Open@Epic CONFERENCE

Playbooks for Data Exchange Design

Open@Epic 2026

Presenters



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Epic Showroom

Technical Services



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Epic EDI

Technical Services

Learning Objectives

1. Understand the importance of data exchange design
2. Apply core design concepts to your apps
3. Discover available design and implementation resources on open.epic

Agenda

01 Why

02 What & How

03 Playbooks

04 Case Studies

05 Implementation Time

06 Wrap Up

Why?

Principles of Data Exchange

Shared Goals

- Solve healthcare problems that require data exchange
- Generate positive outcomes for patients and those who serve them

Importance of Design



Measure Twice

Data Exchange design is foundational.



High Stakes

Exchanging data between two complex healthcare systems increases the stakes.



You Benefit

And Happier Customers!

What & How

Data exchange design overview

Data Exchange: Core Concepts

Design Overview



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

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.

Discover Recommended Connection Practices

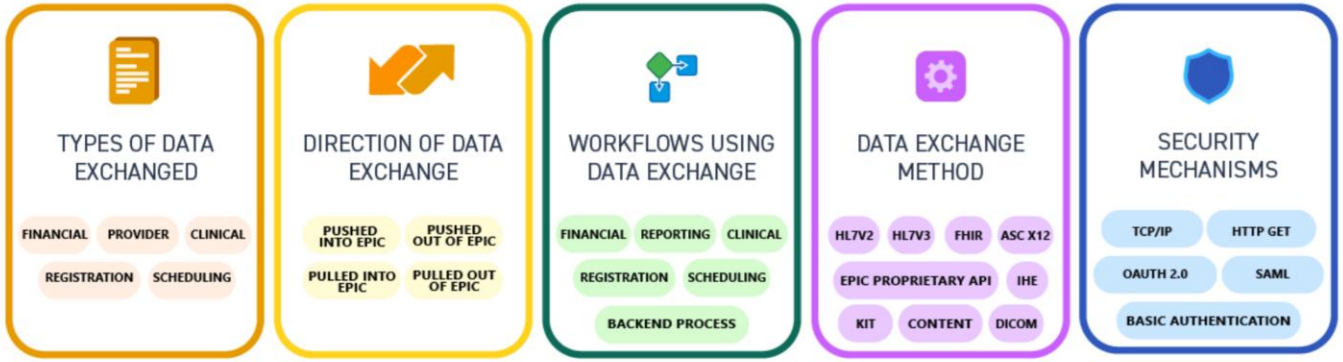
Before designing your connection to Epic from scratch, explore our Playbooks — proven data-sharing approaches built through collaboration between Epic staff and customers for common use cases. Each Playbook highlights supported standards, key design considerations, and real-world tips to help you get started. Building on open standards and community experience, these recommended practices help you ship safer, more reliable connections faster, so you can focus on delivering value to patients and providers instead of reinventing common connection logic.

For example, over 500 patient-authorized health apps have connected to the Epic community in 2025. Our Patient-Facing Consumer Health Apps Playbook highlights how apps can use OAuth2.0 and modern FHIR APIs to help individuals access their health information. As networks have evolved, we've updated our recommended practice to include **TEFCA Individual Access Services (IAS)**, a national framework for secure, patient-authorized data exchange. TEFCA IAS can expand your app's reach, enabling individuals to retrieve records from multiple systems (including beyond Epic) through a single, trusted connection. It's a major step toward a more connected and patient-driven healthcare ecosystem.

Playbooks give you a clear starting point where a path is already proven. When you're charting new territory, keep reading to design your connection.

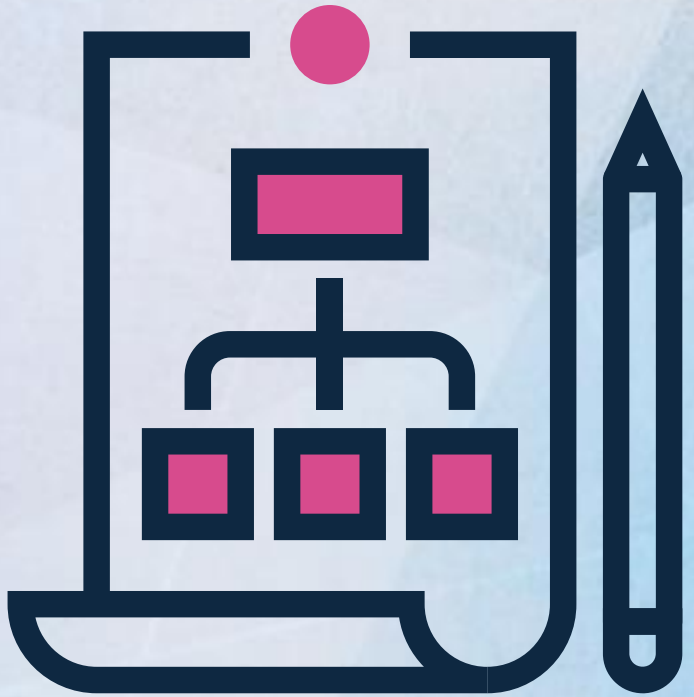
What Should I Consider When Designing My Data Exchange?

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 when 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.



Initial Workflow

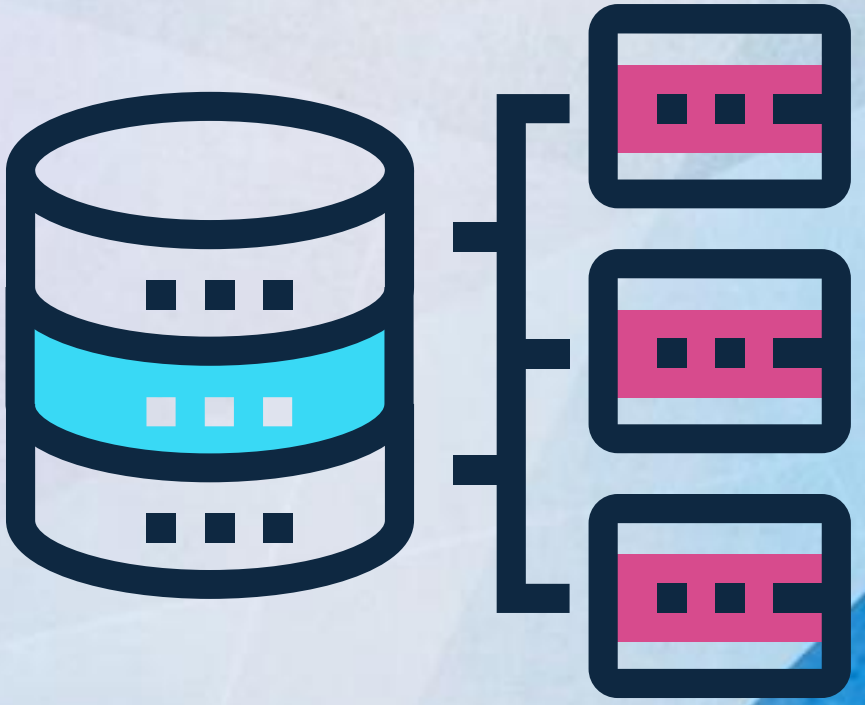
- Mission statement -> Workflow diagram
- Technology follows the use case, not the other way around



Types of Data Exchanged

WHAT data do you need?

