



An Analysis of Postpartum Mental Health Readmissions Using Hospital Discharge Data

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July 14, 2025

Background

- Maternal mental health disorders are a common complication of the perinatal period
 - 1 in 5 women affected
- Screening is not universal, and treatment is not always available
 - Lack of adequate support
 - Prevalence of depression screening in CT (PRAMS, 2016-2023)
 - During pregnancy: 78.9%
 - Postpartum: 90.2%
- Postpartum mental health disorders vary in severity
- Consequences of failing to treat these disorders can be severe
 - Maternal mental health disorders are leading cause of maternal mortality
 - 20% of maternal deaths due to suicide

Goal of Analysis: Characterize the prevalence of severe mental health disorders in the postpartum period, marked by hospital visits in the year following delivery

Methods

- Hospital discharge data from 2016 to 2023 was limited to women of reproductive age (15 – 44) with a Connecticut residence
- Two datasets created:
 - Delivery records
 - Any procedure or diagnostic code listed indicating delivery from Alliance for Innovation on Maternal Health (AIM) Severe Maternal Morbidity Code List
 - Mental Health records
 - Any diagnostic code listed indicating any mental health conditions from AIM Perinatal Mental Health Conditions Patient Safety Bundle
 - Includes conditions such as anxiety, depression, PTSD, bipolar disorder, OCD, and psychosis
 - Indicated delivery records were excluded
- Datasets linked
 - Matched on First Name, Last Name, SSN, Birthdate, Medical Record Number, and Address
 - Scored based on number of matching variables
 - Higher scores assumed as matches, lower scores manually reviewed

Results

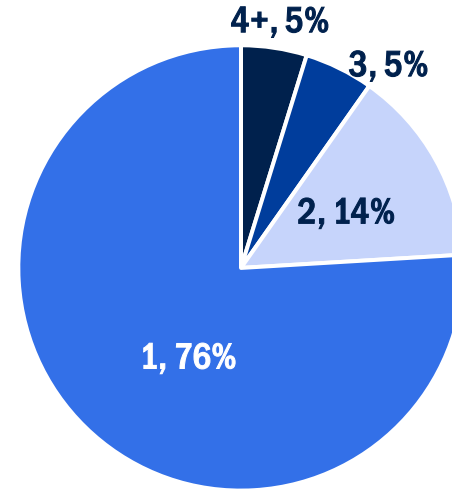
Overview

From 2016 to 2022, there were 230,020 deliveries in a CT hospital.

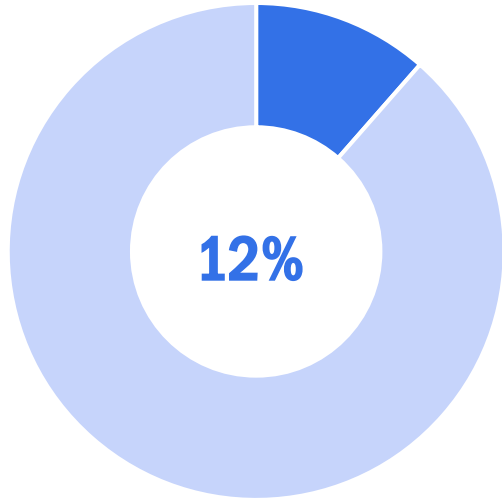
Among these residents who had a delivery, 2.4% or 5,555 women had at least one readmission with a mental health code.

On average, these residents had 3 readmissions with a range of 1 to 43 readmissions.

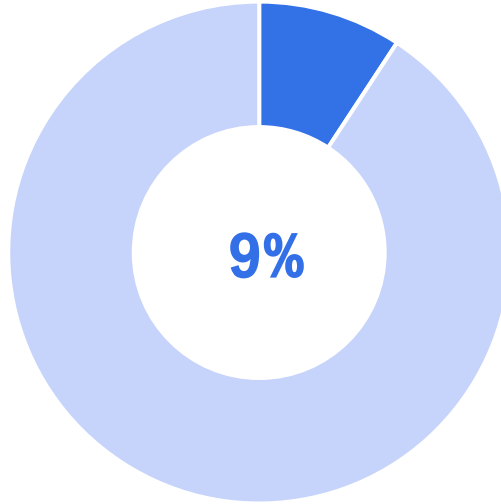
Most birthing individuals had only **one mental health readmission in the year following their delivery.**



