



Cerner
**code Learning
Lab** 2019

Introduction to SMART on FHIR

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Senior Software Engineer



Agenda

- What is SMART on FHIR?
- SMART app examples
- SMART on FHIR app launch sequence
- SMART community
- Cerner Developer Ecosystem & code Console
- Cerner supported launch points
- Cerner SMART on FHIR tutorial app
- Cerner SMART on FHIR community
- Questions

Substitutable **M**edical **A**pplications & **R**Reusable **T**echnology

Fast Healthcare Interoperability Resources

SMART Standards



Provides standards to build **healthcare applications**



Applications can **run against any vendor** implementing SMART



Open source (licensed under Apache License 2)



Generally **web apps**
(though **native apps** are supported too)

SMART > Platform Benefits



Defines how apps are launched



Authorization (OAuth 2)



Authentication (OpenID Connect)



Context sharing between EHR and app



Discover FHIR service endpoint

SMART > Platform Benefits



Defines how apps are launched



Authorization (OAuth 2)



Authentication (OpenID Connect)

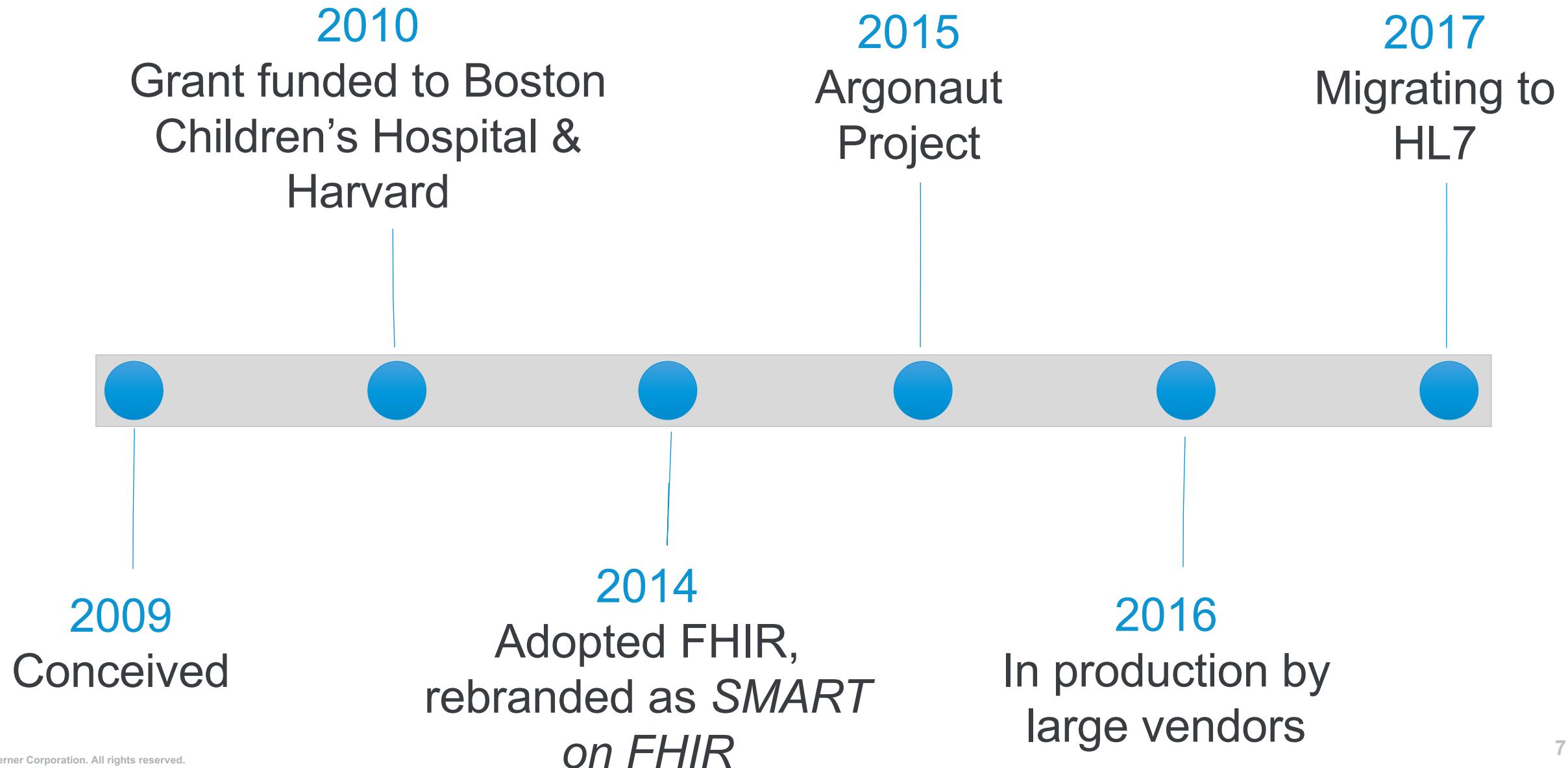


