Abstract Book

2nd Evidence-Based Research Conference: The place of EBR in the Evidence Ecosystem

27th – 28th September 2021

evbres
Evidence-Based Research

The Evidence-Based Research Network

IF I HAVE SEEN FARTHER, IT IS BY STANDING ON THE SHOULDERS OF GIANTS
- ISAAC NEWTON

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Introduction

The theme of the 2nd Evidence-Based Research (EBR) Conference - "The place of Evidence-Based Research in the Evidence Ecosystem" - brought together a broad range of key EBR actors and stakeholders (including researchers, funding agencies, research regulators, editors and reviewers, educators, patients and consumers) to discuss what role EBR might play in the different areas of the evidence ecosystem, respectively in the generation, synthesis and translation of knowledge.

The overall theme was split into 7 areas for abstract submission: Stakeholders' role in EBR; Challenges and success stories in the implementation of EBR; Local initiatives in EBR/Practice/Service development using EBR; Innovative learning methods in EBR; Efficient production and updating of SRs (categories of stakeholders may include librarians, health informatics etc.; artificial intelligence, rapid review methods); Alternative pathways for synthesizing evidence; Meta-research related to EBR.

The successful abstracts, included in this book, will be presented online at the Conference on 27th-28th September 2021 in one of two categories:

1. Oral presentation: Presentations in this category are 20 minutes long in total, allowing time for audience questions.
2. "Poster" presentation: Presentations in this category are 10 minutes long in total, allowing time for audience questions.

We would like to thank everyone for their abstract submissions.

The 2nd EBR Conference 2021, Scientific Committee

Raluca Sfetcu (Conference chair, EVBRES Working Group 3)

Lisa Affengruber (Conference vice-chair, EVBRES WG 3)

Karen Robinson (representing non-European EBR Network)

Caroline Blaine (Science Communication Manager EVBRES)

Klara Brunnhuber (vice-chair EVBRES) Elsevier, London, UK

Hans Lund (chair EVBRES) Western Norway University of Applied Sciences, Norway

Robert Prill (EVBRES WG1)

Tina Poklepovic (EVBRES WG2)

Wiktoria Lesniak (EVBRES WG4)

Conference Program of Abstract/Poster Sessions

Time (CET)		**Monday, 27 September 2021 DAY 1**
09:40 - 11:00		**Abstract / Poster Session 1** Chair: Miloslav Klugar; Co-chair: Michaela Kosticova
	09:40-10:00	*A Systematic Review on the Use of Prior Research in Reports of Randomized Clinical Trials* Yuanxi Jia
	10:00-10:20	*Evidence-based research – placing research in the context of existing knowledge: a scoping review* Hans Lund
	10:20-10:40	*Key Components to inform Study Design are rarely used - a Systematic Review and Meta-analysis of Meta-research Studies* Birgitte Nørgaard
	10:40-10:50	*The Kavli Trust Programme on Health Research: A funding program developed and designed to enhance evidence-based research and minimize research waste* Ida Svege
	10:50-11:00	*A 'Needs Led Research' approach for PhD studies at Oslo Metropolitan University (OsloMet), Norway. Learning from a cohort of PhD candidates and their contribution to the evidence ecosystem* Sally Crowe
11:40 - 13:20		**Abstract Session 2** Chair: Hrund Scheving Thorsteinsson; Co-chair: Joanna Zajac
	11:40-12:00	*Redundant Randomized Trials Are Hurting Patients with Acute Myocardial Infarction: A Comparison between the China Mainland and the United States* Yuanxi Jia
	12:00-12:20	*Assessment of Research Waste in the Randomized Clinical Trials Conducted in Mainland China: Cross-Sectional Study* Yuanxi Jia
	12:20-12:40	*Citation analysis for monitoring evidence-based research – a systematic review of meta-research studies* Dawid Pieper
	12:40-13:00	*Assessing Risk in Research Studies: EVBRES Research Ethics Committees Survey* Jennifer Durning
	13:00-13:20	*Evidentiary Standards and the Justification of Randomized Clinical Trials: The Case of Hydroxychloroquine Trials for COVID-19* Michel Shamy

Key
Abstract (Oral) 20 min (incl: Q&A)
Abstract (Poster) 10 min (Incl Q&A)

