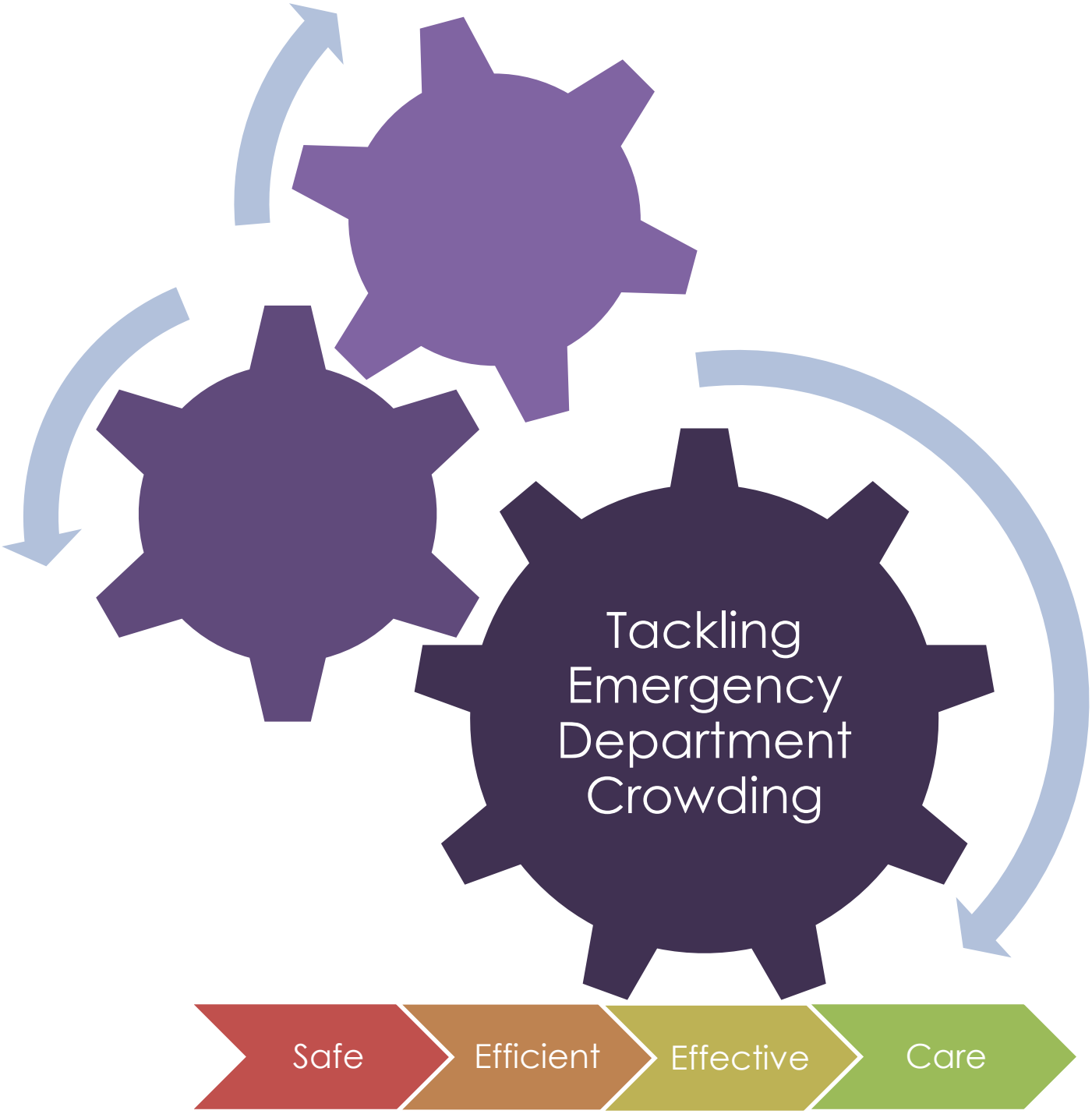
The Royal College of Emergency Medicine

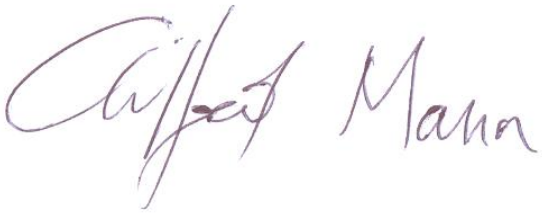


Service Design and Delivery

Introduction

I welcome the publication of this toolkit and strongly advise all those involved in emergency care to read it. This document represents an enormous amount of careful thought, lively debate and hard work by members of the Service Design and Delivery Committee, and previously the authors of the first crowding guideline, which this replaces. Exit block and the consequential emergency department crowding is the single most important issue affecting our patients and staff today.

This document explains why emergency department crowding is of such significance and makes several important and achievable recommendations. It cannot be emphasised enough that resolving emergency department crowding is the collective responsibility of the entire health care system. Emergency Department crowding is not inevitable and this toolkit shows how to reduce the associated harm.



