



EHR Integration Scope Overview

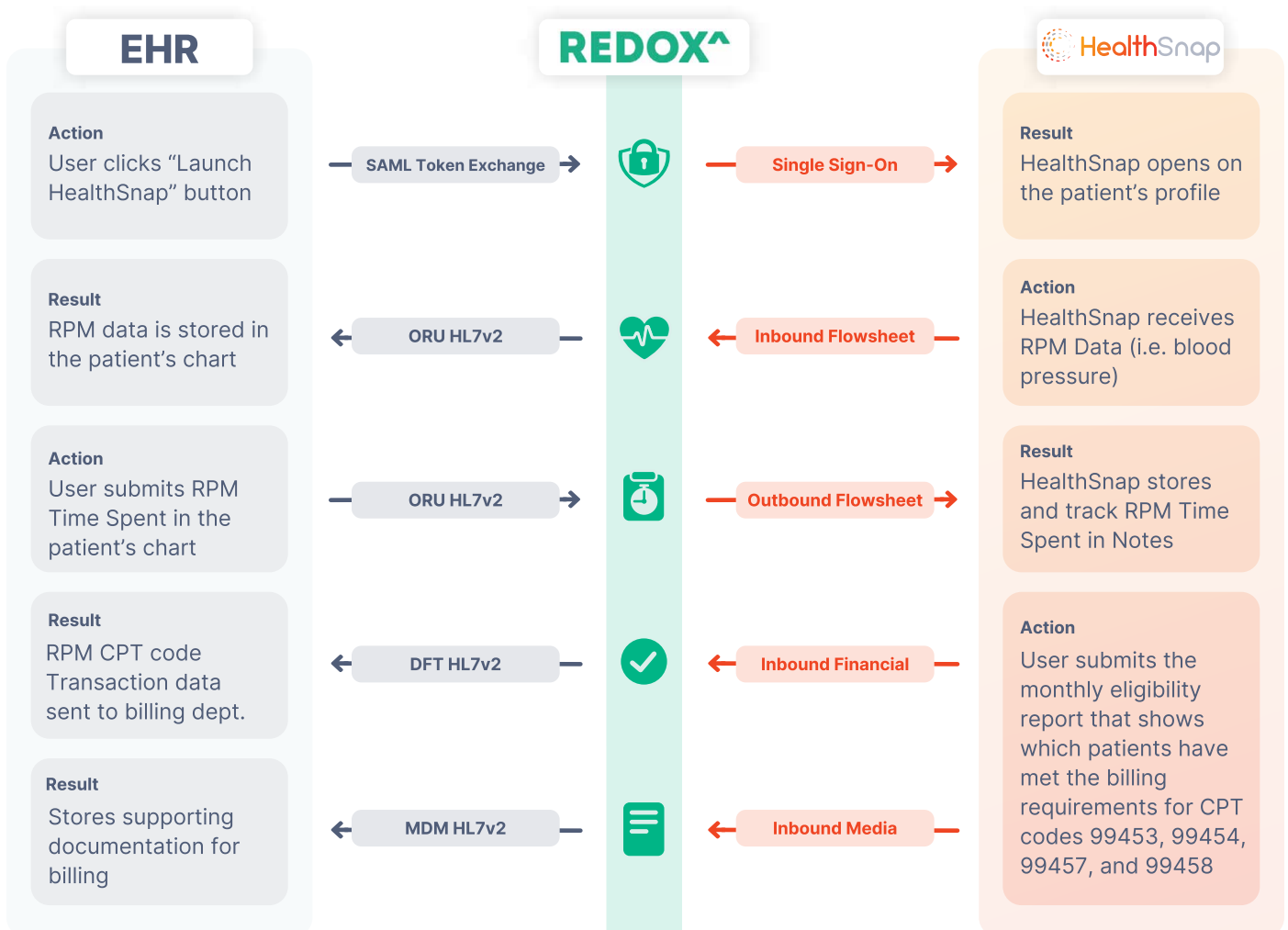


Overview

HealthSnap's standard EHR integration package provides a healthcare organization with the convenience to work out of their existing EHR while harnessing the benefits of working with HealthSnap to reduce the cost of care and improve outcomes with remote patient monitoring. The objective of an EHR integration is to maximize convenience while eliminating the additional time spent logging into and navigating multiple systems, including manual and double-entry of information.