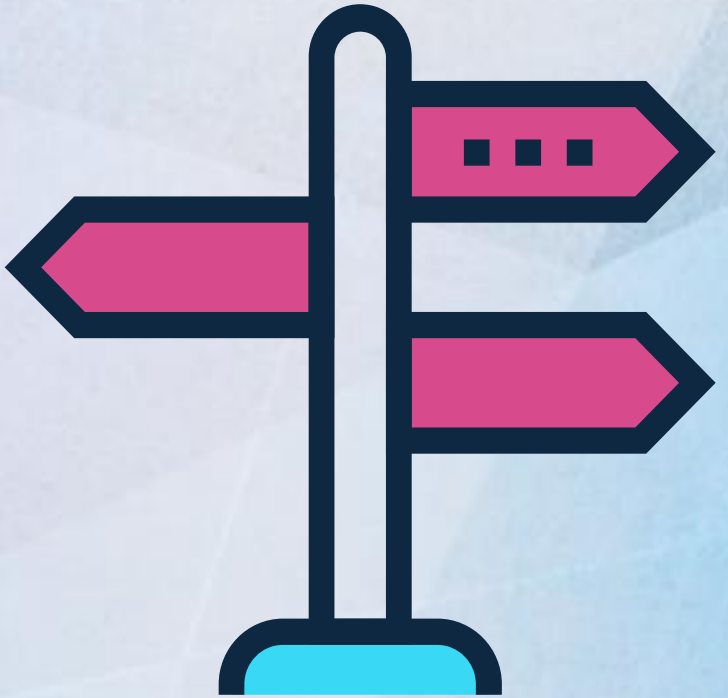
- Core data types
- Level of detail within those types



Direction of Data Exchange

WHERE does it come from?

- Pushed into / out of Epic
- Pulled into / out of Epic
- Maintaining the source of truth
- Strong patient matching



Workflows Using Data Exchange

WHEN do you need it?

- When your app is launched
- When a specific event happens
- On a schedule
- Ad-hoc backfill



Data Exchange Method

HOW will you get it?

	Recency	Volume	Direction	Standards	Trigger
HL7 Interfaces	Real-time	High	Push	✔	Event-driven
RESTful FHIR	Real-time	Low	Push/Pull	✔	On-demand
HL7 CDA	Varies	Medium	Push/Pull	✔	Varies
SMART Apps	Real-time	Low	Bidirectional	✔	On-demand
CDS Hooks	Real-time	Low	Bidirectional	✔	Event-driven
FHIRCast	Real-time	Low	Bidirectional	✔	Contextual
Bulk FHIR	Delayed	Moderate	Pull	✔	Batch
Reporting Tools	Delayed	High	Push/Pull	✘	Batch
Other Web Services	Real-time	Low	Varies	✘	Varies

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OEC14 – Speed, Safety, and Standards

1:30 – 2:10 PM Today

in Roll

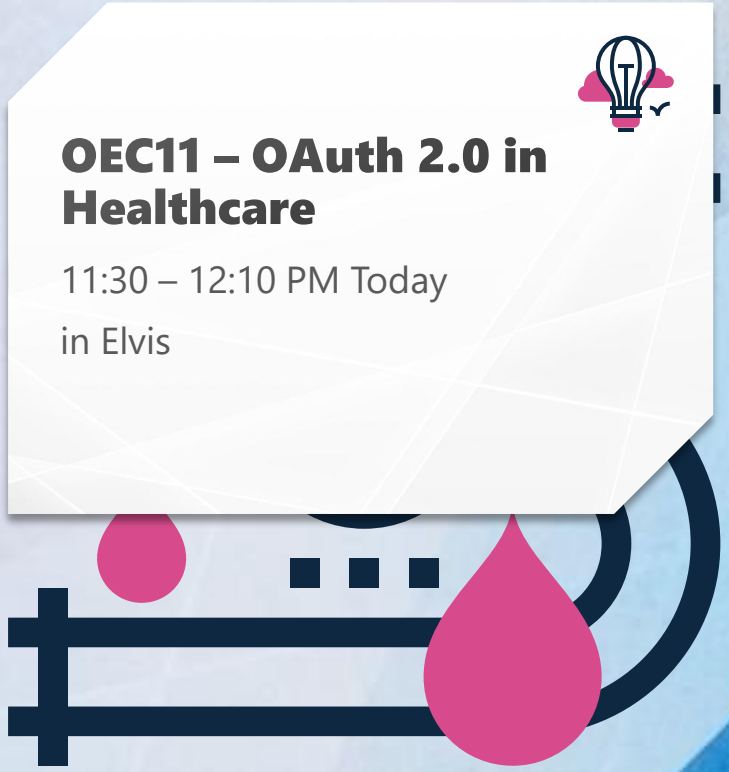
Authentication Mechanism

- OAuth 2.0 / SMART on FHIR
  - Recommended in most cases
- Direct socket (MLLP)
- Other historic mechanisms
  - SAML, Basic Auth



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Playbooks

Common connection patterns

What Is a Playbook?

Common integration patterns, documented

Data Sharing Playbooks

Data Sharing Playbooks offer practical recommendations for connecting with Epic community members. Each playbook highlights proven approaches to common data sharing use cases, whether supporting patient-directed access, enabling providers to deliver whole-person care, or improving operations. By leveraging open standards, these playbooks help innovators accelerate safe, reliable connections.



All Playbooks



Patient Access



Provider Workflows



Operational Efficiency

Alert Managers

Alert Managers ingest alerts from a variety of devices, such as inpatient vitals monitors, and determine who should get notified for each alert via Epic's Alert Communicator.

History of Playbooks



History of Playbooks

Pre-2024

- Pockets of expertise
- Occasional specialized tutorials & guidance

2024

- Toolbox program launches
- “Blueprints” for each category



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2025

- Playbooks debut at Open@Epic 2025

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Since 2025

- Creating playbooks alongside new Toolbox categories.

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Since 2025

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2026

- **50+** playbooks
- Staff Duress
- Image Exchange etc.

Playbook Case Studies

Three examples, three shapes of problem

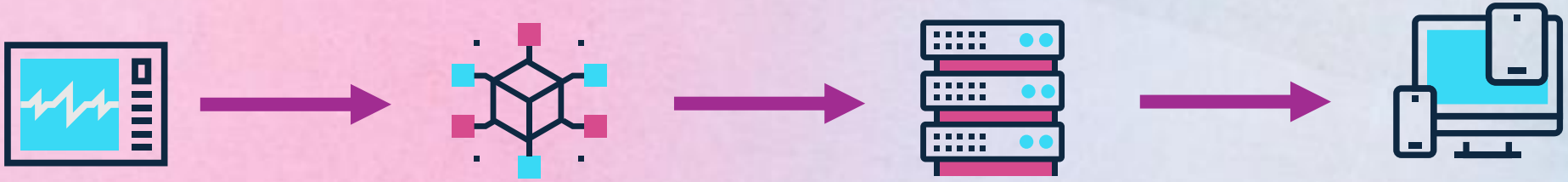
Playbook Case Studies



1. Alert Managers
   (Bespoke Standard)
2. Remote Patient Monitoring with Devices
   (Multiple Options)
3. Patient Rostering
   (Open-Ended)

1. Alert Managers

What are Alert Managers?



Alert Reporter
Monitor, Nurse Call, etc.

