

# Reimagining Care

InterSystems TrakCare Unified Healthcare Information System





**“SUCCESS REQUIRED  
A TRANSFORMATION  
IN OUR PROCESSES.  
TRAKCARE  
ACCELERATED IT.”**

**Elio Soldano, CIO,  
Azienda ULSS 7  
Pedemontana (Thiene  
and Bassano Districts)**

## CARE TRANSFORMATION

### If You Could Reimagine Care

What would you do to improve the care experience for patients, improve the workplace for clinicians, and create a sustainable future for your organization? Italy's national health service had the opportunity to ask and answer these questions in planning for a new hospital in the town of Santorso. The answers required a transformation from the ground up.

### TrakCare Supports More Patient-Centric Care

Supported by the information and workflow capabilities of InterSystems TrakCare®, clinical care and business processes were transformed into a more patient-centric model:

- Patients are physically at the center of care. They are assigned to multidisciplinary wards based on the intensity and frequency of care required, rather than on its specific type.
- Patients are virtually at the center of care. TrakCare consolidates all clinical, administrative, and financial information for each patient into a single record. Every member of the care team can access the information they need. A native mobile-enabled user interface optimizes the user experience wherever care is delivered.
- TrakCare's complete patient record, medication management, and decision support capabilities enable a more uniform standard of care for each level of care intensity.
- Enhanced workflows and comprehensive information from TrakCare improve hospital processes. For example, greater flexibility in bed allocation and real-time bed availability information have led to higher hospital occupancy rates.
- Clinicians feel more in control and confident about their care decisions, with TrakCare immediately providing alerts when, for example, it detects a potential risk or irregularities in patient status.

# Connected, Informed, Transformed with TrakCare

The TrakCare unified healthcare information system is for organizations that want to make a difference in care by transforming care delivery and the patient experience. It is for organizations that are serious about digital transformation. Key to the TrakCare advantage are information, insight, and improved workflows.

## A Single Source of Truth

TrakCare provides clinical, administrative, and financial information as a single source of truth for each patient in one electronic patient record. Built-in integration technology brings data from other sources within your organization into that record and keeps it up-to-date.

## Easier Access to the Information that Matters

TrakCare's clear presentation of clinically relevant information, powerful clinical decision-support capabilities, and insightful analytics and reporting enable its users to make informed decisions quickly. Shared workflows enhance communication and enable care teams to work together seamlessly to keep individuals and populations healthy. Patients can view their own records, communicate with their care teams, request appointments, and access other functions that help engage them in the care process.

## TWICE AS EFFECTIVE

ACCORDING  
TO KLAS ARCH  
COLLABORATIVE,  
ELECTRONIC HEALTH  
RECORDS (EHRS)  
THAT MAKE IT EASIER  
TO GET NEEDED  
DATA OUT OF THE  
SYSTEM HAVE TWICE  
THE IMPACT ON EHR  
SYSTEM SUCCESS  
THAN THOSE THAT  
FOCUS ON EASE OF  
DATA ENTRY.



## CARE VISION

### Creating Something New

At its inception, United Family Healthcare (UFH) envisioned a private hospital that would combine the best of Western medical IT with the family-style care model familiar in China. Key to achieving this vision was UFH's commitment to complete life-cycle care — from prenatal and pediatrics to internal medicine, surgery, geriatrics, and home care.



### Rapid Growth with TrakCare

UFH began in Beijing with 20 beds. Today, it is a consortium with six general hospitals, one rehabilitation hospital, and 15 clinics located in major cities. Strict standards for care delivery, and the use of InterSystems TrakCare starting in 2008, helped drive this growth, in addition to helping UFH achieve its vision. “It would be difficult for such a huge hospital consortium to achieve sustainability without strict standards and a unified software system,” says Roberta Lipson, CEO of UFH.

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Jenny Shao, MD, UFH  
Director of Health  
Information Systems

### Data Insights for Preventive Care

Life-cycle preventive care is a cornerstone of the UFH philosophy. UFH uses TrakCare to transform the data in its electronic patient record into insights on patient needs and effective actions. “Data insights empower UFH to carry out a series of care delivery plans, which may involve follow-up visits, advice, or chronic-disease management,” says Jenny Shao, MD, director of health information systems at UFH.

For cervical and colorectal cancer screening, for example, the system automatically informs the care providers of a patient's age, family history, genetic screening results, or other risk factors and reminds the doctors to notify the patient of upcoming screening or follow-up visits.

### Care Transformation with TrakCare

“TrakCare has helped us transform from fragmented, episode-based management to integrated care management,” says Dr. Shao. “Going forward, we expect it to serve as a source of clinical wisdom, guiding providers through evidence-based medicine and proven clinical pathways.”



