OREGON OFFICE of RURAL HEALTH

2023 Rural Population Health Webinar Series

OPPORTUNITY Just knock.

Welcome!

Population Health 101

James McCormack, PhD | Oregon Health & Science University

April 25, 2023

OHSU

OREGON OFFICE of RURAL HEALTH

2023 Rural Population Health Webinar Series

OPPORTUNITY Just knock.

Register for the full series:

- April 25: Digging into Community Health Data
- May 25: Community Health Workers: Approaches to Health Equity and Payment Strategies
- June 22: Building Healthy Communities Through Strategic Partnerships
- July (Date TBA): Setting Up Your Population Health Program
- August 9: What's Next? Learning From Each Other

https://www.ohsu.edu/oregon-office-of-rural-health/2023-population-health-webinar-series

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2023 Rural Population Health Webinar Series

OPPORTUNITY Just knock.

Rural Population Health Grant Program

The Rural Population Health Grant is designed to support programs that address a specific population health need for an identified rural population. A strong application demonstrates an innovative, sustainable and scalable model with strong community partners. This initiative is currently open to Critical Access Hospitals (CAHs), CAH-owned Rural Health Clinics (RHCs), or organizations who are conducting programming in collaboration with a local CAH or CAH-owned RHC.

Request for proposals will be released June 1, 2023 for the 2023-2024 grant cycle.

https://www.ohsu.edu/oregon-office-of-rural-health/rural-population-health-grants

Continuing Education

OHSU

Accreditation: The School of Medicine, Oregon Health & Science University (OHSU), is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Credit: Oregon Health & Science University School of Medicine designates this live activity for a maximum of *1.0 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Disclosures:

- James McCormack has no conflicts to disclose.

Digging Into Community Health Data (in Electronic Health Records)

April 25, 2023

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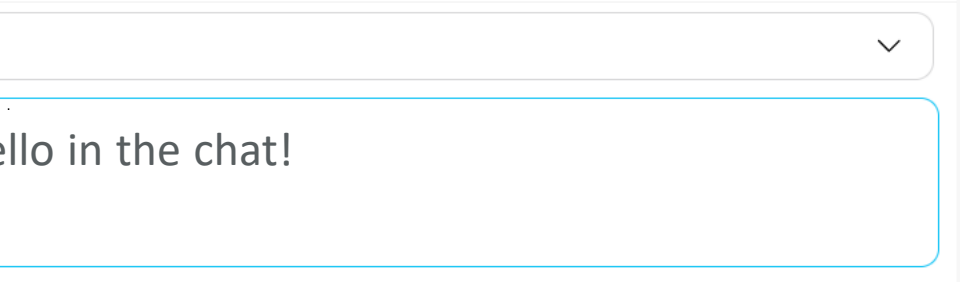
ORPRN
Oregon Rural Practice-Based Research Network
www.ohsu.edu/orprn

OHSU

Today's topics

- Introduction
- SDOH data in EHRs
- Accessing and extracting SDOH data in EHRs
- Ensuring the quality of SDOH data in EHRs
- Use cases for SDOH data in EHRs
- Beyond EHRs: Other data sources for SDOH data
- Discussion



ORPRN
Oregon Rural Practice-Based Research Network

Social Determinants of Health (SDOH)

Social Determinants of Health
Copyright-free

Healthy People 2030

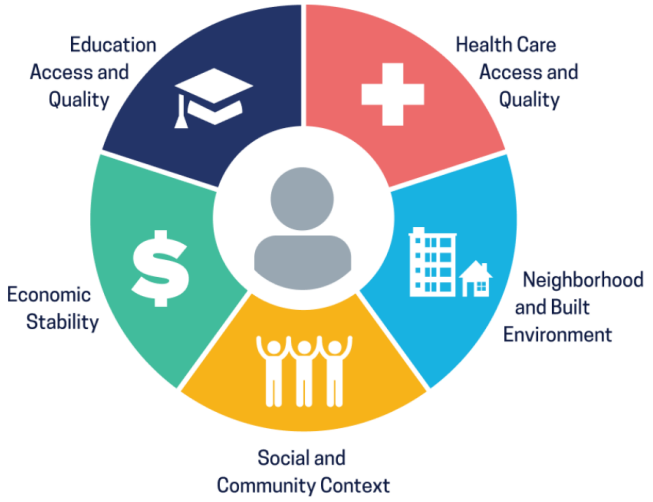
Retrieved April 26, 2022, from the Healthy People 2030 website, U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion.

According to Healthy People 2030, the social determinants of health (SDOH) are the conditions in the environment that affect our overall health and quality of life.

There are five key areas of SDOH:

- Economic stability: Such as job opportunities and income
- Education access and quality: Such as the level of education we complete, how well we read or our preferred written or spoken language
- Health care access and quality
- Neighborhood and built environment: Such as neighborhood access to safe and stable housing, transportation, healthy food and opportunities for physical activity; air and water quality
- Social and community context: Such as racism, discrimination, conditions in the workplace

What Are the Social Determinants of Health?



Source: https://www.oregon.gov/oha/hsd/amh/pages/sdoh.aspx

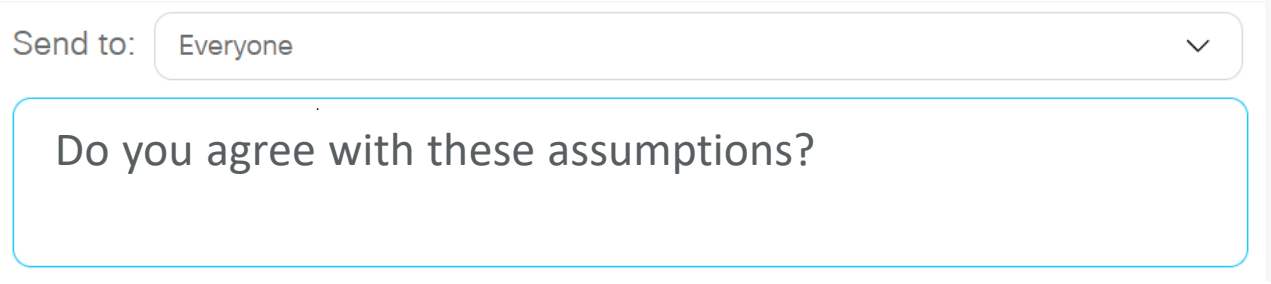
For the sake of discussion…

For today we will assume:

1. Individual health is largely determined by social and behavioral factors
2. Rural healthcare providers do (or will) assess individuals for social determinants of health
3. Access to patient-level data on social needs is critical for high quality and equitable care

And (time permitting) will briefly touch on:

1. Non-EHR data sources for individual SDOH data
2. Databases with community-level social health factors



Types of SDOH data

EHRs can represent several types of data relevant to assessing and meeting community health needs.

