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

Tom Roberts. Royal College of Emergency Medicine, London, UK

10.1136/bmjebm-2019-EBMLive.76

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.

Abstracts

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

Razia Allani, 1Nicole Pitcher, 1Isabelle Bouton. 1Cochrane, Paris, France; 2École des hautes études en santé publique (EHESP), Rennes, France; 3University of Sheffield, Sheffield, UK

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
Sustaining and developing movements, like EBM Live, Choosing Wisely, and Reducing Research Waste are well-intentioned, but are met with varying degrees of success. We need to learn from recent successful social movements that have reached international circulation and had fundamental impact, such as #MeToo and Black Lives Matter. The EBM manifesto’s aim to reduce bias, wastage, error fraud research is driven by a small community of researchers, academics, and publishers, largely from the United Kingdom. What percentage of end users, including researchers, patients, and public, are engaged or even aware of the movement? We must move away from simply raising awareness amongst small communities to co-producing and collaborating with them. Looking at successful social movements within and outside medicine that have generated transformational change and inspired the public, the following themes emerge:

1. Have a clear purpose and vision for the movement. This has to be simple, short, and direct rather than a complicated and detailed plan. This will hook and unify the targeted audience and break down interdisciplinary barriers. (Satell, Harvard Business Review 2016).
2. Use a structured framework to ensure standardisation across the movement. In order to enact change locally, nationally, and internationally, there needs to be clear guidance. For example, the Knowledge-to-Action Cycle, generated by Canadian Institute of Health Research, can be used as a guiding framework to increase the relevance, applicability, and impact of research findings (Field, Implementation Science 2014). This will increase clarity and process within the movement.
3. Training nominated champions will increase uptake of the movement. Nominated champions should undergo sponsored training which will empower them to create a shared vision amongst their teams within hospital, university, or organisation. Formal accreditation, such as the Knowledge Translation Professional Certificate™, or informal opportunities, such as workshops and summer courses run by Evidence Live are a starting point. Cementing awareness can be formalised through the National Institute for Health Research Good Clinical Practice module and local induction for all healthcare and university staff, and not just those involved in research. This will ensure everyone is involved and engaged in the movement.
4. Continuous monitoring and evaluation are necessary for a successful movement. An iterative process will allow strategy review, monitoring of activities, and amendments to be made in line with the movement’s values. Sustaining a movement in medicine is difficult. For real change to occur, the whole community needs to be engaged. Evidence Live is an inspiring conference with an ambitious manifesto, ultimately aiming to improve patient care. Unfortunately, we are still failing to reach the majority of the medical community. To do this, we need to learn from other social movements to understand their roadmaps and how to improve ours. This will enable movements like Evidence Live to be successfully implemented into practice.

Method This review is based on the Preferred Reporting Items for Systematic review and Meta-Analyses (PRISMA-P) Guidelines. We reviewed all published articles, grey literature, reports and software manuals that evaluate automated and semi-automated tools that support healthcare-related SRs, from screening to write-up. Only tools that are fully developed were eligible for inclusion.

The systematic review toolbox (SR ToolBox), PubMed, Google and Google were systematically searched. Titles, abstracts and full articles were reviewed for inclusion independently by two reviewers. Data extraction and quality appraisal were undertaken independently by two reviewers, with disagreements resolved by consensus or by arbitration by a third reviewer if necessary.

Tools’ characteristics and performance metrics reported in the included studies were extracted and tabulated. To enable comparisons, tools were grouped according to stages of SR they support, and the type of algorithms deployed in them.

Results This review is currently in the data extraction stage and will be completed by the first week of June 2019. This presentation will focus on the evidence available on automated tools that support the screening, data extraction, quality appraisal and write-up phases of SRs. For each phase, we will present data on the number of tools that have been developed and the number of studies that have evaluated them. We will discuss the strengths and limitations of the methods and standards used to evaluate existing tools, and implications for future research and SR practice.

Conclusions This review constitutes an important step in easing the transition of SR production from a primarily manual process to a semi-automated one. It will inform current collaborative efforts aimed at the development of evidence-informed integrated automated systems for conducting high-quality SRs in healthcare research.