

# Understanding the Social Determinants of Health in Diabetes

Impact on Prevention, Management and Outcomes

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# Learning Objectives

- What are Social Determinants of Health?
- Social Determinants' impact on Diabetes
  - Socioeconomic Status (SES)
  - Education
  - Income/Employment
  - Race/Ethnicity
- Impact: Diabetes in Louisiana
- Addressing Social Determinants of Health

# What are Social Determinants of Health?

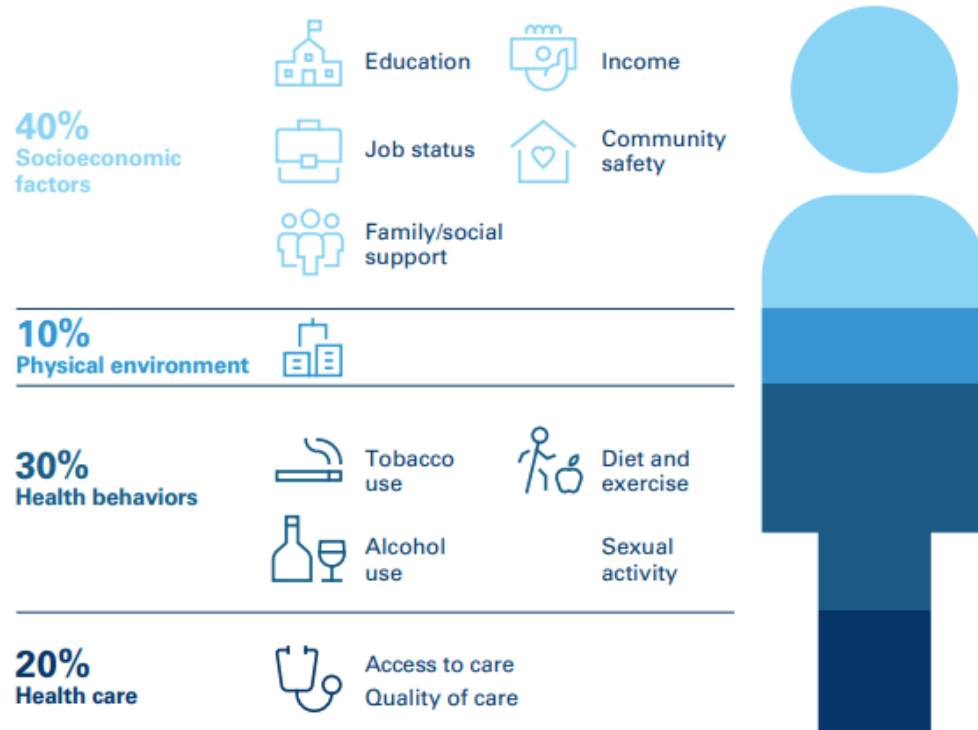
- “Social determinants of health (SDOH) are the non-medical factors that influence health outcomes. They are the conditions in which people are born, grow, work, live and age, and the wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, developmental agendas, social norms, social policies and political systems.” (World Health Organization, 2024)

# Health Disparities

- “A particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; sex; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion.” (Briggs, 2021)

