

Results For AMI identification the sensitivity was 99.4 (CI 95% 96.8-100.0), specificity 18.0 (CI 95% 19.9-20.1), PPV 13.4 (CI 95% 11.6-15.4) and NPV 99.6 (CI 95% 97.7-). Giving a rule-out rate of 16%, with <0.1% patients with AMI wrongly ruled-out.

For high-risk conditions (AMI, pulmonary embolism, aortic dissection etc.) identification the sensitivity was 98.4 (CI 95% 96.1-99.6), specificity 19.0 (CI 95% 16.1-19.1), PPV 20.0 (CI 95% 19.5-20.5) and NPV 98.3 (CI 95% 95.7-99.4), with four false negatives. Giving a rule-out rate of 16%, with <0.2% patients with high-risk conditions wrongly ruled out.

Conclusion By introducing high-sensitivity Troponins and applying the ESC 0/1 algorithm the EMS setting, high-risk conditions and especially AMI can be ruled out with high accuracy.

PP18 THE ROLE OF THE ROTATIONAL PARAMEDIC IN PRIMARY CARE

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Background Over the last decade, paramedics in the United Kingdom (UK) have increasingly taken up clinical employment away from ambulance services, with many moving into primary care settings. Reasons for this move are multifactorial and interwoven. However, in an effort to retain the paramedic workforce, rotational roles between ambulance services and primary care providers have been initiated.

Methods An online survey was distributed via the College of Paramedics to paramedics in primary care in England, Northern Ireland, Scotland, and Wales. The survey utilised both qualitative and quantitative items to better understand the scope of role undertaken by paramedics in NHS primary care and explore the perceptions paramedics in primary care have on their contribution to primary care teams. This presentation will focus on the results relevant to paramedics who rotate between ambulance services and primary care settings only.

Results The survey was completed by 341 paramedics. Of these, 10% worked one day a week in a rotational role. The most common job title was Advanced Paramedic Practitioner (44%) or First Contact Practitioner (25%), though other job titles were also reported. Of particular note is the correlation between hours worked and attending presentations such as catastrophic haemorrhage ($rs=.109$, $p=.044$), anaphylaxis ($rs=.127$, $p=.019$), angioedema ($rs=.140$, $p=.009$), seizures ($rs=.147$, $p=.007$), and overdose/poisoning ($rs=.200$, $p<.001$), where respondents who worked in a rotational role attended these presentations to a greater extent.

Conclusion The survey highlighted the variety of work that paramedics in rotational roles undertook in primary care, however paramedics in these roles attended emergency presentations in primary care to a greater extent when compared to their full-time counterparts. Whilst the ability for paramedics to attend emergency presentations in primary care may be a benefit for primary care providers, this does little to develop their primary care clinical acumen.

PP19 A QUALITATIVE STUDY TO EXPLORE CURRENT CHALLENGES AND FUTURE OPPORTUNITIES RELATING TO THE PREHOSPITAL TRIAGE OF PATIENTS WITH TRAUMATIC BRAIN INJURY

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Background Evidence suggests that patients with traumatic brain injury (TBI) benefit from treatment at specialised neuro-trauma centres, emphasising the importance of accurate identification in prehospital care. A practical need exists to evaluate prehospital providers' perspectives in order to introduce new measures to enhance triage decisions, such as brain biomarkers, near-infrared spectroscopy and decision aids. This study explored the current challenges ambulance personnel face when triaging patients with suspected TBI and their perceptions of the facilitators and barriers to adopting new decision aids to enhance TBI diagnosis in the prehospital environment.

Methods Twenty semi-structured interviews were conducted remotely between June 2022 and December 2022 with prehospital clinicians of varying levels of experience across the UK. Participants were recruited in collaboration with the research lead of each UK NHS ambulance trust. The interview topic guide was developed a priori and piloted. Interviews were audio recorded, transcribed verbatim, and analysed using a hybrid process of deductive and inductive thematic analysis.

Results Four themes and fifteen subthemes emerged, as follows. The first theme related to specific triage challenges: elderly patients; differentiating TBI from other conditions; identifying mild to moderate TBI; and using the current triage tools. The second theme related to potential areas for improvement: education and training; specific TBI triage criteria; elderly triage criteria and new diagnostic tools. Third, there were barriers to using new innovations: training and financial aspects; on-scene time; and application and distribution concerns. The fourth theme was facilitators: effective implementation strategies; in-depth and practical training to instil confidence in paramedics; evidence of accuracy, cost-effectiveness and feasibility of implementation; and guidelines for selecting patients for testing and guiding care.

Conclusion Enhancing personal training and education, assessing the feasibility of introducing new diagnostic tools, and developing evidence-based triage tools may improve prehospital triage for patients with suspected TBI.

PP20 A NATIONAL RETROSPECTIVE COHORT STUDY OF THE DEMOGRAPHIC AND CONVEYANCE CHARACTERISTICS OF PAEDIATRIC PATIENTS PRESENTING TO THE SCOTTISH AMBULANCE SERVICE, BEFORE AND DURING THE COVID-19 PANDEMIC

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Background COVID-19 created unprecedented challenges for emergency care services worldwide. The direct health impact on children was reportedly minimal; however the indirect impact on their prehospital presentations is not yet fully understood. Published studies on national paediatric presentations to ambulance services, before and since the pandemic, are lacking. Therefore, this study aimed to describe the demographic and conveyance characteristics of paediatric patients presenting to the Scottish Ambulance Service, before the first UK lockdown and from 1-year into the pandemic.

