Measuring Value in Healthcare Beyond Cost

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To drive healthcare reform, value assessments must be based on strong methods and patient preferences. Value varies by perspective: the concept of hope is an additional element that may be important from the patient perspective. Alternatives to the conventional QALY may be useful.

Value in health has long been equated with cost. But cost-effectiveness is just one component on the complex spectrum of value-based care. As healthcare systems and stakeholders seek to measure value in other ways, there is a need for frameworks that represent the needs and interests of decision makers.[1] Well-balanced and robust value assessment frameworks can inform decisions about a wide range of treatments with the goal of achieving better outcomes for patients.[2]

MEASURING WHAT MATTERS TO PATIENTS

Healthcare is a unique industry grappling with high consumer expectations, many diverse stakeholders, and most important, patients with distinctly different needs. Few other sectors are as vast or multifaceted. In light of this complexity, value frameworks face significant challenges, as well as substantial opportunities.

Value frameworks seek first and foremost to support decision making. However, current value assessment methods are often based on cost-utility analyses and do not always consider all factors that are of importance to patients.[3] The most comprehensive frameworks are informed by data on clinical outcomes, costs, and patient preferences. They serve a dual purpose, supporting the delivery of patient-preferred outcomes and identifying higher-cost treatments that lack a significant benefit.

Improving value assessment methodology starts with research. Leading experts are expanding traditional measurements of value to meet the needs of diverse stakeholders. While their approaches differ, 3 key principles have emerged:

- We must consider all perspectives on value: Value is in the eye of the beholder, and key aspects of value vary among patients, clinicians, payers, and society
- Value can be defined in many ways: Even within a single class of stakeholders, perspectives are often nuanced, dynamic, and heterogeneous. They are also based on clinical goals, needs, and preferences
- Alternatives to the conventional QALY may be useful: Commonly used metrics—such as the quality adjusted life-year (QALY)—may not adequately capture the full scope and meaning of value to all stakeholders

Table 1: Three Viewpoints on Value Assessment Challenges

Current Limitation	Approach to Address Limitation	Implications for Value Assessment
Varied perspectives on value may conflict with or overshadow one another	Impact analysis of various perspectives on value assessments	Greater transparency and understanding of various perspectives
Most value frameworks account only for realized or expected health outcomes, not for value of knowing, value of hope, or value of peace of mind in protection from financial catastrophe—factors that matter to patients	Discrete choice experiment to quantify value of hope	Broader value frameworks may better represent elements of importance to patients and families
Data sources and methodologies, such as QALY, may not capture all potential impacts of health interventions	Systematic review of studies and approaches that provide alternatives to QALY	Inform policy discussions about value assessment methodology and develop generic simulation tool

THREE NEW WAYS TO ASSESS HEALTHCARE VALUE

Three researchers are addressing barriers to value assessment by challenging current methodologies (Table 1).[4,5]

These scientists are specialists in health economics, outcomes research, and comparative effectiveness, and they have devoted their careers to elucidating patient-centered preferences. Gillian Sanders Schmidler, PhD, is deputy director of the Duke Margolis Center for Health Policy. Dr Schmidler has developed methods and models for evaluating the comparative effectiveness of treatments, practices, and policies. As past president of the Society for Medical Decision Making, she brings a unique patient- and-provider emphasis to the design of value assessments. She has underscored challenges in reconciling the varying and oftentimes conflicting perspectives of different stakeholders in assessing value. Shelby D. Reed, PhD, is a professor in population health sciences and medicine at the Duke Clinical Research Institute and the past president of ISPOR. As a member of 3 ISPOR task forces examining best practices for cost-effectiveness analyses, Dr. Reed has advocated for quantifying intangible but potentially meaningful aspects of value. Current value assessment frameworks fail to capture personal sources of value, such as hope, focusing largely on costs and clinical outcomes. Josh J. Carlson, PhD, an associate professor at the University of Washington, has studied uncertainty in decision-making processes and how to reduce uncertainties in real-world medical settings. In his work addressing the shortcomings of current data sources and measures designed to demonstrate value for various healthcare interventions, Dr. Carlson has also identified alternative methods for assessing value that may prove useful for healthcare decision makers. Each of these challenges and proposed solutions are described in more detail below.

EXPLORING MULTIPLE PERSPECTIVES ON VALUE

The First Panel on Cost-Effectiveness in Health and Medicine published its findings 23 years ago, recommending that analyses present their findings in a reference case that used a societal perspective. Since that time, Dr Sanders Schmidler says "many cost-effective analyses (CEA) have been performed, [but] most did not use the societal perspective, and even those that said they did often [omitted] important elements." Recognizing this critical gap, the Second Panel on Cost-Effectiveness in Health (cochaired by Dr Sanders Schmidler) recommended that CEAs report 2 reference cases—one from a healthcare sector perspective and another from a societal perspective.[6] As Dr Sanders Schmidler noted, the Second Panel was "very clear in terms of just how broad that societal perspective should be, and how it should incorporate things beyond just the normal healthcare outcomes."

