



## Prospective protocols in evidence synthesis: building transparency and accountability

### Editorial

As systematic and scoping reviews have become fundamental tools for evidence-based decision-making in healthcare and policy, ensuring their transparency and rigor has grown increasingly critical. The prospective publication of review protocols represents a key mechanism for achieving these goals but remains underutilized despite the evidence of its benefits.<sup>1</sup> This editorial examines why protocol publication matters and addresses the practical concerns that have limited widespread adoption.

### The transparency imperative

The value of protocol publication lies in predefining methodology before data collection begins. When researchers specify questions, eligibility criteria, outcomes, and analytical approaches in advance, they create documented commitments that guard against post-hoc rationalization and selective reporting.<sup>1-4</sup> Published protocols allow readers, editors, and reviewers to compare planned versus executed methods, detecting deviations and evaluating their impact on findings.<sup>5-7</sup>

For systematic reviews, particularly those involving meta-analyses that directly influence clinical practice and policy, this protective function proves essential. When protocol deviations remain undisclosed and undebated, decision-makers cannot adequately judge whether findings reflect true evidence patterns or methodological choices made in response to emerging data.<sup>2,8,9</sup> Scoping reviews, though more exploratory by nature, similarly benefit from protocol documentation that reduces arbitrary decisions in what can otherwise become subjective mapping exercises.<sup>1,5,7</sup>

### Demonstrated quality improvements

Beyond theoretical arguments, empirical evidence consistently demonstrates that systematic reviews with published protocols show more comprehensive methods reporting and higher methodological quality than those without. This relationship reflects both direct effects (protocol development forces careful planning) and the value of early peer review that catches methodological problems when corrections remain straightforward.<sup>2,8,9</sup>

Reporting frameworks like PRISMA-P for systematic reviews,<sup>1,10</sup> its extension for scoping reviews<sup>11</sup> and the Joanna Briggs Institute Manual for Evidence Synthesis<sup>12</sup> enhance this quality improvement by ensuring protocols address key methodological elements comprehensively. Research groups following these standards produce more complete, reproducible documentation, which is precisely what transparency and rigor demand.

### Preventing research waste

Public protocol registration addresses the persistent problem of duplicative reviews that waste limited research resources and create confusion when concurrent reviews reach differing conclusions. When teams can see planned or ongoing work through registries like PROSPERO or repositories like Open Science Framework, they can avoid redundancy, build on existing efforts, or collaborate rather than compete.<sup>4,9</sup> For scoping reviews specifically, published protocols can guide subsequent systematic reviews by identifying evidence-rich areas and highlighting gaps requiring primary research, a sequential approach that requires protocol transparency to function effectively.<sup>5,13,14</sup>

## Acknowledging legitimate trade-offs

To provide an honest assessment, it is necessary to consider the practical trade-offs of publishing protocols. Evidence reveals, concerning temporal patterns, that systematic reviews with published protocols show substantially longer lags between final search and submission (median 325 versus 122 days for reviews without protocols).<sup>2,8</sup> This delay translates to older evidence at publication, potentially limiting relevance in fast-moving fields. Protocol peer review can consume months, and when teams pause substantive work awaiting protocol acceptance, timelines extend further.<sup>2</sup>

Workload concerns merit consideration as well. Protocol publication adds tasks, such as drafting, submission, peer review, revision, to an already demanding process. For small teams or individual researchers facing grant deadlines or degree requirements, these burdens present genuine barriers. Additionally, some researchers worry about intellectual property, fearing that published protocols might allow others to rush similar reviews to publication.<sup>4</sup>

A critical limitation described in the documents is low conversion from registration to publication and poor updating of registry status. This creates false signals for other research groups, clutters registries, and can paradoxically increase waste by discouraging needed work. If protocol registration is to be a public commitment, then status updating, and finishing the review are part of the commitment. Without it, registries risk becoming less informative precisely because they are widely used.<sup>15-17</sup>

Most troubling, current uptake remains low, as only approximately 38 percent of systematic reviews report protocols, with scoping reviews showing even lower rates. Many researchers indicate they do not understand the protocols' importance, viewing them as optional extras rather than methodological quality steps.<sup>4,9,18</sup>

## A pragmatic path forward

The benefits of protocol publication, which we can resume as enhanced transparency, improved quality, and reduced duplication, clearly outweigh concerns about workload or idea theft in most circumstances. However, temporal costs and uptake challenges demand pragmatic responses. Journal editors and research institutions should recognize multiple acceptable pathways. The traditional peer-reviewed publication offers maximum rigor but may not suit time-sensitive work, while registration in freely accessible repositories (e.g. PROSPERO, OSF) provides transparency with minimal delay. For urgent reviews, repository registration followed by eventual protocol publication could offer reasonable compromise.

Given the documented low rates of status updating and completion, registries should implement lightweight but enforceable expectations, such as periodic status confirmations,

clear marking of abandoned records, and structured fields linking final publications to protocol records. Journals can support this by requiring registry updates as part of publication workflows.

Requirements should also reflect review type and purpose. Systematic reviews informing clinical practice, clinical guidelines or policy decisions warrant strict protocol requirements, including peer-reviewed publication before data extraction.<sup>19</sup> Scoping reviews serving as preliminary exercises might appropriately use less formal registration<sup>12</sup>. Rapid reviews conducted under true emergencies may justifiably proceed without full protocol publication, though documenting planned methods remains important.<sup>20</sup>

Education represents another crucial frontier. When protocol development becomes inseparable from review planning in research training, or in other words, presented not as optional best practice but as fundamental to rigorous evidence synthesis, we can expect gradual cultural change toward a universal adoption practice.