Initiates alarm state

Alert Manager
510(k) Medical Device

Determines who gets notified
Handles escalation path

Alert Communicator
Epic

Sends feedback to manager

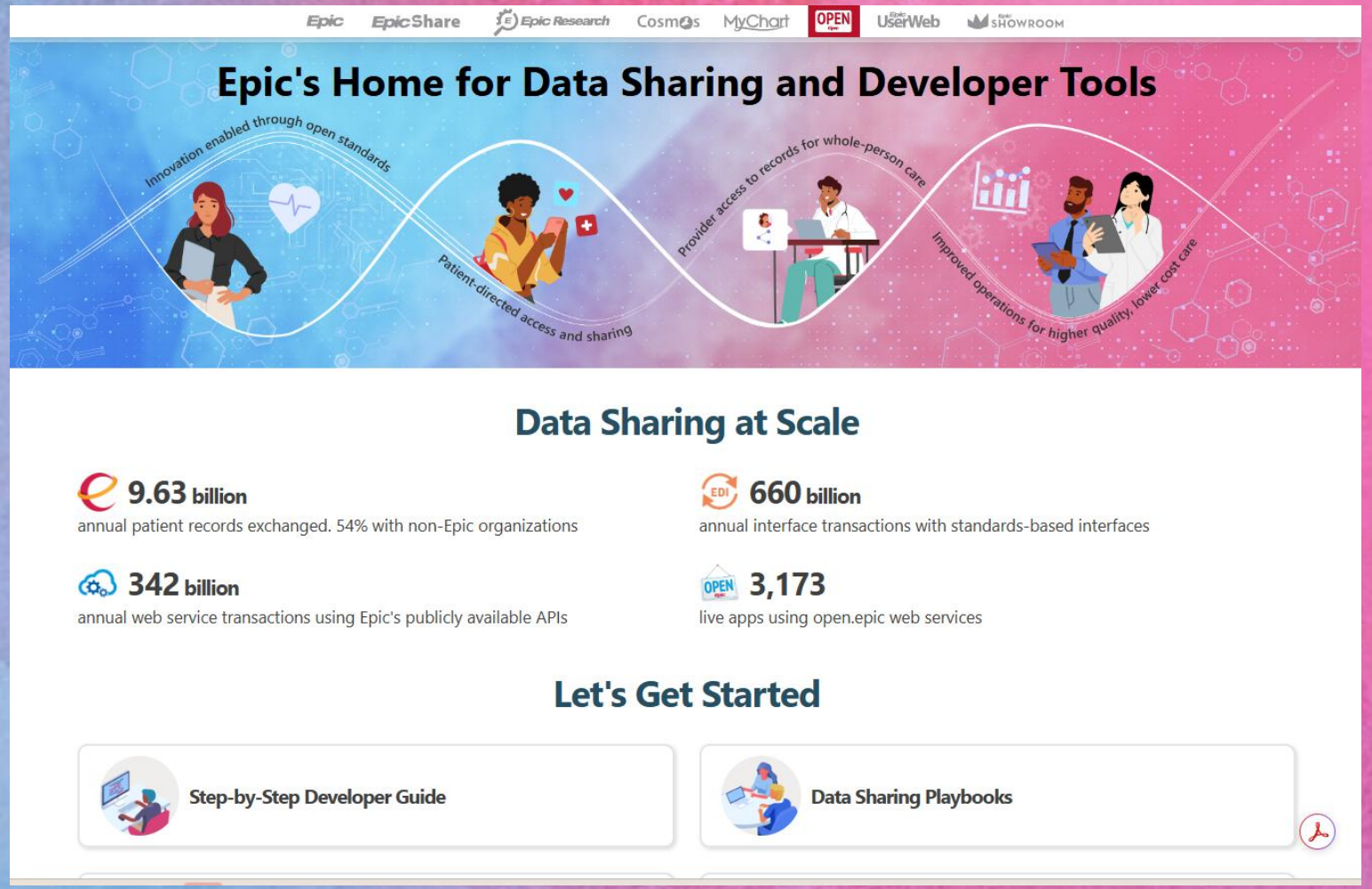
End User Device
Running an Epic Client

End user acts on alert

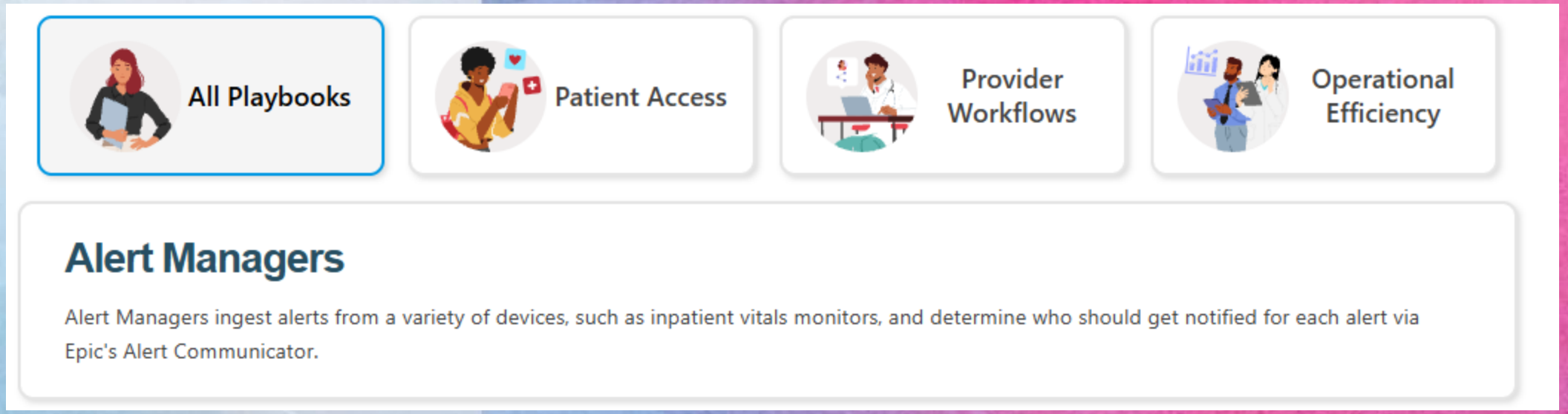
Situation



Open.epic Website

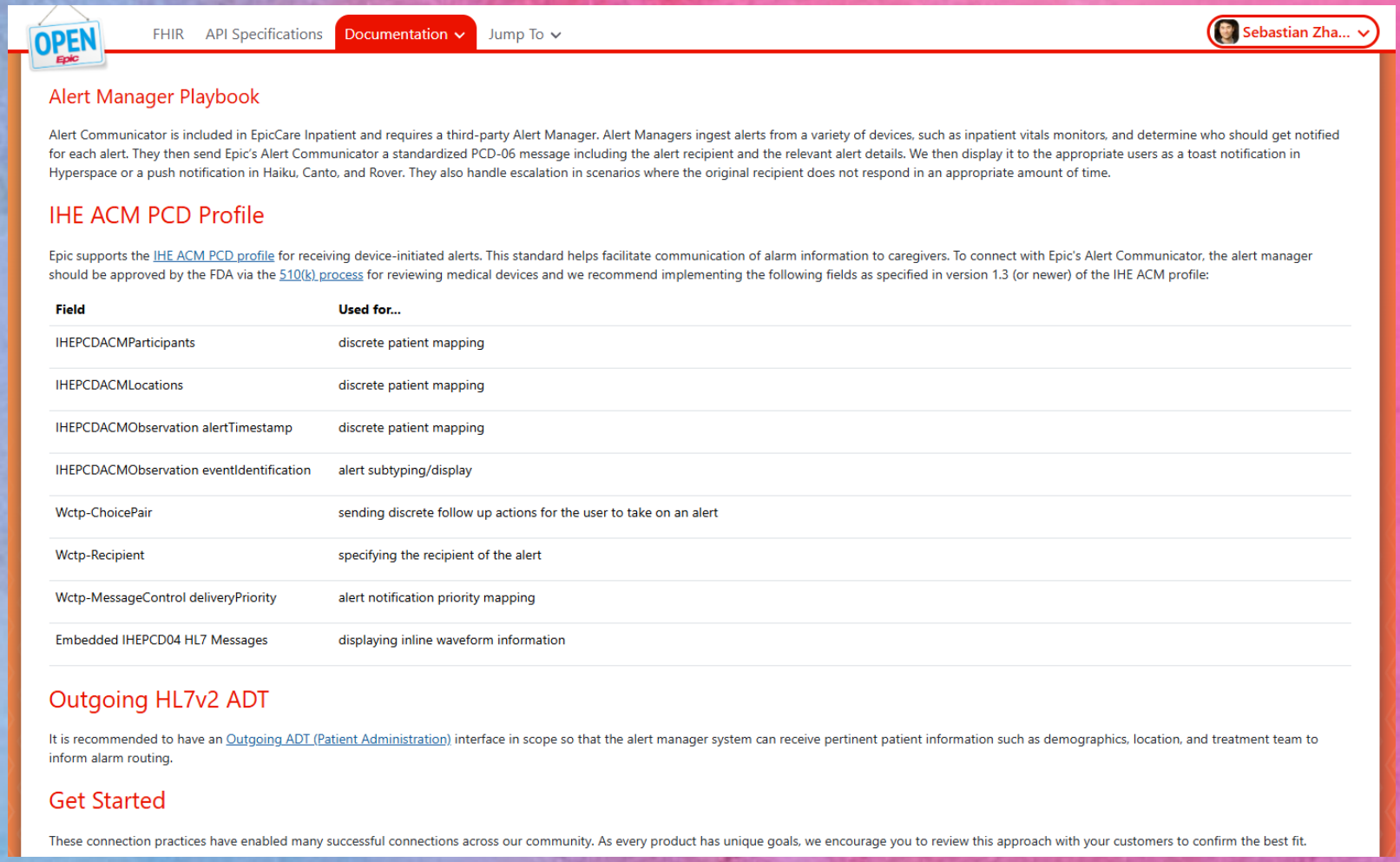


Open.epic Website



Alert Manager Playbook

- IHE Profile: Use Case Specific Standard
- Outgoing ADT: Best Practice



Success!



