



Case Study

IHIE employs AT&T healthcare solution to support its growth



About Indiana Health Information Exchange

The Indiana Health Information Exchange (IHIE) operates the nation's largest health information exchange. It provides a highly secure statewide health information technology network that connects more than 90 hospitals, long-term care facilities, rehabilitation centers, community health clinics and other healthcare providers in Indiana. This network serves an area with a population of about six-and-a-half million people and more than 25,000 physicians. IHIE provides information and medical records in a highly secure, standardized and electronic format, enabling information to follow the patient, rather than being limited to one physician office or a single hospital system.

Situation

IHIE wanted help to identify and understand a sustainable cost model for the exchange, address issues of scalability and provide the information technology tools and expertise required to move forward. Ultimately, IHIE needed to grow its revenue and streamline its operations to become a self-sustaining business, moving beyond its historical reliance on grants and government funding.

Solution

Although IHIE could have continued to fine-tune the technologies and business processes that it had in place, leaders realized that bringing in an experienced integrator would help them reach their ultimate goals in a more expedited fashion. Therefore, IHIE turned to AT&T for its ability to tackle large organizational and process challenges – and to provide the technology that would support the exchange's ongoing growth. IHIE is now utilizing [AT&T Healthcare Community Online](#) to provide a highly secure messaging platform for clinical messaging and new services that offer the scalability required.

Providing Insight at the Point of Care

Typically, when an ambulance pulls up to a crisis, the emergency responder (EMT) focuses on keeping the patient alive, without having much background information about the individual such as known allergies or chronic medical conditions. Even though medical professionals are likely to follow emergency medicine best practices in these situations, they are working with many unknowns – and that could turn a stressful situation into an even more challenging one.

If you need crisis care in Indianapolis, however, you can rest a bit easier. When the ambulance arrives, the medical professionals may have already reviewed your health history on a computer tablet. As such, they will be able to treat you while knowing about a variety of factors that could affect outcomes, such as your health history, current medication list and allergies.

Access to this important information can be attributed to the work of the Indiana Health Information Exchange. This pioneering organization got its start in 2004 when leaders from the Regenstrief Institute, an internationally respected informatics and healthcare research organization based in Indianapolis, and five charter hospitals formed one of the country's first health information exchanges (HIEs).

Indiana Health Information Exchange Facts

Business Needs

Efficiently and cost effectively integrate healthcare providers into the health information exchange

Networking Solution

AT&T Healthcare Community Online, a cloud-based care collaboration and health information exchange platform offering toolsets designed for physicians, providers, payers and patients

Business Value

Reduced hospital on-boarding process by months; improved revenue realization; provided scalability to address future growth

Industry

Health Information Exchange

Size

92 hospital members and 70 employees

Working with communities throughout Indiana, IHIE strives to get patient health information where it needs to be, when it needs to be there, to enhance care coordination and patient outcomes. Its mission is to improve the quality, safety and efficiency of healthcare by connecting hospitals, rehabilitation centers, long-term care facilities, laboratories, imaging centers, clinics, community health centers and other healthcare organizations so patients receive the best care.

“Over the last decade, people have come to recognize that capturing data on a person’s health and well-being is very important,” said Harold Apple, CEO of IHIE. “When you have data, you can take quick action at the point of care. And you can also analyze the aggregate data and trends in larger populations, and then implement best practices that can lead to improved overall outcomes.”

“Now, we are on-boarding hospitals into the exchange in waves of 10 and 15 at a time. It would have taken us years to get to this point without the help of AT&T.”

– Harold Apple, CEO, Indiana Health Information Exchange

Moving Beyond Good Intentions

Certainly, bringing this vision to fruition sat at the center of the IHIE’s early activities, as the Regenstrief Institute spearheaded the initiative by developing the infrastructure, protocols and messaging tools that would enable organizations to exchange information. This could be a daunting proposition considering all of the particularities of healthcare – especially the need to keep personal health information secure.

“We were able to break through a lot of those barriers with the technology that was developed with our partner Regenstrief. We had a head start because of some of the foresight of the people who participated back when we started in 2004,” Apple recalled.

IHIE, however, like other pioneering HIEs across the country, has discovered that good intentions only go so far. Even though working with Regenstrief provided the exchange with a great start, leaders eventually realized that it wouldn’t be enough to get to their ultimate goal. To truly succeed, IHIE would need to go beyond this initial innovation and develop and sustain a viable business model. “We have to get to the point where we can prove that we are financially sustainable by showing a positive return on asset, investment and time to market,” Apple said.

Doing so, however, is not always easy. Since the exchange is blazing a new trail, there is no proven business model to emulate. As such, leaders constantly grapple with unknowns and are forced to face challenges as they arise.

Most telling, perhaps, Apple has discovered that to financially succeed, the exchange needs volume – and lots of it. “The most significant lesson we have learned is that the cost of this technology and the cost of developing it are pretty significant,” Apple said. “We recognize that you have to provide the exchange services over a much larger population than we initially did. We have to get to the point where the cost per unit – whether it be record, transmission or individual service – comes down to a level that will induce hospitals and physicians to use it.”

IHIE, therefore, has been adding as many providers as possible. At first, getting healthcare organizations to sign on the dotted line was a sales challenge. But when the federal government started pouring money into information technology adoption through the American Recovery and Reinvestment Act (ARRA) of 2009, providers started lining up at the proverbial IHIE door.

