

In an ICOM setting, we demonstrated 100% intubation success in adult trauma patients undergoing PHEA. There was no significant difference in first-pass intubation success between physicians and CCPs.

1692

A MULTI-CENTRE PROSPECTIVE OBSERVATIONAL STUDY TO EVALUATE HEALTHCARE IMPACTS OF E-SCOOTERS ON EMERGENCY DEPARTMENTS

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10.1136/emered-2022-RCEM2.5

Aims, Objectives and Background This study aims to report the prevalence of E-scooter related injuries, delineate the impact of rental schemes on Emergency Departments (ED) and report associated ED resource use and cost.

E-scooters have risen in popularity since the expansion of rental schemes and there is rising concern over the healthcare impact of faster illegal private E-scooters. Current literature is limited on the healthcare related impact of E-scooters by retrospective design and focus on specific injury patterns (e.g. orthopaedic or maxillofacial).

This study presents prospective data on E-scooter related injury presenting to the ED, comparing sites with and without rental schemes.

Method and Design A prospective observational study for four weeks of recruitment across twenty EDs across the United Kingdom (12 with rental schemes and 8 without). All patients presenting to ED with an E-scooter associated injury were identified.

A prospective observational design was chosen to more accurately collect data on E-scooter injury patterns and behaviours. Sites with and without rental schemes were chosen to compare the impact of rental schemes.

Results and Conclusion E-scooter related injury was found in 250 ED patients. Fractures were diagnosed in 30.4% of patients and 19.4% sustained a head injury (4.2% classified as severe traumatic brain injury). Only 6.4% of

riders were helmeted and 19.8% were intoxicated with alcohol. Mean unadjusted ED costs per patient were £297.31. The mean Injury Severity Score (ISS) was 2.8 in rental E-scooter incidents and 3.0 in private E-scooter incidents. From multiple linear regression modelling, helmet use, alcohol use and private or rental E-scooters were not predictive of ISS.

In conclusion, E-scooter riders are vulnerable to injuries of varying severity. Low rates of helmet use and high prevalence of alcohol intoxication suggest a need for targeted public health interventions, but improved data collection is required. Health service costs should be considered when reviewing the suitability of rental schemes.

1502

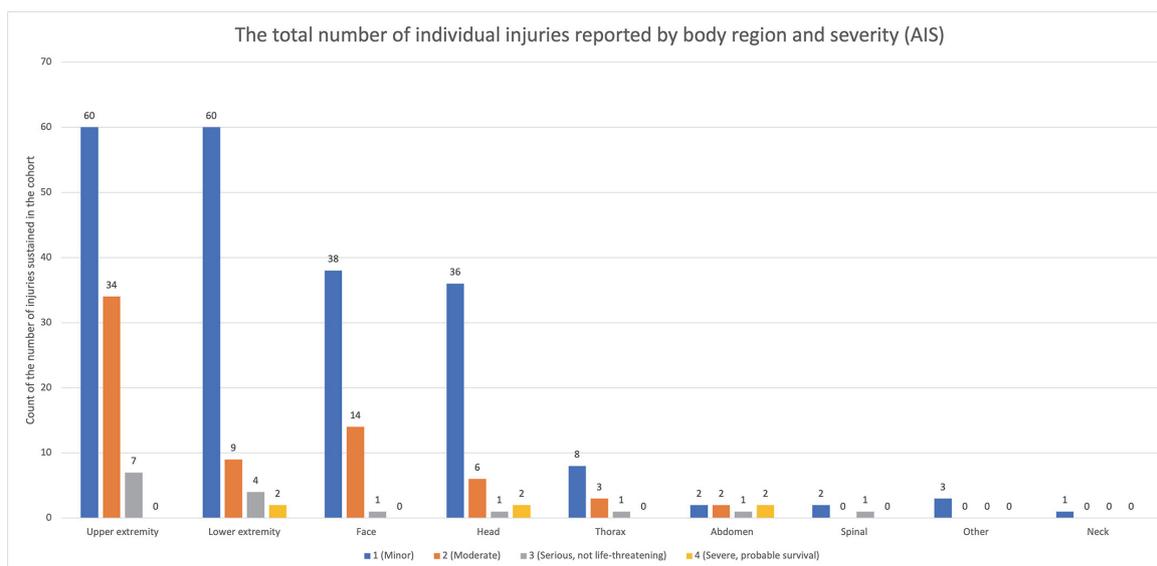
GEOSPATIAL VISUALISATION OF EMERGENCY DEPARTMENT ATTENDANCE RATES AND THEIR ASSOCIATIONS WITH DEPRIVATION AND NON-URGENT ATTENDANCES

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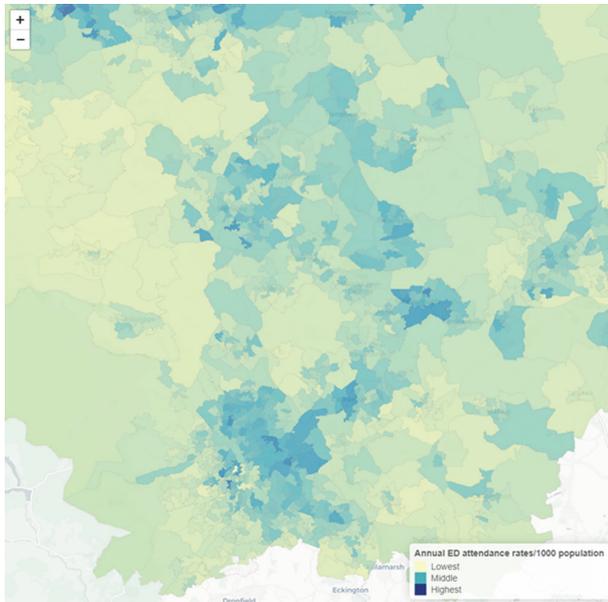
10.1136/emered-2022-RCEM2.6