Clifford Mann

President, Royal College of Emergency Medicine

Tackling Emergency Department crowding

Executive Summary

Emergency Department (ED) crowding is one of the greatest challenges to delivering safe, high quality, urgent and emergency care. It should be recognised by policy makers, those who commission or purchase care, and providers of acute and community services, as posing an unacceptable risk to patient and staff wellbeing.

Crowding is dangerous and should not be accepted. There is an association between ED crowding and:

- Mortality
- Increased length of stay
- Reduced quality of care
- Poor patient experience
- Staff burnout
- Difficulty recruiting and retaining staff.

Crowding can be reduced by effective implementation of:

- Good planning
- Effective operational management of hospitals and urgent care systems
- Integrated working and service development.

When normal processes fail to deliver good care, escalation policies are required to mitigate harm, reduce crowding, and restore patient flow through the urgent care system. Escalation should be rare if the acute health care system is able to adjust its urgent care capacity and procedures according to predicted or actual need.

Finally, there is a need for EDs to implement effective governance around crowding, including the recording of risk, and of incidents.

Purpose: who is this document for?

The aim of this toolkit is to:

- Provide a best practice framework designed to prevent, mitigate and resolve ED crowding
- Describe and explain the key underlying issues
- Offer solutions to help prevent and reduce crowding
- Describe principles of good escalation

This guidance is intended for all of those with responsibility for emergency care, including management teams, hospital executives, ED leaders, clinicians and staff.

Definitions and related concepts

Good practice starts with all the key players speaking the same language, a pre-requisite for shared understanding.

Emergency Department Crowding

This is the situation where the number of patients occupying the emergency department is beyond the capacity for which the emergency department is designed and resourced to manage at any one time. This results in an inability to provide safe, timely and efficient care to those patients, and any subsequent patients who attend the department. There are different causes of crowding including surges in activity, insufficient staffing to manage normal activity etc. However, the most common cause of recurrent and persistent crowding is exit block from the ED.

There is no internationally agreed and widely used definition of crowding. Markers of crowding might include:

- Prolonged Ambulance offload times (e.g. > 15 minutes).
- Long waits for patients to be assessed by Emergency Department clinicians (e.g. > 1 hour).
- Occupancy of available resuscitation and trolley spaces greater than 100%.
- Delays between request for a bed and that bed being made available (e.g. > 1 hour).
- High proportion of patients in the ED awaiting placement on an inpatient ward.

Emergency Department Exit Block

Exit block (also known as access block) describes the situation where patients who have been assessed in the ED are unable to leave the department due to a lack of capacity in the downstream system. The most commonly identified cause is a lack of bed capacity in the admitting hospital. Exit block is the single most common cause of sustained ED crowding and represents failure of the hospital, or of the whole health and social care system, to provide the process and resources capable of managing the demands placed upon it.

Flow

Flow is a term describing the passage of patients through the care pathway. It should be considered as a 'home to home' process, initiated when patients call for help from the community or present to a health care provider. It finishes when their episode of care is completed and they return home or to an appropriate care setting. Identifying where flow is constrained is imperative when designing and maintaining a safe, efficient and cost effective care pathway.

Capacity

Capacity is the ability of a system to deliver its planned capability. In Emergency Departments it is a function of:

- Demand
    - Number of patients
    - Complexity
    - Acuity
    - Dependency
    - Length of stay in the ED.
- Functional capacity
    - Staffing (numbers and skill mix)
    - Process efficiency
    - Size of the department, and of each functional area
    - Turnaround times for investigations
    - Organisational culture (e.g.) "push" vs. "pull".

Similar principles apply within hospitals, where capacity is not just about numbers of beds, but about how effectively those beds are used, and when they become available for patients requiring them.

Coordination

Co-ordination refers to ensuring available resources are effectively utilised in both time and place.

Boarding

Boarding is a term used in two situations:

- Patients who are awaiting admission, but who are still in the ED beyond agreed service standards, are boarding in the ED.
- Patients who are on a ward, but who are not in a properly configured bed and bed space, are boarding on a ward.

Escalation

Escalation is a co-ordinated and progressive response adopted when the emergency care pathway has reached a predefined threshold of risk or failure. It mandates a change in practice by key stakeholders. Escalation has three components:

- **Recognition:** triggers designed to identify when demand exceeds capacity and risk is developing.
- **Actions** that reduce risk.
- **Actions** that restore flow.

This may require distributing risk across all aspects of the healthcare system, transiently increasing or targeting resources where flow is constrained and/or increasing capacity to manage a surge in activity.

ED crowding overview

Emergency Departments, the hospital services that support them, and the ambulance services that deliver patients to them, are under intense, growing and unsustainable pressure. These front-line services bear the brunt of system-wide failure in the co-ordination, organisation and management of acute unscheduled health care. There is currently failure to match demand with the capacity of services to meet that demand. This mismatch manifests as crowded emergency departments.

