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Integrating Health-Related Social Needs (HRSN) Screening and Referral into Clinical Workflow

May 2024

Purpose

This toolkit provides steps your organization can take to integrate a social needs screening and referral process into its clinical workflow. These steps are general recommendations that an organization can consider and adapt for its specific needs. The recommendations are general by design, to ensure they are useful for the diverse organizations that will be using this toolkit and their unique patient populations, workflow, and available resources.

Background

Social determinants of health (SDOH) are "the conditions in the environment 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."[1] Research has shown that unmet social needs are risk factors for negative health outcomes and health inequities.

The U.S. Department of Health and Human Services (HHS) estimates that SDOH account for up to 50% of health outcomes.[2] According to the Centers for Disease Control and Prevention (CDC), SDOH have a far greater impact on an individual's health than the healthcare they receive or their genetic factors.[3]

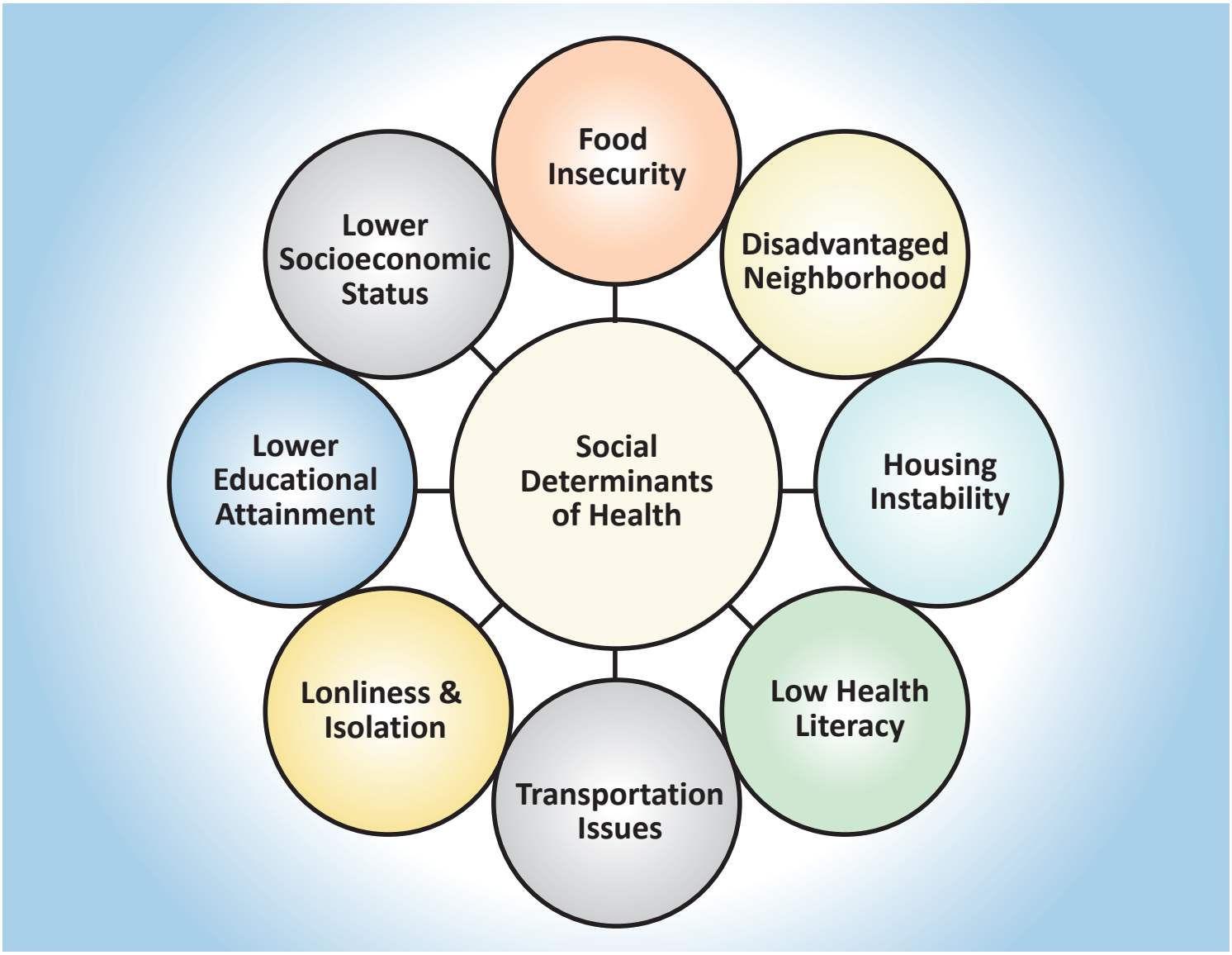

Figure 1: Examples of SDOH

Some examples of SDOH are shown in Figure 1. The correlation between these factors and health manifests in a variety of ways. For example:

