Interoperability and more

Create the future of care

InterSystems®
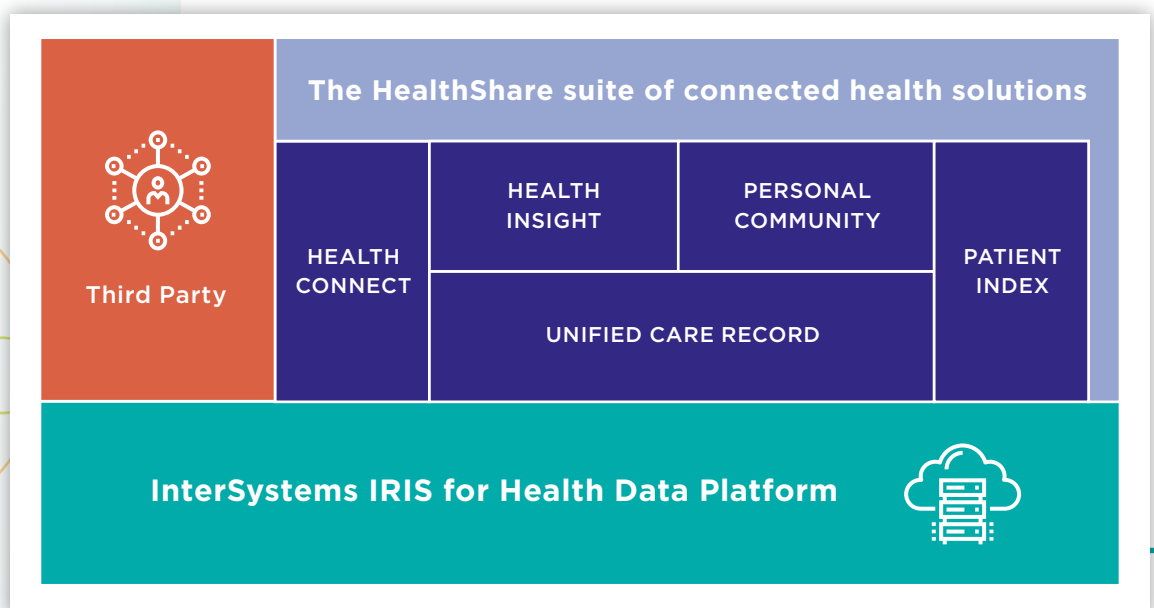**Creative data technology**

InterSystems HealthShare

InterSystems HealthShare® is the interoperable solution for different forms of files (eGA, ePA, eFA, ePD (CH), ELGA (A), medical files, research files...), regardless of whether they are administered by patients or doctors. It allows them to be implemented quickly and in a way that complies with standards.

The HealthShare product range comprises the following modules:

HealthShare has proven itself in numerous national and international projects. Users include Sint Maartens Kliniek, VieCuri, Regionaal Zorg Communicatie Centrum, GGZ Eindhoven, Sana Kliniken AG, Universitätsklinikum Erlangen, Hôpital Ambroise Paré, Hôpital Erasme, Grand Hôpital de Charleroi (GHDC) and Centre hospitalier universitaire vaudois (CHUV).
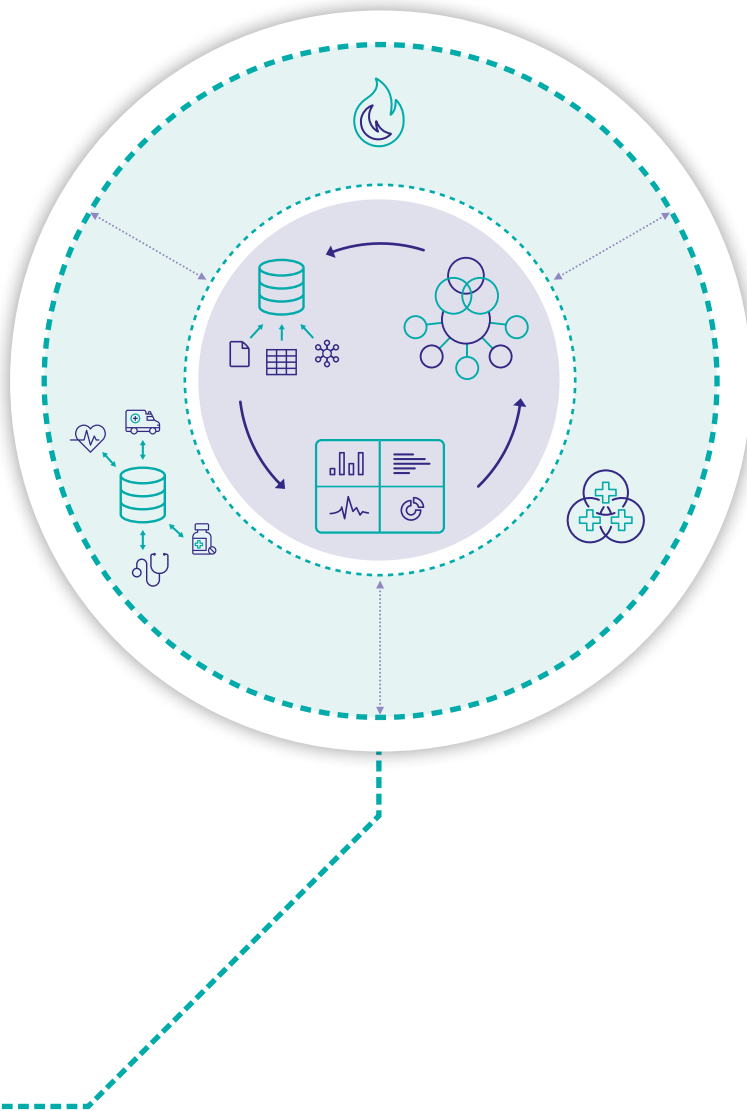
HealthShare enables service providers, sponsors, and patients to benefit equally from improved healthcare.