Time (CET)		Tuesday, 28 September 2021 DAY 2
09:30-10:50		**Abstract Session 3** Chair: Liliya Eugenevna Ziganshina; Co-chair: Mersiha Mahmic-Kaknjo
	09:30-09:50	*Resource use during systematic review production: a scoping review* Barbara Nussbaumer-Streit
	09:50-10:10	*Validating the 2weekSR (2-week systematic review) methods on larger and more complex reviews: a case series of 10 systematic reviews* Anna Mae Scott
	10:10-10:30	*Improving efficiency of systematic reviews production through an exploration of available methods and tools – a scoping review* Lisa Affengruber
	10:30-10:50	*A user-friendly software application to improve systematic review screening process functionality and expedite transforming research into decision-ready evidence* Eitan Agai
11:40-13:20		**Abstract / Poster Session 4** Chair: Rene Spijker; Co-chair: Lisa Affengruber
	11:40-12:00	*Rapid answers to important clinical questions: the role of COVID-evidence within the evidence ecosystem* Julian Hirt
	12:00-12:20	*Why systematic review production and update processes are resource-intensive: results from a qualitative study* Raluca Sfetcu
	12:20-12:30	*Barriers and facilitators for evidence-based investigator-initiated clinical trials: a qualitative study with Swiss stakeholders and international funders* Stuart McLennan
	12:30-12:40	*Making Science Computable: Developing Tools to Facilitate a Systematic Meta-Review of Steroid Therapy for COVID-19* Joanne Dehnbostel
	12:40-12:50	*Making Science Computable: Evidence-Based Medicine on Fast Healthcare Interoperability Resources (EBMonFHIR)* Andrey Soares
	12:50-13:00	*Completeness of reporting of studies on evidence-based health care (EBHC) e-learning interventions: methods study using the GREET checklist* Malgorzata Bala
	13:00-13:10	*Patients and Caregivers as Partners in the Evidence Based Research Generation EcoSystem* Janice Tufte
	13:10-13:20	*Engagement with transparent and open science standards in the policies of selected medical and health sciences journals before the Covid-19 pandemic: a cross-sectional evaluation* Antoni Gardener

Key
Abstract (Oral) 20 min (incl: Q&A)
Abstract (Poster) 10 min (Incl Q&A)

Oral Presentations

#9 Resource use during systematic review production: a scoping review

Barbara Nussbaumer-Streit[1], Moriah Ellen[2,3], Irma Klerings[1], Raluca Sfetcu[4,5], NIcoletta Riva[6], Mersiha Mahmić-Kaknjo[7,8], Georgios Poulentzas[9], Patricia Martinez[10,11], Eduard Baladia[10], Liliya Ziganshina[12], Maria Marques[10], Luis Aguilar[10], Angelos Kassianos[13,14], Geoff Frampton[15], Anabela Silva[16], Lisa Affengruber[1], Rene Spjker[17,18], Thomas James[19], Rigmor Berg[20], Meropi Kontogiani[21], Monica Sousa[22,23], Christos Kontogiorgis[9], Gerald Gartlehner[1]

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Aim

We aimed to map the resource use during systematic review (SR) production and reasons why steps of the SR production are resource intensive.

Methods

Within the EVBRES Cost Action (Working Group 3) we conducted this scoping review. An information specialist searched multiple databases (e.g., Ovid MEDLINE, Scopus) and implemented citation-based and grey literature searching. We employed dual and independent screenings of records at the title/abstract and full-text levels and dual and independent data extraction.

Results

We included 34 studies. Thirty-two reported on the resource use—mostly time; four described reasons why steps of the review process are resource intensive. Study selection, data extraction, and critical appraisal seem to be very resource intensive, while protocol development, literature search, or study retrieval take less time. Project management and administration required a large proportion of SR production time. Lack of: experience, domain knowledge, use of collaborative and SR-tailored software, and good communication and management can be reasons why SR steps are resource intensive. The Journal of Clinical Epidemiology has accepted a manuscript with detailed results for publication in May 2021.

Conclusions

Resource use during SR production varies widely. Areas with the largest resource use are administration and project management, study selection, data extraction, and critical appraisal of studies.

#10 Evidentiary Standards and the Justification of Randomized Clinical Trials: The Case of Hydroxychloroquine Trials for COVID-19

Michel Shamy[1,2], Brian Dewar[2], Vignan Yogendrakumar[3], Mark Fedyk[4]

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Aim

We sought to map the landscape of randomized clinical trials (RCTs) investigating hydroxychloroquine (HCQ) for SARS-CoV-2 in order to draw conclusions about how RCTs have been conducted in the pandemic environment and offer potential regulatory recommendations.

Methods

We identified and captured data related to registered studies using HCQ to treat SARS-CoV-2 registered with the publicly available National Institutes of Health (NIH) Clinical Trials Registry between February and November 2020. We then analyzed this data in relation to ethical and epistemic principles used in the justification of RCTs.

Results

From February to November 2020, 206 studies investigating HCQ in SARS-CoV-2 were registered with the NIH Clinical Trials Registry. As of November 2020, 135 studies were listed as ongoing, 22 have been completed, and 46 were suspended or terminated. Reasons for suspension or termination included difficulties with patient recruitment (n=9), emerging evidence showing a lack of benefit of HCQ (n=7), and recommendations by regulatory boards to discontinue (n=10).