- Individuals with a lower socioeconomic status may not have access to the fresh, healthy foods that are critical to managing certain chronic conditions such as diabetes.[4]
- Food insecurity is associated with increased emergency department use, hospital admissions[5], and greater healthcare expenditures.[6]
- Those with lower health literacy may not have the ability to follow a treatment protocol, take prescribed medications correctly, or find and effectively use health information to manage their health.[7]
- Transportation barriers can limit access to medical care, result in missed or delayed fulfillment of prescription medications, or limit access to items necessary to meet daily living needs.[8]
- Individuals who are socially isolated and/or experience loneliness are at higher risk for a variety of medical and mental health conditions, cognitive decline, and potentially early death.[9]
- Armed with this information, healthcare organizations across care settings recognize that addressing unmet social needs is essential to reducing the health disparities and poor health that are rooted in social and economic disadvantage. There is solid evidence that this strategy is effective. For example, a Commonwealth Fund report outlines four factors that distinguish the top performing high-income countries on healthcare; one is their investment in social services.[10]

Screening for and addressing unmet social needs is important because:

- Unmet social needs create significant barriers to receiving high quality care and contribute to poorer health outcomes. They also contribute to excess healthcare spending and avoidable utilization of services.
- Social needs screening can prompt referrals to resources, inform clinical care, and improve health outcomes.
- An increasing body of literature examines the benefits of addressing unmet social needs, and while some findings are mixed, there is ample evidence of positive impacts.[11] An evidence map published by the Patient-Centered Outcomes Research Institute (PCORI) includes information on 285 studies that address 15 social needs, summarize interventions, and include an evaluation of health outcomes.

  The purpose of the evidence map "is to distill complex information on study and population characteristics, health outcomes, and study quality for interventions addressing social needs in an accessible visual format for researchers, physicians, payers, and purchasers."
- Organizations can leverage aggregate screening data to:
  - gain insights into the impact of addressing unmet social needs;
  - understand overall trends including reductions in unmet social needs over time among those screened;
  - learn how interventions influence outcomes, utilization, and costs for their patient populations;
  - prioritize development of new community partnerships, social services, and other relevant resources; and
  - reassess their approach to addressing unmet social needs to meet evolving patient needs.

CMS Commitment to Health Equity

The Centers for Medicare & Medicaid Services (CMS) believes that equitable care is a key component necessary to achieve high-quality care for Medicare enrollees. CMS defines health equity as "the attainment of the highest level of health for all people, where everyone has a fair and just opportunity to attain their optimal health regardless of race, ethnicity, disability, sexual orientation, gender identity, socioeconomic status, geography, preferred language, or other factors that affect access to care and health outcomes."

The first pillar in the 2022 CMS Strategic Plan is "Advance health equity by addressing the health disparities that underlie our health system." In the CMS Framework for Health Equity, 2022-2023, CMS further outlined its commitment to health equity around five priority areas that inform CMS' efforts to advance equity over the next decade. CMS aims to "expand coverage, and improve health outcomes for the more than 170 million individuals supported by CMS programs."

To amplify the Agency's commitment to health equity, CMS has released several new health equity measures and final payment rules across care settings that impact reimbursement and facility quality ratings. This includes new measures that require facilities to screen for and address unmet social needs. If you would like more information on any of the health equity measures, please contact your IPRO Quality Specialist or refer to CMS website.

Definitions and Common Terms

The semantics used to describe social needs can be confusing. Various terms are used interchangeably, and not always consistently. The information in Table 1 defines some of the more common terms and how they are used in the context of this toolkit. The toolkit will refer to health-related social need (hereafter referred to as HRSN), social need or unmet social need.

Table 1: Summary Definitions

Term	Definition
Social Determinants of Health	Social factors that give health benefits to some populations but can cause harm to others, such as economic stability and access to health care.[9] SDOH affect everyone - not just the most vulnerable individuals. In and of themselves, they are not positive or negative. [16, 17]
Social Risk Factors	Adverse social conditions associated with poor health, such as food insecurity and housing instability that result from SDOH impact.[10]
Social Needs	The social risk factor(s) that an individual identifies and prioritizes for intervention using shared decision making.
Social Drivers of Health and Health-Related Social Need	CMS terms synonymous with social risk factors.

Steps for Integrating HRSN Screening into Clinical Workflow

1. Make Health Equity a Strategic Priority

- Make a commitment to an organizational culture of equity, at the executive level, and establish an infrastructure that supports the delivery of care that is equitable for all patients. Leadership sets the tone, leads the way, and empowers others.
- Ensure an organizational commitment to equitable care by including health equity in written policies, protocols, and strategic planning, as well as your organization's mission and vision statements.
- Identify an individual or individuals with leadership responsibility who have accountability for health equity efforts. The individual(s) should be adept at leading teams, engaging clinicians and staff to obtain buy-in on health equity initiatives, and engaging patients, families, and caregivers.

