

controlled trials of smoking cessation interventions in the ED using e-cigarettes. This approach offers a valuable opportunity to reach unmotivated quitters and provide them an alternative to smoking tobacco.

The aim of this study is to definitively test real-world effectiveness of an ED based smoking cessation intervention in comparison to usual care.

**Method and Design** Two-group, multi-centre, pragmatic, individually randomised controlled trial (ClinicalTrials.gov: NCT04854616). We recruited adults who smoke tobacco and were attending one of six EDs across the UK. They were randomised to either control (in which case they were given written information about stop smoking services) or intervention (in which case they received a brief smoking cessation intervention, provision of an e-cigarette starter kit and referral to stop smoking services). Both groups were followed up 1, 3 and 6 months after randomisation. Smoking abstinence was biochemically verified at 6 months.

**Results and Conclusion** Of 2,888 screened, 1,327 were eligible and 972 were randomised (488 control and 484 intervention). The mean age was 40, 62% were male and 72% were White British. By the time of the conference we will be able to report biochemically verified quit rates between groups (primary outcome), self-reported point prevalence by group and changes to number of cigarettes per day between the groups. The results of the economic evaluation will also be presented in terms of cost per QALY and cost per quitter.

It is feasible to implement a smoking cessation intervention in EDs with dedicated staff time to deliver the intervention. Recruitment was above target indicating that EDs may represent an excellent opportunity to engage hard to reach smokers.

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#### THE IMPACT OF PATIENT-TO-STAFF INCIVILITY IN THE EMERGENCY DEPARTMENT: A QUALITATIVE STUDY

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10.1136/emj-2023-RCEM.26

**Aims and Objectives** This qualitative study aims to establish the existence and impact of patient-to-staff incivility on staff wellbeing and patient care in the Emergency Department (ED).

**Background** Research has indicated that incivility between staff in clinical environments negatively impacts their wellbeing, clinical performance and the care patients receive (Riskin et al., 2015). However, incivility can occur between any group of persons, including between staff and patients. There is currently no UK-based research investigating patient-to-staff incivility in EDs; thus investigating this literature gap is important as there may be negative implications similar to staff-to-staff incivility. This aligns with Royal College of Emergency Medicine Research Priority-10.

**Method and Design** Ethical approval was received prior to commencement of this study and 3 EDs were identified as recruiting centres. A purposive sampling strategy was employed, and participants recruited via mixed methods. Informed written consent was received by all participants.

Semi-Structured interviews were used to collect data as the study was exploratory in nature and required flexibility for the interviewer to explore arising themes. Interviews were

~30 minutes long and were recorded and transcribed. The-matic analysis was used to analyse the transcripts and identify themes from the data.

**Results and Conclusion** 15 participants were recruited. Four main themes emerged in analysis of transcripts: 'Training and Coping Strategies', 'Environmental Accentuation and the related Impact', 'Power Dynamics and Latent Factors', and 'Implications on Staff Resilience and Wellbeing'.

**Conclusions** This study confirms that patient-to-staff incivility exists in EDs and has negative implications on patient care and staff wellbeing. Findings included: Staff reduced the impact of patient-to-staff incivility on patient safety by relating incivil incidents to patients clinical conditions; Staff wellbeing can be better protected after incidents of incivility by providing peer-peer support as opposed to a traditional hierarchal structure; and that patient-to-staff incivility is a main cause of avoidance behaviours in ED staff.

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#### MULTIMORBIDITY AND ADVERSE OUTCOMES IN THE EMERGENCY DEPARTMENT: A COHORT STUDY

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10.1136/emj-2023-RCEM.27

**Aims and Objectives** The prevalence of multimorbidity, the presence of two or more long-term conditions (LTCs) is increasing, and it is associated with poor health outcomes. Multimorbidity is likely to impact on care delivery in emergency department(ED) settings due to time-critical decision-making in the context of patient complexity. This study describes the impact of multimorbidity in patients attending ED on 30-day mortality and other patient-centred outcomes in an ED setting.

**Method and Design** This was a cohort study of adults attending EDs in the NHS Lothian region of Scotland between 2012 and 2019, using linked records including ED attendance records, hospital discharge records, cancer registry and national death records. Multimorbidity was defined as two or more Elixhauser conditions. Multivariable logistic regression was used to assess the association of multimorbidity on 30-day mortality (primary outcome), time spent in ED (linear regression), hospital admission and 7-day ED reattendance (secondary outcomes). Primary analysis was stratified by age (<65 vs ≥65 years), and associations between individual LTCs and 30-day mortality were reported.

**Results and Conclusion** There were 1,273,937 attendances to EDs in the region during the study period, corresponding to 451,291 patients. The prevalence of multimorbidity was 9.6% (n=43504). After adjusting for confounding, multimorbidity was associated with higher 30-day mortality (8.2% vs 1.2%, OR 1.81 (1.72-1.91), p<0.001), longer time spent in department (mean difference 16 minutes (16-17 minutes), p<0.001), higher rate of hospital admission (60.1% vs 20.5%, OR 1.81 (1.76-1.86), p<0.001) and higher 7-day ED reattendance in those discharged from ED (7.8% vs 3.5%, OR 1.41 (1.32-1.50), p<0.001). Magnitude of associations between multimorbidity and all outcomes were more pronounced in patients <65 years old.

Almost one in ten patients presenting to ED were multimorbid. Multimorbidity was strongly associated with adverse outcomes and these associations were more pronounced in

younger patients. Patients with multimorbidity in ED settings may benefit from improved recognition and tailored care pathways.

