

Assessment Approach

Overview of the ICER-PHTI
Assessment Framework for
Digital Health Technologies

September 2023



The Peterson Health Technology Institute (PHTI) provides rigorous, evidence-based evaluations of innovative digital health technologies to improve health and lower costs.

Through its rigorous, evidence-based research, PHTI analyzes the clinical benefits and economic impact of digital health solutions, as well as their effects on health equity, privacy, and security.

Digital health technology is a broad term that describes innovations that are integrated into healthcare delivery for use by patients, providers, and health plans.

PHTI evaluations will focus on technology solutions that claim to directly impact health outcomes and system performance, including digital therapeutics, chronic care management apps, remote patient monitoring, and administrative technologies, many of which use artificial intelligence (AI).

The evaluations will include collections of technology solutions that focus on a specific condition or challenge in a similar way. PHTI does not intend to directly evaluate traditional drugs or devices, but we may evaluate companion digital solutions developed for these products. For more, see our [future plans and developments](#).

The primary audience for evaluations is decision-makers at organizations that purchase health technologies on behalf of patients, including payers, providers, and employers.

PHTI has partnered with the [Institute for Clinical and Economic Review \(ICER\)](#), a leader in health technology assessment, to develop the ICER-PHTI Assessment Framework for Digital Health Technologies that will guide the evaluations. PHTI is also supported by a [Purchaser Advisory Council](#), which provides guidance on the design and outputs of the assessment framework.

PHTI evaluations will:

- Review public and private company data and evidence regarding the clinical performance of health technologies. We will also assess other patient impacts, including user experience, safety and effectiveness, and health equity.
- Assess the economic impact of digital technologies through comparisons to how traditional care is delivered today, identifying specific price ranges at which a product would deliver value to the patients, the developer, and the healthcare system as a whole.
- Consider the technologies' context—including the competitive landscape, investment markets, and company history.

PHTI's goal is to provide decision-makers with relevant and valuable information to make effective decisions to improve overall performance and deliver better health outcomes at lower costs.

By helping purchasers identify bright spots in digital health innovation, PHTI aims to raise the bar for technology-driven advances in healthcare delivery, including superior outcomes, convenience, access, and affordability.

Peterson Health Technology Institute (PHTI) Assessment Process

PHTI will evaluate the evidence about the performance of groups of health technologies designed to replace or augment traditional care delivery.



How the Assessment Process Works

The assessment process is designed to answer a comprehensive set of questions about the performance of emerging digital health tools.



Technology Context

Decision makers want to know: What is the healthcare problem that a solution aims to improve? How does it claim to work as compared to standard care? What is the quality and accuracy of the evidence supporting such claims? Who uses it, prescribes it, and pays for it? How does the product compare to those of competitors? What is the experience and maturity of the company and its management?

The assessment report will include the following information:

- The history of the development of the technology;
- The role these solutions play in care pathways;
- The competitive landscape of the product, including other companies that operate in the space;
- The history and experience of the company, including funding, management team, and investors; and
- Privacy and security risks that may be relevant to those using the technology, including any relevant certifications.



Clinical Effectiveness

Decision makers want to know: Is the solution clinically effective and for whom? How does it compare to alternative treatments? What outcomes are the most meaningful to measure and are they supported by evidence? How does clinical effectiveness vary across users? Is it accessible and inclusive for all users?

The assessment report will include the following information:

- Categorizing the technology to determine the level of required evidence to support clinical claims, which depend on its function and risk to patients;
- Public, private and company evidence review using the [ICER Evidence Rating Matrix](#), which determines the net health benefit and level of confidence level in such results;
- User experience from real-world use in diverse patient populations and practice settings, including evidence in usability information for key populations;
- Health equity analysis that includes access and distribution across sub-populations, along with accessibility and inclusivity of the solution.



Economic Impact

Decision makers want to know: How quickly do patients benefit from using these solutions, and do those benefits last? What are the retention and compliance rates for the solution and do they align with the outcome timeline? How much does each product cost and what savings are produced by the technology compared to standard care? What is the “zone” of price negotiation at which the product would deliver value to the patients, the developer, and the healthcare system as a whole?

The assessment report will include the following information:

- How a health technology aims to deliver value as compared with standard care (for example, changes in site of care, staffing, mode of delivery, or mechanism of action);
- Budget impact analysis of the health technology at both the individual “user” level and purchaser level as compared with standard care;
- A specific threshold price at which the health technology would produce material cost savings as compared to standard care;
- The estimated comprehensive operating cost of delivering the technology;
- Potential contracting models for technologies with highly variable or uncertain budget impacts.

Summary Ratings and Recommendations

Decision makers want to know: What is the purchasing recommendation based upon the evidence and analysis? What are the strengths and limitations of the digital technology across each domain of the assessment framework? What are key areas of improvement for promising technologies that require further development?

The summary will use the following rating scale, with accompanying narrative about areas for improvement:

- Evidence is sufficient to support adoption;
- Potential for performance supports further testing and evidence generation;
- Evidence is inadequate to support adoption or further testing at this time.



Download the [ICER-PHTI Assessment Framework for Digital Health Technologies](#)

Future Plans and Developments

PHTI will collaborate with leading experts to further develop the assessment framework to advance new areas of evaluation and continually improve the quality and relevance of its assessments.

Future Technologies for Evaluation

While PHTI will initially assess digital technologies that are clinical interventions, over time PHTI will expand its capabilities to include evaluations of technology-enabled services and administrative technologies, such as AI-enabled provider documentation tools or revenue cycle management products. These categories have the potential to produce significant improvements and savings for the U.S. healthcare system, but the impact of a technology can vary greatly depending on the care model, IT infrastructure, and how the technology is deployed. Administrative services will also require customization of the assessment framework to evaluate relevant outcomes that may not directly affect patient health.

Deepen Assessment Expertise



Artificial Intelligence (AI)

The role of AI in digital health technology is growing rapidly. PHTI intends to continue to engage AI experts to ensure the assessment framework remains relevant, rigorous and current in this rapidly evolving area, including that AI tools use robust and representative training data and that algorithms are validated and free of bias.



Privacy and Security

The initial PHTI assessments will identify data privacy and IT security exposures created by the technology. PHTI will deepen engagement with experts in consumer protection and cybersecurity to further advance this area.



Health Equity

The initial PHTI assessments will include qualitative data related to (1) accessibility and (2) equitable availability and distribution. PHTI will develop and refine its health equity frameworks to broaden the understanding of how digital technology impacts equity and access considerations.

Engage with Us

PHTI will continue to collaborate with subject-matter experts. If you or your organization would like to engage with PHTI on the development of its framework, please contact us at Info@PHTI.com.