# The Power of Interoperability:

## Making Life Easier for Hospital Staff While Providing a Safer Environment for Patients

By Rich Murphy, Vice President, Interface Software, Iatric Systems

Early this year, the Office of the National Coordinator for Health Information Technology (ONC) released its **Nationwide Interoperability Roadmap** for a nationwide healthcare IT infrastructure. The roadmap lays out a long-term vision for a future healthcare IT ecosystem "where electronic health information is appropriately and readily available to empower consumers, support clinical decision-making, inform population and public health and value based payment, and advance science." It will all be glued together by an interoperability standard that's in the early stages of development.

This will be a complex process that will take place over several years. ONC has set 3-year, 6-year, and 10-year goals to achieve national interoperability. Your organization likely has similar goals, but can't wait years for all the complex issues included in the roadmap to get finalized. Fortunately that future world of interoperability envisioned by ONC is within reach for your organization today using interfaces to integrate healthcare IT systems that otherwise would be unable to share information.

This article will show you ways that you can move toward the goal of interoperability by integrating your current healthcare IT systems now. You'll read what barriers CIOs and other healthcare IT leaders are facing at their hospital, and how one hospital was able to save clinicians time and improve patient safety by implementing the right interfaces. There are so many benefits to integrating healthcare IT systems that the use cases are almost unlimited — providing critical information in real time for nurses and physicians, updating patient records across multiple systems, improving data collection for Meaningful Use compliance, and many others.

## Preventing Medication Errors and Saving Thousands of Staff Hours at Roper Saint Francis Healthcare

When Roper Saint Francis Healthcare replaced its outdated ED system with a new Emergency Department Information System (EDIS) from MEDHOST, it was an opportunity to automate key processes that previously had to be handled manually. The three-hospital healthcare system in Charleston, South Carolina is now seeing significant safety and productivity benefits thanks to some very unique interfaces that integrate its new EDIS with its inpatient systems from McKesson Horizon Clinicals — two platforms that don't easily share information.

"We were moving to a system that made our ED users happy on the front end, but we needed some unique back end interfaces to make it work," says Joy Huntington, Clinical Nurse Specialist at Roper Saint Francis. Those interfaces allow information to flow transparently between the MEDHOST EDIS and McKesson inpatient systems,

saving time and making life easier for hospital staff while providing a safer environment for patients. Patient information from inpatient systems is now instantly available within the EDIS when treating patients in the ED, and information captured in the EDIS when registering, treating, and discharging patients is reflected back to the inpatient systems in real time.

**When registering patients in the ED:** An enhanced ADT interface extracts patient allergy and home medication information from Horizon Clinicals (Roper Saint Francis' inpatient charting system), attaches it to an ADT message from McKesson STAR (their inpatient registration system), and delivers the enhanced message to the MEDHOST EDIS in real time.

**15 minutes**
The amount of time saved per patient by having the data readily available instead of having to make phone calls or look up records in other systems

**20,000 visits**
The number of patient Emergency Department visits each year that benefit from improved patient care due to the fact that the systems are integrated

**20,000**

**5,000 hours**
The annual hours of staff time saved each year by eliminating manual or redundant tasks

"Doctors and nurses caring for patients now have the information they need, when they need it," says Wanda Brockmeyer, Service Line Director for Emergency Services at Roper Saint Francis.

**When admitting patients from the ED:** When patients receive medication in the ED, a second interface documents the administration of meds in Horizon Clinicals. "The interface prevents duplicate doses of medications — including some very serious medications — as well as missed doses and confusion about timing," says Joy.

"Now when a floor nurse pulls up the record, she can see what medication the patient received in the ED," Joy adds. "Before the systems were integrated, we were blind to it, and there was a lot of guesswork and phone calls to get verification. The integration eliminates the uncertainty, and the risk of medication errors that comes with it."

