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## Value-Based Care EHR Alerts

EHR Alerts to generate a Virtual Patient Outcomes Plan (vPOP)

Actionable Data in the EHR Workflow

- CDS Hooks
- SMART on FHIR
- Proprietary EHR Application Program Interface (API)



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## Message From CTO

Health Endavors has developed solutions for value-based care organizations since 2009. Over 90 accountable care organizations (ACOs') have used our solutions. We continue to be an industry leader in analytics, quality reporting, and actionable data in the EHR.

More recently our solutions have focused on improving value-based care health outcomes by integrating actionable data into the EHR workflow.

We are pleased to announce the release of Value-Based Care EHR Alerts. Our solution vPOP uses EHR Alerts to generate a virtual patient outcomes plan (vPOP).



# EHR Alert Integration Options

## CDS Hooks

Cards that popup in the EHR  
Workflow

## SMART on FHIR

Push/Pull data from EHR and other  
data repositories

## API

Proprietary Application Program Interface  
(API to populate tab on patient chart)


# Types of EHR Integration

Different EHRs will have different capabilities. EHRs with Clinical Decision Support (CDS) Hooks allow cards to pop up in the EHR patient workflow while other EHRs rely on their Application Program Interface (API) functionality to display data in the EHR on a tab in the patient chart. Both capabilities offer the ability for actionable data in the EHR workflow.

<b>CDS Hooks (HL7) Card (pop up) in EHR Workflow</b>	<b>EHR API Tab on Patient Chart in EHR</b>	<b>SMART on FHIR</b>
<p>Decision support in the form of cards may display as part of the provider workflow. Cards may be informational or allow the user to accept or reject the prompted action.</p> <p>Cards or CDS Hooks may be customizable if installed as distinct products or the practice is identifiable by an id number.</p> <p>An event, such as the loading of a patient's chart triggers the CDS service logic to serve up a card or cards in the EHR workflow with actionable information for the provider team.</p>	<p>Proprietary EHR Application Program Interface (API) facilitates selected data elements to render on a tab on the patient chart.</p> <p>If your EHR has an API then a tab on the patient chart in the EHR renders with the actionable data.</p> <p>Depending on the EHR API without SMART on FHIR it may have either:</p> <ul style="list-style-type: none"><li>• Read capabilities</li><li>• Read/Write capabilities</li></ul> <p>Most EHR APIs only have the ability to read and not write.</p> <p>Tabs can be customized as the Practice ID of the EHR is identifiable and is passed back to Health Endeavors in the API process.</p>	<p>SMART on FHIR capabilities means data has read or write capabilities. SMART on FHIR defines a workflow that an application can use to securely request access to data, and then receive and use that data.</p> <p>Read means the ability to pull or extract EHR data or claims data and display on the card.</p> <p>Write means the ability to push or import EHR data from the card to the EHR or another repository.</p>




# Examples: Virtual Patient Outcomes Plan (vPOP)

 **Sally Smart**    **DOB: 11/15/1972**    **AGE: 51**

ICD-10 Code	Description
I495	Sick sinus syndrome

HCC96 Specified Heart Arrhythmias HCC Value \$2,454.15

[Dismiss](#) [Take Action](#)

 **Sally Smart**    **DOB: 11/15/1972**    **AGE: 51**

Social Determinants of Health

Z-Code	Description
Z5900	Homelessness unspecified

[Dismiss](#) [Take Action](#)

# Key Value- Based Care Alerts

## V28 HCC Model

Over 2,000 diagnosis codes to be retired with an associated loss in benchmark value.

