UNLOCKING WELLNESS: UNDERSTANDING SOCIAL DETERMINANTS OF HEALTH

Work Group Webinar Series (1)

Rhelinda McFadden, Josh Hall & Justin Villines

April 18, 2024

AGENDA

1. Meet the Panel
2. Increase awareness & understanding outcomes
3. Provide practical strategies and tools
4. Foster collaboration & networking
5. Panel Discussion

LEARNING OBJECTIVES

1. Explain the concepts of health and well-being
2. Recognize the responsibility of states to uphold the health of their population
3. Identify the socioeconomic, biological and behavioural factors that influence health
4. Explain the social determinants of health

Population Health and SDOH Work Group

UAMS
Baptist Health
ABHIN
ACCN ACH
Methodist Family Health
HARK NWA
ADH/SHARE HIE

AFMC
CHI St. Vincent
Arkansas Ped Clinic
ARAAP
AR BCBS
AR Medicaid
AR DIS

Many countries are working towards better health, yet they often face an absence of data to guide policy

National

"Longer, healthy lives more likely in countries with strong health inclusivity"

-Health Inclusivity Index by *The Economist* (2022)

Community

"Health does not begin in a hospital or clinic. It begins in our homes and communities, with the food we eat and the water we drink, the air we breathe, in our schools and our workplaces"

-Dr Tedros Adhanom Ghebreyesus, WHO Director General

Individual

Inclusive health cannot be created by focusing on healthcare alone. What is known about the **social determinants of health** such as a patient's education, income level and environment matters in patient care

Meet the Panel

1

Panel

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afmc℠
Healthy People. Healthy Businesses. Healthy Communities.

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Moderator

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ARKANSAS DEPARTMENT OF HEALTH

SHARE
State Health Alliance FOR Records Exchange

Overview of Social Determinants of Health (SDoH)

2

DEFINITION OF HEALTH

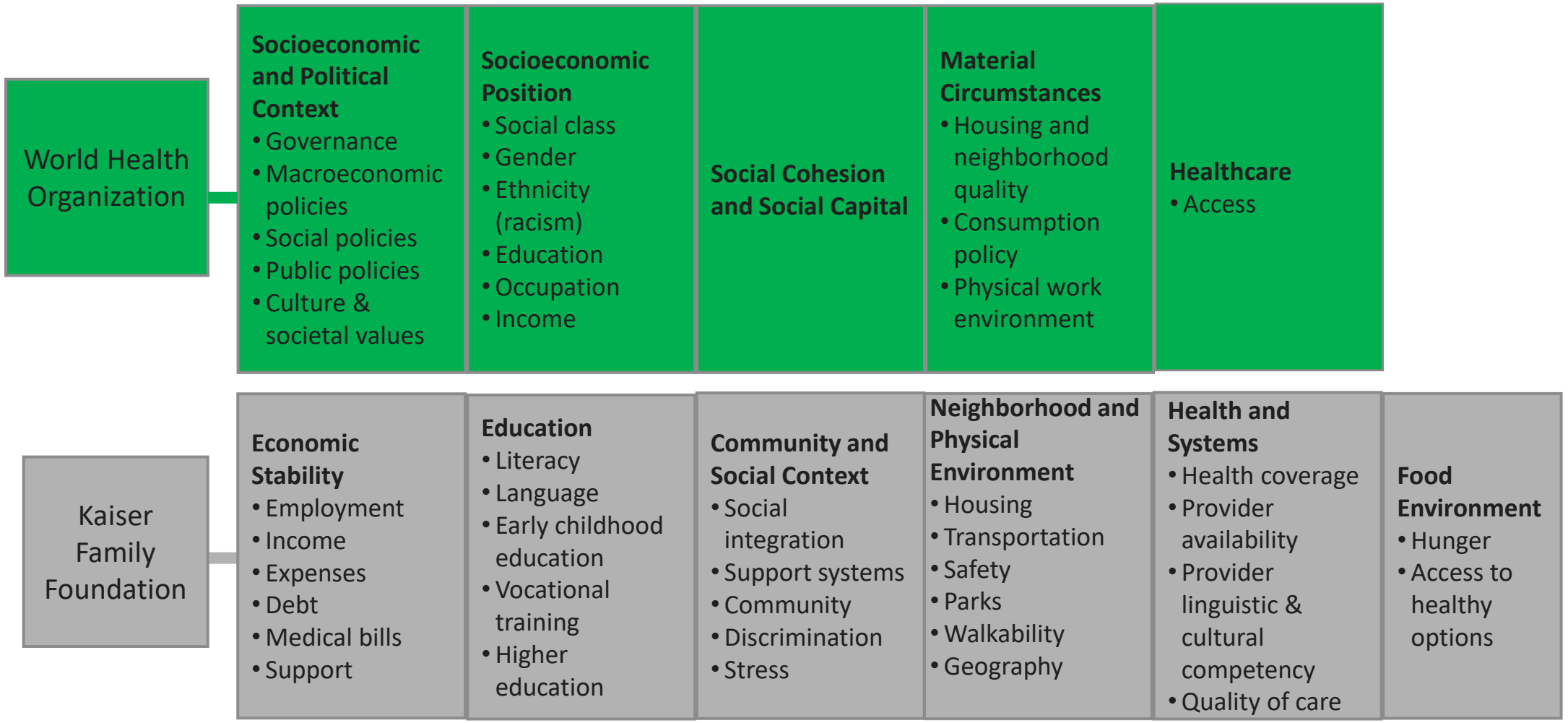
Health is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity (World Health Organization, 1948).

