

From Pledge to Practice: Interoperability that Powers SDOH Referral Loop Closure

Presented By:

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Webinar Participant Tips

- All participant lines are muted. To protect your privacy, you will only see your name and the presenters names in the participant box.
 - To submit a question to the presenters any time during the event;
 - In the Event window, in the Panels drop-down list, select Q & A.
 - Type your question in the Q & A box.
 - Click “Send”.

Overview

- Elements Toward Interoperability Adoption
- “Query” (Pull) and “Push” Interoperability
 - TEFCA the Network of Networks
 - Direct & 360X
- SDOH
 - Definitions
 - Costs
 - Outcomes



Polling Question 1: Why This Is Relevant, Now

How many of you have seen a referral made... and then cannot confirm what happened next?

For how many of you does the entire referral process take more than an hour?

For how many of you is your interoperable data received patient/member information readily available, reliable and usable?



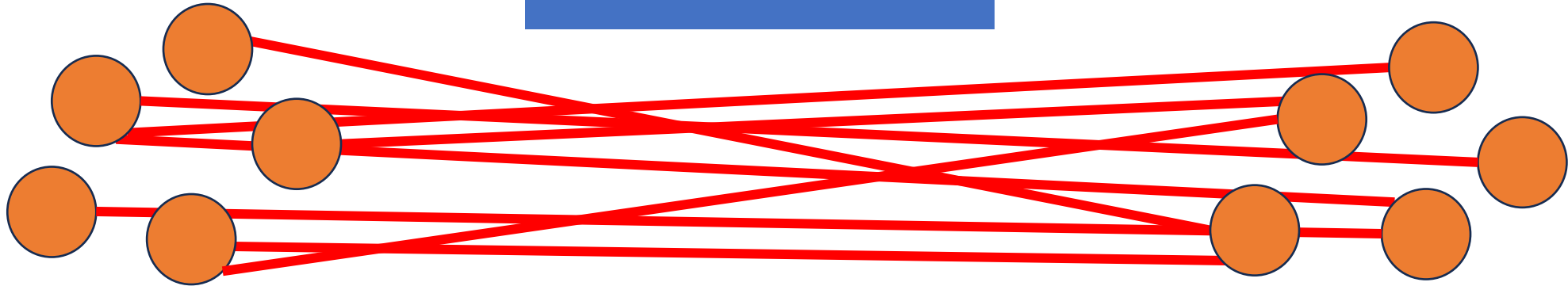
Interoperability

- Interoperability Healthcare Adoption Factors
 - Received patient/member information is:
 - Available, reliable and usable
 - Workflow
 - Burden Reduction
 - Benefits Care



Overview Graphic of Framework and Network

Framework



Edge HIT Systems

- Clinical EHRs
- Payer Systems
- IAS Systems
- HIEs
- Etc.

Networks

Edge HIT Systems

- Clinical EHRs
- Payer Systems
- IAS Systems
- HIEs
- Etc.

Framework

- Governance
- Technical, Privacy and Security, and Legal requirements for participation
- Defining the Exchange Purposes and Response Requirements

Network

- Networks, operating under all aspects of their given Framework, support data moving from point to point
 - Edge system to edge system

Benefits of Interoperability

- United States Core Data for Interoperability
USCDI



USCDI V3

Allergies and Intolerances <ul style="list-style-type: none"> • Substance (Medication) • Substance (Drug Class) • Reaction 	Health Status/Assessments <ul style="list-style-type: none"> • Health Concerns • Functional Status • Disability Status • Mental/Cognitive Status • Pregnancy Status • Smoking Status 	Problems <ul style="list-style-type: none"> • Problems • SDOH Problems/Health Concerns • Date of Diagnosis • Date of Resolution
Assessment and Plan of Treatment <ul style="list-style-type: none"> • Assessment and Plan of Treatment • SDOH Assessment 	Immunizations <ul style="list-style-type: none"> • Immunizations 	Procedures <ul style="list-style-type: none"> • Procedures • SDOH Interventions • Reason for Referral
Care Team Member(s) <ul style="list-style-type: none"> • Care Team Member Name • Care Team Member Identifier • Care Team Member Role • Care Team Member Location • Care Team Member Telecom 	Laboratory <ul style="list-style-type: none"> • Tests • Values/Results • Specimen Type • Result Status 	Provenance <ul style="list-style-type: none"> • Author Organization • Author Time Stamp
Clinical Notes <ul style="list-style-type: none"> • Consultation Note • Discharge Summary Note • History & Physical • Procedure Note • Progress Note 	Medications <ul style="list-style-type: none"> • Medications • Dose • Dose Unit of Measure • Indication • Fill Status 	Unique Device Identifier(s) for a Patient's Implantable Device(s) <ul style="list-style-type: none"> • Unique Device Identifier(s) for a patient's implantable device(s)
Clinical Tests <ul style="list-style-type: none"> • Clinical Test • Clinical Test Result/Report 	Patient Demographics/ Information <ul style="list-style-type: none"> • First Name • Last Name • Middle Name (Including middle initial) • Name Suffix • Previous Name • Date of Birth • Date of Death • Race • Ethnicity • Tribal Affiliation • Sex • Sexual Orientation • Gender Identity • Preferred Language • Current Address • Previous Address • Phone Number • Phone Number Type • Email Address • Related Person's Name • Related Person's Relationship • Occupation • Occupation Industry 	Vital Signs <ul style="list-style-type: none"> • Systolic Blood Pressure • Diastolic Blood Pressure • Heart Rate • Respiratory Rate • Body Temperature • Body Height • Body Weight • Pulse Oximetry • Inhaled Oxygen Concentration • BMI Percentile (2 - 20 years) • Weight-for-length Percentile (Birth - 24 Months) • Head Occipital-frontal Circumference Percentile (Birth- 36 Months)
Diagnostic Imaging <ul style="list-style-type: none"> • Diagnostic Imaging Test • Diagnostic Imaging Report 		
Encounter Information <ul style="list-style-type: none"> • Encounter Type • Encounter Diagnosis • Encounter Time • Encounter Location • Encounter Disposition 		
Goals <ul style="list-style-type: none"> • Patient Goals • SDOH Goals 		
Health Insurance Information <ul style="list-style-type: none"> • Coverage Status • Coverage Type • Relationship to Subscriber • Member Identifier • Subscriber Identifier • Group Number • Payer Identifier 		

USCDI Draft V7

Adverse Events

- Adverse Event
- Adverse Event Outcome

Allergies and Intolerances

- Medication Allergy Intolerance
- Drug Class Allergy Intolerance
- Non-Medication Allergy Intolerance
- Reaction
- Allergy Intolerance Criticality

Care Plans

- Assessment and Plan of Treatment
- Care Plan

Care Team Members

- Care Team Member Name
- Care Team Member Identifier
- Care Team Member Role
- Care Team Member Location
- Care Team Member Telecom
- Healthcare Agent

Clinical Notes

- Consultation Note
- Discharge Summary Note
- Emergency Department Note
- History & Physical
- Operative Note
- Procedure Note
- Progress Note
- Referral Note

Clinical Tests

- Clinical Test
- Clinical Test Result/Report

Diagnostic Imaging

- Diagnostic Imaging Test
- Diagnostic Imaging Result/Report
- Diagnostic Imaging Reference

Encounter Information

- Encounter Type
- Encounter Identifier
- Encounter Diagnosis
- Encounter Time
- Encounter Location
- Encounter Disposition
- Appointment

Facility Information

- Facility Identifier
- Facility Type
- Facility Name
- Facility Address
- Facility Telecom

Family Health History

- Family Health History

Goals and Preferences

- Patient Goal
- Treatment Intervention Preference
- Care Experience Preference
- Advance Directive Observation

