



September 2018

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, NQF member organizations, federal government representatives, and NQF staff. One of the recommendations from that effort was to establish a Scientific Methods Panel that would help ensure higher-level and more consistent evaluation of the scientific acceptability of complex measures. Shifting the methodological evaluation of measures to this panel and to NQF staff should 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 Scientific Methods Panel consists of up to 25 individuals with expertise in statistics, risk adjustment, measure testing, psychometrics, economics, composite measures and eMeasures. It is co-led by NQF staff and two co-chairs designated by NQF. Each panel member will serve an initial term of either two or three years, with an optional three-year term to follow. The Consensus Standards Approval Committee (CSAC) oversees the work of the Scientific Methods Panel.

Is the Scientific Methods Panel a multistakeholder group?

Because the charge of the Scientific Methods Panel 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 Scientific Methods Panel does include academicians and researchers, healthcare providers, informaticists, consumers, and measure developers.

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

There is only one Scientific Methods Panel. The Scientific Methods Panel supports the standing committees for all 15 topical areas.

What defines a measure as complex or noncomplex?

The following types of measures are considered complex and therefore qualify for a methods review by the Scientific Methods Panel:

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

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

Measures that do not fall under these categories are considered noncomplex. As part of their initial review of submitted measures, NQF staff identify and share with the Scientific Methods Panel complex measures for evaluation.

How does the Scientific Methods Panel work?

Similar to the past work of NQF staff, the Scientific Methods Panel 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 the fall 2017 and spring 2018 evaluation cycles, NQF has established a new process for the Scientific Methods Panel evaluation of measures, effective fall 2018. The previous process—independent evaluation by three panelists, supplemented if needed by co-chair evaluation—is replaced with group-based evaluations. Panelists will be assigned to subgroups after the Intent to Submit deadline; the number and size of the subgroups will depend on the number of complex measures submitted for endorsement. Generally, each subgroup will comprise five to seven panel members. Each member of the subgroup will conduct an in-depth evaluation of assigned measures, then the subgroup will convene to discuss and vote on reliability and validity. NQF staff will assign measures to subgroup members for evaluation based on panelists' relevant expertise, availability, and disclosures. After subgroup members independently evaluate their assigned measures, staff will compile the results and determine if measures passed, did not pass, or did not reach consensus on reliability and validity. A consent calendar approach will be used for discussion and voting by the subgroups during their meetings. Subgroups will discuss all measures deemed “consensus not reached” on a public call prior to voting; subgroup members and staff also may request discussion and/or vote of other measures at will. The majority recommendations from the subgroup vote will serve as the overall assessment of reliability and validity. The final results from the subgroup meetings will be shared with the appropriate standing committees. 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?

Measures rated by the Scientific Methods Panel as “low” or “insufficient” for reliability or validity will be removed from the current evaluation cycle and will **not** be forwarded to the standing committee for evaluation. The developer can decide when, or whether, to re-submit the measure to a subsequent review cycle. All Scientific Methods Panel evaluations will be provided to the developer, and therefore, any future resubmission can address the concerns of the Panel. NQF will inform the standing committee of the results of the Scientific Methods Panel 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 Scientific Methods Panel 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.

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 Scientific Methods panel. Otherwise, the Committee will discuss their concerns and then vote on the criteria. Committee members can "overrule" moderate or high recommendations and ratings provided by the Scientific Methods Panel (or NQF staff). As mentioned earlier, measures rated as "low" or "insufficient" for reliability or validity will be removed from the current evaluation cycle and will **not** be forwarded to the standing committee for evaluation. These decisions cannot be "overruled" by the standing committee.

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

Evaluation of complex measures by the Scientific Methods Panel and the standing committee will not be simultaneous. The Scientific Methods Panel 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 two weeks to submit clarifications/additional data. 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 Methods Panel, to the appropriate standing committee for evaluation.

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

NQF provides guidance documents for the Scientific Methods Panel that is similar to those currently provided to standing committees. The guidance documents contain the Scientific Methods Panel charge, terms and conditions, roles and responsibilities of panel members, and instructions on evaluating a measure 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 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 monthly webinars and an annual in-person meeting to 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 Scientific Methods Panel on evaluated measures.

Typically, panel members will not be available during evaluation meetings. However, some Panel members are also standing committee members. In the event that the standing committee has a Scientific Methods Panel member who evaluated a specific measure before the 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. As with complex measures that receive a “low” or “insufficient” rating from the Scientific Methods Panel on reliability or validity, measures evaluated by NQF staff that receive a “low” or “insufficient” rating will be removed from the current evaluation cycle and will **not** be forwarded to the standing committee for evaluation.