The second is that health is a state that allows the individual to adequately cope with all demands of daily life (implying also the absence of disease and impairment).

What is the literal meaning of health?

The condition of being sound in body, mind, or spirit.

Social determinants of health (SDoH) are the non-medical factors that influence health outcomes



https://doi.org/10.2337/dci20-0053

Definitions of SDoH differ between organizations, but the main concepts remain similar

Healthy People 2030 Goals

Source: Healthy People 2030

Definitions of SDoH differ between organizations, but the main concepts remain similar (cont.)

Figure 1

Social Determinants of Health

Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Employment	Housing	Literacy	Hunger	Social integration	Health coverage
Income	Transportation	Language	Access to healthy options	Support systems	Provider availability
Expenses	Safety	Early childhood education		Community engagement	Provider linguistic and cultural competency
Debt	Parks	Vocational training		Discrimination	Quality of care
Medical bills	Playgrounds	Higher education		Stress	
Support	Walkability				
	Zip code / geography				

Health Outcomes
Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations

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WHAT ARE THE SOCIAL DETERMINANTS OF HEALTH?

The social determinants of health are the conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels.

The social determinants of health are mostly responsible for health inequities – the unfair and avoidable differences in health status seen within and between countries.

The social determinants of health are multi-layered and range from societal to individual factors.

FACTORS DETERMINING HEALTH

Clinical care is less important than many people think whereas socioeconomic factors and the physical environment are quite influential on health and well-being.

Genetic characteristics are also less significant than many people think.

Whether people are healthy or not, is determined by their circumstances and environment – the social, economic and environmental conditions which affect the health of the population.

Healthy people 2030 aims to create social, physical, and economic environments that promote attaining the full potential for health and well-being for all

Education Access and Quality
- Early Childhood Development and Education
- Enrollment in Higher Education
- High School Graduation
- Language and Literacy

Healthcare Access and Quality
- Access to Health Services
- Access to Primary Care
- Health Literacy

Economic Stability
- Employment
- Food Insecurity
- Housing Instability
- Poverty

Neighborhood and Built Environment
- Access to Healthy Foods
- Crime and Violence
- Environmental Conditions
- Quality of Housing

Social and Community Context
- Civic Participation
- Discrimination
- Incarceration
- Social Cohesion

1

CDC's six pillar framework to address SDoH:

2

Aim is to highlight how disparities in SDoH can be addressed through leveraging data to generate better health outcomes

1. https://health.gov/healthypeople; **2.** https://www.cdc.gov/about/sdoh/cdc-doing-sdoh.html

However, chronic conditions show disparity across different income levels

https://frac.org/blog/whats-state-childhood-obesity

Integrating SDOH into Healthcare in Arkansas: Practical Strategies & Tools

1.Assessment Tools

Implementation of SDOH Screenings

1. Use of validated screening tools (e.g., HARK NWA, Findhelp)
2. Training staff on effective SDOH data collection

2.Data Integration

Linking EMRs with SDOH Data

1. Leveraging SHARE HIE for a comprehensive view
2. Employing algorithms to match patients with appropriate services

3.Community Partnerships

Collaborative SDOH Initiatives

1. Establishing partnerships with community organizations
2. Creating referral systems for non-medical needs (e.g., food insecurity, housing)

