



Evaluating the sharing of EHR instances across organizations

Opportunities for cross-organizational connectivity and interoperability

What's at stake?

Implementing a modernized EHR

Many drivers have spurred significant investment in the implementation of electronic health records (EHRs) over the past decade. Among these are legislation, such as the Affordable Care Act (ACA) and the Medicare Access and CHIP Reauthorization Act (MACRA), user expectations, merger & acquisition (M&A) activity, and cost containment. Large and complex health care provider organizations have led the way with these implementations, often making significant financial and other resource investments over an extended period of time. For large, distributed organizations, Total Costs of Ownership (TCOs) for EHR implementations in the range of \$150M to \$500M or higher are common. The complexity of these implementations frequently requires organizations to invest resources for 18 to 24 months or longer.

Smaller and mid-tier community hospitals are now exploring options to either initially implement or modernize an existing EHR platform. Many are resource constrained and therefore seeking creative and cost-effective implementation models.

Adopting an EHR instance

One way for such organizations to accomplish their goals within an abbreviated timeline and with reduced financial burden is to join an existing EHR instance owned and operated by another organization. Embracing an existing EHR platform that is working well in another organization allows for rapid co-opting of leading practice clinical content, such as order sets, documentation templates, and decision support. It also provides demonstrably successful organizational workflows and the consolidation of shared technical services such as infrastructure hosting, application configuration and integration, and application enhancements, as well as

ongoing support. The appeal of adopting another organization's instance also includes potential enhancement of interoperability and improved clinical outcomes (in an environment trending towards accountable care) due to improved coordination of care and population health management. In many markets, sharing an EHR instance between a community hospital and a larger facility may result in improved patient satisfaction as access and coordination of care are improved. For clinicians, the shared platform promotes seamless access to patient information and facilitates communication between care providers.

While benefits exist, sharing an EHR instance also poses organizational and cultural challenges. A frequently cited concern is loss of autonomy over specific clinical content and workflows that the smaller provider organization may have in its legacy systems. This may result in resistance to adoption and change by clinical providers, unless they are engaged in a meaningful manner from the beginning. Other concerns include ongoing governance, data security, and ownership. Questions such as, "Will there be a joint data governance operating model for decision making in the long run?" "Will all patient data be shared across both organizations?" and "Who has the ability to view shared patient data?" need to be addressed early during the planning stage, and well before the implementation begins.

Establishing the right implementation strategy for a shared instance approach can promote regional integration, cross-organizational connectivity, and interoperability. Other benefits may include improved management of accountable care organization (ACO) needs and the ability to support population health related initiatives and reporting needs.

Our take

Hosting across organizations

As the market has matured, organizational leaders now have several implementation offerings to consider:

1. On-premise, self-hosted
2. Vendor hosted
3. Other health care provider organization hosted

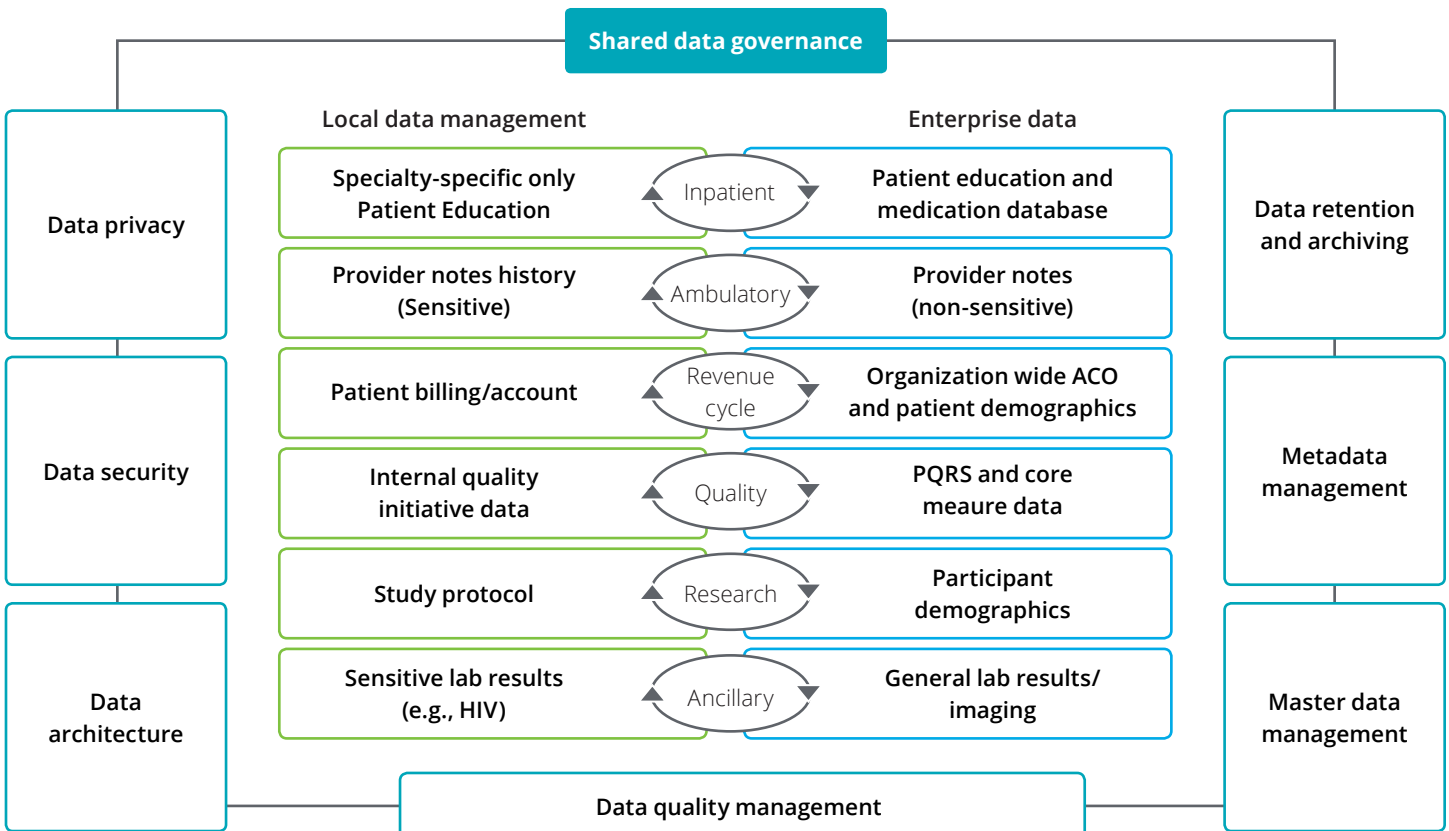
While on-premise, self-hosting has been the most common approach to date, it requires the greatest investments on multiple fronts: technology infrastructure, resource requirements, application configuration, interface development, testing, training, and change management.

Approaches such as vendor hosting and other health care provider hosting have proven to be effective alternatives that may reduce the cost of implementation while increasing enterprise-wide application deployment speed. Careful planning for the foundational setup for each organization comprising the shared EHR solution is critical. This requires a proper understanding of each entity's organizational structure and revenue locations including the specialty-specific departments. Although the focus is on establishing a long-term hosting relationship, it is important to carefully consider several key factors in case the organizations eventually part ways from a shared instance. These factors include the enterprise governance, legal agreements, and the foundational setup whether evaluating the vendor hosted or other health care provider organization hosted options.

Many of the larger EHR vendors offer hosting services for their underlying technical infrastructure. This approach may result in cost savings across both hardware and resource needs, as the EHR vendor can provide internal expertise to manage the technical infrastructure. Key negotiation points should include monthly/annual fees, licensing, support hours/fees, and Service Level Agreements (SLAs).

Another approach some health care providers are considering is an opportunity to monetize their EHR infrastructure and resources by providing hosting services to other organizations that have not yet implemented their own EHR. To determine the feasibility and benefits of pursuing a hosting strategy using the EHR of another health care provider, the "purchasing" organization will need to establish qualitative and quantitative assessment criteria in order to evaluate potential hosting partners.

Figure 1. Shared data governance



While each organization considering a shared EHR solution may have different objectives and requirements that influence their decision making, there are several evaluation criteria to help assess organizational fit.

Data governance across organizations

Governance and the decision-making approach to address ongoing development and enhancements are critical issues, as there may be competing needs and differing viewpoints depending upon the health care organizations' scope of services and specialties.

