**Results and Conclusion** The review to date has identified 20 studies for inclusion. Data show emergency service use among migrants were comparable to non-migrants. Migrant emergency service attendees were less likely to be registered with a general practitioner than non-migrant patients, suggesting migrants may face additional barriers to accessing primary care services. Migrants were also more likely to report self-referral to emergency services rather than referral through primary care services.

These findings raise concerns about health inequities amongst migrant populations who self-refer to emergency care (bypassing preventative care and potentially at a late stage of illness) and the implications that use of emergency services for primary care needs may have for health systems. Considering increasingly restrictive health systems for migrants, the findings highlight that it is imperative to facilitate access to effective primary care for migrant populations, to reduce the risk of poorer and more costly health outcomes and the burden on emergency services.

## 2168 ARE ACUTE CARE CLINICIANS DELIVERING OPTIMAL END OF LIFE CARE AND RECOGNISING THE DYING PATIENT?

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10.1136/emj-2023-RCEM.3

**Aims and Objectives** Suboptimal end of life care is being increasingly recognised in hospital and a change in attitude or education may provide a significant improvement. The purpose of this study was to outline if there was a discrepancy in patient care in in the acute medical unit and discuss the need for improvement. All clinicians should be able to "identify adults approaching the end of life" and "should have skills to provide care for adults approaching the end of their life" as per NICE guidelines. This study focused on the delivery of EoL care in the emergency and acute medical services and assessed whether this met NICE standards.

**Method and Design** Data collected over a 1-month period of patients who died less than 24 hours of admission in A&E or AMU at Royal Blackburn Hospital. We reviewed documentation and decided whether recognition of dying was made during doctors' assessments, when the dying process was recognised, whether symptom-focused management medications were prescribed and recorded if referral to palliative care was considered.

**Results and Conclusion** 44 patients met selection criteria. 10/44 patients had recognition of possible active dying on admission. 32/44 had anticipatory medications prescribed. 6/44 were considered for referral to palliative care. 36/44 remained on active treatment prior to death.

This study suggests that there is a slowness in the recognition of the dying patient and prioritising patient-focused symptom management. Recognition of dying is an essential first step in improving care for dying patients, perhaps a criterion score would be helpful in practice such as the "traffic lights" model or the "palliative performance score." Education with the palliative care specialists would likely benefit departments. There was a predominant theme of patients being actively managed up until the point of dying, is there a cultural reasoning behind acute physicians leaning towards active treatment and not accepting dying as an outcome?

## 2296 PREDICTING RECOVERY IN PATIENTS WITH MILD TRAUMATIC BRAIN INJURY AND A NORMAL CT USING DIFFUSION TENSOR IMAGING

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10.1136/emj-2023-RCEM.4

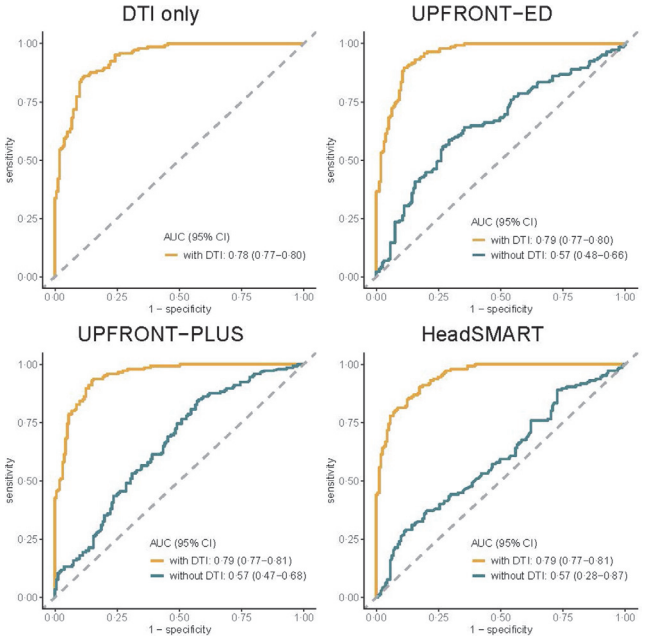
**Aims and Objectives** UK emergency departments conduct 200,000 CTs for mild traumatic brain injury (TBI) annually.

Whilst >90% of CTs are normal, 30-50% of patients report long-term functional deficits. This study aims to assess if advanced MRI (diffusion tensor imaging, DTI) improves existing models for the prediction of 3-month functional recovery in patients with mild TBI and a normal CT.

**Method and Design** This formal prognostic study followed the TRIPOD statement and used data from the prospective multicenter CENTER-TBI study. Patients aged ≥16 years were included if they had a Glasgow Coma Scale score >12, a normal CT, and DTI within 31 days of injury. Complete recovery at 3 months was defined as an extended Glasgow Outcome Scale score of 8.

DTI data was harmonized and age-corrected using matched healthy controls (n = 157). The current best prognostic models for an incomplete recovery (UPFRONT-PLUS, UPFRONT-ED and HeadSMART) were fitted with and without DTI information and internally validated using bootstrapping.

Where available (n = 107), we assessed if serum neurofilament light (NFL) can select patients for DTI.




**Abstract 2296 Figure 1**

**Results and Conclusion** The study included 153 patients, aged 20-70 (mean 44) years, 108 (71%) male, 70 (46%) with an incomplete recovery. The best model without DTI (UPFRONT-PLUS) explained 10% (-6-26) of the variation in outcome (ViO) with an area under the curve (AUC) of 0.57 (0.47-0.68). Adding DTI raised the ViO to 74% (66-82) and the AUC to 0.79 (0.77-0.81), p <0.001.

