

## INTRODUCTION

Accelerating innovations in different types of health technology call for improved methods and processes to better define and measure innovation in health technology assessment (HTA) to ensure the long-term sustainability of our innovation ecosystem and to maximize benefits to our society.

The objective of this study was to engage cross-stakeholder experts in a roundtable discussion to identify prioritized areas for future research.

These prioritized attributes also subsequently informed a Call for Papers launched by the Innovative and Value Initiative to identify innovation solutions to address these gaps.

## METHODS

First, a targeted literature search was conducted to identify systematic review articles for attributes used to define and measure innovation in HTA frameworks worldwide. Guidance documents from three HTA agencies not found in the literature review were also examined.

An Expert Roundtable was subsequently held on October 17, 2020, where 11 stakeholders representing patient, employer, clinician, payer, industry, and researcher perspectives participated in two facilitated group discussion sessions.

In the first session, participants reviewed the initial list of attributes from the review and discussed elements that were missing or should be removed.

In the second session, participants:

1. Identified a subset of attributes from the revised list that were most important to consider in HTA,
2. Refined the list further for additional discussion about availability in data and methods,
3. Participated in a group exercise to plot the attributes on a two-dimensional scatter plot, illustrating the available data and readiness of appropriate methods, and
4. Ranked their top 3 prioritized attributes for further research and inclusion in our Call for Papers initiative.

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## RESULTS

An initial set of 23 attributes across six domains were identified from the targeted search. In the first discussion session, experts identified eight attributes that should be added to the list and two attributes that should be removed.

In the second discussion session, participants began by identifying 21 attributes most important to defining innovative properties of health technologies across three domains: quality of life, long-term dynamic effects, and unmet needs (Table 1).

**Table 1. List of Attributes Most Important to Consider in Valuing Innovation in HTA**

Quality of Life	Long-Term Dynamic Effects	Unmet Needs and Wants
<ul style="list-style-type: none"><li>• Ease</li><li>• Convenience</li><li>• Productivity</li><li>• Well-being/wellness</li><li>• Family spillover/family burden</li><li>• Reduced patient burden</li><li>• Impacts on the broader society</li><li>• Health outcomes</li></ul>	<ul style="list-style-type: none"><li>• Novelty of the technology (e.g., a new mechanism of action)</li><li>• Incremental vs. radical</li><li>• Scientific spillover effects<ul style="list-style-type: none"><li>• Novel knowledge/learning</li></ul></li><li>• Real options value</li><li>• Impacts on the costs for next innovation</li></ul>	<ul style="list-style-type: none"><li>• Access</li><li>• Availability of existing treatments</li><li>• Accessibility of existing treatments</li><li>• Affordability</li><li>• Timely access/optimized treatment pathway</li><li>• Diagnostics and its potential to improve health through the targeted and related diseases (spillover)</li><li>• Removing clinical and economic burden</li><li>• Available treatments (curative, disease modifying, treatment exists, exists but not great)</li><li>• Therapeutic options</li><li>• Undiagnosed patients and population</li><li>• Understanding the “root cause” of a disease</li><li>• Disease severity</li><li>• Lack of market incentives</li></ul>

## CONCLUSIONS

The Expert Roundtable concluded with cross-stakeholder consensus on prioritized attributes for further research.

Advancing research in these areas through a Call for Papers will help us identify innovative solutions that will address these gaps, investing in the long-term sustainability of our R&D ecosystem and improving social welfare.

Among the 21 attributes, 15 were identified as attributes that required additional discussion to assess whether there are existing methods and data sources to measure them in HTA (Figure 1):

- > Access, affordability, optimized treatment pathways, and clinical and economic burden were categorized as attributes with good data and methods, but the use of quality data and validated methods was inconsistent across different stakeholders and diseases.
- > The well-being of patients and improved health outcomes were attributes judged to have some emerging data sources and methods.
- > Family spillover, reduced patient burden and convenience of treatments were attributes categorized as often having data but lacking well-established methods.
- > Impacts on broader society, real-option value, productivity, understanding of root causes, and societal burden were judged as having established methods but often requiring additional data collection.
- > Lastly, scientific spillover was considered an attribute that lacks both established data and methods.

Based on committee votes, scientific spillover, real-option value, and impacts on broader society were identified as the top three attributes prioritized as themes for the Call for Papers.

**Figure 1. Attributes Categorized by Data and Methods Readiness**

