Understanding corridor and escalation area care in 165 UK emergency departments: a multicentre cross-sectional snapshot study

Trainee Emergency Research Network TERN

Handling editor Ellen J Weber

► Additional supplemental material is published online only. To view, please visit the journal online (https://doi.org/10.1136/emermed-2025-215301).

The Royal College of Emergency Medicine, London, UK

Correspondence to
Trainee Emergency Research Network TERN;
tern@rcem.ac.uk,tom.roberts@bristol.ac.uk

Received 23 June 2025
Accepted 17 October 2025

ABSTRACT

Introduction Emergency department (ED) crowding is an international concern. It results in care being delivered in non-standard treatment spaces including corridors, termed escalation areas in the UK. Limited data suggest their use is widespread. This study aimed to establish the prevalence of UK escalation area use at a national level.

Methods A prospective cross-sectional point prevalence study was carried out in 165 UK EDs over five snapshots in March 2025 selected to represent a range of expected ED activity. The primary outcome was the proportion of patients receiving care in escalation areas. Secondary outcomes were the number of patients awaiting an inpatient bed, ED occupancy and resuscitation capacity. The presence of paediatric patients and those with mental health presentations in escalation areas is also reported.

Results Across the five snapshots, 17.7% (n=10 042) of ED patients were receiving care in escalation areas. At each snapshot there were more patients awaiting an inpatient bed than patients in escalation areas. The percentage of escalation area patients in non-clinical areas such as corridors ranged from 54.5% to 61.1%. ED occupancy (patients per cubicle space) ranged from 1.0 (IQR 0.7–1.4) to 2.4 (IQR 1.8–3.1). There was no available resuscitation cubicle at 10.5% (n=17/162) to 26.2% (n=43/164) of sites. Paediatric and mental health patients were receiving care in escalation areas across all time points.

Conclusion Almost one in five ED patients was experiencing escalation area care during the five snapshots. National guidance states escalation area use is not acceptable; this research demonstrates it is routine. This study supports the hypothesis that, to address ED escalation area care, the focus should be on facilitating the flow of patients who require an inpatient bed out of the ED. Further research should consider the effect of escalation area care on patient level outcomes and the effectiveness of interventions to reduce ED crowding.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Care in crowded emergency departments (EDs) is delivered in areas not originally designed for this use, known as escalation areas, including hospital corridors.
⇒ Escalation area care is known to put patient safety at risk, create substandard and undignified patient experiences and is postulated as a reason for increased mortality among patients who have long ED waits.
⇒ In the UK escalation area care is reported to be widespread, but there is no high-quality evidence describing its prevalence.
⇒ This study aimed to report the point prevalence of escalation area care on a national scale.

WHAT THIS STUDY ADDS

⇒ This study shows that, at any single point in time, almost one-fifth of all ED patients were being cared for in escalation areas; and the substantial majority of EDs are using escalation area care.
⇒ At all time points, the number of patients in EDs awaiting an inpatient bed outnumbered the number of patients in escalation areas or corridors.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ Health policy experts should prioritise a system-wide approach to improving hospital flow in order to address the routine use of escalation area care within EDs.
⇒ Further research should explore the effect of escalation area care on patient level outcomes and the effectiveness of interventions to reduce ED crowding and mitigate its harms.

Check for updates

© Author(s) (or their employer(s)) 2025. No commercial re-use. See rights and permissions. Published by BMJ Group.

To cite: *Emerg Med J* Epub ahead of print: [*please include* Day Month Year]. doi:10.1136/emermed-2025-215301

INTRODUCTION

Emergency department (ED) crowding is one of the biggest challenges to the delivery of safe and high-quality emergency care internationally.[1 2] It occurs when demand exceeds available resources across the health and social care system. Lack of access to inpatient beds impedes the flow of patients through EDs resulting in 'exit block' and high numbers of patients awaiting an inpatient bed, often referred to as patients with a 'decision to admit' in the UK and 'ED boarders' in other international healthcare systems.[3 4]

Crowding results in pre-hospital care providers queuing to hand over patients. It also results in care delivered by ED staff in spaces not originally designed for this purpose. These spaces include non-clinical areas, such as waiting rooms and hospital corridors, and repurposed clinical areas. Standard ED cubicles may also be 'doubled up', with multiple patients being cared for in a cubicle designed to be single occupancy.

NHS England guidance published in 2024 uses the term 'temporary escalation spaces' to refer to spaces that are not considered standard ED treatment areas and used during times of overcrowding.[5] It states that their use is 'not acceptable and should not be considered as standard', and that children and patients with mental health presentations should never be cared for in these areas. Escalation in this context refers to healthcare organisations implementing measures to respond to substantial operational pressures. The term 'escalation area' is commonly employed in UK EDs to denote areas used when capacity is exceeded and is used throughout this study. There is currently no consensus definition as to what comprises an escalation area. The use of escalation areas, particularly non-clinical spaces such as corridors, contradicts the NHS constitution which states that patients 'have the right to be cared for in a clean, safe, secure and suitable environment'.[6]

Hospital level surveys with variable methodology from 21 hospitals in Scotland and 15 hospitals in Wales suggest escalation area use is routine and widespread, but the UK-wide picture has not been established.[7–9] A Royal College of Nursing survey published in 2025 considering corridor care with 5408 respondents described the negative impact on the quality and safety of patient care and the detrimental effect on the morale and well-being of staff working in these settings.[10] Long waits in EDs and crowding are associated with increased mortality, although the mechanism for this link has not been established, escalation area care may be contributory.[11 12]

The UNCORKED study (Understanding escalation area and Corridor care in UK Emergency Departments) aimed to understand what proportion of ED patients receive care in escalation areas using a cross-sectional point prevalence snapshot study.

METHODS

Design and setting

This was a prospective multicentre observational study led by the Royal College of Emergency Medicine's (RCEM) Trainee Emergency Research Network (TERN) between 3 March and 16 March 2025. The study had two stages: stage 1 was a cross-sectional point prevalence snapshot study reporting the proportion of patients in escalation areas, and stage 2 was an observational cohort study considering patient level outcomes involving eligible participants identified during the snapshots. To facilitate timely presentation of data and an up-to-date understanding of the state of the emergency care system, the results of the stage 2 study will be published separately.

Table 1 Characteristics of participating emergency departments (n=165)

	N	%
Location		
England	140	84.8
East of England	13	7.9
London	24	14.5
Midlands	17	10.3
North East and Yorkshire	22	13.3
North West	20	12.1
South East	26	15.8
South West	18	10.9
Northern Ireland	4	2.4
Scotland	13	7.9
Wales	8	4.8
Trauma designation		
Local Emergency Hospital	33	20.0
Major Trauma Centre	35	21.2
Trauma Unit	97	58.8
Age group status		
Adult	38	23.0
Mixed adult/paediatric	115	69.7
Paediatric	12	7.3

Participating sites

All UK type 1 EDs (those providing consultant-led, 24-hour services with full resuscitation facilities) were eligible to participate. Based on routinely reported emergency care activity data, there were approximately 228 such EDs in the UK during the study period.[13–16] Sites were identified and enrolled via the TERN membership and engaging with National Institute of Health Research (NIHR) regional research delivery networks. EDs that treat adult patients only, paediatric patients only, or both were eligible.

Outcomes

The primary outcome was the proportion of patients (of the overall number in all areas of the ED) present in an escalation area during each snapshot. Differences in primary outcome were considered by prespecified factors: snapshot, geographical region, ED status by age groups served (adult, paediatric or both) and trauma-receiving designation (Major Trauma Centre, Trauma Unit and Local Emergency Hospital). Secondary outcomes were the number of patients awaiting an inpatient bed, ED occupancy and resuscitation cubicle availability. ED occupancy is reported as the total number of patients in the ED divided by the number of cubicles. The number of sites with EDs with paediatric and mental health patients experiencing escalation area care is also reported.

Data collection

Data were collected at five predetermined 'snapshots' over a 14-day period. Local study teams uploaded data to REDCap, an electronic data capture tool, in a predefined case report form.[17] Snapshots were chosen to align with published data on ED attendances and give a representative spread of ED patient volumes across the time of day and day of the week.[18] A minimum interval of 48 hours was maintained between snapshots to reduce the likelihood of including the same patient across multiple snapshots during a single ED presentation.

