

Framework for Use of Delphi Methods in ATS Document Proposals

Purpose

This framework is intended to guide ATS document groups that wish to use a Delphi or modified Delphi process as part of document development. Its purpose is to improve methodological rigor, transparency, consistency, and operational predictability across ATS proposals and final documents.

A Delphi process may be appropriate when a document seeks structured expert judgment in areas where evidence is limited, incomplete, inconsistent, or insufficient on its own to resolve key questions. However, because the credibility and feasibility of a Delphi-informed document depend heavily on how the process is designed, conducted, and reported, proposals using Delphi methods must describe the process in enough detail for DDIC to assess both methodological rigor and likely resource and timeline implications.

Core expectation

Authors proposing a Delphi-based ATS document should not simply state that they will use a “modified Delphi.” The proposal should clearly explain what type of Delphi process is planned, why that approach was chosen, what features depart from a conventional iterative anonymous survey process, and how those modifications are expected to support the aims of the document. The literature repeatedly shows that the term “modified Delphi” is often used too loosely to permit meaningful appraisal.

When alternatives to Delphi may be preferable

In some circumstances, a less resource-intensive consensus approach may be sufficient. For example, if the goal is to obtain opinions on prioritization, refine a limited set of items, or document committee views without requiring iterative consensus building, options such as a single-round survey, structured committee voting, or nominal group techniques may be more appropriate (Table 1). Proposals using Delphi should explain why these alternatives would not adequately address the aims of the document.

When Delphi methods are appropriate

A Delphi approach is generally most appropriate when the proposed document requires one or more of the following:

- structured expert input to address questions not fully answered by existing evidence
- prioritization, refinement, or selection of statements, domains, indicators, or recommendations
- a formal and transparent process for moving from a broad set of views toward agreement
- participation by geographically dispersed experts who cannot easily deliberate in person

A Delphi process is less appropriate when the proposal does not explain why formal consensus methods are needed, when the questions could be resolved through straightforward evidence synthesis alone, or when the process is being used as a substitute for a clearly defined evidentiary and methodological approach.

Delphi methods are generally discouraged when a less resource-intensive approach could reasonably answer the same question. In some situations, alternatives such as structured discussion with explicit voting, a single-round survey, nominal group techniques, or standard committee drafting informed by evidence review may be sufficient.

Operational implications for ATS review and approval

Because Delphi processes typically require additional rounds of survey development, analysis, controlled feedback, and coordination, they often increase methodological and administrative workload and may lengthen document timelines. DDIC and PRC proposal review will evaluate not only whether Delphi is justified, but also whether its expected resource use is reasonable in the context of ATS document priorities and capacity.

Proposals using Delphi methods should therefore provide enough detail to allow an estimate of likely methodological support needs, administrative burden, and timeline implications. When other factors are equal,

reviewers may reasonably prioritize less resource-intensive document approaches and may also choose to limit the number of Delphi-based documents approved in a given cycle based on cumulative resource demands.

Applicants should also be advised up front that Delphi processes are expected to require more time and coordination than many other ATS document types. If major project delays occur, continued ATS administrative support may need to be re-evaluated.

Minimum elements required in the proposal

1. Rationale for using Delphi

The proposal should explain why a Delphi process is needed for the specific document. This should include the problem to be addressed, the limits of the available evidence, and the reason a structured consensus method is preferable to informal discussion or standard committee drafting alone. Proposals should also state what role the Delphi process will play in the document—for example, generating candidate items, refining language, selecting priorities, or determining agreement on recommendations.

2. Description of the planned Delphi approach

The proposal should name the planned method and describe its main features. At minimum, authors should specify whether the process is intended to seek consensus, characterize disagreement, or do both. They should describe the number of planned rounds, the format of each round, whether anonymity will be preserved, what feedback participants will receive between rounds, and whether any meetings will occur before, between, or after survey rounds. If in-person or virtual discussion is planned, the proposal should explain how the team will reduce the risk that dominant voices distort the process. The core methodological features of Delphi include an expert panel, iteration across rounds, and controlled feedback from prior rounds; proposals should preserve and explain these elements rather than invoke Delphi as a label alone.