Conclusions

Over 200 RCTs of HCQ were launched in the first months of the pandemic, many of which were redundant and potentially unethical. The medical community appears to have responded very quickly to political interest in HCQ, while responding much more slowly to the evolving medical evidence of its lack of efficacy. Several lessons regarding RCT design and regulation can be drawn from this case.

#11 Key Components to inform Study Design are rarely used - a Systematic Review and Meta-analysis of Meta-research Studies

Birgitte Nørgaard[1], Eva Draborg[1], Jane Andreasen[2,3], Carsten Bogh Juhl[1,4], Jennifer Yost[5], Klara Brunnhuber[6], Karen Robinson[7], Hans Lund[8]

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Aim

The aim of this systematic review (SR) and meta-analysis was to identify and synthesize results from meta-research studies assessing if and how authors of original studies in clinical health research use SRs when designing new studies.

Methods

We searched MEDLINE, Embase, and the Cochrane Methodology Register for meta-research studies. Primary outcome was percentage of original studies using SRs to design their study. Results are presented both as a narrative synthesis and a random effects meta-analysis performed to identify the mean proportion of studies using systematic reviews when designing a new study. SR registration number https://osf.io/cnkym/

Results

Ten studies were included. The use of an SR to inform the design of new clinical studies varied between 3.7% and 100%, with a mean percentage of 44%. The number of components of the design in which information from previous systematic reviews was used, varied from three to 11 with justification of treatment comparison as the component most frequently informed by previous SRs.

Conclusion

The field of clinical health research is characterized by a pronounced degree of variability regarding the extent to which SRs are used to guide the design and also in how SRs are used. An evidence-based research approach towards research design, including a systematic use of previous SRs, when new clinical health studies are designed is necessary to decrease research redundancy and increase end-user value.

#13 Validating the 2weekSR (2-week systematic review) methods on larger and more complex reviews: a case series of 10 systematic reviews.

Anna Mae Scott, Justin Clark, Paul Glasziou

Affiliation (all authors): Bond University, Robina, Australia

Aim

To describe our experiences conducting 10 systematic reviews using the 2weekSR (2-week systematic review) methods.

Methods

In 2019, we conducted the first 2weekSR (J Clin Epi 2020), under the following conditions: a small team of 4, very experienced systematic reviewers, in close physical proximity, addressing an intervention question, and including only RCTs. Those conditions do not reflect many other types of systematic reviews, nor the conditions under which they are conducted. We have therefore subsequently tested whether the 2weekSR methods are usable for other systematic review types and more complex conditions.

Results

We applied 2weekSR methods to systematic reviews of prevalence and adverse events; systematic reviews involving a mix of RCT and observational studies; teams of up to 14 people; a mix of proximate and remote team-members, and teams of varying experience levels (including novice reviewers). The 10 2weekSRs ranged in size from 5 to 81 included studies, and required from 5 workdays (1 week) to 18 workdays (3.5 weeks) to complete, confirming the applicability of 2weekSR methods but also raising issues that require further research and development.

Conclusions

The 2weekSR method is adaptable to different types of systematic review questions and sizes, mixed experience levels, and can be used with overseas team-members. Time to complete increases for larger systematic reviews but continues to offer considerable savings over traditional approaches.

#16 Evidence-based research – placing research in the context of existing knowledge: a scoping review

Hans Lund[1], Karen A. Robinson[2], Ane Gjerland[1], Hanna Nykvist[3], Thea M. Drachen[4], Robin Christensen[4], Carsten B Juhl[4], Gro Jamtvedt[5], Monica W. Nortvedt[1], Merete Bjerrum[6], Matt Westmore[7], Klara Brunnhuber[8]

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Aim

To examine the extent, variety, and characteristics of meta-research on the topic of Evidence-Based Research (EBR) in order to identify any research gaps that could be covered by future meta-research studies.

Methods

We searched MEDLINE (OVID), Embase (OVID), and the Cochrane Methodology Register. Data related to the publication, the medical field, design and methods and results were extracted by two independently reviewers. Data were descriptively analyzed and presented in tables and figures.

Results

49 studies were included, published between 1981 and 2018 with 82% published after 2002. Studies evaluated the presence of study justification bias, study design bias, end user perspective bias, and results interpretation bias. Most of the studies considered study justification bias in primary studies (89%). Half of the studies evaluated researcher's behavior within a specific medical area (51%). Few studies used funding and research ethic committee proposals and protocols as sources for the evaluation, and almost none used surveys or qualitative studies to evaluate any of the biases.

Conclusion

49 studies have in different ways evaluated if researchers used an EBR approach when justifying and designing new studies and when interpreting new results in the context of existing evidence. However, the scoping review clearly indicates a number of research gaps for further meta-research to be performed in order to improve knowledge about research practice.

#23 Assessing Risk in Research Studies: EVBRES Research Ethics Committees Survey

Jennifer Durning[1,2], Simon Kolstoe[3], Jennifer Yost[1], Silviya Aleksandrova-Yankulovska[4]

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Aim

As an initiative of the EVidence-Based RESearch (EVBRES) Implications for Ethics Committees Working Group, the aim of this study was to establish a scale of the risk continuum for research designs from the perspective of the individuals involved with the ethical conduct of research.

