12

BARRIERS AND FACILITATORS TO USING REAL-WORLD DATA IN HEALTHCARE SETTINGS IN LOW-AND MIDDLE-INCOME COUNTRIES: A SYSTEMATIC REVIEW OF QUALITATIVE STUDIES

^{1,2}Ranin Soliman, ²Nia Roberts, ¹Alaa Elhaddad, ¹Wael Eweida, ²Jason Oke, ²Carl Heneghan. ¹Children's Cancer Hospital 57357 – Egypt, Cairo, Egypt; ²University of Oxford, Oxford, UK

10.1136/bmjebm-2019-EBMLive.93

Objectives To determine the barriers and facilitators to using real world data (RWD) in healthcare settings in low-and middle-income countries (LMICs).

Method We conducted a systematic review through searching MEDLINE, EMBASE, Global Health Database and CINAHL. We searched for qualitative studies that address the use of RWD, barriers and facilitators, and its applications in LMICs. Study participants included healthcare settings/organizations in LMICs which collect and use RWD. Primary outcomes are the roles of using RWD, and barriers/facilitators affecting the applications of RWD in healthcare settings in LMICs. Data extraction included contextual and methodological data. Quality of review will be assessed using the CASP Qualitative checklist, and we will follow the ENTREQ checklist for synthesis of qualitative research. Risk of bias will be assessed using GRADE-CERQual to determine the level of confidence from qualitative evidence synthesis. Qualitative data synthesis will be done as narrative/descriptive synthesis of the roles of using RWD in healthcare settings in LMICs; thematic synthesis and conceptual framework of the barriers/facilitators of using RWD and its applications.

Results The review addressed the use of real-world data in healthcare settings in LMICs, according to World Bank classification including 137 countries as per World Bank country classification. Initial search across the four databases showed a total of 2,245 search results. The results were separated into three sets; systematic reviews (n = 27) from 2012 until 2018; primary studies (n = 2,048) from 1988 until 2019; and conference abstracts (n = 170) from 2004 until 2018. Preliminary searches are completed, and piloting of the study selection process was done. Formal screening of results against eligibility criteria is underway and will be presented in conference.

Conclusions The use of RWD in healthcare settings in LMICs is important to make evidence-based improvements in care delivery and health outcomes. Results from this systematic review will address the gap in evidence about what real world data is used in LMICs and the barriers and facilitators to its use. This review will generate qualitative evidence about the roles, barriers and facilitators and real-world applications of using RWD in healthcare settings in LMICs.

13

THE SCIENTIFIC INDEX OF INTEGRITY AMONG AUTHORS OF ARTICLES PUBLISHED IN MAJOR JOURNALS: A NEW METRIC FOR EVALUATING THE SCIENTIFIC ECOSYSTEM

^{1,2,3}Luis Correia, ²Diego Rabelo, ⁴Alessandra Caldas, ²Bruno Góes, ⁴Daniel Medina, ⁵Janine Magalhães, ⁵Denise Matias. ¹Bahiana Medical and Public Health School, Salvador, Brazil; ²Center for Evidence Based Medicine, BAHIANA, Salvador, Brazil; ³Hospital São Rafael, D'Or Institute for Research and Education, Salvador, Brazil; ⁴Federal University of Bahia, Santo Antônio de Jesus, Brazil; ⁵Center for Evidence Based Medicine – BAHIANA, Salvador, Brazil

10.1136/bmjebm-2019-EBMLive.94

Objectives Before proved by evidence, plausible hypotheses are more likely to be false than true. Therefore, one should expect more true negative studies than true positive studies. However, mechanisms such as imprecision, bias in study design, outcome reporting bias, spin and publication bias fabricates a higher prevalence of positive studies. Scientific integrity constitutes a series of mechanisms to prevent such bias towards positive results. Based on this rational, a higher number of negative studies in comparison with positive studies indicates scientific integrity of an author, laboratory, scientific field or journal.

To propose the 'index of integrity' and use it to describe scientific integrity among first authors of papers published in major journals.

Method We selected the first authors of any original article published during the first month of 2019 in three major medical journals: Journal of American Medical Association, The Lancet and British Medical Journal. Lifetime articles published by these individuals as first authors in Pubmed indexed journals were selected and defined as positive or negative according to abstract conclusion.

A positive article was defined as those with (1) a positive conclusion based on the primary analysis or (2) a negative primary conclusion spun into positive by emphasis on secondary positive results. Otherwise, the article was defined as negative. The index of integrity was calculated by the ratio between negative articles (numerator) and positive articles (denominator). An index > 1 is desired as a marker of scientific integrity.

Results A total of 27 authors were selected, with a median of 5 articles (interquartile range = 1 – 7, minimum of 1 and maximal of 55) published during lifetime in Pubmed indexed journals. The prevalence of positive articles was 87% (95% CI = 82% – 91%) and the utilization of spin to positivize the conclusion was present in 7.9% of positive articles.

Sixteen authors (59%) had no negative studies and leading to an index of integrity equal to zero. Only 4 authors (15%) had an index higher than 1. The average estimation for the index of integrity was 0.40 (95% CI = 0.10 - 0.70). There was no association between the index and total number of publication or the practice of spin.

Conclusions In this preliminary report, an especially higher number of positive articles compared with negative articles suggests undesired level of scientific integrity among first authors of major publications in medical science. The index of integrity, first utilized in this report, should be validated in larger samples of authors.

14

EVIDENCE BASED MEDICINE: MYTH OF INCORPORATION OF NOVEL IDEAS IN COMMON PRACTICE

^{1,2}Archana Raysee, ¹Muhammad Junaid Saleem. ¹Medway Maritime Hospital, Kent, UK; ²University of Edinburgh, Edinburgh, UK

10.1136/bmjebm-2019-EBMLive.95

Objectives EBM is the best method to practice medicine. But does this quote a scenario of a perfect world as the only way it can be guaranteed is theoretically. As argued sometimes that day to day practice based on clinical expertise and experience may bring results not so different from the evidence proven methods.