2. Form a Team and Make a Plan

- Develop a structured process for screening for and addressing unmet social needs. These are questions your team can use to guide discussions and decisions about the screening process:
  - Who will screen patients?
  - When and where will screening take place?
  - When will screening results be reviewed and by whom to determine how to proceed, especially if the patient screens positive?
  - How will screening results be discussed with the patient and by whom?
  - How are resources provided if the patient screens positive?
  - How are screening results and social needs recorded?
  - How is the referral loop closed?

Figure 2: Screening Process Questions & Responses

Who is screening the patients?	When does the screening occur?	When are the results reviewed?	How are the results discussed?	How are resources povided?	How is the social need recorded?	How is the referral loop closed?
Medical Assistants. Community health workers. Social workers. Nurses. Clinicians.	Electronically prior to the visit. Verbally with the patient in their home. Patient completes a paper or electronic survey independently.	Review electronic responses prior to visit. Review in patient's home directly after screening. Review in the office after patient visit.	Clinician and patient discuss during home visit. Social work is connected to patient after screening.	Provide handout to patient with resources. Warm handoff to social worker or community-based org. Referral via the electronic medical record to community-based org.	Clinician enters data in the electronic medical record Social worker enters additional information. Billing office associates the visit with a SDOH Z-code.	Community-based org. updates via electronic medical record. Social work follows up with patient via phone call. Social work calls the community-based org. for status.

- Evaluate and select a screening assessment. Ensure the screening assessment you select is validated and health information technology (IT)-encoded. (The Gravity Project lists screening instruments by domain, available in the National Library of Medicine Value Set Authority Center (VSAC).)

  Here are three examples of validated screening assessments:

  - CMS Accountable Health Communities Health-Related Social Needs Screening Tool. This assessment is modeled after the PRAPARE (see next bullet) tool and has been tested as part of a CMS Innovation Center's Accountable Health Communities demonstration model. It can be completed by the patient; it was tested and proven to be effective in multiple care settings across the country. This assessment is available in 11 languages. Please refer to Appendix B for more information on the CMS Accountable Health Communities Demonstration Model, promising practices, key insights, and resources.
  - Protocol for Responding to and Assessing Patients' Assets, Risks and Experiences (PRAPARE). This assessment tool is used broadly, is embedded in several electronic health records (EHRs), and can be completed by the patient or administered by providers. The PRAPARE assessment is available in 30+ languages.
  - The American Academy of Family Physicians Everyone Project Screening Tool. This screening tool has 11 questions and can be completed by the patient. It is available in seven languages.

The SIREN website provides a comparison of publicly available, free screening assessments.

3. Establish a Network of Community-Based Organizations (CBOs)

- Create and sustain partnerships with CBOs before you begin screening patients so that patients can be immediately referred if they screen positive and request assistance. Establish mechanisms for seamlessly connecting patients to resources and services such as referrals to social workers, care managers, or navigators if this is the process your organization decides to use. It is also helpful to provide online tools and resources to enable patients who screen positive and refuse assistance to explore them independently and self-refer.
- If your organization is in the planning phase of establishing a network of CBOs, consider conducting an environmental scan to learn about organizations in your community and the services they provide. Inquire about their referral process, any limitations they may have for accepting referrals, and if there is the capability for bidirectional communication to track referrals. The Camden Coalition provides some key considerations to help think through the mapping exercise.
- Designate an individual(s) in your organization to keep your referral resources up to date. CBOs can close, stop accepting referrals or change contact information. Your organization might consider hosting regular meetings with all the CBOs in your network to build and sustain positive relationships. It is important to maintain a current list so that patients are not referred to a resource that is unavailable to them.

4. Train Staff

- Staff will be more confident and prepared to address patient reluctance if they have received appropriate training.
- Explain to your staff why your organization is conducting HRSN screening. This increases engagement and comfort with the process.
- Train at on-boarding and annually (at a minimum) to maintain the integrity of the HRSN screening process.
- Adopt an interactive training program. Incorporate scripts and roleplaying to increase staff confidence with the screening process and with addressing challenging questions or concerns from patients.
  - An introductory statement helps patients understand why your organization is collecting the information and how it will and will not be used.
  - Ensure the scripts cover potential patient questions and objections, as well as suggested responses for staff.
  - Have a standardized process in place to address patient questions and concerns, and handle potential complaints about the screening process.
  - Consider developing tailored scripts to address different social needs, different languages, and cultural differences.
- Consider how different methods of screening may impact acceptance by patients (i.e., verbally collected by staff vs. paper survey/portal).
- Evaluate the effectiveness of workforce training to ensure staff demonstrate competency.
- Train staff on culturally and linguistically appropriate services (CLAS), implicit bias, and use of empathic inquiry and motivational interviewing approaches.
- Refer to Appendix A for information on identifying and addressing staff and patient reluctance with the screening process.

