



# **Data Driven Systems: Linking Homeless System Data to Medicaid Data**

**Joel Cantor, Sc.D**

Distinguished Professor of Public Policy, E.J. Bloustein School of Planning and Public Policy  
Director, Center for State Health Policy,  
Institute for Health, Health Care Policy, and Aging Research

**Evan Cole, Ph.D**

Research Associate Professor, University of Pittsburgh School of Public Health

Housing as a Human Right: Exploring Partnerships, Innovation, and Equity

October 6, 2022

# **Data and Evidence to Advance Housing and Health Equity**

Joel C. Cantor, ScD  
Evan Cole, PhD

Presentation to Monarch Housing Associates  
Conference on Housing as a Human Right:  
Exploring Partnerships, Innovation, and Equity

October 6, 2022  
Princeton, NJ

## Plan for Today

---

- The Medicaid-housing connection
- Role of PSH in healthcare outcomes
- Linked homelessness (HMIS) and Medicaid (MMIS) data
- Update on two new projects focusing on homelessness and healthcare outcomes

# Acknowledgements

---

## Our team



## Our funders

- National Institute on Minority Health and Health Disparities (R01MD01261)
- Robert Wood Johnson Foundation
- Pennsylvania Department of Human Services
- New Jersey Division of Medical Assistance and Health Services (Medicaid)
- The Nicholson Foundation

## Additional thanks to officials from

- NJ Housing and Mortgage Finance Agency
- PA Department of Community & Economic Development, Allegheny County, Delaware County, Lancaster County, and Philadelphia County

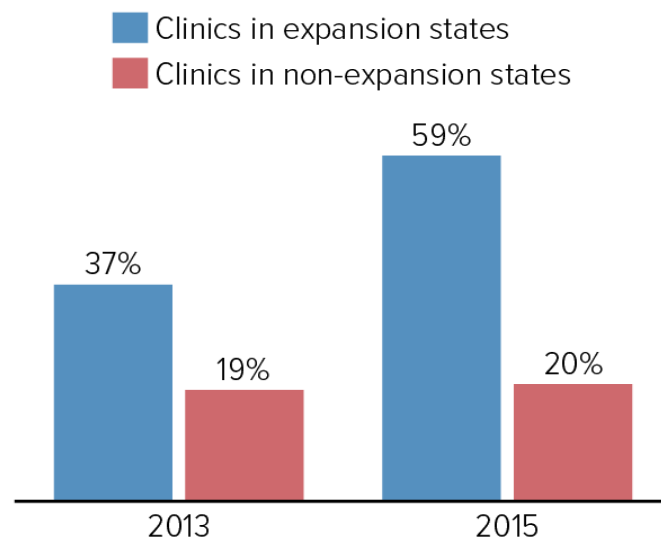
# Medicaid & Housing

- Medicaid provides public health insurance to low-income and disabled individuals, and covers physical, behavioral, and long-term care services at little to no cost to the individual.
- The ACA Medicaid expansion increased the proportion of people experiencing homelessness who enrolled in Medicaid.
- Medicaid spending on enrollees experiencing homelessness is 10-27% higher than stably housed enrollees with similar demographic and health characteristics.

Cantor JC, Chakravarty S, Nova J, Kelly T, Delia D, Tiderington E, Brown RW. Medicaid Utilization and Spending among Homeless Adults in New Jersey: Implications for Medicaid-Funded Tenancy Support Services. Milbank Q. 2020 Mar;98(1):106-130. doi: 10.1111/1468-0009.12446. Epub 2020 Jan 22. PMID: 31967354; PMCID: PMC7077786.

## Medicaid Coverage Among People Experiencing Homelessness Rose Under ACA's Expansion

Percentage covered at Health Care for the Homeless Clinics



Note: The Affordable Care Act (ACA) gave states the option to expand Medicaid to adults with income up to 138 percent of the poverty line starting in 2014. Health Care for the Homeless Clinics provide services to Medicaid and non-Medicaid clients.

