

# Virginia's Maternal Health Landscape

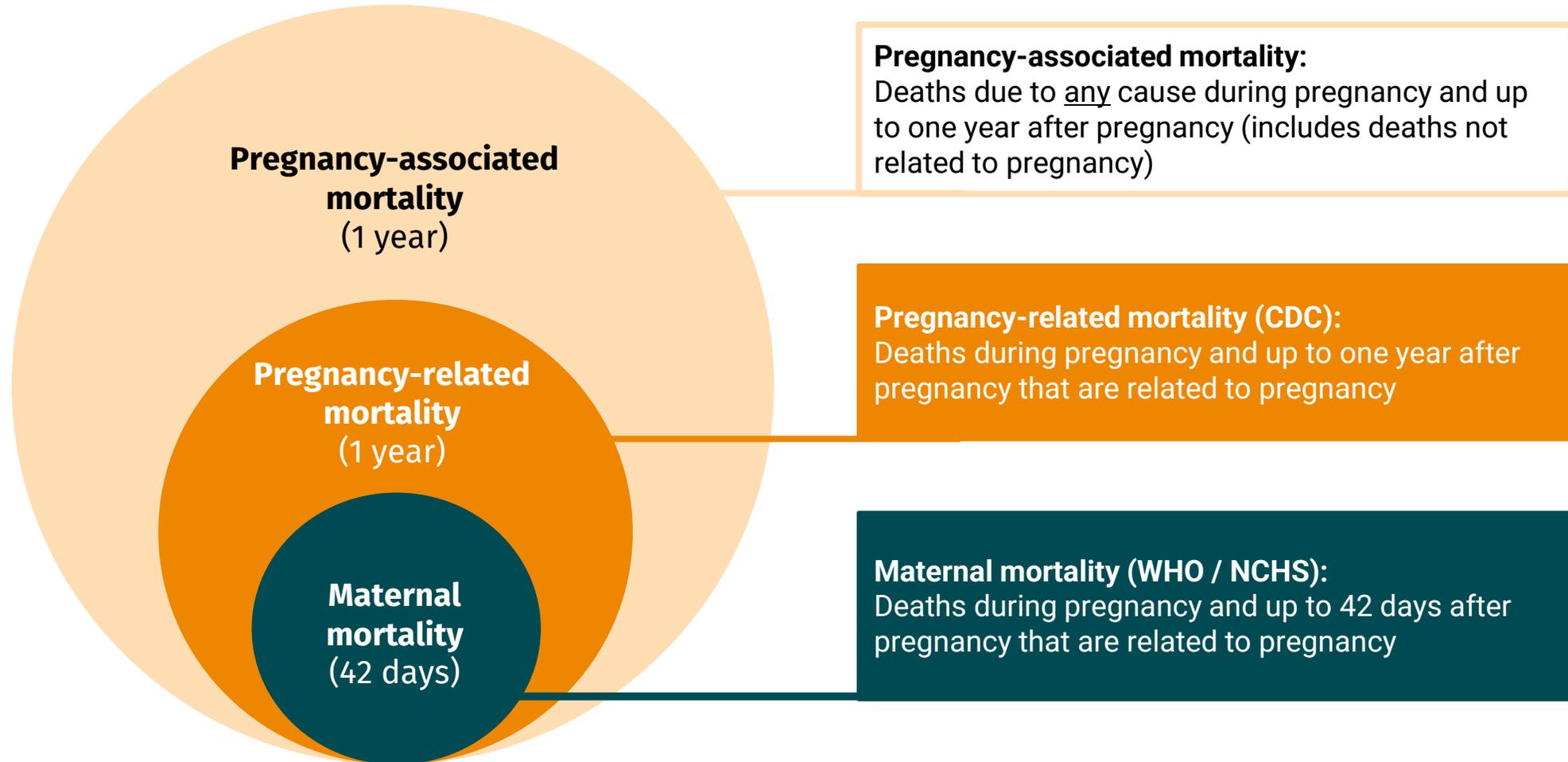
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State Health Commissioner  
Virginia Department of Health  
February 29, 2024

# Virginia's Maternal Health Data

- Maternal Mortality Surveillance
- Maternal Outcomes
- Patient Engagement
- Linkage to Care
- Access to Care

# Maternal Mortality Surveillance

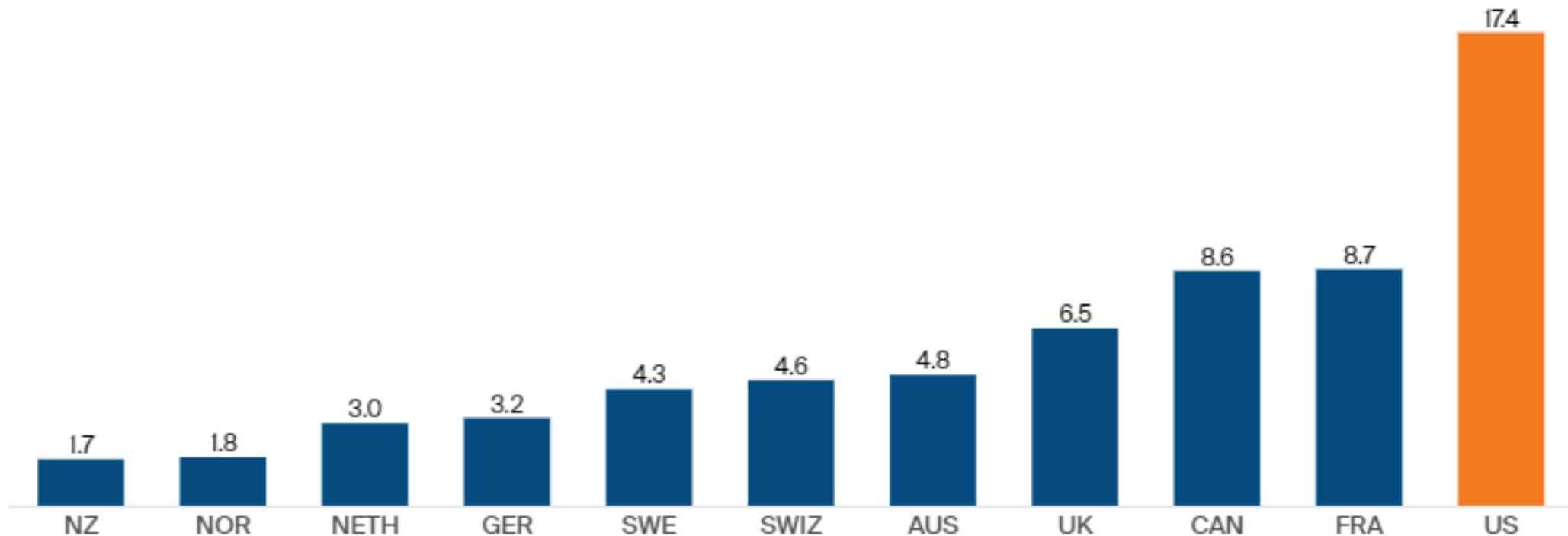
# Maternal Mortality



# Trends in Maternal Mortality (WHO Definition)

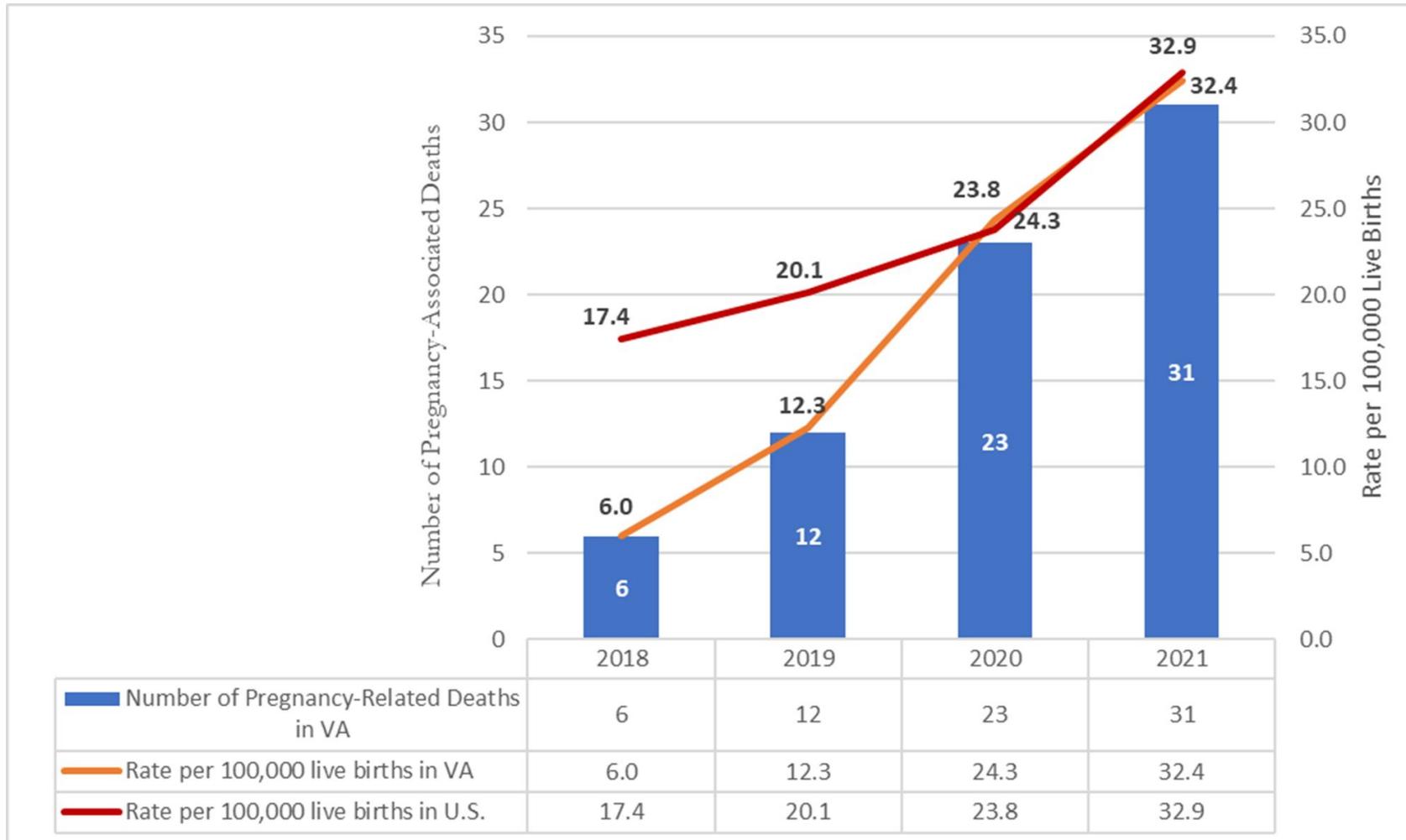
## Maternal Mortality Ratios in Selected Countries, 2018 or Latest Year