Methods

Convenience and snowball sampling methods recruited participants representative of researchers, research ethics committee members, and individuals with an interest in research ethics. A 20-item online survey was implemented (19 multiple choice and 1 open-ended questions). Participants were asked to rate the level of risk they thought was characteristics of different research designs [1 (not at all risky) to 10 (extremely risky)].

Results

283 participants completing the survey were primarily from the United Kingdom (51.1%) who considered themselves to be both a researcher and research ethics committee member (44.%) and whose job description explicitly includes conducting research (50.9%). Phase I and Phase II studies were identified to be the most risky and anonymous secondary data analysis and non-intrusive questionnaire studies were identified as the least risky research designs.

Conclusions

With evidence of a continuum of risk, there is potential to discern how the use of evidence syntheses by researchers, including the range of rigor of evidence syntheses, is important to research ethics committees when approving the conduct of new studies based on riskiness of the design.

#24 Citation analysis for monitoring evidence-based research – a systematic review of meta-research studies

Birgitte Nørgaard[1], Matthias Briel[2], Stavri Chrysostomou[3], Danijela Ristic Medic[4], Sandra Buttigieg[5], Ele Kiisk[6], Livia Puljak[7], Malgorzata Bala[8], Tina Poklepovic Pericic[9], Wiktoria Lesniak[8], Joanna Zajac[10], Hans Lund[11], Dawid Pieper[12]

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Aim

Citation analysis, defined as the examination of the frequency, patterns, and graphs of citations, is a potential way to monitor an evidence-based research (EBR) approach. The aim of this systematic review (SR) was to identify characteristics and application of citation analyses in the context of EBR.

Methods

We searched multiple bibliographic databases for meta-research studies. The initial search was performed in June 2015 with an update in May 2021. Study selection, data extraction, and risk of bias (RoB) assessment was performed independently by two reviewers. Studies were grouped by their main focus and patterns across the studies were identified. Results are summarized in a narrative synthesis. Systematic review registration: https://osf.io/8759p/

Results

We included 15 studies published between 2011 and 2018. Overall, included studies had a low RoB. The number of publications analyzed in the studies varied considerably (range: 27-622). Ten studies examined whether SRs were cited in trials and focused on the justification of new research (n=10), followed by designing new studies (n=8) and putting research into context (n=5). Citation analyses are characterized by citation of SRs or MAs, and to some extent citation of previous trials or guideline adherence.

Conclusions

There is a high methodological heterogeneity in citation analyses. More investigations are needed to improve their design in order to serve for monitoring an EBR approach.

#25 Authors hardly use existing evidence to contextualize new results - a systematic review and meta-analysis of clinical health meta-research studies*

Eva Draborg[1], Jane Andreasen[2,3], Birgitte Nørgaard[4], Carsten Bogh Juhl[5,6], Jennifer Yost[7], Klara Brunnhuber[8], Karen A. Robinson[9], Hans Lund[10]

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Aim

The aim of this systematic review and meta-analysis was to identify and synthesize results from meta-research studies examining if and how studies within health care use systematic reviews to place their results in context of earlier, similar studies.

Methods

We searched MEDLINE (OVID), EMBASE (OVID), and the Cochrane Methodology Register. We included meta-research studies reporting the use of systematic reviews to place results of clinical studies in the context of existing studies. Data was synthesized using narrative synthesis and random effects meta-analysis was performed to estimate the proportion of studies placing their results in the context of earlier studies. SR registration number https://osf.io/8gkzu/

Results

We included ten meta-research studies, representing 1,114 primary studies. The mean percentage of original studies within these meta-research studies placing their results in context of existing studies was 28% (95% CI 20% to 36%). Only one of the studies integrated results in a meta-analysis, while three integrated their results within a systematic review; all others simply cited a systematic review.

Conclusion

Our systematic review found a low rate and great variability in the use of systematic reviews to place new results in the context of existing studies. Even though a possible positive time trend is indicated, improvement is still needed in researchers use of prior research in a systematic and transparent way.

*NOTE: This abstract was withdrawn from the final conference program due to technical reasons.

#27 Why systematic review production and update processes are resource-intensive: results from a qualitative study

Raluca Sfetcu[1,2], Lisa Affengruber[3,4], Liliya Eugenevna Ziganshina[5], Barbara Nussbaumer-Streit[3], Moriah Ellen[6,7]

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Aim

Systematic reviews are labour-intensive and time-consuming. The objective of our study was to understand why some steps in the systematic review production and update processes are perceived as resource-intensive by experienced reviewers, who have actively contributed to the production or update of more than five systematic reviews on health-related topics.