# Why does this matter?

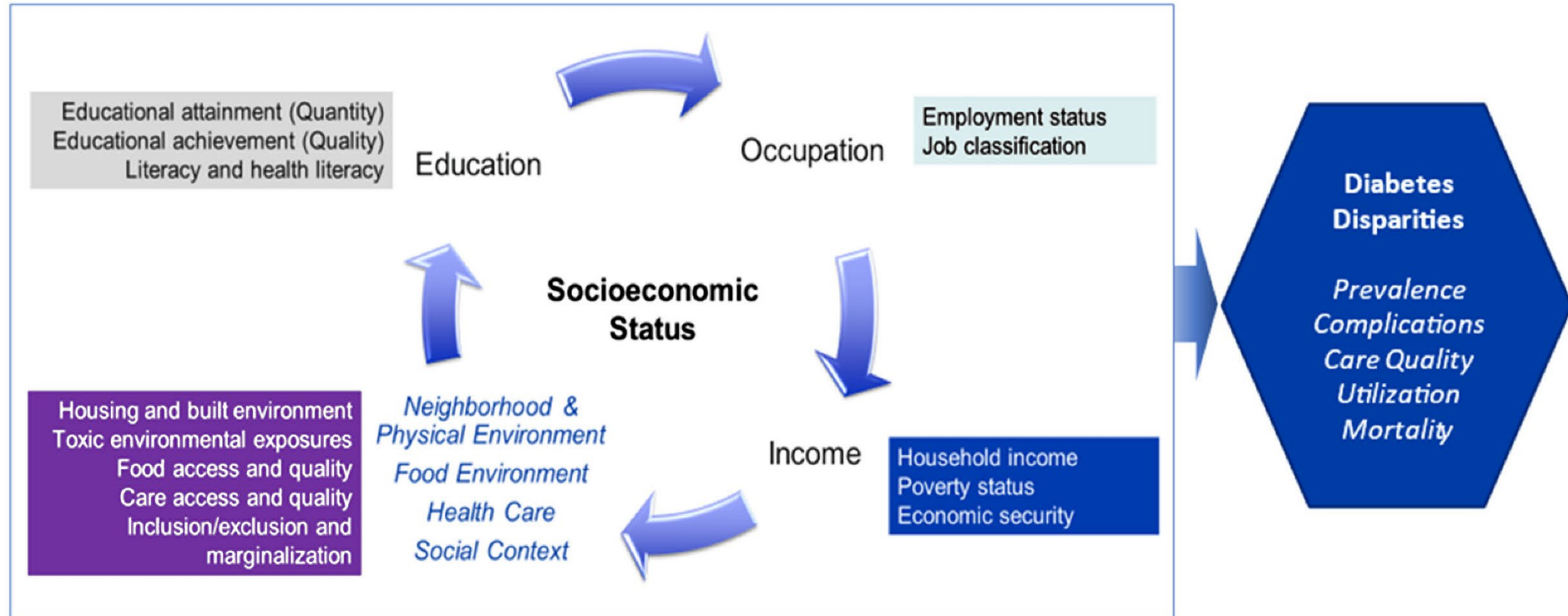
Overwhelming evidence indicates that social determinants of health make up roughly 80 percent of a person's health outcomes.<sup>1</sup> And 68 percent of people experience at least one social determinant challenge at any given time.<sup>2</sup>



*There was significant impact of SDOH factors on incidence and severity among the commercial population.*

*This is contrary to mainstream assumptions that SDOH factors are only significant for elderly and low-income members.*

Diabetes Care. 2023;46(9):1590-1598. doi:10.2337/dci23-0001

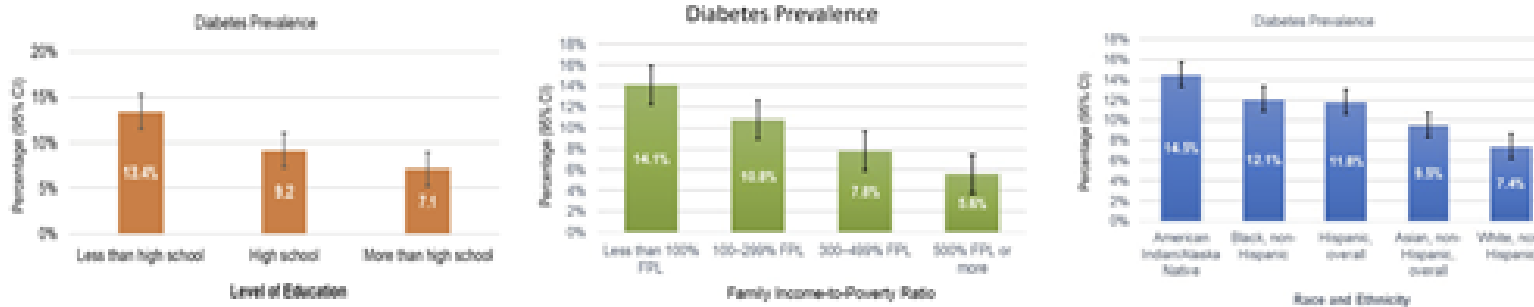
**Figure Legend:**

The cyclical, intergenerational, population-based, and systemic nature of SDOH.

# The Impact and Outcomes

Diabetes has long-standing, well-documented socioeconomic and racial/ethnic inequities in disease prevalence and incidence, morbidity, and mortality.

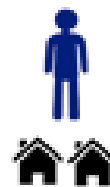
Higher diabetes prevalence, for example, is associated with lower education, lower income, and non-White race/ethnicity. The figures below show current diabetes prevalence data in U.S. adults. These patterns demonstrate that diabetes is a disease highly influenced by nonmedical, SDOH factors.



The World Health Organization SDOH framework includes **Socioeconomic and Political Contexts** as an upstream SDOH and **Ethnicity (Racism)** as a Socioeconomic Position SDOH factor.



vs.



U.S. SDOH frameworks do not include sociopolitical contexts or racism. They begin with the **Economic Stability** SDOH, which represents individual- and neighborhood-level factors.

Incorporating socioeconomic and political contexts and racism into U.S. SDOH frameworks enables an emphasis shift from primary individual- and neighborhood-level time-limited solutions to multisector and all-of-government initiatives that bring policy and permanent structural change.