1. Individual demographics including race, ethnicity, and disability (REALD)
2. Eligibility for screening for SDOH
3. Visits and encounters relevant to screening or meeting social health needs
4. Screening tools used, responses, interpretations, and conclusions
5. Actions taken in response to screening results
6. Requests for community services
7. Administrative coding for screening and identified needs for community services
8. Clinician notes and narrative relevant to identifying and addressing social needs

Screening assessments for SDOH needs

Approved Social Needs Screening Tools for Required Domains

Updated 3/23/23

	Food insecurity	Housing insecurity	Transportation
Accountable Health Communities (AHC)	✓	✓	✓
American Academy of Family Physicians (AAFP)	✓	✓	✓
Arlington	✓	✓	✓
Boston Medical Center Thrive (BMC Thrive)	✓	✓	✓
Comprehensive Universal Behavior Screen (CUBS)	*Question not recommended*	*Question not recommended*	✓
Health Begins	✓	✓	✓
Health Leads	✓	✓	✓
Housing Stability Vital Sign	*No question*	✓	*No question*
Hunger Vital Sign	✓	*No question*	*No question*
iHELP	✓	✓	*No question*
North Carolina Medicaid (NC Medicaid)	✓	✓	✓
Protocol for responding to and assessing patients' assets, risks and experiences (PRAPARE)	✓	✓	✓
PROMIS	*No question*	*No question*	✓
Safe Environment for Every Kid (SEEK)	✓	*No question*	*No question*
Survey of Well-being of Young Children (SWYC)	✓	*No question*	*No question*
U.S. Adult Food Security Survey	✓	*No question*	*No question*
U.S. Child Food Security Survey (Self-Administered Food Security Survey Module for Youth Ages 12 and older)	✓	*No question*	*No question*
U.S. Household Food Security Survey	✓	*No question*	*No question*
U.S. Household Food Security Survey: Six-Item Short Form	✓	*No question*	*No question*
WeCare	✓	✓	*No question*
WellRx Questionnaire	✓	✓	✓
Your Current Life Situation (YCLS)	✓	*Question not recommended*	✓

Oregon Health Authority

Social Determinants of Health: Social Needs Screening and Referral Measure – MY 2023

PRAPARE

Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences

PRAPARE®: Protocol for Responding to and Assessing Patient Assets, Risks, and Experiences

Paper Version of PRAPARE® for Implementation as of September 2, 2016

Personal Characteristics

1. Are you Hispanic or Latino?

	Yes		No		I choose not to answer this question

2. Which race(s) are you? Check all that apply

	Asian		Native Hawaiian
	Pacific Islander		Black/African American
	White		American Indian/Alaskan Native
	Other (please write):		
	I choose not to answer this question		

3. At any point in the past 2 years, has season or migrant farm work been your or your family's main source of income?

	Yes		No		I choose not to answer this question

4. Have you been discharged from the armed forces of the United States?

	Yes		No		I choose not to answer this question

5. What language are you most comfortable speaking?

Family & Home

6. How many family members, including yourself, do you currently live with? ____

	I choose not to answer this question

7. What is your housing situation today?

I have housing
I do not have housing (staying with others, in a hotel, in a shelter, living outside on the street, on a beach, in a car, or in a park)
I choose not to answer this question

8. Are you worried about losing your housing?

	Yes		No		I choose not to answer this question

9. What address do you live at?
Street:_____
City, State, Zip code: _____

Money & Resources

10. What is the highest level of school that you have finished?

	Less than high school degree		High school diploma or GED
	More than high school		I choose not to answer this question

11. What is your current work situation?

	Unemployed		Part-time or temporary work		Full-time work
	Otherwise unemployed but not seeking work (ex: student, retired, disabled, unpaid primary care giver) Please write:				
	I choose not to answer this question				

12. What is your main insurance?

	None/uninsured		Medicaid
	CHIP Medicaid		Medicare
	Other public insurance (not CHIP)		Other Public Insurance (CHIP)
	Private Insurance		

13. During the past year, what was the total combined income for you and the family members you live with? This information will help us determine if you are eligible for any benefits.

_____

	I choose not to answer this question

Send to: Everyone

What screeners do you use?

Screening assessment for SDOH needs

AAFP
AMERICAN ACADEMY OF FAMILY PHYSICIANS

Social Needs Screening Tool

HOUSING

1. Are you worried or concerned that in the next two months you may not have stable housing that you own, rent, or stay in as a part of a household?[1]
   - ☐ Yes
   - ☐ No
2. Think about the place you live. Do you have problems with any of the following? (check all that apply)[2]
   - ☐ Bug infestation
   - ☐ Mold
   - ☐ Lead paint or pipes
   - ☐ Inadequate heat
   - ☐ Oven or stove not working
   - ☐ No or not working smoke detectors
   - ☐ Water leaks
   - ☐ None of the above

FOOD

3. Within the past 12 months, you worried that your food would run out before you got money to buy more.[3]
   - ☐ Often true
   - ☐ Sometimes true
   - ☐ Never true
4. Within the past 12 months, the food you bought just didn't last and you didn't have money to get more.[3]
   - ☐ Often true
   - ☐ Sometimes true
   - ☐ Never true

TRANSPORTATION

5. Do you put off or neglect going to the doctor because of distance or transportation?[1]
   - ☐ Yes
   - ☐ No

UTILITIES

6. In the past 12 months has the electric, gas, oil, or water company threatened to shut off services in your home?[4]
   - ☐ Yes
   - ☐ No
   - ☐ Already shut off

CHILD CARE

7. Do problems getting child care make it difficult for you to work or study?[5]
   - ☐ Yes
   - ☐ No

EMPLOYMENT

8. Do you have a job?[6]
   - ☐ Yes
   - ☐ No

EDUCATION

9. Do you have a high school degree?[6]
   - ☐ Yes
   - ☐ No

FINANCES

10. How often does this describe you? I don't have enough money to pay my bills:[7]
    - ☐ Never
    - ☐ Rarely
    - ☐ Sometimes
    - ☐ Often
    - ☐ Always

PERSONAL SAFETY

11. How often does anyone, including family, physically hurt you?[8]
    - ☐ Never (1)
    - ☐ Rarely (2)
    - ☐ Sometimes (3)
    - ☐ Fairly often (4)
    - ☐ Frequently (5)
12. How often does anyone, including family, insult or talk down to you?[8]
    - ☐ Never (1)
    - ☐ Rarely (2)
    - ☐ Sometimes (3)
    - ☐ Fairly often (4)
    - ☐ Frequently (5)

The EveryONE Project®
Advancing health equity in every community

Patient Initials: _____
Date of Service: _____

Health starts – long before illness – in our homes, schools, and jobs. The more we know about you the better health care we can provide. We want to support your health and wellness.