5. Engage and Educate Patients

- Educate patients on why your organization is collecting HRSN data before you start screening to increase their comfort and confidence in participating in the screening process.
- Consider placing flyers and posters throughout your facility, sending a letter to patients, putting information about the screening process on the patient portal, and/or providing information to patients at registration and check-in.
- Patients will feel more comfortable sharing the information if they know:
  - The questions come from a place of caring and concern.
  - Their privacy will be respected, and the data will be used to improve care for not only them, but all your patients.
  - Their care will not be impacted, especially if they screen positive for an unmet HRSN.
  - They are not required to do the screening and can opt out.
  - The screening process doesn't take too much time.
  - If they screen positive, they will be asked if they would like assistance.
- Involve the Patient and Family Advisory Council (PFAC) and other trusted community members/organizations to help educate patients.

6. Implement Screening on a Small Scale

- Once your organization is ready to start screening patients, start small by screening a limited number of patients and/or for a limited number of social needs. For example, start by screening patients for food insecurity. Test the process, recalibrate as needed, and test again until the process is working smoothly. Consider using the Plan-Do-Study-Act method of improvement. Using a small-scale approach allows you to test and modify the screening tool, modify the workflow, test different methods of screening (in person, electronically, over the phone, self-administered, staff-administered), determine if more staff training is needed, and evaluate other factors affecting the screening process. Once the process is working, spread the process on a larger scale.

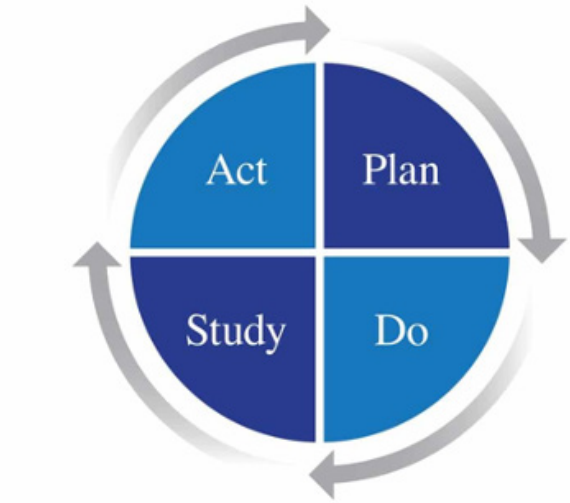

Figure 3: IHI PDSA Model of Improvement

7. Address HRSN and Connect to Referral (if applicable)

- If a patient screens positive for an unmet social need, the next step is to always ask if they would like assistance.
- Through shared decision making, clinical staff and the patient can decide how to proceed. (For more information on shared decision making, please refer to the AHRQ resource The SHARE Approach: A Model for Shared Decisionmaking - Fact Sheet.)
  - The patient may have other priorities that they need/want to address, or they may not be comfortable receiving assistance at that time. If the patient indicates they would like assistance, your referral process should seamlessly move them to the next step in your workflow.
  - Ensure staff spends sufficient time discussing the screening results and options with patients. Discussing social needs is a sensitive topic. Allocate adequate time for the discussion so patients feel more comfortable and your staff do not feel rushed.
  - If receptive, educate patients on the benefits to their health of addressing any unmet social needs.
- Anticipate challenges.
  - It is important to keep in mind that patients may not feel comfortable discussing their social need(s) due to shame, fear of judgment, stigma or trauma associated with their social needs. You should prepare staff for these difficult conversations through training and education.

Table 2 provides examples of potential social services your organization can consider providing to patients with unmet social needs. As you gather more screening data, you can analyze the data to determine if services need to be modified to meet patients' needs.

Examples of Social Needs Services

Food/Nutritional Insecurity	Utilities/Housing Instability	Transportation Barriers
• Supplemental Nutrition Assistance Program (SNAP) • Medically tailored meals • General meal services • Food vouchers / food cards • Home-delivered meals • Congregate meal settings	• Subsidies for utilities • Subsidies for rent or assisted living communities • Structural home modifications • Family & marital counseling • Access to companion care • Events to address isolation	• Parking / bus passes • Non-emergency / non-medical transportation • Local discount transportation services • Reimbursement for transportation • Transportation vouchers: Taxi, Uber, Lyft

8. Close the Referral Loop and Document HRSN

- Ensure each staff member follows closed loop processes to confirm the referral process is complete for every patient that is referred to support services. This ensures that each patient is connected to appropriate resources or services and is not lost in the process.
- Use bidirectional data sharing between your organization and community partners/CBOs to better understand outcomes such as:
  - patient utilization of the service(s) offered;
  - whether patients had a positive or negative perception of their experience with the service/resource and the process;
  - associated costs related to the referral.
- Consider documenting patients' social needs using ICD-10 Z codes (Z55-Z65). Using Z-codes will allow your organization to better assess your patients' needs, inform planning and implementation of social needs interventions, and monitor intervention effectiveness and patient outcomes. [19]

Figure 4 lists the SDOH-related ICD-10-CM Z codes as of October 2023. Z codes are typically updated twice annually. You can learn more at the Centers for Disease Control and Prevention's (CDC) Comprehensive Listing ICD-10-CM Files website.

