



# Maternal Health -Backmapping-

# Low Birth Weight & VLBW

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***LBW: Birthweight less than 2,500 grams (5 pounds, 8 ounces)***

***VLBW: Birthweight less than 1,500 grams (3 pounds, 4 ounces)***



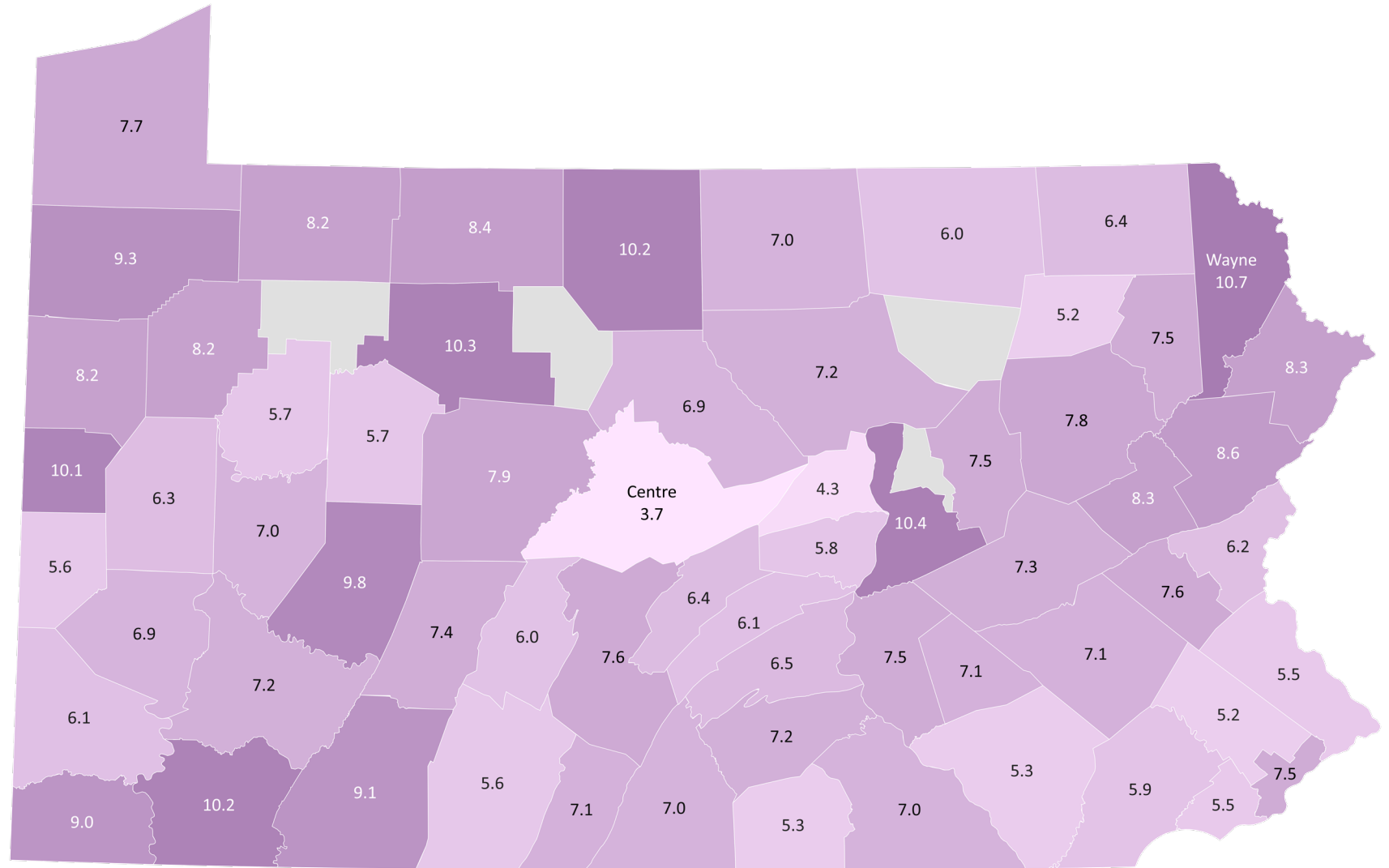
# Introduction

- Race has persistently emerged as a theme driving the LBW rate, specifically the rate of non-Hispanic (NH) Black women
  - The LBW rate has increased by 4% since 2014, which aligns with historical trends from 1990 to 2006 that reveal a 20% increase
- Rate of LBW in PA
  - All Races: **8.3**
  - White: **6.8**
  - Black: **14.5**
  - Hispanic: **8.5**
  - Asian/Pacific Islander: **9.2**
  - Multi-Race: **10.1**
- Rate of VLBW in PA
  - All Races: **1.4**
  - White: **1.0**
  - Black: **3.0**
  - Hispanic: **1.4**
  - Asian/Pacific Islander: **1.4**
  - Multi-Race: **1.6**

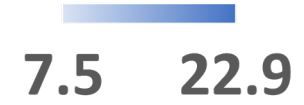
# Low Birth Weight (White)