3. Panel composition and expert selection

The proposal should define who qualifies as an expert for this document and why. It should describe the expertise, experience, stakeholder perspectives, and disciplines that will be represented on the panel. When relevant to the topic, proposals should also explain whether patient, caregiver, allied health, methodologist, implementation, or public health perspectives will be included, and if not, why not. The literature emphasizes that panel composition materially affects the trustworthiness and applicability of Delphi outputs, and that broad but purposeful representation is often preferable to an undefined or convenience sample.

Authors should also explain how panelists will be identified, invited, and recruited. If different groups of participants will have different roles, that distinction should be specified in advance. The proposal does not need to prescribe one ideal panel size but should justify the size in relation to the aims of the project, the diversity of perspectives needed, and the feasibility of maintaining participation across rounds. Published reviews note both that very small panels may be unstable and that larger, more heterogeneous panels can be more difficult to manage; the point is not a single magic number, but a justified design.

4. Management of conflicts of interest and panel independence

The proposal should explain how financial, intellectual, and relational conflicts of interest will be identified and managed. This is especially important when the Delphi panel is small or when the proposed topic is contentious. Authors should indicate who will oversee the process, whether a steering group will guide survey development and analysis, and how those leading the process will avoid undue influence on voting or interpretation. If a steering committee will make decisions outside the Delphi rounds, those decisions and their boundaries should be specified up front.

5. Development of survey items or statements

The proposal should describe where candidate statements, items, or domains will come from. For example, they may be derived from a systematic review, prior ATS work, qualitative data, expert nomination, or a combination of these. Whatever the source, the proposal should explain how the initial list will be generated, reviewed, and edited

before round 1. If the first round will include open-ended item generation, that should be made explicit. If the process begins with a preconstructed list, authors should explain how that list was assembled and why it is appropriate.

6. Consensus definition and decision rules

One of the clearest lessons from the literature is that Delphi studies often fail to define consensus adequately, or define it only after results are known. ATS proposals should therefore prespecify what will count as agreement, disagreement, retention, revision, or rejection of an item. Authors should state the metric they will use, the threshold they will apply, and whether that threshold differs by round or item type. If subgroup agreement matters, that should also be specified. Consensus thresholds do not need to be identical across all ATS documents, but they do need to be justified in advance.

The proposal should also define stopping rules. If the process will end after a fixed number of rounds, that should be stated. If it may end early when stability or consensus is reached, that rule should also be stated. The proposal should not assume that simply conducting multiple rounds proves consensus.

7. Feedback between rounds

The proposal should describe exactly what information participants will receive after each round. At minimum, this should include a summary of group responses from the preceding round and a chance for participants to reconsider their own ratings in light of the group's input. If qualitative comments will be summarized, authors should explain how that summary will be prepared. If participants will be shown their own prior responses, that should also be described. Controlled feedback is a defining part of Delphi methodology and should be deliberate and clearly described in the proposal.

8. Attrition and missing data

Because drop-off across rounds can distort results, proposals should explain how the team will monitor participation and handle attrition. This should include how reminders will be sent, whether partial responses will be included, and how the authors will evaluate whether attrition may have biased apparent agreement. Reviews of Delphi methodology warn that loss of dissenting participants across rounds can create a misleading impression of consensus.

9. Analysis plan

The proposal should describe how quantitative and qualitative data will be analyzed. This includes what descriptive statistics will be used, how free-text comments will inform revisions, and how revised items will be carried forward from one round to the next. If subgroup analyses are planned, or if different stakeholder groups will be weighted differently, this should be explained and justified in advance.

10. Reporting plan for the final ATS document

The proposal should state how the Delphi process will be reported in the final document or companion methods report. At minimum, final reporting should allow readers to understand the rationale for the method, panel composition, round structure, feedback process, consensus definitions, stopping rules, response rates by round, and how final statements or recommendations were selected or revised. The methodological literature consistently identifies incomplete reporting as a major weakness of Delphi-based work.

