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## The Role of Patient-Reported Outcome Measures in Value-Based Payment Reform

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### Abstract

The United States healthcare system is currently experiencing profound change. Pressure to improve the quality of patient care and control costs have caused a rapid shift away from traditional volume driven fee-for-service reimbursement to value-based payment models. Under the 2015 Medicare Access CHIP (Children's Health Insurance Program) Reauthorization Act (MACRA), providers will be evaluated based on quality and cost efficiency and ultimately receive adjusted reimbursement based on their performance. Although current performance metrics do not incorporate patient reported measures, many wonder if and how patient-reported outcome measures (PROMs) will eventually fit into value-based payment reform. On November 17, 2016 the 2<sup>nd</sup> annual Patient-Reported Outcomes in Healthcare Conference brought together international stakeholders from all aspects of health care to discuss the potential role of patient reported outcomes in value-based healthcare reform. The purpose of this report is to summarize findings from this conference in the context of recent literature and guidelines to inform implementation of patient reported outcomes in value-based payment models. Recommendations for evaluating key perspectives and measurement goals are made to facilitate appropriate use of patient reported outcome measures to best benefit and amplify the voice our patients.

### Keywords

patient-reported outcomes; value-based; payment reform

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Understanding the patient perspective is integral to delivering high-value patient-centered care. Patient reported outcome measures (PROMs) have the potential to systematically incorporate patient input for improvement in both quality and cost of care. However, PROMs are based on subjectively collected data with potential for invalid/unreliable measurement, and uncontrolled sampling/response bias that is not always fully understood. Successful implementation of PROMs require substantial provider buy-in and resource investment that makes practical data collection challenging. Therefore, despite much enthusiasm to incorporate PROMs in value-based reform, foundational work addressing methodological and operational challenges is required.<sup>1-3</sup>

On November 17, 2016 the 2<sup>nd</sup> annual Patient-Reported Outcomes in Healthcare Conference brought together international stakeholders from all aspects of medicine: regulatory bodies, funding agencies, payers/insurers, patient advocacy groups, quality of life researchers, clinicians, and physician specialty associations. This meeting was funded through a Patient-Centered Outcomes Research Institute (PCORI) Eugene Washington PCORI Engagement Award and convened by the Plastic Surgery Foundation (PSF) and the Council of Medical Specialty Societies (CMSS). The meeting sought to investigate ways in which PROMs may be implemented within value-based healthcare reforms. The purpose of this article is to provide a summary of the key findings from this Conference and identify areas for further research and development.

## Choosing the Correct Measure

The fundamental goal of all stakeholders interested in using PROMs is to facilitate delivery of high-quality, patient-centered care. However, the unique perspective and intended impact of PROMs for each stakeholder is different (Table 1). Discussion among conference participants echoed previous expert opinions that evaluation of a proposed PROM for performance measurement must take into account the intended context of use, patient population, and purpose for data collection.<sup>3</sup> Clinically relevant factors for shared decision-making between patients and their care providers may be fundamentally different from actionable data items for payers and employers when addressing provider accountability. Similarly, the evaluation of novel therapies may be different for a regulatory agency compared to funding agencies or academic researchers. Thus, even for patients with the same condition, different outcome metrics or measurement scales may be required for different purposes.

Many traditional PROMs were developed solely from the clinician perspective for shared decision making, and were not intended for measuring provider performance. Generic (non-condition specific) or legacy (historic measures with limited patient input) PROMs may not be sensitive enough to compare treatments or provider performance, especially for low-volume conditions or procedures. To optimize the value of care we provide from our patients' perspective, we must ensure that the right PROM is used for the appropriate indication. Without proper alignment between PROMs and measurement goals, actions on the basis of these data may be unfounded and may result in poor decision-making.

## Measurement Standardization Across Settings and Reduction of Patient Burden

Standardization of condition-specific PROMs through organizations such as the International Consortium for Health Outcomes Measurement (ICHOM), have the potential to improve data collection efficiency and clarity of data interpretation.<sup>4-5</sup> Other potential benefits include improved learning curves among patients/providers and the ability to follow outcomes longitudinally across multiple settings for chronic conditions. However, standardization requires a substantial effort and cooperation among various different stakeholders, which may present significant logistical challenges. Furthermore, patients with multiple chronic conditions may feel inundated with excessive surveying unless there is direct benefit in their interaction with providers or access to preferred treatments. Thus, it is imperative for standardized measures to be parsimonious and efficient in evaluating relevant, actionable outcomes.