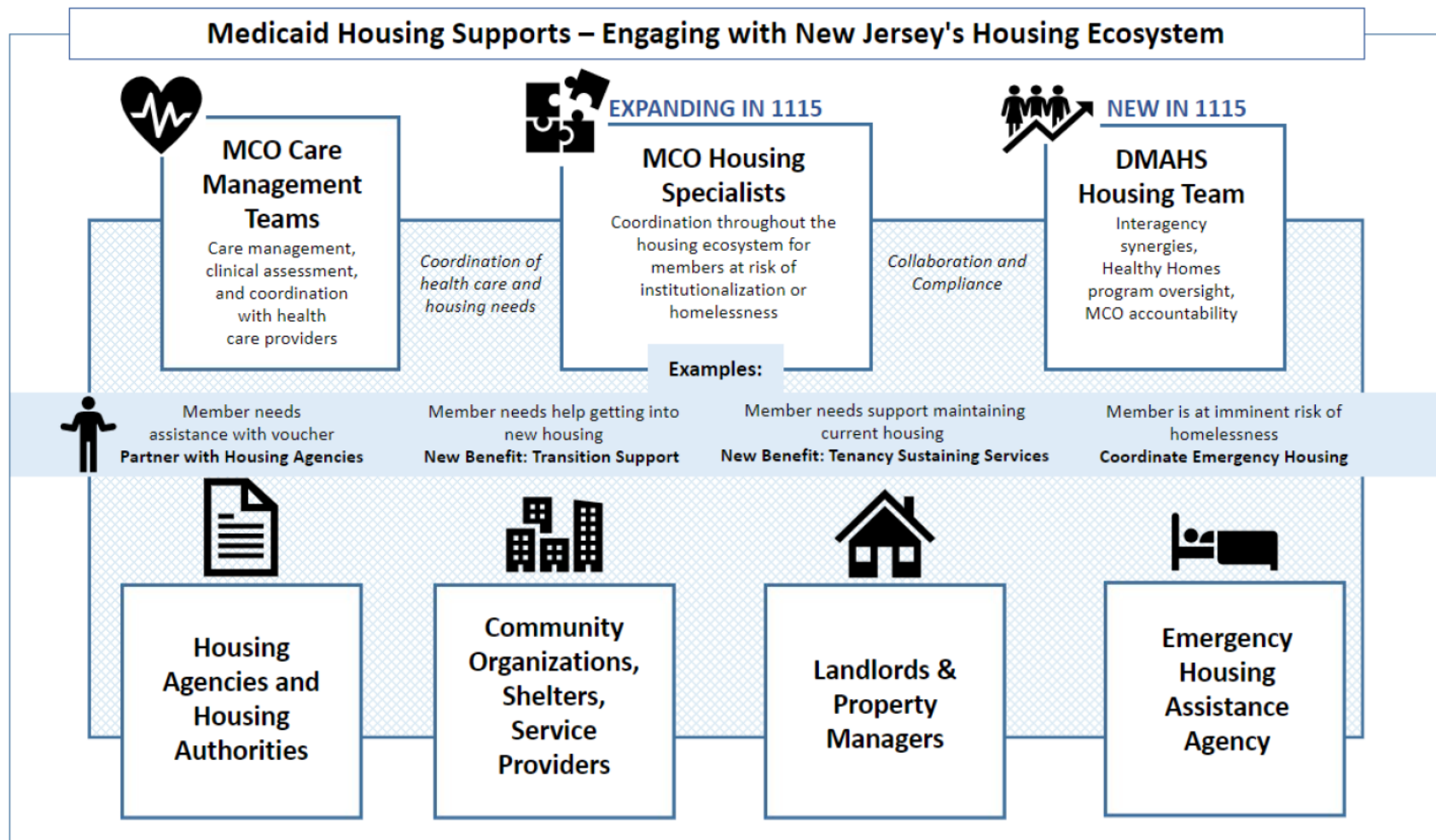
Source: National Health Care for the Homeless Council

# Medicaid & Housing

---

- Homeless services and Medicaid services serve many of the same people and affect each other's outcomes, but there is limited collaboration
- What can Medicaid pay for related to housing?
  - Housing Transition Services (e.g., housing application assistance)
  - Housing and Tenancy Sustaining Services (e.g., linkage with community resources when housing is jeopardized, landlord dispute resolution)
  - State-Level Housing-Related Collaborative Activities (e.g., working with housing partners to transition people to community-based settings)
  - *Not* rent or bricks & mortar
- Much ongoing activity between states and the federal government
  - At least 27 states have some active or proposed Medicaid and housing activity
  - Pending New Jersey Medicaid Section 1115 Demonstration Waiver request

# Pending New Jersey Medicaid Waiver Request





# Permanent Supportive Housing & Healthcare

---

- **Health Care Utilization**
  - Increases in behavioral health care and outpatient visits
  - Decreases in hospitalizations, emergency department visits, residential treatment, emergency medical services
- **Health Care Spending**
  - Mixed results, savings estimated in PA (-\$145 per month) but not NJ
  - Higher health care spending among individuals receiving PSH in some other studies

## Sources:

National Academies of Sciences, Engineering, and Medicine, *Permanent Supportive Housing: Evaluating the Evidence for Improving Health Outcomes Among People Experiencing Chronic Homelessness*. Washington (DC): National Academies Press (US); 2018 Jul 11.

