



Effective Health Care

Clinical Outcomes of Implementing Patient-Reported Outcome Measures (PROMs)

Results of Topic Selection Process & Next Steps

The nominator, a Quality Officer at a large health system, is interested in a new AHRQ evidence review on the clinical outcomes of patient-reported outcome measures (PROMs) to be able to make a clinical case to leaders and clinicians as to the importance of a mandate to implement PROMs.

We identified a systematic review protocol and recent systematic review of reviews addressing the scope of the nomination, and a new review would be duplicative of an existing product. No further activity on this nomination will be undertaken by the Effective Health Care (EHC) Program.

Topic Brief

Topic Number and Name: 0845 Clinical Outcomes of Implementing Patient-Reported Outcome Measures (PROMs)

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Conflict of Interest: None of the investigators have any affiliations or financial involvement that conflicts with the material presented in this report.

Background

Patient-reported outcome measures (PROMs) are tools used to measure patient-reported health status and quality of life. The tools are often questionnaires and generally measure either disease-specific symptoms or more global health status. PROMs were developed in the context of research,^{1,2} and are now increasingly used in clinical care^{1,3}. The now large collection of PROMs are cataloged in a website, PROMIS, developed by the National Institutes of Health⁴. Further, the Department of Health and Human Services has recently prioritized initiatives supporting improved patient outcomes⁵. While the use of PROMs is expanding, the effectiveness of PROMs on patient health outcomes has not yet been established, and clinicians may be resistant to implement PROMs without evidence of their benefits to patient health and quality of life⁶. Additionally, with increased interest in PROM implementation, there is increased interest in knowledge about how to best implement PROMs in healthcare systems⁷.

Nominator and Stakeholder Engagement

The nominator, a quality officer at a large health system, submitted this topic on clinical outcomes of PROM implementation following participation in a Learning Health Systems panel funded by the Agency for Healthcare Research and Quality (AHRQ). We spoke to the nominator to clarify the key questions of interest and to discuss an in-process protocol and a recent completed systematic review pertaining to the nominated topic.

Key Questions and PICOs

The key questions for this nomination are:

1. What is the effectiveness of using PROMs for improving patient clinical outcomes?
 - a) What are the harms to clinical outcomes of using PROMs?
2. What are the facilitators and barriers to implementing PROMs in healthcare systems?

To define the inclusion criteria for the key questions, we specify the population, interventions, comparators, and outcomes (PICO) of interest (Table 1).

Table 1. Key Questions and PICO

Key Questions		
	What is the effectiveness of using PROMs for improving patient clinical outcomes? a) What are the harms to clinical outcomes of using PROMs?	What are the facilitators and barriers to implementing PROMs in healthcare systems?
	Adult patients	N/A
	Use of PROMS for specific care interventions	N/A
	Any	N/A
	Pain, function, quality of life, hospitalizations, morbidity/mortality	N/A

Abbreviations: N/A=not applicable; PROM=patient-reported outcome measures

Methods

We assessed the nomination 0845 Clinical Outcomes of Implementing Patient-Reported Outcome Measures (PROMs), for priority for a systematic review or other AHRQ EHC report with a hierarchical process using established selection criteria. Assessment of each criteria determined the need to evaluate the next one. See Appendix A for detailed description of the criteria.

1. Determine the *appropriateness* of the nominated topic for inclusion in the EHC program.

2. Establish the overall *importance* of a potential topic as representing a health or healthcare issue in the United States.
3. Determine the *desirability of new evidence review* by examining whether a new systematic review or other AHRQ product would be duplicative.
4. Assess the *potential impact* a new systematic review or other AHRQ product.
5. Assess whether the *current state of the evidence* allows for a systematic review or other AHRQ product (feasibility).
6. Determine the *potential value* of a new systematic review or other AHRQ product.

Appropriateness and Importance

We assessed the nomination for appropriateness and importance.

Desirability of New Review/Duplication

We searched for high-quality, completed or in-process evidence reviews published in the last three years on the key questions of the nomination. See Appendix B for sources searched.

Results

See Appendix A for detailed assessments of all EPC selection criteria.

Appropriateness and Importance

This is an appropriate and important topic. The Department of Health and Human Services (HHS) has recently prioritized initiatives supporting improved patient outcomes⁵. With the emphasis on improving patient outcomes, clinicians and health systems leaders will be working to implement the use of PROMs, but may be hesitant to do so without evidence that the use of PROMs will influence patients' quality of life.⁶

Desirability of New Review/Duplication

A new evidence review would be duplicative of an existing evidence review. We located a protocol addressing the first key question regarding the effectiveness of PROMs on clinical outcomes with a proposed start date of February 2019². Further, we identified a 2018 systematic review of reviews addressing the barriers and facilitators of implementation of PROMs⁷.

Table 2. Key Questions and Results for Duplication

Key Question	Duplication (2/2016-2/2019)
KQ 1: What is the effectiveness of using PROMs to improve clinical outcomes? a. What are the harms to clinical outcomes of using PROMs?	Total number of identified systematic reviews: 1 <ul style="list-style-type: none"> • AHRQ EPC: 0 • Cochrane: 0 • VA ESP: 0 • PROSPERO Database (International Prospective Register of Systematic Reviews and Protocols): 1²
KQ 2: What are the facilitators and barriers to implementing PROMs in healthcare systems?	Total number of identified systematic reviews: 1 systematic review of reviews, 0 systematic reviews <ul style="list-style-type: none"> • AHRQ EPC: 0 • Cochrane: 0 • VA ESP: 0 • Other: 1⁷

Abbreviations: AHRQ=Agency for Healthcare Research and Quality; EPC=Evidence-based Practice Center; KQ=Key Question; PROM=Patient-reported outcome measure; VA ESP=Veterans Administration Evidence Synthesis Program

Summary of Findings

- Appropriateness and importance: The topic is both appropriate and important.