The dates and times for each snapshot were:

1. 12:00 on Monday March 2025
2. 07:00 on Thursday 6 March 2025
3. 16:00 on Saturday 8 March 2025
4. 19:00 on Monday 10 March 2025
5. 23:59 on Wednesday 12 March 2025

Local teams prospectively used electronic health records, department management systems and real-time in-department observations to record the number of patients in each area of the ED and in escalation areas including queuing ambulances. The number of patients awaiting an inpatient bed, the number of cubicles or chair spaces in each ED (stratified by resuscitation room and non-resuscitation room status), whether there were paediatric patients (<16 years of age) and patients with a mental health presentation in escalation areas, and resuscitation cubicle availability were also prospectively collected. A full list of data collection items is available in online supplemental material.

Escalation area definition

There is no universally agreed definition for an escalation area in the UK. The study team provided the following definition to sites: 'any area not routinely used unless the capacity of the usual ED geographical footprint is exceeded'. Sites were then asked to assign each escalation area to one of the following categories:

- An ambulance queueing to offload for >15 min
- A repurposed clinical area
- A non-clinical area such as a hospital corridor or waiting room
- A doubled-up cubicle

Only areas under the care of the ED team were included, apart from queueing ambulances and prehospital cohort areas (where prehospital providers care for patients within the ED while awaiting handover). Sites recorded whether each escalation area was inside or outside the ED (eg, an adjoining outpatient clinic). Patients in the waiting room were only considered to be in an escalation area if there was easily observable objective evidence that they would be moved to a standard ED cubicle if one were available (eg, actively receiving IV infusions, supplemental oxygen, nebulisers and/or awaiting an inpatient bed). The central study team liaised with local teams during site engagement sessions prior to data collection to assist in identifying and categorising relevant areas and to maximise consistency between sites.

Statistical methods and analysis

The characteristics of participating sites are reported as the number and percentage of total sites. When the total number of patients in the ED is reported (and proportions thereof), this includes patients in minors areas and the waiting room. The number and proportion of patients present in escalation areas are reported for each snapshot and across all snapshots. The percentage of patients in escalation areas across sites is reported as medians with IQR. Missing data are indicated in the results, and sites reporting inconsistent numbers between the total number in escalation areas and those in specific sub-areas were considered missing. Inconsistencies in the description of ED characteristics (such as trauma status) between snapshots were resolved by acceptance of the most commonly reported characteristics.

Registry

The study was prospectively registered at the ISCTRN (ref: ISRCTN16396025).

RESULTS

In total, 165 EDs (approximately 72.4% of type 1 EDs in the UK) reported data to the study. The characteristics of these EDs are shown in table 1. The number of EDs submitting data at each snapshot ranged from 160 to 164 (97.0–99.4%) (table 2).

Escalation area care

The total number of patients in escalation areas across all five snapshots was 10 042, which represented 17.7% of all

Table 2 Number and proportion of sites using escalation areas and patients in escalation areas

Characteristic		Snapshot				
		1: Monday 3 March 12:00	2: Thursday 6 March 07:00	3: Saturday 8 March 16:00	4: Monday 10 March 19:00	5: Wednesday 12 March 23:59
Number of sites	n	164	162	160	164	162
Total number of patients in the ED	n	12 051	7056	10 967	15 933	10 874
	Missing	0	0	0	0	1
Median number of patients in each ED	Median (IQR)	69 (50–98)	41 (25–61)	69 (48–90)	95 (66–126)	67 (45–90)
	Missing	0	0	0	0	1
Number of sites using escalation areas	n (%)	127/164 (77.4%)	113/162 (69.8%)	132/160 (82.5%)	147/164 (89.6%)	134/161 (83.2%)
	Missing	0	0	0	0	1
Total number of patients in escalation areas	n (%)	1866/12 051 (15.5%)	1486/7056 (21.1%)	1705/10 967 (15.5%)	2919/15 933 (18.3%)	2066/10 874 (19.0%)
	Missing	0	0	0	0	1
Median number of patients in escalation areas in each ED	Median (IQR)	7 (1–17)	4 (0–15)	7 (1–16)	15 (5–24)	9 (3–18)
	Missing	0	0	0	0	1
Median percentage of patients in escalation areas	Median (IQR)	10.3 (1.6–21.9)	11.4 (0.0–27.2)	9.8 (2.9–21.5)	14.6 (7.0–24.0)	15.2 (6.2–23.3)
	Missing	0	0	0	0	1
Total number of patients awaiting an inpatient bed	n (%)	3527/11 943 (29.5%)	3135/7056 (44.4%)	2936/10 931 (26.9%)	3837/15 345 (25.0%)	3293/10 769 (30.6%)
	Missing	1	0	1	4	2
Median number of patients awaiting an inpatient bed in each ED	Median (IQR)	18 (10–32)	17 (7–28)	15 (8–27)	23 (14–31)	17 (9–28)
	Missing	1	0	1	4	2
Resuscitation cubicle availability and ED occupancy						
Number of sites with no available resuscitation cubicle	n (%)	29/164 (17.7%)	17/162 (10.5%)	27/160 (16.9%)	43/164 (26.2%)	31/162 (19.1%)
	Missing	0	0	0	0	0
Total number of patients per ED cubicle	Median (IQR)	1.9 (1.3–2.4)	1.0 (0.7–1.4)	1.6 (1.3–2.2)	2.4 (1.8–3.1)	1.7 (1.2–2.1)
	Missing	0	0	0	0	1

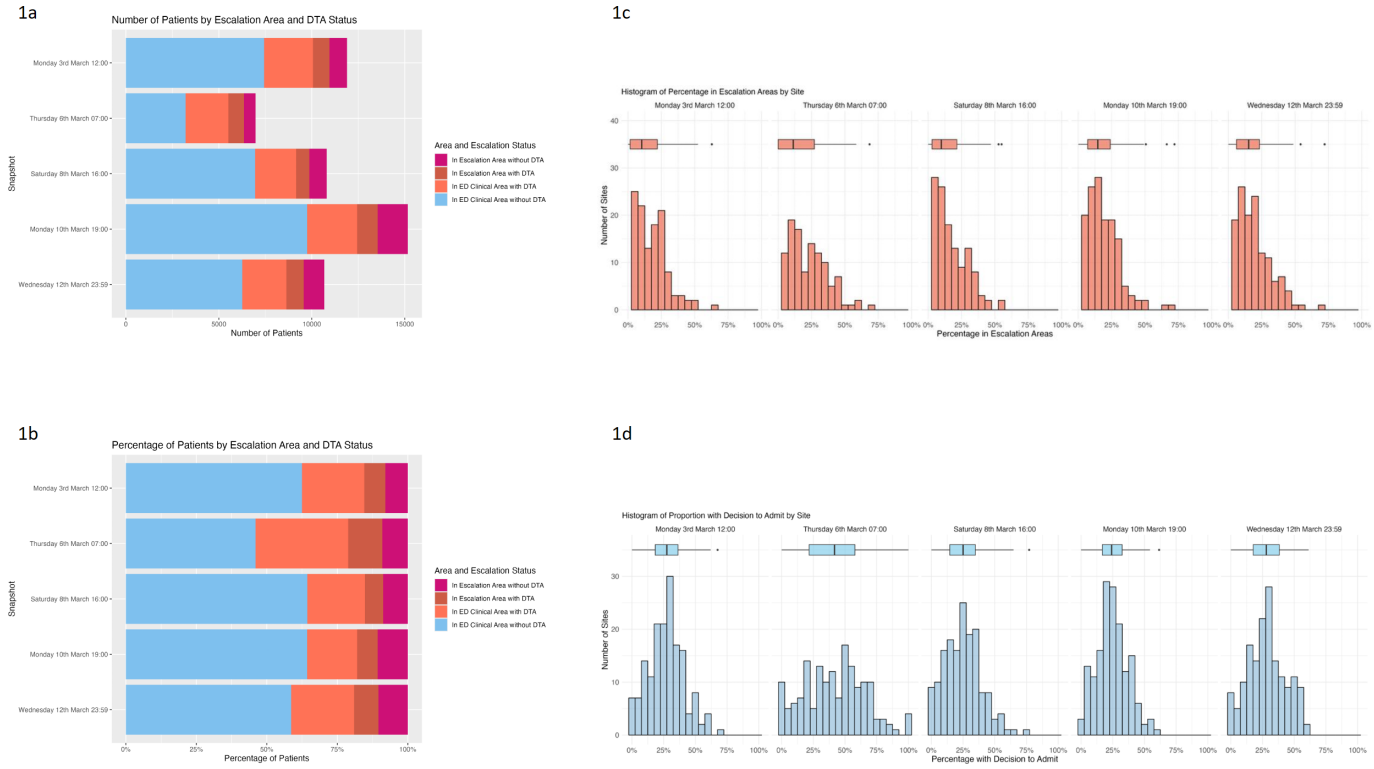

Figure 1 (a) Stacked bar chart showing the number of patients at each snapshot in escalation areas and awaiting an inpatient bed. (b) Stacked bar chart showing the proportion of patients at each snapshot in escalation areas and awaiting an inpatient bed. (c) Histogram showing the percentage of patients at each snapshot in escalation areas. (d) Histogram showing the percentage of patients at each snapshot awaiting an inpatient bed.

patients present in the participating EDs (n=56 881). Across the five snapshots, the proportion of sites reporting patients in escalation areas ranged from 69.8% to 89.6% (n=113/162 to n=147/164) and the proportion of patients in escalation areas ranged from 15.5% to 21.1% (n=1866/12 051 to n=1486/7056) (table 2). The median proportion of patients in an escalation area per site was 10.3% (IQR 1.6–21.9%) at snapshot 1, 11.4% (IQR 0.0–27.2%) at snapshot 2, 9.8% (IQR 2.9–21.5%) at snapshot 3, 14.6% (IQR 7.0–24.0%) at snapshot 4 and 15.2% (IQR 6.2–23.3%) at snapshot 5 (see table 2 and figure 1).

