



Section 3: Assessing the Value of HIE

The ability to demonstrate value to stakeholders is critical to HIE projects. This section describes key considerations in assessing the value of HIE:

- The need to assess the value of HIE
- The relationship between HIE usage and value
- Approaches to estimating the value of HIE

HIE projects have been developed with support from various funding sources, stakeholders, and technical architectures. The information that is being exchanged, and the number and type of users, affect how HIE value might be perceived and assessed. Stakeholders are usually most interested in financial and clinical value. Financial benefits may include additional revenue or reductions in costs, such as savings achieved when staff no longer needs to support paper-based processes. Clinical value may include both process and outcome measures, such as increased utilization of preventive care or reduced rates of hospital readmission.



Importance of Assessing HIE Value

To demonstrate its value to the health care system, an HIE project needs to demonstrate its impact on factors such as patient safety, quality of care, and cost.^{3, 4, 14-22} Your evaluation plan must take these factors into account. To increase participation in HIE and to sustain HIE services, the HIE project must be able to describe its value to current and potential users. Demonstration of value is critical to stakeholder satisfaction and sustainability of the HIE project. The next section describes the interdependent relationship between the number of users and demonstrated value.

Relationship Between Usage and Value

Users of HIE are generally interested in obtaining patient data from other sources.^{15, 18} As a result, the perceived value of an HIE project is often based on the amount of data available and the comprehensiveness of that data. The financial value derived from an HIE intervention is generally expected to increase along with growth in the amount of clinically useful data and in the number of users. Adding providers, services, and transaction capacity will improve data sharing and make HIE more valuable to providers, payers, consumers, and policymakers. It is important for project evaluators and stakeholders to understand that it takes time for HIE projects to obtain patient participation, add exchange partners, train users, and accumulate data for exchange; all of those factors are important to efforts to demonstrate the value of the HIE project.

Approaches to Estimating the Value of HIE

When estimating the value of HIE, the two primary approaches are (1) demonstrating financial value through cost savings or increased revenue, and (2) demonstrating improved clinical processes or outcomes. To assess the value of an HIE project, consider the following:



- Who uses the information from the exchange?
- What information do they use?
- How do they use that information?
- How does that usage differ from usage in a setting without access to HIE?

The answers to these questions will help your evaluation planning team to identify options for measuring value.

Financial Value

One approach to estimating the value of your HIE project is to compare the financial benefits of having access to and using HIE data, compared with not having access to HIE data.^{14-15, 21} This can be done by collecting data prospectively before and after HIE project implementation, or, if historical data are available, comparing historical data with data collected after HIE project implementation. An alternative approach is to conduct a prospective case-control study of the effects of exposure to HIE information during clinical encounters. Section 4, Evaluation Design, provides information on these types of evaluation study designs. Finally, a less-rigorous alternative is to ask participants to estimate the impact of HIE implementation on relevant benefits and costs.

You may wish to demonstrate return on investment by reporting on costs and financial returns. To effectively apply this concept in working with your stakeholders, consider defining with each stakeholder the parameters for both the costs and the returns. Obtaining agreement on those parameters at the outset will help to reduce variability, and may help to control the scope of stakeholder expectations.

Clinical Value

HIE has the potential to deliver significant clinical information from multiple care settings to inform patient care.^{3-4, 16-17, 19-20, 22} The expectation is that patient care management and health care outcomes will improve when providers have access to shared clinical information provided through HIE, including comprehensive medication lists, laboratory values, radiologic images, and other reports.

Clinically focused stakeholders are interested in providing high-quality care to their patients.¹⁷⁻¹⁸ Value is dependent upon the context for each type of user. For example, primary care providers may place high value on having lab results delivered quickly so they can improve patient care, or on receiving hospital discharge summaries to enhance care coordination. Emergency department providers may ascribe value to medication lists, radiologic results, and other data to help inform care management.^{3, 14, 16, 22}

The process of identifying and prioritizing your HIE evaluation goals and objectives can begin once the evaluation planning team has considered how to assess the value of the HIE project. The next section describes the steps required to complete the evaluation plan.