4.Payment Models

SDOH-Informed Reimbursement Structures

1. Adopting value-based care models that include SDOH metrics
2. Incentivizing providers for SDOH interventions

5.Education and Training

Building SDOH Awareness

1. Developing educational sessions for providers and payers
2. Integrating SDOH into ongoing professional development

6.Technology Solutions

Innovative SDOH Platforms

1. Utilizing digital tools for SDOH tracking and management
2. Exploring telehealth to address SDOH

7.Evaluation and Improvement

Measuring SDOH Interventions' Impact

1. Implementing metrics to evaluate SDOH integration success
2. Continuous quality improvement processes

8.Case Management

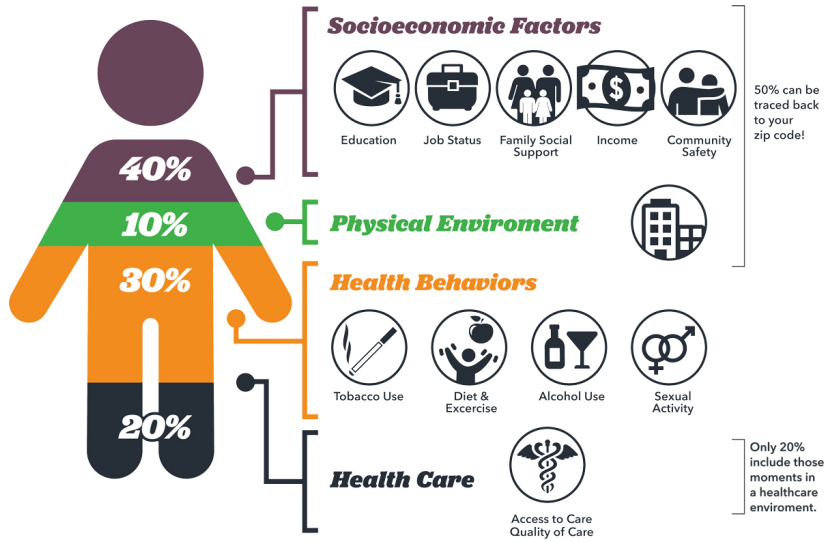
Enhanced Care Coordination

1. Coordinating care across providers, including behavioral health and LTPAC
2. Using patient navigators familiar with local SDOH resources

10. **Information Sharing**

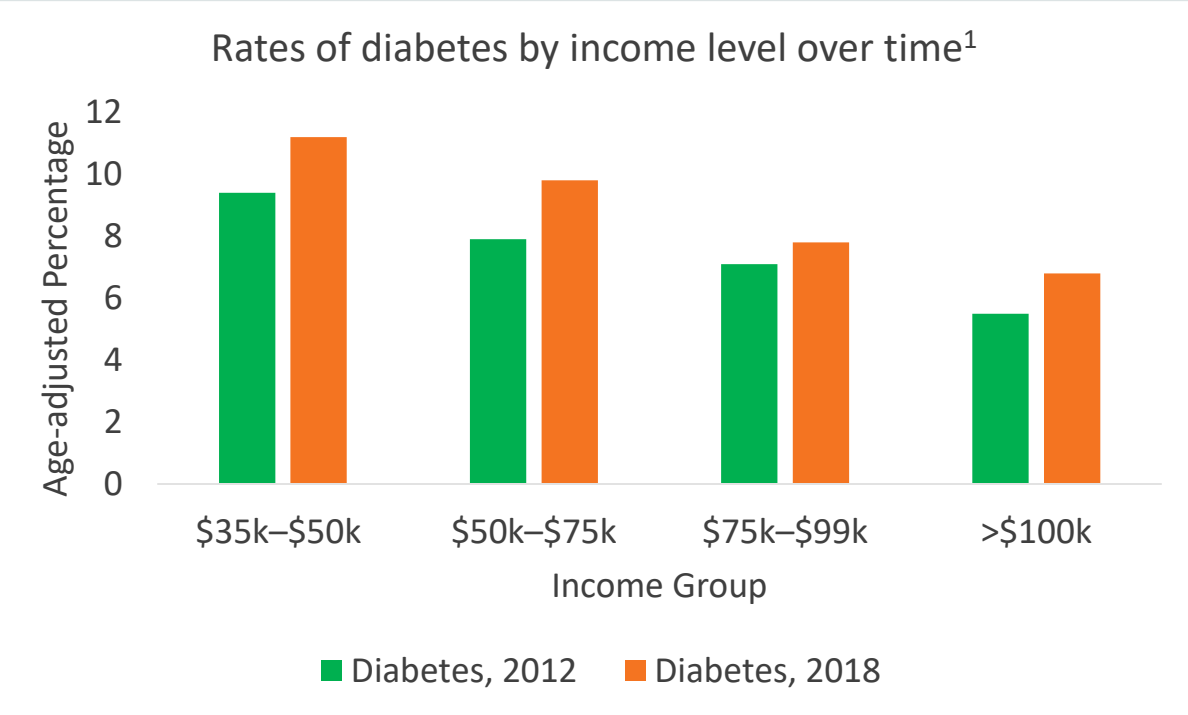
Fostering Transparency and Collaboration

1. Encouraging data sharing between healthcare entities
2. Building community-wide SDOH databases for shared insights



Source: Institute for Clinical Systems Improvement, Going Beyond Clinical Walls: Solving Complex Problems (October 2014)

To address disparities in diabetes, the American Diabetes Association has proposed a Health Equity Bill of Rights