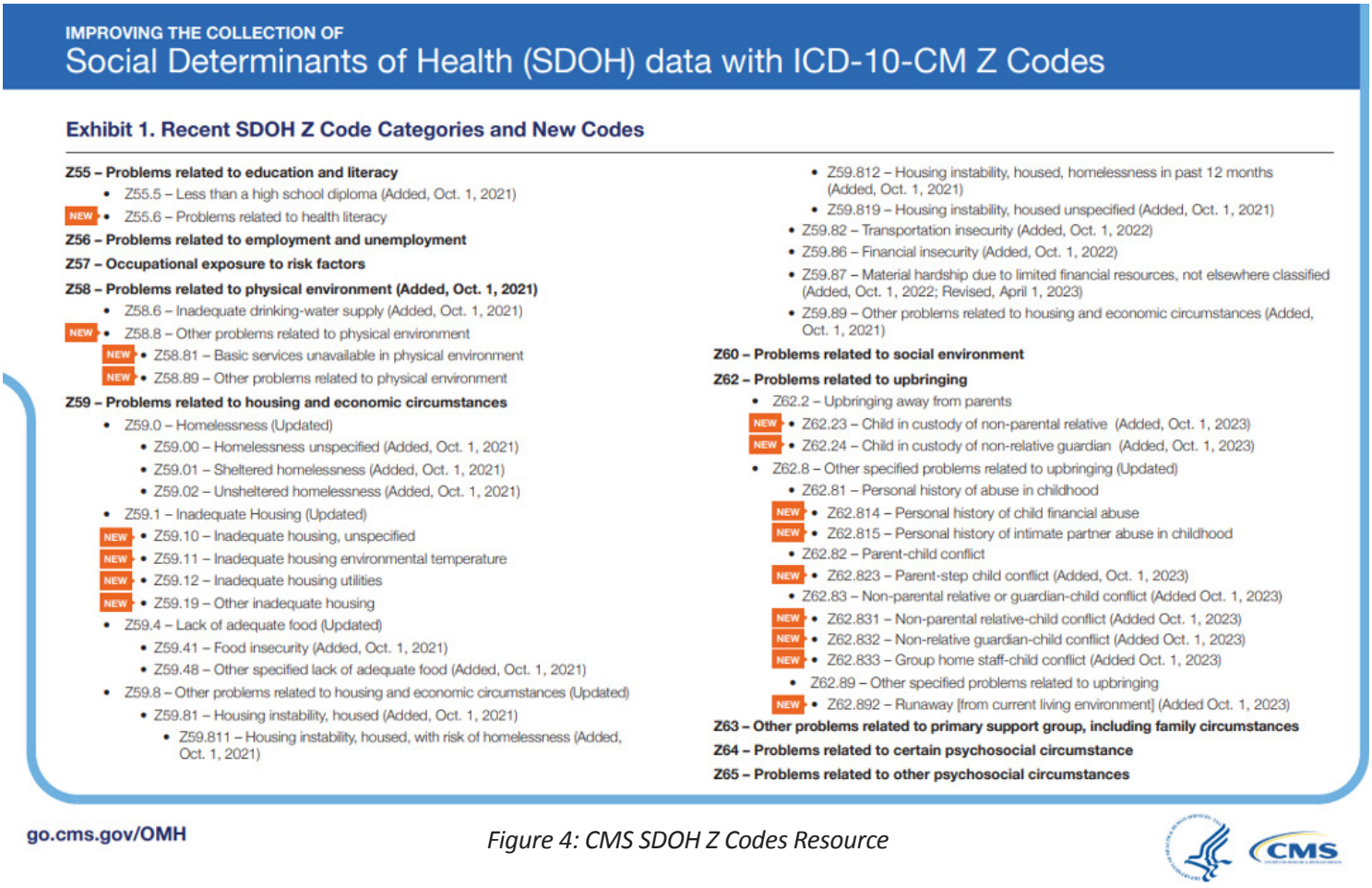

Figure 4: CMS SDOH Z Codes Resource

9. Screen Universally and at Regular Intervals

- HRSNs tend to be chronic, and patients' circumstances often change, therefore it is recommended that patients be screened at regular intervals. Moreover, there is evidence that systematic HRSN screening reinforces the patient/provider alliance and results in higher patient satisfaction scores. Consider including HRSN screening in your standardized patient sociodemographic data collection process.
- If staffing permits, implement universal HRSN screening. This eliminates staff assumptions and implicit biases about patients' susceptibility to unmet social needs. Universal screening also ensures that patients do not feel singled out and may ease their discomfort with the process if it is communicated that all patients are screened.

