Summary

CUSTOMER

eHealth Exchange national health information network

CHALLENGE

Interconnect tens of thousands of distinct healthcare entities across the United States

SOLUTION

Fast, reliable, and secure data exchange nationwide

eHealth Exchange + InterSystems

Ensuring High Availability, Performance, Security, and Scalability for the Leading Nationwide Public Health Data Exchange

eHealth Exchange, the largest health information network in the United States, uses InterSystems solutions to power its massively scalable eHealth Exchange Hub data platform. InterSystems cloud-hosted managed service offerings help eHealth Exchange accelerate time-to-value and ensure outstanding performance and availability for its nationwide data-sharing network.
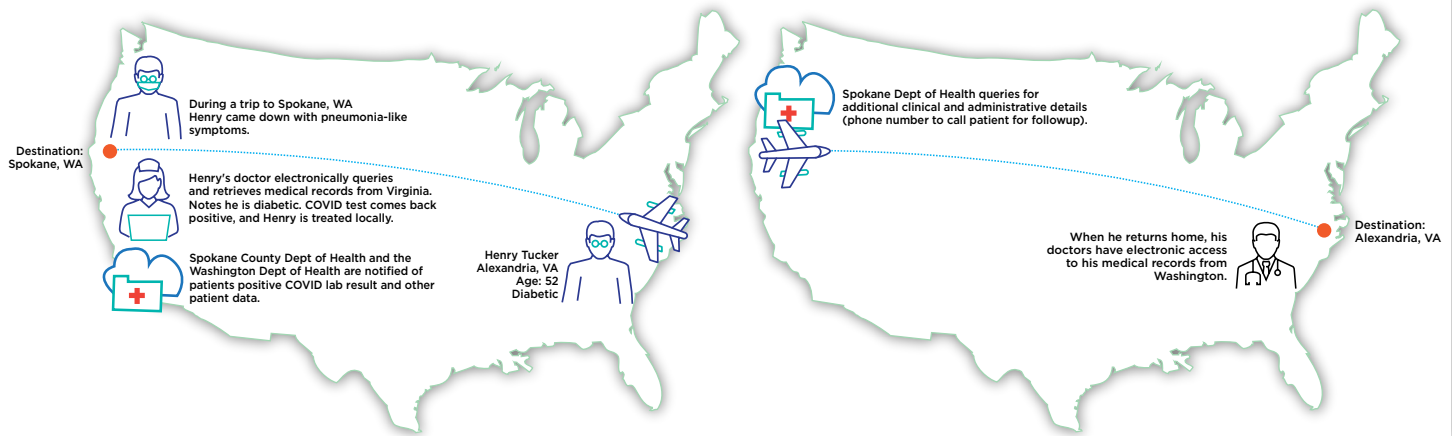
eHealth Exchange facilitates over **21 billion secure transactions** a year and is known as the network of choice for public health and the federal government. It provides connectivity for 60 regional and state health information exchanges (HIEs), 75% of U.S. hospitals and health systems, 6 TEFCA national health information networks, 70,000 medical groups, 85% of dialysis centers, payers in 34 states, as well as countless urgent care centers, surgery centers, and clinical laboratories. Public health agencies nationwide, as well as five federal agencies, rely on eHealth Exchange to share patient information with private-sector partners and among each other. eHealth Exchange also connects to 35+ national health information networks via Carequality.

eHealth Exchange is one of the inaugural electronic data-sharing networks in the country to be designated as a Qualified Health Information Network™ (QHIN™) under the **Trusted Exchange Framework and Common Agreement**™ (TEFCA™). Created under the 21st Century Cures Act, TEFCA establishes a universal governance,

policy, and technical foundation for nationwide interoperability. eHealth Exchange stands apart from other designated and approved-candidate QHINs as the only network that connects healthcare providers to five different federal agencies and supports the routing of electronic case reports (eCRs) to public health agencies in all 50 states.

Improving Patient Care and Public Health

eHealth Exchange connects federal agencies and non-federal healthcare organizations throughout the United States. The network dramatically improves patient care and public health by ensuring tens of thousands of organizations with disparate systems can share vital medical data—quickly, reliably, and securely.

During a trip to Spokane, WA Henry came down with pneumonia-like symptoms.

Destination: Spokane, WA

Henry's doctor electronically queries and retrieves medical records from Virginia. Notes he is diabetic. COVID test comes back positive, and Henry is treated locally.

Spokane County Dept of Health and the Washington Dept of Health are notified of patients positive COVID lab result and other patient data.

Henry Tucker Alexandria, VA Age: 52 Diabetic

Spokane Dept of Health queries for additional clinical and administrative details (phone number to call patient for followup).

When he returns home, his doctors have electronic access to his medical records from Washington.

Destination: Alexandria, VA

eHealth Exchange makes it easy for organizations with disparate systems to exchange healthcare information

A hub-and-spoke architecture lets eHealth Exchange participants exchange patient data via a single connection, a single set of APIs, and one trust agreement for ultimate convenience, ease-of-deployment, and economics.

