

Od zdieľania dát k inteligentnému rozhodovaniu: The AI Healthcare Shift

Martin Zubek
InterSystems Corporation

About InterSystems



InterSystems Technology



What we do

- 80+** Countries
- >1B+** Patient Records
- 2/3** US Patient Records
- #1** Industry Recognition



Global leader in healthcare data management & integration; underpinning for Epic



Leading international EHR



Highly rated by KLAS, Forrester, Gartner Peer Insights, Gartner Magic Quadrant and IDC



Unparalleled performance, scalability, interoperability, reliability and flexibility



At the intersection of healthcare transformation for payers, providers, and life sciences

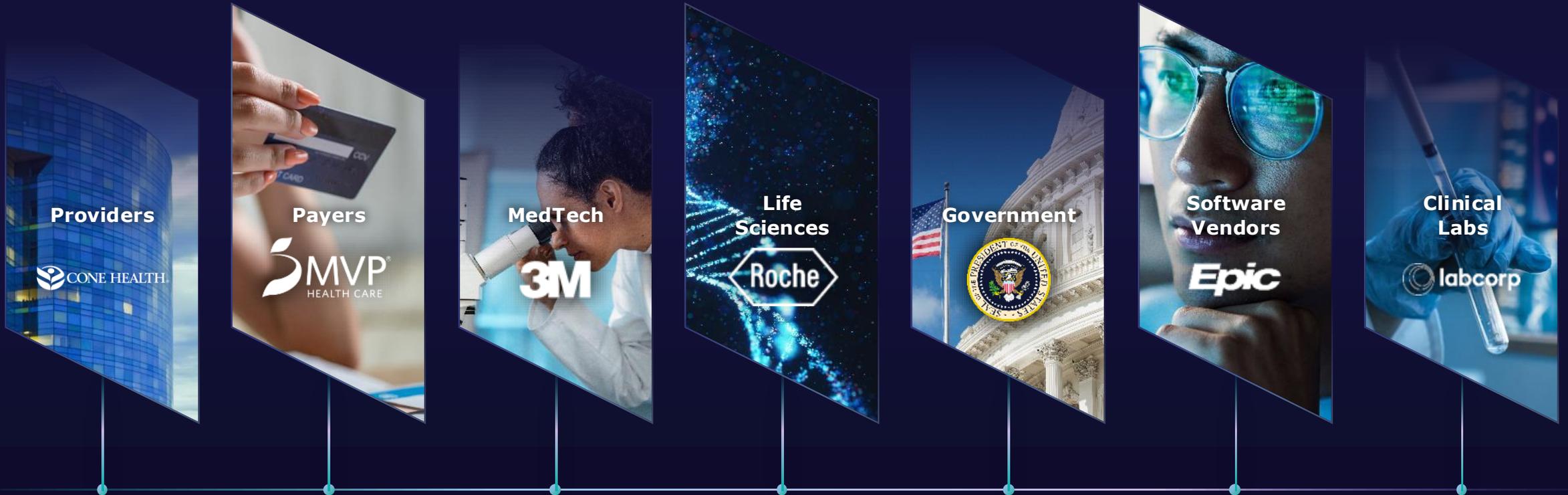


Office locations in 25 countries



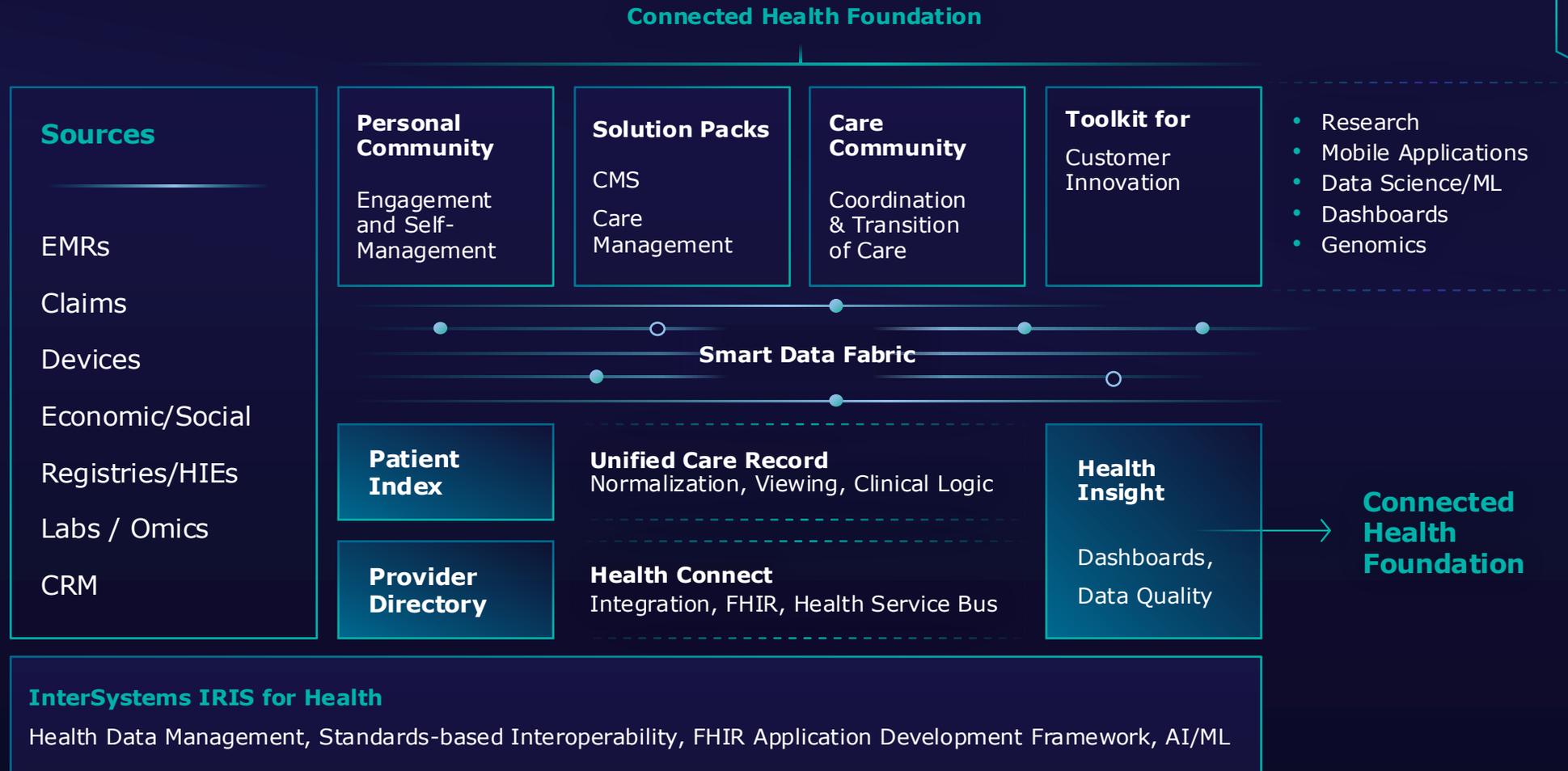
Privately held, stable, and profitable business built on partnerships – for 45+ years

We Power Digital Transformations



The InterSystems Healthcare Solution Set

Interoperability Services Delivering Trusted Data





EHDS Ready

Market Context & Regulatory Imperative

1 EHDS Regulation in Force

The EHDS Regulation (EU 2025/327) came into force March 2025, establishing the legal & technical framework for cross-border health data exchange and reuse.

2 Primary vs Secondary Use

EHDS differentiates data use: primary (patient care) vs. secondary (research, public health, innovation).

3 March 2029 Deadline

March 2029 deadline for cross-border exchange of priority data (patient summary, ePrescriptions) across Member States.

4 Compliance Requirements

New obligations for EHR system certification, semantic & technical interoperability, and support for EEHRxF for priority data categories.

📌 **The regulation is a forcing function**; clients need to accelerate their **data interoperability, standardization, and compliance**. Non-compliance risks (financial, exclusion from ecosystem) create urgency.

