

prescribers predicted (figure 2), and patients were prepared to tolerate significantly more pain than prescribers expected (figure 3). A relatively high number of patients were aware of the addictive potential of codeine, yet some were unaware of the addictive potential of morphine, while others thought that paracetamol and ibuprofen were also addictive. Almost all patients indicated that if a painkiller could lead to addiction, they would expect their ED doctor to inform them of this risk.

These results suggest that strong painkillers are sometimes given out on the mistaken assumption that this is what patients expect. Involving patients in shared decision making about TTO analgesia may be a useful strategy to reduce ED opioid dispensing.

Rod Little Prize

047 A REVIEW OF REVIEWS OF EMERGENCY DEPARTMENT INTERVENTIONS FOR OLDER PEOPLE: OUTCOMES, COSTS AND IMPLEMENTATION FACTORS

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Background Older people's emergency care is an international public health priority and remains sub-optimal in the UK. Strategies are needed to manage older patients sensitively and effectively. We reviewed emergency care interventions, evaluating evidence for outcomes, costs, and implementation.

Method and results We developed and registered (with PROSPERO, CRD42018111461) a review of reviews protocol. Screening was according to inclusion criteria for subject and reporting standards. Data were extracted and summarised in tabular and narrative form. Quality was assessed using AMSTAR2 and Joanna Briggs Institute tools. Due to intervention and outcome heterogeneity, findings were synthesised narratively. McCusker's Elder-Friendly Emergency Department assessment tool was used as a classification framework.

Conclusions Eighteen review articles and three conference abstracts fulfilled inclusion criteria. The majority were systematic reviews, with four using meta-analysis. Fourteen reviews reported interventions initiated or wholly delivered within the ED, and four focussed on quality indicators or patient preferences.

Confidence was limited to each review's interpretation of primary studies. Descriptions of interventions were inconsistent, and there was high variability in reporting standards. Interventions mostly focussed on screening and assessment, discharge planning, referrals and follow-up, and multi-disciplinary team composition and professional activities. 26 patient and health service outcomes were reported, including admissions and readmissions, length of stay, mortality, functional decline, and quality of life.

Our review of reviews demonstrated that the current, extensive evidence base of review studies lacks complexity, with limited or no evidence for the effectiveness of

interventions; reviews commonly called for more primary research using rigorous methods. There is little review evidence for factors influencing implementation.

There was evidence that among interventions initiated in ED, those continued into the community yielded better outcomes. Service metrics (as valued by care commissioners) were evaluated as intervention outcomes more frequently than person-centred attributes (as valued by older people). Interventions were broadly holistic in nature.

048 COMPUTER BEATS DOCTOR? ESTIMATING THE PROBABILITY OF ACUTE CORONARY SYNDROME FOR INDIVIDUAL PATIENTS

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Chest pain is one of the most common reasons for patients attending the Emergency Department (ED). Accurately assessing for Acute Coronary Syndromes (ACS) remains a challenge. There is strong evidence supporting use of the Troponin-only Manchester Acute Coronary Syndrome (T-MACS) risk prediction model. How clinicians perform compared to these models is unknown.

We aimed to externally validate the diagnostic accuracy of clinicians' estimated probability of ACS (gestalt) compared to the T-MACS calculated probability of ACS.

The Bedside Evaluation of Sensitive Troponin prospective multi-centre diagnostic accuracy study included adults presenting to the ED with potential ACS. Alongside clinical, ECG and blood sample data, the emergency clinician recorded their estimated probability of ACS (%) following review. The probability of ACS was also calculated using T-MACS. The primary outcome was Major Adverse Cardiac Events (MACE) within 30-days. For this planned secondary analysis, patients from sites using the high-sensitivity cardiac troponin T (Roche Diagnostics Elecsys) were eligible.

Of 782 included, 116 (14.8%) had MACE. The C-statistic for clinician gestalt and T-MACS were 0.76 (95% CI 0.71–0.81) and 0.93 (0.90–0.95) respectively ($p < 0.0001$). Compared to T-MACS, clinicians overestimated the probability of ACS (positive bias 18.0%) and were less likely to stratify patients to extremes of probability. For 'rule out' of ACS, clinicians identified 72 (9.3%) patients as 'very low risk' ($< 2\%$) compared to 385 (49.2%) with T-MACS. For 'rule in' of ACS, clinicians identified 16 (2.1%) patients as 'high risk' of ACS ($\geq 95\%$) in comparison with 50 (6.4%) with T-MACS. Assessment of model calibration comparing observed against predicted outcomes gave an R square of 0.78 and 0.97 for clinicians and T-MACS respectively.

Clinician gestalt has inferior diagnostic accuracy to T-MACS. T-MACS requires a clinician's skill for appropriate application. Our conclusion is therefore not that computers are better, but that clinician performance can be augmented using T-MACS.