Crowding is associated with:

- Negative effects for patients
    - Increased mortality amongst admitted patients
    - Increased length of stay amongst admitted patients
    - Failure in key quality standards
    - Poor patient experience.
- Negative effects on staff
    - Burnout
    - Increased illness
    - Difficulty with recruitment and retention.
- Negative effects on organisations
    - Performance
    - Reputational.

Flow, and the causes of crowding

Flow through the ED can be thought of in terms of input, throughput and output. Crowding may be caused by a variety of factors:

- Surges in demand
- Inadequate staff or resources to meet demand
- Inadequate physical capacity of the ED relative to the demand faced
- Constraints within internal processes
- Exit block from the ED.

The most common cause of crowding is exit block. Furthermore, in the presence of exit block all other causes become secondary. Crowding, in and of itself, may also lead to

excessive demands on ED staff (who are looking after incoming demand, plus patients who should have left), and causes secondary process breakdown. This leads to a vicious spiral in which crowding exacerbates crowding.

Managing fluctuations in patient flow requires agile operations. There are two approaches to managing flow:

- Proactive capacity-led strategies involving careful planning, forecasting demand, improving capacity and matching it to demand.
- Reactive strategies aiming to mobilise or release resources as required. This is escalation. These strategies tend to lag behind capacity requirements.

In practice acute provider organisations employ a mix of the two strategies contingent on the assessment of the clinical, operational and financial risks. No two organisations will have the same balance of risks at any one time, or indeed tolerance to the risks faced.

Information is vital for the real time management of patient flow. Information adds value to emergency care patient flow when it:

- Provides whole pathway real time data and trends, which are accurate, relevant and available to the key decision makers
- Provides information that can, at a glance, communicate flow status at the system and individual department level.

NHS hospitals are complicated. Combined with pre-hospital systems, and community teams and facilities required to ensure safe discharge of patients, system complexity further increases. There must be effective service design and integration if flow through the whole system is to be maintained.

Measuring crowding in your ED

Measuring crowding can be complex. Performance against the four-hour access standard has become a useful proxy measure of crowding. While poor performance against the standard usually indicates crowding, the standard provides little 'diagnostic' information about the causes of crowding.

International crowding measures can be difficult to introduce. Simple measures of crowding might include:

1. Ambulance offload times
2. Occupancy data (generally select time spent at >100% occupancy)
3. Performance against the four-hour standard, particularly for admitted patients
4. Reported 12 hour waits may be used but in practice these are often inconsistently reported. It may be that 8 hour waits are a more reliable measure
5. The time patients wait in emergency departments after a decision to admit has been made. This can be difficult to record reliably. This information is a key marker of exit block.
6. Emergency Physician perception of crowding.
7. 'Wasted Patent Hours' metric - the total time per day/week/quarter that admitted patients remain in the ED for more than 4 hours.

The ICMED (International Crowding Measure in Emergency Departments) tool may prove to be a useful way to measure crowding but is incompletely validated. NEDOCS (National Emergency Department Overcrowding Score) is also widely studied and partially validated in North America.

Solutions for crowding

There is a large scientific literature about interventions to reduce emergency department crowding. The usefulness of the literature is limited by low quality intervention studies, uncontrolled trials, significant variation in the definitions and outcome measurement.

The recently released publications "Safer, faster, better: good practice in delivering urgent and emergency care" and the Scottish Emergency Department Capacity Management Guidance both contain comprehensive information about "what good looks like" and are recommended reading. They contain measures which will contribute to improvements in crowding.

Staffing

Staffing should be matched to demand. Getting staffing right will improve times to triage, time to see clinicians, and reduce length of stay. It will also reduce the risk associated with crowding.

Build a flexible workforce that can meet needs as they vary across the department or Trust at different times of the day. This adds resilience.

There are detailed RCEM workforce recommendations relating to the medical and non-medical practitioner workforce, available on the College website, further discussion is beyond the scope of this toolkit.

Publication of NICE nurse staffing guidance has been delayed at the time of writing. The RCEM position is that nursing staff levels should be sufficient to meet demand, reflect ED crowding, and be geared towards ensuring:

- The correct skill mix including dedicated and experienced nurses on duty 24/7 to coordinate the department
- The correct nursing staff to undertake high quality triage, assessment, treatment, safe transportation, and basic nursing care in all areas of the department
- The nursing establishment is resilient so that sickness and maternity leave can be covered, and so that professional development can take place

- The nursing establishment reflects crowding. When EDs are crowded the burden of caring for extra patients, requiring ongoing treatment and nursing care, is largely felt by the nursing staff

Managing demand, and improving infrastructure and process

Attempts to manage demand have not been shown to reduce crowding. However, many interventions have face validity and may improve the quality of care provided through the urgent and emergency care system.

Infrastructure should be geared towards supporting effective processes. Physical capacity is a factor in crowding.