## From Vision to Reality with TrakCare

Healthcare is changing rapidly, driven by new technologies and new models of care and financing. The goal for managing these changes is the same everywhere: to create a more intelligent, more sustainable health and care system for the future.

### The Best Foundation

This future depends on the right foundation: connected health and care organizations, and decisions based on meaningful, comprehensive health data. TrakCare enables both. It connects health and care communities around a shared, comprehensive, and trustworthy electronic patient record. Its intuitive tools help care providers make better decisions, and help administrators understand what it takes to improve the cost and quality of care.

### Successful Adoption

Widespread adoption of an advanced healthcare information system plays a central role in care transformation success. TrakCare makes adoption smoother with an interface that is easy to learn, and streamlined single-screen displays of critical data for faster decision-making and action. TrakCare's problem-oriented view of the patient record enables clinicians to quickly see and act on relevant information, making it a more rewarding system to use.

**SERVING 100 MILLION  
PEOPLE IN 27 COUNTRIES**

**TRAKCARE IS DRIVING  
SMARTER, MORE  
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PROCESSES IN OVER  
450 HOSPITALS AND  
THOUSANDS OF LABS  
AND COMMUNITY CARE  
SITES.**



**“WE ACHIEVED  
RECORD  
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SATISFACTION  
RATINGS OF OVER  
95 PERCENT OVER  
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DEPARTMENTS.”**

**Kenny Lim, Chief IT  
Officer, Bumrungrad  
International Hospital**

## CARE INNOVATION

### TrakCare Accelerates Digital Transformation

It is one of the world’s leading and most digitally advanced hospitals. Bumrungrad International, Thailand, serves 1.1 million patients annually, now using TrakCare’s unified patient administration and clinical capabilities across the hospital. Improvements in workflow and the patient experience have been notable.

For example, TrakCare enabled Bumrungrad to increase the number of patients seen for initial exams in a given timeframe by 50 percent and cut the time to produce visit summaries for patients by one-third.

### Safer, More Personalized Care

TrakCare’s clinical decision support is improving safety with alerts for a range of risks, including drug interactions, therapeutic duplications, and duplicate orders. TrakCare is also integrated with patient monitors and provides closed-loop medication management to minimize medical errors. Data from TrakCare is feeding artificial intelligence algorithms for evidence-based, personalized oncology treatment.

“Over the next few years, hospitals will see almost all medical tools become digital,” says Kenny Lim, Chief IT Officer, Bumrungrad International. Bumrungrad plans to integrate and manage these tools through TrakCare.

### Data for AI and Machine Learning

TrakCare provides Bumrungrad with a powerful foundation for innovation. According to Lim, the hospital plans to increase its use of TrakCare on mobile devices, expand remote patient monitoring and telemedicine, increase patient engagement, and broaden its use of AI and machine learning.

# Driving Better Care & Innovation Across Care Communities

## Interoperability, Insight, and Efficiency

Even in the most extensive healthcare systems, patients will have clinical encounters and health information elsewhere — whether across the country or across the border. Interoperability for information sharing with other organizations is critical for making the best care decisions, and innovation in care processes.

## Community-Wide Care Coordination & Analytics

Organizations like the United Kingdom's Lothian National Health Service Board extend the reach of TrakCare with InterSystems HealthShare® for interagency and community-wide information sharing. HealthShare can, for example, use this community-wide information to automatically identify dynamic cohorts of patients for care coordination, registries, and population health management.

When HealthShare combines TrakCare with community-wide clinical, financial, patient-generated, and social data sources, it can help you analyze, share, and use this data to:

- Identify opportunities for enhancing and optimizing care processes and outcomes
- Support new value-based business models
- Drive population health initiatives
- Enable clinical research
- Provide care coordination across organizations, regions, and countries

## The Freedom to Innovate

Using HealthShare alongside TrakCare means you are free to innovate. The TrakCare data and capabilities you use every day to manage care delivery will remain stable, responsive, and secure.



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Gillian Colquhoun,  
Assistant Director  
of Digital Programs,  
North Tees and  
Hartlepool National  
Health Service  
Foundation Trust

## BETTER DECISIONS

### Improving the Patient Experience & Controlling Costs

TrakCare integrated workflows and shared patient records across care settings are enabling England's North Tees and Hartlepool National Health Service Foundation Trust to redesign care processes. For patients with complex fractures, for example, the staff uses TrakCare to ensure that each patient gets the appropriate and most cost-effective treatment. For some, that means receiving care at the location closest to home, at North Tees hospital. For those with the most severe fractures, it means treatment farther from home at a major trauma center, which will result in higher costs.