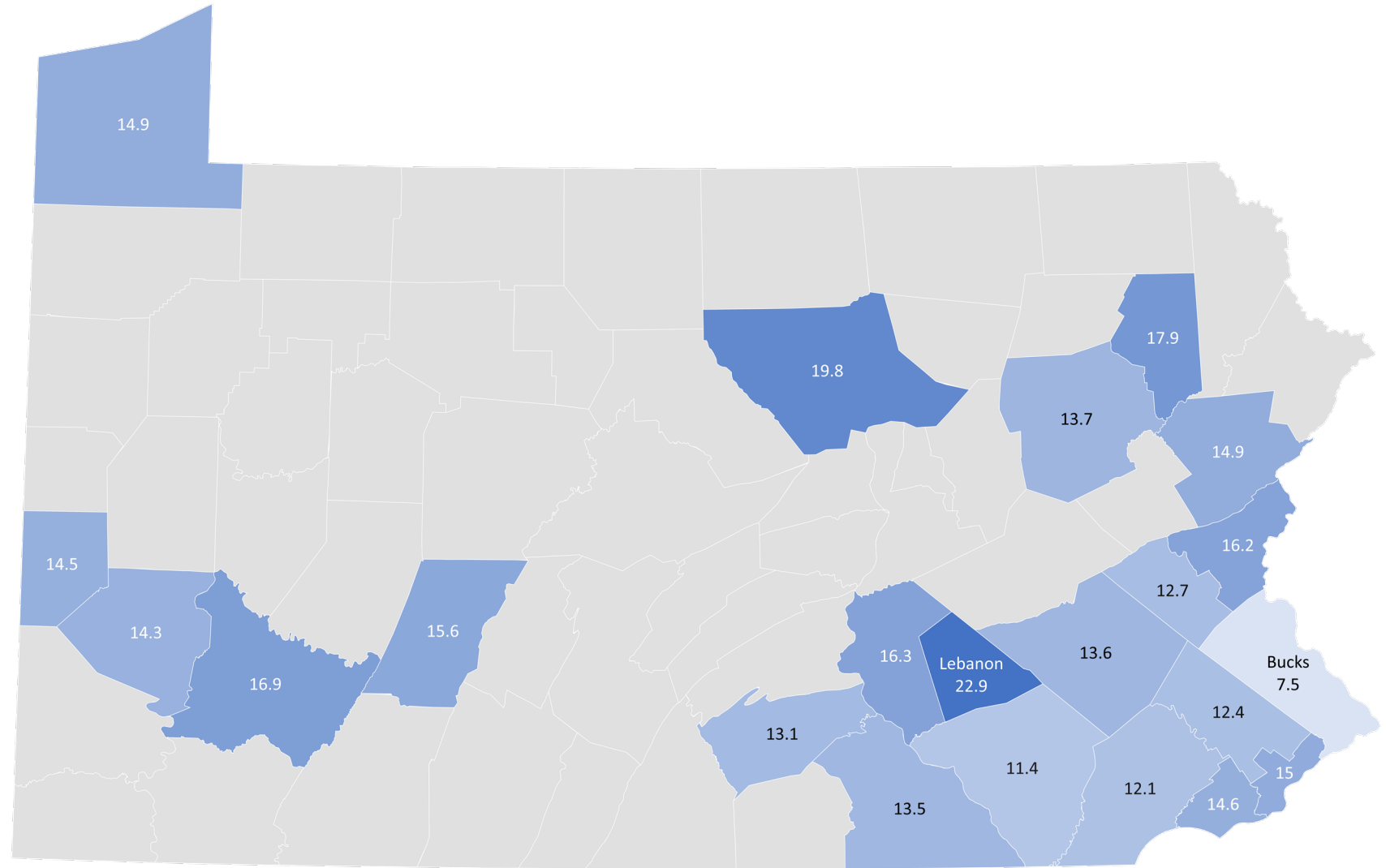
Pennsylvania  
Rate: 6.8



# Low Birth Weight (Black)



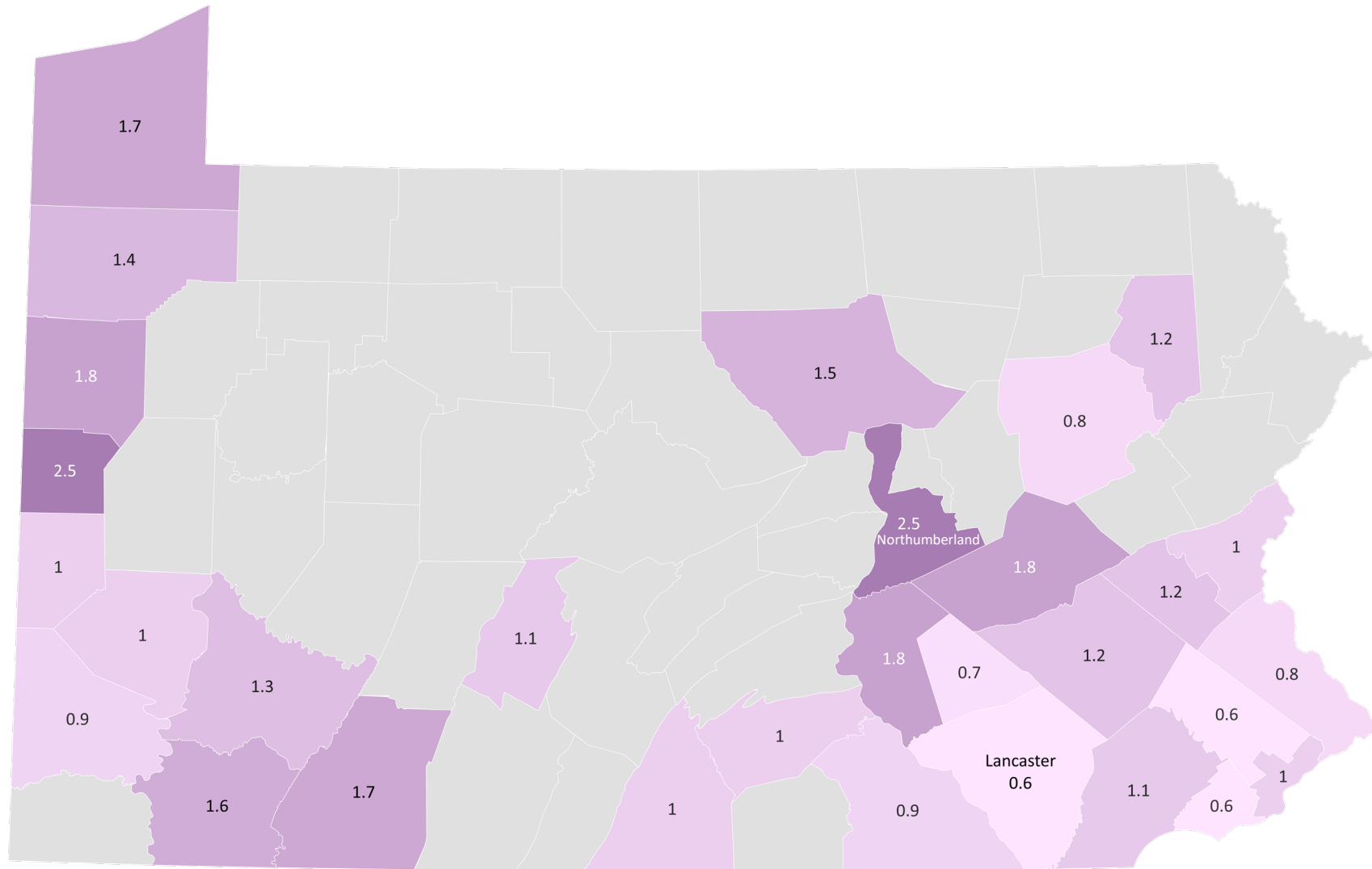
Pennsylvania  
Overall Rate:  
14.5



# Very Low Birth Weight (White)



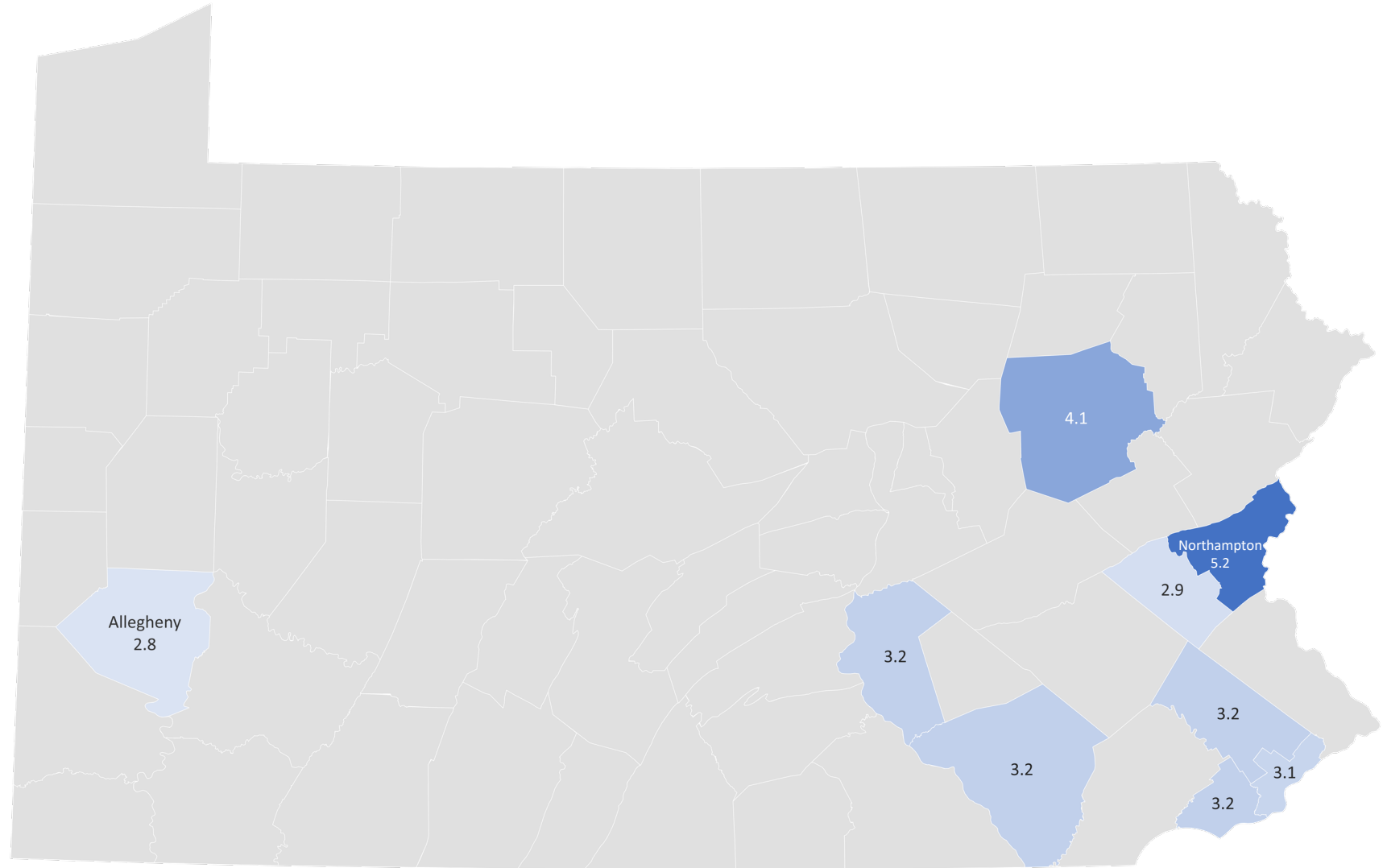
Pennsylvania  
Overall Rate:  
1.0



# Very Low Birth Weight (Black)



Pennsylvania  
Rate: 3.0

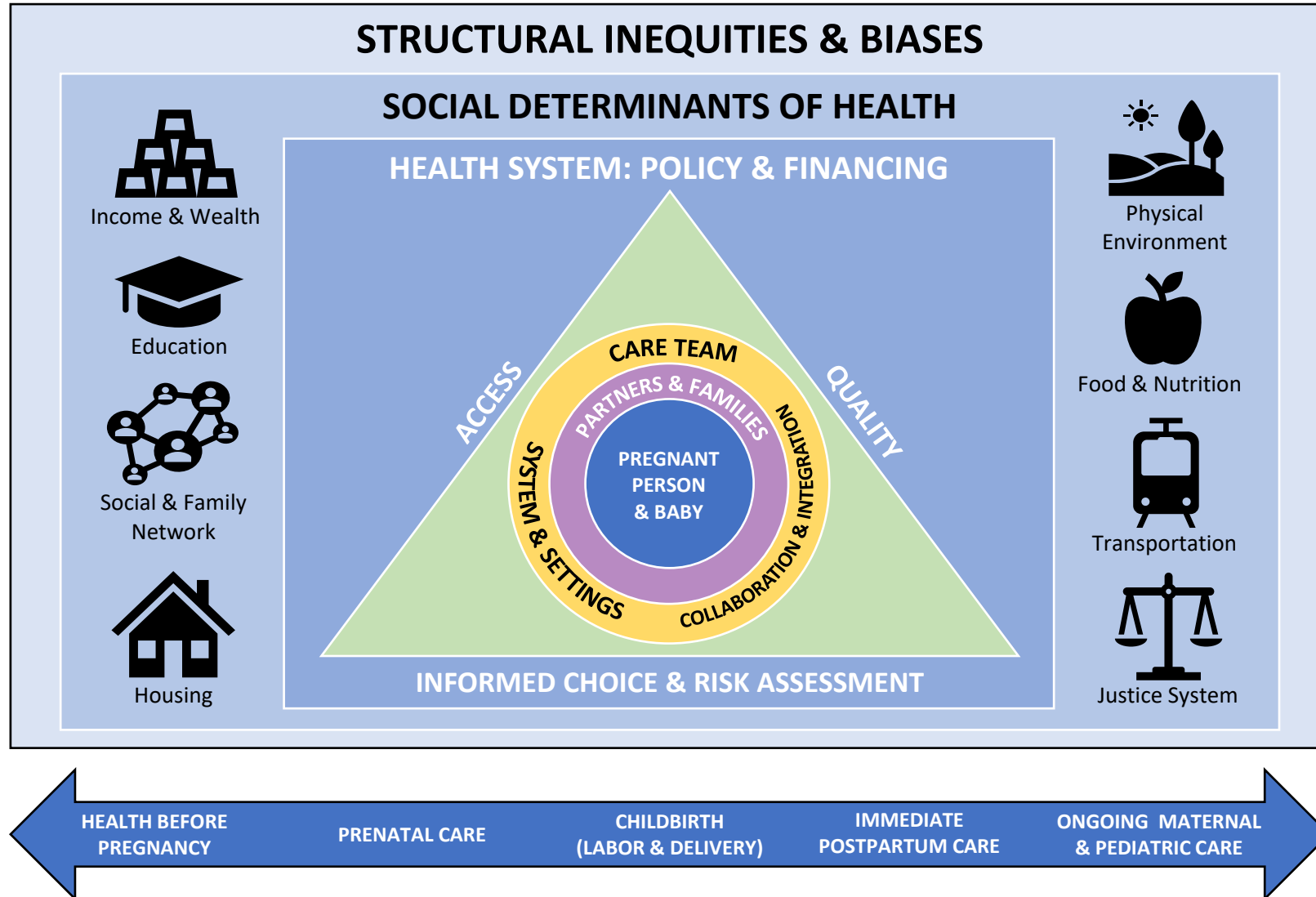


# Why Do These Racial Disparities Exist?

- Racial disparities in LBW has led to deeper exploration of risk factors:
  - Social determinants
  - Personal characteristics