Third Party	The HealthShare suite of connected health solutions			
	HEALTH CONNECT	HEALTH INSIGHT	PERSONAL COMMUNITY	PATIENT INDEX
		UNIFIED CARE RECORD		
InterSystems IRIS for Health Data Platform				

InterSystems IRIS for Health

InterSystems IRIS for Health™ was specially developed for the healthcare industry. IRIS for Health provides all the functionality required to develop modern, real-time, data-driven solutions in the healthcare industry quickly. The InterSystems IRIS for Health data platform is available on the three largest cloud providers (AWS, Google Cloud, and Microsoft Azure). You can try out the Community Edition there free of charge. The IRIS for Health platform is the technical basis for InterSystems Healthcare solutions.

HealthShare Health Connect

High Availability, High Performance Integration Engine

InterSystems HealthShare Health Connect is an integration engine that delivers high-volume transaction support, process management, and monitoring to support mission critical applications.

Health Connect delivers:

- Intuitive HL7® message transformation, routing, durable process orchestration, and workflow

- Support for high transaction volumes between systems that scales with the most demanding integration tasks

- A simple bridge from legacy protocols to new standards such as HL7 FHIR®

Reliability and Management

The Health Connect built-in data repository stores every message moving through integrated systems. The repository enables guaranteed message delivery and provides a complete audit trail of all messages for improved troubleshooting. InterSystems also delivers several options for high availability (HA) and disaster recovery, including clustering, virtualization HA, and an elegant, easy-to-implement technology for database mirroring.

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Mission critical capabilities include:

- Mirroring with fast failover recovery, often in 30 seconds or less, critical for an always-on business.

- Visual diagnostics and auditing. Industry-leading message trace capabilities, a powerful test harness, and robust auditing facilitate the creation, debugging, and support of all your interfaces.

- Event detection, alerting, and monitoring to ensure that information continues to flow even when source systems pause or fail. Messages are never lost, and an interrupted business process can always restart from the point of interruption.

- Long-running, guaranteed business processes and coordinated human workflow.

High Performance

At the heart of Health Connect is a high performance, multi-model data engine that seamlessly handles multiple forms of data at high speed. Health Connect easily scales from serving small clinics to handling the transaction volumes of the largest and most complex healthcare delivery systems in the world.

Interoperability – Standard by Design

Healthcare organizations worldwide use InterSystems products for interoperability and improved workflow across the care continuum. Our support for global and national standards and certifications is one reason for this success. As global healthcare information protocols and standards evolve or new ones emerge, InterSystems keeps pace with these changes so you can take advantage of them easily.

In addition to FHIR STU3 and DSTU2, Health Connect implements many IHE standards, and supports HL7 Version 2, HL7 Version 3, CDA® and CCD®, C-CDA®, DICOM, X12, ADHA (Australia), ASTM, DMP (France), EDIFACT, ITK (United Kingdom), and xDT (Germany).

You can use Health Connect's pre-built data transformations to convert between most standard healthcare data formats. These transformations can be customized to address special cases, such as proprietary or legacy formats.

The depth of Health Connect's standards support, and its ability to translate between health data representations — for example HL7 V2 and FHIR, or a non-standard format and FHIR — gives you unmatched interoperability power and flexibility.

HEALTH CONNECT INCLUDES:

- Concurrent support for STU3, the latest FHIR version, and DSTU2, the previous version

- Fast access to FHIR recources with pre-caching, and stabile recource identifiers

- Enhanced FHIR API usability

- Advanced development tools for mapping between FHIR and legacy data formats

InterSystems API Manager

InterSystems API Manager handles the entire application programming interface (API) life cycle. From planning and design, implementation and testing, deployment and operation, to versioning and retirement, InterSystems API Manager enables you to deliver business value, including monetization of API usage, faster while you focus on your core capabilities.

Key features include:

- Publishing: designed with the embedded administrator dashboard, a command line interface (CLI) or REST APIs. All of your APIs are discoverable.

- Developer Portal: APIs can be listed on a customizable portal/ web marketplace which allows developers to sign-up, explore and subscribe to APIs. The system supports self-signup and multi-tenant environments.

- Traffic Control: allows administrators to manage, throttle, and restrict inbound and outbound API traffic.

- Analytics & Security: API publishers can monitor APIs and detect unusual activity. InterSystems API Manager supports TLS and SSL at the transport level, OAuth2 at the protocol level, and role based access control.

FHIR Capabilities

FHIR is the future of healthcare interoperability, and InterSystems is actively engaged in creating that future. Employee contributions at the HL7 board level, standards-committee participation, and investment in internal resources keeps InterSystems on the forefront of FHIR implementation.

Health Connect provides all the technology interface engineers need to handle FHIR requests as easily as they now work with HL7 V2 and integration flows. Health Connect includes a FHIR client, a FHIR message model, and translation between FHIR and other health information interchange standards, such as HL7 V2 and C-CDA.

Health Connect receives or sends FHIR resources via the FHIR RESTful API, in JSON or XML formats. This allows applications based on the latest technology to use FHIR data – new or mapped from legacy systems.

Leverage FHIR to Integrate with Legacy Systems

Today, thousands of integrations using HL7 V2, HL7 CDA, and other standards form the backbone of interoperability and workflows in healthcare. Health Connect is your bridge between these formats and the FHIR standard, transforming their data into a FHIR representation. Examples include:
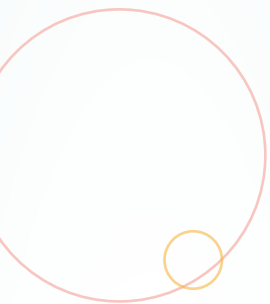
- Decomposing CDA document data into FHIR resources

- Converting HL7 V2 messages into a FHIR representation for consumption by a decision support system

- Transforming a FHIR message into an HL7 V2 message, such as an order, to send to a legacy system

New applications can access legacy data, and represent this data as FHIR messages, to expand their use for value-based care, quality improvement, and research.