Hollander MAG, Cole ES, Donohue JM, Roberts ET. Changes in Medicaid Utilization and Spending Associated with Homeless Adults' Entry into Permanent Supportive Housing. *J Gen Intern Med*. 2021 Aug;36(8):2353-2360.

DeLia D, Nova J, Chakravarty S, Tiderington E, Kelly T, Cantor JC. Effects of Permanent Supportive Housing on Health Care Utilization and Spending Among New Jersey Medicaid Enrollees Experiencing Homelessness. *Med Care*. 2021 Apr 1;59(Suppl 2):S199-S205.



# Permanent Supportive Housing & Healthcare

## *Key Evidence Gaps Remain*

---

- What is the impact of PSH on the use of **essential community-based healthcare** (e.g., primary care, dental, and behavioral health)?
- What is the role of homelessness in racial/ethnic and rural **healthcare disparities**?
- What is the impact of PSH on **long-term healthcare outcomes** beyond about two years?
- How does the “real world” impact of PSH on healthcare **vary across time, regions** (e.g., CoCs), **and PSH program characteristics**?

# Data to Drive Better Healthcare for People Experiencing Homelessness

---

- **Medicaid programs have limited ways of identifying enrollees who are experiencing homelessness**
  - Z-codes on billing data – underused and unknown accuracy
  - Social determinants of health screening tools – not universally adopted and dependent on self-reporting
- **Linked Medicaid claims (MMIS) and Homeless Management Information System (HMIS) data**
  - HMIS data often managed at local levels, requiring multiple, complex data sharing agreements
  - Confidentiality and privacy concerns (HIPAA, Medicaid and HUD regulations)
  - Challenges making administrative data useful for analysis and research