*Deaths per 100,000 live births*

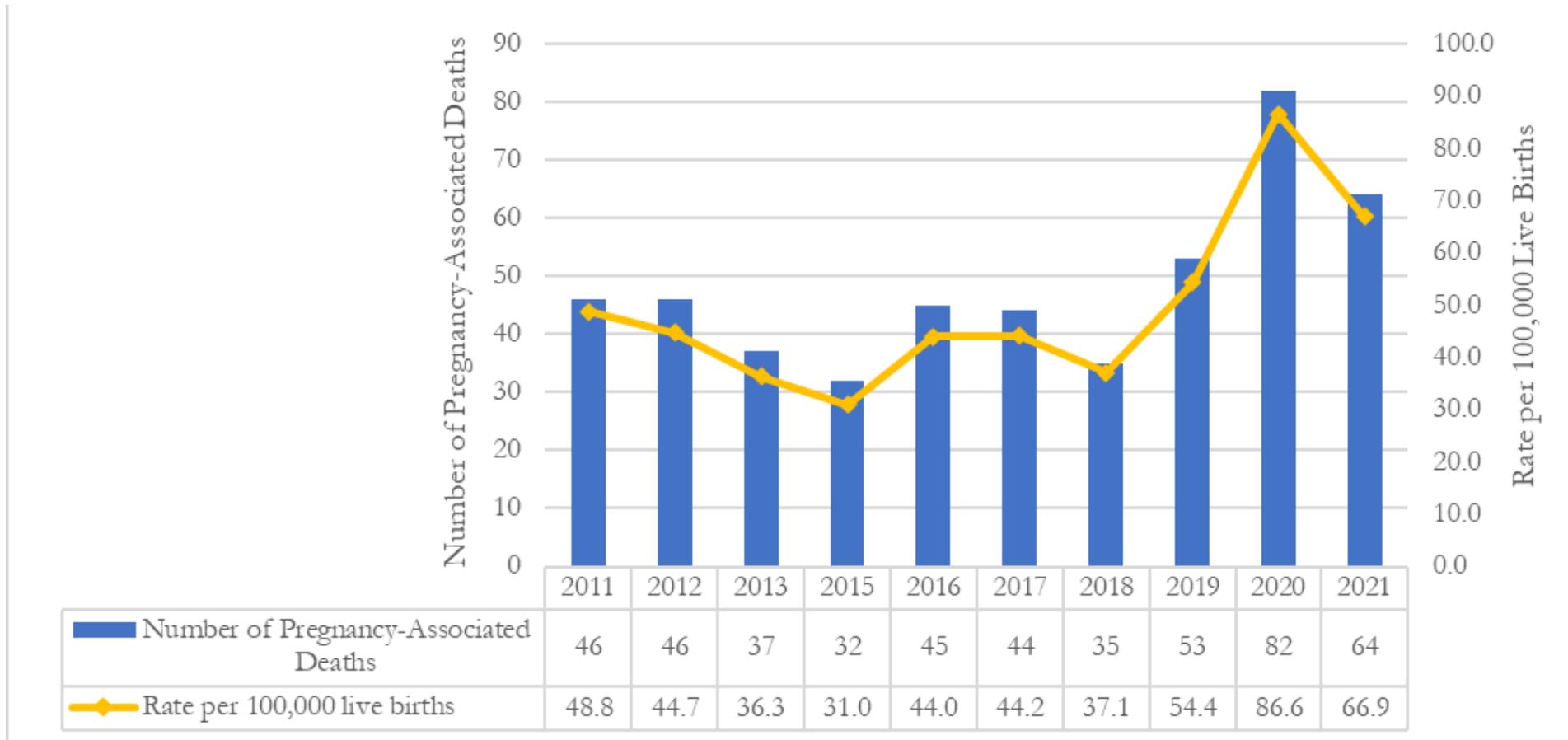


Source: <https://www.commonwealthfund.org/publications/issue-briefs/2020/nov/maternal-mortality-maternity-care-us-compared-10-countries>

# Trends in Pregnancy-Related Mortality

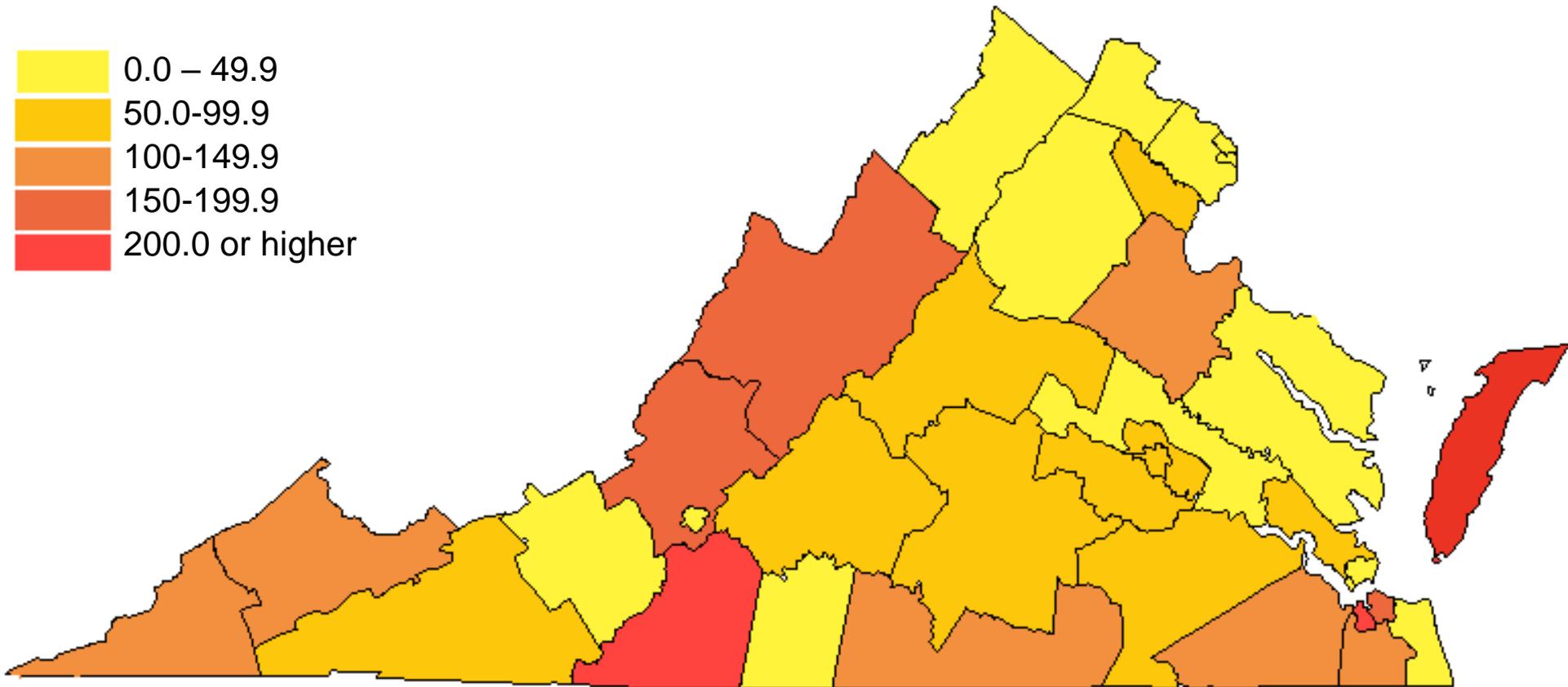


# Trends in Pregnancy-Associated Mortality

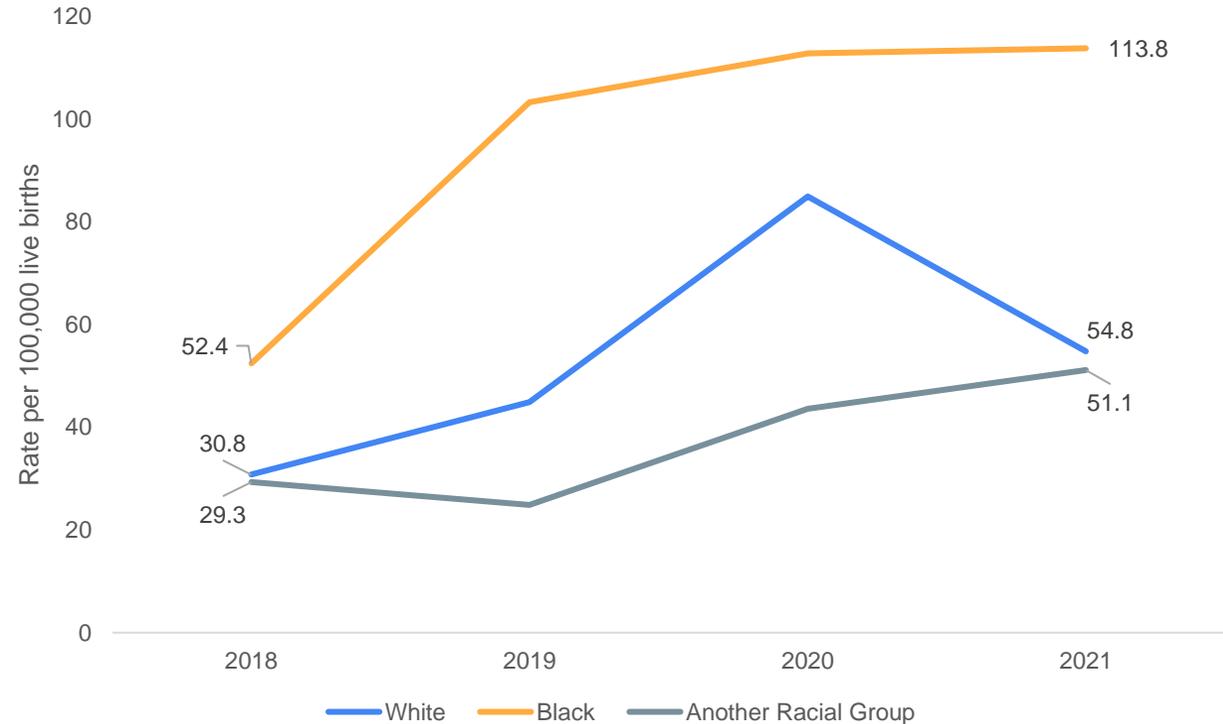
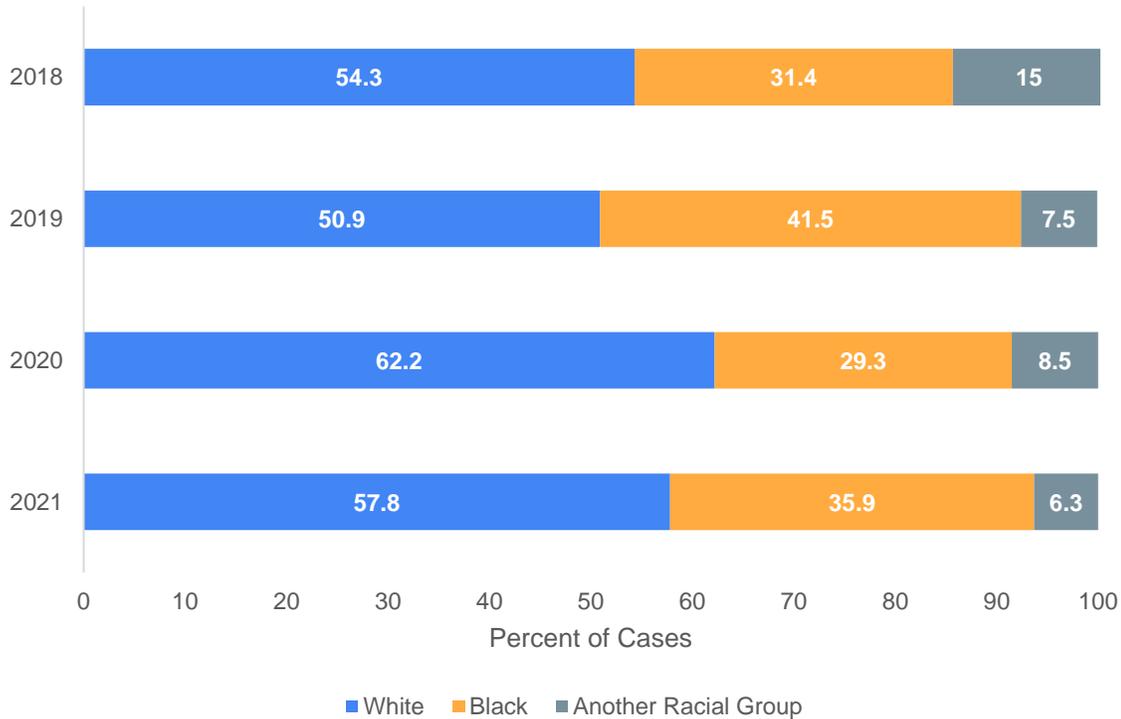


