May 2nd, 12:00 AM

Maternal Health Outcomes of the Least and Most Vulnerable Counties in NJ

Nayarith Lopez
Rowan University

Follow this and additional works at: https://rdw.rowan.edu/stratford_research_day

Part of the Female Urogenital Diseases and Pregnancy Complications Commons, Health and Medical Administration Commons, Maternal and Child Health Commons, Obstetrics and Gynecology Commons, Pathological Conditions, Signs and Symptoms Commons, Primary Care Commons, Psychiatric and Mental Health Commons, Psychiatry Commons, and the Women's Health Commons

Let us know how access to this document benefits you - share your thoughts on our feedback form.

ROWAN - VIRTUA
School of
Osteopathic Medicine

Maternal Health Outcomes in the Least and Most Vulnerable Counties in NJ

Nayarith Lopez, OMS-II

Background

- Maternal health continues to be of great concern in the United States.
- The maternal mortality rate for 2021 **was 32.9 deaths per 100,000 live births**, an increase from both 2020 and 2021.[1]
- The leading causes of pregnancy-related death are **mental health, hemorrhage, and cardiovascular conditions**. Most are preventable.[2]
- **New Jersey ranks 27th with 24.1 deaths** occurring within 42 days of the end of a pregnancy per 100,000 live births.[3]
- While rates for the entire state show a need for improvement, in comparison to northern and central regions, **rates in the southern region of NJ are approximately twice the state average.**[4]
- there are a multitude of disparities contributing maternal health outcomes that vary by county and need to be addressed.
- Creating government funding, reducing racial disparities, and promoting health initiatives are included in the **Nurture NJ Maternal Health and Infant Health Strategic Plan**.[5]

Significance

- To properly implement efforts to reduce maternal mortality rates, research must be done to identify why maternal outcomes vary by county.
- Understanding of disparities that exist within and across counties in NJ is needed to improve maternal health outcomes and reduce maternal morbidity.

Methods

Data Collected	Source
Pregnancy Risk Factors Race/Ethnicity Education	Maternal Vulnerability Index (MVI) Report[13] CDC WONDER Natality 2016-2022 Dataset[14]
Rates of First-trimester Prenatal Care	New Jersey State Health Assessment Data's Health Indicator Report[16]
Median Household Income	US Census Bureau[15]

- Focused on counties with highest and lowest MVI [13,14]
  - Highest: Cumberland, Atlantic, Camden counties
  - Lowest: Morris, Somerset, Hunterdon counties
- Descriptive data analysis was performed

Results

County	Median Household income	First Trimester Prenatal Care	Racial/Ethnic Minority	Post-secondary Education
Cumberland	$62,310	70%	70%	36.92%
Atlantic	$73,113	75.90%	55%	60.45%
Camden	$82,005	71.20%	53%	66.17%
Morris	$130,808	84.50%	37%	86.50%
Somerset	$131,948	80.20%	57%	79.63%
Hunterdon	$133,534	85.70%	24%	85.79%

Fig 1. Household income, first-trimester prenatal care, Racial/Ethnic Minority, and Education by county *Racial/Ethnic minorities include Asian, Black, and Hispanic.*

Region	PAMR	PRMR
North	36.5	14.0
Central	25.1	7.3
South	78.6	27.4
Statewide	**41.0**	**14.4**