Types of escalation area in use

The proportion of sites with patients in an ambulance queue >15 min after arrival across the five snapshots ranged from 8% to 34.1% (n=13/162 to n=54/164), representing 3.3% to 7.8% (n=49/1486 to n=227/2919) of patients in escalation areas (table 3).

The proportion of sites with patients in repurposed clinical escalation areas was 45.7% to 59.1% (n=74/162 to 97/164), representing 31.5% to 38.6% (n=537/1705 to n=573/1486) of patients in escalation areas (table 3); the proportion of sites with patients in non-clinical escalation areas was 50.6% to 72.6% (n=82/162 to n=119/164), representing 52.7% to 58.0% (n=783/1486 to n=989/1705) of patients in escalation areas (table 3); and the proportion of sites with patients in doubled-up cubicles was 9.9% to 13.4% (n=16/162 to n=22/164), representing 4.1% to 5.8% (n=121/2919 to n=99/1705) of patients in escalation areas (table 3).

Further details on the types of escalation areas in use are shown in online supplemental file 1.

Differences between snapshots

The highest number of total patients in the ED (n=15 933) was at snapshot 4 (Monday 10 March at 19:00) and the median percentage of patients in an escalation area for individual departments was highest (15.2%, IQR 6.2–23.3%) at snapshot 5 (Wednesday 12 March at 23:59). Overall, the highest escalation area use as a percentage of the total number of patients present in the ED was at snapshot 2 (Thursday 6 March at 07:00, 21.1%, n=1486/7056). At this snapshot, representing the end of the clinical night shift, more than one-fifth of all UK ED patients were being cared for in escalation areas, despite being the snapshot with the lowest total numbers in the ED (n=7056) (see table 2, figure 1, and online supplemental file 1).

Geographical region

The proportion of patients in escalation areas was consistently highest in Northern Ireland (31.8–38.8%, n=148/465 to 134/345) followed by Wales (21–32.5%, n=157/747 to 126/388), and was lowest in the Southwest of England (7.5–13.5%, n=74/987 to 153/1131). (see figure 2 and online supplemental file 1).

Adult and paediatric EDs

The total percentage of patients in escalation areas was higher in adult-only EDs (17.4–21.3%, n=497/2849 to 626/2934)) and mixed adult and paediatric EDs (15.0–21.6%, n=1357/9023 to 1107/5121) compared with EDs that see only paediatric patients (1.6–6.7%, n=3/182 to 12/179) (see online supplemental file 1).

Trauma-receiving status

The total percentage of patients in escalation areas was higher in EDs within Local Emergency Hospitals without trauma

Table 3 Escalation area use by type

Characteristic	Snapshot				
	1: Monday 3 March 12:00	2: Thursday 6 March 07:00	3: Saturday 8 March 16:00	4: Monday 10 March 19:00	5: Wednesday 12 March 23:59
Ambulance queue					
Number of sites with patients in an ambulance queue (>15 min), n (%)	33/164 (20.1%)	13/162 (8.0%)	33/160 (20.6%)	56/164 (34.1%)	39/162 (24.1%)
Number of escalation area patients in an ambulance queue (>15 min), n (%)	108/1866 (5.8%)	49/1486 (3.3%)	80/1705 (4.7%)	227/2919 (7.8%)	142/2097 (6.8%)
Non-clinical escalation area					
Number of sites with patients in a non-clinical escalation area, n (%)	99/164 (60.4%)	82/162 (50.6%)	104/160 (65%)	119/164 (72.6%)	108/162 (66.7%)
Number of escalation area patients in a non-clinical area, n (%)	1019/1866 (54.6%)	783/1486 (52.7%)	989/1705 (58.0%)	1644/2919 (56.3%)	1119/2097 (53.4%)
Repurposed clinical area					
Number of sites with patients in a repurposed clinical escalation area, n (%)	80/164 (48.8%)	74/162 (45.7%)	75/160 (46.9%)	97/164 (59.1%)	85/162 (52.5%)
Number of escalation area patients in a repurposed clinical area, n (%)	641/1866 (34.4%)	573/1486 (38.6%)	537/1705 (31.5%)	937/2929 (32.1%)	743/2097 (35.4%)
Doubled-up cubicles					
Number of sites with patients in doubled-up cubicles, n (%)	19/164 (11.6%)	16/162 (9.9%)	17/160 (10.6%)	22/164 (13.4%)	17/162 (10.5%)
Number of escalation area patients in doubled-up cubicles, n (%)	98/1866 (5.3%)	81/1486 (5.5%)	99/1705 (5.8%)	121/2919 (4.1%)	93/2097 (4.4%)

designation (16.6–24.5%, n=309/1861 to 287/1171) and Trauma Units (15.2–22.3%, n=1064/7022 to 961/4314) compared with Major Trauma Centres (13.4–19.3%, n=336/2511 to 643/3338) (see online supplemental file 1).

Department occupancy and resuscitation capacity

The percentage of sites reporting no available resuscitation cubicles across snapshots ranged from 10.5% to 26.2% (n=17/162 to n=43/164) (table 2). In terms of occupancy, across all EDs the median number of patients per cubicle ranged across snapshots from 1.0 (IQR 0.7-1.4) to 2.4 (IQR 1.8-3.1)(table 2).

Patients awaiting an inpatient bed

The total percentage of patients awaiting an inpatient bed across the snapshots was 25.0–44.4% (n=3837/15 345 to 3135/7056). This percentage was highest during snapshot 2, at the end of the clinical night shift (see table 2 and figure 1).

Paediatric patients and patients with a mental health presentation

Both paediatric patients and patients with a mental health presentation were being cared for in escalation areas across all five snapshots. Among the EDs that see paediatric patients, 4.8–23.0% (n=6/124 to 29/126) reported paediatric patients in escalation areas. The proportion of EDs with patients with a mental health presentation in escalation areas was 25.9–35.4% (n=42/162 to 58/164) (see table 4).

DISCUSSION

A total of 10 052 patients (17.7% of all patients) present in UK type 1 EDs across the five snapshots were receiving care in escalation areas. Of these, the majority were in non-clinical areas such as corridors. The point prevalence of patients in escalation areas was highest in Northern Ireland and lower in paediatric-only EDs and Major Trauma Centres. Despite national guidance, both paediatric patients and patients with mental health presentations were found to be receiving care in escalation areas across all snapshots.

