



BEHAVIORAL HEALTH CONDITIONS IN AVOIDABLE HOSPITAL USE AND COST

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Presentation by
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The project team...

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Motivating issues

- Our previous research identified substantial cost saving opportunities from reducing high hospital use and preventable hospitalizations
- Such avoidable hospitalizations may arise from barriers to ambulatory care, inadequate care coordination and presence of behavioral health conditions
 - Interaction between mental and physical health needs (IOM 2006)
- Effective management of behavioral health conditions and integration of behavioral and physical healthcare may be critical to reducing avoidable hospitalizations and costs
- Several existing care models are based on such integration e.g., SBIRT, SAMHSA, VA Services, CDC's NCCDPHP
 - Behavioral health screening by primary care provider
 - Co-location of services and referral

Study questions & data

- To what extent are behavioral health (BH) conditions associated with:
 - Preventable hospitalizations and costs?
 - Inpatient and ED high use and costs?

Data and measures

- Data from NJ Discharge Data Collection System and Charity Care Claims, 2008-2011
- Diagnostic information drawn from billing records only
- Measures
 - Preventable hospitalizations (AHRQ: Prevention Quality Indicators)
 - Highest 5 percent of hospital users characterized as ‘high users’
 - Mental Health (MH) and Substance Abuse (SA) (AHRQ: Clinical Classification Software)
 - Severely Mentally Ill (SMI) - Extreme Functional Impairment (Coffey et al. 2011; Kessler et al. 2005)
- Costs calculated by applying cost-to-charge ratios on charge amounts
- Focus on 13 low income regions in NJ

13 Low-Income NJ Areas

Camden

Greater Newark*

Trenton**

Asbury Park-Neptune

Atlantic City-Pleasantville

Elizabeth-Linden

Jersey City-Bayonne

New Brunswick-Franklin

Paterson-Passaic-Clifton

Perth Amboy-Hopelawn

Plainfield, North Plainfield

Union City-W. NY- Guttenberg-N. Bergen

Vineland-Millville

*Newark zip codes (07102,07103,07104, 07105, 07106, 07107,07108, 07112, & 07114)

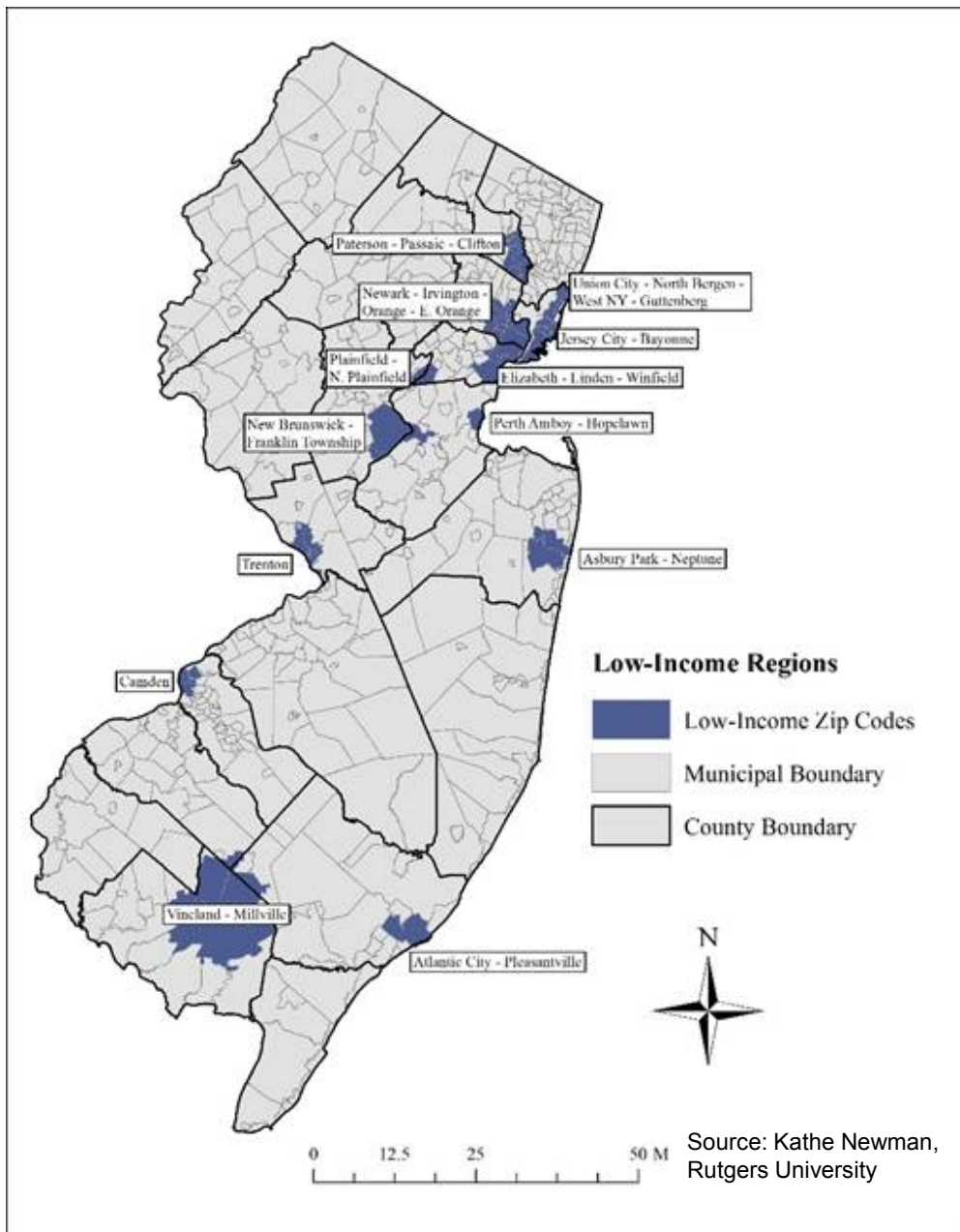
East Orange zip codes (07017,07018)

Irvington zip code (07111)

Orange zip code (07050)