### Easier Access to Complete Information

Hospital care managers need to review these cases to make sure each patient is receiving the correct level of care. Getting the information about these fractures and the care patients received used to require a case review and data audit across multiple systems, which took several days. Now, care managers can use TrakCare to sort patients into cohorts based on specific criteria — in this case, those with complex fractures — and quickly get the information they need to verify that the right decisions have been made.



## Built to Be Your Best Decision

For over 40 years, InterSystems has been at the heart of the healthcare information ecosystem. Today, the health data of more than 500 million people worldwide is managed using InterSystems technology. Health information is who we are. And it is our mission to make it work better for you and those you care for. TrakCare is central to this mission.

## Built for Any Care Setting

TrakCare was the first healthcare information system built specifically for the web. It continues to build on that history of innovation today with a native mobile, touchscreen-enabled interface that enhances the care delivery experience, wherever it happens. Unlike other systems, TrakCare does not require you to install and maintain apps on devices, saving you time and money.

## Built for Your Country

During implementation, care teams leverage the expertise we have gained from working with clinicians and health systems around the world. We incorporate our global best practices into the product, which we deliver preconfigured to meet local market requirements in a range of countries. This approach reduces the complexity and risk of switching to a new healthcare information system or installing one for the first time.

## Built for Maximizing Performance, Minimizing Costs

Like many of the world's most successful healthcare applications, TrakCare is built on the InterSystems IRIS for Health™ data platform. When an application and the information it delivers could literally mean the difference between life and death, InterSystems provides the ultimate in proven reliability, speed, and scalability. TrakCare also saves money, because applications built on InterSystems IRIS for Health run faster on commodity hardware and require fewer resources for system administration than applications built on other data platforms. We also offer flexible deployment models to meet your unique requirements.

## Built to Exceed Expectations

We are passionate about customer success and view every business relationship as a long-term partnership. To help you realize the full benefits of your TrakCare investment, you can engage our team to help you navigate through the process of identifying and measuring expected benefits, preparing for and leading your organization through change, implementing an effective governance strategy, and continuously enhancing how you use TrakCare after go-live.



# TRAKCARE: A COMPREHENSIVE, UNIFIED SYSTEM FOR SEAMLESS CARE

## The Power to Improve Care Delivery

TrakCare supports optimal care delivery for each individual and helps you deliver proactive support for the health and well-being of entire populations. It includes completely unified clinical, patient administration, practice management, and revenue-cycle functionality.

TrakCare supports care across diverse settings, including acute-care hospitals, outpatient clinics, urgent-care centers, community health centers, and laboratories. Wherever TrakCare is used, its single, shared electronic patient record and master patient index place the patient at the center of care.

## TrakCare Electronic Patient Record and Master Patient Index

The electronic patient record (EPR) is automatically populated by relevant clinical and administrative data entered anywhere within TrakCare or through its integration with other healthcare applications. It includes patient demographics and medical histories, as well as admissions, surgery, and obstetric information. The master patient index (MPI) records an extensive range of sociodemographic information and uniquely identifies each patient. Together, the EPR and MPI enable efficient information organization and easy access to patient data when you need it.

## TrakCare Unified Capabilities

### CLINICAL INFORMATION SYSTEM

- Clinical Documentation
- Care Provider Worklists And Workbenches
- Clinical Pathways And Care Planning
- Doctor And Nurse Assessments And Charting
- Clinical EPR

### CLINICAL EXTENSIONS

- Discharge Summary
- Ordering And Results Communication
- Oncology
- Radiology
- Laboratory
- Operating Theatre
- Maternity
- ICU
- Anesthesia
- Medication Management
- Advanced Medication Management
- Pharmacy
- Clinical Specialties

### PATIENT ADMINISTRATION SYSTEM

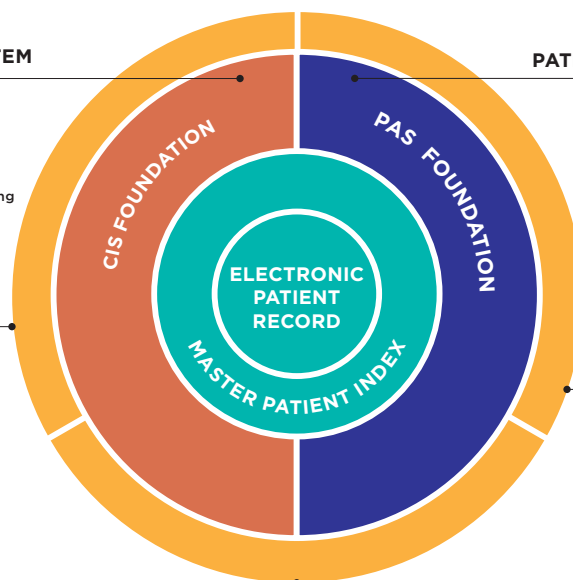
- Inpatients
- Outpatients
- Medical Records & Coding
- Admission, Discharge, Transfer
- Resource Scheduling & Appointment Booking
- Administrative EPR