Improving physical capacity will improve crowding in the short term, but the bigger department will become a bigger crowded department if exit block persists. Any increases in physical capacity much be matched by increases in staffing and relevant resources.

It should be noted that in the presence of significant exit block, measures designed to improve throughput will ultimately fail to improve crowding. However, they may improve quality of care and safety in the presence of crowding.

The College commissioned a Delphi study of the executive, safer care sub-committee committee, best practice sub-committee and the service design and delivery sub-committees to identify consensus based recommendations to reduce emergency department crowding and the consequent harms.

The recommendations are divided into input, throughput and output recommendations. The College has also indicated where individuals should have responsibility for taking action. It should be noted that not all recommendations are necessary in all departments and there should be an understanding of the relative contributions of causes of crowding in an individual ED. For instance, there is only marginal benefit in improving rapid assessment and triage in a department where the main cause of crowding is exit block.

Input recommendations

These refer to initiatives to reduce the number of attendances to emergency departments. It should be noted that while reducing avoidable admissions may improve crowding, the effect on exit block is likely to minor.

For commissioners and managers with responsibility for whole system service design:

1. Improve clinician involvement with NHS 111 and call handling services. Referral rates drop if there is ready access to an experienced clinician to provide advice.
2. Improve access to, and awareness of, out-of-hours primary care. The College recognises the significant value that General Practitioners add in reducing admissions to hospital.
3. Improve medical support to nursing and residential homes, especially to plan for long-term conditions and end of life care. Too many dying people are brought to emergency departments unnecessarily. This is undignified.
4. Ensure elderly people with frequent falls have access to community falls services.
5. Improve community mental health responses.
6. Avoid any system design or advice where the emergency department, (whether stand alone, or as part of an acute hub), is the default option.
7. Ensure paramedics are supported in diverting patients to alternatives to emergency department care, such as urgent care centres, mental health services, social services and primary care.
8. Ensure most inpatient specialties provide a small number of rapid access and ambulatory care clinic appointments to prevent avoidable admissions.
9. Co-locate acute primary care, to provide 24/7 care provided by GPs and Emergency Nurse Practitioners.
10. Co-locate the following specialist services: emergency frailty services, mental health and social services.

For clinicians in the ED:

1. Develop ambulatory care pathways that mean patients are treated in areas separate to the emergency departments.
2. Deflect appropriate patients to same day GP appointments.

Throughput solutions

These refer to interventions that occur to patients that are in the emergency department. These are frequently under the control of the emergency physicians and the emergency department nursing staff.

For clinicians:

1. Triage or assessment nurses should be trained to request analgesia, x-rays and blood tests so that these happen early in a patients stay.
2. Streaming and Rapid Assessment processes:
    a. Investigations should be front-loaded
    b. Straightforward admissions should be fast tracked to the relevant specialty if not unwell. There should be such agreements for common presentations such as painless bleeding in early pregnancy or fractured neck of femur.
3. An emergency physician in charge role should be developed and supported, so that there is oversight of the whole emergency department. This role is to co-ordinate flow alongside nursing and other coordinators, and should include admitting rights to ensure patients are admitted under the appropriate team.
4. Develop a flexible ED workforce using both medical and non-medical clinical practitioners.
5. Involve senior decision makers from inpatient specialties early, these should be free of elective commitments and non-clinical activities.
6. Improve informatics and documentation to reduce duplication in processes by specialties involved in urgent and emergency care (e.g. single admission documentation)
7. There should be agreed, achievable, escalation policies for all specialties involved in acute care.

For ED and hospital managers:

1. Service level agreements should support prompt turnaround times for results of laboratory and radiological tests.
2. A safety checklist to standardise care given by agency and locum staff.
3. Total occupancy should be routinely monitored.

4. There should be frequent active site management to identify and manage bottlenecks to care in the ED, and elsewhere in the system.
5. Emergency Department crowding should be on the risk register of a hospital, with senior managers fully aware.
6. The risk management team of the hospital should be actively involved in managing and mitigating the risk of emergency department crowding.

Output Solutions

For the senior management team of a hospital:

1. The four-hour access standard needs to be perceived as a whole system target, not purely an emergency department target. Though the four-hour access standard is controversial, the College argues that the benefits outweigh the disadvantages.
2. Any system or service change must routinely consider the impact on both the urgent care pathway and the workload of the emergency department clinical staff.
3. The whole health community should have agreed escalation procedures where all relevant services are able to adjust their response at times of impending capacity pressure.
4. Managers responsible for urgent care should ensure that there is an effective representative forum, where access issues can be discussed and solutions can be found.
5. Ensure that there are sufficient specialty beds for patients with more complex needs, such as isolation, end of life care, respiratory, monitored, critical care and bariatric.
6. Aim for overall hospital occupancy of less than 85%. This can initially be focused on the medical bed base. Higher levels than this result in multiple bed moves and an increased length of stay, thus perpetuating exit block.
7. Facilitate early discharge from inpatient beds, by bringing processes forward, and by using discharge teams and discharge lounges.
8. Ensure that there is effective discharge at the weekends, and bank holiday periods.
9. Development and implementation of full capacity protocols.