## Operational Data Issues and Economies of Scale

Experts in healthcare information technology noted challenges implementing PROMs and achieving system level integration. These issues are significant and require a financial, operational, and cultural investment. Conference members noted three key factors necessary for successful implementation: 1) clearly defining the perspective and measurement goal, 2) identifying a team champion, and 3) real-time immediate access to data for shared decision-making. Accomplishing these goals is a strenuous task and requires collaboration with healthcare information technology experts as well as collaboration between providers with shared patient populations.

## Using PROs to Evaluate Structure, Process and Outcome

Donabedian's conceptual framework for evaluating healthcare quality in terms of structure, process, and outcome has served as the foundation for many quality and performance measures used today.<sup>6</sup> This framework was originally intended to identify measures for quality improvement. However, under value-based healthcare reform, many believe in using these measures to assess provider accountability as a surrogate for improving quality of care. Though this distinction may seem insignificant, clarifying the way measures will be used under value-based reform may determine their ultimate success in truly improving quality of care from the patient-perspective rather than simply adjusting provider reimbursement.

PROMs have the ability to be used as structural, process, and/or outcome measures.<sup>3</sup> Many stakeholders are interested in pursuing the use of PROMs as an outcome measure to monitor and compare provider performance. However, a recent study evaluating change in PROMs before and after hip replacement surgery found that most of the variation in PROMs are due to patient-related factors outside of the control of providers, and therefore PROMs may not be a useful method for evaluating and comparing individual provider performance.<sup>4</sup> Given the ability of PROMs to assess the impact of healthcare interventions on pain, function, and quality of life, the same PROMs may be better suited for shared medical decision making or other process related quality improvement efforts.<sup>3-4</sup> Similarly, PROMs may also be

considered a structural performance measure due to the high level of system infrastructure and investment required for implementation.

## Conclusion: PROs as Performance Measures (PRO-PMs)

A recent literature review and expert panel assembled by the American Medical Association convened Physician Consortium for Performance Improvement identified nine best practices and considerations for developing and evaluating proposed PROMs as performance measures (PRO-PMs).<sup>3</sup> Among these recommendations were a clear rationale for measuring the outcome and consideration of the intended context of use (including psychometric development). Conference participants agreed strongly with these recommendations. Specifically, when using PRO-PMs to serve our patients, it is important to collect data that is best known to our patients, such as symptoms and experience. This may involve using PRO-PMs as traditional outcome measure, but may also involve using PRO-PMs to evaluate process and structure of care.

Stakeholders also echoed the best practice recommendations that there should be a clear analysis plan and framework for interpreting results. If the goal of value-based payment reform is to adjust provider reimbursement, then PRO-PMs used in this capacity should be developed with appropriate measurement scales to assess provider performance. Similarly, results from these PRO-PMs should be actionable in a transparent manner to providers.

Finally, conference participants and patient advocates elaborating on the concept of measure standardization and minimization of patient burden. As developing technology continues to increase our capacity to measure, store, and analyze larger amounts of data, it is important to consider parsimony of data collection. Patients with multiple chronic conditions and frequent health utilization are at risk for substantial administrative burden that may reduce the quality of care they receive from providers. As the U.S. healthcare system places greater emphasis on improving value, it is important for all stakeholders to work together and implement PROMs in a way that best benefits and amplifies the voice of our patients.

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**Table 1**

**The Value of Patient Reported Outcome Data for Stakeholders**

<b>PRO Impact</b>	<b>Patient</b>	<b>Clinical Provider</b>	<b>Academic Researcher</b>	<b>Institution/Employer Organization</b>	<b>Payer</b>	<b>Research Funding Agency</b>	<b>Regulatory Agency</b>
Evaluation of Novel Treatments	X	X	X		X	X	X
Shared Decision Making	X	X					
Evaluating Provider Performance	X	X		X	X		
Determining Treatment Effectiveness	X	X	X		X	X	
System Level Quality Improvement		X		X	X		