Wakely
BEYOND THE NUMBERS

Social Determinants of Health: Case Study Insights

PRESENTED BY
Ksenia Whittal, FSA, MAAA

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Session Overview

- Overview of current efforts to address SDOH by public and private healthcare entities
- SDOH in Medicaid risk adjustment
- A look at disparities in costs, payments and MCO impact

What are social determinants of health?

Social Determinants of Health

Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Employment	Housing	Literacy	Hunger	Social integration	Health coverage
Income	Transportation	Language	Access to healthy options	Support systems	Provider availability
Expenses	Safety	Early childhood education		Community engagement	Provider linguistic and cultural competency
Debt	Parks	Vocational training		Discrimination	Quality of care
Medical bills	Playgrounds	Higher education		Stress	
Support	Walkability				
	Zip code / geography				

Health Outcomes
Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations

Source: https://www.kff.org/disparities-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity/

Overview of Current SDOH Efforts

CMS Accountable Health Communities Model

- “The Accountable Health Communities (AHC) Model tests whether connecting beneficiaries to community resources can improve health outcomes and reduce costs by addressing health-related social needs (HRSNs).”

- Participation:
  - 29 entities
  - ~500k individual screened
  - 15% navigation-eligible (Medicare and Medicaid)

Navigation-eligible beneficiaries were disproportionately likely to be low income; racial and ethnic minorities; and, among Medicare beneficiaries, disabled.

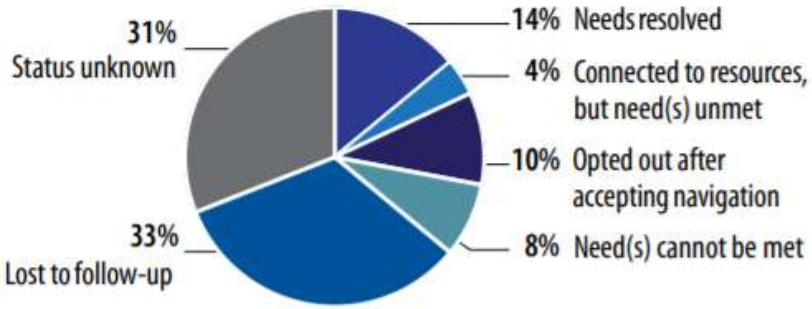
Source: https://innovation.cms.gov/data-and-reports/2020/ahc-first-eval-rpt-fg

CMS Accountable Health Communities Model

Medicare FFS beneficiaries in the Assistance Track intervention group had 9% fewer ED visits than those in the control group in the first year after screening.

Results for the Alignment Track and Medicaid beneficiaries are not yet available.

HRSN Resolution Among AHC Beneficiaries with a Closed Navigation Case



- 75% eligible are Medicaid beneficiaries
- No Medicare savings or impacts on other outcomes in the first year

