

# ALAMEDA COUNTY PERINATAL AND INFANT HEALTH INDICATORS



Alameda County Public Health Department  
Health Care Services Agency  
February 2023

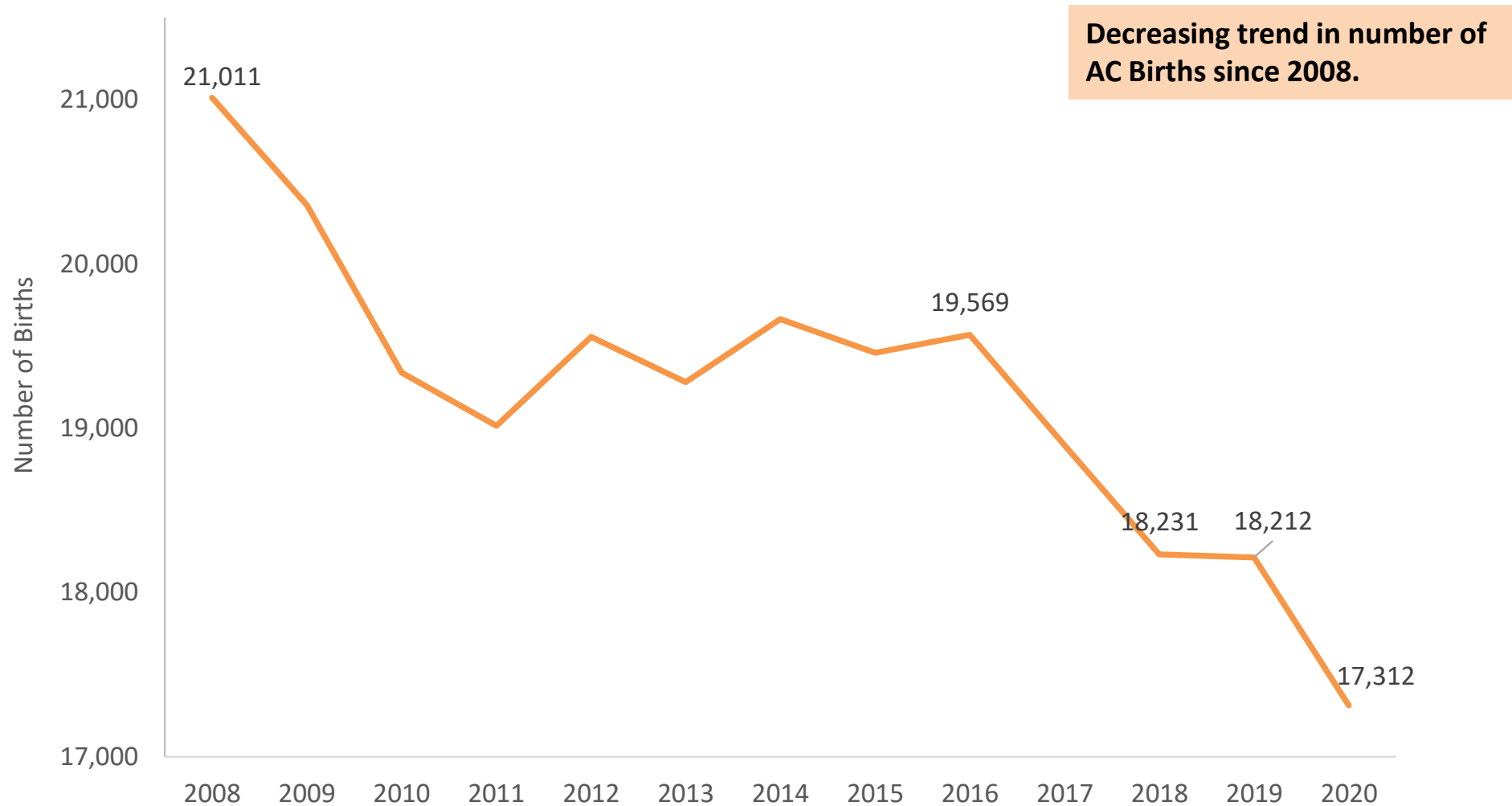
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# Alameda County Births



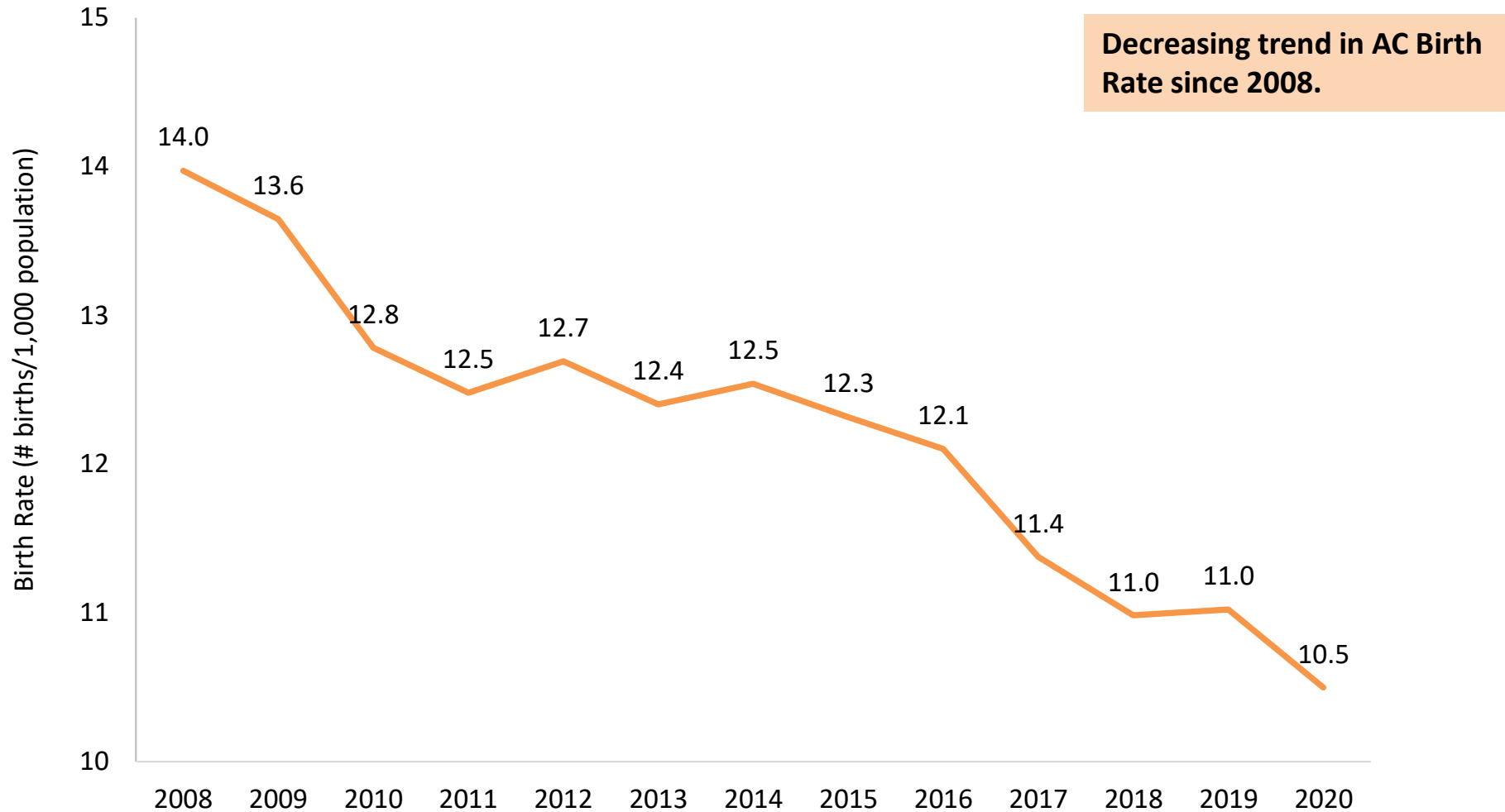
# Annual Births in Alameda County, 2008-2020

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# Annual Birth Rate in Alameda County, 2008-2020

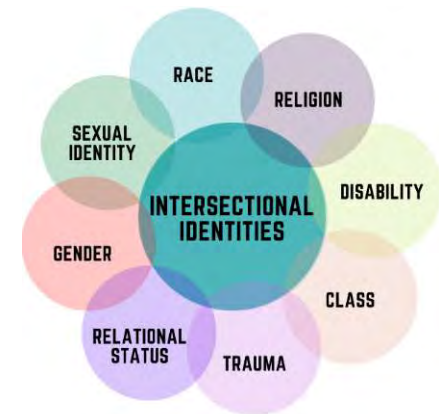
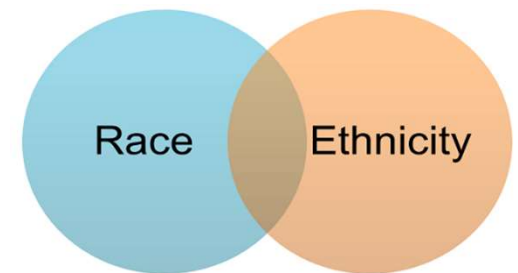
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# Defining Race & Ethnicity

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- ❑ Both Race and Ethnicity are Social Constructs!
- ❑ Race: Narrow category based on real or perceived biological differences between groups of people.
- ❑ Ethnicity: Broad category based on common language, religion, nationality, history or another cultural factor.
- ❑ Problems with Categorization
  - ▣ Race & Ethnicity overlap in complex ways
  - ▣ Definitions have changed overtime (“Irish”= Race)
  - ▣ People Can Fit in Multiple Categories
  - ▣ People have multiple/intersecting identities