### ADMINISTRATIVE EXTENSIONS

- Community Health
- Emergency Department
- Referral And Waiting List Management
- Patient Billing
- Mental Health Administration
- Vaccinations
- Genogram
- Family Health

### ADDITIONAL EXTENSIONS

- Active Decision Support
- Patient Portal
- TrakCare Analytics
- Government Standards
- EPR Connectivity
- Specialty Interfaces
- Custom Reports & Dashboards



## Patient Administration System

Patient administration system (PAS) provides the core administrative management functionality for all patient populations. PAS tracks information on inpatients and outpatients, and supports functions such as medical records management with coding and an administrative patient record with allergy information, alerts, diagnosis entry, episode lists, order history, and patient history. Key features include comprehensive admission, discharge, transfer, bed management, resource scheduling, and appointment booking functionality.

## Clinical Information System

Clinical information system (CIS) delivers the core functionality required for clinical patient management. It helps care providers prioritize, complete, and document care activity. Targeted worklists, clinical pathway and care planning tools, and a modern documentation workspace that supports a problem-oriented view of records make it easy to locate and add relevant facts, findings, and observations about an individual's health. This includes data on past and present illnesses, examinations, assessments, tests, treatments, plans, and outcomes.

## Extension Products

TrakCare extensions expand on the functionality provided by the PAS or CIS to enhance the power of TrakCare. Extension products support the needs of staff in specialty departments (such as ICU, maternity, operating theater, or emergency) and provide additional tools for care management, safety, patient flow, and productivity. Supported functions include discharge summary generation, referral and waiting list management, medication management, patient billing, decision support, and analytics for staff in any setting.





## Decision Support

Clinicians trust TrakCare decision support because it improves safety by working across a unified system with consistent, comprehensive patient data. Intelligent tools inform decision-making within normal clinical and administrative workflows, providing relevant information to users according to their needs and the needs of the people they care for. TrakCare provides decision support in three main areas:

- Notifying users at the point of decision about issues such as duplicate orders, therapeutic duplications, and drug interactions, based on information in its unified patient record and connected knowledge sources.
- Assisting users with easy access to search, analytics, and reporting functions that enrich and present information from TrakCare, such as by allowing an administrator to look at bed usage for a medical unit to determine whether a ward should be opened or closed.
- Enabling users to create rules that define patient conditions and the actions that must occur when the conditions are met. For example, if a patient is identified as deteriorating (using the TrakCare Early Warning Score functionality), the system can notify the care team.

## Privacy and Security

The InterSystems Global Trust framework is our process and commitment to meeting or exceeding legal and regulatory requirements for privacy and security anywhere in the world. Privacy concentrates on information collection, use, and disclosure. Security emphasizes confidentiality, integrity, and availability.

TrakCare enables your organization to meet strict privacy and security requirements for health information. Departmental, role, and individual-based controls determine who can see sensitive information and what they can do with it. Multiple authentication methods, password policy control, encryption, comprehensive logging and auditing, and consent management provide strength and flexibility to meet your organization's security needs.



## Future-Proofing Your Investment

A new healthcare information system is a major investment, and its use may span decades. We've done our best to future-proof TrakCare for you.

- **InterSystems IRIS for Health.** TrakCare uses the InterSystems IRIS for Health data platform for database management, core interoperability technology, and support for big-data analytics and AI initiatives. InterSystems IRIS for Health is the only data platform specifically engineered to extract value from healthcare data. It gives you more ways to use and benefit from the data in TrakCare.
- **Cloud deployment.** TrakCare deployed in the cloud enables you to scale your computing environment up and down as needed, without large upfront capital expenditures.
- **More open access to health data.** Over time, what you want and need to do with your data will change. For data sharing, TrakCare includes support for HL7® FHIR® and most other international data interchange standards. Through InterSystems IRIS for Health, TrakCare provides FHIR client and server components to give you greater range in what you can do with the data you have. For example, apps developed using the SMART on FHIR specifications can be used to present TrakCare data in new ways.
- **Big data and analytics.** Healthcare data's rapid growth is outpacing clinicians' ability to use it for decision-making. InterSystems IRIS for Health combines high performance with analytical and transaction processing, giving TrakCare the foundation for addressing healthcare's big-data challenges. This includes technology for supplying large data sets to machine learning and AI systems, which can enhance decision-making and care-coordination processes.





### Take the Next Step

The transformation to more connected, more informed, and more sustainable care is possible with TrakCare. To accelerate this journey for your organization, contact us. [InterSystems.com/contact](https://www.intersystems.com/contact)

The power behind what matters.