- Duplication: A new review would be duplicative of a protocol registered in PROSPERO.

References

1. Bausewein C, Simon ST, Benalia H, et al. Implementing patient reported outcome measures (PROMs) in palliative care--users' cry for help. *Health Qual Life Outcomes*. 2011 Apr 20;9:27. doi: 10.1186/1477-7525-9-27. PMID: 21507232.
2. Stamm T, Mosor E, Maisa O, et al. Systematic review on whether the use of patient-reported outcome measures improves patient outcomes. PROSPERO. 2019. http://www.crd.york.ac.uk/PROSPERO/display_record.php?ID=CRD4201912030
3. Black N. Patient reported outcome measures could help transform healthcare. *BMJ : British Medical Journal*. 2013;346:f167. doi: 10.1136/bmj.f167.
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5. Achieving Meaningful Measurement In Medicare. *Health Affairs Blog*. August 15, 2018.
6. Fung CH, Hays RD. Prospects and challenges in using patient-reported outcomes in clinical practice. *Qual Life Res*. 2008 Dec;17(10):1297-302. doi: 10.1007/s11136-008-9379-5. PMID: 18709564.
7. Foster A, Croot L, Brazier J, et al. The facilitators and barriers to implementing patient reported outcome measures in organisations delivering health related services: a systematic review of reviews. *J Patient Rep Outcomes*. 2018 Dec;2:46. doi: 10.1186/s41687-018-0072-3. PMID: 30363333. <https://www.ncbi.nlm.nih.gov/pubmed/30363333>

Appendix A. Selection Criteria Assessment

Selection Criteria	
1a. Does the nomination represent a health care drug, intervention, device, technology, or health care system/setting available (or soon to be available) in the U.S.?	Yes. PROMs are available in the U.S. and the National Institutes of Health developed an online collection of PROMs, PROMIS ⁴ .
1b. Is the nomination a request for a systematic review?	Yes. This is a request for a systematic review.
1c. Is the focus on effectiveness or comparative effectiveness?	Yes. Key Question 1 addresses effectiveness of PROMs on clinical outcomes.
1d. Is the nomination focus supported by a logic model or biologic plausibility? Is it consistent or coherent with what is known about the topic?	Yes. This is consistent with what is known about the topic.
2a. Represents a significant disease burden; large proportion of the population	Patient outcomes are a focus of initiatives of the federal government, and the use of PROMs for a range of health conditions is increasing in healthcare systems ^{3, 5} .
2b. Is of high public interest; affects health care decision making, outcomes, or costs for a large proportion of the US population or for a vulnerable population	Yes. Patient outcomes are a focus of initiatives of the federal government and the use of PROMs for a range of health conditions is increasing in healthcare systems ^{3, 5} .
2c. Represents important uncertainty for decision makers	Yes. Health system leaders are beginning to implement PROMs and need evidence that the implementation of PROMs will improve patient clinical outcomes and need guidance on the facilitators and barriers to implementing the PROMs ^{5, 6} .
2d. Incorporates issues around both clinical benefits and potential clinical harms	Yes. This topic incorporates benefits and harms of introducing the use of PROMs.
2e. Represents high costs due to common use, high unit costs, or high associated costs to consumers, to patients, to health care systems, or to payers	There may be costs associated with healthcare systems implementing changes to incorporate PROMs on a large scale ⁶ .
3. Would not be redundant (i.e., the proposed topic is not already covered by available or soon-to-be available high-quality systematic review by AHRQ or others)	We identified a protocol registered in PROSPERO that addresses the question of the effectiveness of PROMs on improving clinical outcomes ² . We also identified a 2018 completed systematic review of reviews that addresses the facilitators and barriers to implementing PROMs ⁷ .

Abbreviations: AHRQ=Agency for Healthcare Research and Quality; KQ=Key Question; PROM=Patient-reported outcome measure

Appendix B. Search for Evidence Reviews (Duplication)

Listed below are the sources searched, hierarchically

Primary Search
AHRQ: Evidence reports and technology assessments https://effectivehealthcare.ahrq.gov/ ; https://www.ahrq.gov/research/findings/ta/index.html ; https://www.ahrq.gov/research/findings/evidence-based-reports/search.html
VA Products: PBM, and HSR&D (ESP) publications, and VA/DoD EBCPG Program https://www.hsr.d.research.va.gov/publications/esp/
Cochrane Systematic Reviews http://www.cochranelibrary.com/
HTA (CRD database): Health Technology Assessments http://www.crd.york.ac.uk/crdweb/
PubMed http://www.ncbi.nlm.nih.gov/pubmedhealth/
Secondary Search
AHRQ Products in development https://effectivehealthcare.ahrq.gov/
VA Products in development https://www.hsr.d.research.va.gov/publications/esp/
Cochrane Protocols http://www.cochranelibrary.com/
PROSPERO Database (international prospective register of systematic reviews and protocols) http://www.crd.york.ac.uk/prospero/
Tertiary Search
Patient-Centered Outcomes Research Institute (PCORI) https://www.pcori.org/