# How We Determine Baby's Race/Ethnicity

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- ❑ The Birth Certificate allows mothers to select up to 3 race groups and Latino/Hispanic ethnicity
- ❑ Mother's race/ethnicity determines baby's race/ethnicity.
- ❑ Race/Ethnicity is mutually exclusive (one category per mother & baby).
- ❑ Starting Out Strong Uses Similar Methodology
- ❑ Different Program & Data Sources Have Different Definitions

## Hispanic/Latino Ethnicity- Any Race

- ❑ Mexican
- ❑ Chicano
- ❑ Puerto Rican
- ❑ Cuban
- ❑ Central/South American

## Race Categories

- ❑ African American NH
- ❑ American Indian NH
- ❑ Asian NH
- ❑ Pacific Islander NH
- ❑ White NH
- ❑ Multirace NH- More than 1 of the above

## Unknown Race/Ethnicity

- ❑ Mother's Race/Ethnicity not included on baby's birth certificate
- ❑ "Refused to State" or "Unknown"



# Why We Categorize Baby's Race/Ethnicity

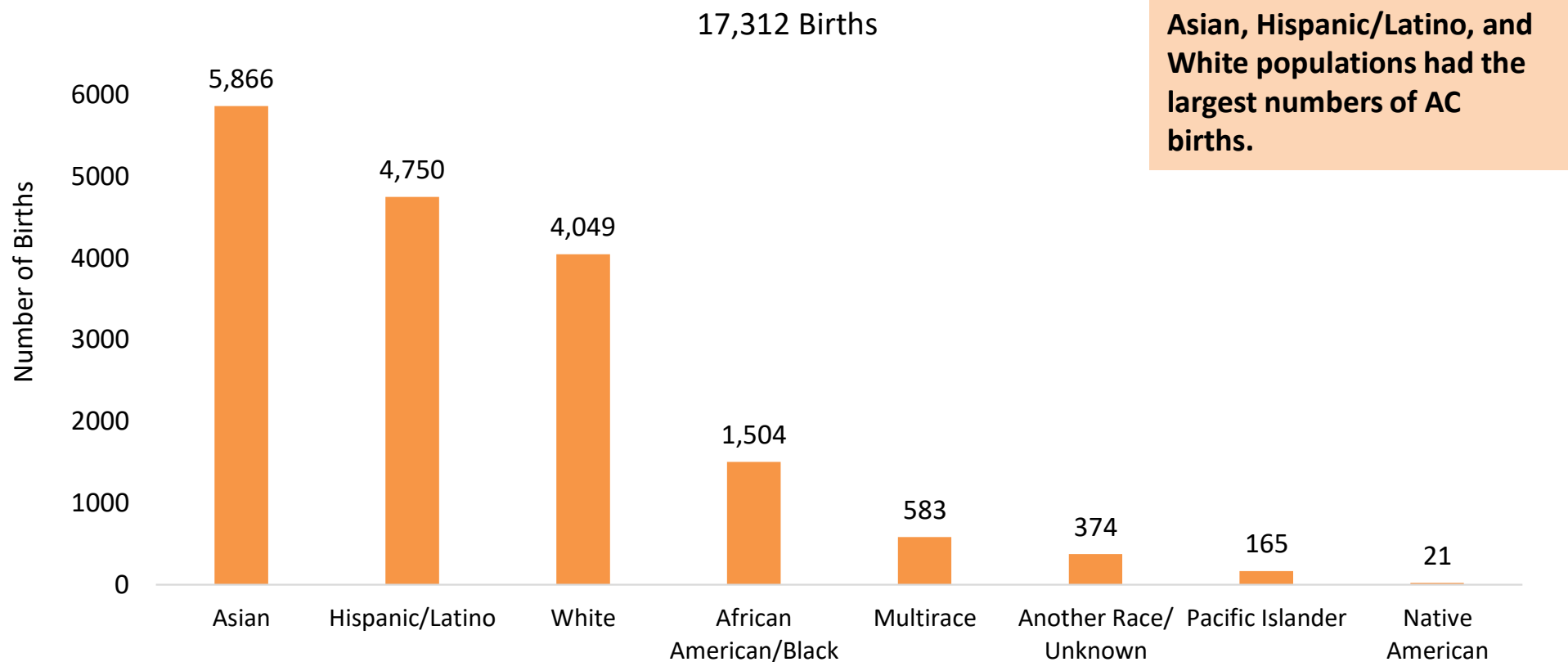
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- ❑ Data Aggregation/Analyses: to count and compare groups.
- ❑ Align with National Standards (NCHS, CDC, CDPH, HP2030)
- ❑ Measure how well we are doing compared to other jurisdictions.
- ❑ Mother's race/ethnicity incorporates Life Course Perspective.
- ❑ #1 reason: To identify health inequities- Race/Ethnicity is our best category for measuring inequities between groups in AC.



# Number of Births by Race/Ethnicity, 2020

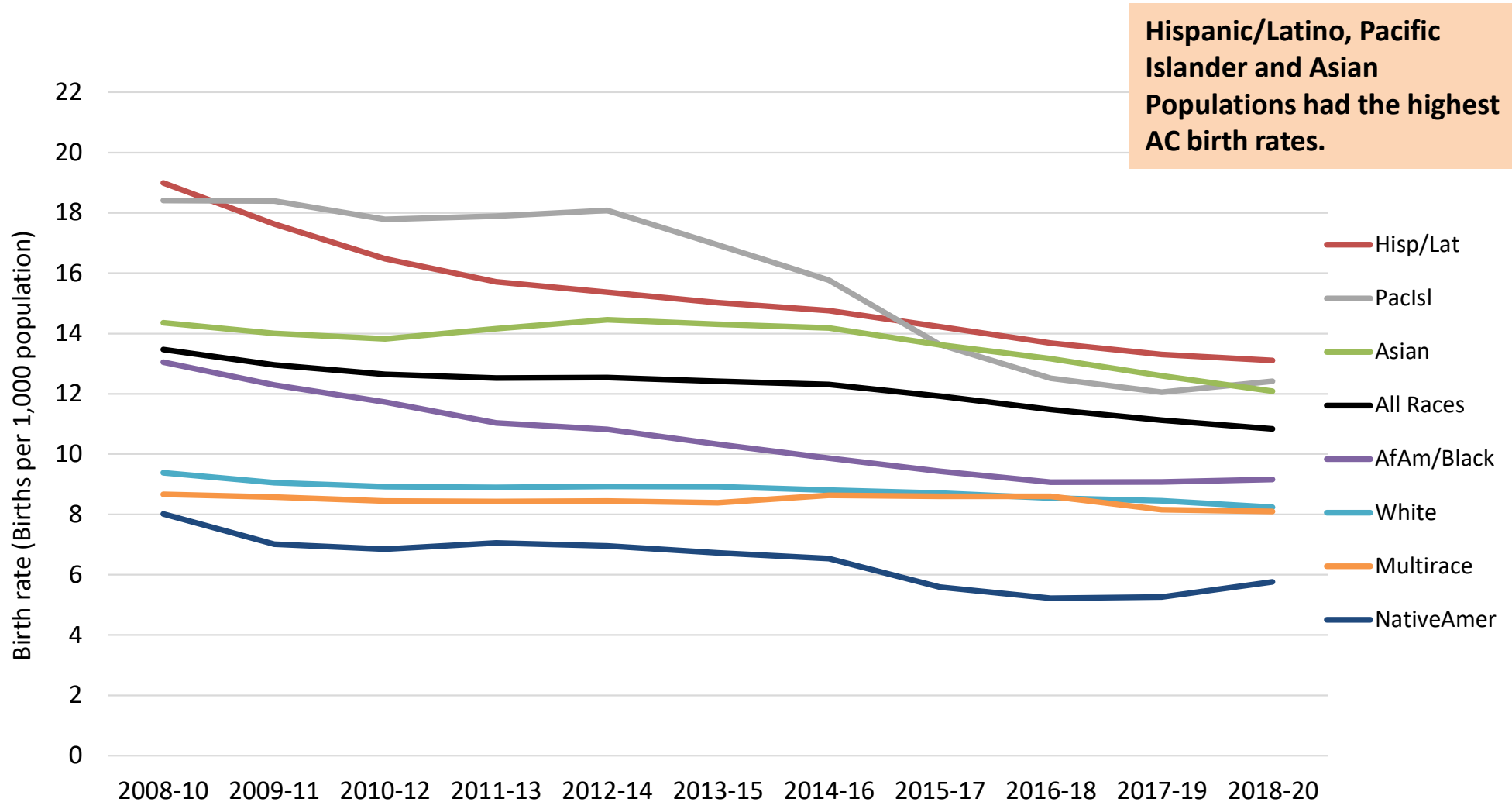
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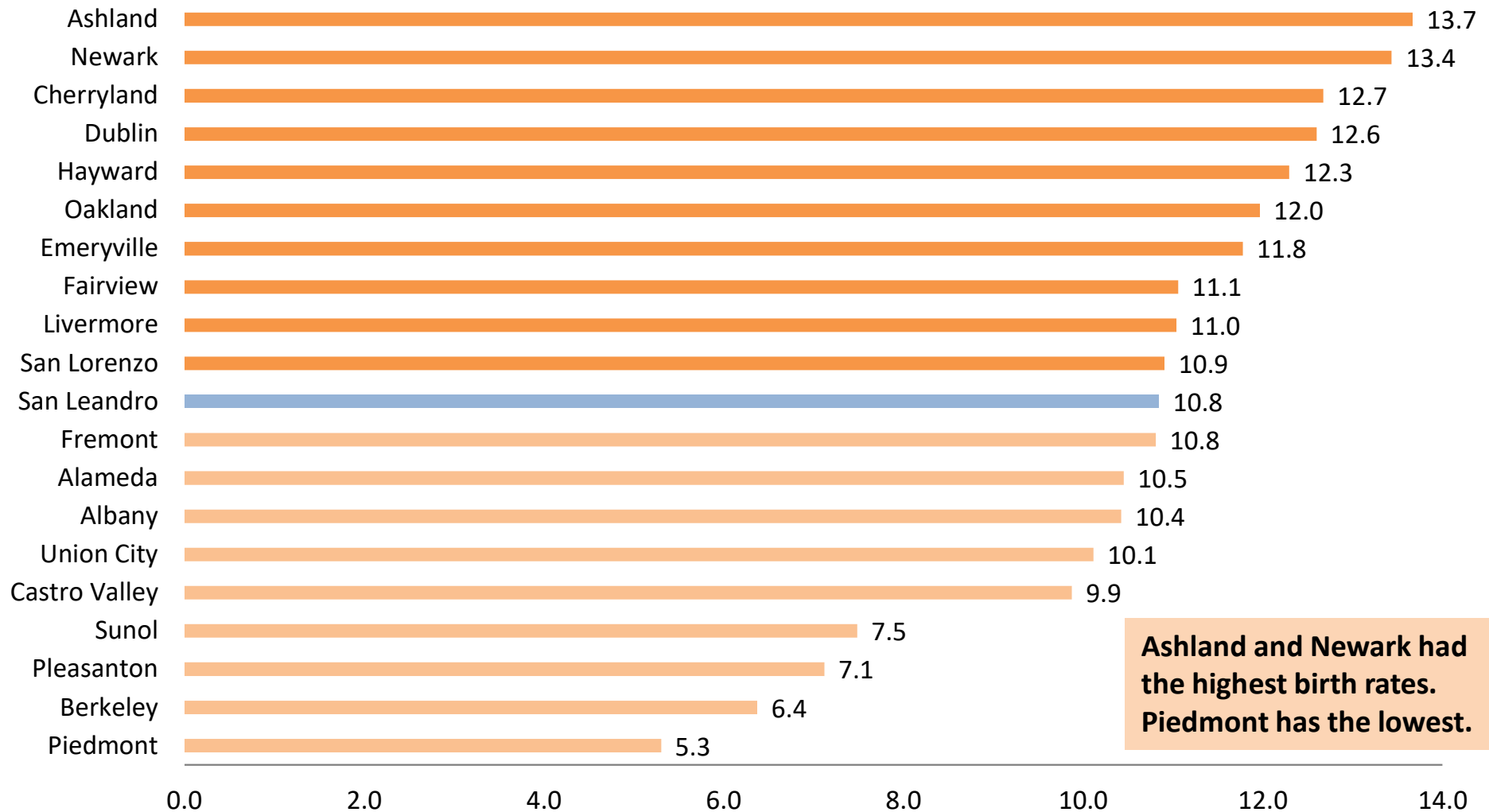
# Birth Rate Trend by Race/Ethnicity, 2008-2020

