Open@Epic
CONFERENCE

Getting Started with open.epic

An Epic 101

Presenters



Justin Hewitt

Showroom Technical Services

Learning Objectives

1. Understand Epic's standards-first approach to data exchange
2. Walk the road(map) from app concept to Go-Live
3. Strategies for successful connectivity and collaboration with customers

Agenda

01 **Data Sharing Philosophy and Design**

Overview of supported standards, our websites, and architecting your data exchange

02 **Register a Client Record**

Obtain client IDs for implementation of OAuth 2.0

03 **Develop and Test**

Simulate app launches and connectivity by connecting to our FHIR developer sandbox

04 **Customer Implementation and Going Live**

Strategize your install project and Go Live with Epic customers

05 **Request Showroom Listing**

Market your live product in Connection Hub

Developer Guide

1

Data Sharing Design



2

Register a Client Record



3

Develop & Test



4

Customer Implementation and Going Live

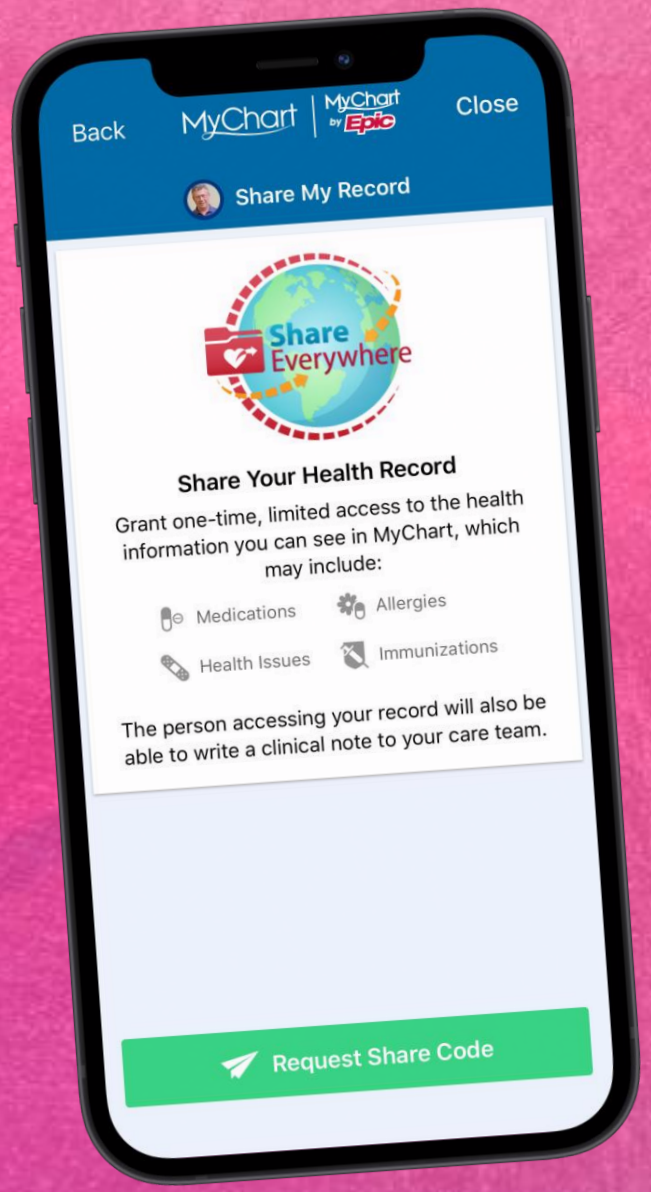


5

Request Showroom Listing



Sharing Data *with* Patients & Providers



Care Everywhere

BEST IN KLAS
Won every year of eligibility

26 million patient records exchanged daily

58 million documents in those daily exchanges

>50% of exchanges are with non-Epic systems

HL7® International

IHE INTERNATIONAL Integrating the Healthcare Enterprise

TEFCA℠

1 Data Sharing Design

Our Philosophy



Their System, Their Data



Open Standards



Scalability, Sustainability



Paths to Connect

Available on open.epic.com

640+

FHIR APIs

21% ↑ since Open@Epic 2025

180+

Standards-based interfaces

190+

Additional public APIs

322 Billion

annual web service transactions with Epic's public APIs

56% ↑ since Open@Epic 2025

3,200+

Active apps using open.epic technology

45% ↑ since Open@Epic 2025

Data Exchange Design Overview

https://open.epic.com/DesignOverview

Epic | EpicShare | Epic Research | Cosmos | MyChart | OPEN | UserWeb | SHOWROOM

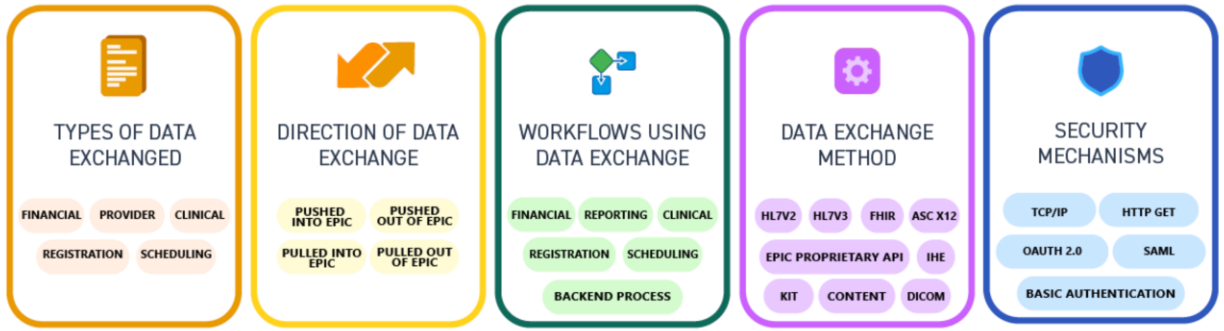
Get Started | Log In

Design Overview

Epic supports a wide variety of data exchange technologies. This guide provides an overview of design considerations and the different ways to plan your connection to organizations using Epic.

What Should I Consider When Designing My Data Exchange?

Due to the vast breadth of standards and types of APIs and interfaces a developer may wish to use, there are many factors to consider whe determining the best way for you to exchange data with Epic. The sections below cover the most common considerations when designing a connection, while the Case Studies section toward the end of this document provides examples for applying these considerations to some sample scenarios.



Types of Data to Exchange

Before you begin designing your connection, you must first understand what data you plan to exchange with Epic. Start by defining the discrete types of data your app will work with, and define a scope for the level of detail required within that data set. For example, you may need to exchange medication information. You should then more specifically define data elements you need within that data type, such as dosage information, RxNorm codes, etc.

1 Data Sharing Design

APIs in the Toolbox

Bulk FHIR

Efficient access to large volumes of information about a group of individuals

RESTful FHIR

Lightweight REST-based access layer for standard HL7-defined data models

HL7 Interfaces

One of the most widely implemented standards for health-related data



CDS Hooks

In-workflow, real-time, provider-facing decision support between EHRs and external Decision Support Services

Epic APIs

Extend functionality beyond standards-based exchange

Exports

Formatted to be human-readable or computable (machine-readable)



Common Interface Use Cases

HL7 International

- Appointment Scheduling
- Blood Transfusions
- Financial Transactions
- Flowsheet and Device Data
- Inventory/Supply Management
- Medication Administrations
- Orders and Results
- Patient Administration
- Referral Management
- Surgical Scheduling/Tracking
- Transcriptions/ Documents
- Vaccine Administrations

NCPDP®

- External Paid Rx Claims
- Medication Dispense History
- Medication History
- Refill Requests from Pharmacy
- Rx Prior Authorization
- Rx to Retail Pharmacy
- Rx Benefits Claims Adjudication

ASCX12
The Accredited Standards Committee

- Authorization
- Benefit Enrollment
- Claim Remittance Advice
- Claim Status
- Claims
- Eligibility Verification
- Referral Request