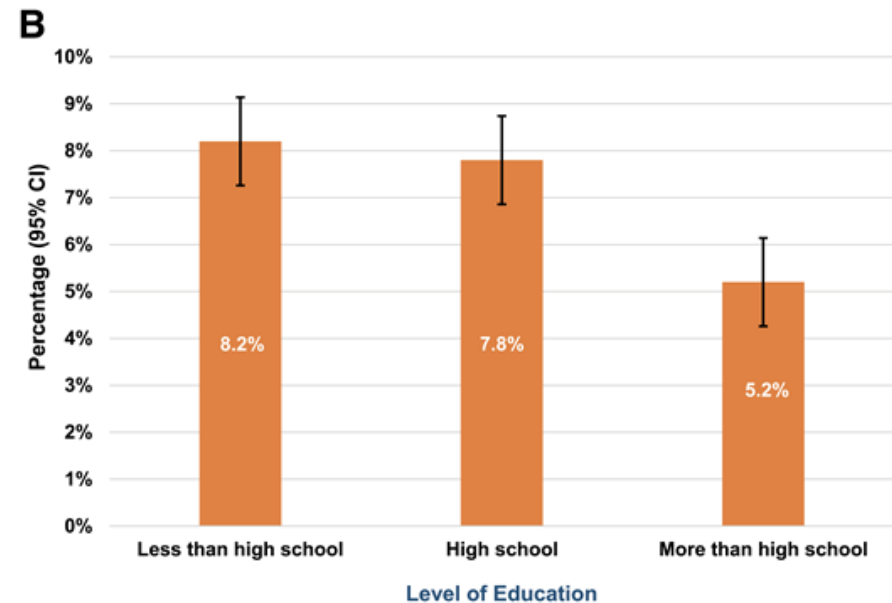
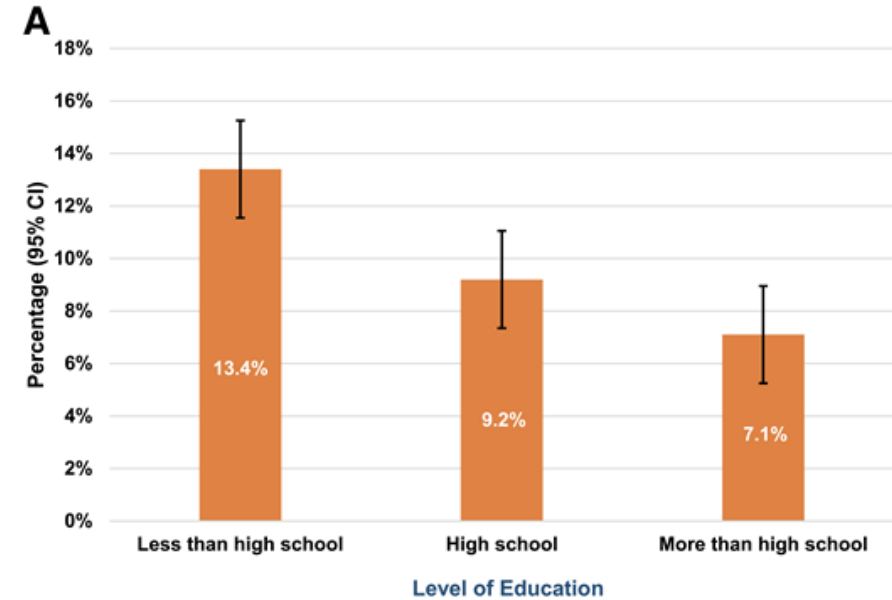
FPL, federal poverty level; SDOH, social determinants of health.

# Education

Low level of education leads to increased risk of developing type 2 diabetes.

Diabetes prevalence and incidence are highest among adults with less than a high school education in the United States.

Recent studies in other high-income countries had similar results.