  - Factors related to the health care system and services
- Guiding conceptual framework in understanding maternal and child health outcomes in the US is the *Interactive Continuum of Maternity Care*



# \*Interactive Continuum of Maternity Care\*



\*The Interactive Continuum of Maternity Care was created in 2020 by the ad hoc Committee on Assessing Health Outcomes by Birth Settings and the standing Board on Children, Youth, and Families of the National Academies of Sciences, Engineering, and Medicine\*

# Historical Context of Racism in the U.S.

- Long history of structural racism and racial health designed to uphold power structures and racial hierarchies
- Racist attitudes are still embedded in the healthcare system
  - Dating back to the time of slavery, Jim Crow, and Civil Rights Era
- Despite changes in health insurance coverage and access to public health services, disparities persist
  - Resulting in Black women having a high likelihood of maternal mortality and adverse pregnancy outcomes (such as LBW)

# Reproductive Rights of Black Women

- Racialized idea that Black women did not have autonomy over their reproductive health
  - For example: slave breeding
  - Psychological and generational trauma
- Black women's reproductive history has been influenced by discriminatory policies, practices, and structural racism
  - For example: Redlining, medical racism, eugenics
  - Causing many Black women to fear and distrust the healthcare system
- Historical patterns reveal that Black women have not always been in control of their reproductive experiences, possibly leading to higher rates of maternal morbidity and mortality