Context sharing between container and app



Discover FHIR service endpoint

SMART > Trajectory



Example Apps



SeamlessMD



HEART Pathway



vincari

UpToDate[®] Pathways



Cerner App Gallery : <https://code.cerner.com/apps>

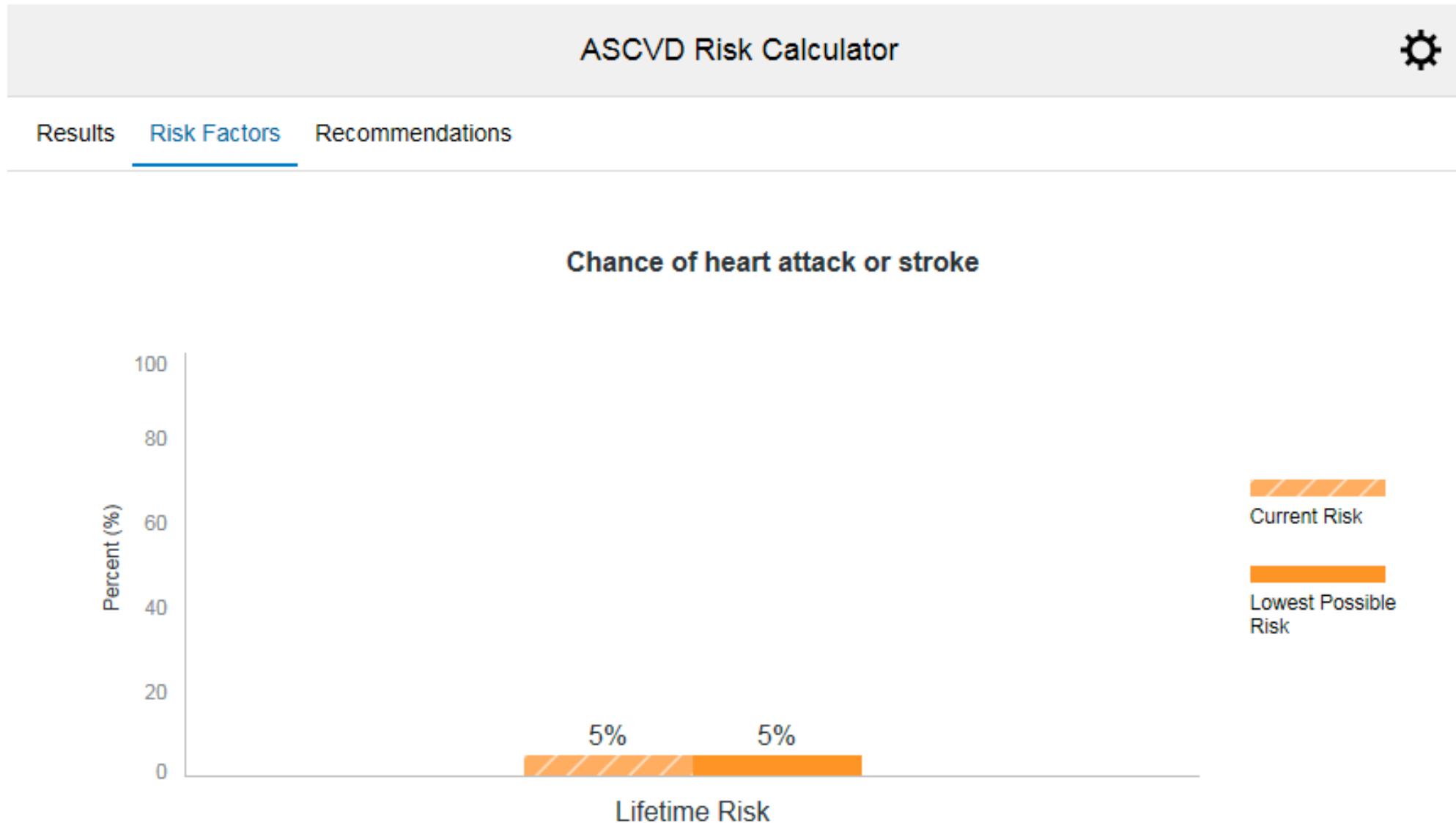
SMART Cardiac Risk App by Cerner

ASCVD Risk Calculator 

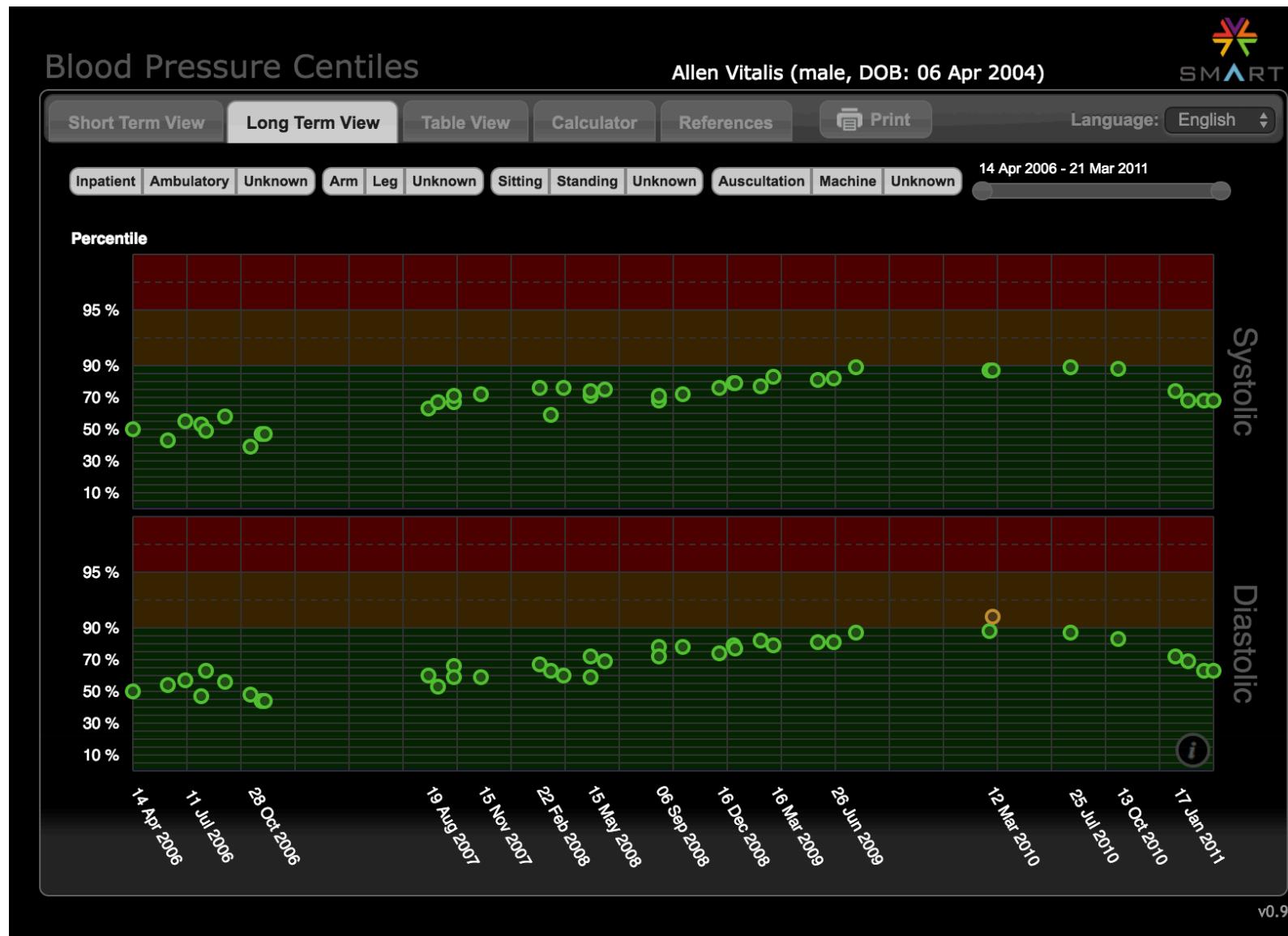
Results Risk Factors Recommendations

Sex <input type="button" value="Male"/> <input type="button" value="Female"/>	Total Cholesterol (mg/dL) 130	Diabetes <input type="button" value="No"/> <input type="button" value="Yes"/>
Age 37	HDL - Cholesterol (mg/dL) 90	Current Smoking <input type="button" value="No"/> <input type="button" value="Yes"/>
Race <input checked="" type="radio"/> White <input type="radio"/> African American <input type="radio"/> Other	Systolic Blood Pressure 90	Treatment for Hypertension <input type="button" value="No"/> <input type="button" value="Yes"/>

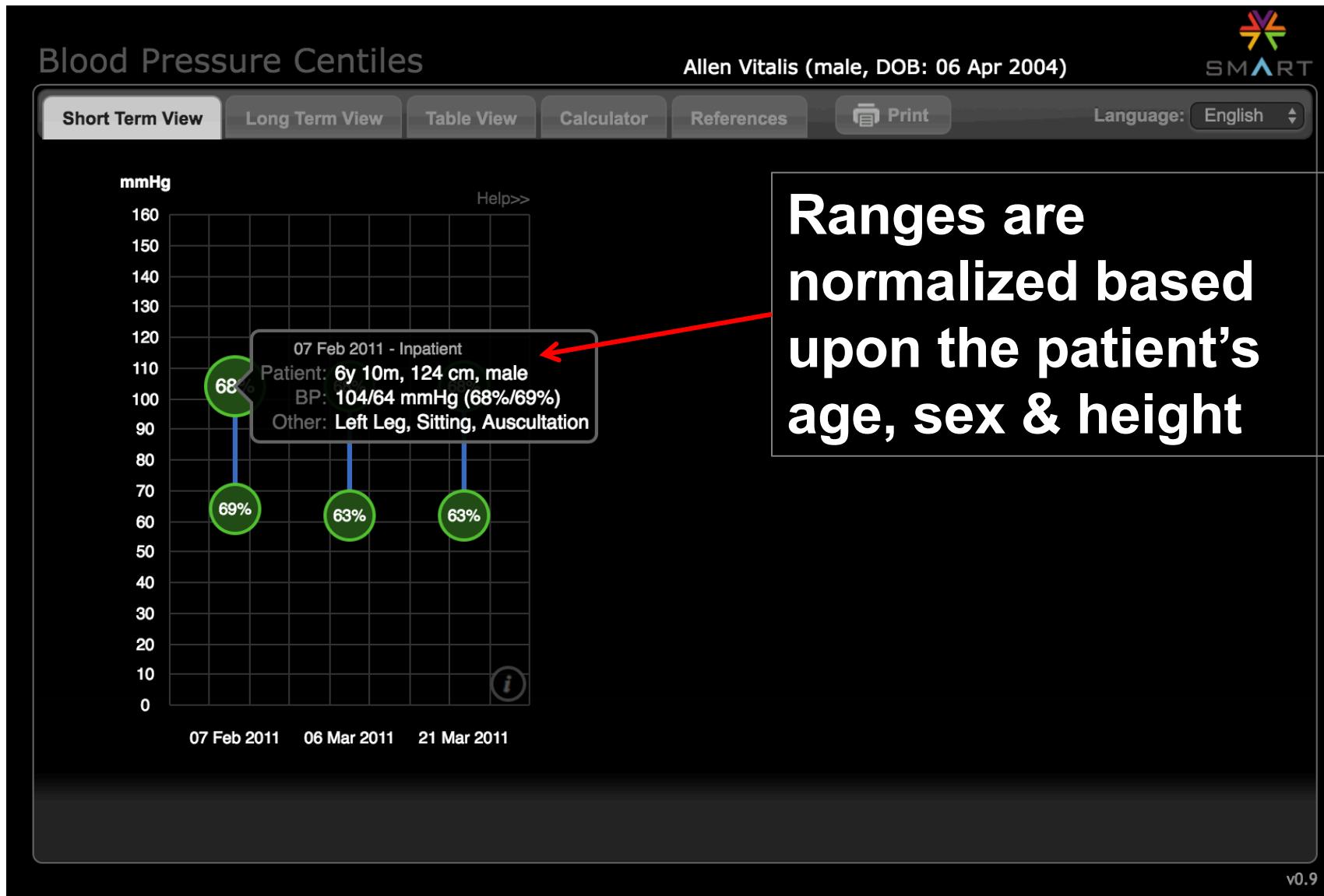
SMART Cardiac Risk App by Cerner



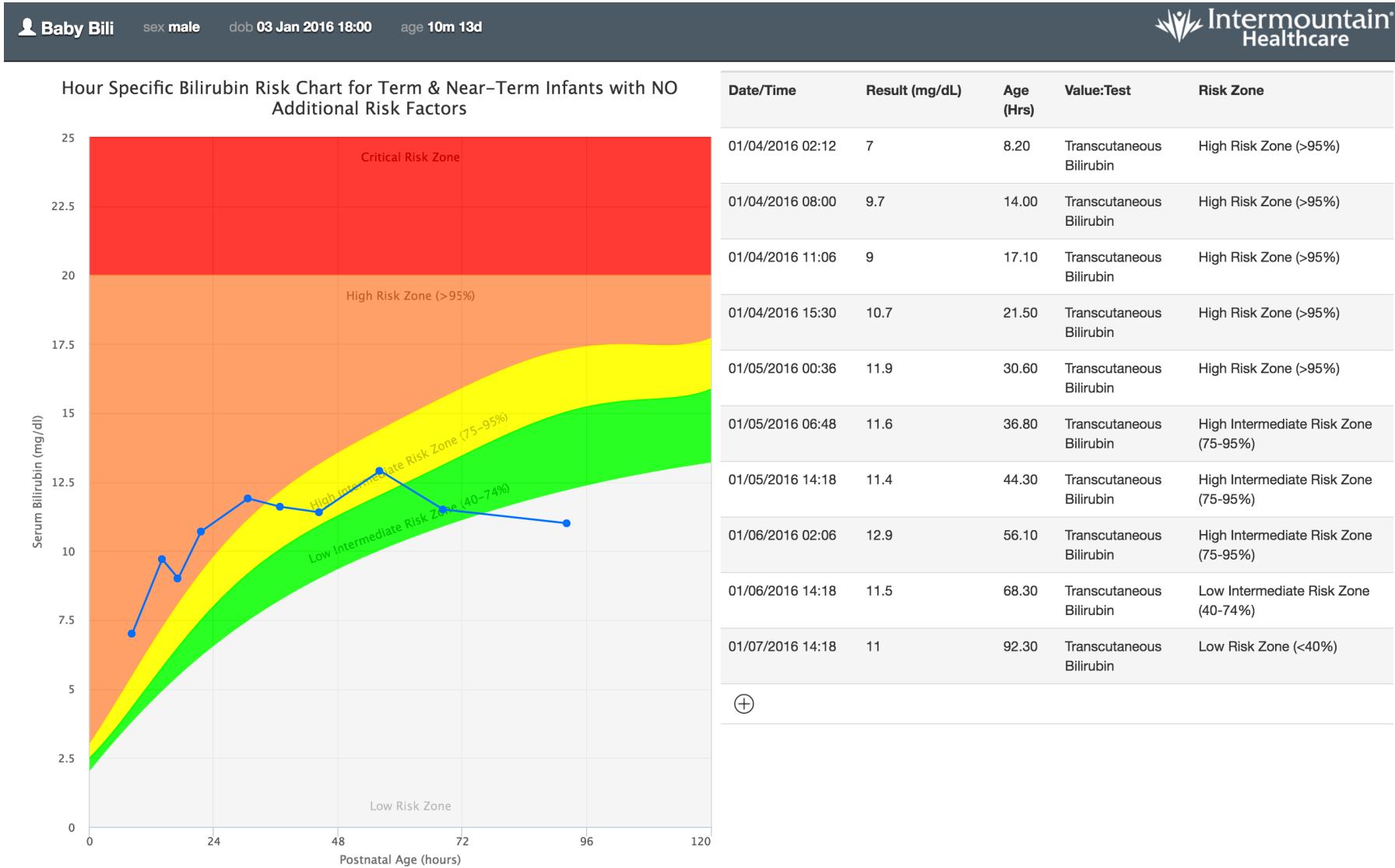
SMART BP Centiles by Boston Children's Hospital