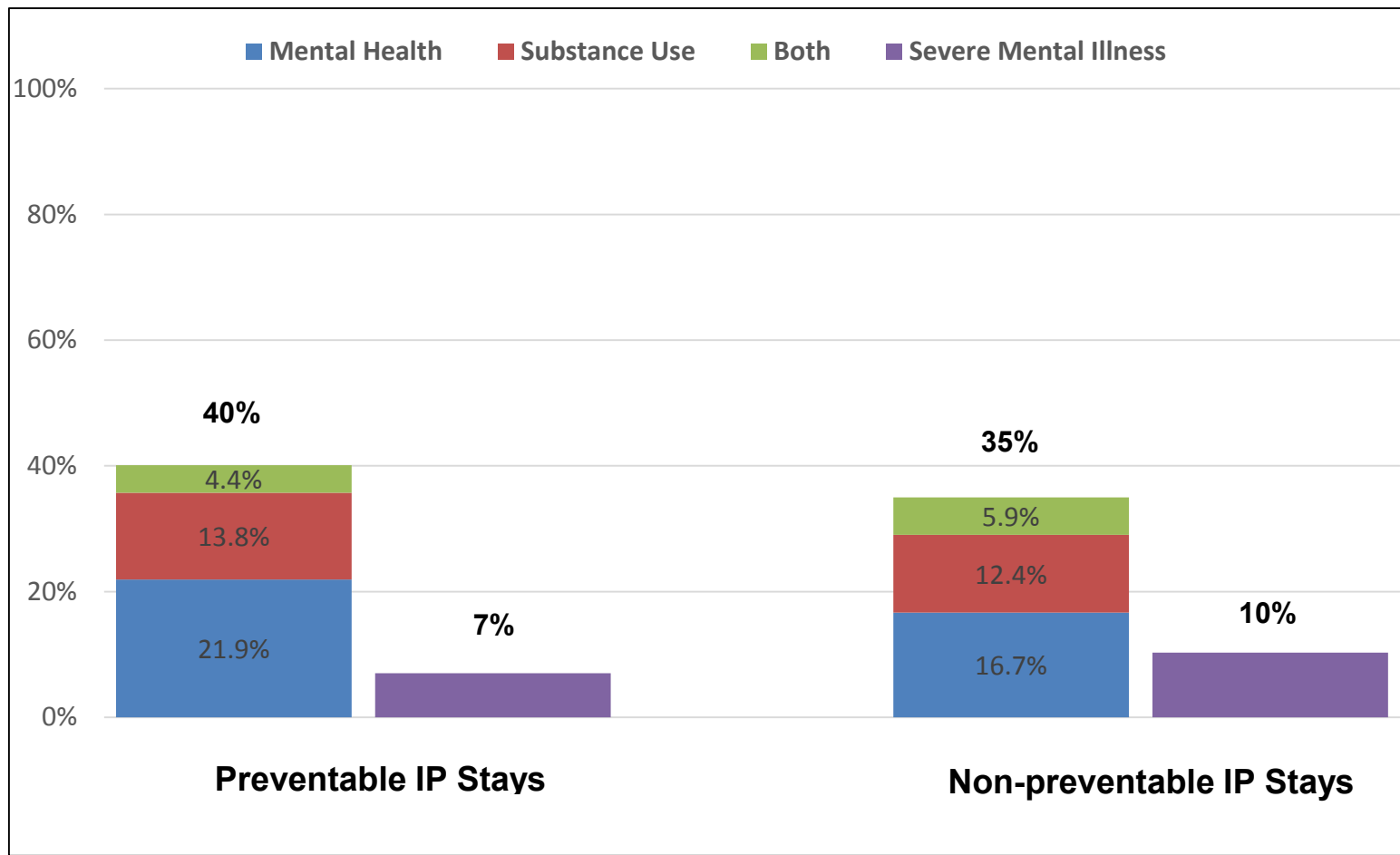
**Trenton zip codes (08608, 08609, 08611, 08618, 08629, & 08638)

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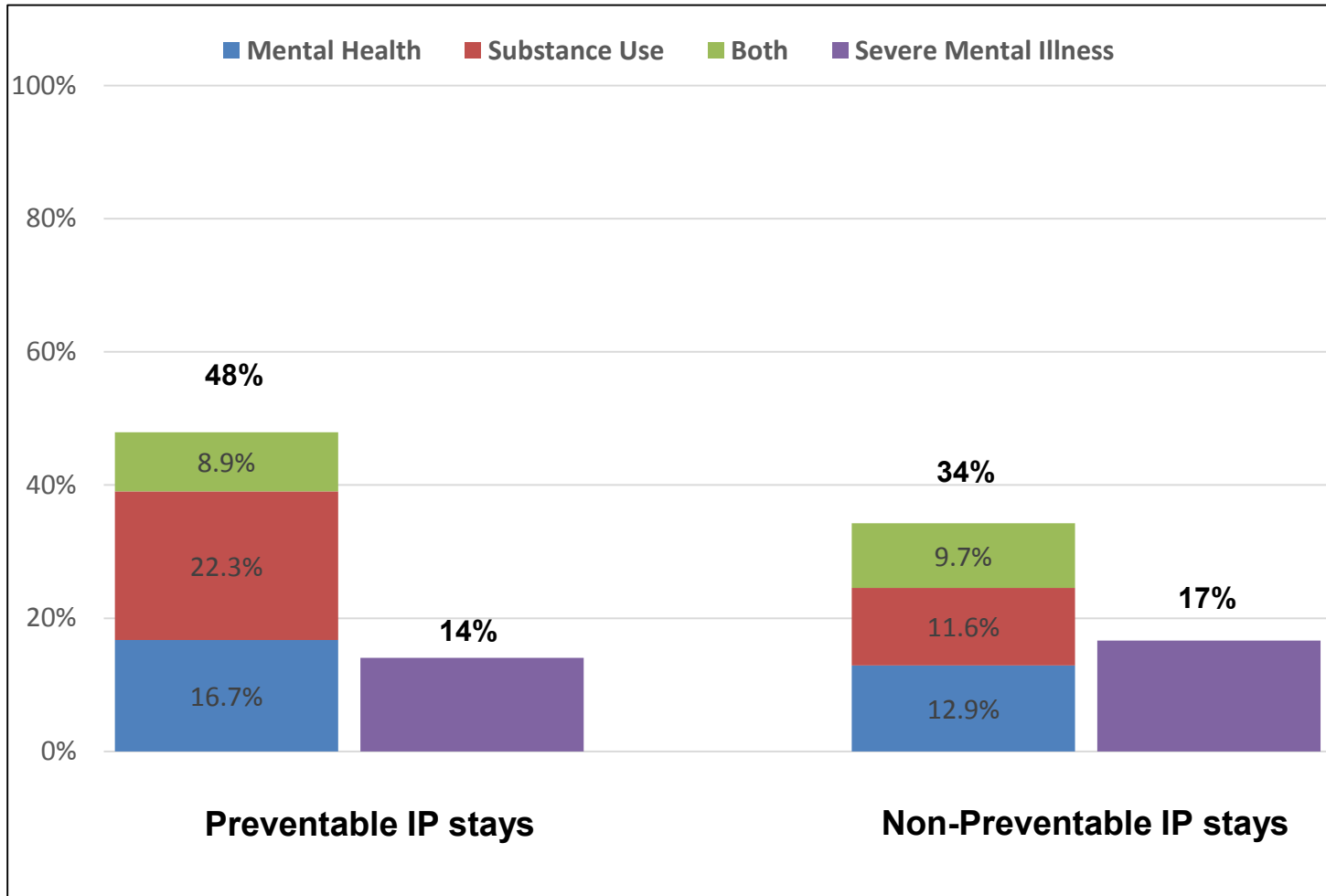
Behavioral Health Problems by Preventable Inpatient (IP) Hospitalizations

