



Addressing Social Needs: Data for Measurement

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Disclaimer

Comments reflect the speaker's opinion and do not represent the position of NCQA or other referenced organizations.

Imperative to Address Upstream Factors to Improve Outcomes

The Argument for Health Care Intervention



40 to 55% of health outcomes attributable to social determinants of health *outside* the traditional health care system

Black and Native American infant mortality rates 2x higher than White infants (Artiga, 2019)

Hispanic individuals 60% more likely to die from viral hepatitis than White individuals, despite lower rates of Hepatitis C (OMH, 2020).

Black, Native American and Native Hawaiian individuals receive worse care than White individuals on 4 out of 10 health care access measures (AHRQ, 2019).

From 2003 -2006, total cost of health inequities and premature death estimated at \$1.24 trillion (APHA, 2019)

In one Medicaid program, 43% of diabetes cost (\$225M) avoidable if racial & economic disparities addressed (Buescher, 2010)

Wide-Ranging Impact

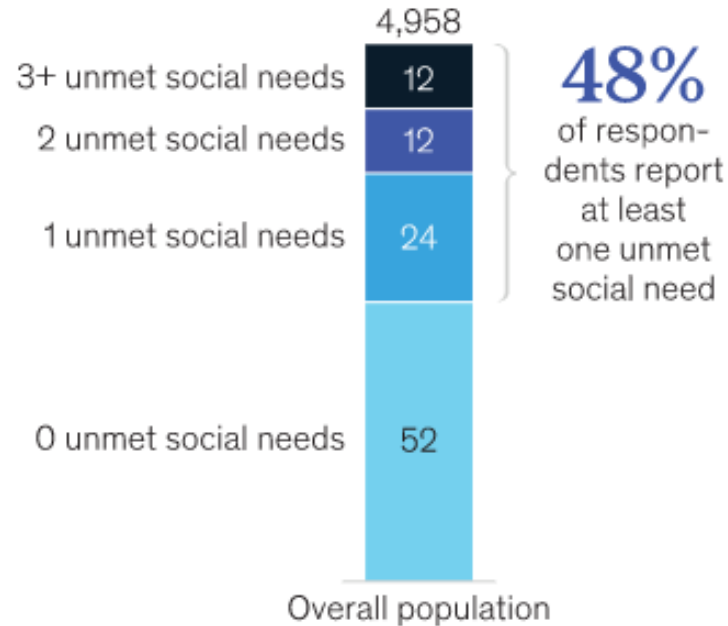
Unmet social needs broadly felt, regardless of payer type

Don't assume needs are limited to specific populations.

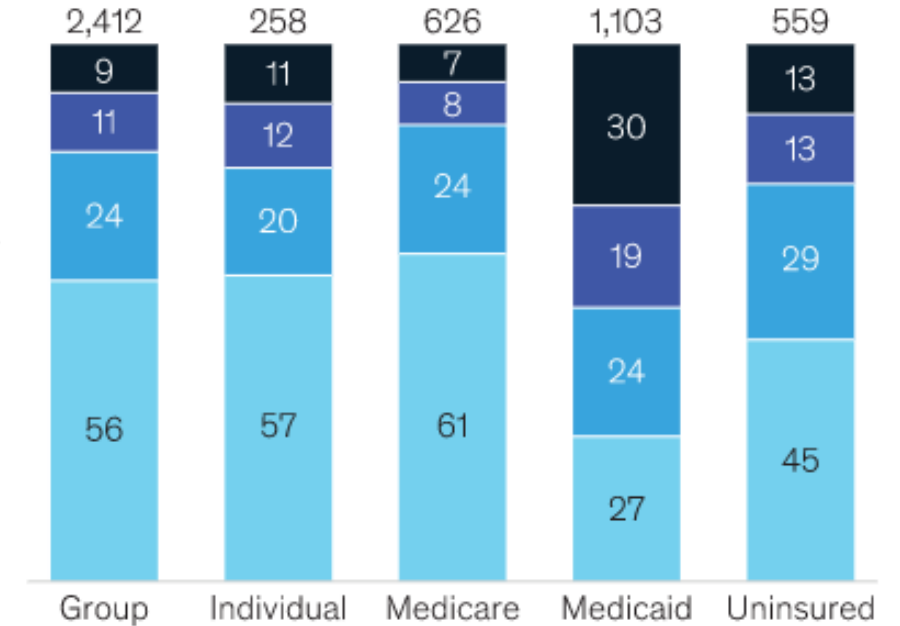
48% of overall population report unmet social needs