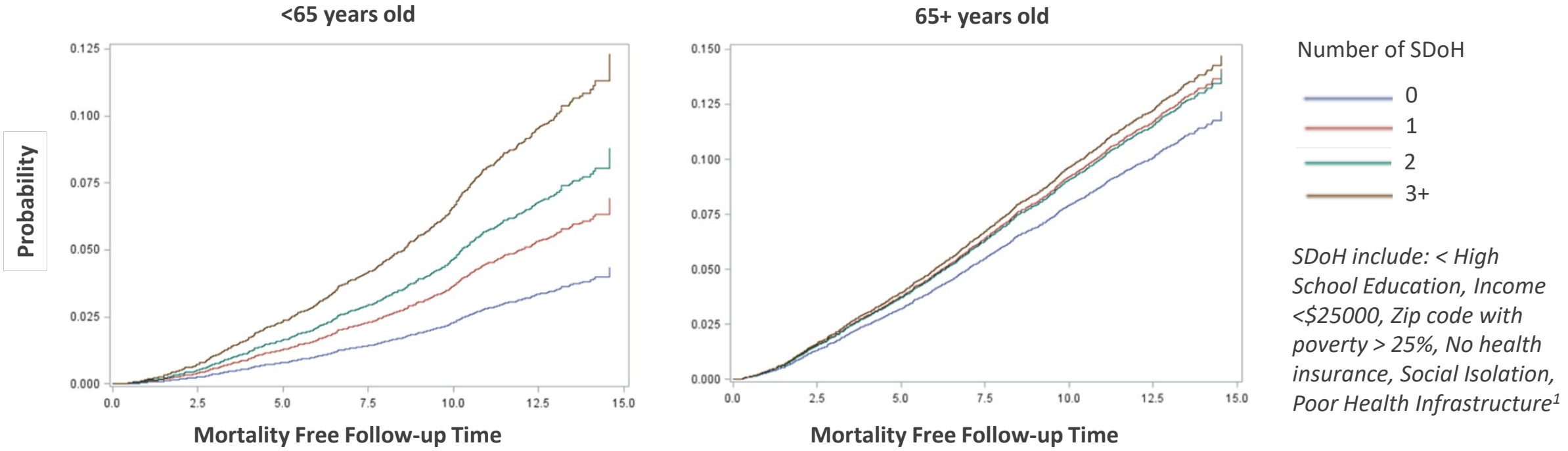
The American Diabetes Association published a **Health Equity Bill of Rights**[2] in 2020 which focuses on creating a future without unjust health disparities.

Some of these rights include:

- The right to access insulin & other drugs affordably
- The right to insurance that covers diabetes management and future cures
- The right not to face stigma or discrimination
- The right to the latest medical advances

1. https://www.cdc.gov/nchs/nhis/shs/tables.htm; 2. https://diabetes.org/healthequitynow

The American Cancer Society also seeks to reduce disparities in cancer care through health initiatives



SDoH include: < High School Education, Income <$25000, Zip code with poverty > 25%, No health insurance, Social Isolation, Poor Health Infrastructure[1]

- The **American Cancer Society (ACS)** has been undertaking various initiatives to promote health equity and reduce disparities in cancer care
- Some of the initiatives include the CHANGE[2] program and partnerships with organizations like NAACP[3] and NHMA[4]
- These initiatives facilitate greater outreach and enable effective interventions for underserved populations

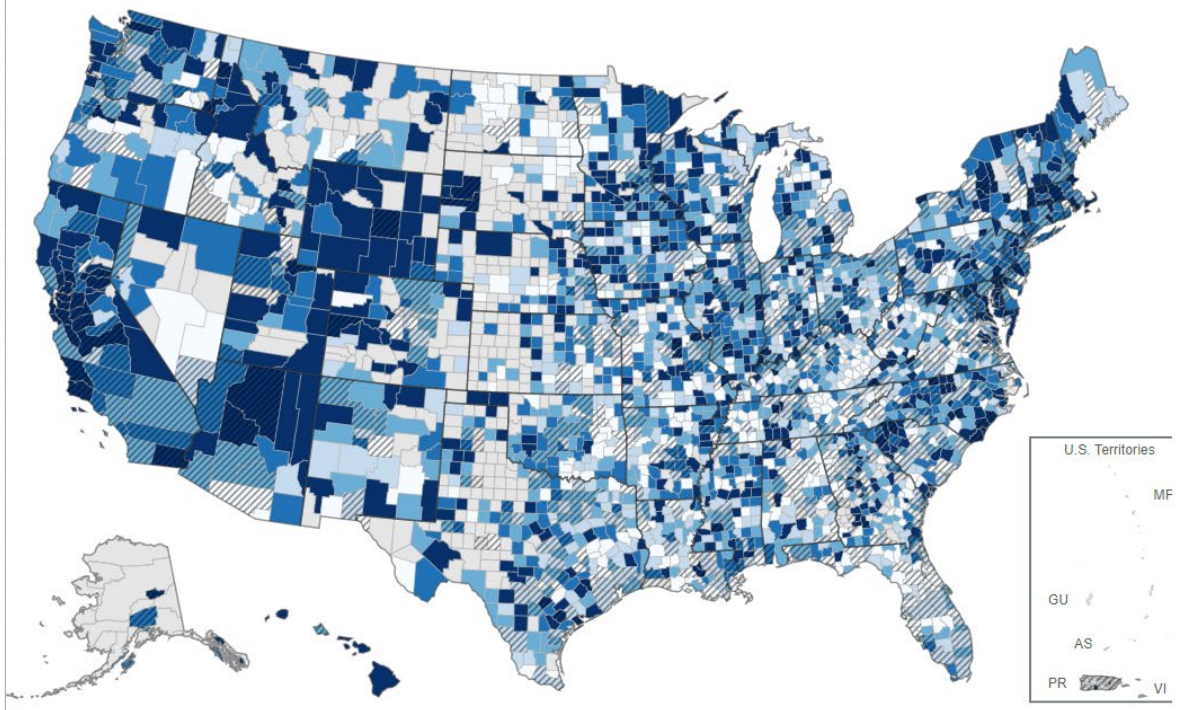
1. https://doi.org/10.1002/cncr.33894; 2. CHANGE: Community Health Advocates Implementing Nationwide Grants for Empowerment and Equity; 3. NAACP: National Association for the Advancement of Colored People; 4. NHMA: National Hispanic Medical Association