HealthSnap uses Redox (<https://www.redoxengine.com/>) to support all EHR integrations. Redox provides a scalable integration platform that simplifies the way healthcare organizations exchange data and adopt innovative technology solutions by creating a mid-tier abstraction layer above source systems, like EHRs, that provides a standardized way to send and receive data. Healthcare organizations and technology vendors connect to Redox once and authorize the data they send and receive across the most extensive interoperable network in healthcare.

Integration Diagram



Integration Ready

The first step before kicking off the integration project is to ensure all parties are ready to begin the integration. The items listed below should serve as a readiness checklist to start the integration.

1 Approve Scope

Approve HealthSnap's standard integration scope or define any changes in the scope

2 Connection Method

Decide on connection method (likely HL7 or Vendor APIs)

- ☐ HL7 over VPN
- ☐ FHIR
- ☐ SFTP
- ☐ Vendor APIs
- ☐ Web Services
- ☐ Other

3 Resources Available

Confirm necessary resources from the health system is assigned to the project

Network/Connection Analyst

Ability to provision access to the EHR via VPN establishment, certificate exchange, and/or granting approval for the EHR vendor to allow access

Interface Analyst

Knows how to send and receive the required data needed for the integration project; this may be someone from the EHR vendor

EHR Analyst

Knows how to do the workflows that trigger message exchange and can validate that information sent back in is filing correctly; this may be the same person as the Interface Analyst

Project Lead

The person responsible for ensuring the project is successful; this may be the same person as the Interface Analyst or EHR Analyst

Subject Matter Expert(s)

Represents the end-user by providing deep knowledge of current workflows, needs, and expectations of the application; this may be the same person as the Interface Analyst, EHR Analyst, or Project Lead

Project Kickoff

Once these three items are addressed, HealthSnap will submit the project request internally and will have the project staffed with an integration manager who will work alongside a Redox Integration Manager to kick off the project.

It will take approximately 1-2 weeks to staff the project. Once staffed, HealthSnap will provide the health system with a 2-week kick-off window to schedule a call with all parties to kick-off the project (HealthSnap, Health System, and Redox). On the kick-off call will review the implementation plan, the integration scope, and identify a go-live date.

Standup VPN connection

1-2 hours of work

The first step will be to set up a VPN tunnel connection between Redox and the EHR. To do this, Redox can supply a spec sheet for the VPN, or can work off of a spec sheet provided by the EHR team.

During this step, the Network/Connection Analyst will decide on connectivity and message specifications, and setup and validate connectivity with Redox.

Note that if a health system has worked with Redox in the past, we could possibly re-use the VPN that was previously stood up instead of setting up a new one.

Configure Data Models

20 hours of work

Once a VPN connection is set up, we will work on setting up the data models for the integration. This includes Single Sign-on, Inbound Flowsheet, Outbound Flowsheet, Inbound Financials, and Inbound Media.

Single Sign-On (SSO)

SAML Token Exchange or Alternative Method

The first data model in the integration we will tackle is single sign-on (SSO). SSO will allow users to select a patient in the EHR and click on a “Launch HealthSnap” button to open up their profile in HealthSnap directly without an additional log-in required to allow for a more seamless experience.

There are 2 options to set up integrating the SSO workflow:

1 Use Active SAML Tokens for authentication

The EHR will send a SAML token to Redox, which will be translated and sent to HealthSnap via the SSO Data Model. HealthSnap will return a URL to display to the provider.

2 Use SMART on FHIR for authentication

In order to authenticate the appropriate users, the Health System will provide HealthSnap with a file with a list of EHR users to upload into HealthSnap. Using their EHR credentials, these users will be able to click on the “Launch HealthSnap” button to open the patient’s profile in HealthSnap since the SAML message will contain patient identifying information.

Notes for Health System

The Health System will need to decide how they would like the EHR to identify which patients should display a “Launch HealthSnap” button. Usually, this is done by identifying a patient panel they plan to prescribe RPM for and adding it to their profiles.

Inbound Flowsheet

HL7 Feed: ORU HL7v2

HealthSnap sets up an Inbound Flowsheet to allow for RPM data (ex. blood pressure) to be sent from the HealthSnap inbound to the EHR.