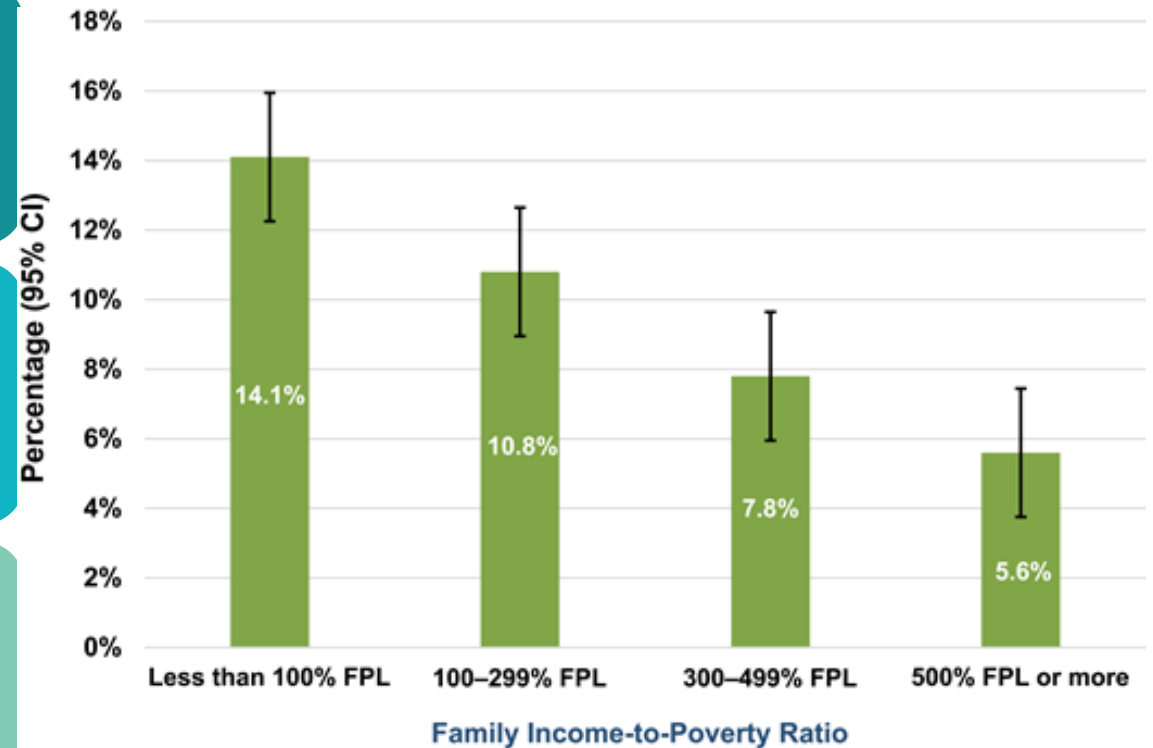


# Income

Diabetes prevalence and incidence increases with progression farther below federal poverty line (FPL).

Also observed in other higher income countries

Studies suggest that income gradient worsens with age

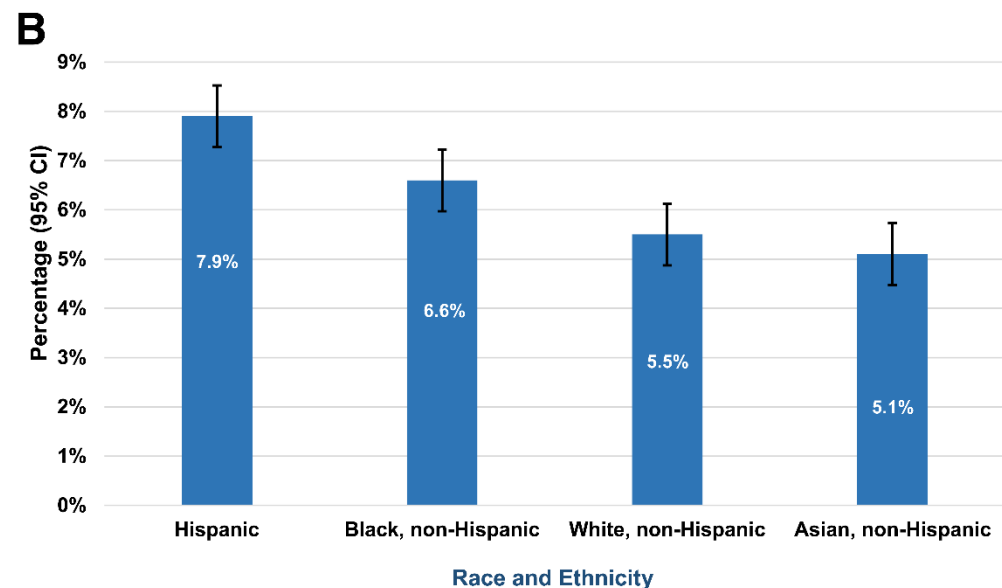
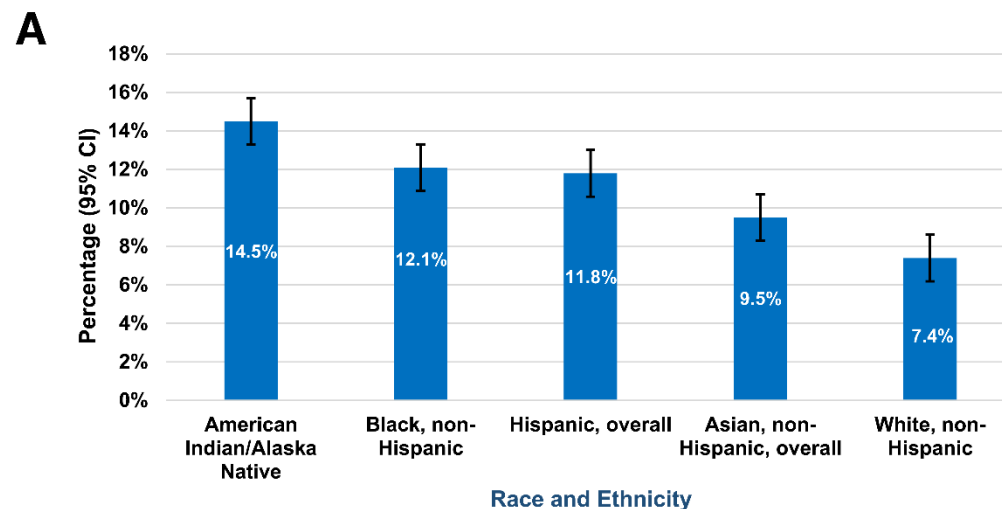