## Conclusion

The case for publishing review protocols rests on solid foundations. Published protocols enhance transparency, improve quality through early feedback and structured planning, and prevent waste by making planned work visible. These benefits contribute directly to reproducibility, accountability, and efficient resource use. These are core scientific values that evidence synthesis must uphold.

The next step for journals, registries, and review teams is not to argue about whether protocols are valuable. As editors, our responsibility extends beyond advocating ideal practices to facilitating realistic adoption. We should encourage protocol publication strongly while recognizing legitimate constraints, provide clear guidance on acceptable approaches, and support multiple pathways to achieving transparency goals. We should invest in education, helping researchers understand that protocol publication represents essential scientific infrastructure, the methodological foundation upon which trustworthy evidence synthesis rests. This balanced perspective, grounded in evidence while respecting practical realities, offers the most promising path toward protocol publication as standard practice in evidence synthesis. ATHENA - Health & Research Journal is firmly committed to this process, and we encourage all authors conducting systematic and scoping reviews to embrace protocol publication as a cornerstone of rigorous, transparent evidence synthesis.

## References

1. Shamseer L, Moher D, Clarke M, et al. Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015: elaboration and explanation. *BMJ*. 2015;349
2. Rombey T, Allers K, Mathes T, Hoffmann F, Pieper D. A descriptive analysis of the characteristics and the peer review process of systematic review protocols published in an open peer review journal from 2012 to 2017. *BMC Med. Res. Methodol*. 2019;19(1):57.
3. O'Mahony A, Haseldine C, Albers B, et al. Exploring Discrepancies between Protocols and Published Scoping Reviews in Implementation Science: Protocol for a Methodological Study. *HRB Open Research*. 2025;8:95.
4. Jesus TS. Rigour and transparency in the family of systematic reviews: The International Journal of Health Planning and Management encourages prospective protocol registration. *Int. J. Health Plan. Manag.* 2022;37(5):2523–2527.
5. Peters MD, Marnie C, Tricco AC, et al. Updated methodological guidance for the conduct of scoping reviews. *JB1 evidence synth.* 2020;18(10):2119–2126.
6. Iannizzi C, Akl EA, Kahale LA, et al. Methods and guidance on conducting, reporting, publishing and appraising living systematic reviews: a scoping review protocol. *F1000Research*. 2021;10:802.
7. Peters MD, Godfrey C, McInerney P, et al. Best practice guidance and reporting items for the development of scoping review protocols. *JB1 evidence synth.* 2022;20(4):953–968.
8. Allers K, Hoffmann F, Mathes T, Pieper D. Systematic reviews with published protocols compared to those without: more effort, older search. *J. Clin. Epidemiol.* 2018;95:102–110.
9. van der Braak K, Ghannad M, Orelia C, et al. The score after 10 years of registration of systematic review protocols. *Syst. Rev.* 2022;11(1):191.
10. Moher D, Stewart L, Shekelle P. Implementing PRISMA-P: recommendations for prospective authors. *Syst Rev.* Jan 28 2016;5:15. doi:10.1186/s13643-016-0191-y
11. Tricco AC, Lillie E, Zarin W, et al. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Ann. Intern. Med.* 2018;169(7):467–473.
12. Aromataris, E., Lockwood, C., Porritt, K., Pilla, B., Jordan, Z. *JB1 Manual for Evidence Synthesis*. JBI; 2024.
13. Munn Z, Peters MD, Stern C, Tufanaru C, McArthur A, Aromataris E. Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Med. Res. Methodol*. 2018;18(1):143.
14. Tricco AC, Lillie E, Zarin W, et al. A scoping review on the conduct and reporting of scoping reviews. *BMC Med. Res. Methodol*. 2016;16(1):15.
15. Andrade R, Pereira R, Weir A, Arden CL, Espregueira-Mendes J. Zombie reviews taking over the PROSPERO systematic review registry. It's time to fight back! *Br. J. Sports Med.* 2019;53(15):919–921.
16. Carev M, Čivljak M, Puljak L, Došenović S. Characteristics, completion and publication of PROSPERO records in regional anesthesia for acute perioperative pain. *J. Comp. Eff. Res.* 2023;12(3):e220129.
17. Tawfik GM, Giang HTN, Ghozy S, et al. Protocol registration issues of systematic review and meta-analysis studies: a survey of global researchers. *BMC Med. Res. Methodol*. 2020/08/25 2020;20(1):213. doi:10.1186/s12874-020-01094-9
18. Woo BFY, Tam WWS, Williams MY, et al. Characteristics, methodological, and reporting quality of scoping reviews published in nursing journals: A systematic review. *J Nurs Scholarsh.* 2023;55(4):874–885.
19. Page MJ, McKenzie JE, Bossuyt PM, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*. 2021;372
20. Stevens A, Garrity C, Hersi M, Moher D. Developing PRISMA-RR, a reporting guideline for rapid reviews of primary studies (Protocol). *Equator Network*. 2018:1–12.

Adérito Seixas

*Athena Health & Research Journal Associated Editor*