2. Remote Patient Monitoring

FHIR and/or HL7v2



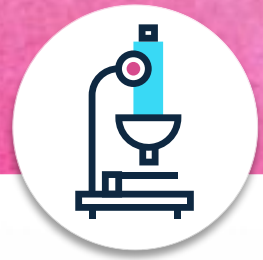
Not just RPM

This fork shows up in many technology implementations. Recognize it early and design around it instead of discovering it late.



High Stakes

Healthcare is complex. Exchanging data between two complex healthcare systems increases the stakes.



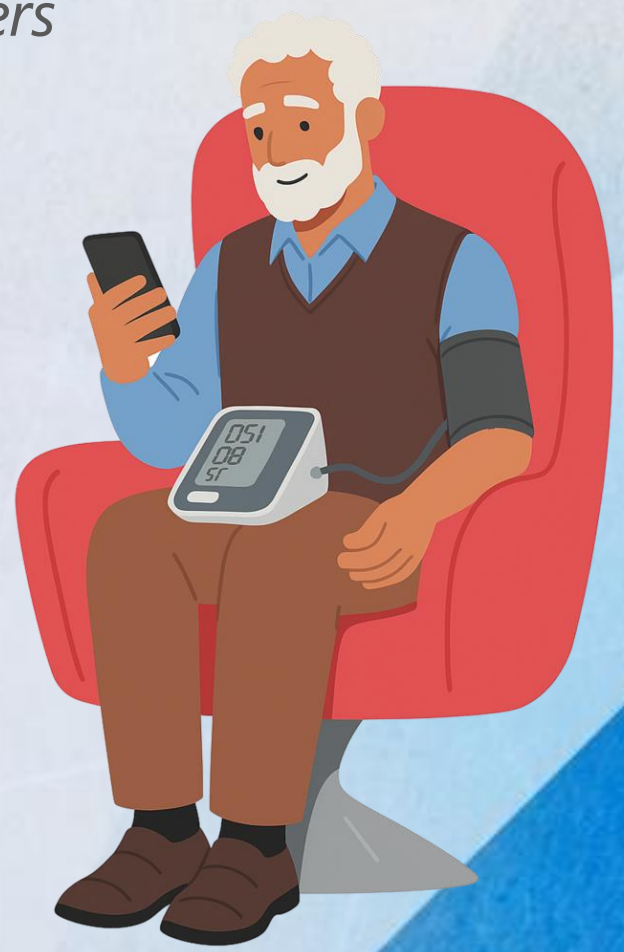
Details, Details

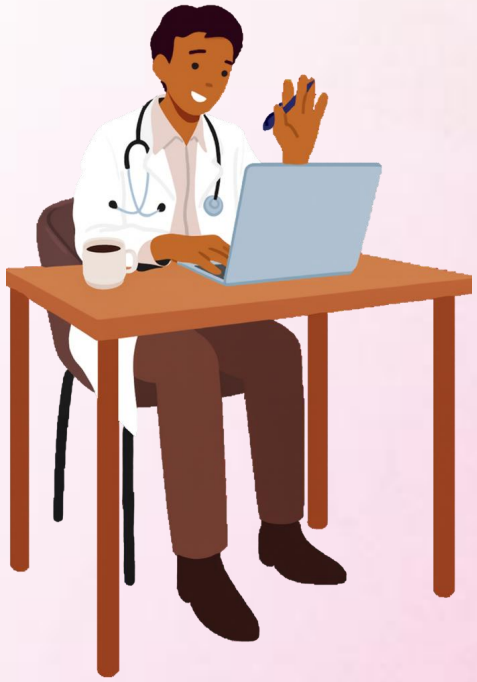
Low-level technology details can make one preferred over the other in certain workflows.

Remote Patient Monitoring with Devices

For RPM software vendors & device manufacturers

- Monitor chronic conditions from home
- Device data written to the patient's chart
  - Provider reviews data in Epic & escalates as needed







