



Payers on FHIR®

Opportunities to Advance Value-Based Care

December 4th, 2019

Webinar Speakers



Aneesh Chopra

**President, CareJourney
Former Chief Technology Officer
of the United States**

- Aneesh Chopra is the President of CareJourney, an open data membership service
- He served as the first U.S. Chief Technology Officer under President Obama and authored, “Innovative State: How New Technologies can Transform Government.”
- He serves on the Board of the Health Care Cost Institute, the New Jersey Innovation Institute, and earned his MPP from Harvard Kennedy School and BA from The Johns Hopkins University.



Wayne Kubick

**Chief Technology Officer,
HL7 International**

- Wayne R. Kubick is Chief Technology Officer for Health Level Seven International, an ANSI-accredited Standards Development Organization (SDO).
- He was formerly Chief Technology Officer for CDISC, the leading SDO for pharmaceutical clinical research, and has held many senior executive roles with BBN Software Products, Parexel International, Lincoln Technologies and Oracle Health Sciences.



Swanand P.

**Sr. Vice President for
Data Management,
CitiusTech**

- Heads CitiusTech’s Healthcare Interoperability, BI-DW & Big Data practices
- 20+ years of experience across healthcare regulatory reporting, standards and frameworks including HL7
- Earlier worked with Epic Systems on development of the EpicCare product
- Holds a Master’s degree in Information Technology from IIT Mumbai

About Health Level Seven, International

ANSI-accredited healthcare standards development organization



- > 4000 volunteers and members in >50 countries
- > 300 standards products
- Major product families: v2, v3, CDA, FHIR



Vision: A world in which everyone can securely access and use the right health data when and where they need it



Mission: To provide standards that empower global health data interoperability



Webinar Objectives

Use FHIR® as a catalyst to drive technology transformation

- Understand different opportunities to accelerate the shift to value-based care
- Understand how payers can advance the shift to value-based care model with the development and deployment of interoperable solutions
- Strategies to spread interoperability using FHIR®
 - FHIR® for HEDIS® Supplemental Data Exchange
 - Closing Gaps in Care using FHIR® enabled Gaps Engine
 - FHIR® for Consumer and Provider Engagement

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The New Interop & CMS Proposed Rule

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Why FHIR®?

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Impact on Payers

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Unlocking the potential of FHIR®

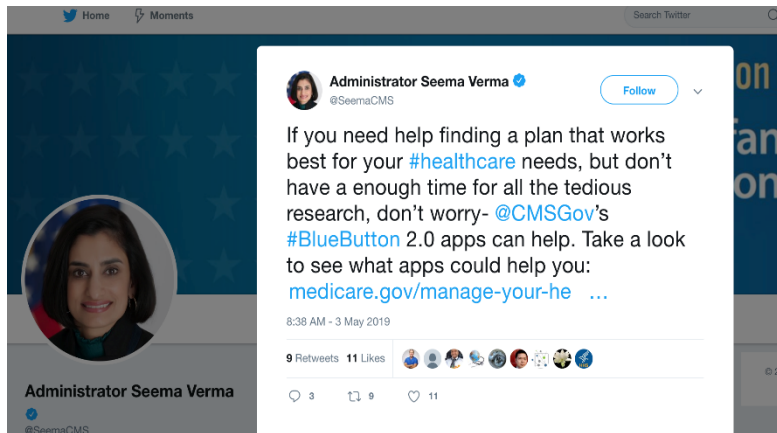
Progress @ the Pace of Standards Development



After dramatic reduction in aircraft manufacturing following WWI, then-Secretary Hoover encourages industry collaboration on engine, wing standards, commercialized on popular DC-3, Boeing 247

Source: http://argonautwiki.hl7.org/index.php?title=Main_Page

Summary of ONC, CMS Proposed Rules



Institutions that support health records on iPhone (beta)

A growing list of healthcare institutions support health records on iPhone, enabling you to view important data such as immunizations, lab results, medications, and vitals directly in the Health app.

We're working with more hospitals and clinics to support health records. Health institutions might have multiple hospitals and clinics that support health records, which are listed in the Health app.

Richard M. Adams, DPM - Family Foot Care (Texas)
<https://www.richardadamsdpm.com>



1. **Consumer Directed Exchange** the preferred “HIE” method
2. “Net Neutrality”- like approach to “B2B” data access pricing
3. **Government-sponsored Plans** under new obligations to share data
4. **Hospitals under new obligations** to share discharge notifications
5. **FHIR “Accelerators”** to set pace of meeting CMS challenge to API-enable HIPAA “designated record set”

CMS Engages HL7 on Priority Payer Use Cases



1. ADT for Patient and Physician Notification

2. Claims Data from Payers
Payer to Provider Use Cases

3. Real-time Benefit Check (RTBC)
Point of prescribing or enrollment
Prior Authorization using CDS Hooks

4. Provider Directories

5. Bulk Data Access

6. Price Data from Payers and Providers

7. Quality Data – FHIR-enabling eCQMs

8. Access to Expanded Clinical Data

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The Fundamentals of FHIR:

Fast Healthcare Interoperability Resources



- A next generation, open source **standards framework & platform**, built on 30 years of HL7 experience, designed for simplicity and implementation
 - R4, with normative content now available
- Built on **REST**, a pattern for using web technologies to manage information (the platform used by Facebook, Twitter...) and APIs
 - Availability of Patient-focused APIs required by *21st Century Cures*
- Content based on **Resources**: essential, portable modular information building blocks easily assembled into working systems
 - Like web pages directed toward computers; fast and scalable
 - Concepts like patient, practitioner, observation, problem
- Flexible outputs: web, messages, documents, services
- A **technology**, a **data model**, and an active, global **community**

*“The Web, for Healthcare” –
Grahame Grieve*

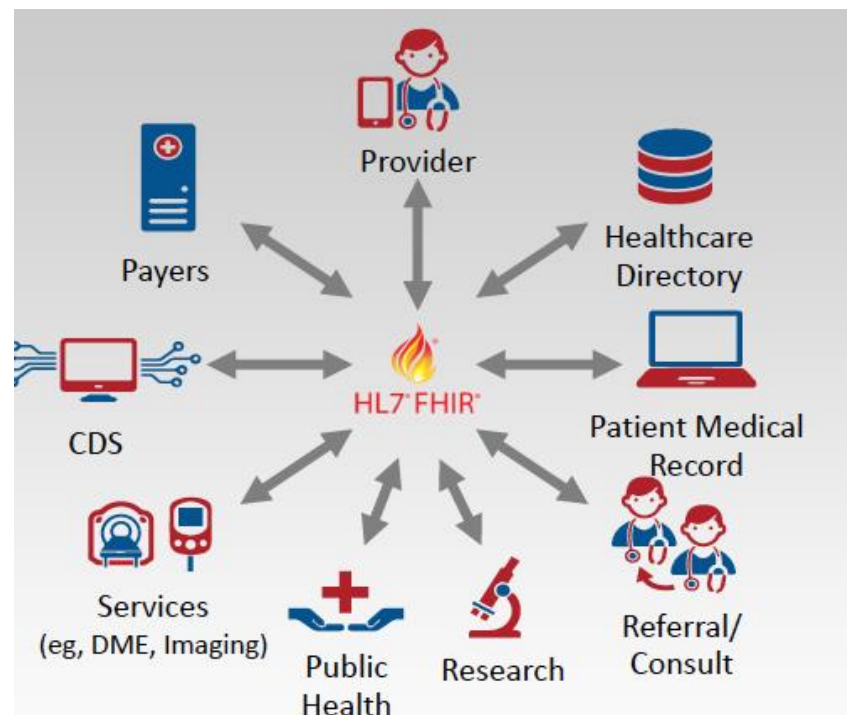


Diagram Source: ONC Fast Task Force

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Argonaut IGs Ready for Testing, Use

Published Argonaut IGs

[Data Query Implementation Guide](#)

[Provider Directory Implementation Guide](#)

[Scheduling Implementation Guide](#)

[CDS Hooks](#)

[Clinical Notes Implementation Guide](#)

[Bulk Data Access Implementation Guide](#)

[Questionnaire Implementation Guide](#)

Only “Data Query”
implemented at scale (due to
regulation)

2019 Argonaut Projects

1. **[R4 update](#)**: Add **Encounter** resource and clinical notes. Update existing resources to R4. Develop ‘write’ capabilities for selected resources
2. **[FHIR Clinical Data Subscriptions](#)**: Develop FHIR Subscriptions resource to push updates of medical record information to authorized recipients. Eliminates need to continuously poll FHIR servers for updates. **Supports 'push' use cases such event notifications**
3. **[Provenance](#)**: Define expectations on what provenance information is retained when information is imported into a FHIR server. Test round trip write, update, retrieve
4. **[Web Messaging and CDS Hooks for Radiology Ordering](#)**: Create **[CDS Hooks profile](#)** to support radiology ordering (to support Protecting Access to Medicare Act requirements), add **[web messaging](#)** channel to allow apps to functionally communicate with EHR sessions

Source: http://argonautwiki.hl7.org/index.php?title=Main_Page

HL7® FHIR® Accelerator Program



[About](#) [Standards](#) [Membership](#) [Resources](#) [Events](#) [Training](#) [Certification](#)

HL7® FHIR® Accelerator Program

The HL7 FHIR Accelerator Program is designed to assist communities and collaborative groups across the global health care spectrum in the creation and adoption of high quality FHIR Implementation Guides or other standard artifacts to move toward the realization of global health data interoperability.