44% of members under group commercial insurance

Number of unmet social needs
% of individuals



Number of unmet social needs by insurance coverage
% of individuals



Source: 2019 McKinsey Consumer Health Insights Survey

Data and Intent

Intrinsically Linked

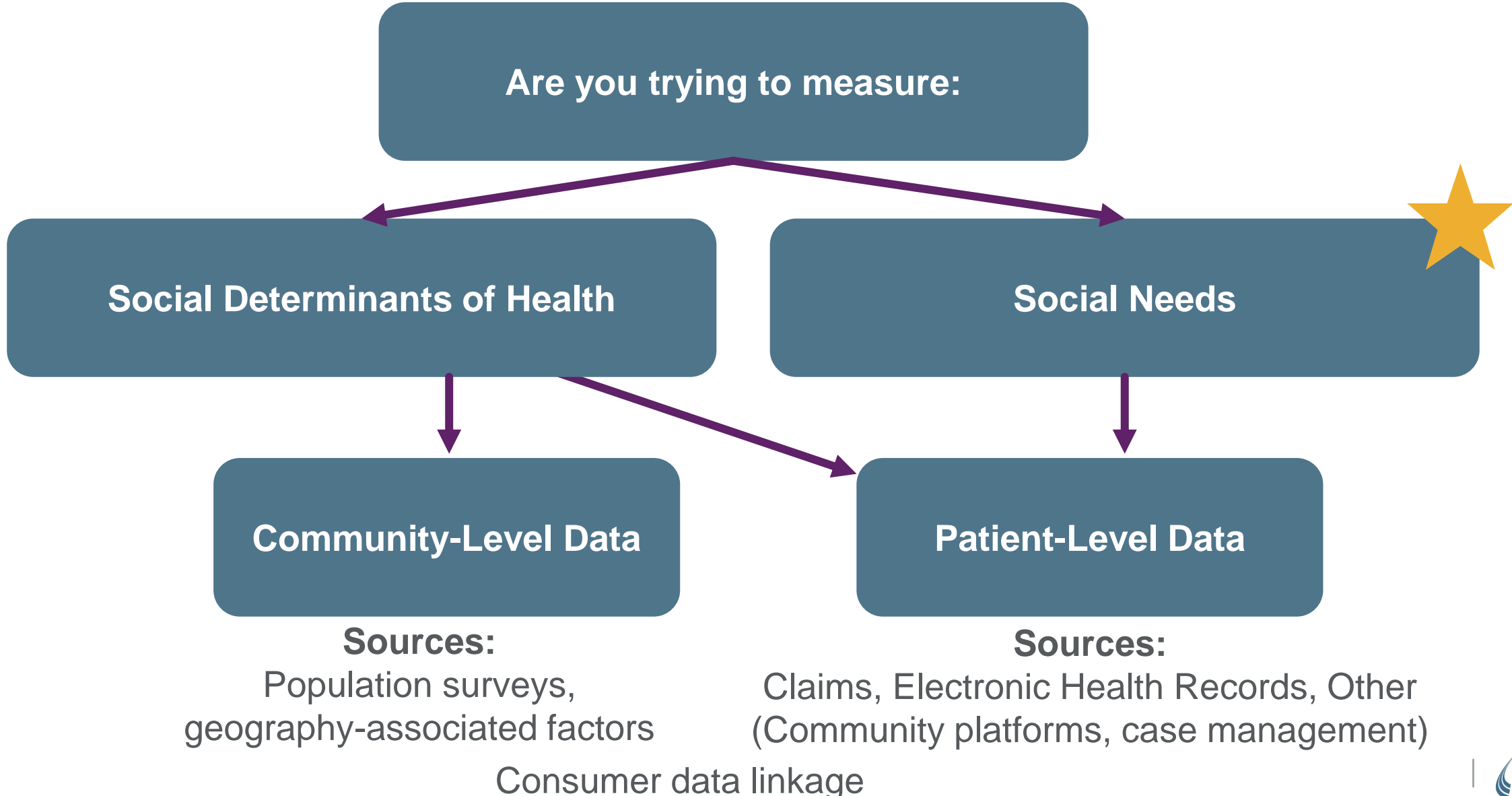
*The questions we ask
determine the data we need.*