Healthcare Information Attributes

- Diagnostic Report Date
- Indication
- Performance Time
- Reason Not Performed

Health Insurance Information

- Health Insurance Coverage Status
- Health Insurance Coverage Type
- Health Insurance Coverage Period
- Relationship to Health Insurance Subscriber
- Health Insurance Member Identifier
- Health Insurance Subscriber Identifier
- Health Insurance Group Identifier
- Health Insurance Payer
- Health Insurance Payer Identifier
- Health Insurance Plan
- Health Insurance Plan Identifier

Health Status Assessments

- Functional Status
- Disability Status
- Mental/Cognitive Status
- Pregnancy Status
- Alcohol Use
- Substance Use
- Physical Activity
- SDOH Assessment
- Tobacco Use
- Nutrition Assessment

Immunizations

- Immunization
- Immunization Lot Number
- Immunization Status
- Immunization Record Source

Laboratory

- Test
- Value/Result
- Specimen Type
- Result Status
- Result Unit of Measure
- Result Reference Range
- Result Interpretation
- Specimen Source Site
- Specimen Identifier
- Specimen Condition
- Specimen Collection Method

Medical Devices

- Unique Device Identifier
- Device Type

Medications

- Medication
- Dose
- Dose Unit of Measure
- Route of Administration
- Medication Dispense Status
- Medication Instructions
- Medication Adherence
- Medication Administration
- Medication Dispense Quantity

Orders

- Medication Order
- Laboratory Order
- Diagnostic Imaging Order
- Clinical Test Order
- Procedure Order
- Portable Medical Order
- Medical Device Order
- Nutrition Order
- Referral Order

Patient

Demographics/Information

- First Name
- Last Name
- Middle Name (Including middle initial)
- Name Suffix
- Previous Name
- Date of Birth
- Date of Death
- Race
- Ethnicity
- Tribal Affiliation
- Sex
- Preferred Language

- Interpreter Needed
- Current Address
- Previous Address
- Phone Number
- Phone Number Type
- Email Address
- Related Person's Name
- Relationship Type
- Occupation
- Occupation Industry
- Accommodation
- Deceased Indicator
- Patient Identifier

Problems

- Problem
- Health Concern
- Date of Onset
- Date of Diagnosis
- Date of Resolution
- Condition Status

Procedures

- Procedure
- Reason for Referral
- Procedure Status

Provenance

- Author
- Author Role
- Author Time Stamp
- Author Organization

Vital Signs

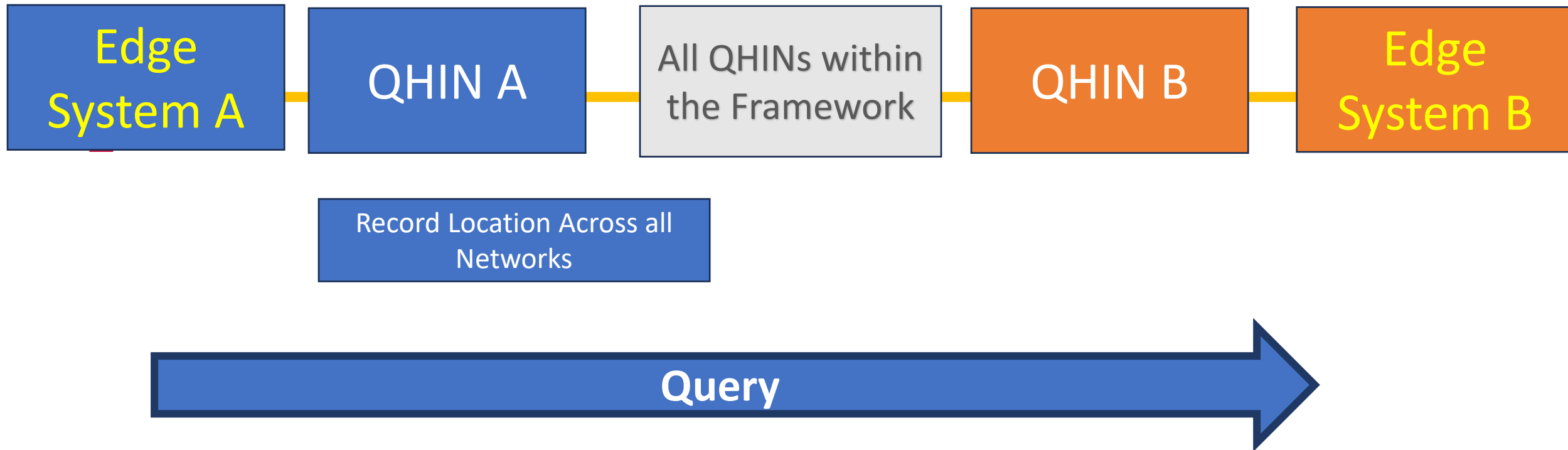
- Systolic Blood Pressure
- Diastolic Blood Pressure
- Average Blood Pressure
- Heart Rate
- Respiratory Rate
- Body Temperature
- Body Height
- Body Weight
- Pulse Oximetry
- Inhaled Oxygen Concentration
- BMI Percentile (2 - 20 years)
- Weight-for-length Percentile (Birth - 24 Months)
- Head Occipital-frontal Circumference Percentile (Birth- 36 Months)

Polling Question 2

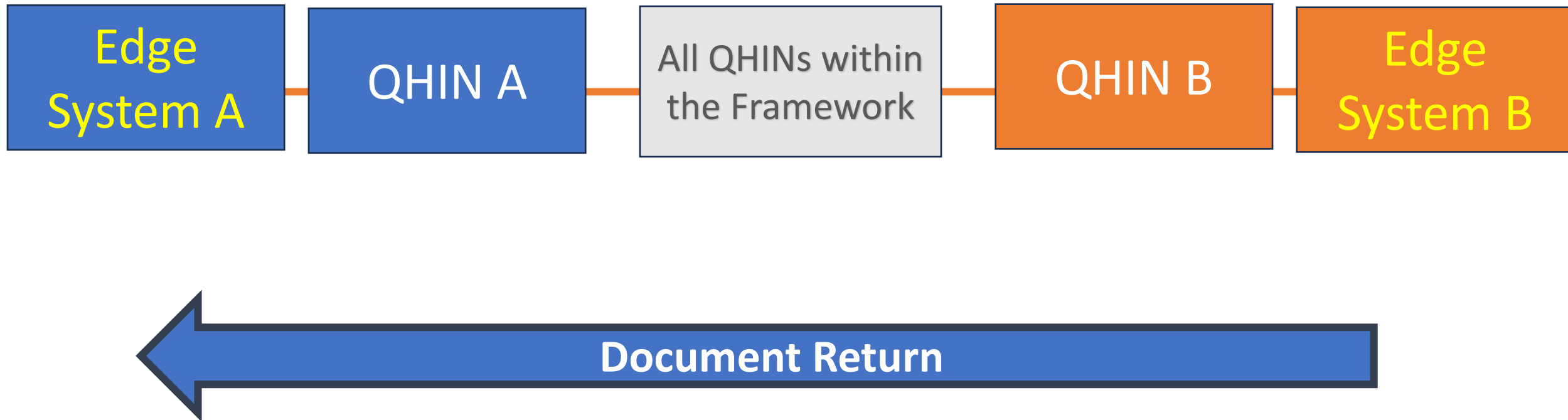
- Are Frameworks and Networks responsible for ensuring that certified EHR systems and health IT vendors comply with the USCDI currently mandated version?
 - 1) Yes
 - 2) No

Query Interoperability

“Query” Trusted Exchange Framework Common Agreement (TEFCA) Qualified Health Information Network (QHIN) Interoperability