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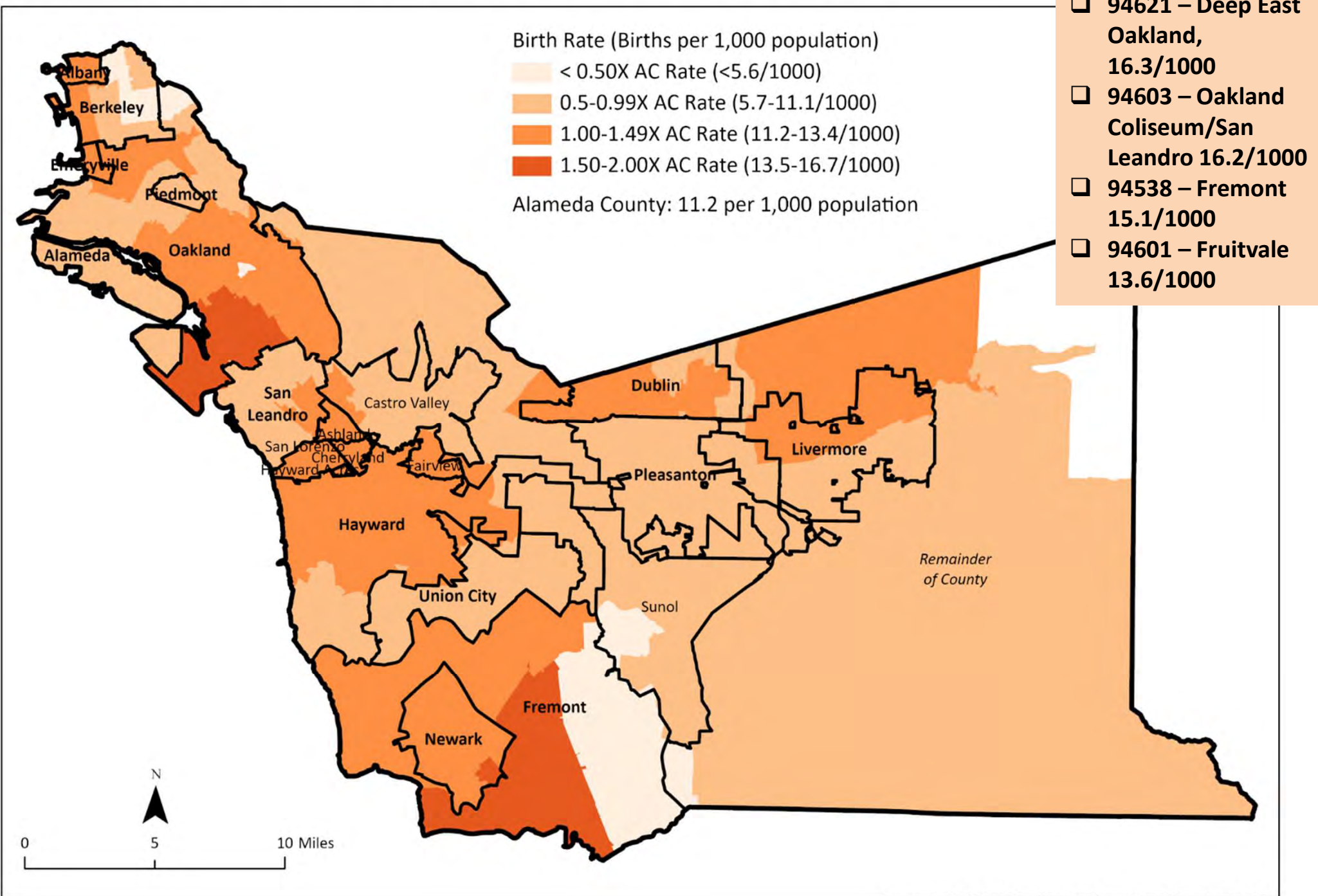


# Birth Rate by City/Place, 2018-2020

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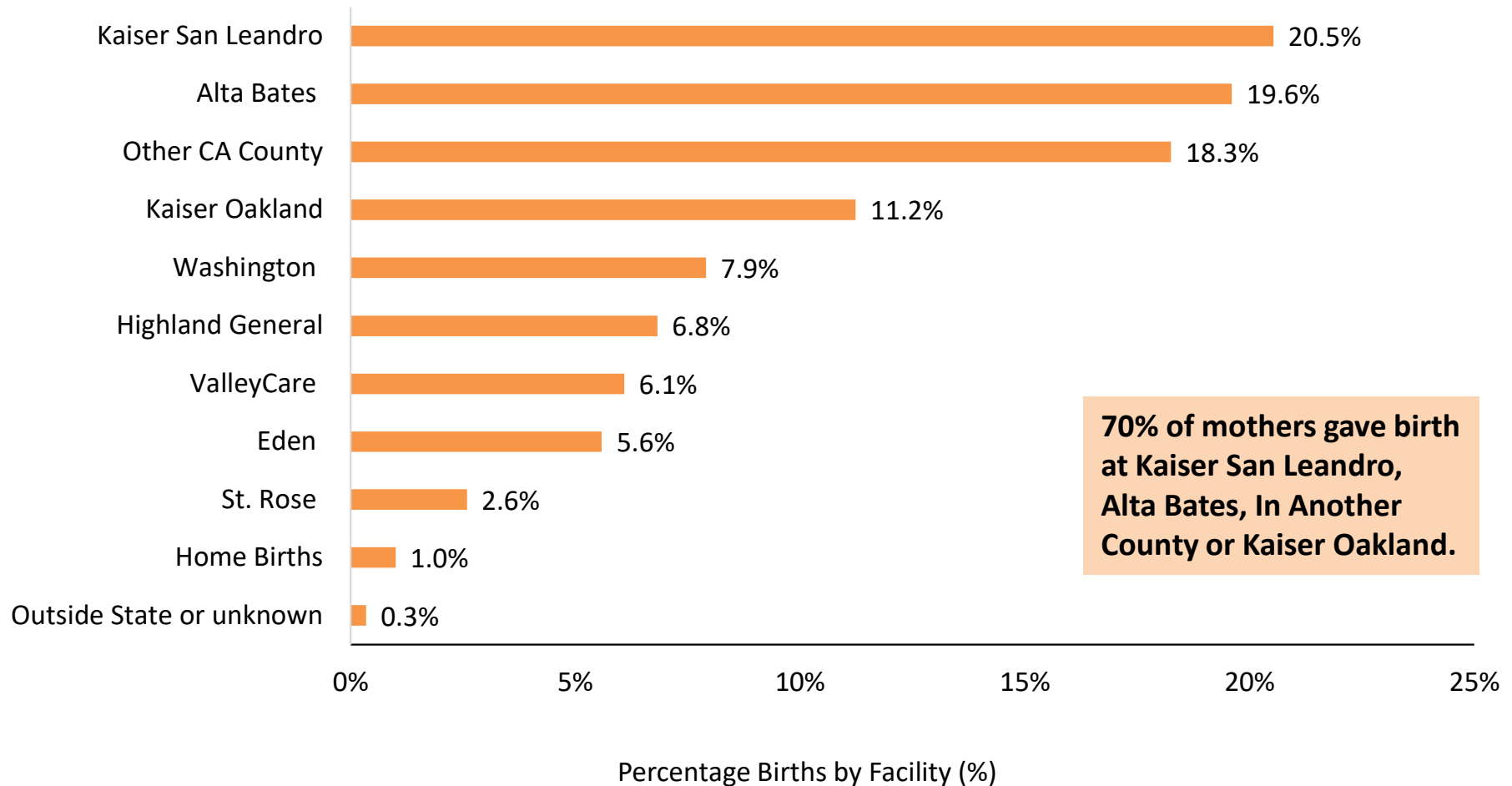
# Alameda County Birth Rate by Zip Code, 2016-2020



