TOWARDS A MORE HOLISTIC VALUE ASSESSMENT IN HEALTHCARE

THE IMPACT FRAMEWORK

I NTEGRATING VALUE OF INFORMATION

M EASURING PATIENT RELEVANT OUTCOMES

P RIORITIZING HEALTH EQUITY

A DDRESSING SEVERITY OF DISEASE

C ONSIDERING SOCIETAL IMPACTS

T ARGETING SUSTAINABILITY

Table of Contents

AUTHORS

Tuukka Hakkarainen, MSc
Health Economics and Outcomes Research Manager

Ira Haavisto, PhD
Research and Innovation Director

Katja Nolvi, MSc
Senior Manager

Riikka-Leena Leskelä, PhD
Research Director, Senior Partner

How to cite this document: Hakkarainen T, Haavisto I, Nolvi K, Leskelä RL. Towards a More Holistic Value Assessment in Healthcare: The **IMPACT** Framework. Nordic Healthcare Group. May 14, 2024.

1. Introduction to Traditional Cost-Effectiveness Analysis

Health Technology Assessment has long relied on traditional cost-effectiveness analysis (CEA) as its cornerstone for evaluating the value of health technologies and programmes, and guiding global coverage and reimbursement decisions1. Traditional CEA primarily relies on direct, measurable costs and individual health benefits, often expressed in terms of quality-adjusted life years (QALY).

A key element of CEA is the incremental cost-effectiveness ratio (ICER), which measures the cost-effectiveness of a new intervention against standard care by dividing the cost difference by the health benefit difference. This ratio quantifies the cost per additional health benefit, such as a QALY, which can help decision-makers evaluate whether a new treatment's health benefits justify its higher costs compared to existing options.

The traditional CEA framework, while historically central to decision-making in health economics, faces challenges amid today's rapid advancements in health technology and prevailing mega trends[2]. The changing healthcare environment, marked by an ageing population, swift technological progress, resource scarcity, a growing emphasis on patient empowerment and an intensified focus on health equity, calls for a more comprehensive approach.

In this paper, we introduce a more holistic approach to value assessment that builds upon traditional CEA. Our value assessment framework is designed to address current healthcare-related challenges and trends by integrating broader considerations into healthcare evaluation and ensuring a more comprehensive assessment of the value of health technologies and programmes.

2. Key Trends Driving the Need for a More Holistic Value Assessment

Increasing healthcare costs: Rising healthcare costs, driven by demographic shifts and new costly treatments, underscores the need to consider healthcare spending within the broader societal context to optimise the use of limited resources. Traditional CEA tends to focus narrowly on direct healthcare costs and benefits, overlooking long-term broader societal impacts and potentially leading to suboptimal resource allocation. These impacts include, for example, the ability to participate in societal activities, which includes patients as well as their caregivers and families. A comprehensive assessment framework could extend beyond direct health outcomes to evaluate the overall impact on societal activity and well-being.

Sustainability aspects in healthcare: An increasing emphasis on sustainability in healthcare calls for decision-makers to evaluate the long-term environmental, economic and social impacts of health technologies. Traditional CEA often concentrates mainly

on immediate costs and benefits, excluding broader sustainability considerations. A more holistic and forward-thinking approach could align healthcare decisions with global sustainability goals by evaluating health technologies and programmes for long-term sustainability and promoting environmentally responsible and economically viable healthcare practices.

Increasing interest in patient-centricity: A growing focus on patient autonomy and individual preferences highlights the importance of including patient-relevant outcomes in healthcare value assessments. Traditional CEA often prioritises immediate health outcomes, and the QALY may not systematically encompass all patient-relevant outcomes or be consistently applied in reimbursement decisions. A more holistic value assessment approach could incorporate a broader array of patient-relevant outcomes, ensuring that healthcare assessments are more closely aligned with patients' needs and preferences.

Health equity considerations: Addressing health disparities and ensuring equitable access to healthcare for all segments of a population could be considered an important factor in healthcare decision-making. Traditional CEA often applies a uniform approach to health outcomes, disregarding varied impacts on different demographic groups. This uniformity may not recognise the unique needs of underserved populations and overlooks the influence of the social determinants of health. A more holistic evaluation framework could include equity considerations, ensuring that healthcare delivery is fair and accessible to all segments of society, irrespective of socioeconomic status.

Challenges posed by the ageing population: With demographic changes leading to an older population, an increase in both chronic and severe diseases, along with multimorbidity, can be observed. Traditional CEA often does not effectively distinguish between chronic and severe conditions and may not fully address the complexities of multimorbidity. Recognising that society might place greater value on treatment for severe diseases, a more holistic framework could account for disease severity and complexity[3].