Geographic-level disparity of health outcomes: acute myocardial infarction (heart attack) among Medicare beneficiaries

Year	2021
Geography	County
Measure	Average princip
Adjustment	Unsmoothed ac
Analysis	Base measure
Domain	Primary chronic
Condition/Service	Acute myocardi
Sex	All
Age	All
Race and Ethnicity	All
Dual Eligible	Dual & non-dua
Medicare Eligibility	All
Comparison Sex	All
Comparison Age	All
Comparison Race and Ethnicity	All
Comparison Dual Eligible	Dual & non-dua
Comparison Medicare Eligibility	All

Download Data | Download Map

Download Geographic Profile Data



Disparities can be explored by:

- Visualizing health outcomes measures at a region, state, or county level, or by age group, sex, and race
- Exploring outcomes disparity using comparison stratified by geographical location, age group, sex, or race

One caveat of public data is enrollees of government insurance programs may be lower income, older, or have disability status, factors which may not necessarily represent patients enrolled in commercial plans

https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/CCDashboard

Payers' increasing focus on SDoH has prompted the industry to incorporate SDOH in their care for patients with pharmacy usage

Payers are focusing on differences in **clinical and economic** outcomes between patients with different insurance coverage types (Medicare Advantage vs. fee-for-service, dual eligible, etc.).[1]

In response to payer recommendations, the healthcare industry has begun to recognize that focusing on medical care alone is not an effective way to manage population health. Pairing medical care with SDoH, could significantly **improve care, lower costs, and improve quality of life** for millions.[2]

1. Jiang S, et al. (2022). *Journal of managed care & specialty pharmacy*, *28*(11), 1321–1330. https://doi.org/10.18553/jmcp.2022.28.11.1321; **2.** https://www.ehidc.org/sites/default/files/resources/files/Importance%20of%20SDOH%20Data%20March%202019.pdf

However, there are several barriers related to improving delivery of care through SDoH

Cross-agency collaboration

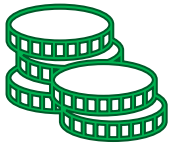
Between **45%** and **57%** of SDoH stem from outside of the healthcare system and 80 percent of what influences health comes from beyond one's physician visits.[1] Only **one-third** of stakeholders reported partnering with community–based support groups to address social needs.[2]

Care gap

To properly **care** for a patient, treatments must positively impact their knowledge, attitudes, and motivations, as well as their physical health in a cost-effective manner. Without full understanding of a patient's social determinants of health, treatment is limited.[3]

1. https://www.ncqa.org/wp-content/uploads/2021/06/20210622_NCQA_Health_Equity_Social_Determinants_of_Health_in_HEDIS.pdf; **2.** Heidari E, et al. (2022). *Journal of managed care & specialty pharmacy*, *28*(5), 538–543; **3.** https://certintell.com/blog/the-sdoh-care-gap/

There are also several data-related gaps in current practice for SDoH research



Substantial Costs

Gathering and studying complex biological data, such as genetic information, which is combined with other patient health data, can be very expensive. It might cost millions every year just for specialized data sets, or even more—up to billions—if you're looking to buy companies that provide this data. Also, it's often not clear if the money spent will lead to equivalent benefits or profits. [1]

Poor Data Collection

There is a lack of comprehensive data for both health and social outcomes; lack of large sample sizes, particularly for subgroup analyses; and differences in unmeasured characteristics between those who participate in health-related social needs (**HRSN**) interventions and those who do not.[2]

1. Dagenais S, et al. (2022). *Clinical pharmacology and therapeutics*, *111*(1), 77–89. https://doi.org/10.1002/cpt.2480; **2.** SDOH-Evidence-Review.pdf (hhs.gov)

