Editorial Comments: The 2023 Model Core Content of Disaster Medicine

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Abstract
The recently published Model Core Content of Disaster Medicine introduces proposed curriculum elements for specialized education and training in Disaster Medicine. This editorial comments on the publishing decision for the manuscript.

In the recently published paper, "The 2023 Model Core Content of Disaster Medicine," the authors present a proposed curriculum for future education and specialty training of health professionals in the specialty of Disaster Medicine.[1] The curriculum is the culmination of work done by United States based disaster experts. As noted by the authors, the proposed curriculum is expected to go through evolutionary changes that reflect the basic and current elements for a Disaster Medicine subspecialty certification program.

Research in Disaster Medicine is frequently based on developing the best conclusions with limited or uncertain evidence. When the conclusions involve setting priorities, developing guidelines, building curricula, or forecasting the future, the Delphi Method can be an appropriate tool. In "The 2023 Model Core Content of Disaster Medicine," Bryan Wexler and colleagues use the Delphi method to develop the proposed curriculum framework for fellowship training in Disaster Medicine.

The Wexler manuscript proposing the Disaster Medicine curriculum is unique and has been published in the original research category at the discretion of the *Prehospital and Disaster Medicine* Editor. The manuscript was selected for publication partly due to the time-sensitive need for academic discussion of the proposed curriculum. Of note is that blinded peer reviewers of the manuscript brought forward two areas of concern, which this editorial addresses.

A reviewer concern was the validity and use of the Delphi method for development of the elements of the curriculum. Delphi studies are never a substitute for rigorous statistical techniques such as experiments, quasi-experiments, or prospective observational designs. However, when the topic is unsuitable for more formal methods, Delphi studies can offer a means to attain consensus that is more structured than focus groups or expert panels. For instance, in this article, the authors explore core competencies unique to fellowship training in Disaster Medicine. The authors note that although previous studies have developed curricula for Disaster Medicine topics within emergency medicine programs, this study is the first to address the unique needs of specialist or fellowship training. As such, this topic is ideal for the Delphi method.

This manuscript serves as an example of the typical process involved in selecting experts for Delphi studies. Experts in Delphi studies are rarely a random sample. Traditionally, experts are chosen specifically for their expertise in the topic. As experts are not a random sample, inference beyond the sample is limited. For instance, use of P values, confidence intervals, or other inferential statistics is not appropriate with non-random samples. In addition, conclusions of a Delphi study represent the aggregated consensus of opinions from the experts but should not be extrapolated to a target population.

Wexler, et al note in their manuscript, that limitations "reside within the Delphi methodology itself." As such, authors are encouraged to give specific details of the Delphi methodology used in their studies, including number of experts in each round, type of rating scale used, definition of consensus, and rate of retention across the rounds. In addition, ranking the statements by priority or importance can add another dimension to the

translation of this knowledge to practice. As the Delphi method is often misunderstood, and criticized for its lax methodology, researchers in Disaster Medicine can help legitimize this study design by careful attention to and documentation of the methods used.

The authors note that "it is expected that the content will continue to evolve." This represents a best use of Delphi methodology: to serve as idea generation and a springboard for more rigorous research. Delphi studies excel when used for idea generation and exploration. This can include setting priorities, developing guidelines, building curricula, or forecasting the future and can lead to more vigorous statistical methods, and extrapolation of results outside of the expert group. Researchers can help advance the use of the Delphi method by careful methodology and documentation.

Another reviewer concern for the paper by Wexler, et al was the potential need for human research subject ethics committee review of the research presented. The need for institutional ethics review for Delphi studies is controversial and varies from institution to institution and from journal to journal. Where the experts are chosen by either sampling or recruitment specific for the research study, authors should seek approval from their local institutional research ethics committee. The Wexler manuscript is unique as there was no specific recruitment of Delphi members because all were known expert members of the pre-existing Council of Disaster Medicine Fellowship Directors. These directors were members of a group specifically tasked with developing a curriculum knowing that it was for publication and public comment and that their affiliation with the groups developing the curriculum was public information, therefore, a formal human research subject review was waived in the editorial decision to publish the manuscript.

Considering the peer reviewer comments noted above, the editorial decision to publish the Wexler manuscript was based on the need to introduce the proposed curriculum in Disaster Medicine to foster discussion and evolution of Disaster Medicine fellowships and advance disaster management education in health and medicine training programs. While the content of the curriculum is directed toward emergency medicine and trauma surgery programs in the Untied States, the curriculum is a springboard for inclusion of all medical and health care providers throughout the world in the development of specialty training and certification in Disaster Medicine.

Reference
1. Wexler BJ, Schultz C, Biddinger PD, Ciottone G, Cornelius A, Fuller R, Lefort R, Milsten A, Phillips J, Nemeth I. The 2023 Model Core Content of Disaster Medicine. *Prehosp Disaster Med.* 2023. doi: 10.1017/S1049023X23006556.