Source: https://innovation.cms.gov/data-and-reports/2020/ahc-first-eval-rpt-fg

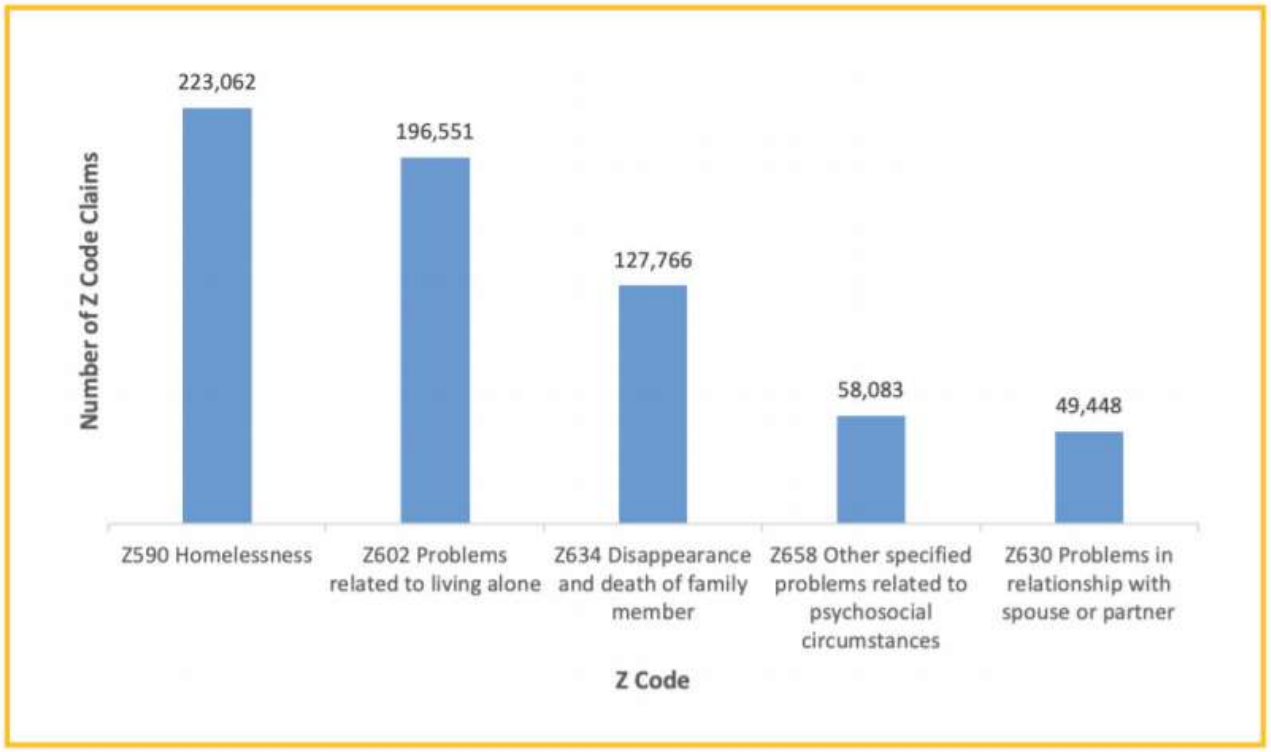
Medicare Advantage SSBCI

- Medicare Advantage (MA) plans can offer Special Supplemental Benefits for the Chronically Ill (SSBCI):
  - Non-medical benefits targeting beneficiaries with chronic illnesses
- 6% of plans offered SSBCI in the first year (2020)
- There are other approaches such as offering targeted benefit designs through VBID or uniform benefit flexibility – 11% of plans offered this (2020)
- Plans offering additional, primarily health-related supplemental benefits increased substantially between 2018 and 2020:
  - meal provision (20% of plans to 46% of plans),
  - transportation (19% to 35%),
  - in-home support services (8% to 16%), and acupuncture (11% to 20%).
- Operational and logistic challenges
- Initial insight into 2021 plan benefit offerings, the trend toward more benefits that address social determinants of health will continue:
  - 57% of plans will offer meal provision services
  - MA plans included supplemental benefit offerings specific to COVID-19 (1/3 plans)
  - 16% of plans will offer SSBCI (compared to 6% in 2020)

Source: https://www.commonwealthfund.org/publications/issue-briefs/2021/feb/medicare-advantage-plans-supplemental-benefits