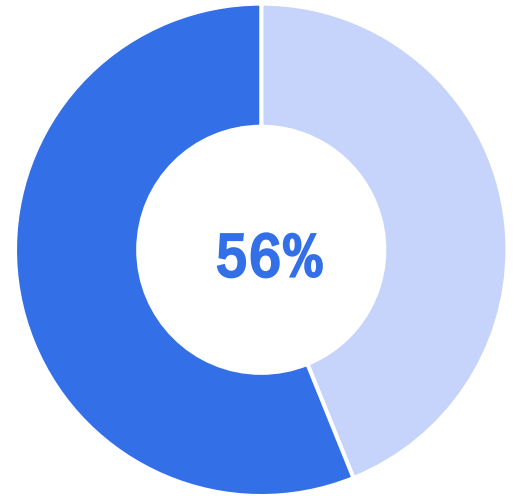
Mental Health Codes at Delivery



Among all delivery records (N=230,020), **12%** contained a mental health diagnosis code (n=26,359)



Among all delivery records with a mental health diagnosis code (N=26,359), **9%** had a postpartum mental health readmission (n=2,438)

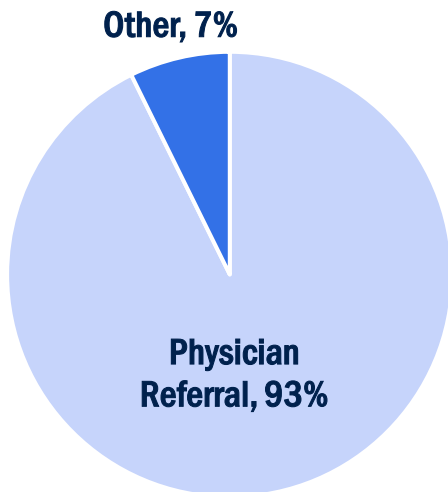


Among records with a postpartum mental health readmission (N=5,555), **56%** did not contain a mental health diagnosis code at delivery (n=3,117)

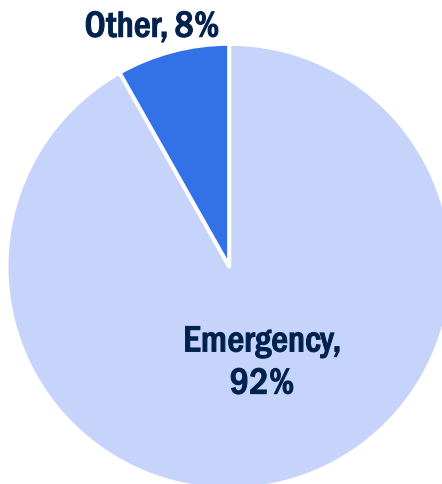
Admission Characteristics

Among all postpartum readmissions with a mental health code (n = 8,287):

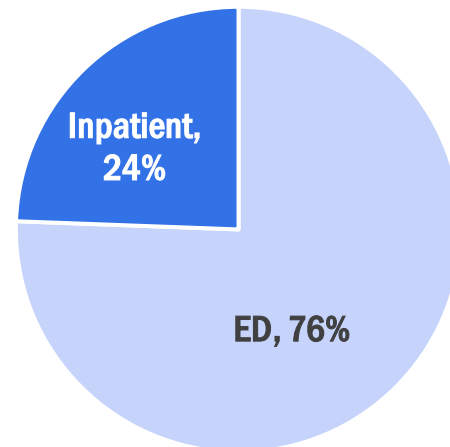
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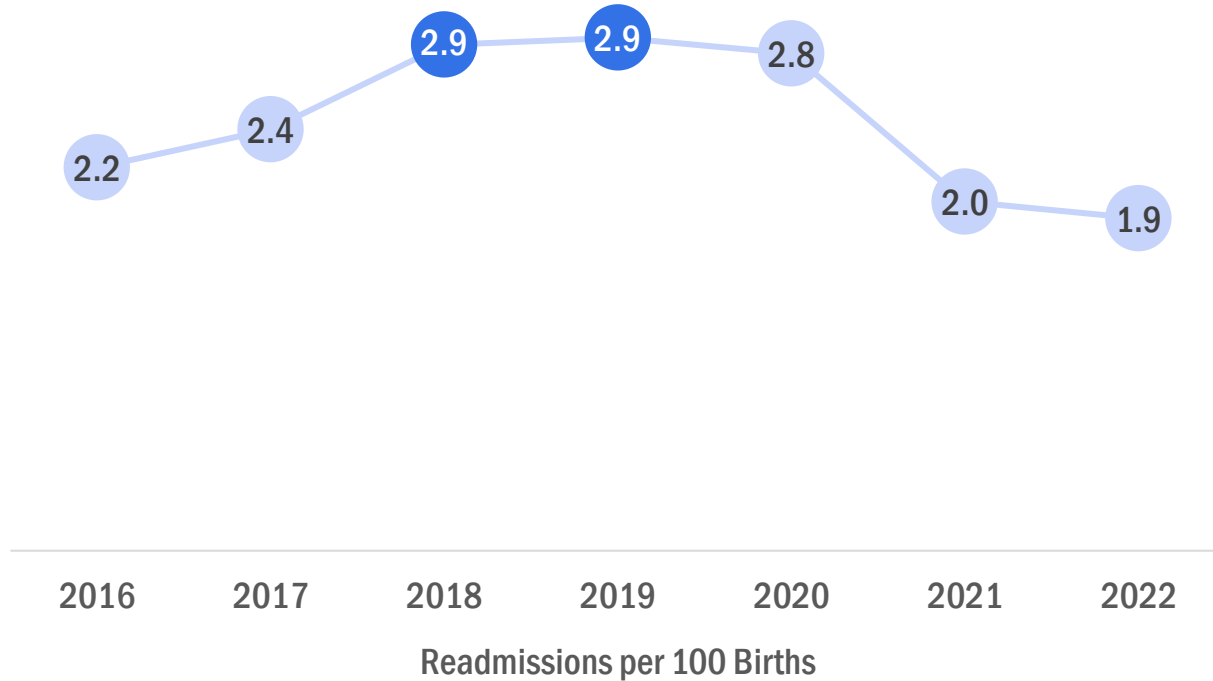
Admit Type