The number of patients in UK EDs waiting for an inpatient bed consistently exceeded the number of patients being cared for in escalation areas. The proportion of sites without any immediate resuscitation cubicle capacity ranged from 10.5% to 26.2%, representing a significant patient safety issue and particularly concerning given the previously identified association between ED crowding and cardiac arrest within the ED.[19]

Findings in context

Escalation area care within the ED results in compromised patient safety, staff demoralisation and a loss of dignity for patients.[10] Studies in the USA report ED patients experiencing escalation areas (known as 'boarders' in the USA) are less satisfied with the care they receive and prefer boarding in inpatient areas.[20 21] A study of patient experience within a crowded UK ED described themes of uncertainty, helplessness and discomfort.[22] Care in escalation areas has been suggested as a causative factor in the association between delay to admission and increased mortality.[11]

The 2025 NHS England Urgent and Emergency Care Plan recognises that corridor care is unacceptable for patients and staff.[23] The plan to routinely publish corridor care data should be welcomed, but, due to the lack of a consistent definition of an escalation area and the potential challenges in collecting such data, the data collection methods should be designed in conjunction with emergency care staff and transparently published. Beyond corridors, the use of other escalation areas should also be considered as a key metric of ED capacity due to the impact of their use on patient care and department operational effectiveness. The plan aims to make 'progress on eliminating corridor care', including via initiatives to reduce ED attendances and improve flow. Our data support the hypothesis that ED escalation area care is principally a result of poor flow out of the ED. Focus on flow should be a priority for policy makers, hospital

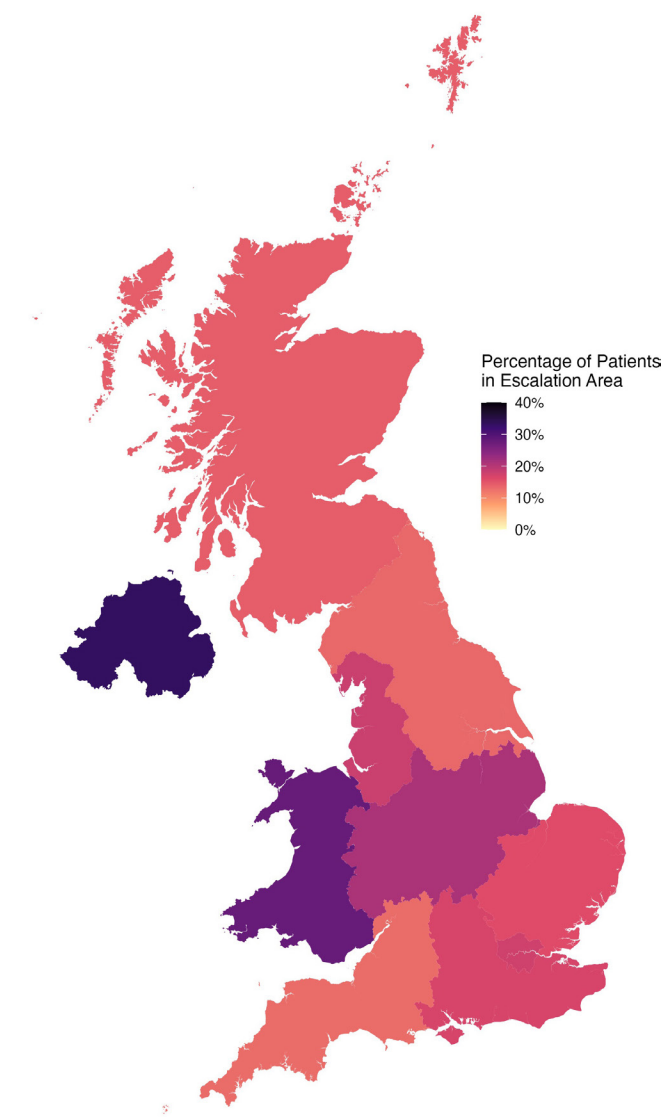

Figure 2 Heatmap showing the median percentage of patients in escalation areas across all snapshots by region.

executives and clinical leaders while considering system-wide risk.

Escalation area care has been suggested as a potential explanatory factor in the observed relationship between long waits for an inpatient bed and increased mortality.[11] Given how routine and widespread the use of escalation areas was seen to be in this study, further research to understand whether this is the case would be of great interest to emergency care providers and members of the public. Equally, research that explores effective measures to reduce crowding and the use of escalation areas, such as continuous flow models and other full capacity protocols, will be of interest.[2]

The development of a universally applicable definition of an escalation area, via methodology such as a Delphi study, would help to ensure a consistently applied definition in future research and routinely reported data.

We encourage policy makers to ensure that routinely reported data capture the full picture of escalation area care delivered in over-capacity EDs and to consider how strategic development aims for the healthcare system as a whole can address the issue.

Strengths and limitations

Due to the strength of the TERN model, this study involved a high proportion of UK EDs with representation from all four UK nations. Data completion was high across the snapshots; the lowest percentage of sites completing data entry at any one snapshot was 98.2% (161/164). Data were prospectively collected at snapshots within and outside of normal working hours. The results are highly representative of real-world UK ED conditions, and routinely reported performance metrics for March 2025 are consistent with those reported across recent years.[16]

The snapshot design was used to ensure feasibility and has been used to describe the prevalence of frailty across European EDs and crowding.[24–26] There is large variation in individual hospitals' procedures for addressing crowding and no universally applied definition for ED escalation areas. The study team assisted sites in identifying and assigning their escalation areas into the four study categories prior to data collection.

As point prevalence is reported here, there may have been patients present in the ED and not in an escalation area during the snapshots who experienced escalation area care at another point in their ED stay. The proportion of patients who experience escalation area care at any point during their presentation is therefore likely to be higher.

Our study does not account for patients in a legitimate ED cubicle space that would be in a higher acuity area if space were available—for example, a patient in a majors cubicle who needs a resuscitation space. To maintain feasibility and minimise subjective decision-making by research teams, patients in the waiting room were only defined as being in an escalation area if there was easily observable and objective evidence that they should be cared for in an ED cubicle. This conservative approach means our study is likely to have underestimated the true prevalence of patients being cared for in escalation areas.[22]

CONCLUSION

National guidance from NHS England states that escalation area use is not acceptable; this study demonstrates that it is widespread and routine. The same guidance states that children and those with mental health problems should never experience

Table 4 Paediatric patients* and patients with a mental health presentation

Characteristic	Snapshot				
	1: Monday 3 March 12:00	2: Thursday 6 March 07:00	3: Saturday 8 March 16:00	4: Monday 10 March 19:00	5: Wednesday 12 March 23:59
Number of sites with paediatric patients in escalation areas, n (%)	10/127 (7.9%)	6/124 (4.8%)	15/125 (12.0%)	29/126 (23.0%)	16/124 (12.9%)
Number of sites with mental health presentations in escalation areas, n (%)	48/164 (29.3%)	42/162 (25.9%)	42/160 (26.2%)	58/164 (35.4%)	44/162 (27.2%)

*Adult-only emergency departments not included in the denominator.

escalation area care; this study demonstrates that this is occurring regularly. Although system-wide risk must be considered with any intervention to address ED flow, admitting patients awaiting an inpatient bed from the ED would largely solve the escalation area care problem within the ED. Healthcare policy makers must address this issue or openly accept escalation area care and its associated harms as a standard experience in UK emergency care.

Acknowledgements Our thanks to Alice Colombo for her hard work as TERN Research Administrator. Our thanks to Matthew Reed, Edward Carlton and Virginia Newcombe for supervising the work of TERN and reviewing the manuscript in their roles as the RCEM Research Committee Lead and RCEM Professors. Our thanks to Adrian Boyle and Ian Higginson, RCEM President and Vice President, for advice at the design stage.

