



Social Determinants of Health

Health disparities due to social determinants of health (SDOH) factors such as income instability, access to transportation, neighborhood safety, and housing status can lead to reduced quality of care and higher health care costs. Understanding the impact of SDOH factors on medication use and health outcomes can help managed care develop interventions to address these inequities for health plan members.

CALL TO ACTION

- ❑ Develop comprehensive standards for SDOH data collection to capture members' social risk needs.
- ❑ Collect SDOH data at all member contact points, including annual health screenings.
- ❑ Educate and incentivize providers to collect and report social needs using z-codes.
- ❑ Ensure the infrastructure is in place for interoperability of data transfer.
- ❑ Stratify medication use and quality measures by SDOH to identify gaps in care.



WHY THIS MATTERS


Incomplete SDOH data can lead to missed opportunities to address the underlying cause of medication non-adherence, inadequate disease management, and poor health status. Collecting, analyzing, and utilizing SDOH data can help health plans understand their members' unique needs, develop targeted initiatives, and customize interventions.

Among U.S. adults prescribed medications,

11% 


DID NOT fill a prescription due to high cost.¹

Among U.S. adults,

1.8% 

cited **transportation as a barrier**
for a delay in medical care.²

Among U.S. adults,

10% 

SKIPPED medication doses to save money.³

Existing Standards

There are no mandates or standards to collect SDOH data, but SDOH factors can be located through the International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) diagnosis codes and be augmented with community data such as the U.S. census.⁴ For Medicare fee-for-service claims, a subset of ICD-10-CM codes, “Z-codes,” collect SDOH data. Z-codes identify members with socioeconomic and/or psychosocial circumstances, such as food insecurity and lack of social support, which may affect their health.⁵

Organizations that have published recommendations, developed models, standards, and resources for SDOH include the Gravity Project, American Medical Association Integrated Health Model Initiative, and Office of the National Coordinator for Health IT.^{6, 7, 8}

Z-Codes^{16, 17}

SDOH are the conditions in the environment where people are born, live, learn, play, work, and worship. SDOH-related Z-codes range from Z55-65 which are the ICD-10 CM encounter reason codes used to document SDOH data. Some examples of these are housing, transportation, and food insecurity.¹⁶

Among the **33.1 million** continuously enrolled Medicare FFS beneficiaries in **2019, 1.59%** had claims with z-codes, as compared to **1.31%** in **2016**. Of the Z-codes listed the top five were Z-59, Z-60, Z-63. Beneficiaries in rural areas were overrepresented (**39.7%**) among those with a **Z59.3** (*problems related to living in a residential institution claim*). **Male beneficiaries** who accounted for **45.4% of the overall FFS population** represented **67.1%** of those with a **Z59.0** (*homelessness claim*). **Black and Hispanic beneficiaries** accounted for **8.8% and 5.9% of the overall FFS population**, respectively, but represented **24.8% and 9.2%** of those with a **Z59.0** (*homelessness claim*).⁵ Subcategories of Z-Codes listed in Figure 1 are depicted in Figure 2.

Figure 1

Z-code categories include:

- 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.⁵



Figure 2

Reporting Prevalence of ICD-10 Z-Codes in a non-Medicare Adult Patient Population (2021)

ICD-10 Code	Description	% of All Patients	% of Commercial Patients	% of Medicaid Patients	Unique Patients (N=39.5M)
Z63.X	Other problems related to primary support group, including family circumstances	0.45%	0.37%	0.61%	176,885
Z59.X	Problems related to housing and economic circumstances	0.37%	0.08%	0.94%	144,042
Z56.X	Problems related to employment and unemployment	0.27%	0.14%	0.51%	104,956
Z65.X	Problems related to other psychosocial circumstances	0.17%	0.06%	0.37%	65,307
Z62.X	Problems related to upbringing	0.16%	0.08%	0.32%	63,315
Z60.X	Problems related to social environment	0.11%	0.07%	0.21%	44,784
Z64.X	Problems related to certain psychosocial circumstances	0.07%	0.02%	0.17%	28,525
Z55.X	Problems related to education and literacy	0.04%	0.02%	0.08%	14,657
Z57.X	Occupational exposure to risk factors	0.03%	0.03%	0.02%	10,299



SDOH Data Sources Used by Health Plans

SDOH data is commonly collected through medical claims data and health plan enrollment. It may be collected in case management programs, health risk assessments, social needs assessments, patient experience surveys, and limited transfer of clinical data from providers or health information exchanges.^{4,10}

SDOH data can be augmented with U.S. census data, national surveys (e.g., American Community Survey), public Centers for Medicare & Medicaid Services data, and other federal agencies' surveys (e.g., Department of Education's National Center for Education Statistics and Department of Transportation's Bureau of Transportation Statistics).^{4,10}

Some plans augment data with information they purchase from commercial vendors.¹⁰

Challenges and Opportunities Related to SDOH Data



CHALLENGE

There is a lack of standardization in the collection and analysis of SDOH data.^{10,11}



OPPORTUNITIES

- Develop a centralized repository of open-source assessment tools and social screening platforms.^{10,11}
- Use existing resources (e.g., Gravity Project and AHRQ) and standards (e.g., NCQA) when developing SDOH collection requirements and analysis.^{10,11,12}



CHALLENGE

Data collected may not be easily accessible throughout the health care system due to infrastructure challenges.^{10,11}



OPPORTUNITIES

- Create standard questions for SDOH collection to increase the structured collection within the EHR (e.g., standard clinical notes).
- Contract with organizations that collect and aggregate SDOH data (e.g., geographic and neighborhood data) and share those data.
- Ensure interoperability between systems.^{10,11}



CHALLENGE

Provider participation in Z-code collection and reporting is low due to a lack of knowledge, time, or structural challenges.^{10,11}



OPPORTUNITIES

- Educate providers on the importance of collecting and reporting SDOH data through current standards (e.g., Z-codes and HCPCS codes).^{10,11}
- Incentivize providers to screen patients and collect/report meaningful data on patients that go beyond their medical needs.^{10,11}

What Managed Care Pharmacy is Doing



CareFirst BCBS is partnering with Live Chair Health to start a pilot for Medicaid members in Maryland. This program will provide education on benefits, provider selection, and schedule appointments for their members in underserved communities. Additionally, they will work with the CareFirst case management team to provide resources to close the SDOH health gaps identified through these interactions.¹³



Commonwealth Care Alliance has a Medicare Premier PPO that combines comprehensive medical, dental, and prescription drug benefits with a care management program that addresses social factors that negatively impact health. Among benefits, the plan offers 40 one-way medical and non-medical rides per year, an allowance that can be used to purchase food, a yearly sneaker allowance, and coverage for an in-home support team to help with housekeeping, medication pickup, grocery shopping, and technology guidance.¹⁴



Humana is collecting and incorporating three types of health-related social needs data to close the SDOH gaps for their members. They use self-reported, derived, and inferred data. The self-reported data is collected using a validated assessment tool. The derived data is obtained through predictive modeling and natural language processing. The inferred data comes from community-level data collected from government agencies. This data is then standardized to identify the health care needs of their members.¹⁵



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