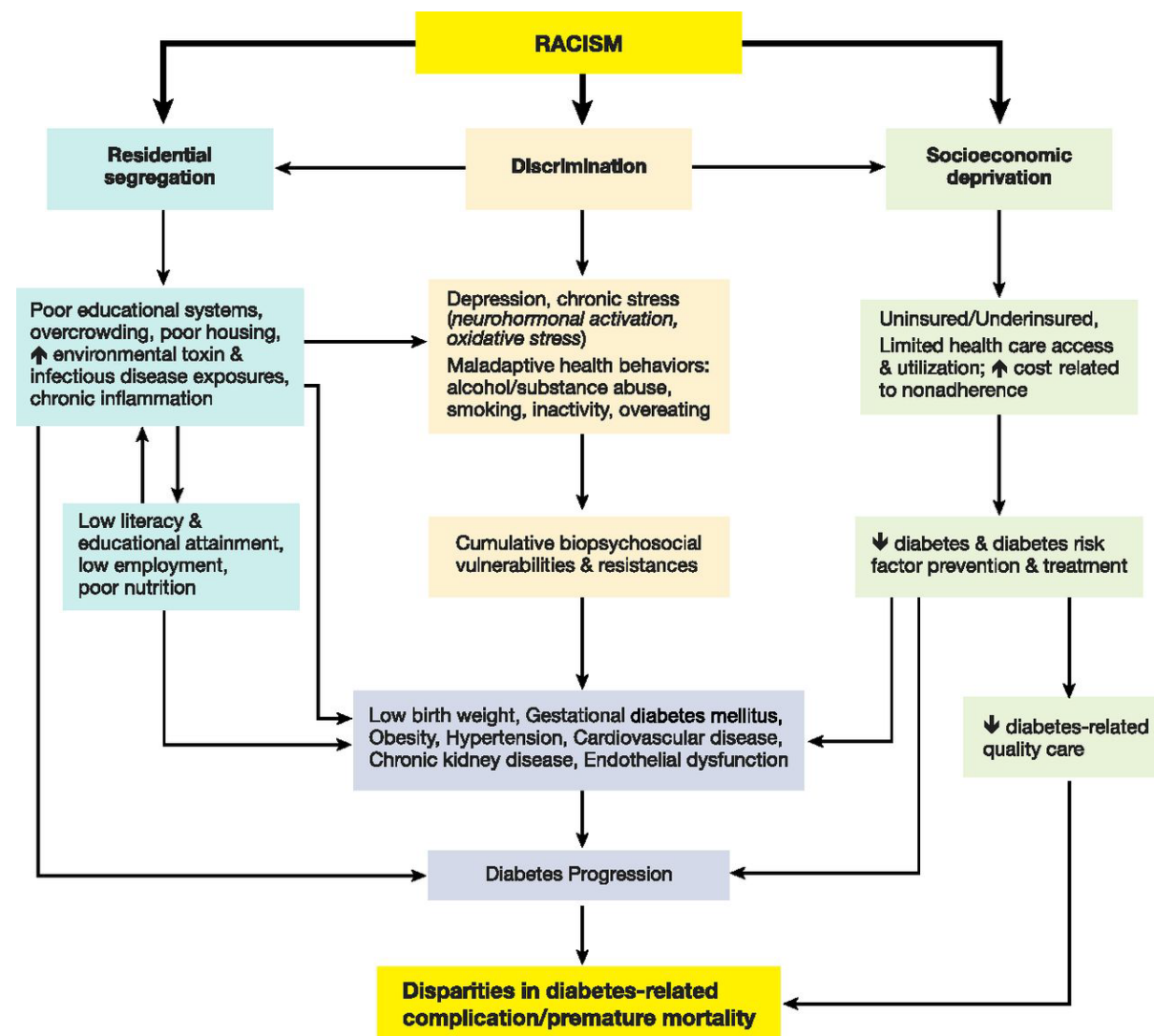
# Race and Ethnicity

“American Indian/Alaska Native population, non-Hispanic Black population, Hispanic population, and Asian population have higher diabetes prevalence than the White population” (Briggs, 2023)

Despite innovations, medical advances in diabetes care, and research targeting diabetes disparities – these patterns have continued to endure.