Collaborators Writing Committee: Fraser Birse, Ben Clarke, Ryan McHenry, Tom Roberts. Local collaborators: Aberdeen Royal Infirmary (Conal Mulholland, Toluwalase Fasina); Addenbrooke's Hospital (Paul Bonhomme, Susie Hardwick, Asa French, Emma Clark, Jewel Inapan, Kerry Meynell); Aintree Hospital (Abdo Sattout, Richard Evans, Hayley Digby, Danielle Mclaughlan, Gemma Parker, Sarah Murphy); Airedale General Hospital (Martin Kelsey, Dan Raine, Charlotte Kelsey, Heather Collier, Virginia Clarke, Lindsey Stephens); Antrim Area Hospital (Kathryn Boyle, Jenny Sutherland, Matthew Copeland, Peter Devine); Barnet Hospital (Taranpreet Bhoday, Charlotte Walker-Jones, Jodie Mahendran); Barnsley Hospital (Fiona Dunning, Jenny Vernon, Scott Roantree, Emelia Barraclough, Hannah Brown); Basildon Hospital (Edward Lamuren, Mohamed Attia, Dawn Cairns, Shanais Thompson, Jane Thomas, Bushena Miyesa, Michael Villaruel, Princess Gabiana); Basingstoke and North Hampshire Hospital (Stian Mohrsen, Karolina Chalk, Tanja Border); Bedford Hospital (Devasena Subramanyam, Melchizedek Penacerrada, Jacinta Dias, Rachel Lorusso, Marielle Tolentino, Blessy Rethi, Christina Smith, Sushma Patil, Sanya Niyas); Bristol Royal Infirmary (Katherine Murdoch, Charlotte Munday, Katie Sweet, Ruth Bonsor, Linda Pipira, David Hopgood, Zoe Garland, Robert Eggen, Philip Anyelba Tankpara, Reeana Irani); Bronglais General Hospital (Mohamed Nasser, Subhasree Biswas, Heather McGuinness); Broomfield Hospital (Karen Rhodes, Stacey Cotterell, Rachael Arnold); Calderdale Royal Hospital (Huw Masson, Katherine Fulcher, Megan Walters, Emren Potinci, Rusha Saha, Ishak Rouf); Charing Cross Hospital (Ann Carroll, Claire Kelly, Daniel Martin, Lauren Nichols, Niamh Sargeant); Chelsea Chesterfield Royal Hospital (Nick Mani, Vittoria Sorice, Emma Moakes, Natasha Lee, Jonathan Spackman); Conquest Hospital (Leigh Greenland, Sarah Goodwin, Claire Rutherfurd, David Jones, Christy Biji, Timothy Kesington, Ghassan Youssef, Danielle Vidler, Peter Garner, Louise Watson, Janet Sinclair, Toni de Freitas, George Youssef, Oliver Reigler, Aparna Senjuti, Shabih Zahra, Kate Fever, Penny Boxall); County Staffordshire Hospital (Adebola Olorunfemi, Jennifer Thomas, Nenette Abano); Craigavon Area Hospital (Dervla McKenna, Mark Feenan); Croydon University Hospital (Mark McInerney, Salwa Adam, James Brown, Rahisha Maskey, Sruthi Sridhar, Thuta Swe, Sharan Thapa, Kushagra Gupta, Maryam Alhasan, Qusay Al-Zubaidi, Michael Masucci, Harman Bhandal, Victoria Estlin, Trushna Marpaka, Nadir Fadol, Christo Anto); Derriford Hospital (Daisy Carter, Rosalyn Squire); Dumfries Ealing Hospital (Chris Nordstrom, Mariam Sharafeldin, Rafhan Kazi, Ibrahim Ayvaz, Sheena Quaid, Oluwatofunmi Gbenedio, Cheryl Aiello); East Surrey Hospital (Csaba Szekeres, Edward Rippingale-Combes, Ellen Jessup-Dunton, Catherine Kloppenborg, Isaac Brookman, Abbas Kumail, Varshini Gaddameedi, Viktor Mordavszky, Emmeline Simpson, Yathin Thammaiah); Eastbourne District General Hospital (Leigh Greenland, Sarah Goodwin, Claire Rutherfurd, Kelly Booth, Kavitha Anoop, Paul Bailey, Budhaditya Sanyal, Asim Bela, Chloe Hall, Oliver Reigler, Aparna Senjuti, Shabih Zahra, Kate Fever, Penny Boxall); Epsom Hospital (Grace Blows, Lisa Evans, Rebecca Macfarlane); Fairfield General Hospital (Mark Richardson-Riley, Zoe Thomas, Carol Lunney, Monaza Saeed, Pamela Bradley, Rebecca Marie Gibson, Jijimol Anthony, Julie Newton); Frimley Park Hospital (Kyi Kyi Nwe, Noha Elgendy, Ainsley Reynolds, Teena Kunnath, Thomas Davies, Khaled Alshakaki, Aatif Butt); Glan Clwyd Hospital (Kenneth Igwe, Siva Seramanperuman, Rachel Manley, Annette Bolger, Bethan Roberts, Oluwatoyin Idowu); Glangwili General Hospital (Mohamed Nasser, Becky Icke, Charlotte Jones, Samantha Coetzee, Bethan Landeg, Bethan Morse-Browning); Glasgow Royal Infirmary (Joanna Quinn, Monica McKenna); Gloucestershire Royal Hospital (Taher Sharaf, Michael Connelly, Jen Griffiths, Teresa Tarling, Alicia Wailes, Carys Whitby, Michael Castillo, Jennie Lowdell, Kate Pinchassoff, Nick Vallotton, Ashleigh Pritchard); Great Western Hospital (Sian Thomas, Ayesha Mushtaq, Laura McCafferty, Tim Slade, Lauren Eady, Sahaj Romana, Alex Law, Urwa Chaudhry, Hannah Sennitt, Funmi Olagbaiye, Joy Egbiri, Will Peach, Alasdair Franks, Leanne Price, Hannah Glatzel, Rob Kirkham, Rejani Jayan, Funmilayo Fatile); Hillingdon Hospital (Hinal Patel, Katherine Lovejoy, Alaric Belmain, Prachi Avatade, Vandan Savani, Neha Rao, Vaibhav Todkari, Prudence Oliver, Jonathan Porritt, Natasha Mahabir, Latha Aravindan, Mariam Nasseri, Shweta Sharma, Ru Grinnell); Hinchingbrooke Hospital (Rehan Fareed, Gbemisola Jenfa, Hassan Khan, Mark Harvey, Jozen Obrique, Elena Marco-Illana, Rincy Kurian, Kemisola Ajide); Huddersfield Royal Infirmary (Huw Masson, Katie Fulcher, Iqra Sultan, Sangeeta Khadka, Havishma Sreedharala, Sadvika Padmanabhuni, Ishak Rouf, Yasoob Alaameri, Lily Boyle, Marium Akhtar, Temiloluwa Ijiwole, Toby Williams, Phyu Syn); Hull Royal Infirmary (Austin Smithies, Laura Caley, Phillipa Howell, Ana Ferreira); James Cook University Hospital (Owen Williams, Sian Dalgleish, Elizabeth Griffiths); James Paget University Hospital (Amir Guirguis, Helen Sutherland, Elva Wilhelmsen, Montana Boast); John Radcliffe Hospital (Charlotte Tickle, Alexis Espinosa, Abigail Harris, Tinelly Sambo, Rashadul Alam, Rebecca Dehavillande, Jasmine Harris, Ralph Houet, Rufino Magallano, Franceska Tchapdeu, Daniela