SMART BP Centiles by Boston Children's Hospital



SMART Neonatal Bilirubin Alerts by Intermountain



Medication by First Databank

medication® XZR26WX3

Demos | Tutorial | Feedback

Med List	Calendar	Add Med	Print PMI	English	Regular	Options
Drug Name	SIG Instructions	Links	Med Type	Category	<input checked="" type="checkbox"/> Cal	<input checked="" type="checkbox"/> PMI
Aspirin Tablet 81mg	1 once daily	 	Oral Pill	Daily	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Carvedilol Tablet 25mg	1 twice daily	 	Oral Pill	Daily	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fish Oil Capsule 1000mg	2 once daily	 	Oral Pill	Daily	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Flovent 100mcg/inh	1 puff every 12 hours	 	Inhalant	Daily	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Irbesartan Tablet 300mg	1 once daily	 	Oral Pill	Daily	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Metamucil Sugar-Free	1 teaspoon three times daily	 	Oral Liquid	Daily	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Omeprazole Delayed Release Tablet 20mg	1 once daily	  	Oral Pill	Daily	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ProAir HFA	2 puffs every 4 hours for asthma	  	Inhalant	Daily	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Synthroid Tablet 50mcg	1 once daily	 	Oral Pill	Daily	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Systane ophthalmic solution	1 drop each eye twice daily	  	Ophthalmic	Daily	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Vitamin D3 Capsule 5000 iu	1 once daily	 	Oral Pill	Daily	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Zetia Tablet 10mg	1 once daily	 	Oral Pill	Daily	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Blue SIG: SIG not recognized  Edit unrecognized data  View PMI (Personal Med Instructions)  View demonstration

Blue Drug: Medicine not recognized  Modify SIG instructions  Med detail unavailable  View FDA Med Guide

Medication by First Databank

[Print header](#) [Print](#) [Mandarin \(Simplified\)](#) [Regular](#)

Carvedilol Tablet 25mg

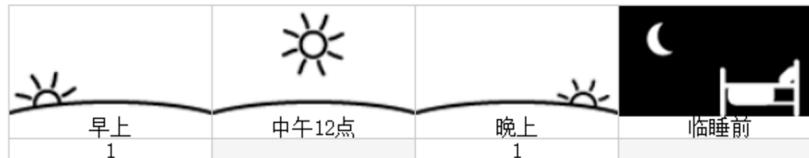
用法用量 (服药说明)

口服，每天两次。

Take the medicine by mouth twice a day.

每次服一粒/片。

Take one (1) pill each time.



重要：以下是给您的具体说明。若该说明与您收到的其他信息不同，包括以下说明，请洽询您的处方医生或药师。

服用说明

吞服，请勿压碎或嚼碎药片/丸以后吞服。

此药须跟食物同服。

很重要的是要请您在每天的同一时间服药，这样药效最佳。

请在室温下储存此药，避热及避免阳光直射。

按时服用此药的每次剂量极其重要，就算感觉很好，也请准时服药。

如果您忘记了而错过（漏服）了一次剂量，请在想起来以后马上补服。如果想起来的时间已经差不多到了下一剂量的服药时间，请跳过（忽略）漏服的剂量。请继续按正常的服药时间安排服药。此药不可两剂（两次剂量）同时服用。

请告知您的医生、护士或药剂师您服用的所有药物。包括处方药和非处方药。同样告知他们您服用的任何维生素、中草药或其他保健食品。

如果您患有糖尿病，此药可能会隐藏某些低血糖的症状，比如心跳过速。请定期检测您的血糖水平并留意其它低血糖的症状。低血糖的症状可能包括恶心、颤动、出汗、皮肤冰凉、心率过快、饥饿或易怒。

请勿突然停止服用此药。停止之前，请咨询您的医生。

注意事项

如果您曾对该药物过敏，请告知您的医生和药剂师。症状可能包括呼吸困难、皮疹、瘙痒、肿胀或者严重头晕。

请遵医嘱用药，不要过量用药。

此药可影响、削弱您的灵敏度或快速反应的能力。在不明白此药对您身体的影响前，请勿驾驶机动车（开车）或操作机器设备。

如果您已经有孕在身（怀孕了）、或者准备受孕、或者是在母乳喂养期间，请告诉医生或者药剂师。

如果此药物与您服用的其他药物产生反应，请咨询您的药剂师。务必告知他们您服用的所有药物。

在医生或牙医进行治疗之前，请告知他们您正在服用此药。

KRAMES Patient Education by StayWell

KRAMES Patient Education

Conditions | 12 Medications | 5 Procedures | 0

Aortic valve stenosis... 60573004 Benign prostatic hyp... 266569009 Community acquired... 385093006 Coronary arterioscler... 53741008 Diabetes mellitus (dis... 73211009 Essential hypertensio... 59621000

Images Off 25 titles

ShareWIK: Expert Insight (EN) Aortic Valve Disease: Explaining Aortic Stenosis

HealthSheets (EN) Diabetes and Heart Disease

HealthSheets (EN) Diagnosing Heart Valve Problems

HealthSheets (EN) Eating Heart-Healthy Foods

Videos (EN) Eating Well with High Blood Pressure

HealthSheets (EN) Exercise for a Healthier Heart

Exit-Writer (EN) Heart Disease Education

HealthSheets (EN) Heart Valve Problems

HealthSheets (EN) Heart Valve Problems: Aortic Stenosis

Search

Filter and sort

Sort by

- All Relevant
- Newest Relevant
- Favorites
- Name
- Content Type

Gender

- All
- Male
- Female

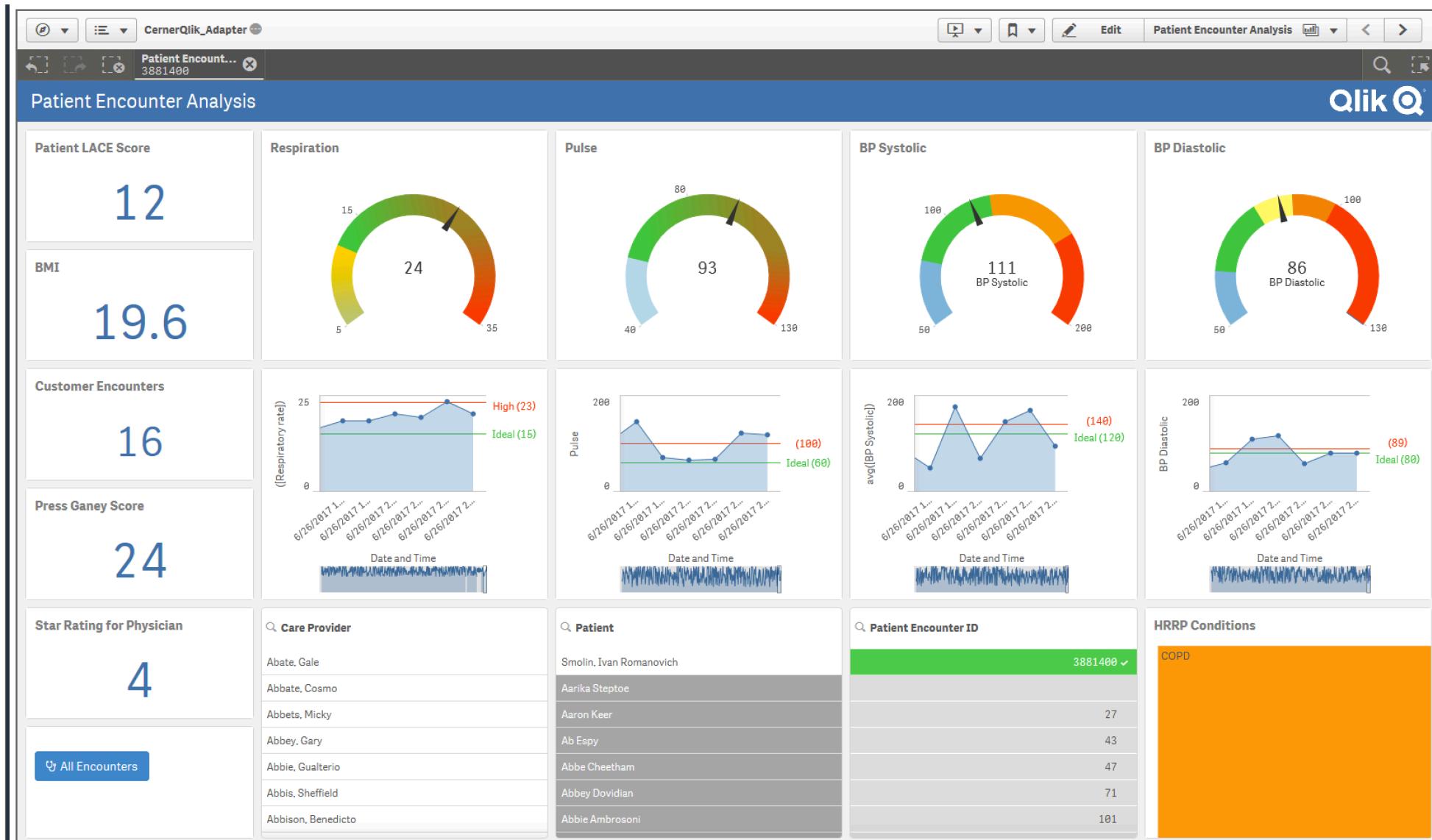
Age

- All
- Infant (0-11 mo)
- Child (1-12 yrs)
- Teen (12-18 yrs)
- Adult (18-65 yrs)
- Senior (65+ yrs)

Content Type

- All
- Greystone - Adult
- Videos
- Cancer
- Knowledgebase
- Diseases and Conditions
- PDF
- Lab Tests
- Alchemy Drug Sheets
- Client Custom Content
- Exit-Writer
- HealthSheets
- Medications
- VA Videos
- KidsHealth
- ShareWIK: Patient Perspective
- ShareWIK: Friday Flyer
- Video Healthsheets
- ShareWIK: Expert Insight
- ShareWIK: Caregiver Perspective
- ShareWIK: Why the Health?