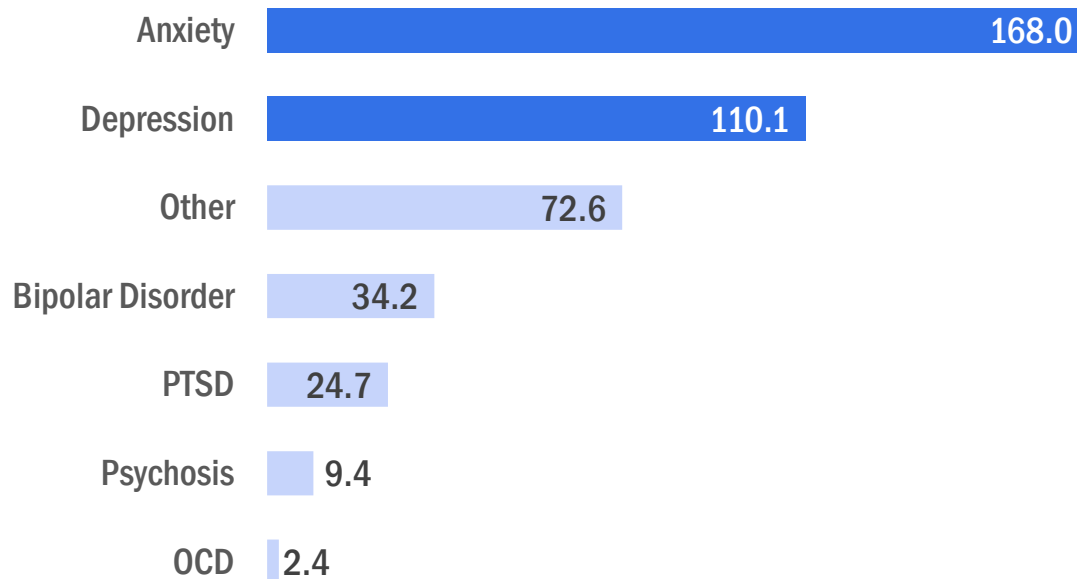
Account Type



The rate of postpartum mental health hospital readmissions peaked in 2018 and 2019 but has since declined.