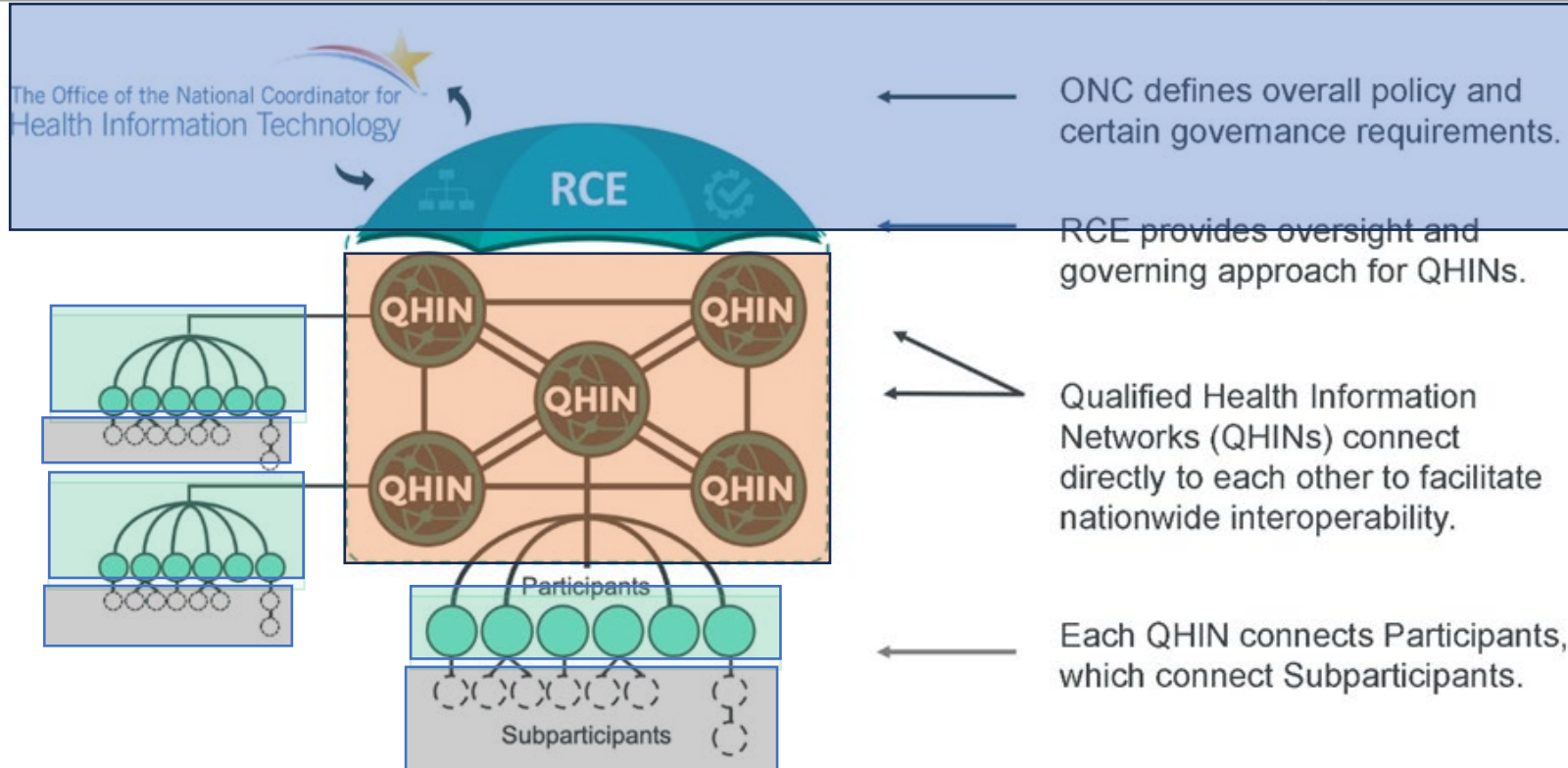


“Query” Trusted Exchange Framework Common Agreement (TEFCA) Qualified Health Information Network (QHIN) Interoperability



TEFCA Framework

How will exchange work under TEFCA?



Framework

Networks

Participants

Subparticipants

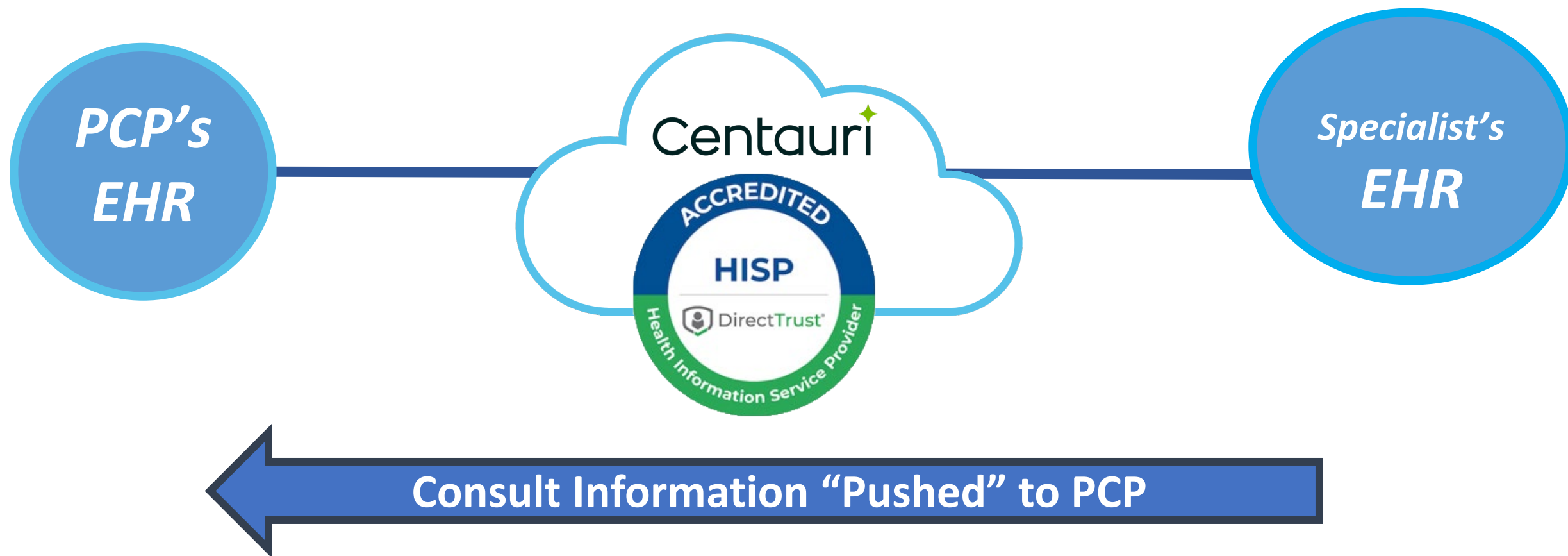
TEFCA Exchange Purposes (XPs)

- Treatment
- Payment
- Health Care Operations
- Public Health
- Government Benefits Determination
- Individual Access Services



