

# Behavioral Health and Readmissions among Patients in Massachusetts Acute Care Hospitals

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## RESEARCH OBJECTIVES

- There is a growing recognition in the healthcare community that patients with comorbid behavioral health conditions may be at higher than average risk of readmissions.
- Efforts to reduce readmissions should include identifying readmission risk factors associated with this group.
- Little information available on the prevalence of behavioral health comorbidities among hospitalized and readmitted patients on an all-payer, all-condition basis.

### Research Questions

- What is the prevalence of behavioral health comorbidities among hospitalized patients in Massachusetts acute care hospitals? How do these prevalence rates vary by patient demographic and payer type?
- What are the readmission rates for patients with and without behavioral health comorbidities?

## STUDY DESIGN

### Data

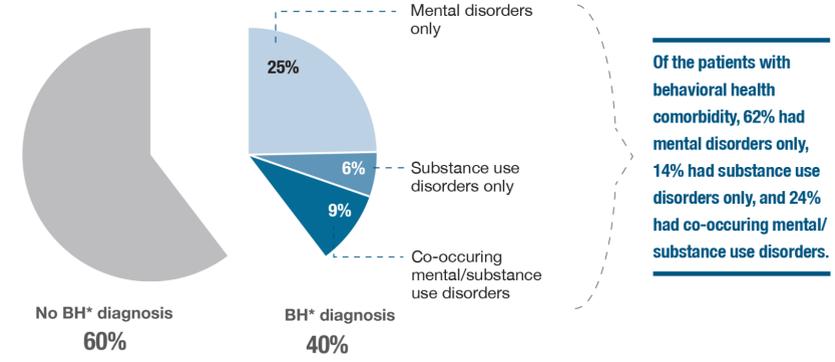
- Using Massachusetts inpatient hospital discharge datasets from July 1, 2013 to June 30, 2014, we established a base cohort of all-payer adult patients by expanding the Yale/CMS methodology for hospital-wide all-cause unplanned 30 day readmissions to include primary psychiatric admissions.<sup>1</sup>
- Discharges from Massachusetts psychiatric hospitals were not included in this study.
- A total 347,747 unique patients, representing 515,353 eligible index admissions and 79,826 readmissions, were included in the analysis.

### Behavioral Health Comorbidity

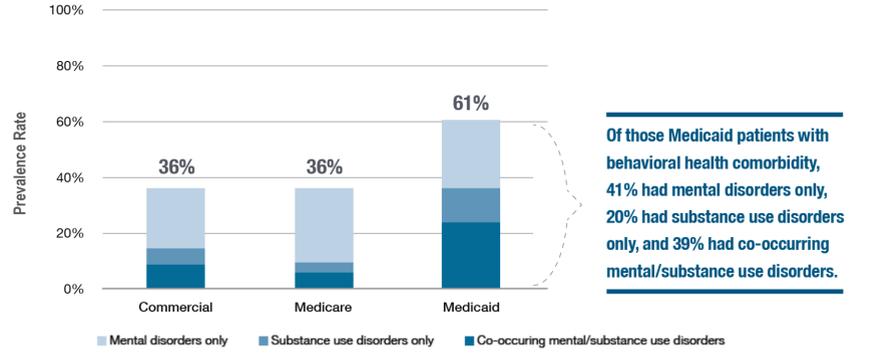
- To examine the prevalence of behavioral health comorbidity among hospitalized patients, CHIA categorized patients into behavioral health groups using a modified classification methodology developed by the Agency for Healthcare Research and Quality (AHRQ).<sup>2</sup>
- Both primary and secondary diagnoses across all discharges for patients within the one-year study period were used to group patients into four mutually exclusive categories:
  - Mental health disorders (MD) only
  - Substance use disorders (SUD) only
  - Both MD and SUD or co-occurring conditions (COD)
  - No mention of MD or SUD (None)