Krouzkova, Helen Law, Dominique Georgiou, Clare Fitchett, Nga Man Law, Martina Iorio); Kettering General Hospital (Mohammed Elwan, Hannah Britton, Vishnu Sreelatha, Hathurusinghage Piyaratne, Sari Al Hajaj, William Madu, Chloe Stolarski, Harika Maddireddy, Salma Mohamed, Suryanarayana Pasupuleti, Khaled Soliman, Swarga George); King George Hospital (Darryl Wood, Faika Qazi, Kim Bovill, Sam King); Kings College Hospital (Edward Baker, Clare Finney, Abdur Faisal, Caitlin Spooner, Burt Vergara); Kings Mill Hospital (Lynne Allsop, Jill Woodhead, Jill Kirk, Cheryl Heeley, Philip Buckley); Kingston Hospital (Kay Philcox, Marian Di Vito, Anjana Mistry, Roshni Molls); Leeds General Infirmary (Najeeb Rahman, Sophie Griffin, Sasha De Prendergast, Charlotte Winder, Matthew Smith); Leighton Hospital (Sean Crossman, Natalie McCormack, Adewale Naiyeju, Mark Quiambao, Sherrymole Chettaniyil, Martin Griffin, Joanne Harold, Claire Gabriel, Richard Lowsby, Victoria Westwood); Lincoln County Hospital (Awais Ahmad, Kelly Hubbard, Katie Dorr, Catherine Wyatt, Sarah Shephardson); Luton Macclesfield District General Hospital (Matt Lynch, Alex Scott, Natalie Keenan, Hannah Brennan, Joanne Bradley-Potts, Jan Tomkinson, Rachel Smith, Megan Balmer); Maidstone Hospital (Ragavan Navaratnam, Rebecca Seaman, Laura Kent, Amy Ackerley, Mel Kelly, Maisie Quinney, Anna Tunnicliff, Corinne Selsby, Monica Bin Meh); Manchester Royal Infirmary (Thomas Bannister, Craig Ferguson, Charlotte Taylor, Richard Body, Rhea Saldanha, Mohamed Abouhemda, Rachael Quayle, Sabiha Akter, Qurat Ul Ain, Karolina Szarzanowicz, Dana Hegazy, Sreenath Duggi, Zainab Baye, Olabisi Temilayo Omotayo, Peter David, Fady Dahalan, Sana Nasir, Sian Baldry); Medway Maritime Hospital (Adebayo Da-Costa, Victor Anota, Louise Brassington, Perpetual Palmer, Morakinyo Fasakin, Oluwafemi Aina, Emmanuel Oduware, Linda Ofori, Patience Nkala, Mary Everett, Dilukshi Wickramasinghe, Suzanne Williams, Clarissa Madla, Mahdi Succar); Midland Metropolitan University Hospital (Ashley Dark, Manal Shakir, Chinnu Prince, Syeda Tamanna, Izuchukwu Nwolisa); Milton Keynes University Hospital (Shindo Francis, Young Chewe, Muni Akande, Oluwadamilare Adetuberu, Annith Jerry, Katy Canavan, Sneha Venaik, Wuraola Akande); Musgrove Park Hospital (Sarah Johnson, Emma Machin, Evelyn Owusu-Mireku, Chrissie Lawrence, Shauna Bartley, Steffi Jose); New Cross Hospital (Arvinth Soundarrajan, Emma Jenkinson, Githushan Gengaparam, Rose Hemmings, Naomi Brown, Olasimbo Akinbobola, Ross Evans, Pradeep Nagaraju); Ninewells Hospital (Ross Hendry); Norfolk and Norwich Hospital (Laura Lee); North Manchester General Hospital (Pedro Simoes, Bency Laiju, Karen Connolly, Helen T-Michael, Adele Fitzgerald, Robin Sebastian, Zahid Yusuf); North Middlesex University Hospital (David Sims, Kim Stallard, Jonathan Holliday, Nirmala Arulampalam, Amy Knowles, Amr Kash, Yousef Atta, Nitish Seeboruth); North Tees Hospital (Sophie Hindmarsh, Laura O'Rourke, Paula Correia, Amrutha Jinka, Hillie Corr); Northampton General Hospital (Aiden Pettet, Flora Gallamoza, Amna Khalid, Ethelwolda Goyena, Bincy Kariyadil, Maxine Foo); Northern General Hospital (Ashleigh Trimble, Alex Robertson, Charlotte Crapper, Helen Wanstall, Emily Dale, Anna Wilson, Jack Bardwell); Northumbria Specialist Emergency Care Hospital (Alex Russell, Mark Harrison, Hayley McKie, Tracy Smith, Anna Smith); Northwick Park Hospital (Chris Nordstrom, Oluwatofunmi Gbenedio, Tabassum Khan, Sheena Quaid, Parveen Kaur, Rafhan Kazi, Ibrahim Ayvaz, Mariam Sharafeldin, Andreea Cuciuc, Ikenna Ohanenye); Ormskirk Hospital (Chelcie Jewitt, Nyquist Mooteeram, Craig Rimmer, Moira Morrison); Peterborough City Hospital (Robert Lee, Christopher Edmunds, Natalie Temple, Shukurat Adeola Adebayo, Caitlin Back, Stephanie Bates, Helen Burtenshaw, Raquel Calcada, Alys Capell, Kerrie Cavanagh, Jayne Hanby, Trish Mazambani, Graeme McLintock, Reshma Ramachandran, Frincy Sijo, Lauren Woods, Ionela Sinanovic, Helen Wilson, Suzanne Woodhouse, Manali Lilani, Emily Smith, Tracey Peachey, Tessa Stoby, Lois Frome); Pilgrim Hospital (Awais Ahmad, Amy Faunt, Jane Upsall, Kimberley Netherton, Rajeshwar Ranganathan, Muhammad Mohsin Isar, Moustafa Abouelkheir); Pinderfields Hospital (Sarah Robertshaw, Sarah Buckley, Amy Major, Shamundeshwari Mathavan, Freddy Kheshwalla, Katherine Goff, Elina John, Mohammad Irfan); Poole Hospital (Charlotte Humphrey, Karen O'Toole, Emma Langridge, Yasmin de Ath, Lauren Bumpass, Aryn Azlan, Thankam Boniface, Esha Moghan, Ursula Gannon, Emily Doidge, Eliza Chwiecko); Princess Royal Hospital, Haywards Heath (Juliet Ariel, Hadis Reyhani, Carla Clegg, Victoria Elston, Lara McNeill, Ruchindra DeSilva, Chizoba Azie); Princess Royal Hospital, Telford (Adrian Marsh, Danyal Fiaz, Wael Fuhaid, Megan Brown, Jaseem Mohamed, Anthonia Maduabuchukwu, Sidharth Smithapushpan, Mohamed Musa, Ahmad Sultan, Joseph Paruchuru, Helen Diack); Queen Alexandra Hospital, Portsmouth (Christiane Vorwerk, Zoe Daly, Andrew Gribbin, Leah Sinclair, Blessing Otobhiale); Queen Elizabeth Hospital, King's Lynn (Sharleen Siu, Hilary Thornton, Charles Nwankpa, Amrit Chaulagain, Hannah Greenacre, Ashish Kundu, Mohamed Imam, Yunusa Abdullahi, Joanna Rudnicka, Jemshad Koola Parambath, Sophy Shedwell); Queen Elizabeth Hospital, Woolwich (Lauren Matthews, Sharon Hall, Olivia Ballard, Reshma Kamar, Adheera Singh, Tasnuva Tamanna, Faisal Yousif, Devaan Dezylva, George Wilson, Arif