Push Interoperability

“Push” Direct Interoperability

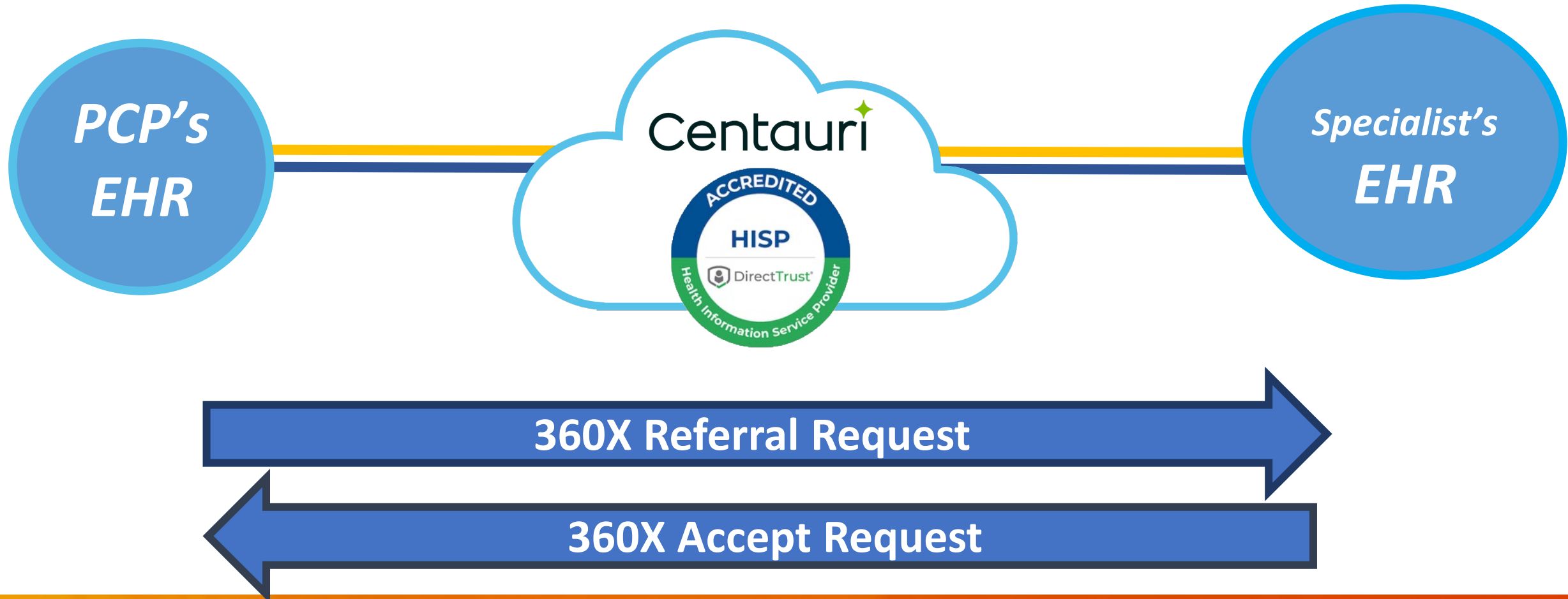


360X Project – Why It Is Important

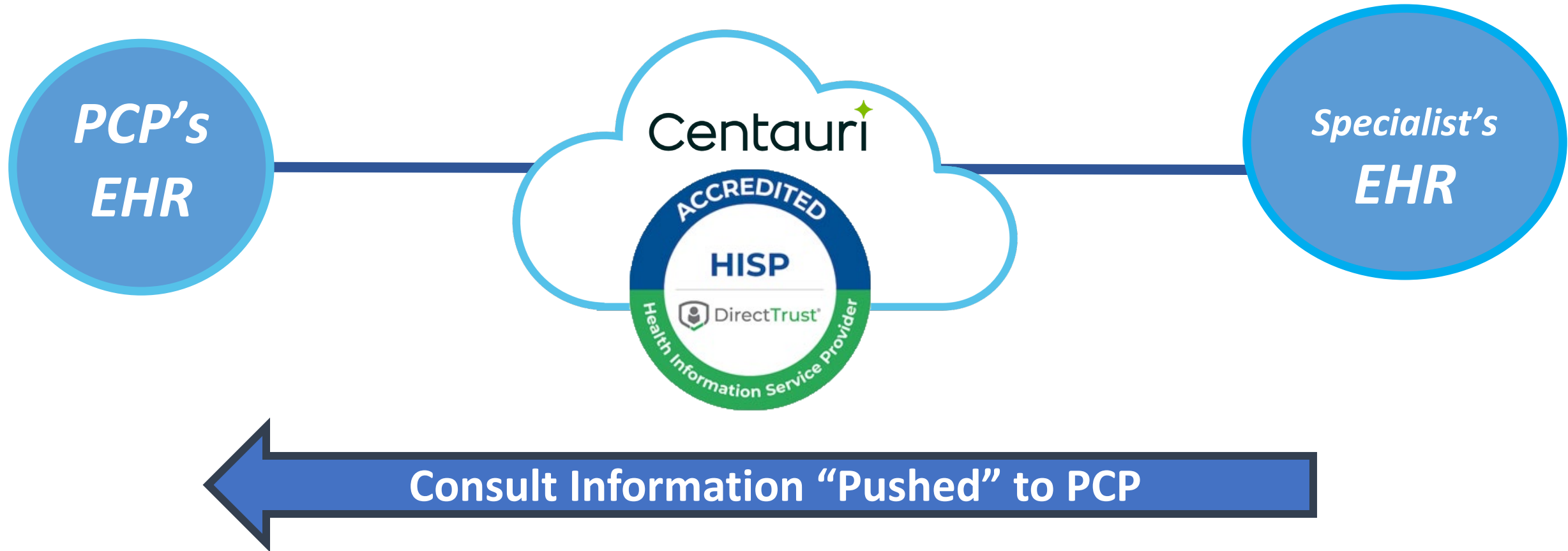
- Primary Goals:
 - Improve patient care and referral management
 - Add value to patients, clinicians, office staff and overall clinical workflows

360X Referral from PCP

Specialty Office Response to PCP: Accept



Post Specialty Encounter, Closing the 360X Referral Loop



Participating Workgroup Vendors

- Epic
- Netsmart
- eClinicalWorks
- NextGen
- MEDITECH
- Athenahealth
- Oracle Health
- Centauri Direct



360X Home - 360X - Confluence

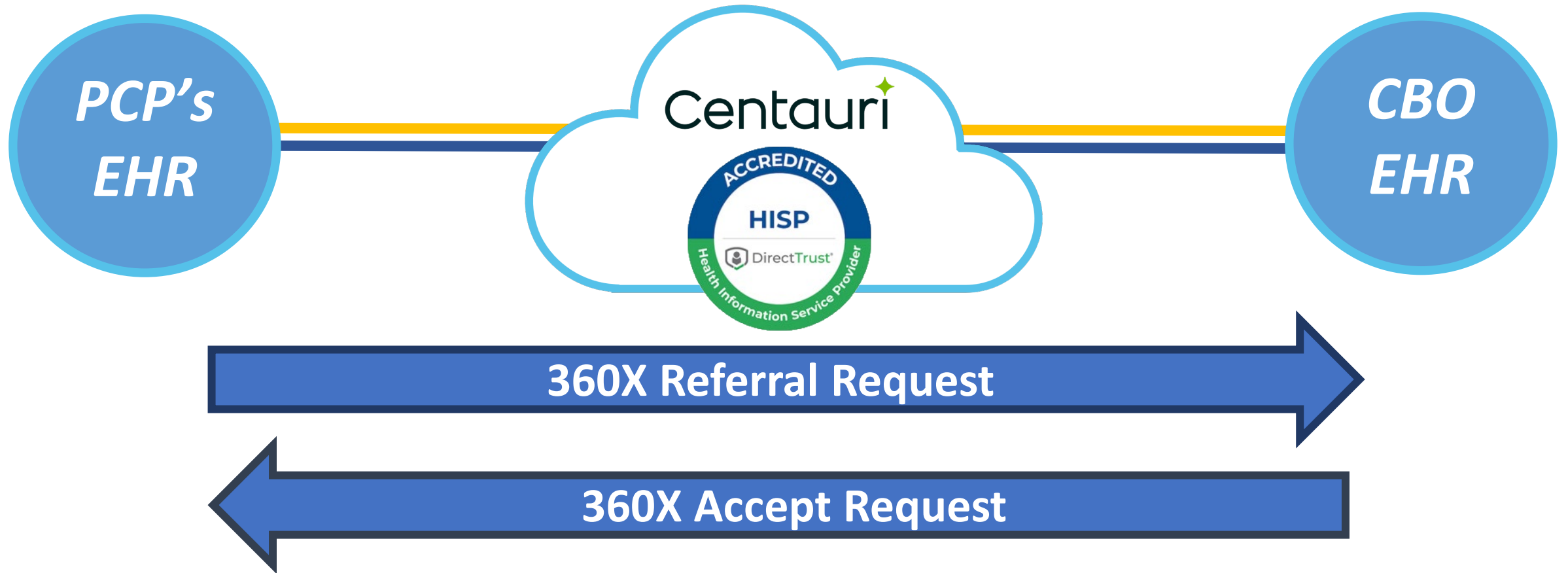
- Active Use Cases
 - 360X Closed Loop Referral
- Coming Soon
 - 360X and LTPAC Transfers
 - 360X LTPAC to ED Transfers
 - **360X SDOH Referrals**



