


# The Prehospital and Disaster Medicine Mission Statement

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## Abbreviations:

EBM: evidence-based medicine  
PDM: *Prehospital and Disaster Medicine*

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## Abstract

This article discusses changes to the *Prehospital and Disaster Medicine* (PDM) mission statement which will take effect as of January 1, 2025. The new mission statement focuses on innovative, high-impact, evidence-based research.

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**The primary mission of *Prehospital and Disaster Medicine* (PDM) is to publish innovative, high-impact, evidence-based research in prehospital and Disaster Medicine.**

Beginning in 2025, *Prehospital and Disaster Medicine* (PDM) will be introducing this new mission statement that emphasizes innovation, impact, and evidence-based medicine. It is based on the previous mission statement, but with some additional focus on clarity. This new mission statement is designed to help readers, contributors, and editorial staff better understand the role of the journal.

## Innovative

Webster's dictionary defines the verb innovate as “to make changes” or “introduce new practices.”<sup>1</sup> While the word innovation did not appear in previous versions of the PDM mission statement, the concept has long been part of the journal's core values. The current description of the PDM review process highlights the importance of the “timeliness of the research topic” and “uniqueness of the research.” In an excellent article on choosing a research topic, C. Ronald Kahn states how outstanding research is often the result of a “seminal” observation that creates new knowledge, leads to new ways of thinking, and lays the foundation for further research in the field.<sup>2</sup>

Indeed, when looking at PDM's most cited papers, we see technical innovation such as Google Glass, a smartphone application, and near-infrared spectroscopy.<sup>3–5</sup> In addition, recent publications have highlighted the introduction of new practices such as the development of the Sendai Framework.<sup>6</sup>

As an editor, the first question I ask when reviewing an article is: “what new information does it provide?” For our editors and peer reviewers, the new mission statement echoes the importance of innovation as a priority for publication.

For the authors, the new mission statement gives clear instructions on the importance of innovation as a pre-requisite for publication. As an author myself, before embarking on any research project, I ask myself a very harsh question: “what are you trying to prove?” I advise all authors to make sure that their manuscript articulates the answer to this question in the study's objectives. At PDM, we prefer papers that focus primarily on the novelty of the findings of the study. Unless writing a structured review paper, authors should avoid relying heavily on the findings of others in the discussion, but instead emphasize the uniqueness of their study findings.

For our readers, the inclusion of the word innovation in the mission statement is a promise that PDM will make all efforts to ensure that our journal becomes your primary source for high-quality research in innovation in Disaster Medicine.

## High-Impact

High-impact articles usually have two features: (1) a strong value proposition; and (2) external validity.

## Value Proposition

While the word value did not previously appear in the PDM mission statement, value has always been an important concept for the journal. For specialty topics, manuscripts are often



sent to editorial board members or peer reviewers with expert content knowledge to assess the value of the paper's findings.

The expression value proposition is a term not typically applied to research, but is widely used in business and startup communities. When applied to research, a value proposition can be thought of as a statement that explains why a reader should care about your research, including what makes the research unique and why it is useful. It is a link between the researcher's work and the audience. In the startup world, this is often phrased as: "nobody cares about your product, they only care about their problems." For researchers, this can translate to: "nobody cares about your research, they only care about their problems." Value proposition is how the findings of the research help address a problem — often divided into "gain promoters" and "pain relievers." One of my mentors, Joost Bierens, called this the "so what" question. As C. Robert Kahn states, if the research question is not important, no matter how well the research is performed, it will not be viewed as an outstanding work.

As an example of research with a strong value proposition, I look at the Canadian Cervical Spine Rules, which I use daily in the emergency department.<sup>7</sup> The "gain promoter" is that I can easily explain to my patients why they do not need a CT scan. The "pain reliever" is the avoidance of unneeded ionizing radiation.

As an editor, after reading the title of a paper, I almost always immediately move to the conclusions. I strongly recommend to authors that the conclusion of the paper articulates the "so what" question. Will the research help our readers to do their jobs? Will the research serve as a springboard for other research projects? Will other researchers cite the publication in their work?

For authors, I suggest that the value proposition be stated explicitly in the conclusions as a concise statement that explains what the research has proven and why it will be useful to the readers. Furthermore, after publication, I encourage authors to disseminate the value proposition in social media, conference abstracts, blog posts, and by other knowledge mobilization methods.