Aims, Objectives and Background Attendances at emergency departments in England continue to increase above the capacity of the urgent and emergency care system. There is significant variability in the rates of attendance at emergency departments across different localities. The aim of this study is to model the association of deprivation and non-urgent attendances with locality-based emergency department attendance rates. The secondary aim is to create an interactive data visualisation tool to engage stakeholders, clinicians, and the public with the research.

Method and Design We undertook a retrospective, observational study using routinely collected emergency department attendance data from Yorkshire and the Humber (population 5.4 million) between January 2013 and March 2017. We calculated average annual age and sex standardised attendance



Abstract 1692 Figure 1



Abstract 1502 Figure 1 Screenshot of interactive data visualisation tool showing age and sex standardised annual emergency department attendance rates in Yorkshire and the Humber

rates at emergency departments for small localities known as lower layer super output areas.

The association between emergency department attendance rates, deprivation and non-urgent attendances was examined using multivariable linear and logistic regression models, which were adjusted for travel time to the nearest emergency department.

The data was visualised to create an interactive choropleth map using R.

Results and Conclusion The analytical sample included 6,389,383 attendances across 2,880 localities, with a median age and sex standardised annual emergency department attendance rate of 308 per 1000 population (interquartile range 130).

The fully adjusted linear regression model was significant (Adjusted R² = 0.648, F (7, 2872)=757, p<0.001). Higher locality-based emergency department attendance rates were significantly predicted by each increasing decile of deprivation (β = 14.8, p=0.002), each minute less of travel time to the emergency department (β = 7.86, p<0.001) and each percent greater proportion of low acuity attendances (β = 8.61, p<0.001).

A large proportion of the variability in emergency department attendance rates in different geographical areas can be explained by deprivation levels and proportion of non-urgent attendances. This provides an opportunity for targeted interventions to reduce emergency department attendances.

1358

THE ASSOCIATION BETWEEN MAJOR TRAUMA CENTRE CARE AND OUTCOMES OF ADULT PATIENTS INJURED BY LOW FALLS IN ENGLAND AND WALES

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10.1136/emered-2022-RCEM2.7

Aims, Objectives and Background Disability and death due to low falls is increasing worldwide and disproportionately affects older adults. Current trauma systems were not designed to suit the needs of these patients. This study assessed the effectiveness of major trauma centre care in adult patients injured by low falls.

Method and Design Data were obtained from the Trauma Audit and Research Network on adult (age >16 years) patients injured by falls from <2 metres between 2017–2019 in England and Wales. Binary logistic regression and Cox Regression were used to control for casemix. 30-day survival, length of hospital stay and discharge destination were compared between major trauma centres (MTCs) and trauma units or local emergency hospitals (TU/LEHs).

Results and Conclusion 127,334 patients were included of whom 27.6% attended an MTC. The median age was 79.4 years (IQR 64.5–87.2 years), and 74.2% of patients were aged >65 years. MTC care was not associated with improved 30-day survival (adjusted odds ratio [AOR] 0.91, 95% CI 0.87–0.96). Transferred patients had a significant impact upon the results. After excluding transferred patients, the AOR for survival in MTCs was 1.056 (95% CI 1.001–1.113). The association between improved survival and MTC care was greatest in patients who suffered major trauma (AOR 1.126, 95% CI 1.044–1.215) and was absent in patients aged >65 (AOR 1.038, 95% CI 0.982–1.097).

TU/LEH care is at least as effective as MTC care due to the facility for secondary transfer from TU/LEHs to MTCs. In patients who are not transferred, MTCs are associated with greater odds of 30-day survival in the whole cohort and in the most severely injured patients. Future research must determine the optimum means of identifying patients in need of higher-level care, the components of care which improve patient outcomes, and develop patient-focused outcomes which reflect the characteristics and priorities of contemporary trauma patients.

Elizabeth Molyneux Prize Papers (APEM)

1338

THE BABIES KEPT COMING AND COMING – EMERGENCY DEPARTMENT INFANT ATTENDANCES FROM 2019–2021. A NATION-WIDE ELECTRONIC HEALTH RECORDS STUDY

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10.1136/emered-2022-RCEM2.8

Aims, Objectives and Background In 2020 limited evidence suggested increased emergency department (ED) attendances for infants in England, associated with feeding problems. We examined the frequency and distribution of infant feeding-related attendances (IFA) at EDs before and during the SARS-CoV2 pandemic.

Method and Design All attendances at 48 major EDs (England) in two 50-week periods before and during the COVID-19 pandemic: period 1, 2 April 2019 to 10 March 2020 and period 2, 1 April 2020 to 10 March 2021. Anonymised datasets were obtained from the National Commissioning Data