# Importance of Socioeconomic Status

- Low SES is widely considered a risk factor for poor maternal and child health outcomes, yet Black women still face higher risk of pregnancy complications and maternal mortality regardless of income, educational attainment, and wealth
  - NYC: college-educated Black women more than twice as likely to suffer severe complications from childbirth than white women without a high school diploma
  - California: Black mothers with the highest incomes more likely to have severe childbirth complications than white women with the lowest incomes

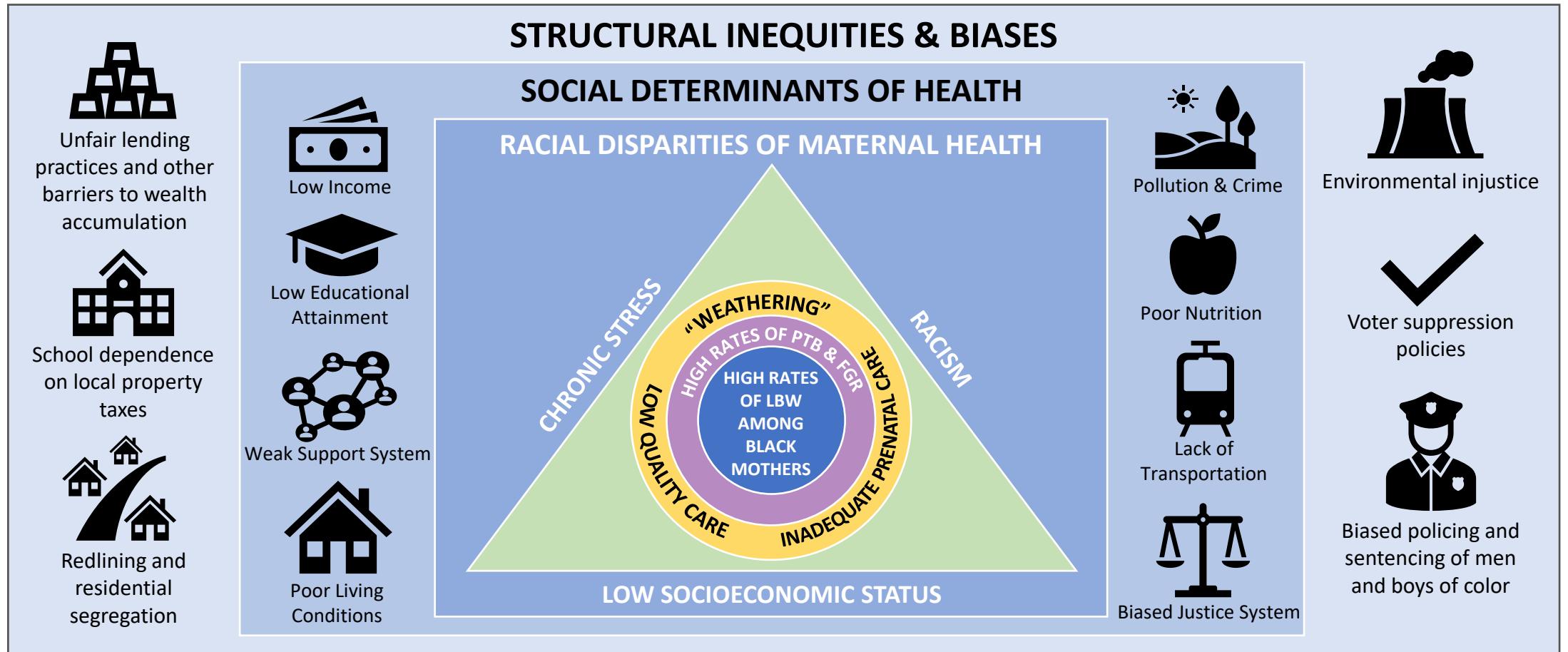
# Chronic Stress & “Weathering”