Value Proposition: EHDS Hub + Conversion Services

A. EHDS Hub (Native / Greenfield)

A centralized or regional "hub / platform" that provides the full envelope of EHDS services:

- Ingest, normalize, map health data from disparate sources
- Support for priority data categories (e.g. patient summary, ePrescriptions, diagnostics)
- FHIR-based APIs, semantic alignment (SNOMED CT, LOINC, ICD)
- Data governance, consent/opt-out management, audit trails
- Interoperability with MyHealth@EU cross-border services
- Secure environment for primary & secondary data use
- Analytics, monitoring, value-added services

B. Conversion / Compliance Enabler (Bridge Mode)

For clients/organizations not native EHDS (legacy systems, other jurisdictions):

- Translate local data models and APIs to EHDS-compliant formats
- On-demand "EHDS interface as a service" (e.g., FHIR façade)
- Data validation, semantic mapping, transformation rules, consent enforcement
- Managed services in HealthConnect Cloud (SLA, versioning, updates)
- Certification support, testing, and conformance checks



Native AI Capability

Real-Life Challenges of AI



30%

of GenAI projects
are abandoned

50%

of GenAI projects reach
production in 8 months



Real-Time



Cost



Complexity



Trust



Clinical Safety



Regulatory

InterSystems Data Platform Difference



Real-Time



**Sub-second
Data Access**

Cost



**Smart Vector &
Data Profiling**

Complexity



**Unified
Healthcare Data**

Trust



**In-tenant Secure
Processing**

Clinical Safety



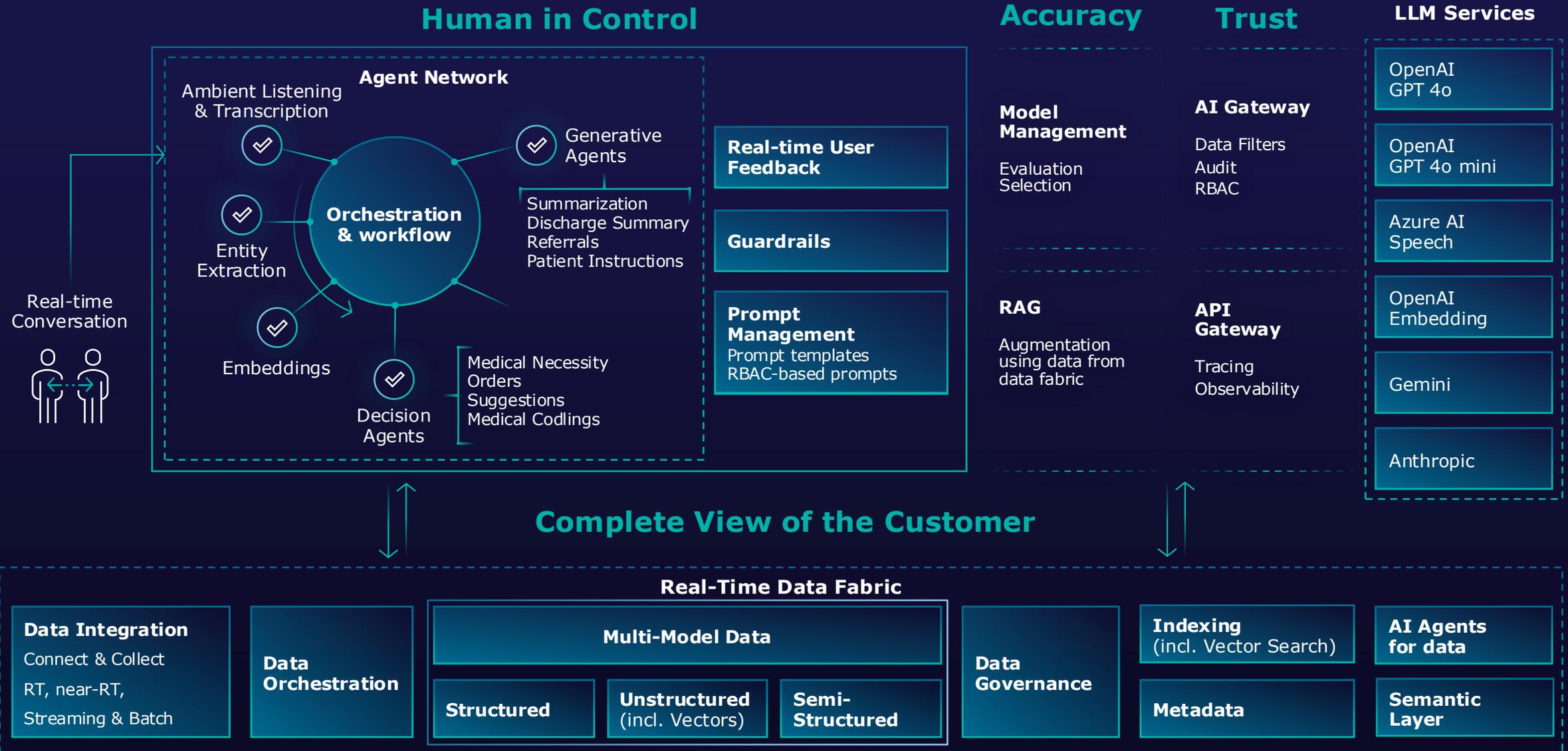
**Embedded
Workflow Integration**

Regulatory



**Built-in
Governance & Audit**

InterSystems IRIS Integration Blueprint



Demo

Navigation | AI Assistant Patient Selection English (US) SFarrell

SCHILLING, MARK
M 57y 10/20/1968 MPIID: 100548714

Prompts <<

Search Prompts

Favorite Prompts

- Demographics

All Prompts

- Annual Wellness Preparation
- Cardiovascular Risk
- Cardiovascular Summary
- Claims Summary
- Clinical Summary
- Conditions
- Coordination of Benefits
- Demographics
- Diabetes Summary
- Lab Results
- Medications
- Most Recent Encounter
- Nephrology Summary

Assistant
Welcome. I can assist with patient-related questions. How can I help?

