management strategies, managing complexity and ambiguity, inter-professional relationships and fear of professional consequences. These candidate themes will continue to be developed and refined during the remaining analysis.

**Conclusion** Restraint decisions take place in the context of high levels of complexity and ambiguity, limited clinical management options and rely on effective communication and collaboration with partner agencies, such as the police. Paramedics are motivated by patient-centred issues including advocacy and improving outcomes, and at times experience tensions with practitioner-centric issues such as fear of adverse professional consequences.

**REFERENCE**


**Conflict of interest** None to declare.

**Funding** None.

### Pain and trauma

#### USING REAL-WORLD DATA TO PREDICT PAIN RECORDING AND PAIN SEVERITY IN THE PRE-HOSPITAL EMERGENCY SETTING – AN OBSERVATIONAL ANALYSIS OF 212,401 EPISODES OF CARE


10.1136/bmjopen-2022-EMS.8

**Background** Previous studies in the prehospital setting have reported wide variation in the incidence and severity of pain, and that documentation of pain scores is poor. The aim of our study was to investigate and describe the incidence and severity of patient-reported pain that is recorded by pre-hospital emergency care patients in Ireland.

**Method** We used data from our electronic patient care record (ePCR) repository to perform this retrospective cohort study of all emergency care episodes recorded by National Ambulance Service practitioners during 2020. Descriptive analysis of patient and care characteristics and regression analyses for the outcomes pain recorded and severity of pain were performed.

**Results** Out of the 212,401 patient care episodes included, 138,195 (65%) included a pain score (75,445 = no pain; 18,378 = mild pain; 21,451 = moderate pain; 22,921 = severe pain). The likelihood of pain being recorded was most strongly associated with the Glasgow Coma Score, working diagnosis, call location, and patient age. The variables showing strongest association with pain severity were transport outcome, working diagnosis, and patient age. Sensitivity analysis confirmed that all regression models performed better than chance, but that all models were relatively weak at predicting the outcomes.

**Conclusion** Using a large real-world dataset, we have demonstrated patient and care episode characteristics that are associated with recording and severity of self-reported pain. We have identified actionable improvements that will strengthen the prediction accuracy of routinely collected data and ultimately improve pain management for our patients.

**Conflict of interest** None to declare.

**Funding** No specific funding received or sought for this study.

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### Dispatch and triage

#### LARGE VESSEL OCCLUSION STROKE IN AN EMERGENCY CALL: A DESCRIPTIVE ANALYSIS OF EMERGENCY CALLS FOR THROMBECTOMY CANDIDATES

**Background** Large vessel occlusion strokes cause most of the post-stroke disability and mortality. In this study, we aim to find out common words and phrases used in the emergency calls for paramedic-suspected thrombectomy candidates. Also, we wanted to find out how a question about conjugate eye deviation, an indicator of vast cortical ischemia, arises in the Finnish stroke dispatch protocol.

**Method** This was a retrospective study with descriptive analysis of emergency calls for patients with paramedic-suspected large vessel occlusion stroke. We listened to the emergency calls for 157 patients transported to a Finnish comprehensive stroke centre.

**Results** Speech disturbance was the most common symptom brought up in 125 (80%) calls, followed by tripping (n = 63, 40%) and facial asymmetry (n = 41, 26%). Suspicion of stroke was mentioned by 44 (28%) callers. Inability to speak any words was mentioned in 63 calls (52% of calls with speech disturbance). Otherwise, difficulty to speak was described, for example, as a lisp, mumble or slurred speech. Conjugate eye deviation was definitively heard in 12 emergency calls. Ten of these patients were diagnosed with large vessel occlusion.

**Conclusion** In the emergency calls for patients with paramedic-suspected large vessel occlusion, typical stroke symptoms were described. The severity of the stroke stood out by the patients’ inability to speak any words or remain standing. It is possible to further develop stroke dispatch protocols to recognise thrombectomy candidates already during an emergency call.

**Conflict of interest** None.

**Funding** None.

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### Cardiac arrest

#### ABSTRACT WITHDRAWN

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### Miscellaneous

#### SITUATIONAL AWARENESS AMONG PREHOSPITAL PROVIDERS DURING AN ONLINE HIGH-FIDELITY SIMULATION – A NOVEL STUDY

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**Background** Prehospital providers must rapidly respond to high-acuity medical situations. It may be challenging for prehospital providers to perform their duties in a stressful environment. Several studies have highlighted the importance of situational awareness (SA) in prehospital care. The aim of this study was to assess the SA of prehospital providers during an online high-fidelity simulation.

**Method** This was a prospective study with the recruitment of 20 prehospital providers. Two emulators were used to simulate a simulated medical scenario. Prehospital providers were asked to answer situational awareness questions using a survey based on the 5A framework (awareness, anticipation, assessment, action, and after-action review).

**Results** The prehospital providers’ situational awareness was measured using the 5A framework. The results showed that prehospital providers had a good awareness of the situation, but they lacked the ability to anticipate potential outcomes and assess the situation accurately. They also had difficulty taking appropriate actions and reviewing the after-action.

**Conclusion** Situational awareness is a critical component of prehospital care. Prehospital providers must be trained to enhance their situational awareness to improve patient outcomes. Further research is needed to improve situational awareness in prehospital care.