CMS Data Highlight

Figure 1. Medicare FFS Diagnosis Code Counts for Top 5 Z Codes in 2017



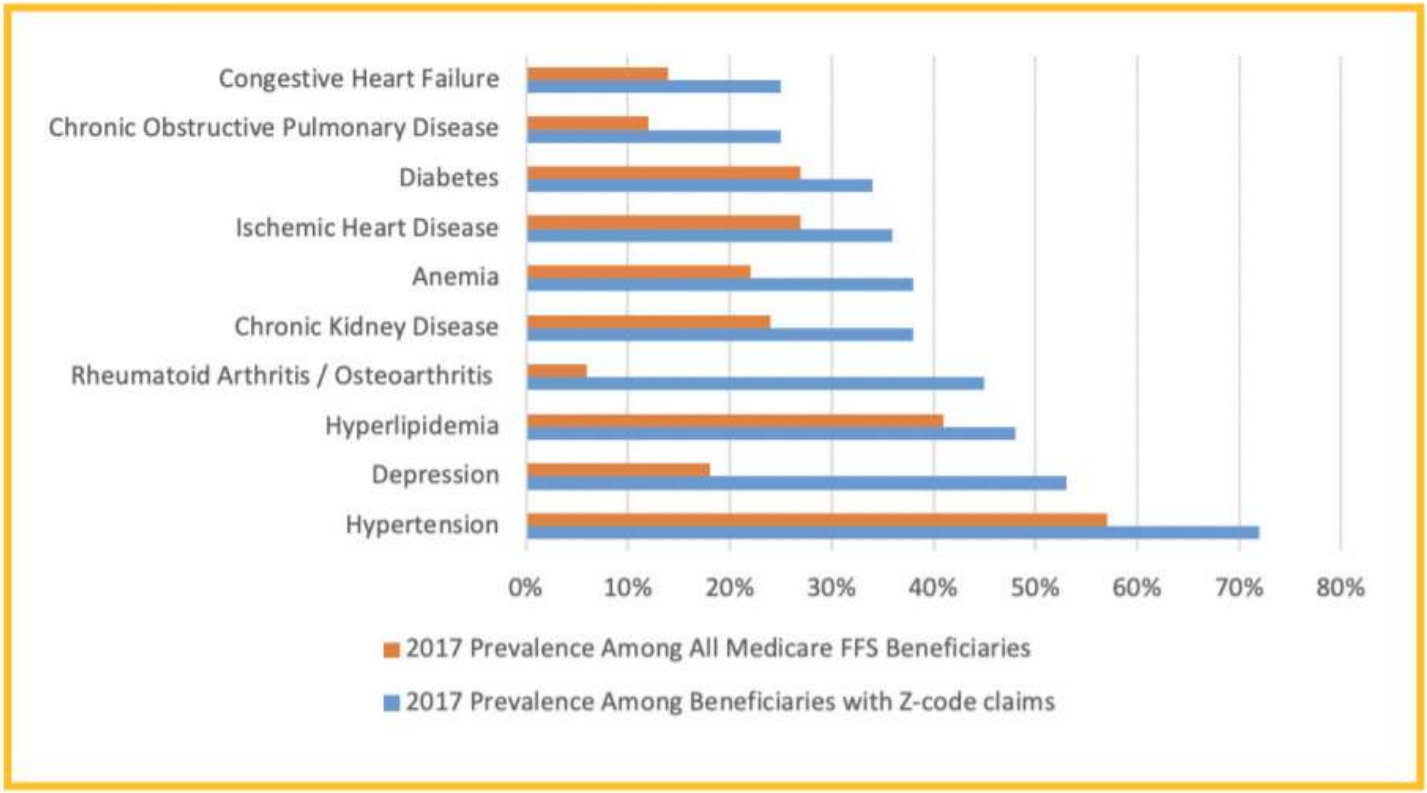
Key Findings:

- Among 33.7 million total Medicare FFS beneficiaries in 2017, approximately 1.4% had claims with Z codes.

Source: https://www.cms.gov/files/document/cms-omh-january2020-zcode-data-highlightpdf.pdf

CMS Data Highlight

Figure 2. Top 10 Chronic Conditions among Medicare FFS Beneficiaries with Z Codes in 2017



Source: https://www.cms.gov/files/document/cms-omh-january2020-zcode-data-highlightpdf.pdf

Medicaid

- CMS released guidance to help state Medicaid incorporate SDOH:
  - Shift from FFS payment models to value-based models
  - States can use different federal authorities that can allow them to design an array of services to address SDOH
  - Can be customized to meet state-specific policy goals
  - States can cover: housing-related services and supports, non-medical transportation, home-delivered meals, educational services, and employment supports
- Section 1115 Demonstration. States are able to test innovative budget neutral strategies for addressing SDOH:
  - Addressing SDOH for a specific target population
  - Addressing SDOH through expenditure authority
  - Address SDOH through alternative payment methodologies
- Managed care contracts:
  - Social Needs Screening Requirements
  - State SDOH-Related Quality Assessment and Performance Improvement (QAPI) Measurement Requirements

Source: https://www.cms.gov/newsroom/press-releases/cms-issues-new-roadmap-states-address-social-determinants-health-improve-outcomes-lower-costs
Source: https://www.medicaid.gov/federal-policy-guidance/downloads/sho21001.pdf
Source: https://www.chcs.org/media/Addressing-SDOH-Medicaid-Contracts-1115-Demonstrations-121118.pdf

Medicaid Managed Care Themes from States

MCOs to help members with employment opportunities and determine behavioral health/medical needs preventing employment	MCOs to determine which members are homeless and connect them to housing supports and create tactics to find resources for the homeless members	MCOs to participate in State Innovation Model initiatives, including Community Health Innovation Regions	MCOs to use standard screening questions (created by the state) to identify members with unmet health/related resource needs	MCOs to determine health disparities present and SDOH in the population. Create a plan to address these disparities through targeted interventions in the MCO's QAPI program.	MCOs to engage members through web-based applications, which can help individuals with self-managing their health care needs and SDOH
KS WV MD MA NM RI CO MI NC MO DC OR OH AZ MN CA NH NY WA					

SDOH in Medicaid Risk Adjustment

Approaches from Other States

✓ **Massachusetts recently developed an enhanced risk adjustment model** that aims to account for the impact of SDOH on the State's Medicaid spending.