13 Low-Income NJ Areas, 2008-2011



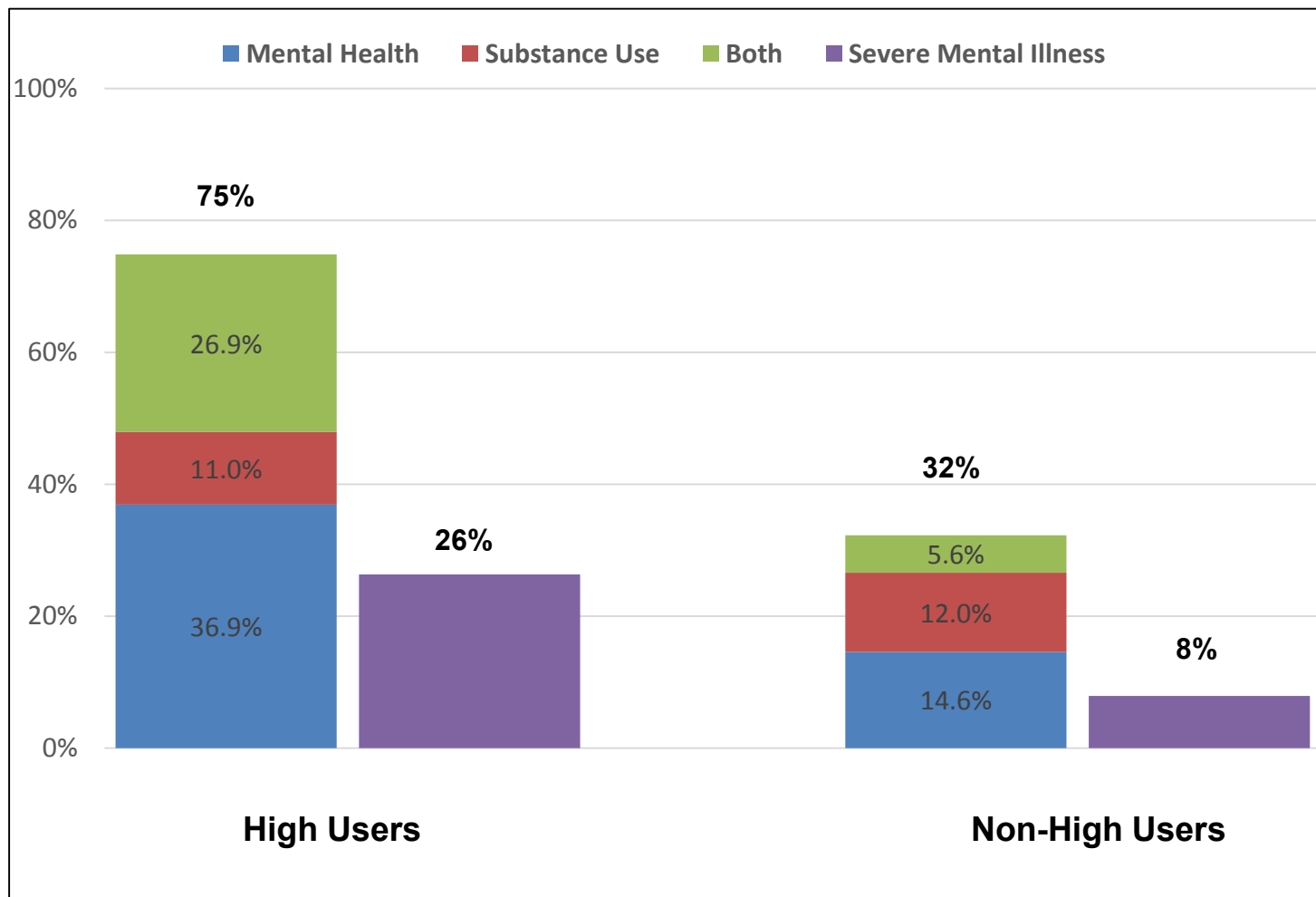
Medicaid Beneficiary Behavioral Health Problems by Preventable IP Hospitalization Status