Qlik SMART Analytics Adapter



DoseMeRx

HELP

ID:	3850798	Most Recent Dose:	09/29/2017 09:00 AM
Name:	Mead, Daniel (M)	Most Recent Response:	09/27/2017 8:17 PM
DOB:	07/15/1980	Drug:	Vancomycin (Adult)
Height:	175 cm		
Weight:	70 kg		

Calculate Next Dose At

Next Dose at: 29 Sep 2017 9:00 PM

Next dose should be between 2017-09-29 21:00 and 2017-10-02
09:00

Default Individualized Target 750 mg over 1.5 hours twice daily for 3 days Target: AUC24: 400 mg.h/L Predicted: AUC24: 363.59 mg.h/L Warning: Historical report. Dose date is in past.	Guideline Dose 1250 mg over 2.5 hours every 18 hours for 3 doses Warning: Historical report. Dose date is in past.	Label Dose 500 mg over 1.5 hours twice daily for one day Warning: Historical report. Dose date is in past. Warning: Dose is less than minimum of 10 mg/kg
Peak 20.64 mg/L	Peak 25.71 mg/L	Peak 13.32 mg/L
Trough 10.62 mg/L	Trough 9.64 mg/L	Trough 6.85 mg/L
AUC12 181.80 mg.h/L	AUC18 298.13 mg.h/L	AUC12 117.15 mg.h/L
<input checked="" type="checkbox"/> Plot <input type="button" value="Select"/>	<input checked="" type="checkbox"/> Plot <input type="button" value="Select"/>	<input type="checkbox"/> Plot <input type="button" value="Select"/>
<input type="button" value="Customize"/>	<input type="button" value="Individualized Dose Profile"/>	



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MyLegacy Disease Risk Reference

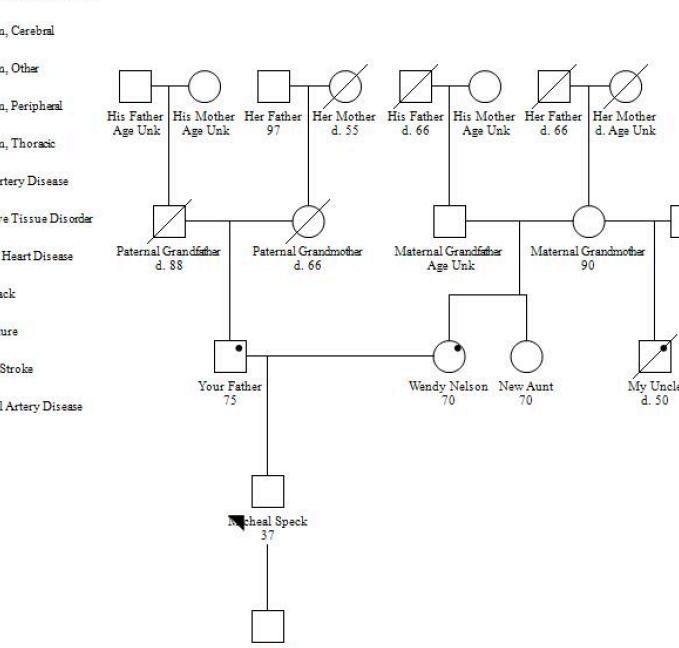
 MyLegacy Disease Risk Reference

Patient Name: Jake Boxer
MRN: 3772357
Date Submitted: 09/30/2017

Pedigree

Abdominal Aortic Aneurysm

7/19/2017



Legend:

- Abdominal Aortic Aneurysm
- Aneurysm, Cerebral
- Aneurysm, Other
- Aneurysm, Peripheral
- Aneurysm, Thoracic
- Carotid Artery Disease
- Connective Tissue Disorder
- Coronary Heart Disease
- Heart Attack
- Heart Failure
- Ischemic Stroke
- Peripheral Artery Disease

Individuals in the pedigree:

- His Father: Age Unknown
- His Mother: Age Unknown
- Her Father: 97
- Her Mother: d. 55
- His Father: d. 66
- His Mother: Age Unknown
- Her Father: d. 66
- Her Mother: d. Age Unknown
- Paternal Grandfather: d. 88
- Paternal Grandmother: d. 66
- Maternal Grandfather: Age Unknown
- Maternal Grandmother: 90
- Your Father: 75
- Wendy Nelson: 70
- New Aunt: 70
- My Uncle: d. 50
- Michael Speck: 37



SMART embedded launch workflow



SMART App One-Time Setup

- SMART Apps must be published at Transport Layer Security (TLS)-protected URL (<https://>)
- Register a launch URL with the EHR
- Register an authorization redirect URL with EHR
- Register the required scopes with the EHR



Launch SMART app
with FHIR endpoint +
opaque launch id

EHR

Launches SMART app via the app's
launch URL

Captures the context (e.g. patient id,
encounter id) and associate this data with
an opaque launch id

