

**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 R<sup>2</sup> = 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 ( $\beta$  = 14.8, p=0.002), each minute less of travel time to the emergency department ( $\beta$  = 7.86, p<0.001) and each percent greater proportion of low acuity attendances ( $\beta$  = 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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**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

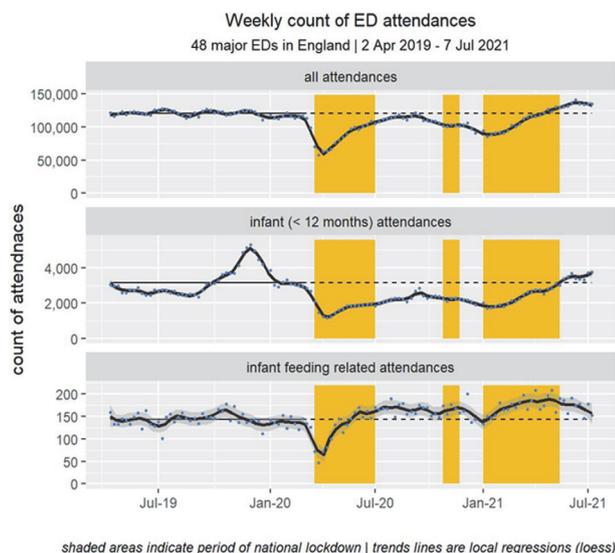
#### THE BABIES KEPT COMING AND COMING – EMERGENCY DEPARTMENT INFANT ATTENDANCES FROM 2019–2021. A NATION-WIDE ELECTRONIC HEALTH RECORDS STUDY

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**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



Abstract 1338 Figure 1

Repository across all age groups, with an infant defined as <1year.

We estimated the change in frequency of ED presentations by age group and diagnosis before and after the SARS-CoV2 pandemic began in England. We compared changes in the frequency of attendances of IFP by infant age, sex, ethnicity, deprivation, rurality, arrival mode, arrival time, acuity, mother's age, gravidity and mental health, birth length of stay, attendance duration and disposal (admission or discharge). IFA was classified as feeding problems, neonatal jaundice and gastro-oesophageal reflux.

**Results and Conclusion** Whilst total ED attendances fell by 16.7% (95% CI -16.8% to -16.6%), infant attendances increased for feeding problems (+7.5% 95% CI 2.3% to 13.0%), neonatal jaundice (+12.8%, 95% CI 3.3% to 23.3%) and gastro-oesophageal reflux (+9.7%, 95% CI 4.4% to 15.2%). These increases were more pronounced amongst first babies (+22.4%, 95% CI 13.1% to 32.5%) and brief hospital stay after birth (0–1 days, +20.1%, 95% CI 14.8% to 25.7%). Our analysis suggests many of these attendances were low acuity. Taken together, IFA presentations (figure 1) increased by 8.9% (95% CI 5.4% to 12.5%) in 2020–21.

ED attendances reduced dramatically and systematically with the COVID-19 pandemic, but infant feeding-related attendances increased. This implies growth in the unmet needs of infants and identifies future target groups for health policy.

1396

### PREDNISOLONE FOR BELL'S PALSIA IN CHILDREN: A RANDOMISED, DOUBLE-BLIND, PLACEBO-CONTROLLED, MULTICENTRE TRIAL

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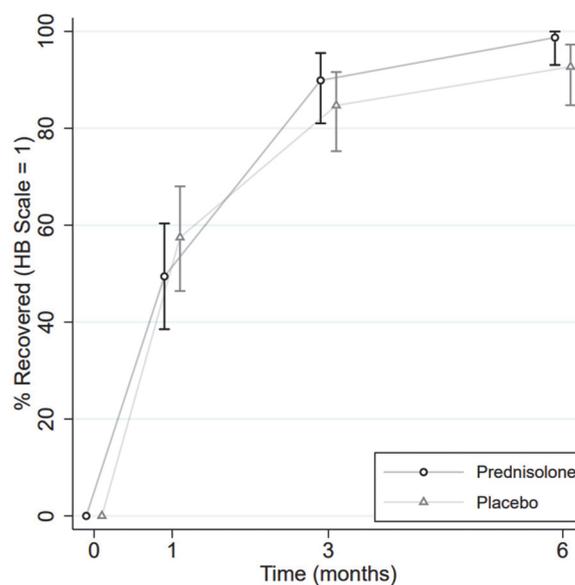
10.1136/emered-2022-RCEM2.9

**Aims, Objectives and Background** Corticosteroids can be used to treat idiopathic facial paralysis (Bell's palsy) in children, but their effectiveness is uncertain.

**Aims** To determine if prednisolone improves recovery of children with Bell's palsy at one month.

**Method and Design** Double-blind, placebo-controlled, randomised, trial of prednisolone in children presenting to ED with Bell's palsy.<sup>1</sup>Patients 6 months to <18 years, recruited <72 hours after symptom onset, were randomly assigned to receive 10 days of treatment with oral prednisolone (1 mg/kg) or placebo. The primary outcome: complete recovery of facial function at 1 month on the House-Brackmann scale.<sup>2</sup> Secondary outcomes: facial function, adverse events and pain to 6 months.

**Results and Conclusion** Between October 2015 to August 2020, 187 children were randomised (94 to prednisolone and 93 to placebo) and included in the intention-to-treat analysis. At 1 month, the proportions of patients who had recovered facial function were 49% (n=43/87) in the prednisolone group compared with 57% (n=50/87) in the placebo group (risk difference -8.1%, 95% CI -22.8 to 6.7; adjusted odds ratio [aOR] 0.7, 95% CI 0.4 to 1.3). At 6 months these proportion were 99% (n=77/78) for prednisolone and 93% (n=76/82) for placebo respectively (risk difference 6.0%, 95% CI -0.1 to 12.2; aOR 3.0 95% CI 0.5 to 17.7) (figure 1). There were no serious adverse events and little evidence for group differences in secondary outcomes.



Abstract 1396 Figure 1

In children with Bell's palsy the vast majority recover without treatment. The study does not provide evidence that early treatment with prednisolone improves complete recovery.

### REFERENCES

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- House JW, Brackmann DE. Facial nerve grading system. *Otolaryngol Head Neck Surg*. 1985;**93**(2):146–7.