



NATIONAL QUALITY FORUM

Driving measurable health
improvements together

September 2019

NQF Scientific Methods Panel

Frequently Asked Questions

Why did NQF create a Scientific Methods Panel?

In 2017, NQF underwent a [redesign](#) of its Consensus Development Process (CDP). This effort involved 50 stakeholders including representatives from NQF member organizations, the federal government, and NQF staff. One of the recommendations from that effort was to establish a Scientific Methods Panel (SMP) that would help ensure higher-level and more consistent evaluation of the scientific acceptability (i.e., reliability, validity) of complex measures, as well as encourage greater engagement and participation by consumers, patients, and purchasers on NQF standing committees.

What does the Scientific Methods Panel do?

The new Panel has two specific charges:

- Evaluate complex measures for the criterion of scientific acceptability, with a focus on reliability and validity analyses and results.
- Serve in an advisory capacity to NQF on methodologic issues related to measure testing, risk adjustment, and emerging measurement approaches.

What expertise do you need to be a member of the Scientific Methods Panel?

The NQF SMP consists of up to 30 individuals with expertise in statistics, risk adjustment, measure testing, psychometrics, economics, composite measures, and electronic clinical quality measures (eCQMs). It is co-led by NQF staff and two co-chairs designated by NQF. Each new Panel member will serve an initial term of three years, with an optional two-year term to follow. The Consensus Standards Approval Committee (CSAC) oversees the work of the Scientific Methods Panel as part of its oversight of all of NQF's Consensus Development Process.

Is the Scientific Methods Panel a multistakeholder group?

Because the charge of the SMP is methodological in nature, NQF sought individuals with specific methodological expertise rather than those with particular stakeholder perspectives. While not quite as diverse as other NQF committees, the membership of the SMP does include academic and other researchers, healthcare providers, informaticists, consumers, and measure developers.

Does each NQF standing committee have its own Scientific Methods Panel?

No. There is only one SMP. It supports the standing committees for all 14 topic areas.

What defines a measure as complex or noncomplex?

The following types of measures are considered complex and therefore qualify for evaluation by the SMP:

- Outcome measures, including intermediate clinical outcomes
- Instrument-based measures (e.g., patient-reported, outcome-based performance measures)
- Cost/resource use measures

<http://www.qualityforum.org>

- Efficiency measures (those combining concepts of resource use and quality)
- Composite measures

Measures that do not fall under these categories are considered noncomplex. NQF staff typically evaluate noncomplex measures and then share their evaluations with the standing committees. As part of their initial review of submitted measures, NQF staff identify and share with the SMP complex measures for evaluation.

How does the Scientific Methods Panel work?

Similar to the past work of NQF staff, the SMP provides NQF standing committees with evaluations and ratings of reliability and validity for new complex measures and for previously endorsed complex measures with updated testing. Standing committees consider this input when making their endorsement decisions. All Panel members complete an annual, general disclosure of interest (DOI) form, as well as measure-specific disclosure forms to identify any need for recusal for specific measures.

Based on what was learned from previous evaluation cycles since fall 2017, the SMP evaluation process has evolved. In the current process, panelists are assigned to evaluation subgroups; the number and size of the subgroups depend on the number of complex measures submitted for endorsement. Generally, each subgroup will comprise five to eight Panel members. Each member conducts an in-depth evaluation of assigned measures. NQF staff assigns measures to subgroup members for evaluation based on panelists' relevant expertise, availability, and known disclosures. Subgroups discuss all measures deemed "consensus not reached" during a public meeting prior to voting. Subgroup members and staff also may request discussion and/or vote of other measures at will. Measure developers will be given the opportunity to provide additional information to the SMP prior to its final vote.

The majority recommendations from the subgroup vote serve as the overall assessment of reliability and validity. The final results from the subgroup vote are shared with the appropriate standing committees, along with a summary of the SMP's evaluation. As per the current measure evaluation process, information about measures being evaluated will be posted on NQF's public webpages.

What is the process if the Scientific Methods Panel rates a measure as "low" or "insufficient" for reliability or validity?