The FHIR endpoint URL and an opaque
launch id are given as parameters

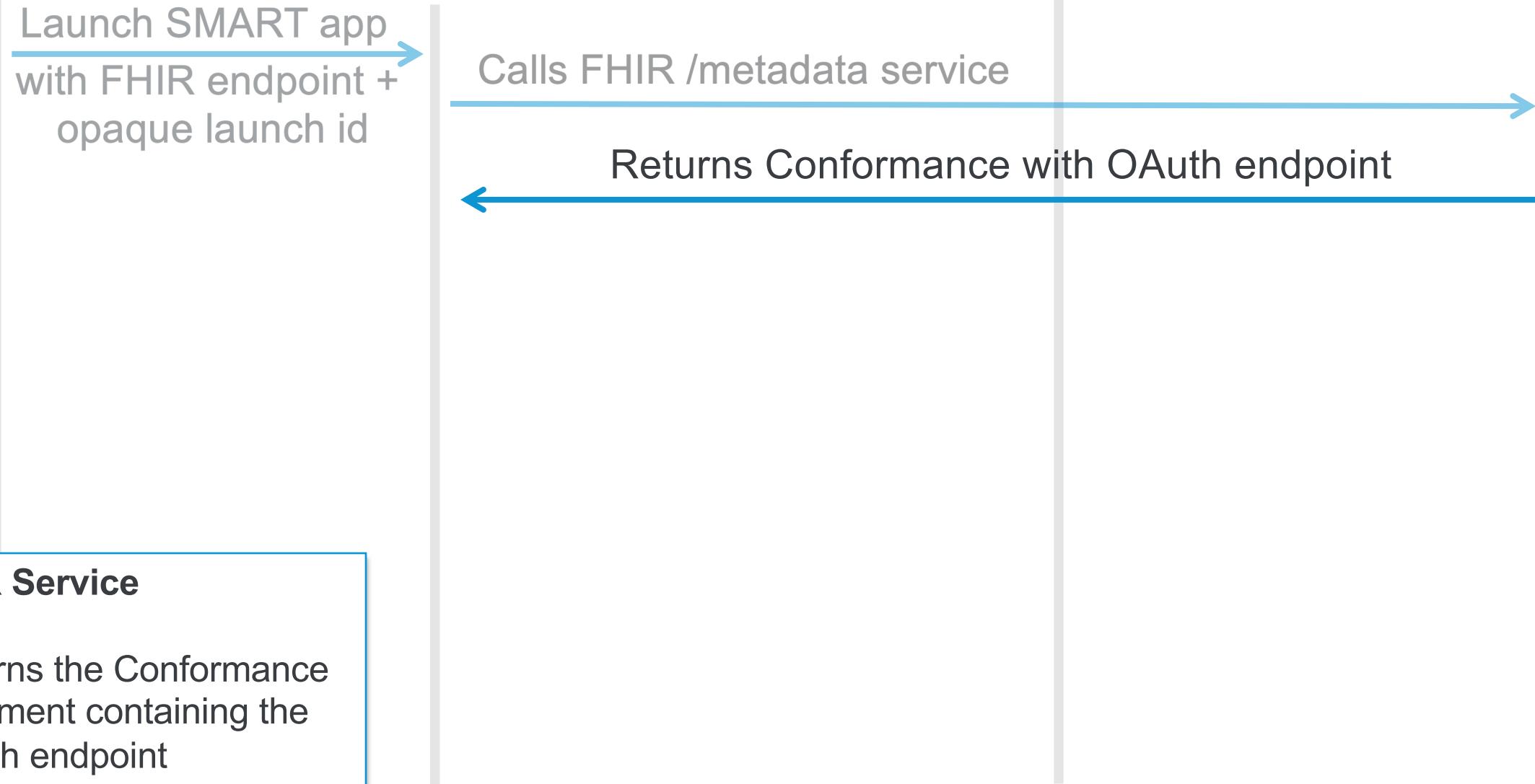


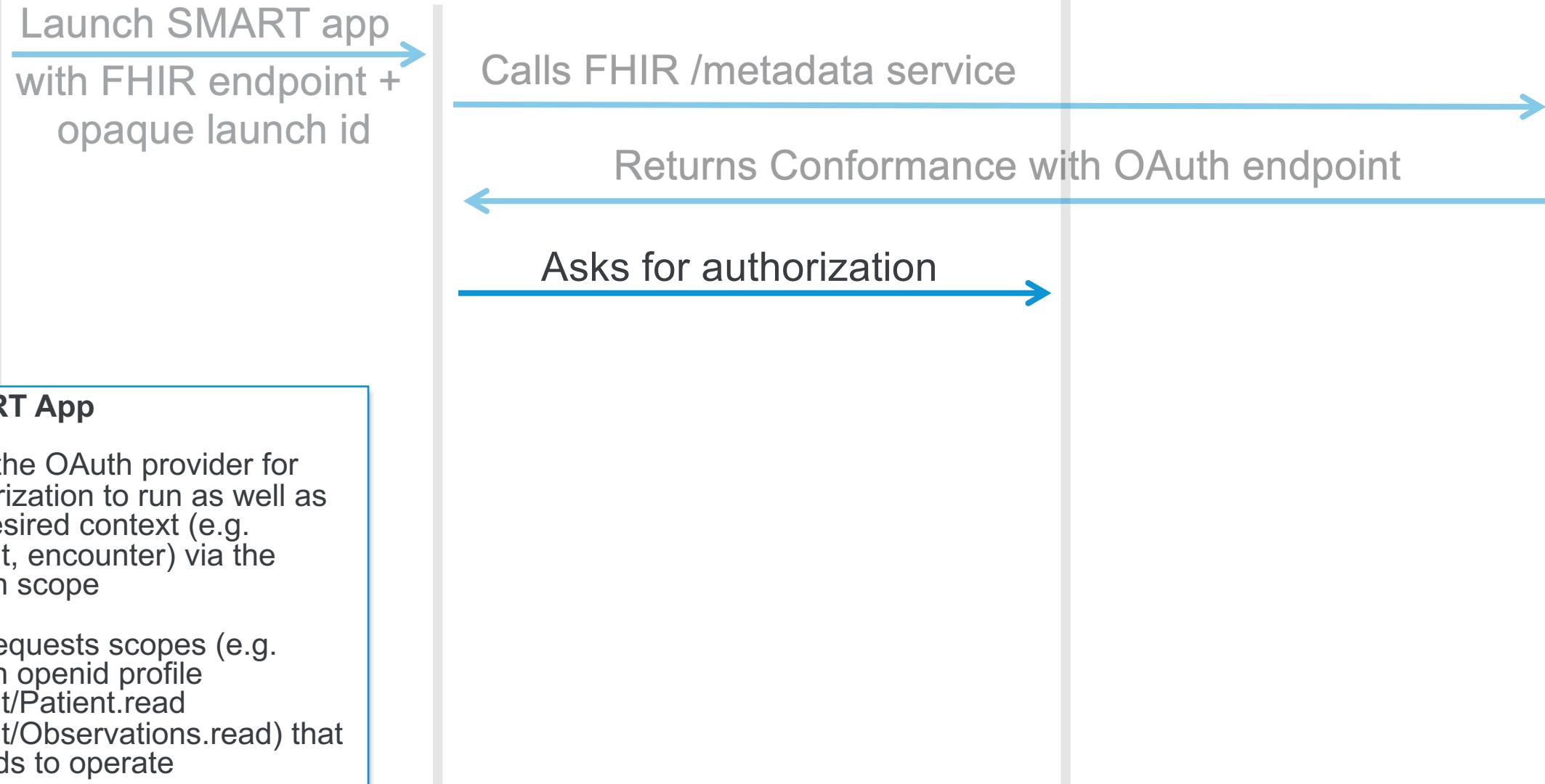
Launch SMART app
with FHIR endpoint +
opaque launch id