## HCC Diagnosis Recapture

## Health Equity

Patient social determinants of health

# Virtual Patient Outcomes Plan (vPOP) EHR Alerts Examples Defined

- HCC Diagnosis Recapture: Notify EHR end user a HCC diagnosis code has not been re-coded in the current year by using a notification display of the value of the HCC diagnosis code. The purpose of this alert is to tackle the problem of Benchmark Leakage or loss to the Benchmark value due to failure to recode.
- V28 HCC Model Updates: Notify EHR end user a HCC diagnosis code has been retired or its value has changed. The purpose of this alert is to minimize the impact of the new V28 HCC Model to be implemented in 2024.
- Avoidable Emergency Room Encounter : Notify EHR end user the patient has utilized the emergency room for a non-urgent reason during that past 12 months. For example, an emergency encounter for a bladder infection.
- Prescription Not Picked Up: Notify EHR end user the patient has picked up at the pharmacy one time a maintenance medication but has not picked it up since.
- Advance Care Planning (ACP): Notify EHR end user if Advance Care Planning has been completed or not completed in current year for the patient. The value of ACP is \$80 per Medicare patient.
- Spend Allowance Exceeded: Notify the EHR end user the patient's spend has exceeded their spend allowance.
- Quality Measures automatically pull from EHR into central repository for reporting to Medicare qualified registry.
- Health Equity: Notify EHR end user of the patient's social determinants of health such as food, transportation, or shelter issues.
- Out-of-Network: Notify the EHR end user if the patient is using Part B or Part A services out-of-network.
- Palliative Care Review: Notify the EHR end user if the patient has a terminal condition and is using the emergency room or hospitalizations for their care source.

Note: a vPOP alert or notification may be developed for any purpose using the available clinical or claims data set. See Appendix A



# How it Works in EHR?


## CDS Hook + Smart on FHIR (Benchmark Leakage Example)



Provider team searches in **EHR** for patient

**MATCH** to patient occurs using SMART on FHIR

CDS hook pops up in the EHR workflow

 **Sally Smart** DOB: 11/15/1972 AGE: 51

**Benchmark Leakage**

ICD-10 Code	Description
I495	Sick sinus syndrome
HCC96	Specified Heart Arrhythmias Value \$2,454.15

[Take Action](#) [Dismiss](#)

**Problem List** [+ Care Coordination Note](#)

Search for new problem [+ Add](#) [DxReference](#) Show:  Past Problems

Diagnosis	Sort Priority	Resolved
Sick sinus syndrome	Unprioritized	<input checked="" type="checkbox"/>
Hypertension	Unprioritized	<input checked="" type="checkbox"/>
Generalized anxiety disorder	Unprioritized	<input checked="" type="checkbox"/>

Mark as Reviewed  Never Reviewed [Advanced View](#)

If confirmed, the diagnosis is added to the EHR problem list



# Data Sources

CDS Hooks + SMART on FHIR  
Card in EHR workflow

Claims Data

Medicare  
Medicaid  
Medicare Advantage  
Commercial  
Self-Insured Employer  
TPA

Clinical

QRDA  
FHIR

API

Tab on patient chart in the EHR

Claims Data

Medicare  
Medicaid  
Medicare Advantage  
Commercial  
Self-Insured Employer  
TPA

Clinical

QRDA  
FHIR



**Sally Smart**

**DOB: 11/15/1972**

**AGE: 51**

ICD-10 Code      Description

I495      Sick sinus syndrome

**HCC96 Specified Heart Arrhythmias HCC Value \$2,454.15**

This diagnosis has not been coded yet this year for patient.

Dismiss

Take Action

EHR Alerts

# How to Get Started?

<b>Step One: Evaluate EHR Capabilities</b>	
Does EHR have CDS Hooks capabilities?	Yes/No
Does EHR have SMART on FHIR capabilities?	Yes/No
Does EHR have an API that allows read only or read/write?	Read Only/Read and Write
Request EHR API Documentation	Done/Not Done
<b>Step Two: Book an Appointment</b>	
Ron Gowen, CTO ron@healthendeavors.com <a href="https://calendly.com/patientlookup/30min?month=2023-03">https://calendly.com/patientlookup/30min?month=2023-03</a>	
<b>Timeline for installation is 60 to 90 days after access to client sandbox is granted.</b>	



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Let's Work Together!

