Interoperability is like moving a piano. It is a team effort, but when the piano tumbles down the stairs, puts a hole in the wall, or lands on a foot, it is always someone else’s fault. The truth is that pointing fingers does not help—we all fail or succeed together. Vendors and providers both point to standards as the main barrier to success. Really, how much of the barrier disappears with intense cooperation? Who is stepping in to lift the industry? Who could carry more? Where can we work together better?

**Which Connections Bring High Value?**

Providers want invisible, effortless connections that provide high patient-care value. Connections via EMR vendors’ private networks are the closest match today, with Epic clients in the Care Everywhere network composing 80%+ of such connections and enjoying immediate benefits once live. Demonstrating the success of clear governance and standards, Care Everywhere is successful due to clear client governance, Epic’s large footprint, and an almost effortless activation process. Epic’s network does not solve the critical need for heterogeneous connections built through vendor collaboration. In the absence of such collaboration, many are hopeful that Direct messaging will provide a valuable plug-and-play connection between vendors. To date, most are disappointed with poor coordination among vendors, difficulty locating records, and limited parsing abilities. A majority of respondents have little optimism about the future of public HIEs, reporting limited value.

### Value vs. Setup Complexity

<table>
<thead>
<tr>
<th>VENDORS</th>
<th>SCORE</th>
<th>STRENGTHS</th>
<th>WEAKNESSES</th>
</tr>
</thead>
</table>
| Epic      | 3.8+  | • Savvy IO team respected by competitors and providers  
            • Ubiquitous, valuable sharing among Epic customers  
            • Lower cost, broad range of connections  | • Epic approach tagged as inflexible by some  
            • Industry perception of closed technology  |
| athenahealth | 3.8+  | • High-value/low-cost integration  
            • Proactive, easy to connect to  
            • Supports simple/complex integration  | • athena-to-athena sharing ability could be stronger  |
| Cerner    | 3.3   | • Strong tools (CEP) for building complex connections  
            • Leads out with standards and collaborations  | • Eclectic mix of connection costs an irritant to clients  
            • Resonance (sharing between Cerner customers) not taking off  |
| MEDITECH  | 3.0   | • Customers appreciate MEDITECH’s transparent efforts  
            • Generally meets customers’ tempered expectations  | • Weaker tools result in lower level of sharing overall  
            • Customers see MEDITECH as harder to connect to  |
| Greenway  | 2.8   | • Optimism with new one-to-many connection for sharing  | • Smaller practices lack connections, missing proactive help  
            • Some report frustration with communication around connections  |
| NextGen   | 2.8   | • High level of sharing with some complex connections  
            • Mirth tool helps make connecting easier  | • Frustration with NextGen’s higher cost and lack of expertise  
            • Customers and non-customers often frustrated to connect to  |
| Allscripts | 2.7   | • High volume of records shared within connections  
            • High value in current connections  | • Significant challenges sharing data between Allscripts solutions  
            • Stronger integration comes with a perceived high price tag  |
| eClinicalWorks | 2.6 | • Highest number of point-to-point/private network connections  
            • Provides hub for customers to easily connect to each other  | • Tagged broadly as most frustrating vendor to connect to  
            • Hub technology/model adds to cost of connectivity  
            • Weaker support and follow-up  |
| GE Healthcare | 2.5  | • Long-standing connections bring value  | • Frustratingly inattentive at times with interoperability projects  
            • Less than 20% of customers consuming exchanged data  |
| McKesson  | 2.5   | • RelayHealth offers some strong sharing options and HIE foundation  
            • Early signs of easy sharing model for Paragon clients  | • Shared data stays in RelayHealth—not consumed into EMR  
            • Seen as disappointed; clients say McKesson is difficult to work with  
            • Costs more likely to be a barrier—low sharing overall  |

**NOTE:** Average rating across 8 interoperability measures. 1 to 5 scale (higher is better) **+** Epic rated slightly higher, although both vendors rounded to 3.8
ATHENAHEALTH EASIEST TO CONNECT TO, FOLLOWED BY CERNER AND EPIC

Who do customers, non-customers, and vendors say is easiest/most effective to connect to? It depends on who you ask. Customers rating their own vendors tag athenahealth and Epic as easiest to connect to. Vendor peers list Epic as most effective to connect to and MEDITECH as least effective, followed by Cerner. Providers connecting with foreign EMRs pick athenahealth and Cerner as leaders in connection ease.

ATHENAHEALTH: athenahealth delivers both simple and very complex connections, choosing not to pass along many additional integration costs to customers. They are also a leader in bringing outside patient data into the clinician workflow in a convenient format. Non-athena customers report that athena’s SaaS environment is easy to connect to, as they can connect to multiple practices with one interface.