Source: ACPHD CAPE, with data from birth files, 2016-2020.

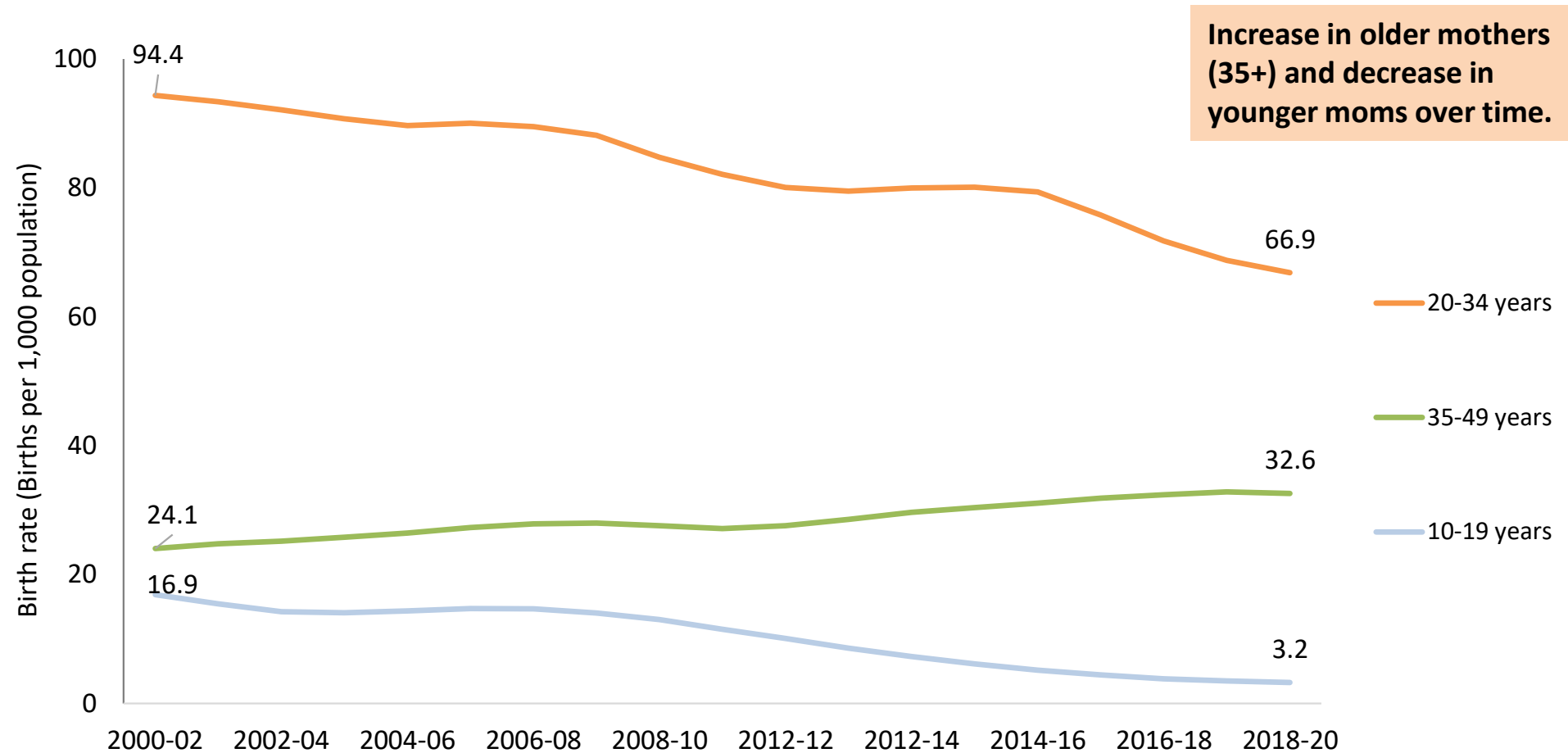
# Percentage Share Alameda County Births by Facility, 2018-2020

12



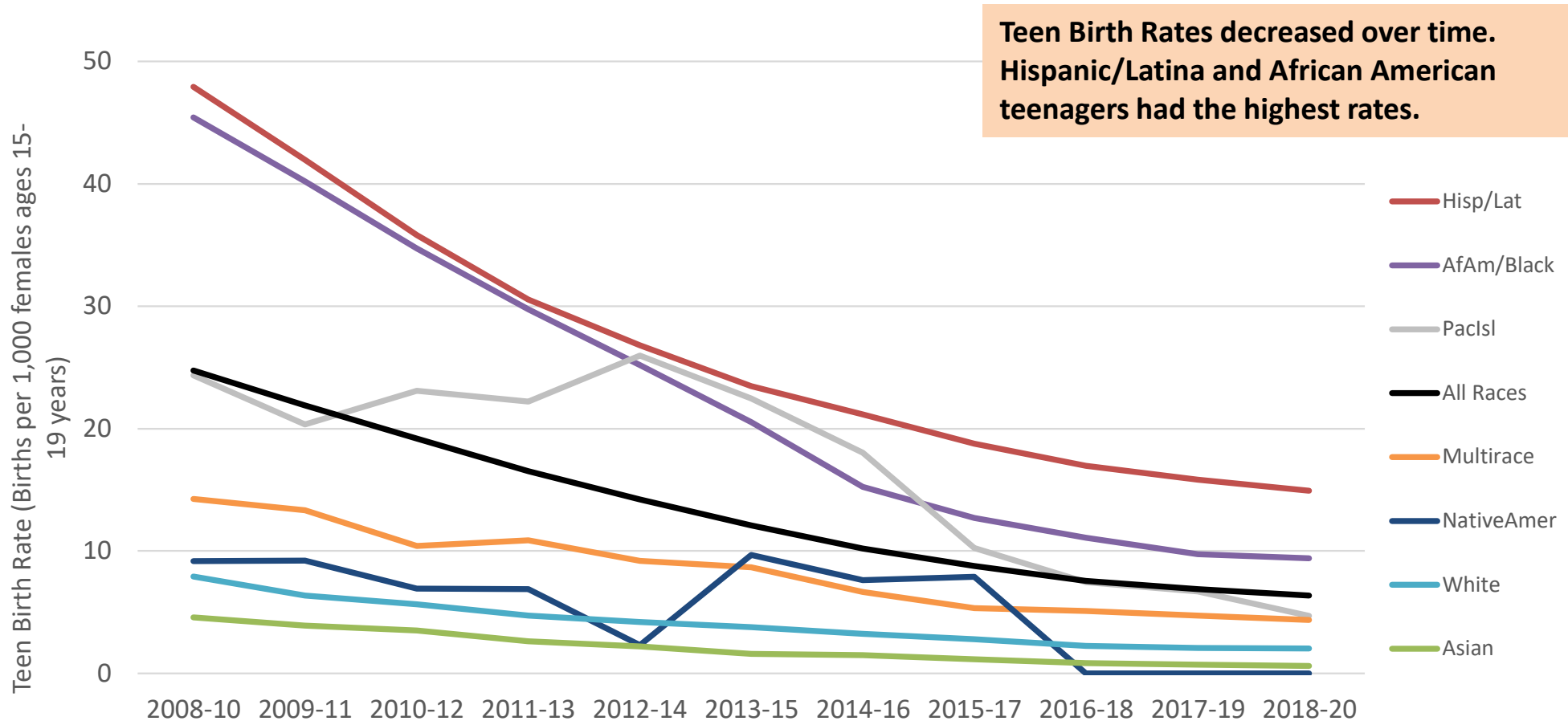
# Birth Rate Trend by Age Category, 2008-2020