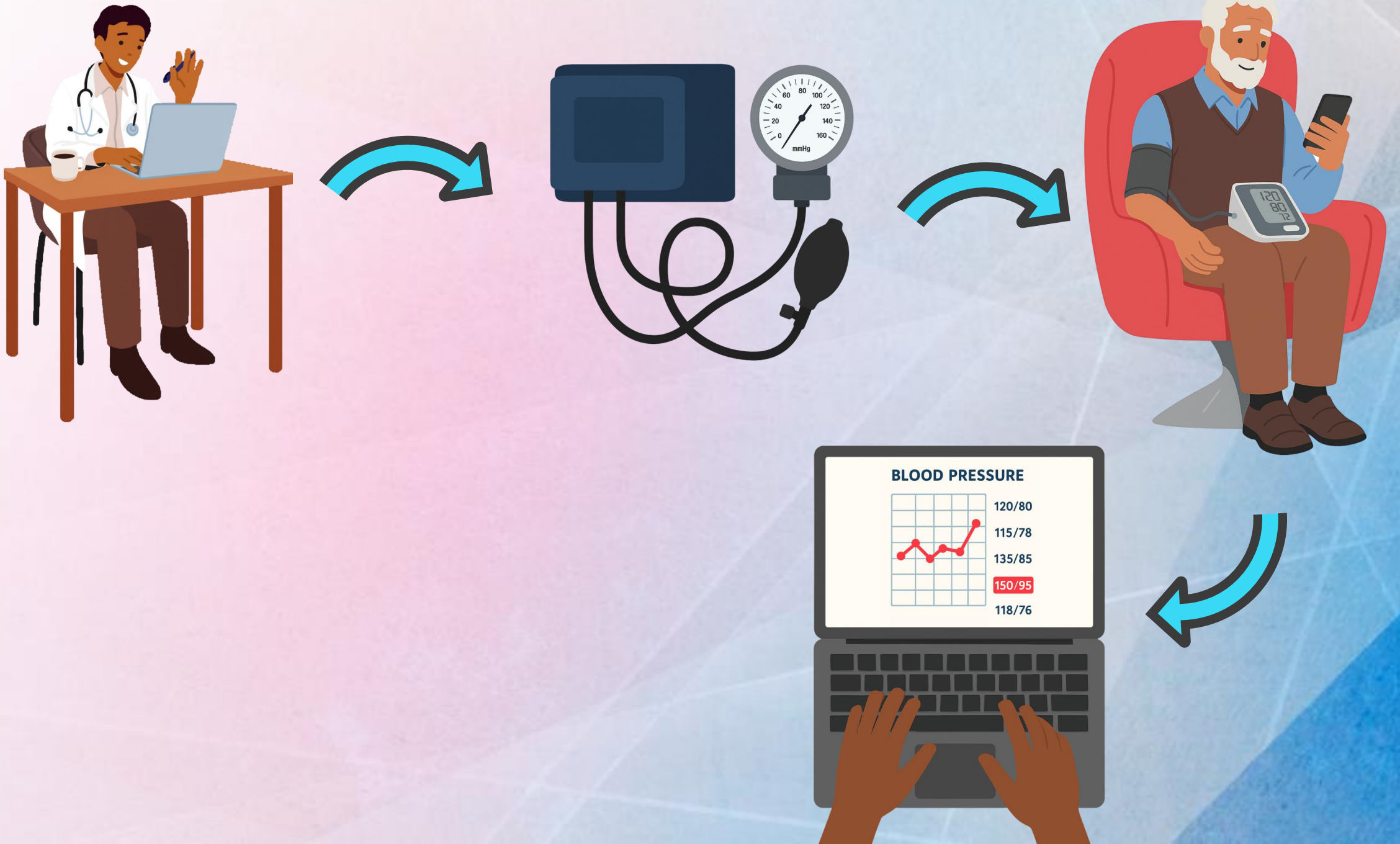


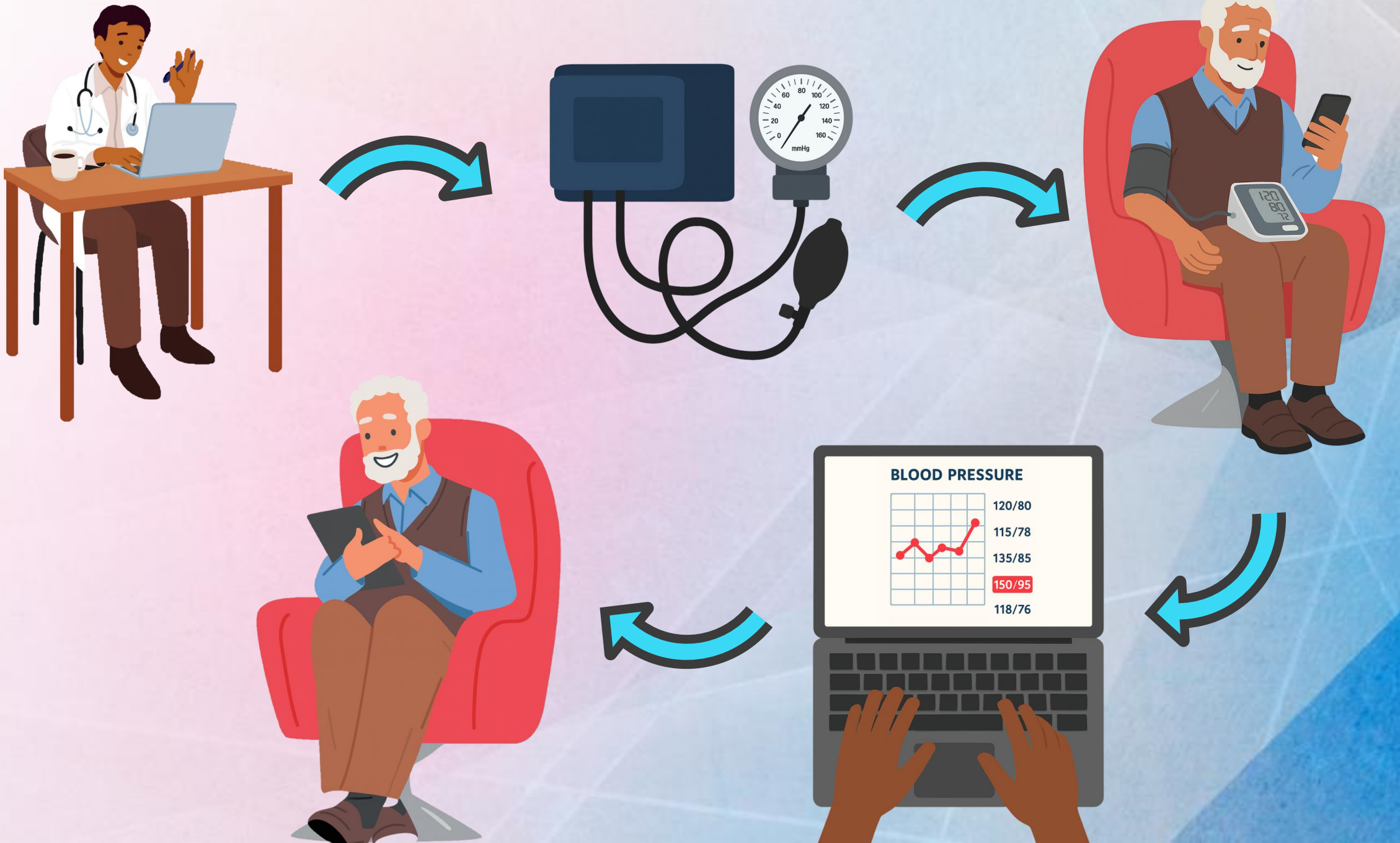

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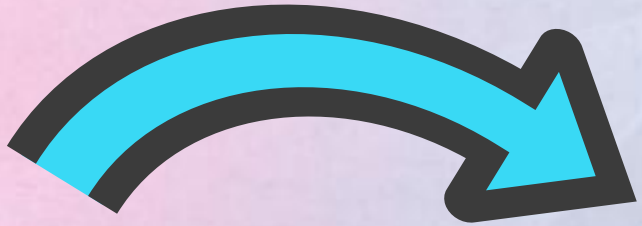

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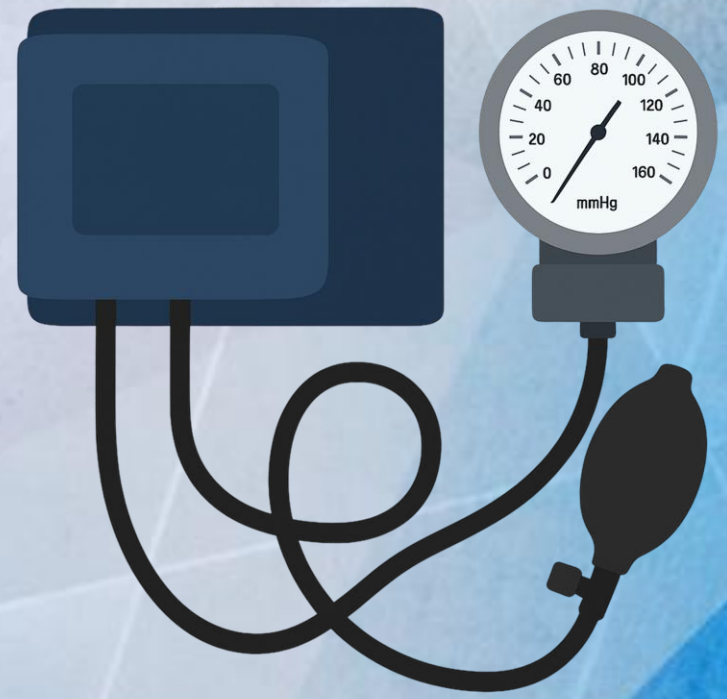