The guideline development group identified a number of interventions that should not be promoted to reduce emergency department crowding.

1. Ambulance diversion was discussed at length. This is only an option in the major urban areas served by multiple emergency departments
2. Public health campaigns to discourage emergency department use are ineffective, incompletely evaluated and make patients feel guilty.
3. Restricting access to the emergency department by non-clinical staff was not supported. This was seen as a serious safety concern.

Escalation

Principles

- Escalation involves doing something differently from routine business operations. Activation of the escalation process therefore requires stakeholders to act differently.
- Escalation processes should identify service failure, and aim to deliver service recovery.
- Escalation processes must be pre-planned and dynamic. Escalation is underpinned by good pre-emptive planning and early recognition of an impending problem.
- Failure to work in escalation when it is required, will compromise patient safety.
- Actions must:
    - Prioritise a safely operating emergency care service, ensuring availability of emergency ambulances and a functional ED.
    - Distribute the risks across the hospital and community.
    - Aim to return a state of normal practice as quickly as possible.
- Continuous review of real-time escalation status and communication is essential to proactively address service needs and identify impending pressures.
- Escalation triggers are a key component in the escalation process. Information on triggers must be available in real time. Live system tools are essential to support this process. A visible live dashboard throughout the wider organisation as well as in ED is recommended.
    - Triggers will be site and Trust specific but must be meaningful to that organization.
    - Triggers should be based on demand, capacity and flow.
- Since escalation is likely to be Trust wide and include elements of the external community, escalation must be initiated by someone with Trust wide oversight.
    - Although the ED consultant and nurse in charge have roles in identifying the need for escalation, they are not the most appropriate persons to

perform a Trust wide role given the identifiable pressures within the ED. This role can be the responsibility of a non-clinical person in a system where identifiable triggers are pre-determined and there is absolute agreement regarding responses.

    - Non-negotiable automatic responses with prescribed actions are required.

- Each step up in escalation will require a different response and action. An escalation plan should be sufficiently flexible to address specific causes of escalation.
- Clear communication and collaboration across the system is vital.
    - Use of pre-agreed structured communications, based on pre-agreed information, is advised (see appendix 2).
- Ultimate accountability for co-ordination of the escalation response lies with the Trust Executive team.
- If one part of the urgent care system is under pressure this should be associated with escalation in other relevant elements of the system.
- The end point of escalation is activation of the Trust Full Capacity Protocol and / or Major Incident Plan.
- Clear de-escalation protocols should be present.
- Trusts that are frequently in escalation require a fundamental review of demand and capacity combined with systematic process changes.

Specific escalation issues

Full Capacity Protocol and Boarding

- Sending patients to wards where they will be admitted before a bed is available is supported by the College as part of Full Capacity Protocols. Ideally, this should be a time-limited policy, to allow a hospital to organise its inpatient discharge process more effectively.
- The harm of having un-assessed patients in ambulances is greater than the harm of boarding patients who have been assessed by a doctor on their destination ward.
- Patients who are selected to board on wards should be stable, orientated and should not require intensive treatment or monitoring.
- The maximum number of patients that should board on each ward should be determined locally. Factors that should be considered include the physical environment on the ward, the likely dependency of other patients in that area and the medical and nurse staffing levels in that area.
- The number of patients actually boarded on each ward should be determined dynamically and should aim to balance the risk of accommodating such additional patients across both the Emergency Department and the admitting wards.
- Patients boarding in the ED are usually the joint responsibility of the clinical team to which they have been referred, and the ED team. Inpatient clinical teams should not avoid taking clinical responsibility for patients who have been referred to them simply because the patients cannot be moved to an inpatient ward.
- Once a patient is transferred from the ED to a ward they become the clinical responsibility of the admitting team.

Declaring major incidents for emergency department crowding

Hospital Trusts, and wider systems, may describe their own operating state in incremental terms such as Green-Amber-Red-Black. This is the language of escalation A major incident has previously been defined as any occurrence which requires special arrangements to be implemented by hospitals, ambulance trusts or primary care organisations. When hospitals or systems are in escalation due, for example, to "operational pressures," there may be reluctance to use the term major incident. The terms serious incident, internal incident, business continuity incident, or critical internal incident may be preferred, or recommended, for use when operational pressure is not the result of a single or well-defined event. However, this new language is new, not widely publicised or accepted, and may not be backed up by the necessary planning or responses.

Senior medical leaders have a duty of care to patients under their care. In very challenging circumstances when patient safety is compromised, and current escalation plans have failed, that duty may make it necessary to request declaration of a critical or major incident in order to mobilise the correct additional response

The process of initiating an escalated response in the event of critical ED crowding is a decision for each trust. This decision making process should be clear in advance. Furthermore, there must be an agreed process by which either the Emergency Department consultant or senior clinicians in the ambulance service can indicate that they feel that critical ED crowding has occurred and request consideration of either a critical or major incident being declared. It is then imperative that the resulting decision, and the reasoning behind it are recorded, so that the decision can later be reviewed and if necessary the decision makers held to account.