One of the greatest challenges in value assessment is recognizing and interpreting different and sometimes opposing points of view. Among and between stakeholder groups, perspectives diverge on the value of specific healthcare interventions. Yet, these viewpoints are fundamental to the definitions of value that are ultimately used to select one treatment versus another. Acknowledging multiple perspectives and enhancing transparency to illustrate how framing value assessments from different perspectives may change outcomes, costs, analytic horizons, and ultimately decisions can help us develop more comprehensive, more flexible, and more inclusive value frameworks. All cost-effectiveness analyses and value assessments must be clear about which viewpoint(s) they represent and how differing viewpoints can lead to significantly different valuations.

CAPTURING THE VALUE OF HOPE

Integrating value-based care across health systems may hinge on better understanding the patient perspective. But value assessments must also consider a multitude of nuanced factors that shape and affect perceptions of value across individuals and over time. Cost and clinical benefits provide only a limited view of the scope of value, especially for patients with serious or chronic diseases. Based on discussions with cancer patients, Dr Reed is working to quantify the extent to which the value of hope represents a unique contribution to value from the patient perspective. The value of hope was explicitly recognized by ISPOR's special task force on value frameworks as one of the defining elements of value in healthcare.[7] Researchers have substantiated the significance that patients attach to hope, but the high value people assign to this outcome is frequently excluded in cost-effectiveness analyses.[8,9]

Hope can be framed as a patient's preference for a treatment that offers a chance of a significant gain *in survival* versus a treatment that offers a *certain period of survival*, even when expected survival is the same for both treatments. Knowing patients often value hope above and beyond health gains afforded by a particular treatment, value assessments that incorporate this concept may better reflect patient preferences. When asked about the value of cancer treatments, Dr Reed says many patients cite traditional measures of value, such as "length of life and quality of life. Some mention cure, being able to do what they wanted to do, playing with grandchildren, and so forth. But then a couple of [patients] simply say, 'Hope.' They just want hope."

Although patients and researchers recognize the importance of hope, this nuanced and dynamic concept can be difficult to quantify. There is also the question of whether payers should be responsible for the hope that treatments may offer patients even if they do not deliver on extending survival or improving quality of life. Nevertheless, incorporating concepts like value of hope offers payers the opportunity to view value from a more patient-centered perspective and may offer a means to better align benefit packages with patients' preferences.

EXPLORING ALTERNATIVES TO THE CONVENTIONAL QALY

The QALY is a prominent metric for capturing quantity and quality of life. QALYs are calculated by multiplying utility value by time spent in a health state and aggregating over the relevant time horizon.[10] While frequently used, the QALY has been criticized for several potential limitations. For instance, QALY calculations often assume individual patients are risk-neutral, and they may not indicate all potential impacts of healthcare interventions, eg, well-being.[11,12] Despite these critiques, use of QALYs has steadily increased, while research and implementation of strategies for overcoming the underlying flaws have lagged. >

Dr Carlson has discussed the use of QALYs and their application in decision making and value frameworks. He notes criticisms that the QALY "doesn't hold up under certain conditions" and empirical evidence that suggests "individuals are [not] risk-neutral with respect to longevity … and the sequence of health states [may] matter."

Although many objections to the QALY are well known, it remains the default measure, in part because of a perceived lack of viable alternatives. But other metrics and approaches do exist, eg, equity weighting, which Dr Carlson notes has been implemented internationally and could be evaluated for viability in the United States.[13] Another approach is expanding the QALY to include well-being.[14] These alternatives have their own sets of challenges and limitations. Further categorization of QALY alternatives can identify, examine, and compare existing gaps and uncover opportunities to ensure the underlying methods behind value assessment are accurate, precise, and meet the needs of health care stakeholders.

OVERCOMING OBSTACLES AND MOVING VALUE ASSESSMENT FORWARD

The 3 viewpoints described in this article have been endorsed by national expert-level panels, including the Second Panel on Cost-Effectiveness in Health and Medicine and ISPOR's Special Task Force on US Value Frameworks. While moving away from traditional measures of costs and benefits may seem daunting, painting a more holistic picture of value that captures the heterogeneity of patient preferences will ensure value-based care truly reflects the significance of life-saving and life-improving treatments to patients, providers, payers, and the greater public. Promoting the development of new and novel methods that address some of the widely acknowledged shortcomings of traditional value assessments will help direct scarce resources to the most effective and promising therapies.

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