13 Low-Income NJ Areas, 2008-2011

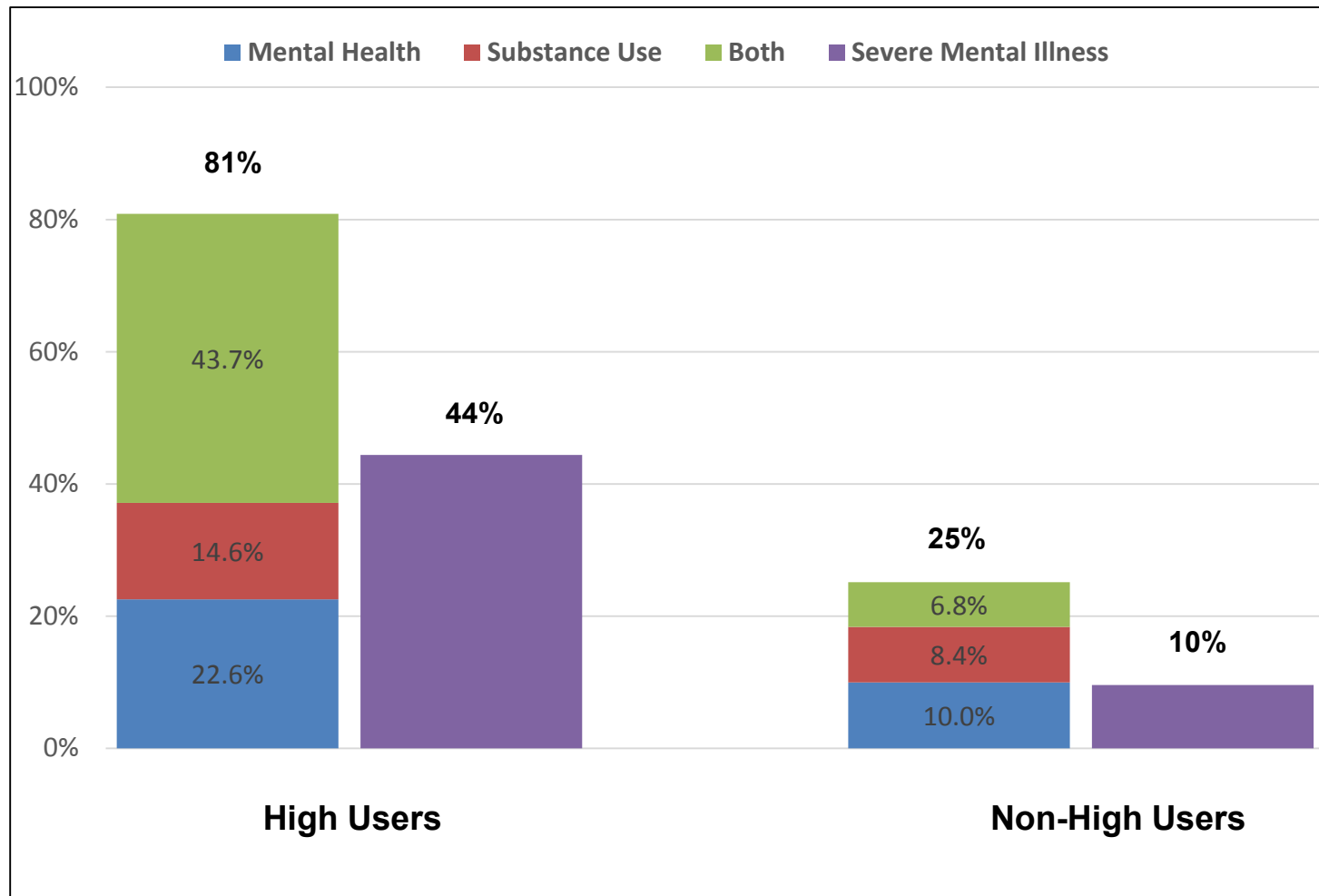


Behavioral Health Problems by Inpatient High User Status

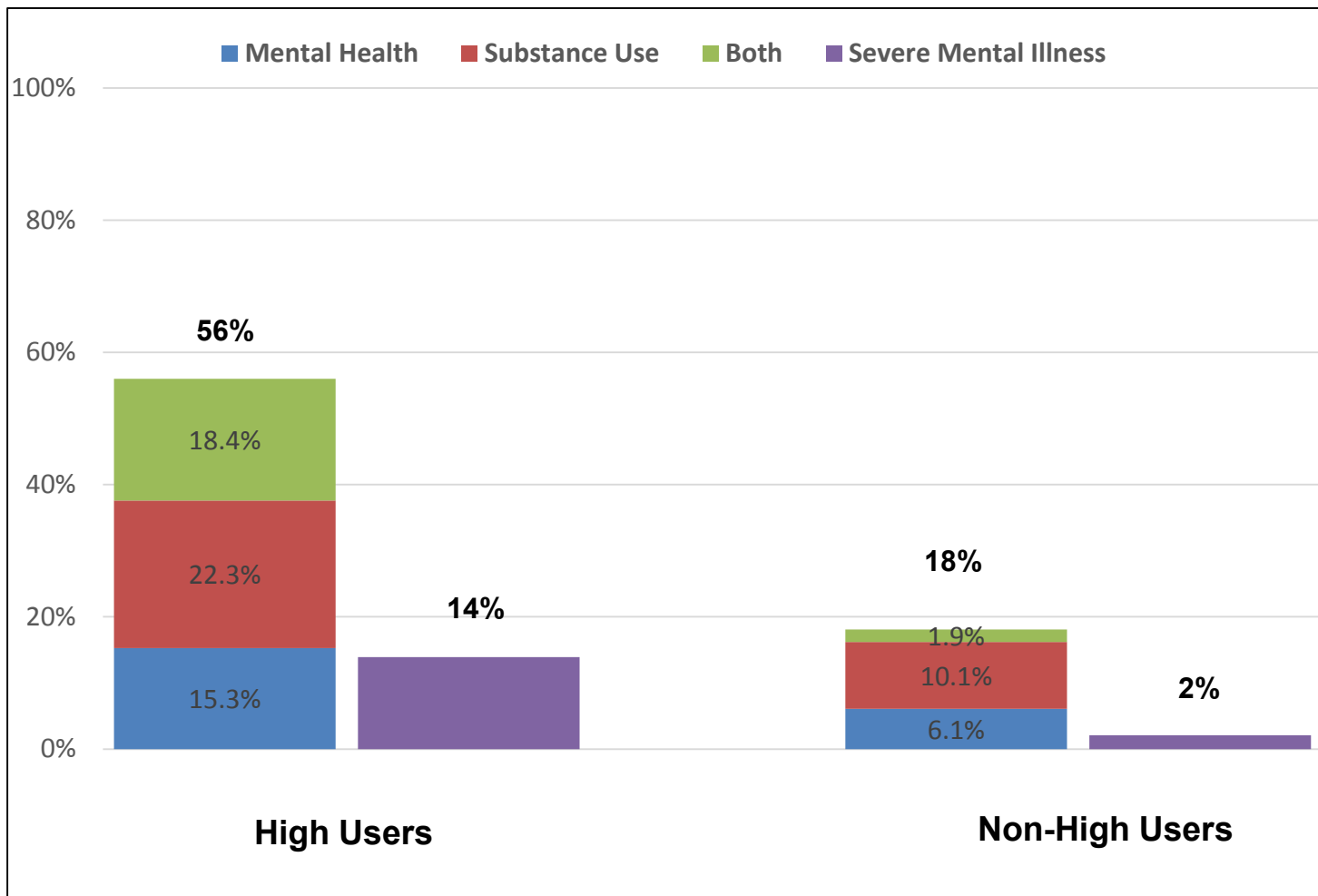
13 Low-Income NJ Areas, 2008-2011



Medicaid Beneficiary Behavioral Health Problems by Inpatient High User Status 13 Low-Income NJ Areas, 2008-2011