Shareef, Semi Segbenu, Chloe Hicks, Arwa Shaikh, Samuel Booth, Aadil Farooq, Matt Burton, Khurrum Rasool, Ameena Sulaiman, Haris Rauf Mohammad); Queen Elizabeth the Queen Mother Hospital, Margate (Georgiana Scarlat, Hazel Ramos, Joanne Deery, Tracy Hazelton, Eva Beranova, Natalie Mercado); Queen Elizabeth University Hospital, Glasgow (Ryan McHenry); Queen's Hospital Burton (Jamie Hunter, Alison Fletcher, Ainsley MacShannon, Mohsin Mirza); Queen's Hospital, Romford (Darryl Wood, Jaspinder Kaur, Sam King); Rotherham Hospital (George Hamson, Simon McCormick, Rebecca Pugh, Rachael Gaffney, Rachel Walker); Royal Albert Edward Infirmary (Gemma Burrows, Amanda Ahmed, Emma Robinson, Sacha Connor); Royal Alexandra Hospital, Paisley (Jennifer Ross, Imogen Sandiford); Royal Berkshire Hospital (Thomas Rickaby, Georgia Coward, Ada Ukaulor, Romilly Gosling, Maria Nozdrina, Georgia Porter, Rana Awadalla, Anna Okada, Charlotte Knowles, Sheena Faloon, Liza Keating, Priyadharshini Ravi, Emel Yildirim, Myra Naeem, Nandini Tewari); Royal Cornwall Hospital (Rosemary Hartley, Muhammad Irshad, Sally Thomas, Adam Spencer, Georgia Moore, Oliver Vincent, Dan Bawden); Royal Derby Hospital (Jasmine Soo, Bashar Elwir, Alison Rockey, Lianne Hufton, Elisha Cousins, Andrew Tabner, Graham Johnson, Alison Fletcher, Ainsley Macshannon, Alison Matthews, Jamie Hunter, Mohsin Mirza, Bethany Harvey, Claire Fearn, Muamar Bayanan); Royal Devon and Exeter Hospital (Sam Scotcher, Ruth Webb, Harvey Thompson, Mahima Bhatt, Jasmine Collins, Thomas Christie); Royal Hampshire County Hospital (Stian Mohrsen, Tanja Border, Karolina Chalk); Royal Infirmary Edinburgh (Luisa Padovani, Ysabelle Thackray, Johanna Walter); Royal Liverpool Hospital (Wojciech Sawicki, Danielle Mclaughlan, Hayley Digby, Sarah Murphy, Gemma Parker, Christopher Speed, Harry Dale, Richard Evans, Jessica Hindley, Mary Brodsky, Allayna Doherty, Amy Doyle, Faustina Ravi, Jennifer Entwistle); Royal London Hospital (Fiona Mendes, Ivan Petkov Kisyov, Noemi Caponi, Fiona McMahon, Jake Hong, Michael Eason, Hannana Khatun, Emily Campbell, Nimca Omer, Fatma Mohammed, Hannah Stalker, Grace Tunesi); Royal Oldham Hospital (Hassaan Afzal, Louise Howard-Sandy, Angiy Vian-Michael, Jack Haslam); Royal Preston Hospital (Kirsty Challen, Jennifer Townsend, Kristal Dirisam); Royal Shrewsbury Hospital (Adrian Marsh, Helen Diack, Nabina Bhattarai, Sandi Angus, Alessandra Fraser-Pye, Nisha Pai, Mohammad Bhuiyan, Ikram Mohamoud, Aribah Naveed, Omer Mohamed, Roanna Craven, Mohamed Mobasher); Royal Stoke University Hospital (Adebola Olorunfemi, Nenette Abano, Ukraina Garcia, Sylwia Mowinska, Abira Aftab, Joanne Hiden); Royal Surrey County Hospital (Giorgina Blanco, Anna Vaulks, Sheila Mtuwa, Wuraola Adeoye, Diane Montoya, Kay Reynolds); Royal Sussex County Hospital (Sara Basha, Divya Rajaiah, Alyssa Jordan, Lovelin Regina, Gabrielle Alexander-Harvey); Royal United Hospital Bath (Emily Wilson, Lucy Howie, Genette Parsons, Katy Stevenson, Amanda King); Royal Victoria Hospital Belfast (Leanne Brown, Adeel Akhtar, Christopher Finnegan, Um e Roman Moughal, Peter Heaney, Erin Fisher, Joel Abraham); Royal Victoria Infirmary, Newcastle (Lucy Curtis-Holloway, Chris Wilkinson, Elizabeth Clayton, Jonathan Bennett); Salford Royal Hospital (Dominic Kay, Ahmed Ali, Reece Doonan, Jessica Pendlebury, Stephanie Lee, Lisa Swindells, Sharon Barber, Jacob Hadfield); Salisbury District Hospital (Jenna Plank, Sophia Strong-Sheldrake, Abby Rand, Frederick Gleadowe, Emily Brockbank, Rory Catton, Matthew Charlwood, Fenia Dandelou); Scarborough General Hospital (Ed Smith, Francesca Duncan, Alison Turnbull, Laura Barman, Rachel Harrison, Dana Groom, Anna Waine, Rachel Harrison, Sakshi Beotra); Scunthorpe General Hospital (Kelum Perera, Sue Spencer, Joanne Hill); Southampton General Hospital (Caroline Thomas, Sidra Jamil, Elizabeth Frost, Anna Foster, Rachel Schranz, Abigail Johnston, Kate Sheppard, Matt Morris, Owen Gregory, Ines Moreira, Kerry Thorpe, Iberedem Umana); Southend University Hospital (Joanne Galliford, Sharon Tysoe, Anne McPherson, Eugene Mphansi, Lesley Nichols, Swapna Kunhunny, Abena Tweneboah, Oluwaseyifunmi Juba); Southmead Hospital (Chris Goodwin, Michael Gammon, Joshua Evans, Mohamed Ali, Tanaz Padiyath, Alice Ostojic, Will Sharp, Tarn Stroud, Aimee Wilkinson, Alex Sedgley, Naina Mistry, Olivia Sinclair, Harriet Jones, Helen Emery, Sandeep Nair, Emma Godson, Aran Jamieson, Fraser Birse); Southport Hospital (Craig Rimmer, Nyquist Mooteeram, Lorraine Bickerstaffe, Sabina Koprowska, Moira Morrison, Kerri Bowness, Chelcie Jewitt); St George's Hospital (Jared Charlton-Webb, Phil Moss, Laila Altaffi, Dariush Micallef, Annalie Lahoud, Rawan Mouhandes, Nisha Gurung, Thomas Hosfield, Cayla Marshall, Shaimaa Mohamed, Muhammad Faham Saleem, Rosie Wright); St Helier Hospital (Grace Blows, Lisa Evans, Melissa Hanger, Hannah Brotherwood, Rebecca Macfarlane); St James's University Hospital (Najeeb Rahman, Manou Sundararaj, Sasha De Prendergast, Charlotte Winder, Matt Smith, Katie Nolan, Sophie Griffin); St John's Hospital (Johanna Walter, Ysabelle Thackray, Luisa Padovani); St Mary's Hospital (Michael O'Connor, Ruud Nijman, Purushotham Harsha Vardhan, Saranya Ravindran); St Peter's Hospital (Santosh Pradhan, Lok Thapa, Ahmad Saqer, Amit Bhandari, Donna Edano); St Richard's Hospital (Andrew Pantelides, Clemence Lagroy de Croutte, Abbie Tutt, Tessa Mitchell, Usama Hassan, Siraj Mohammed, Rupali Sachdev); St Thomas' Hospital (Laura Hunter, Ella MacInnes, Amy Harris, Miranda Smith); Stepping Hill Hospital (Gopala Pureti, Julie Melville, Diane Daniel, Chioma Akinfenwa); Sunderland Royal Hospital (Phil Dowson, Michael Thompson, Kyna Richardson); Tameside General Hospital (Mohammad Islam, Hussain Ahmad, Christy Simon, Roxanne Gray); The Cumberland Infirmary (David Miller, Jane Gregory, Theresa Cooper); The Grange University Hospital (Mary Kivell, Alastair Richards, Shiney Cherian, Claire Price); The Princess Alexandra Hospital, Harlow (Roberta Branisteanu, Daniel Hodges, Patricia Nabayego, Amara Benson, Sylwia Goliaszewska, Bibi Badal, Samantha Beck, Donna Foster, Louise Barnard, Joanne Finn); The Royal Bournemouth Hospital (Charlotte Humphrey, Annamaria Wilce, Javen Ramsami, Eliza Chwiecko, Declan Woodhouse, Danier Parker, Keerthana Aravindhan, Angela Healey, Lorenzo Bianchi, Helena Dunn, Omar Elsobky, Farzana Karim); Torbay Hospital (Elizabeth Florey, Joan Redome, James Allen); Tunbridge Wells Hospital (Ragavan Navaratnam, Rebecca Seaman, Laura Kent, Amy Ackerley, Mel Kelly, Maisie Quinney, Anna Tunnicliff, Corinne Selsby, Monica Bin Meh); Ulster Hospital (Andrew Dobbin, Jonny Taylor, Ellen Hirst, Vicki Adell, Rachael Johnston, Sara Molloy, Eleanor Flynn, Jonathan MacCorkell, Aine Forester, Jennifer Holmes, Caoimhe Sheppard, Emma McCann, Sarah Moorhead, Lauren Brown, Jill McGregor, David McKinney); University College London Hospital (Mohamed Abdalla, Samer Elkhodaor, Erlyn Lomibao, Bobby Garcia, Fabiola Sevilla Perez, Christopher Griffiths); University Hospital Coventry (Llinos Hutchings, Jordan Simms, Rachel Rose, Margaret Lindsay, Ibrahim Abdelrhman, Louise Bromwich, Karys Noonan, Adel Bilal, Mehmet Yilmaz, Caroline Leech); University Hospital Crosshouse (Jessica Jameson, Struan Powrie); University Hospital Hairmyres (Hayley-Isabella Cawley, Maria McLaughlin, Emma Speake, Keir Brown, Heather Liddell, Elliot Craven, Linzi Marie Clark); University Hospital Lewisham (Anna Colclough, Joemar De La Pena, Easteen Davis-McIntosh, Neisha Rhule, Blessing Kazooba, Liban Bussuri, Daniel Beasley, Nicholas Wilson, Adam Durbin); University Hospital Monklands (Nicola Moultrie, Fiona Hunter, Roisin McGovern, Tracy Baird); University Hospital of North Durham (Lauren Ferguson, Iain Fraser, Jamie Greenwood); University Hospital of Wales (Peter Tytler, Nicholas Manville, Rhys Thomas, Nathaniel Williams, Mark Crothers); University Hospital Wishaw (Chris Moultrie, Claire Beith, Karen Black); Victoria Hospital Kirkcaldy (Naomi Gunn, Chloe Haigh, Jacqueline James); Walsall Manor Hospital (Misbah Mohammad, Midhat Tahir, Ben Jones, Rachel Pearse, Rhianne Grice, Andre Fernandes); Warwick Hospital (Rachel Dancer, Johannes Du Toit, Penny Parsons, Judy Shirley, Camilla Stagg, Maxine Turner, Angela Day, Indy Atwal, Pamela Berry, Bolanle Ekisola, Bridget Campbell); Watford General Hospital (Daniela Burlacu, Arin Bose, Alice Balaican, Marietta Pilarska, Tanvi Patel, Jasmin Pandhal); West Cumberland Hospital (David Miller, Rosemary Harper); Weston General Hospital (Hazem Amer, Deepika Mittal, Susan Wilkinson, Mandie Williams, Catherine White, Edel Robbins, Katrina Stallard, Janet Parker, Joshua Christie); Wexham Park Hospital (Nicolas Marquinez Vecchione, Sarah Wilson, Anrhona Galloway, Neeraja Mini Mol, Rhoda Law-Onilearo, Molly Everett, Christine Del Rosario, Benjamin Rush, Karen Chivers, Annie Green, Isha Chhetri, Eleanor Hassett, Wameedh Almaalullah, Mohamed Badawi, Maria Cruz, Chaw Myo, Hritik Nautiyal, Nicole Kader, Joana Da Rocha, Heather Bonner); Whipps Cross University Hospital (Fiona Mendes, Igho Jude Mukoro, Jack T G P Maloney, Mohamed Elymany, Michael Tadres, Alan Padayathil, Saloni Phor, Muhammad Farooq Mamoon); Whiston Hospital (Oliver Moore, Harriet Pleasant, Sharon Burnett, Jennifer Procter, Sharon Dealing, Jayne Evans, Kerri Bowness, Zoe Grindley, Eric Mbogu, Anamika Algeo, Karen Shuker, Robert Fuller); Whittington Hospital (Rachel Johnston, Leanne Taylor, Rahman Ahmad); William Harvey Hospital (Alison Brown, Reanne Solly, Olajumoke Owolabi); Withybush General Hospital (Mohamed Nasser, Michelle Edwards, Kelly Wood, Catherine MacPhee); Worthing Hospital (Laurence Caines, Isabel Norris, Kirsten King, Mohamed Selim, Andrew Thomson, Shahnaz Hakeem, Syed Muzaffar Hasan Kirmani, Alexander Dalton, Lorena Lucioli, Muhammad Sulaman Ashraf, Hannah Lidbetter); Wrexham Maelor Hospital (Ash Basu, Rachel Hughes, Rebecca Pope, Aimi Streeter, Phil Metcalf, Pavan Mangalore, Rob Fenwick, Nina Bassett, Jomcy John, Sarah Garrett); Yeovil Hospital (Stevan Bruijns, Rebecca Covey, Lucy Pippard, Nigel Beer); York District Hospital (Deborah Goldfield, Catriona Laverty, Katherine Atley, Stephen Grace, Christopher Bourlet, Laura Wendon; Ysbyty Gwynedd (Bangor) (Georgina Keyte, Catrin Davies, Ateev Juneja, Jessica Flint, Felipe Pellizon, Jess Trevett, Delyth Davies, Wendy Scrase).

