SDOH and Health IT

NASDOH
NATIONAL ALLIANCE TO IMPACT THE SOCIAL DETERMINANTS OF HEALTH

What is SDOH Data?

"SDOH data" includes individual-level demographic data such as race, gender identity, immigration status, and income; however, it also captures external drivers of health such as housing security, environmental conditions, access to broadband Internet, and community-level educational attainment. Various health care entities, such as providers, insurers, health systems, and public health organizations gather data on these factors at the individual level. Collectively, this "SDOH data" captured throughout the health care system has the potential to form a valuable dataset for analysis.

The sharing and analysis of SDOH data serves several purposes for health care entities by providing key insights into population-level health needs in the communities they serve.

Robust SDOH data is a game-changing tool for identifying and targeting drivers of poor health outcomes at the community or population level. However, when this data is not gathered in a consistent format, smaller datasets from different sources cannot be merged into a larger – and more useful – dataset. It is vital that this data is standardized to make it usable in population-level analyses.

For health care entities using electronic health records (EHRs), data standards like the United States Core Data for Interoperability (USCDI) can be incorporated into the EHR to ensure compatibility between multiple datasets. For entities that do not use EHRs, such as a food bank or a housing assistance organization, "the use of standardized, structured SDOH data aligned with non-proprietary, national data standards can support broader integration opportunities with health care systems and community settings."[1] For example…

Payers can use SDOH data to keep health care costs down by identifying and addressing a community's health-related social needs to prevent downstream need for medical care.

Medical researchers can use SDOH data to better understand the non-medical factors that are associated with the development of disease.

Providers can use SDOH data to implement social prescribing plans – where medical providers use clinical interactions to "prescribe" social services provided by community-based organizations (CBOs).

CBOs providing social services can use SDOH data to receive and make referrals, make decisions on eligibility, and interact with physicians as part of a social prescribing plan.

Efforts to Standardize SDOH Data

There are few widely adopted standardized methods for organizing and sharing SDOH information. Instead, individual organizations have adopted a wide array of data collection methods that work for each organization individually but limit the ability for data to be communicated across organizations and technologies. SDOH data, like other health care data, must be captured in a consistent and structured way

[1] https://www.healthit.gov/health-equity/social-determinants-health

for it to be effectively used for clinical and policy improvement, as well as for Medicaid reimbursement. Below is a list of current data standards used in health care that aim to standardize SDOH data.

Standard	Description	Impact on SDOH
United States Core Data for Interoperability (USCDI)	USCDI is a set of standardized data elements used in the U.S. that contains different data elements designed to exchange data between stakeholders in the health care space. USCDI is updated through versions, where stakeholders consider comments and proposed data elements.	The USCDI is a required standard in the ONC Health IT Certification Program. The baseline version of the USCDI was updated to Version 3 in January 2024 through the HTI-1 Final Rule. After January 1, 2026, only USCDI v3 will be available in the Certification Program. USCDI v3 incorporates several SDOH data elements such as SDOH Assessment, SDOH Goals, SDOH Problems/Health Concerns, and SDOH Interventions. As part of its evolution, USCDI has started to incorporate social determinants of health data, recognizing the importance of integrating these non-clinical factors into health care. In recent years, SDOH data elements have been added, including sexual orientation, gender identity, and SDOH goals. USCDI's structured format ensures SDOH data can be exchanged between health care systems, enabling a holistic approach to patient care.
Health Level 7 International® (HL7®) Standards	HL7 is a set of international standards for the exchange, integration, sharing, and retrieval of electronic health information.	HL7 supports the interoperability of SDOH data by providing frameworks for how data should be structured and shared. The HL7 SDOH Implementation Guide helps to map social determinants into electronic health records (EHRs), ensuring seamless communication between systems.
Fast Healthcare Interoperability Resources® (FHIR®)	FHIR is an interoperability standard developed by HL7 designed to enable the exchange of health care information across different systems.	FHIR allows for the exchange of specific health-related data elements, including SDOH data, in a standardized way that different systems can interpret. The **FHIR SDOH Clinical Care Implementation Guide** offers a framework for incorporating SDOH data into health care workflows and EHR systems, ensuring that health care providers and community services can collaborate more effectively. Because the FHIR standard is open-sourced and non-proprietary, it has become a preferred vehicle for data exchange across many domains. ASTP/ONC has mandated the use of FHIR for several data exchange purposes across health care, including areas of social need because of its modularity and relative ease of implementation.

HL7 and USCDI are standards for the content of the data being exchanged. FHIR serves as a standard focused on the technical aspects of health care data exchange. Data that is HL7 or USCDI compliant can be exchanged using FHIR.

Resources and Initiatives Related to SDOH Data Interoperability

Additional resources and regulations have been developed by both the public and private sectors to promote the collection and standardization of SDOH data in health care settings. The below is a list of some of the most frequently referenced resources, collaborations, and initiatives working to achieve data standardization and interoperability.

