

What Is Your EHR Connectivity Strategy?

Defining the Best Attributes to Approaching a Connected
Patient Care Community

“Have it your way.” This famous slogan has become part of the hamburger competitive advertising folklore as McDonalds and Burger King fought for market share. As you may remember, the positioning was McDonalds only prepared hamburgers one way, and Burger King would add or take off items to fit your tastes.

Approaching integration with Electronic Health Records (EHR) is much the same way. There are, however, two central questions:

1. How responsive do you want to be in establishing EHR connections to clinics, imaging centers, and laboratories?
2. How flexible do you want to be in adapting to the different EHR data specifications?

How your organization answers these questions will drive your EHR approach. How your healthcare organization delivers connectivity to EHRs will be quickly recognized in the marketplace. Ultimately, it will likely affect the number of referrals received from various physicians and the strength of a long term relationship.

This paper will outline the EHR integration approach options and the resulting attributes for your organization.

EHR Integration Standards

EHR adoption has accelerated quickly with the passage of the Health Information Technology for Economic and Clinical Health (HITECH) and the adoption of Meaningful Use standards. According to a 2010 Centers for Disease Control (CDC) survey, 50% of physicians are now using some kind of electronic system (in some scope or manner), with 25% using a “basic system” and 10% now using a “fully functional” system.

EHRs are being used by various healthcare providers to collect and store patient information and their medical history. Although EHRs hold a great deal of value to all involved in the healthcare community, there are several challenges to overcome in order to achieve the ultimate goal of efficient delivery of quality patient care.

One of the primary challenges that influence the effectiveness of an EHR implementation is exchanging patient information between various and numerous healthcare applications. To add to the complexity, there are several standards available to use including:

- HL7
- HL7 Clinical Document Architecture (CDA)

- HL7 Continuity of Care Document (CCD)
- Continuity of Care Record (CCR)
- EHR-Lab Interoperability and Connectivity Specification (ELINCS)

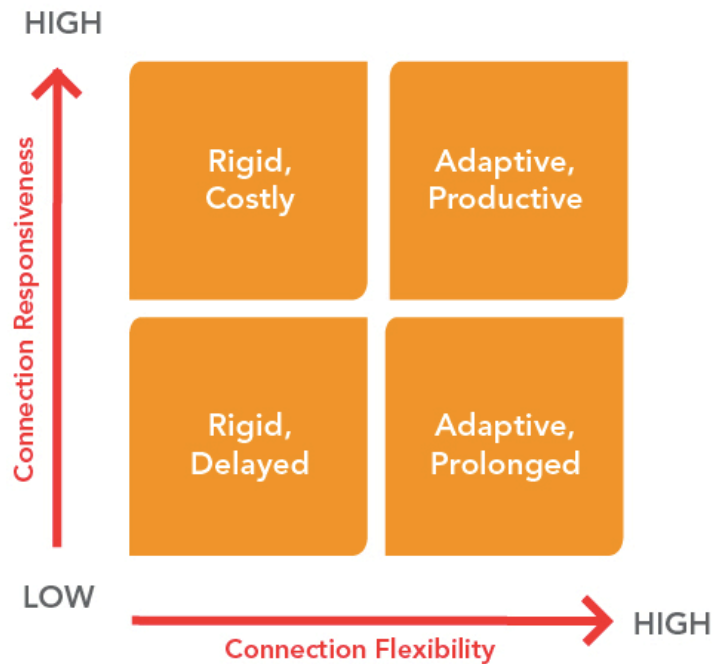
Add to this the different EHR vendor data specifications, and it can become a real predicament to navigate the connectivity maze.

EHR Integration Standards – Quick Definition

Standard	Overview Definition
HL7	Provides standards for exchanging clinical data
HL7 CDA	Provides an exchange model (XML-based) for clinical documents (such as discharge summaries and progress notes)
CCR	Responds to the need to organize and make a transportable set of basic information about a patient’s health care that is accessible to clinicians and patients (XML-based)
HL7 CCD	Provides an approach to deliver a snapshot of patient information to the next step in the chain of patient care CCD is built on CDA elements, but the data itself is defined by CCR CCD uses a detailed set of constraints for CDA elements
ELINCS	Provides a defined standard for reporting lab test results
EHR Vendors	Defines specifications for data fields in their specific applications

EHR Connectivity Options

Untangling the interfacing challenge of EHRs can be tackled in a number of ways. Illustrated below are several interfacing approach options.



A few definitions:

- **Connection Flexibility:** As outlined previously, there are several EHR interfacing standards. Each standard has some pliability within it. In fact, HL7 is frequently called a “framework for negotiation” – not exactly a rigid standard. Moreover, each vendor’s application has their own data format specifications, adding to the intricacy.