*The data we have determine
the questions we can answer.*

*To apply the emerging analytic methods,
we need to grapple with emerging data standards*

Planning, Intervention, Outcomes and Value

Where's the Data?



Data Sources

Administrative Claims

Z-Codes: Set of ICD-10-CM codes used to report “social, economic, and environmental determinants known to affect health and health-related outcomes”

Z code	Categories
Z55	Problems related to education and literacy
Z56	Problems related to employment and unemployment
Z57	Occupational exposure to risk factors
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.

Billed on traditional claims for reimbursement. Consider...

- Inconsistent uptake
- Interpretation of presence of code unclear
- Calculate of prevalence / incidence confounded by selection
- Temporality

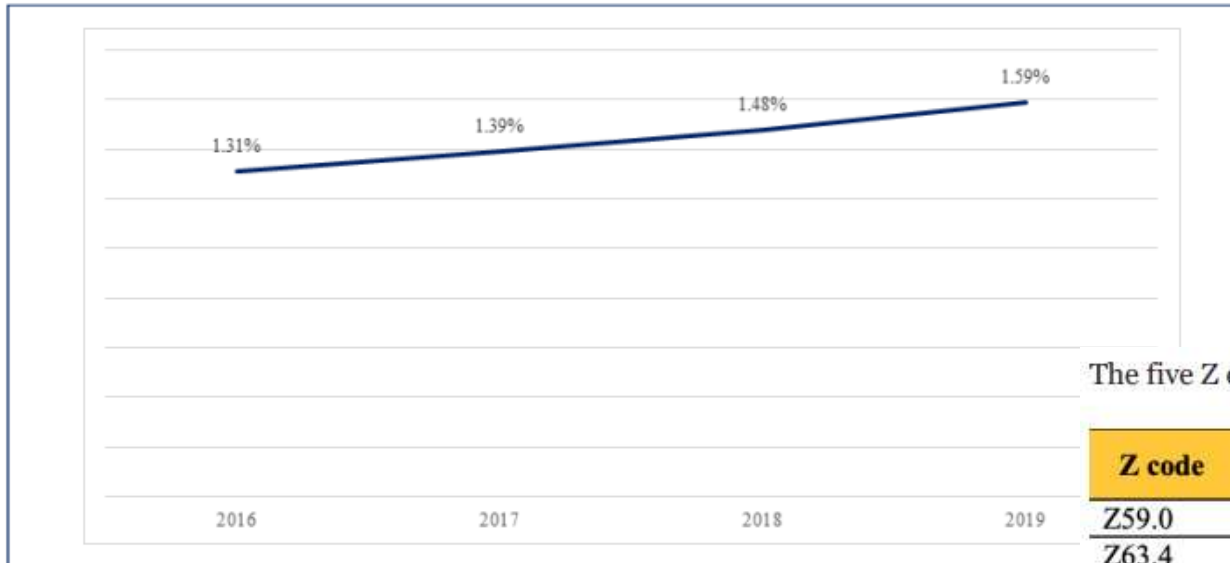
Data Sources

Z-Code Uptake

Medicare Fee For Service

- Medicare FFS Claims (2016-2019)
- As of 2019, 0.11% of all FFS claims had a Z-Code coded

Figure 2. Change in Proportion of Medicare FFS Beneficiaries with Z Code Claims, 2016 to 2019.