\*\*\*Data for 2019 and 2020 are preliminary

# Pregnancy-Associated Mortality by Health District (2021)



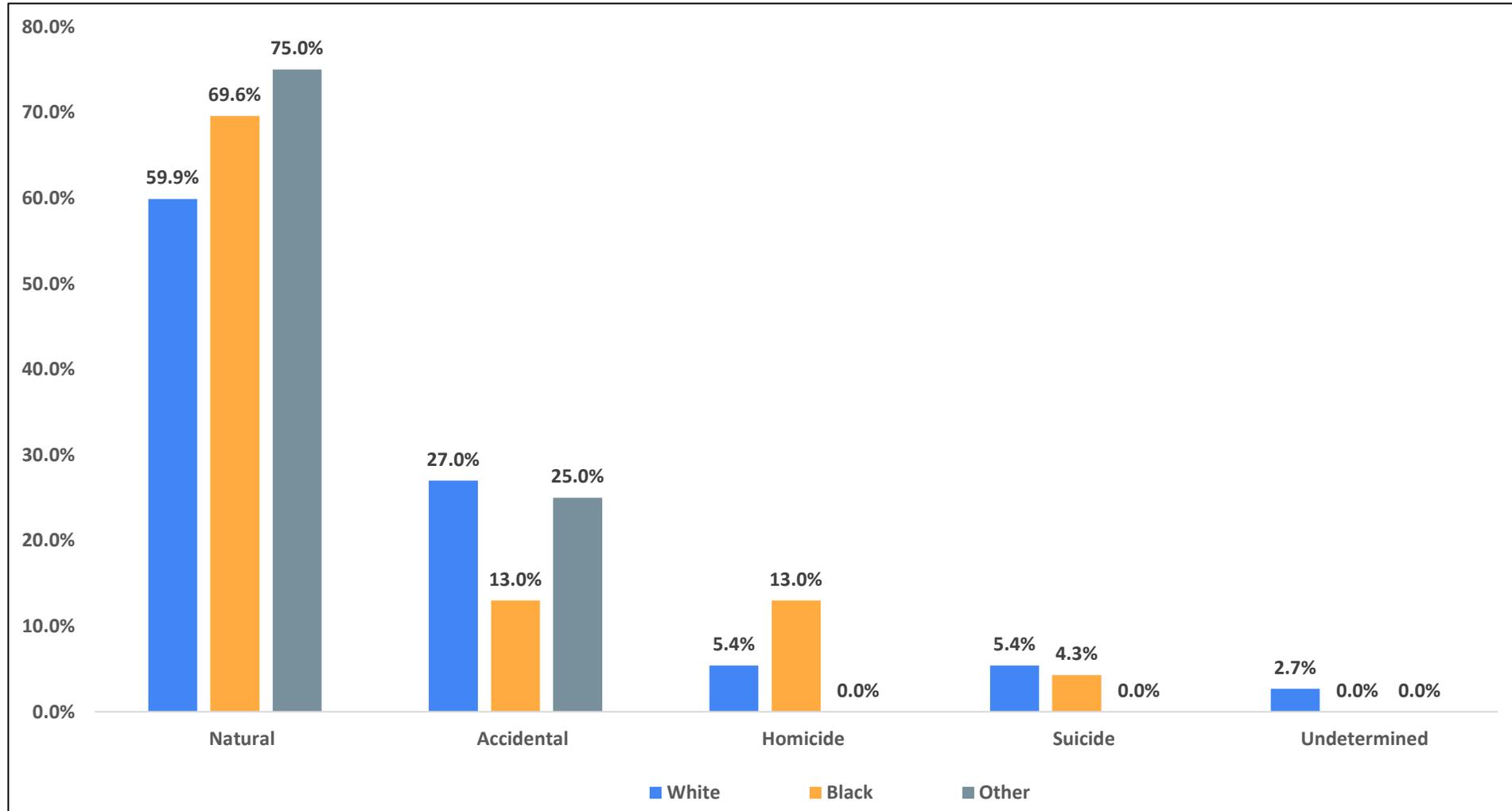
# Racial Disparities in Pregnancy-Associated Mortality (2018-2021)



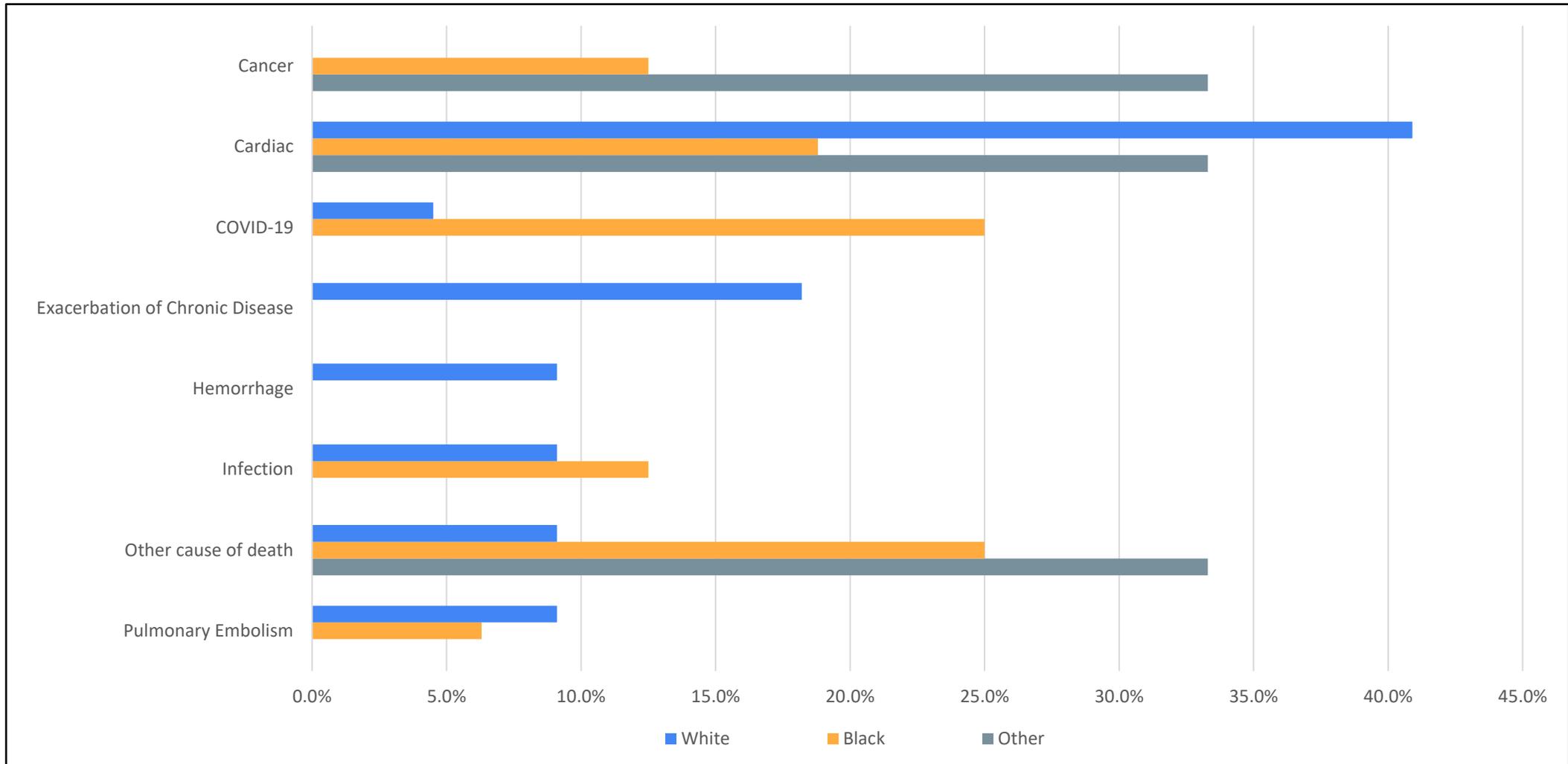
# Pregnancy-Associated Mortality Data, 2021

- 31.3% of deaths occurred while pregnant or on the day of delivery.
- 32.8% of deaths occurred 43 days or more past the date of delivery
- Leading causes of death:
  - Cardiac Conditions (20.3%)
  - Accidental Overdoses (17.2%)
  - COVID-19 (7.8%)
  - Homicide (7.8%)
  - Infection (6.3%)

# Racial Differences in Manner of Death, 2021



# Natural Causes of Death by Race, 2021



# Risk Factors Identified During Case Review (2018)



- Mental illness
  - Depression
  - Anxiety
- Chronic substance abuse
- Intimate Partner Violence
- Chronic disease

# Contributors to Mortality, 2018



- Nearly 23% of cases had at least 1 community-related contributor
- Over 54% of cases had at least 1 provider-related contributor
- Nearly 29% of all cases had at least 1 Facility -related factors
- 100% of cases had at least 1 Patient-related factors

# Review to Action: Preventability



- A **preventable death** is a death that may have been averted by one or more reasonable changes in clinical care, facility infrastructure, community and/or patient factors.
- Nearly 83% of all 2018 cases reviewed by the Team were determined to be preventable.
- 90% of cases among White women were determined to be preventable.
- 80% of cases among Other race women were determined to be preventable.
- 70% of cases amongst Black women were determined to be preventable.

# Review to Action: Recommendation Themes

- Public outreach, awareness, education campaigns related to substance use
  - Decrease Stigma, referral to treatment
- Regular Screenings and Risk Assessment
  - Mental health, trauma history, intimate partner violence, social determinants of health
- Appropriate Referrals
  - Chronic disease management
- Coordination of Care
  - Hospital discharge referrals and follow up
- Violence reduction

# Maternal Outcomes

# Preterm Births



## State Level

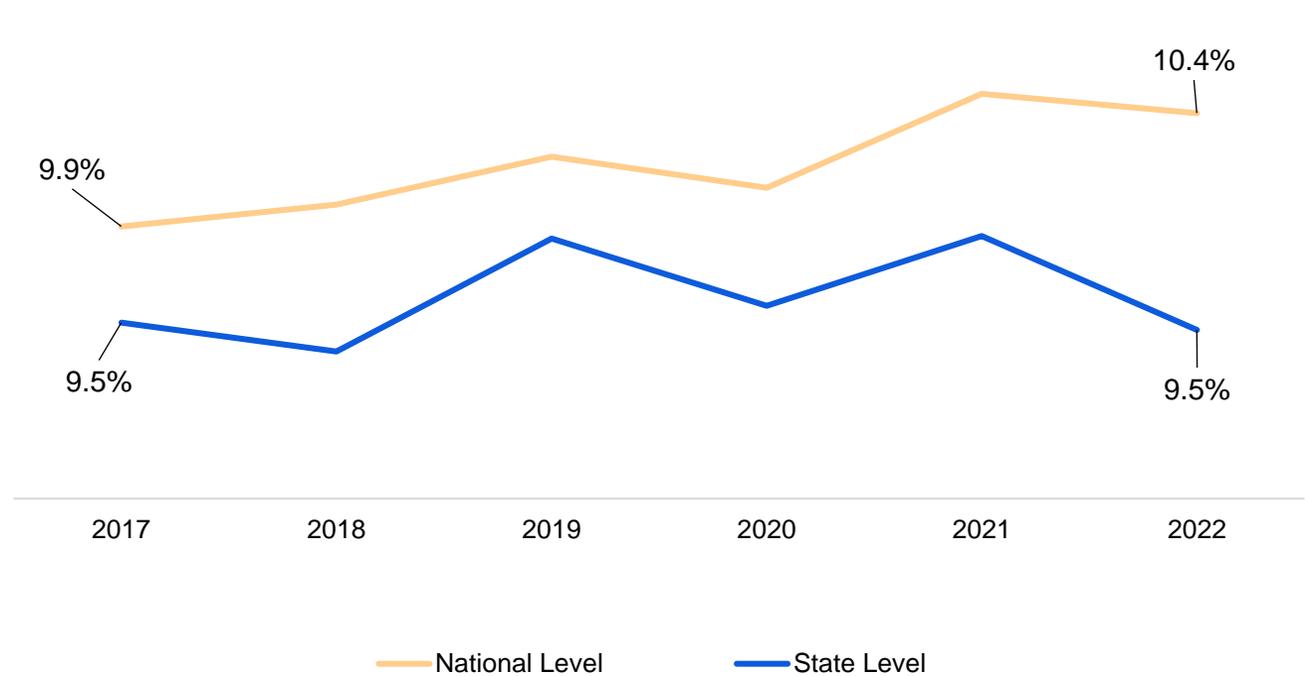
Data includes babies born in Virginia before 37 weeks gestation



