Scoping reviews: There is a need for a guideline to standardise methods and reporting

A team of Canadian epidemiologists analysed 494 scoping reviews that were disseminated between 1999 and 2014. Scoping reviews are used to identify knowledge gaps, set research agendas and identify implications for decision-making, and their number has steadily increased since 2012. The conduct and reporting of scoping reviews is inconsistent in the literature. Scoping reviews can be seen as a hypothesis-generating exercise, while systematic reviews can be hypothesis-testing. A mean of 118 studies (range 1 to 2600) were included in the 494 scoping reviews. Assessment of scoping reviews was done with the Joanna Briggs Institute methodology guidance: 13% of scoping reviews reported the use of a protocol, 36% used two reviewers for data sharing, 43% used a pre-defined charting form. No guidelines for reporting scoping reviews or studies that assessed the quality of scoping review reporting were identified.


Real world data have their reporting guidelines: The RECORD statement

In pricing and reimbursement dossiers, real world data (RWD) are commonly used to complete information from randomised trials. The RWD are routinely collected without specific or a priori research questions developed prior to utilisation for research. Data sources are registries, primary care databases, administrative data, etc. The REporting of studies Conducted using Observational Routinely collected health Data (RECORD) statement was created to assist authors to write papers. RECORD is an extension of the STROBE (STrengthening the Reporting of OBservational studies in Epidemiology) statement, and it has its own website (http://www.record-statement.org). It is a result of a collaborative process that involved more than 100 international stakeholders comprising researchers, journal editors and consumers of data. The RECORD checklist has 22 items that are described with illustrative examples by Benchimol et al. in an article in PLoS Medicine.


Marketing purposes influence study design for 20% of randomised clinical trials publications in the highest impact general medical journals

Under the leadership of Virginia Barbour, six investigators independently reviewed 194 randomised clinical trials (RCTs) published in 2011 in six journals (Annals Intern Med, BMJ, JAMA, Lancet, NEJM, PLoS Medicine). The investigators defined six indicators of marketing-influenced trials and characterised the reviewed trials as YES/MAYBE/NO suspected marketing trials: 41 trials (21%) were categorised YES, 14 (7%) as MAYBE, and 139 (72%) as NO. All YES and MAYBE trials were funded by the manufacturer compared to 37% of NO trials (p<0.001). There was no significant difference between groups in the median number of participants screened (p = 0.49), but the median number of centres recruiting participants was higher for YES compared with NO trials (171 vs. 13, p < 0.001). YES trials were often better reported in terms of blinding, safety outcomes and adverse events than NO trials. YES trials more frequently included speculation that might encourage clinicians to use the intervention outside of the study population compared to NO trials (59% vs. 37%, p = 0.03). Two journals (NEJM and Lancet) published 77% (150/194) of the trials. The consensus was that about a fifth of the drug trials published in the highest impact medical journals in 2011 had features that were suggestive of being designed for marketing purposes.

Randomised clinical trials published in high impact medical journals are less likely than observational studies to be the subject of a journal press release

Researchers from Auckland (NZ) tested whether the design of a clinical study determines the extent of its media coverage, because the latter influences public health beliefs. They compared two study designs: RCTs (n =85) and observational studies (n =86). Observational research is conducted more frequently than RCTs, and can generate hypotheses but not reliably test them. The investigators searched publications in seven high impact journals (Annals Intern Med, BMJ, JAMA, JAMA intern Med, Lancet, NEJM, PLoS Medicine) in 2013. They used www.eurakelert.org to collate editorials and press releases that accompanied the publications. They also used Factiva, the top 10 USA and UK newspapers, and the top 10 English language news agencies. They observed that editorials in high impact journals were more commonly written for RCTs than observational research. Journal press releases, which influence the content of news stories, were more common for observational studies than RCTs (50% vs 17%, P<0.001). The conclusion was that study design of clinical studies published in high impact medical journals is not associated with the likelihood or amount of ensuing news coverage.

Reference:

Too many results are irreproducible: strategies to improve reproducibility must be implemented

The report of a meeting held in London with a panel of 80 experts was published at the end of 2015 by the Academy of Medical Sciences, the Biotechnology and Biological Sciences Research Council, the Medical Research Council and the Wellcome Trust. This meeting discussed poor research practices, as described by R Horton in the Lancet: “The case against science is straightforward: much of the scientific literature, perhaps half, may simply be untrue. Afflicted by studies with small sample sizes, tiny effects, invalid exploratory analyses, and flagrant conflicts of interest, together with an obsession for pursuing fashionable trends of dubious importance, science has taken a turn towards darkness.” This 80 pages report described six issues: data dredging, omitting null results, unpowered study, errors, underspecified methods, weak experimental design; and seven possible strategies to improve reproducibility: open data, pre-registration, collaboration, automation, open methods, post-publication review, and reporting guidelines. A poster is proposed to researchers with the seven strategies using logos representing the six issues.

Reference:
R Horton. Offline: What is medicine’s 5 sigma? Lancet. 385(9976):1380