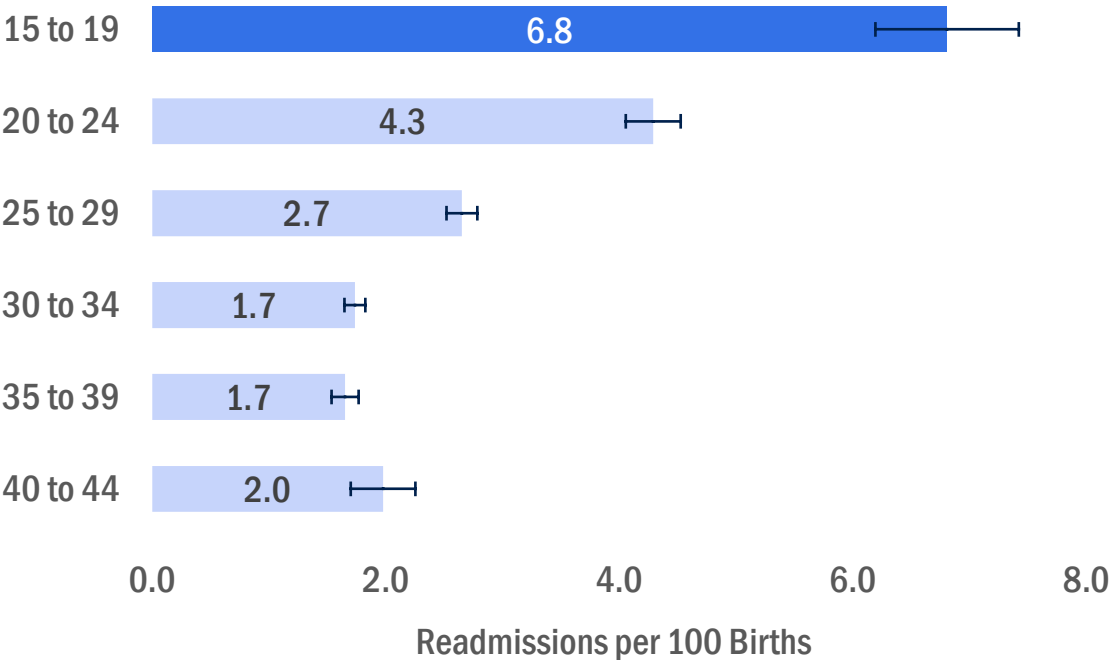


Anxiety and **depression** were the most frequent mental health conditions in hospital readmissions in the year after delivery.

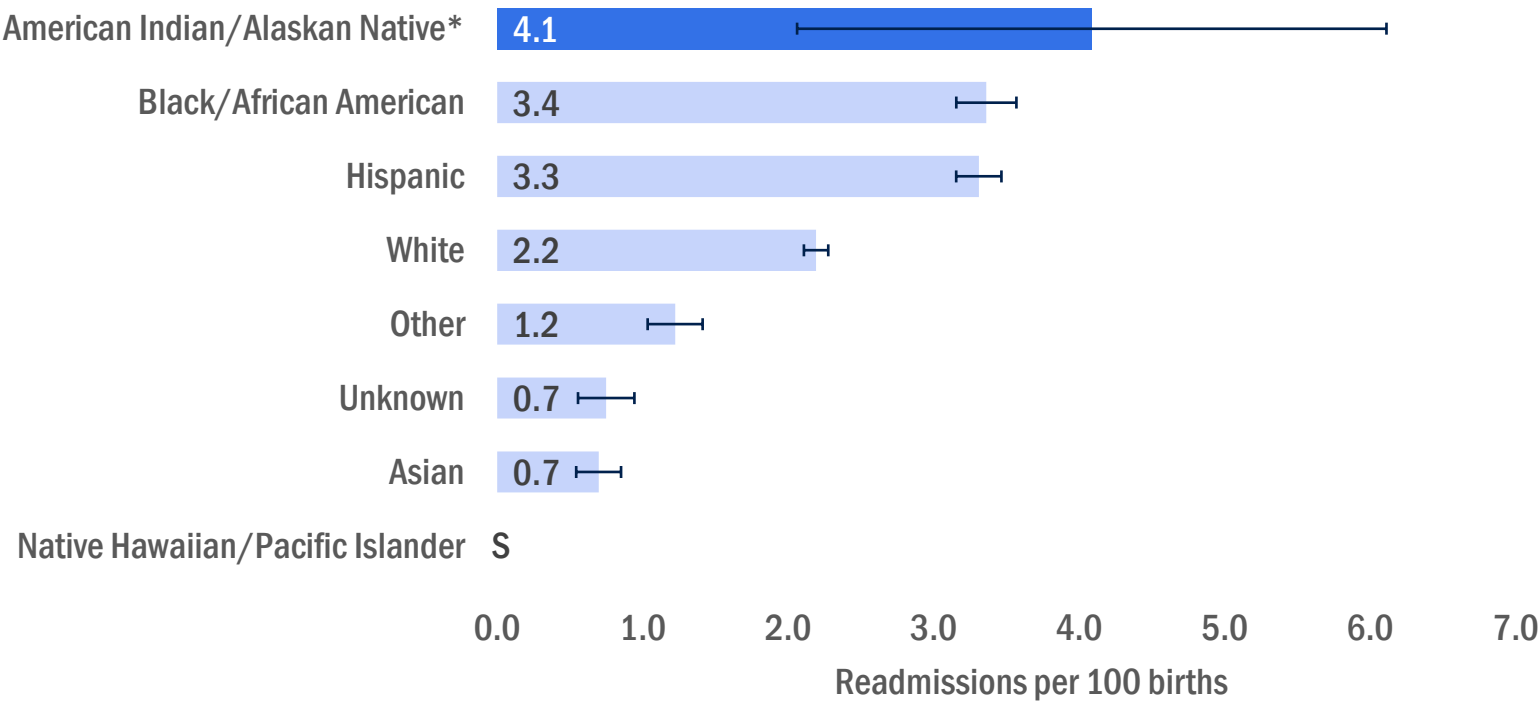


Readmissions per 10,000 births

Postpartum mental health hospital readmissions were more common among **younger birthing individuals.**