Higher Productivity for Interface Engineers

Healthcare organizations may manage hundreds of different specialized applications, systems, and devices that must work together efficiently, securely, and without interruption. Health Connect provides features that make it easier for interface engineers to create, manage, and troubleshoot such systems, including:

- Drag-and-drop HL7 schema editing, data-mapping, business rule creation, and workflows

- Source control for HL7 schemas, including custom schemas

- Drag-and-drop managed file transfers using popular data storage services such as DropBox, Box, and kiteworks, or the dropping of files into other applications for processing

- DevOps-ready containerized deployment in public or private clouds

- A Java Business Host that runs Java apps as efficiently as native components within integrations and workflows

- Unit testing of routing rules and data transformations

- Smart search that reveals all locations in a production where a given component is used, and routes that a message can take

- Interface converters for legacy interface engines, such as eGate and Cloverleaf

Security

A flexible, adaptable security model with enterprise-wide provisioning capabilities makes it easy to protect data both "at rest" and "in motion" across even the largest deployments, while minimizing the burden on application performance. Authenticate and authorize users via passwords, OAuth, two-factor authentication, and other means.

Customer Support and Education

When you select Health Connect, you get more than technology. You also get InterSystems acclaimed customer support and extensive educational opportunities. KLAS consistently rates Health Connect customer satisfaction among the best in the industry.

**KLAS
CATEGORY
LEADER**

INTEROPERABILITY
PLATFORMS

2020

KLAS RESEARCH RANKS INTERSYSTEMS AS THE CATEGORY LEADER FOR INTEROPERABILITY PLATFORMS

InterSystems platform received a remarkable 91/100 approval rating in the 2020 Best in KLAS Global Software Services report.

"We got up and running fast with health connect. development time is... maybe half the time needed with our previous interface engine."

Randy Paruch, Director of Information Systems, Holland Hospital

**LEARN MORE ABOUT
HEALTHSHARE HEALTH
CONNECT AND ALL OF
THE PRODUCTS WITHIN
THE HEALTHSHARE FAMILY
AT INTERSYSTEMS.COM/
HEALTHSHARE.**

HealthShare Unified Care Record

The Foundation for Collaborative Care, Innovation, and Transformation

The health and wellness ecosystem is diverse, with care delivered across a wide range of organizations, geographies, and disciplines. Similarly, the information this ecosystem creates and consumes is diverse, dispersed, and dynamic. A unified care record providing a current and complete view of all the data – clinical, social, and financial – is key to improving patient care and fostering innovation.

Breaking Down the Boundaries of Care

InterSystems HealthShare Unified Care Record helps providers, payers, consumers, social care and wellness services, researchers, and solution developers overcome the challenges of decentralized data by creating a shared, comprehensive, and unified care record. HealthShare delivers relevant data from the unified record into clinical and business workflows, communicates across your application and business ecosystem, and facilitates timely action through real-time notifications.

HealthShare data is aggregated, normalized and deduplicated so all of it, regardless of source, is stored in a single, consistent format. This data can power analytics applications, HL7 FHIR® applications (including FHIR R4), and artificial intelligence for knowledge discovery. Because it is updated in near real-time, you can be confident you're always working with the latest information.

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HealthShare extends and enhances the software investments you've already made. And it is a strong foundation for pursuing new business relationships and integrated care models with confidence. Additional use cases include:

- Connecting to and integrating data from national health data exchange networks, including CommonWell and Carequality

- Coordinating and optimizing team-based community care delivery for individuals and populations

- Ensuring continuity as you modernize your IT infrastructure by archiving legacy clinical data in your unified care record

- Seeing performance trends in time to make the course corrections essential for success in value-based care

- Investing limited resources cost effectively using business intelligence to identify population cohorts at highest risk

- Uniting claims and clinical data with information about social determinants of health to optimize care management and population health initiatives

- Innovation by redesigning processes, leveraging data for research, or serving up data for FHIR-based applications, including FHIR R4

Key Features

Unified Care Record

HealthShare includes a comprehensive and extensible health data model and data normalization technology for unifying all information relevant to each person, regardless of its source or format. This includes patient-generated data, clinical content, claims, and social determinants of health. In many cases, the unified care record is integrated directly into the electronic medical record systems used by clinicians.
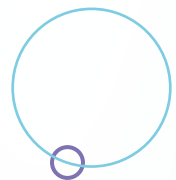
Clinical Viewer

The browser-based HealthShare Clinical Viewer is designed for a longitudinal representation of care, and mobile care delivery. Even without access to an EMR, clinicians, care managers, care coordinators, and other members of the care team can use the Clinical Viewer to get the information they need. Upon a patient lookup, quick summaries bring the most relevant information together on one screen, and a single click brings the clinician to details on history, conditions, allergies, medications, labs, vital signs, social determinants, and more.

Clinical Viewer presents just the information you need from the Unified Care Record. Wherever you need it.

HealthShare "Clinigraphics" in the Clinical Viewer provide condition summaries that display relevant labs, vitals, medications, and related conditions all in one place to enhance the decision-making process.

Managed Connections

HealthShare Managed Connections[1] is available for customers who do not want to purchase, operate, secure, and maintain the system infrastructure themselves. It serves as a one-stop hub for connectivity and data exchange with many organizations and different healthcare information systems, including national federated networks such as Commonwell and Carequality.

And it provides safe, secure connections to other data providers as they become partners in HealthShare Managed Connections. InterSystems also offers its customers on-demand connections to organizations not connected to the HealthShare Managed Connections hub.

