

which is usually given as a 21-hour infusion in UK hospitals. A 12-hour infusion known as the ‘SNAP’ regimen has been implemented in some centres and appears on TOXBASE. The SNAP regimen has been associated with fewer anaphylactoid reactions than the standard 21-hour treatment. The SNAP regimen was initiated in two District General Hospital Emergency Departments within the same NHS Trust as part of a quality improvement project (QIP) to determine whether anaphylactoid reactions and inpatient length of stay could be reduced.

**Methods/Design** Trust guidelines for Paracetamol overdose were revised advising the 12-hour SNAP regimen for treatment of adults along with a pre-filled prescription chart. A retrospective review of patient notes and electronic discharge letters was performed before and following the new guideline to identify patients who received NAC and whether they suffered any adverse reactions. The length of stay was also recorded.

**Results/Conclusions** In three months from August to November 2020, across both sites, 60 adult patients received NAC for Paracetamol overdose. Of these, four patients had anaphylactoid reactions to NAC. Following the introduction of the SNAP regimen, in three months between April and June 2021, 36 adult patients received NAC, and there were no adverse drug reactions.

Prior to the introduction of the new guideline and prescription chart adult patients admitted for Paracetamol overdose had an average inpatient stay of 48.3 hours compared to an average stay of 44.5 hours following the introduction of the SNAP regimen.

The SNAP NAC regimen was not associated with more adverse drug reactions and has decreased length of stay in adult inpatients with Paracetamol Overdose.

days from first contact. Multi-variable logistic regression was used to identify factors associated with risk of false negative or false positive triage.

**Results/Conclusions** Of the 12, 655 callers, 11.1% experienced the primary outcomes. An ambulance was dispatched to 84.2% of callers. The decision to dispatch an ambulance achieved 95% sensitivity (95% CI: 93.7 to 96.1%) and 17.2% specificity (95% 16.5% to 17.9%) for adverse outcomes. Where an ambulance was not dispatched, patients had a 3.5% (2.8 to 4.4%) of subsequent deterioration. Of patients that received an ambulance only 57% were subsequently conveyed to hospital. Multivariable logistic regression modelling found false negative assessment was associated with younger age and female sex and false positive assessment was associated with malignancy, immunosuppression, respiratory and cardiovascular comorbidities.

Emergency telephone triage of patients with suspected COVID-19 achieved a high sensitivity to serious adverse outcomes. Further research is required to identify ways specificity of triage could be improved to reduce unnecessary ambulance dispatch.

**1116 DIAGNOSTIC ACCURACY OF POINT-OF-CARE LUNG ULTRASOUND FOR COVID-19: A META-ANALYSIS OF 19 STUDIES INCLUDING 3954 PATIENTS**

<sup>1</sup>Ashley Matthies, <sup>2</sup>Michael Trauer, <sup>3</sup>Karl Chopra, <sup>4</sup>Robert Jarman. <sup>1</sup>Homerton University Hospital; <sup>2</sup>Guy's and St Thomas' NHS Foundation Trust; <sup>3</sup>Homerton University Hospital NHS Foundation Trust; <sup>4</sup>Royal Victoria Infirmary

10.1136/emered-2022-RCEM.16

**Aims/Objectives/Background** There is a growing evidence-base concerning the role of Point-of-Care (POC) lung ultrasound (LUS) for the diagnosis of COVID-19. LUS is well-established for many respiratory illnesses and may convey several advantages over conventional imaging modalities and single initial reverse-transcriptase polymerase chain reaction (RT-PCR) testing for COVID-19.

**965 ACCURACY OF EMERGENCY (999) TELEPHONE TRIAGE FOR PREDICTING ADVERSE OUTCOMES IN SUSPECTED COVID-19: AN OBSERVATIONAL COHORT STUDY**

<sup>1</sup>Carl Marincowitz, <sup>2</sup>Peter Bath, <sup>2</sup>Madina Hasan, <sup>3</sup>Tony Stone, <sup>3</sup>Richard Campbell, <sup>4</sup>Richard Pilberry, <sup>2</sup>Janette Turner, <sup>2</sup>Benjamin Thomas, <sup>1</sup>Steve Goodacre. <sup>1</sup>Northern General Hospital; <sup>2</sup>University of Sheffield; <sup>3</sup>Sheffield University; <sup>4</sup>Yorkshire Ambulance Service