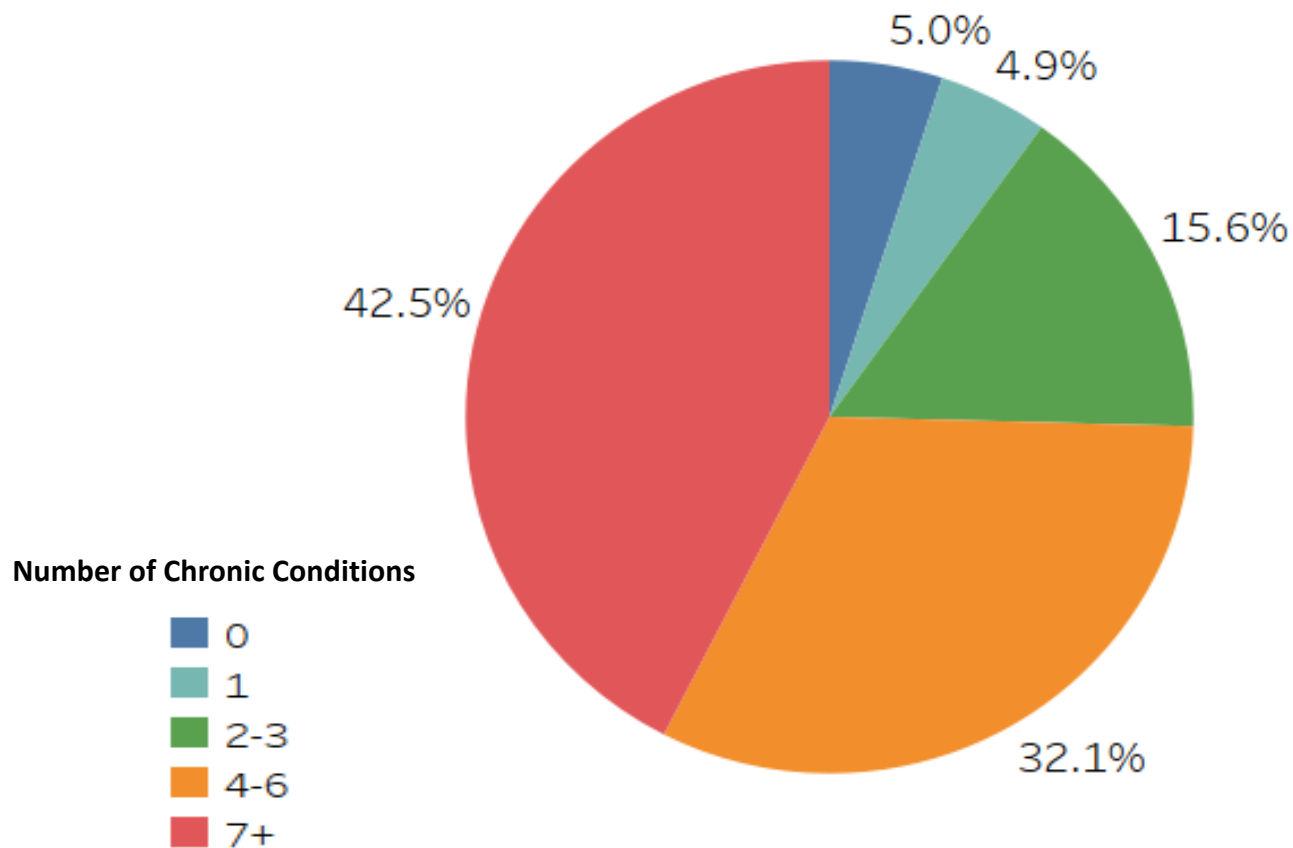
# Linked MMIS-HMIS Data Has Great Value

---

- Identify gaps and inequities in utilization of essential healthcare services
- Measure how providing PSH impacts Medicaid utilization and spending, and how those effects may vary
- Identify optimal PSH and Medicaid policies and strategies to improve access to high-quality essential health services
- Promote and inform cross-sector collaboration

