RACIAL VARIATION IN PRENATAL DEPRESSION IN A U.S. POPULATION OF MEDICAID-INSURED PREGNANCIES

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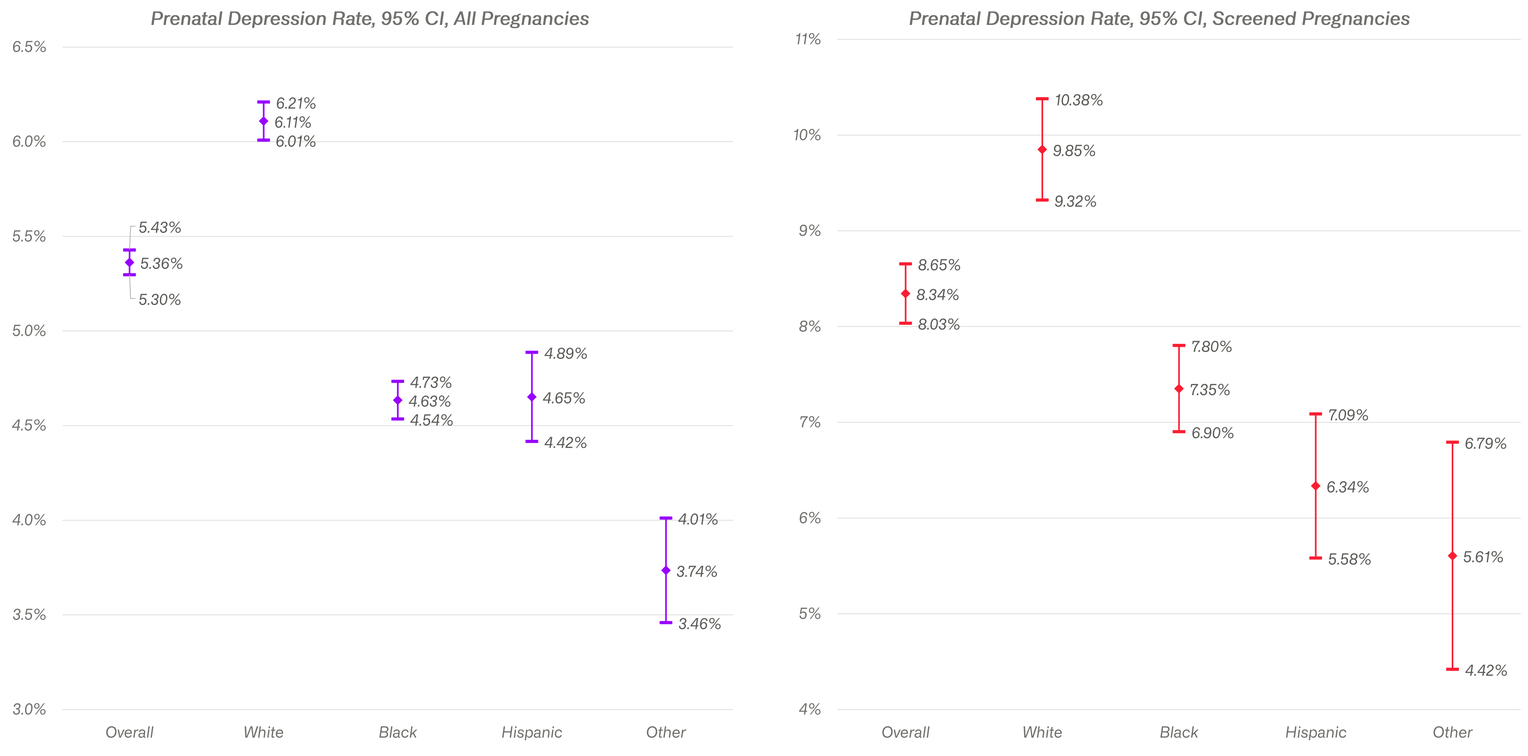
Study Summary

Study Objective: To assess racial variation in prenatal depression in a U.S. population of Medicaid-insured pregnancies.

Study Design: Retrospective cohort study of Medicaid-insured patients with a pregnancy outcome from 2018-2022.

Study Results



Conclusion: Variations in the rates of prenatal depression diagnosis by race were observed and the highest rates of prenatal depression were observed in pregnancies in White patients. The higher rates of prenatal depression diagnosis in pregnancies of White patients may reflect racial variation in level of prenatal care by race.

Background

- Depression is a common psychiatric disorder during the perinatal period. Patients are at risk for the development of mental health disorders during the perinatal period, including perinatal depression.[1]
- Perinatal depression is characterized by a major depressive episode in the prenatal or postpartum period and includes both prenatal depression and postpartum depression.[2]
- Prenatal depression is an important risk factor for postpartum depression and has been associated with negative impacts on child development.[3]
- Prior research has shown racial differences in the risk of perinatal depression.[4]

Objective

- To assess racial variation in prenatal depression in a U.S. population of Medicaid-insured pregnancies.

