

What Are the Biggest Healthcare Interfacing Challenges?

HL7 Reference Guide Survey Results

Background

NeoTool published the [HL7 Reference Guide](#) as a resource for healthcare IT professionals who are working diligently to integrate various applications efficiently and productively. The success of this [HL7](#) publication led to crafting a Second Edition and releasing it in mid-2006. The response has been tremendous, as more and more people are using this *Guide* in their HL7 interface initiatives.

As people register to receive this complimentary HL7 guide, two simple questions are asked:

1. What is your biggest healthcare interfacing challenge?
2. What is your organization type (e.g., [hospital](#), [lab](#), [clinic](#), [imaging center](#), vendor, etc.)?

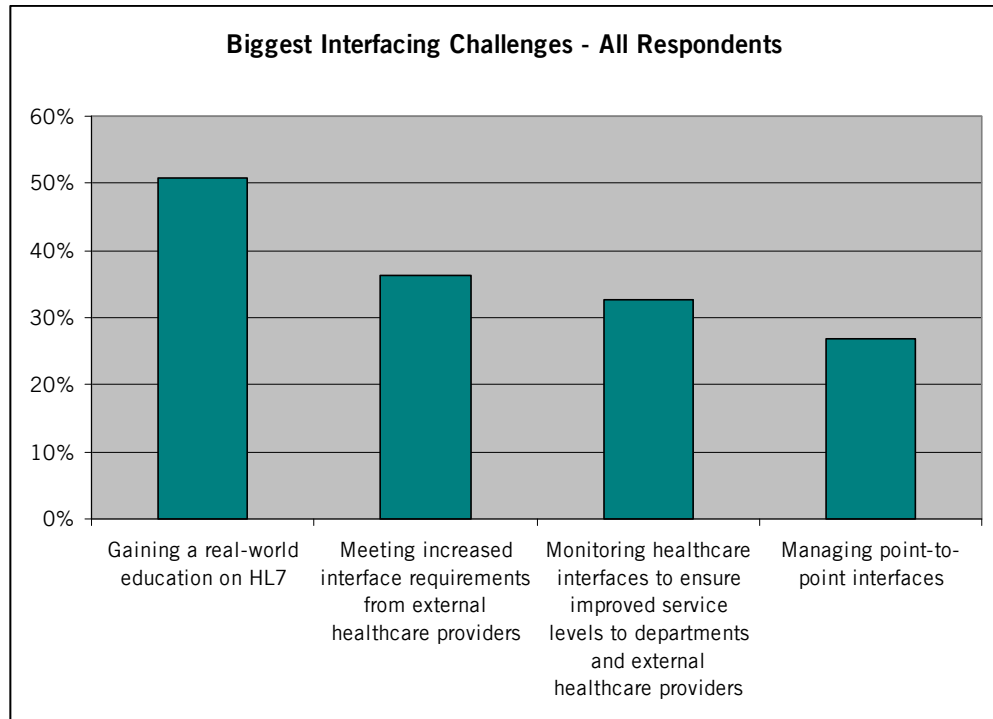
This paper outlines and discusses the [HL7 interfacing](#) challenges mentioned by each organization type.

Healthcare Interfacing Challenges – All Respondents

The overall top healthcare interfacing challenges revealed through the first question across all organization types are:

1. Gaining a real-world education on HL7
2. Meeting increased interface requirements from external healthcare providers
3. Monitoring healthcare interfaces to ensure improved service levels to departments and external healthcare providers
4. Managing point-to-point interfaces

Since more than one interfacing challenge could be selected for each respondent, the chart below highlights the frequency of these top issues.



The growing adoption of [Electronic Medical Record \(EMR\)](#) applications and greater requirement for streamlined workflows in healthcare entities makes [HL7](#) play an even more essential role as the standard for clinical data exchanges. Given this, gaining insights and practical knowledge on HL7 makes sense as the top challenge for healthcare organizations overall.

