Bridging the gap between AI principles and practice: A comparative evaluation of AI position statements and frameworks for responsible use

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Background

Systematic literature reviews (SLRs) are essential to evidence-based medicine and health technology assessment (HTA), but keeping pace with the growing volume of literature is increasingly difficult. Artificial intelligence (AI) offers a promising solution, streamlining tasks such as title and abstract screening to improve efficiency (1). Despite the emergence of multiple AI frameworks, there is limited understanding of how they align, or diverge, in their recommendations.

Objectives

To compare AI position statements from key decision bodies, and to assess the suitability of currently available frameworks for guiding responsible use of AI in SLRs.

Methods

Targeted searches were conducted to identify AI position statements and frameworks from key decision bodies. Conclusions of this poster are based on data available before 29th July 2025.

1 **AI position statements from HTA bodies** (NICE, FDA, IQWiG, CDA-AMC, SMC, HAS, JCA)

Position statements were identified through targeted searches of HTA body websites. Each statement was reviewed to identify key principles of responsible AI use and for specific viewpoints on AI use in SLR phases.

2 **AI position statements from HEOR working groups** (Cochrane, PRISMA-AI)

AI working groups are dynamic and continuously evolving, making it difficult to capture a fixed picture of their activities. To provide timely insights, a brief synthesis of active working groups and their viewpoints was conducted based on recent available documentation (i.e. website articles, publications, webinars).

3 **Assessment of frameworks to evaluate coverage of different SLR phases** (ELEVATE-GenAI, TRIPOD-LLM, RAISE, CHART)

Published and emerging frameworks for critical appraisal of AI in SLRs were identified. Each framework was scored on a three-point system based on the depth, specificity, and applicability overall and to key SLR phases by two independent reviewers.

Results

1 HTA bodies have highlighted several key principles for responsible AI use

Table 1: Overview of position statements from HTA bodies for responsible AI use in SLRs

HTA body	Key principles of responsible AI use noted in the position statement				
	Transparency	Bias mitigation	Human oversight	Reproducibility + accountability	Lifecycle monitoring
CDA-AMC 2025 (2)	✓	✓	✓	✓	NR
FDA 2025 (3)	✓	✓	✓	✓	✓
IQWiG 2023 (4)	NR	NR	✓	NR	NR
NICE 2024 (5)	✓	✓	✓	✓	NR

Table 2: Overview of position statements from HTA bodies on SLR-specific AI viewpoints

HTA body	Specific viewpoints on AI use in SLR phases				
	Search	Screen	Extract	Synthesis	Report
CDA-AMC 2025 (2)	✓	✓	✓	✓	✓
FDA 2025 (3)	Provides overall evidence generation guidance and is not SLR specific				
IQWiG 2023 (4)	NR	✓	NR	NR	NR
NICE 2024 (5)	✓	✓	✓	✓	✓

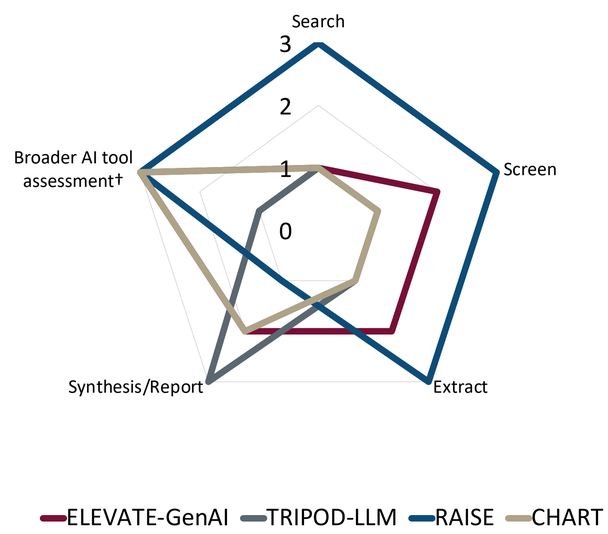
Currently, neither the SMC or HAS have a formal AI position statement. The JCA also lacks an official stance, but given its remit and structure, it is likely to become a focal point for research and development in this area.

