

only say what is likely to be true based on the volume and quality of evidence available. Poor research integrity misleads doctors, meaning what we tell our patients might simply be wrong. In 2001 a single misreported trial, study 329, led to millions of adolescents being prescribed an antidepressant that didn't work, and caused suicidal behaviour. This was entirely avoidable. I believe there are three fixes to such problems in evidence-based medicine: transparency; strategic campaigning; and education. Transparency so we know about missing data and poor methodology Half of all clinical trial results are never reported, and positive trials are twice as likely to be published as negative trials. This means we often don't learn about harms data, and the data we have are biased. Hidden documents mean we don't know when publication bias is happening: readers accept biased results, because they trust journals and authors to maintain reporting integrity. Transparent reporting fixes publication bias, allowing us to see the most accurate picture of the evidence available. Transparent trial registration, protocols, and editorial practices allow us to detect poor methodology and interpret the evidence accordingly. Such transparency has very real consequences: If all data had been transparently reported, study 329 would have shown the lack of efficacy and increases in harm of paroxetine, and thousands of lives may have been saved. Strategic campaigning to effect real-world change Outcome switching and publication bias remain prevalent, showing decades of prevalence studies do not in themselves solve these problems. Guardians of evidence-based medicine must be more strategic in fixing its flaws. There are strong financial, academic and personal incentives for trialists to comply with requests from journal editors. Appealing to editors to require full registration and transparent reporting is therefore likely to motivate trial authors in good practice. Incentives such as CONSORT and ICMJE do just this and provide a standard to which journals can be held accountable. Funding is arguably the biggest barrier to research. Plan S sets out 10 principles to improve research funded by public grants, including funders' research integrity requirements. Future projects should learn from this: researchers are likely to comply with such requirements to secure funding. Education so people know what to do Responses to correction letters in the COMPare project showed widespread misunderstandings around the reporting of trial outcomes. Education is needed to show doctors and patients what good trial reporting looks like, so they can make informed clinical decisions with the evidence available. In COMPare we did this through journal correspondence, leading to policy changes and extensive discussion in the clinical trials community. Education should be considered more broadly: teaching EBM at schools sets standards for the next generation of leaders; educating the public creates appropriate intolerance to poor research practice; and open discussion of existing research educates doctors and patients about poor research practice affecting clinical decisions.

### 68 WE NEED LESS RESEARCH, BETTER RESEARCH, AND RESEARCH DONE FOR THE RIGHT REASONS

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The Trainee Emergency Research Network (TERN), funded by the Royal College of Emergency Medicine (RCEM), is a new initiative that aims to demystify research and increase research

engagement amongst Emergency Medicine (EM) clinicians. It was launched in 2018 and is ideally placed to improve how EM research is planned and conducted. Whilst the value of evidence-based medicine in Emergency Departments (EDs) is recognised, the unique pressures of the ED setting makes conducting research and disseminating good practice particularly challenging. TERN was designed to tackle these challenges with a focus on three important pillars to engage busy EM Clinicians: 1) Answer practice-changing questions 2) Robust and achievable data collection 3) Recognition Point 1, the research question has to be important and applicable to a trainees' practice, both to encourage engagement and create impact. Point 2, the research has to be designed rigorously so that the data collection is clear and achievable within EDs and can be translated into clinical practice. Point 3, trainee contributions have to be recognised throughout. We will choose research questions that mirror the 2017 James-Lind/RCEM research priority setting partnership. This will allow TERN to frame its research questions around themes that have been recognised as vital in EM. TERN's strength lies in accessing multiple ED sites for standardised data collection, ideally over short collection periods, to obtain nationally representative snapshots of patients and practice. This enables, for example, small pilot studies and subsequent multi-site prospective observational cohort studies to be conducted rapidly. We recognise that collecting data in multiple sites leads to potential issues surrounding data monitoring and governance. Simplifying the research design of studies by only collecting data that genuinely adds to the research question, will support the collection of accurate data. TERN will also harness the use of online data collection, which allows for live data monitoring and a clear audit trail of all data entered. This will allow busy ED clinicians to concentrate on data collection and allow the study team to have clear oversight of the project at local, regional and national levels. TERN is new but the response from the EM community, both academic and non-academic, has been very encouraging. Thanks to this support, within 8 months, we already have multiple successes, including our first primary research project, TIRED, which has 111 UK and Ireland sites signed up for data collection. We believe that by giving EM clinicians the opportunity to engage in high quality projects and contribute to a national data collection process, we can move away from the current model of EM evidence generation that typically relies on collections of small, often poorly-designed studies with limited compatibility. With our work, we aim to be transparent and seek guidance throughout our research designs, to ensure our projects stand up to the highest of research and statistical standards. Part of this process is opening dialogues and 'EBM Live' is the perfect forum to start this.

### 69 AUTOMATING THE PROCESS OF SYSTEMATIC REVIEWS IN HEALTHCARE RESEARCH – A METHODOLOGICAL SYSTEMATIC REVIEW

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**Objectives** Systematic Reviews (SRs) are the cornerstone of evidence-informed healthcare decision making. However, they are extremely resource-intensive and commonly take 2 to 3 years to complete. One of the solutions put forward to support