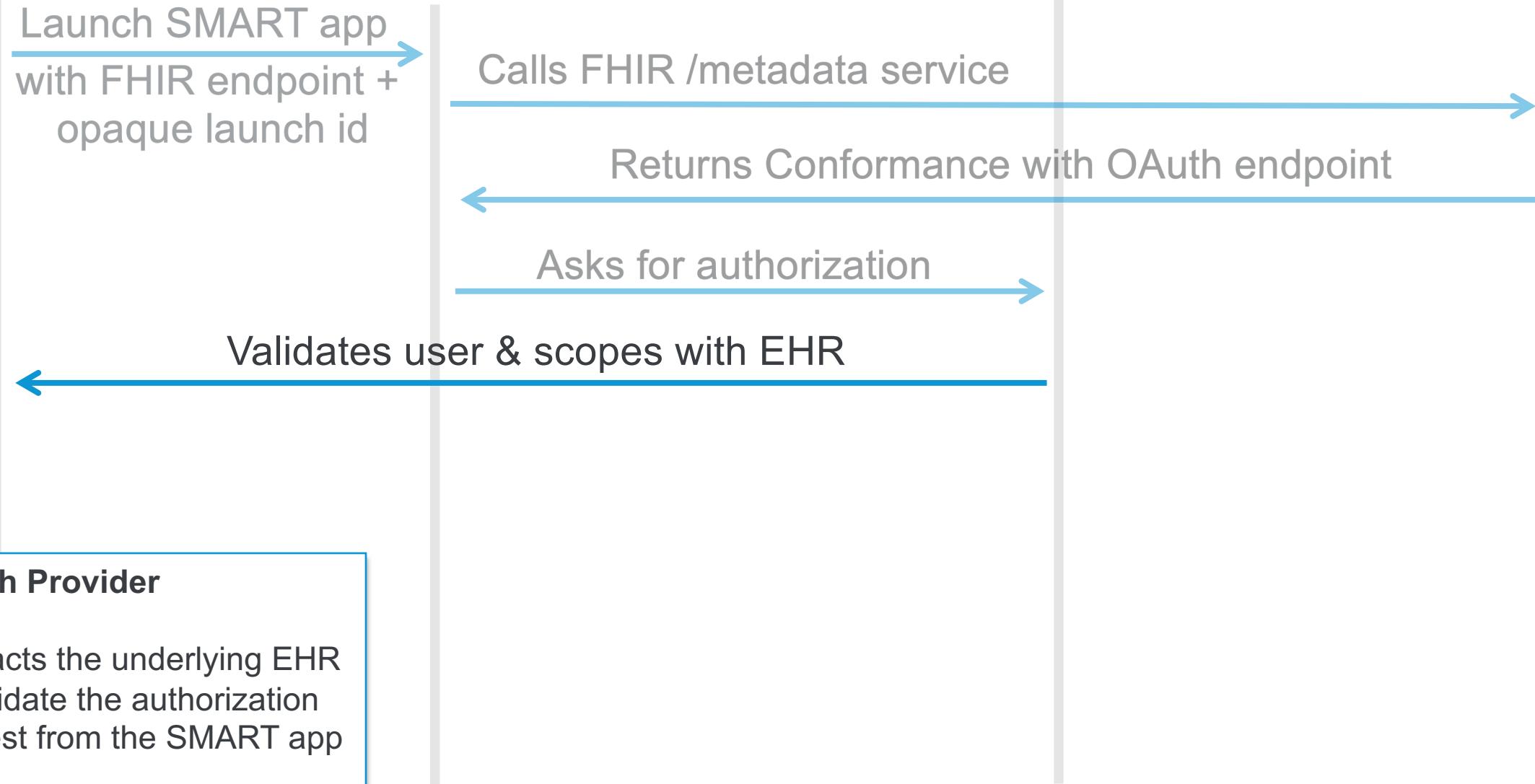
Calls FHIR /metadata service

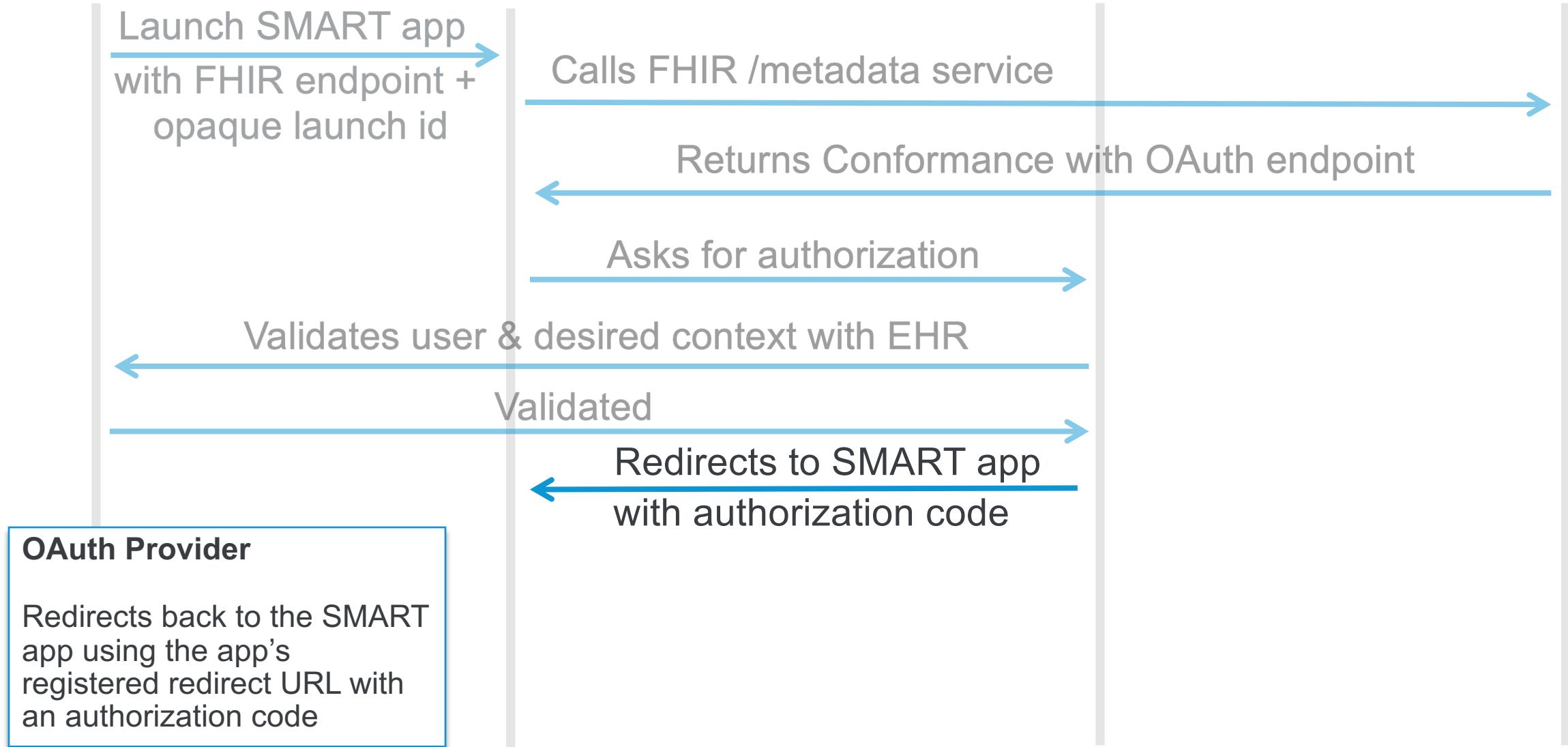
SMART App

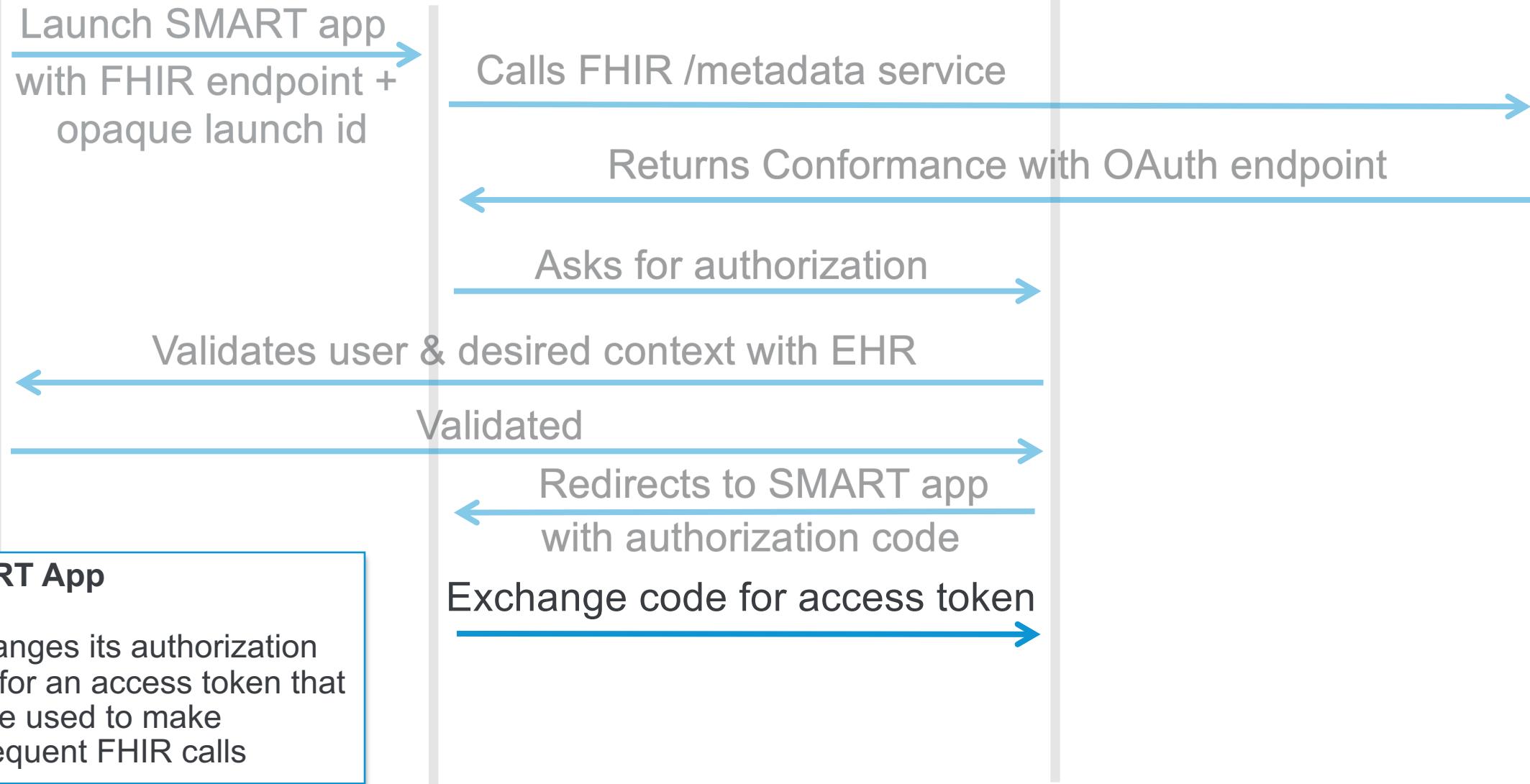
Calls FHIR conformance
resource (GET /metadata) to
obtain the OAuth endpoint