Increasing variability and predictability: The evolution of personalised medicine and advanced medical technologies has increased both the variability and predictability of treatment outcomes in healthcare. These advancements promise highly tailored patient care and improved health outcomes for certain subgroups of patients. This means that treatment responses can be highly variable, complicating the task of assessing their value by using traditional uniform metrics. Furthermore, emerging diagnostics and AI-based tools help identify these subgroups, necessitating the development of methods for evaluating these diagnostics alongside treatments. Moreover, there is increasing recognition that individuals often value the acquisition of more information about their health status, even when it may not alter their health outcomes. This calls for an evaluation framework that accommodates the diverse outcomes of these advanced treatments as well as recognises and incorporates the intrinsic value that patients place on more comprehensively understanding their health conditions.

Previous efforts to expand the traditional CEA

Several endeavours[2,4–6] have sought to expand the traditional CEA framework by proposing new aspects of value that respond to evolving healthcare needs. While these efforts have introduced aspects to expand traditional CEA, a consensus on an appropriate evaluation framework remains elusive. This lack of consensus keeps evaluators and decision-makers anchored to traditional CEA, possibly limiting their ability to fully capture the multifaceted value of health technologies and programmes (see Figure 1).

Figure 1. Traditional CEA might overlook various aspects that influence the holistic value assessment of health technologies.

3. Introducing the IMPACT Value Assessment Framework

Building on existing knowledge, we introduce the **IMPACT** value assessment framework to spark dialogue and drive a transition towards a more holistic value assessment in healthcare. Recognising the foundational significance of traditional CEA in shaping coverage and reimbursement decisions, the **IMPACT** value assessment framework is designed with traditional CEA at its core. The **IMPACT** value assessment framework extends beyond the traditional CEA by introducing supplementary value aspects aimed at providing a more holistic perspective on the potential value of health technologies and programmes.

Acknowledging that the aspects introduced in the **IMPACT** value assessment framework are neither new nor novel, we prefer the term "supplementary" to highlight the contextual and additive nature of these aspects. Some of the supplementary value aspects presented in the **IMPACT** value assessment framework are already occasionally incorporated into value assessments. We aim to advocate for the wider adoption of these aspects to enable healthcare policymakers to conduct more comprehensive appraisals and comparisons of health technologies.

The six supplementary value aspects proposed by the **IMPACT** value assessment framework include the value of information, patient-relevant outcomes, health equity, severity of disease, societal impacts and sustainability.

Integrating the Value of Information

The value of information aspect addresses healthcare outcome unpredictability and patient response variability while considering risk aversion, anticipated therapy advancements and diverse patient preferences for outcome variability.

By employing methods such as a value-of-knowing analysis or Bayesian methods, healthcare-related variability can be addressed. This aspect enhances decision-making by understanding factors such as the value of knowing, value of hope, insurance value and the value of precise information.

Measuring Patient-Relevant Outcomes

This aspect aligns with a growing emphasis on patient-centricity by advocating for the systematic incorporation of patient-relevant outcomes in healthcare evaluations. Although the QALY metric includes patient-reported outcomes, its use as a basis for reimbursement decisions varies in consistency across countries, with some relying on it more heavily than others. Furthermore, evidence suggests that QALY has limitations in its foundational assumptions, does not always align with societal priorities, and fails to adequately cover all diseases and treatments, often underperforming in various contexts[2,7].

Patient-relevant outcomes could be assessed more comprehensively by applying patient-reported outcome measures (PROMs), functionality impairments, qualitative interviews or patient engagement frameworks.

Prioritising Health Equity

The health equity aspect addresses the impacts of health technologies and programmes on health-related inequalities and disparities, aiming to ensure equitable healthcare access for all demographic groups, including the elderly. It addresses the unique needs of underserved populations and the impacts of social determinants on health outcomes.

The equity impacts of health technologies and programmes could be examined by methodologies such as distributional CEA, multicriteria decision analysis or opportunity cost analysis. Analyses of geographical equity and social determinants can further explore how location and societal factors affect health outcomes. Measures such as the equity-weighted life years gained (evLYG) could be considered to mitigate QALY's inherent bias against the elderly or individuals with disabilities[8].