+660 Billion annual interface transactions

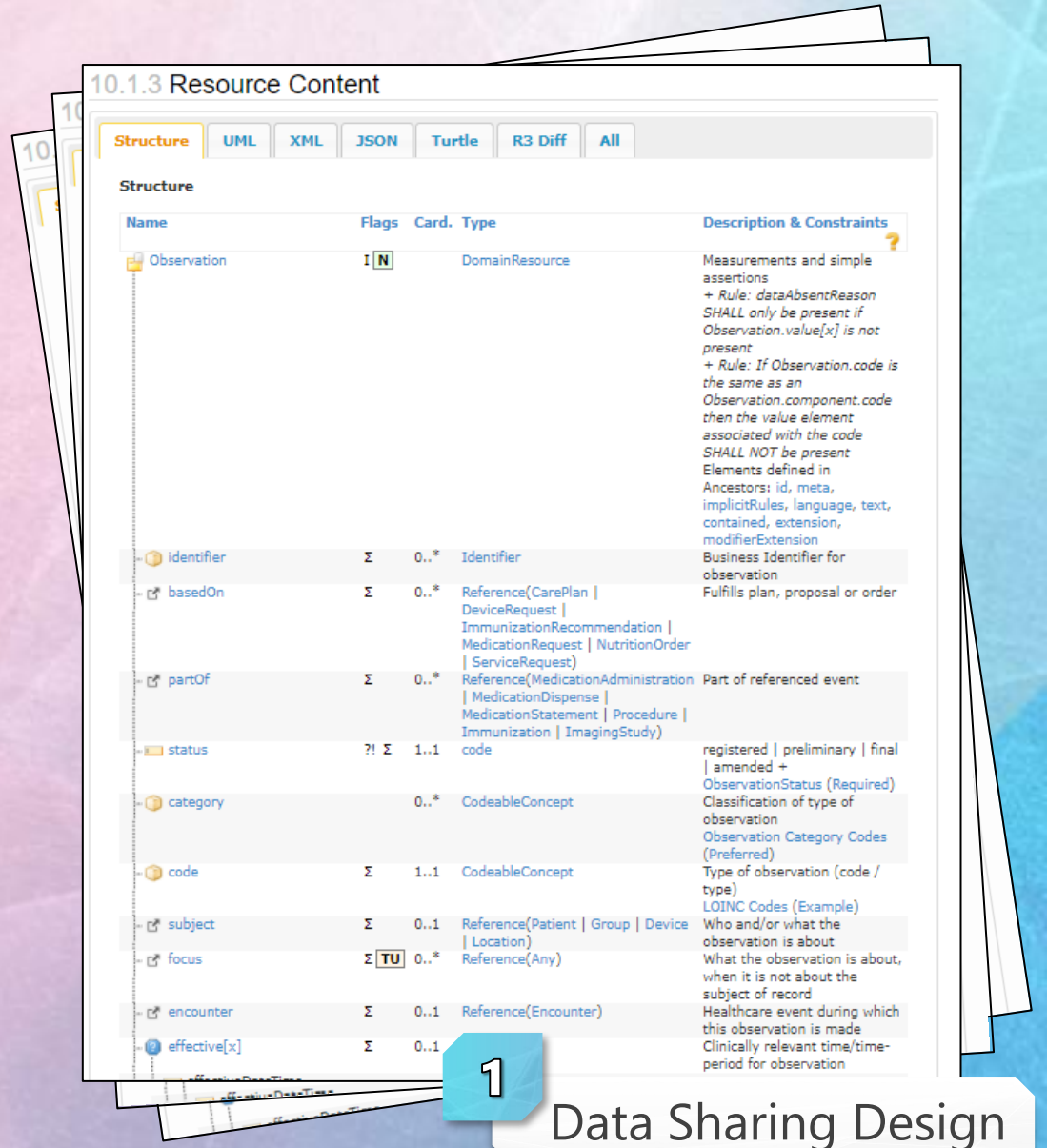
RESTful FHIR

FHIR®

Fast Healthcare Interoperability Resource

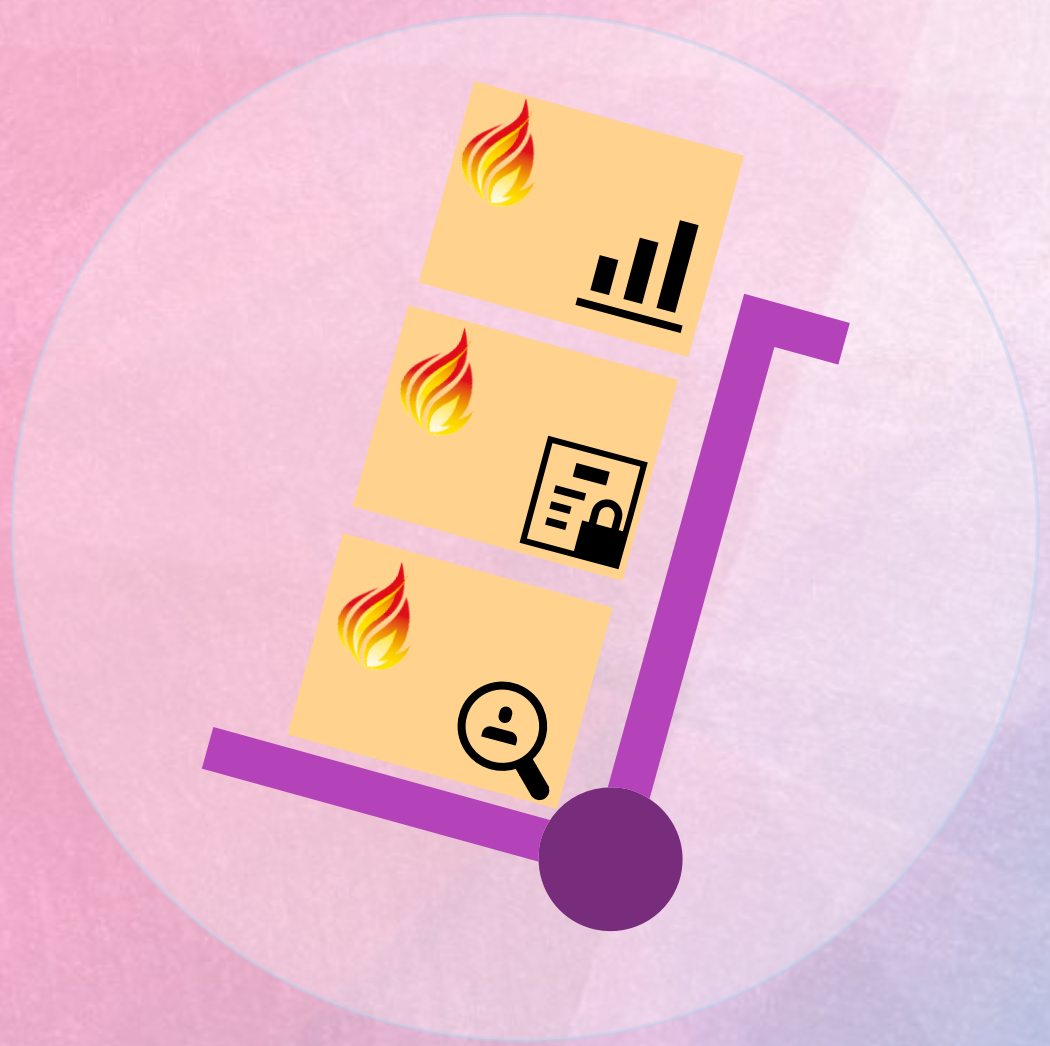
285 Billion Messages

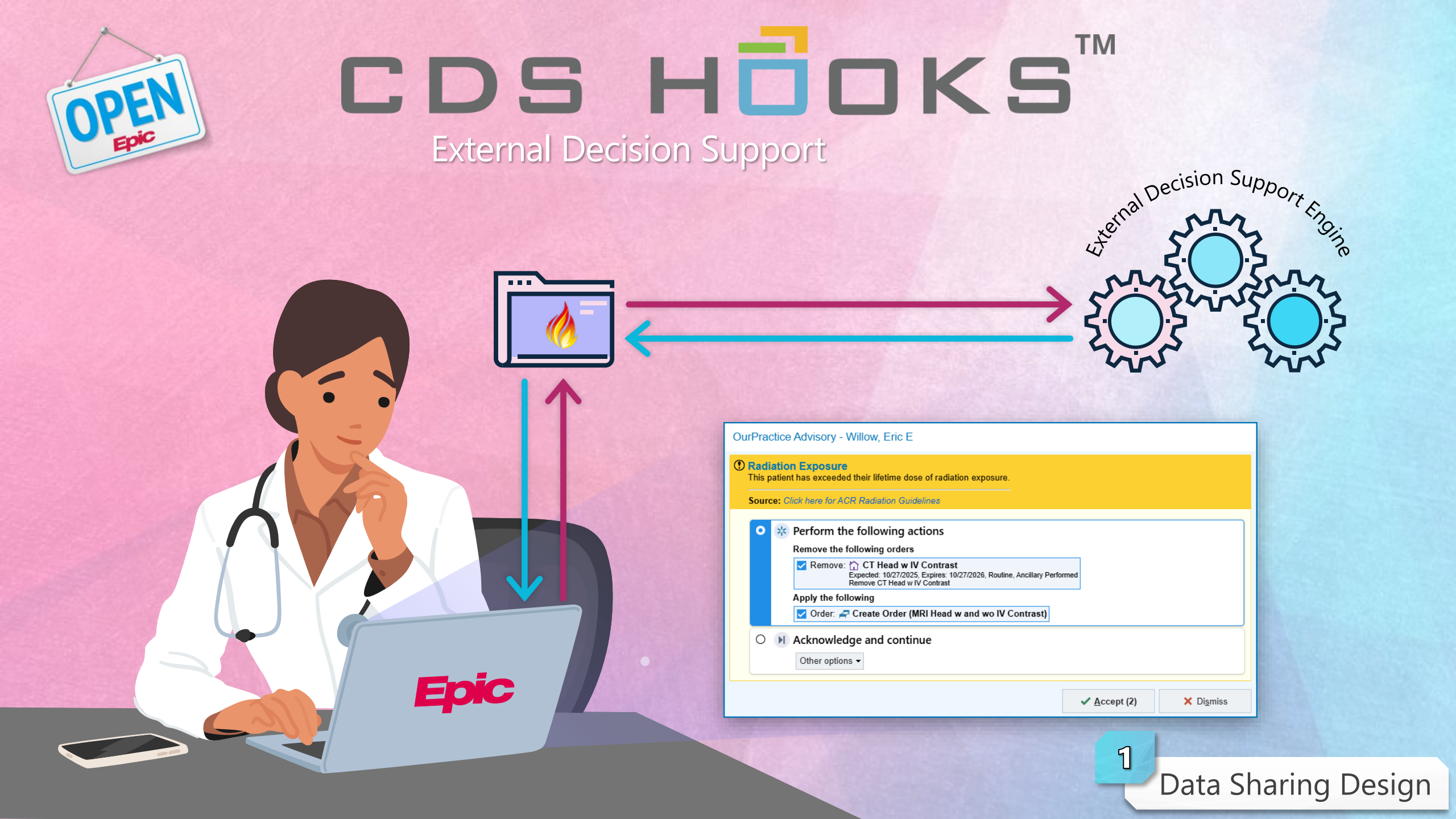
in the past year

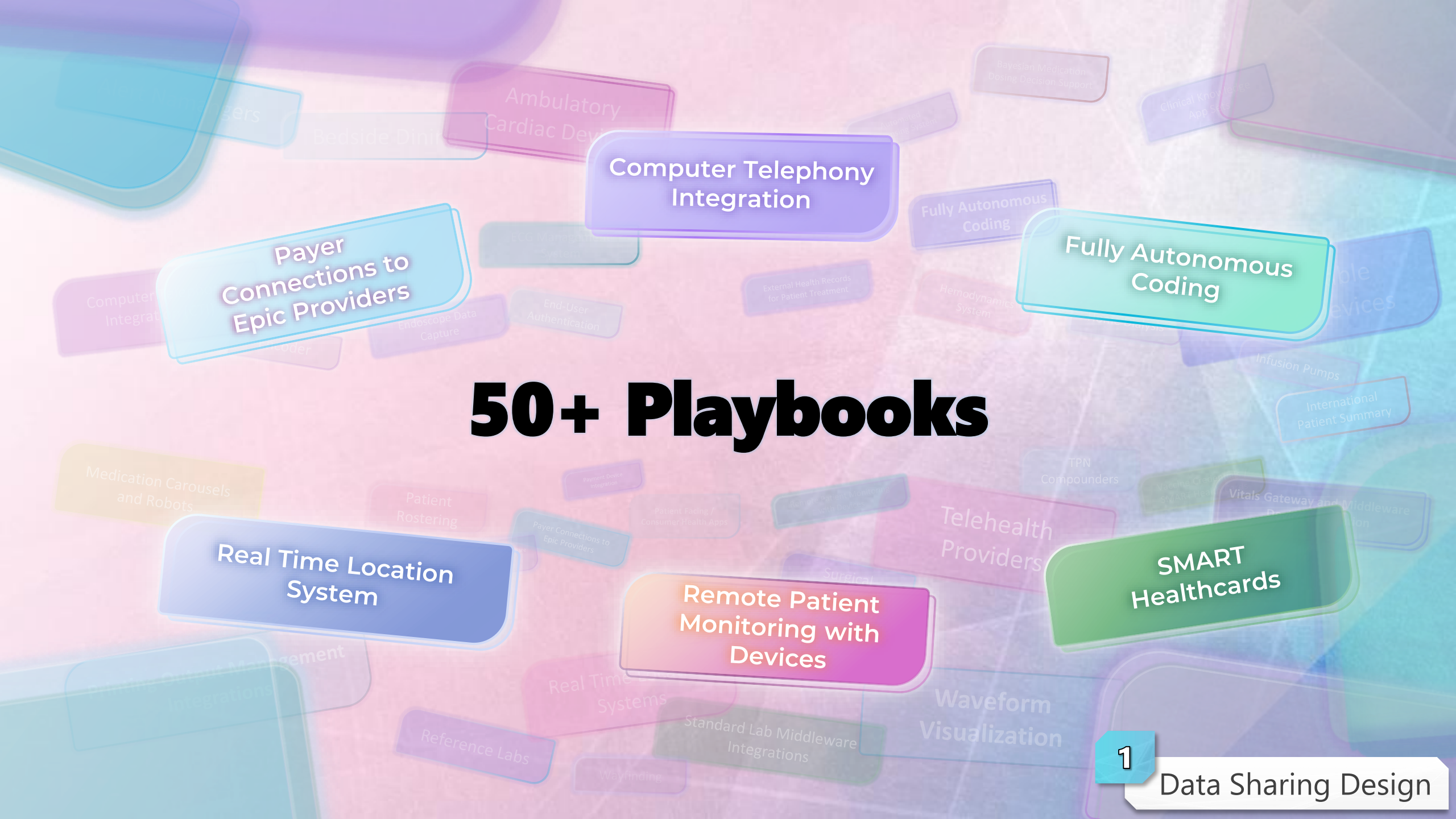


1 Data Sharing Design

Bulk FHIR




OPEN
Epic
CDS HOOKS™
External Decision Support
External Decision Support Engine
Epic
OurPractice Advisory - Willow, Eric E
Radiation Exposure
This patient has exceeded their lifetime dose of radiation exposure.
Source: Click here for ACR Radiation Guidelines
Perform the following actions
Remove the following orders
Remove: CT Head w IV Contrast
Expected: 10/27/2025, Expires: 10/27/2026, Routine, Ancillary Performed
Remove CT Head w IV Contrast
Apply the following
Order: Create Order (MRI Head w and wo IV Contrast)
Acknowledge and continue
Other options
Accept (2)
Dismiss
1
Data Sharing Design


Computer Telephony Integration
Payer Connections to Epic Providers
Fully Autonomous Coding
50+ Playbooks
Real Time Location System
Remote Patient Monitoring with Devices
SMART Healthcards
1
Data Sharing Design