Vision

HL7 FHIR has gained rapid acceptance on a global scale as an unprecedented, innovative platform standard that can truly enable health data interoperability. Since its inception, FHIR standards development has focused on practical implementation and adoption. As an increasing array of use cases emerges, end users and implementers across the health care spectrum are eager to apply the robust capabilities of FHIR to address discrete business needs in their own business areas. HL7 has served as a global convener for standards development to advance effective use of FHIR in meeting the needs of stakeholders in the global healthcare ecosystem.

Strategy

HL7 will help convene and work with communities and implementers with an interest in using FHIR to address common use cases. HL7's Accelerator service will help such communities initiate and efficiently navigate through the standards development process by providing guidance on how to navigate and work with HL7 work groups, product families and project teams. The program also provides basic team collaboration infrastructure tools and a range of other optional support services for Accelerator groups based on their own needs, ranging from self-service guidelines, to contracted project and/or financial management, contracting with SMEs, and other project and infrastructure services.

Accelerator Projects

- [The Argonaut Project](#)
- [The CARIN Alliance](#)

HL7 FHIR Accelerators



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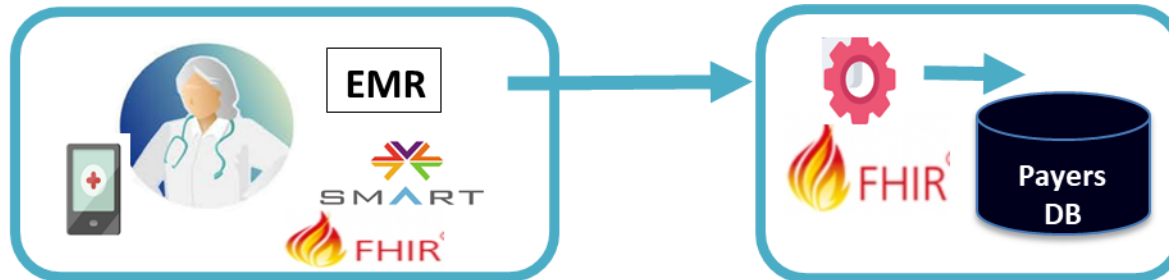
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Unlocking the potential of FHIR®

DaVinci Project on Path to Production



Documentation Templates and Rules for Prior Auth
Attachments
PDFs
QuestionnaireResponse

***Document Reference Resources as attachments.

Coverage Discovery
Orders (FHIR Svc Request)
Insurance (FHIR Coverage)
Provider (Argo Practitioner)
Location (Argo Location)

Prior Auth Request
Coverage
Claim
Document Reference (Attachments)
SoF Apps will query the EMR for DocumentReference resource

Assumptions: EHRs run Argonaut R4; Payers run "CPCDS"; Prior Auth as an "app" can reuse the US Core Document Reference profile

An App Developer's FHIR Toolkit

- 1 Consumer Data Access via Trusted Apps
- 2 Apps for Provider Directories (No 'Surprise Billing')
- 3 Open Standards for Physician Scheduling
- 4 Open Standards for Patient Assessments
- 5 Open Data for Performance Transparency (TBD)

Defining “Shoppable Services” in the Open

	Column A	Column B	Column C	Column D
Colectomy Services	Medicare Prices		Median Provider Prices	
	25 th percentile	75 th percentile	Medicare	Commercial
Preoperative				
Pre-Surgical E/M	\$ 175	\$ 316	\$ 233	\$ 350
Pre-Surgical Imaging/Lab	\$ 218	\$ 202	\$ 201	\$ 543
Pre-Surgical Other	\$ 309	\$ 209	\$ 312	\$ 780
Subtotal	\$ 702	\$ 727	\$ 746	\$ 1,672
Operative Stay				
Facility	\$ 17,384	\$ 22,818	\$ 17,516	\$ 40,286
Operating Clinician	\$ 1,900	\$ 1,725	\$ 1,821	\$ 5,463
Anesthesia	\$ 549	\$ 339	\$ 478	\$ 1,912
Imaging/Lab Professional Fee	\$ 125	\$ 139	\$ 167	\$ 668
Other Professional	\$ 58	\$ 58	\$ 45	\$ 79
Subtotal	\$ 20,016	\$ 25,069	\$ 20,027	\$ 48,408
Post-Discharge				
Readmissions	\$ 649	\$ 888	\$ 715	\$ 1,573
PAC-SNF/IRF/LTAC	\$ 556	\$ 669	\$ 602	\$ 1,144
Sequelae	\$ 1,402	\$ 1,511	\$ 1,454	\$ 3,490
PAC Other	\$ 2,361	\$ 2,578	\$ 2,494	\$ 4,988
Subtotal	\$ 4,968	\$ 5,646	\$ 5,265	\$ 11,194
TOTAL	\$ 25,686	\$ 31,442	\$ 26,038	\$ 61,274

CMS awarded Brandeis ~\$40M “EGM” contract to develop an open-source grouper; potential foundation for “shoppable” services