NFL could have avoided 36% of DTI with a sensitivity of 0.81 (0.67-0.89) if sampled at initial presentation, or 24% with a sensitivity of 0.95 (0.81-0.98) if sampled at the time of DTI.

This suggests that NFL and DTI could help select mild TBI patients at risk of incomplete recovery for interventional trials and clinical follow up, pending external validation and a health economics assessment.

## 2178 RELATIVE HYPOTENSION: THE MORTALITY EFFECT OF BELOW-BASELINE SYSTOLIC PRESSURE IN OLDER PEOPLE RECEIVING EMERGENCY CARE

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10.1136/emj-2023-RCEM.5

**Aims and Objectives** Increased mortality has been observed among older people whose systolic pressure was at least 7mmHg below their baseline primary care value when they attended the emergency department (ED). This study aimed to (1) assess feasibility of identifying this 'relative hypotension' using readily available ED data, (2) externally validate the 7mmHg threshold, and (3) refine a threshold for clinically important relative hypotension.

**Method and Design** This single-centre retrospective cohort study of people aged over 64 linked year 2019 ED attendance data to vital signs at hospital discharges within the previous eighteen months. Hospital frailty risk (HFRS) and Charlson comorbidity scores were calculated. Previous discharge ('baseline') vital signs were subtracted from initial ED values to give individuals' relative change. Cox regression analysis compared relative hypotension exceeding 7mmHg with mean time to mortality censored at 30 days. The relative hypotension threshold was refined using a fully adjusted risk tool formed of logistic regression models. Receiver operating characteristics were compared to NEWS2 models with and without incorporation of relative systolic pressure.

**Results and Conclusion** 5136 (16%) of 32548 ED attendances were linkable with recent discharge vital signs. Relative hypotension exceeding 7mmHg was associated with increased 30-day mortality (HR: 1.98; 95%CI: 1.66-2.35). The adjusted risk tool (AUC: 0.69; sensitivity: 0.61; specificity: 0.68) estimated each 1mmHg relative hypotension to increase 30-day mortality by 2% (OR: 1.02; 95%CI: 1.02-1.02). 30-day mortality prediction was marginally better with NEWS2 alone (AUC: 0.73; sensitivity: 0.59; specificity: 0.78) and NEWS2 + relative systolic (AUC: 0.74; sensitivity: 0.62; specificity: 0.75).

Comparing ED vital signs with recent discharge observations was feasible for 16% individuals. The association of relative hypotension exceeding 7mmHg with 30-day mortality was externally validated. Indeed, any relative hypotension appeared to increase risk, but model characteristics were poor. These findings are limited to the context of older people with recent hospital admissions.

## 2176 MEASURING WHAT MATTERS: VALIDATION OF THE PATIENT-REPORTED OUTCOME MEASURE FOR OLDER PEOPLE LIVING WITH FRAILTY RECEIVING ACUTE CARE (PROM-OPAC)

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10.1136/emj-2023-RCEM.6

**Aims and Objectives** Measurement of acute care quality and effectiveness is usually constrained to service metrics such as mortality and waiting times. Meaningful measurement for older people living with frailty would include additional person-centred outcomes of healthcare knowledge, shared decision-making, and situational security. Consideration of these requires patient-reported outcome measures (PROMs), which are useful at the system level (commissioning), service level (quality improvement), and patient level (goal elicitation). We have previously reported the development and field-testing of a PROM for older people living with frailty receiving acute care – the PROM-OPAC. This study examined PROM-OPAC for feasibility, reliability, and validity.

**Method and Design** Older people living with frailty and receiving acute healthcare were recruited at three UK hospitals. They completed the PROM-OPAC and concurrent measures totalling 16 items. Data were analysed for feasibility (completeness, completion time), reliability (response distribution, internal consistency), and validity (confirmatory factor analysis, hypothesis testing).

**Results and Conclusion** 66 participants completed the final draft PROM-OPAC. 98% responses were complete and median completion time was 11 (IQR: 12) minutes. Responses were adequately distributed without end-effects and internal consistency was acceptable (Cronbach's alpha: 0.71). Eight items had acceptable fit on two factors for self-determination and security (RMSEA: 0.065; TLI: 0.917; CFI: 0.944) and as hypothesised these responses were lower when respondents had longer waiting times or required hospital admission.

Administration of PROMs for research in emergency care settings was feasible with older people living with frailty; implementation for clinical applications requires further evaluation. The eight-item PROM-OPAC considers outcome goals specific to this population and was observed here to have metric reliability and validity.

# APEM Elizabeth Molyneux Prize Papers

## 2135 COOKING ON GAS: IMPLEMENTING GUIDELINES FOR SUSPECTED GROUP A STREPTOCOCCUS IN THE EMERGENCY DEPARTMENT AT ROYAL ABERDEEN CHILDREN'S HOSPITAL

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10.1136/emj-2023-RCEM.7

**Aims and Objectives** Paediatric GAS pharyngitis is common[1] and associated with chronic health complications. Antibiotic treatment decreases risk of complications.[2] Many cases of pharyngitis are viral, and most milder GAS cases self-resolve without complication; injudicious antibiotic use is associated with bacterial resistance.[3] [4] A spike in GAS infections in Winter 2022 increased investigation and antibiotic prescribing.[5]