“Diabetes is a disease of both racial inequality and socioeconomic inequality” (Briggs, 2023)





# Diabetes in Louisiana

- “Approximately 505,468 people in Louisiana, or 14.2% of the adult population, have diagnosed diabetes.” (American Diabetes Association, 2022)
- “An additional 113,000 people in Louisiana have diabetes but don’t know it, greatly increasing their health risk.” (American Diabetes Association, 2022)
- Diabetes has an estimated cost of \$5.7 billion in Louisiana each year

# How to address SDOH



Screen for SDOH!



Document and Follow up



Find Resources in Your Community



Providing Education and Support



# Social Needs Screening Tool

## PATIENT FORM (short version)

Please answer the following.

### HOUSING

1. What is your housing situation today?<sup>1</sup>
  - ☐ I do not have housing (I am staying with others, in a hotel, in a shelter, living outside on the street, on a beach, in a car, abandoned building, bus or train station, or in a park)
  - ☐ I have housing today, but I am worried about losing housing in the future
  - ☐ I have housing
2. Think about the place you live. Do you have problems with any of the following? (check all that apply)<sup>1</sup>
  - ☐ 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.<sup>1</sup>
  - ☐ Often true
  - ☐ Sometimes true
  - ☐ Never true

### TRANSPORTATION

5. In the past 12 months, has lack of transportation kept you from medical appointments, meetings, work or from getting things needed for daily living? (check all that apply)<sup>1</sup>
  - ☐ Yes, it has kept me from medical appointments or getting medications
  - ☐ Yes, it has kept me from non-medical meetings, appointments, work, or getting things that I need
  - ☐ No

### UTILITIES

6. In the past 12 months has the electric, gas, oil, or water company threatened to shut off services in your home?<sup>1</sup>
  - ☐ Yes
  - ☐ No
  - ☐ Already shut off

### PERSONAL SAFETY

7. How often does anyone, including family, physically hurt you?<sup>1</sup>
  - ☐ Never
  - ☐ Rarely
  - ☐ Sometimes
  - ☐ Fairly often
  - ☐ Frequently
8. How often does anyone, including family, insult or talk down to you?<sup>2</sup>
  - ☐ Never
  - ☐ Rarely
  - ☐ Sometimes



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?

<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	I choose not to answer this question
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2. Which race(s) are you? Check all that apply

<input type="checkbox"/>	Asian	<input type="checkbox"/>	Native Hawaiian
<input type="checkbox"/>	Pacific Islander	<input type="checkbox"/>	Black/African American
<input type="checkbox"/>	White	<input type="checkbox"/>	American Indian/Alaskan Native
<input type="checkbox"/>	Other (please write):		
<input type="checkbox"/>	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?

<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	I choose not to answer this question
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4. Have you been discharged from the armed forces of

8. Are you worried about losing your housing?

<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	I choose not to answer this question
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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?

<input type="checkbox"/>	Less than high school degree	<input type="checkbox"/>	High school diploma or GED
<input type="checkbox"/>	More than high school	<input type="checkbox"/>	I choose not to answer this question

11. What is your current work situation?

<input type="checkbox"/>	Unemployed	<input type="checkbox"/>	Part-time or	<input type="checkbox"/>	Full-time
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## AHC HRSN Screening Tool Core Questions

If someone chooses the underlined answers, they might have an unmet health-related social need.

### Living Situation

**1. What is your living situation today?<sup>3</sup>**

- ☐ I have a steady place to live
- ☐ I have a place to live today, but I am worried about losing it in the future
- ☐ I do not have a steady place to live (I am temporarily staying with others, in a hotel, in a shelter, living outside on the street, on a beach, in a car, abandoned building, bus or train station, or in a park)

**2. Think about the place you live. Do you have problems with any of the following?<sup>4</sup>**

CHOOSE ALL THAT APPLY

- ☐ Pests such as bugs, ants, or mice
- ☐ Mold
- ☐ Lead paint or pipes
- ☐ Lack of heat
- ☐ Oven or stove not working
- ☐ Smoke detectors missing or not working
- ☐ Water leaks
- ☐ None of the above

### Food

Some people have made the following statements about their food situation. Please answer whether the statements were **OFTEN**, **SOMETIMES**, or **NEVER** true for you and your household in the last 12 months.<sup>5</sup>

**3. Within the past 12 months, you worried that your food would run out before you got money to buy more.**

- ☐ Often true
- ☐ Sometimes true
- ☐ Never true



# Food Insecurity Screening

Hunger Vital Sign™ screen:

- “‘Within the past 12 months, we worried whether our food would run out before we got money to buy more.’ Was that often true, sometimes true or never true for you/your household? “ (Hager, 2009)
- “‘Within the past 12 months, the food we bought just didn’t last, and we didn’t have money to get more.’ Was that often true, sometimes true or never true for you/your household?” (Hager, 2009)

# Document and Follow Up

## Z59.4 Lack of adequate food and safe drinking water

- “Including this code alerts Louisiana Healthcare Connections that this member would benefit from targeted outreach by our team of clinical social workers and certified community health coaches. Please encourage your patients to take advantage of these resources. Finally, be sure to follow up with your patient to determine if referrals to food security supports have been successful.” (Louisiana Healthcare Connections, 2019)

## Supplemental ICD-10 Z codes such as codes Z55–Z65 – related to SDOH

- “Although Z codes are not generally reimbursable, including these codes in the medical record can help with population health, panel management, and quality improvement initiatives” (O’Gureck, 2018)

# The Social Determinants of Health (SDOH)

## Data Journey to Better Outcomes

**Z**  
codes

(e.g., housing, food insecurity, transportation, etc.).

**SDOH** are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.



### Step 1 Collect SDOH Data

**Any member of a person's care team can collect SDOH data during any encounter.**

- Includes providers, social workers, community health workers, case managers, patient navigators, and nurses.
- Can be collected at intake through health risk assessments, screening tools, person-provider interaction, and individual self-reporting.

### Step 2 Document SDOH Data

**Data are recorded in a person's paper or electronic health record (EHR).**

- SDOH data may be documented in the problem or diagnosis list, patient or client history, or provider notes.
- Care teams may collect more detailed SDOH data than current Z codes allow. These data should be retained.
- Efforts are ongoing to close Z code gaps and standardize SDOH data.

### Step 3 Map SDOH Data to Z Codes

**Assistance is available from the ICD-10-CM Official Guidelines for Coding and Reporting.<sup>1</sup>**

- Coding, billing, and EHR systems help coders assign standardized codes (e.g., Z codes).
- Coders can assign SDOH Z codes based on self-reported data and/or information documented by any member of the care team if their documentation is included in the official medical record.<sup>2</sup>

### Step 4 Use SDOH Z Code Data

**Data analysis can help improve quality, care coordination, and experience of care.**

- Identify individuals' social risk factors and unmet needs.
- Inform health care and services, follow-up, and discharge planning.
- Trigger referrals to social services that meet individuals' needs.
- Track referrals between providers and social service organizations.

### Step 5 Report SDOH Z Code Data Findings

**SDOH data can be added to key reports** for executive leadership and Boards of Directors to inform value-based care opportunities.

- Findings can be shared with social service organizations, providers, health plans, and consumer/patient advisory boards to identify unmet needs.
- A [Disparities Impact Statement](#) can be used to identify opportunities for advancing health equity.



# 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.<sup>3</sup>**

- 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.<sup>4</sup>
- 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.

## Exhibit 1. Recent SDOH Z Code Categories and New Codes

### Z55 – Problems related to education and literacy

- Z55.5 – Less than a high school diploma (Added, Oct. 1, 2021)

### **NEW** Z55.6 – Problems related to health literacy

### Z56 – Problems related to employment and unemployment

### Z57 – Occupational exposure to risk factors

### Z58 – Problems related to physical environment (Added, Oct. 1, 2021)

- Z58.6 – Inadequate drinking-water supply (Added, Oct. 1, 2021)

### **NEW** Z58.8 – Other problems related to physical environment

- NEW** • Z58.81 – Basic services unavailable in physical environment

- NEW** • Z58.89 – Other problems related to physical environment

### Z59 – Problems related to housing and economic circumstances

- Z59.0 – Homelessness (Updated)

- Z59.00 – Homelessness unspecified (Added, Oct. 1, 2021)

- Z59.01 – Sheltered homelessness (Added, Oct. 1, 2021)

- Z59.02 – Unsheltered homelessness (Added, Oct. 1, 2021)

- Z59.1 – Inadequate Housing (Updated)

- NEW** • Z59.10 – Inadequate housing, unspecified

- NEW** • Z59.11 – Inadequate housing environmental temperature

- NEW** • Z59.12 – Inadequate housing utilities

- NEW** • Z59.19 – Other inadequate housing

- Z59.4 – Lack of adequate food (Updated)

- Z59.41 – Food insecurity (Added, Oct. 1, 2021)

- Z59.48 – Other specified lack of adequate food (Added, Oct. 1, 2021)

- Z59.8 – Other problems related to housing and economic circumstances (Updated)

- Z59.81 – Housing instability, housed (Added, Oct. 1, 2021)

- Z59.811 – Housing instability, housed, with risk of homelessness (Added, Oct. 1, 2021)