The next three interfacing challenges relate to the operational challenges of a healthcare IT environment. They can be summarized as:

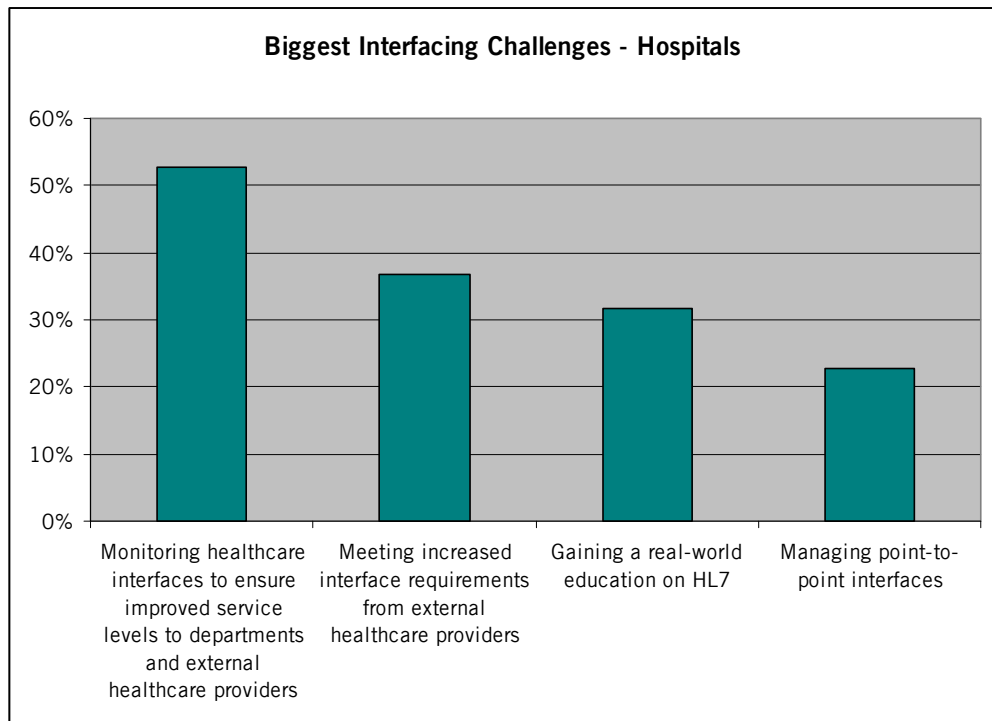
- **Increased Interface Requirements:** Healthcare IT organizations are receiving increased requests for interfaces. Whether it is for the seamlessly integration of more internal applications or extending integration beyond the four walls of the healthcare institution, healthcare IT must respond productively to the requests.
- **Monitoring Healthcare Interfaces:** More deployed interfaces dictates maintaining service levels and managing the interfaces proactively is vital. Automated monitoring and alerting features can easily keep a healthcare IT organization abreast of the potential issues and enable them to respond accordingly.
- **Managing Point-to-Point Interfaces:** Point-to-point interfaces by their very nature are challenging. They are “specially” developed in order to exchange data between two healthcare applications. There is no monitoring of point-to-point interfaces, and they are usually developed by an application vendor. Support of these interfaces can be time-consuming and

resource-draining, especially when each interfaced application can modify their application, thus breaking the interface.

Each market segment responded somewhat similarly, but each offered some interesting insights that highlight the differences each segment faces in their primary healthcare interfacing challenges.