The Era of “Substitutable” Apps

“Bulk” FHIR Standards



The Standard

The Official Blog of Health Level Seven® International

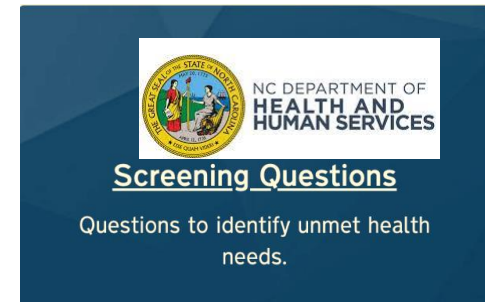
Leading Healthcare Stakeholders Commit to Real-World Testing of HL7’s FHIR Bulk Data Implementation Guide

Payer “Data @ Point of Care”



Patient Summary	Data at the Point of Care: Williamson, James		
	DOB: 11/12/1940	HICN: 9876543A	
CMS DPC	MEDICAL TIMELINE	MEDICATIONS	CHRONIC CONDITIONS
Encounters	TRANSITIONAL CARE CONSULT 05/12/2019 – Rush University Hospital	ONCEPRAZOLE (onceprazole 20 mg oral) 05/24/2019 – Rush University Hospital	CANCER - COLORECTAL 05/24/2019 – Rush University Hospital
Problem List	INFIDENT 05/24/2019 – Rush University Hospital		DEPRESSION 05/24/2019 – Northwestern Memorial Hospital
Medications	EMERGENCY 05/24/2019 – Northwestern Memorial Hospital		OSTEOPOROSIS 05/24/2019 – Midwest Orthopaedics
Procedures	AMBIOLATORY 05/24/2019 – Midwest Orthopaedics		CHRONIC OBSTRUCTIVE PULMONARY DISEASE 05/24/2019 – Northwestern Memorial Hospital
Care Team	INFIDENT 05/24/2019 – Northwestern Memorial Hospital	CARTOPREL (cartoprel 25 mg oral) 05/24/2019 – Northwestern Memorial Hospital	ASTHMA 05/24/2019 – Rush University Primary Care
Allergies	ANNUAL WELLNESS VISIT 05/17/2019 – Rush University Hospital	VALIOTEC (valiotec 1.5 mg oral) 05/17/2019 – Rush University Primary Care	
Vaccines	AMBIOLATORY 05/24/2019 – Rush University Hospital		
Family History	EMERGENCY 05/24/2019 – Northwestern Memorial Hospital	ANNOVIR (annovir 100 mg auto-injector) 05/24/2019 – Northwestern Memorial Hospital	ARTHRITIS 05/24/2019 – Northwestern Memorial Hospital
Preventive Maintenance	Potentially Available		
Quality Measures			

SDOH Screening Assessment



Health Systems
Intermountain
Healthcare
Jefferson Health
Marshfield Clinic
MUSC
Mount Sinai (NY)
MultiCare
OCHIN
OrthoVirginia
Rush University MC
Trinity Health
U.S. Department of VA

Health Plans
Anthem
BCBS of North
Carolina
BCBS of South
Carolina
BCBS of Tennessee
Cambia
Florida Blue
Humana
Manifest MedEx
Medigold
Oscar Health
Security Health Plan

Source: <https://nlmdirector.nlm.nih.gov/2019/10/22/addressing-social-determinants-of-health-with-fhir-technology/>; <https://dpc.cms.gov/>; <http://blog.hl7.org/leading-healthcare-stakeholders-commit-to-real-world-testing-of-hl7-fhir-bulk-data-implementation-guide>