Think of the scenario.

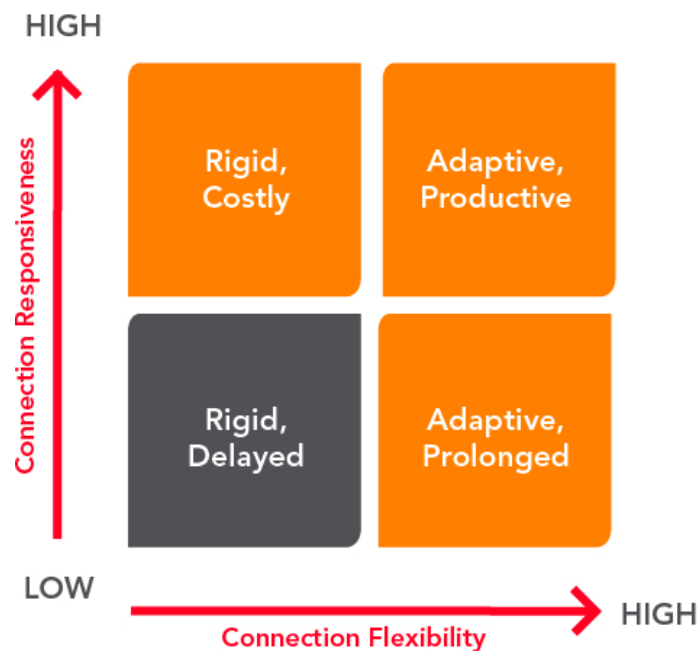
A hospital needs to connect to 20 different clinics in which they use 5 different EHR systems. Each EHR system has different data format specifications and may use the available standards differently. Consequently, the connection flexibility is essential in order to be able to adapt easily and send a patient test result or receive a patient order in the right format from one system and another way for a different system.

- **Connection Responsiveness:** Simply stated, how quickly can you build, test, and deploy an EHR interface? Is the response several days, weeks, or months? Connection responsiveness covers the capability to quickly implement an interface to and from an EHR system, but it should be more.

Connection responsiveness should entail the support after the interface is in place. In other words, monitoring the interface status enables proactive troubleshooting should problems arise. It delivers a confidence level to the external providers that their electronic orders and results are being received. Monitoring and proactively resolving potential issues builds trust between healthcare providers.

With these definitions as background, let's discuss the differences in each of the approach options.

Low Connection Flexibility, Low Connection Responsiveness. This is the EHR connectivity quadrant that no one wants to be in. In this scenario, the connection type and format has to be on your inflexible specifications, and it is probably a point-to-point interface which takes time to develop.

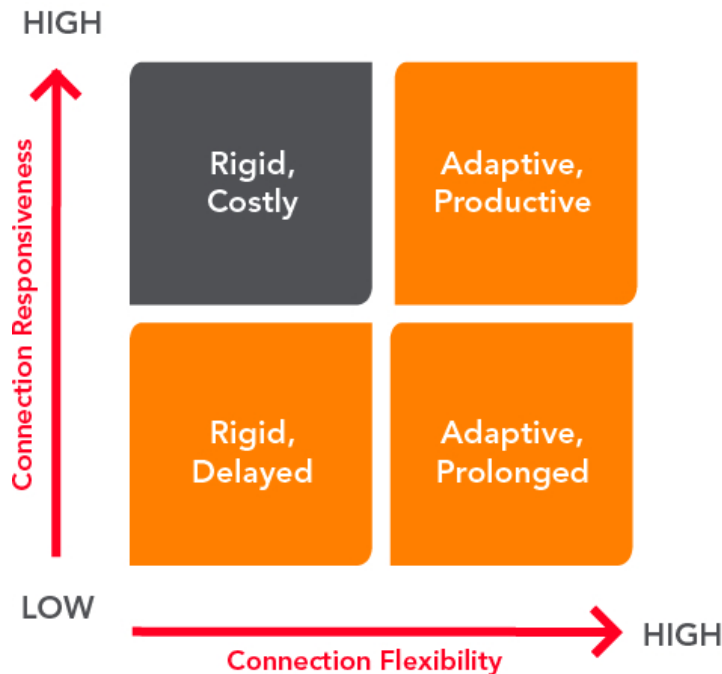


Characteristics of being in this quadrant include:

- Deep queue of interface requests that need to be developed, tested, and deployed
- Long cycle time to develop, test, and deploy (3-6 months)
- Lack of interface monitoring and alerting to ensure continuous uptime of electronic communication of patient results and orders
- High on-going maintenance costs due to the inflexible nature of the interface

The end result: Uncompetitive in being able to deliver timely connectivity to a physician's EHR system and unsatisfied healthcare providers because interfaces are not proactively monitored.

