Emergency Department Crowding

Authors

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Introduction

ED crowding occurs when the demands on an ED exceed the capacity of that service, hospital, or health system to meet them. It manifests most visibly as delays to offloading ambulances, delays to be assessed and treated, and as long waits for admission with patients often situated on trolleys in corridors or in other inappropriate spaces. Less visible, but well recognised and more important, are increased morbidity and mortality for patients, and moral injury, burnout and reduced retention and recruitment for ED staff.

Emergency Department crowding represents the greatest threat to the timely delivery of emergency care in the UK and across the world1. It is present to a greater or lesser extent, in many healthcare systems, and although not a new phenomenon, it has been steadily worsening over time. This does not make it inevitable. Causes of crowding are complex and can vary between different health systems, hospitals, and over different time periods. It is a source of considerable frustration to Emergency Physicians when crowding is framed as an 'ED problem.' The consistent factor in ED crowding is that the causes are in the unscheduled healthcare system, and that the solutions lie, for the most part, outside of the ED.

Standards

1. Where hospitals accept emergency admissions, bed occupancy must be around 85%. The optimal figure will vary between organisations.
2. RCEM Emergency Department design, informatics, workforce and sustainable working standards must be met by organisations with a type 1 ED.
3. All hospital handovers must be complete by 60 minutes after ambulance arrival, with most taking place within 15 minutes, and almost all within 30 minutes.
4. Every ED must have the ability to create a resuscitation bed, and a high dependency adult and paediatric bed, at very short notice, and at all times.

Standards

1. Initial assessment processes must meet RCEM standards.
    a. Patients will ideally receive initial assessment by a specifically trained clinician within 15 minutes of arrival.
    b. Patients will ideally receive a full clinical assessment within an hour of arrival. However, it is acceptable to prioritise patients with higher triage categories or other markers of urgency / acuity where demand outstrips resources.
2. The 4-hour emergency access standard threshold is an NHS constitutional standard. The threshold must remain at 95% subject to formal, scientific, review.
3. For emergency departments to be able to deliver the 4-hour emergency access standard, no more than 10% of their cubicles must be occupied by patients waiting for admission or who have been referred.
4. No patient must be in an ED for more than 12 hours after arrival. This must be measured and reported publicly, in a timely fashion.

Recommendations

1. RCEM'S recommendations are summarized in the "Management of Emergency Department Crowding [2]," and our policy recommendations are summarized in the "RCEM Acute Insight Series document "Crowding and its consequences [3]."

2. The management of ED crowding is a whole system responsibility. It is vital to understand that Emergency Medicine services cannot solve this on their own. Interventions are complex, requiring whole system engagement and understanding. Solving a problem in one part of system can create another problem elsewhere. This is about balancing risk and needs active engagement from senior leaders across the health and social domains.

3. There is an extensive scientific literature about interventions to reduce emergency department crowding[4]. However, this is limited by variable quality in the studies.

4. **UK & Devolved Governments**

    a. Resource the health and social care system so that there is capacity and capability to meet the 85% occupancy and 95% site-specific four-hour standards in the long term.

        - This will require strategic and long-term policy development and investment in hospital facilities, workforce, and informatics

            - Prioritise high-risk hospitals within the maintenance backlog. This will enable urgent repairs and replacements, ensuring safer conditions and better care for patients and staff.

        - Additional investment is required into community and social care in order to ensure patients are only admitted when care cannot be provided elsewhere, and are discharged safely and promptly when their medical care is complete.

            - The care of patients with mental health problems requires specific prioritisation.

Recommendations

1. **NHS England and devolved equivalents**

    a. Publish key performance metrics relating to crowding by hospital, rather than, for example, Trust or Board.