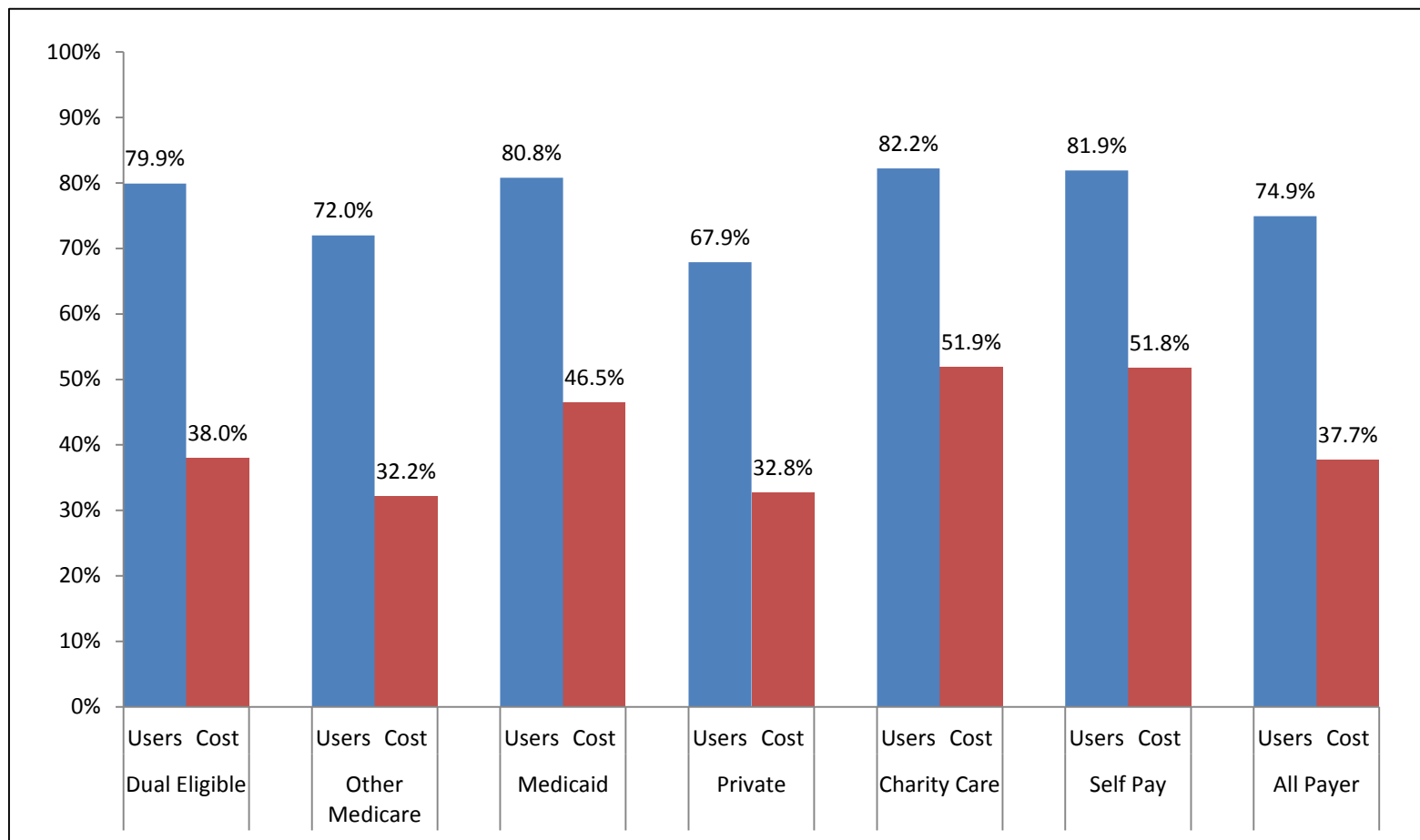


Behavioral Health Problems by ED High User Status 13 Low-Income NJ Areas, 2008-2011

