

The Inpatient Blindside: Comorbid Mental Health Conditions and Readmissions among Hospitalized Children

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To ensure hospital quality, the Centers for Medicaid & Medicare Services have tied payments to performance measures, including readmissions.¹ One readmission metric, the Potentially Preventable Readmission measure (3M, PPR), was initially developed for Medicare and defined as readmissions related to an index admission, excluding those for treatment of cancer, related to trauma or burns, or following neonatal hospitalization. The PPR includes readmissions for both primary mental health conditions (MHCs) and for other hospitalizations with comorbid MHCs.² Although controversies surround equating a hospital's quality with its rate of readmissions, the PPR has been expanded to include numerous states. Since the PPR is also used for the Medicaid population in these states, it also measures pediatric readmissions. Hospitals in states adopting PPR calculations, including children's hospitals, must either meet these new quality metrics or risk financial penalties. In light of evidence of high readmission rates among adult patients with MHCs, several states have modified the PPR to exclude MHCs and claims for mental health services.³⁻⁹

In their study, "Mental Health Conditions and Unplanned Hospital Readmissions in Children," Douppnik et al. provided compelling evidence that MHCs in children (similar to adults) are closely associated with readmissions.¹⁰ MHCs are possibly underappreciated risk factors for readmission penalties and therefore represent a necessary point for increased awareness. Douppnik et al. calculated 30-day unplanned hospital readmissions of children with versus without comorbid MHCs using another standard measure, the Pediatric All-Condition Readmission (PACR) measure. The PACR measure excludes index admissions with a MHC as primary diagnosis but includes children with comorbid MHCs.

Douppnik et al. used a nationally representative cohort of all index hospitalizations of children aged 3–21 years from the 2013 Nationwide Readmission Database that allowed for estimates of MHC prevalence in the study population.¹¹ A comorbid MHC was identified in almost 1 in 5 medical admissions and 1 in 7 procedural admissions. Comorbid substance abuse

was identified in 5.4% of medical admissions and 4.7% of procedure admissions, making this diagnosis the most frequently coded stand-alone MHC. The authors' findings are particularly noteworthy given that diagnosis of MHCs is highly dependent upon coding and is therefore almost certainly underreported. In pediatric inpatient populations, the true prevalence of comorbid MHCs is probably higher.

Douppnik et al. observed that comorbid MHCs are a significant risk factor for readmission. After adjustment for demographic, clinical, and hospital characteristics, children with MHCs presented a nearly 25% higher chance of readmission for both medical and procedural hospitalizations. Children admitted with medical conditions and multiple MHCs yielded odds of readmission 50% higher than that of children without MHCs. Overall, the presence of MHCs was associated with more than 2,500 medical and 200 procedure readmissions.

Previous studies in adult populations have also found that comorbid MHCs are an important risk factor for readmissions.^{12,13} Other research describes that children with MHCs have increased hospital resource use, including longer lengths of stay and higher hospitalization costs.¹⁴⁻¹⁷ Further, children with MHCs as a primary diagnosis are more prone to readmission, with readmission rates approaching those observed in children with medical complexity in some cases.^{18,19} MHCs are common among hospitalized children and have become an increasingly present comorbidity in primary medical or surgical admissions.¹⁷

One particular strength of this study lies in its description of the relationship between comorbid (not primary) MHCs and readmission following medical or surgical procedures in hospitalized children. This relationship has been examined in adult inpatient populations but less so in pediatric inpatient populations.^{12,13} This study provides insights into the relationships between specific MHCs and unplanned readmissions for certain primary medical or surgical diagnoses, including those for attention deficit disorder and autism that are not well-recognized in adult populations.

High-quality inpatient pediatric practice depends not only upon recognition of concurrent MHCs during hospitalizations but also assurance of follow-up outside of such institutions. During the inpatient care of children, pediatric hospitalists often perform myopic inpatient care which fails to routinely address underlying MHCs.²⁰ For example, among children who are admitted with primary medical or procedure diagnoses, it is possible, or perhaps likely, that providers give little attention to an underlying MHC outside of continuation of a current

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medication. Comorbid MHCs are not accounted for within re-admission calculations that directly affect hospital reimbursement. This study suggests that comorbid MHCs in hospitalized children may worsen readmission penalty status. In this manner, comorbid MHCs may represent a hospital's blindside.

We agree with Douppnik et al. that an integrated approach with medical and mental health professionals may improve the care of children with MHCs in hospitalized settings. This improvement in care may eventually affect hospital-level national quality metrics, such as readmissions. The findings of Douppnik et al. also provide a strong argument that pediatric inpatient providers should consider mental health consultations for patients with frequent admissions associated with chronic conditions, as comorbid MHCs are associated with worsened disease states and account for a disproportionate share of admissions for children with chronic conditions.^{21,22} Recognition of comorbid MHCs may improve baseline chronic disease states for hospitalized children.

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