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Orders & Demographics

HL7v2 – Outgoing Ancillary Orders

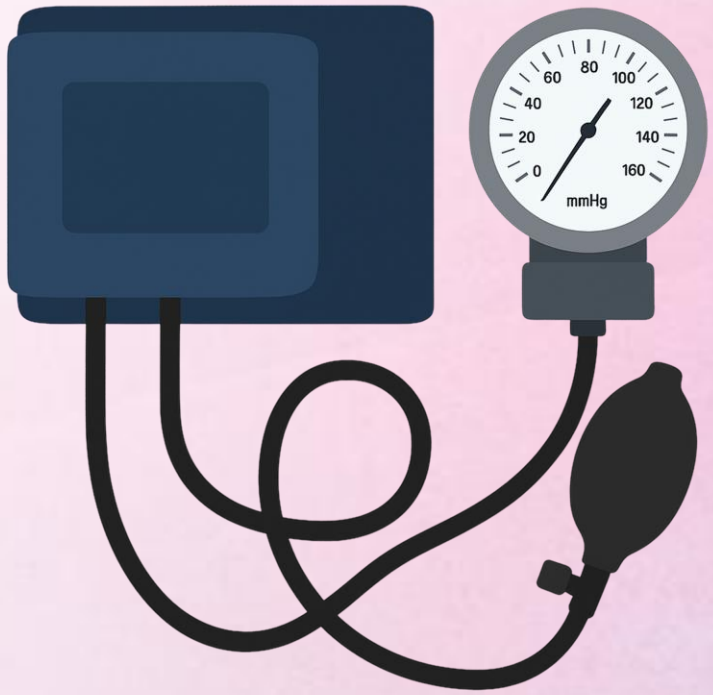


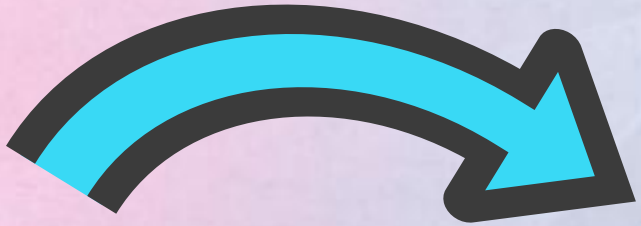




Updated Demographics

FHIR Patient.Search / $match

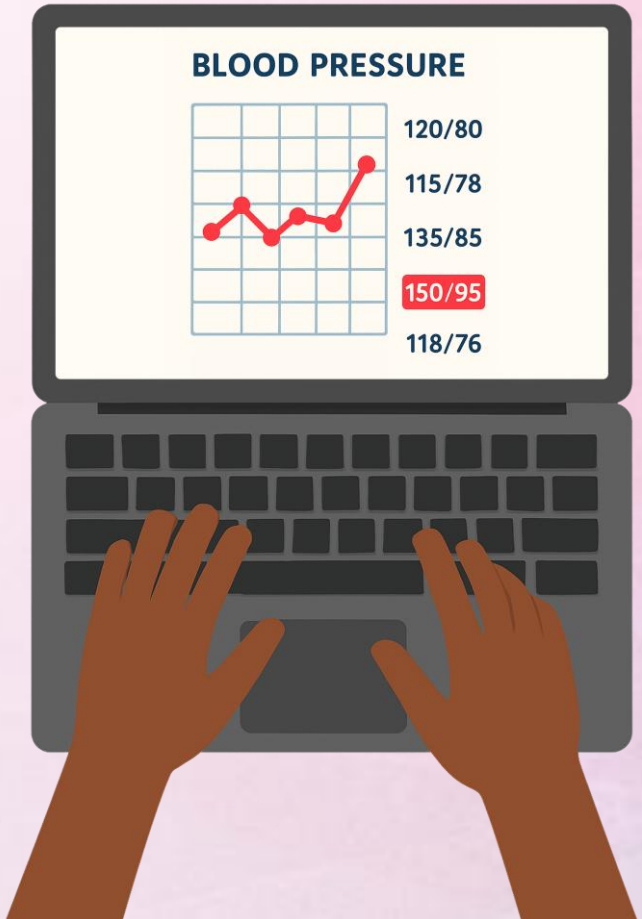






Patient-Generated Data

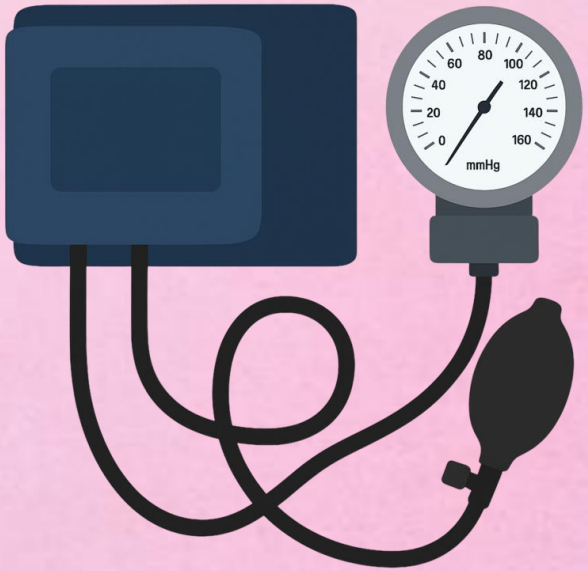
??







How does the patient enter their readings?



Direct from the device?

HL7v2 Incoming Flowsheet Interface



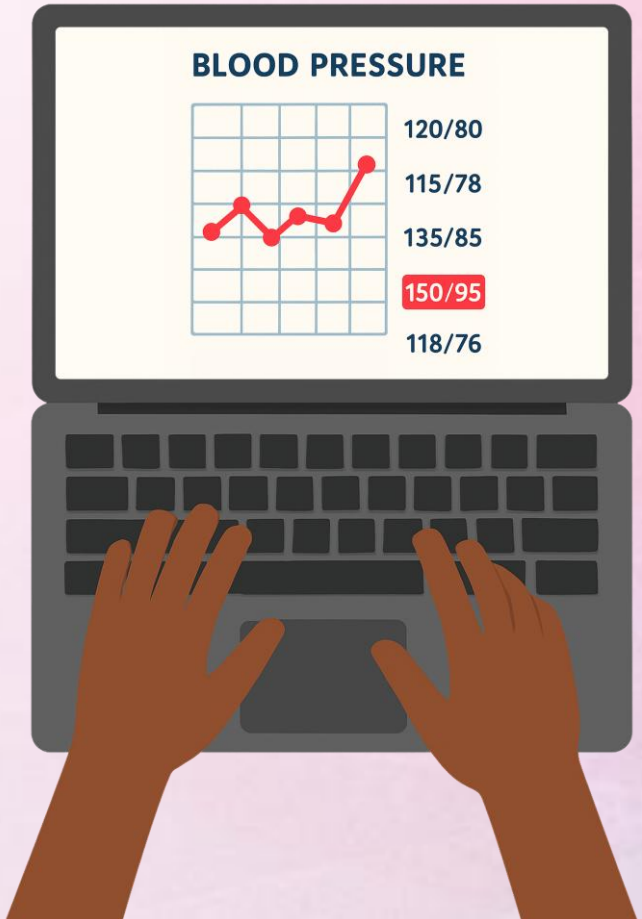
From a patient UI?

FHIR Observation.Create (Vital Signs)

Patient-Generated Data

UI? FHIR Observation.Create

No UI? HL7v2 Incoming Flowsheets







Enrollment Status

FHIR EpisodeOfCare







Success!

- The same considerations apply to plenty of other integrations
  - Event-based vs query-based
  - UI-based or system-to-system