13



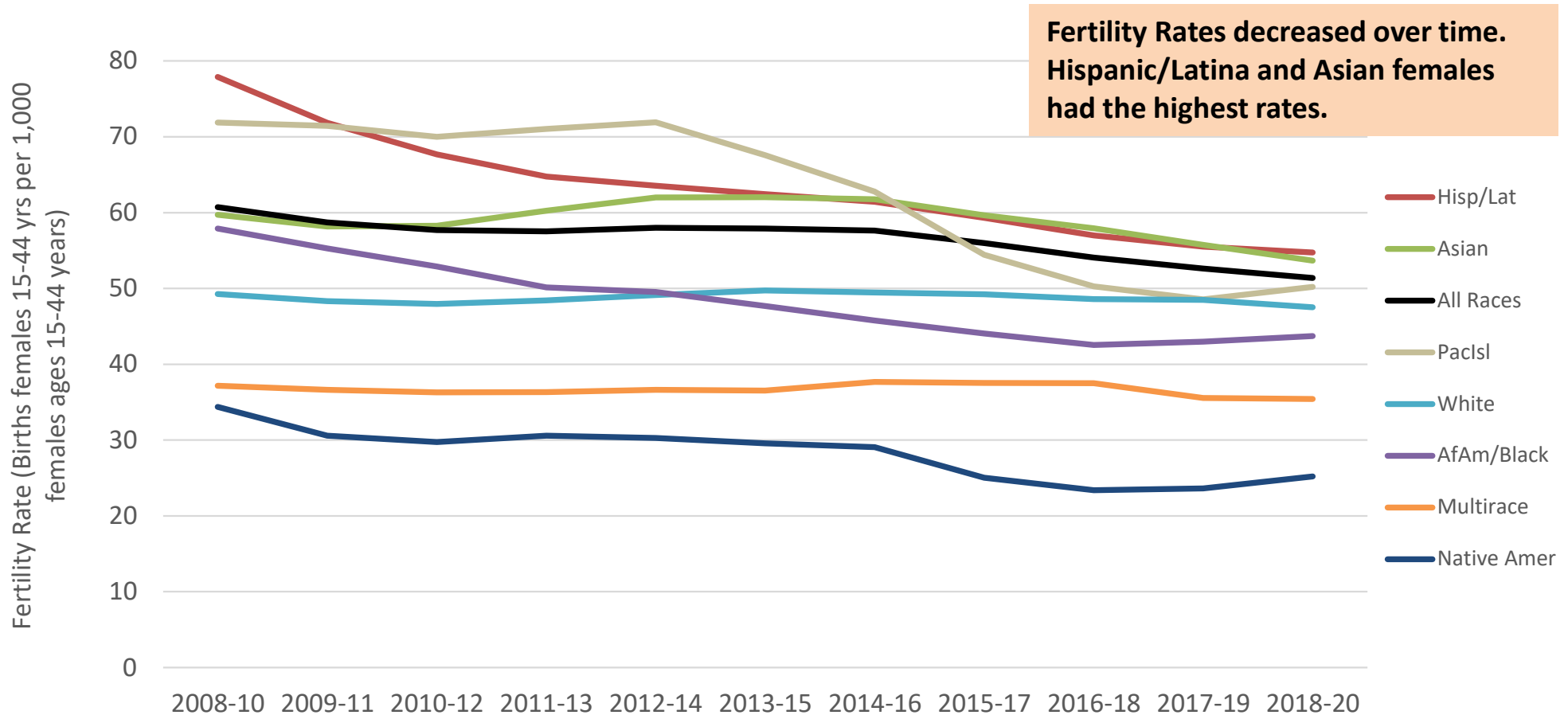
# Teen Birth Rate Trend by Race/Ethnicity, 2008-2020

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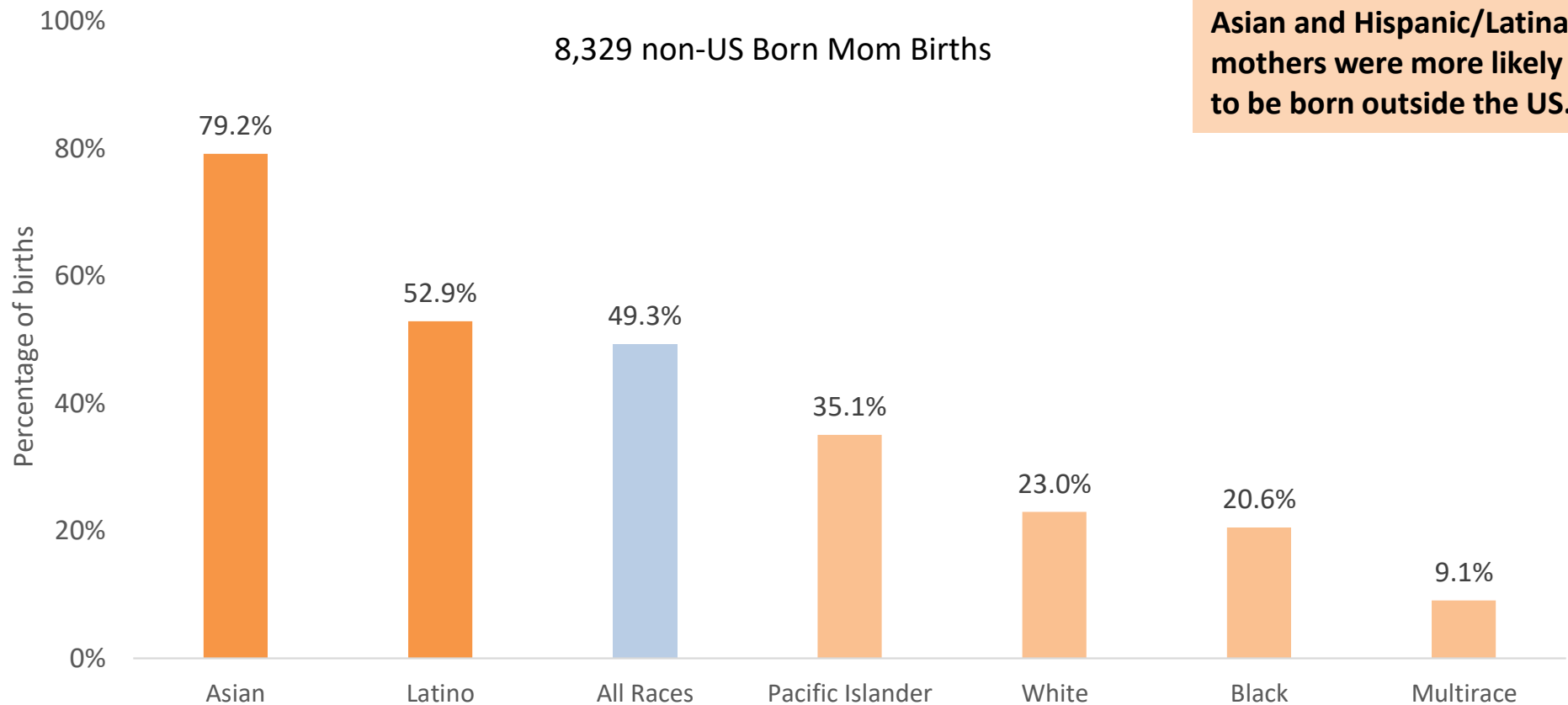
# Fertility Rate Trend by Race/Ethnicity, 2008-2020

15



# Percentage Births to Non-US Born Mothers by Race/Ethnicity, 2020

16



\* There were no non-US born Native American Mothers in 2020.





# Top Countries of Mothers' Birth by Race/Ethnicity, 2020

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## Asian (5,866)

Rank	Country	Percent
1	India	33.5%
2	US	22.4%
3	China	16.7%
4	Philippines	7.5%
5	Vietnam	4.6%

## Pacific Islander (165)

Rank	Country	Percent
1	US	66.1%
2	Tonga	13.9%
3	Fiji	13.3%

## Black/ African American (1,504)

Rank	Country	Percent
1	US	80.0%
2	Ethiopia	5.2%
3	Eritrea	3.9%
4	Nigeria	2.7%

## White (4,409)

Rank	Country	Percent
1	US	75.3%
2	Afghanistan	4.5%
3	Yemen	4.3%
4	Russia	1.6%

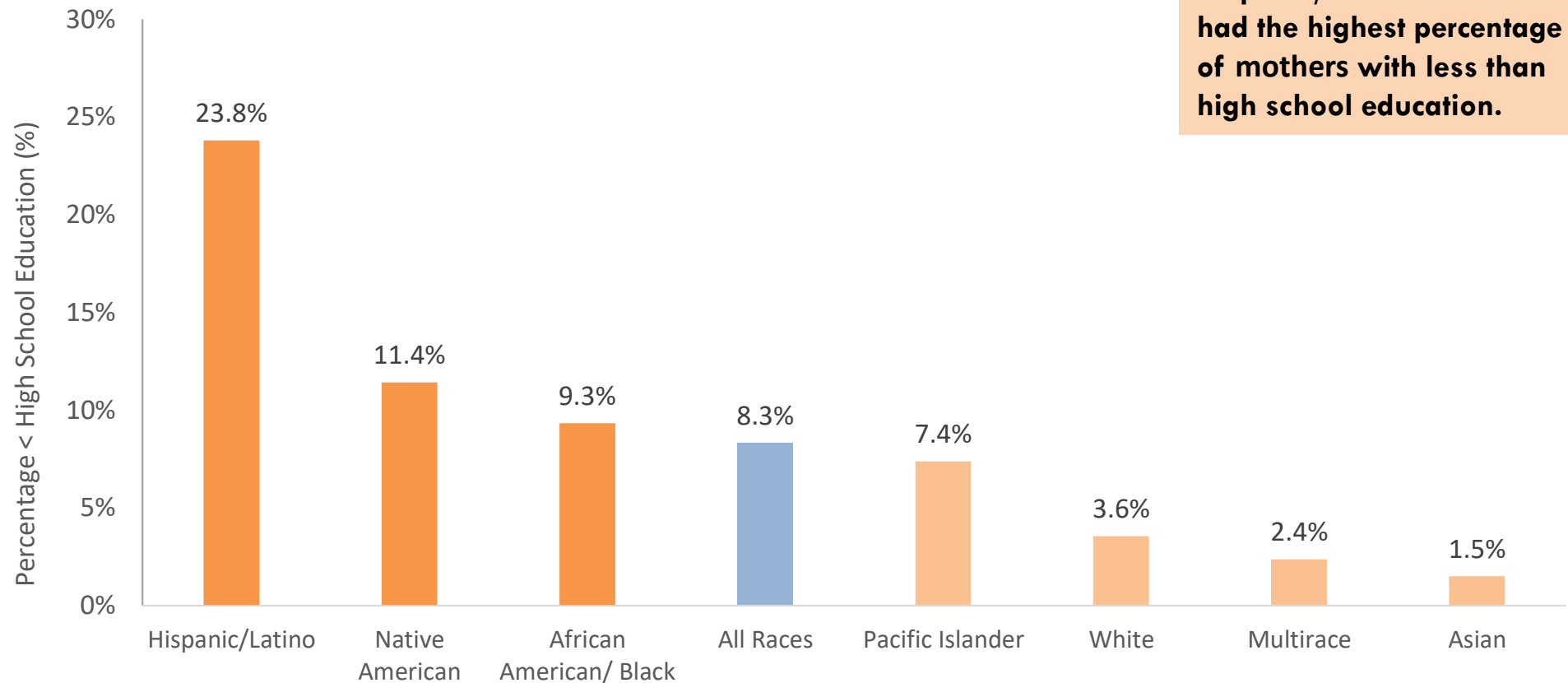
## Hispanic/Latino (4,750)

