Evidence and mass casualty events

“I sat among the dead, dying and those fighting for life, I observed the pain and suffering and endured my own. I need to hear the truth to be able to move forward and I have to be there for those who didn’t make it, they do not have a say in this, so I must speak up for them and for my own mental well-being, I cannot rest until the truth is told and evidence is shown to me…”

I would urge all readers this month to consider carefully these words from an innocent victim of the 2017 Manchester Arena bombing. Among these harrowing words, we should be mindful of the use of the word “evidence,” as we consider the theme of several of our papers in this addition of Mass Casualty Events. The first of these papers, our Editor’s choice from Dark and colleagues, considers evidence from a national trauma registry patient case series and hospital performance data from the Manchester bombing itself. In this important work, Dark presents routinely collected injury, management and outcome data from 153 patients who attended hospital after this incident. While this powerful data provides an objective evaluation of a system wide response and offers important learnings for systems moving forward, we should be mindful that the interpretation of what is evidence may be different for us as readers and most importantly the victims of such incidents. Objective numbers can never describe pain and suffering. We discuss the ethical implications of the data presented within this manuscript, together with the outstanding community engagement work undertaken by Dark’s team within our accompanying editorial.

Skrabina and colleagues, provide an alternative form of evidence in their mixed methods study involving interviews with healthcare staff who took part in responses to three terrorist attacks in the UK. It is pleasing to see patient and public involvement from victims again here, in informing interview design. With this work we can identify themes that will be helpful to systems in planning for such events such as effective team working, communication and robust Major Incident Plans. Although one interview quote stands out: “We underestimate the post-trauma of it and that’s the one thing I definitely took away from this event is we are not prepared for the stress and trauma it caused.” As the authors highlight, the need for psychosocial support after such events is clearly underestimated. A Short Report, by Mawhinney et al, demonstrates through a survey of nearly 200 doctors working in hospitals across the UK, that having a Major Incident Plan in place does not necessarily translate to preparedness and knowledge in the handling of mass casualty events. There is certainly work to do in terms of education here.

Our final Mass Casualty Event themed paper this month takes an entirely different approach to evidence. By reviewing extensive written, photographic and video evidence from the Hillsborough Disaster (a crowd crush at a football stadium in the UK in 1989), Jerry Nolan and expert colleagues provide a unique clinical insight into compression asphyxia in their Practice Review. Again, it is impressive to see engagement with the Hillsborough Families who gave permission for publication of this potentially emotive manuscript.

Safety and service organisation

Current daily clinical work in Emergency Departments (ED) across the world continues to be pressured. Lynsey Flowerdew identifies some familiar risks in our practice, in survey work covering over 1000 UK clinicians. Risks posed by interruptions, negative effects of targets, deficient mental healthcare and ED crowding are identified but an encouraging safety culture is also revealed. Our Reader’s Choice also explores risks at a more granular level, in a prospective observational study of risk events during intrahospital transport from Australia. While risk events occur in almost 40% of patient journeys, with many resulting in harm, prior preparation would appear to prevent poor performance.

One initiative to mitigate risk in EDs that are facing unprecedented demands, continues to be the integration of primary care/general practitioners within an ED setting (GPED). It is therefore a pleasure to see preliminary work mapping GPED published in the EMJ, led by my colleagues from the University of West of England, Bristol, UK. While the majority of UK ED’s have adopted a GPED model, there appears heterogeneity in the type of model used and the relative effectiveness of these models remains unknown. There is more to come from this excellent project, that should provide answers. In a similar vein, Lasserson and colleagues identify significant heterogeneity in referral rates (between 1%-21% of patients seen) from out of hours primary care to the ED using operations research methods. There is clearly still much work to be done to reduce variations in practice and maximise efficiency in this area.

COVID-19

As we continue to see high volumes of patients with COVID-19 attending EDs across the world, work by Douillet et al highlights limitations in current structural design of departments in France to facilitate robust organisational responses. They showed that clinical guidelines are designed to fit an “ideal” rather than being more pragmatic for use in existing environments. Finally, an interesting Short Report from Davies and colleagues in Scotland explores the utility of exercise induced hypoxia in evaluating patients with COVID-19 and offers a standardised approach to this using a 1 min sit-to-stand test. Readers may want to put this into perspective by looking at the secondary analysis from the PRIEST study, published in the EMJ earlier this year, which found post exertional oxygen saturations to be only a modest prognostic variable. Perhaps a standardised approach is key here.

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