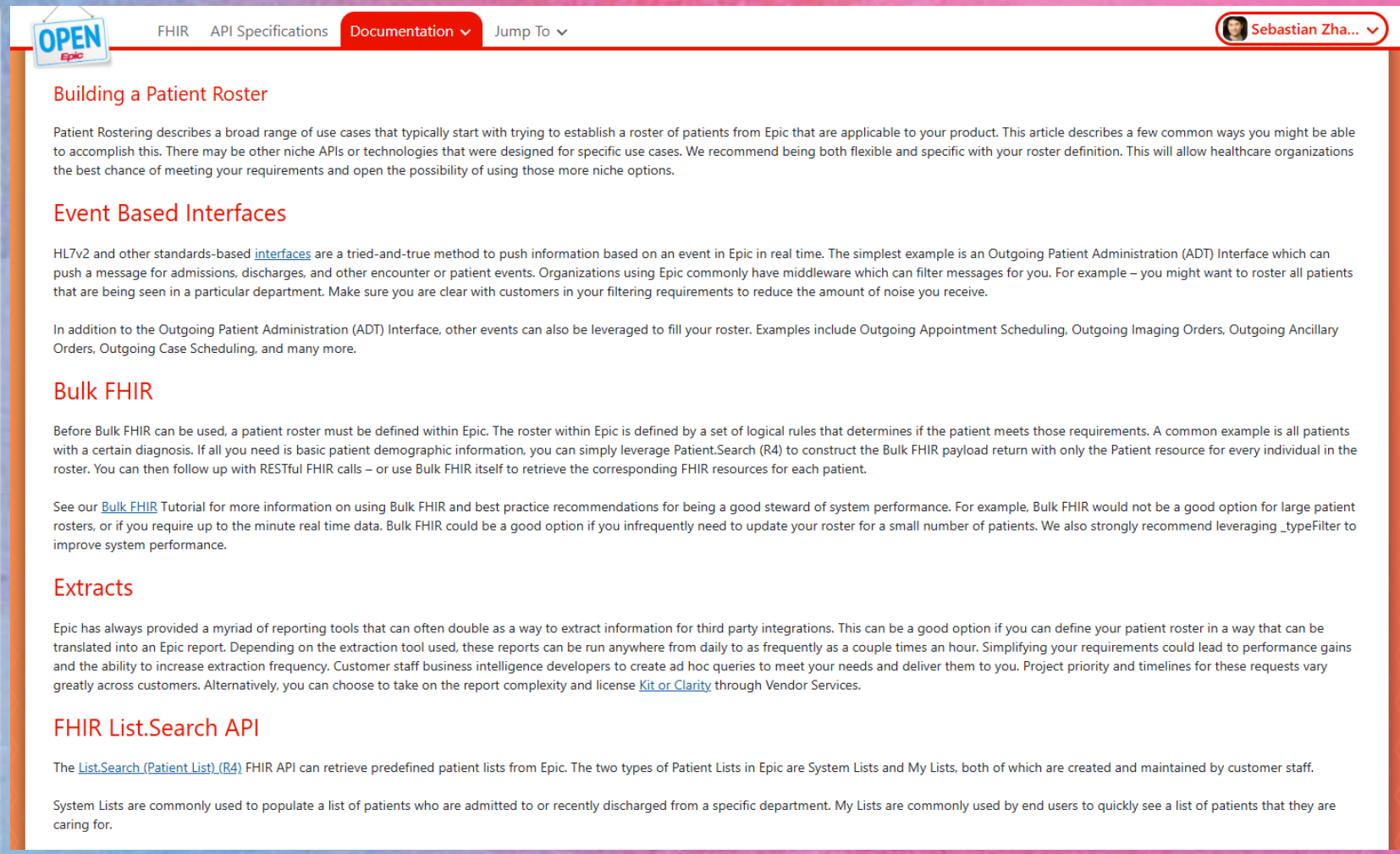
3. Patient Rostering

What is Patient Rostering?

- Need to retrieve data from a roster of patients in Epic
- Broad range of use cases

Patient Rostering Playbook

- No one-size fits all
- List of possible solutions



Rostering Technologies

Technology	Exchange Method	Data Latency	Types of Data	Standards Based?
Event Based Interfaces	**TCP/IP or HTTPS**	**Real Time**	**Patient, Clinical, Billing, Operational**	**Yes**
Bulk FHIR				
Extracts				
FHIR List.Search				

Rostering Technologies

Technology	Exchange Method	Data Latency	Types of Data	Standards Based?
Event Based Interfaces	TCP/IP or HTTPS	Real Time	Patient, Clinical, Billing, Operational	Yes
Bulk FHIR	**HTTPS**	**Real Time to ~Minutes/Hours**	**Patient, Clinical, Limited Billing /Operational**	**Yes**
Extracts				
FHIR List.Search				



OEC17 – Bulk FHIR: Lessons Learned

2:30 – 3:10 PM Today

in Elvis

Rostering Technologies

Technology	Exchange Method	Data Latency	Types	?
Event Based Interfaces	TCP/IP or HTTPS	Real Time	Patier Billing	
Bulk FHIR	HTTPS	Real Time to ~Minutes/Hours	Patier Limited Billing/Operational	
Extracts	**SFTP and/or VPN**	**~Minutes to ~Daily**	**Patient, Clinical, Billing, Operational**	**No**
FHIR List.Search				



OEC22 – Bulking Up Your Data Extracts for Populations and Analytics

3:30 – 4:10 PM Today

in Roll

Rostering Technologies

Technology	Exchange Method	Data Latency	Types of Data	Standards Based?
Event Based Interfaces	TCP/IP or HTTPS	Real Time	Patient, Clinical, Billing, Operational	Yes
Bulk FHIR	HTTPS	Real Time to ~Minutes/Hours	Patient, Clinical, Limited Billing/Operational	Yes
Extracts	SFTP and/or VPN	~Minutes to ~Daily	Patient, Clinical, Billing, Operational	No
FHIR List.Search	**HTTPS**	**Real Time to ~Minutes**	**Patient**	**Yes**