The purpose of the inbound flowsheet is to send discrete RPM data from HealthSnap to the EHR. As soon as HealthSnap receives any of the data listed below, HealthSnap will send it to the EHR immediately as a discrete value.

The list of data can be seen in the following table:

Data	
Blood Pressure	Blood Glucose
Body Weight	Temperature
Body Fat	Oxygen Saturation
Resting Heart Rate	

Notes for Health System

EHR should decide where this data should be stored, but typically it is filled into the patient's chart. Since this integration is allowing EHRs to receive discrete data, some of HealthSnap's customers also will set up native alerts in their EHR instead of using HealthSnap's alert system.

Outbound Flowsheet

HL7 Feed: ORU HL7v2

HealthSnap sets up Outbound Flowsheets to allow for RPM Time Spent to be sent from the EHR outbound to HealthSnap. The purpose of Outbound Flowsheet is to allow HealthSnap to receive RPM Time Spent. The eligibility requirements for CPT codes 99457 and 99458 are based on time spent furnishing care and interactive communication with the patient. Therefore HealthSnap tracks RPM Time Spent to check towards eligibility for these codes. This data is added to the EHR so that a provider can submit RPM Time Spent in the EHR and it is sent as discrete data to HealthSnap to track toward eligibility.

The EHR should add a row in flowsheets that include the RPM "Time Spent" field as well as a narrative field to provide any notes about that time spent. This way any time an EHR user is in chart review, or wherever they are looking at clinical content, they can submit RPM Time Spent and provide a description of the time spent for documentation purposes. HealthSnap will store the RPM Time Spent data and the associated description about the time spent in the Notes in HealthSnap.

Notes for Health System

The Health System will need to decide where the flowsheet will live. Likely this is within chart review, but it can also be wherever they are looking at clinical content.

HealthSnap sets up Inbound Financials to allow for transactions for RPM CPT codes (ex. CPT Code 99454) to be sent from HealthSnap inbound to the EHR. The purpose of inbound financials is to send discrete transactions to the EHR around CPT codes 99453, 99454, 99457, and 99458.

Throughout a patient's RPM program, HealthSnap will track which RPM codes (i.e. 99453, 99454, 99457, and 99458) a patient has met the requirements to be billed for. HealthSnap generates "Eligibility Reports" for each calendar month in the HealthSnap portal displaying which codes each patient is eligible for. As soon as a calendar month ends, this eligibility report will be ready for "review" from a member of the health system's care team. As soon as this eligibility report is reviewed and submitted, HealthSnap will send the charge data to the EHR as discrete data. This prevents requiring a user to manually type in all the transaction information into a billing system in order to bill the RPM CPT codes.

Below is an example of the data that is sent for each transaction:

Data	Example
Patient First Name	George
Patient Last Name	Caldwell
Patient DOB	05/04/1951
Patient Email	George@healthsnap.io
Patient Phone	(888) 780-1872
Ordering Provider First Name	John
Ordering Provider Last Name	Smith
Ordering Provider EHR Identifier	123456789
Ordering Provider Email	John@healthsystem.com
Diagnosis	I10
Code	99454
Code Description	Remote Patient Monitoring Data Transmission
Quantity	1
99454 Eligible Date	2021-01-27

Notes for Health System

HealthSnap will send this data as soon as a calendar month's eligibility report is submitted in HealthSnap. The workflow after this data is sent, like reviewing it before officially submitting it to billing or if it is sent directly to billing, should be decided by the EHR.

HealthSnap sets up Inbound media to allow for various file types to be sent from HealthSnap inbound to the EHR. HealthSnap generates various files as supporting documentation for remote patient monitoring. These files can be sent to the EHR via inbound media.

The main file that is triggered to be sent to the EHR in the standard integration is a file of all RPM data transmitted in a calendar month that counted toward the RPM requirements for CPT code 99454. This file will be sent in parallel when an eligibility report is submitted to trigger the Inbound Financial data to be sent. This file can either be in a .csv or .pdf format

Below is a screenshot of what this .csv's format is.