## National Level

Data includes babies born in the United States before 37 weeks gestation

Trends of Preterm Births



**Stable**

**↑ 5.1%**

# Low Birthweight Deliveries



## State Level

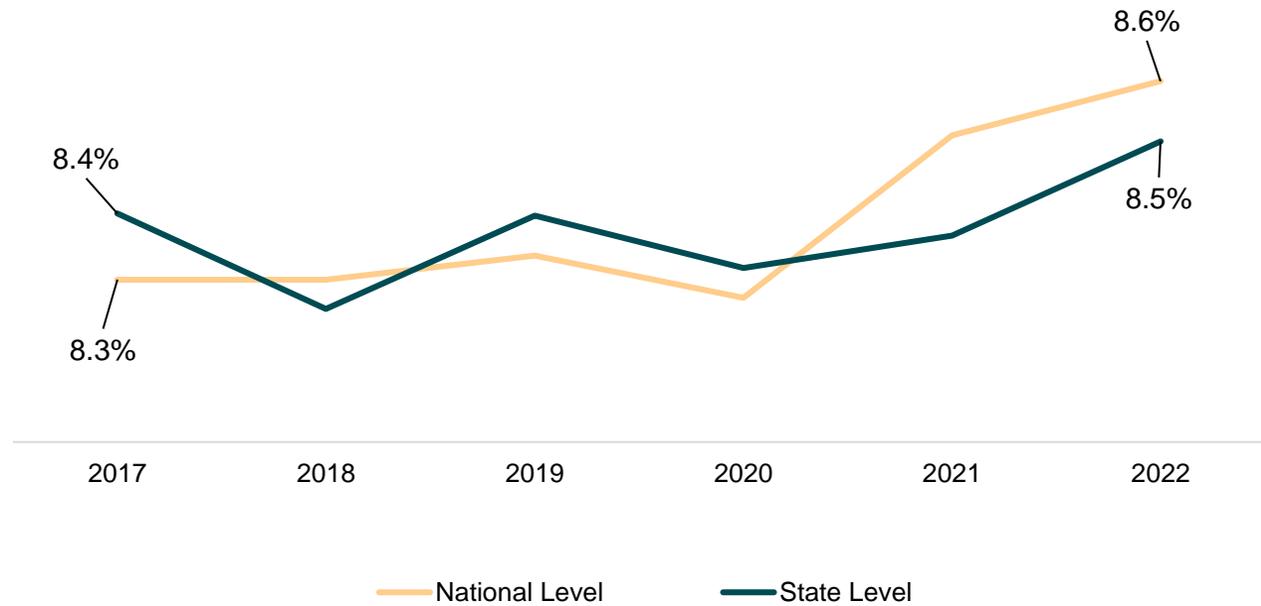
Data includes live births in Virginia weighing less than 2,500 grams



## National Level

Data includes live births in the United States weighing less than 2,500 grams

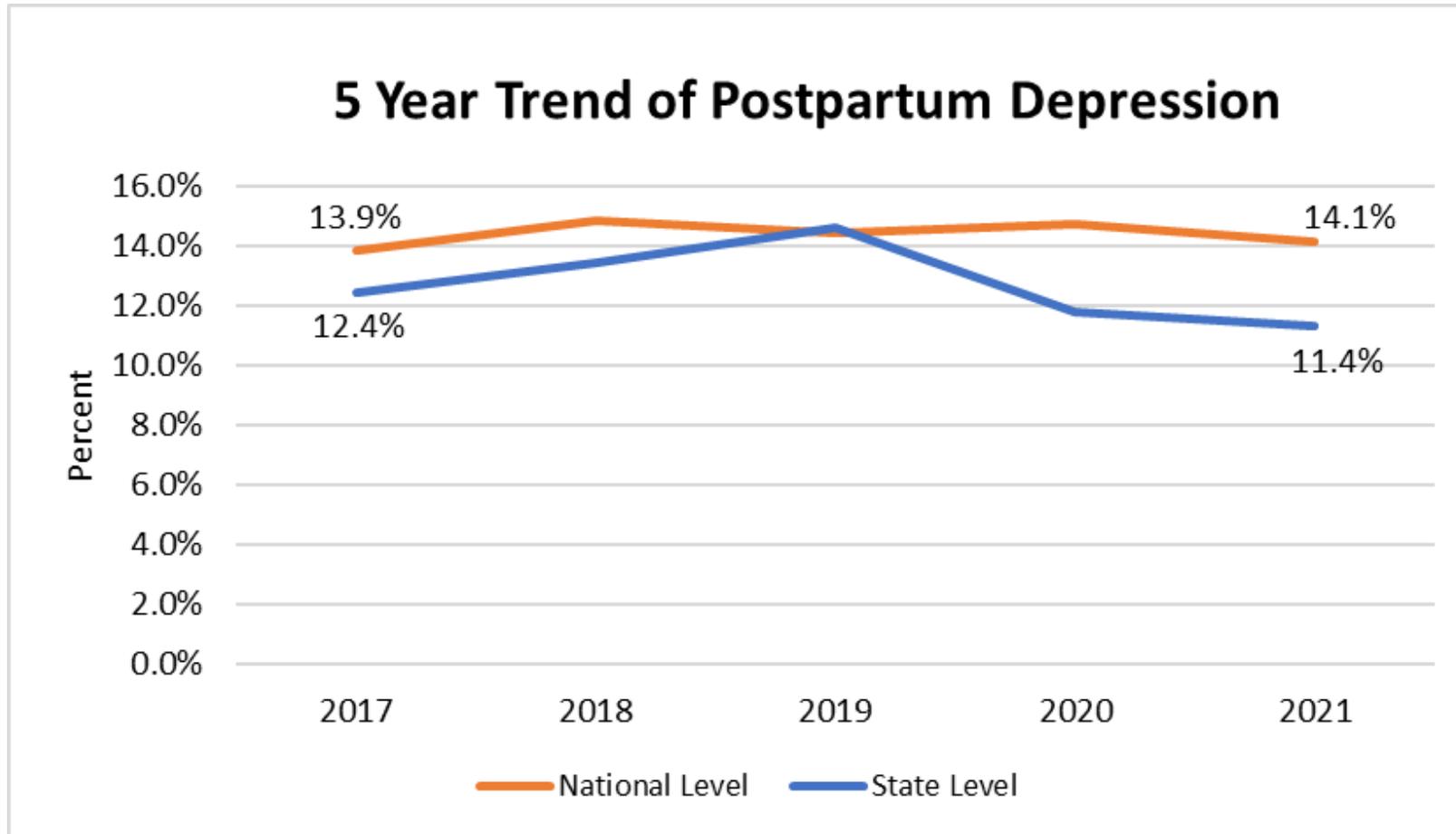
Trends of Low Birthweight Deliveries



↑ 2.4%

↑ 3.6%

# PRAMS Data - Postpartum Depression



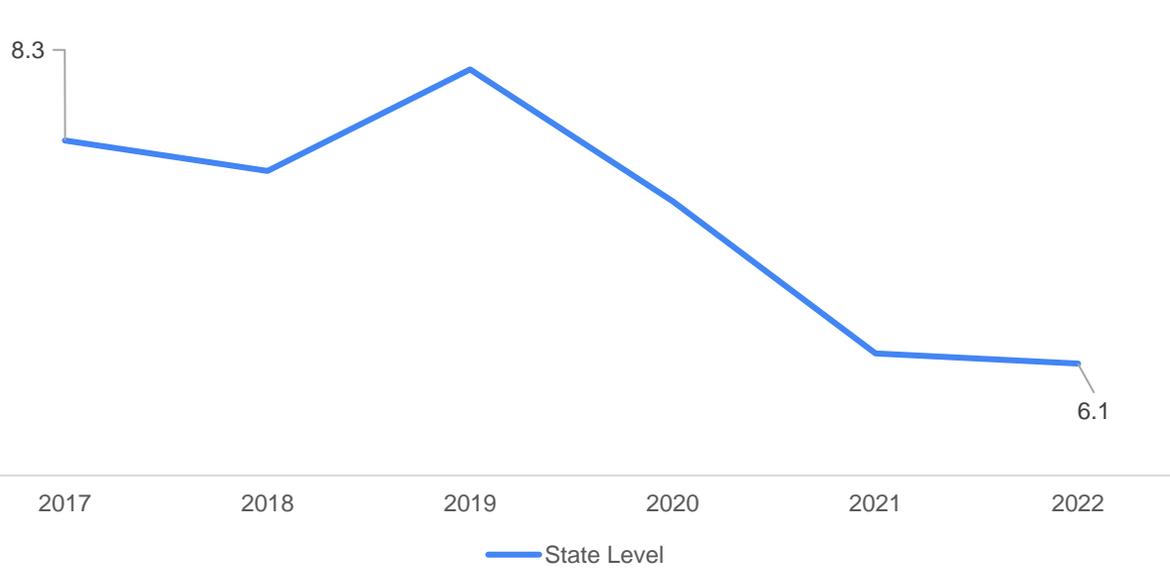
PRAMS Questions 74 & 75: Indicated feeling down or depressed and loss of interest after giving birth.

# Maternal Mental Health

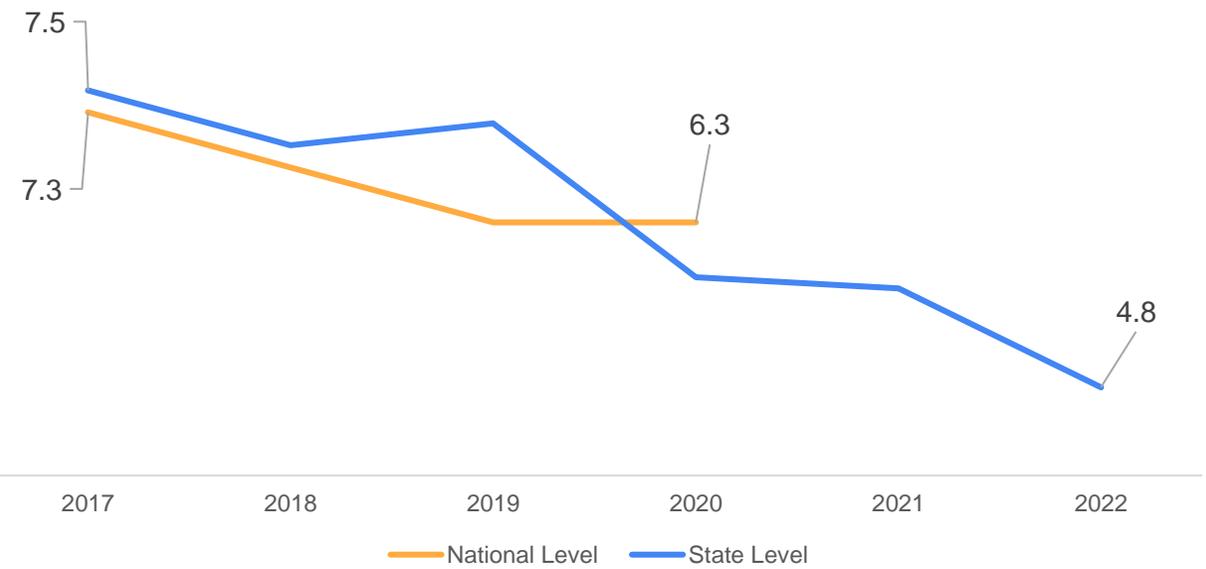
- Maternal Mental Health Strategic Plan
- VMAP – expansion into maternal mental health
- Postpartum Support
  - Pregnancy loss initiative provides funding for grief support groups, community awareness activities, material support, and capacity building
- Reducing maternal deaths due to violence
  - The Pregnancy and Postpartum Violence Prevention Class Curriculum was developed to build capacity for health systems and community organizations to provide prevention education. The curriculum teaches pregnant and postpartum individuals about the dynamics of mental health and healthy relationships during pregnancy, available resources, and resiliency and communication skills to cope with challenges related to mental health and relationships.