You
Please generate a nephrology summary.

Assistant
Nephrology Summary

Patient Demographics and Encounter Overview

- Full name: Mark Schilling
- Date of birth: 10/20/1968
- Gender: Male
- Member ID(s): cie100548714 (cie, MRN); 227733884499 (stw, MRN); 3355446655 (stmp, MRN); 114422553366 (strn, MRN); 100548714 (homecommunity, MRN); 100548714 (documents, MRN)
- Most recent nephrology visit: No direct nephrology encounter documented; most recent nephrology referral order on 05/15/2018 by Chen, Viola ("eval of glucosuria in pt with a1c of 5.5")
- Referring provider name and specialty: Chen, Viola (specialty not specified in record)

Renal-Related Diagnoses
Reverse chronological order; includes ICD-10 codes if available

Diagnosis	ICD-10 Code	Status	Most Recent Update	Source	Stage (if CKD)
Type your question here					

This is an AI Tool. Errors may occur.

-
-
-
-
-
-
-
-
-

SCHILLING, MARK

M 57y 10/20/1968 MPIID: 100548714



Chartbook <<

Clinical Summary

- Conditions
- Allergies
- Medications
- Documents
- Immunizations

Vital Signs

> Lab Results

- Diagnostic Studies
- Procedures
- Histories
- Encounters
- Appointments

Care Team

Cohorts

Claims

Demographics

Insurance

Reports

Document Repository

Diagnoses Sorted by Last Updated

Diagnosis	Diagnosis Type	Last Updated
Congestive heart failure	Inferred from CIE	10/01/2018 13:19
Atrial flutter	Final	02/20/2018 00:00
Benign essential hypertension	Final	02/20/2018 00:00
Body Mass Index 40.0-44.9, Adult	Final diagnosis (discharge)	
Chest pain	Final diagnosis (discharge)	

Page 1 [Next >](#)

Allergies Sorted by Last Updated, Category

Allergen	Reaction	Source	Category	Last Updated
No known drug allergies			Allergy	
No known drug allergies			Allergy	
No known drug allergies			Allergy	

Medications Sorted by Start Date

Medication	Dose	Start Date	Details
Bumetanide 2 MG Oral Tablet	1 Tablet(s)	05/21/2018 10:46	
rivaroxaban 15 MG Oral Tablet [Xarelto]	1 Tablet(s)	05/21/2018 10:46	
Spirololactone 25 MG Oral Tablet	1 Tablet(s)	05/21/2018 10:46	
Hydralazine Hydrochloride 50 MG Oral Tablet	1 Tablet(s)	04/03/2018 11:06	
Spirololactone 25 MG Oral Tablet	1 Tablet(s)	04/03/2018 11:06	

