



WHITE PAPER

Transforming Healthcare Interoperability into Measurable Outcomes



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How interoperability is defined today

In healthcare, the definition of “interoperability” is the ability to share clinical data seamlessly among various disparate systems and technologies, and to avoid information blocking.

It just has to work; healthcare providers intuitively know this. Patients expect their physicians to have access to their full medical history and as much information as possible to make the best decision. Meanwhile, there’s an expectation that patients have access to their health data when they want to.

If you combine patient and physician goals, you have a clearer idea of the promise of interoperability today.

Interoperability barriers

There’s an expectation that all patient data can be shared seamlessly, but healthcare professionals know it doesn’t work like that, and it’s not magic. One of the many challenges healthcare organizations face is fully understanding their own data sharing obligations and those of their health IT vendors.

For hospitals and health systems, there are also regulatory requirements regarding how and when patient information is shared.

From a technical perspective of interoperability, healthcare organizations can take stock of:

- Their expectations for health data exchange
- The tools available to meet these expectations
- Capabilities of their current health IT vendor to meet their interoperability needs and whether third-party assistance can fill in gaps
- Their business process of maintaining an interoperability framework

Grasp the magnitude of interoperability demands

Healthcare organizations, large or small, have to ask themselves:

- Does our in-house health IT team have the skills to fully understand interoperability standards like Fast Healthcare Interoperability Resources (FHIR)?
- Are we actively exchanging Continuity of Care Documents (CCDs) and HL7 Version 2 messages?
- What’s the transport solution to translate data, combine with administrative and operational data, and then apply it to specific health systems?

Typical big-box hospital EHR vendors may lack the means to answer these questions or have the agility to resolve patient data exchange challenges. Interoperability projects are like snowflakes – no two are alike. There is no one-size-fits-all approach to resolving patient data exchange conundrums in any healthcare system.

For example, FHIR (R4), a new version of an API for healthcare, is required technology for certified EHR and health IT systems. Actual implementation of FHIR in the real world has differences and variations between implementations. One of the great strengths of FHIR is its flexibility, but understanding the complexities can be a significant challenge for a health system’s in-house IT team.

What do healthcare leaders think about interoperability?

There’s an expectation that the bulk of interoperability can be done within an EHR system. That’s true for national network connectivity to Commonwealth, Carequality, or eHealth Exchange. Regulatory requirements mandate that EHRs have an efficient level of interoperability.

Having the technology to implement and maintain interoperability alone is one thing. Access to expertise that works side-by-side with an in-house health IT team to ensure the i’s are dotted and t’s are crossed—especially when it comes to national and local regulatory policies—is another. State policies around patient data exchange may differ from national ones. Healthcare organizations have to take into account the rules of how to handle, retain, store, and share data based on your state or region.

The bottom line is healthcare leaders quickly face a magnitude of challenges when strategic interoperability projects are deployed and realize that all interoperability projects are unique.



How cloud-based solutions help resolve challenges

The move to the cloud was well underway before the pandemic. Organizations that had cloud-native and cloud-based solutions at that time were faster at responding to urgent needs and could pivot resources quickly to offer more services and capabilities.

With more efficient integration, they could initiate telehealth expediently and engage face-to-face with patients conveniently in their homes. This is a clear example of how the cloud made healthcare delivery better and faster for people.

The same shift toward the cloud is also happening from an interoperability perspective. The era of legacy systems, when a hospital or health system buys and acquires its own integration engine—is fading into the sunset. Days are numbered for these organizations to build and maintain these systems in-house. Retaining quality staff who understand interop specifications, interface implementation, and data exchange policies can be a challenge. The bottom line—running a legacy system in-house can be costly.

All interoperability-related functions can now be automated in the cloud with the right tool. NextGen Healthcare has made significant investments to help clients move their interoperability capabilities to the cloud while retaining the same functionalities they rely on to support their entire community.

“We moved the full production applications to work directly with Mirth Connect itself and decommissioned old web front ends. This led to a massive improvement in dynamically updating applications/systems instead of relying on manual data entry.”

Daniel Dryhurst

Senior Digital Solutions Delivery Engineer
St Helens and Knowsley Teaching Hospitals NHS Trust



Mirth® Connect by NextGen Healthcare, one of the most widely used data-sharing tools in the world, has evolved to include a cloud-based service. Organizations can look to Mirth® Cloud Connect by NextGen Healthcare to resolve their interoperability issues in a cloud environment agnostic to their EHR and source system. For example, APIs can be leveraged to share data between different health systems securely and seamlessly, while our team of interoperability experts can help manage ongoing integrations.

Cloud-based solutions and direct patient access

Cloud-based solutions can enable patients to directly access their medical records on their own. Almost all the certified EHRs are certified with patient access APIs to allow patients to access their data wherever they are. Health IT vendors, hospitals, health systems, and other healthcare partners are looking to get a similar level of API access that patients can use.

The question is—how to enable this level of access to third parties unfamiliar with the health IT vendors who are managing the interoperability system? The answer—leveraging interoperability standards built in Fast Healthcare Interoperability Resources (FHIR). The cloud enables us to take full advantage of FHIR to turn on use cases faster for healthcare organizations.

Patient data exchange and access involving imaging files, orders or results, and registry, submissions, queries, or retrieval from immunization registries are provided through cloud-based APIs. This is one of the benefits organizations can appreciate when they move these workloads offsite.

How data completes the full patient picture

One of the core goals of any integration within healthcare technology is providing data that completes the whole patient picture without duplicative testing. For example, a provider may require a new patient to take a blood test even if relatively recent lab results are recorded in the EHR by the patient's previous provider.

Minimizing duplicative test orders is a significant cost-saving measure. It comes down to the fact that once providers see that this data is readily available in their EHR, both the patient and provider save time and money by not going through the motions of lab tests when they are unnecessary. It's justification that easy access to a patient's full medical history is essential for achieving better clinical outcomes cost-efficiently.

Provider access to a bigger picture of patient health comes from a health system with efficient tools to collect and aggregate data from the community. Specialists, behavioral health practices, social services, and substance abuse treatment facilities can access a patient's entire medical history. This connection is critical for engaging with patients who maybe now have access to services they wouldn't have had before.

Interoperability enables clinicians to rely on this critical connection instead of faxing information or making it the patient's responsibility to move the data themselves. Cloud-based solutions are the fastest way to improve and sustain these links between health practices and organizations throughout the community and the rest of the nation.

Find meaning in the mountains of data

If data can't be used at the transmission point or later on in the analysis point, it's a waste of time. As we build and aggregate data sets and share the data more efficiently, providers will gain better insights that will support their best courses of treatment at the right time for the right people.

NextGen Healthcare has spent the last 15 years getting EHR systems implemented and certified to reap the benefits of accessing vital patient data at the micro level—from one provider to another.

Not just this small data set of "I had a procedure and this diagnosis code" but the fullest amount of the data, the notes, images, genetics, and genomics. In those instances, combining all that information in one place that's easily accessible to support healthier communities is the primary goal of healthcare IT vendors.

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Contact us at **855-510-6398** or **results@nextgen.com**

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