- Minimal increase in use of codes (0.28 ppt in 2 years)
- Traditionally underserved groups over-represented

The five Z codes that represented the largest shares of all Z code claims (N=1,262,563) in 2019 were:

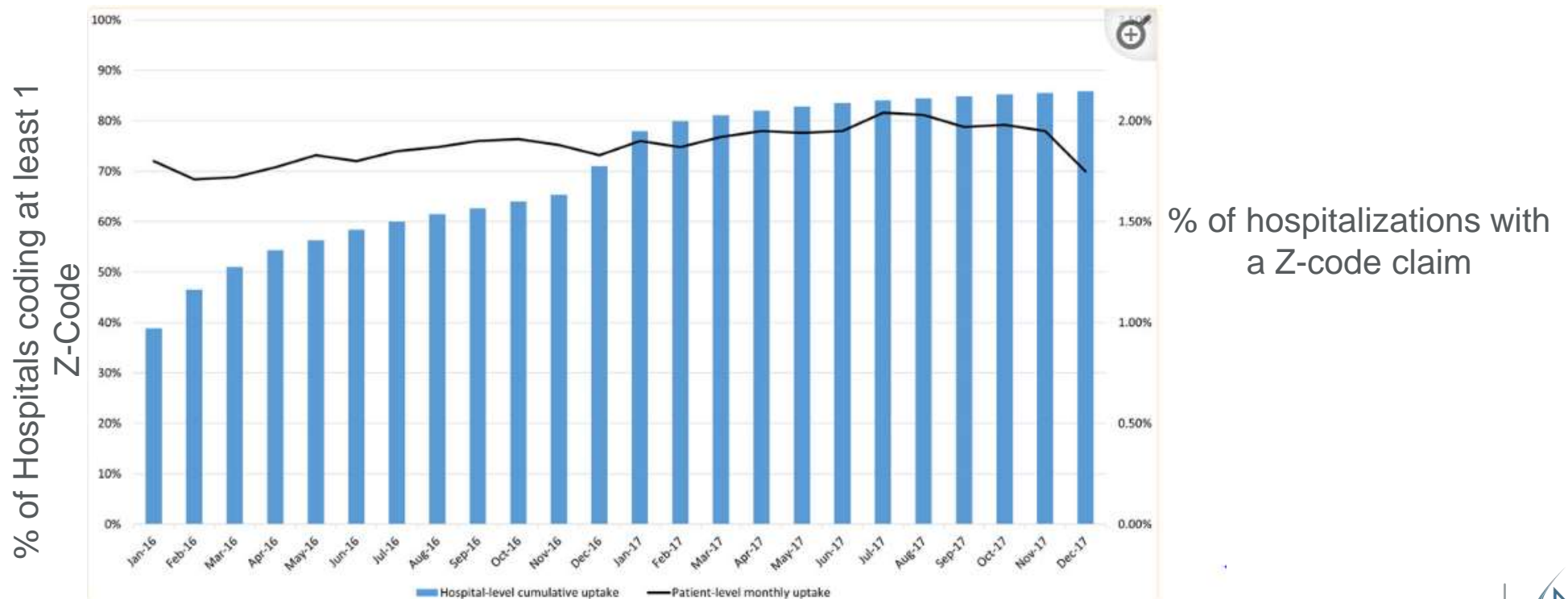
Z code	Description	n	Proportion of all Z code claims
Z59.0	Homelessness	310,089	22%
Z63.4	Disappearance and death of family member	164,829	12%
Z60.2	Problems related to living alone	163,259	12%
Z59.3	Problems related to living in a residential institution	66,842	5%
Z63.0	Problems in relationship with spouse or partner	62,572	5%

Data Sources

Z-Code Uptake

Hospitals

- National Inpatient Sample (2016-2017)
- Increase in hospitals with any Z-code use (Jan 2016: 39%, Dec 2017: 86%), but only on 1.9% of all admissions.
- Most likely to code: Larger, private non-profit, urban, teaching



Data Sources

Electronic Health Records

Traditionally... social needs data is unstructured, accessed via chart review, rules-based programming, Natural Language Processing

NLP Algorithm Performance (Residential Instability)	JHHS	KPMAS	KPScal
Sensitivity	0.84	0.61	0.96
Specificity	0.96	0.87	0.97

Unstructured data can be a rich source of information, and algorithmic approaches can work.

