

Project Title: Emergency department crowding: an overview of reviews describing measures causes, and harms.

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Background: Crowding in Emergency Departments (EDs) has emerged as a global public health crisis. Current literature has identified causes and the potential harms of crowding in recent years. The way crowding is measured has also been the source of emerging literature and debate. We aimed to synthesize the current literature of the causes, harms, and measures of crowding in emergency departments around the world.

Methods: This overview of reviews was guided by the PRIOR statement, and involved Pubmed, Medline, and Embase searches for eligible systematic reviews. A risk of bias and quality assessment, using the JBI tool, were performed for each included review, and the results were synthesized into a narrative overview. A total of 13 systematic reviews were identified, each targeting the measures, causes, and harms of crowding in global emergency departments.

Results: The reviews addressed the current state of the literature regarding crowding in EDs and displayed that while an abundance of research is available, there is a need for further research to standardize measurements and make recommendations. Amongst the results is that the measures of crowding were heterogeneous, even in geographically proximate areas, and that temporal measures are being utilized more frequently. It was identified that many measures are associated with crowding, and the literature would benefit from standardization of these metrics to promote improvement efforts and the generalization of research conclusions. These standardized metrics may effectively be used to track crowding in geographically proximate centers, as well as to evaluate the impact of interventions and solutions on crowding in emergency departments. The major causes of crowding were grouped into patient, staff, and system-level factors; with the most important factor identified as outpatient boarding. A common theme in the causes of crowding was that issues were not universal; therefore, it is imperative to understand the issues relating to crowding in your center, the stage of treatment that it represents, and the actions that can be taken to reduce it. The harms of crowding include impacts to patients, healthcare staff, and healthcare service and spending. This harm may further exacerbate crowding, therein creating a cycle of poor healthcare delivery. Thus, it is imperative that systems target local solutions which can improve crowding in emergency care.

Advice and Lessons Learned: This overview was intended to synthesize the current literature on crowding for relevant stakeholders, to assist with advocacy and solution-based decision making. The major conclusions from the overview were as follows:

1. There is an abundance of current available research, especially on the measures of crowding, but a standard of metrics is required to standardize research results and accurately evaluate solutions to crowding.
2. Crowding has a significant impact on patient care, employee satisfaction, and cost to the healthcare system, with worsening impacts on each factor as crowding worsens.
3. The causes of crowding are heterogeneous, and solutions should be tailored to local healthcare systems. This is especially important considering the fact that a common theme was that many solutions were not tailored to the local causes of crowding.

This project provides a broad overview on the topic of crowding and synthesizes the current evidence. The information contained within it provides a framework for concerted evidence informed efforts to reduce crowding in Emergency Departments.