10. Leverage HRSN Data

- Consider reviewing aggregate HRSN data across patient populations on a regular basis to:
  - Understand overall trends in social needs, including reductions in unmet social needs over time among patients screened.
  - Identify at-risk populations allowing for a targeted approach to improve screening and support.
  - Reassess your organization's approach to addressing unmet social needs to meet evolving and diverse patient needs.
  - Prioritize development of new community partnerships, social services, and other resources.
- Review social needs screening data in conjunction with utilization of social needs-related resources to:
  - Understand if patients are utilizing community resources.
  - Analyze whether the utilization of community resources led to changes in HRSN screening responses.
  - Identify potential disparities in screening vs. social needs-related resource utilization.
  - Determine if the budget allotted to address unmet social needs should be adjusted.

Resources

Center for Medicare & Medicaid Services (CMS)

- Accountable Health Communities Health-Related Social Needs Screening Tool
- Accountable Health Communities Model Website

National Association of Community Health Centers®

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

The Physicians' Foundation

- Take 5 Conversation Starter

IPRO

- Social Determinants of Health: A Guide for Getting Started
- Screening for Social Drivers of Health
- IPRO Health-Related Social Needs (HRSN) Affinity Group Resource
- IPRO HRSN Resources (align with the CMS Social Drivers of Health)
  - Interpersonal Safety: A Guide to Screening and Connecting Patients to Support Services
  - Energy/Utility Insecurity: A Guide to Screening and Connecting Patients to Support Services
  - Food Insecurity: A Guide to Screening and Connecting Patients to Support Services
  - Transportation Barriers: A Guide to Screening and Connecting Patients to Support Services
  - Housing Insecurity: A Guide to Screening and Connecting Patients to Support Services

Please refer to the IPRO Resource Library for additional health equity and social determinants of health resources.

Appendix A

Staff Screening Challenges
• Discomfort or lack of confidence discussing social needs with patients. • Time required to appropriately and responsibly screen for and discuss social needs with patients. • Lack of a standardized process to screen patients and track referrals for those who screen positive. • Inability to address patients' social needs. • Limited knowledge of available resources and/or lack of available resources. • Insufficient training on how to properly screen for and discuss HRSNs with patients.

Screening Challenge	Best Practices
Staff discomfort	• Train staff on motivational interviewing and cultural sensitivity. • Educate on the importance of collecting HRSN data. • Share patient success stories.
Time required	• Integrate screening into workflows: before, during, or after a clinical visit. • Encourage use of multiple modalities by phone, in-person or via telehealth.
Lack of standardized process	• Select evidence-based screening tools, such as PRAPARE and AHC HRSN. • Conduct Z-Code training and designate staff for data entry.
Inadequate IT infrastructure	• Select platform with a central database that tracks referrals to community-based organizations.
Inability to address the need	• Engage social workers, case managers, and community health workers.
Lack of knowledge about resources	• Collaborate with community-based organizations to identify available resources and educate staff.

Patient Screening Challenges

- Shame or embarrassment.
- Concerns about how the information will be used and potential consequences of screening positive for a social need.
- Stigma and bias from others and/or the community.
- Unequal power dynamic between the patient and the provider, creating a 'paternalistic' environment.
- Systemic racism and discrimination in the healthcare system.
- Discomfort sharing struggles or needs due to social and cultural beliefs.

Addressing Patient Reluctance

- If the patient is reluctant, listen and learn from them to understand their concerns.
- Provide training and hire appropriate staff.
- Train staff on empathic and motivational interview approaches, racial inequity, cultural competence, trauma-informed care.
- Consider using community health workers from patients' communities. Research suggests that use of community health workers or other trained members of the community to screen for HRSNs can reduce patient reluctance as these staff are more likely to understand and relate to the patients' experiences and environment.
- Engage patient communities.
- Understand social and cultural differences, potential stigma, and bias around screening.
- Create a safe space.
- Concerns about privacy or confidentiality of screening results should be discussed with patients and the process for screening and access to results be made transparent.
- Plan to offer screenings and follow up discussions in multiple modes such as over the phone or virtually if the patient is not comfortable discussing in person.

Appendix B

CMS Accountable Health Communities (AHC) Demonstration Model

This table outlines promising practices and key insights from the AHC model that may be useful for organizations that plan to use the ACH HRSN screening tool, or are interested in learning about promising practices related to HRSN screening generally.