Low Connection Flexibility, High Connection Responsiveness. Low connection flexibility plays out the same as above, but now the responsiveness is timelier. EHR interfaces are turned around more quickly and are more closely watched.

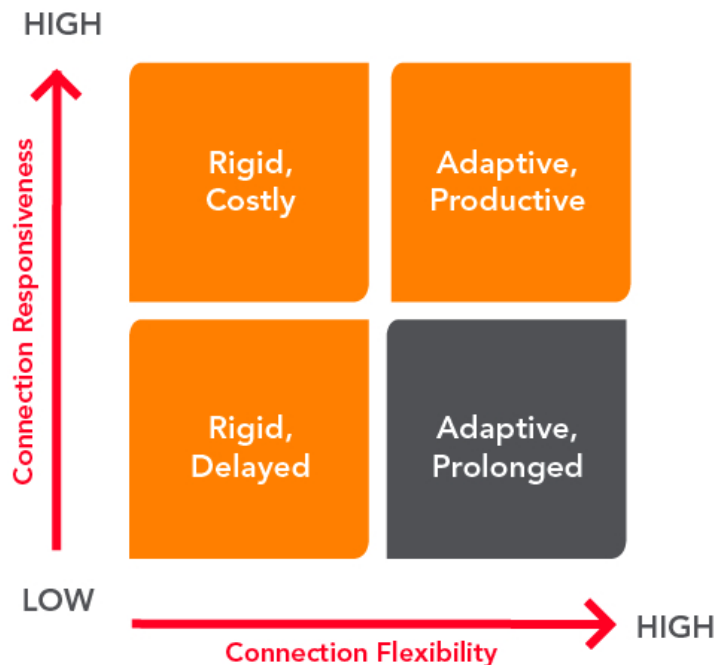


What is happening in this scenario, however, is that the interface staffing levels are high. Essentially, it is throwing people at the interfacing problem. More people to develop, test, and deploy interfaces, and more people to closely watch interface connections and their results. Characteristics of being in this quadrant include:

- High number of hours to build an EHR interfaces due to rigid data specification restraints
- Large IT and interface staffs to develop and monitor EHR interfaces
- Low to medium physician confidence in the EHR connections due to the manual effort required to program and monitors the interfaces

High Connection Flexibility, Low Connection Responsiveness. In this quadrant, the scenario begins to change. With high connection flexibility, the likelihood that an interface engine is located in one or more of the facilities is very high.

An interface engine delivers the capability to transform the patient’s clinical data to meet the different EHR specifications. If one EHR has the patient name “Evans, Jill A.” and your application needs it “Jill Evans,” the interface engine introduces the ability to adapt and change the data format before the information is sent forward.

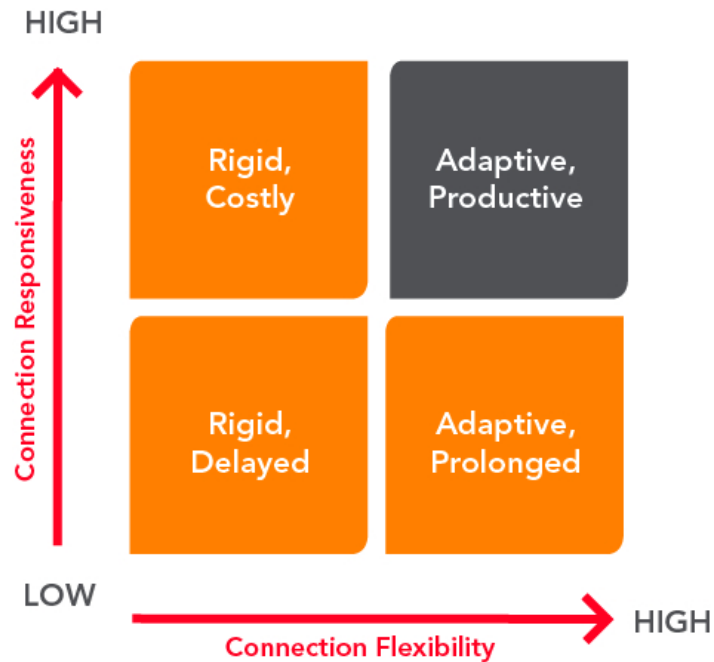


However, in this situation, the responsiveness is low. The interface engine is present, offering greater interface adaptability, but the monitoring capabilities or the tools to build the interfaces may be complex or limited. In this case, half the battle is won; nevertheless, the strength of referring physician relationships is built on quick response times and building confidence in the patient messages being sent and received.