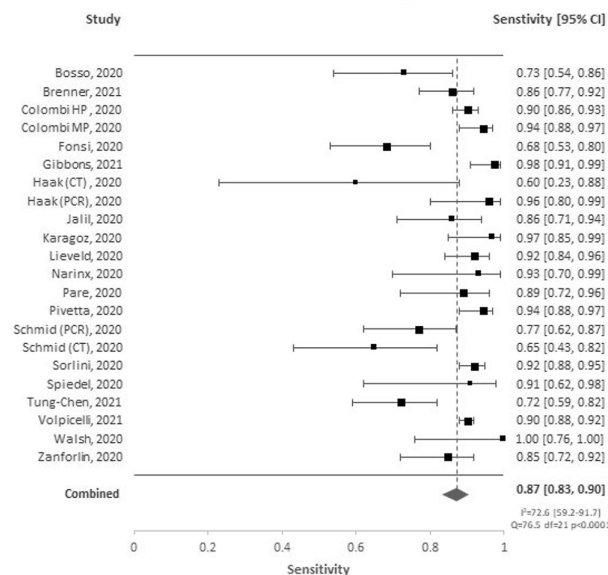
10.1136/emered-2022-RCEM.15

**Aims/Objectives/Background** In the first wave of the pandemic some ambulance services received three times their usual number of 999 calls. The increase was mostly due to calls from patients with respiratory symptoms. Call handlers must rapidly decide whether patients need an emergency face-to-face assessment or could access non-emergency services.

We assess accuracy of emergency telephone triage in identifying patients with suspected COVID-19 infection who need an ambulance response and identify factors which affect triage accuracy.

**Methods/Design** An observational cohort study of adults who contacted 999 emergency telephone services provided by Yorkshire Ambulance Service between the 18<sup>th</sup> March 2020 and 29<sup>th</sup> June 2020 with symptoms indicating possible COVID-19 infection was completed. Callers were linked to ONS death registrations and routine health care data collected by NHS Digital.

The accuracy of triage outcome (ambulance dispatch versus telephone advice) was assessed for death or organ support 30



**Abstract 1116 Figure 1** Forest plot of LUS sensitivity

The purpose of this study was to perform a systematic review and meta-analysis of the diagnostic accuracy of LUS for the diagnosis of COVID-19. This is the first meta-analysis in this evolving area of research and combines data from almost 4,000 patients.

**Methods/Design** This work was synthesised according to the PRISMA guidelines. A research question was formulated according to the PICOTS framework and a search strategy was developed in accordance with existing guidance. A screening and selection tool was used to identify studies from the initial search. All prospective and retrospective trials of adult patients comparing LUS to either RT-PCR testing, chest CT or a final clinical diagnosis were included.

Data analysis was performed in R. Random effects bivariate binomial models were used to estimate overall sensitivity, specificity, and the hierarchical summary receiver operating characteristic (HSROC) curve for LUS. The QUADAS-2 tool was used to assess the quality of included studies.

**Results/Conclusions** 19 studies were included in the meta-analysis, providing data for 3,954 patients in total. LUS demonstrated an overall (pooled) sensitivity of 87.3% (95% CI 83.4–90.5) and specificity of 70.0% (61.6–76.4). The overall positive and negative likelihood ratios were 3.04 (2.27–4.06) and 0.16 (0.12–0.22) respectively. Heterogeneity between studies was found to be high, with  $I^2$  values of 72.6% (59.2–91.7) and 87% (83.5–95.9) for sensitivity and specificity respectively.

LUS was found to be highly sensitive in a high prevalence population and may improve detection of COVID-19 pneumonia compared to CXR. In patients requiring hospital admission a normal LUS should prompt consideration of alternative diagnoses.