Explore the API Catalog

https://vendorservices.epic.com/OpenEpicApis

Home | Explore Apps | Manage Apps | Find Resources | Jump To | EpicCare Guy

open.epic APIs

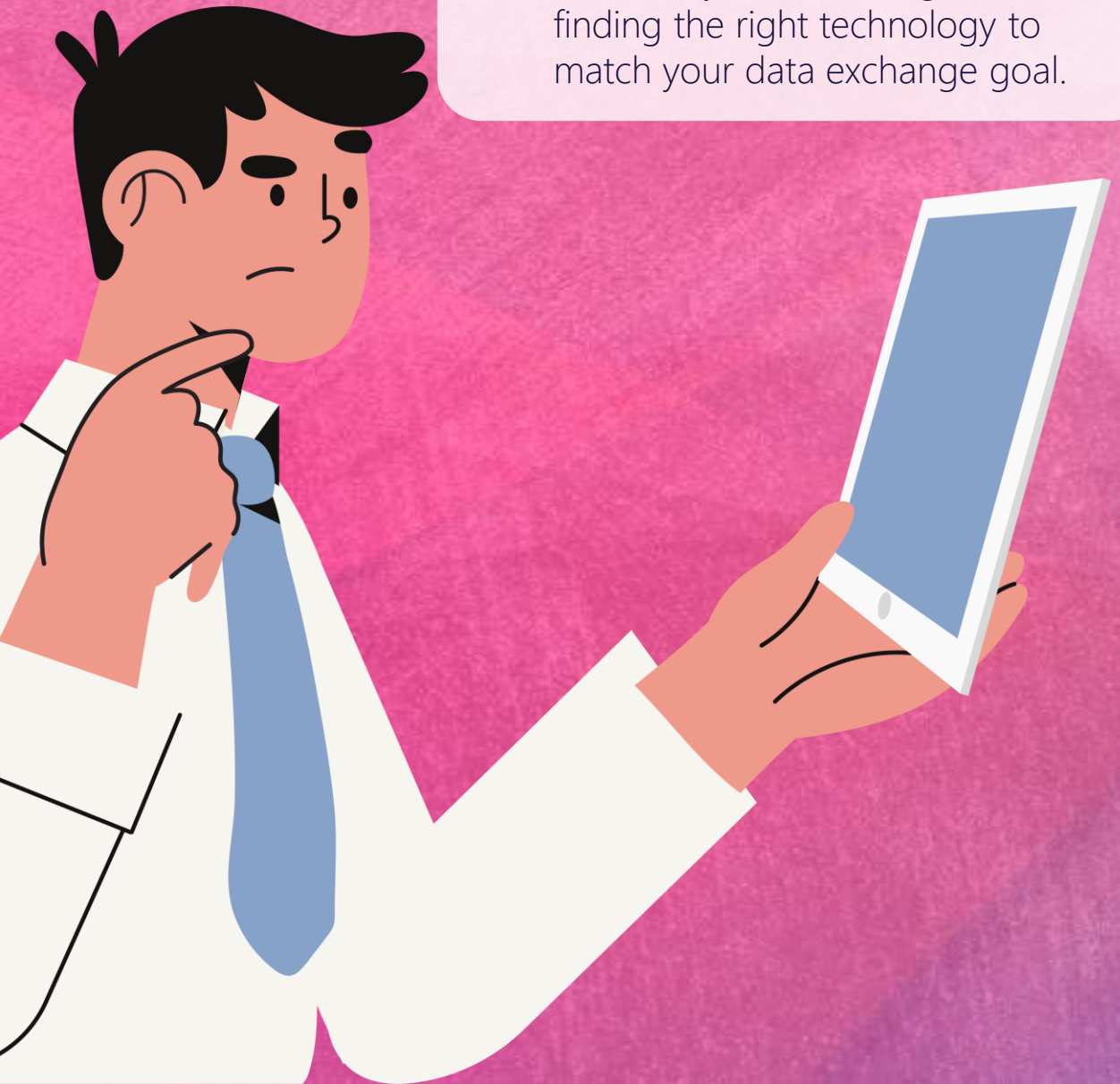
USCDI FHIR APIs

- AllergyIntolerance.Read
- AllergyIntolerance.Search
- **Bulk Data Group**
  - → Bulk Data Delete Request ^
  - → Bulk Data File Request ^
  - → Bulk Data Kick-off ^
  - → Bulk Data Status Request ^
- CarePlan.Read (Encounter-Level)
- CarePlan.Read (Longitudinal)
- CarePlan.Search (Encounter-Level)
- CarePlan.Search (Longitudinal)
- CareTeam.Read (Longitudinal)
- CareTeam.Search (Longitudinal)
- **Clinical Notes Document Group**
  - → Binary.Read (Clinical Notes)
  - → Binary.Search (Clinical Notes)
  - → DocumentReference.Read (Clinical Notes)
  - → DocumentReference.Search (Clinical Notes)
- Condition.Read (Care Plan Problem)
- Condition.Read (Encounter Diagnosis)
- Condition.Read (Health Concern)
- Condition.Read (Problems)
- Condition.Search (Care Plan Problem)
- Condition.Search (Encounter Diagnosis)
- Condition.Search (Health Concern)
- Condition.Search (Problems)
- Coverage.Read
- Coverage.Search
- **Generated CCDA Document Group**
  - → Binary.Read (Generated CCDA)
  - → Binary.Search (Generated CCDA)
  - → DocumentReference.Read (Generated CCDA)
  - → DocumentReference.Search (Generated CCDA)
- Goal.Read (Care Plan)
- Goal.Read (Patient)
- Goal.Search (Care Plan)
- Goal.Search (Patient)
- Immunization.Read
- Immunization.Search
- **Labs Document Group**
  - → Binary.Read (Labs)
  - → Binary.Search (Labs)
  - → DocumentReference.Read (Labs)
  - → DocumentReference.Search (Labs)
- Location.Read
- Location.Search
- **Media Study Group**
  - → Binary.Read (Study) (R4)
  - → Binary.Search (Study)
  - → Media.Read (Study)
  - → Media.Search (Study)
- Medication.Read
- Medication.Search
- MedicationDispense.Read (Fill Status)
- MedicationDispense.Search (Fill Status)
- MedicationOrder.Read
- Observation.Read (SDOH Assessments)
- Observation.Read (SmartData Elements)
- Observation.Read (Social History)
- Observation.Read (Study Finding)
- Observation.Read (Vitals)
- Observation.Search (Assessments)
- Observation.Search (Labs)
- Observation.Search (SDOH Assessments)
- Observation.Search (SmartData Elements)
- Observation.Search (Social History)
- Observation.Search (Study Finding)
- Observation.Search (Vitals)
- Organization.Read
- Organization.Search
- Patient.Read (Demographics)
- Patient.Search (Demographics)
- Practitioner.Read
- Practitioner.Search
- PractitionerRole.Read
- PractitionerRole.Search
- Procedure.Read (Orders)
- Procedure.Read (SDOH Intervention)
- Procedure.Read (Surgeries)
- Procedure.Search (Orders)
- Procedure.Search (SDOH Intervention)
- Procedure.Search (Surgeries)
- Provenance.Read
- RelatedPerson.Read (Friends and Family)

1 Data Sharing Design

Technology Guidance Form

Submit if you are having trouble finding the right technology to match your data exchange goal.



Epic Technology Guidance

Legal Name of party seeking access

(Include Inc., LLC, Corp., etc.; if you are not representing an organization or are an independent contractor, list your full legal name.)

Principal business address

If you are not representing an organization, list your primary mailing address. Spell out the state.

Website (optional)

Corporate contact name

Corporate contact title (optional)

Corporate contact phone

Corporate contact email

This form will let you select specific technologies that you need access to. If you aren't sure where to start or want to research available technologies, check out the Data Sharing Playbooks and Specifications on open.epic.

Select technologies

Select the technologies you want to use to exchange data with an Epic customer. We will direct you to the right documentation based on your selection.

Search here to filter menu

- Active Guidelines
- AdverseEvent
- AllergyIntolerance
- Appointment, Schedule, Slot
- Authentication and Single Sign-On (SSO)
- Batch Eligibility Query (BEQ)
- Bidirectional Correspondence
- CarePlan, Goal
- Cash Management
- CDS Hooks
- Clinical Context Manager Integration
- Clinical Document Architecture (CDA)
- Closing Referral Loop
- Coding - Bidirectional
- Coding - Incoming Query and Response
- Condition
- Consent
- Content Linking
- Credit Card and Bank Acc
- Credit Card and Check Sca
- CriteriaReview, ReviewColl
- Cross-Community Access
- Desktop Generic Authenti
- Device

I need to request something not listed here

I found what I need - show me the documentation

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Terms of Use - Contact Epic - Privacy Policy

Vendor Services

Developer Support



Q&A Support

200+ Proprietary APIs

42% ↑ since Open@Epic 2025

Advanced Testing Tools

Bulk Access via Kit and Clarity

Learn More!

Today @ 10:30

OEC08 Data Exchange Design Principles and Guidance

Get an overview of the self-service resources available through Open.Epic, including playbooks, implementation guidance, developer documentation, and other tools designed to help you succeed.

Today @ 3:30

OEC21 FHIRstarting (without burning anything down)

Interested in developing a FHIR app? In this session, learn about FHIR's general capabilities, an overview of Epic's resource support, good use cases for FHIR, and tips & tricks for connecting.

Today @ 11:30

OEC02 FHIR Roadmap

A dual perspective on the FHIR standard, highlighting both industry-wide momentum and Epic's ongoing efforts. Presenters cover recent and upcoming development, as well as some standards and regulatory updates.

Tomorrow @ 9:30

OEC27 CDS Hooks at Point of Care

Join Epic and FDB presenters to discuss the history of CDS Hooks, the value of the standard for real time decision support, Epic's support of the standard, and FDB's successful experiences with implementation.

Register a Client Record



App Contexts

Patient



Clinician/Staff



Backend System



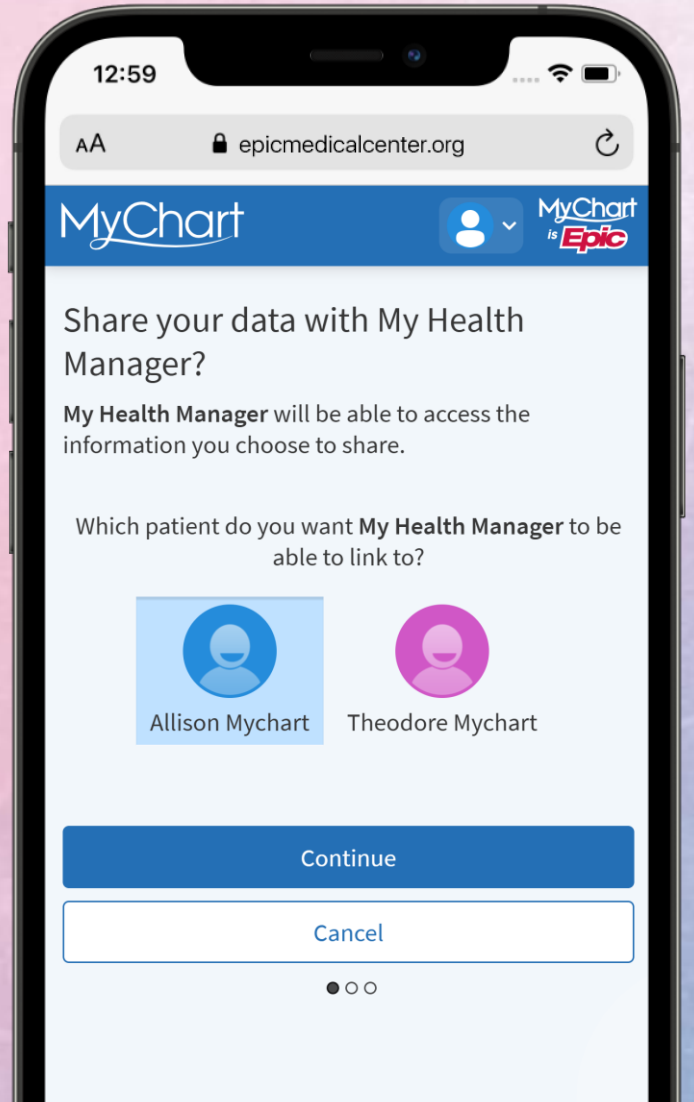
2

Register a Client Record

OAuth 2.0 in a Nutshell

Health app, what meds do I need to take today?





Can I get an access token to check?

2 Register a Client Record

Learn More!