Please (circle) the areas you would like assistance with. We cannot guarantee assistance in all areas, but will do our best to respond to your priorities.

I am having a hard time getting access to and/or paying for:

Would you like to be contacted by a member of our health care team about this survey?

Source: Presentation slides from Adapting SDOH Data Collection Workflows during COVID-19. Yuriko de la Cruz, NACHC, Jessica Mussetter, Bighorn Valley Health Center, October 8, 2020

OHSU

EHR implementations of SDOH

NORC at the UNIVERSITY of CHICAGO

November 13, 2018

Incorporating Social Determinants of Health in Electronic Health Records: A Qualitative Study of Perspectives on Current Practices among Top Vendors

Submitted To:
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Office of Health Policy
Assistant Secretary for Planning and Evaluation
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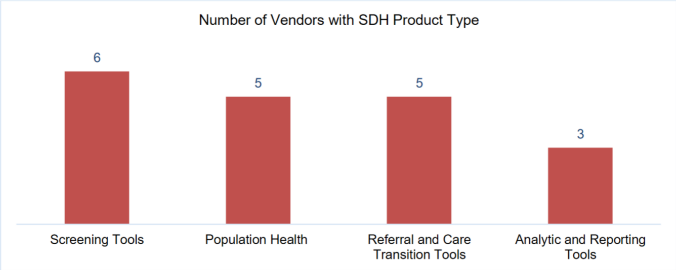
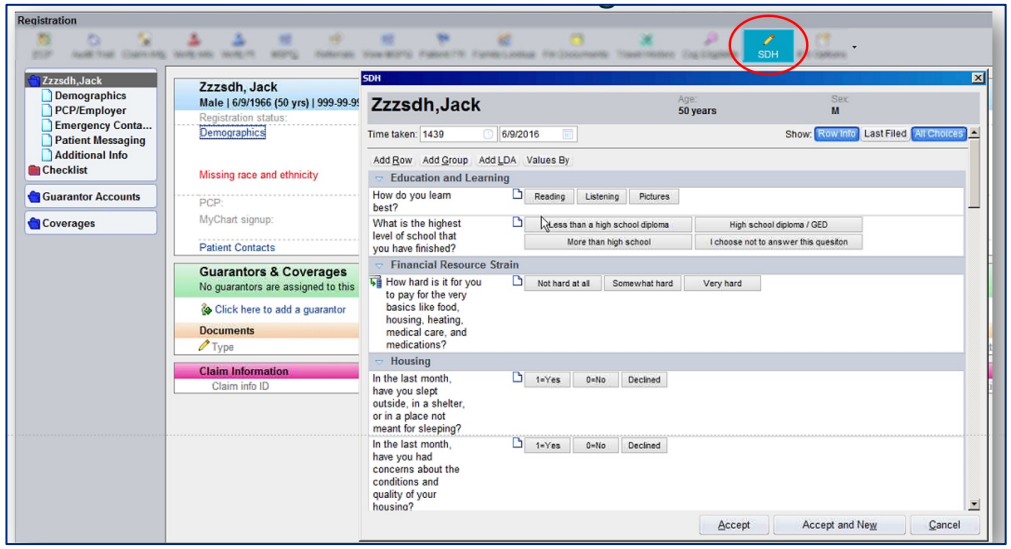
Exhibit 2: Types of Available SDH Tools and Products among Sample of Vendors (n=6)

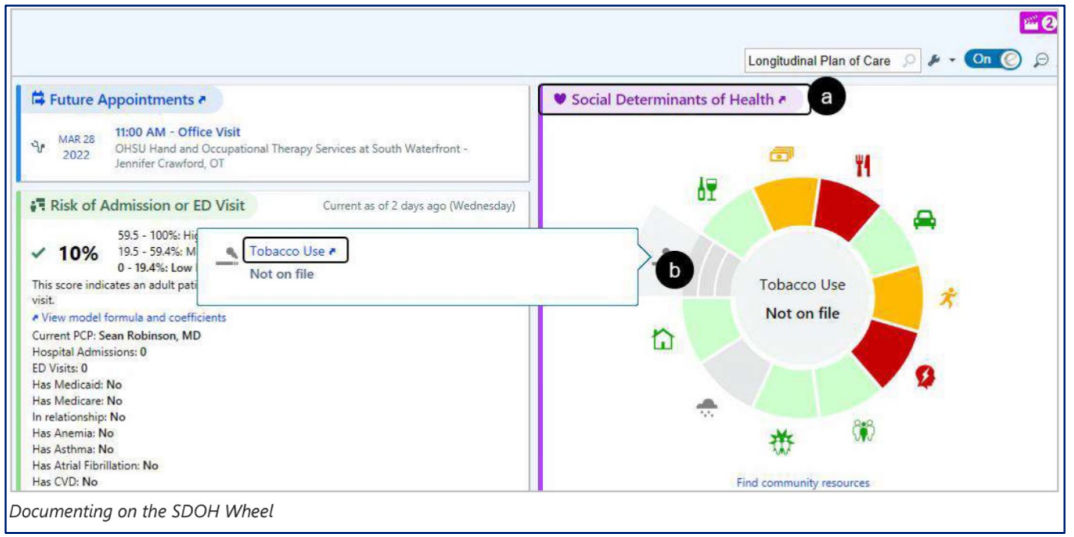


Source: https://aspe.hhs.gov/reports/incorporating-social-determinants-health-electronic-health-records-qualitative-study-perspectives