Methods

We conducted 32 in-depth, semi-structured interviews with experienced reviewers between February-November 2020 via Zoom. The interviews included questions about previous experience with conducting and updating SRs, perceived reasons why each step of the SR process might be resource-intensive, and potential improvements. Interviews were audio-recorded, transcribed, coded, and thematically analyzed.

Results

We have found that practices differ greatly in terms of the tools and methods employed based on the topic, the resources available, and expertise. The uptake of tools that might increase the efficiency of the systematic review production is limited by factors such as the fee required to access the tools, the reviewer's willingness to adopt new tools, or the lack of information about available tools.

Conclusions

This qualitative evaluation of systematic review research efforts and challenges can highlight the current differences in tools and methods employed when conducting systematic reviews and contribute to the wider dissemination of best practices.

#31 Redundant Randomized Trials Are Hurting Patients with Acute Myocardial Infarction: A Comparison between the China Mainland and the United States

Yuanxi Jia[1], Jun Liang[2], Wenyao Wang[3], Jinling Tang[4], Karen Robinson[1]

[1]Johns Hopkins University, Baltimore, USA. [2]Tongzhou Blood Station, Beijing, China. [3]National Cardiovascular Disease Center, Beijing, China. [4]Shenzhen Institute of Advanced Technology, Shenzhen, China

Aim

To compare the extra major adverse cardiac events (MACEs) that were experienced by patients who did not receive standard therapy against acute myocardial infarction (AMI) in redundant randomized trials (RCTs) between China and the United States (US).

Method

RCTs were eligible if they compared standard therapy with placebo or blank control among patients with AMI. A RCT was redundant if initiated one year after the standard therapy had been strongly recommended by clinical practice guidelines. The standard therapy included reperfusion, dual antiplatelet therapy, anticoagulation, statins, and angiotensin-converting enzyme inhibitors. The journal articles were retrieved from bibliographic databases.

The primary outcome was the extra MACEs that were experienced by patients who were deprived of standard therapy in the control group. MACEs included death, relapsed MI, revascularization, stroke, heart failure (HF), and angina pectoris (AP).

Result

Up to June 2021, 765 redundant RCTs were identified from China while no were found from the US. There were 35,244 patients who were treated in the control group. 2,972 (95%CI: 2,854 to 3,099) extra MACEs were reported by 329 redundant RCTs, including 1,088 (999 to 1,155) deaths, 522 (473 to 578) relapsed MIs, 46 (32 to 65) revascularizations, 61 (42 to 78) strokes, 599 (538 to 656) HFs, and 659 (590 to 720) APs.

Conclusion

The sharp contrast with the US highlighted the urgent need for stakeholders in China to protect patients.

#32 A Systematic Review on the Use of Prior Research in Reports of Randomized Clinical Trials

Yuanxi Jia, Shahnaz Khan, Karen Robinson

Affiliation (all authors): Johns Hopkins University, Baltimore, USA

Aim

To assess the use of prior research evidence in randomized clinical trials (RCTs).

Method

We retrieved journal articles of eligible studies from PubMed. Eligible studies were defined as those that provided empirical and quantitative evidence on the use of prior existing research evidence in a cohort of RCTs addressing the same research question.

Two co-primary outcomes were defined: (1) Prior Research Citation Index (PRCI), calculated as the number of cited RCTs divided by the number of RCTs eligible to cite; (2) Sample Size Citation Index (SSCI), calculated as the number of participants in cited RCTs divided by the number of participants in RCTs eligible to cite. Random-effect meta-analyses were performed on the co-primary outcomes.

Result

The initial search conducted in June 2018 had identified three eligible studies including three cohorts of RCTs. An updated search performed in March 2021 did not add new ones.

A total of 1,894 RCTs from three cohorts were used for estimating PRCI. The overall PRCI estimated by meta-analysis was 0.22 (95%CI 0.19 to 0.25).

A total of 1,632 RCTs from three cohorts were used for estimating SSCI. The overall SSCI estimated by meta-analysis was 0.22 (95%CI 0.13 to 0.33).

Conclusion

Only 22% of prior RCTs were cited in the following RCTs, while only 22% of participants recruited in prior RCTs were cited in the following RCTs. Researchers should appreciate and cite prior evidence in a more comprehensive manner.

#33 Assessment of Research Waste in the Randomized Clinical Trials Conducted in Mainland China: Cross-Sectional Study

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Aim

To estimate the mismatch between randomized clinical trials (RCTs) and the corresponding disease burden in mainland China.

Methods

This was a cross-sectional study among RCTs conducted in mainland China and published in 2019. A random sample of 12,344 RCTs retrieved from bibliographic databases was analyzed for the representation of disease burden.

The representation of disease burden was evaluated by (1) estimating the correlation between the disability-adjusted life years (DALY) and the number of corresponding RCTs, and (2) comparing the proportion of DALY and the proportion of corresponding RCTs.