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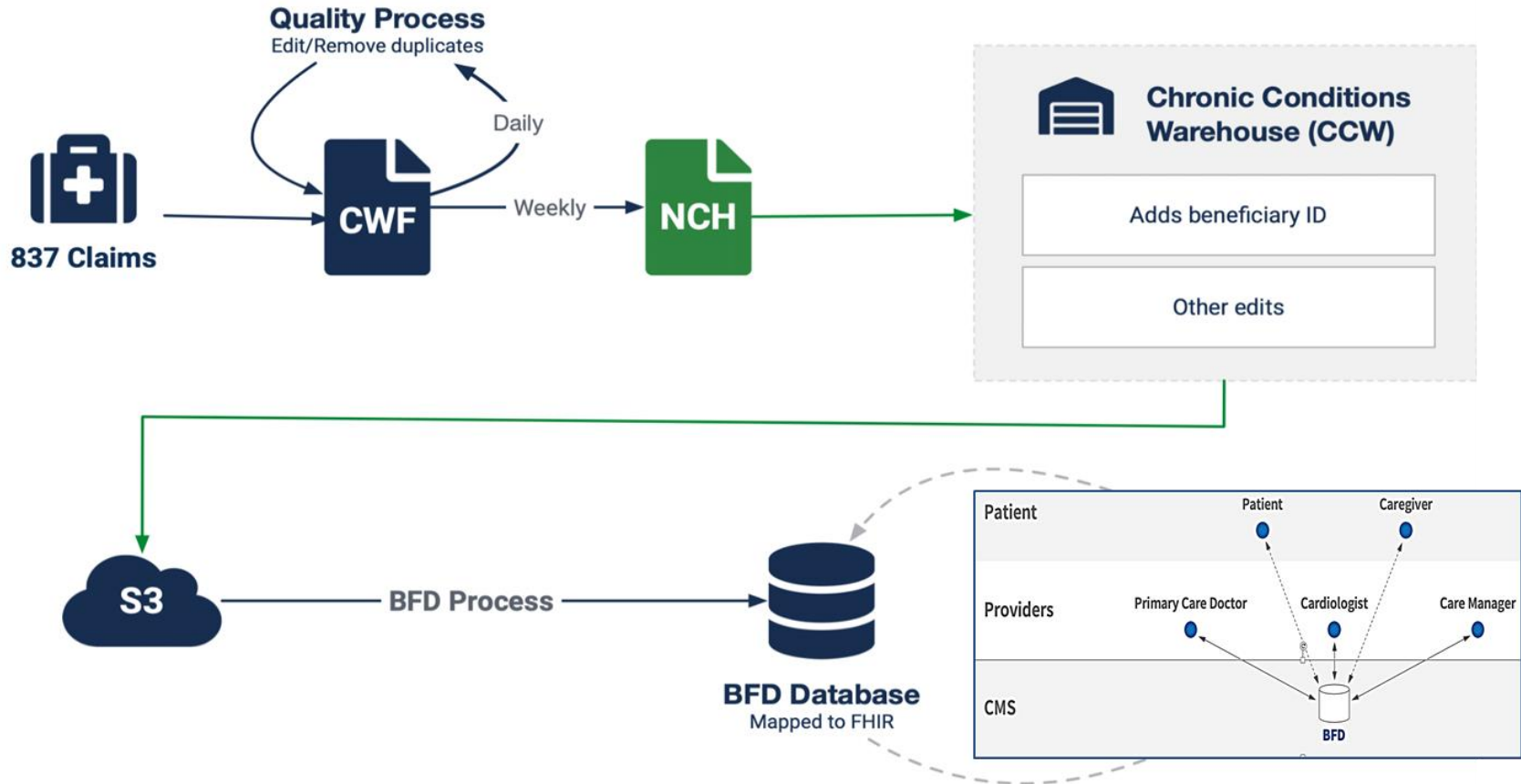
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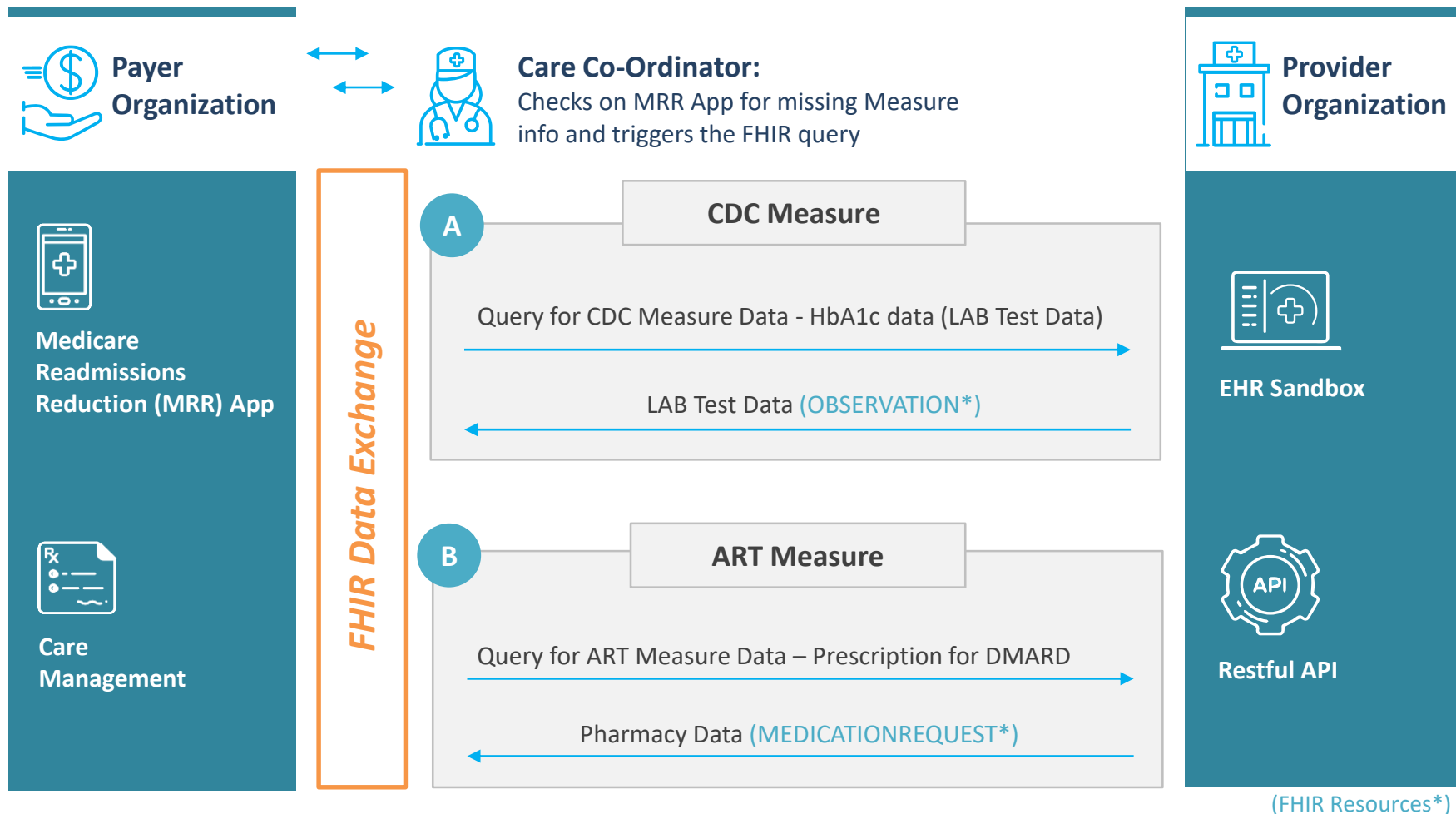
Case Study: CMS “BFD” Infrastructure