        - Off-site facilities such as UTCs should not be used to dilute the performance metrics for a whole organisation.

    b. Ensure that there are enough appropriately staffed hospital beds available, so hospitals have the space and resources available to be able to care for patients needing emergency admission and can run at appropriate occupancy.

    c. Develop numerated and evidence-based workforce plans. Ensure workforce planning takes into account less than full time working, sustainable working practices, changing population health needs. Workforce plans must contain details relating to each specialty, including Emergency Medicine.

    d. Ensure that investment choices, and energy, are directed where there is evidence of improved clinical care, or of reduction in the harm associated with crowding.

        - Prioritise output interventions and improving throughput, rather than focusing on demand management strategies.

2. **Local Health Systems and Hospitals**

    a. ED design, workforce configuration, and sustainable working practices should be in line with RCEM guidance.

    b. Informatics systems should be integrated across systems. Within hospitals they should support ED operational and clinical function and be aligned with RCEM guidance.

    c. Output, throughput and input interventions detailed the document “Management of Emergency Department Crowding” should be adopted, with the priority in that order, with focus on higher impact interventions.

    d. Escalation policies should be effective and in line with guidance provided here. The use of boarding and of full capacity protocols is cautiously supported by RCEM.

Background

Crowding represents a persistent, worsening, and existential threat to the delivery of timely patient care to patients in Emergency Departments and healthcare systems throughout the world.

Harm caused by crowding affects patients in terms of worsening mortality, morbidity, reduced quality of care, and poor patient experience.

Harm due to crowding also affects staff and has a serious adverse effect on staff experience, leading to moral injury, burnout, and lack of staff retention. This places the future of the emergency medicine workforce at risk.

Crowding is a marker of failure in health policy and leadership. Responsibility for solving this issue lies first with health service policy makers and national leaders, and then local system and organisational leaders. With responsibility should come accountability.

Potential solutions to the problem of Emergency Department crowding must be viewed as whole system interventions and do not sit solely within the Emergency Department.

The study of, and interventions associated with, crowding can be divided into Input, Throughput and Output [5]. One issue with this commonly quoted model is that it is the wrong way round when describing the importance of potential solutions. It also fails to emphasise the crucial role of health policy. The key determinant of crowding is output. Throughput is important, but improvements in processes will have a limited effect if there is significant exit block. There is little evidence that input solutions have a significant impact on crowding and, in particular, on the harmful effects of crowding, yet they continue to be the focus of many significant interventions. The value of this investment is unclear. In our guidance we have inverted the usual order of play to emphasise this.

Output

ED outflow. Overwhelmingly this is a lack of hospital beds for patients needing them. The inability to admit patients to inpatient beds when needed is also described as access block or exit block. Output interventions are the responsibility of leaders and commissioners of services required to provide alternatives to the ED, and of services designed to facilitate patient discharge and reduce inpatient bed occupancy. It will require health policy changes and strategic investment and planning to increase hospital, social care and community-based capacity.

Throughput

What happens within the ED. Determined by factors such as physical space, informatics, people, and processes. Throughout solutions can be influenced by the ED team, but also by other clinical and management teams.

Input

Referring to influences before the ED such as patterns of demand, demand management strategies, pre-hospital interventions etc. Input interventions are within the remit of commissioners of community and other out-of-hospital services and commissioners.

In selected situations several uncomfortable actions may be justified to reduce the risk from crowding. Doing this does not imply acceptance or tolerance of crowding and should not be used as a substitute for escalation, or implementation of longer-term solutions.

References

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2. *RCEM: the Management of Emergency Department Crowding.* https://rcem.ac.uk/wp-content/uploads/2024/01/RCEM_Crowding_Guidance_Jan_2024_final.pdf

3. *RCEM Acute Insight Series. Crowding and its consequences. RCEM. Nov 2021.* https://rcem.ac.uk/wp-content/uploads/2021/11/RCEM_Why_Emergency_Department_Crowding_Matters.pdf

4. *Pearce S, Marchand T, Shannon T, Ganshorn H, Lang E. Emergency department crowding: an overview of reviews describing measures causes, and harms. Intern Emerg Med. Jun 2023. 18(4):1137-1158*

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