Characteristics of being in this quadrant are:

- Adaptable to meet the differing EHR and other application data specifications
- Middle-of-the-road cycle times in developing, testing, and deploying EHR interfaces
- Mediocre insight into EHR interface status – physicians may be calling to find out why the patient results or orders were not sent

High Connection Flexibility, High Connection Responsiveness. Here is the place to be! Any EHR interface can be built, tested, and deployed in days – the data specifications in the receiving application and the sending application can be easily mapped and data transformed to meet the requirements.



EHR interfaces are monitored proactively and alerts are set to be sent if any indicator parameters are surpassed.

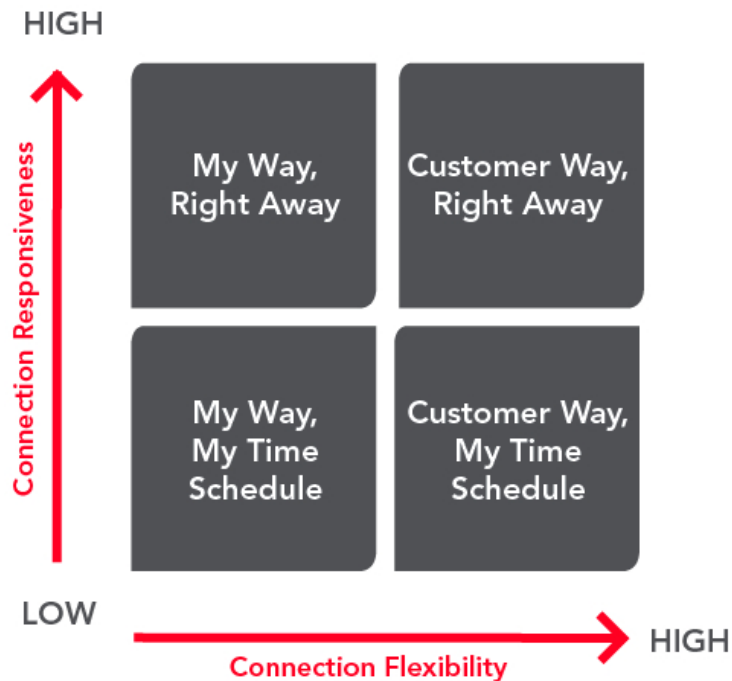
Characteristics of being in this quadrant are:

- Highly responsive to meeting EHR data specifications and delivering electronic two-way interfaces in days, rather than weeks or months
- Strong, long-term referring physician relationships
- You know it before the physician does. Proactively monitored interfaces – high confidence in your capabilities, rock solid relationships
- Growing number of EHR connections and business. Word of mouth reputation grows as your level of responsiveness and flexibility becomes more pervasive within the physician community
- Lean, productive interfacing team

EHR Connectivity Attributes

The EHR connectivity approach that your organization has adopted, or decides to adopt, translates into the traits that describe your interactions with the referring physician community. Given your approach, the market may perceive you in different ways.

Taking the same two-by-two illustration a step further, the attributes can be outlined as follows:



Essentially, the attributes can be summarized by:

- *Service delivery.* Is EHR connectivity established on your time schedule, or is it done in a very customer-responsive way?
- *Interface definition.* Must the EHR interface meet your specifications, or do you adapt and manage to the data format that is delivered by the physician?

Doing EHR Connectivity the Customer Way

The adoption of EHRs is growing strongly with a continued rapid adoption rate being driven by the race to obtain HITECH incentive funds. EMRs and EHRs help physicians manage the relationships with their patients and accurately track their medical history. The objectives of EHRs can be lofty – creating a connected healthcare community – yet they are also practical – deliver high quality, efficient patient care.

The approach that your organization takes to implement interfaces to a referring physician’s EHR or EMR will translate into how your organization is viewed by that physician. Establishing close, long-term relationships can sometimes be challenging. The interface approach that you take may be a determining factor in how long-term that physician relationship is.

“Have it your way” is a reasonable, doable approach when it comes to EHR interfaces. Processes and supporting technology exists to implement that strategy effectively. Building a community of physicians, each with their own unique EHR system, can be a reality for your healthcare institution.

The long term operational impact of high connection flexibility, high connection responsiveness approach is very positive, delivering the right financial results, quality of care results, and physician relationship results. Moreover, it is the right way to deliver the spirit and intent of Meaningful Use.

About Corepoint Health

Corepoint Health has the healthcare IT experience and strength to deliver a dramatically simplified approach to internal and external data integration and health information exchange for hospitals, radiology centers, laboratories, and clinics. Our next generation software solutions are transformational and will streamline your IT environment, provide a fast track to achieving your interoperability goals, and create operational leverage within your organization. Corepoint Health's solutions achieve a needed balance of being both intuitive and sophisticated while delivering solid functionality and performance.

www.corepointhealth.com/YOUEmpowered

Telephone: 214-618-7000

Email: info@corepointhealth.com