Single-Sign On

To minimize the cognitive burden on clinicians, HealthShare includes support for single-sign on between an EMR and the Clinical Viewer. With minimal configuration, administrators can add a link in the EMR which takes clinicians to the Clinical Viewer without requiring a second log in. This saves clinicians the time and trouble of having to remember another set of credentials.

Messaging and Event Notifications

HealthShare supports coordinated care across the entire care team, including consumers, with secure messaging and automated notifications. Care managers can subscribe to alerts on their members for events such as Emergency Department visits, abnormal lab results, gaps in care, and missed appointments. These notifications help avoid costly adverse events and align care teams and patients around desired outcomes.

Social Determinants of Health

HealthShare makes it easier to communicate a complete picture of the individual across the health and social care community. It can store, analyze, and share non-clinical factors affecting the overall health of a patient, such as living situation, healthy food availability, or access to transportation.

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[1] HealthShare Managed Connections is available in the United States only

Advanced FHIR Capabilities

HealthShare continues our longstanding healthcare interoperability leadership with concurrent support for FHIR R4, the latest version, and the previous version, STU3. Our FHIR support includes:

- Representing all of your data as FHIR resources, and using our FHIR Server to simplify data sharing with devices and applications

- Mapping between older data formats and FHIR to help you increase the value of legacy systems

- A graphical user interface that allows you to map your data model customizations to FHIR extensions

In addition to FHIR, HealthShare supports all the major national and international interoperability standards, including HL7 V2 and multiple CDA formats, that are used by your data sources.

Performance and Scale

HealthShare has become the leading solution for aggregating and sharing health information at any scale because it delivers on its promises. Data quality, system management, analytics, and operational reporting tools help you track and manage usage across facilities.

Management

HealthShare's Management Portal helps you monitor business processes and keep the system running smoothly. The Management Portal includes dashboards for operations and data quality, as well as tools for managing and configuring patient consent, data filtering, and more.

More than a Service

HealthShare Unified Care Record is the foundation of the HealthShare suite of connected health solutions. Delivered as a managed service offering, it can operate as the data aggregator for machine learning or your own solutions built on InterSystems IRIS for Health. It can be combined with HealthShare Health Insight, HealthShare Patient Index, HealthShare Provider Directory, or HealthShare Personal Community to advance your digital transformation strategy.

InterSystems Managed Services

InterSystems designs, operates, and maintains Managed Services in independent environments for each client. We eliminate the burden of purchasing and managing the infrastructure required for highly available solutions. All Managed Services include:

- Selected InterSystems product functionality

- All data center resources, including hardware and network capacity, needed to run the solution

- Ongoing maintenance of all solution components

- Customer-specific configuration and implementation services to bring the solution live, including building connections

- 24/7 support for the solution including real-time monitoring

- Seamless upgrades

- Sophisticated security and data protection programs
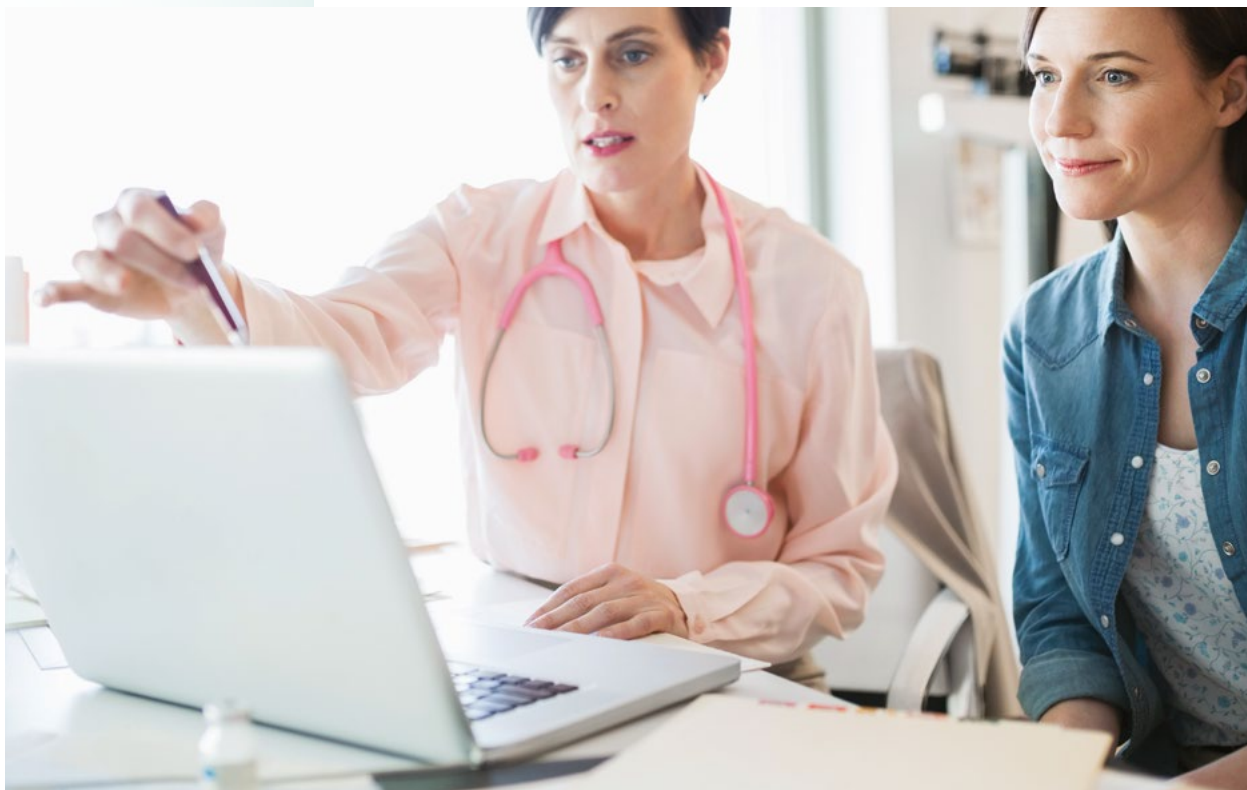
Customer Support and Education

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> "Patient data doesn't have to be centered in the EPD; all you need to do is build connections. That's why we work with Health Connect from InterSystems"
>
> *Mark van Houdenhoven, Sint Maartenskliniek Nijmegen*

LEARN MORE ABOUT HEALTHSHARE UNIFIED CARE RECORD AND ALL OF THE PRODUCTS WITHIN THE HEALTHSHARE FAMILY AT INTERSYSTEMS.COM/ HEALTHSHARE.

