Environmental Scans for Quality Measurement

This document provides information about environmental scans ⓘ and the process of conducting an environmental scan. The environmental scan is an essential part of building the case for a quality measure ⓘ. It serves as the foundation for the measurement plan. A strong, comprehensive environmental scan will improve the likelihood of project success. This information supplements information found in the Blueprint content on the *CMS MMS Hub*, *Conduct an Environmental Scan* . The measure developer should refer to both sources when conducting an environmental scan. The measure developer may also refer to the *Information Gathering Report Template & Instructions*.

The measure developer should incorporate interested party engagement in the environmental scanning process. See the *Interested Party Engagement* content on the *CMS MMS Hub*, and the *Technical Expert Panels* and *Person and Family Engagement in Quality Measurement* supplemental materials for more information.

1 Creating the Environmental Scan

Six steps are fundamental to creating an environmental scan. The steps are not necessarily sequential but are concurrent and iterative.

- Be strategic in planning and managing the scan and formalize the scanning process (Choo, 1999). Frame a series of unambiguous, structured questions to limit the search to a specific problem set and prevent distraction by other interesting, but unrelated topics.
- Design the scan in collaboration with domain experts (Choo, 1999). Determine the framework for work relevant to the quality measure, including literature databases and search engines, keywords and phrases, inclusion and exclusion criteria, and domain experts.
- Assess the literature using qualitative techniques and quantitative metrics such as impact (e.g., number of citations for a paper, number of page views), quality of the evidence, innovativeness, consistency with other works on the topic, recency of citations used in the work, seminality/originality, and quality of writing.
- Manage the information obtained (Choo, 1999). Qualitatively evaluate and summarize the evidence. Evaluate the effectiveness and value of the data sources ⓘ used, sample ⓘ sizes, data collection methods, statistical methods, periods, and research findings.

- Interpret findings by evaluating the similarities and differences among the findings through expansion of the techniques previously cited. From this, draw conclusions to inform data collection and analyses.
- Refine research questions and develop hypotheses. Generate a general analysis plan, including data sources and estimation procedures.

1.1 Literature Review

The measure developer should conduct a literature review to determine the quality issues associated with the topic or setting of interest and to identify significant areas of controversy if they exist.

The measure developer should use the measure evaluation criteria described in the Blueprint content on the *CMS MMS Hub* and the supplemental materials addressing special measure types, e.g., cost and resource use measures, to guide the literature search and organize the literature obtained.

Evidence should support there is a gap in achievement associated with the measure topic, which is especially true if

- clinical practice guidelines are unavailable
- guidelines about the topic are inconsistent
- guidelines have not incorporated recent studies

If recent studies contribute new information that may affect the clinical practice guidelines, the measure developer must document these studies, even if they choose not to base a measure on the relatively new evidence. Emerging studies or evidence may indicate the guideline may change, and if it does, this may affect the stability of the measure.

Evidence should directly apply to the specified measure, if possible. The measure developer should state the central topic, population, and outcomes addressed in the body of evidence and identify any differences from the measure focus and measure target/initial population.

1.2 Quality of the Body of Evidence

Across studies in the body of evidence, the measure developer must summarize the certainty or confidence in the estimates of benefits and harms to patients resulting from study factors (i.e., study design/flaws, directness/indirectness of the evidence to the measure, imprecision/wide confidence intervals due to few patients/events). In general, the preference is for randomized controlled trials (RCTs), studies in which there is randomization of subjects to various interventions. However, this type of study is not always available because of the strict eligibility criteria and/or expense; further, RCTs may not be appropriate. RCTs do not assess real-world situations. Under these circumstances, the measure developer may rely on non-RCT studies such as quasi-experimental studies, observational studies (e.g., cohort, case-control, cross-sectional, epidemiological), and/or qualitative studies. If available, the measure developer should also examine systematic literature reviews to assess the overall strength of

the body of evidence for the measure topic and evaluate each study to report the grade of the body of evidence for the topic.

The measure developer should review the

- Quantity of the evidence available. Generally, five or more separate RCT studies providing direct evidence for a specific measure focus constitutes a high level of evidence. This count refers to actual studies, not papers or journal articles written about the same study.
- Consistency of results across studies. The measure developer should summarize the consistency of the direction and magnitude of clinically/practically meaningful benefits over harms to patients across the studies.
- Grading of strength/quality of the body of evidence. If graded, identify the entity that graded the evidence, including the balance of representation and any disclosures regarding bias. There is no requirement for measure developers to grade the evidence; rather, they assess the graded evidence and what the grading process entailed.
- Summaries of relevant controversy and contradictory evidence, if applicable.
- Information related to health care disparities. The measure developer should review demographic characteristics across patient, clinical care, and outcomes, which may include referenced statistics and citations demonstrating potential disparities (e.g., race, ethnicity, age, social risk factors, income, region, gender, primary language, disability) in clinical care areas/outcomes related to the measure focus. If there is documentation of a disparity, the measure developer should discuss referenced causes and potential interventions, if available.

Reviewed literature should be

- published in peer-reviewed journals
- written recently (i.e., within the past five years)
- based on data collected within the past 10 years or have an end date within 10 years
- Unpublished studies or reports such as those described as grey literature. Government agencies such as the Agency for Healthcare Research and Quality, CMS, and Centers for Disease Control and Prevention produce studies and reports that are publicly available, but not peer reviewed.

