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WHICH PATIENTS RECEIVE A PREALERT? ANALYSIS OF LINKED DATA IN THREE AMBULANCE SERVICES

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Background Ambulance clinicians use pre-alert calls to advise Emergency Departments (EDs) about patients who may require immediate assessment on arrival. Despite pre-alerts playing a key role in the transfer of care between ambulance and ED clinicians, there is a lack of understanding about which patients should receive a pre-alert and potential variation in practice.

Methods We created a linked dataset from 3 ambulance services comprising of 999 call, electronic patient record and ambulance staff demographic and shift pattern data for all ED ambulance conveyances between July 2020–June 2021. We also compared pre-alert activity with the AACE/RCEM guidance on pre-alerts. We undertook descriptive analysis using the statistics package R.

Results Pre-alerts were recorded in 10.5% of conveyances (142,795/1,363,274) with significant variation in pre-alert rates between ambulance services (8.2%–15.0%) and between receiving hospitals. Paramedics pre-alerted 10.7% of their conveyances (107,309/1,002,733) with non-registered clinician staff pre-alerting 9.8% of their conveyances (35,486/360,541).

Patients who met the AACE/RCEM pre-alert criteria were more likely to be actually pre-alerted when they met non-physiological criteria (e.g. stroke), compared to physiological criteria (e.g. respiratory rate) (51.9% vs 28.5%). Only a third of cases that met any AACE/RCEM physiological criteria for pre-alert were actually pre-alerted (103,066/323,971). Around 15% (20,522/142,795) of pre-alerts were for patients in low priority triage categories (3–5).

Conditions with the highest numbers of pre-alerts included suspected sepsis (21,479/142,795, 15.0%), unspecified medical conditions (16,884, 11.8%) and acute stroke (14,869, 10.4%). Covid-19, respiratory problems and lower respiratory tract infections made up a further 15.4% of pre-alerts. Highest pre-alert rates were found with suspected sepsis (21,749/34,821, 62%), acute stroke (14,869/27,783, 54%) and STEMI (3,687/6,207, 59%).

Conclusion There is significant variation in patients who are pre-alerted. Improved clarity of criteria for pre-alert may help. Variation may be partly due to under-documentation of pre-alerts.

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WHICH PATIENTS SHOULD BE PREALERTED? REVIEW OF UK AMBULANCE SERVICE GUIDELINES

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Background Ambulance pre-alerts inform receiving emergency departments (EDs) of the arrival of critically unwell or rapidly deteriorating patients, who need time-critical assessment or

treatment immediately upon arrival. Over and inappropriate use of pre-alerts can lead to EDs diverting resources from other critically ill patients. There is limited guidance about how pre-alerts should be undertaken, delivered or communicated.

The pre-alerts study aims to understand how pre-alert decisions are implemented by pre-hospital staff, and the impact on receiving EDs. There are five work packages. This abstract represents part of the first: To map and compare existing pre-alert guidance from all UK NHS ambulance services.

Methods We contacted medical directors, education leads and research teams in all UK ambulance services to request any documents containing guidance about pre-alerts. We reviewed all documentation and mapped the guidance, to understand which conditions were recommended for pre-alert, identify variations in vocabulary and alignment with AACE/RCEM pre-alert guidance (2020). We reviewed language and accessibility of provided documents using the Agree II Tool (AGREE Next Steps Consortium, 2017).

Results We received responses from 15/19 UK Ambulance Services. Five had no specific pre-alert guidance. We identified noticeable variations in conditions declared suitable for pre-alerts, a lack of consistency within each service's own guidance, and alignment with the AACE/RCEM pre-alert guideline (2020). Services listed between 4–35 different conditions suitable for pre-alert. There were differences in physiological thresholds and terminology, even for conditions with established care pathways, e.g. Hyperacute Stroke. Pre-alert criteria were typically a short section in lengthy handover procedure policy documents.

Conclusion Trusts need both policies and tools: A policy to explain the pre-alert process, and allocate responsibility for tasks required, and a quick reference tool for use in time-sensitive situations. Trusts should have a single pre-alert policy incorporating appropriate national guidance that other policies directly reference.

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WHAT FACTORS AFFECT AMBULANCE CLINICIAN PREALERT DECISION-MAKING? A QUALITATIVE STUDY

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Background Ambulance clinicians use pre-alert calls to inform receiving Emergency Departments (EDs) of the imminent arrival of a patient who they perceive will require non-standard ED response. Although some pre-alert decisions will be clear (e.g. cardiac arrest), in many cases the decision about whether to pre-alert is more complex. We undertook qualitative research to explore factors affecting how decisions are made.

Methods We undertook semi-structured interviews with ambulance clinicians (n=35) from three ambulance services and ED clinicians (n=32) from 6 EDs and non-participant observation in 6 EDs (86 hours, 109 pre-alerts). Detailed observation notes and verbatim interview transcripts were imported into NVivo and analysed thematically.