HealthShare Health Insight

Unlock the Value of Unified Health Information

Healthcare runs on data – for diagnosis, treatment, wellness, performance improvement, payment, and knowledge discovery. Healthcare data is diverse, dispersed, and frequently changing, and it is growing at a rate that far exceeds our ability to consume it. To make the most of that data – for timely insights, informative lookbacks, and predictive modeling – you need an analytics platform that can leverage the power of all that data in a unified care record. That is InterSystems HealthShare Health Insight.

Health Insight delivers information for better decisions based on the aggregated, clean data in HealthShare's community-wide, unified care record. HealthShare aggregates and continuously updates this care record from electronic medical record (EMR) systems, claims systems, health information networks, social care, and other sources.

Health Insight is unique in delivering actionable intelligence straight to existing clinical and care management workflows. It enables you to more effectively care for individuals while also providing comprehensive insights into the populations formed by those individuals.

Use cases for Health Insight include:

- Using clinical dashboards to better manage at-risk members and deliver better care coordination

- Closing gaps in care with event-based and time-based clinical notifications

- Automatically identifying patients for community-wide care management, registries, and population health management

- Data aggregation, normalization, and cleansing to feed InterSystems or third-party analytics, decision support, and machine learning applications

- Assessing data quality

- Monitoring and assessing resource utilization such as emergency services or a hospital bed census

Key Features

Safe, coordinated care requires insight delivered in time to identify opportunities for action and enable interventions. Health Insight makes this possible with automated updates as new data arrives in the unified care record. This kind of closed loop management can reduce readmissions, improve sepsis rates and lower a health plan's per member per month costs for chronic disease populations. Health Insight makes this possible with automated event logic and notifications configured for the issues that matter to you and your organization. It enables you to properly manage those who are sick, and encourage healthy behaviors for those who are not.

Analytics Infrastructure

Health Insight offers a robust analytics data model and infrastructure to add meaningful health analytics to your current workflows. A customization framework lets you extend the model to include other sources and data types, and developers have SQL access to this data for complete freedom in how it is used.

The comprehensive health analytics data model is automatically populated and updated in near real-time via InterSystems HealthShare Unified Care Record. The data model and analytics can incorporate social determinants of health, care plans, and other text-based information such as radiology or pathology reports, in addition to structured data.

Decision Support Beyond the EMR

Traditional clinical decision support provides guidance based on the data in your EMR. Health Insight monitors your entire health and care ecosystem, across multiple EHRs and other data sources, to avoid costly adverse events and align care teams around desired outcomes for individuals and populations. Clinicians and care managers can subscribe to Health Insight clinical event notifications on population members of interest for events such as Emergency Department admissions or abnormal lab results.

In addition to event-based notifications, Health Insight uses analytics based on time periods or missing events to trigger notifications about possible gaps in care. Changes in calculated risk scores can also trigger notifications to clinicians and patients.

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Dynamic Cohorts

With a single lab result, missed appointment, or emergency room visit, an individual can move from one population cohort to another. Health Insight automates cohort assignments and dynamically updates cohort membership so you always know where to focus limited time and resources.

Dashboards

Health Insight provides tools to create fully interactive dashboards, reports, statistical and text analyses, and business graphics with high-level summaries and detailed drill downs. A starter set of dashboards and reports provides immediate benefits, and their code serves as examples to simplify the process of creating your own. One available report helps administrators monitor the flow of data from the unified care record into Health Insight by comparing the number of encounters, patients, and unique patients throughout the system.

Out-of-the-Box Dashboard Solutions

The Emergency Department (ED) Usage Report is the first of several turnkey solutions to be included with Health Insight. It identifies high utilizers of the emergency department in near real time, enabling staff to shift care to other appropriate, less expensive venues. Users can easily view the unified care record for complete background on the patient's health status and history. Hospitals and health systems can make configuration changes to the ED Usage Report to meet their specific needs.

Data Management Application Programming Interfaces (APIs)

The Health Insight toolset lets you develop analytics applications using the data in HealthShare Unified Care Record. It also includes a library of APIs for populating the Health Insight data model from other data sources. As with all HealthShare solutions, Health Insight understands and supports the relevant healthcare interoperability standards.

Data Provisioning

In addition to its own rich analytics environment, Health Insight can provide data services to the rest of your analytics portfolio. These include conditioning, harmonization, normalization, and transport services to feed current, comprehensive and credible data to other applications.

Data Provenance for Trustworthy Data

Health Insight tracks and exposes the source of the data it contains, including information such as sending facility. This helps ensure that data provenance is known, can be vetted, and can be trusted by the people using the data for decision-making.

When relevant patient data changes in the unified care record, the changes are propagated to Health Insight. Health Insight's Data Consistency Check tool monitors the flow between its data and that in the unified care record, identifies mismatches, and presents data consistency trends over time. Health Insight users can drill down into the data behind the trends to explore gaps and support data cleaning or corrections, ensuring that decision makers can always trust that Health Insight is working with the latest information.