Methods

Study Design and Data Source

- This study employed a retrospective observational cohort design within the Merative™ MarketScan® Multi-State Medicaid Database.
- The MarketScan data was accessed using Treatment Pathways 4.0, an online analytic platform, to identify patients with a pregnancy outcome between 1 January 2018 and 31 December 2022 (Figure 1).
- Pregnancies included in the study were required to have continuous enrollment for 480 days prior to the delivery date. The 300 days prior to the delivery were considered the prenatal period and 180 days prior to the prenatal period were considered the pre-pregnancy period.

Outcomes

- Prenatal depression, prenatal screening, and number of prenatal visits were identified during the prenatal period as follows:
  - Prenatal depression: non-diagnostic medical claim for depression, adjustment or mood disorders
  - Prenatal depression screening: medical claim for emotional/behavioral assessment (CPT: 96127, 96160, 96161) or depression screening (ICD-10: Z13.31, Z13.32)
  - Prenatal visits: unique service dates with a claim for an outpatient office visits with a diagnosis or procedure code for pregnancy-related healthcare resource utilization.
- Patient age and race were measured on the date of the pregnancy outcome.
- Chi-square tests were conducted to compare patient characteristics and outcomes. A p-value <.001 was considered statistically significant.

References
1. Am Fam Physician 2016; 93:852–858.
2. American Psychological Association. Diagnostic and statistical manual of mental disorders, 5th ed. Washington, DC: American Psychological Association, 2013
3. Arch Womens Ment Health 2016;19:711–720
4. J Affect Disord 2023; 334:297–301

Disclosure
Elizabeth Packnett and Liisa Palmer are employees of Merative. This study was funded by Merative.

Figure 1. Patient Selection

Patients with a medical claim for a pregnancy outcomes between 01 January 2018 and 31 December 2022. Date of earliest claim each calendar year was the index date
N=1,346,9532 (100.0%)

↓

Age 15-50 and female on the date of the pregnancy outcome
N=1,343,431(99.7%)

↓

≥480 days of continuous enrollment prior to the pregnancy outcome
N=599,964 (44.5%)

↓

No non-diagnostic claims for depression in the period from 480 to 301 days prior to the pregnancy outcome
N=558,813 (41.5%)

↓

≥1 diagnosis, procedure or DRG code indicating delivery on the pregnancy outcome date
N=458,372 (34.0%)

Table 1. Characteristics of Pregnancies with and without Prenatal Depression

	All (N=458,372)	*Depression (N=24,580)*	*No Depression (N=433,792*
*Age**			
<18	*3.3%*	*3.8%*	*3.2%*
18-25	*43.8%*	*43.4%*	*43.8%*
26-34	*43.2%*	*43.6%*	*43.2%*
35+	*9.7%*	*9.2%*	*9.7%*
*Race**			
White	*47.3%*	*53.9%*	*46.9%*
Black	*37.6%*	*32.5%*	*37.9%*
Hispanic	*6.7%*	*5.8%*	*6.8%*
Other	*3.9%*	*2.8%*	*4.0%*
Unknown	*4.4%*	*5.1%*	*4.4%*
*Prenatal Screening**			
Yes	*7.0%*	*10.7%*	*6.8%*
No	*93.0%*	*89.3%*	*93.2%*
*Number of Prenatal Visits**			
No visits	*16.3%*	*9.8%*	*16.7%*
1-5 visits	*38.2%*	*32.8%*	*38.5%*
6-10 visits	*20.0%*	*24.4%*	*19.7%*
11+ visits	*25.6%*	*33.1%*	*25.1%*

**p<.001 for Chi-square tests comparing pregnancies with and without prenatal depression diagnosis*

Results

- In total 458,372 Medicaid-insured deliveries were included in the study; most pregnancies were in White patients (47.3%) followed by Black (37.6%), Hispanic (5.3%) and other race patients (3.9%). (Table 1)
- The overall rate of diagnosed prenatal depression was 5.36% (95% CI: 5.30-5.53); 8.34% (95% CI: 8.03-8.65%) in screened pregnancies. Rates of diagnosed prenatal depression were highest in pregnancies in White patients followed by Black, Hispanic, and other race patients. (Summary Figure)
- Screening rates for prenatal depression differed by racial group. Screening was most common in pregnancies of Hispanic patients (13.1%) and lowest in pregnancies of White patients (5.9%). (Figure 2)
- Number of prenatal visits also varied by race. Pregnancies in Hispanic patients were more likely to have less than six prenatal visits and pregnancies in White patients were more likely to have 11 or more prenatal visits. (Figure 3)