- Chronic stress may be a key factor in why SES fails to completely explain racial disparities
- Social, economic, and political marginalization → chronic stress over the lifespan → poor health outcomes → conditions that cause LBW
  - Chronic maternal stress hormones significantly associated with increased risk of preterm birth and LBW
- Premise of Dr. Geronimus “Weathering” Hypothesis
  - Health of Black women deteriorates due to repeated exposure to racism
  - Intersectionality: Effect of racial hierarchies and being a “double-minority”
  - The social becomes the biological

# Main Causes of LBW

- Preterm birth (PTB) and fetal growth restriction (FGR) are two major major risk factors for LBW
  - Black women are disproportionately more likely to experience all 3
- PTB: when a baby is born too early before 37 weeks of pregnancy has been completed
  - Racial disparities in LBW are mostly driven by differences in PTB
  - PTB rate among Black women is about 50% higher than white or Hispanic women
- FGR: diagnosis for infants with an estimated fetal weight below the 10th percentile for the estimated gestational age
  - Black infants in the US have consistently lower birth weight for their gestational age
  - Association with hypertensive disorders of pregnancy

# \*Continuum of LBW Disparities\*



\*This Continuum of LBW Disparities is adapted from the Interactive Continuum of Maternity Care was created in 2020 by the ad hoc Committee on Assessing Health Outcomes by Birth Settings and the standing Board on Children, Youth, and Families of the National Academies of Sciences, Engineering, and Medicine\*

# Maternal Mortality

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*Death while pregnant or within 42 days of the end of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes*





# Maternal Mortality

- Maternal and infant mortality disproportionately occurs across racial/ethnic groups. Compared to white women:
  - Black women are 3 to 4 times more likely to die from a pregnancy-related cause of death
  - American Indian and Alaska Native (AIAN) women are 2 times more likely
- Black, AIAN, and Native Hawaiian and Other Pacific Islander (NHOPI) women also have higher rates of:
  - Preterm births, low birth weight, and births for which they received late or no prenatal care