More than a Service

Health Insight is part of the HealthShare suite of connected health solutions, and can be delivered as a managed service. Combine Health Insight with HealthShare Unified Care Record, HealthShare Personal Community, HealthShare Provider Directory, or HealthShare Patient Index to advance your digital transformation strategy.

Customer Support and Education

When you select Health Insight, you get more than technology. You also get our acclaimed customer support and extensive educational opportunities. Search for Health Insight education resources at Learning.InterSystems.com. Learn more about Health Insight and all of the products within the HealthShare suite at InterSystems.com/HealthShare.

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"Health Insight allows us to provide highly customized alerts and specific customized paneling for our clients, and we see this as something that is going to be really huge for us and beneficial to our participants as a partner in their success. The ability to refine and focus alerting to specific patients will advance services and resource allocation across the care continuum."

Nick VanDuyne, Executive Director, NY Care information Gateway

HealthShare Personal Community

A Comprehensive, Multi-EMR, Patient Portal

Unlike electronic medical record (EMR)-specific patient portals, InterSystems HealthShare Personal Community is central to a community-wide patient engagement strategy. For its data source, Personal Community relies on InterSystems HealthShare Unified Care Record to aggregate information from multiple EMRs, wearables, claims, and other sources into a single, unified care record. This is the same care record used by clinicians, but with a user interface designed for patients.

Regardless of how many data sources you have, patients and their designees can access their health information securely with a single, simple user interface on their device of choice.

Use cases for Personal Community include:

- Meeting patient expectations for consumer-level access to health information

- Engaging patients in their own or a family member's care to improve patient satisfaction and awareness

- Achieving and demonstrating relevant Meaningful Use criteria

- Unifying multiple patient portals into one for a better patient experience (after a merger or acquisition, for example, or when patients are seen by several non-networked providers)

- Improving workflow for staff via patient self-service options

- Empowering patients and families with all the information they need for better care decisions and outcomes

The Value of Engagement

Research shows that engaged and activated patients have higher levels of satisfaction and use fewer resources. Patients who understand their conditions and treatment options make better healthcare decisions and patient record review leads to safer care and improved record quality. Patients and their designees can use any web browser, on any device, to:

- Review, download, and manage care records

- Upload data from home or personal medical devices

- Schedule appointments

- Complete forms for the care team

- Receive alerts and notifications

- Learn about conditions and adopting healthier behaviors

- Securely interact with care providers

- Link to external systems to view and pay bills

Redefining the Patient Portal to Transform Healthcare in Your Community

Shifting business models, industry consolidation, and constrained resources make a fully engaged patient population essential. Personal Community offers patients and their designees an engaging user interface with a real-time view of all the information available across any number of data providers. The look-and-feel is configurable to support your branding and market identity. You determine what data to present to patients and in what format. You select the appropriate enrollment model for your organization.

Key Features

Personal Community is easy to configure, manage, and secure, and includes features that help to engage patients and make care delivery more efficient.

User Interface

A simple user interface enhances usability on any device. This UI accesses the same unified record used by their care team. Care records can be easily viewed, downloaded, and printed by patients and their designees.

Management Workbench

A workbench, overview dashboard, and robust reporting simplify Personal Community management, including enrollment tracking, designee assignment, adoption metrics, and customization.

Patient-Contributed Information

The Personal Community My Forms section gives users a single location for form access, completion, and tracking. Data from completed forms and uploaded documents, such as advance directives, can be included in the patient's unified care record for use by care team members and in analytics.

Data from home devices such as pulsometers, scales, and blood oxygen readers can also flow into the unified care record.

Alerts and Notifications

Personal Community delivers alerts and notifications to the patient's inbox, or to patients and their designees directly, based on data and analytics in the unified care record. With multiple systems tied in to Personal Community, it becomes a single source for alerts and other notifications, helping to reduce the burden and hazards of information overload.

Language Support

Personal Community provides out-of-the-box interface localization and communication in English, French, German, Italian, and Spanish. The product supports customer translations into most other languages, as well.

Security

Flexible, positive identification during setup makes enrollment more secure for patients and their designees. Enrollment may be handled at the point of care, initiated by a patient, or via an external application such as a registration system. Patients can assign family members or others on their care team as designees who can view their records.

Personal Community does not store data on the patient's device unless a file is downloaded by the patient.

Single-Sign On Identity Provider

Personal Community acts as a single-sign on identity provider, making it possible for users to leverage their existing Personal Community login to access third-party applications. For security purposes, the Personal Community identity provider relies on an internal whitelist of sites, and applications within those sites. A request for credential verification from any site or application not on the whitelist will be denied.

Application Programming Interfaces (APIs)

Personal Community APIs enable trusted external systems (such as an EMR) to interact with it while the user of the EMR or other application continues in their existing workflow. Functions available through APIs include:

- Enrolling patients

- Managing accounts

- Establishing proxy relationships

- Delivering secure messages

- Sending important notifications

Personalized Education Content

Adopters of Personal Community can add local news and events, links to community resources, and relevant patient education materials to the portal, creating a trusted information environment that enhances patient and community relationships with your organization.

More than a Service

Personal Community is part of the HealthShare suite of connected health solutions, and can be delivered as a managed service. Combine Personal Community with HealthShare Unified Care Record, HealthShare Health Insight, HealthShare Patient Index, or HealthShare Provider Directory to advance your digital transformation strategy.

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HealthShare Patient Index

One Patient One Unified Care Record

One patient, one record is the ideal, but it's difficult to achieve. Patients are mobile and may receive care from different organizations in multiple settings. Healthcare organizations use different electronic medical record (EMR) systems, and patient identifiers often vary among them. When healthcare organizations affiliate or merge, multiple identifiers and differences between information systems complicate the process of information consolidation. And duplicate or misidentified records can be an issue even within a single information system. All it takes is a simple clerical error to result in two different, incomplete records for the same patient.