FHIR® for HEDIS® Supplemental Data Exchange

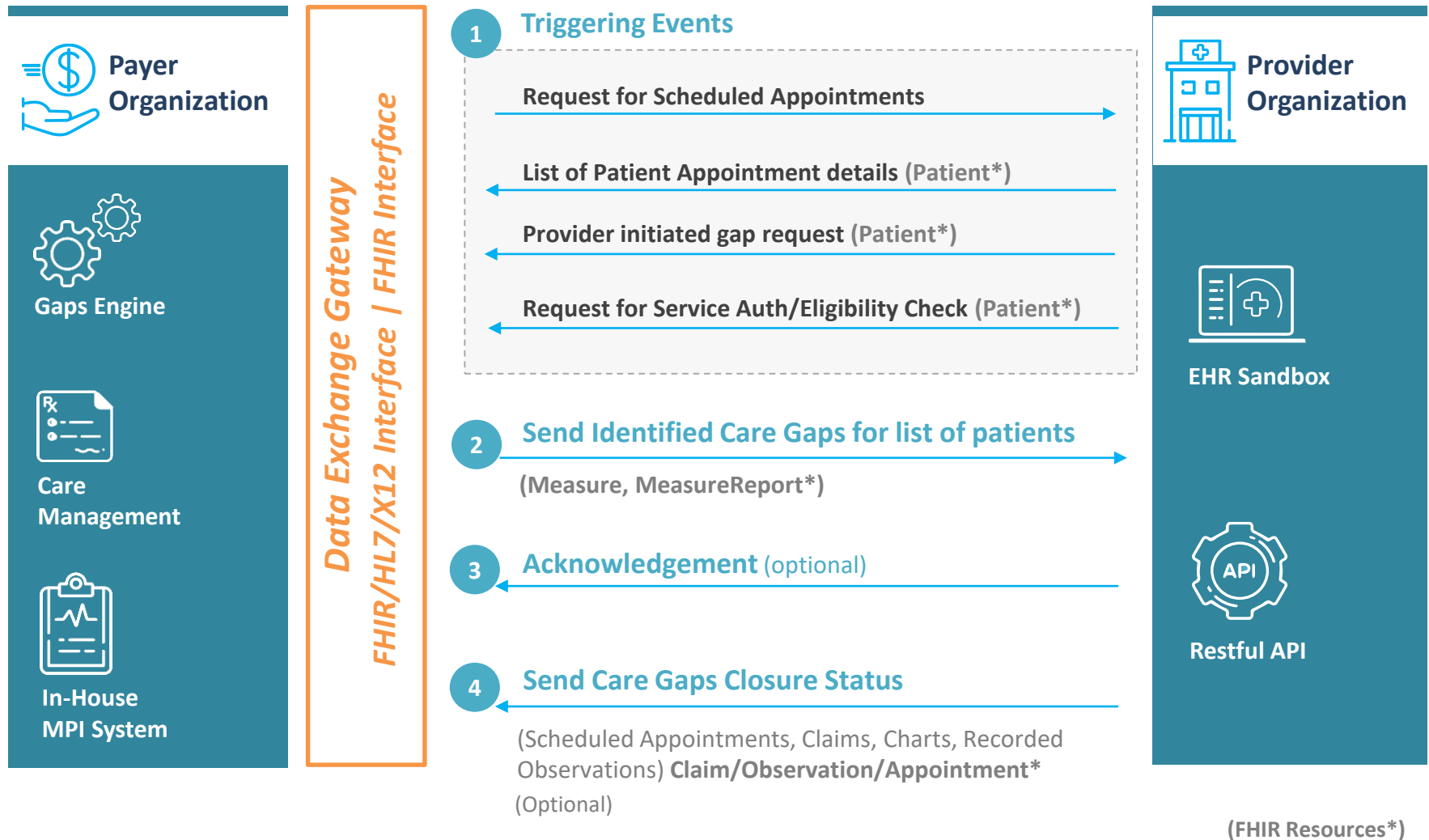
Measure A : Comprehensive Diabetes Care (CDC) - Diabetes type 1 and type 2 with HbA1c <7.0 and BP <140/90