# Black Women Face **Three Times** the Maternal Mortality Risk as White Women

Black mothers: **55**



White mothers: **19**



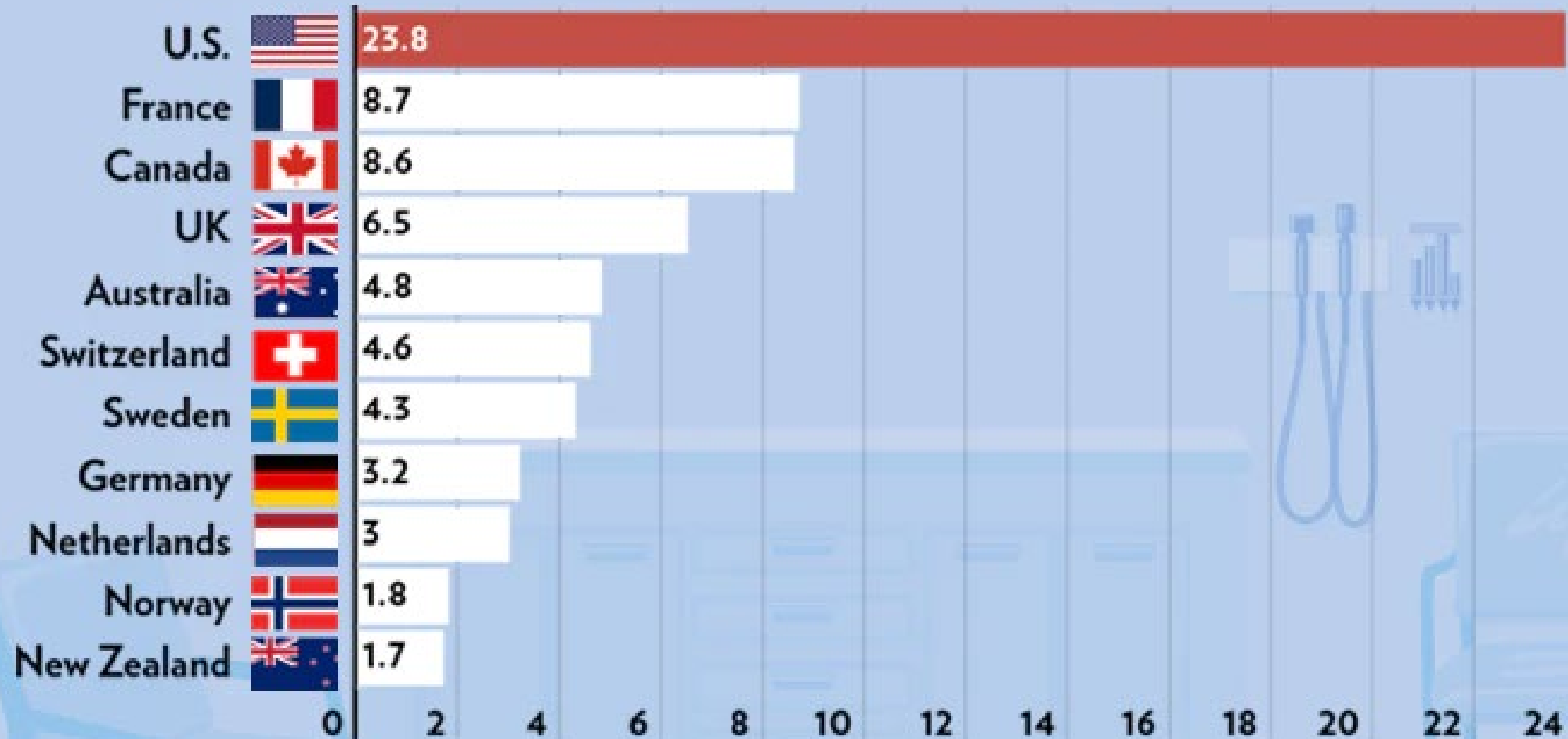
Hispanic mothers: **18**



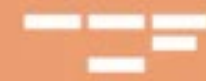
\*Deaths per 100,000 live births

Source: <https://www.cdc.gov/nchs/data/hestat/maternal-mortality/2020/maternal-mortality-rates-2020.htm>

# Maternal Mortality in the U.S. Far Outstrips That of Other Industrialized Nations



\*Deaths per 100,000 live births



# The U.S. Maternal Mortality Rate Continues to Increase Substantially



Source: <https://www.cdc.gov/nchs/data/hestat/maternal-mortality/2020/maternal-mortality-rates-2020.htm>

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