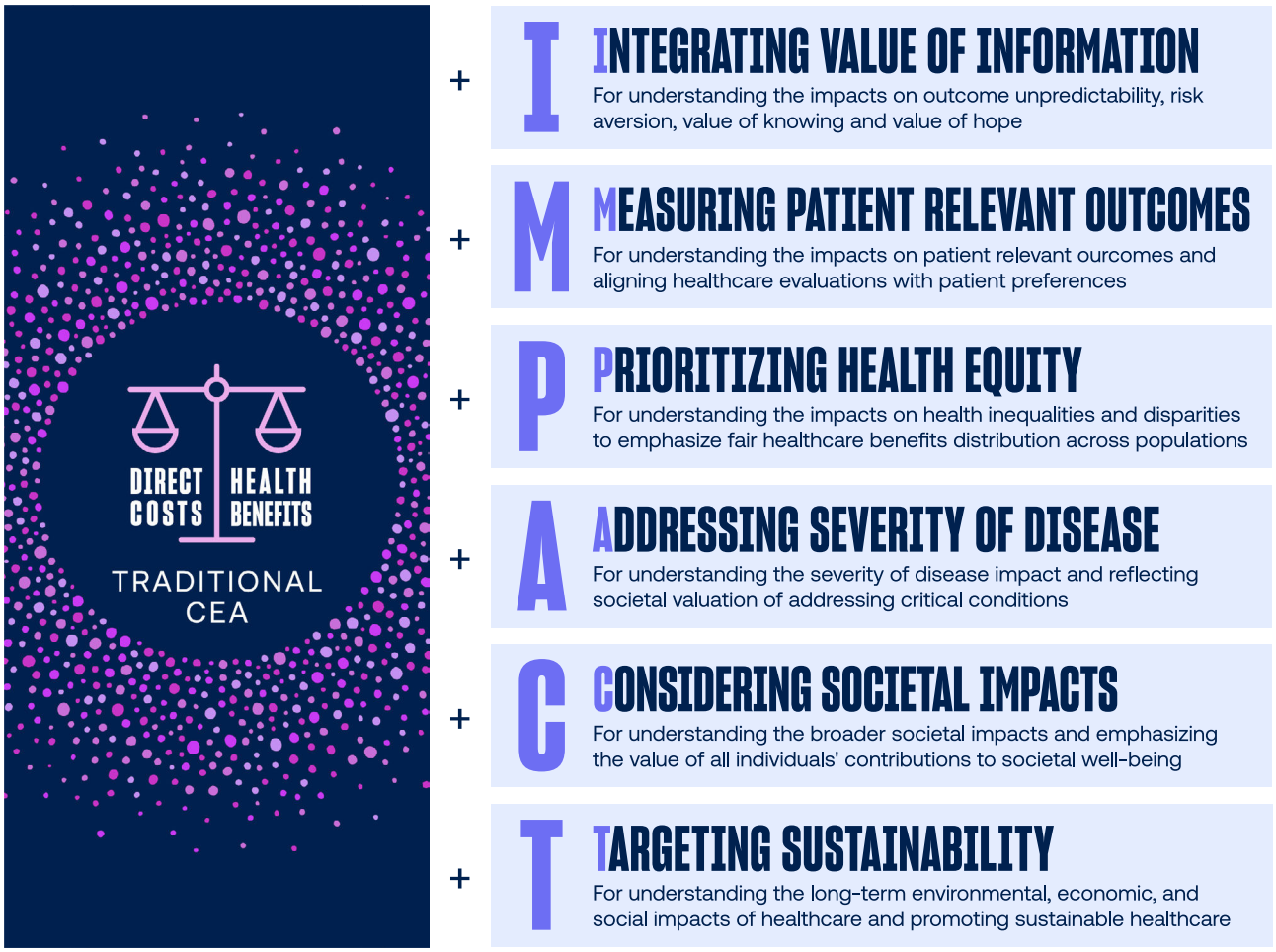

Figure 2. The six supplementary value aspects of the **IMPACT** value assessment framework, including traditional CEA at the core.

Addressing the Severity of Disease

The severity-of-disease aspect addresses the challenge of increasing the prevalence of both chronic and severe diseases. This aspect acknowledges that QALY gained for severe diseases may be appreciated with greater value compared to QALY gained for minor conditions. This aspect aspires to align resource distribution with the societal valuation of treating severe diseases.

Approaches such as severity weighting, disease severity scale development, qualitative assessments, and patient preference studies could be used to inform the value attribution to the treatment of severe diseases.

Considering Societal Impacts

Societal impacts of health technologies and programmes include already occasionally used productivity metrics, such as absenteeism and presenteeism, as well as the value of personal time, the value of reduced burden on a community and an individual's ability to engage in societal activities.