Page 1 [Next >](#)

Lab Results

Order	Results	Collection Date	Details
POC Multi Analyte	Results	04/01/2018 05:53	
BMP	Results	04/01/2018 02:38	
POC Multi Analyte	Results	03/31/2018 21:18	
POC Multi Analyte	Results	03/31/2018 17:02	
POC Multi Analyte	Results	03/31/2018 11:50	

Page 1 [Next >](#)

Diagnostic Studies

Study	Ordering Clinician	Order Date	Test Date	Status
US Renal With Doppler	Allen Vantrese	03/27/2018 05:00	03/27/2018 05:00	Final
XR Chest Portable	Jenifer L Tanner	03/26/2018 17:15	03/26/2018 17:15	Final
XR Chest Portable	Kevin Bonner	03/05/2018 01:23	03/05/2018 01:23	Final

Documents Sorted by Event Date

Document	Source	Facility	Event Date	Details
Summary	David Speare	Documents	06/28/2018 16:19	
Summary	ralph pallotta	Documents	06/21/2018 15:16	
Summary (XML)	ralph pallotta	Documents	06/21/2018 15:16	
Summary	ralph pallotta	Documents	06/21/2018 15:15	
Summary (XML)	ralph pallotta	Documents	06/21/2018 15:15	

Page 1 [Next >](#)



Potential Benefits

Streamlined, Optimized Care

Transforming healthcare delivery through enhanced communication and coordination

1

GP to Specialist Referrals

- Challenge: Delayed referrals causing unnecessary ER visits
- Solution: Real-time data sharing through UCR
- **ROI Impact:** \$25-30B potential annual savings in U.S. healthcare

2

Discharge to Home/Social Care

- Challenge: Extended hospital stays due to coordination delays
- Solution: Automated care coordination
- **ROI Impact:** \$40 reduction in charges per patient-day

3

Real-time Care Alerts

- Challenge: Delayed updates on patient status
- Solution: Automated provider notifications
- **ROI Impact:** Reduced readmissions and service duplication

Each improvement area demonstrates significant cost-saving potential while enhancing patient care quality.

Front-line Operational Efficiencies



Time-Saving Record Access

Consolidates patient records into one unified system

- Reduces administrative burden
- Improves clinical decisions
- Enhances patient safety



Smart Test Management

Prevents duplicate diagnostic testing across facilities

- Alerts for existing results
- Speeds up diagnosis process
- Saves \$16.08 per alert

Original content preserved: Problems included clinicians spending excessive time searching records and patients undergoing unnecessary repeat tests. Solutions involve UCR system consolidating records and alerting about existing tests. ROI data from clinical decision support tools study showing cost savings.

Back-office Operational Efficiencies



Accelerating Payor Approvals

- Problem: Fragmented patient information delays approvals
- Solution: UCR aggregates claims data with decision support
- Outcome: Faster approvals, reduced workload, enhanced revenue cycle



Automating Disease Registries

- Problem: Manual registry updates are slow and error-prone
- Solution: UCR provides automated registry management
- Outcome: Real-time accuracy, reduced costs, better resource allocation

Both initiatives demonstrate significant potential for cost reduction through improved efficiency and accuracy in administrative processes.

Prevention Strategies & ROI

1

Diabetes Prevention Program

UCR identifies high-risk patients for targeted interventions, increasing program engagement by leveraging predictive analytics.

- ROI: €14 return for every €1 invested over 10-20 years
- Outcome: Improved chronic disease prevention rates

2

Predictive Healthcare Analytics

Machine learning models predict readmission risks, optimize length of stay, and forecast MI risks using unified patient data.

- Focus: Readmission rates, Length of Stay, MI prevention
- Outcome: Optimized resource utilization

3

Point-of-Care Decision Support

Real-time clinical alerts and medication reconciliation at point of care prevent avoidable readmissions.

- Key Feature: Real-time medication safety alerts
- Outcome: Reduced readmission rates