Interfacing Challenges – Hospitals

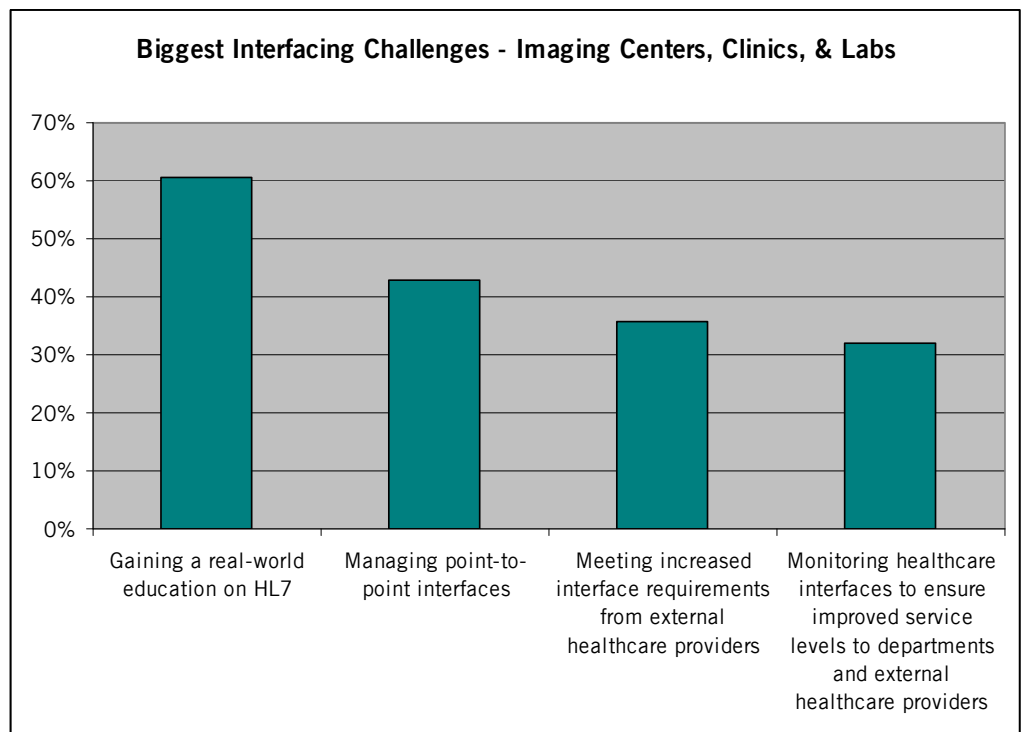
Hospitals are the most mature market using the [HL7 Standard](#). Accordingly, it may not be surprising that gaining an [HL7 education](#) is not always their top challenge. Instead, hospital's top two challenges are [monitoring existing interfaces](#) while trying to productively keep up with the demand for new interfaces.



It is interesting that [managing point-to-point interfaces](#) is the fourth challenge. Many small- to mid-sized hospitals implemented this approach to solve an immediate or limited need. Again, with the growth of [Electronic Medical Records \(EMRs\)](#) and the competitive realities of the healthcare market today, the limitations of point-to-point interfaces puts more pressure on the constrained IT resources of smaller hospitals.

Interfacing Challenges – Imaging Centers, Clinics, & Labs

[Imaging Centers, Clinics](#), & [Labs](#) are all relatively new to HL7 and using the standard to integrate workflow and extend their reach electronically to the referring physician community. Given this, it may not be too surprising that gaining practical education on HL7 is the number one challenge.



Historically, [point-to-point interfacing](#) for labs was the preferred approach; however, this resulted in a heavy dependence on the application vendors for each of their interfaces. More importantly they found this approach was difficult to scale to increasing requests for electronic interfaces.