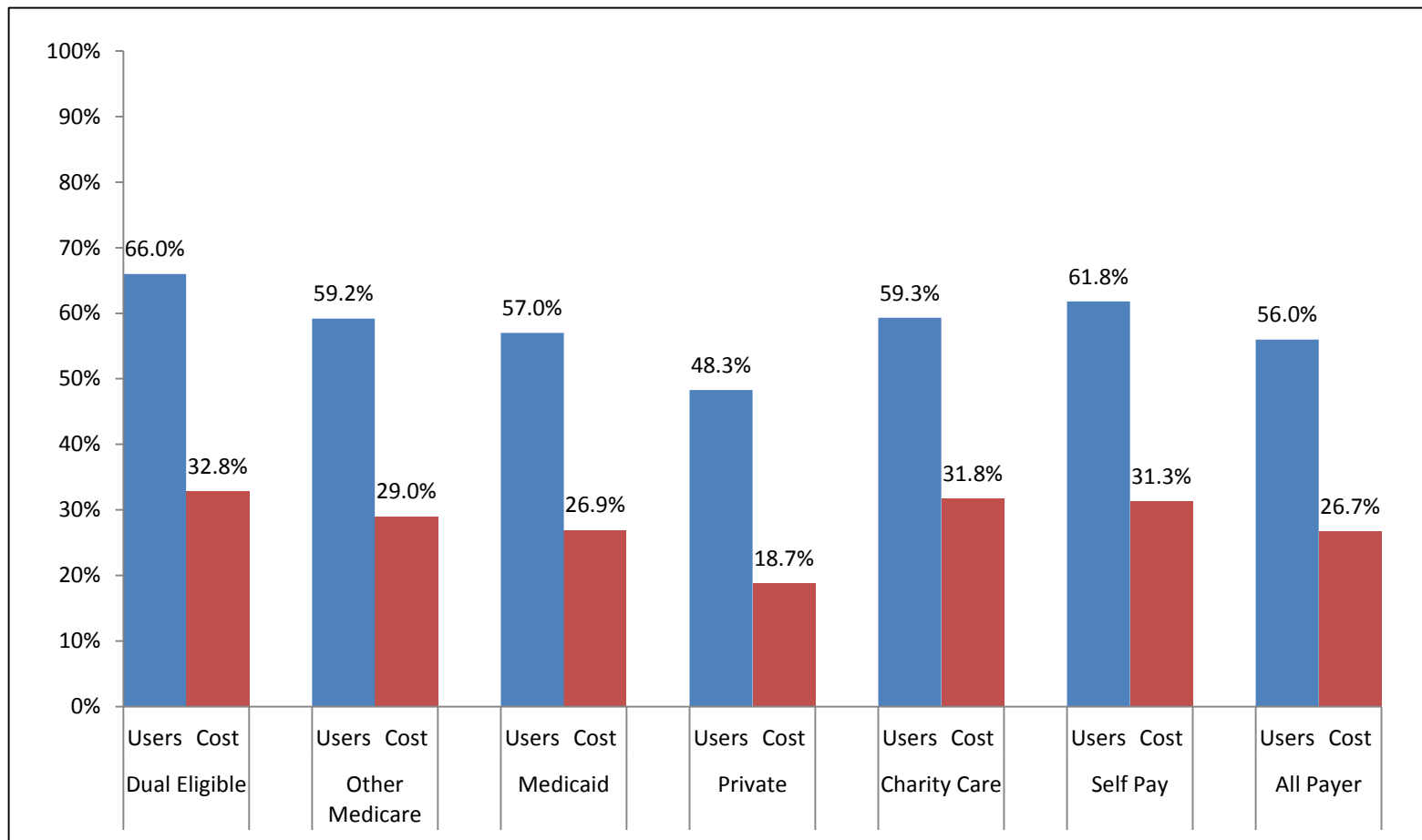


Behavioral Health Problems among Inpatient High Users by Payer

13 New Jersey ACO Regions



Behavioral Health Problems among ED High Users by Payer 13 New Jersey ACO Regions