CMS AHC Promising Practices & Key Insights		
Population	**Screening-Related Challenges**	**Strategies**
Patients with behavioral health needs	Patients may lack trust in the staff, providers, or health care system; it may take longer to screen them.	• Train staff on communication strategies (for example, active listening and trauma-informed care) and draw on partnerships with peer supports, behavioral health providers, and community services to build trust and rapport with patients. • Ensure staff are prepared to spend extra time assisting patients with behavioral health needs.
Elderly patients	Patients may refuse screening because of stigma, fear of losing independence, or privacy concerns.	• Train screeners on using empathic inquiry and active listening techniques to engage elderly patients. • Enlist student or elderly volunteers who may be able to spend more time with patients.
Patients with disabilities	Staff may have unconscious biases or make assumptions based on patients' ability.	• Enlist the expertise of diversity and inclusion committees to train staff on respectfully engaging patients with disabilities. • Ensure that staff allow extra time to accommodate visual, hearing, or cognitive impairments.
Patients with low literacy	Patients needing assistance may not feel comfortable asking for it.	• Train staff on how to identify patients with low literacy and offer assistance by reading questions.
Patients from racial or ethnic groups that differ from staff	Staff may have unconscious biases or make assumptions based on patients' physical appearance or race/ethnicity.	• Enlist the expertise of diversity and inclusion committees to help staff recognize cultural differences, biases, and assumptions, as well as promote cultural sensitivity.
Non-English speakers	The AHC screening tool is publicly available in English, Spanish, Portuguese, Arabic, Chinese, Japanese, Korean, Vietnamese, Tagalog, German, and Ilocano. Note: the non-English translations were made using the multiuse version of the screening tool.	• Translate the AHC HRSN Screening Tool and any related materials to languages commonly spoken in the community. When developing translations, engage a native speaker in the process to ensure quality and be sure to consider the dialect. • Hire bilingual screeners who represent common languages in the population served and use telephonic interpreting services.
Sexual and gender minorities (SGM)	Patients may not feel accepted at the screening site.	• Promote an inclusive and welcoming culture, train staff on SGM needs and hold staff accountable for creating a safe space. • Use signs, stickers, or flags to signal that the site is SGM friendly. • Note that the proxy and multiuse versions of the AHC HRSN Screening Tool include gender-neutral and inclusive language.

Information about the CMS Accountable Health Communities Model (ACH) Health-Related Social Needs (HRSN) Screening Tool

- The CMS AHC Health-Related Social Needs screening assessment is a 10-item, validated screening tool with 16 supplemental questions. The 10 questions cover these five domains: living situation, food, transportation, utilities, and safety. The 16 supplemental questions cover financial strain, employment, family and community support, education, physical activity, substance use, mental health, and disabilities.
- The assessment can be used by individual respondents to answer the questions themselves. A best practice is for patients or caregivers to self-report sociodemographic data. The AHC tool has also been tested by providers as part of the clinical workflow to screen individuals of different ages, backgrounds and in a variety of settings.
- The AHC screening tool has been tested as part of the CMS Innovation Centers' Accountable Health Communities demonstration model to test whether connecting patients to community resources to address unmet social needs can improve health outcomes and reduce healthcare costs. The model's five-year period of performance concluded in April 2022. The second AHC evaluation report was released in May 2023.

To learn more, including key findings of the demonstration model, please access the report and other model information using these links:

- Results from Accountable Health Communities Model Webinar: https://www.youtube.com/watch?v=QI7CjtSWnSo
- AHC Second Evaluation Report: https://www.cms.gov/priorities/innovation/data-and-reports/2023/ahc-second-eval-rpt

References

1. Healthy People 2030, U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Accessed May 18, 2024. https://health.gov/healthypeople/objectives-and-data/social-determinants-health

2. Whitman A, De Lew N, Chappel A, Aysola V, Zuckerman R, Sommers BD. U.S. Department of Health and Human Services. Addressing Social Determinants of Health: Examples of Successful Evidence-Based Strategies and Current Federal Efforts. 2022. Accessed May 8, 2024. https://aspe.hhs.gov/sites/default/files/documents/e2b650cd64cf84aae8ff0fae7474af82/SDOH-Evidence-Review.pdf

3. Centers for Disease Control and Prevention. Why Is Addressing Social Determinants of Health Important for CDC and Public Health? Updated December 2, 2022. Accessed May 18, 2024. https://www.cdc.gov/about/priorities/why-is-addressing-sdoh-important.html?CDC_AAref_Val=https://www.cdc.gov/about/sdoh/addressing-sdoh.html

4. Ohri-Vachaspati P, DeWeese RS, Acciai F, DeLia D, Tulloch D, Tong D, Lorts C, Yedidia M. Healthy Food Access in Low-Income High-Minority Communities: A Longitudinal Assessment-2009-2017. Int J Environ Res Public Health. 2019 Jul 3;16(13):2354. doi: 10.3390/ijerph16132354. PMID: 31277250; PMCID: PMC6650883.