The decision cannot be made or impeded by agencies outwith the acute hospital and the relevant ambulance organisations.

Concerns about media attention or adverse effects on organisational reputation should not influence decisions around safety.

Maintaining safety in a crowded emergency department

Guide for shift leaders:

Processes

- Confirm escalation has occurred through standard channels.
- Confirm with duty manager that required escalation actions are actually occurring.
- If critical risk exists then consider declaration of serious / critical / major incident dependent upon local criteria and triggers.
- Problem will be:
    1. Demand exceeding capacity
    2. Primary process breakdown
    3. Exit block
    4. Combination of the above.

Safety

- Don't compromise handovers. After handover walk the department.
- If you are overloaded think "STAR": Stop, Think, Act, Review. This may require a team time-out to take stock and make a plan.
- If you have a specific check list, use it.
- Brief staff if specific actions required.
- Make a judgment on risk. Critical risk = harm to patients likely OR no capacity to accept and / or manage incoming sick patients.
- If risk critical and resolution not immediately expected:
    - Contingency planning: what if a critically ill patient arrives?
- If exit block:
    - Undertake a brief safety round every 2-4 hours to ensure long stayers are (1) stable (2) still needing to be in the ED.
    - Ask clinicians to ensure next-step critical drugs and fluids are written up: attention to analgesia, antibiotics, diabetic regimes, regular steroids.
    - Ask clinicians to ensure investigations are followed up and acted upon.
    - Liaise with ambulance crews to mitigate risk in the queue.

- Implement local strategies to move from a queue to get in, to a queue to get out.

Patients

- Communicate with / apologise to patients within the department, or ask hospital management teams to do so.
- If long waits to be seen:
  - Make an announcement to the waiting room.
  - Consider seeing all patients in strict priority order, and using a triage physician.
- If exit block:
  - Consider "bedding down." Ensure refreshments made available to patients: food and drink.
  - Attend to basic nursing needs of patients.

Acute decompression

- Stream to specialties and get the specialty doctors down to see appropriate patients if not already done
- Any investigations you can get underway?
- Prioritise the CTs
- Ensure patients can get to X-ray (porters may be deployed elsewhere)
- Any patients you can get home quickly?
- Any patients who can be streamed to primary care or walk in centres?
- Does everyone in a cubicle, need to be in a cubicle (can they go into a chair?)
- Utilise internal professional standards if appropriate and if it will help (e.g. direct admission). If there is exit block this may be futile
- Can you free up any space by streaming to specialties which sometimes have space? (e.g. paeds, gynae), or by using ambulatory care and CDU?
- Can any patients go to wards direct from CT?
- Anyone who can be discharged from, or sat-out from, CDU?

Staff

- Brief staff if specific actions required
- Review staff allocation: are you playing to strengths? Consider specific deployment for rapid assessment, resus/sedation, majors, minors, paeds, CDU round
- Ensure staff getting breaks AND/OR organise refreshments for ED and ambulance staff
- Do any staff need time out to regroup?

Reporting

- Ensure incident / other reports are completed.

Governance

Safety checklists

The use of safety checklists may improve governance and safety during periods of crowding. The use of checklists to drive effective processes may also form part of the solution to crowding.

Who is responsible for the ambulance queue?

Emergency Departments, and acute hospitals, have a responsibility to assist the ambulance service by ensuring that the turnaround time for ambulance patients is as short as possible. There is a period of time where responsibility for the care of the patient needs to be shared between the ambulance service and the clinical staff working in the Emergency Department. If a patient cannot be offloaded from an ambulance because the Emergency Department is crowded, within an acceptable timeframe, usually 15 minutes, then the patient should be registered with that Emergency Department.

A clinician's duty of care begins when the clinician begins to assess the patient. The receiving hospital has a duty of care to all patients on the hospital premises once ambulance handover is complete, but an emergency physician or nurse cannot reasonably be expected to extend their duty of care outside a crowded Emergency Department. Ambulance service responsibilities are not complete until handover is complete.

The most pragmatic solution is to jointly manage the queue with the ambulance service, aiming to prioritise patients who require care most urgently on the basis of clinical or humanitarian need. There should be regular communication between the emergency physician and nurse in charge and the ambulance staff.

Any protocols or agreements should put the best interests of patients first.

Emergency physicians and nurses can rarely offer a meaningful intervention to a patient in the back of ambulance, at a time where their skills are required to work in a crowded Emergency Department.

Queuing to get in vs. queuing to get out

Crowding may cause a queue to get into the department. The practice of "cohorting" patients on ambulance stretchers whilst they await entry to ED has developed as a response. Instigation of this suboptimal approach suggests normalisation of crowding and inadequate escalation responses.