Program	Description	Impact on SDOH
ONC SDOH Information Exchange Learning Forum	This initiative, led by the Office of the National Coordinator (ONC), aims to promote the sharing of best practices and strategies for integrating SDOH data into health care systems. The Learning Forum brings together stakeholders to address interoperability challenges, explore technical standards, and discuss the role of data sharing in reducing health inequities.	This project is central to developing **practical approaches** for SDOH data exchange across sectors, such as health care providers and community-based organizations (CBOs). It emphasizes the importance of FHIR-based frameworks and other national standards that support seamless data integration.
360x	360x is an ONC project dedicated to advancing data standardization and transparency in health care. One of their recent projects was developing a series of **SDOH referral workflows** that involve EHRs, with the primary goal to make adoption of the workflows easy by utilizing commonly adopted technologies	360X is currently developing a **use case for SDOH referrals from a clinician/provider organization to a CBO or to an SDOH Referral Hub for distribution to a CBO**. The goal of this project is to develop a closed loop referral system for SDOH referrals with a low development bar that allows for immediate adoption.
The Gravity Project	Led by HL7, the Gravity Project focuses on developing data standards for capturing and sharing SDOH data using FHIR. It aims to create consensus on how SDOH-related data should be structured, ensuring compatibility across different systems. The initiative is focused on assessment and diagnosis, interventions, and goals of the treatment or intervention.	This project is pivotal for creating the standardized tools necessary for capturing social determinants data, such as housing or food insecurity, and making that data actionable in clinical and social care settings. The Gravity Project has also launched several pilots to explore previously developed standards in the real world.
CMS Interoperability and Patient Access Final Rule	CMS mandates that health care organizations provide patients access to their health data, including information related to SDOH, through standardized APIs that use FHIR.	This rule pushes forward the adoption of FHIR-based technologies that will facilitate the exchange of SDOH data between health care providers and other stakeholders, empowering patients and improving care coordination.
Interoperability Standards Advisory (ISA)	The ISA provides guidance from the Office of the National Coordinator for Health Information Technology (ONC) on standards and specifications for health care data interoperability.	The ISA outlines recommended standards for SDOH data exchange, encouraging the adoption of FHIR and other protocols to support the integration of social factors into health records.
Sync for Social Needs	The Sync for Social Needs coalition is a group of health technology companies and health systems working to standardize the sharing of patient data on SDOH, including food insecurity. Participants committed to working on developing consensus on standards and piloting testing of an HL7 FHIR-based approach for the collection and	The initiative will test HL7 FHIR applications that incorporate the Regenstrief Institute's LOINC FHIR Questionnaire representing the CMS AHC Tool and can provide a completed and scored assessment to any health IT systems supporting the SDOH functionality of the FHIR US Core Implementation Guide.

	sharing of social needs screening results to meet CMS program requirements.	

SDOH Screening & SDOH Data

Systematic assessment of individuals' social determinant risk status is an area of active development. A holistic understanding of a person's needs is integral to identifying the presence of social factors or conditions, such as food insecurity, that can have a significant impact on health outcomes. Clinical identification of social factors that relate to health risk is an essential step toward improving health.

In recent years, efforts have been made by both the public and private sectors to encourage health care providers to incorporate SDOH screening and data collection into their operations through quality measures.

In 2022, the Centers for Medicare and Medicaid Services (CMS) issued rules requiring health-related social need screening in CMS quality programs. CMS added screening-related measures to several quality programs in the CY 2023 Medicare payment rules, including the Merit-based Incentive Payment System (MIPS) measure set for hospitals. The screening rules require hospitals to report on two separate measures: What proportion of patients admitted to the hospital were screened for the five domains of SDOH, and the proportion of screened patients who screened positive for any of the five domains of SDOH. The five domains detailed in the rules are food insecurity, housing instability, transportation needs, utility difficulties, and interpersonal safety.

At the same time, the National Committee for Quality Assurance (NCQA) developed a new "Social Need Screening and Intervention" (SNS) measure within the Healthcare Effectiveness Data and Information Set (HEDIS). The HEDIS SNS measure, rolled out for use in 2023, uses data from health plans reported through NCQA's Electronic Clinical Data Systems (ECDS) to analyze six indicators. The six indicators record information for both screening and intervention across three social needs: food, housing, and transportation. The HEDIS SNS measure was designed to align with Gravity Project data elements.

Gaps to be Addressed

Despite progress, several gaps remain in integrating SDOH data into health care. A report titled *HHS Strategic Approach to Addressing Social Determinations of Health: Agency Program, Activity, and Policy Highlights* was released in October 2024. Goal One of the report focuses on enhancing data infrastructure to support the collection, sharing and use of SDOH data across various sectors. It highlights the importance of expanding data sources beyond health care to include housing, education, and food security organizations, and stresses the need for standardized frameworks to facilitate seamless data exchange. The report also addresses existing gaps in data sharing, particularly the lack of unified technical standards for non-health care entities and calls for coordinated federal efforts to implement interoperable systems. The report also emphasizes privacy concerns, highlighting the need for secure, linked data that protects individual consent. The report advocates for a data ecosystem that integrates SDOH data into electronic health records (EHRs) and other health IT systems, ensuring that this critical information is accessible and actionable for improving public health and reducing disparities.

Additional gaps in integrating SDOH data include:

- **Lack of Standardization**: While frameworks like USCDI and FHIR support the integration of SDOH data, many non-health care entities such as food banks or housing services lack the resources or technical infrastructure to adopt these standards.

- **Data Sharing Across Sectors**: Bridging the gap between health care providers and community-based organizations remains a challenge, as different sectors often use incompatible systems for data management. This limits the ability to share vital SDOH data across platforms and sectors.
- **Privacy and Consent**: Ensuring that SDOH data, which may be sensitive, is shared securely and with appropriate consent is a growing concern, especially as interoperability efforts scale.

By addressing these challenges through standardized frameworks and policies, stakeholders can better harness the power of SDOH data to improve health outcomes at both the individual and population levels.