

Conclusions Vaccine injury compensation is implemented to protect the supply of vaccines and improve vaccine confidence to encourage high vaccination rates among the general population. A secondary objective is to provide timely access to compensation in the event of injury from a vaccine. Schemes that have removed the need to prove negligence and apply a low standard of proof provide timely access to compensation; these schemes also reduce administrative, legal and overhead costs and improves relations between claimants and the medical profession. Schemes that apply a higher standard of proof and enact a cumbersome claim handling and adjudication process delay timely access to compensation and reduce the number of awards. Schemes vary in the level of public awareness and support that they enjoy.

7 SHOULD THE GOVERNMENTS FUND ASSISTED REPRODUCTIVE TECHNOLOGIES?

Gerald O’Nolan, Jean Long, Martin Keane, Louise Farragher. *Health Research Board, Dublin, Ireland*

10.1136/bmjebm-2019-EBMLive.15

Objectives Access to assisted reproductive technologies (ART) for those seeking treatment is dependent on their ability to afford such treatments. A combination of out-of-pocket payment, public funding and the availability of health insurance determines the uptake of ART services in most countries. The variation between countries ranges from public funding with some limitations and/or small out-of-pocket payments (Australia, Belgium, France, Slovakia, Slovenia, Spain and Israel) to no funding of any kind (Malta, Switzerland and the USA).

In Ireland, such technologies have not yet been subject to government regulation or funding. The Irish Government requested the Health Research Board to investigate the costs and benefits associated with the public funding of ART for the funder, provider, and service user.

Method The methods employed to undertake this work followed the principles of a systematic review, including searching, screening, applying inclusion/exclusion criteria, data extraction, quality appraisal, and synthesis.

Results A benefit to public funding for ART in the literature reviewed includes improving access to treatment by reducing out-of-pocket payments.

Clinical benefits can also reduce the pressure on public spending. In some countries, public funding is contingent on patients and clinicians agreeing to restrict the number of embryos transferred in one cycle: single embryo transfer (SET). Where SET has occurred, there has been a significant reduction in multiple pregnancies without causing a decrease in cumulative pregnancy rates, as well savings to the public health system.

The literature outlines inferred benefits to wider society when public funding for ART is approved. In some countries, ART is seen as a social investment towards arresting the declining fertility rate, and overall future revenue receipts. Research indicates for women aged over 40 years, live births are substantially less likely following ART treatments and the financial cost of achieving a live birth is substantially more.

Conclusions Every country has a different approach to ART and the likely funding mechanism may emerge through trial and error. State funding with regulation can provide a cost-

effective solution for patients who are subfertile and for wider society.

8 AN INTERNATIONAL NETWORK FOR EVIDENCE-BASED RESEARCH: INTRODUCING THE EVBRES INITIATIVE

¹Jong-Wook Ban, ²Karen Robinson, ³Jennifer Yost, ⁴Caroline Blaine, ⁵Donna Ciliska, ⁶Klara Brunnhuber, ^{7,8}Carsten Juhl, ^{9,10}Robin Christensen, ¹¹Hans Lund. ¹*Evidence-Based Health Care Programme, University of Oxford, Oxford, UK;* ²*Johns Hopkins University School of Medicine, Baltimore, USA;* ³*M. Louise Fitzpatrick College of Nursing, Villanova University, Villanova, USA;* ⁴*EVbRES, Western Norway University of Applied Sciences, Bergen, Norway;* ⁵*School of Nursing, McMaster University, Hamilton, Canada;* ⁶*Clinical Solutions, Elsevier Ltd., London, UK;* ⁷*Institute of Sport Science and Clinical Biomechanics, University of Southern Denmark, Odense, Denmark;* ⁸*Department of Physical and Occupational Therapy, Herlev and Gentofte Hospital, University of Copenhagen, Hellerup, Denmark;* ⁹*Musculoskeletal Statistics Unit, The Parker Institute and Department of Clinical Research, SDU, Odense, Denmark;* ¹⁰*Department of Rheumatology, Odense University Hospital, Odense, Denmark;* ¹¹*Centre for Evidence-Based Practice, Western Norway University of Applied Sciences, Bergen, Norway*

10.1136/bmjebm-2019-EBMLive.16

Objectives Research on research has shown that many redundant studies would have been avoided if a systematic review has been conducted prior to starting the new study. These apparently wasteful studies limit funding available for truly important and relevant research, diminish the public’s trust in research, and are unethical. Researchers planning a new study should therefore systematically review existing evidence in order to effectively justify the need for the study. Researchers should also interpret the results and evaluate what the new study adds by systemically analysing existing evidence (i.e. putting new research into context). Unfortunately, researchers fail to systematically review the current evidence when planning a new study and interpreting results.

Method The Evidence-Based Research Network (EBR network: ebrnetwork.org) was created in 2014 to promote evidence-based research - the use of prior research in a systematic and transparent way to inform a new study so that it answers the questions that matter in a valid, efficient and accessible manner. In April 2018, the Evidence-Based Research Network obtained funding from the European Cooperation in Science and Technology (COST) to create the Evidence-Based REsearch (EVBRES). COST is an organization that provides funding for researchers to create a network (called COST Action) that organizes meetings (e.g. workshops, conferences), support short term scientific visits, develop training schools, and carry out dissemination activities. EVBRES (evbres.eu), COST Action Network (CA-17117), is establishing an international network to encourage researchers and other stakeholders such as patients, ethics committee members, funders, and journal editors to use an EBR approach when conducting or supporting research.