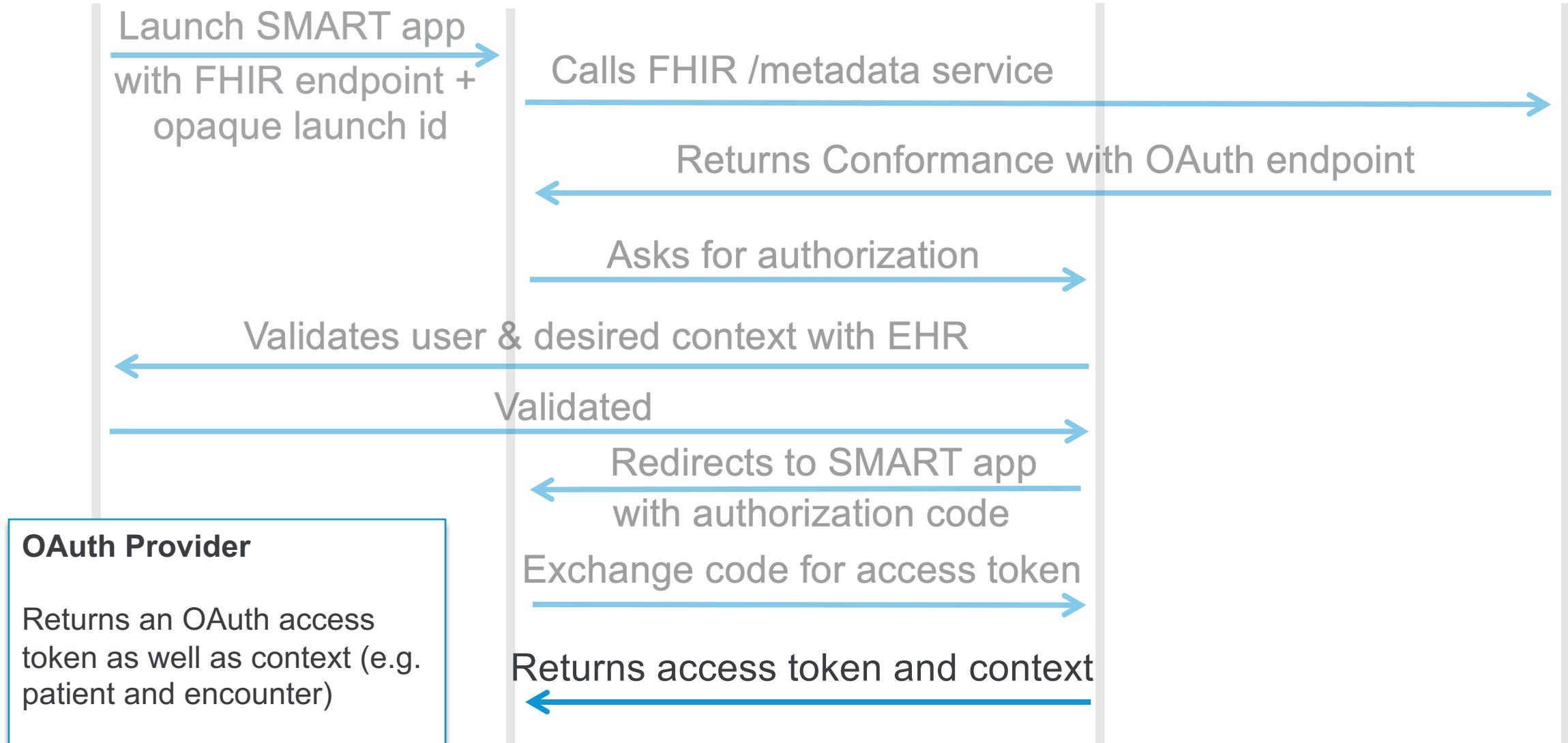


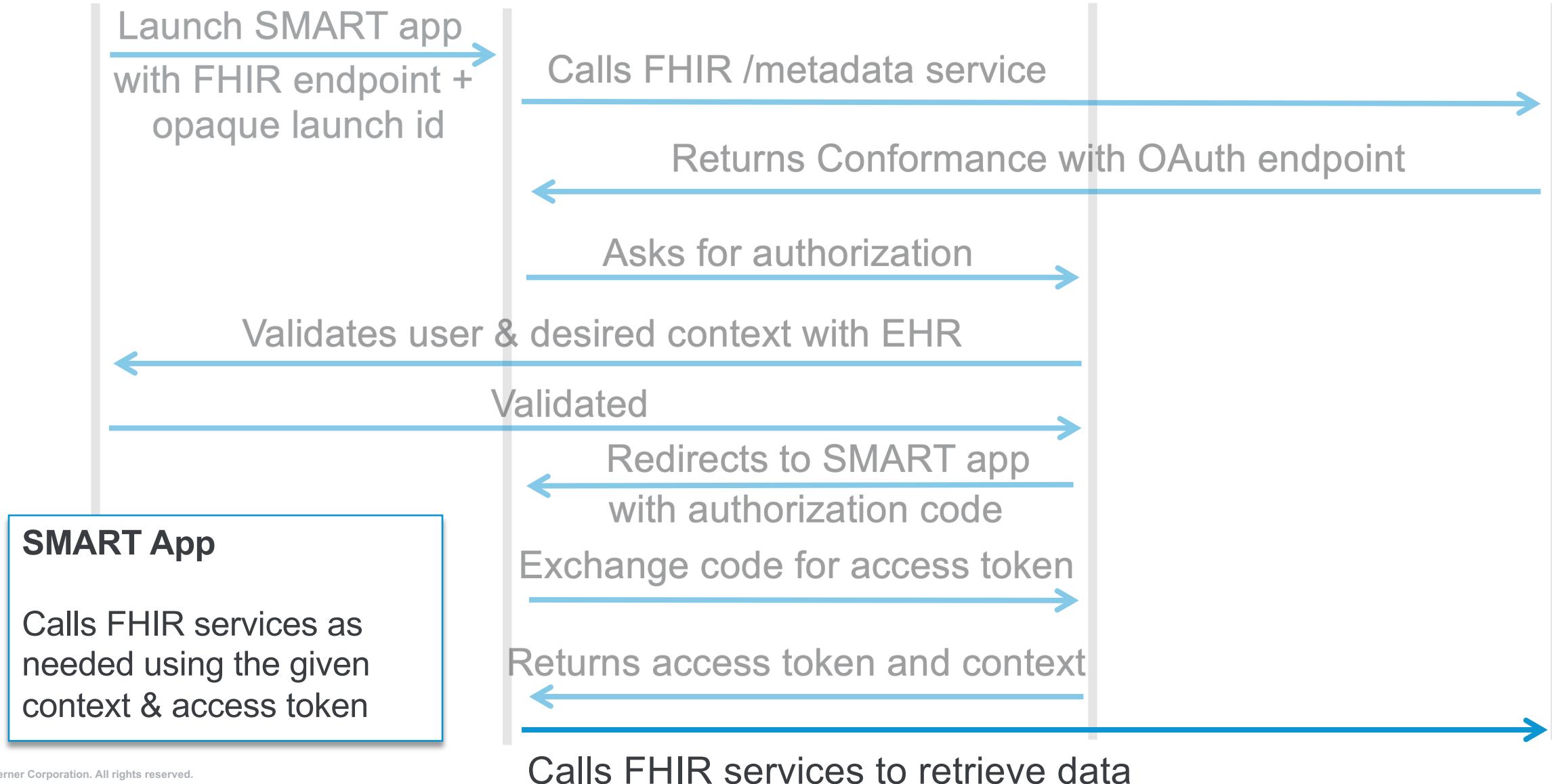


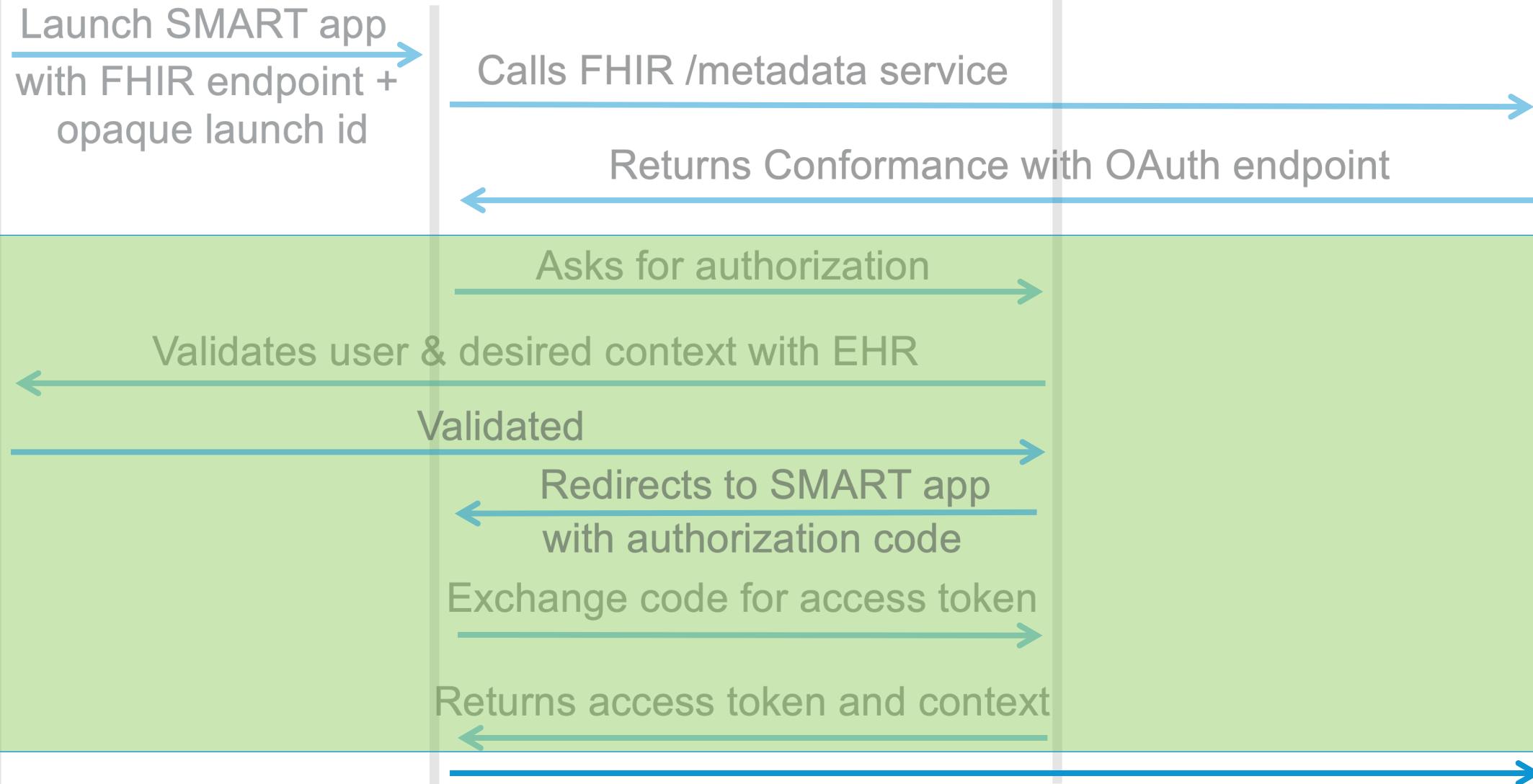












SMART > Community



smarthealthit.org



docs.smarthealthit.org



gallery.smarthealthit.org



chat.fhir.org | bit.ly/smart-google-group



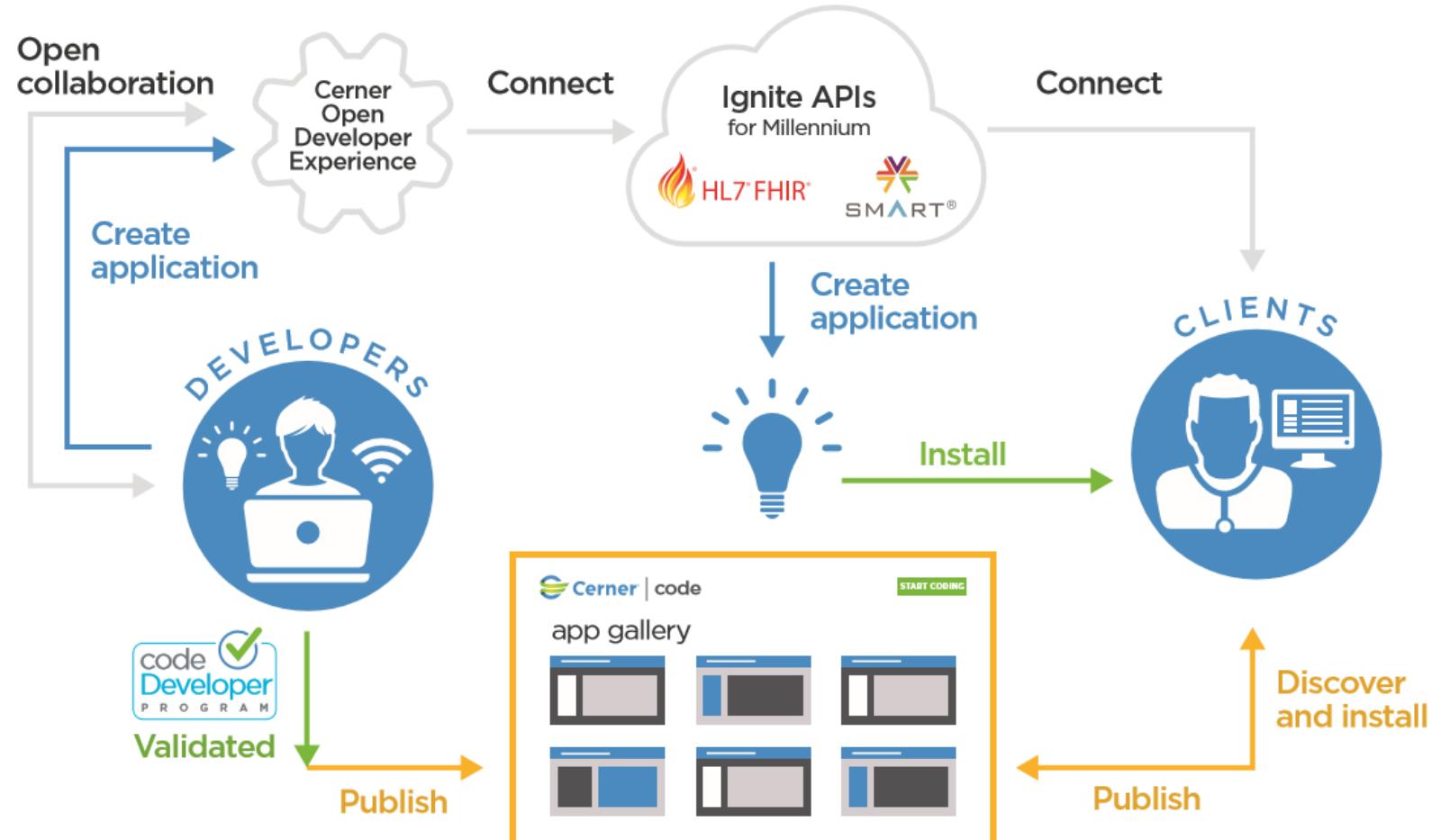
github.com/smart-on-fhir

Developer ecosystem

Developer ecosystem

Developer ecosystem

Cerner | code



code Console

code Console

CODE

The *Cerner Open Developer Experience* provides a developer everything they need to develop and test their applications and services against Cerner's open platforms.

Log in using **CernerCare**

Email Address

Password

Remember Me

Log In

[Forgot your password?](#)
[Mobile Website](#)

Don't have an account?

Create an account >>

bit.ly/cerner-code-console

code Console > My Apps

My Apps | kol.kheang@cerner.com | Logout

My Apps

+ New App Grid View List View



[GitHub SMART App Tutorial](#)
App Type: provider
FHIR Spec: dstu2



[localhost - App Validator](#)
App Type: provider
FHIR Spec: dstu2



[App Validator DSTU2](#)
App Type: provider
FHIR Spec: dstu2



[SMART without FHIR - ABL Testing](#)
App Type: provider
FHIR Spec: dstu2

code Console > App Registration

My Apps		kol.kheang@cerner.com Logout
---------	--	--------------------------------

App Registration

* Indicates a required field.

*** App Name**

SMART Launch URI

https://

The URI to initiate the launch of your SMART app

*** Redirect URI**

https://

The callback URI for the OAuth2 server to redirect to your SMART App

*** App Type**

- Provider
- Patient
- System

*** FHIR Spec**

The FHIR version your SMART App will consume

- dstu2

code Console > Launching App

The screenshot shows a web application interface for a GitHub SMART App Tutorial. At the top, there's a navigation bar with 'My Apps' and a user email 'kol.kheang@cerner.com | Logout'. The main title 'GitHub SMART App Tutorial' is displayed above a large green button with a white 'G'. Below the button, the text 'Test GitHub SMART App Tutorial' and 'Click Begin Testing to create a testing environment' is shown, along with a 'Begin Testing' button. A modal window titled 'Testing Details' is open in the foreground. It contains a question 'Does your application require a patient?' with a radio button selected for 'Yes'. Below this, there's a section titled 'Select a Patient:' with a table listing several patients:

Patient	Description
SMART, Timmy Male DOB: 2012-02-19	Young male child
Peters, Tim Male DOB: 1961-04-30	
SMART, Wilma Female DOB: 1947-03-16	Communication language set to Hindi
SMART, Nancy Female DOB: 1980-08-11	Patient with pregnancy condition
SMART, Joe Male DOB: 1976-04-29	
SMART, Heiley	

At the bottom of the modal, there are 'Delete App' and 'Cancel' buttons.

bit.ly/cerner-code-console

Launch Points

SMART App > Organizer View

The screenshot shows the SMART App Organizer View interface. At the top, there is a navigation bar with links for Task, Edit, View, Patient, Chart, Links, Navigation, and Help. Below the navigation bar is a toolbar with icons for Patient List, Juxly IBH, and Links. On the right side of the toolbar are buttons for Recent, Name search, Full screen, Print, and a timestamp of 0 minutes ago.