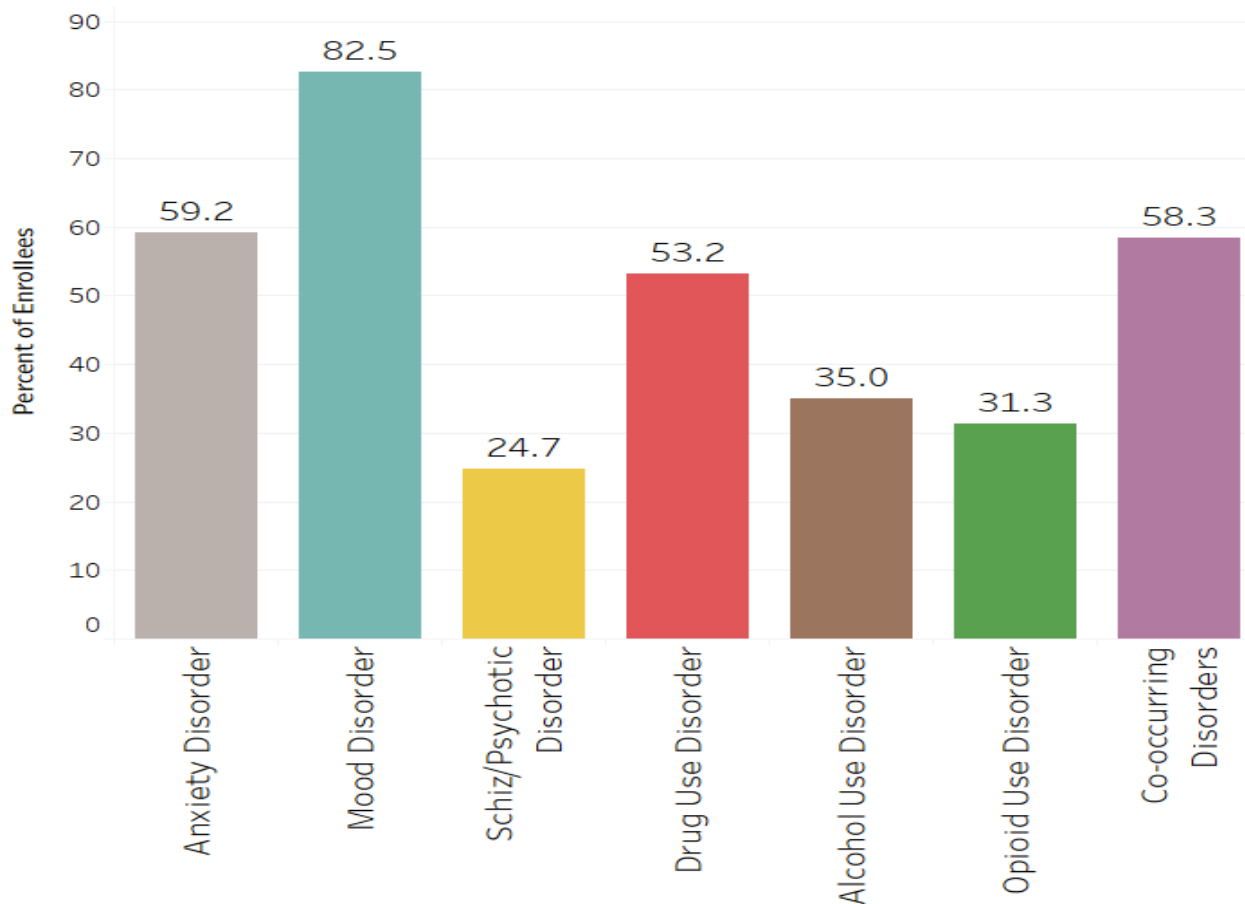
# Examples from our Prior Research: PA

*Count of Chronic Conditions among Adult PSH Recipients, 2011-2016 (N=2,733)*



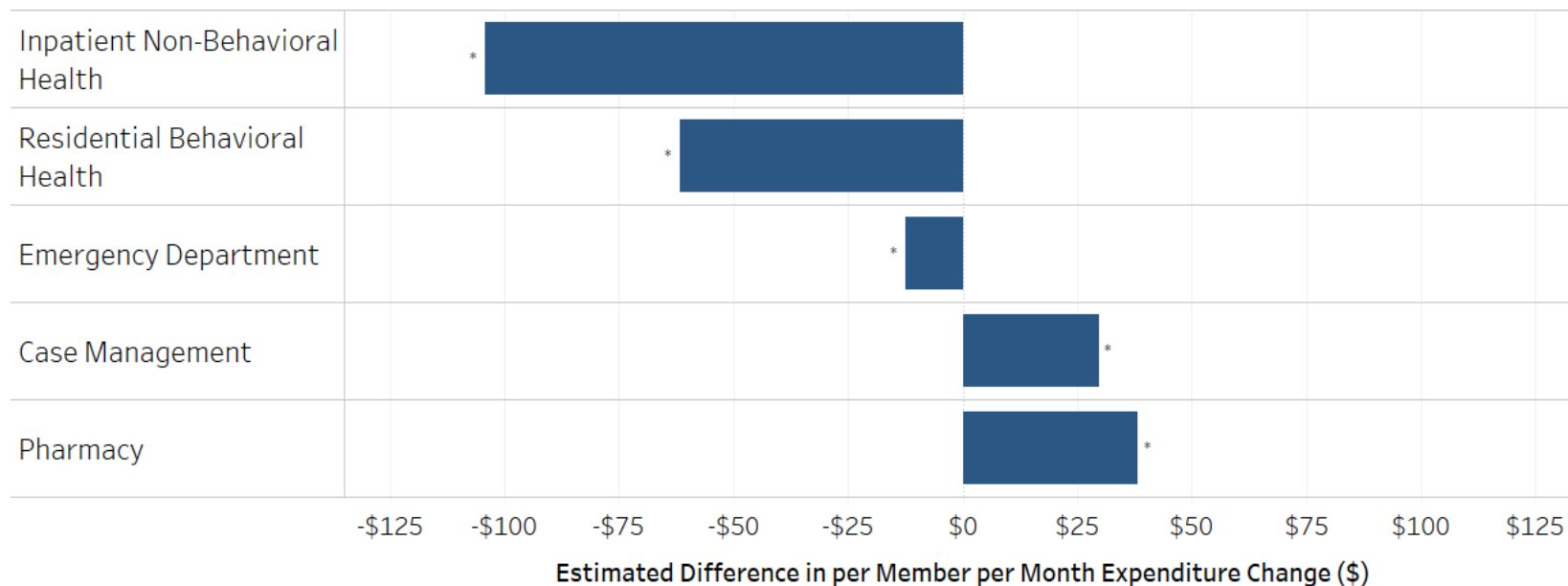
# Examples from our Prior Research: PA

*Prevalence of Behavioral Health Conditions among Adult PSH Recipients, 2011-2016 (N=2,738)*