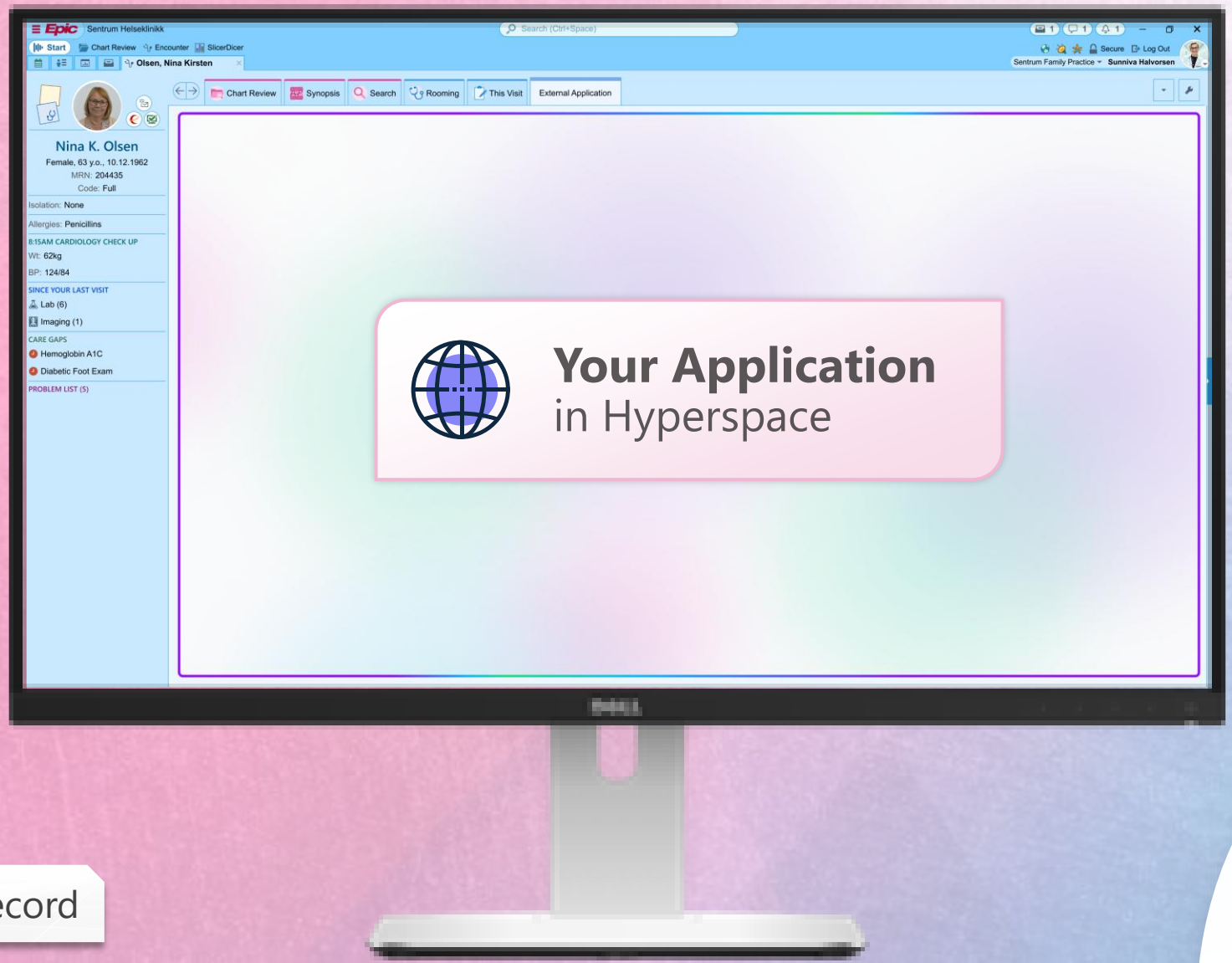
Today @ 11:30

OEC11 OAuth2 in Healthcare

Join us for a technical deep dive on the latest security standards for interoperability with Epic.

Discover how the specification enables patient- and user-mediated data exchange and aligns with HIPAA considerations around data sharing.

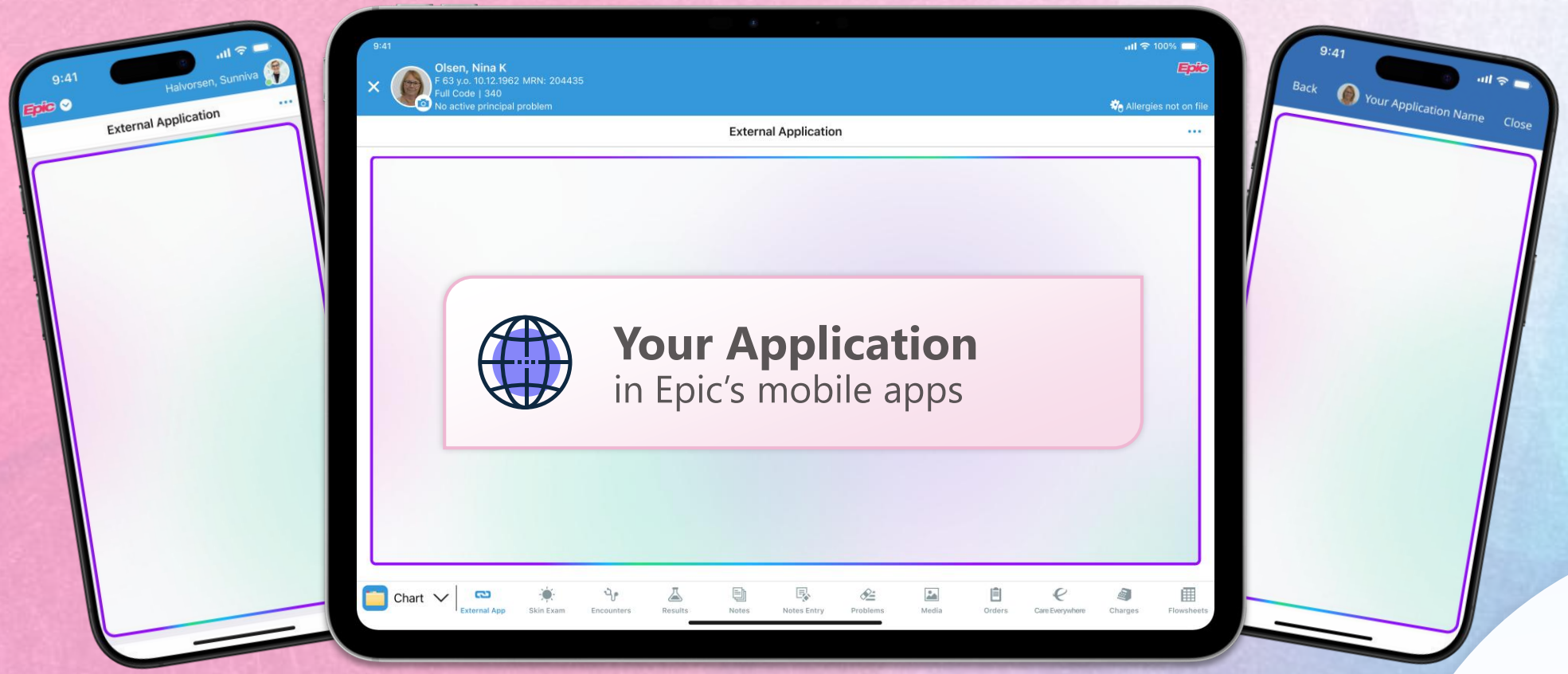
Supported OAuth 2.0 Workflows



2 Register a Client Record

SMART®

Supported OAuth 2.0 Workflows



2 Register a Client Record

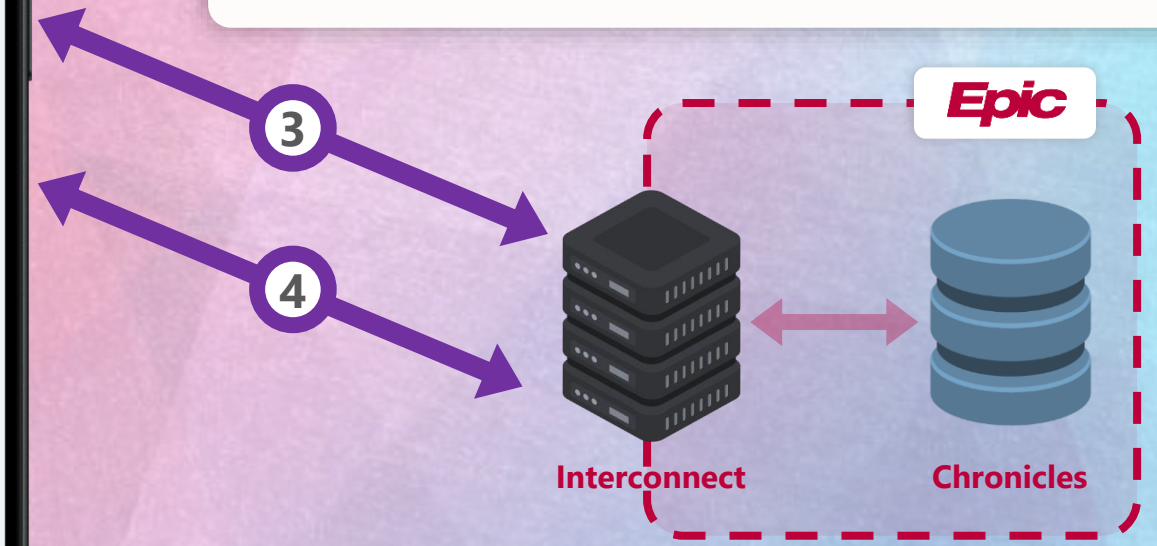
SMART®

Supported OAuth 2.0 Workflows

The health system configures a launch point to your app within MyChart



1. Add a custom menu option launch to **Your Idea**
2. **Your Idea** is launched using Smart-on-FHIR
3. **Your Idea** establishes user and patient identity
4. **Your Idea** uses FHIR APIs to get additional data