Epic



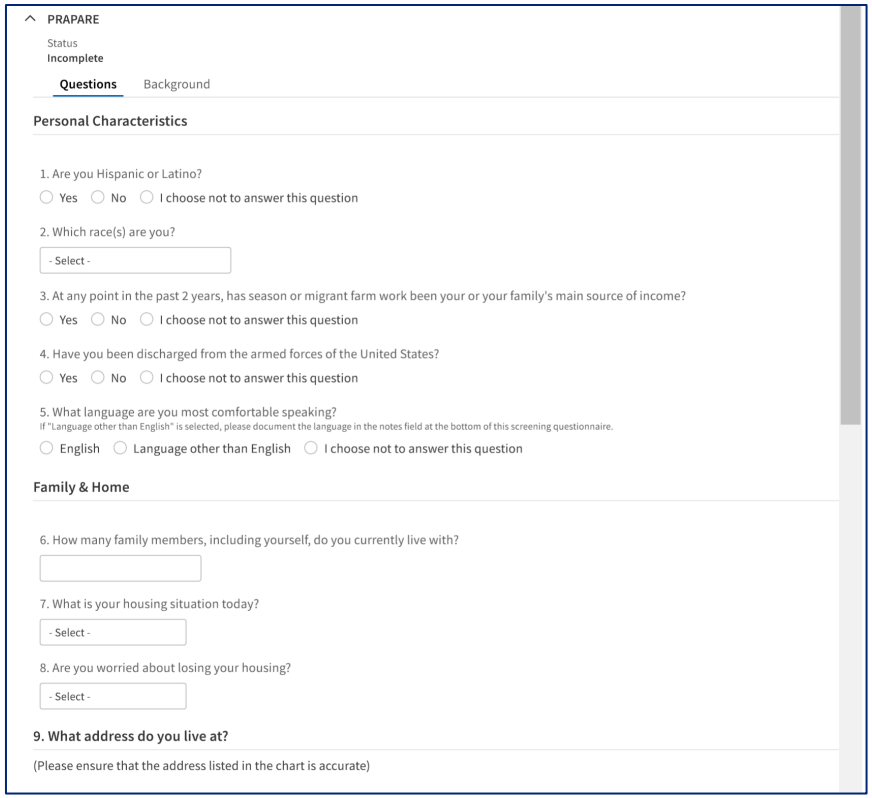
Source: OCHIN presentation by Ned Mossman mossmann@ochin.org and Mary Middendorf middendorfm@ochin.org, screen copyright Epic Systems



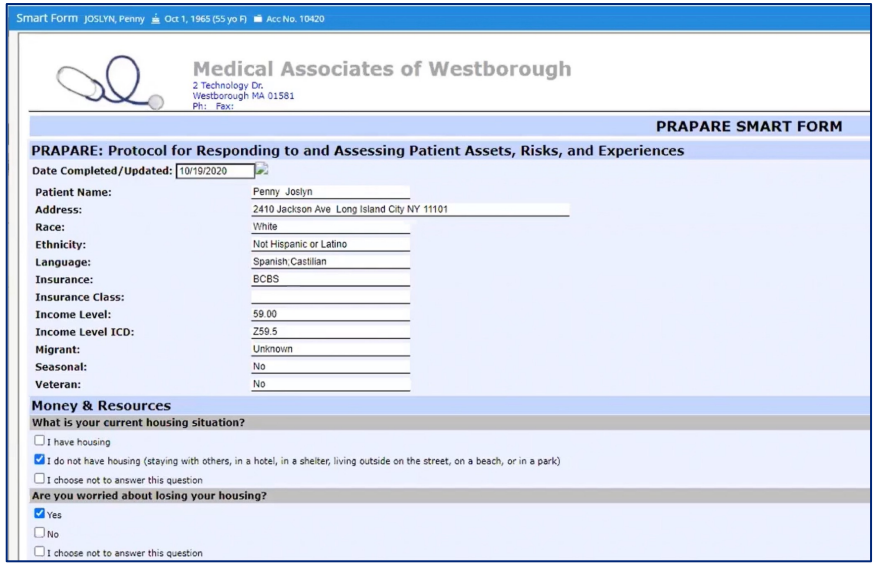
Documenting on the SDOH Wheel

Source: OHSU SDOH Training Document screens copyright Epic Systems

EHR implementations of SDOH



Source: Athena Health PRAPARE screener (screen copyright Athena Health)



Source: eClinicalWorks PRAPARE SmartForm (screen copyright eClinicalWorks)

eClinicalWorks

athenahealth

Send to: Everyone

How do other EHRs handle SDOH data?

Representation of SDOH data: USCDI v3

USCDI v3 Summary of Data Classes and Data Elements

Allergies and Intolerances • Substance (Medication) • Substance (Drug Class) • Reaction	**Health Status/Assessments** • Health Concerns • Functional Status • Disability Status • Mental/Cognitive Status • Pregnancy Status • Smoking Status	**Problems** • Problems • SDOH Problems/Health Concerns • Date of Diagnosis • Date of Resolution
Assessment and Plan of Treatment • Assessment and Plan of Treatment • SDOH Assessment	**Immunizations** • Immunizations	**Procedures** • Procedures • SDOH Interventions • Reason for Referral
Care Team Member(s) • Care Team Member Name • Care Team Member Identifier • Care Team Member Role • Care Team Member Location • Care Team Member Telecom	**Laboratory** • Tests • Values/Results • Specimen Type • Result Status	**Provenance** • Author Organization • Author Time Stamp
Clinical Notes • Consultation Note • Discharge Summary Note • History & Physical • Procedure Note • Progress Note	**Medications** • Medications • Dose • Dose Unit of Measure • Indication • Fill Status	**Unique Device Identifier(s) for a Patient's Implantable Device(s)** • Unique Device Identifier(s) for a patient's implantable device(s)
Clinical Tests • Clinical Test • Clinical Test Result/Report **Diagnostic Imaging** • Diagnostic Imaging Test • Diagnostic Imaging Report **Encounter Information** • Encounter Type • Encounter Diagnosis • Encounter Time • Encounter Location • Encounter Disposition **Goals** • Patient Goals • SDOH Goals **Health Insurance Information** • Coverage Status • Coverage Type • Relationship to Subscriber • Member Identifier • Subscriber Identifier • Group Number • Payer Identifier	**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 • 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** • 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)

SDOH Assessment *Screening questionnaire-based, structured evaluation (e.g., PRAPARE, Hunger Vital Sign, AHC-HRSN screening tool) for a Social Determinants of Health-related risk. (e.g., food insecurity, housing instability, or transportation insecurity)*	• Logical Observation Identifiers Names and Codes (LOINC®) version 2.72 Optional: • SNOMED International, Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT®) U.S. Edition, March 2022 Release
SDOH Goals *Desired future states (e.g., food security) for an identified Social Determinants of Health-related health concern, condition, or diagnosis. (e.g., food insecurity)*	• SNOMED International, Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT®) U.S. Edition, March 2022 Release • Logical Observation Identifiers Names and Codes (LOINC®) version 2.72
SDOH Interventions *Actions or services to address an identified Social Determinants of Health-related health concern, condition, or diagnosis. (e.g., education about food pantry program, referral to non-emergency medical transportation program)*	• SNOMED International, Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT®) U.S. Edition, March 2022 Release • Current Procedural Terminology (CPT®) 2022, as maintained and distributed by the American Medical Association, for physician services and other health care services. • Healthcare Common Procedure Coding System (HCPCS) Level II July 2022, as maintained and distributed by HHS.