Methods A national retrospective cohort study of incidents involving children aged 1-day to 16 years, during two separate 1-year periods: March 2019/20 (before lockdown) and March 2021/22 (after lockdown).

Results Overall, 5.7% (n=69,327) of calls were for patients <16 years (before lockdown n=34,022; after lockdown n=35,305). Median age of patients decreased from 3 years (IQR 1-10) to 2 years (IQR 1-7). Most presentations during both periods were for children <5 years, with an associated increase in calls recorded for the period after lockdown (59%, n=20,018 vs 66%, n= 23,285). The converse was demonstrated for children ≥5 years, with fewer presentations recorded after lockdown (41%, n=14,004 vs 34%, n=12,020). Conveyance rates remained high, both before and after lockdown (79%, n=26,737 vs 75%, n=26,602). In addition, over half of conveyed patients had no clinical interventions or emergency driving recorded (58%, n=15,470 vs 62%, n=16,528).

Conclusion This study demonstrates that the majority of paediatric patients presenting to the service were <5 years, conveyed to hospital and required no intervention during transfer. The demographic and conveyance data provide a benchmark on which to measure future changes and highlight key areas that would benefit from further investigation. Future research is needed to understand why incidents involving children <5 years increased after lockdown and reasons for conveyance in those patients who receive no prehospital clinical intervention.

PP21

WHICH ELEMENTS OF HOSPITAL-BASED CLINICAL DECISION SUPPORT TOOLS FOR THE ASSESSMENT AND MANAGEMENT OF CHILDREN WITH HEAD INJURY CAN BE ADAPTED FOR USE BY PARAMEDICS IN PRE-HOSPITAL CARE? A SYSTEMATIC MAPPING REVIEW AND NARRATIVE SYNTHESIS

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Background Hospital-based clinical decision tools are used to support clinicians when a child presents to the Emergency Department with a head injury. These are effective in informing decisions regarding computed tomography scanning. However, there is no pre-hospital decision tool to reduce unnecessary conveyance to hospital for head-injured children. This study aims to determine what elements of in-hospital tools for the assessment and management of children with head injury can be adapted for use in pre-hospital care.

Methods Systematic mapping review and narrative synthesis of published journal articles and grey literature. Searches were conducted using MEDLINE, EMBASE, PsycINFO, CINAHL

and AMED. We systematically identified all in-hospital clinical decision support tools and extracted from these the clinical criteria used in decision making. We complemented this with a narrative synthesis.

Results Following deduplication 874 articles were identified. After screening titles and abstracts, 697 articles were excluded, leaving 177 full text articles. Of these, 95 articles were excluded, yielding 82 studies. A further 14 studies were identified in the literature, totalling 96 analysed studies. 25 relevant in-hospital clinical decision tools were identified from these studies, which included 67 different clinical criteria, and these were grouped into 18 categories.

Conclusion Factors that increase the likelihood of neurosurgical intervention, and should be considered for use in a clinical decision tool designed to support paramedics in the assessment and management of children with head injury, are: signs of skull fracture; a large, boggy or non-frontal scalp haematoma (particularly in infants); focal neurological deficit; Glasgow Coma Scale score less than 15; prolonged or worsening headache; prolonged loss of consciousness; post traumatic seizure; amnesia in older children; non-accidental injury; drug or alcohol use; less than one year old. Clinical criteria that require further investigation include mechanism of injury; clotting impairment/anticoagulation; vertigo; length of time of unconsciousness; number of vomits. It appears that any clinical predictor present in isolation is unlikely to indicate clinically significant traumatic brain injury. There are likely to be additional clinical criteria that are relevant to paramedic assessment and practice, which are not included in any of these tools. None of the existing hospital-based clinical decision support tools can be directly implemented into paramedic practice as they are.

PP22

WHO CARES? EVALUATING THE SUCCESS OF THE CARES SKILLS FRAMEWORK AS A PEER SUPPORT INTERVENTION AMONGST PARAMEDIC STUDENTS IN THE UK

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Background The resilience, mental health, and wellbeing of paramedics is poor, even compared to other healthcare professionals. Student paramedics face a myriad of potential stressors during clinical placement. Curricula needs to consider how to help student paramedics cope with their experiences during placement and give them skills to cope with the stressors of the paramedic role once qualified. Peer support has been documented as a common informal coping strategy amongst paramedics, and evidence supports its use to buffer poor wellbeing. This study qualitatively evaluates the CARES Skills Framework, a structured peer support model, piloted in student paramedics at a single UK university.

Methods A convenience sample of 35 second- and third-year student paramedics were recruited from a single Paramedic Science programme who undertook the CARES Skills Framework. A modified nominal group technique was used to collect data. Qualitative data was ranked by participant voting. Data were analysed using Braun and Clarke's Reflexive Thematic Analysis framework. Participant ranking was pooled to give a hierarchy of themes.