It may be worth attempting to move the queue, and adopt a practice whereby patients who have been assessed, and are waiting for beds, are selectively moved to ED corridors or other suitably configured and staffed areas in order to allow new patients to be offloaded. The advantage is that this may mitigate risk in the ambulance queue. The disadvantage is that the risk and workload is all taken on board by the ED and inpatient teams, physical and functional capacity may be overwhelmed, and pressure from ambulance service on the Trust to drive effective escalation may reduce. This strategy can be used as an alternative to, or in addition to, full capacity protocols.

Incident reporting in crowding

- Keeping a shift log with regular reporting of crowding issues should be embedded in routine practice.
- Using incident reporting systems to report crowding can be challenging
    - Encouraging shift leaders to report **crowding episodes** will likely yield intermittent reporting.
    - Most incident reporting systems are not set up to report incidents of general risk, although it is possible to use it for this purpose.
    - One issue with reporting systems is that if an incident is reporting as having caused harm, then the 'duty of candour' has to be met, and the Trust may be fined if there is no evidence that it has been undertaken. This implies that every patient in the ED should have been advised of risk / harm, and an apology extended.
        - It may be reasonable to code episodes or crowding as non-harm / near miss incidents unless individual incidents are known to have occurred at the time.
        - Routinely apologising to patients who experience long waits, degradation of care, or corridor waits as a result of crowding is appropriate, as are leaflets handed to all patients within a crowded department. This may also satisfy requirements for duty of candour.
- **Individual incidents** should be recorded as normal.
- Ensure that your safety, quality and ED teams link individual incidents, and episodes of crowding, to each other, and to your higher level risks.

Key words for searches and useful reading

Key words for searches

Crowding, safety, access block, exit block, boarding, full capacity protocol.

Useful reading

The RCEM website contains a number of useful resources, which are kept updated: http://www.rcem.ac.uk/Shop-Floor/Service Design & Delivery/ED crowding

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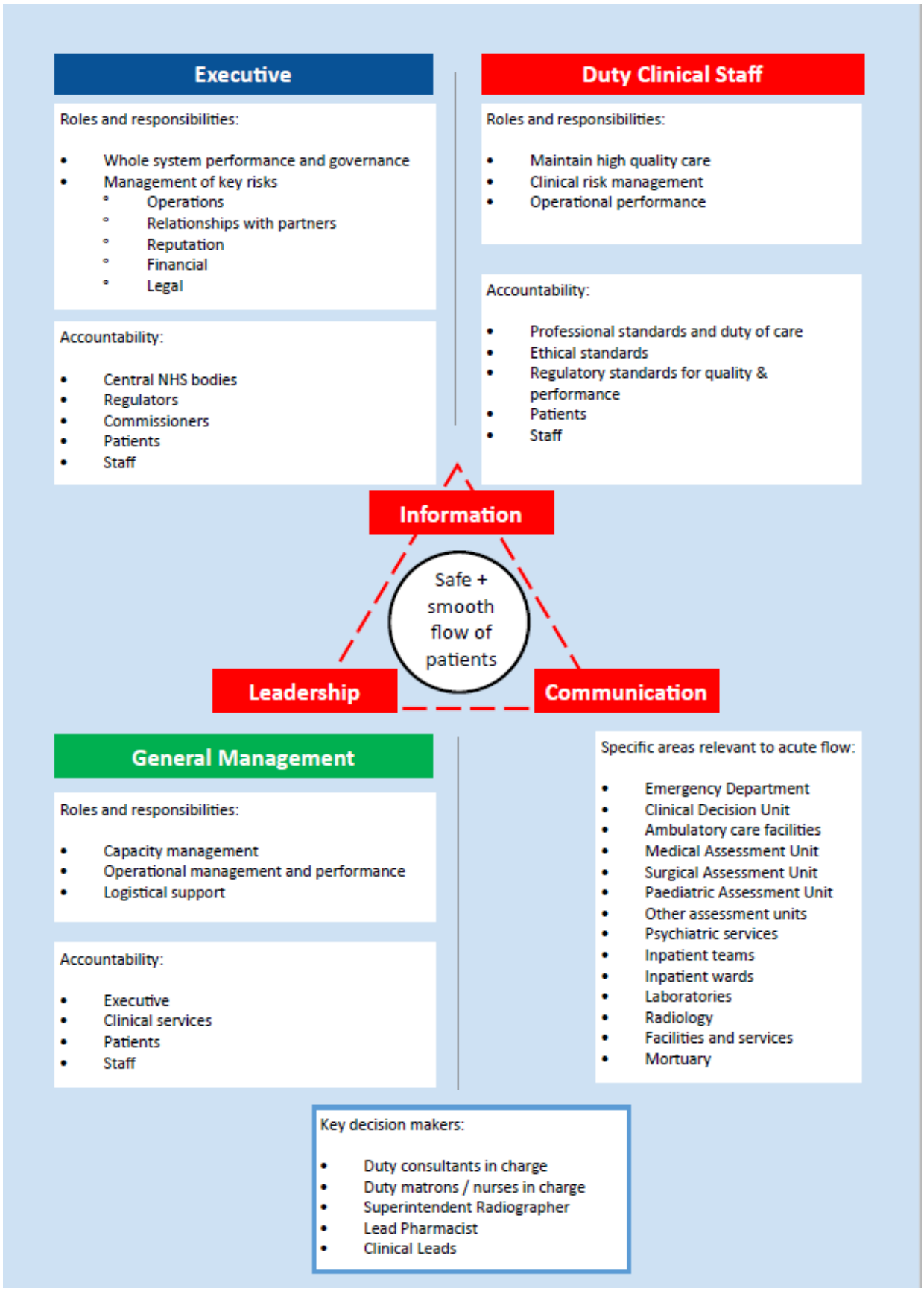
Conflicts of Interest