Source: https://www.healthit.gov/isa/united-states-core-data-interoperability-uscdi#uscdi-v3

Representation of SDOH data: Gravity Project

Gravity Terminology Value Sets

Created by Marissa Rice, last modified by Sara Behal on Apr 17, 2023

Gravity Published Social Risk Data Elements

The dashboard contains hyperlinks to domain-specific value sets for Assessment Instruments, Diagnoses, Goals, and Interventions (Procedures and Service Requests). For Assessment Instruments, VSAC has a limitation in reflecting screening question and answer pairs and their association with a panel (Assessment Instrument) code. To address this limitation, the spreadsheets in the last column below provide links between panel, question, and answer codes. For an explanation of the fields in the Assessment Instruments spreadsheets, please see Assessment Instruments Spreadsheet Guidance document here.

Gravity Project social risk data elements are published in Value Set Authority Center (VSAC) value sets. The value sets can be identified by searching for "The Gravity Project" steward. You will need to create a free National Library of Medicine (NLM) account to access the value sets. After completion of initial updates to this page on April 31st, 2023, value sets will be updated bi-annually on June 30th and December 31st.

› Click here to select domain of interest

Click on the domain icons below to be redirected to its respective page containing historical domain-specific data elements (Master Lists) developed by the Gravity Project community.

Domain	SDOH Activities	Links to Value Sets in VSAC	Downloadable Assessment Instruments Spreadsheets
FOOD INSECURITY	Assessment Instruments Question Codes (LOINC)	Work in progress	Food Insecurity Assessment Instruments Codes V1
	Assessment Instruments Answer Codes (LOINC)	Work in progress	
	Diagnoses (SNOMED CT, ICD-10)	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1247.17/expansion/latest	
	Goals (SNOMED CT)	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1247.16/expansion/latest	
	Procedures (SNOMED CT, CPT, HCPCS)	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1247.7/expansion/latest	
	Service Request (SNOMED CT, CPT, HCPCS)	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1247.11/expansion/latest	
HOUSING INSTABILITY	Assessment Instruments Question Codes (LOINC)	Work in progress	Housing Instability Assessment Instruments Codes V1
	Assessment Instruments Answer Codes (LOINC)	Work in progress	
	Diagnoses (SNOMED CT, ICD-10)	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1247.24/expansion/latest	
	Goals (SNOMED CT)	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1247.161/expansion/latest	
	Procedures (SNOMED CT, CPT)	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1247.44/expansion/latest	
	Service Request (SNOMED CT, CPT)	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1247.45/expansion/latest	
HOMELESSNESS	Assessment Instruments Question Codes (LOINC)	Work in progress	Homelessness Assessment Instruments Codes V1
	Assessment Instruments Answer Codes (LOINC)	Work in progress	
	Diagnoses (SNOMED CT, ICD-10)	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1247.18/expansion/latest	
	Goals (SNOMED CT)	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1247.159/expansion/latest	
	Procedures (SNOMED CT, CPT)	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1247.20/expansion/latest	

Source: https://confluence.hl7.org/display/GRAV/Gravity+Terminology+Value+Sets

The Gravity Project

Created by Carrie Lousberg, last modified by Sara Behal on Apr 20, 2023

Representation of SDOH data: OHA metric

Oregon Health Authority

Appendix 2: Codes and Value Sets

These codes and value sets may be used to identify the occurrence of screening, unmet needs and referrals for reporting Component 2. Given the evolving availability of SDOH coding, Component 2 will not be limited to these codes; CCOs will be allowed to identify other approaches.

Codes reflecting the occurrence of screening

LOINC Coding		
Food Insecurity	88121-9	Hunger Vital Sign (HVS) question panel
	88122-7 and 88123-5	LOINC Question Codes Within the past 12 months we worried whether our food would run out before we got money to buy more [U.S. FSS] Within the past 12 months the food we bought just didn't last and we didn't have money to get more [U.S. FSS]
	93025-5	Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences [PRAPARE] question panel
	93031-3	LOINC Question Code Have you or any family members you live with been unable to get any of the following when it was really needed in past 1 year [PRAPARE]
Housing Insecurity	93025-5	Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences [PRAPARE] question panel
	71802-3 and 93033-9	LOINC Question Codes What is your housing situation today? Are you worried about losing your housing?
Transportation	93025-5	Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences [PRAPARE] question panel

Source: https://www.oregon.gov/oha/HPA/ANALYTICS/CCOMetrics/Final-2023-SDOH-Screening-Specifications.pdf

Value sets for identified needs and referrals

These value sets are maintained by The Gravity Project and can be accessed through the Value Set Authority Center (select The Gravity Project from the drop-down for Steward). For additional background, see The Gravity Project's terminology workstreams.

Name	Code System(s)	OID	Code Count	Use
Food Insecurity Diagnoses	ICD10CM SNOMEDCT	2.16.840.1.113762.1.4.1247.17	12	Identified need
Food Insecurity Service Requests	CPT HCPCS SNOMEDCT	2.16.840.1.113762.1.4.1247.11	128	Referral
Food Insecurity Procedures	CPT HCPCS SNOMEDCT	2.16.840.1.113762.1.4.1247.7	128	Referral
Homelessness Diagnoses	ICD10CM SNOMEDCT	2.16.840.1.113762.1.4.1247.18	4	Identified need
Housing Instability Diagnoses	ICD10CM SNOMEDCT	2.16.840.1.113762.1.4.1247.24	9	Identified need
Inadequate Housing Diagnoses	ICD10CM SNOMEDCT	2.16.840.1.113762.1.4.1247.48	6	Identified need
Homelessness Procedures	CPT SNOMEDCT	2.16.840.1.113762.1.4.1247.20	85	Referral
Homelessness Service Requests	CPT SNOMEDCT	2.16.840.1.113762.1.4.1247.21	85	Referral
Housing Instability Procedures	CPT SNOMEDCT	2.16.840.1.113762.1.4.1247.44	54	Referral
Housing Instability Service Requests	CPT SNOMEDCT	2.16.840.1.113762.1.4.1247.45	54	Referral
Inadequate Housing Procedures	CPT SNOMEDCT	2.16.840.1.113762.1.4.1247.52	44	Referral
Inadequate Housing Service Requests	CPT SNOMEDCT	2.16.840.1.113762.1.4.1247.53	44	Referral
Transportation Insecurity Diagnoses	SNOMEDCT	2.16.840.1.113762.1.4.1247.26	4	Identified need
Transportation Insecurity Procedures	CPT SNOMEDCT	2.16.840.1.113762.1.4.1247.27	27	Referral
Transportation Insecurity Service Requests	CPT SNOMEDCT	2.16.840.1.113762.1.4.1247.28	27	Referral