Additional areas that bear careful consideration are data ownership, security, and privacy as a shared implementation model adds additional complexity to data governance, since data created by one organization is hosted/managed by another. This will require defining what data is owned and shared across the organizations and striking the right balance between restricting access (security) and sharing of data (privacy).

A federated data governance model involves standards and guidelines agreed to by both organizations and provides flexibility for localized groups to access data for their respective operational and analytics needs. There are many challenges and benefits related to the implementation of an EHR application suite, and thoughtful attention to data governance can result in benefits accruing appropriately to all involved organizations.

The path forward

Considerations for sharing EHR instances

Validating the feasibility and value of a shared EHR instance can be challenging. There are multiple considerations for both the hosting and hosted organizations. These considerations will help define the viability of an organizational partnership and may provide a blueprint for successful cooperation in other ventures, or a sobering lesson in marketplace competition.

Framework for assessing instance sharing

Supporting an assessment of the organization’s needs and opportunities requires an evaluation framework which focuses on core operational and technical issues.

Evaluative criteria in such a framework should encompass four categories:

- Host viability decision criteria
- Operational system design requirements
- Implementation timing
- Vendor recommendations

Host viability decision criteria

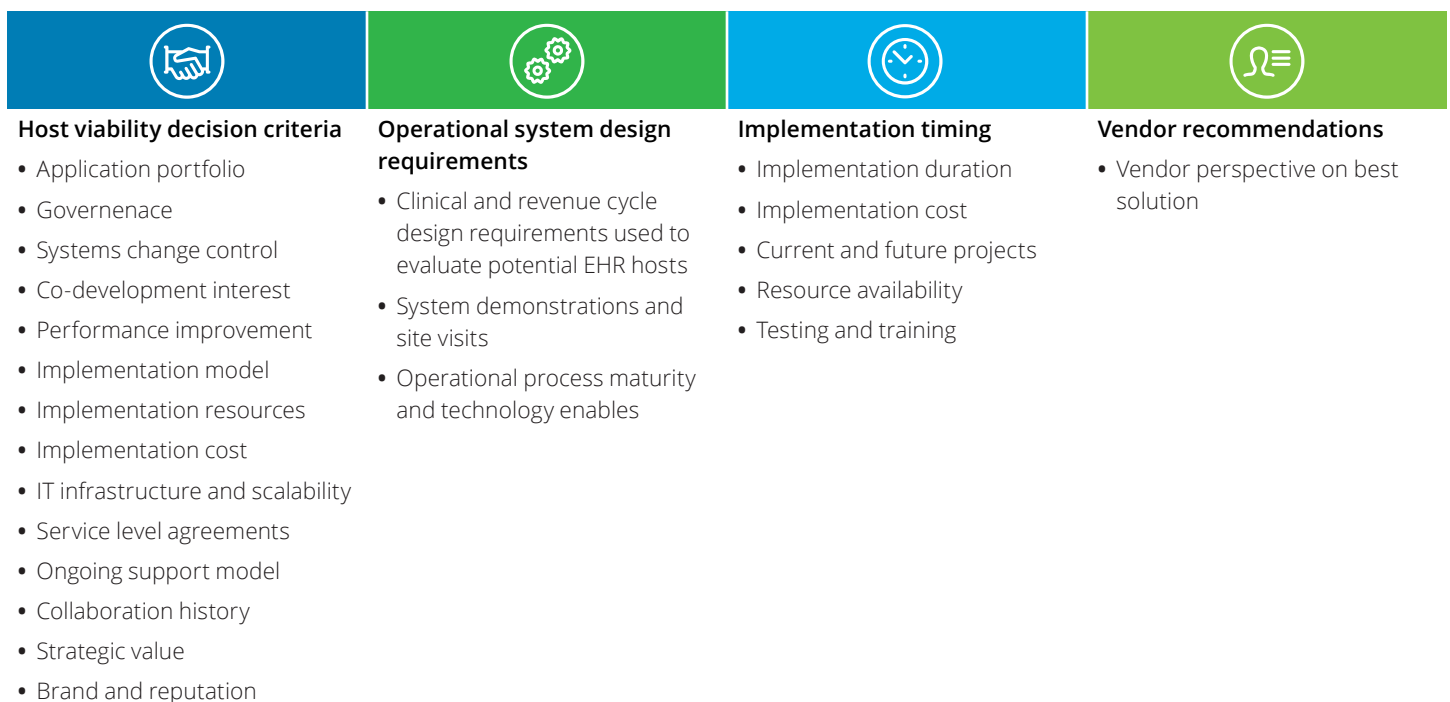
Organizations should investigate financial, technical, and regulatory considerations in a hosting deliberation. What services should be included in addition to core EHR functions such as technical server support, help desk support, and training support? Addressing these issues will help organizations understand what additional offerings may need to be developed.