# Examples from our Prior Research: PA

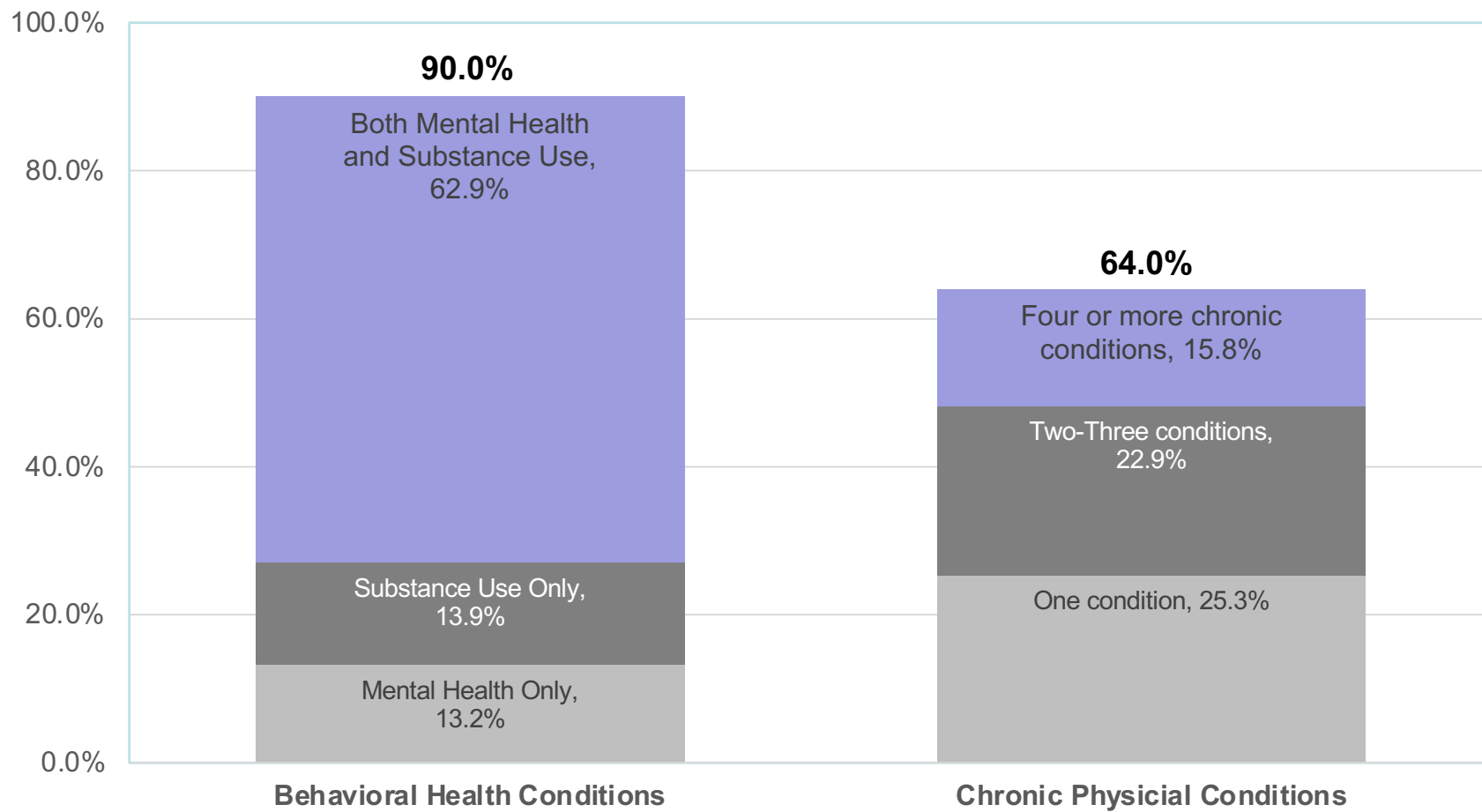
## *Changes in Medicaid Spending after PSH Placement*



Positive and negative dollar amounts represent the estimated change in spending for PSH recipients for the given year per member per month relative to the change in spending in the comparison group, after adjusting for relevant covariates. Asterisks indicate changes that are statistically significant at the 0.05 level. Expenditures from the long-term care file are not included in any of the estimates.

