Objectives Guideline developers and healthcare decision makers rely on high-quality evidence to make sound evidence-based decisions. The quality appraisal step is critical to ensuring a balanced representation of the evidence. The overall results of systematic reviews (SRs) should not be accepted as evidence-based if this step was performed inadequately. Impact factor is incorrectly being used as an indicator of the quality of papers. The purpose of this study is to systematically evaluate the quality of SRs that report the association between HIV adherence levels and specific outcomes, to determine the impact factor or reputation of the publication journal, and to provide guidance for reducing research waste.

Method A literature search was conducted in April 2018 in Ovid MEDLINE, EMBASE, CINAHL, PubMed Central, the Cochrane Library, Science Citation Index, Web of Science, ScIELO Citation Index, and Ovid Embcare. Records were screened in Covidence by at least 2 reviewers using pre-specified eligibility criteria and definitions. Methodological quality of the reviews was assessed independently by 2 reviewers using the AMSTAR 2 tool; additional information about the literature searches and conflicts of interest was extracted. The quality assessment was qualitatively compared to the impact factor of the journals in which the papers were published.

Results Our literature search identified 1141 unique records. Ultimately, 9 articles met our inclusion criteria. The overall confidence in the results of 78% of the SRs was critically low (1 critical flaw with or without non-critical weaknesses). Frequent problems identified were lack of protocols, incomplete literature searches, study selection and/or data extraction not done in duplicate, lack of formal quality appraisal tools, inadequate consideration of the effect of risk of bias of individual studies on results, and missing key information on populations, interventions, comparisons, outcomes, study designs included or rationale for studies included, funding sources, and conflicts. Impact factor or the reputation of a journal is not an indication of the overall quality of these SRs.

Conclusions This research emphasizes the importance of using quality appraisal tools and reporting guidance. The majority of SRs do not meet quality standards despite the availability of tools and guidance. The number of published SRs is increasing. This does not necessarily translate to more precise answers based on high-quality evaluations of the evidence for the ultimate goal of improving healthcare decision-making and patient care. Low-quality evidence syntheses are a huge burden on everyone involved and may cause harm. All parties involved in healthcare decisions should require critical appraisal of evidence regardless of the reputation or impact factor of an author, organization, or journal, and be prepared to perform such an evaluation prior to using, applying, or distributing SRs. The problem can be corrected if we work together to find ways in which this can be done and continue to develop innovative methods and tools to streamline the SR process without compromising quality.

Objectives Guideline developers, healthcare decision makers, and researchers need to identify reliable systematic reviews (SRs) to inform evidence-based medicine (EBM) and underpin guidelines. At the start of this decade, Bastian et al. highlighted the challenge of keeping up with new publications, when 11 reviews were being published daily and this is coupled with difficulties in finding SRs through time-intensive, traditional literature searches. We sought to estimate the current publication rate of SRs and to examine Epistemonikos as a method for identifying SRs by considering transparency of contributors and SR identification methods, researcher awareness and confidence, and its value as a means of finding SRs.

Methods We reviewed the Epistemonikos website and searched Pubmed, Embase, and the Cochrane Library for ‘Epistemonikos’ to examine awareness. We compared basic search strategies in Epistemonikos with the comprehensive search strategy from an overview of SRs and screened records solely identified in Epistemonikos to determine their eligibility for the overview. We estimated the number of SRs published annually between 1990 and 2018 through various searches, including Epistemonikos.

Results We noted no major concerns for potential conflicts of interest in the compilation of Epistemonikos, but a fuller process description for identifying SRs would be helpful. The word Epistemonikos appeared in 226 abstracts in Pubmed or Embase, and in the full text of 24 of 7960 (0.3%) full Cochrane reviews. Our basic search in Epistemonikos (including treatment, adherence, and outcome terms) identified 67% of the records retrieved by the full search for the overview. A broader search without outcome terms identified 78%, and a very broad search using only treatment terms identified 89%. One key SR (published in 2011) was not indexed in Epistemonikos at the time of our search (March 2019); but was present by April 2019. None of the other records identified solely by the Epistemonikos search were eligible for the overview. The annual number of SRs suggests three distinct periods: a slow rise to the year 2000, a gradual increase in 2000-