# Substance Use

Trends of Maternal Opioid Use Disorder - Rate per 1,000 Delivery Hospitalizations



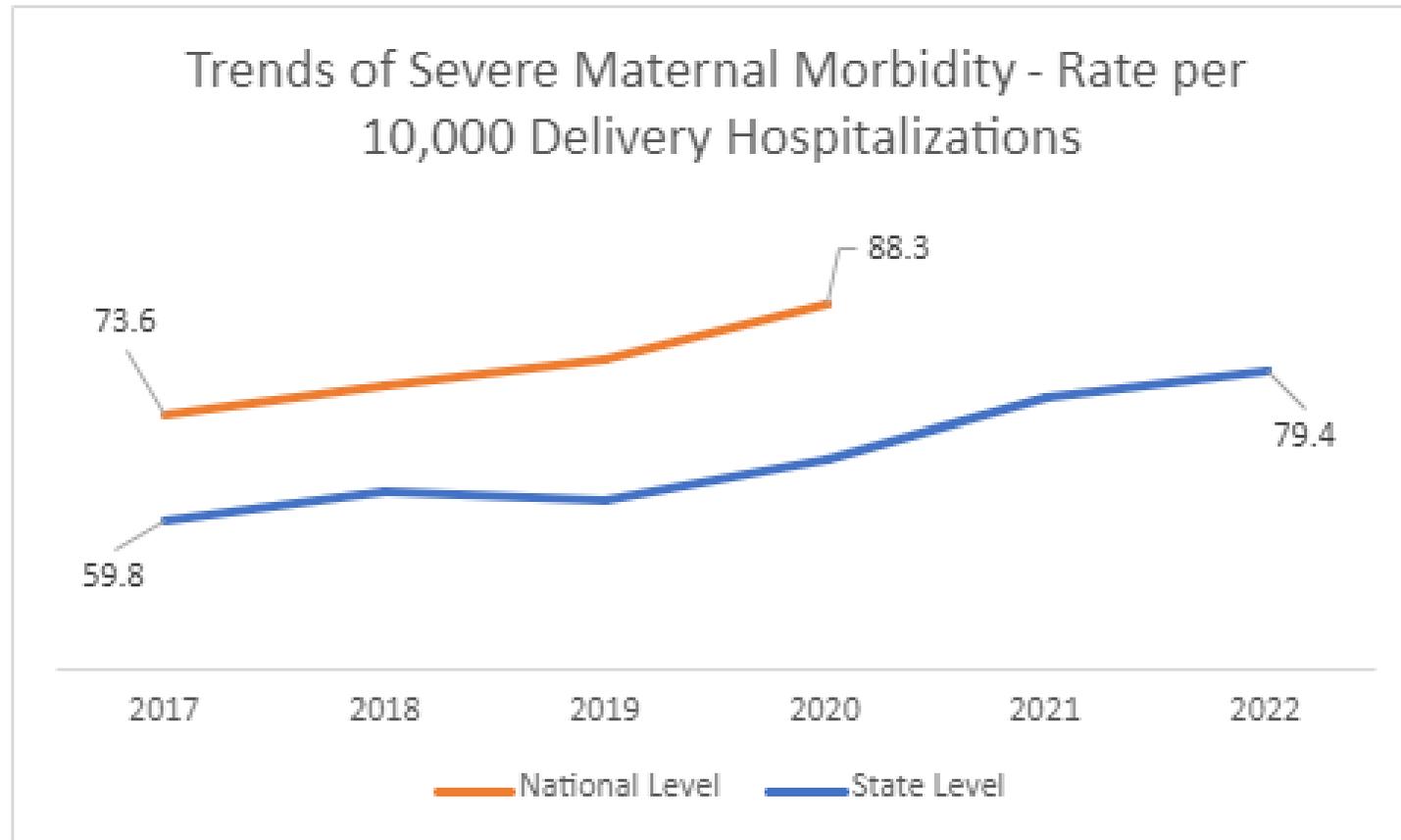
Trends of Neonatal Abstinence Syndrome (NAS) - Rate per 1,000 Birth Hospitalizations



# Substance Use

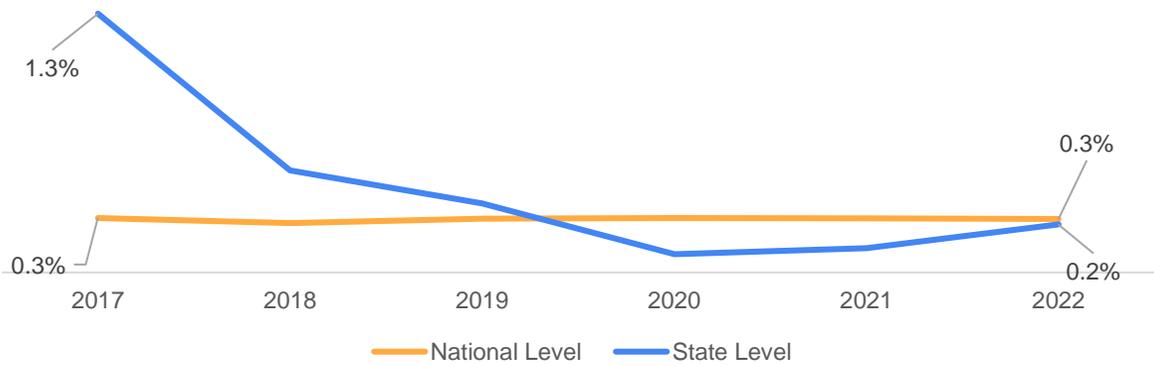
- Neonatal abstinence syndrome (NAS) surveillance
  - NAS is a reportable condition in Virginia (one of six states in U.S.)
  - NAS data dashboard available on [VDH website](#) to inform public
- State Plan for Substance Exposed Infants
- Perinatal Cannabis Workgroup

# Severe Maternal Morbidity

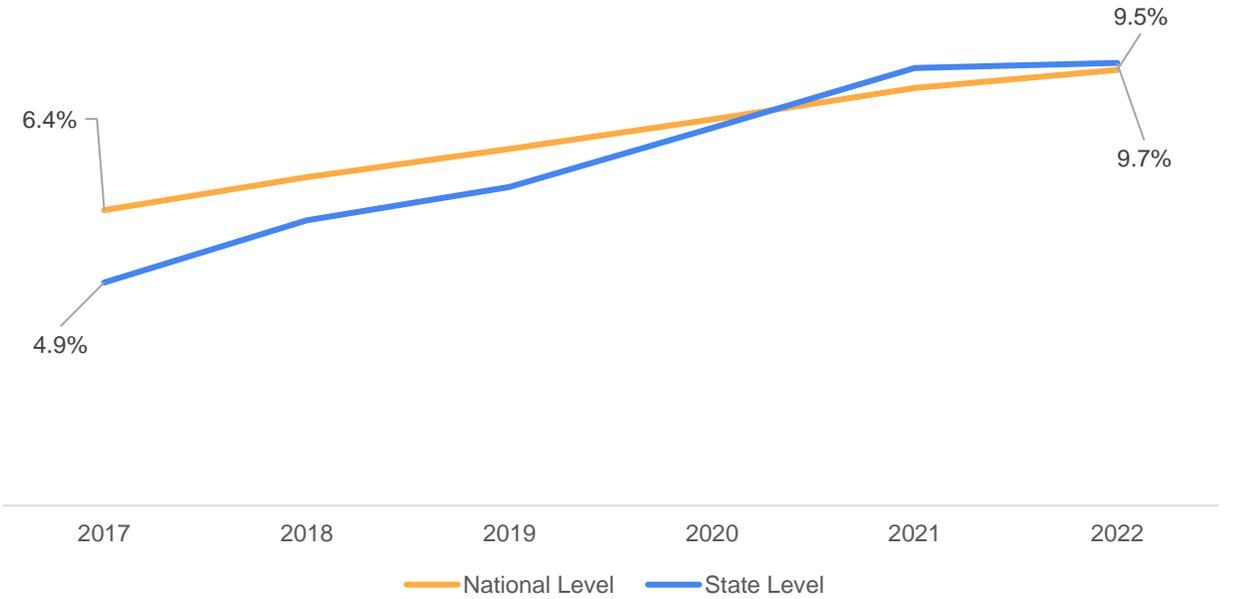


# Severe Maternal Morbidity

Trend of Deliveries with Eclampsia



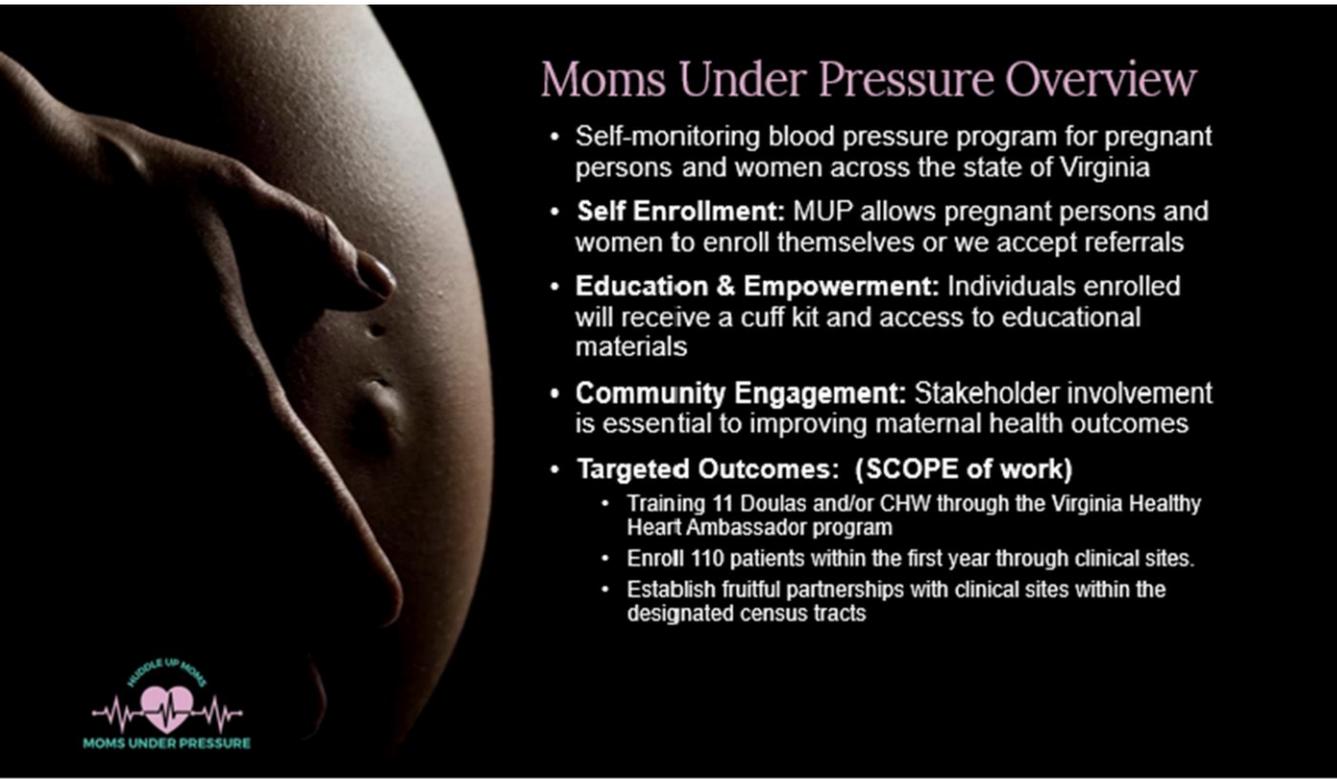
Trend of Deliveries with Gestational Hypertension/Pre-eclampsia



# Moms Under Pressure

- Hypertension is a common condition in pregnancy:  
1 in 12 pregnancies
- Preeclampsia occurs in 1 in 25 pregnancies
- HELLP Syndrome 1 in 1,000 pregnancies

"Moms Under Pressure helps preserve life for those who bear life." - Dr. Jaclyn Nunziato, Founder, Huddle Up Moms and the Moms Under Pressure Program.