Representation of SDOH data: Z codes

ICD-10 Z-Codes and PRAPARE Crosswalk | 2023

OPCA Oregon Primary Care Association

SDH DOMAIN	Z CODES	PRAPARE QUESTION(S)
RACE & ETHNICITY	N/A	– Are you Hispanic or Latino? – Which race(s) are you?
MIGRANT / SEASONAL FARMWORKER	N/A	– At any point in the past 2 years, has seasonal or migrant farm work been your or your family's main source of income?
VETERAN STATUS	**Z56.82** Military deployment status	– Have you been discharged from the armed forces of the United States?
LANGUAGE PROFICIENCY	**Z55.0** Illiteracy and low-level literacy **Z55.6** Problems related to health literacy	– What language are you most comfortable speaking?
HOUSING STATUS	**Z59** Problems related to housing and economic circumstances **Z59.0** Homelessness **Z59.1** Inadequate housing **Z59.2** Discord with neighbors, lodgers and landlord **Z59.8** Other problems related to housing and economic circumstances **Z59.9** Problem related to housing and economic circumstances, unspecified	– What is your housing situation today? – Are you worried about losing your housing? – What address do you live at?
ENVIRONMENT	**Z58** Problems related to physical environment	N/A
EDUCATION	**Z55.1** Schooling unavailable or unattainable **Z55.2** Failed school examinations **Z55.3** Underachievement in school **Z55.4** Educational maladjustment and discord with teachers and classmates **Z55.8** Other problems related to education and literacy **Z55.9** Problems related to education and literacy, unspecified	– What is the highest level of school that you have finished?
EMPLOYMENT	**Z56** Problems related to employment and unemployment **Z56.0** Unemployment, unspecified **Z56.1** Change of job **Z56.2** Threat of job loss **Z56.89** Other problems related to employment **Z56.9** Unspecified problems related to employment	– What is your current work situation?
INSURANCE	**Z59.7** Insufficient social insurance and welfare support	– What is your main insurance?
INCOME	**Z59.5** Extreme poverty (100% FPL or below) **Z59.6** Low income (200% FPL or below)	– During the past year, what was the total combined income for you and your family members you live with?
RESOURCE SECURITY (clothing, utilities, child care, medicine, phone, etc)	**Z58.81** Basic services unavailable in physical environment **Z59.87** Material hardship due to limited financial resources, not elsewhere classified **Z91.120** Patient's intentional underdosing of medication regimen due to financial hardship	– In the past year, have you or any family members you live with been unable to get any of the following when it was really needed?

This document was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award totaling $1,491,396 with 20% financed with non-governmental sources. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS, or the U.S. Government. For more information, please visit HRSA.gov.

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Source: https://www.orpca.org/initiatives/social-determinants-of-health/251-sdoh-tools-resources

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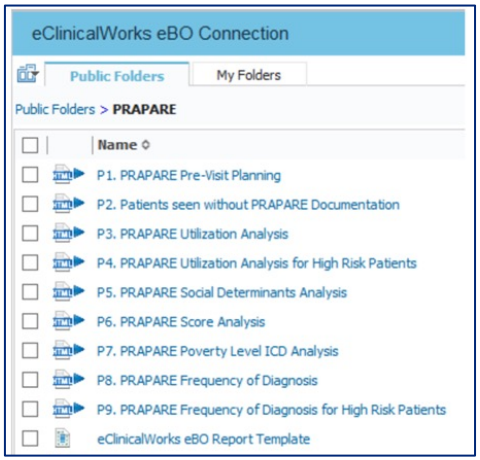
Are you entering Z codes for social needs?

Extracting SDOH data from EHRs

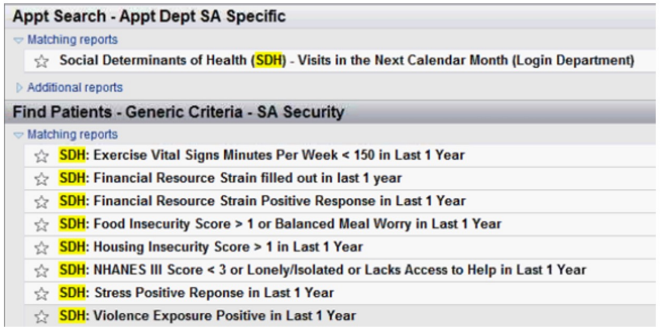
EHRs may provide reports and/or tools to extract individual and population-level SDOH data, but they may not be easy to use.



eClinicalWorks

SDH Reports in Reporting workbench

OCHIN Epic



Uniform Data System

TABLE 4: SELECTED PATIENT CHARACTERISTICS (CONTINUED)

Calendar Year: January 1, 2022, through December 31, 2022

Line	Special Populations	Number of Patients (a)
14	Migratory (330g awardees only)	
15	Seasonal (330g awardees only)	
16	**Total Agricultural Workers or Dependents** (All health centers report this line)	
17	Homeless Shelter (330h awardees only)	
18	Transitional (330h awardees only)	
19	Doubling Up (330h awardees only)	
20	Street (330h awardees only)	
21a	Permanent Supportive Housing (330h awardees only)	
21	Other (330h awardees only)	
22	Unknown (330h awardees only)	
23	**Total Homeless** (All health centers report this line)	
24	**Total School-Based Service Site Patients** (All health centers report this line)	
25	**Total Veterans** (All health centers report this line)	
26	**Total Patients Served at a Health Center Located In or Immediately Accessible to a Public Housing Site** (All health centers report this line)	

Source: https://bphc.hrsa.gov/sites/default/files/bphc/data-reporting/2022-uds-tables.pdf

Source: Screens copyright of eClinicalworks and Epic Systems

Extracting SDOH data from EHRs

EHRs may provide reports and/or tools to extract individual and population-level SDOH data, but they may not be easy to use.