Table 1: Variables Included in Massachusetts Medicaid Payment Model[18]	
Diagnostic Risk Scores	DxCG v 4.2
Age	0-1, 2-5, 6-12, 13-17, 18-24, 25-34, 35-44, 45-54, 55-59, 60+, male and female
Additional Diagnostic Variables	Mental illness, substance use disorders
State Agency Affiliation	Department of Mental Health, Department of Developmental Services
Disability	Entitled to Medicaid due to disability
Unstable Housing	Three or more addresses in single year or ICD-code for homeless on claim[19]
Neighborhood Stress Score	Composite measure from seven census data variables: • % families with incomes < 100% FPL • % < 200% FPL • % adults unemployed • % households receiving public assistance • % households with no cars • % single parent households • % adults 25+ with no high school degree

Source: https://www.shvs.org/wp-content/uploads/2017/07/SHVS_SocialDeterminants_HMA_July2017.pdf

Approaches from Other States

✓ **Minnesota has developed an approach to identify Medicaid populations** with the greatest health disparities by examining a number of social risk factors.

MINNESOTA'S APPROACH

Several measures of social risk factors, all obtained from administrative and claims data.

Adults

- Diagnosis of substance use disorder (SUD), serious mental illness (SMI), or severe and persistent mental illness (SPMI)
- Deep poverty (income below 50 percent of the Federal Poverty Level [FPL])
- Homelessness: self-reported, or address determined to be a homeless shelter or nonresidential address
- Past incarceration

Children

- Parent with diagnosis of SUD, SMI, or SPMI
- Parent income at deep poverty level
- Parent with homelessness: self-reported or address determined to be a homeless shelter or nonresidential address
- Parent with past incarceration
- Involvement with child protective services

Source: https://www.shvs.org/wp-content/uploads/2017/07/SHVS_SocialDeterminants_HMA_July2017.pdf

SDOH Data Options

ICD-10 diagnosis codes (Z-codes)

County Health Rankings

Z-codes

Z00-Z99, Factors influencing health status and contact with health services

- 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

Codes

- Z65 Problems related to other psychosocial circumstances
  - Z65.0 Conviction in civil and criminal proceedings without imprisonment
  - Z65.1 Imprisonment and other incarceration
  - Z65.2 Problems related to release from prison
  - Z65.3 Problems related to other legal circumstances
  - Z65.4 Victim of crime and terro
  - Z65.5 Exposure to disaster, war
  - Z65.8 Other specified problems
  - Z65.9 Problem related to unspe

- Z59 Problems related to housing and economic circumstances
  - Z59.0 Homelessness
  - Z59.1 Inadequate housing
  - Z59.2 Discord with neighbors, lodgers and landlord
  - Z59.3 Problems related to living in residential institution
  - Z59.4 Lack of adequate food and safe drinking water
  - Z59.5 Extreme poverty
  - Z59.6 Low income
  - Z59.7 Insufficient social insurance and welfare support
  - Z59.8 Other problems related to housing and economic circumstances
  - Z59.9 Problem related to housing and economic circumstances, unspecified