Results EVBRES officially commenced in October 2018 with participations from researchers in more than 35 European COST Action member countries, in addition, more than 10 international partner countries were also involved. We held the first EVBRES workshop at Bergen, Norway in February 2019 and organized four working groups to carry out the mission of EVBRES. Working Group 1 will describe key stakeholders’ role, such as ethic committees, funding agencies, journals and patient groups, in solidifying the evidence-based research approach. Working Group 2 will develop and organize activities aimed at educating researchers on how to systematically incorporate existing evidence when preparing new

research. Working Group 3 aims to identify and prioritize tools that can improve efficiency in producing and updating systematic reviews. Working Group 4 will explore methods to detect redundant research as well as measurable outcomes of implementing evidence-based research approach that are relevant to researchers and key stakeholders.

Conclusions The EVBRES initiative, a COST Action Network, was initiated by the EBRNetwork, and successfully launched and is funded to carry out activities until October 2022. The EBRNetwork and its work will play a crucial role in increasing systematic use of existing evidence when planning new research and interpreting the results. These initial steps will lay the firm foundations for future endeavour to promote evidence-based research.

9 HIERARCHICAL ARRANGEMENT OF SCHOLARLY AND NOVEL INFORMATION (HASANI): A DIGITAL PLATFORM TO SYNTHESIZE RESEARCH EVIDENCE IN REAL TIME

¹Izhar Hasan, ¹Uzair Hasan, ²Babar Rao, ¹Salman Habib Abbasi. ¹MDACCESS, Princeton, USA; ²Robert Wood Johnson Medical School, Somerset, USA

10.1136/bmjebm-2019-EBMLive.17

Objectives Our main objective is to create a real time evidence generating platform for the most up-to-date evidence-based practice with following specific goals.

1. Implement a digital curation framework to automate knowledge extraction and summarization of published and unpublished publications
2. Implement a critical appraisal process at the time of publication submission to journals.
3. Implement an integrated visual abstract application for authors to submit critically appraised elements of the study
4. Implement an automated data analytical interface to generate automated systematic reviews and meta-analysis
5. Implement a platform API for publishers to automatically summarize their published papers for automated systematic reviews and meta-analysis.

Method We designed and implemented a platform for automating the research evidence synthesis. The application is implemented as SaaS-based model in angular JS framework with Application program interface (API) to integrate with online journals. This creates an opportunity to synthesize research evidence in real time for a given research topic, population or territory. Each publisher or organization can customize templates for various study types to create automated systematic review, meta-analysis, and qualitative review studies

Results A beta testing of our platform (HASANI) has been conducted to display the automated article summary creation from critical appraisal elements. Preliminary beta study results confirmed that our framework was efficient in identifying, curating and synthesizing the literature article summary of a given article to pool against similar studies. This strategy not only saves time and money in synthesizing new research evidence, but also provides a platform for insuring a quality research publication as it eliminates a human bias and errors. A real time automated pooling of similar research studies

expedites a creation of automated systematic reviews generation which addresses the research publication overload in coming years

Conclusions We have designed and implemented a web-based automated literature reading and curating framework for research evidence synthesis in real time. Our initial findings provide supportive evidence of automating the literature curating and extraction strategy. In addition, it provides an excellent future digital curation strategy for journal publishers to streamline the synthesis of research evidence by requesting authors to submit the pre-appraised critical elements of the relevant study types. This strategy provides a reassurance to academic audience that published articles have been formally appraised to be included in building a research evidence towards a particular topic or subject. More importantly, a real-time knowledge synthesis from this strategy will provide a more robust and up-to-date practice guidelines for clinicians to focus on interpretation of research findings for applicability in their patient population, rather waiting for new systematic review and meta-analysis creation.

10 RCTS: WHAT ELSE? TEACHING RESEARCH METHODS WITH A CAFFEINE BOOST

Luigia Scudeller, Cristina Capittini, Annalisa De Silvestri, Catherine Klersy, Valeria Musella, Carmine Tinelli. *Scientific Direction, Fondazione IRCCS Policlinic San Matteo, PAVIA (PV), Italy*

10.1136/bmjebm-2019-EBMLive.18

Objectives Randomized Controlled Trials are complex undertakings, involving many different abilities, skills, knowledges and notions, some of which can only be acquired by direct experience. Objective of this teaching experiment was to assess short-term learning efficacy of a simulated RCT on knowledge of methodological issues involved in clinical research.

Method The final exam of our 400-hours course on Methods in Biomedical Research, was a 2-days simulation of a randomized placebo-controlled trial with 30 ‘patients’ in 5 ‘clinical centres’ (Africa, America, Asia, Europe, Oceania), in three editions (2015–2017, final sample size = 90). The study question was on efficacy of caffeine on cardiovascular endpoints, and safety. Participants were randomized to standard vs decaffeinated Italian espresso in a blinded fashion, and were guided to actively perform:

Day 1, morning: study design, CRF design, trial registration

Day 1, afternoon: implementation (including obtaining consent, randomization, etc)

Day 2, morning: statistical analysis

Day 2, afternoon: study report (CONSORT)

Knowledge was tested pre- and post-intervention by means of a standardized questionnaire, based on the CONSORT checklist, scoring 0–30.

Participants were also blind to coffee manufacturer, and were allowed the following concomitant medications: sugar, milk, biscuits, or chocolates.

The trial was not funded by a coffee maker.

Results Trial participants improved their median knowledge of RCTs methods from 15 points (IQR 10–24) to 28 points