Contributors Writing Committee: Fraser Birse, Ben Clarke, Ryan McHenry, Tom Roberts. This study was conducted by TERN. TR and FB were responsible for the initial concept. TR, FB and BC all contributed to study design. RM analysed the data and produced the figures. BC acted as primary study coordinator with support from TR and FB. The Writing Committee were all involved in authorship of this manuscript and take responsibility for its contents. TR is the guarantor.

Funding The study was funded by RCEM. RCEM grant number RCEM24_SG_4.

Map disclaimer The inclusion of any map (including the depiction of any boundaries therein), or of any geographic or locational reference, does not imply the expression of any opinion whatsoever on the part of BMJ concerning the legal status of any country, territory, jurisdiction or area or of its authorities. Any such expression remains solely that of the relevant source and is not endorsed by BMJ. Maps are provided without any warranty of any kind, either express or implied.

Competing interests None declared.

Patient and public involvement Patients and/or the public were involved in the design, or conduct, or reporting, or dissemination plans of this research. Refer to the Methods section for further details.

Patient consent for publication Not applicable.

Ethics approval This study was conducted under a waiver of consent, as approved by Brighton and Sussex research ethics committee (ref: 24/LO/0837)

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available upon reasonable request. Data are available on reasonable request and will be shared in anonymised form in accordance with ethical and data protection requirements.

Supplemental material This content has been supplied by the author(s). It has not been vetted by BMJ Publishing Group Limited (BMJ) and may not have been peer-reviewed. Any opinions or recommendations discussed are solely those of the author(s) and are not endorsed by BMJ. BMJ disclaims all liability and responsibility arising from any reliance placed on the content. Where the content includes any translated material, BMJ does not warrant the accuracy and reliability of the translations (including but not limited to local regulations, clinical guidelines, terminology, drug names and drug dosages), and is not responsible for any error and/or omissions arising from translation and adaptation or otherwise.

REFERENCES

1 International Federation for Emergency Medicine. Report from the Emergency Department Crowding and Access Block Task Force. 2020. Available: https://assets.nationbuilder.com/ifem/pages/270/attachments/original/1650595379/ED-Crowding-and-Access-Block-Report-Final-June-30-2020.pdf?1650595379
2 Smith E, Higginson I. The management of emergency department crowding. 2024. Available: https://79a10773.flowpaper.com/RCEMCrowdingGuidanceJan2024final/#page=1
3 Rabin E, Kocher K, McClelland M, *et al*. Solutions To Emergency Department 'Boarding' And Crowding Are Underused And May Need To Be Legislated. *Health Aff (Millwood)* 2012;31:1757–66.
4 Paling S, Lambert J, Clouting J, *et al*. Waiting times in emergency departments: exploring the factors associated with longer patient waits for emergency care in England using routinely collected daily data. *Emerg Med J* 2020;37:781–6.
5 NHS England. Principles for providing safe and good quality care in temporary escalation spaces. 2024. Available: https://www.england.nhs.uk/long-read/principles-for-providing-safe-and-good-quality-care-in-temporary-escalation-spaces/
6 NHS England. The NHS constitution for England. 2023. Available: https://www.gov.uk/government/publications/the-nhs-constitution-for-england/the-nhs-constitution-for-england#principles-that-guide-the-nhs
7 Royal College of Emergency Medicine. Crowding in Scottish EDs: cubicle space, corridor care, and bed waits. 2024. Available: https://rcem.ac.uk/wp-content/uploads/2024/06/Scotland_ED_Crowding_Briefing.pdf
8 Royal College of Emergency Medicine. Corridor care 'endemic' in Welsh A&Es as RCEM research reveals shocking reality. 2025. Available: https://rcem.ac.uk/news/corridor-care-endemic-in-welsh-aes-as-rcem-research-reveals-shocking-reality/
9 Royal College of Physicians. A snapshot of UK doctors: delivering care in a temporary environment. 2025. Available: https://www.rcp.ac.uk/media/q0wgoec5/a-snapshot-of-uk-doctors-delivering-care-in-a-temporary-environment.pdf
10 Royal College of Nursing. On the frontline of the UK's corridor care crisis. 2025. Available: https://www.rcn.org.uk/Professional-Development/publications/rcn-frontline-of-the-uk-corridor-care-crisis-uk-pub-011-944 [Accessed 6 Jun 2025].
11 Jones S, Moulton C, Swift S, *et al*. Association between delays to patient admission from the emergency department and all-cause 30-day mortality. *Emerg Med J* 2022;39:168–73.
12 Sprivulis PC, Da Silva J-A, Jacobs IG, *et al*. The association between hospital overcrowding and mortality among patients admitted via Western Australian emergency departments. *Med J Aust* 2006;184:208–12.
13 Stats Wales. Emergency department. March 2025 Available: https://statswales.gov.wales/Catalogue/Health-and-Social-Care/NHS-Hospital-Waiting-Times/emergency-department
14 Public Health Scotland. Accident and emergency: overview. August 2025 Available: https://publichealthscotland.scot/healthcare-system/urgent-and-unscheduled-care/accident-and-emergency/overview
15 NI Direct. Emergency Department Average Waiting Times. October 2025 Available: https://www.nidirect.gov.uk/articles/emergency-department-average-waiting-times
16 NHS England. A&E attendances and emergency admissions. Available: https://www.england.nhs.uk/statistics/statistical-work-areas/ae-waiting-times-and-activity/ [Accessed 6 Jun 2025].
17 Harris PA, Taylor R, Minor BL, *et al*. The REDCap consortium: Building an international community of software platform partners. *J Biomed Inform* 2019;95:103208.
18 NHS England. Hospital accident and emergency activity 2019-2020. 2020. Available: https://digital.nhs.uk/data-and-information/publications/statistical/hospital-accident--emergency-activity/2019-20/time-of-day [Accessed 6 Jun 2025].
19 Jun JH, Park CR, Park I, *et al*. Impact of emergency department overcrowding on the occurrence of in-hospital cardiac arrest. *PLoS One* 2025;20:e0317457.
20 Richards JR, Ozery G, Notash M, *et al*. Patients Prefer Boarding in Inpatient Hallways: Correlation with the National Emergency Department Overcrowding Score. *Emerg Med Int* 2011;2011:1–4.
21 Viccellio P, Zito JA, Sayage V, *et al*. Patients overwhelmingly prefer inpatient boarding to emergency department boarding. *J Emerg Med* 2013;45:942–6.
22 Craston AIP, Scott-Murfitt H, Omar MT, *et al*. Being a patient in a crowded emergency department: a qualitative service evaluation. *Emerg Med J* 2025;42:148–53.
23 NHS England. Urgent and emergency care plan 2025/26. 2025. Available: https://www.england.nhs.uk/long-read/urgent-and-emergency-care-plan-2025-26/ [Accessed 6 Jun 2025].
24 Coats T, Conroy S, de Groot B, *et al*. Prevalence of Frailty in European Emergency Departments (FEED): an international flash mob study. *Eur Geriatr Med* 2024;15:463–70.
25 Wretborn J, Henricson J, Ekelund U, *et al*. Prevalence of crowding, boarding and staffing levels in Swedish emergency departments - a National Cross Sectional Study. *BMC Emerg Med* 2020;20:50.
26 Schneider SM, Gallery ME, Schafermeyer R, *et al*. Emergency department crowding: a point in time. *Ann Emerg Med* 2003;42:167–72.