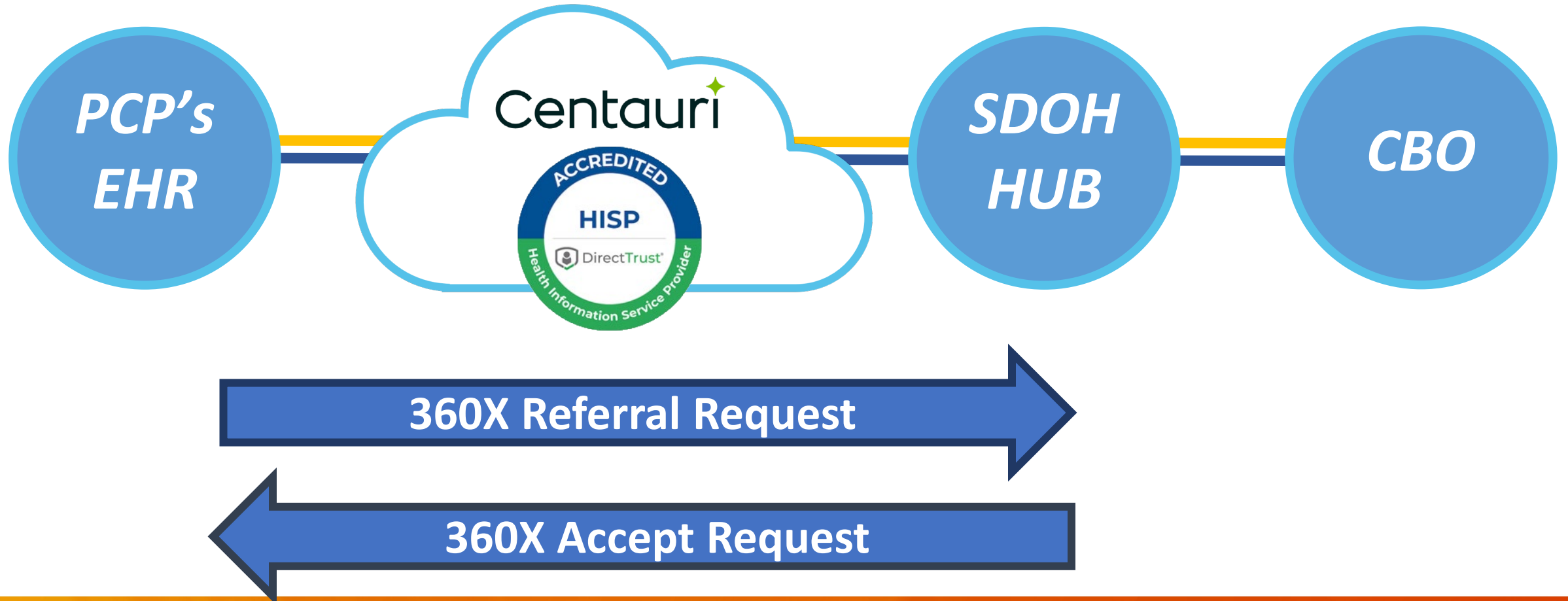
SDOH Community Based Organizations (CBOs)

- Examples:
 - Food and Nutrition – Meals on Wheels, Food Pantries
 - Housing and Housing Instability Support – housing programs, homeless shelters, rental assistance agencies
 - Transportation
 - Health Promotion and Social Engagement – Senior Centers, PACE

360X SDOH Referrals Directly to a CBO



360X SDOH Referrals Through an SDOH HUB



AmeriHealth Caritas Builds on Year of Action to Address **Food**

Insecurity

Health Care Groups Aim To Counter Growing 'National Scandal' of **Elder**

Homelessness

By: Newsfile

November 05, 2025 at

Meridian Health Plan of Illinois and Centene Foundation Award \$2.2 Million Grant to Safer Foundation for Purchase and Renovation of **Affordable Housing** Building in Chicago

CVS Health invests nearly \$35 million in **affordable housing** in Hawai'i

Buckeye Health Plan and Centene Foundation Make \$200,000 Investment to Help Tackle **Food Insecurity** in Ohio

Housing through Homeward

At UPMC Health Plan, we believe that access to affordable, stable housing is crucial to long-term physical and mental health as well as an individual's well-being. [Evidence shows](#) that stable housing positively impacts health outcomes and may also provide a critical foundation for addressing other SDOH factors such as education, food security, and health care affordability and access. Our community collaborators for housing initiatives include [Community Human Services](#) and [Action Housing Inc.](#)

UnitedHealth Group's **affordable housing** investments surpass \$1.2B

Strategic Collaboration Overview

Cityblock Health and Mercy Health have launched a groundbreaking strategic collaboration designed to revolutionize healthcare delivery for Medicaid patients in Ohio's Cincinnati and Toledo regions. This innovative partnership brings together two powerhouse healthcare organizations committed to transforming care accessibility and quality for underserved populations.

The collaboration centers on providing comprehensive care extension services that complement Mercy Health's existing [primary care provider \(PCP\) network](#). By integrating Cityblock's specialized expertise with Mercy Health's established infrastructure, the partnership creates a seamless care continuum that addresses the complex needs of Medicaid beneficiaries across multiple touchpoints.



Polling Question 3: Which statement best reflects where your organization is today on SDOH?

- A) Strong strategy + consistent workflows**
- B) Pilots in progress**
- C) Mostly ad hoc / program-by-program**
- D) Early stage / not started**



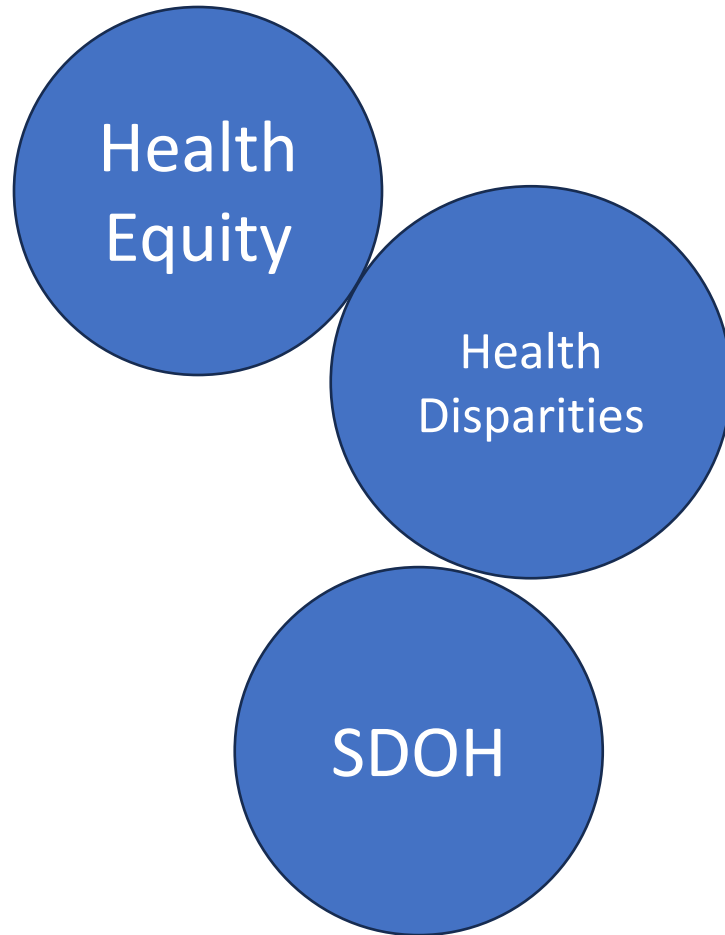
Polling Question 4: What's the biggest reason SDOH initiatives stall or are not as effective as they could be in your organization?