- Z59.812 – Housing instability, housed, homelessness in past 12 months (Added, Oct. 1, 2021)

- Z59.819 – Housing instability, housed unspecified (Added, Oct. 1, 2021)

- Z59.82 – Transportation insecurity (Added, Oct. 1, 2022)

- Z59.86 – Financial insecurity (Added, Oct. 1, 2022)

- Z59.87 – Material hardship due to limited financial resources, not elsewhere classified (Added, Oct. 1, 2022; Revised, April 1, 2023)

- Z59.89 – Other problems related to housing and economic circumstances (Added, Oct. 1, 2021)

### Z60 – Problems related to social environment

### Z62 – Problems related to upbringing

- Z62.2 – Upbringing away from parents

- NEW** • Z62.23 – Child in custody of non-parental relative (Added, Oct. 1, 2023)

- NEW** • Z62.24 – Child in custody of non-relative guardian (Added, Oct. 1, 2023)

- Z62.8 – Other specified problems related to upbringing (Updated)

- Z62.81 – Personal history of abuse in childhood

- NEW** • Z62.814 – Personal history of child financial abuse

- NEW** • Z62.815 – Personal history of intimate partner abuse in childhood

- Z62.82 – Parent-child conflict

- NEW** • Z62.823 – Parent-step child conflict (Added, Oct. 1, 2023)

- Z62.83 – Non-parental relative or guardian-child conflict (Added Oct. 1, 2023)

- NEW** • Z62.831 – Non-parental relative-child conflict (Added Oct. 1, 2023)

- NEW** • Z62.832 – Non-relative guardian-child conflict (Added Oct. 1, 2023)

- NEW** • Z62.833 – Group home staff-child conflict (Added Oct. 1, 2023)

- Z62.89 – Other specified problems related to upbringing

- NEW** • Z62.892 – Runaway [from current living environment] (Added Oct. 1, 2023)

### Z63 – Other problems related to primary support group, including family circumstances

### Z64 – Problems related to certain psychosocial circumstance

### Z65 – Problems related to other psychosocial circumstances

# SDOH Resources for any state

General resources	
211	<a href="http://www.211.org">http://www.211.org</a>
Aunt Bertha	<a href="http://www.auntbertha.com">http://www.auntbertha.com</a>
Cap4Kids	<a href="http://cap4kids.org">http://cap4kids.org</a>
Food insecurity	
Feeding America	<a href="http://www.feedingamerica.org">http://www.feedingamerica.org</a>
Supplemental Nutrition Assistance Program	<a href="http://www.fns.usda.gov/snap">http://www.fns.usda.gov/snap</a>
Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)	<a href="http://www.fns.usda.gov/wic">http://www.fns.usda.gov/wic</a>
Housing	
Public Housing and Voucher Program	<a href="http://www.hud.gov/topics/rental_assistance">http://www.hud.gov/topics/rental_assistance</a>
Legal issues	
Medical-Legal Partnerships	<a href="http://medical-legalpartnership.org">http://medical-legalpartnership.org</a>



# Other resources to consider for Louisiana

- Well-Ahead Community Guide:
  - <https://wellaheadla.com/community-resource-guide/>
- Access Health Louisiana
  - [https://accesshealthla.findhelp.com/search\\_results/70119?widget=accesshealthla&ref=AccessHealthLAWebsite](https://accesshealthla.findhelp.com/search_results/70119?widget=accesshealthla&ref=AccessHealthLAWebsite)
- Food insecurity:
  - <https://www.louisianahealthconnect.com/content/dam/centene/louisiana-health-connect/pdfs/medicaid-provider/Food%20Insecurity%20Provider%20Toolkit.pdf>

### Filter by Type (3) ^

- ☐ Breastfeeding
- ☐ Diabetes Prevention and Management
- ☐ Health Screenings
- ☐ Healthy Eating and Food Resources
- ☐ Heart Screenings
- ☐ Physical Fitness
- ☐ Stress Management and Mental Health
- ☐ Tobacco Cessation and Prevention

### Filter by Parish (1) v



**Abundance of Desire Health  
Education**

3600 Desire  
Parkway, New



# Providing Education and Support

- Increase access to diabetes management services
  - Utilizing patient savings programs
  - Offering tele-health
  - Working with other community providers and healthcare teams to optimize use of community resources
- Preventative programs
  - Access Health Louisiana - National Diabetes Prevention Program (National DPP)
    - “...a partnership of public and private organizations that provide the framework for type 2 diabetes prevention efforts in the U.S. One component of the National DPP is the National DPP lifestyle change program. This program is founded on the science of the Diabetes Prevention Program research study and several translation studies that followed.” (Access Health, 2024)
    - <https://accesshealthla.org/services/diabetes-test/>



EQUALITY



EQUITY

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**Questions?**  
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