However... feasibility, reliability and validity challenges are barrier to broad use and data generation process varies widely.

- Differential uptake by facilities / offices / departments within systems
- Selective implementation of screening tool elements
- Missing not at random
- Misclassification

Data Sources

Electronic Health Records

The landscape is rapidly evolving to standardized, structured, data



Consensus-driven standards on social determinants of health

Codifies data generation for both screening and intervention.

An example:

Screening Tool	Screening Question	Positive Finding	Related Intervention
Accountable Health Communities (AHC) Health-Related Social Needs	LOINC 88122-7: Within the past 12 months, you worried that your food would run out before you got money to buy more.	LOINC LA28397-0: Often true LOINC LA6729-3: Sometimes true	SNOMED 713109004: Referral to community meals service (procedure)

Data Sources

Electronic Health Records

Interoperability standards are also incorporating SDOH elements

United States Core Data for Interoperability (USCDI)

The United States Core Data for Interoperability (USCDI) is a standardized set of health data classes and constituent data elements for nationwide, interoperable health information exchange. Review the [USCDI Fact Sheet](#) to learn more.

Navigation tabs: USCDI V1, **USCDI V2**, Draft USCDI V3, Level 2, Level 1, Comment

Problems
Information about a condition, diagnosis, or other event, situation, issue, or clinical concept that is documented.
Problems
SDOH Problems/Health Concerns
Date of Diagnosis
Date of Resolution

Procedures
An activity that is performed with or on a patient as part of the provision of care.
Procedures
SDOH Interventions

Critical for large-scale data linkage and sharing

Consider aligning with data standards when designing research protocols

Data Sources

Tech Startups and Social Needs Case Management Systems



NOWPOW



NCCARE360



Formerly Aunt Bertha

- Designed as “end to end” solutions
- Implemented across care settings
- Potential to track closed loop referrals
- Link to claims and billing systems
- Mostly proprietary, require licensing.
- Data privacy principles still developing.

Translating to Policy

Transforming Health Care Expectations

Medicaid

- As of 2021, 33 states with some sort of SDOH-related requirement
- 24 states require screening for social needs, though only 11 require use of uniform screening tool
- Common theme of Section 1115 Medicaid waivers

Medicare

- CHRONIC Care Act expands ability to offer SDOH-focused supplemental benefits
- Medicare Part C plans in 2022:
 - 68% offer meals
 - 39% offer transportation
 - 30% offer nutrition
 - 11% offer in-home support

Social Needs in Quality Measurement

Rapidly Developing Area

The policy interest in addressing unmet social needs reflect in development of quality measures at health plan, hospital and provider levels:

Numerator	# Screened	# Screened positive	# Screened Positive	# With Intervention
Denominator	Full population	# Screened	Full Population	# Screened

Challenges for Development & Implementation

- Building on legacy data foundation
- Tension about mandate for use of specific screening tools
- Interpretation of performance (higher better? higher worse?)

Social Needs in Quality Measurement

Use for Accountability

Structured requirements for accountability via quality measurement has the potential to clarify...

Prevalence

Service Uptake

Intervention Effectiveness

Long term benefits (?)

Outstanding Questions

Integrating into Care Systems



- How to ensure social needs data is accessible and relevant as part of care pathways?
- Where might perspectives and needs misalign?
- Where do the rapidly evolving contract models that include non-traditional stakeholders fit in value-based payment models?
- How might this data inform or reshape value assessment and decision-making?

Continue to expect rapid evolution.