



Orion Health | Case Study

Phoenix Children's Hospital Achieves a New Level of Integration: Getting Ready for FHIR While Empowering Clinicians to Provide Better Care

The Customer

Phoenix Children's Hospital (Phoenix Children's) is the only hospital in Arizona dedicated to children and one of the ten largest children's hospitals in the nation. Phoenix Children's is home to the state's largest group of pediatric specialists and sub-specialists. As the hospital continues to evolve this world-class care, it's working with leading local and national research partners to uncover new breakthroughs in pediatric medicine.

The Challenge

Phoenix Children's IT department was being asked by their clinicians, support staff, and researchers to provide a wider variety of services with limited resources. Beyond that, the Hospital's legacy integration engine was increasingly proving to be too rigid for the organization's evolving demands. Neither user-friendly nor scalable, the engine delivered messages with incomplete information, was unable to track the vast quantities of data coursing through the hospital's IT infrastructure, and failed to offer the level of integration that Phoenix Children's needed.

"A clinician would ask me for the details of a patient encounter on a specific day, three years earlier," said Kevin Allen, the Hospital's senior integration analyst, "and I would have to tell her that I was sorry, but that we only keep thirty days of information, since our integration engine didn't support a data warehouse. That sort of dialogue was a regular occurrence, and it certainly didn't do any favors for the IT department's reputation within the Hospital."

Additionally, the application team found themselves in an increasingly awkward position between their providers and their EMR application vendor. Their EMR vendor was unable to accommodate requests to add fields and functionality Phoenix Children's needed to add data to downstream messages and execute other tasks related to patient care.

"When we asked the vendor to add a specific field, they couldn't, because not enough customers were asking for it. For just one field, to enter a single piece of data for an



PHOENIX CHILDREN'S Hospital

CUSTOMER Phoenix Children's Hospital

CITY, STATE Phoenix, Arizona

WEBSITE phoenixchildrens.org

ORGANIZATION TYPE Non-profit hospital

BEDS 433

INPATIENT VISITS PER YEAR 12,248

PRODUCTS IMPLEMENTED Orion Health Rhapsody Integration Engine

- KEY BENEFITS**
- Achieved a heightened level of flexibility and services
 - Enabled improved integration in a scalable, user-friendly environment
 - Empowered hospital staff to track and make sense of vast quantities of data
 - Made possible the creation of a series of long-awaited application enhancements
 - Prepared the hospital to be ready to connect with HL7® FHIR®-enabled vendors

outbound message, the quotes would start at \$5,000 and the vendor would propose a timetable of several months. That was unacceptable," said Allen. "Ultimately, that lack of functionality was slowing down our processes and impacting patient care."

The Solution

Phoenix Children's interviewed the top interface-engine vendors and determined only one could accommodate the lengthy list of must-have features they compiled. Rhapsody met their needs including everything from connecting two communication points in less than ten minutes, to advanced functions, like quickly collecting data from a myriad of databases.

Offering fast and reliable connectivity and data sharing within and among hospitals, Rhapsody is a platform that enables its users to:

- Build interfaces and deliver projects faster
- Extend the life and value of existing systems
- Continually adapt to the latest healthcare industry changes
- Give their staff the ability to solve complex problems
- Be confident in their infrastructure's uptime
- Reduce the time it takes to maintain systems
- Implement FHIR capabilities
- Simplify complex healthcare interoperability

The Results

The implementation of Rhapsody solved multiple problems and ushered in a new era for Phoenix Children's. The Hospital's IT department is now able to offer a level of flexibility and services never possible before.

"As we started to use Rhapsody and migrate off our legacy interface engine," said Allen, "we discovered that it boasted capabilities we had not even considered during our interface-engine selection process. We quickly learned we could help our application team by adding much-needed business logic and capture the data our providers were asking for. We'd be able to do all of it without paying extra set-up and maintenance fees."

In addition to enabling a high level of integration in a scalable, user-friendly environment, Rhapsody empowers the Hospital's clinicians, support staff, and researchers to track and make sense of vast quantities of data, which now amounts to some one to three million messages per day.

"Now, whenever a Phoenix Children's clinician needs insight into a specific patient encounter, no matter what year it happened," said Allen, "I can run a query through the data warehouse and other routes via Rhapsody and bring real intelligence to their decision-making process. This means a profoundly improved level of care for patients. The history captures gaps in care that would've been missed, at-risk patients who wouldn't have been promptly identified, and inefficiencies in our workflow that could've had a negative impact on patient well-being. Rhapsody has made a complete night-and-day difference in how we provide care at Phoenix Children's."

Further, Rhapsody has made it possible for the IT department to create a series of long-awaited custom applications that not only feed data into Rhapsody, but also pull data from a variety of sources in real time.

"Instead of IT being seen as a roadblock, we're now seen as a facilitator," said Allen. "Instead of saying we can't offer the custom applications the hospital wants because it's too expensive or the engine won't allow it, we say, 'Whatever you want, we'll get it for you. We'll create it ourselves.'"

Future Developments

"With Rhapsody, we're now ready to accommodate the first vendor who wants to connect to Phoenix Children's using FHIR," said Allen, referring to Fast Healthcare Interoperability Resources, the latest standard developed by the HL7 organization. "By all accounts, FHIR is the future of healthcare data integration, and we're excited to have a partner like Orion Health by our side as we venture into it."

About Orion Health

At Orion Health, we are building thinking software for life. Our new generation eHealth software provides an open platform that seamlessly integrates local, regional, and national data, making it more readily available to doctors, nurses, specialists, and patients themselves. We believe that our software, built on new generation technology, will give everyone healthier, happier, and longer lives.

Find out more: orionhealth.com and phoenixchildrens.org

Rhapsody® Integration Engine is intended only for the electronic transfer, storage, or display of medical device data, or the electronic conversion of such data from one format to another in accordance with a preset specification as specified in the product manual and/or related documentation. Rhapsody Integration Engine is not intended to be used for active patient monitoring, controlling or altering the functions or parameters of any medical device, or any other purpose relating to data obtained directly or indirectly from a medical device other than the transfer, storage, and conversion of such data from one format to another in accordance with preset specifications. Orion Health makes no warranties and the functionality described within may change without notice.
ONC Health IT Certification (2014 Edition) Rhapsody Integration Engine and Rhapsody Connect attained 2014 Edition Modular Ambulatory EHR Certification and 2014 Edition Modular Inpatient EHR Certification from the ICSA Labs ONC Health IT Certification Program. This EHR Module is 2014 Edition compliant and has been certified by an ONC-ACB in accordance with the applicable certification criteria adopted by the Secretary of Health and Human Services. This certification does not represent an endorsement by the U.S. Department of Health and Human Services. For more information, please see orionhealth.com/us/support/disclosures/meaningful-use-rhapsody. Rhapsody® is a registered trademark of Orion Health™ Limited, manufactured in New Zealand, by Orion Health Limited. All other trademarks displayed in this document are the property of Orion Health or their respective owners, and may not be used without written permission of the owner. Rhapsody Integration Engine is not intended to be used for diagnostic purposes, or to replace clinical judgment or responsibilities.
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