Limitations

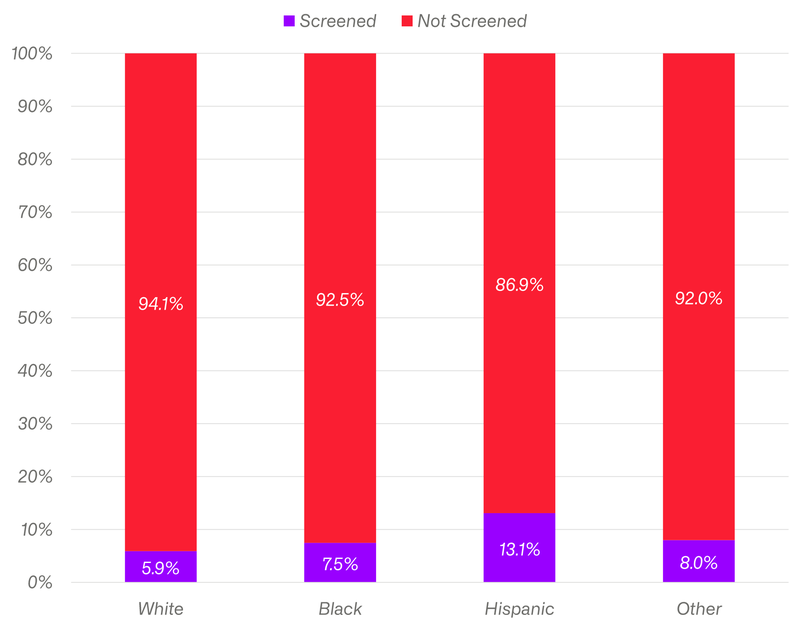
This analysis has conventional limitations of claims-based analyses:

- Procedure codes used to identify prenatal screening not specific to depression and may include screening for other behavioral health conditions.
- This study was based on pregnancies with commercial or Medicaid health coverage, and results may not be generalizable to pregnancies with other types of insurance or without health insurance coverage
- Diagnoses on claims may be mis-coded, thereby potentially underestimating the prevalence of prenatal depression.

Conclusions

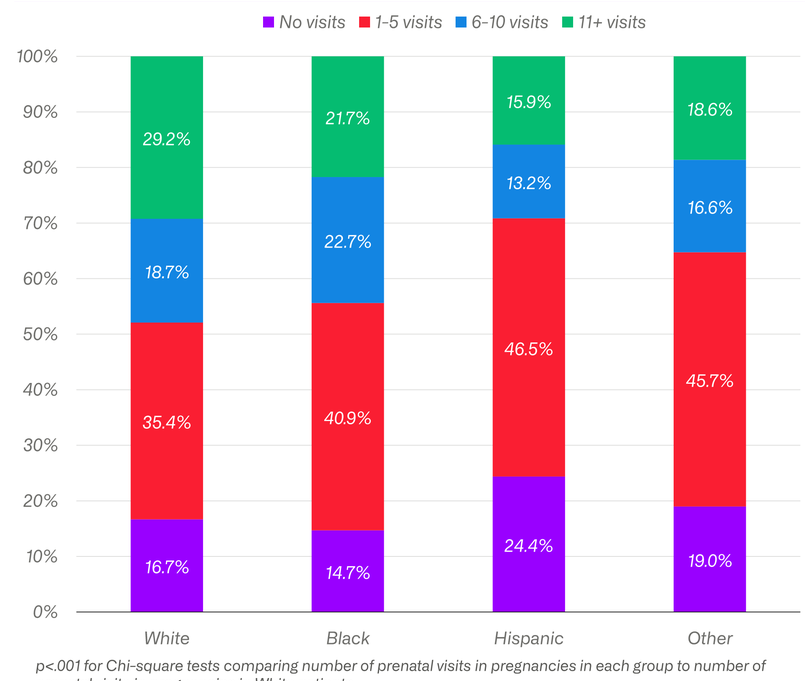
- Variations in the rates of prenatal depression by race were observed and the highest rates of prenatal depression were observed in pregnancies in White patients.
- Overall screening rates were low with the lowest rates observed in pregnancies in White patients. Pregnancies in White patients also had more prenatal visits. Therefore, the higher rates of prenatal depression of pregnancies in White patients may be attributed to higher levels of prenatal care.
- Despite being more likely to have fewer prenatal visits, pregnancies in Hispanic patients were more likely to be screened for depression, which may reflect increased provider awareness of prenatal screening when prenatal care is inadequate.

Figure 2. Rate of Prenatal Screening by Racial Group



p<.001 for Chi-square tests comparing screening rate in pregnancies in each group to screening rate in pregnancies in White patients.

Figure 3. Number of Prenatal Visits by Racial Group



p<.001 for Chi-square tests comparing number of prenatal visits in pregnancies in each group to number of prenatal visits in pregnancies in White patients.

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