Source: https://www.icd10data.com/ICD10CM/Codes/Z00-Z99/Z55-Z65

Z-codes

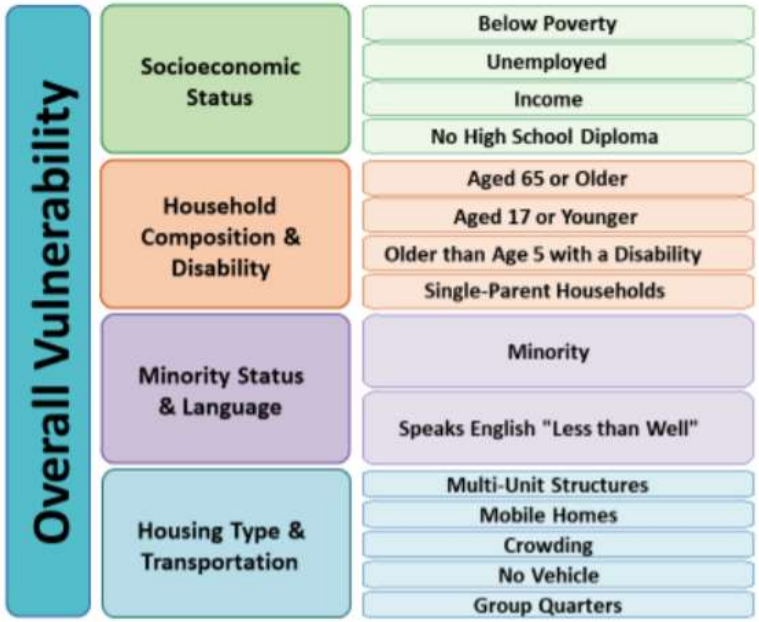
Table 1: Prevalence of SDOH Related Risk Markers in AZ Medicaid Population

Time Period ->	July 2017 – June 2018		July 2018 – June 2019	
SDOH-Related Risk Marker	Range by MCO	Average	Range by MCO	Average
Z59, Housing Problems	0.0% - 1.4%	0.9%	1.3% - 2.9%	1.8%
Z62, Parent Problems	1.0% - 2.1%	1.1%	1.5% - 4.2%	1.7%
Z63, Family Problems	0.0% - 0.9%	0.7%	1.3% - 1.7%	1.5%
Z65, Criminal Problems	0.6% - 2.9%	1.9%	1.1% - 5.6%	2.0%
SVI Zip Code	17.0% - 24.6%	20.8%	32.3% - 66.0%	38.5%
Any Z-code	2.8% - 5.2%	4.0%	5.1% - 12.2%	5.5%

- While the prevalence of SDOH risk markers in claim data is low (4-5%), it increased over the two-year study period.
- As coding improves, the impact of social risk markers on risk adjustment will change.

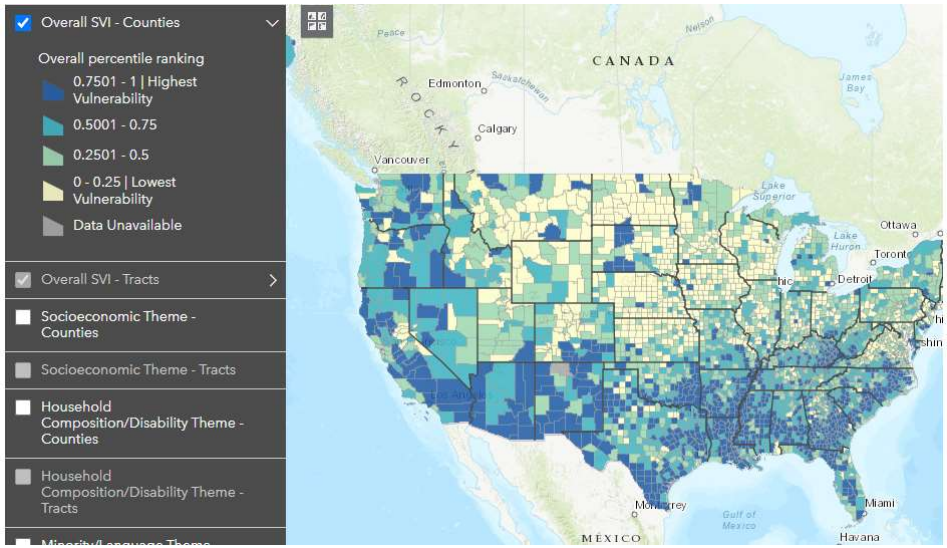
CDC Social Vulnerability Index (SVI)

American Community Survey (ACS), 2014-2018 (5-year) data for the following estimates:



Prevalence of SVI Zip Code with Highest Vulnerability in AHCCCS Population

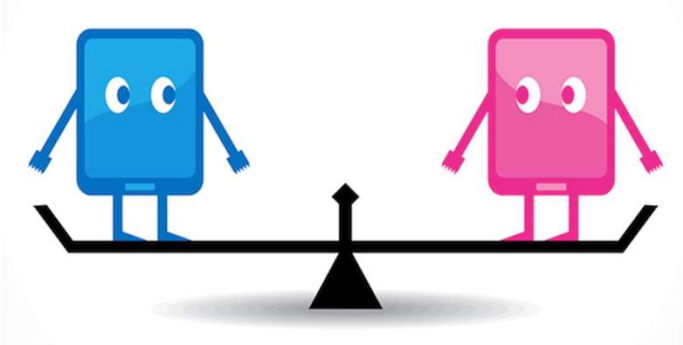
July 2017 – June 2018		July 2018 – June 2019	
Range by MCO	Average	Range by MCO	Average
17.0% - 24.6%	20.8%	32.3% - 66.0%	38.5%



Source: https://www.atsdr.cdc.gov/placeandhealth/svi/documentation/SVI_documentation_2018.html

Arizona AHCCCS Case Study:
Incorporating SDOH into Risk Adjustment

CDPS+MRx 6.4 vs. CDPS+MRx 6.4 + SDOH

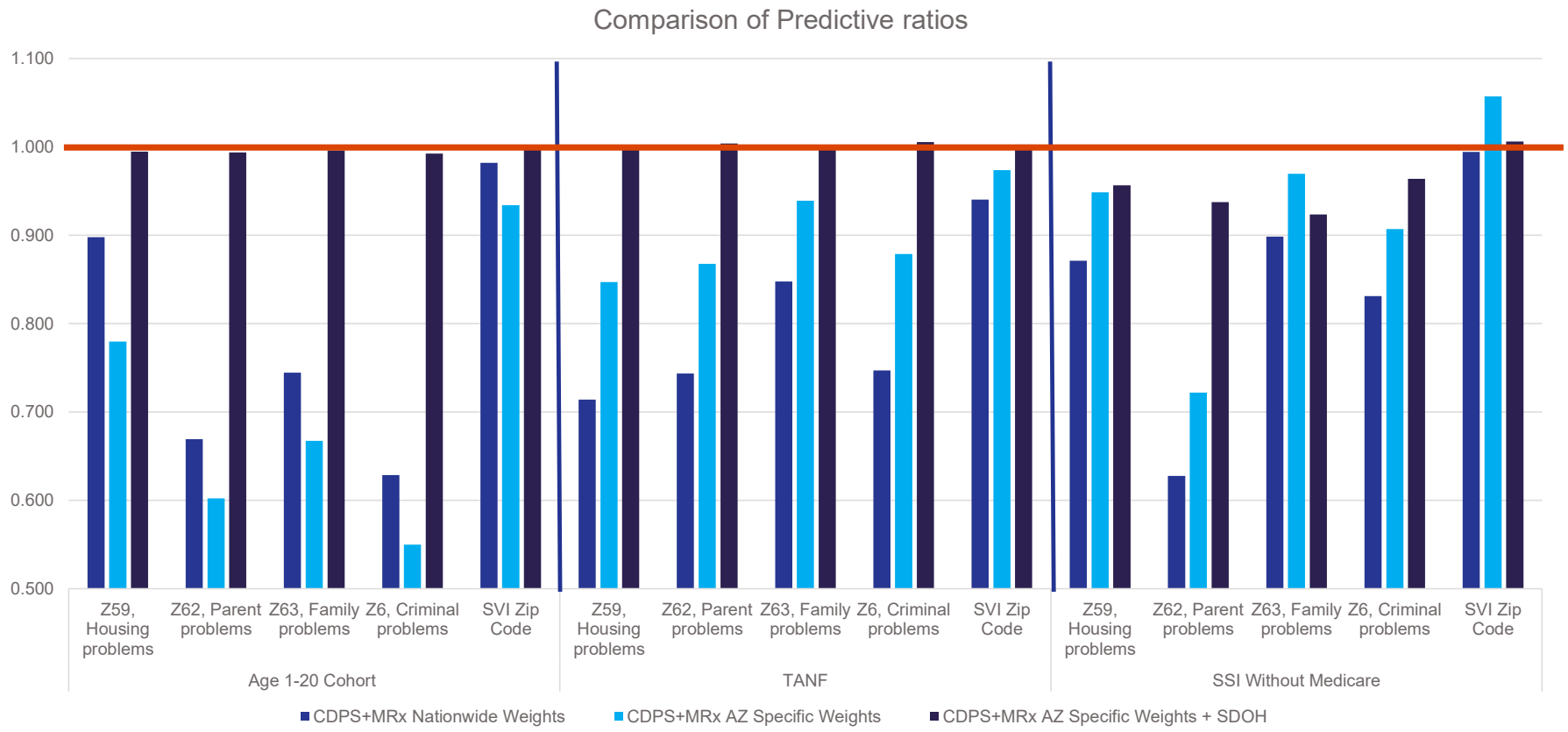


1. What impact does incorporating SDOH risk markers into CDPS+MRx model have on MCOs' risk transfers and financial position?
2. Does incorporating SDOH risk markers into the CDPS+MRx model improve payment accuracy?
3. What specific SDOH risk markers provide the most significant contribution to risk scores?