“With the new legislation, hospitals became incented, and are actually required, to install new technology and capture medical records in an electronic format,” Apple said. “The sales challenge of getting providers to sign up was much less difficult than it had been at the start. The hospitals were being pushed by the government and consumers into becoming our customers, so to speak.”

Facing New Challenges

Welcome as it was, the flurry of interest presented IHIE with a new challenge: getting hospitals up and running on the exchange in a quick and efficient manner. Shortly after the landmark ARRA legislation was introduced, more than 30 hospitals were awaiting implementation, a process that historically took up to nine months.

“We just couldn’t scale up fast enough,” Apple said. “Our challenge was that we were equipped to handle very few hospitals in terms of the complex process of interfacing with their systems and building connections between a given provider and the health exchange.”

Part of the challenge stemmed from the inherent complexities in healthcare. “Mapping and converting data from one system to another is more complex in this industry than it is in others,” Apple said. “This is because the diversity and range of data types that healthcare organizations collect and capture come from a broad array of information systems.”

“The fact that we can get data to the right point in the care process within seconds to help that EMT, physician or that nurse who is providing care is something we are all very proud of.”

– Jim Hill, Chief Revenue Officer, Indiana Health Information Exchange

Bringing hospitals into the IHIE fold often turned into a cumbersome process, according to Becky Learn, Customer Success Manager. After signing on with the exchange, hospitals typically would undergo an interface review process. IHIE and the hospital would engage in an iterative exercise that consisted of finding issues and making updates on both sides to improve message display.

While things typically worked out in the end, the process proved to be long and laborious. “Application specifications were not communicated upfront so we had to take time to identify the issues, communicate them to the hospital and ask for any necessary updates,” Learn said. “This resulted in hospitals having to go back to their technology vendors more than once to request changes to the interface. Not knowing the requirements upfront frustrated the hospital staff and prolonged the project.”

Growing Gracefully

While IHIE had the healthcare side of the equation figured out, the exchange needed some guidance and technology that would enable

it to better manage growing pains and expand cost efficiently. IHIE also needed the people, resource and technical capacity to integrate hospitals into the mix in a parallel – instead of sequential – process.

“That’s what AT&T brought to the process,” said Apple. “They have an understanding of large complex projects and they are able to bring what we need from both a training and technology perspective.”

IHIE began to use AT&T Healthcare Community Online, a cloud-based HIE and care collaboration platform, to displace the existing messaging system, making IHIE more accessible in a highly secure and scalable environment. AT&T Healthcare Community Online utilizes the AT&T open network and best-in-breed ecosystem to increase the number of hospitals participating in the exchange and to decrease the time spent on implementations and integrations.

The whole process is now more streamlined. After a provider enters into a contract, IHIE leaders work with the hospital to plan a “readiness assessment” with the facility to identify timing preferences and any risks to the project from the hospital side. IHIE provides the hospital with standard interface specifications including an AT&T-developed tool that enables the hospital to identify general issues with their messages before attempting to create an interface. As such, IHIE can address the more complicated interface challenges earlier in the process, so all of the basic issues are already resolved.

“Now, we are on-boarding hospitals into the exchange in waves of 10 and 15 at a time,” Apple said. “Before we had a severe backlog of some 30 or 40 hospitals that we had contracted with and that were not exchanging data with our other members. It would have taken us years to get to this point without the help of AT&T.”

In fact, IHIE was able to work with AT&T to on-board twelve healthcare providers onto the exchange in just three months. The hospital on-boarding process now takes, on average, four to five months, as opposed to nine to twelve months previously. All this growth has extended the exchange’s reach to include 92 hospitals and six-and-a-half million patients. With these patients, IHIE has more than three billion

health observations in its 14-terabyte database. Adding hospitals in this more streamlined fashion is helping IHIE grow its per hospital revenue three times faster than it did with its previous on-boarding process.

The real beauty of the exchange, however, is that it keeps getting more and more valuable as it grows. Indeed, as more providers join IHIE, the ability to provide point-of-care access to medical records expands to cover a larger population of patients.

“The fact that we can get data to the right point in the care process within seconds to help that EMT, physician or that nurse who is providing care is something we are all very proud of,” said Jim Hill, Chief Revenue Officer for IHIE. “AT&T has helped us get to this point so much faster than we would have done on our own.”

Perhaps even more important is the fact that IHIE can now start to use the data to examine trends in population health – and identify and implement best practices to improve overall healthcare delivery.

“The real long-term value will come when we start using the knowledge that we’re gaining from the data to start improving healthcare,” Apple said. “By utilizing data analytics and care management technologies, IHIE can work toward improving quality by identifying healthcare best practices and integrating them into care processes. We just started to scratch the surface in terms of the big gains in health outcomes that we could potentially achieve as we amass more data, protect patient-specific information and apply advanced analytics tools to it,” Apple said.

Next Steps

The fact that continued growth will result in greater public health benefits and, at the same time, make the exchange a more cost efficient operation has leaders set on expanding IHIE’s reach well beyond state lines.

“We have a map in our office and each time we sign up a hospital, we put a pin in the map,” Apple said. “We’re planning on posting a lot more pins as we start to take the exchange outside of Indiana and grow into a regional and perhaps even national exchange.”

For more information contact an AT&T Representative or visit www.att.com/healthcare.



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