The main content area displays a list of patients in a table format. The columns include:

- Name
- Age
- DOB
- Patient Status
- Last Review
- Weeks / Encounters
- Encounter
- PHQ-9
- Change
- Comments

The table lists the following patients:

Name	Age	DOB	Patient Status	Last Review	Weeks / Encounters	Encounter	PHQ-9	Change	Comments
Chen, Flora	38 yrs	01-01-1980	Active	Jul 11, 2018	21 Weeks - 5 Encounters	Jul 6, 2018	13	+18%	
Powell, Peter	27 yrs	08-08-1991	Active	Sep 4, 2018	18 Weeks - 7 Encounters	Sep 12, 2018	18	+6%	
Sharma, Manish	43 yrs	10-05-1975	Active		2 Weeks - 1 Encounter	Sep 22, 2018	13	-	
Newman, Frank	31 yrs	07-16-1987	Active	Sep 18, 2018	5 Weeks - 1 Encounter	Sep 6, 2018	19	-	
Svensson, Linda	37 yrs	03-30-1981	Active	Sep 14, 2018	25 Weeks - 3 Encounters	Sep 14, 2018	10	-52% <input checked="" type="checkbox"/> Significantly improved.	
Walters, Wilma W	83 yrs	05-05-1935	Active	Aug 1, 2018	21 Weeks - 5 Encounters	Aug 5, 2018	17	-6%	
Miller, William	81 yrs	01-01-1937	Active	Sep 24, 2018	4 Weeks - 1 Encounter	Sep 12, 2018	23	-	May require quick escalation?
Miller, Ethan	16 yrs	04-30-2002	Active	Sep 3, 2018	7 Weeks - 2 Encounters	Sep 4, 2018	20	-9%	History of self-harm.
Coronel, Melinda R	85 yrs	03-31-1933	Active	Aug 22, 2018	13 Weeks - 3 Encounters	Sep 3, 2018	9	-25%	
Smith, Shannon	29 yrs	11-29-1988	Prevention						<button>Start Episode</button>
Peterson, Terry	81 yrs	01-01-1937	Prevention						<button>Start Episode</button>

At the bottom right of the table, it says "powered by Juxly".

SMART App > Chart View

Boxer, Diane J - 00010011 Opened by Dubois MD, Penny

Task Edit View Patient Chart Links Notifications Navigation Help

Home Physician Worklist ePA Worklist Dynamic Worklist Referral Management Uptodate Links Tear Off Suspend Exit Calculator AdHoc Communicate

Boxer, Diane J

Boxer, Diane J DOB: 8/3/1952 Age: 66 years Sex: Female FIN: 000112585
Allergies: No Known Medication Allergies Dose Weight: Isolation: Resuscitation Status:
Care Team: <No Primary Contact> Loc: BW 15NW; 15009; 1 CommonWell: Not Enabled HealtheLife: Yes
Clinical Trials:
Advance Dir:

SMART ePreop SurgicalValet Full screen Print 0 minutes ago

Menu - All

Checklist

Boxer, Diane J [10011] [112585]
DOB: 08/03/1952 (65 YOF)
HT 0 in / WT 0 kg / BMI 0 kg/m² DOS: 09/29/2017

This may not be the latest data available in the EMR. Please use the "Refresh Health Profile" from the left menu to get the latest data.

PREOP Surgical CDI ERP Results/Docs Day of Surgery Readmission Prevention

Length Of Stay Readmission Period Readmission Reason

Status	Completed	Task	Sys Generated	Comments	Last Update
Edit	<input type="radio"/>	Patient Satisfaction Survey	<input checked="" type="checkbox"/>		9/29/2017 11:03 AM CST (J. Anderson, MD)
Edit	<input type="radio"/>	RN Screening Satisfaction Survey	<input checked="" type="checkbox"/>		9/29/2017 11:03 AM CST (J. Anderson, MD)
Edit	<input type="radio"/>	Post Procedure Follow Up (30+) Satisfaction Survey	<input checked="" type="checkbox"/>		9/29/2017 11:03 AM CST (J. Anderson, MD)
Edit	<input checked="" type="radio"/>	<u>Post D/C Follow-up</u>	<input checked="" type="checkbox"/>		9/29/2017 11:03 AM CST (J. Anderson, MD)

Add New Task Show Removed Tasks

Remove the current view and recreate on desktop

P1810 PWMD1 October 08, 2018 12:15 PM CDT

SMART App > MPage Workflow / Summary

CLARK, ZACHARY x

CLARK, ZACHARY
Allergies: Allergies Not Recorded
IQHealth: No

PCP:Kolm, Margaret
Phone:(231) 564-6546
Age:81 years

DOB:3/3/1936
Wt:96 kg
Sex:Male

Pref. Labs/Diagnostics:
MRN:10002090
Emergency FIN: <No - Financial number> [Admit Dt: 3/5/2015 11:00 PM] Loc: BNMC ...

List Recent Name

SMART in MPage

Full screen Print 3 minutes ago

MPages View +

ASCVD Risk App

ASCVD Risk App

ASCVD Risk Calculator

Sex: Male Female

* Total Cholesterol (mg/dL): 130-320

Diabetes: No Yes

Age: 65

* HDL - Cholesterol (mg/dL): 20-100

Current Smoking: No Yes

Race: White African American Other

* Systolic Blood Pressure: 90-200

Treatment for Hypertension: No Yes

See Risk Score

* The following are required to compute ASCVD risk: Total Cholesterol (mg/dL), HDL - Cholesterol (mg/dL), Systolic Blood Pressure

The screenshot shows the SMART in MPage application interface. At the top, there's a header bar with patient information: CLARK, ZACHARY, PCP: Kolm, Margaret, DOB: 3/3/1936, Wt: 96 kg, Sex: Male, and various medical codes. Below the header is a toolbar with icons for search, print, and other functions. The main area has tabs for 'MPages View' and 'ASCVD Risk App'. The 'ASCVD Risk App' tab is active, displaying the 'ASCVD Risk Calculator' form. The form includes fields for Sex (Male selected), Age (65), Race (White selected), Total Cholesterol (130-320 mg/dL), HDL-Cholesterol (20-100 mg/dL), Systolic Blood Pressure (90-200), Diabetes (No selected), Current Smoking (No selected), and Treatment for Hypertension (No selected). A note at the bottom states that Total Cholesterol, HDL-Cholesterol, and Systolic Blood Pressure are required to compute the risk score. There's also a 'See Risk Score' button.

SMART App > HealtheLife (Patient Portal)

Dashboard | English (United States) | Sign Out

Assessment Appointments Health Trackers Action Plan Health Record Messaging

 BaseWestHealth
Because we care

Health Profile Print

The information provided below is in the electronic medical record. If you believe any data is incorrect, please notify the office.



Current Medications

Your pharmacy may make changes, so be sure to ask your pharmacist for exact medication instructions.

Refill/Renew

Jantoven 2.5 mg oral tablet [Learn more about this](#)

Date Started On: Jul 11, 2017

Ambien 5 mg oral tablet [Learn more about this](#)

Date Started On: May 25, 2017

Allegra 30 mg oral tablet [Learn more about this](#)

Date Started On: Apr 27, 2016

Show more info

Immunizations

Health Profile

-  [Health Profile](#)
-  [Results](#)
-  [Medications](#)
-  [Patient Documents](#)
-  [Procedures](#)
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SMART App > Authorization

Authorization Needed

I, MANSOOR, GHALIB, (Not you? [Sign out](#)) request that VISN_MO USPres share the following health information with Meducation - Patient.

VISN_MO USPres will share this information until I log out:

- personal information
- medications

[View full list of information.](#)

The information you share may be subject to re-disclosure. Consult Meducation - Patient's terms of service and privacy policy.

I, as the authorized representative, am allowing access to the records of:

MANSOOR, GHALIB (Self, 68)

[Expecting different people?](#)

Please email me a copy of this authorization.

Clicking **Deny** will not impact treatment, payments for treatment, enrollment, or eligibility for benefits at VISN_MO USPres.

[Authorize](#) [Deny](#)

SMART App > HealtheLife (Patient Portal)

The screenshot shows a web-based medication management application titled "Medication - FHIR". The URL is https://mymeds.medication.com/index. At the top, there is an "Import" dropdown set to "Cedars-Sinai" and a green "Get" button. Below this, a table lists various medications with columns for Tag, Name, Description, and ID.

Tag	Name	Description	ID
✓	benazepril (benazepril 5 mg oral tablet)	1 tabs, Oral, BID, 60 tabs, 11 Refill(s)	898723
✓	donepezil (donepezil 10 mg oral tablet)	1 tabs, Oral, Once a Day (at bedtime), 30 tabs, 0 Refill(s)	997223
✓	ibuprofen (ibuprofen 400 mg oral tablet)	1 tabs, Oral, q4hr, 180 tabs, 0 Refill(s)	197805
✓	simvastatin (simvastatin 20 mg oral tablet)	1 tabs, Oral, Once a Day (at bedtime), 90 tabs	312961
✓	warfarin	2 mg, Oral, Daily	11289
✓	ceFAZolin	1 g, IV Piggyback, Once	2180
✓	ceFAZolin	2,000 mg, IV Piggyback, Once	2180

At the bottom left, there is a green "Import Selected" button.

Cerner SMART on FHIR Tutorial

bit.ly/cerner-smart-on-fhir-tutorial

Community @ Cerner



code.cerner.com



fhir.cerner.com



bit.ly/cerner-code-console



bit.ly/cerner-smart-on-fhir-developers |
bit.ly/ignite-apis-community



github.com/cerner

Questions