Key Observations

- Results suggest that models that do not account for the social risk markers systematically undercompensate plans disproportionately serving these members.
- The most significant social risk markers were **housing problems, parent problems and criminal problems.**
- Incorporating SDOH risk could lead to a meaningful change in the underwriting margin for issuers providing coverage to a disproportionate share of members with SDOH.
- Zip code risk markers provided modest contribution to the overall model performance, and did not differentiate members as well as claim-based markers.

SDOH Impact on Risk Adj. Accuracy

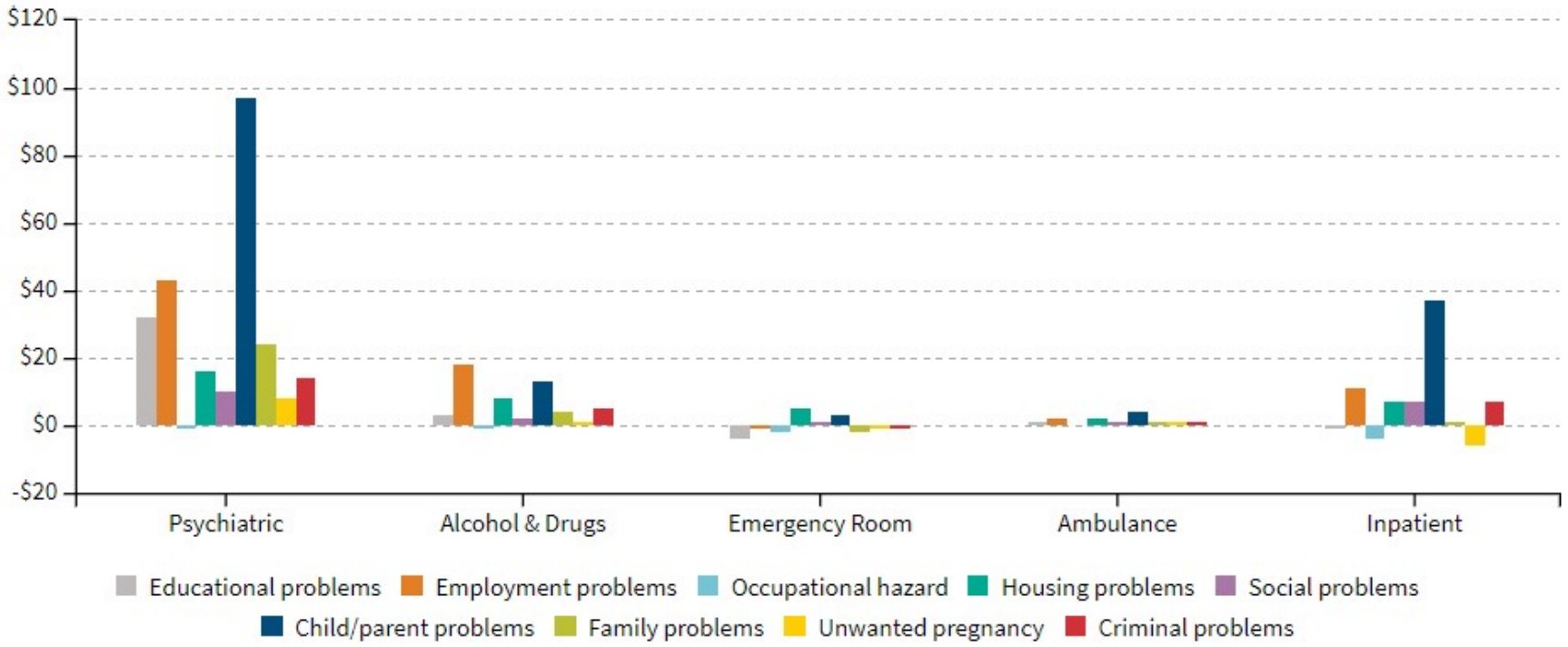


Key Observations

- In this analysis, the average claim costs for Medicaid members with SDOH-related risk markers were **1.2 to 3.4 times higher than cost** of an