**Moms Under Pressure Overview**

- Self-monitoring blood pressure program for pregnant persons and women across the state of Virginia
- **Self Enrollment:** MUP allows pregnant persons and women to enroll themselves or we accept referrals
- **Education & Empowerment:** Individuals enrolled will receive a cuff kit and access to educational materials
- **Community Engagement:** Stakeholder involvement is essential to improving maternal health outcomes
- **Targeted Outcomes: (SCOPE of work)**
  - Training 11 Doulas and/or CHW through the Virginia Healthy Heart Ambassador program
  - Enroll 110 patients within the first year through clinical sites.
  - Establish fruitful partnerships with clinical sites within the designated census tracts

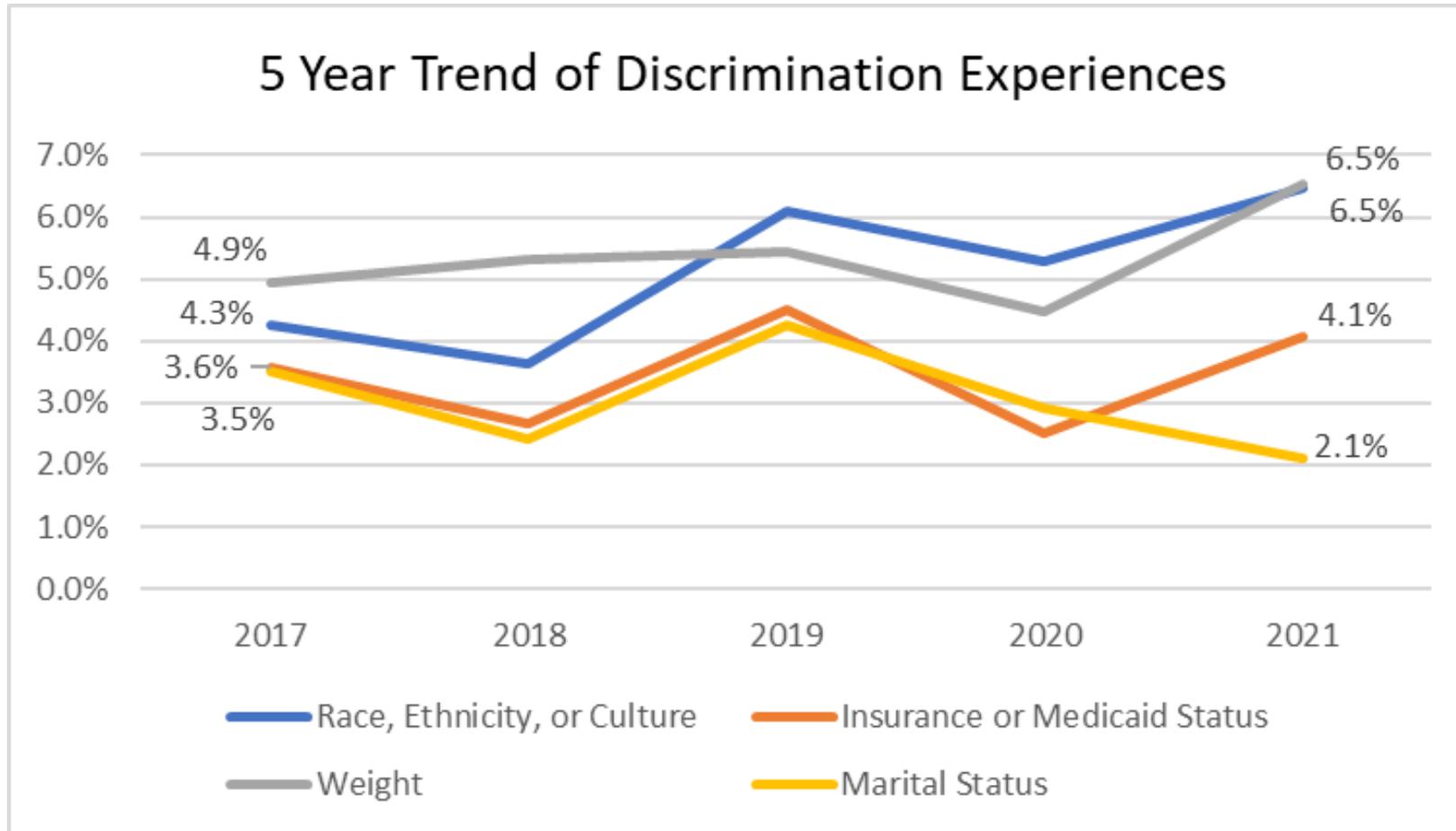


## VDH and Huddle Up Moms partnership goals for Moms Under Pressure in 2024:

- Establish 9 programs across 3 regions (Central, Eastern, Southwest) by the end of 2024.
- Focus initially on census tracts with the highest hypertension prevalence rates.
- To Date, in 2024: Augusta Health launched the program on 2/14/24.

# Patient Engagement

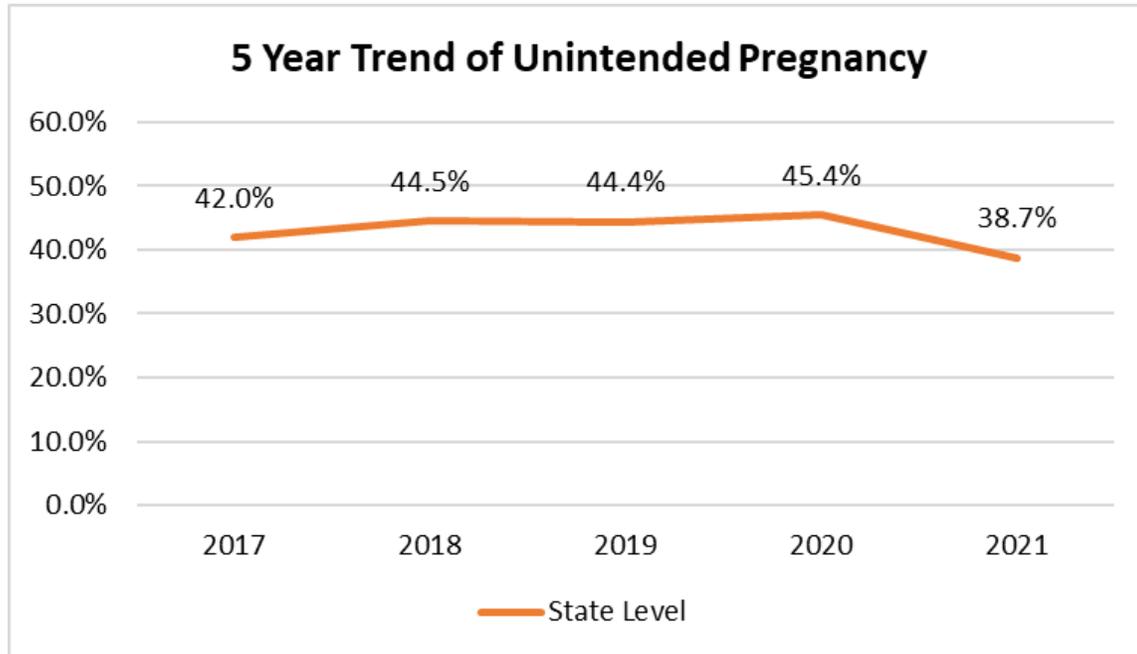
## PRAMS Data – Topics of Discrimination Experiences



PRAMS Questions 76: Experienced discrimination, harassment, or were made to feel inferior because of the topics listed.

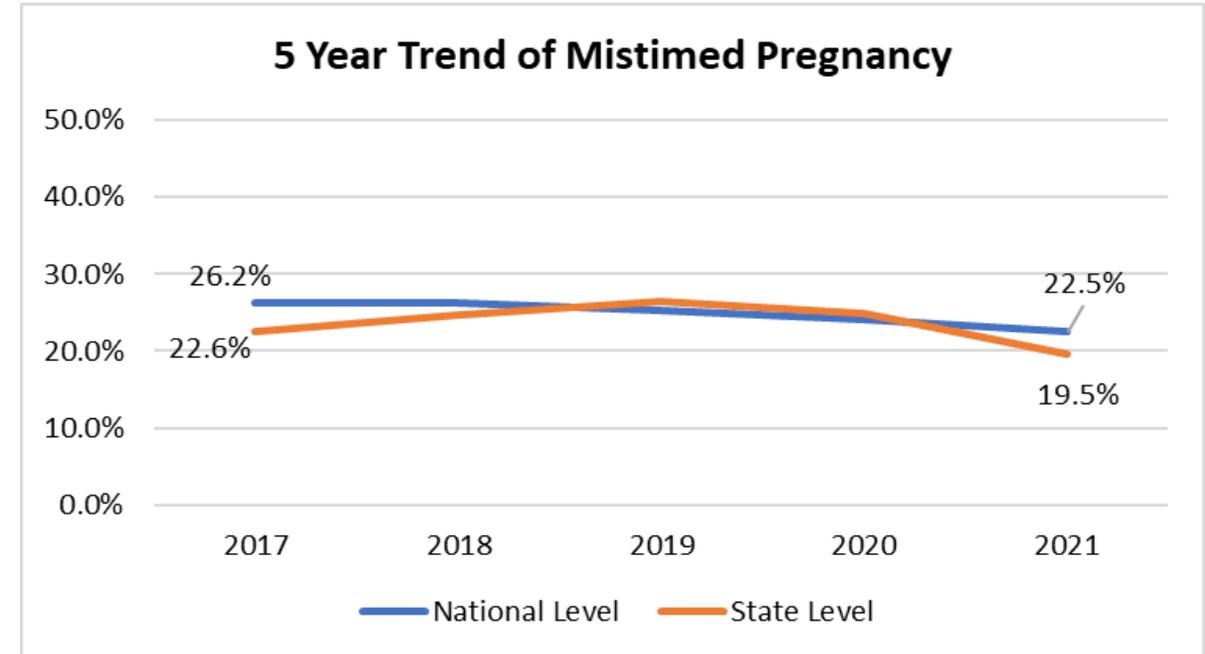
# PRAMS Data – Pregnancy Intentions

## Unintended Pregnancy



PRAMS Questions 14: Indicated that they were not actively trying to get pregnant when they did.

## Mistimed Pregnancy



PRAMS Questions 13: Indicated that they wanted to be pregnant later or never.