Rank	Country	Percent
1	US	49.5%
2	Mexico	26.1%
3	Guatemala	10.2%
4	El Salvador	6.8%
5	Honduras	2.1%



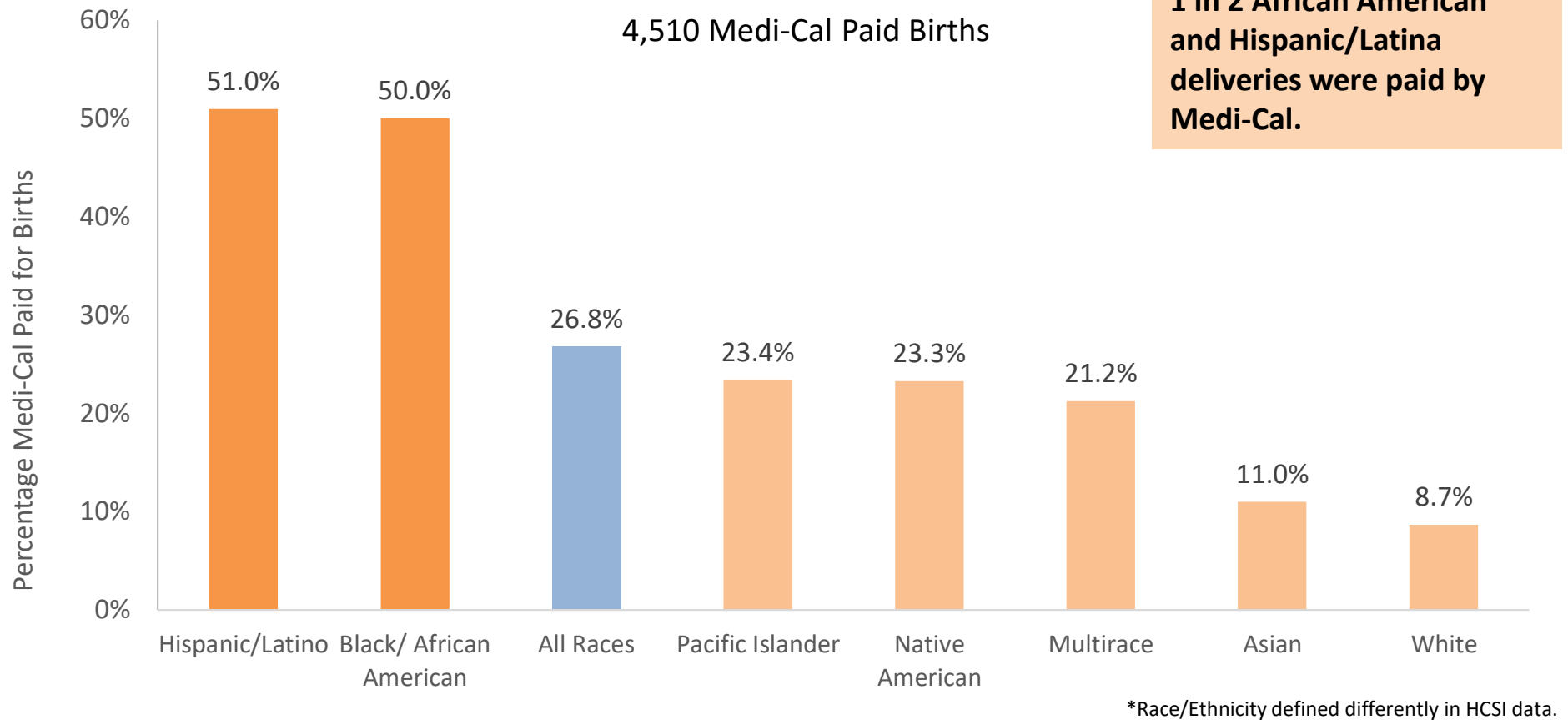
# Percentage Mothers Less than High School Education by Race/Ethnicity, 2018-2020

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# Percentage Medi-Cal Births by Race/Ethnicity, 2020

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# Medi-Cal Births by AC Birthing Facility

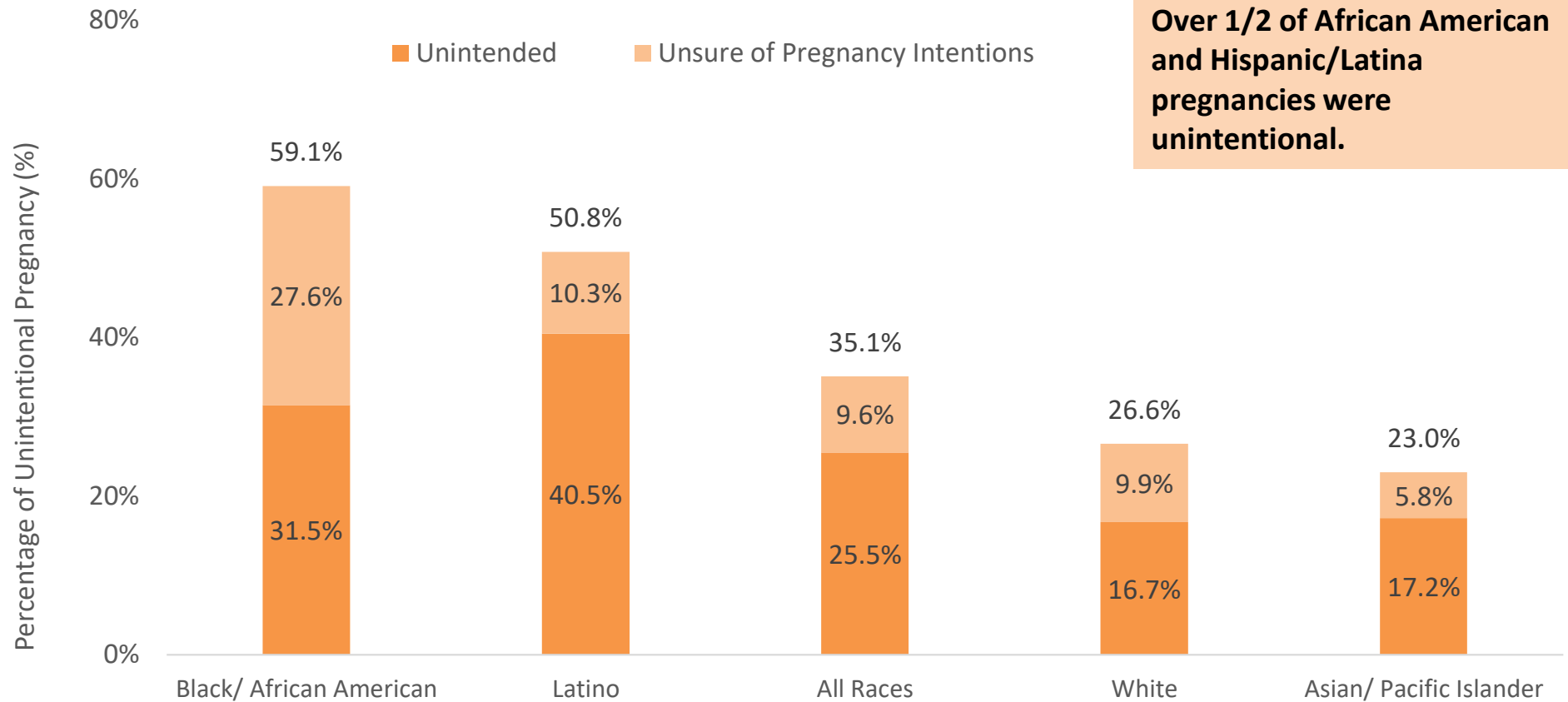
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- ❑ Facilities with highest percentages of Medi-Cal births
  - ▣ Highland, St Rose and Alta Bates
- ❑ Facilities with the lowest percentages of Medi-Cal births
  - ▣ Kaiser San Leandro, Kaiser Oakland, Eden and Home Births.
- ❑ Note: Medi-Cal Births are underestimated on birth certificates and hospital diagnostic and billing data is a better source for payer type.



