which would have otherwise been identified may go unnoticed. At the time of writing this article, there have been 22 COVID-19–related research publications retracted (https://retractionwatch.com/retracted-coronavirus-covid-19-papers/). Most well-known ones are the recent retractions of COVID-19–related publications in well-respected journals, such as the Lancet and New England Journal of Medicine, primarily owing to the inability of third parties being able to verify the data used for analysis. Such examples reinforce the need for adherence to good publication practice.

In summary, research during disasters and public health emergencies, such as COVID-19, should be carefully considered before it is commenced. First, for individual researchers, this means embarking on high-quality, collaborative, and meaningful research, resisting the temptation to quickly grasp low-hanging research, which has the potential to be expedited at the jeopardy of quality. Second, for organisations that facilitate research through funding support or access to potential participants, supporting research with high scientific rigour should be maintained and strategies implemented to facilitate collaborative research particularly when it becomes apparent that duplication of research efforts is imminent. Finally, journals must be agile so that they can quickly respond to the need for rapid dissemination of information while still maintaining established standards of good publishing practice.

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