Fiscal

Financial considerations are at the core of the business case when considering a shared instance. Understanding the costs associated with hosting or being hosted is critical to the decision-making process. Labor, hardware, and software costs should all be considered. Labor costs in most cases will be less than implementing a separate instance because of a decreased duration to system delivery. Hardware and software costs will vary based on the current state of the organization’s data center(s) and application mix.

Many organizations omit analyzing the tax implications of the arrangement and specifically the allocation of depreciation across the organizations. This analysis is important and should be included in the business case.

Figure 2. Assessment criteria



Technical

Both organizations will have to work together to develop a technical solution that fits the goals of each organization. Outside of the technical requirements for hardware and software, organizations should work together to define a data privacy and security agreement. The hosted and hosting organizations should be confident their business financial and patient data privacy requirements are fulfilled under the agreement. Agreeing to data privacy and standardizing operations across the organizations will help improve the partnership between the two organizations. The application mix and agreed upon data sharing will help drive interoperability between the two organizations. The hosting organization will likely have multiple tools and processes that can be shared by the hosted organization in order to accelerate the implementation of a shared instance, and for long-term maintenance and support. For instance, the testing tools and test scripts, training materials, help desk procedures, change control algorithms, and release management processes provided by the hosting entity may be used by the hosted organization, thus reducing the time needed to independently develop materials in those areas.

Regulatory

Organizations need to evaluate regulatory requirements when participating in a shared instance partnership. Subsidies and overall program pricing must meet “fair market value” considerations, which are typically bounded by regulatory guidelines and market considerations.

Any agreement must account for unintended implications to networks of referrals and

patient information flow as it relates to meeting value-based care objectives in the context of state and federal ACA regulations.

Operational system design requirements

Both entities will need to evaluate the impact to their operations when determining fit for sharing instances. The workflows and common clinical content in a shared instance should be standardized, and this will impact operations. For example, an organization that will be hosted will need to have localized workflows for specialty services it provides, but will have to work with the hosting organization to develop a standard set of workflows that will be shared across both providers.

This is also true for content across both clinical and revenue cycle operations. Content such as order sets, clinical documentation, and coding guidelines should be standardized, and this has the potential to significantly impact current state operations at both organizations. An example would be standardizing physician documentation across the hosted and hosting organization by using the hosting organization's current content, with tailoring as necessary. These assets and additional assets that have been developed previously (e.g., test scripts and training materials) can help shorten the implementation timeline.

Implementation timing

Sharing an instance can help accelerate an organization's implementation timeline. With a shared instance, the hosted organization will be able to use standard content that is already built in the instance. Resourcing also becomes a less prominent issue, accelerating

the implementation and reducing costs across the program.

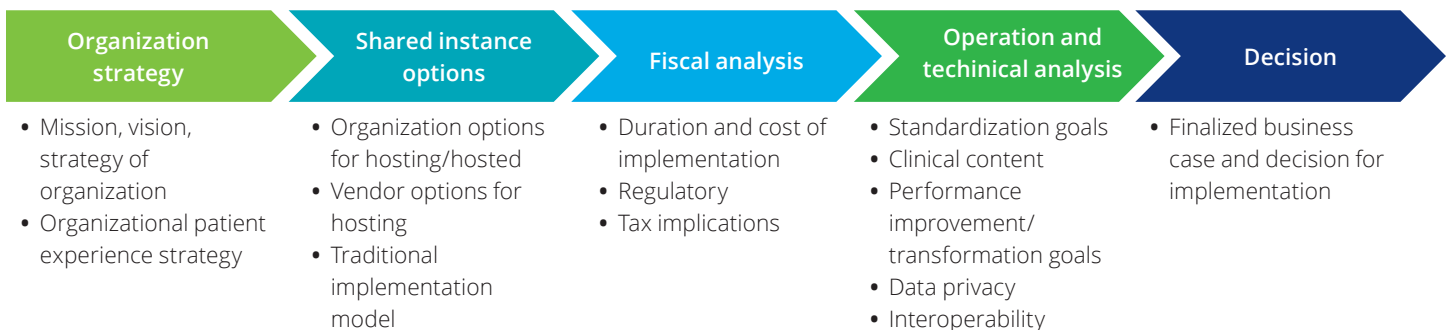
Organizations will need to validate the duration, sequencing, and phasing of key activities. They will also need to consider enterprise-wide projects such as ongoing IT (e.g., infrastructure refreshes, system upgrades) and operational projects (e.g., evaluation of regulatory changes) that may impact the implementation. While developing the implementation timeline, it is also important to consider the staffing structure and requirements for support of post-implementation and optimization phases.