HealthShare Patient Index is an enterprise master patient index (EMPI) product that provides an automated and easily integrated solution for creating a "single source of truth" for patient identity and demographic information. Patient Index is pre-configured to work with InterSystems HealthShare Unified Care Record to accelerate the merging of multi-source patient information into a single, accurate, unified care record.

InterSystems®
HealthShare

Patient Index use cases include:

- Automatically linking large volumes of records in accordance with your business rules to create a unified care record within a healthcare enterprise, across a health information network, or embedded within another solution

- Recognizing the creation of duplicate records in real time and triggering corrective actions

Adding Safety and Accuracy to Shared Health Information

A sophisticated matching engine using deterministic and probabilistic logic sits at the center of Patient Index. This set of software algorithms and services provides record matching and automated tuning tools to adjust the algorithms based on your data set.

Key Features

Data Quality Framework

Data Quality Framework (DQF) is an analysis utility that makes creation of the EMPI faster and more accurate, and the EMPI itself easier to maintain. Using DQF you can determine the cleanliness, or not, of data coming from source systems. With this knowledge you can work with source system managers to improve data quality, or establish routines to clean the data before it reaches your EMPI. DQF includes dashboards that display data-source trends over time and other intelligence, making it easier to catch potential issues early and prevent bad data from entering your EMPI.

Dashboards

Patient Index includes usage and detail dashboards that help you achieve the highest levels of record-matching accuracy. Overview dashboards include information like the number of logins by user and the number of imported patient records. The Linkages detail dashboard provides insight on how records are or are not linking across particular facilities or the entire environment. The Record Summary dashboard tracks usage, including counts and trends of adds, updates, and merges against records over a given time.

Batch Import

The Batch Import utility is used to bulk-load patient data into the system. This can be useful when on-boarding a new data source, or when migrating a data source from an existing system. Batch Import provides APIs to ingest demographic data into Patient Index and export data from the patient registry.

Whole Record Viewer

To facilitate manual review and validation, the Whole Record Viewer lets you efficiently compare and validate patient identity and demographics across all source records on a single screen.

Composite Record

Patient Index automatically determines which records refer to the same individual and creates a single composite demographic record for each patient. When there are slight differences between data sources, the system uses configurable rules to choose the most trusted source. Data that is out of sync or out of date can be highlighted by the system for manual review.

Workflow Integration

Patient Index includes easy-to-use and configurable workflows to manage those cases where manual intervention is required. It also automatically notifies other systems and facilities about important changes to patient information.

Record Integrity and Configuration Evaluator

These utilities help you ensure optimal settings and operation of your EMPI before go-live and after. The utilities run on the live system, and do not need service interruptions to diagnose and repair system configuration or data integrity issues, if they exist.

Standards-Based APIs for Connectivity

Built-in secure and robust support for standards, including HL7 FHIR®, HL7®v2, IHE (PIX, PDQ, PDQm, XCPD), and Web Services, enables you to easily integrate Patient Index with the other applications in your enterprise.

Customized Rules

A built-in rules engine allows you to create and implement site-specific logic, such as customized patient matching and alerting.

Auditing and Security

A secure, role-based portal manages access to data and utilities. All record updates are audited, as are all decisions to link or unlink patient records.

More than a Service

Patient Index is part of the HealthShare suite of connected health solutions, and can be delivered as a managed service. Combine Patient Index with HealthShare Unified Care Record, HealthShare Health Insight, HealthShare Provider Directory, or HealthShare Personal Community to advance your digital transformation strategy.

Customer Support and Education

When you select Patient Index, you get more than technology. You also get our acclaimed customer support and extensive educational opportunities. Search for Patient Index education resources at Learning.InterSystems.com. Learn more about Personal Community and all of the products within the HealthShare suite at InterSystems.com/HealthShare.

LEARN MORE ABOUT HEALTHSHARE PATIENT INDEX AND ALL OF THE PRODUCTS WITHIN THE HEALTHSHARE FAMILY AT INTERSYSTEMS.COM/ HEALTHSHARE.

InterSystems IRIS for Health

The Fastest Path to Value for Healthcare Data Solutions

Data is at the heart of the digital transformation sweeping healthcare. Radical change requires a new foundation to handle the massive data demands of modern healthcare.