Accelerating the Pace of Innovation with InterSystems

Since 2019, eHealth Exchange has relied on a number of InterSystems solutions including InterSystems IRIS for Health™ and InterSystems HealthShare™ to power eHealth Exchange Hub, the centerpiece of its electronic data-sharing network. InterSystems solutions help eHealth Exchange efficiently connect diverse networks and entities, and reliably exchange data at high scale with ultra-low latency.
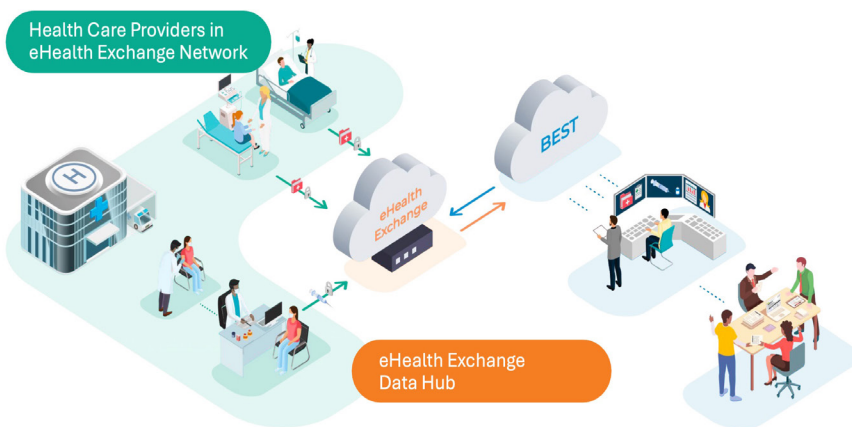
InterSystems cloud-based, fully managed solutions help eHealth Exchange accelerate time-to-market for new use cases, avoid upfront capital equipment expenditures, and tightly align ongoing expenses with evolving business requirements. The solutions make it easy for healthcare organizations to get connected and become TEFCA-compliant.

"With InterSystems we can support new data exchange use cases quickly and cost-effectively to help our members expand information sharing and keep pace with change," explains Jay Nakashima, President at eHealth Exchange. "InterSystems helps us reduce operations expense and complexity, and free up technical resources to focus on more strategic tasks."

InterSystems solutions support every healthcare data standard, including HL7® FHIR®. They help eHealth Exchange optimize system performance and availability, and lay the foundation for emerging FHIR projects. The eHealth Exchange Hub underpins a variety of innovative public health data exchange applications including a FHIR-based adverse events monitoring application, an automated electronic case reporting application, and a nationwide disaster preparedness and response application.

Automating Adverse Event Monitoring

eHealth Exchange Hub is the cornerstone of the U.S. FDA Biologics Effectiveness and Safety (BEST) exchange platform, one of the first national-scale, FHIR-based public health exchanges in the world. Live in 46 states, the platform handles millions of FHIR R4 transactions annually for the FDA's adverse events reporting program. The AI-based program automates inefficient manual processes and provides more robust monitoring of adverse events, while minimizing the burden on providers.

FDA BEST Exchange Platform powered by eHealth Exchange and InterSystems

The BEST platform supports two distinct adverse event use cases: a "push scenario" to intelligently detect and validate adverse event cases and report them to the FDA via eHealth Exchange; and a "pull scenario" to automatically gather patient data from provider EHR systems for validation purposes by the FDA.

Streamlining Electronic Case Reporting

eHealth Exchange participants can automatically send eCRs to appropriate local, state, and national public health agencies via eHealth Exchange's partnership with the Association of Public Health Laboratories (APHL), an eHealth Exchange participant. Many participants started leveraging the solution to report COVID-19 cases at the onset of the pandemic. Today, providers can automatically share over 80+reportable diseases via eHealth Exchange.

> **"WITH INTERSYSTEMS WE CAN SUPPORT NEW DATA EXCHANGE USE CASES QUICKLY AND COST-EFFECTIVELY TO HELP OUR MEMBERS EXPAND INFORMATION SHARING AND KEEP PACE WITH CHANGE.**
>
> **INTERSYSTEMS HELPS US REDUCE OPERATIONS EXPENSE AND COMPLEXITY, AND FREE UP TECHNICAL RESOURCES TO FOCUS ON STRATEGIC TASKS."**
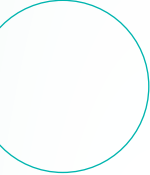>
> *Jay Nakashima, President, eHealth Exchange*

Empowering Clinicians at Disaster Sites
The Patient Unified Lookup System for Emergencies (PULSE) is a nationwide health IT disaster response platform deployed at the city, county, or state level to authenticate and empower volunteer clinicians at disaster sites. With an eHealth Exchange connection, authorized volunteers in makeshift "pop-up" clinics and elsewhere can use PULSE to retrieve patient medical records and make well-informed decisions.

For More Information

InterSystems helps eHealth Exchange provide fast, reliable, and secure data exchanges nationwide. The QHIN-designated network works tirelessly to advance interoperability through new use cases to serve the public good, enhance workflows, and reduce administrative burdens. With these efficiencies, eHealth Exchange is transforming care and improving outcomes.

eHealth Exchange is using InterSystems solutions to streamline information sharing for value-based care and to operationalize the HL7 Da Vinci Project, including a hub-and-spoke model for electronic prior authorization and clinical data exchange (CDEX).

To learn how InterSystems can help your organization streamline information flows and improve care visit **InterSystems.com**

InterSystems®
Creative data technology