- A) No closed-loop feedback (can't confirm services)**
- B) Limited community capacity**
- C) Data/consent/sharing barriers**
- D) Hard to prove ROI or outcomes**



Key Terms

(often used interchangeably, actually distinct)



Health Equity – A state in which every person has the opportunity to achieve their full health potential and in which no person is disadvantaged because of social circumstances

Health Disparities – Preventable differences in disease burden or opportunities to achieve optimal health experienced by socially disadvantaged individuals and communities

SDOH – conditions in which people are born, grow, work live and age. A wide set of forces and systems that shape life, such as economic, political and social policies and systems

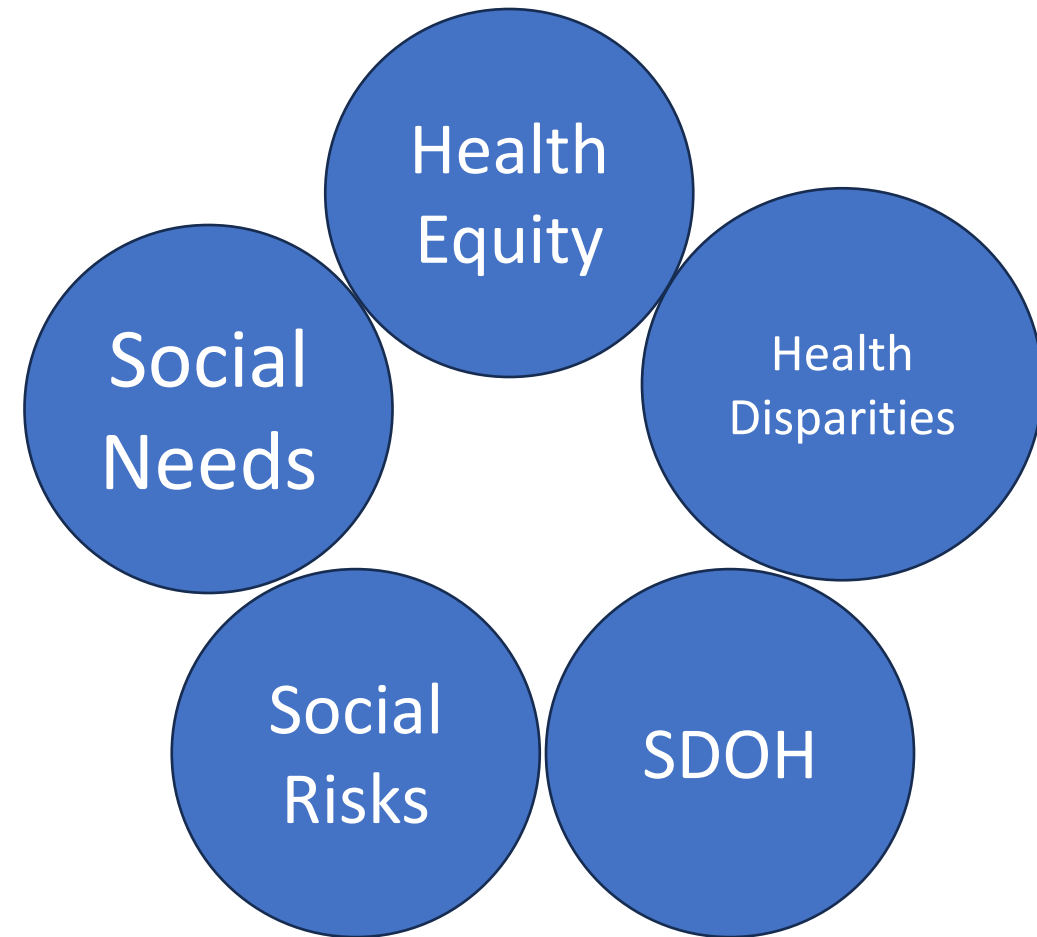


Key Terms

(often used interchangeably, actually distinct)

Social Needs – An individual's immediate necessities determined by that person's preferences and priorities

Social Risks – Adverse social conditions associated with poor health, such as poverty or social isolation



What Are Social Determinants of Health (SDOH)?

Social Determinants of Health



- Defined as non-medical factors that influence health outcomes, and are the conditions in which people are born, live, learn, work, play, worship and age:
- Economic Stability
- Education Access and Quality
- Health Care Access and Quality
- Neighborhood and Built Environment
- Social and Community Context

USING SDOH Z CODES

Can Enhance Your Quality Improvement Initiatives



Health Care Administrators

Understand how SDOH data can be gathered and tracked using Z codes.

- Select an SDOH screening tool.
- Identify workflows that minimize staff burden.
- Provide training to support data collection.
- Consider EHRs that facilitate data collection and coding.
- Decide what Z code data to use and monitor.

Develop a plan to use SDOH Z code data to:

- Enhance patient care.
- Improve care coordination and referrals.
- Support quality measurement.
- Identify community/population needs.
- Support planning and implementation of social needs interventions.
- Monitor SDOH intervention effectiveness.



Health Care Team

Use a SDOH screening tool.

- Follow best practices for collecting SDOH data in a sensitive and HIPAA-compliant manner.
- Consistently document standardized SDOH data in the EHR.
- Refer individuals to social service organizations and appropriate support services through local, state, and national resources.



Coding and Other Professionals

Follow the ICD-10-CM coding guidelines.³

- Use the CDC National Center for Health Statistics [ICD-10-CM Browser](#) tool to search for ICD-10-CM codes and information on code usage.
- Assign all relevant SDOH Z codes to support quality improvement initiatives.

Z code

Categories

- Z55** – Problems related to education and literacy
- Z56** – Problems related to employment and unemployment
- Z57** – Occupational exposure to risk factors
- Z58** – Problems related to physical environment
- Z59** – Problems related to housing and economic circumstances

- Z60** – Problems related to social environment
- Z62** – Problems related to upbringing
- Z63** – Other problems related to primary support group, including family circumstances
- Z64** – Problems related to certain psychosocial circumstances
- Z65** – Problems related to other psychosocial circumstances

This list is subject to revisions and additions to improve alignment with SDOH data elements.

Interactive Activity

- An individual's diet is solely a matter of personal choice.
- An individual's neighborhood has an impact on their health outcomes.
- If an individual has insurance, all of their healthcare access barriers are removed.
- Homelessness is primarily a mental health issue.
- Focusing on an individual's social needs is outside the scope of a clinical or administrative professional's job.
- Telling individuals to "have healthier habits" will not motivate them to improve their health.
- It is the government's responsibility to address health-related social needs and determinants.