## Examples from our Prior Research: NJ

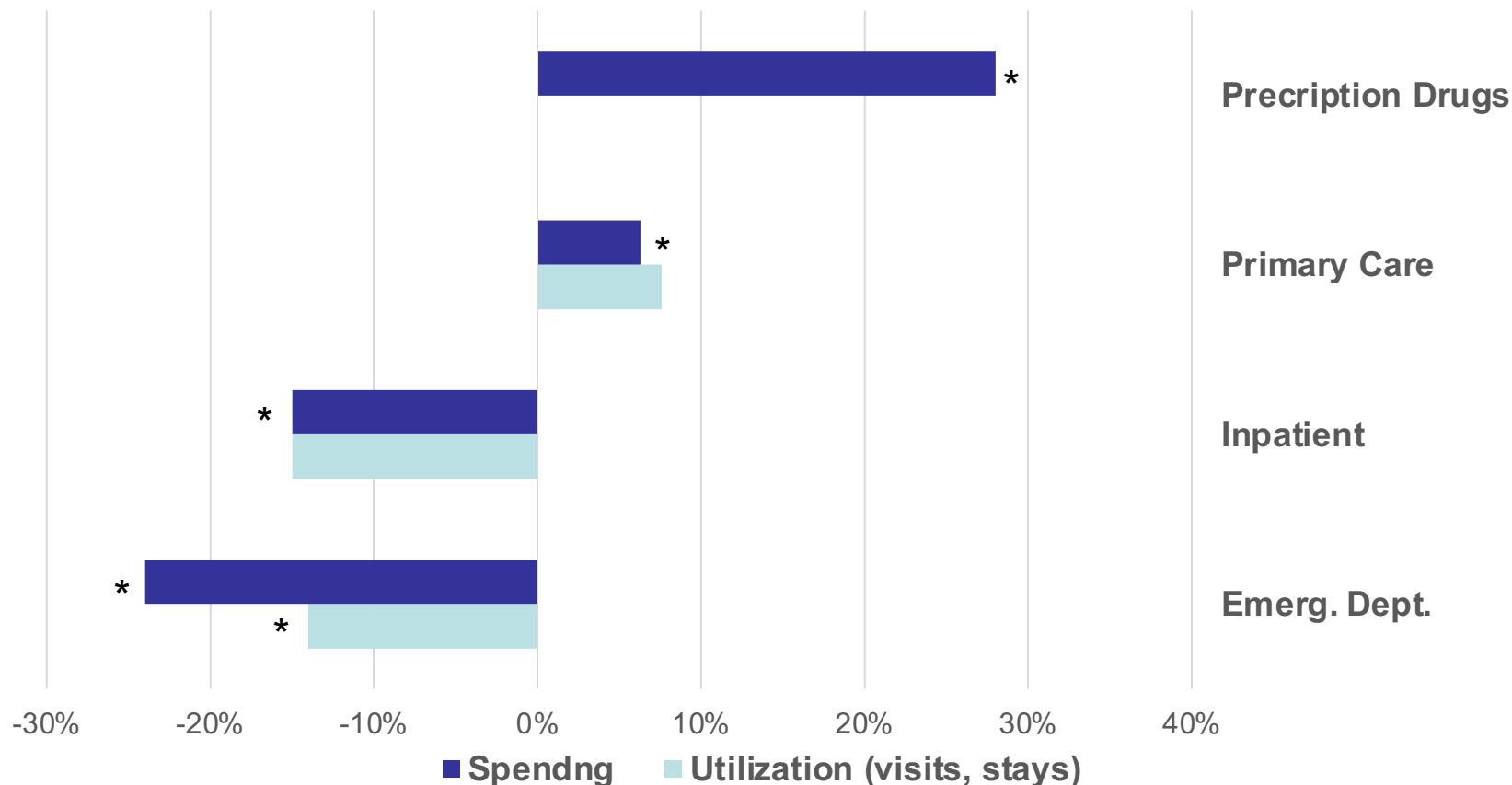
*Prevalence of health conditions among chronically homeless, 2016*





# Examples from our Prior Research: NJ

## *Changes in Medicaid Spending after PSH Placement*



Positive and negative percentage represent the estimated change in spending for PSH recipients per member relative to the change in spending in the comparison group. Based on models excluding the quarter before PSH placement. Asterisks indicate changes that are statistically significant at the 0.05 level.