2 AI position statements from HEOR working groups pave the way for responsible, transparent, and impactful use of AI

- A **joint AI methods group** (6) (Cochrane, Campbell Collaboration, Joanna Briggs Institute [JBI], Collaboration for Environmental Evidence [CEE]) was formed to advance responsible AI use in evidence synthesis by spearheading methods, defining best practices, and supporting the integration of new methods
- In addition to being part of the joint AI methods group, **Cochrane** (7) provide a clear position on use of AI, emphasising the need to address all relevant domains while actively developing the RAISE (8) framework to support structured assessment
- The **ISPOR working group** (9) is developing guidance for using generative AI in health economics and outcomes research (HEOR), with a focus on applications that support HTA through improved evidence generation and analysis, while developing ELEVATE-GenAI (10)
- **PRISMA-AI** (11) present a closely aligned position in their guidelines while actively developing an AI-specific extension to its checklists

3 Various frameworks are available to critically assess use of AI overall and in different SLR phases

Figure 1: Assessment of frameworks based on 3-point system



1. Minimal or vague reference; 2. Phase-relevant guidance; 3. Comprehensive, highly actionable guidance.
† Broader AI tool assessment refers to evidence synthesis checklists covering tool characteristics, performance metrics, and factors outlined in Table 1.

ELEVATE-GenAI (10) is a reporting framework from the ISPOR working group, addressing challenges of generative AI in HEOR and HTA. It was developed through expert input and includes a checklist to guide transparent, consistent reporting.

TRIPOD-LLM (12) is an extension of the TRIPOD+AI statement, addressing the unique challenges of large language models in biomedical applications. It is a living document that was developed through an expedited Delphi process and expert consensus.

RAISE (8) is a multi-part framework that was developed to addresses key challenges, such as transparency and ethical oversight. It was shaped through expert consensus to support diverse roles across evidence synthesis.

CHART (13) is a reporting guideline for chatbot health advice studies, developed through international consensus to promote transparent evaluation of generative AI in clinical and health advice applications.

Conclusion

Although there is overlap between key principles in responsible AI use across HTA bodies, alignment is key. Emerging position statements from HTA agencies and AI working groups provide the initial steps needed for transparency, oversight, and responsible innovation. However, collaboration between HTA bodies, researchers, and regulators is vital to close critical framework gaps and meet evolving challenges in AI.

Scan for a video walkthrough and references

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Key definitions

AI position statement: A group's view on AI, generally outlining any expectations and concerns regarding the use of AI

Framework: A practical, structured tool, often in the form of a checklist, which helps researchers evaluate, document, and govern their use of AI

Transparency: A request for clear documentation in which AI tools are used to inform a submission

Bias mitigation: A request for clear documentation to identify and reduce systematic errors or unfairness in AI outputs

Human oversight: A request for clear documentation as to how human experts are involved in reviewing, validating, and governing critical decisions made by AI systems

Reproducibility + accountability: A request for clear documentation of AI-assisted methods to allow for independent replication

Lifecycle monitoring: A request for clear documentation as to how ongoing AI tools are evaluated following deployment to detect performance drift, emerging risks, or changes in data relevance

Abbreviations

AI, artificial intelligence
CDA-AMC, Canada's Drug Agency
CEE, Collaboration for Environmental Evidence
FDA, Food and Drug Administration
HAS, Haute Autorité de Santé
HEOR, health economics and outcomes research
HTA, health technology assessment
IQWiG, Institute for Quality and Efficiency in Health Care
JBI, Joanna Briggs Institute
JCA, Joint Clinical Assessment
LLM, large language model
NICE, National Institute for Health and Care Excellence
NR, not reported
PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-Analyses
SLR, systematic literature review
SMC, Scottish Medicines Consortium