# Appendix A



## Legacy Solution: Patient Lookup

Health Endeavors legacy solution used to generate the EHR alerts is Patient Lookup. This solution has been available as a tab in the EHR since 2015. Any data source or algorithm developed within the Patient Lookup framework is available as an EHR alert.

DOB: 12-25-1941

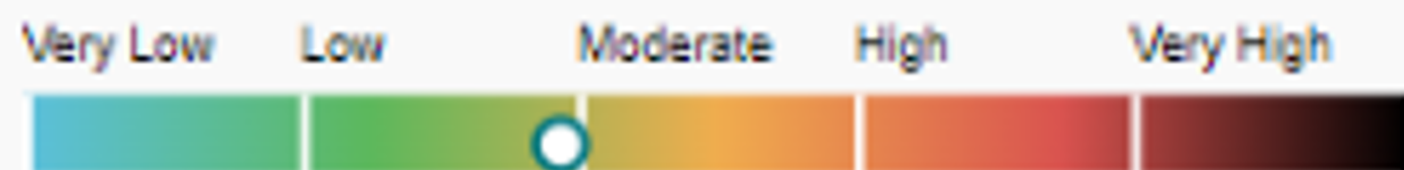
Gender: M

HICN: DM11110618

MBI: 1A23B450618

Deceased: NO

Risk Level:



.477

Spend Level:



0% benchmark used

Out-of-Network Spend:



\$0.00

Probability of Hospital Discharge:



4.93%

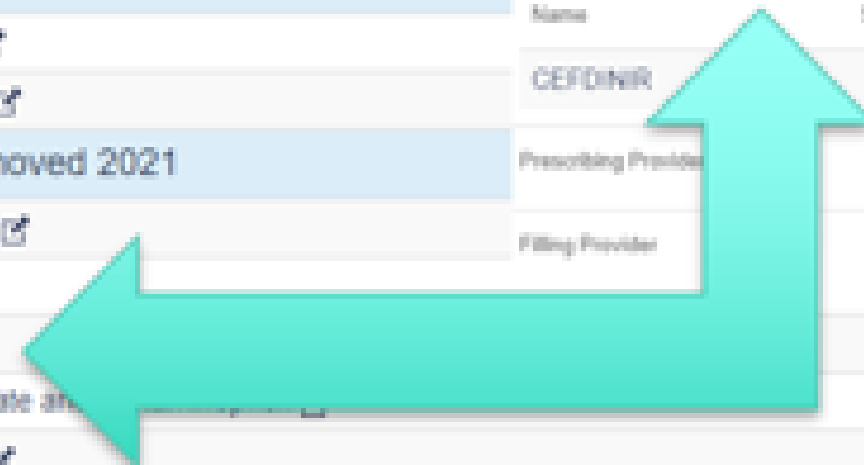
Avoidable Emergency Visits:



0

2021 vs 2020 HCC DX
<b>Not Recoded in 2021</b>
Ischemic or Unspecified Stroke <a href="#">🔗</a>
<b>Recoded in 2021</b>
Amputation Status, Lower Limb/Amputation Complications <a href="#">🔗</a>
Complications of Specified Implanted Device or Graft <a href="#">🔗</a>
Diabetes with Chronic Complications <a href="#">🔗</a>
Septicemia, Sepsis, Systemic Inflammatory Response Syndrome/Shock <a href="#">🔗</a>
Dialysis Status <a href="#">🔗</a>
Chronic Obstructive Pulmonary Disease <a href="#">🔗</a>
Other Significant Endocrine and Metabolic Disorders <a href="#">🔗</a>
Vascular Disease <a href="#">🔗</a>
<b>Added in 2021</b>
Cardio-Respiratory Failure and Shock <a href="#">🔗</a>
Congestive Heart Failure <a href="#">🔗</a>