Measure B : Rheumatoid Arthritis (ART) -Diagnosed with rheumatoid arthritis and with one Rx of DMARD



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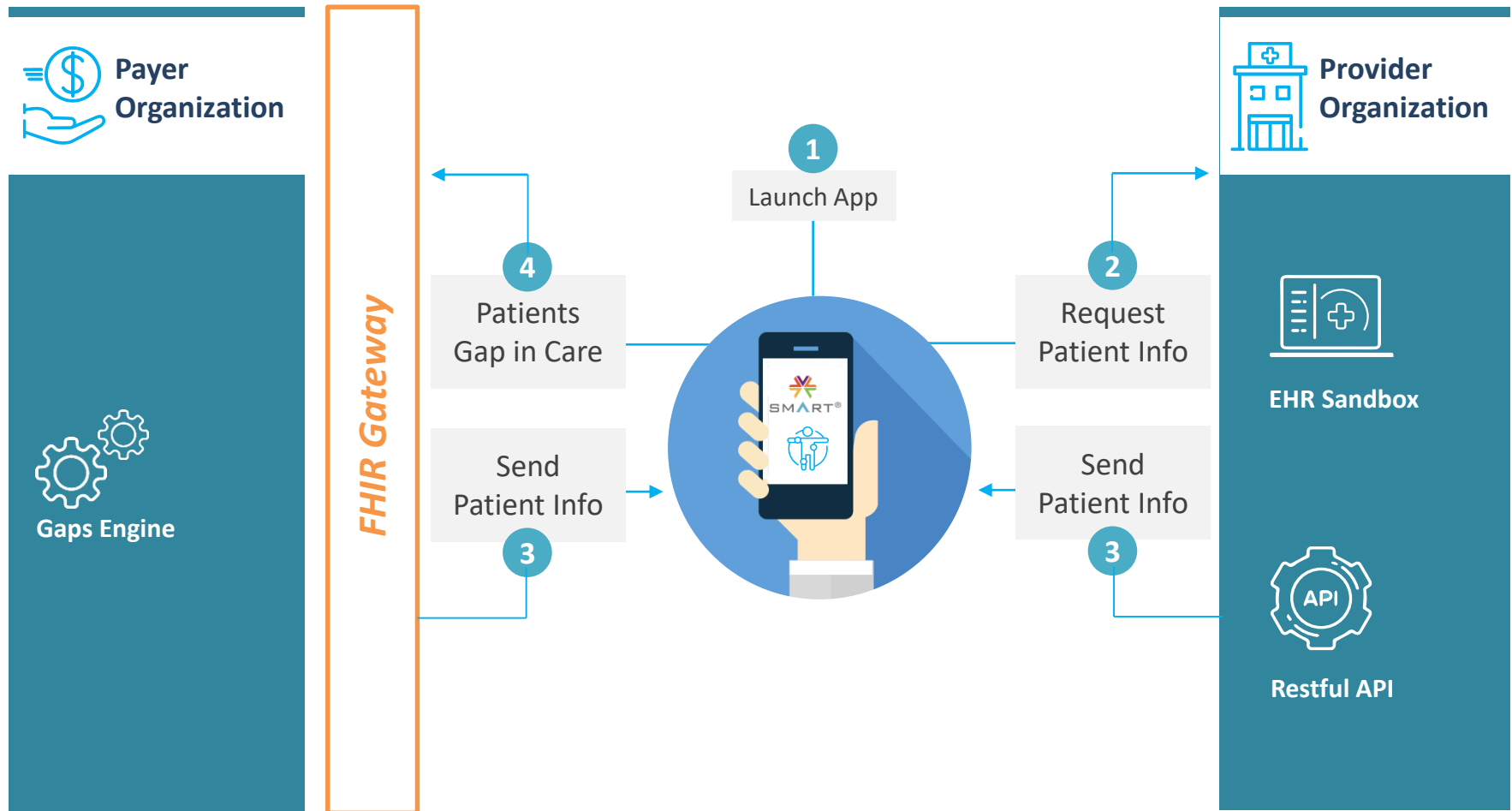
Closing Gaps in Care using FHIR® enabled Gaps Engine