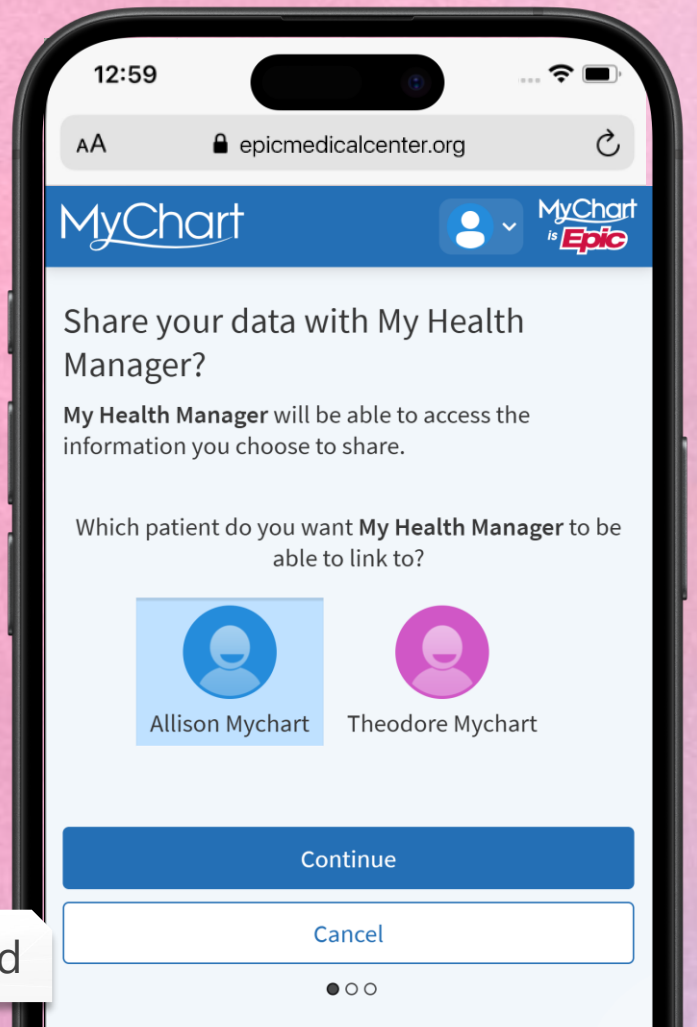
2 Register a Client Record

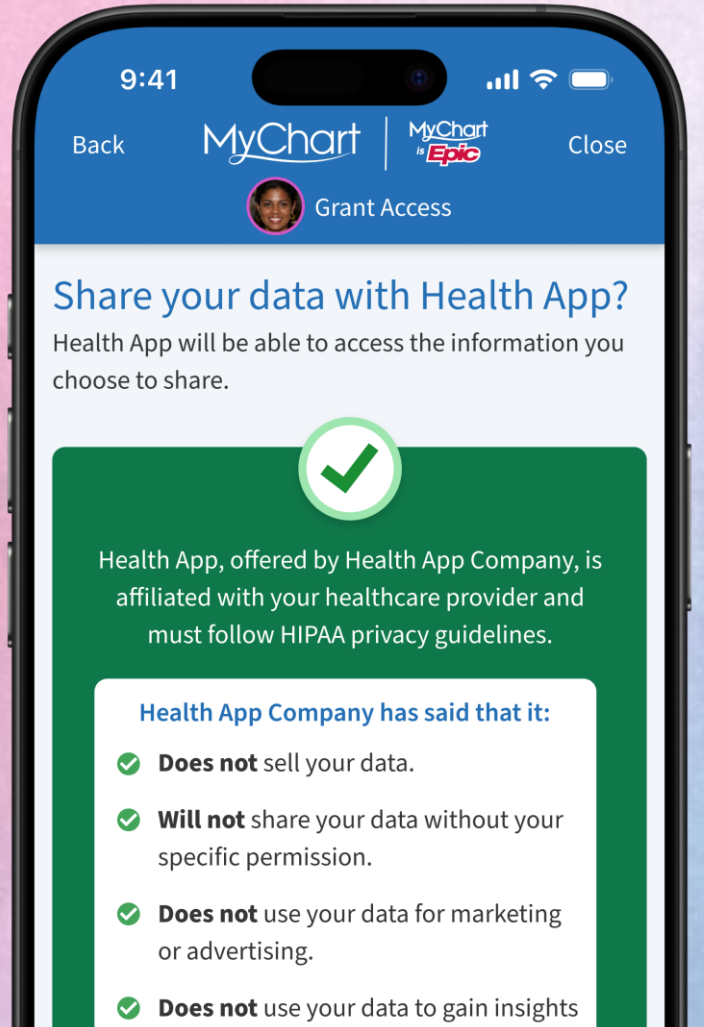
Supported OAuth 2.0 Workflows

Patients use their MyChart login to share their data with your app

Your app asks for access

The patient chooses to connect your app to their MyChart.





Your app gets the data

You receive an access token and call FHIR APIs.

2 Register a Client Record

Learn More!

Today @ 2:30

OEC18 Connecting with MyChart

During this session, presenters share the history of MyChart, its tools for exchanging data, and the latest ways Epic supports patient-facing application development by groups like yours. Learn how you can use Epic's recommended practices to build apps that work with MyChart to support a happy and healthy patient population.

Tomorrow 9:30

OEC24 Paperless, Please: Streamlining Patient Authentication

Epic is bringing mobile drivers license and passport-derived digital ID support to the sign-up flow in MyChart to make identity verification and proofing seamless.

OEC28 Works with Epic MyChart: Native Bluetooth Device Support

Standards continue to evolve as patients seek simple ways to share their health data with their care teams. This session covers every step of the interoperability process, discussing how Bluetooth SIG's new data exchange standards enable patients to share with their care team through interoperability via medical devices and Epic.

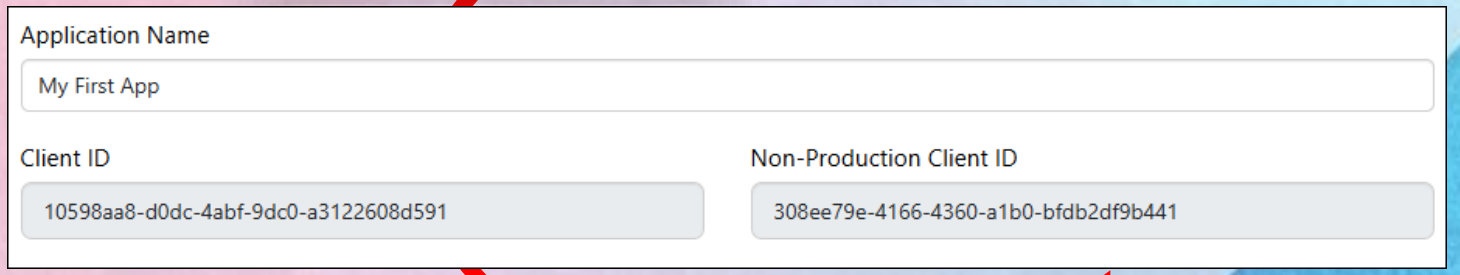
What's in an App?

Client ID Validation

- Incoming APIs
- Incoming HL7 over HTTP
- Some Outgoing APIs



Use the Non-Production Client ID in the Sandbox



2 Register a Client Record

App Templates

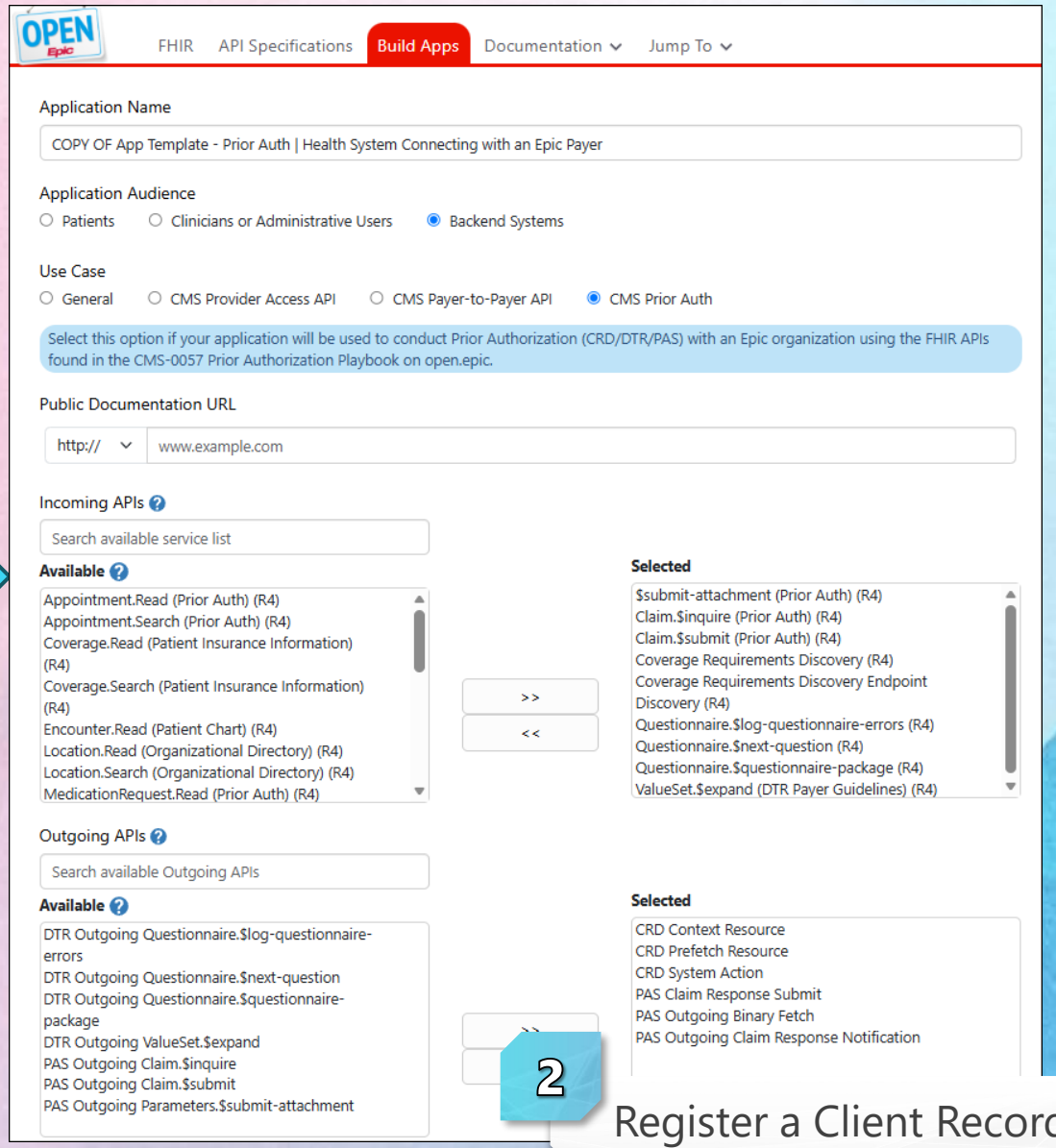
I am a...

Health System Connecting with an Epic Payer

Example: I'm a health system sending CRD, DTR, and PAS requests to a payer that runs on Epic.

Copy Template App →

One click creates a copy of this app with the context, use case, and all scopes below already selected.



2 Register a Client Record

Develop & Test



What's in a Spec?