average claimant. While the **prevalence is currently low (4-5%)**, the high cost of these members translates into a meaningful risk adjustment impact.
- SDOH risk markers had a **higher statistical significance** than a number of HCCs and MRx categories.
- Addition of SDOH-related risk markers improved prospective CDPS+Rx risk adjustment accuracy and increased risk scores for SDOH cohort members, especially for children.

SDOH increases utilization of...

Differences in Risk-adjusted Cost Between Z-cohorts and Matched Cohorts



Source: https://theactuarymagazine.org/when-life-affects-health/

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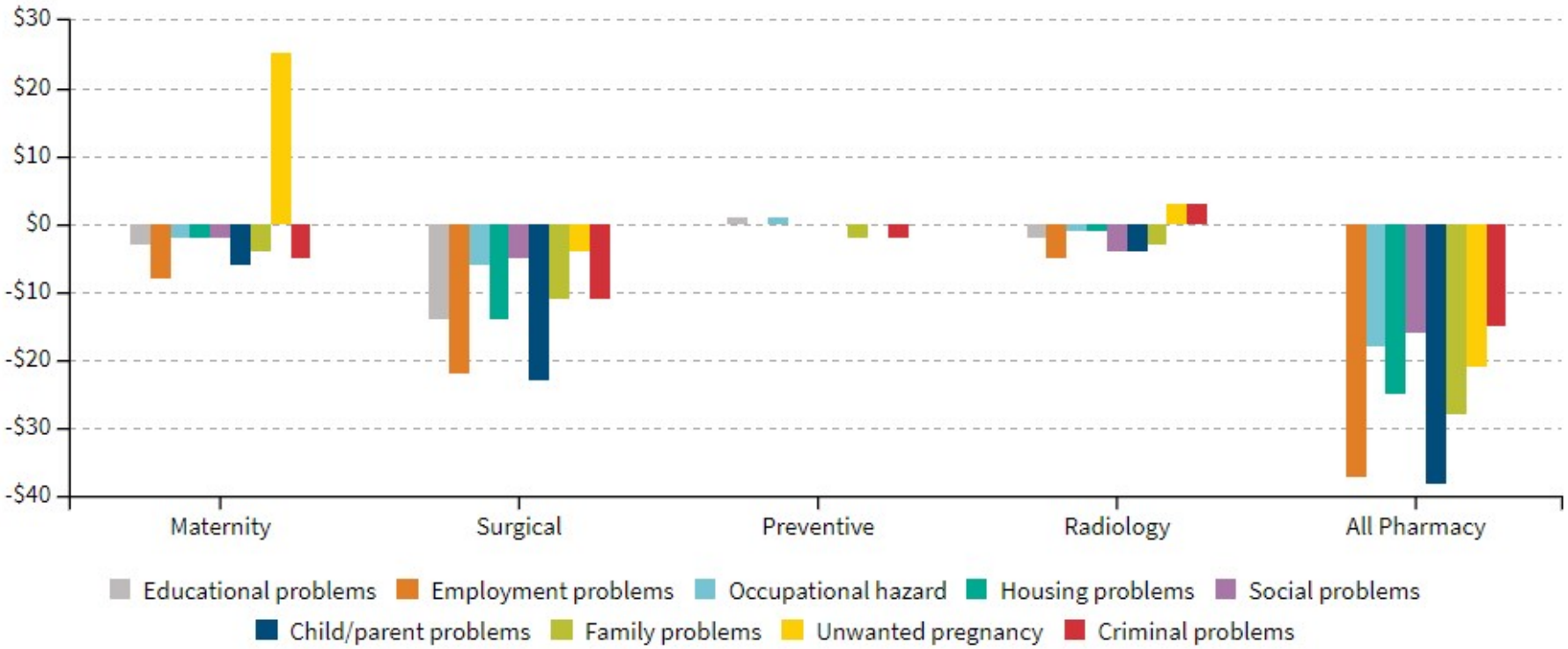
Differences in Risk-adjusted Cost Between Z-cohorts and Matched Cohorts



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Thank you!

Questions?