

Is it Time to Update Societal Value Sets for Preference-Based Measures of Health?

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I have been asked more than once if it is time to revisit ‘old’ value sets for health state classifier systems, in part motivated by the idea that societal preferences for health may have changed. Values change from generation to generation and era to era. In an age of social media and ‘selfies’, there is unlikely to be much debate that certain societal values have changed over time, but this is less clear in the context of societal preferences for health that inform healthcare decisions. There are additional reasons to consider updating societal value sets: developments in the methods used to value health; changes in population demographics; and concerns about potential bias in previous studies.

The issue of whether societal value sets should be re-estimated to reflect changes in preferences for health states is an increasingly relevant question. For example, notable scoring functions for the EQ-5D and Health Utilities Index were elicited from populations almost a generation ago. The widely cited EQ-5D value set by Dolan was based on the 1993 Measurement and Valuation of Health (MVH) study in the UK [1]. The Health Utilities Index Mark 3 multi-attribute and single-attribute utility functions are based on preferences elicited in 1994 from a community in Hamilton, Ontario, Canada [2]. It is conceivable that preferences elicited 20 or more years ago represent antiquated notions of willingness to trade off years of life for better health if there is an emerging populace sentiment that “as long as I can surf the web, I don’t care if I am confined to bed”. Similarly, changes in societal attitudes

about the stigma of mental health issues may have implications for valuation studies.

To my knowledge, no valuation study has been rationalized on the basis of outdated preferences. If there is evidence that societal preferences for health have changed in jurisdictions that rely upon utilities/QALYs to guide resource allocation, there would be a heightened need to conduct studies that update the preferences. However, methodological issues impede our ability to determine whether there is temporal mutability in the underlying preferences. As researchers have found with the MVH protocol, it is very difficult to reproduce time trade-off values despite attempting to follow an established protocol [3]. Although one explanation could be that values have changed, differences could also be attributed to interviewer effects, mode of data collection, sample selection, and other elements of study design that are difficult to replicate.

Population demographic shifts are occurring in many nations as birthrates decline and people live longer. Re-estimation of societal value sets with quota sampling representative of current demographics would likely lead to different weights because preferences and willingness to trade off life for health is age dependent.

Another argument for revisiting value sets relates to the current state of the science that surrounds preference elicitation. Despite decades of experience, no consensus has emerged regarding the most appropriate methodology to directly elicit preferences and substantial issues remain unresolved, such as the treatment of states worse than dead. There is progressive experimentation with preference elicitation methods, such as discrete choice-based experiments in multinational protocols by the EuroQol group [4]. Thus, an overarching question to ask prior to replicating a past study is “do we want to replicate this approach when we know we could improve upon the past protocol?”

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Nested within this dilemma is the foreknowledge that changing the protocol will preclude the ability to compare preferences between a proposed and past study.

In contemplating the need to update value sets, we should also consider why we need them. If primarily for Health Technology Assessment (HTA) purposes—to inform resource allocation—then new value sets are needed when values change to the extent that they would impact the decision to adopt a technology or not. That will be difficult to pinpoint. Furthermore, if new valuation studies are to be conducted, they would be unlikely to replicate a previous methodology as they would need to conform to the prevailing HTA guidelines issued by government agencies that would likely reflect contemporary views on scientific methods.

While relatively fewer resources are needed to conduct valuation studies through online data collection and more efficient designs, they still require considerable effort, expertise, and resources. Policy makers and researchers have to be selective and prioritize which value sets to update and adequately justify the need to fund such studies. As culture and science are dynamic, the overriding question is not whether value sets need to be updated; clearly at some point they should be revisited. Rather, it is to

determine at what point changes in scientific methodology, cultural values, and population demographics necessitates re-estimation of preference-based algorithms. As QALY-guided resource allocation decisions in healthcare are country specific, the urgency of this call is best decided jurisdiction by jurisdiction, measure by measure.

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