SWAR 50: Evaluating the completeness of EMERGE item reporting in observational studies reporting medication adherence of proprotein convertase subtilisin/kexin type 9 (PCSK9) inhibitor

Objective of this SWAR
1. To evaluate the completeness of EMERGE item reporting in full-length articles included in a host systematic review.
2. To compare EMERGE item reporting between studies that explicitly included medication adherence as a study aim versus those that did not.
3. To show the relevance of these findings for other similar systematic reviews.

Study area: Critical appraisal
Sample type: Review Authors
Estimated funding level needed:

Background
Previous research has identified sub-optimal practices in the reporting of research studies despite the availability of relevant reporting guidelines.[1,2] This has implications for the conduct of systematic reviews, which might be faced with eligible studies that do not report key information for the review.

The International Society for Patient Adherence, Compliance, and Persistence (ESPACOMP) Medication Adherence Reporting Guideline (EMERGE) was published in 2018 and aims to enhance the standards of reporting for research into medication adherence.[3] However, it is unknown how authors report EMERGE items in observational studies investigating medication adherence. Furthermore, some studies that do not include medication adherence as an explicit objective of their investigation do report on a range of adherence measures such as medication initiation or discontinuation, usually as a secondary outcome.

Interventions and Comparators
Intervention 1: Compliance with EMERGE in two groups of studies: 1) Study with primary aim to evaluate medication adherence (i.e. having any of the following words in the title or aims statement of the article: “adhere”, “adherence”, “compliance”, “persistence”, “discontinue”, or “discontinuation”); and 2) Study without primary aim to evaluate medication adherence (i.e. not meeting the criteria for group 1), but that report on a measure of medication adherence.

Index Type: Full review

Method for Allocating to Intervention or Comparator:
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Outcome Measures
Primary: Completeness of reporting for each EMERGE checklist item (both minimum and additional) across the studies included in the host review,[4] measured by the number of studies that completely, incompletely, or did not report the item, or where the item was not applicable
Secondary: Absolute difference in proportions, associated 95% confidence intervals and p-values between the two groups of studies for each EMERGE checklist item

Analysis Plans
Descriptive statistics will be used to describe the distribution of characteristics of the included studies, reported as the number and percentage of studies for categorical variables and the mean (standard deviation) and range for continuous variables. For each study, we will count the total number of EMERGE “minimum items” and “additional items” that are completely reported, incompletely reported, not reported, or not applicable. To compare reporting proportions between the two groups of studies, we will visualize the number of minimum and additional EMERGE items overall and by group using dot plots. The null hypothesis that the proportion of items

reported between studies with medication adherence as a study aim (group 1) versus those without adherence as a study aim (group 2) will be assessed with the Fisher's exact test with a two-sided alternative hypothesis. For each EMERGE checklist item, the absolute difference in proportions, associated 95% confidence intervals and p-values will be reported.

Possible Problems in Implementing This SWAR

Determining whether an EMERGE item is "completely", "incompletely", or "not reported" may involve subjective interpretation, especially for complex or poorly worded reports. Inconsistent judgments across reviewers may reduce the reliability of results.

References

1. Turner L, Shamseer L, Altman DG, Weeks L, Peters J, Kober T, et al. Consolidated standards of reporting trials (CONSORT) and the completeness of reporting of randomised controlled trials (RCTs) published in medical journals. Cochrane Database of Systematic Reviews 2012;(11): MR000030.
2. Zheng R, Tao L, Sun Y, Shang H, Levine M. Inadequate Reporting of Harm From Randomized Clinical Trials in Top Medical Publications. Journal of Evidence-Based Medicine 2025; 18: e70006.
3. De Geest S, Zullig LL, Dunbar-Jacob J, Helmy R, Hughes DA, Wilson IB, et al. ESPACOMP Medication Adherence Reporting Guideline (EMERGE). Annals of Internal Medicine 2018;169(1):30-5.
4. Blais JE, Chan AHY, Li CYV, Kongkaew C. Evaluating short- and long-term medication adherence to PCSK9 inhibitors: protocol for a systematic review of non-randomized studies. PROSPERO 2024 Available from: https://www.crd.york.ac.uk/PROSPERO/view/CRD42024567957

Publications or presentations of this SWAR design

Examples of the implementation of this SWAR

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