5. Ariella K-L Spitzer, Marisa P R Shenk, James G Mabli. Food Insecurity is Directly Associated with the Use of Health Services for Adverse Health Events among Older Adults. *The Journal of Nutrition*, Volume 150, Issue 12, 2020. Pages 3152-3160, ISSN 0022-3166 https://doi.org/10.1093/jn/nxaa286.

6. Deepak Palakshappa, Arvin Garg, Alon Peltz, Charlene A. Wong, Rushina Cholera, Seth A. Berkowitz. Food Insecurity Was Associated With Greater Family Health Care Expenditures In The US, 2016–17. Health Affairs 2023 42:1, 44-52.

7. Coughlin SS, Vernon M, Hatzigeorgiou C, George V. Health Literacy, Social Determinants of Health, and Disease Prevention and Control. J Environ Health Sci. 2020;6(1):3061. Epub 2020 Dec 16. PMID: 33604453; PMCID: PMC7889072.

8. Wolfe MK, McDonald NC, Holmes GM. Transportation Barriers to Health Care in the United States: Findings From the National Health Interview Survey, 1997-2017. Am J Public Health. 2020 Jun;110(6):815-822. doi: 10.2105/AJPH.2020.305579. Epub 2020 Apr 16. PMID: 32298170; PMCID: PMC7204444.

9. Social Isolation And Health, Health Affairs Health Policy Brief, June 21, 2020. DOI: 10.1377/hpb20200622.253235

10. Eric C. Schneider et al., Mirror, Mirror 2021 — Reflecting Poorly: Health Care in the U.S. Compared to Other High-Income Countries (Commonwealth Fund, Aug. 2021). https://doi.org/10.26099/01dv-h208

11. Smith, Riley MD; Piggott, Cleveland MD.
Does screening for social determinants of health improve patient outcomes?.
Evidence-Based Practice 24(6):p 1, June 2021. | DOI: 10.1097/EBP.0000000000000869

12. Viswanathan M., Kennedy S., Eder M., et al.
Social Needs Interventions to Improve Health Outcomes: Review and Evidence Map. Patient-Centered Outcomes Research Institute; August 2021. Prepared by RTI under Contract No. IDIQ-TO#13-RTI-EVIDENCEMAPAMPTESP and Contract No. MSA-MDB-ENG-05-26-2020.

13. Centers for Medicare & Medicaid Services. Health Equity. Accessed May 18, 2024.
https://www.cms.gov/pillar/health-equity

14. Centers for Medicare & Medicaid Services. CMS Strategic Plan. Accessed May 18, 2024.
https://www.cms.gov/about-cms/what-we-do/cms-strategic-plan

15. Centers for Medicare & Medicaid Services. Framework for Health Equity 2022 – 2023. Accessed May 18, 2024.
https://www.cms.gov/files/document/cms-framework-health-equity-2022.pdf

16. "When Talking About Social Determinants, Precision Matters," Health Affairs Blog, October 29, 2019. DOI: 10.1377/hblog20191025.776011

17. Alderwick, H and Gottlieb, LM (2019), Meanings and Misunderstandings: A Social Determinants of Health Lexicon for Health Care Systems. The Milbank Quarterly, 97: 407 419. https://doi.org/10.1111/1468-0009.12390

18. Institute for Healthcare Improvement. Plan-Do-Study-Act (PDSA) Worksheet. Accessed January 23, 2024.
https://www.ihi.org/resources/tools/plan-do-study-act-pdsa-worksheet

19. Centers for Medicare & Medicaid Services. Office of Minority Health. Improving the Collection of Social Determinants of Health (SDOH) Data with ICD-10-CM Z Codes. Accessed January 23, 2024.
https://www.cms.gov/files/document/cms-2023-omh-z-code-resource.pdf

20. Webb J. Social aspects of chronic transfusions: addressing social determinants of health, health literacy, and quality of life. Hematology Am Soc Hematol Educ Program. 2020 Dec 4;2020(1):175-183. doi: 10.1182/hematology.2020000104. PMID: 33275666; PMCID: PMC7727521. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7727521

21. Nohria R, Xiao N, Guardado R, Drainoni ML, Smith C, Nokes K, Byhoff E. Implementing Health Related Social Needs Screening in an Outpatient Clinic. J Prim Care Community Health. 2022 Jan-Dec;13:21501319221118809. doi: 10.1177/21501319221118809. PMID: 35978539; PMCID: PMC9393584.

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