Vendor recommendations

Consulting with a vendor partner regarding instance sharing is critical to a shared arrangement being successful. Working with a vendor partner to identify technical requirements and licensing structure will help drive the exploratory phase of the potential hosting structure. Another key consideration is the scope of core applications from the vendor, including the third party applications and bolt-on systems that may be rationalized for IT cost effectiveness across the organizations sharing an instance.

Vendors have also been developing hosting services for organizations. These services can help organizations minimize their initial hardware and labor costs during implementation. Vendor hosting services also can help with shortening duration to scale for hosting another organization on an instance due to the experience and technical capabilities within the vendor services.

Figure 3. Timeline for evaluating shared instances



Case studies

Bridging academic medical centers through shared instances

Leading health care organizations are continuing to evaluate how their EHRs affect their operations and business. They are continuing to implement new EHRs to help grow their business and improve patient satisfaction across their health ecosystems. Recently, an Academic Medical Center (AMC) evaluated the need to implement a new EHR. It assessed two strategies for implementing a new system. The first option was to purchase the EHR directly from the vendor. The second was to partner with another academic medical center currently on the preferred platform.

The organization evaluated the primary drivers across both options for the new EHR instance, with the drivers aligned to the organization's strategic vision. The primary drivers the organization evaluated included:

- Cost
- Implementation duration
- Regulatory
- Organizational readiness
- Technical

The AMC determined the best option to meet their goals would be partnering with another AMC to share an EHR instance. This option best positioned the organization to achieve the following objectives:

- Reduction in implementation time and costs
- Improved patient experience
- Operational and transformation goals

Growing an accountable care organization through the community practice ecosystem

As organizations shift from fee-for-service to value-based care models, there is an increased need for community and as-yet unaffiliated physicians to be incorporated meaningfully into the organization's health care community. This was the issue at one of the largest ACOs in the country. The organization's goal was to make a transition in their operating model by strengthening their interaction with providers in their community.

The organization wanted to change the way it provided care for patients in the community through the following actions:

- Design an ambulatory EHR instance that would be available to community providers outside of the organization
- Change the way the organization interacts with community provider practices

Before implementing the program, it was important to develop clear objectives to ensure that the initiative met the goals of the organization. The organization worked with community practice leadership to define and develop the goals based on shared values and objectives, including:

- Decrease costs to community practices
- Improve quality of care
- Enhance coordination across community providers

The organization introduced a successful pilot program after the design was completed using input from the community providers. To date the pilot has shown:

- High adoption rates across the community practices
- Improved patient care across the community care continuum
- Advanced coordination of care and communication across the community

Organizations looking to expand collaboration and interoperability across their community providers should investigate opportunities to host shared ambulatory instances within the organizational ecosystem

Bottom line

As technology costs continue to rise, it is becoming increasingly important to identify opportunities to increase the value of any investments in technology across the health care landscape. Sharing instances can provide significant value to small and large organizations and increase the potential opportunities for value-based care delivery in those communities.

EHR technology has improved over the past decade and vendors have been working to help facilitate alternative implementation models. Some of the key benefits of these arrangements have been decreased costs, improved interoperability, and an abbreviated implementation timeline.

Organizations are able to leverage their experience with EHR implementations and materials from prior implementations to reduce costs and durations of the implementation of the shared instance. An additional benefit for hosted organizations can be the realization of support benefits when partnering with a larger organization.

Before making a commitment to a shared instance, both entities need to critically evaluate multiple dimensions of any proposed arrangement to maximize potential for proper fit for their organizations. Both organizations will need to address financial, operational, technical, and regulatory considerations.

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