Results

A total of 111,363 (95%CI: 110,353 to 112,263) RCTs conducted in mainland China were published in 2019, which enrolled 12,053,941 (11,586,171 to 12,694,711) participants. Only 1.2% were published in English; 0.6% reported registration.

DALY was moderately correlated with the number of RCTs [ρ=0.66 (95%CI: 0.56 to 0.74)]. The ten most overemphasized diseases accounted for 34.4% of the RCTs and 7.3% of DALY; the ten most overlooked diseases accounted for 22.6% of the RCTs and 48.3% of DALY.

Conclusions

The mismatch with disease burden led to diminished values and research waste among RCTs conducted in mainland China.

#34 A user-friendly software application to improve systematic review screening process functionality and expedite transforming research into decision-ready evidence

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Aim

Develop a user-friendly software application to improve systematic review screening process functionality and expedite the generation of spreadsheets such as evidence maps.

Methods

With a modern user interface, mobile support, and a flexible workflow that intelligently automates tasks such as deduplication, identifying possible non-RCT articles, and highlighting keywords, PICO Portal uses Machine Learning (ML) and Natural Language Processing (NLP) algorithms to prioritize articles likely to be included. A tagging function to annotate articles using free vocabulary coupled with a note-sharing ability allows reviewers to communicate and create codes to document study or article characteristics; codes can be created a priori or as needed. We tested functionality screening over 11,000 articles on transitioning children/youth with special healthcare needs from pediatric to adult health care. We simultaneously built an evidence map using the tagging function to code population, intervention, and study design characteristics of interest.

Results

Even with added clicks for tagging, title/abstract screening efficiency was increased by an average of 30%. Further, 22% of articles were excluded using ML/NLP-based exclusion. A preliminary evidence map was available upon completion of the first screening of title/abstract.

Conclusion

PICO Portal has the potential to increase efficiency and accelerate research of diffuse literature sets with difficult to specify concepts.

#36 Rapid answers to important clinical questions: the role of COVID-evidence within the evidence ecosystem

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Aim

The COVID-evidence database provides a comprehensive overview of RCTs on interventions to treat or prevent COVID-19. We aim to describe the COVID-19 trial ecosystem and provide rapid answers to important clinical questions.

Methods

Trial registries, literature databases, and preprint servers are searched on a weekly basis for eligible RCTs. We use a multi-method approach combining peer-reviewed search strategies, automated identification and extraction of search results, and quality control through expert review. In addition to publicly available data, we contacted clinical trialists from ongoing, completed, or discontinued RCTs and used unpublished evidence.

Results

We initiated descriptive studies on the COVID-19 clinical research agenda highlighting a general lack of research coordination indicated by a large overlap of small trials, few non-pharmacological interventions, and low recruitment rates. Our collaborative meta-analysis showing increased mortality with hydroxychloroquine is a promising example of global collaborations in evidence synthesis with clinical trialists (similar projects are underway for convalescent plasma and fluvoxamine).

Conclusions

The monitoring of COVID-19 RCTs helps to (i) highlight recruitment challenges and lessons learned of the COVID-19 research agenda, (ii) identify accumulation of evidence on clinical questions, and (iii) create synergies between review teams and clinical trialists for efficient and timely systematic reviews.

#41 Improving efficiency of systematic reviews production through an exploration of available methods and tools – a scoping review

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Aim

The primary objective is to conduct a scoping review to explore evaluated and fully developed methods and tools used to improve the efficiency of systematic review (SR) production. The second objective is to map identified methods and tools against various context factors.

Methods

We conducted searches in Ovid, Embase, Scopus and Web of Science from 1997 for methods and from 2005 for tools to November 2020. Two reviewers performed study

selection independently. One reviewer is performing data abstraction, which a second one is checking. Two reviewers independently will assess the quality and applicability of included studies and underlying methods/tools by adapting the PROBAST (Prediction model study Risk Of Bias Assessment) Tool. We will summarize the results narratively and categorize them according to the steps of the SR process. We plan to map methods and tools against various contexts of evidence-synthesis (e.g. clinical/policy decision-making, informing new research).

Results

We identified 6314 references, of which 243 full texts were assessed. 70 references met our eligibility criteria. Currently, we are extracting the data of eligible studies. Results will be available at the time of the conference.

Conclusion

As a result of this research project, we will be able to give an overview of evaluated review methods and automation tools used to improve the efficiency of SR production and of their contexts of evidence-synthesis applicability.

Posters

#8 Patients and Caregivers as Partners in the Evidence Based Research Generation EcoSystem

Janice Tufte

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Abstract

Evidence based research prioritization, generation, dissemination and implementation are spaces within the research ecosystem where patients and caregivers can be invited and welcomed into. Patients are foundational to the success of research evidence moving along the virtuous cycle in a relevant understandable manner. Too often patients and caregivers are left out of evidence research opportunities and are not compensated for their work, yet their time and expertise can show up throughout the evidence ecosystem products.