Data Availability

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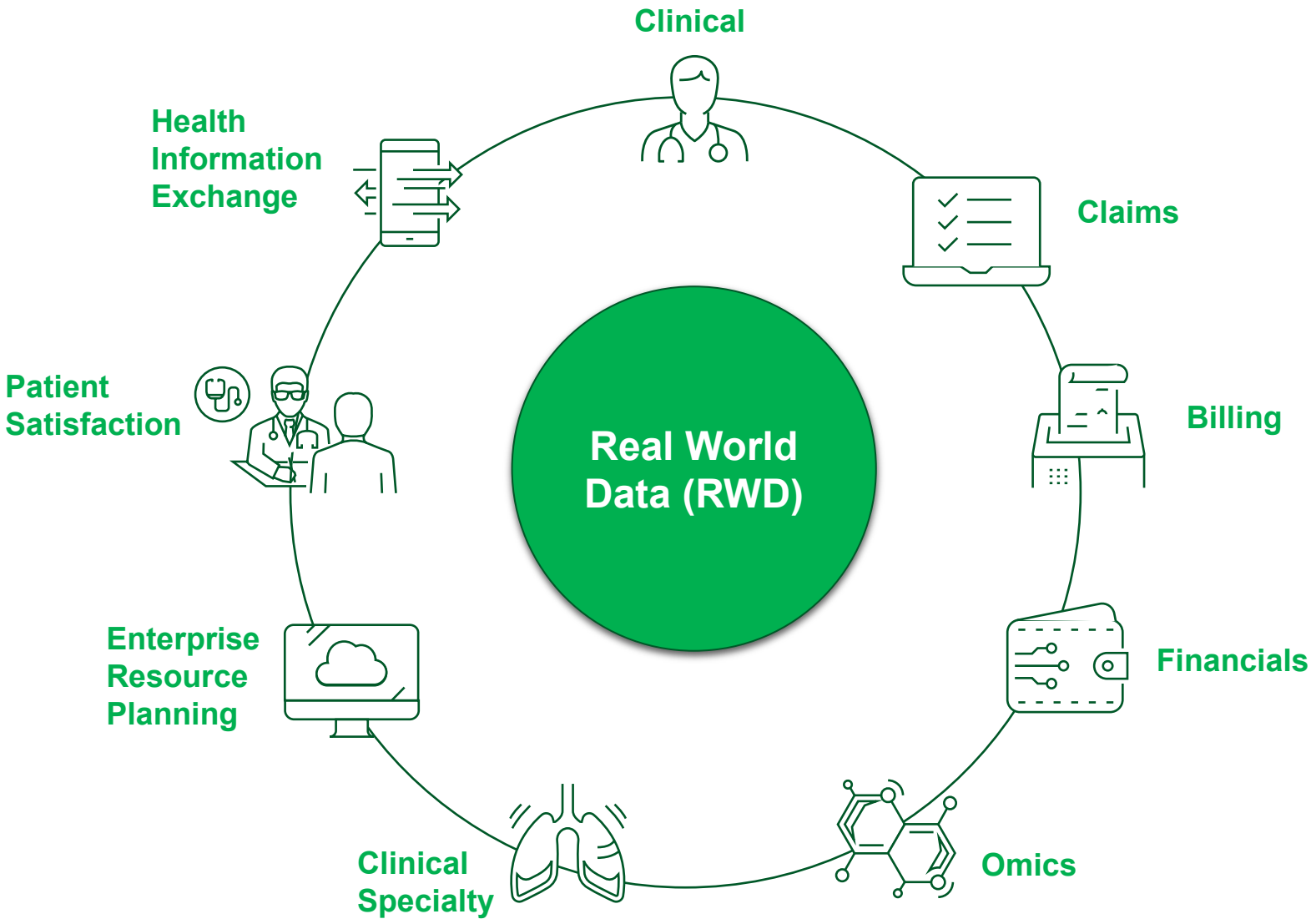
Real-world data (RWD) is a valuable asset for capturing patient outcomes in routine clinical practice



SDoH data can bring additional insights to Real-world data (RWD)

- Linkage of SDoH data at the patient or geographical level

- Evaluate the impact of targeted interventions in the real-world setting

- Identify unmet needs among populations with certain SDoH characteristics

- Identify additional SDoH-related risk factors and confounders to improve study design, analysis and the interpretation of outcomes

However, availability of SDoH varies across Real-world data (RWD) sources

Primary Surveys

- Owned by study sponsor
- Specific patient population; small sample sizes
- Depending on objective, can contain rich SDoH information

Patient Registries

- May be available for research purposes
- Specific patient population; sample sizes vary
- Tend to contain rich patient data, including SDoH

Consumer Data

- Widely available for research purposes
- General population; public, self-reported, transactional, credit, and metadata
- Depending on source, can contain rich SDoH information

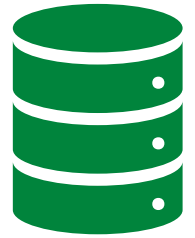
Administrative Claims

- Widely available for research purposes
- General population; medical, pharmacy, lab claims; large sample sizes
- SDoH usually very limited

