SUCCESS STORIES

InterSystems Scalability Supports Growing IDNs and HIEs

For large healthcare delivery systems, software scalability is critical. As organizations grow, they need data to flow seamlessly across their health IT systems to provide a unified care record, and for analytics that span the care continuum. However, many first-generation data sharing initiatives fail to address fundamental technical challenges, including access, scalability, and performance.

Customers often come to us when searching for the right solution for their second-generation interoperability investment. In InterSystems HealthShare®, they find a proven and powerful foundation, with integration, information sharing, and analytics solutions that scale easily to handle thousands of concurrent users. Consider, for example:

Replatforming at Scale:
Greater Houston Healthconnect

Houston has grown to become the third largest city in the United States, renowned for its healthcare institutions — Memorial Hermann, MD Anderson Cancer Center, and Houston Methodist, to name a few. These institutions share their medical records through Greater Houston Healthconnect, the regions Health Information Exchange (HIE).

"Our mission is to assist in the coordination of care throughout Southeast Texas," says CEO Nick Bonvino, who has significantly expanded the HIE's membership. For more than eight million

InterSystems®
HealthShare

people in 24 counties, the not-for-profit also provides diagnostic image sharing, real-time notifications, and the secure exchange of healthcare information via Direct Secure Messaging.

Not surprisingly, the information management and interoperability challenges grew with the membership and volume of electronic medical record (EMR) and other disparate systems. The Greater Houston Healthconnect's original interoperability platform struggled to meet current demand. And it lacked capacity to address the HIE's expected challenges going forward.

Greater Houston Healthconnect selected InterSystems HealthShare® to connect the disparate systems among its members and uniquely identify patients represented differently across many providers.

Now, HealthShare seamlessly connects 70% of the region's physician community and 95% of the hospital market to the same unified health record. Providers have an accurate, straightforward view of nearly every patient in the Greater Houston area. The result? A direct impact on quality, efficiency, and patient safety. With a complete picture of a patient's medical history at the point of care, physicians can better assess, diagnose, and create care plans that address a patient's health issues without unnecessary tests, procedures, or admissions.

Integration at Scale:
Large National Integrated Delivery Network

You don't become one of the Top 3 integrated delivery networks (IDNs) in the US without acquiring a lot of different software systems along the way. That includes the integration engines in place to connect everything through a legacy of thousands of interfaces.

When this IDN decided to consolidate on a single integration platform, they knew they were investing not just in software, but in a large-scale migration project. They set up head-to-head performance tests for what they knew would be the make-or-break statistic: the time to convert to a new, production-quality interface.

When the final results were in, **InterSystems HealthShare Health Connect** was the clear winner. HealthShare Health Connect's conversion time per interface was 7 hours, 56% faster than the 16-hour benchmark of competing products. With an InterSystems interface-engine-specific conversion utility, the IDN decreased conversion time to 3.5 hours per interface, over 78% faster than the competing product benchmark. This let the IDN's senior management revise its schedule for completing the top priority interface conversions from 30 months to 18 months.

Underscoring Health Connect's critical reliability as the IDN's interface engine, there has been zero unscheduled downtime due to the software through 3.5 years of interface deployment, and only 15 minutes of scheduled downtime. By eliminating 15 different systems and using Health Connect's centralized platform, the company also reduced its vendor fees (licensing, annual support, professional services) by retiring

multiple interface products and terminating separate software licensing agreements. Health Connect's interfaces using a single code base and standard naming conventions lowered the organization's maintenance costs.

With a team of only four developers the organization converted and deployed over 2,000 Health Connect interfaces in 21 months, toward its goal of replacing 7,000 interfaces. What's more, the IDN is expected to save $3,000 per interface in development costs, for an estimated total savings of $21 million. By supporting one of the largest centralized integration projects in the world, Health Connect is ensuring that the organization can continue to grow and scale a connected health business.

Care Coordination at Scale:
Providence Saint Joseph Health

The 2016 merger between Providence Health and Services, and Saint Joseph Health, created new strains on existing infrastructure. The new organization, Providence Saint Joseph Health, operates in seven states, with 119,000 caregivers serving a population of more than 9 million.

In an early project with InterSystems HealthShare, the new organization securely aggregated and normalized patient data from more than 45 unique EMRs used by providers in California and Texas. The goal was to access the data from acute and ambulatory EMRs for use in new ways, without affecting those systems or clinician workflows.

A Scalable Platform for Rapid Innovation

When Providence decided to create a portal giving providers access to this unified patient record, the IT team again turned to HealthShare. The goal was to help affiliated hospitals and physicians in Texas and California share information to improve care coordination and outcomes. They needed access to all information, not just the acute data, for nine million patients, across 7,000 providers, practicing in 16 hospitals, 257 medical groups and physician networks, 9 community clinics, 9 skilled nursing facilities, plus imaging centers, and reference labs. The portal, ShareVue, now has over 10,000 registered users.

Analytics at Scale:
North Carolina Health Information Exchange Authority

Growth is good when it comes to a health information exchange — the more complete and accurate the patient information, the better for decision-making and care outcomes.

The North Carolina Health Information Exchange Authority (NC HealthConnex) has seen tremendous growth in the past two years. It has multiplied its connected participant base of hospitals, physician practices, long-term care facilities, local health departments, behavioral health providers, Federally Qualified Health Centers (FQHCs), Rural

"WITH HEALTHSHARE WE HAVE THIS GREAT, AGILE, DYNAMIC PLATFORM THAT WE CAN USE ANYWHERE. IT GIVES US THE DATA LAYER AND THE APPLICATION LAYER FOR BUILDING INNOVATIVE SOLUTIONS."

Theo Siagian, Executive Director of Health Information Exchange and Interoperability, Providence Saint Joseph Health.

Health Clinics (RHCs), and radiology centers by a factor of five.

**Information and Analytics for a
Deeper Understanding of Community Needs**

To leverage this growth, NC HealthConnex has undertaken a new collaboration creating a more modernized, seamless experience for health care providers. NC HealthConnex moved from its original solution to InterSystems HealthShare.

The result has been a more holistic view of each patient's health and care that reveals patterns far beyond an individual provider's or provider network's records. "Health care providers often just exchange data without deep analysis, missing the opportunity to improve patient matching and learn more about the health of our communities," said Grant Brooks, Vice President of SAS' US Government and Education Practice. "NC HealthConnex enables health providers to gain a more complete view of a patient and build care strategies centered around their needs."

Supporting Care, at Any Scale

HealthShare eliminates information barriers across the health and social care continuum, and allows care systems to make innovation and transformation possible. HealthShare creates a virtual, longitudinal, community-wide patient record as the foundation for coordinated e-health applications. Using HealthShare, healthcare organizations are improving communication and accuracy of health records, enhancing safety, reducing duplicative services, and using all the organization's data in analytics to identify opportunities for enhancing and optimizing care processes and outcomes.

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Grant Brooks, Vice President of US Government and Education Practice, SAS.

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Creative data technology