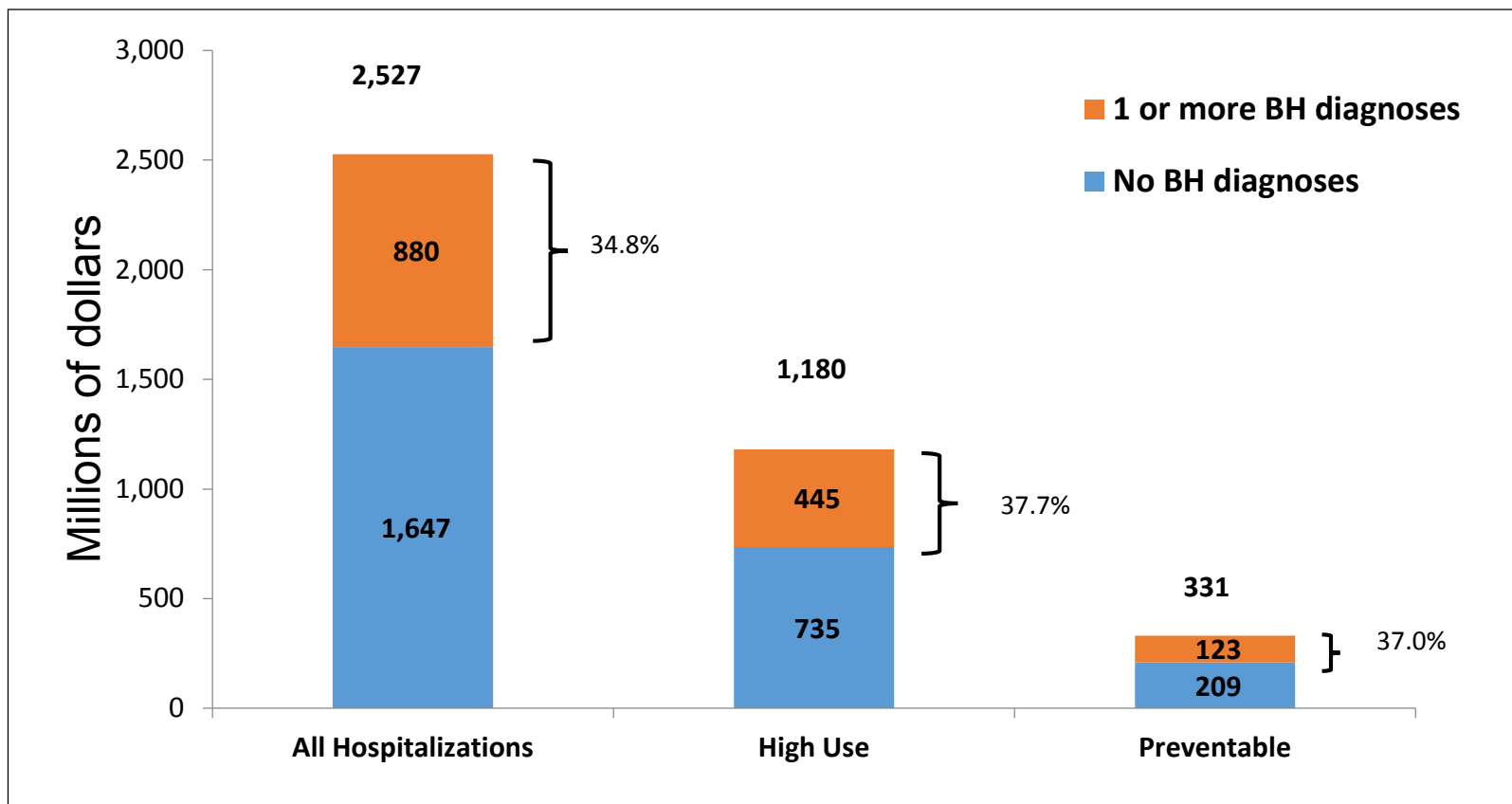


Inpatient Hospitalization Costs

Annualized Estimates

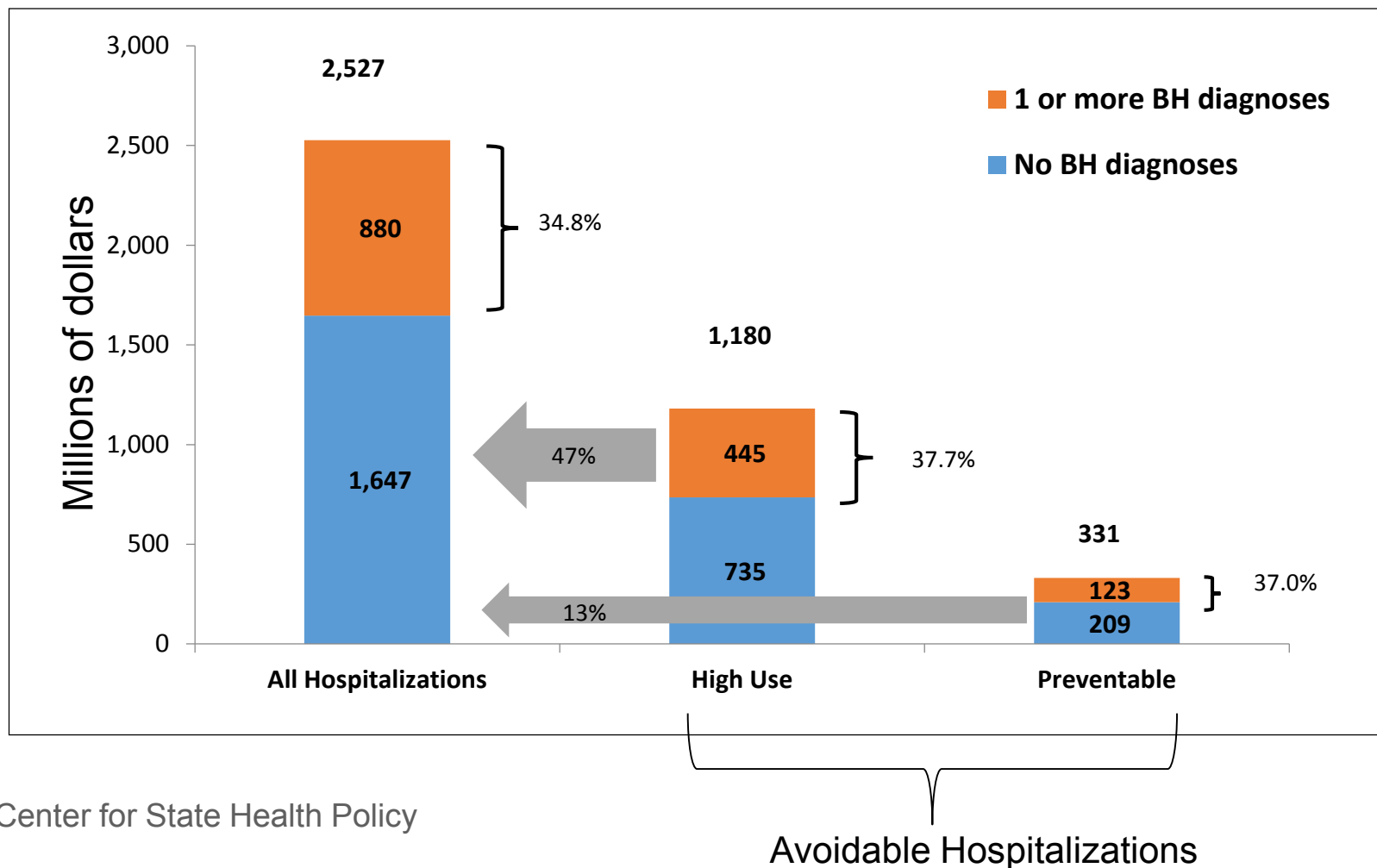
Hospitalization Costs Associated with Behavioral Health Conditions