2021 vs 2020 Medications
<b>New Prescriptions 2021</b>
albuterol sulfate <a href="#">🔗</a>
midodrine hydrochloride <a href="#">🔗</a>
sevelamer carbonate <a href="#">🔗</a>
<b>Current Prescriptions 2021</b>
atorvastatin calcium <a href="#">🔗</a>
lanthanum carbonate <a href="#">🔗</a>
<b>Prescriptions Removed 2021</b>
amlODIPine besylate <a href="#">🔗</a>
cefdinir <a href="#">🔗</a>
cephalexin <a href="#">🔗</a>
HYDRocodone bitartrate <a href="#">🔗</a>
metoprolol succinate <a href="#">🔗</a>
NovoLIN <a href="#">🔗</a>



### Chronic Obstructive Pulmonary Disease

Code	Code Description	Date of First Billing	Date of Last Billing	Total Count of Claims	Rendering Provider	Rendering Provider NPI
J42	Unspecified chronic bronchitis	2019-09-10	2019-10-24	3		
J440	Chr obstructive pulmon disease with (acute) lower resp infct	2021-01-12	2021-01-12	1		
J441	Chronic obstructive pulmonary disease w (acute) exacerbation	2021-01-12	2021-01-13	7		
J449	Chronic obstructive pulmonary disease, unspecified	2020-06-08	2021-04-14	13		

## Quality Care Gaps

DM-2 DM with HbA1c > 9 percent (poor control)		Not Applicable
HTN-2 Controlling High BP		Not Applicable
MH-1 Depression Remission		<b>Action Required</b>
PREV-5 Breast Cancer Screening		Not Applicable
PREV-6 Colorectal Cancer Screening		Not Applicable
PREV-7 Influenza Immunization		Done
PREV-10 Tobacco Use: Screening and Cessation Intervention		<b>Action Required</b>
PREV-12 Screening for Depression and Follow-up Plan		Not Applicable
PREV-13 Statin Therapy		Done
Care-2 Falls: Screening for Future Fall Risk		Not Applicable
Wellness Exam		<b>Action Required</b>

### Eligibility

Dual Eligible: SLMB only

Medicare Status Code: Aged without ESRD

Filter by Provider

■ Part A In Network ■ Part A Out Of Network ■ Part B In Network ■ Part B Out Of Network

### HCC Trend

2021 Your Risk Score: 5.694

2020 Your Risk Score: 3.991

2019 Your Risk Score: 7.573

2018 Your Risk Score: 2.713

### Claims History (04/01/2020 - 03/31/2021)

Part A Claims: **\$106,432.55**

Part B Claims: **\$10,237.57**

Part BDME Claims: **\$134.16**

Part D Claims: **\$0.00**

< 2021

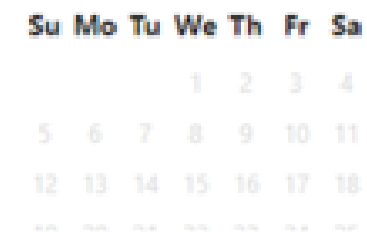
#### January



#### May



#### September



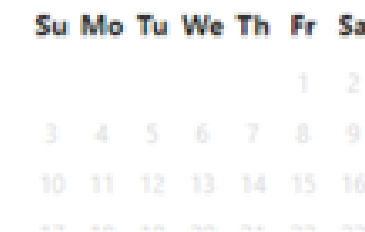
#### February



#### June



#### October



#### Claim Details

02/16/2021

\$65.91

Claim id: 10001094118

Claim type: RIC O local carrier non-DMEPOS claim

ICD-10 Diagnosis

COVID-19

Code(s): U071

Additional ICD-10 Codes: [R2681 - Unsteadiness on feet](#)

Related HCPCS/CPT Codes: [99308 - Subsequent nursing facility care - per day for the evaluation and management of a patient, which requires at least 2 of these 3 key components: An expanded problem focused interval history; An expanded problem focused examination; Medical decision ma](#)

Show Provider Details

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