Time to market counts as you create the next therapeutic break-throughs, genomic insights, and intelligent clinical workflows. You need to deliver them now.
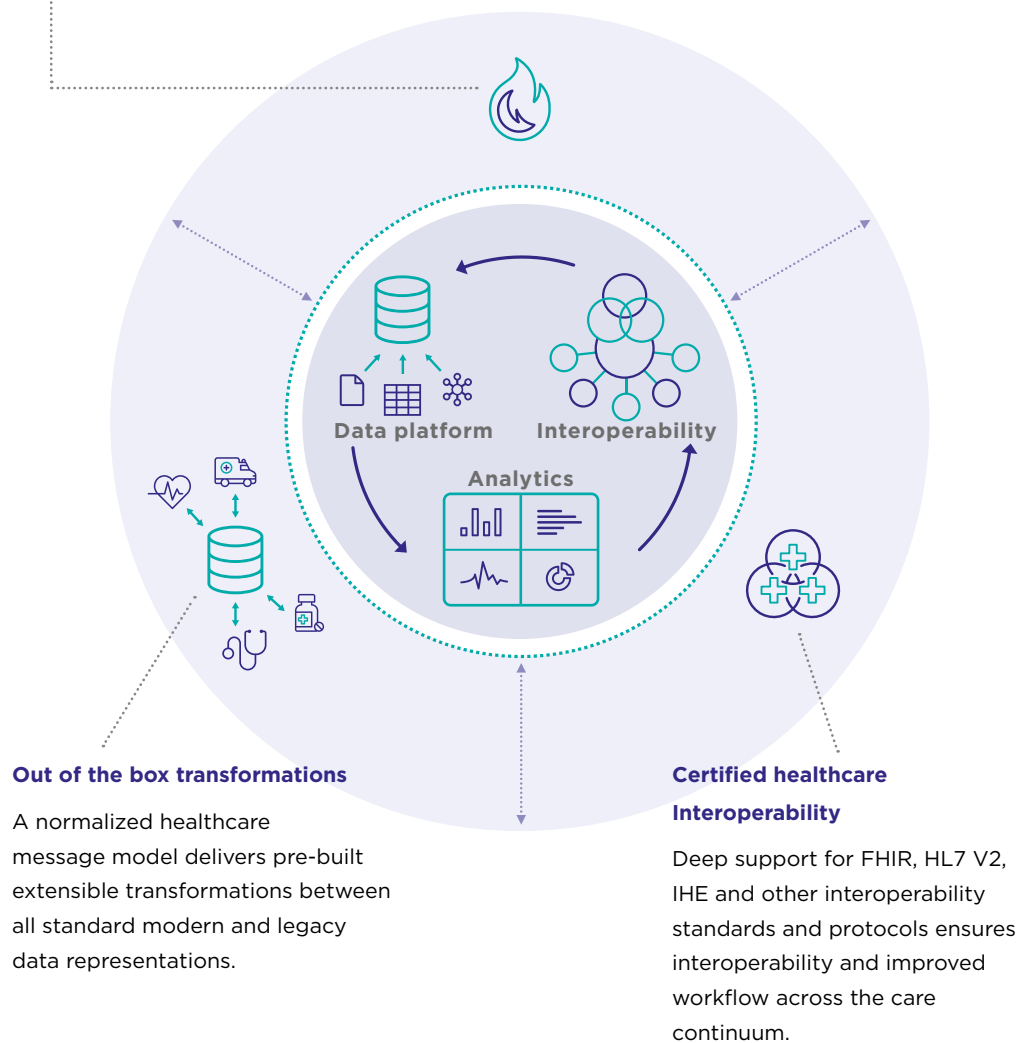
That's why we've extended the power of our InterSystems IRIS Data Platform® to address the unique characteristics of healthcare infor-mation. InterSystems IRIS for Health™ is the world's first and only data platform engineered specifically for the rapid development of healthcare applications to manage the world's most critical data.

No data management vendor has a greater commitment to healthcare or more relevant experience than InterSystems. Globally, more than one billion health records are managed by solutions built on our technology. Laboratories running on InterSystems process nearly half the specimens in the U.S. every day. The most sophisticated private and government providers depend upon devices, records, and IT powered by InterSystems.

InterSystems™
IRIS Health

InterSystems IRIS for Health

FHIR-based solution development

An extensible FHIR repository and comprehensive REST APIs provide the foundation of modern healthcare application development.

Data platform

Interoperability

Analytics

Out of the box transformations

A normalized healthcare message model delivers pre-built extensible transformations between all standard modern and legacy data representations.

Certified healthcare Interoperability

Deep support for FHIR, HL7 V2, IHE and other interoperability standards and protocols ensures interoperability and improved workflow across the care continuum.

InterSystems IRIS for Health provides everything you need to develop data-rich healthcare applications quickly.

Healthcare application development, quickly and intelligently.

FROM WHITEBOARD TO PRODUCTION, FAST.

InterSystems IRIS for Health provides all of the capabilities for building complex, mission-critical, data-intensive applications. It's a comprehensive platform spanning data management, interoperability, transaction processing and analytics, built to accelerate time to value.

BUILT FOR BIG.

The volume and variety of healthcare information is stunningly large and growing exponentially. InterSystems IRIS for Health efficiently enables applications to scale from scratch, both vertically and horizontally to cost-effectively handle any scale workload, data, and users.

ACCELERATING CONNECTIONS.

Truly connected health requires interchangeable information flow across all sources, modern and legacy. Since InterSystems IRIS for Health delivers native support for FHIR and every major global healthcare messaging standard, applications can rapidly ingest, normalize, and share information.

DEEPER INTELLIGENCE.

Artificial intelligence and machine learning succeed or fail on the quality of the underlying data. InterSystems IRIS for Health delivers advanced data prep capabilities to create transformative healthcare models and optimize the effectiveness of learning solutions.

RESPONSIVE INSIGHTS.

Clinical decision support, bench-to-bedside medicine, and increasing consumer expectations all demand answers in real time. InterSystems IRIS for Health excels at hybrid transactional/analytical processing (HTAP), powering solutions that respond to these accelerating demands.

STANDARDS SUPPORTED:

United States: ASTM, CDA® and CCD®, CCDA, DICOM, EDI – ASC X12, HL7 V2 and 3, HL7 FHIR, IHE , NCPDP

International: EDIFACT, ITK - England, DMP - France, HPRIM - France, SS-MIX – Japan, ADHA – Australia, xDT - Germany

Tested Interoperability in the Healthcare Industry

Our HealthShare and IRIS for Health products support all common standards and profiles (IHE, HL7, FHIR, DICOM, and so on). A universal data model processes all data types in a format that enables standards such as HL7 V2/V3 to be converted into HL7 FHIR or HL7 FHIR into HL7 CDA 2.0 easily.

Data can be saved as FHIR resources and the comprehensive REST APIs grant SMART on FHIR and other FHIR applications granular access to this data. Many InterSystems employees are involved with IHE and HL7 committees. They play an active role in shaping the HL7 FHIR standard and its usage in IHE profiles.

InterSystems®
HealthShare

InterSystems™
IRIS Health

InterSystems®
Creative data technology