Adrian Boyle has received academic research grants and fees for speaking about Emergency Department Crowding.

Appendix 1: NHS hospitals. Relationship between executive, managerial and clinical teams with respect to flow and crowding



Appendix 2: Example tools to use as part of escalation

EXAMPLE EMERGENCY DEPARTMENT ESCALATION CHECKLIST

Internal ED Status: **Site Status:**

A: Assess Situation (in conjunction with ENIC) – use internal ED escalation triggers. Consider Command & Control model.

Think "STAR": Stop, Think, Act, Review

Is demand exceeding capacity & occupancy?

Is acuity high?

Assess current resource (including staff & skill mix)

B: Board / Walk round – optimise control – board rounds are best done as a continuous process but walk-arounds should occur at least 4 hourly

Immediate patient safety issues identified and mitigated

Expedite decision making

Optimise capacity (where possible) – plan strategy for accepting further ill patients

Prioritise care including "next-step management"

C: Communication (named Trust "escalation officer") – optimise influence

Brief team on specific actions arising from Board / Walk around

Current escalation situation – confirm escalation has occurred through standard channels

Predicted escalation status – inform escalation officer

Recommendation – use agreed communication terminology

Obtain assurance that Trust escalation & Internal Professional Standards are being met

Document communication & response

Clear communication with patients and relatives

C: Colleagues

Staffing resource optimised

Rest / refreshment / breaks considered

D: Delays

Identify & communicate as appropriate

Ensure ambulance service is briefed on current escalation status

Incident report forms completed if required

E: External & Environmental Factors

Communicate directly with key stakeholders and specialties impacting on ED environment

Ensure patient basic needs and dignity are being respected

EXAMPLE OF COMMUNICATION IN ESCALATION

ED consultant in charge What is the current / anticipated status of the ED?	Hospital Management What is the current / anticipated status of the hospital?
Acuity: **1.** The total number of critical patients is _ **2.** We are expecting _ **Service Load:** **3.** The total number of patients in the ED is _. **4.** Of the total _ are in resus, _ are in majors, _ in minors, _ in Paediatric ED **5.** _ are waiting to book in (ambulatory) **6.** _ are en route by ambulance **7.** _ are waiting for ambulance handover **8.** The total occupancy for resus & majors is _ **9.** _ are ready to leave and boarding **Risks:** **10.** The current pressures are: volume / acuity / capability / ED capacity / flow **11.** The current major issue to flow is _ (e.g. inflow / throughput / outflow) **12. Actions to mitigate:** Specify _	**Current effective bed capacity:** 1. Admissions so far today 2. Discharges so far today 3. Expected discharges **Current demand for beds:** 4. ED currently needing a bed 5. Medical Assessment Unit needing a bed 6. Other (e.g. predicted admissions) **Performance today so far:** 7. 4-hour access standard 8. ED wait to be seen 9. Internal professional standards **Main Risks:** 10. Assessment of predicted bed balance based on predicted capacity relative to predicted demand 11. By area **Actions to mitigate:** 12. Specify
The current status is: Clinical < safe – hazardous – unsafe > Flow < excellent – slow – exit block >	**The current status is:** Hospital occupancy - _ % Current deficit is _

EXAMPLE EMERGENCY DEPARTMENT ESCALATION TRIGGERS

Triggers always form part of a big picture. Predicted resolution should also be taken into account

Key components might include

- Demand / capacity / resource

- Input / process metrics
    - Number of attendances last 60 minuntes
    - Number of ambulances waiting to offload
    - Any ambulance patients offloaded into a non-clinical area
    - Time to triage
    - Time to initial assessment

- Throughput / balancing metrics
    - ED occupancy (vs. capacity)
    - Resuscitation room space availability
    - Live 4-hour performance

- Output / outcome metrics
    - Number of patients greater than “2” hrs post DTA
    - Time to specialty assessment
    - AMU capacity

Each trigger with a pre-determined trigger point.

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