Aims/Objectives/Background We aim to examine senior managers' perspectives on funding mechanisms used to implement the policy and experiences of success or challenges in introducing models of using GPs in or alongside emergency departments. Health policy in England has advocated the use of primary care clinicians at emergency departments to address pressures from rising attendances. However, implementing large systemic changes such as placing GPs in or alongside emergency departments requires significant funding, consideration of the opportunity costs of the alternative uses of such funding, an available workforce and evidence of how it should be used. Our findings will inform policy adaptation and service development to improve the healthcare provided to patients by providing new evidence of the reported experiences of adopting models of using GPs in or alongside emergency departments.

Methods/Design The perspectives of senior clinical, business and finance managers with responsibility for emergency department services and on-site primary care service implementation were investigated in semi-structured interviews with 31 managers at 12 type-1 emergency departments in England and Wales. Emergency departments operated one of three GP models or had prior experience of implementing a GP model. Interviews were thematically analysed.

Results/Conclusions Successful GPs models in emergency departments were perceived to be reliant on well-organised and unified funding mechanisms, appropriate staffing and governance, and consideration of population demands and needs. Funding mechanisms and the flow of funds were reported as complex, the most efficient mechanisms were described at departments where funding was unified, in collaboration with health and community care services. Staffing with local, experienced GPs was important. There were also cautions from experiences with private locum providers. Our findings contribute to debates about implementing policy on how primary care clinicians are effectively and safely deployed in emergency departments and how local context should be considered.

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WHAT GOES BUMP IN THE NIGHT? A LITERATURE REVIEW AND NOISE EXPOSURE EXPERIMENT IN A UK PAEDIATRIC EMERGENCY DEPARTMENT

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Aims/Objectives/Background In the Emergency department (ED), noise is a frequent and often unavoidable consequence of work undertaken and levels can often be raised during the day and night. Raised ambient noise levels have potential implications for the workforce, patients and relatives.

Investigation into the problem of noise levels in the ED follows feedback from a young patient who couldn't sleep during a prolonged stay. His complaint focused on loud, irregular banging noises such as those from closing bins that kept him awake.

The team felt work should be done to see if it was a wider spread problem or just isolated to his case. A simple sound recording experiment and literature search was conducted.

Methods/Design The literature search was conducted using electronic/online databases (Medline; Cochrane library) with a fixed date range and specific inclusion criteria.

The noise exposure experiment was conducted using a verified phone app to record the sound levels. They were measured at 3 times, during a night shift, in the paediatric emergency department of UHW. All measurements were at a fixed distance and were averaged and compared with WHO recommendations.

Results/Conclusions There are many sources of noise pollution in the ED, some are unavoidable for safety and clinical reasons.

The literature review produced a small number of papers all of which found that sound levels were raised above recommended levels. Similarly, all the sounds measured in the ED also exceeded the recommendations.

The most consistent finding across the papers, matched by findings from recordings, was that human behavioural modification is an easy and effective way to reduce noise levels.

There are simple steps that can be taken to reduce and eliminate sounds

Raising awareness regarding this problem is of great importance and focussing future work on assessing the impact in younger patients within the Emergency Department is paramount.

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A CLASSIFICATION OF PRIMARY CARE PATHWAYS IN EMERGENCY DEPARTMENTS: A MULTI-METHODS STUDY COMPRISING CROSS-SECTIONAL SURVEY; SITE VISITS WITH OBSERVATIONS; SEMI-STRUCTURED AND INFORMAL INTERVIEWS

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Aims/Objectives/Background We aim to describe and classify the predominant streaming pathways on arrival in Emergency Departments (EDs) in England and Wales and explain how they operate in different models of emergency department primary care services. Recent policy has encouraged a method whereby nurses stream from the emergency department front door to GPs working in a separate GP service operating within or alongside an ED. However, there is variation in methods of assessing and streaming patients on arrival at EDs. Conflated terminology causes difficulties in assessing relative performance, improving quality or gathering evidence about safety, clinical effectiveness. Our findings present a new classification of current streaming pathways from emergency departments to primary care services.

Methods/Design We used a multi-stage method approach, including an online survey completed by 77 EDs across England & Wales, interviews with 21 clinical leads, and finally, undertaking case studies of 13 EDs. Qualitative data were triangulated and analysed using a framework analysis approach.

Results/Conclusions The most common ED pathways to primary care services were: front door streaming before ED registration; streaming inside the ED; or without streaming but GPs selecting patients. Pathways were often adapted, to

suit local circumstances such as department layout, patient demand levels, skill mix and interests of GPs practitioners and the accessibility of community primary care services. Pathways to redirect patients with non-urgent primary care problems to community primary care services were also used, with local variation in protocols based on staffing, patient demand and links to community primary care services. Local clinical leads and managers need to consider which pathway(s) may best suit their local context and needs. Consistency of terminology used to describe pathways between EDs and primary care services is necessary for multi-site evaluation, quality improvement and performance measurement.