Additional expectations for proposals using a “modified Delphi”

If authors describe their approach as a modified Delphi, the proposal should specify:

- what was modified relative to the core Delphi structure
- when those modifications occur in the process
- why are the modifications necessary for the aims of the document
- whether the modifications alter anonymity, iteration, feedback, or the interpretation of consensus

“Modified Delphi” should not function as a catch-all label for any group voting exercise. A proposal that uses the term should make the modifications explicit enough that DDIC and PRC can evaluate whether the process remains methodologically coherent.

Recommended proposal template language

To facilitate review, DDIC may ask authors proposing Delphi methods to include a brief structured section addressing the following questions:

- What alternatives to Delphi were considered, and why was Delphi selected instead?
- What question or task in the document requires Delphi methods?
- What type of Delphi process will be used?
- How will panelists be selected, and what expertise or perspectives will be represented?
- How many rounds are planned, and what will happen in each round?
- What feedback will participants receive between rounds?
- How will consensus be defined, and what are the stopping rules?
- How will nonresponse, attrition, and dissent be handled?
- How will results be analyzed and incorporated into the document?

DDIC review standard

In reviewing proposals, DDIC should expect enough methodological detail to determine whether the proposed Delphi process is fit for purpose, transparent, and reproducible in principle. Proposals that merely state that a Delphi process will be used, without describing panel selection, round structure, consensus thresholds, expected resource use, and reporting plans, should be considered incomplete.

Conclusion

ATS documents that use Delphi methods can be valuable when expert judgment is needed in a structured and transparent way. But the authority and feasibility of a Delphi-informed document depend less on the label itself than on the rigor of the process behind it. For that reason, ATS proposals should justify the need for Delphi methods, define the process prospectively, describe who is involved and why, prespecify how agreement will be judged, acknowledge the operational implications for ATS support and timelines, and commit to transparent reporting in the final document. This framework is intended to set those minimum expectations.

References

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Table 1. Selected alternatives to Delphi methods for ATS document development					
Approach	Typical format	Best used when	Main strengths	Main limitations	Relative resource burden
Delphi / modified Delphi	Multiple survey rounds, usually with controlled feedback between rounds; may include discussion depending on design	A formal, iterative consensus process is needed; evidence is limited or incomplete; panelists are geographically dispersed; anonymity is helpful	Structured and transparent; allows reconsideration over time; reduces direct influence of dominant voices when anonymity is preserved	Time-consuming; administratively intensive; can delay documents; often poorly described when “modified Delphi” is used loosely	High
Nominal group technique	Structured live meeting with independent idea generation, round-robin sharing, discussion, and ranking/voting	The goal is to generate and prioritize items efficiently in a small to moderate-sized group	Encourages participation from all members; reduces unstructured dominance; efficient for prioritization	Usually requires synchronous participation; less suited to geographically dispersed panels; typically less iterative than Delphi	Moderate
Structured committee discussion with prespecified voting thresholds	Committee discussion followed by formal vote using predefined agreement thresholds	The group is already constituted and can deliberate directly; a transparent decision rule is needed, but a full Delphi is unnecessary	Practical; easy to integrate into existing committee workflows; more rigorous than informal discussion alone	Vulnerable to influence by dominant voices; less anonymous; may be less suitable for contentious topics	Low to moderate
Single-round survey	One survey distributed to experts or stakeholders	The goal is to gather opinions, preferences, or prioritization without iterative consensus-building	Fast; simple; low administrative burden; useful for initial scoping or prioritization	Does not provide iteration or controlled feedback; limited ability to move toward consensus	Low
Informal committee consensus	Standard discussion without a formal consensus method	The issue is narrow, low stakes, or primarily editorial, and formal consensus methods are not necessary	Familiar; flexible; least burdensome	Least transparent and least reproducible; vulnerable to bias and dominance effects; hard to appraise rigor	Very low