For our readers, the emphasis on value proposition in the mission statement assures that articles published in PDM target helping you do your job as a priority.

#### *External Validity*

External validity — ensuring that the findings are generalizable to other settings — is also fundamental for high-impact research. Historically, PDM has been a global journal. It appeals to a highly diverse readership — with readers from many specialties across the globe. Authors from all countries are invited to publish. The journal emphasizes equity, diversity, and inclusion in its editorial board.

Because of this diversity, PDM must be very selective about publications to ensure that articles are not only relevant to a large proportion of our readers, but also that the findings should be reasonably expected to be valid in other settings. Research that is highly limited in scope, such as survey tools developed in other languages, evaluation of a specific teaching program, or knowledge assessment among providers at a single hospital, are usually not sufficiently generalizable to be relevant for our readers. This lack of generalizability and external validity is also one of the reasons that PDM takes a rather firm stance on sampling methods, as described in the 2021 editorial by Editor Emeritus Sam Stratton.<sup>8</sup>

As an editor, I try to read articles submitted for publication through the eyes of our diverse readership. The major question being: "will this study be applicable to the needs of our readers?"

I encourage authors to think closely about the journal's audience and if the research would be relevant for them. Authors should ask themselves not only: "what am I trying to prove?" but also: "who cares?" When reporting on the results of a single event, we encourage authors to submit a field report — rather than original research — highlighting the unique observations of the event while also noting that it may not be generalizable to other settings. Finally, all authors should be cautious about making inference beyond what was proven in their study.

For our readers, the emphasis on external validity ensures that an article published in PDM will have wide-spread appeal.

#### **Evidence-Based**

The label evidence-based has been present in the PDM mission statement for several decades and dates back to when Marvin Birnbaum was the journal's editor. In fact, the focus on evidence-based medicine (EBM) has been a differentiating feature of PDM when compared to other prehospital and Disaster Medicine journals. The concept of being evidence-based can be divided into two domains: (1) placement on the EBM pyramid; and (2) statistical validity.

#### *The Evidence-Based Medicine Pyramid*

The EBM pyramid is well-known to most medical practitioners. It categorizes the level of strength of evidence from expert opinion at the bottom to randomized controlled trials at the top. Importantly, the pyramid should be used to compare a study to other studies on the same topic. Clearly, not all topics can be addressed by randomized controlled trials. In Disaster Medicine in particular, expert opinion, field reports, and observational studies still have an important role to play. For example, currently, the use of artificial intelligence in Disaster Medicine is quite novel. Even expert opinion, qualitative research, or observational studies would be high on the EBM compared to published literature. Conversely, the use of RNA vaccines to prevent a pandemic is well-studied — and likely only randomized controlled trials or meta-analyses would be considered high-quality evidence.

PDM has always prioritized publication of research high on the EBM pyramid, and this emphasis will continue. However, while the EBM pyramid clearly shows that randomized controlled trials are the strongest evidence, field reports and qualitative research still form an essential part of Disaster Medicine when methodologies higher on the pyramid are impractical, are unethical, or have not yet been performed. For instance, PDM has recently published field reports on flooding, pandemic, hospital fire, and terrorist events as field reports are the best available evidence on the specific topic.<sup>9–12</sup>

As an editor, I look carefully as to how the manuscript sits on the EBM pyramid when compared to other published research on the same topic. This may involve a scan of published literature and consultation with an editorial board member or peer reviewer with significant content expertise. While research high on the EBM pyramid is preferred, it is accepted that innovative research often begins low on the pyramid — field reports, expert opinion, and qualitative research may serve as a launch point for further research on the topic.

For authors, I advise a thorough background check — preferably before even starting the research — to see where current literature on the topic sits on the EBM pyramid. A key part of a paper's introduction should include a summary of the current state of literature on the topic — focusing on the knowledge gap and how the research aims to fill it. In the discussion, authors should

compare the findings to the current literature and explain what gaps have been filled.

For our readers, the new mission statement is a commitment that PDM will provide you with the highest possible quality of evidence.