	A	B	C	D	E
1	Patient Name	Sample Patient			
2	Patient DOB	3/29/82			
3	Patient Email	samplepatient@email.com			
4	MRN/ACT#	12345462			
5	Timeframe	01/01/2021 - 01/31/2021			
6	Days of Data Transmission	16			
7					
8	Date	Submitted By	Data Point	Value	
9	1/24/20 12:18	Cellular Blood Pressure Monitor	Blood Pressure	130/78	
10	1/22/20 11:05	Cellular Blood Pressure Monitor	Blood Pressure	118/88	
11	1/21/20 11:47	Cellular Blood Pressure Monitor	Blood Pressure	111/60	
12	1/20/20 11:56	Cellular Blood Pressure Monitor	Blood Pressure	119/80	
13	1/16/20 10:12	Cellular Blood Pressure Monitor	Blood Pressure	119/72	
14	1/16/20 13:54	Cellular Blood Pressure Monitor	Blood Pressure	180/58	
15	1/15/20 16:03	Cellular Blood Pressure Monitor	Blood Pressure	92/57	
16	1/11/20 16:03	Cellular Blood Pressure Monitor	Blood Pressure	92/57	
17	1/10/20 12:18	Cellular Blood Pressure Monitor	Blood Pressure	130/78	
18	1/8/20 11:05	Cellular Blood Pressure Monitor	Blood Pressure	118/88	
19	1/8/20 11:47	Cellular Blood Pressure Monitor	Blood Pressure	111/60	
20	1/6/20 11:56	Cellular Blood Pressure Monitor	Blood Pressure	119/80	
21	1/4/20 10:12	Cellular Blood Pressure Monitor	Blood Pressure	119/72	
22	1/2/20 13:54	Cellular Blood Pressure Monitor	Blood Pressure	180/58	
23	1/1/20 16:03	Cellular Blood Pressure Monitor	Blood Pressure	92/57	
24	1/1/20 13:03	Cellular Blood Pressure Monitor	Blood Pressure	92/57	
25					

Notes for Health System

The Health System should decide where these files should be stored.



End-to-End Testing

16-20 hours of work

Once all data models are integrated, the next step is end-to-end testing to validate workflows between HealthSnap and the EHR. During this stage, we will turn on real-time test feeds and run testing scenarios with HealthSnap and the EHR. This work is done by both the EHR Analyst and an end-user (i.e. provider) on the EHR side and the integration manager.

This phase is also when training is done with all end users on the health system's side. The Project Lead on the health systems side should schedule training with appropriate team members to understand how the integration with HealthSnap works.



Go-Live

4 hours of work

The final step is to go-live. This is split between a Soft Go-Live where we will configure production systems to send and receive messages from Redox, and then an official Go-Live where we will actively monitor connection health and traffic.

Timeline Overview

Totals ~15 - 25 hours of work

Step 1: VPN Connection

Health System

Estimated Time: **1 - 2 hours** Resource Recommended: **Network/Connection Analyst**

- Provide connective message specifications
- Set up & validate connectivity with Redox

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- Set up & validate connectivity with health system



Step 2: Configure Data Models

Health System

Estimated Time: **20 hours** Resource Recommended: **Interface Analyst**

- Configure EHR to send and receive messages from Redox
- Send sample messages to Redox
- Validate in-scope messages can be sent and received
- Trigger and review test messages

REDOX^

- Configure Redox to send and receive messages based on specifications of sample messages
- Validate in-scope messages can be sent and received



Step 3: End-to-End Testing

Health System

Estimated Time: **16-20 hours** Resource Recommended: **EHR Analyst/End User**

- Validate workflow between HealthSnap and health system
- Turn on real-time test feeds
- Run testing scenarios with HealthSnap

REDOX^

- Set up testing connection between HealthSnap and health system



Step 4: Go-Live

Health System

Estimated Time: **4 hours** Resource Recommended: **Interface Analyst & EHR Analyst**

- Configure prod systems to send & receive messages from Redox for Soft Go-Live
- Go-Live and monitor connection health & traffic and support end users

REDOX^

- Set up prod connection between HealthSnap and health system
- Monitor connection health & traffic



Frequently Asked Questions

How does HealthSnap match patients in HealthSnap and patients in the EHR?

When orders are submitted via eFax to HealthSnap, or submitted via the online order form, it should include the patient's medical record number (MRN). A patient's MRN is what is used by Redox as the identifier to match patients between the two systems. Note if it does not include that or match, HealthSnap will not be able to properly match the patient in HealthSnap to the EHR