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THE TYPES AND EFFECTS OF FEEDBACK RECEIVED BY EMERGENCY AMBULANCE STAFF: A SYSTEMATIC MIXED STUDIES REVIEW WITH NARRATIVE SYNTHESIS

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Aims/Objectives/Background The phenomenon of feedback is well-researched within the wider healthcare context, where it is suggested that feedback can improve patient care and patient safety by enhancing clinical performance and staff mental health. Within prehospital care, reviews have been conducted for automated feedback from defibrillators and debrief after simulation, but not on the wider concept of feedback. The aim of this systematic review is to identify, describe and synthesize the published literature on the types and effects of feedback received by emergency ambulance staff. PROSPERO CRD42020162600.

Methods/Design The search strategy consisted of three facets: ambulance staff synonyms, feedback synonyms and feedback content. Databases searched from inception were MEDLINE, EMBASE, AMED, PsycInfo, HMIC, CINAHL and Web of Science. Studies were included if they were qualitative or quantitative empirical research exploring the concept of feedback, i. e. the systematised provision of information to emergency ambulance staff regarding their performance within prehospital practice. Study quality was appraised using the Mixed Methods Appraisal Tool and data analysed using narrative synthesis.

Results/Conclusions The search strategy yielded 2424 articles excluding duplicates. 94 studies met the inclusion criteria after full-text review, of which 36 fleetingly mentioned increased feedback as a solution to improving specific circumstances (e. g. decision-making, burnout). The remaining 58 studies consisted of 48 interventional prehospital feedback studies, 8 non-interventional studies and 2 feasibility studies. Narrative synthesis revealed a wide range of prehospital feedback types with the majority of studies focusing on performance or patient outcome feedback. The effects of feedback encompassed both personal and professional development, such as improved decision-making, reflection and closure. Mechanisms of providing prehospital feedback varied from electronic dashboards to case reviews and performance appraisals. Further empirical research is required to explore whether the published literature reflects current prehospital practice, as well as to determine the when, what, how and why of ambulance staff desiring feedback.

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THE RELATIONSHIP BETWEEN INTRACRANIAL MRI ABNORMALITIES AND POST-CONCUSSIVE SYMPTOMS IN ED PATIENTS WITH A NORMAL CT: AS DEMONSTRATED ON THE RIVERMEAD POST CONCUSSION SYMPTOM QUESTIONNAIRE (RPQ)

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Aims/Objectives/Background Mild traumatic brain injury (TBI) is common presentation to the ED. Mild, however, is a misnomer with 10–40% of patients suffering from post-concussion symptoms for months to years following injury.¹ ²Patients often re-present to primary care or ED with these symptoms, and the role of repeat imaging in this cohort remains uncertain. Aims: assess TBI patients discharged from the ED with no acute intracranial findings on CT head scan, who subsequently had a research-driven MRI and documented 3-month RPQ, to determine the association between ongoing post-concussion symptoms and MRI pathology.

Methods/Design 91 patients in the CENTER-TBI dataset met the inclusion criteria.³ Mann-Whitney U test used to compare 3-month RPQ and MRI findings. Numbers and percentages of patients with RPQ >35 and >19 presented owing to a score of 35 predicting moderate to severe activity limitation,⁴ and 19 representing mean RPQ in patients with diagnosed post-concussion syndrome (PCS).²

Results/Conclusions 15/91 CT-ve (16.5%) patients had abnormalities on acute MRI (2 intraparenchymal haemorrhages, 13 Diffuse Axonal Injury (DAI)). No significant difference between median 3 month RPQ between MRI -ve (2.00 [IQR 0.00 – 14.00] and MRI +ve (0.00 [IQR 0.00 – 8.50]) patients (p=0.51, Mann-Whitney U test). Of patients with a RPQ >35, only 1/8 (12.5%) had a +ve MRI. Of patients with a RPQ >19 2/14 (14.3%) had +ve MRI, both DAI.

No difference was found between RPQ scores of MRI positive and negative patients, suggesting no significant relationship between ongoing symptomatology following mild TBI and gross MRI findings in patients with a negative acute CT. This study is limited by a small number of patients with positive neuroimaging and a lack of quantitative MRI data. Further prospective research is required to assessing a larger patient cohort and more sensitive imaging modalities to examine the utility of repeat neuroimaging in patients with ongoing concussive symptoms.

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