#### Statistical Validity

The second part of being evidence-based is statistical validity. If statistical analysis is incorrectly performed, it can become impossible to accept the conclusions of the paper even if it is innovative, high-impact, and high on the evidence-based pyramid. For this reason, PDM instructions for authors have been explicit about many statistical concepts such as ensuring that statistical tests are clearly delineated for each outcome and reporting means with 95% confidence intervals. Rigorous statistical review has also traditionally been a part of the PDM peer-review process.

Statistical validity includes numerous factors such as choosing the right statistical design, performing the correct analysis, and reporting results as per the journal's standards. Unfortunately, ensuring statistical validity is not easy, and many mistakes continue to permeate research in all fields. For instance, reporting multiple P values without correcting for multiplicity is a common error – the *New England Journal of Medicine* has updated their instructions for authors specifically to address this problem.<sup>13</sup>

PDM's most cited research over the past 10 years has been a systematic review of the mental health impact of disasters on medical providers.<sup>14</sup> In addition to being high on the EBM pyramid, the article features correct choice of study design, excellent implementation, and precise reporting.

As an editor and statistician, I look cautiously at the methodology and analysis before the article is sent for peer review. Manuscripts with gross violations to statistical validity, such as calculating confidence intervals on non-random samples, failing to analyze paired data properly using the effect size, or reporting large numbers of P values without correction for multiplicity, are not acceptable for publication in PDM and will be returned to the authors. If applicable, adherence to specific reporting guidelines is also assessed – such as systematic reviews or meta-analysis. During peer review, reviewers are asked to comment on the validity of the statistical design, if the research was conducted in a way to limit bias, and the appropriateness of the statistical or qualitative methods performed. A methodology expert may be consulted for highly technical articles.

For authors, analysis can be the most difficult task in bringing a paper to publication. I advise authors to always seek the help of a statistician early in the research process. Reading the instructions for authors is always the most important first step in the submission process. Published reporting guidelines are available for many statistical designs and are an excellent way to quickly improve methodological quality. Statistical analysis should be meticulous with proper identification of each statistical test and to which

outcome it was applied. Where possible, it is always prudent to provide a citation for any statistical analysis beyond basic tests.

For readers, our continued emphasis on statistical rigor and scrupulous review allows you to rest assured that research published in PDM holds to the highest statistical standards.

#### Journal Scope

PDM has been published for more than 30 years, initially known as the *Journal of the World Association for Disaster and Emergency Medicine*. Its scope was described in the previous version of the PDM mission statement as: “information relevant to the practice of out-of-hospital and in-hospital emergency medical care, Disaster Medicine, emergency public health and safety, and disaster mental health and psychosocial support.” Over time, the journal's attention has shifted toward an emphasis on prehospital and Disaster Medicine with less emphasis on in-hospital Emergency Medicine and public health. The newest iteration of the mission statement articulates this adjusted scope. Furthermore, this should help PDM establish its niche in the rapidly changing publishing climate.

Our readership agrees. This interest is echoed in our most cited papers – all of which are on topics in prehospital or Disaster Medicine.

As an editor, I will be ensuring that publications fit this more narrowed scope. Articles that do not focus clearly on prehospital medicine or Disaster Medicine topics will be returned to the authors – often with suggestions on more suitable journals. For instance, manuscripts that focus on in-hospital emergency department care are usually more suitable for Emergency Medicine journals. Research focusing on public health may be better positioned in a Public Health journal.

For authors, the new statement is intended to provide improved clarity in the journal's aims. This, in turn, should make it easier for authors to decide if PDM is the best target for the journal. As one of my mentors, Brian Rowe, states: “every paper has a home.” I encourage researchers to carefully read a journal's mission statement before submission to ensure they are choosing the right home.

For our readers, the new mission statement further clarifies our target of becoming the premiere journal for high-quality research in prehospital and Disaster Medicine.

#### The New Mission Statement

In summary, the new mission statement has been written to assist editors, peer reviewers, and authors in the submission process. With this new mission statement as a guide, we will also update the instructions for authors to provide additional, more detailed guidance on formatting manuscripts for PDM. Article types will also be revised, including new options for review articles and pilot studies. With the help of our readers, contributors, peer reviewers, and editors, PDM intends to become the premiere journal for innovative, high-impact, evidence-based research in prehospital and Disaster Medicine.

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