Examples of additional resources the measure developer may consult

- The *Environmental Scan Support Tool (ESST)* is available to measure developers. The ESST helps identify the most relevant abstracts and articles in PubMed, PubMed Central, and CINAHL for quality measures found in the CMS Measures Inventory. Using the literature supporting existing measures may jump start and/or supplement the measure developer's literature review.
- The De Novo Measure Scan is an advanced feature of the ESST on the controlled access *CMIT* site. The De Novo Measure Scan helps measure developers conduct early and frequent environmental scans while developing new measures and reducing the time required to conduct information gathering.
- Institute of Medicine (IOM)'s report *Finding What Works in Health Care. Standards for Systematic Reviews*.

1.3 Clinical Practice Guidelines

Measure developers should search for the most recent clinical practice guidelines applicable to the measure topic (i.e., written within the past 5 years). The process of developing clinical practice guidelines varies. The preference is for guidelines developed by American national health care professional organizations or federal agencies. However, assessment of guidelines and other evidence documents developed by non-American organizations may also be useful.

The measure developer should also document the criteria used for assessing the quality of the guidelines. Guideline developers sometimes use evidence rating schemes to assign a grade to the quality of the evidence based on the type and design of the research. This makes it easier for measure developers to identify the strongest evidence on which to base their measures. If the guidelines were graded, the measure developer should indicate which system was used, i.e., the United States Preventive Services Task Force (USPSTF) or Grading of Recommendation, Assessment, Development, and Evaluation (GRADE).

It is important to note that not all guideline developers use evidence rating schemes. If there is no documented strength of evidence, the measure developer should document whether the guideline recommendations are valid, useful, and applicable, using examples from peer-reviewed literature.

If multiple guidelines exist for a topic, the measure developer should review the guidelines for consistency. If inconsistencies among guidelines exist, they should evaluate the inconsistencies to determine which guideline to use as a basis for the measure and document the rationale for selecting the guideline.

Sources for clinical practice guidelines review include the USPTF, *ECRI Guidelines Trust®*, and the IOM report *Clinical Practice Guidelines We Can Trust*.

1.4 Existing and Related Measures

The measure developer should search for similar or related measures ⓘ that will help achieve the quality goals. The measure developer should

- Keep the search parameters broad to obtain an overall understanding of the measures in existence, including measures closely meeting the project requirements.
- Look for measures endorsed and recommended by multi-stakeholder organizations whenever applicable.
- Include a search for measures developed and/or implemented by the private sector.
- Determine the types of measures needed to promote the quality goals for a topic/condition or setting.
- Identify measurement gaps for the topic area, as well as existing measures available for adoption or respecified for the project. For example, if a project objective is the development of immunization measures for use in the home health setting, the measure developer will want to identify and review existing home health measures and immunization measures used in other settings such as nursing homes and hospitals.

The measure developer's search parameters should include

- measures used in the same setting, but for a different topic
- measures used in a different setting, but for the same topic
- measures constructed in a similar manner
- quality indicators
- accreditation standards
- CMS CBE-preferred practices for the same topic

The measure developer should use a variety of databases and sources to search for existing and related measures such as

- *CMS Measures Inventory Tool (CMIT)*
- CMS CBE Submission Tool and Repository (STAR) Measure Database
- Quality Payment Program (QPP) *Quality: Traditional MIPS Requirements*

The measure developer should search for other sources of information such as quality indicators, accreditation standards, or preferred practices that may pertain to the project topic. Although not developed as fully as quality measures, measure developers could develop quality indicators further to create a quality measure by providing detailed and precise specifications. Measured entities seeking accreditation must comply with accreditation standards such as those developed by the Joint Commission or the National Committee for Quality Assurance. Measures aligned with those standards may be easier to implement and more readily accepted by measured entities. These standards link to specific desired outcomes and may lead to development of quality measures from the preferred practices reflected in the standards.

1.5 Interested Party Input to Identify Measures and Important Measure Topics

There are multiple ways to obtain information from patients early in the measure development process. Options include engaging patients in informal conversations, conducting focus groups, and/or including patients or their caregivers on the Technical Expert Panel (TEP). The supplemental material, *Person and Family Engagement in Quality Measurement*, includes information on best practices and sources for patient recruitment.

The measure developer should engage patients early and often in the Measure Lifecycle stages. If applicable to the project, the measure developer may also contact and interview measure experts, subject matter experts (subject matter experts including clinicians and electronic health record system implementers), other measure developers, and other relevant interested parties to identify any measures in use or in development that are relevant to the topic of interest or to offer suggestions regarding appropriate topics for measure development. Measure developers may use these and other experts to provide information about feasibility, importance, usability, and face validity early before actual measure development begins. Additionally, a measure developer may publish a call for measures. For more information on the call for measures, see the *Information Gathering* and *Call for Measures* content on the *CMS MMS Hub*.

For details of how to conduct a TEP and other interested party meetings, see the supplemental material, *Technical Expert Panels*.

2 KEY POINTS

The environmental scan is an essential part of building the case for a quality measure and serves as the foundation for the measurement plan. The measure developer initiates the environmental scan process by conducting a literature review. They next search for current clinical practice guidelines applicable to the measure topic as well as similar or related measures. When conducting an environmental scan, it is critical for the measure developer to take the quantity and quality of available evidence into consideration. Measure developers may look to interested parties for input on measures and measure-related topics throughout the measure development process.

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