



Abstract 833 Figure 1 Author spread

**Methods/Design** The Global Emergency Medicine Literature Review (GEMLR) is an annual summary of the top-ranked GEM literature. A spreadsheet of all papers identified by each initial search (before ranking) is freely available. We searched the past six years of GEMLR's 3,634 initial titles to identify authors with EM affiliations. We also collected data on author institutions, country focus, topic, funding sources and if co-authorship included local collaborators.

**Results/Conclusions** From 2014–2019 the GEMLR found over 800 individual papers with at least one EM affiliated author. Authors were from over 600 different institutions (see figure 1) and research focused on over 100 countries.

Approximately 60% had no funding/documented and 5% papers did not include a local author.

There are limitations, including the GEMLR search strategy and EM practitioners omitting their EM affiliations (a take home message, if we wish to strengthen EM's perceived research presence). However this study serves as a robust start-point to map GEM research engagement. Interestingly, the study demonstrates a modest UK author slice with 20 being identified, contributing to 12 papers over 6 years.

Further analysis will target the sociodemographic association between the most/least researched countries, expanding to include further years of data. Using a data visualisation strategy we will make the work accessible online to provide leverage in areas of much-needed GEM research growth.

**Aims/Objectives/Background** Carbon monoxide (CO) is the most common cause of death by poisoning worldwide. Repeated low-level exposure to CO is significant health concern leading to long-term neurological sequelae but is difficult to diagnose due to non-specific symptoms such as headache. We aimed to establish the prevalence of low-level CO poisoning in patients presenting to the ED with symptoms suggestive of CO exposure.

**Methods/Design** This prospective multi-centre observational study recruited from four UK EDs between December 2018 and March 2020. Eligible patients were those with symptoms suggestive of CO poisoning including headache, flu-like symptoms and cardiac chest pain. We collected data using the RCEM endorsed 'COMA' questions to detect CO poisoning and measured carboxyhaemoglobin (COHb). An investigation of the home was undertaken to identify sources of CO exposure. The proportion (exact 95% confidence interval) of probable CO poisoning in each symptom group was calculated.

**Results/Conclusions** We analysed data from 4190 patients. 159 (3.8%) had suspected CO poisoning based on COHb level and/or COMA questions. Prevalence was highest in patients with flu-like symptoms 14.8% (7.9, 24.4).

Data linked to CO testing in the home confirmed 1 case of CO presence and 21 probable cases based on a possible CO source from gas appliances. 62% of probable cases had normal COHb level in ED and were identified using only the COMA questions. Only 7.5% of patients with raised COHb level were considered by ED clinicians to have been exposed to CO as a cause for their symptoms.

This study provides evidence that ED patients with non-specific symptoms and no clear history of CO exposure are at risk from CO poisoning from faulty appliances in the home. We advocate that the COMA tool is used in conjunction with testing of COHb levels at the earliest opportunity to ensure that patients with potential CO exposure are not missed.

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#### THE EDCO STUDY: SCREENING PATIENTS FOR UNINTENTIONAL CARBON MONOXIDE EXPOSURE IN EMERGENCY DEPARTMENT PATIENTS

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