# Timing of Prenatal Care

**● First Trimester**

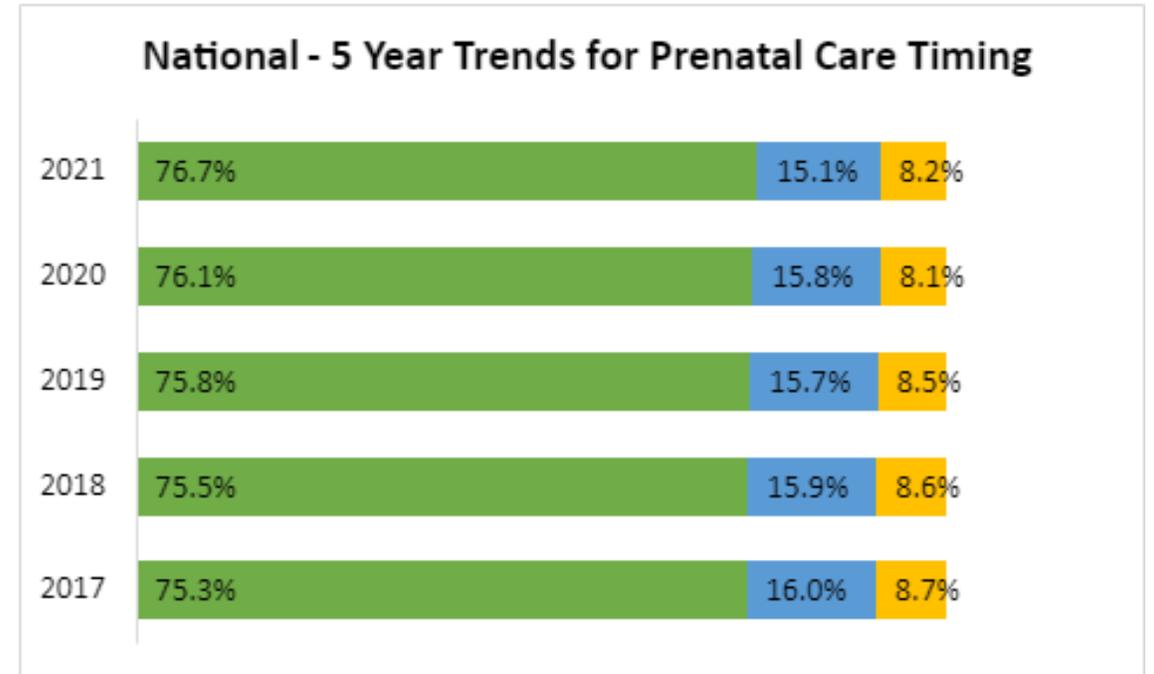
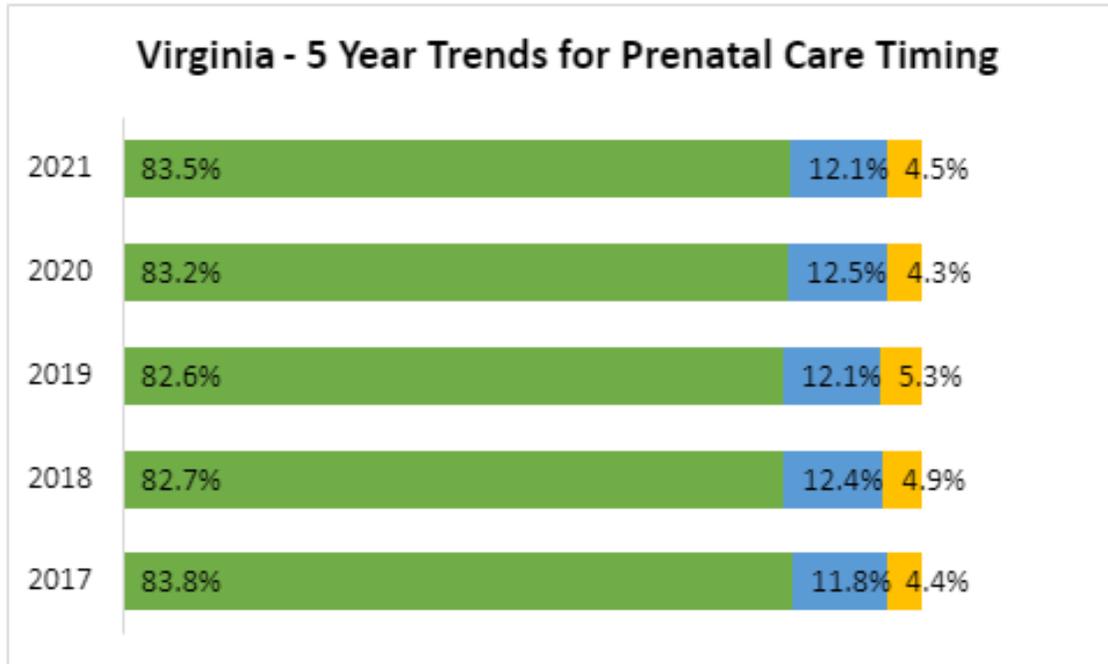
Received prenatal care in the 1st to 3rd month of pregnancy

**● Second Trimester**

Received prenatal care in the 4th to 6th month of pregnancy

**● Late/No Prenatal Care**

Received prenatal care in the 7th to final month of pregnancy or none

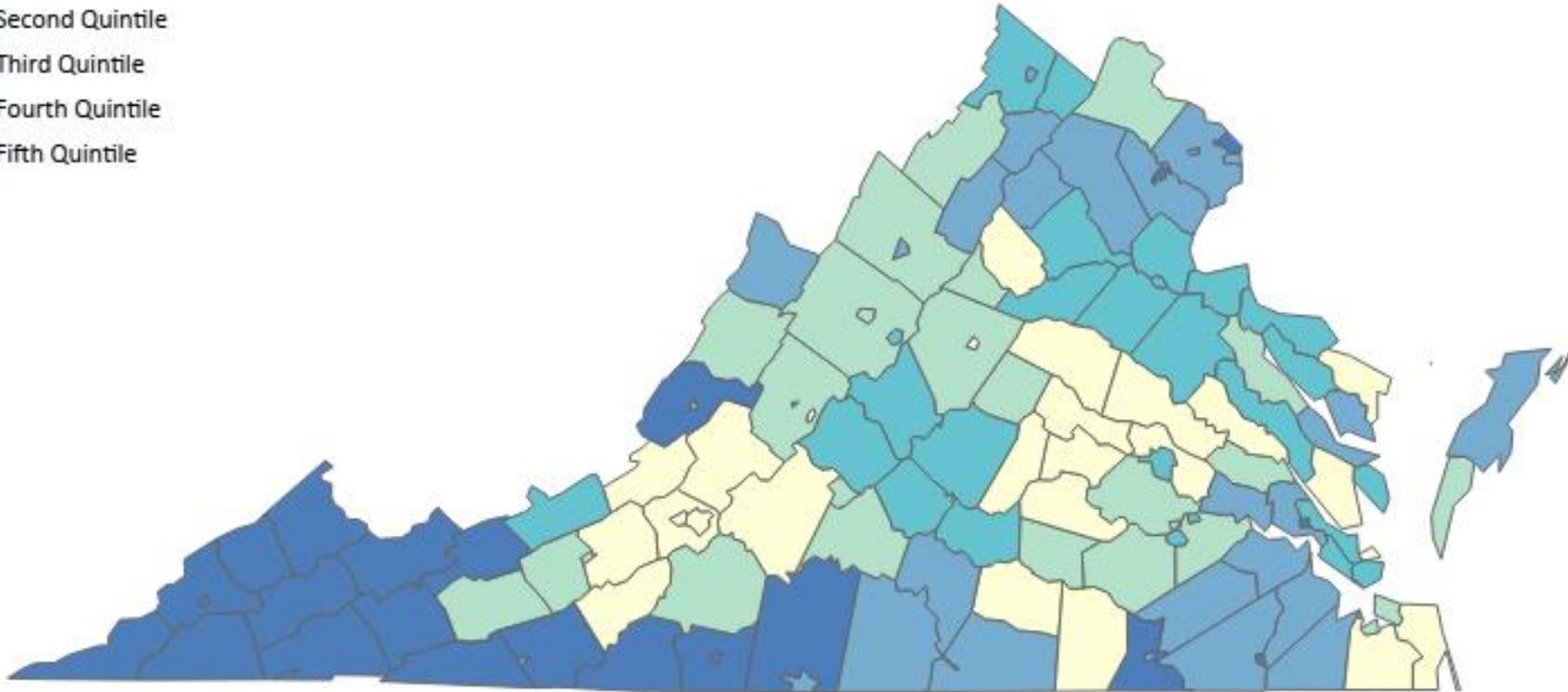


# Late/No Prenatal Care

## Indicator Quintile\*

(higher indicates worse)

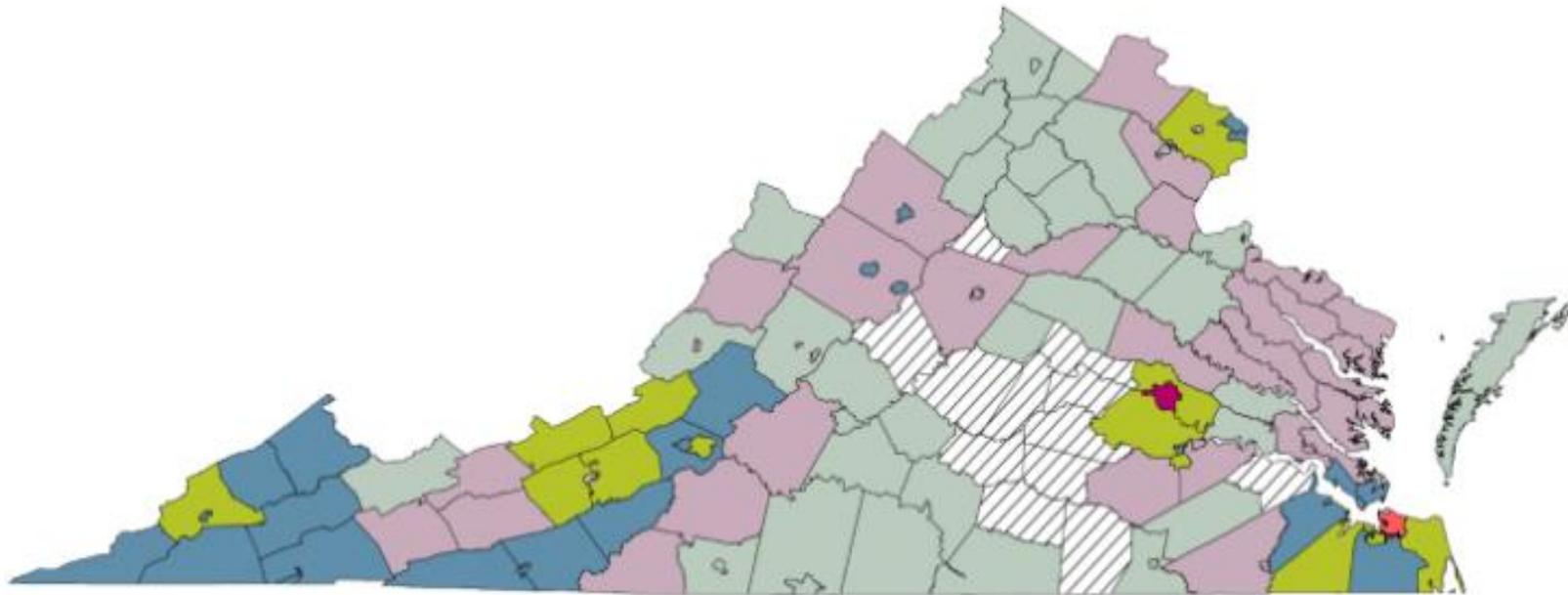
- First Quintile
- Second Quintile
- Third Quintile
- Fourth Quintile
- Fifth Quintile



\*The range of values has been divided into five equal groups or quintiles. A higher quintile indicates worse outcome, as indicated by the shading.

# Linkage to Care

# Home Visiting Programs



**Home Visiting Programs per Locality**



# Doulas – educate, empower, support mothers

## DOULA STATE CERTIFICATION

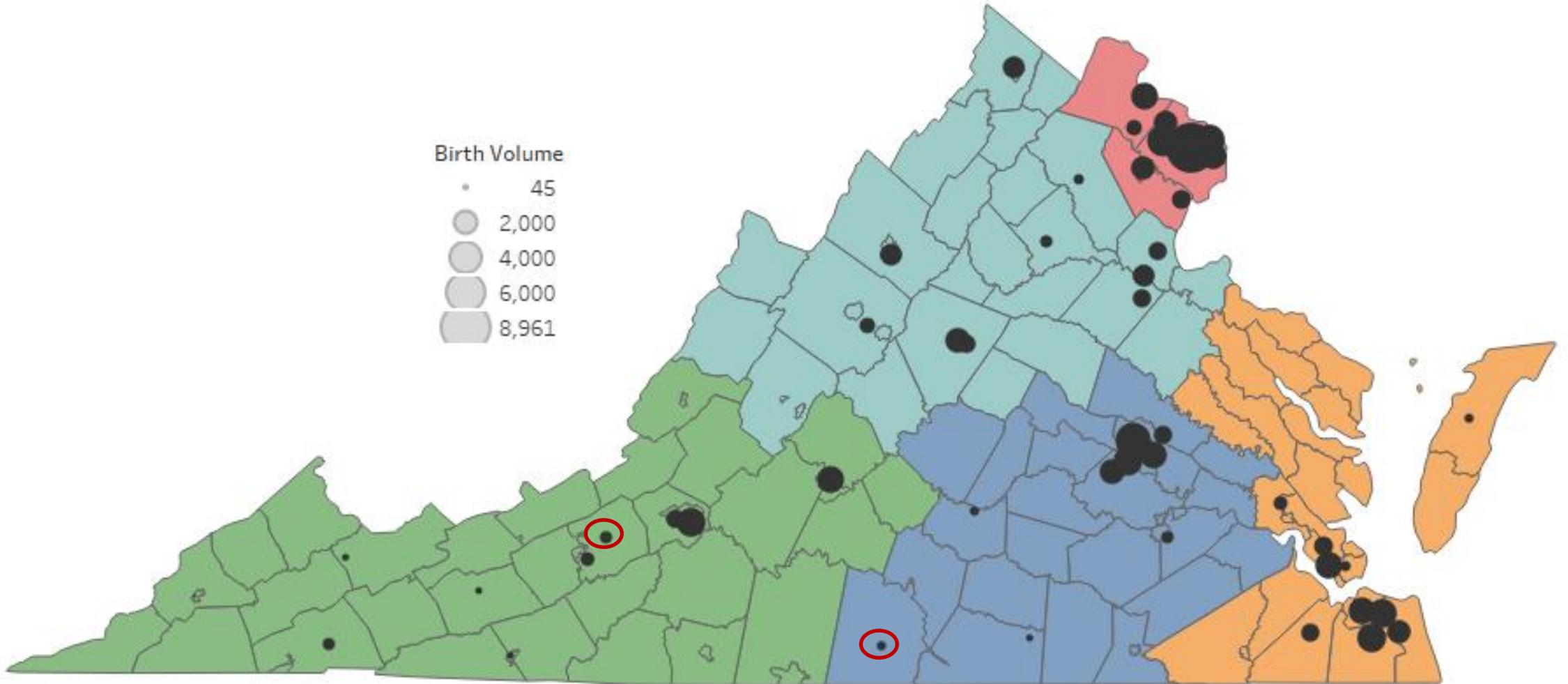
### **Doula State Certification Process**