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FHIR® for Provider Engagement

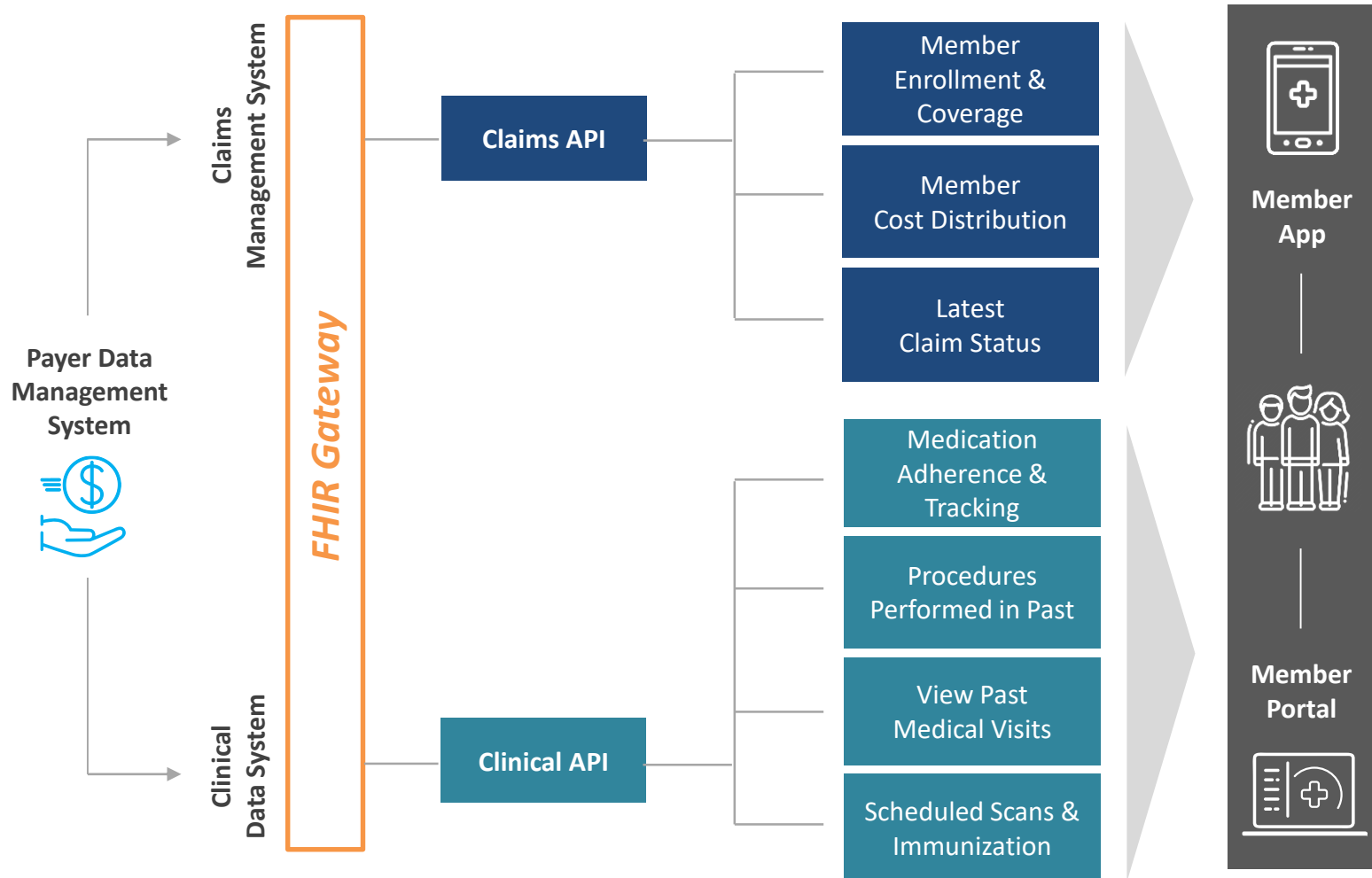
SMART on FHIR app for Provider Engagement for showing patient's gaps in at Point of Care



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FHIR® for Member Engagement

Member Engagement with near to Real time info /updates



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Thank You



Key CitiusTech Stats

4,800+ payer/provider locations

4,000+ healthcare technology professionals

400+ FHIR® & HL7® certified professionals

110 Mn+ patient lives impacted with our solutions

69 NPS - highest in the industry

Visit the CitiusTech Knowledge Hub for on-demand webinars & more: www.citiustech.com/knowledgehub

Let's talk about achieving digital transformation: info@citiustech.com