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### MIXED METHODS STUDY EXPLORING FACTORS INFLUENCING AMBULANCE CLINICIAN DECISIONS TO PRE-ALERT EMERGENCY DEPARTMENTS (EDS) OF A PATIENT'S ARRIVAL

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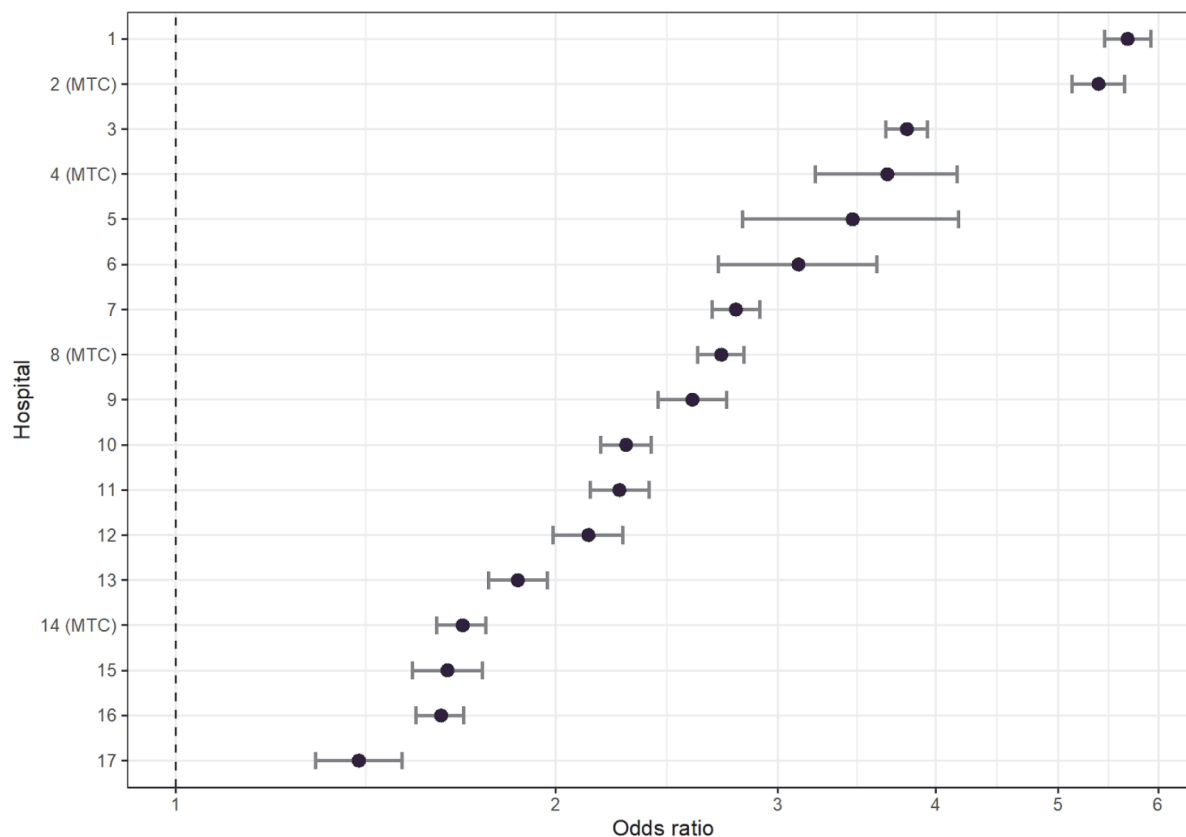
10.1136/emj-2023-RCEM.28

**Aims and Objectives** Ambulance pre-alert calls can lead to improved treatment of time-critical patients by enabling Emergency Departments (EDs) to prepare for their arrival but need to be used judiciously to optimise patient care. Despite their importance, there is a lack of research understanding how pre-alert decisions are made. We aimed to understand factors influencing ambulance clinician pre-alert decision-making.

**Method and Design** Using a convergent parallel mixed-methods design we integrated quantitative and qualitative data from three Ambulance Services and six Emergency Departments using: 1) linked routine dataset of 12 months' (2020/21)

electronic patient records (3 Ambulance Services), clinician information and routine hospital statistics 2) semi-structured interviews with 35 ambulance clinicians and 40 ED staff and 156 hours non-participation observation of pre-alerts across six EDs. Lasso regression to identify candidate variables for multivariate logistic regression was undertaken in R<sup>TM</sup> to explain variation in pre-alert rates in terms of patient (NEWS2 score, working diagnosis, age, sex), ambulance clinician (experience, role, sex, time to end of shift) and hospital factors (journey time, % ambulances waiting >30 mins). Qualitative data was analysed using thematic analysis in NVivo<sup>TM</sup>. Findings were integrated using a triangulation protocol.

**Results and Conclusion** Variation in pre-alert practice was not fully explained by casemix. Overall 142,795/1,363,274 conveyances were pre-alerted. Highest overall odds ratios (ORs) for pre-alert were associated with patient factors (working diagnosis OR:4.16, CI:4.05-4.26, NEWS2 OR:1.4, CI:1.39-1.4) but thresholds for pre-alerting varied between ambulance clinicians. Pre-alerts were more likely when there were longer turnaround times at EDs (OR:1.83, CI:1.69-1.98), potentially due to ambulance clinicians' concerns about their ability to effectively manage deteriorating patients where long handovers were anticipated. There was a significant difference in pre-alert rates between EDs (figure 1) that was not explained by type of hospital (e.g. Major Trauma Centres). Anticipated ED response to pre-alerts had a significant impact on pre-alert decisions due to variation in ED protocols and expectations.



Abstract 2245 Figure 1 Odds ratio of pre-alert being made stratified by receiving hospital