Observation . Read (Vital Signs) (R4)

"Resource" "Action" "Subresource" "Version"

Specifications

Try It

Observation.Read (Vital Signs) (R4) USCDI

General Information	
HTTP Method:	GET
URL Template:	api/FHIR/R4/Observation/{ID}
Supported OAuth 2.0 User Types:	Backend Systems and Non-OAuth 2.0, Clinicians or Administrative Users, Patients

Description

The FHIR Observation resource defines measurements and assertions about a patient, including vital signs, laboratory data, imaging results, devices measurements, clinical assessment tools, personal characteristics, social history, and core characteristics.

The following types of vital information and corresponding LOINC codes are supported by default. How specific types of data translate from within the Epic system to FHIR might vary depending on organizational configuration:

- 2708-6 Oxygen saturation in arterial blood
- 2710-2 Oxygen saturation in capillary blood by oximetry
- 29463-7 Body weight
- 3141-9 Body weight measured
- 3150-0 Inhaled oxygen concentration
- 3151-8 Inhaled oxygen flow rate
- 59408-5 Oxygen saturation in arterial blood by pulse oximetry (SpO2)
- 8287-5 Head occipital-frontal circumference by tape measure
- 8302-2 Body height

Specifications

Native Request Elements

Name	Description	Is Optional	Is Array
category (String)	Use "vital-signs" to search for vitals observations.	conditional	false
code (String)	LOINC code, CADSR code, flowsheet ID, or encoded flowsheet ID. Either this element or category must be provided. The code element value varies depending upon what is passed (for example, a flowsheet ID vs. a LOINC code). If using a flowsheet ID, the system value is different between Epic organizations, and it is also different between production and non-production environments for the same organization.	conditional	false
date (String)	The date range for when the observation was taken. For growth chart data (Epic version August 2021 and later), only the most recent observation within the timeframe is returned.	true	false
patient (String)	Reference to a patient resource the observation is about. Either this element or subject must be provided. If both are provided, they must match.	conditional	false
subject (String)	Reference to a patient resource the observation is about. Either this element or patient must be provided. If both are provided, they must match.	conditional	false

Specifications

Observation.Read (Vital Signs) (R4) USCDI

General Information	
HTTP Method:	GET
URL Template:	api/FHIR/R4/Observation/{ID}
Supported OAuth 2.0 User Types:	Backend Systems and Non-OAuth 2.0, Clinicians or Administrative Users, Patients

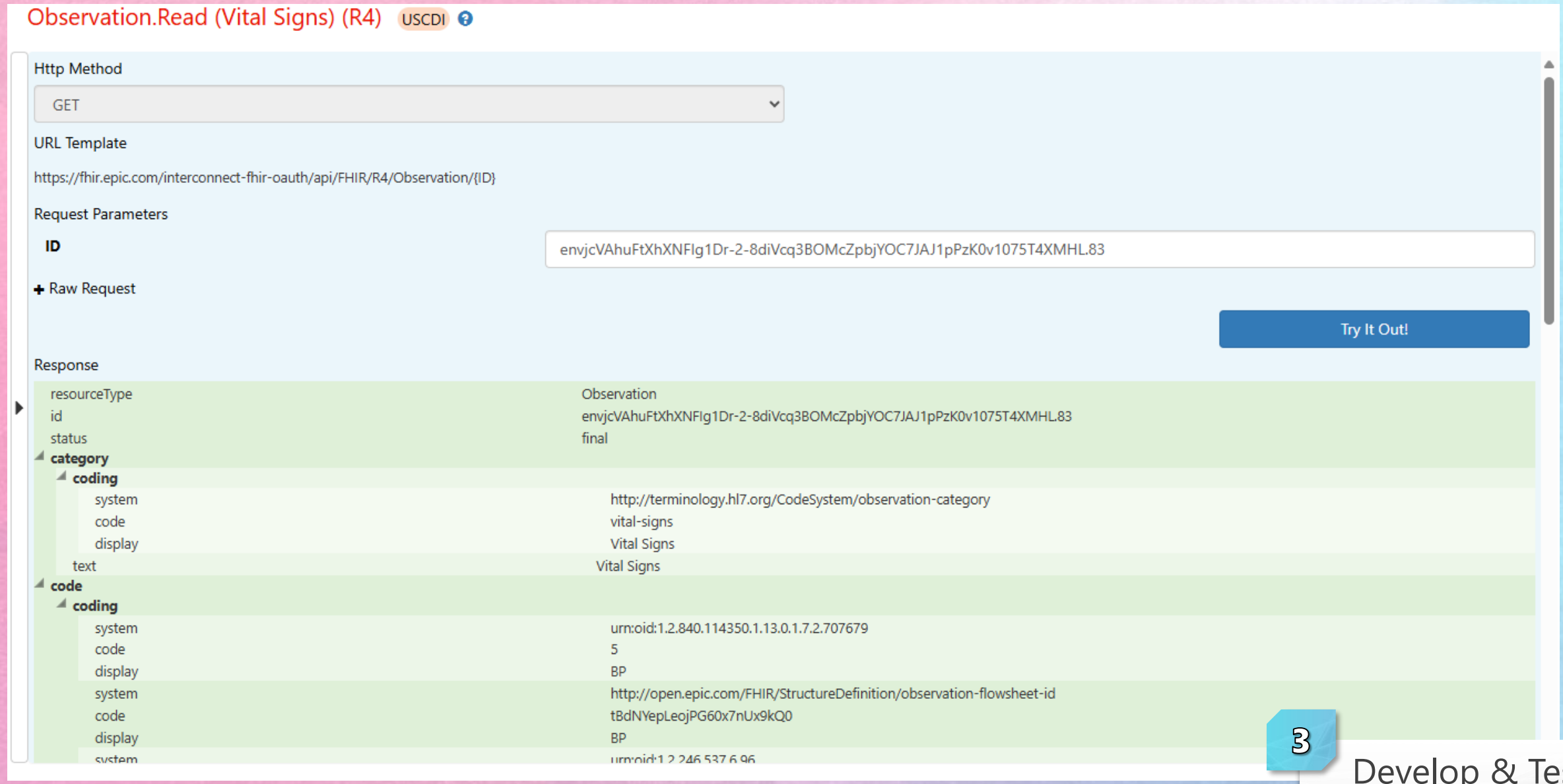
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- 8302-2 Body height

Building FHIR API Calls & Try-It Cases

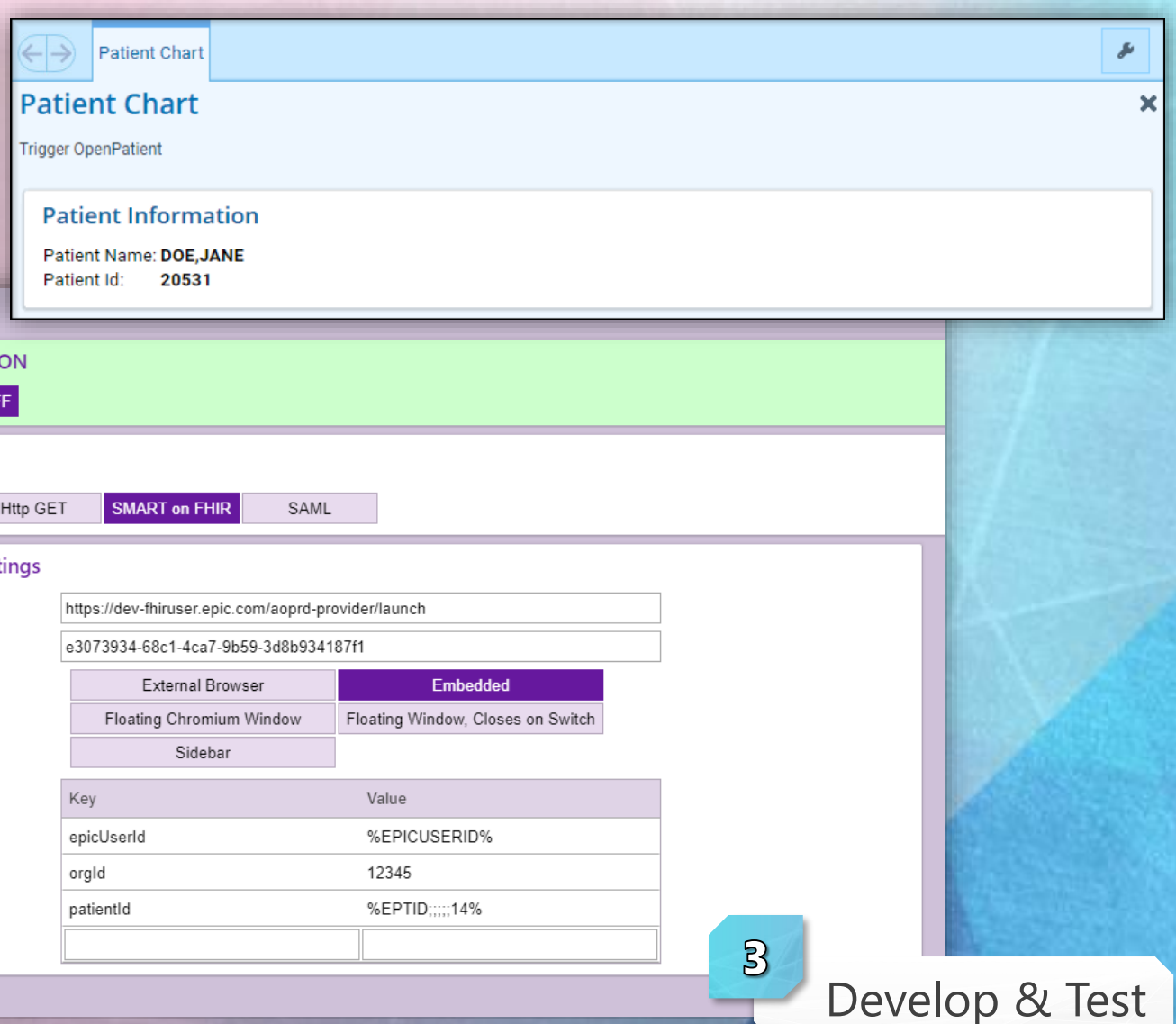


3 Develop & Test

Testing with the Hyperdrive Client Test Harness

Supported Workflows

- SMART on FHIR, FHIRcast, Subspace, XML File Drop, HTTP GET, and SAML
- Speech Recognition for Embedded Apps
- Scan Acquisition, Viewing, and Signature Deficiencies
- E-Signature
- Desktop and Kiosk Generic Authentication
- Electronic Payment Integration



Deploying and Collaborating



Collaboration & Project Planning

Install Tips



- Involve customer operations and IT teams early in the project
  - Customer staff can contact their Epic representatives for expert help
- Each customer has their own instance of Epic
  - Expect variation in mappable data elements, workflows, patient identity, etc.
- Reference our technology-specific app implementation briefs

Collaboration & Project Planning

- Reference our technology-specific app implementation briefs

https://fhir.epic.com/Documentation?docId=implementing

Implementing a SMART on FHIR EHR or Standalone Launch

Many apps launch from a user workflow in Hyperspace to an external web application and use a single-sign-on workflow through SMART on FHIR to log the user in to the external page. SMART on FHIR is the recommended practice for app integrations that launch from Epic. For more information on building with this technology, see our SMART on FHIR launch simulator, and our Hyperdrive Test Harness for testing out your integration using self-service tools.