How to find and identify patients or caregivers to participate in evidence research varies widely across the globe and often is dependent if an evidence practice center or institution has embraced evidence informed person centered or patient centered care. Where or what the end point of evidence research is one might discuss with research colleagues, many would suggest that the end point is the quality of care at the clinician-patient level. Some professionals might suggest that research study data is the end point and of course this is true, yet the value is limited and self-serving at times.

Stakeholder involvement is limited in procurement, retainment, and partnership opportunities within the evidence-based research ecosystem. How often have you contextualized points of evidence research during the protocol or study process with a specific case study or individual story? Patient and caregiver voice in the EBR ecosystem is important and underutilized.

#20 A 'Needs Led Research' approach for PhD studies at Oslo Metropolitan University (OsloMet), Norway. Learning from a cohort of PhD candidates and their contribution to the evidence ecosystem.

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Aim

A multidisciplinary team developed a model (Bridgebuilders) for PhD studies that bridge health and social care needs identification, evidence-based practice and research. The model joins up several important concepts in healthcare research; evidence-based practice, evidence-based research, stakeholder, involvement and needs led research. Eight PhD candidates from midwifery, community children's services, physiotherapy, occupational therapy, and nursing were recruited.

Methods

Candidates undertook an exercise with stakeholders to identify research gaps and inform research question prioritization/development. They also planned and completed reviews of existing evidence, focusing on systematic reviews, noting low quality evidence and gaps in relation to their PhD research scope.

Results

This resulted in ongoing PhD studies that are needs led, both in terms of evidence gaps and stakeholder needs. PhD candidates have shared their progress and reflected on the challenges. These ranged from running parallel processes of stakeholder engagement and reviewing evidence, to translating stakeholder needs into questions that fit research frameworks.

Conclusion

We hope that these PhD studies will be more interconnected with clinical, educational and community settings, and reflect current evidence. It is potentially risky for the institution, but also has the potential to change academic culture to be more receptive to user involvement in PhD studies and evidence-based research.

#21 Making Science Computable: Developing Tools to Facilitate a Systematic Meta-Review of Steroid Therapy for COVID-19

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Aim

Systematic reviews are the standard for evidence synthesis, but are time and resource intensive due to reliance on manual methods for search, deduplication, article selection, risk of bias assessment, data extraction and meta-analysis. We introduce efficient methods to make reviews and their components findable, accessible, interoperable, and reusable (FAIR).

Methods

For each step of our Systematic Meta Review of Steroids for COVID-19 (PROSPERO CRD42020226961), we identified or developed fit-for-purpose software. Data was exchanged with Fast Evidence Interoperability Resources (FEvIR.net).

Results

We used PICO Portal for deduplication of search results, computer-aided filtering, and creation of a PRISMA diagram. We created machine-readable citations in FHIR® JSON for each of the articles using Citation Builder and MEDLINE-to-FHIR Converter tools from Computable Publishing. A novel survey instrument was created to facilitate risk of bias assessment. As we extract variable definitions, statistics and certainty of evidence we will create and refine tools to support human-friendly creation of computable evidence.

Conclusions

As we produce a systematic review, the key results are novel methods for the creation and updating of systematic reviews that reduce the time and resources required. This project paves the way for substantial enhancements in efficiency for the Evidence Ecosystem.

#22 Making Science Computable: Evidence-Based Medicine on Fast Healthcare Interoperability Resources (EBMonFHIR)

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Aim

The Health Level Seven International's EBMonFHIR working group has been extending Fast Healthcare Interoperability Resources (FHIR) to provide standards for interoperable data exchange to express biomedical evidence in a machine-readable and computable format.

Methods

Via weekly web meetings and Connectathons, the EBMonFHIR working group has (1) created and refined FHIR Resources to represent evidence from clinical studies and (2) developed tools to assist with the creation and visualization of FHIR Resources. With a pandemic-stimulated demand for timely results and evidence, the working group expanded to COVID-19 Knowledge Accelerator (COKA) with global participation across 12 active working groups.

Results

The EBMonFHIR working group has outlined FHIR Resources for representing Citation, Evidence, EvidenceVariable, and EvidenceReport. Examples of clinical outcomes results, extracted from randomized controlled trials and represented with FHIR resources, are continually created at https://fevir.net in both human and machine-readable formats.

Conclusions

Computable evidence can support relaying EBM components in a manner that is interoperable and consumable by downstream tools and health IT systems to support evidence users (i.e., creators of Clinical Practice Guidelines, Clinical Decision Support tools and Systematic Reviews).

#26 Barriers and facilitators for evidence-based investigator-initiated clinical trials: a qualitative study with Swiss stakeholders and international funders

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Aim

An evidence-based approach in clinical research is often lacking and research on the barriers and facilitators of using systematic reviews to justify and inform the design of a new study is currently sparse. This study aims to examine the practices and attitudes of Swiss stakeholders and international funders regarding evidence-based investigator-initiated clinical trials (IICTs).