Beginning with the fall 2019 evaluation cycle, measures rated by the SMP as "low" or "insufficient" for reliability or validity can be discussed by the relevant standing committee. The measure specifications, testing information, and a summary of the SMP's evaluation of these measures will be shared with the standing committee. Standing Committee members will have the option to pull measures that did not pass the SMP's evaluation for Committee discussion and, potentially, to revote on reliability and/or validity. Measures that do not pass the SMP evaluation and are not pulled by the relevant standing committee do not move forward in the process and will not be endorsed (if a new measure) or re-endorsed (if a maintenance measure). Measures that do not pass the SMP evaluation on reliability and/or validity, but are pulled by a Committee member for discussion may be eligible for a revote. A measure is eligible for potential re-vote if it did not fail for one of the following reasons:

- Inappropriate methodology or testing approach applied to demonstrate reliability or validity
- Incorrect calculations or formulas used for testing
- Description of testing approach, results, or data is insufficient for SMP to apply the criteria
- Appropriate levels of testing not provided or otherwise did not meet NQF's minimum evaluation requirements

Measures that are not pulled for Committee discussion can be revised and resubmitted for reconsideration in a future cycle (there are two cycles per year). SMP evaluation summaries will be provided to the developer, and any future resubmission can address the concerns of the Panel. NQF will inform the standing committee of the results of the SMP evaluation and the anticipated timing of resubmission.

Do the Scientific Methods Panel members provide the final vote for the Scientific Acceptability evaluation criterion?

No. The SMP will focus on issues related to methods and results of reliability and validity testing, as well as other methodological issues (e.g., statistical adequacy of risk-adjustment methodology). Their ratings will be provided as input for the standing committee's decision. It is possible that standing committees will have substantial clinical and other topical expertise to contribute to the evaluation of validity, in particular.

Will the standing committee vote on reliability and validity? What if it disagrees with the recommendations of Scientific Methods Panel?

If a standing committee agrees with the recommendations from the Panel regarding measures for which the Panel has rated as "moderate" or "high" for reliability and validity, and has no other concerns regarding the scientific acceptability of the measure (e.g., clinical perspectives that impact validity), it can accept the ratings provided by the SMP. Otherwise, the Committee will discuss their concerns and then vote on the criteria. Committee members can ultimately disagree with moderate or high recommendations and ratings provided by the SMP (or NQF staff). Measures that do not pass the SMP's evaluation can be pulled for further discussion and, potentially, for revote on reliability and/or validity, as described above.

Will the Scientific Methods Panel and standing committee review measures simultaneously?

Evaluation of complex measures by the SMP and the standing committee will not be simultaneous. The SMP will complete its evaluation of reliability and validity, and then NQF staff will complete the preliminary analysis for the remaining criteria. NQF staff will then collect all preliminary analyses for each topic area and forward those to developers for review. The developers will have at least 48 hours to review the preliminary analysis for factual accuracy. NQF staff will revise the preliminary analyses and recommendations, if needed, and then release all submission information, including the preliminary analyses and ratings from the SMP, to the appropriate standing committee for evaluation.

How will NQF ensure consistent evaluations by the Scientific Methods Panel?

NQF provides guidance documents for the SMP that are similar to those currently provided to standing committees. The guidance documents contain the SMP charge, terms and conditions, roles and responsibilities of Panel members, and instructions on evaluating measures for scientific acceptability. Panel members will use the same algorithms for rating reliability and validity as used by standing committees. Panel members will use a templated worksheet to aid their evaluations. Further, NQF will convene the Panel bi-monthly to discuss methodological issues and how they should be considered relative to NQF's evaluation criteria.

What is the expected workload of Scientific Methods Panel members?

Using our knowledge of currently endorsed measures, past experience regarding the number, type, and complexity of new measures, and experience from prior Methods Panel evaluation cycles, NQF anticipates that each Panel member will evaluate the scientific acceptability of 15-30 measures per year (depending on availability, need for recusal, expertise, etc.). Panel members also will participate on bi-monthly webinars and two in-person meetings to evaluate measures, discuss methodologies and other

testing-related issues, provide guidance regarding these issues, and promote consistency in the evaluation of measures against NQF's endorsement criteria.

Will Scientific Methods Panel members be available during evaluation meetings to answer questions from the standing committee?

NQF will provide to the relevant standing committees the recommendations and rationale of the SMP on evaluated measures. Typically, Panel members will not be available during standing committee evaluation meetings. Instead, NQF staff act as liaisons between the SMP and the standing committee. However, some Panel members are also standing committee members. In the event that the standing committee has a SMP member who evaluated a specific measure that is being evaluated by the standing committee, this person can discuss the measure and answer questions from the standing committee. However, the individual, as a member of the standing committee, will not be allowed to vote on the criteria of reliability and validity for that measure. The individual can vote on the other measure criteria.

If the Scientific Methods Panel only evaluates complex measures, how will noncomplex measures be evaluated?

Following the current process, NQF staff will evaluate noncomplex measures and provide preliminary ratings for reliability and validity. Standing Committees should consider these ratings as input to inform their endorsement decisions. The same process applies to measures forwarded to standing committees, as described above.