Option 1: Use built-in EHR reports and audits

Advantages	Challenges
• Leverages existing EHR capabilities • Available with little or no configuration • Output can often be exported to Excel or CSV • Standard reports can be compared across clinics	• The vendor defines the format and contents • Access may be restricted • Vendors may charge extra for specialty reports • Not all reports work "out of the box" • May include more data than is needed • Need to validate data in reports

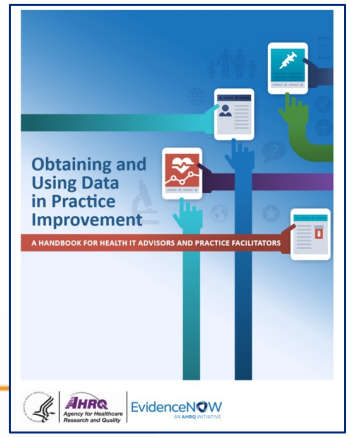
Option 2: EHR registry searches and patient lists

Advantages	Challenges
• Leverages existing EHR capabilities • Available with little or no configuration • Offers flexible search and filter options • Output can often be exported to Excel or CSV • Registries are used by clinics for population health	• Access may be restricted • Creating a search may take some training • Not all vendors provide these tools • Vendors may charge for advanced reporting • Need to validate data in reports

Option 3: EHR dashboards and quality measures

Advantages	Challenges
• Leverages existing EHR capabilities • Vendor eCQMs must pass certification • Dashboards may provide useful filters • Dashboards can link to patient-level data	• Vendor's measure logic can be hard to validate • Measure logic usually cannot be changed • Measures rely on specific workflows for data • Needed measures may not be available or free • Need to validate data in reports

Source: AHRQ Obtaining and Using Data in Practice Improvement: A HANDBOOK FOR HEALTH IT ADVISORS AND PRACTICE FACILITATORS
https://www.ahrq.gov/sites/default/files/wysiwyg/ncepcr/tools/healthit-advisor-handbook.pdf



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Option 4: Custom reports and database queries

Advantages	Challenges
• A custom report or query extracts only the needed data elements for the project • The output can be tailored to streamline review, transfer, and analysis • Raw data files can be imported into external databases or combined with other data sets • Some quality teams have extensive experience in extracting data from EHRs • A custom query can be programmed and run without clinic participation (provided access is granted)	• EHR reporting tools can be costly and difficult and can be difficult to learn • "Back-end" database access may be limited (or prevented) by the vendor or IT department • Custom reports and queries are often a low priority for local IT resources, or costly for a vendor to develop • EHR databases are not standardized, requiring detailed knowledge of each product • The access required to create custom extracts can expose sensitive information • It takes time experienced developers to design, write, test, and deploy a custom query • Queries may have to be adapted for use in other clinics using the same product • Need to validate data in reports • Custom reports often stop working with new EHR versions

Option 5: Chart audits

Advantages	Challenges
• A "low tech" option that can be used anywhere • Provides data for QI while data challenges (e.g., mapping errors) are resolved • Provides access to non-structured data • Can provide data for rapid testing of process improvements that have not yet been spread throughout the practice • Sampling strategies can reduce the work effort • Procedures for abstraction are more flexible • Can usually be done remotely	• Requires significant time and resources • Quality of data can vary depending on auditor • Auditors require broad access to patient records • A sampling strategy may exclude important data • Clinics may be reluctant to allow access to charts

Source: AHRQ Obtaining and Using Data in Practice Improvement: A HANDBOOK FOR HEALTH IT ADVISORS AND PRACTICE FACILITATORS

https://www.ahrq.gov/sites/default/files/wysiwyg/ncepcr/tools/healthit-advisor-handbook.pdf

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Have you used FHIR APIs or natural language processing to extract SDOH data from your EHR(s)?

Ensuring the quality of SDOH data from EHRs

The quality of SDOH data accessed or extracted from EHRs must be validated to avoid erroneous conclusions, failure to identify individuals with and without social needs, or under/over counting screening and referral performance rates.

Exhibit 18: ONC's Five Quality Dimensions for EHR Data

Data Quality Dimension	Definition
Completeness	Is the truth about a patient present in the EHR?
Correctness	Is an element that is present in the EHR true?
Concordance	Is there agreement between elements in the EHR or between the EHR and another data source?
Currency	Is an element in the EHR a relevant representation of the patient state at a given time?
Plausibility	Does an element in the EHR make sense in light of other knowledge about what the element is measuring?

Recommendations for assessing SDOH data quality before use:

- Follow the data
- Inspect the data for "red flags" and potential issues
- Compare EHR data with a gold standard, benchmark, or additional data sources
- Ask for a "gut check"

Source: AHRQ Obtaining and Using Data in Practice Improvement: A HANDBOOK FOR HEALTH IT ADVISORS AND PRACTICE FACILITATORS
https://www.ahrq.gov/sites/default/files/wysiwyg/ncepcr/tools/healthit-advisor-handbook.pdf

Common challenges using data from EHRs for SDOH use cases

Despite rapid advances in EHR technology and recent progress on technical standards, there are several common barriers to using EHR data for the use cases discussed.

- Poor data quality *
- Missing or unconfigured EHR features for capturing structured data for SDOH concepts
- Workflow variations for documenting screening, interventions, and requests for services
- Use of processes or technology to screen or address social needs external to the EHR
- Inconsistent coding practices for SDOH findings and interventions
- Insufficient tools, resources, or expertise to extract and analyze needed data

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What other challenges have you encountered with your EHR(s)?

Use case: Rates of SDOH screening and referral

For example, the 2023 Oregon CCO Incentive metric:

Oregon Health Authority

Social Determinants of Health: Social Needs Screening and Referral Measure – MY 2023

Measure Basic Information

Name and date of specifications used: The measure specifications were developed by OHA in collaboration with a Social Determinants of Health Measurement Workgroup Screening for Social Needs.

URL of Specifications: N/A.

Measure Type:

☐HEDIS ☐PQI ☐Survey ■Other Specify: Workgroup and OHA-developed

Measure Utility:

■CCO Incentive ☐State Quality ☐CMS Adult Core Set ☐CMS Child Core Set ☐Other Specify:

Member Type:

■CCO A ■CCO B

Data Source:

- Component 1 – structural measure: CCO attestation (beginning first year of use and continuing through year 3)
- Component 2 – hybrid measure: sample reporting using MMIS/DSSURS, EHR, community information exchange (CIE), health information exchange (HIE), and other qualifying data sources (beginning 2024 and continuing through 2026)

Measurement Period: January 1, 2023 – December 31, 2023

2023 Benchmark:

- Component 1 – structural measure: Must-pass elements for Measurement Year 2023, as set out in Table 1 below. To support planning for future years, recommended must-pass elements for later years are included; however, only 2023 must-pass elements have been finalized.
- Component 2 – hybrid measure: Measurement Year 2023 – not reporting. No benchmark.
  - Reporting on Component 2 begins in Measurement Year 2024. Benchmarks for Component 2 are anticipated no earlier than Measurement Year 2025.