Dollars and Sense - Loneliness

20 percent of Americans are lonely or socially isolated

- Increases mortality by **45** percent
- Increases risk of depression, anxiety and suicide
 - In the US, depression alone costs an estimated **\$236 billion** per year
- Associated with a **50** percent increased risk of dementia
 - In 2022, the total cost of treating Alzheimer's and related dementia was **\$321 billion** and is expected to reach **\$1 trillion** by 2050
- Associated with a **29** percent increased risk of heart disease and stroke
 - In the US, per year these cost **\$216 billion** per year in healthcare costs and **\$147 billion** in lost productivity



**\$236 billion +
\$321 billion +
\$216 billion +
\$147 billion
= \$920 Billion/Year**

Dollars and Sense – Food Insecurity

1 in 8 Americans is food insecure

- Costs to the healthcare system reached **\$327 billion** in 2017, not including costs associated with loss of productivity and quality of life
- Food insecure older individuals are **50** percent more likely to develop diabetes, **14** percent more likely to develop hypertension, and **60** percent more likely to experience a heart attack



Dollars and Sense – Food Insecurity

CMS-HCC v28

36	Diabetes with Severe Acute Complications
37	Diabetes with Chronic Complications
38	Diabetes with Other/No Complications
48	Morbid Obesity
222	End-Stage Heart Failure
224	Acute on Chronic Heart Failure
225	Acute Heart Failure
226	Heart Failure, Except End-Stage and Acute
228	Acute Myocardial Infarction
229	Unstable Angina and Other Acute Ischemic Heart Disease
249	Ischemic or Unspecified Stroke
263	Atherosclerosis of Arteries of Extremities with Ulceration or Gangrene
264	Vascular Disease with Complications
326	CKD Stage 5
327	CKD Stage 4
328	CKD Stage 3B
329	CKD Stage 3 Except 3B

HHS-HCC

19	Diabetes/Acute Complications
20	Diabetes/Chronic Complications
21	Diabetes/Without Complications
23	Protein/Calorie Malnutrition
94	Anorexia/Bulimia
130	Congestive Heart Failure
131	Acute Myocardial Infarction
132	Unstable Angina
146	Stroke
153	Atherosclerosis of Arteries of Extremities with Ulceration or Gangrene
154	Vascular Disease
184	End Stage Renal Disease
187	CKD Stage 5
188	CKD Stage 4

PATIENT:
DOB: UNIT:

History of kidney surgery (2005)
Hx of foot surgery

Family History (Reviewed 07/17/23 @ 10:19 by Nikole Tisdale, CMA)

Father

Diabetes

Mother

Hypertension

Social History (Reviewed 08/29/23 @ 13:49 by Elizabeth Deglow, CMA)

Usual Living Arrangement: Homeless

Marital Status: Single

Comments: living with an elderly woman in town

Occupation History: helps out at house he is staying in

Smoking Status: Current Some Days Smoker

Approximately How Many Cigarettes Per Day: 12

Smokeless Tobacco Status: None

Recreational Drug Use: Yes (TCH, meth at times)

In the past year, how often have you had an alcoholic drink?: None

"Within past 12 months, we were worried whether our food would run out before we got money to get buy more": Often True

"Within the past 12 months the food we bought just didn't last and we didn't have enough money to get more.": Often True

Alt/Homeopathic Practices: Yes: CBD Products

Assessment & Plan

Assessment & Plan

(1) Opioid dependence on agonist therapy:

Plan:

Suboxone is renewed today no changes in dose at this time he is given a 9-day supply until appointment with Dr. Wright.

UDS is pending

(2) Anxiety:

Plan:

continue paroxetine 30 mg daily.

Add buspirone 10 mg 3 times a day for anxiety

Continue with benzodiazepines as prescribed.

(3) Unsheltered homelessness:

Plan:

This is a barrier to healing as well as his general indifference to care. Unfortunately, his social situation is again unstable.

(4) Type 1 diabetes mellitus with diabetic polyneuropathy:

Plan:

Patient continues intermittent monitoring of his blood glucose levels. Blood glucose today via glucometer was 115.

Food security is definitely an issue at this time. He was given samples of Ensure and granola bars in

PATIENT: ACCT UNIT:

DOB:

AGE/SEX: 35/M

ROOM/BED:

ORDERING PROVIDER:

LOC: RC.MUSCODA

DATE OF SERVICE:

PT STATUS: REG AM3

HPI

Controlled Medicine

Controlled Medicine

Last Dose of Medication:: Today

Follow up appointment needs to be scheduled within 100 days

HPI Comments

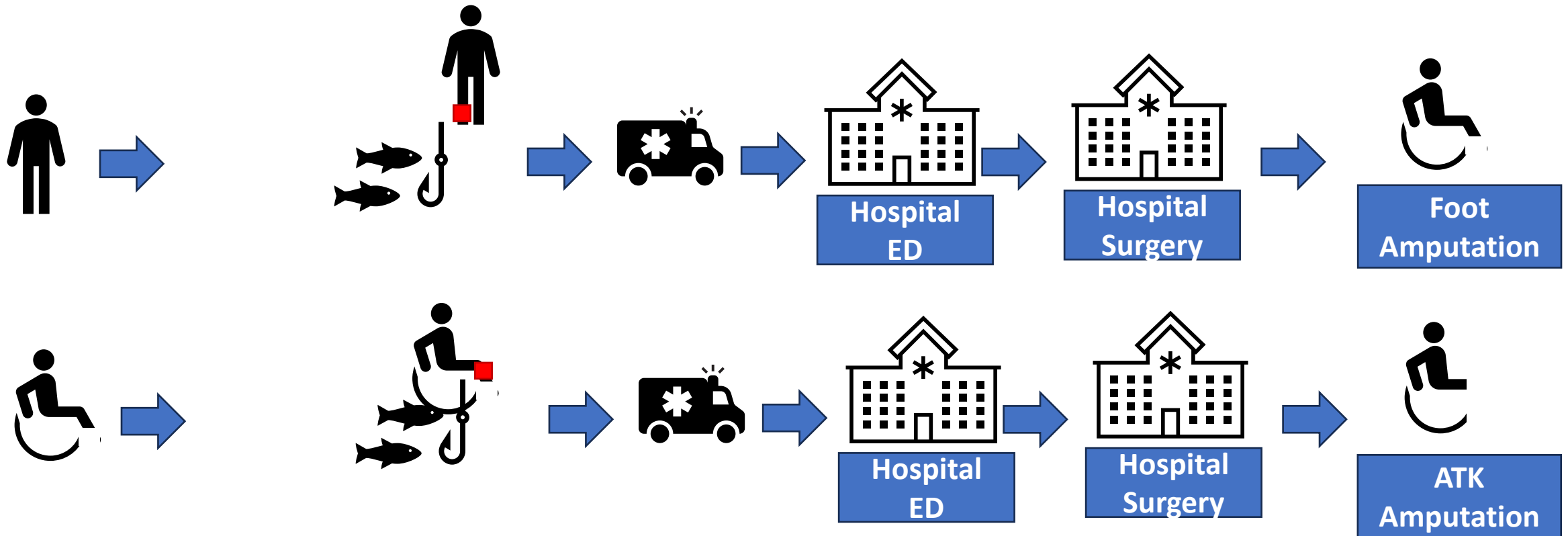
Details:

Presents today for follow up of controlled substance use mood disorder and Type 1 diabetes. Last dose of suboxone was this morning. Admits to cravings for methamphetamine and that he is using pretty much every day however it has been 2 days since last used. Patient did have an amputation of his right great toe. He was living in a tent in the Pines by himself. He rides a bike for transportation. States is very difficult to manage his diabetes he is only using the Lantus. He does not eat on a regular basis. He has had no fevers he does spend a lot of time in the river which he has been told in the past is awful however this is his mode of getting food. His anxiety is very high he is very ambivalent in regards to his care of his diabetes or even to the ulcers on his feet. He is due to be having an MRI completed however he does not have a phone now and is unable to make any phone calls to make arrangements for a ride. Patient has not taken a shower for over a week now. Patient took a shower when he got here to the clinic. He is not consistently getting his wounds on his feet clean. There has been some concern for osteomyelitis which is why the MRI is pending. MRI has been scheduled in Dodgeville on 9/7/2023.