Results We identified that thresholds for pre-alerting varied between clinicians, with decision-making affected by experience (including role), confidence, risk-tolerance and decision-

support availability. Approaches to managing the professional and personal risk associated with pre-alert decisions included: always adhering to pre-alert criteria, pre-alerting or seeking advice (from colleagues or ED clinicians) for ambiguous cases; and documenting the rationale for pre-alert decisions. Where clinicians were less confident, or the clinical criteria less clear, clinicians sometimes used pre-alert calls as a two-way discussion rather than information-provision call, passing the responsibility for the patient's destination to the ED staff.

Contextual factors such as long delays at ED may influence decisions as clinicians weighed up their ability to effectively manage the patient during a standard ED response and perceived higher stakes of not pre-alerting.

A lack of formal training on undertaking pre-alerts and lack of feedback on decisions could influence confidence and consistency of pre-alert practice. Negative feedback experiences from ED staff could also influence clinician confidence and future pre-alerting behaviour.

Conclusion Improved feedback, training and support for decision-making is required in order to ensure greater consistency in pre-alert practice, particularly in the context of high ED demand.

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SUCCESS OF CONSENT AND FOLLOW UP IN THE PARAMEDIC ANALGESIA COMPARING KETAMINE AND MORPHINE IN TRAUMA (PACKMAN) STUDY. AN ANALYSIS OF HOW PARTICIPANTS RESPOND TO COMMUNICATION APPROACHES

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Background Pre-hospital analgesia research relies on the unfortunate circumstances of patients in their time of need and in severe pain. The PACKMaN trial involves research paramedics gaining post event consent and follow up of patients suffering traumatic injuries. With changes to practise following Covid-19, it is important to see how interaction with patients in the community affects continued participation.

Methods This analysis compares how research paramedic interaction affects consent and follow up. The two ambulance Trusts involved took different approaches for contact – Trust A opting for face-to-face visits where possible, Trust B telephone calls. For follow up, Trust A used a method the patient chose at consent (mainly telephone calls) and Trust B, sent postal questionnaires. Consent and follow up details were recorded for each participant including the method in which contact was made, the consent decision and days to each timepoint.

Results 241/354 (68%) patients have currently given consent. Consent was provided by 72% of Trust A participants and 64% of Trust B participants. Most consent interactions have been made by telephone (n=227, 141(62%) consented, median 9 days to decision), followed by face-to-face (n=88, 86(97%) consented, median 16 days to decision). 67 patients did not respond, 52 were from Trust B and were only contacted by telephone, whereas Trust A tried multiple

approaches if at first unsuccessful. Face-to-face consent produces 80% follow up, whereas those originally consented via telephone or post have 75% follow up.

Conclusion While a face-to-face approach could be deemed 'more successful' by accounts of higher consent receipt and follow up, it is more logistically challenging for research paramedics. Depending on geographical distribution of patients and nature of future studies, it is well worth considering the benefits to increased research paramedic resourcing. Further research and engagement with PPI groups may help to improve rates of consent and follow up.

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MEETING THE TARGET? SERVICE ADHERENCE TO ENGLISH NATIONAL PRESCRIBING GUIDELINES IN REMOTE TELEPHONE ASSESSMENT OF LOWER UTI IN OVER 65S

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Background Work on antimicrobial resistance in England has led to the creation of guidelines to minimise inappropriate prescription of antibiotics. Unaware of previous work on the performance of telephone advice services in this regard, we examined antibiotic usage in an NHS 111 service for patients over the age of 65 with lower urinary tract infection (UTI).

Methods We conducted a retrospective audit of telephone assessments during the period 1st June to 31st August 2022. Antibiotic prescriptions for the indication of lower UTI were identified, and notes for a random sample of 25 cases were retrieved from the computer-aided dispatch system. Cases relating to catheter-associated infection and cases where a decision was made jointly with a paramedic on scene were excluded. Resources from the TARGET antibiotics toolkit and NICE guideline NG109 were used to prioritise outcome measures relevant to remote assessment in the NHS 111 setting, and records were coded against these measures by a trainee Advanced Clinical Practitioner with experience in telephone assessment.

Results 327 prescriptions for the cohort were identified, representing 11% of all service prescriptions for the period. The prescribing decision was inconsistent with guidelines in 3/25 audited cases (12%), and suboptimal antibiotic choice, dose, frequency, or duration was noted in 8/25 cases (32%). Dipstick urinalysis was recorded in 5/9 care home cases (56%), documentation of advice given was incomplete in 18/25 cases (72%), and non-UTI differential diagnoses were unmentioned in 20/25 cases (80%).

Conclusion The audit revealed disparities between guidelines and practice in this service, with particular work remaining around appropriate use of urinalysis, advice given to patients, and consideration of non-UTI pathologies. The audit was limited to a documentation review; call recordings may have revealed undocumented rationales or advice. We recommend replication of this audit in similar services to enable understanding of wider patterns in this area of practice.