**For updating the "source of truth:"** Another interface captures patient history information collected during ED visits (allergies, vital signs, tobacco and alcohol use, infectious disease status, etc.) and automatically updates the patient profile in Horizon Clinicals. These are Core Measures required for Meaningful Use compliance, and tracked in ED Horizon Clinicals as the "source of truth" at Roper Saint Francis.
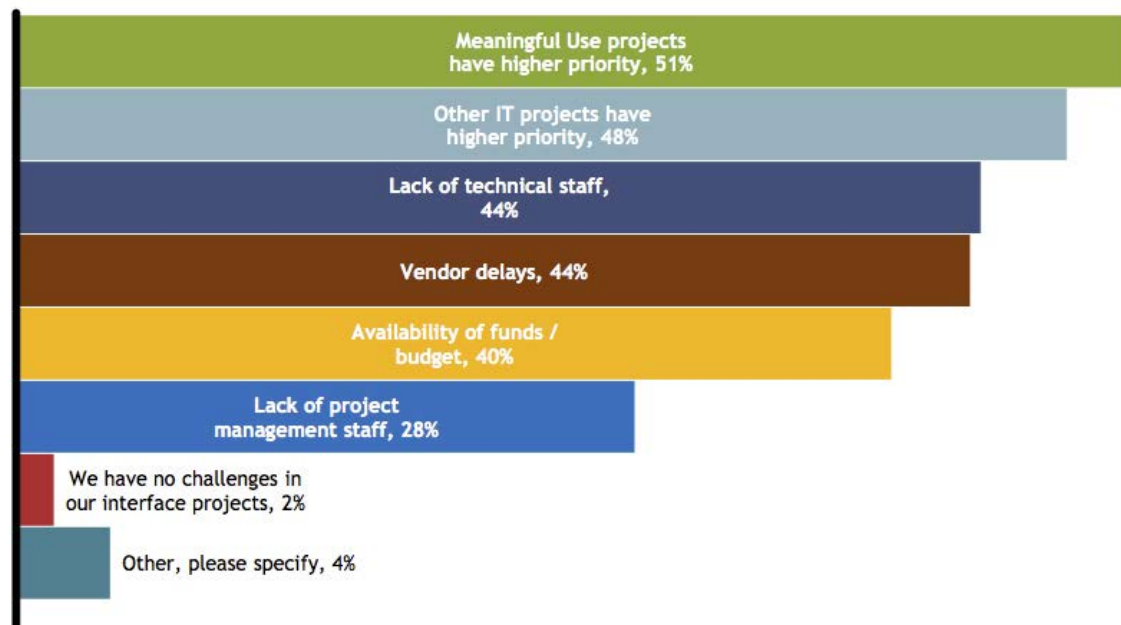
"When we asked those questions in the ED, they were documented in the record but that information didn't always follow the patient upstairs," Wanda observes. "The MEDHOST and Horizon Clinicals integration shares that information automatically so we don't have to ask the questions again, or get dinged for not having information that we actually have."

### How Can Overburdened IT Departments Find Time for Interfaces?

Those were just a few examples of how integration and interfaces can help hospitals improve productivity, prevent medical errors, and enhance day-to-day workflows. However, building interfaces between healthcare IT systems and optimizing the systems being connected requires dedicated IT staff time and specialized interface expertise. Unfortunately, these are often in short supply.

A recent *Healthcare Informatics* survey, "An Assessment of Interface Projects," revealed that CIOs and their teams are being pulled in many directions, with the result that many interface projects are delayed or left on the back burner. The survey of 382 hospital executives and non C-level professionals showed that the biggest challenges were "Meaningful Use projects have higher priority" (51%) and "Other IT projects have higher priority" (48%), followed closely by "Lack of technical staff" (44%). (Participants were asked to "Choose all that apply.")

### Q: What challenges does your organization face related to interface projects?



Meaningful Use projects have higher priority, 51%

Other IT projects have higher priority, 48%

Lack of technical staff, 44%

Vendor delays, 44%

Availability of funds / budget, 40%

Lack of project management staff, 28%

We have no challenges in our interface projects, 2%

Other, please specify, 4%

The irony is that interfaces provide a significant "bang for the buck," but many hospitals aren't able to reap the productivity, financial, and safety benefits because CIOs and IT teams already have too much on their plate, and hiring dedicated people to specialize in interfaces is often not cost-effective. Roper Saint Francis also faced these manpower and technology challenges, and their response was to engage an outside team of professional healthcare technology experts and project managers with extensive interface experience.

The *Healthcare Informatics* survey highlights some of the pressures facing CIOs, and this pressure is echoed in the **2014 Annual CIO Survey** by executive search firm, SSi-SEARCH. This survey finds that CIOs expect their workload will continue to accelerate. They're also uneasy about keeping up with the constant changes in healthcare IT, with 48% of CIOs concerned about their ability to keep pace.

Another interesting finding in the SSi-SEARCH survey was the importance that CIOs placed on EHR optimization. When asked: "Which of the following areas does your health system perceive as most critical?" EHR optimization came in first at 66%. When asked: "Which areas take the majority of your time?" EHR optimization was also first at 55% (tied with Meaningful Use). One of the key aspects of EHR optimization is the ability to map data from one system to another in the way users need to see it — which is really what interfaces are all about.

## A New Perspective

At Roper Saint Francis Healthcare, ED and inpatient caregivers now have instant access to the information they need thanks to the integration between their MEDHOST and McKesson systems. "When we started, none of us had the appreciation for interfaces that we have now," Wanda adds.

Many hospitals find that once they start deploying interfaces, they start seeing new opportunities for sharing information to provide safety and productivity improvements that they never anticipated. They begin to see their hospital's clinical systems from a new perspective — not just as monolithic entities, but how those systems can work together. Since their internal staff members are already overworked, they also start to appreciate having a knowledgeable outside partner that can help bring their interfaces to life quickly and cost-effectively. Patients, clinicians, and the hospital itself are all winners.