Rate 1: The percentage of CCO members from the OHA-identified sample who were screened for each of the three required domains at least once during the measurement year; and

Rate 2: Of the sample population screened, the percentage of CCO members with a positive screen for any of the three required domains.

Note: Performance on Rate 2 is not intended to be benchmarked; rather, it is calculated to understand the prevalence of identified needs in the CCO. In addition, Rate 2 is a necessary step in the process to calculate Rate 3.

Rate 3: Of the sample population with an identified need, those who received at least one referral.

Note: Rate 3 measures referrals made, not closed loop referrals.

Data elements required denominator – Rate 1: Count of unique members who meet continuous enrollment criteria. OHA will provide CCOs with the sampling frame for data collection.

Required exclusions for denominator – Rate 1: None.

Denominator Exceptions – Rate 1: Member declines to be screened. If a member does not meet numerator criteria because they decline to be screened, then they also are removed from the denominator.

Data elements required denominator – Rate 2: Members from Rate 1 denominator who were screened at least once in the measurement year for all three required domains using OHA-approved screening tool (s). (Note: This is the same as the Rate 1 numerator.)

Required exclusions for denominator – Rate 2: None.

Data elements required denominator – Rate 3: Members from Rate 2 denominator who screened positive for one or more needs in the required domains. (Note: This is the same as Rate 2 numerator.)

Required exclusions for denominator – Rate 3: None.

Source: https://www.oregon.gov/oha/HPA/ANALYTICS/CCOMetrics/Final-2023-SDOH-Screening-Specifications.pdf

Other use cases?

Use EHR data to:

- Identify individuals or populations with known community health needs for targeted interventions
- Track requests for, and delivery of, community health interventions and services
- Use individual social needs to adjust risk for population health or value-based payment
- Other

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What other use cases are important to you?

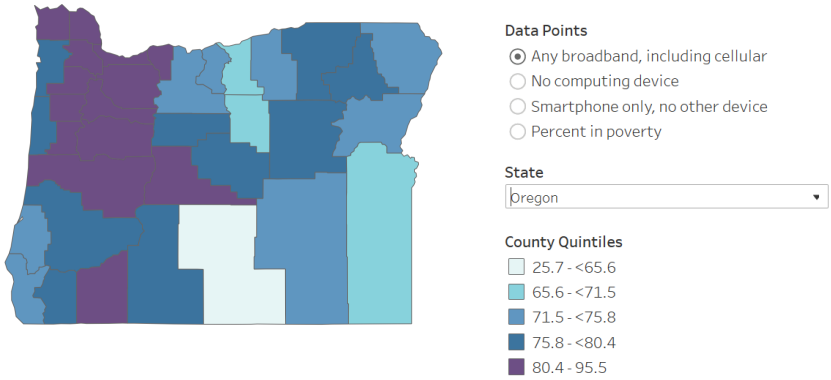
Beyond EHRs: Other sources of SDOH data

Non-EHR data sources for SDOH data

- Community Information Exchanges (CIE)
  - UniteUs
  - HelpFinder/Aunt Bertha
- Health Information Exchanges (HIE)
  - Collective Medical/EDIE
  - Reliance eHealth Collaborative
- Interoperability and exchange networks
  - CareQuality, Commonwell
  - Direct Secure Messaging
- Claims data from payers
  - Oregon Health Authority
  - All claims databases

Community-level social health factors

- AHRQ Social Determinants of Health Database
  https://www.ahrq.gov/sdoh/data-analytics/sdoh-data.html



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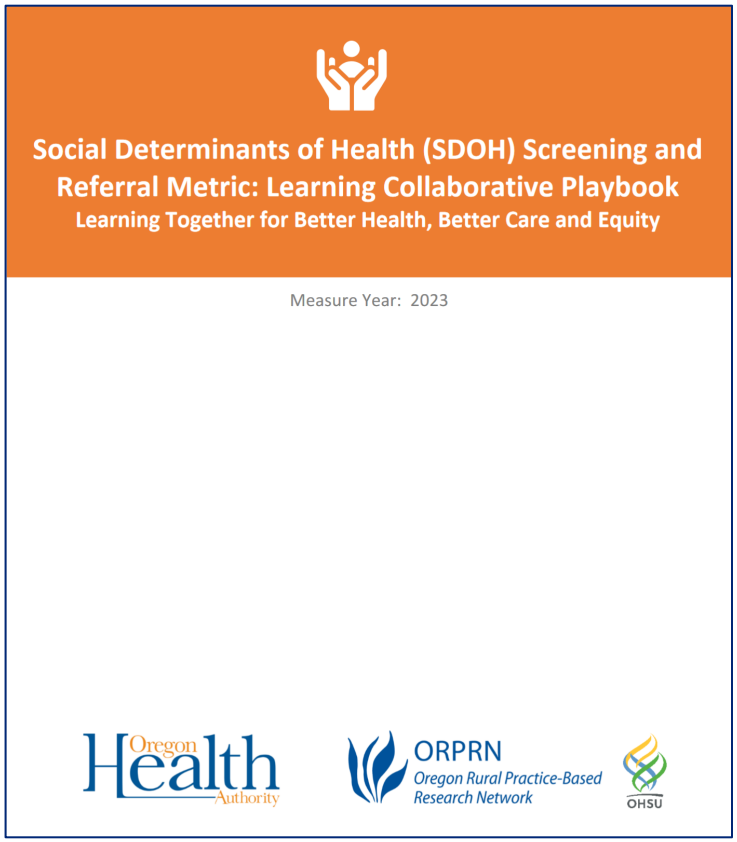
What other data sources have you used or would like to use?

Technical Assistance

The Oregon Health Authority is sponsoring technical assistance in partnership with Oregon Rural Practice-based Research Network (ORPRN) to support CCOs in implementing the social needs screening and referral metric

One-on-one technical assistance available to all CCO staff responsible for metric implementation from January through June 2023.

Contact: Claire Londagin londagin@ohsu.edu



Source: https://www.oregon.gov/oha/HPA/dsi-tc/Documents/SDOH-Screening-LC-Playbook.pdf

Additional Resources

OPCA Oregon Primary Care Association — https://www.orpca.org/initiatives/social-determinants-of-health/251-sdoh-tools-resources

NATIONAL ASSOCIATION OF Community Health Centers® — https://www.nachc.org/

PRAPARE Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences — https://prapare.org/

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2023 Rural Population Health Webinar Series

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