State-Level
PAMR: 41.0
PRMR: 14.4

NORTH
PAMR: 36.5
PRMR: 14.0

CENTRAL
PAMR: 25.1
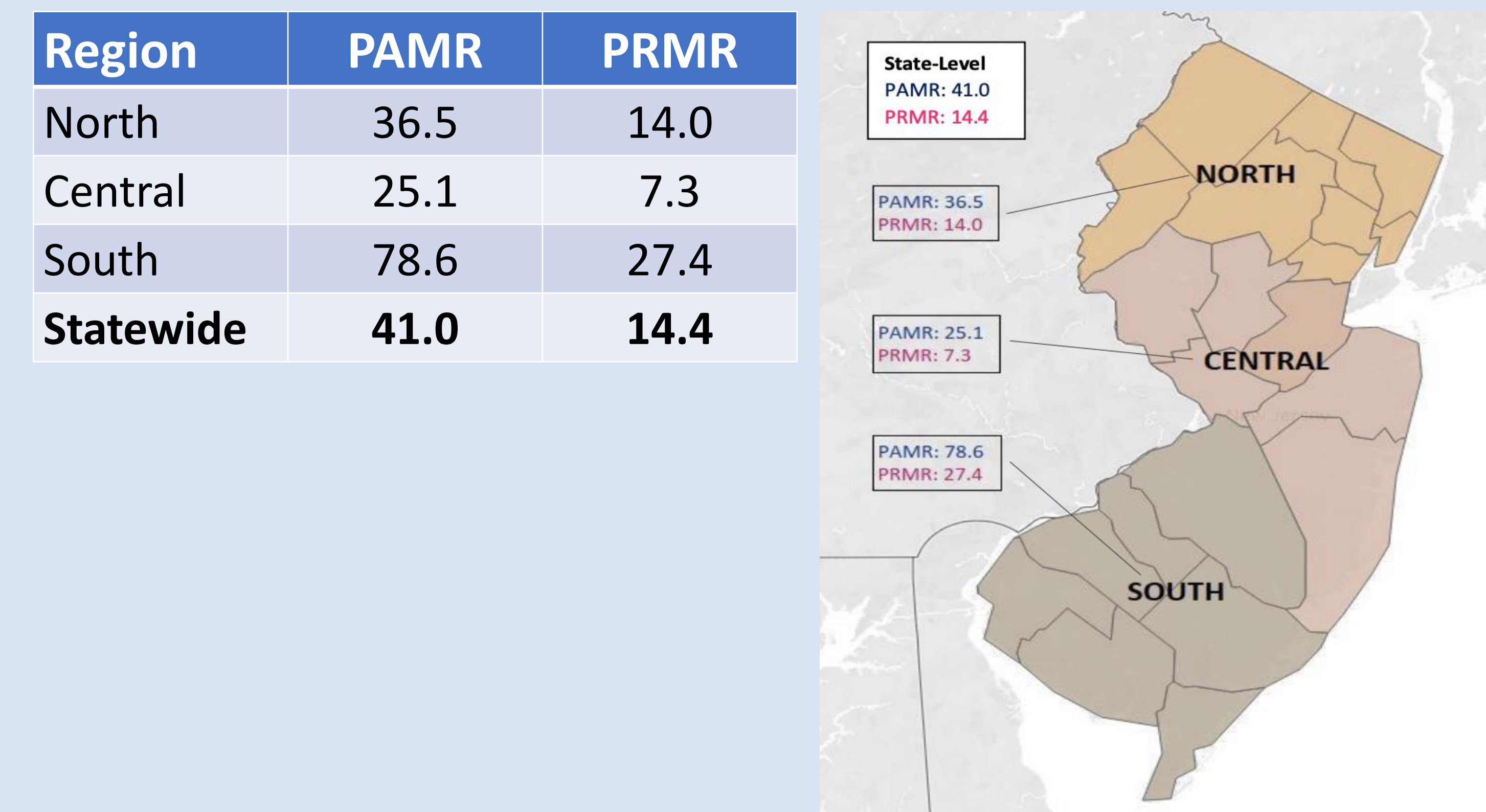PRMR: 7.3

SOUTH
PAMR: 78.6
PRMR: 27.4

Fig 2. NJ pregnancy-related mortality ratio (PRMR) and pregnancy-associated mortality ratio (PAMR).
Source: New Jersey Maternal Mortality Report 2016-1018.

Pregnancy Risk Factors

Legend: Asian, Black or African American, Hispanic or Latino, White, More than one race