# Percentage Unintentional Pregnancy by Race/Ethnicity, 2016-2018

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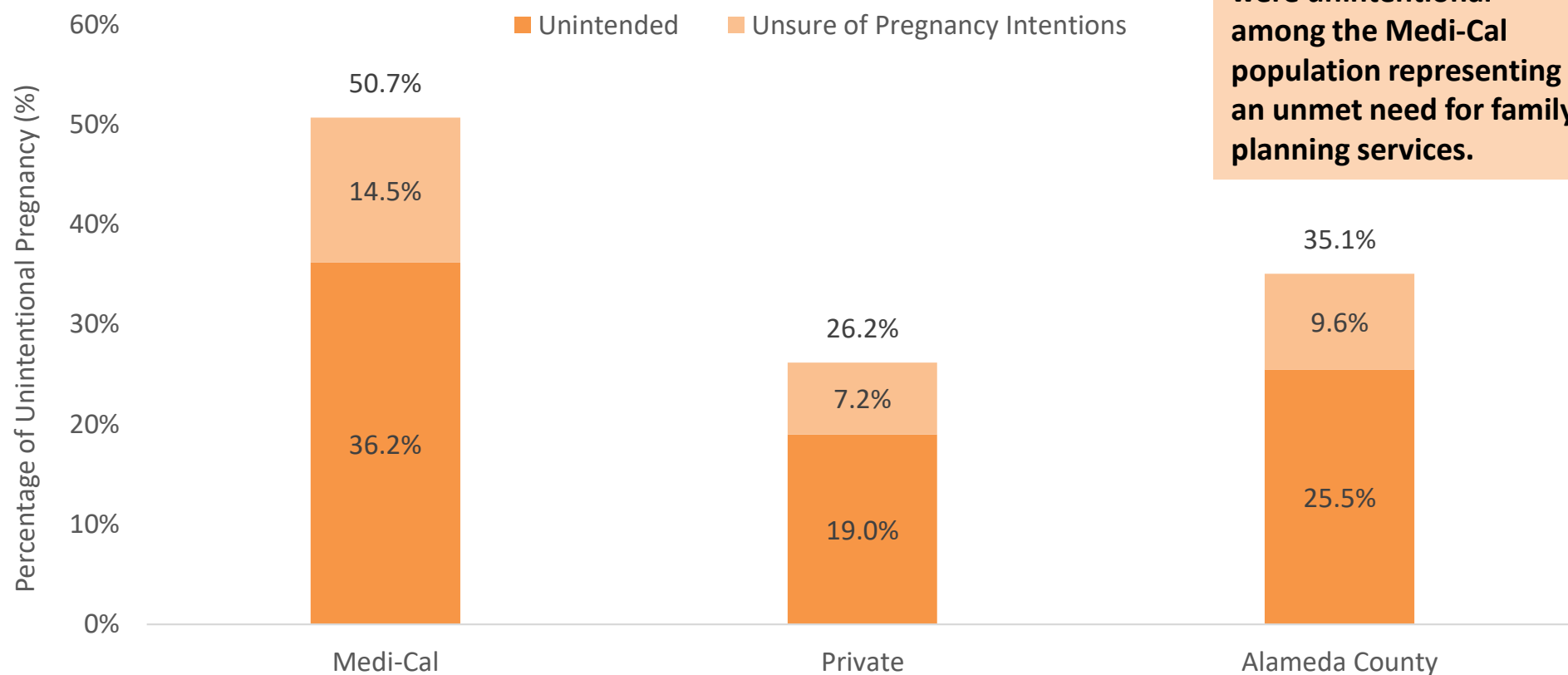


\*MIHA combines Asian and Pacific Islander Mothers due to small sample size of Pacific Islanders. MIHA does not show data for Native American or Multirace Mothers at the state or county level.



# Percentage Unintentional Pregnancy: Medi-Cal vs. Private Insurance 2016-2018

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# Unmet Need for Family Planning Services in AC and CA

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- ❑ In 2016, over 87,000 women in AC aged 13-44 years needed publicly funded family planning services.
- ❑ Publicly funded family planning centers in AC served about 54,000 female clients in 2015.
- ❑ The abortion rate for CA residents was 16.4 per 1,000 women ages 15-44 years in 2017.
- ❑ Publicly funded family planning centers in CA helped avert about 350,000 unintended pregnancies in 2016.