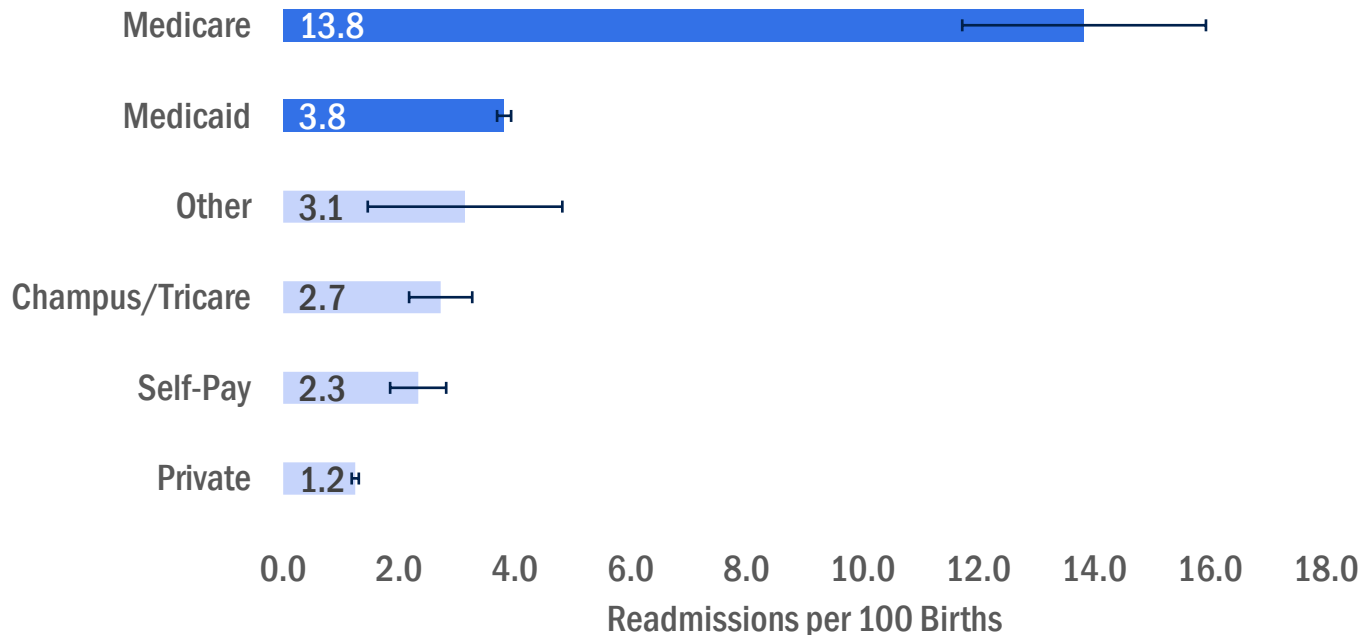
The rate of readmissions was highest among American Indian/Alaskan Natives.



*Interpret with caution, small numbers affect reliability

S = Suppressed due to small numbers

Those who used **public insurance** to cover their birth had the highest rates of mental health readmissions.



Limitations

- The primary use for hospital data is billing purposes
 - May be bias in the way information is recorded
- Data linkage may have resulted in erroneous linkages
- Due to limitations of the data source, it is possible that the primary diagnostic reason for readmission is not mental health related
 - Codes may be just existing issues/diagnoses or secondary concerns
- Diagnosis and procedure codes may be inaccurate

Conclusions

- Postpartum mental health readmissions are most common among those who are
 - Younger
 - Use public insurance
 - American Indian/Alaskan Native
 - Black
 - Hispanic
 - Previous diagnosis of mental health conditions
- Most common mental health diagnoses in readmissions
 - Anxiety
 - Depression

Public Health Implications

- It is important to identify those experiencing mental health issues early through universal screening throughout pregnancy, at delivery, and during postpartum and infant well-child visits
- Prioritize providing extra support to groups deemed high risk, especially those with prior diagnosis of mental health conditions
- Improve the availability of and ease of access to mental health support professionals