**1060 ALL-CAUSE PRESENTATIONS TO EMERGENCY FACILITIES IN LOW-INCOME AND LOW-MIDDLE INCOME SUB-SAHARAN AFRICAN COUNTRIES: A SYSTEMATIC REVIEW**

<sup>1</sup>Sarah Richardson, <sup>2</sup>Tonny Luggya, <sup>1</sup>Alasdair Gray, <sup>3</sup>Liz Grant. <sup>1</sup>Royal Infirmary of Edinburgh; <sup>2</sup>Makerere University; <sup>3</sup>University of Edinburgh

10.1136/ememed-2022-RCEM.17

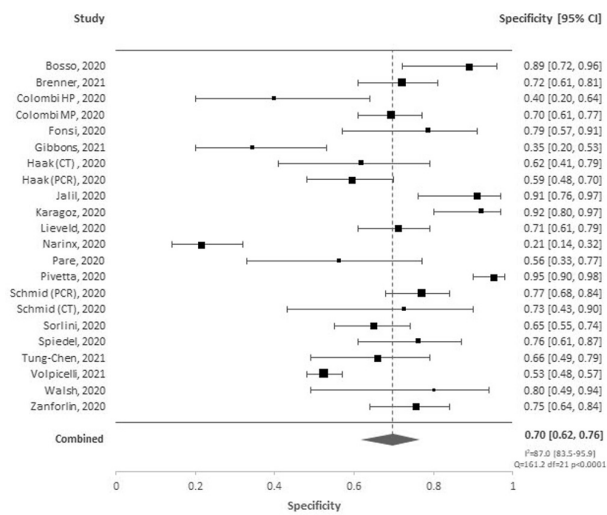
**Introduction** Emergency conditions constitute a large proportion of the total global burden of disease and annual global deaths. All 10 leading causes of death in LMICs are conditions which are amenable to emergency care. Much of the research performed in the sub-Saharan African region focuses on single disease processes or particular causations, giving a skewed impression of disease burden. The lack of comprehensive information concerning emergency care delivery has stalled attempts to improve emergency care systems in LMICs.

**Objective** To understand the current evidence base available regarding the all-cause demographics, characteristics and epidemiology of patient presentations to an emergency setting within LMIC/LIC sub-Saharan African countries.

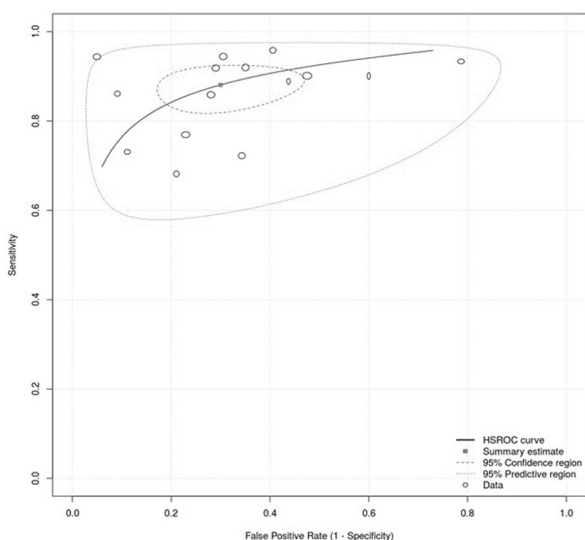
**Methods** A systematic search was conducted on 23rd January 2020 of PubMed, Embase, Global Health and Google Scholar for peer reviewed literature published in English from January 2000 to January 2020 describing all-cause presentations at facility-based emergency care in Sub-Saharan LIC or LMIC countries. Articles were screened at title and full text level.

**Results** 19227 articles were screened at title level, 43 were screened at full-text level. 21 articles fit the inclusion criteria. Of 41 LMIC/LIC sub-Saharan African countries included, 31 were unrepresented due to lack of published data. Overall data quality was poor. Only 1 study fulfilled the suggested minimum core data set for emergency care surveillance. Outcome data was lacking or only partially reported in a number of papers. Chief complaints and disease categorisation reporting lacked a unified approach or reporting system making comparisons both within and between countries extremely challenging.

**Conclusion** Despite considerable progress being made in recognising the need for integrated emergency care systems in all global regions, the data available to policy makers and system implementers remains sparse. This review demonstrates that critical investment is required to produce quality data from the current emergency systems in LMIC/LICs.



Abstract 1116 Figure 2 Forest plot of LUS specificity



Abstract 1116 Figure 3 Random effects meta-analysis