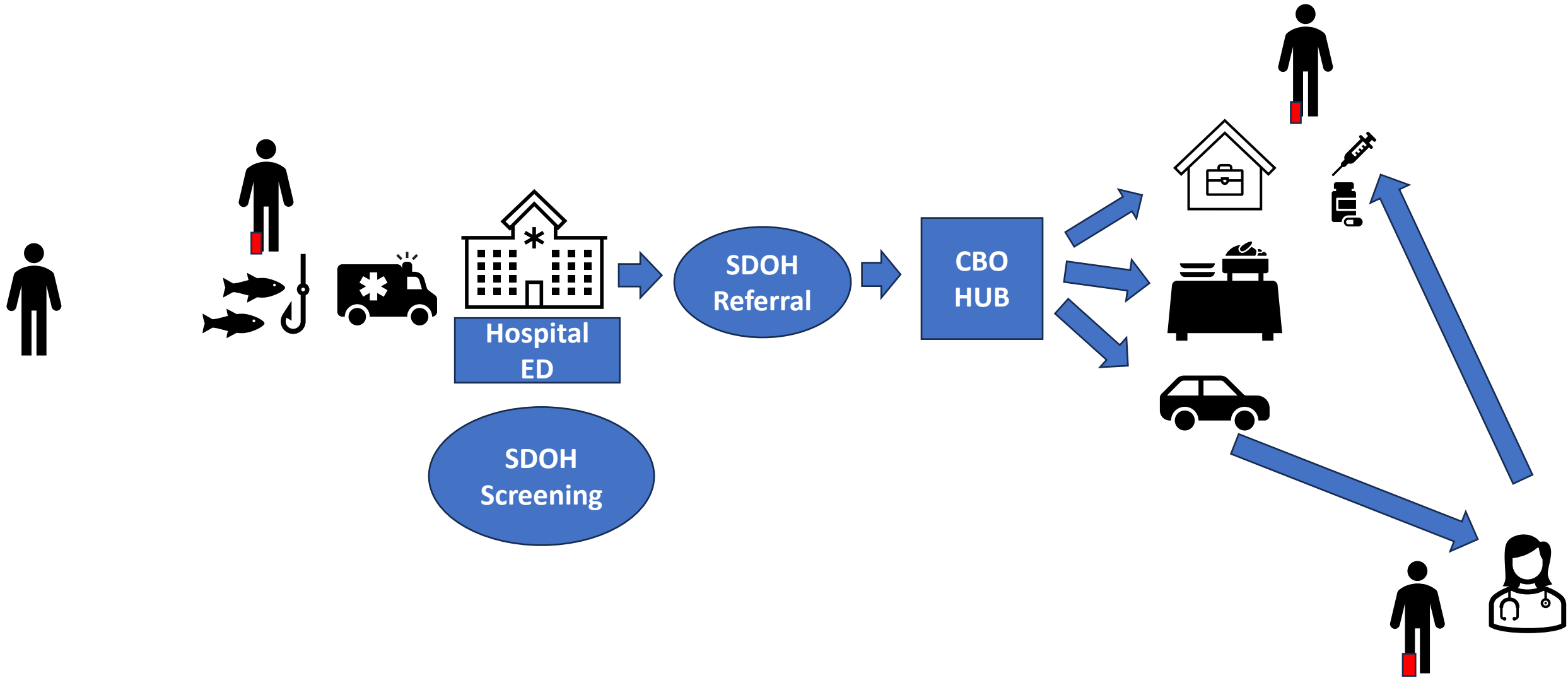
Clinic Intake

Visit Reasons: 1 WK MAT, Opioid dependence

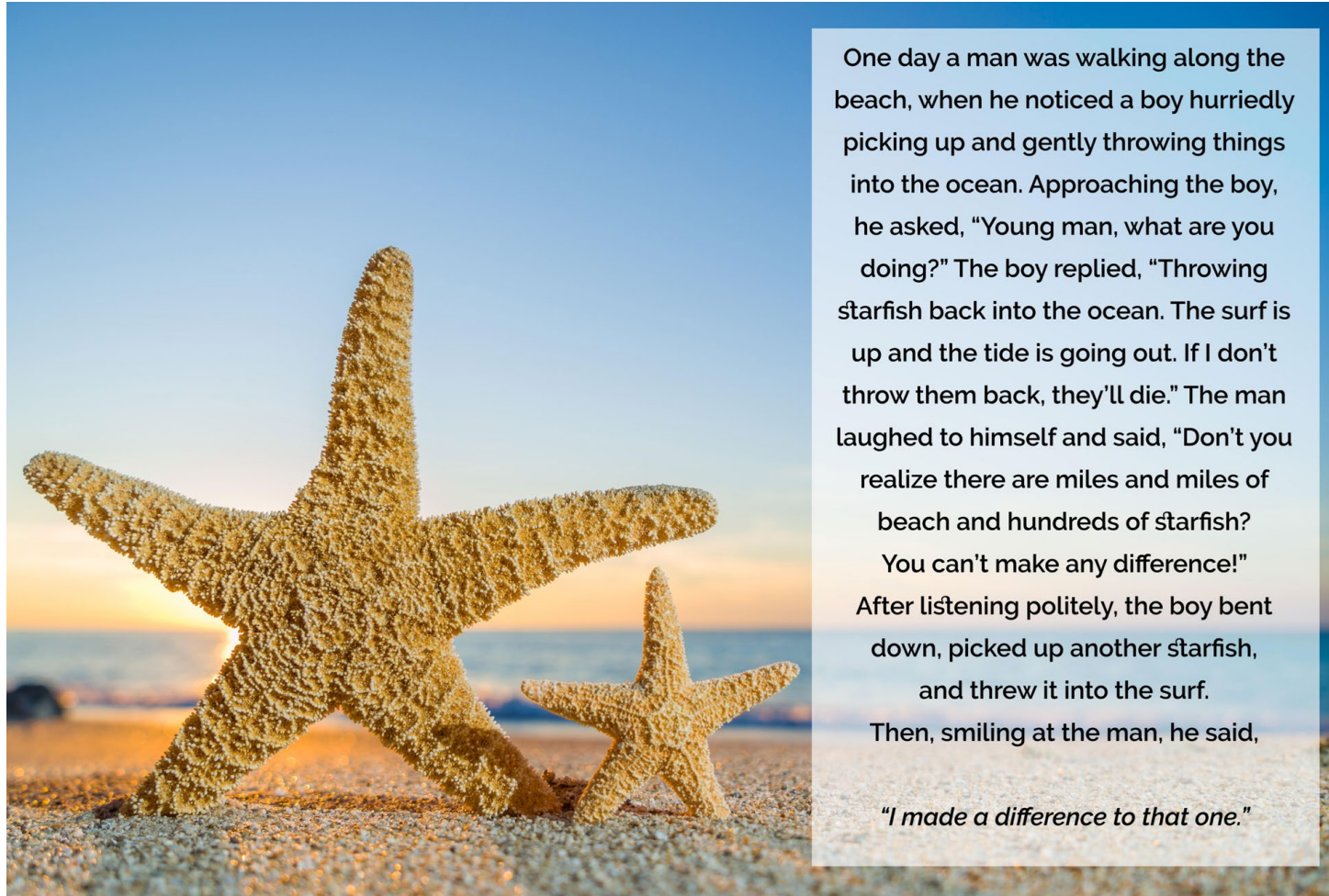
Patient Without SDOH Support



Patient With SDOH Support



Conclusion: The Star Thrower



One day a man was walking along the beach, when he noticed a boy hurriedly picking up and gently throwing things into the ocean. Approaching the boy, he asked, "Young man, what are you doing?" The boy replied, "Throwing starfish back into the ocean. The surf is up and the tide is going out. If I don't throw them back, they'll die." The man laughed to himself and said, "Don't you realize there are miles and miles of beach and hundreds of starfish?

You can't make any difference!" After listening politely, the boy bent down, picked up another starfish, and threw it into the surf. Then, smiling at the man, he said,

"I made a difference to that one."

THANK YOU



RISE