- Improve birth outcomes
- Eliminate disparities in maternal and infant health outcomes
- Established a state-certified doula designation guided by regulations approved by the Board of Health.
- Virginia Certification Board Webpage: <https://www.vacertboard.org>
- Current number of state certified doulas: 132

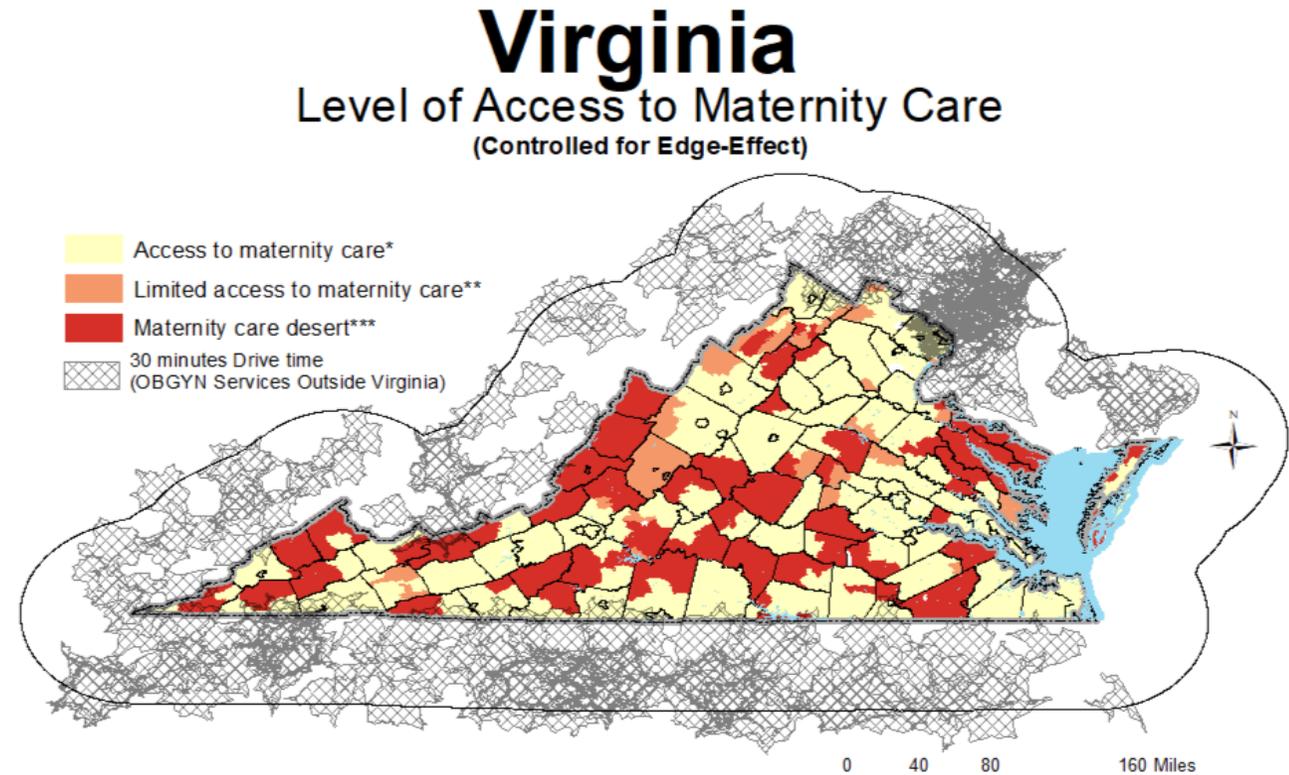
# Access to Care

# Birthing Hospitals by Birth Volume (2021)



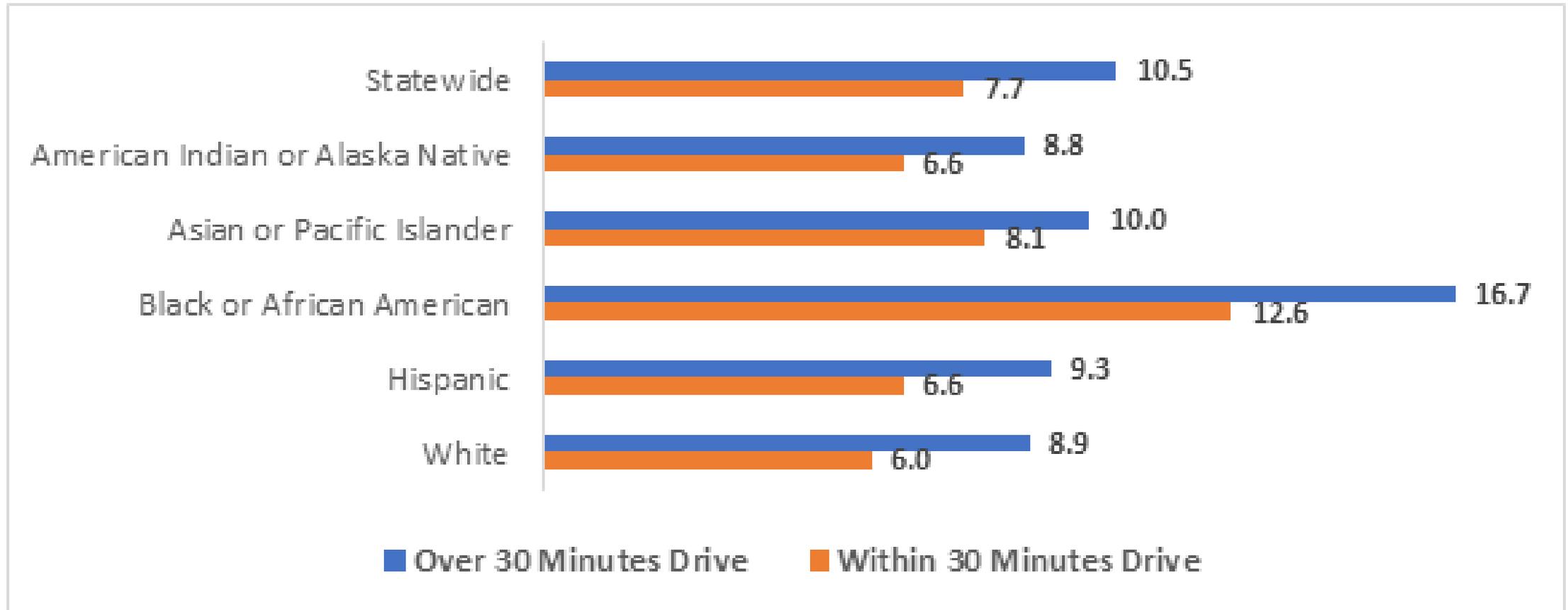
# Maternity Care Deserts (2019)

- Specific regions of Virginia are recognized as maternal care deserts
- Reasons contributing to maternal care deserts include:
  - hospital closures
  - shortages in healthcare personnel
  - social determinants of health

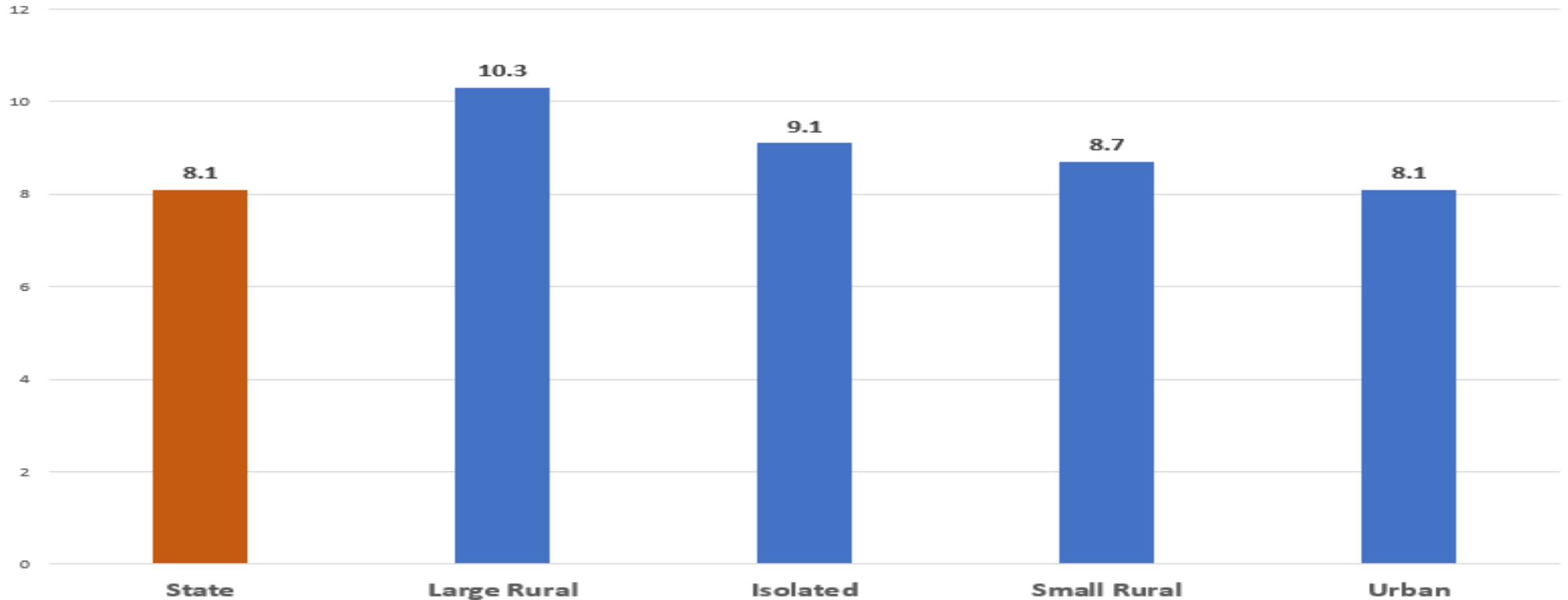


\*Access to maternity care – OBGYN access within 30 minutes drive time from the Population Weighted census tract centroid  
 \*\*Limited access to maternity care – OBGYN access over 30 minutes drive time from the Population Weighted census tract centroid  
 \*\*\*Maternity care desert - OBGYN access over 30 minutes drive time from the Population Weighted census tract centroid, with over 20% of Population living below 200 Federal Poverty Level and located in Health Professional Shortage Area (HPSA)

# Correlation with Low Birthweight



## Low Birth Weight by Rural-Urban Commuting Area Codes (RUCAs) in Virginia, 2013 - 2019





# Healthy Moms Healthy Families Healthy Communities