OEC05 – Configure This Out Together

3:30 – 4:10 PM Today

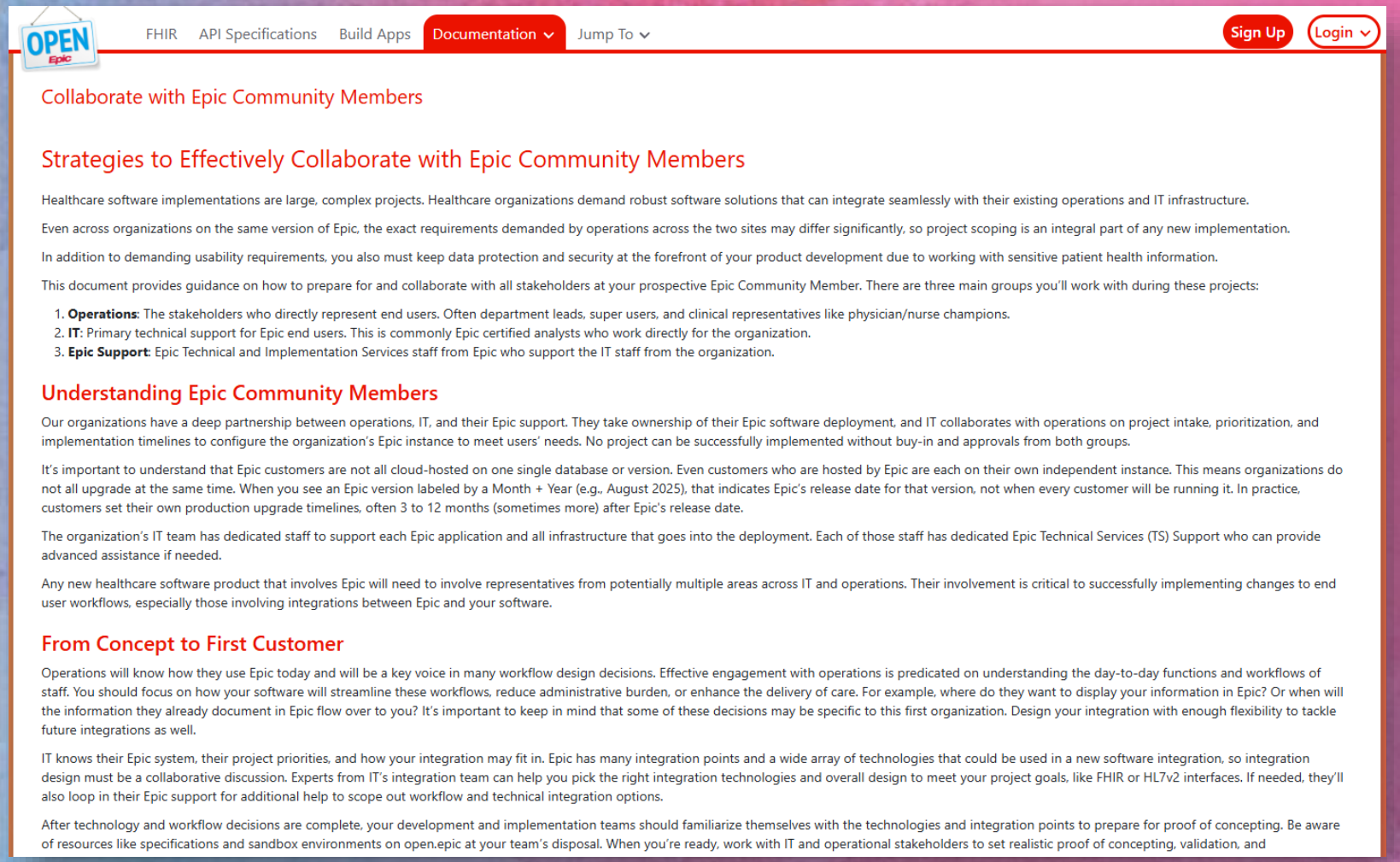
in The Beatles

Implementation Time

Setting expectations with customers

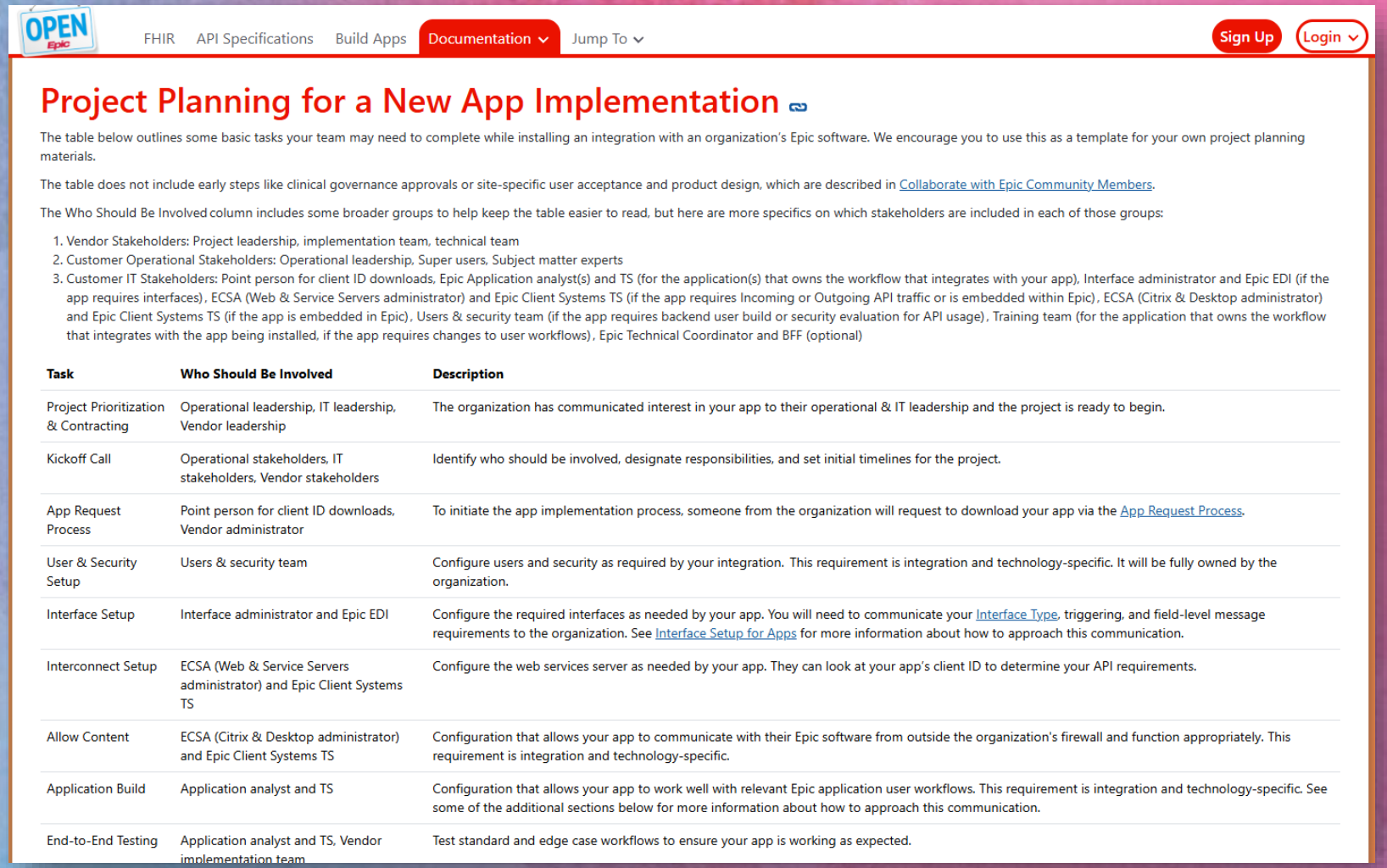
Epic on FHIR

[Collaborate with Epic Community Members]



Epic on FHIR

[Implementing Apps at Epic Customers]



Project Planning for a New App Implementation

The table below outlines some basic tasks your team may need to complete while installing an integration with an organization's Epic software. We encourage you to use this as a template for your own project planning materials.

The table does not include early steps like clinical governance approvals or site-specific user acceptance and product design, which are described in Collaborate with Epic Community Members.

The Who Should Be Involved column includes some broader groups to help keep the table easier to read, but here are more specifics on which stakeholders are included in each of those groups:

1. Vendor Stakeholders: Project leadership, implementation team, technical team
2. Customer Operational Stakeholders: Operational leadership, Super users, Subject matter experts
3. Customer IT Stakeholders: Point person for client ID downloads, Epic Application analyst(s) and TS (for the application(s) that owns the workflow that integrates with your app), Interface administrator and Epic EDI (if the app requires interfaces), ECSA (Web & Service Servers administrator) and Epic Client Systems TS (if the app requires Incoming or Outgoing API traffic or is embedded within Epic), ECSA (Citrix & Desktop administrator) and Epic Client Systems TS (if the app is embedded in Epic), Users & security team (if the app requires backend user build or security evaluation for API usage), Training team (for the application that owns the workflow that integrates with the app being installed, if the app requires changes to user workflows), Epic Technical Coordinator and BFF (optional)

Task	Who Should Be Involved	Description
Project Prioritization & Contracting	Operational leadership, IT leadership, Vendor leadership	The organization has communicated interest in your app to their operational & IT leadership and the project is ready to begin.
Kickoff Call	Operational stakeholders, IT stakeholders, Vendor stakeholders	Identify who should be involved, designate responsibilities, and set initial timelines for the project.
App Request Process	Point person for client ID downloads, Vendor administrator	To initiate the app implementation process, someone from the organization will request to download your app via the App Request Process.
User & Security Setup	Users & security team	Configure users and security as required by your integration. This requirement is integration and technology-specific. It will be fully owned by the organization.
Interface Setup	Interface administrator and Epic EDI	Configure the required interfaces as needed by your app. You will need to communicate your Interface Type, triggering, and field-level message requirements to the organization. See Interface Setup for Apps for more information about how to approach this communication.
Interconnect Setup	ECSA (Web & Service Servers administrator) and Epic Client Systems TS	Configure the web services server as needed by your app. They can look at your app's client ID to determine your API requirements.
Allow Content	ECSA (Citrix & Desktop administrator) and Epic Client Systems TS	Configuration that allows your app to communicate with their Epic software from outside the organization's firewall and function appropriately. This requirement is integration and technology-specific.
Application Build	Application analyst and TS	Configuration that allows your app to work well with relevant Epic application user workflows. This requirement is integration and technology-specific. See some of the additional sections below for more information about how to approach this communication.
End-to-End Testing	Application analyst and TS, Vendor implementation team	Test standard and edge case workflows to ensure your app is working as expected.

Implementation Tips

- Have a plan!
- Decision Paralysis and Constraints

Wrap Up

Setting expectations with customers

Takeaways

- Spend more time than you'd think in the design phase
- Start from existing Playbooks or Tutorials
  - Unique products, standard integration
- Bring a plan to your customer implementations
  - Reference standardized implementation documentation

We Want Your Feedback

- Working in an area that isn't covered by a playbook or tutorial?
  - Submit a Technology Guidance form
  - Vendor Services members: reach us through Sherlock

Resources

- Data Exchange Design overview
- Playbooks
- Implementing Apps at Epic Customers
- Toolbox Overview

Related sessions

- OEC11 – OAuth 2.0 in Healthcare
  - 11:30 – 12:10 PM Today in Elvis
- OEC14 – Speed, Safety, and Standards
  - 1:30 – 2:10 PM Today in Roll
- OEC17 – Bulk FHIR: Lessons Learned
  - 2:30 – 3:10 PM Today in Elvis
- OEC22 – Bulking Up Your Data Extracts for Populations and Analytics
  - 3:30 – 4:10 PM Today in Roll
- OEC05 – Configure This Out Together
  - 3:30 – 4:10 PM Today in The Beatles

Q&A

OEC32

Wrap-Up: Putting It All Together

Form closes today at 5:00 PM

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