13 Low-Income NJ Areas, 2008-2011

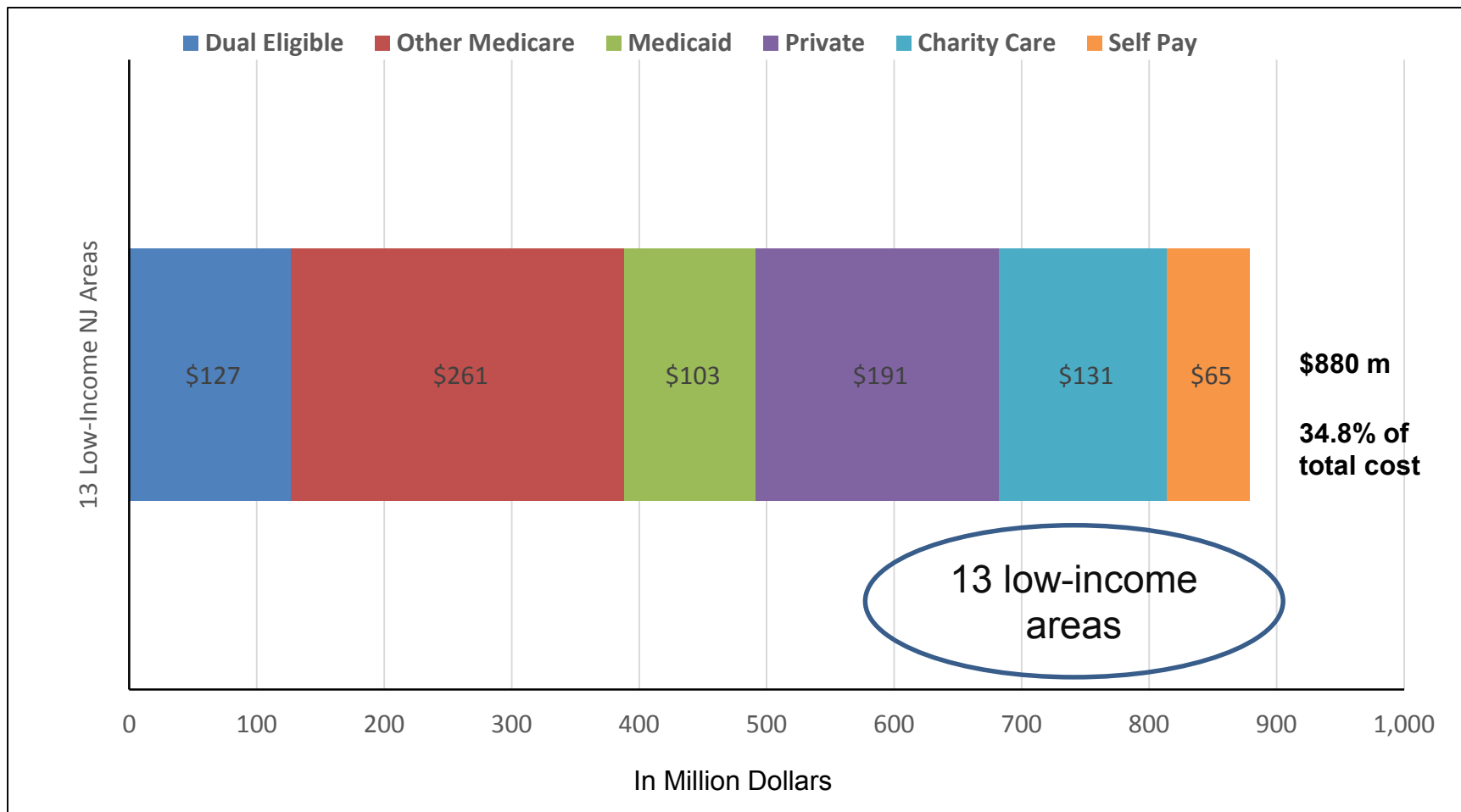


Hospitalization Costs Associated with Behavioral Health Conditions

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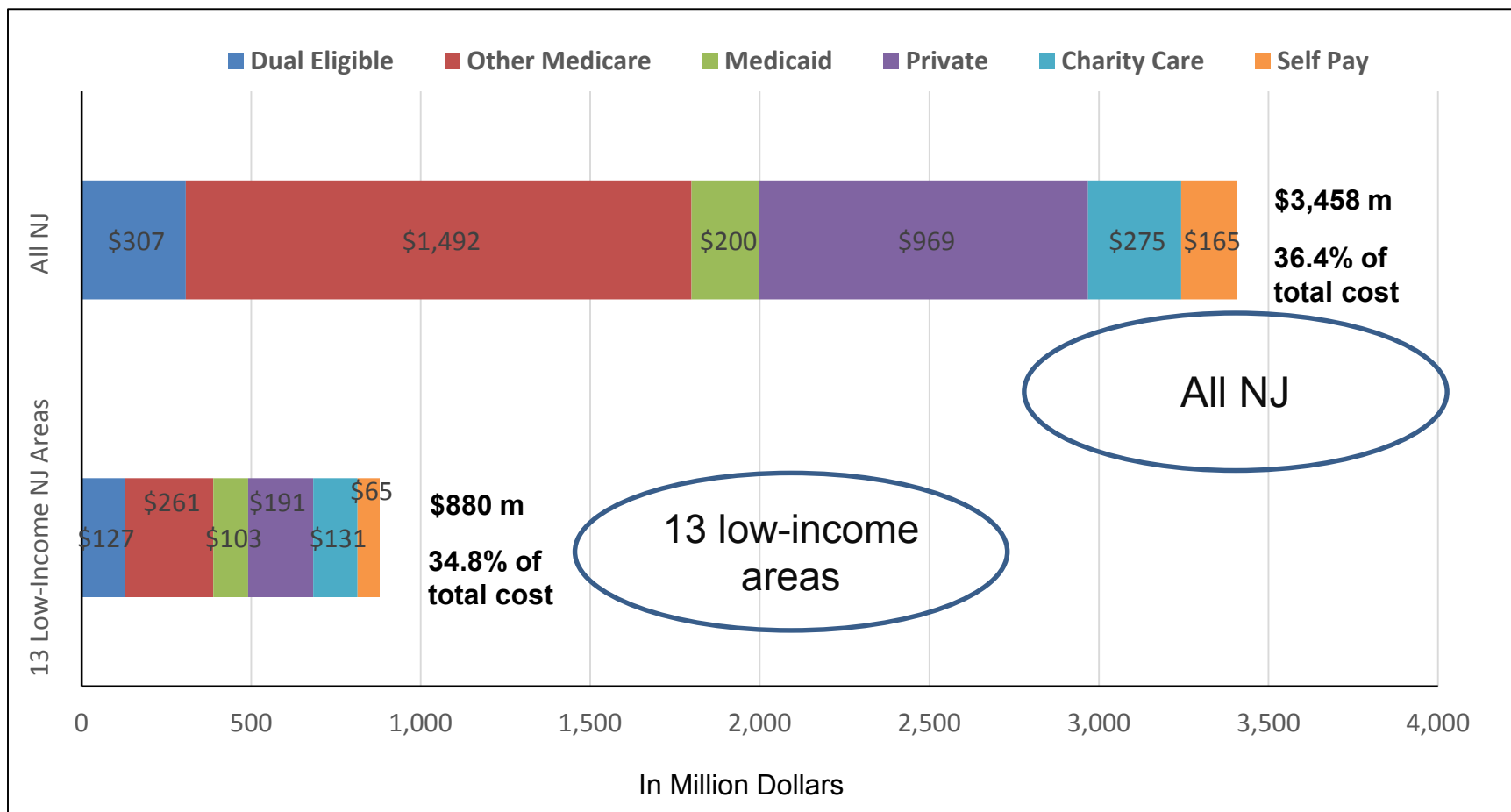


Inpatient, Behavioral Health Costs by Payer



Inpatient, Behavioral Health Costs by Payer

13 Low-Income NJ Areas and All NJ



Percentages reflect BH-related costs as a percent of total IP costs

Conclusions: Behavioral Health and Avoidable Use and Cost

- Higher prevalence of BH conditions among avoidable hospitalizations
 - Differences are higher for Medicaid beneficiaries for both preventable hospitalizations, and also hospitalizations by high users
- Substantially higher prevalence of BH conditions among high users
 - Overall three out of four inpatient high users are diagnosed with BH conditions
 - 44% of Medicaid inpatient high users have a serious mental illness
- BH-related costs comprise a substantial proportion of total IP costs across regions and payers
 - In the 13 low-income regions, annual BH-related costs amount to \$880 m, 34.8% of overall IP costs
 - Statewide, BH-related costs amount to \$3.5 b, 36.4% of overall IP costs
- Findings underscore the importance of current NJ policy initiatives including the Medicaid ACOs, Medicaid Managed Behavioral Health Organization, Behavioral Health Homes.
- Special focus may be needed for the Medicaid expansion population which is also likely to have significant behavioral health involvement along with housing and other social challenges.

DISCUSSION

Methods Appendix

- **New Jersey All-Payer Uniform Billing Hospital Discharge data**
 - Public use discharge-level data and patient-level linked data prepared by the NJ Dept. of Health
 - Patient demographics, clinical information, patient residence, hospital charge amounts and hospital information
- **Avoidable Hospitalizations and Emergency Department (ED) Visits**
 - Population-based rates of ambulatory-care sensitive/preventable inpatient and ED visits
- **High Users of Hospital Resources**
 - ‘High user’ of inpatient care equal to 4 or more inpatient stays (96th percentile of statewide distribution) 2008-2011
 - ‘High user’ of ED care equal to 6 or more visits over 2008-2010 (94th percentile of statewide distribution) 2008-2011
- **Cost estimates based on discharge-based charges**
 - Charge data deflated by cost-to-charge ratios, annualized for 2008-11, and adjusted to 2011 dollars using the Consumer Price Index for medical care