Standards on Social Determinants of Health

Over the last decades growing literature has clarified and further identified the social determinates of health and the impact on health costs. This has sparked initiation and dissemination of national recommendations and projects. Advances have been made to collectively gain insight into social risks and social interventions; yet the terminology used to represent these concepts lags behind.

In 2017, national experts and thought leaders gathered in Washington, D.C. and identified a three step process to address terminology needs: collate existing terminology, assess the applicability of existing terms and collaboratively fill and address gaps, and craft a path for data standards to ground this work. Out of this, the Gravity Project was initiated.

The Gravity Project, convened in 2019, is a national, public, consensus-based community charged with developing data elements, and data standards for the social determinants of health by leveraging the insights of subject matter experts and key stakeholders across the medical and social care community (patients, providers, payers, community-based organizations, vendors, and government). The Project’s terminology recommendations span all U.S. applicable coding systems: ICD-10-CM, SNOMED CT, LOINC, and CPT/HCPCS when appropriate. (For review of the Gravity Project’s process, principles, members, and full deliverables, please follow the link in “resources” below.)

In order to frame its work, the Gravity Project conceptualizes concentric rings of determinants. At the center are concerns driven by a person’s own economic resources, or personal and social history. Next come risks of neighborhood resources and characteristics, including utilities, groceries, and neighborhood safety. The initial phase of Gravity’s work focused principally on the risk imparted by lack of personal resources: food insecurity, homelessness, housing instability, inadequate housing, transportation insecurity, and general financial insecurity. Concerns of less than high school education and veterans were also addressed. In early 2021, the Gravity Project will focus on social connection and domains of interpersonal violence. In later 2021, the Project will focus on elements of digital equity and neighborhood/environmental factors.

This proposal is the Gravity Project’s first ICD-10-CM code request submission. This proposal integrates the requests of two previous social risk submissions to the ICD-10-CM committee which was submitted by the American Medical Association/UnitedHealthcare (AMA/UHC) (multi-domain) and BlueCross BlueShield of Vermont (BCBS VT) (food insecurity).

The Gravity community has carefully considered the degree of risk associated with each domain, its subdomains, and calculations of domain severity (mild – severe) as presented in the peer reviewed literature. The reason for this is threefold.

• First, to aid on the ground workers in triaging resources to those most in need, anticipating the aim of analyzing the effects of interventions.
• Second, to anticipate the use of claims data to predict person-level risk within value based
health care and risk adjustment.
• Third, to align with development and dissemination of national social risk quality metrics and Healthy People 2030 Objectives.

The Gravity community and collaboration with colleagues at the American Health Information Management Association (AHIMA) and the American Hospital Association (AHA), the Gravity Project takes care to recommend revisions to the classification that are easily operationalized. All ICD-10-CM recommendations are aligned with standardized screening questions and answers such as PRAPARE, the Accountable Health Screening Tool, or the Health Leads Screening Tools.

The Gravity Project is grounded in the criticality of having codes for the missing core domains to be able to capture the data at the highest level of specificity. Additionally, work is ongoing with SNOMED CT partners to build these concepts and further subdomains into SNOMED CT terminology.

Education (Less than a high school degree)- although current ICD-10-CM contains general concepts of literacy and underachievement there is, at present no way to distinctly represent the known risk imparted by inability to attain a high school diploma or equivalent, independent of literacy.

Homelessness- although current ICD-10-CM contains a code for homelessness, there is no distinction between sheltered and unsheltered homelessness. COVID discharge planning has given us a critical use case on why this distinction is necessary from both a treatment plan and risk perspective.

Housing Instability- there is a vast literature representing the health risks of economically driven housing instability for individuals and families. Yet, there are no specific codes to define this broad risk nor the specific risk of subtypes of housing instability that segue into homelessness.

Food insecurity- as stated in the previous VT BCBS submission, the health risks and health costs associated with food insecurity are vast. Furthermore, as evidenced by the research of the USDA, risk increases as severity of food insecurity increases. Yet, there is no specific code for food insecurity.

Inadequate drinking water supply- as mentioned above, by suggesting a necessary split of Z59.4, the Gravity Project needed to address the placement of “Inadequate drinking water supply.” The Gravity Project recommends adding Z58 to ICD-10-CM in order to be the base for Inadequate drinking water supply and future neighborhood and environment domains.

Transportation Insecurity- this domain represents both health risks and management complexities as systems consider transportation barriers to care. The Gravity Project proposes an ICD-10-CM code for transportation insecurity.
Financial Insecurity and Material Hardship- Currently ICD-10-CM contains terminology for low income and poverty. However, the health risks driven by limited financial resources are not limited to low income or impoverished individuals. Financial Insecurity (“A subjective evaluation of one's current financial situation that includes perceived inadequacy of financial resources and financial concerns or worries, including expectations regarding one's future economic situation.”) and the more severe Material Hardship (“unable to obtain basic needs”) can be considered broad terms that identify all economic driven social risk. A clear outcome of Gravity’s work was the understanding that there is a need for a general concept for financial insecurity and material hardship as the health risks and management needs of each are clear in the peer-reviewed literature and excluded from the individual domains such as food insecurity, housing instability, or transportation insecurity. Furthermore, it is critical to define risk beyond low income and poverty thresholds. These two concepts also streamline the granular recommendations of the UHC/AMA submission.