EPIC: Data sharing among Epic clients is pervasive across the country, and sharing is solid via point-to-point and HIE connections to organizations with foreign EMRs. Epic customers share with other Epic customers in order to receive the same, often forcing competitive health systems to share whether they want to or not. Once Epic agrees to an integration project, their strong service is a significant benefit. Some non-customers voice frustration with Epic’s strict adherence to self-imposed standards.

CERNER: Cerner and non-Cerner customers report Cerner to be easy to connect to and effective at a broad range of complex connections. Cerner is rated lower by clients for higher integration costs and the lack of a simple switch to turn on sharing with other Cerner clients. Reports from vendor peers of Cerner being less effective to work with are tied to software versions, costs, and licensing outside the CommonWell conversation.

ANY REALITY TO INFORMATION BLOCKING?

How willing are VENDORS to share?
Information blocking is willingly refusing to share data. Providers overwhelmingly report their vendors to be willing to help them share but say business revenue models and lack of technical resources often get in the way. McKesson’s, eClinicalWorks’, and Allscripts’ dedicated interoperability/HIE offerings have some reporting frustration that their interoperability requires a license and connection fees to the HIE offering. No provider has reported a circumstance in which a vendor contractually or otherwise willingly impeded information sharing, aside from the business models around profitability. Most vendors have changed or are changing these models to more cost-effective approaches (e.g., CommonWell clients report minimal cost barriers and Epic eliminated a per-transaction fee).

How willing are PROVIDERS to share?
98% of providers mention that they are willing to share, but only 82% report their main competitor to be similarly willing. Either way, most providers are starting to see data sharing as inevitable, but resistance remains. Smaller ambulatory practices are the least likely care providers to want to share their own records.

PROVIDER WILLINGNESS TO SHARE CLINICAL INFORMATION

How do you rate your organization’s willingness to share clinical information, as well as your main competitors’ willingness?

<table>
<thead>
<tr>
<th>WILLINGNESS</th>
<th>YOURS</th>
<th>COMPETITORS’</th>
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<tr>
<td>Proactive and Willing</td>
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<td>25</td>
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<tr>
<td>Unwilling</td>
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<td>18</td>
</tr>
</tbody>
</table>
1. **IS TODAY’S INTEROPERABILITY SUCCESS TIED TO SERVICE?**
   athenahealth and Epic lead with their overall service levels, while eClinicalWorks, McKesson, GE, and NextGen are described as interoperability laggards, receiving low marks in general support. Why the correlation? No vendor brings a technology silver bullet to the fight, but attentive vendors focused on client success are recognized for their support.

2. **PERCEPTION IS NOT REALITY?**
   Beyond their current experiences with interoperability, providers were asked about their general perceptions of which vendors struggle the most. The result? In one instance, perceptions are not in line with actual experiences. 44% of providers with no or very limited Epic experience report a perception that Epic struggles the most. Contrary to this perception, Epic customers, providers connecting into Epic, and even other vendors give Epic high marks for interoperability strengths.

3. **WHERE SHARING BREAKS DOWN**
   Smaller ambulatory and single-physician practices report the highest frustration with interoperability and the lowest willingness to share their own data, due to perceived risks. With limited resources, costs are often a barrier to effectively connecting with surrounding providers. Ambulatory-focused vendors receive some of the lowest marks from their customers, for inconsistent performance, untenable costs, and unacceptable turnaround times. eClinicalWorks is highlighted as one of the most challenging vendors to connect to, yet participants report more point-to-point connections with eClinicalWorks than with any other vendor.

4. **FHIR IS HOT/CAREQUALITY AND COMMONWELL ARE NOT:**
   With competing standards and collaborations, providers watch for what will make the most difference. Direct connections are often difficult to set up and seemingly of limited value, yet many are optimistic that Direct sharing will soon improve. FHIR was voted by providers and vendors as the standard that will be of highest future value, while prominent collaborations CommonWell and The Sequoia Project (also known as Carequality or Healthway) are considered by providers as significantly less likely to improve future interoperability.

5. **REAL DIFFERENCES IN COST**
   Healthcare leaders reported their costs for recent connections, and though the costs were difficult to normalize and compare in detail, real differences were confirmed across the industry. Providers point to McKesson and Allscripts as requiring more investment in dedicated interoperability platforms (RelayHealth and dbMotion) and requiring licensing and individual connection fees. athenahealth stands out as generally requiring no added costs for interoperability, a reflection of the different business models in the industry.

6. **DOES INTEROPERABILITY IMPACT EMR BUYING DECISIONS TODAY?**
   The answer is no. As KLAS closely monitors EMR buying trends, we have yet to see EMR decisions hinging on which vendor is better at externally sharing health information data. Healthcare organizations are unclear about vendor differences when it comes to external connectivity and so cannot use this as a decision criteria.

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