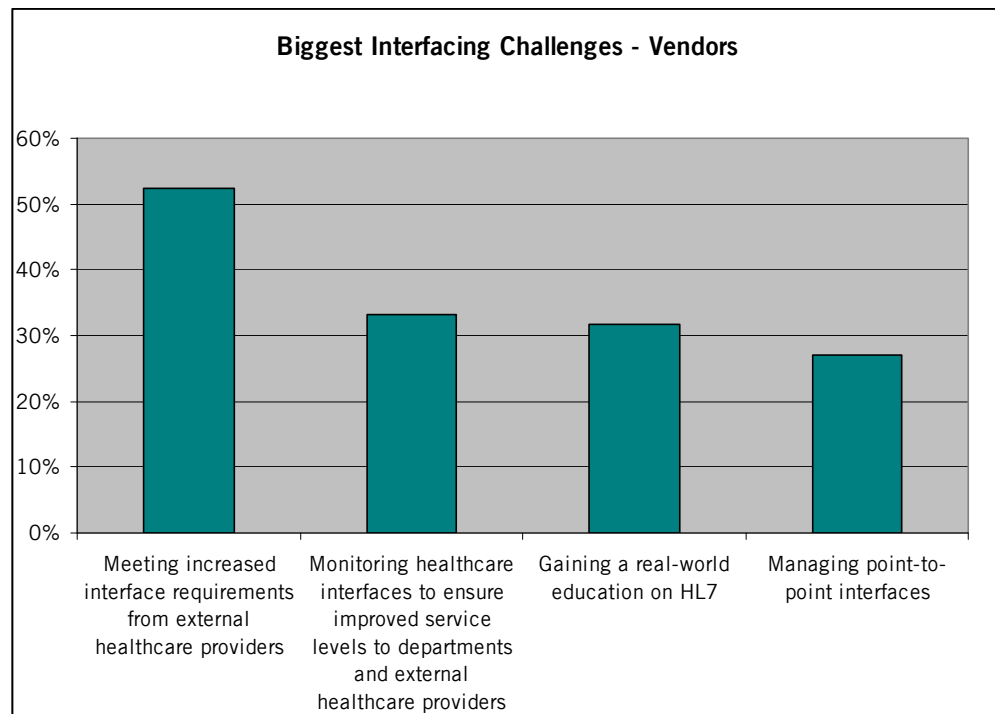
For imaging centers and clinics, the value of leveraging the [HL7 data standard](#) is becoming clearer as they evaluate ways to enhance their workflow and strengthen relationships with other entities in the healthcare market.

Within these markets, the survey data seems to suggest a market in transition. There is a realization that selecting the right implementation approach to using HL7 can assist in enhancing profitability, gaining independence from vendors on interfacing, and establishing solid, long-term relationships with key healthcare entities within their network.

Healthcare Interfacing Challenges – Vendors

Healthcare vendors – [independent software companies](#) and [medical device manufacturers](#) – are in the middle of [HL7](#) and healthcare interfacing. Healthcare providers are asking them to be more flexible in how data is both imported and exported from their application or device. The demand from providers is to “make it easy.”

Healthcare vendors are feeling the pressure, and it is appropriate that their number one interfacing challenge is meeting the increased interface requirements.



Each of the vendor interfacing challenges directly impacts their engineering and support organizations. Some of the questions that these organizations may be struggling with are:

- How do we balance developing features for our core product while keeping up with HL7 and the best interfacing approaches?
- How do we add monitoring capabilities to our interfaces so that our customers have a way to be proactive in their IT environments?
- How do we keep learning the [HL7 standard](#) while also keep up with changes in our application area?
- How do we support point-to-point interfaces in the long term? What is the cost to support and development?

Summary

Overall, it is interesting how the interfacing challenges tie together as well as fluctuate based on market characteristics. Understanding [HL7](#) and determining the best approach to working with it is critical to both healthcare providers and vendors. [For healthcare providers new to HL7](#), a learning curve is present, but there are learning vehicles available to provide assistance. Operationally, the old approach of “just doing it” with point-to-point interfaces is no longer a viable solution with an increasing electronically networked healthcare community.

NeoTool continues to work with the HL7 community to determine both the best education to offer and the industry-leading interface engine technologies to deliver. We listen very closely to what customers are saying and incorporate the best features to enable each customer with the capabilities to overcome their interfacing challenges in an efficient, productive manner.

About NeoTool

NeoTool is a leading provider of [healthcare integration solutions](#) that empower organizations to develop, test, deploy, and manage data exchanges between healthcare applications and providers. Through software, [HL7 training](#), and consulting, NeoTool is dedicated solely to healthcare application interfacing. NeoTool customers include healthcare providers (e.g., [hospitals](#), [imaging centers](#), [labs](#), and [clinics](#)), [healthcare software application providers](#), and [medical device manufacturers](#). www.neotool.com

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