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## Demographic and Psychosocial Factors Associated with Suicide Mortality Among Childbearing-Aged Individuals: A Case-Control Study


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## INTRODUCTION

- Suicidal ideation and non-fatal intentional self-harm are more common among perinatal individuals than those in the general population (especially in the year preceding and following childbirth).<sup>4</sup>
- Although pregnancy has been thought to be protective against suicide,<sup>1</sup> existing evidence shows perinatal losses (e.g., miscarriage, abortion, stillbirth) represent significant stressors which may increase risk for suicide.<sup>2</sup>
- The rates of suicide among childbearing women has increased 45% since 2001.<sup>5</sup>
- Study goal: Examine psychosocial, demographic, and healthcare-utilization factors as potential risk and protective factors associated with suicide among child-bearing aged women to better inform mental health care and suicide-prevention efforts in this population

## METHODS

- Retrospective case-controlled chart review
- 290 women ages 16-45 who died by suicide between 2000-2015
- Each case matched with 10 women who did not die by suicide (n=2900, controls)
- Nine systems in the Mental Health Research Network referenced
- Conditional logistic regression was used to investigate the relationship between pregnancy/postpartum status and suicide death in this matched case-control study

\*NB: Participants were included based on how sex was reported in the EHR.

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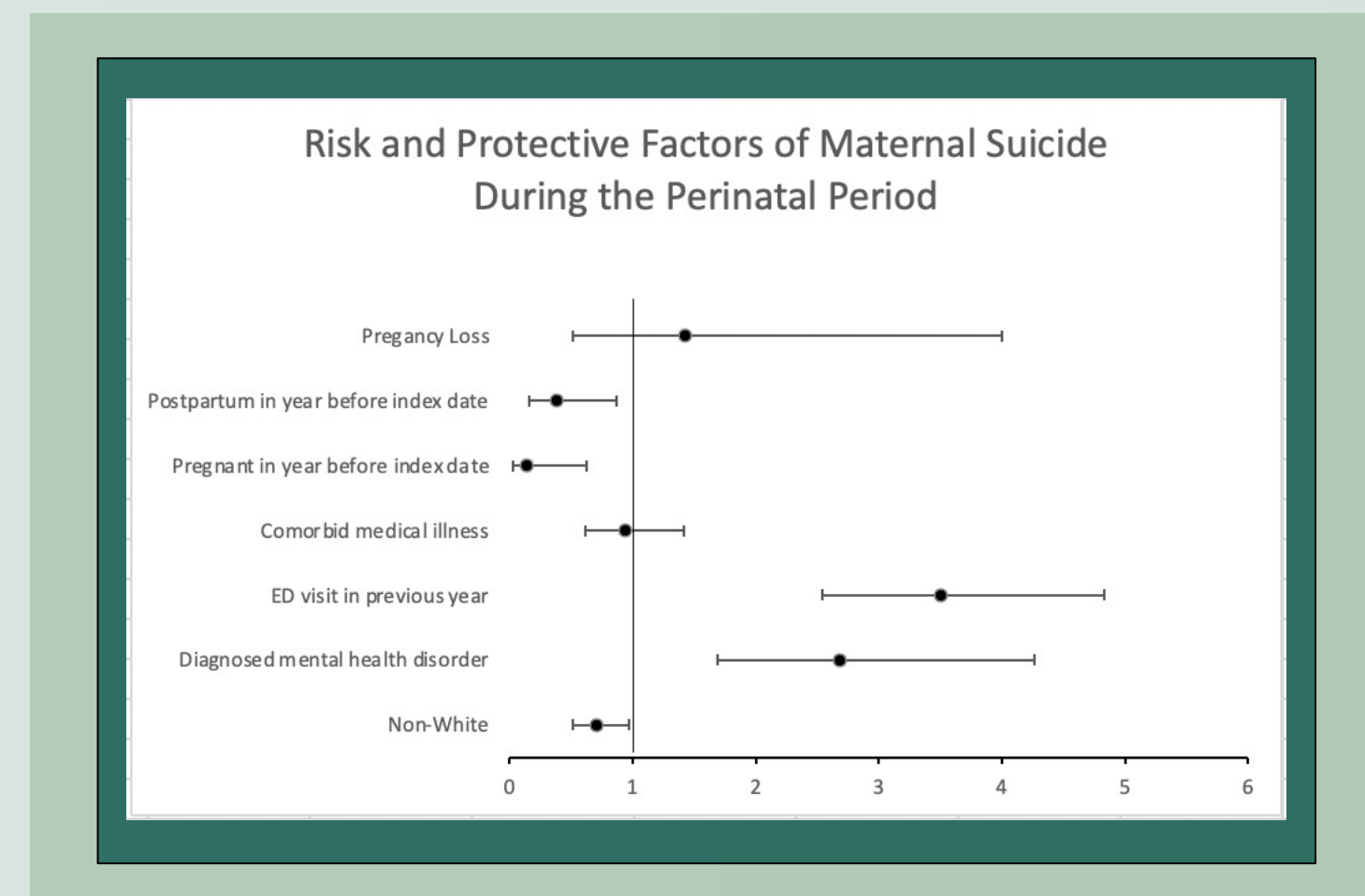
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## RESULTS

- Risk of suicide during the perinatal period was increased in individuals in the following categories:
  - Diagnosed mental health disorder\*
  - ED visit in the previous year\*
  - Pregnancy loss
- Risk of suicide during the perinatal period was decreased in individuals in the following categories:
  - Non-Hispanic White
  - Pregnancy in year before index date\*
  - Post-partum in year before index date\*
- No differences were found between groups in:
  - Maternal age
  - Neighborhood poverty level
  - Neighborhood education level
  - Comorbid medical illness

\*=statistically significant



## AFFILIATIONS

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## RESULTS

- Individuals who died by suicide were **significantly less likely** to have delivered an infant (aOR=0.38, 95% CI: 0.16, 0.87) or be pregnant (aOR=0.14, 95% CI: 0.03, 0.63) and were **1.4x** more like to have experienced perinatal loss (p>0.05)
- Individuals who died by suicide were **2.7x** more likely to have a mental health disorder or substance use disorder than controls and **3.5x** more likely to have visited the ED the year before death

Event	Control n (%)	Case n (%)
	2,900	290
Delivered an infant	160 (6%)	7 (2%)
Experienced perinatal loss	21 (1%)	6 (2%)
Had a pregnancy	90 (3%)	2 (1%)

Table 1. Prevalence of pregnancy-related events among cases and controls in the previous year

## CONCLUSIONS

- Although pregnancy and childbirth may be protective against suicide, perinatal loss may confer greater risk of suicide
- Study population is small, therefore further research is needed with a larger sample size to procure more generalizable results
- Qualitative research suggests there is a general lack of evidence-based guidance and resources for supporting women who experience pregnancy loss during the perinatal period.<sup>3</sup>
- Women of child-bearing age with a diagnosis of anxiety, depression, substance use disorders and/or who have experienced perinatal loss may benefit from routine screening and monitoring for suicide risk
- Risk is likely compounded in women who are of racial minority status with preexisting mental health and/or substance use disorders