SMART on FHIR is unique in its support of standalone launch. During a standalone launch, an app can redirect the Epic user to an Epic login page. By authenticating, the user authorizes the app to access information from Epic. You will need to verify that your app has the correct user type set and understand which login credentials can be used in each case. This is the related to the "Who will primarily be using this app?" question. If you have selected:

- Patients: Users must use their MyChart login credentials to authenticate.
- Clinicians or Administrative Users: Users must use their EMP login credentials to authenticate.

As you develop your SMART on FHIR integration, consider how to make your app's integration as performant as possible by limiting FHIR API calls or performing them asynchronously from the web page load. Users want to interact with your app right away, not wait for it to load.

Information to send to the Customer

When you've tested it out and are ready to implement your SMART on FHIR app with a customer, the customer will need just a couple of pieces of technical information to configure the SMART on FHIR launch in Epic. This is the same information you would have used yourself in the SMART on FHIR simulator:

1. **Client IDs** – the organization will follow the App Request process to download your client ID to prepare for your install. For an EHR launch, they will use either the non-production or production client ID in their SMART on FHIR launch configuration, depending on the environment.
2. **Launch URL** – For an EHR launch, the organization's application build team will need the launch URL for the initial landing page that kicks off your SMART on FHIR launch's OAuth 2.0 handshake.
3. **Tokens in OAuth 2.0 Context** – for an EHR launch, the organization's application build team will need the list of context tokens that your app needs at the point of launch. These will be in the form of Key=Value pairs. Refer to Token Library for a list of possible tokens. It can be easiest to send your customers a table with the values you need.

Get Your App to Organizations Automatically

Qualifying patient-facing apps are sent to Epic organizations automatically

Your app qualifies if it:

- ✓ **Is patient-facing and read-only**
- ✓ **Uses only USCDI FHIR APIs**
- ✓ **Doesn't use refresh tokens**, or you upload a client secret for each organization
- ✓ **Is marked ready for production**



Automatically distributed

Your client ID reaches eligible Epic organizations without each one having to request it.

Need to write data or use other APIs? Each organization reviews your app individually.

Full criteria: fhir.epic.com → Documentation → Patient-Facing Apps → Automatic Client Record Distribution

Learn More!

Today @ 10:30

OEC19 Navigating App Governance

Get a health system's perspective on what we look for when evaluating applications for deployment. Learn how you can have the right information ready to support an efficient implementation of your product as well as how to prepare for your long-term relationship with a health system for future product support.

Today @ 3:30

OEC05 Configure This Out Together

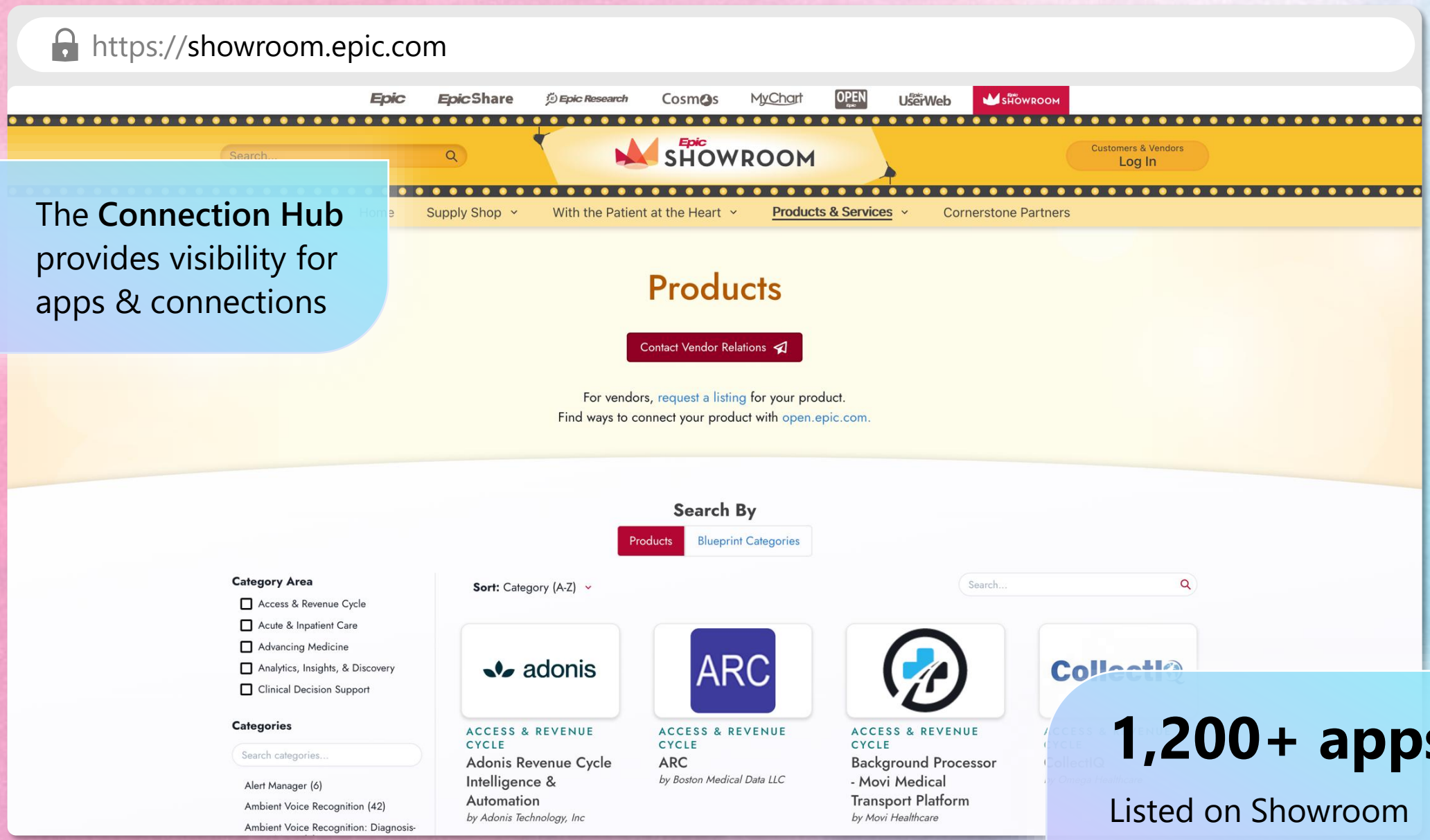
Get an overview of Epic resources and key information you can provide to help health systems go live with third-party integrations faster, while minimizing usage of IT resources.

OEC20 20 Panel: Building Productive Relationships for Successful Implementations

Hear directly from leading industry vendors how they turn customer feedback into stronger products, successfully connect their apps at Epic customers, and navigate implementations. This session brings together perspectives from across the vendor community on what it takes to deliver strong outcomes for customers.

Request Showroom Listing





The **Connection Hub** provides visibility for apps & connections

1,200+ apps

Listed on Showroom

5

Showroom Listing

Connection Hub

- Showroom listing designation for live apps
- Requires ≥1 **live Epic connection**
- $500 per app/year
- Provide your own app details and screenshots
- Purpose: gives customers a place to find solutions

Connection Hub Listing Tips

Highlight **outcomes & benefits**
(avoid unsupported superlatives)

Add **images**

Keep an **accurate list of APIs used**
(work with your tech team)

Learn More!

Today @ 10:30

OEC03 Showing Up in Showroom

This session takes you through an entire app connectivity process, from idea through listing in the Epic Showroom. Learn what support Epic can provide with public & private API options, new public resources, and program paths for both new and mature vendor organizations.

Today @ 1:30

OEC09 Spreading the Word: Tips & Tools for Marketing

You've connected your app to Epic. Now it's time to share that news with the world. This session includes helpful how-to's on talking about your Epic connection, and introduces you to Showroom.

Recap

01 **Data Sharing Philosophy and Design**

Overview of supported standards, our websites, and architecting your data exchange

02 **Register a Client Record**

Obtain client IDs for implementation of OAuth 2.0

03 **Develop and Test**

Simulate app launches and connectivity by connecting to our FHIR developer sandbox

04 **Customer Implementation and Going Live**

Strategize your install project and Go Live with Epic customers

05 **Request Showroom Listing**

Market your live product in Connection Hub

Recap

Let's Get Started



Step-by-Step Developer Guide



Data Sharing Playbooks



API and Interface Specifications



Need Guidance or Access

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