Methodologies such as the human capital approach, friction cost method, trade-off studies and activity-based costing could be utilised to quantify the comprehensive impact of health technologies and programmes on society. Additionally, an opportunity cost analysis could evaluate the value of time spent on activities such as volunteering and caregiving.

Targeting Sustainability

The sustainability aspect of health technologies and programmes assesses their long-term environmental, economic and social impacts. The sustainability aspect focuses on ensuring that health technologies and programmes are environmentally responsible and economically viable.

Methodologies such as life cycle analysis for environmental impact assessment and circular economy models could be employed to promote sustainable healthcare practices. Environmental cost accounting could be used to quantify the environmental costs of health technologies and programmes.

4. Vision of a more holistic value assessment

Without developments towards a more holistic value assessment, the healthcare sector risks stagnation, potentially overlooking innovations that could offer significant long-term value to patients and society overall. Additionally, a narrowly focused value assessment could result in partial optimisation, neglecting potential externalities. We believe that a more holistic understanding of value could help optimise the allocation of scarce resources and maximise utility achieved within budgetary constraints.

The **IMPACT** value assessment framework could bring clarity to who benefits from healthcare spending and who bears the cost, thereby enhancing the transparency of value distribution within the healthcare system. If not implemented judiciously, there is a risk that healthcare providers' initial costs could increase; however, over time, a more holistic assessment could ensure that overall healthcare expenditures decrease by aligning resource allocations with a comprehensive understanding of value.

The **IMPACT** value assessment framework could also enhance fairness in evaluations by equipping all manufacturers, healthcare providers or payers with tools to comprehensively assess the value of health technologies. Furthermore, the **IMPACT** framework could improve comparability across diverse healthcare interventions, from large-scale programmes to targeted therapies.

Early adopters of a more holistic value assessment framework, such as the **IMPACT** framework, enjoy first-mover advantages and set the standards for future value assessments. The cost of inaction—in terms of missed opportunities for better health outcomes and the inefficient use of resources—highlights why moving towards a more holistic assessment framework is beneficial and essential.

Consensus on methodologies among stakeholders is crucial to enable the successful and systematic integration of the supplementary value aspects suggested in the **IMPACT** framework within health technology assessments. The alignment of incentives for different actors is important, as the life sciences industry might prioritise innovation and market access, while government and regulatory agencies focus on public health outcomes and budgetary sustainability.

Leading the way with the IMPACT value assessment framework

At Nordic Health Group, we are committed to driving progress towards a sustainable, human-centred, connected and outcome-driven social and healthcare system. Our **IMPACT** value assessment framework serves as a call to action; we are inviting stakeholders to discuss, refine, and advance methods that enable more holistic value assessments of health technologies and programmes.

Join us in shaping a future where holistic value assessment is the cornerstone of health technology assessments.

References

1. Drummond M, Sculpher M, Claxton G, Stoddart G, Torrance G. Methods for the Economic Evaluation of Health Care Programmes. Oxford university press; 2015.

2. Reed SD, Dubois RW, Johnson FR, Caro JJ, Phelps CE. Novel Approaches to Value Assessment Beyond the Cost-Effectiveness Framework. Value in Health. 2019;22(6):S18-S23. doi:10.1016/j.jval.2019.04.1914

3. Cook JP, Golec J. How Excluding Some Benefits from Value Assessment of New Drugs Impacts Innovation. Health Econ. 2017;26(12):1813-1825. doi:10.1002/hec.3507

4. Neumann PJ, Garrison LP, Willke RJ. The History and Future of the "ISPOR Value Flower": Addressing Limitations of Conventional Cost-Effectiveness Analysis. Value in Health. 2022;25(4):558-565. doi:10.1016/j.jval.2022.01.010

5. Lakdawalla DN, Phelps CE. Health Technology Assessment With Diminishing Returns to Health: The Generalized Risk-Adjusted Cost-Effectiveness (GRACE) Approach. Value in Health. 2021;24(2):244-249. doi:10.1016/j.jval.2020.10.003

6. Garrison LP, Zamora B, Li M, Towse A. Augmenting Cost-Effectiveness Analysis for Uncertainty: The Implications for Value Assessment-Rationale and Empirical Support. J Manag Care Spec Pharm. 2020;26(4):400-406. doi:10.18553/jmcp.2020.26.4.400

7. Neumann PJ, Cohen JT. QALYs in 2018-Advantages and Concerns. JAMA. 2018;319(24):2473-2474. doi:10.1001/jama.2018.6072

8. Cost-Effectiveness, the QALY, and the evLYG. ICER. Accessed April 19, 2024. https://icer.org/our-approach/methods-process/cost-effectiveness-the-qaly-and-the-evlyg/