## PRINCIPAL FINDINGS

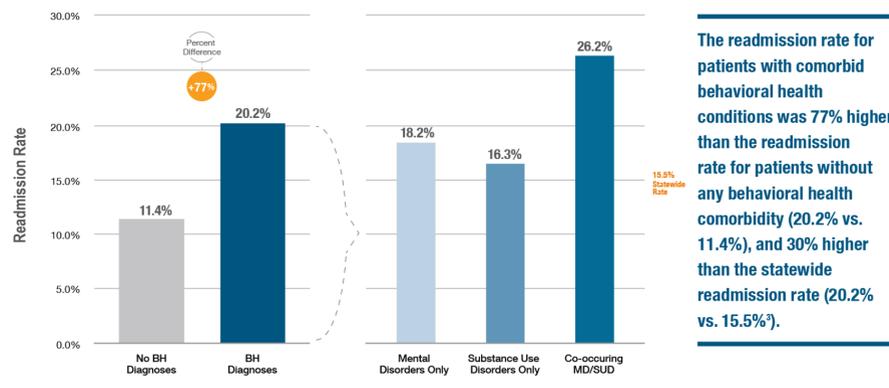
**Figure 1: Prevalence of Behavioral Health Comorbidity among Patients in Acute Care Hospitals**



**Figure 2: Prevalence of Behavioral Health Comorbidity by Payer Type**



**Figure 3: Statewide Readmission Rates and Behavioral Health Comorbidity**



## CONCLUSIONS

- A significant proportion of all-payer adult patients who sought care at acute care hospitals in Massachusetts have comorbid behavioral health conditions.
  - 40% of all hospitalized patients had at least one comorbid behavioral health condition within the one-year study period.
  - 61% of hospitalized Medicaid patients had a comorbid behavioral health condition.
- Patients with behavioral health comorbidity have disproportionately high readmissions rates.
  - The readmission rate for patients with behavioral health comorbidities was 77% higher than for patients without a behavioral health comorbidity.
  - Hospitalized patients with comorbid co-occurring mental and substance use disorders had the highest readmission rate among all patients with behavioral health conditions.

## POLICY RELEVANCE

- Behavioral health comorbidities should not be overlooked in any readmissions reductions strategies for acute care hospitals. Rather, they should be an integral part of such efforts. Particular attention should be paid to patients with co-occurring conditions and Medicaid patients.
- Payers, providers, and policymakers should be more aware of the increased readmission risk of any hospitalized patient who has a behavioral health comorbidity, and take steps to ensure a safe, effective, and supported period following hospitalization so as to reduce the likelihood of a readmission event.
- Information and analysis describing readmission patterns of patients with behavioral health comorbidities is as important as the detailed medical condition specific analyses for readmissions following discharges for heart failure, acute myocardial infarction, pneumonia, COPD, and hip/knee replacements.

## CONTACT

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<sup>1</sup> Center for Health Information and Analysis. 2016. *Hospital-Wide Adult All-Payer Readmissions in Massachusetts: 2011-2014*, Boston, MA: Center for Health Information and Analysis. Available from <http://www.chiamass.gov/assets/docs/r/pubs/16/chia-readmissions-report-2011-2014.pdf>  
<sup>2</sup> Heslin KC (AHRQ), Elixhauser A (AHRQ), Steiner CA (AHRQ). 2015. "Hospitalizations Involving Mental and Substance Use Disorders among Adults, 2012." HCUP Statistical Brief #191. June 2015. Agency for Healthcare Research and Quality, Rockville, MD. Available from <http://www.hcup-us.ahrq.gov/reports/statbriefs/sb191-Hospitalization-Mental-Substance-Use-Disorders-2012.pdf>  
<sup>3</sup>Statewide readmission rate in this report is an extension of the current Yale/CMS methodology used in CHIA's *Hospital-Wide Adult All-Payer Readmissions in Massachusetts: 2011-2014*, and includes primary psychiatric diagnoses.  
 \*BH = Behavioral Health