There are multiple sources of SDoH data that can enhance insights derived from administrative claims

Z-codes for diagnostic documentation in administrative claims

Area-level SDoH from publicly available datasets



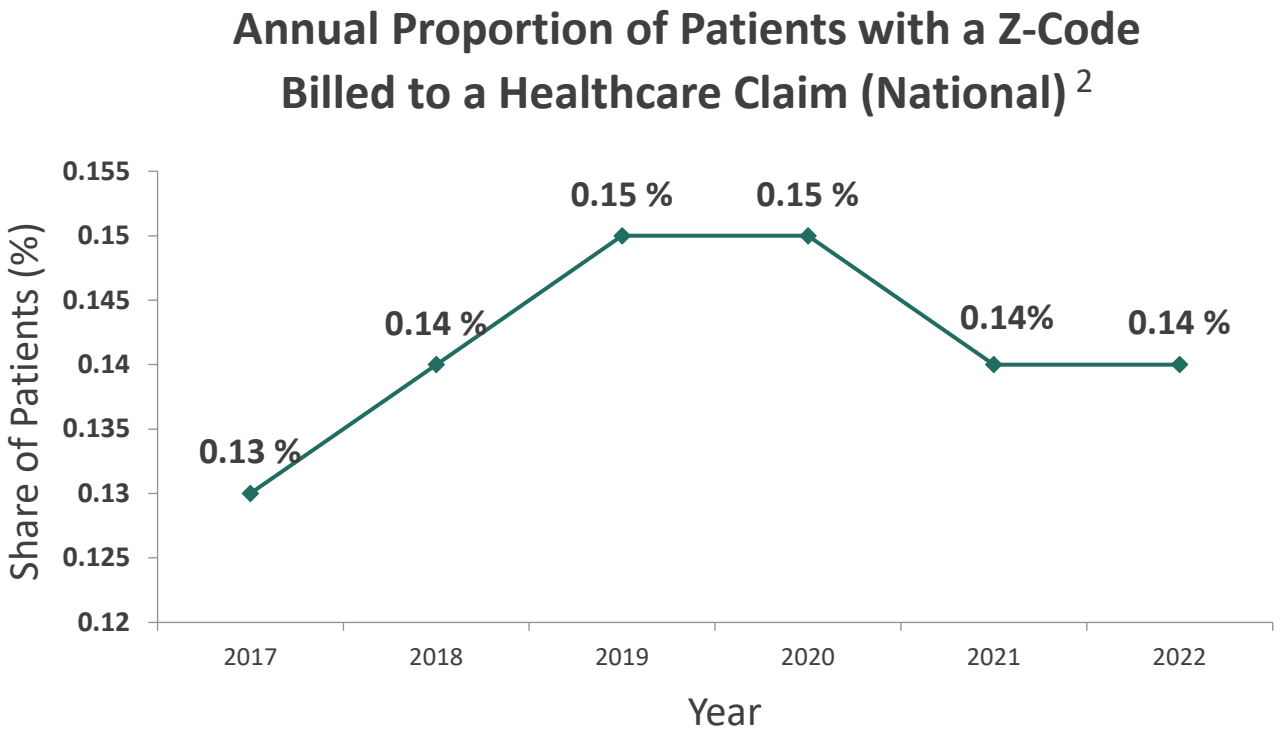
Direct linkage at patient level, such as consumer data or EMR

For the rest of this section, we will be focusing on these enhancements to administrative claims data, their characteristics, and their limitations

SDoH data can be captured in administrative claims through Z-codes but are extremely underutilized

- V-codes (ICD-9) and Z-codes (ICD-10) are allocated for diagnostic documentation in clinical data sources[1]

