

signposted to attend the relevant Emergency Department (ED), and none to SDEC. Since the new pathway, 1st June 2022-31st January 2023, 171 were signposted to ED, and 116 to SDEC. Of the latter, 9/116 (8%) involved a clinician discussion.

For the period where SDEC attendance and outcome data were available, 11/33 (33%) of patients did not attend, 5 (15%) did not wait, 5 (15%) had a respiratory infection, 5 (15%) a musculoskeletal condition, 3 (9%) exacerbation of long-term illness, 2 (6%) other conditions, and 2 (6%) were unknown. One of the 33 was admitted. None had pulmonary embolism.

Conclusion Call assessors using a pathway for suspected pulmonary embolism may benefit providers and patients. Most patients signposted on this pathway were treated under same-day care. Further study could investigate those patients who did not attend or wait for assessment.

PP43

INVESTIGATING FACTORS THAT AFFECT MORTALITY IN PATIENTS PRESENTING WITH HEAD INJURIES TO HELICOPTER EMERGENCY MEDICAL SERVICES (HEMS): CROSS SECTIONAL STUDY

¹Jade Livingstone, ²Jasmine Kirk, ³Niro Siriwardena, ⁴Graham Law, ⁵Mehrshad Parvin Hosseini, ⁶Shayda Karimi, ⁷Anil Hormis. ¹Community and Health Research Unit (CaHRU), UK; ²Lincoln Nottinghamshire Air Ambulance (LNAA), UK; ³University of Lincoln, UK; ⁴University of Nottingham, UK

10.1136/emered-2023-999.42

Background Head trauma is a common cause of death for people aged up to 40 years old in the United Kingdom (UK). The effect of Helicopter Emergency Medical Services (HEMS) on outcomes from severe head injury have been inconclusive hence, further analysis of the effect of HEMS interventions is required to understand the relationship with mortality, while accounting for patient demographics, comorbidities, and timing of treatment. We aimed to investigate the outcomes of the HEMS response to head injuries in one region of the UK.

Method We used a cross sectional design using routine data from Lincolnshire Nottinghamshire Air Ambulance (LNAA) which operates in the East Midlands region of the UK. Forty-five patients, who met the inclusion criteria, presented to LNAA with head injuries between July 2019 and November 2022 before being transported to Queens Medical Centre. Data including patient demographics, mechanism of injury, associated diagnoses, timings, physiological measurements, and interventions delivered by air ambulance staff were collected from LNAA and Nottingham University Hospitals NHS Trust and linked. Data were analysed using descriptive statistics and multivariable models to quantify their association with mortality within 30 days of the incident using STATA version 17.

Results Increasing age was significantly associated with mortality ($p = 0.01$), as were oxygen saturation at first observation ($p = 0.02$) and handover ($p = 0.04$). Other patient characteristics (sex, weight), injury mechanism, comorbidities, physiological variables, or interventions were not associated with an improved or worse patient outcome.

Conclusion Older age was associated with mortality in patients with head injuries presenting to HEMS. Higher oxygen saturation levels were associated with a decrease in mortality. The

small sample size may have led to a type II error which emphasises the need for future research using larger samples to investigate predictors of mortality in an air ambulance setting.

PP44

CONSENSUS ON INNOVATIONS AND FUTURE CHANGE AGENDA IN COMMUNITY FIRST RESPONDER SCHEMES IN ENGLAND: A NATIONAL NOMINAL GROUP TECHNIQUE STUDY

¹Gupteswar Patel, ¹Vanessa Botan, ¹Viet-Hai Phung, ¹Ian Trueman, ¹Julie Pattinson, ¹Sayed Mehrshad Parvin Hosseini, ¹Roderick Ørner, ¹Zahid Asghar, ²Murray D Smith, ¹Elise Rowan, ³Robert Spaight, ⁴Jason Evans, ¹Amanda Brewster, ¹Pauline Mountain, ⁵Craig Mortimer, ⁶Joshua Miller, ⁷Martina Brown, ¹Aloysius Niroshan Siriwardena. ¹Community and Health Research Unit, School of Health and Social Care, University of Lincoln, UK; ²University of Aberystwyth, UK; ³East Midlands Ambulance Service NHS Trust, Nottingham, UK; ⁴National Ambulance Commissioners Network, UK; ⁵South East Coast Ambulance Service NHS Foundation Trust; ⁶The West Midlands Ambulance Service University NHS Foundation Trust; ⁷South Central Ambulance Service NHS Foundation Trust

10.1136/emered-2023-999.43

Background Community First Responder (CFR) schemes provide important and growing contributions to the Emergency Medical Services response, particularly in rural areas. Ambulance services have sought to improve the function of CFRs through various innovations, but these remain under-studied. This consensus study aimed to identify and prioritise innovations in CFR schemes.

Methods A modified-nominal group technique was adopted recruiting participants from regional and national stakeholders and a patient and public involvement panel. The consensus workshop consisted of four hybrid (face-to-face and online) sessions on one day: introduction and research findings; round-robin introduction of additional innovations; discussion and ranking; and concluding statement. Participants identified innovations and scored them on a 5-point Likert scale. Discussions were recorded, transcribed, and thematically analysed. The findings of the survey were analysed using descriptive statistics.

Results The meeting included 17 participants from across England including patient contributors, ambulance leads, commissioners and research staff. Innovations were classified into two broad categories: process innovations and technological innovations. Process innovations included six categories: roles, governance, training, policies and protocols, recruitment, and awareness. There were three categories of technological innovations: information and communication technology, transport technology, and health technology. Ranking of innovations was done independently with an online survey using a 1-5 scale showed that counselling and support for CFRs (median: 5 [IQR: 5,5]), peer support [5 (4,5)], and enhanced communication with the control room [5 (4,5)] were essential priorities. In contrast, innovations such as the provision of dual CFR crew [1.5 (1,3)], CFR responsibilities in patient transport to hospital [1 (1,2)], and CFR access to emergency blue light [1 (1,1.5)] were not deemed priorities.

Conclusions This study established consensus on innovations in the CFR schemes and their ranking for improving the functions of CFR schemes. The consensus exercise also informed policy- and decision- makers on the potential future change agenda.