Socioeconomic Risk Counseling- the need for a specific counseling code to represent the effort of assessing and patient centered goal setting required to address socioeconomic risks.

Non-compliance and financial hardship- based on existing Z91.120 Patient’s intentional underdosing of medication regimen due to financial hardship, it is recommend correlating codes within the “dietary” and “other medication treatment and regimen” roots. Use cases for these include the inability to follow diabetes nutrition recommendations (the risk of this is well documented in the peer-reviewed literature) and the rationing of office visits and orders because of underinsurance.

Veterans- There is no ICD-10-CM code to represent veteran status. The existing code Z91.82, personal history of military deployment, is often incorrectly applied (one can be a veteran and never be deployed). The need for an ICD-10-CM code to capture the data element, personal history of military service, is accentuated by dissemination of community care of Veterans through the “Veterans Choice Program.” If accepted a map from the existing SNOMED CT “Served in armed forces” concept to the new code would be possible.

Lastly, this submission is comprehensive, including new subcategories (example: Food insecurity and Housing instability) and subclassifications (example: Severe food insecurity and “Housing instability, housed, homelessness in past 12 months” respectively). This aligns with the peer-reviewed literature and reflects broad stakeholder requests

**Resources:**

**General:**

**Screening Tools:**
- Centers for Medicare & Medicaid Services, "Accountable Health Communities

Education:

Homelessness:

Housing Instability—

Food Insecurity:

Transportation Insecurity:

Financial Strain:

Material Hardship:

Veterans:
**TABULAR MODIFICATIONS**

Z55 Problems related to education and literacy

Excludes1: disorder of psychological development (F80-F89)

New code Z55.5 Less than a high school diploma
Add No general equivalence degree (GED)

New category Z58 Problems related to physical environment

Excludes2: occupational exposure (Z57.-)

New code Z58.6 Inadequate drinking-water supply
Add Lack of safe drinking water
Add Excludes2: deprivation of water (T73.1)

Z59 Problems related to housing and economic circumstances

Excludes2: problems related to upbringing (Z62.-)

New subcategory Z59.0 Homelessness

New code Z59.00 Homelessness unspecified
New code Z59.01 Sheltered homelessness
Add Doubled up
Add Living in a shelter such as: motel, temporary or transitional living situation, scattered site housing

New code Z59.02 Unsheltered homelessness
Add Residing in place not meant for human habitation such as: cars, parks, sidewalk, abandoned buildings
Add Residing on the street

Revise Z59.4 Lack of adequate food and safe drinking water
Delete Inadequate drinking water supply

Excludes1: effects of hunger (T73.0)
inappropriate diet or eating habits (Z72.4)
malnutrition (E40-E46)

New code Z59.41 Lack of adequate food
Add Inadequate food
Add Lack of food
New code Z59.42 Food insecurity

Z59.8 Other problems related to housing and economic circumstances
Foreclosure on loan
Isolated dwelling
Problems with creditors

New sub subcategory Z59.81 Housing instability, housed
Add Past due on rent or mortgage
Add Unwanted multiple moves in the last 12 months
New code Z59.811 Housing instability, housed, with risk of homelessness
Add Imminent risk of homelessness
New code Z59.812 Housing instability, housed, homelessness in past 12 months
New code Z59.819 Housing instability, housed unspecified

New code Z59.82 Transportation insecurity
Add Excessive transportation time
Add Inaccessible transportation
Add Inadequate transportation
Add Lack of transportation
Add Unaffordable transportation
Add Unreliable transportation
Add Unsafe transportation

New code Z59.86 Financial insecurity, not elsewhere classified
Add Bankruptcy
Add burdensome debt
Add Economic strain
Add Financial strain
Add Medical cost burden
Add Money problems
Add Running out of money
Add Unable to make ends meet
Add Excludes2: material hardship, not elsewhere classified (Z59.87)

New code Z59.87 Material hardship, not elsewhere classified
Add Material deprivation
Add Unable to obtain adequate clothing
Add Unable to obtain adequate utilities
Add Unable to obtain adequate childcare
Add Unable to obtain basic needs
Add Excludes2: financial insecurity, not elsewhere classified (Z59.86)

New code Z59.89 Other problems related to housing and economic circumstances
Add Isolated dwelling

Z71 Persons encountering health services for other counseling and medical advice, not elsewhere classified

Z71.8 Other specified counseling
New code Z71.87 Encounter for counseling for socioeconomic factors

Z91 Personal risk factors, not elsewhere classified
Z91.1 Patient’s noncompliance with medical treatment and regimen
New sub subcategory Z91.11 Patient’s noncompliance with dietary regimen
New code Z91.110 Patient’s noncompliance with dietary regimen due to financial hardship
New code Z91.118 Patient’s noncompliance with dietary regimen for other reason
New code Z91.119 Patient’s noncompliance with dietary regimen due to unspecified reason

New sub subcategory Z91.19 Patient’s noncompliance with other medical treatment and regimen nonadherence to medical treatment
New code Z91.190 Patient’s noncompliance with other medical treatment and regimen due to financial hardship
New code Z91.198 Patient’s noncompliance with other medical treatment and regimen for other reason
New code Z91.199 Patient’s noncompliance with other medical treatment and regimen due to unspecified reason

Z91.8 Other specified personal risk factors, not elsewhere classified
New code Z91.85 Personal history of military service
Add Excludes2: Personal history of military deployment (Z91.82)