Counties: Atlantic, Camden, Cumberland, Hunterdon, Morris, Somerset
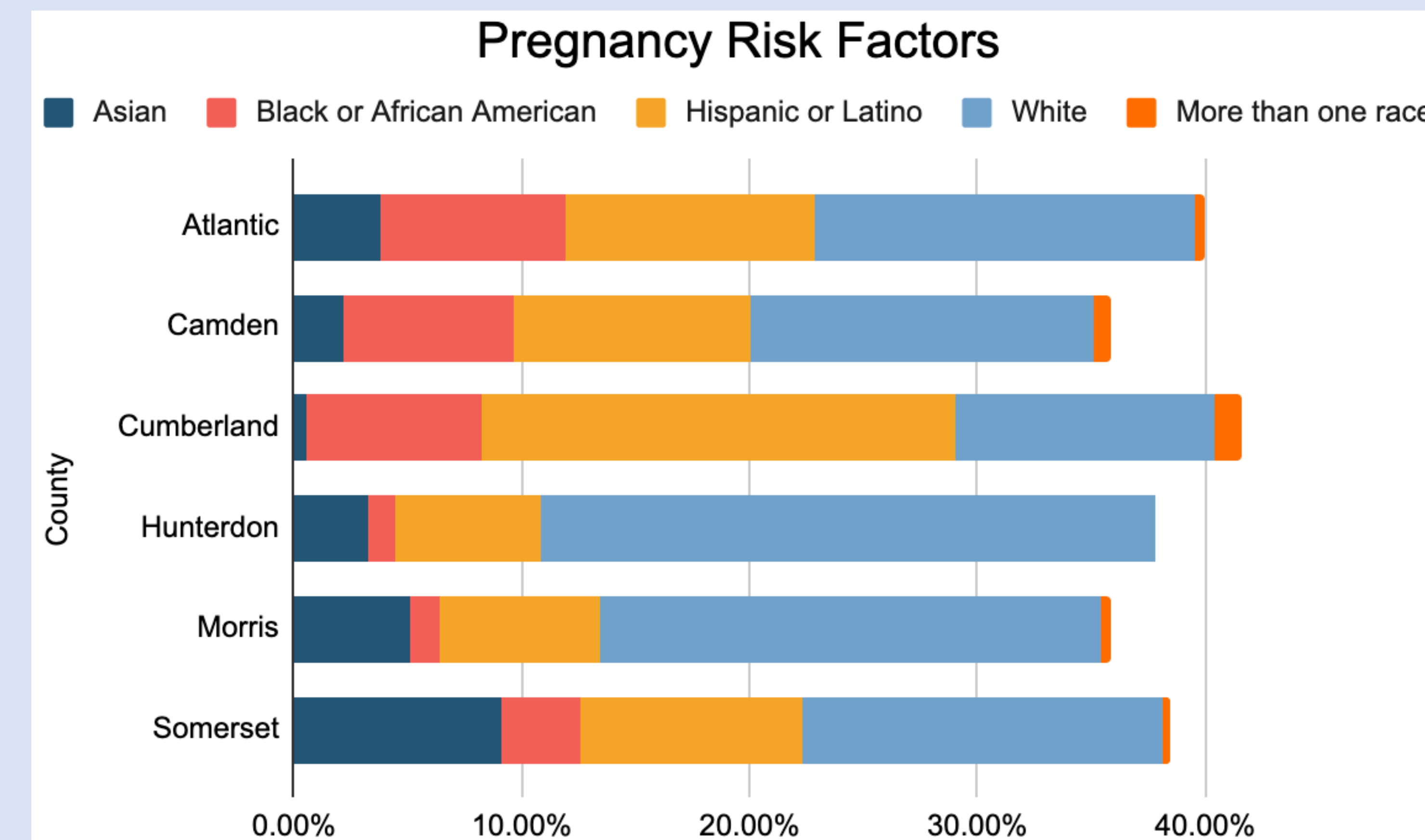
Fig 3. Pregnancy Risk Factors per county by Race/Ethnicity.
Risk Factors include at least one of the following: pre-pregnancy diabetes, Gestational Diabetes, Pre-pregnancy Hypertension, Gestational Hypertension, Eclampsia, Previous Preterm births, Infertility Treatment.

Discussion

- Based on the MVI report done by Surgo Ventures, the three most vulnerable counties in NJ are Atlantic, Cumberland, and Camden. While the three least vulnerable counties are Morris, Hunterdon, and Somerset. [6]
- Cumberland County ranked the lowest in median household income, first-trimester prenatal care, and post-secondary education while ranking the highest for a population of mothers of racial/ethnic minorities and mothers with at least one pregnancy risk factor.
- To minimize the maternal morbidity and mortality rates in NJ, interventions and resource allocations should prioritize South Jersey as individuals in those counties exhibit lower income and education, but higher pregnancy-related mortality ratio, pregnancy-associated mortality ratio, and pregnancy risk factors.
- While mental health was listed to be one of the leading causes of the maternal mortality crisis, no data could be found on reported maternal mental health in NJ by county. [2,6,7,8]

Future Direction

- Research should be conducted on maternal mental health in NJ by county. This data can assist in creating more mental health programs for families throughout the state of NJ.
- As community health resources are being implemented for mothers in NJ, data should be collected on the correlation between community support and maternal morbidity and mortality in that area. [5]

Acknowledgement

Resources