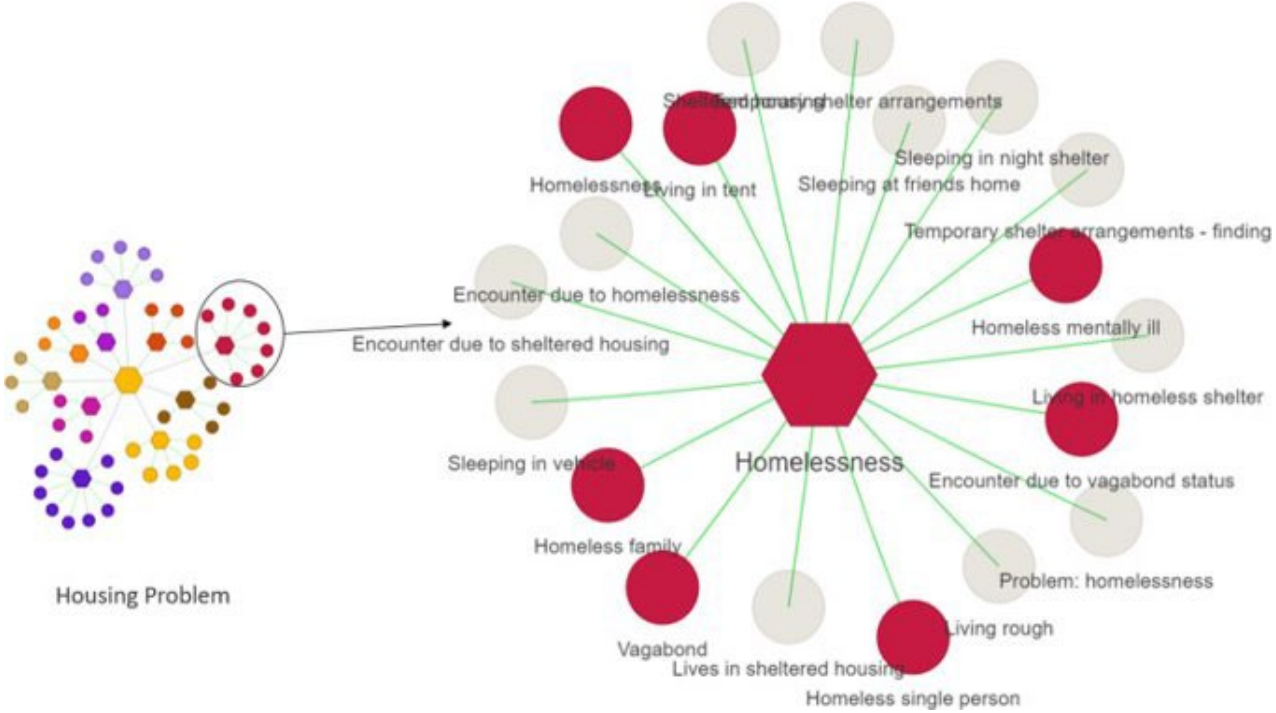
- Year-over-year proportion of Z-codes usage nationally remains low



1. https://www.cms.gov/files/document/zcodes-infographic.pdf; **2.** https://www.trillianthealth.com/insights/the-compass/provider-documentation-of-social-determinants-of-health-continues-to-stall

Patient-level linkage of SDoH from text in EHR / consumer data can generate rich insights

- Electronic Health Records (EHR) are a rich source of information but are typically in an unstructured format
- Physician's notes may contain comments pertaining to SDoH, which can be extracted using Natural Language Processing (NLP)
- Use of consumer data requires tokenization, is labor and cost expensive



1. Park Y, et al. AMIA Annu Symp Proc. 2022 Feb 21;2021:940-949.

Publicly available data sources contain rich information about SDoH

1

Administrative claims data with SDoH and geographical granularity stratified by key demographics:

- Regions, states, and counties stratified by age group, sex, and dual eligibility

2

Contains population characteristics reported across geographies on:

- Education, housing, business, economy, race, ethnicity, income, poverty, employment

3

Contains geographical information about:

- Health care professions, health facilities, economics, hospital utilization, hospital expenditures at the county, state, and national levels

*Other public sources covering issues such as behavioral risk, health, and nutrition include **BRFSS, NHANES,** and **NCIPC**.*

BRFSS - Behavioral Risk Factor Surveillance System | NHANES – National Health and Nutrition Examination Survey | NCIPC - National Center for Injury Prevention and Control

1. https://data.cms.gov/

2. https://data.census.gov/

3. https://data.hrsa.gov/

Examples of area-level SDoH data in US Census data

United States™ Census Bureau

Population and People
Total Population
331,449,281

Business and Economy
Total Employer Establishments
8,000,178

Race and Ethnicity
Hispanic or Latino
62,080,044

Education
Bachelor's Degree or Higher
35%

Health
Without Healthcare Coverage
8.6%

Income and Poverty
Median Household Income
69,717

Housing
Total Housing Units
140,498,736

Family and Living Arrangements
Total Households
127,544,730

Employment
Employment Rate
58.6%

Data available at the national, state, census tract, metropolitan area, zip-code, etc.

Source: https://data.census.gov/

CONSIDERATIONS

- Specific objectives you are trying to meet for your community
- Data availability
- Appropriate model fit

CONCLUSIONS

Health In Arkansas

Disparities in healthcare impact many people and can include factors such as race, income level, gender, geography, sexual orientation, and gender identity

https://www.ispor.org/docs/default-source/ispor-good-practices-for-outcomes-research-index/ispor_top10-2022-2023_online.pdf?sfvrsn=61a9ec28_2

Panel Discussion

4

Questions

Future

Panel questions

- In the future, can we envision including collection of SDoH data at all levels of care?
- Which therapeutic areas are having the greatest disparities and health needs in terms of access to care?
- What incentive do payers have to promote and utilize Z-codes for reporting and tracking SDoH if these are not billable?
- What incentive do physicians / healthcare providers have to report and track SDoH through Z-codes? What prevents them from doing so?