# New NIH Study of Homelessness & Medicaid

---

- **Funded by the National Institute on Minority Health and Health Disparities** (May 2021-Feb. 2026)
- **Two states**
  - New Jersey (19 of 21 counties – excludes Middlesex and Bergen)
  - Pennsylvania (59 of 67 counties – excludes Erie, Harrisburg, and Scranton/Wilkes-Barre)
- **Uniquely valuable features**
  - Longer study period: 11 years of linked Medicaid claims (MMIS) and the Homeless Management Information System (HMIS) data (2011-2022)
  - More in-depth look at variability in PSH
  - Broader range of essential health services

# Study Aims

---

- 1. Quantify the contribution of homelessness to healthcare utilization and spending among adult Medicaid beneficiaries**
  - Examine racial/ethnic and rural disparities
- 2. Model the impact of PSH placement on long-term changes in essential healthcare services utilization and spending**
  - Examine racial/ethnic and rural disparities
  - Measure differences by geographic region and PSH characteristics
- 3. Identify strategies for maximizing the effectiveness of PSH in reducing healthcare disparities among homeless adults**
  - Focus groups with front-line PSH staff to elicit interpretations of Aim 2 findings

# Medicaid Essential Health Services Utilization and Spending Outcomes

---

- **Inpatient hospitalizations**
  - All-cause admissions, avoidable admissions, mental health, substance use, quality measures
- **Emergency department visits**
  - All-cause, mental health, substance use, non-traumatic dental, quality measures
- **Community-based mental health and substance use treatment**
  - Visit rates, continuity of care, quality measures
- **Primary care and other community-based services**
  - Primary care visits, continuity of care, dental care, quality measures
- **Prescription drugs**
  - Total spending, chronic-disease management drugs, quality measures

## Analysis priorities of HUD and DHHS-ASPE policy staff

---

- Needs of **older/aging chronically homeless populations**.
- Role of **long-term care services** among people experiencing homelessness.
- Does PSH achieve **Medicaid savings**? How does spending change?
- Medicaid-based **predictors of first episodes of homelessness** and factors that may prevent homelessness.
- Effects of **variations in PSH** (e.g., scattered site vs project based). Role of policies promoting shift to ***housing first***?
- Trajectory or “**natural history**” of homelessness.
- Is our **two-state linkage/analysis strategy replicable** and can we link to data from **other sectors** (e.g., criminal justice)?
- Role of **case management** in healthcare outcomes.
- Perspectives of people with **lived experience** of homelessness.

# **New Project to Promote Action to Improve Access to Essential Health Services in New Jersey**

---

- **Funded by Robert Wood Johnson Foundation** (Oct. 2022-Aug 2024)
- **Aims**
  - Promote collaborative initiatives among homeless- and healthcare-service providers using timely data and evidence
  - Engage policymakers and other stakeholders to reduce barriers to better care for people experiencing homelessness
- **Project activities**
  - CoC-level data visitations using linked MMIS-HMIS data
  - In-depth interviews giving voice to people experiencing homelessness
  - Survey of existing cross-sector collaborative initiatives
  - Cross-sector convening, policy briefings and outreach
- **Project team**
  - Rutgers Center for State Health Policy & School of Social Work
  - Monarch Housing Associates

# Thank You

## Questions?



# Health Services Outcome Measures

## Hospital Measures

### Inpatient Services

All-cause admissions

Mental health-related admissions

Substance use-related admissions

Potentially avoidable admissions

Total inpatient spending

### Emergency Department Services

All-cause ED visits

Return to ED (72 hr., 9 day)

ED mental health and substance use-related visits

ED visits for non-traumatic dental complaints

Total ED spending

# Health Services Outcome Measures, continued

## Community-Based Services Measures

### Behavioral Health Services

Mental health visits

Continuity of mental health (MH) care

Substance use disorder (SUD)  
treatment initiation & service use

Follow-up after MH and SUD ED visits

Total MH and SUD spending

### Primary and Ambulatory Care

Primary care visits

Continuity of primary care

Follow-up after hospital discharge

Community dental visits

Diabetes process quality measures  
(e.g., A1c testing)

Total primary care spending

## Prescription Drug Measures

Antipsychotic adherence for Schizophrenia

Antidepressant medication management

Spending for chronic disease management medications

Total Rx spending



# **Data Driven Systems: Linking Homeless System Data to Medicaid Data**

## Questions?

Thank you for attending the panel!

Housing as a Human Right: Exploring Partnerships, Innovation, and Equity  
October 6, 2022