Methods

Individual semi-structured qualitative interviews were conducted with a sample of 48 Swiss stakeholders, and a sample of 9 international funders of clinical trials.

Results

Participants universally agreed that a comprehensive understanding of the previous evidence is important, but reported wide variation regarding how this should be achieved. Participants reported that formal systematic reviews are currently not expected before most clinical trials, but most international funders expect a systematic search for the existing evidence. While time and resources were seen by all participants as barriers to systematic reviews, the Swiss research eco-system was reported not to be as supportive of a systematic approach compared to international settings.

Conclusions

This study highlights the need for 1) Swiss funders to raise the requirement for a systematic approach to evidence synthesis for clinical trials, and 2) more explicit requirements from funders to clarify the level of comprehensiveness needed in summarising existing evidence for different types of clinical trials.

#30 Engagement with transparent and open science standards in the policies of selected medical and health sciences journals before the Covid-19 pandemic: a cross-sectional evaluation

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Aim

To evaluate policies on transparent and open science standards in high-ranking medical and health science journals.

Methods

We extracted journal policies of the 20 journals listed in Google Scholar's Top Publications for the health and medical sciences subcategory. For each journal, we audited the level of adherence to the Transparency and Openness Promotion (TOP) by the Centre for Open Science (COS). We also evaluated the level of adherence to the International Committee of Medical Journal Editors (ICMJE) Disclosure of Interest standards. For each standard of the TOP Guideline, a score out of 0-3 was assigned by two independent raters, and verified by a third author if there were discrepancies.

Results

The median TOP score for all eight standards was 6 (IQR: 2-12) out of 24 points. Journals received the lowest scores for the 'Replication studies' standard. Only two journals had provisions for registered reports. Most (18/20) journals fulfilled all ICMJE recommendations for disclosing interests.

Conclusions

The 20 highest-ranking health and medical sciences journals demonstrated limited requirements for transparent and open research practices. Journals should promote open and transparent research to improve the quality of the evidence within the evidence ecosystem. A follow-up study is currently underway to assess the impact of the COVID-19 pandemic on transparent and open science standards in medical and health science journals.

#35 Completeness of reporting of studies on evidence-based health care (EBHC) e-learning interventions: methods study using the GREET checklist

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Background

This work is drawn upon the concept presented at the Global Evidence Summit (GES) 2017, which served as an exploratory pilot for this study.

Aim

We aim to assess whether the completeness of reporting of studies on EBHC e-learning interventions using the guideline for transparent reporting EBHC educational interventions and teaching (GREET) checklist improved over the past 5 years.

Methods

We will conduct a cross-sectional, methodological research-on-research study using the GREET checklist (17 items). Search strategy and inclusion criteria are based on the Campbell review on EBHC e-learning (Rohwer et al 2016), and we will compare studies published before and after 2016.

Results

We are updating the work presented at GES 2017 to include studies published from 2016 onwards and our preliminary searches show over 11000 records. None of the 24 studies included in the pilot met all the GREET checklist items. The items met by at least 75% of studies included brief description of the educational intervention (92%), EBHC content (92%), and description of educational strategies (88%). The items met by up to 25% of studies included: details on instructors (17%), incentives (25%), planned (21%) and unplanned changes (0%), participants attendance (13%), process to verify delivery of materials and strategies as planned (4%), the intervention delivery as planned (0%).

Conclusions

The studies assessing EBHC e-learning up until 2016 poorly reported on their interventions.

#38 The Kavli Trust Programme on Health Research: A funding program developed and designed to enhance evidence-based research and minimize research waste.

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Aim

A large part of health research is avoidably wasted. To reduce waste, funding agencies can demand grant proposals to be justified by existing evidence, engage users in prioritization, and advocate open science. The Kavli Trust developed a funding program using measures to identify and prioritize evidence gaps to enhance the potential relevance of research.

Methods

In 2017, a stepwise approach to identify evidence gaps and prioritize their importance within a pre-defined field was designed. First, experienced researchers searched and reviewed the literature to identify evidence gaps in systematic reviews. Second, relevant users prioritized these gaps according to their importance through an online survey, and the highest ranked gaps were included in the call for proposals. To be eligible, proposals had to address one or more of the evidence gaps. This process was repeated annually.

All proposals underwent peer-review, with special attention paid to the proposals' ability to inform the relevant evidence gap.

Results

The program had annual calls from 2017-2020, each comprising 8-11 evidence gaps. A total of 145 proposals were submitted, and ten Nordic and UK projects were granted a total of EUR 9.5 million. The total cost of running the program was roughly EUR 300,000.

Conclusion

The process is thorough, but still feasible from a funder's perspective. The program has some limitations, but enables the Kavli Trust to support relevant research and avoid research waste.

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