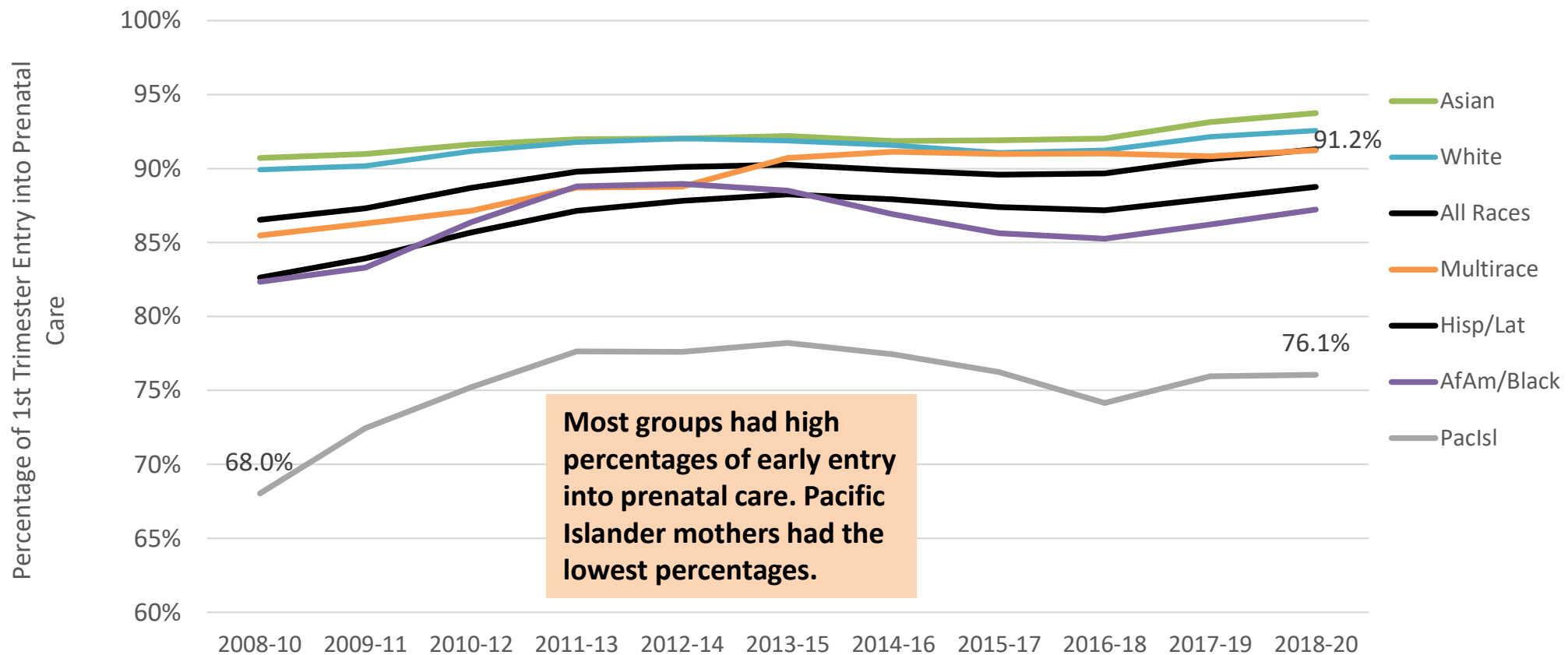


# Alameda County Pregnancy and Maternal Health Indicators





# Percentage of First Trimester Prenatal Care Trend by Race/Ethnicity, 2008-2020

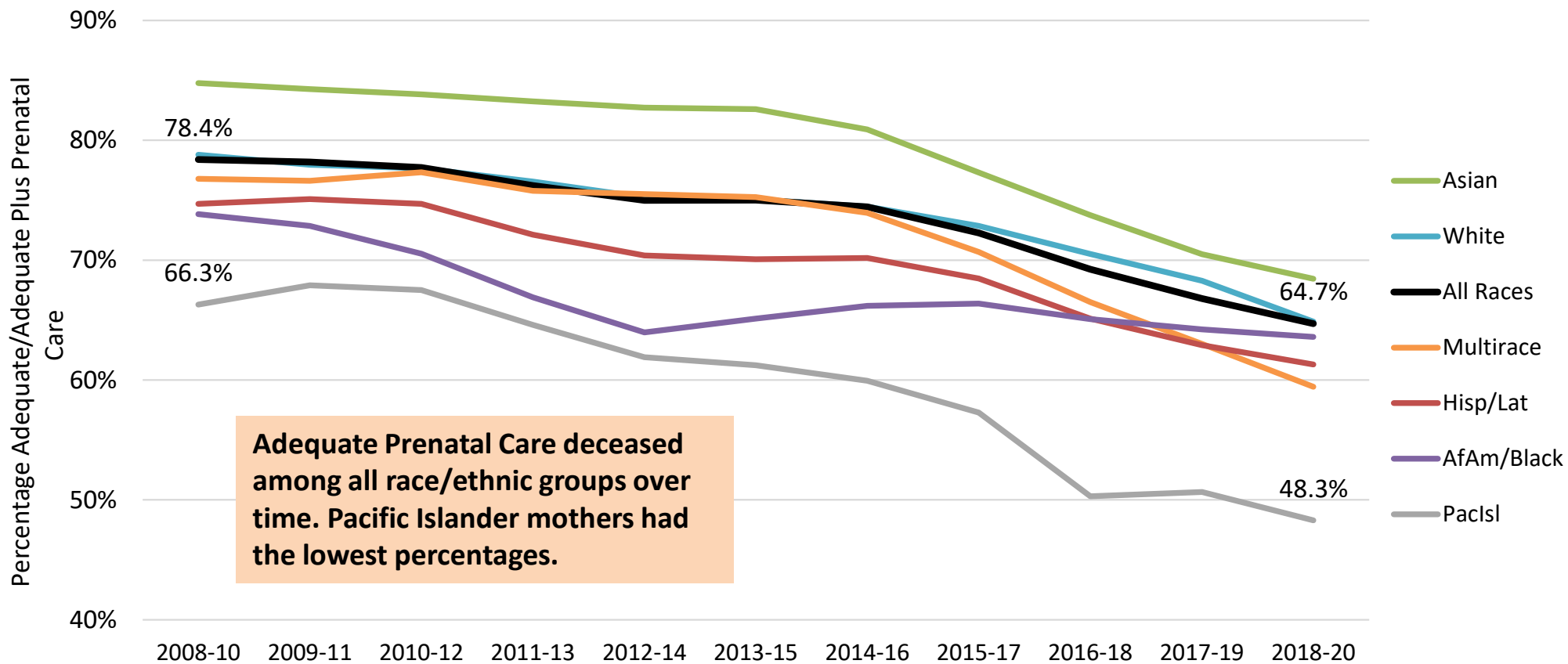


\* Native American mothers first trimester entry into prenatal care was similar to other populations, but not included due to yearly fluctuations.



# Percentage of Adequate/Adequate Plus Prenatal Care Trend by Race/Ethnicity, 2008-2020

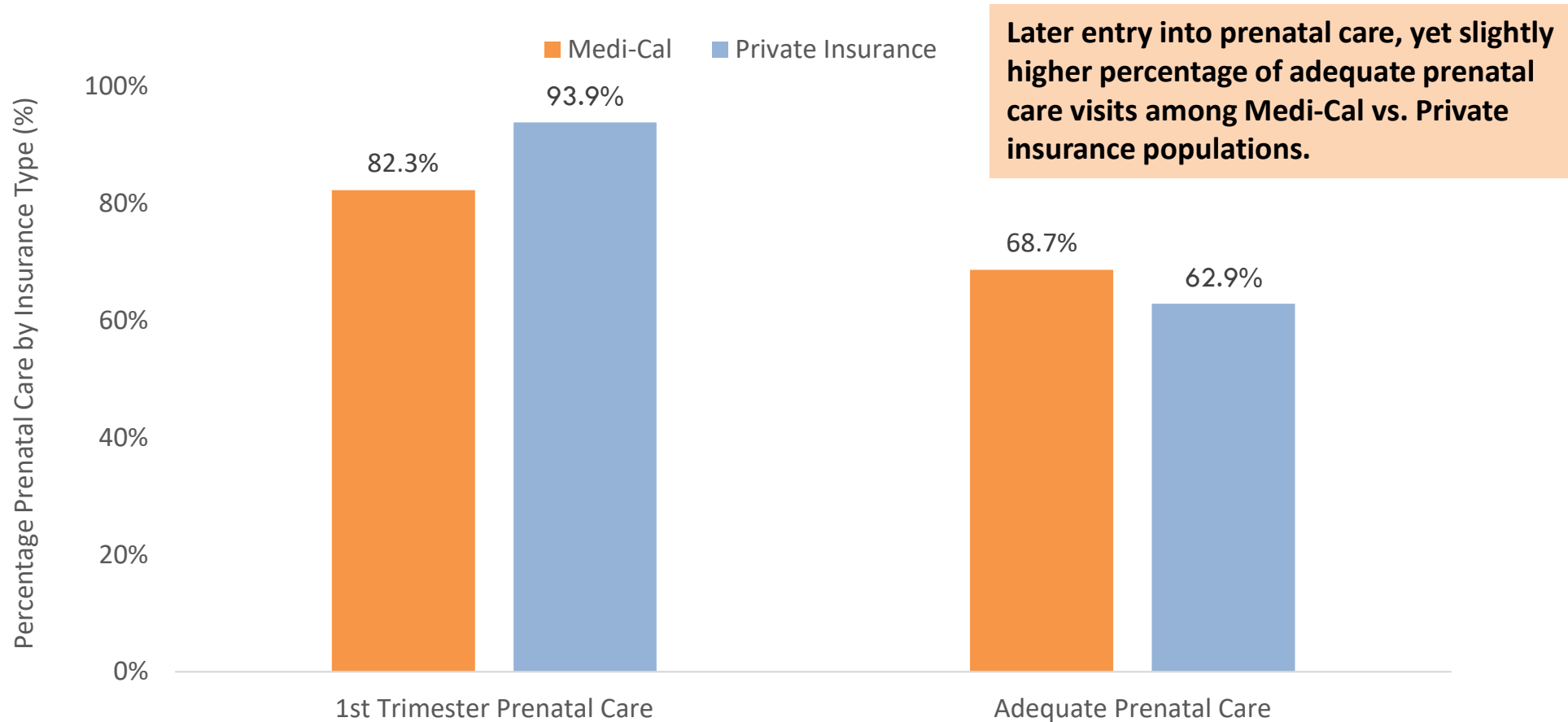
**Adequate/Adequate Plus Prenatal Care:** Received ~80% of needed prenatal care visits during pregnancy. (Kotelchuck Index)



\* Native American mothers first trimester entry into prenatal care was similar to other populations, but not included due to yearly fluctuations.

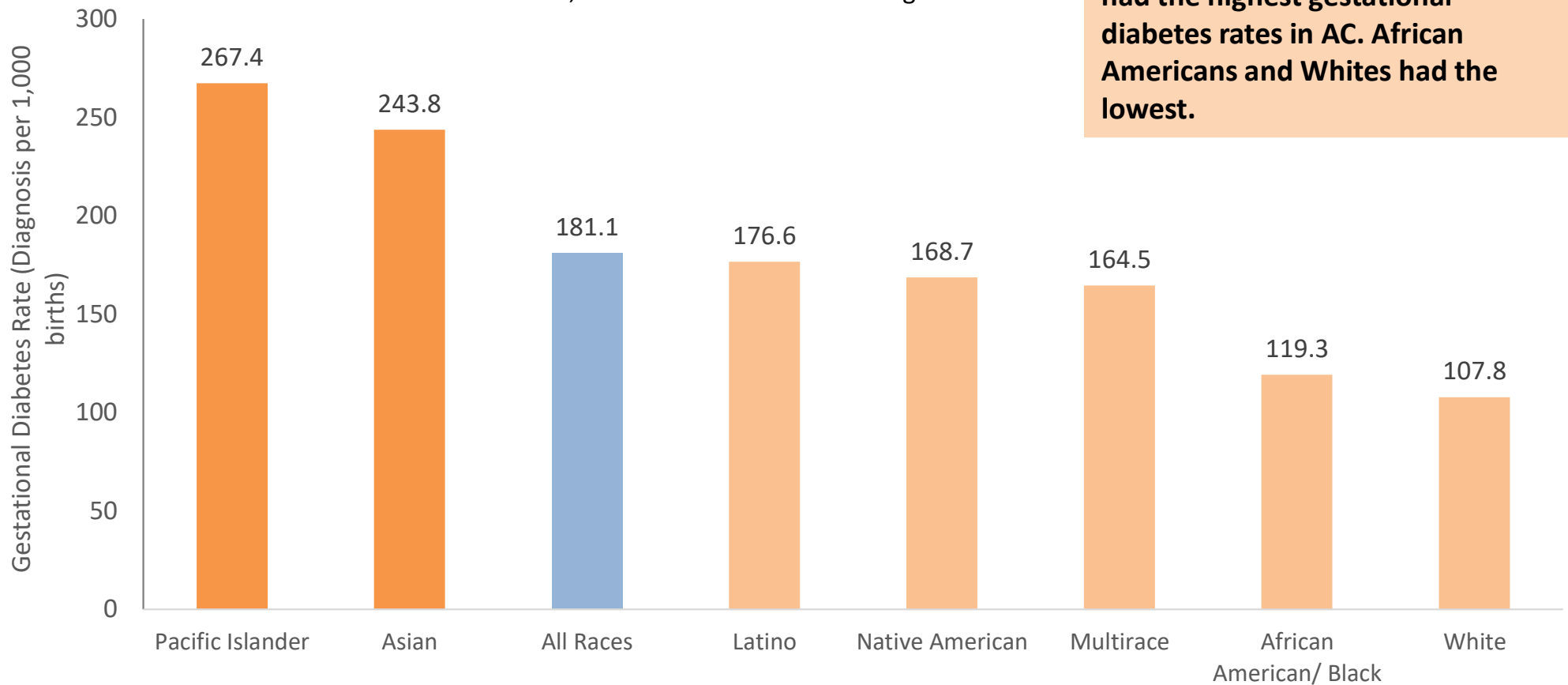


# Percentage 1st Trimester & Adequate Prenatal Care Medi-Cal vs. Private, 2018-2020



# Gestational Diabetes Rate by Race/Ethnicity, 2019-2020

3,117 Gestational Diabetes Diagnoses

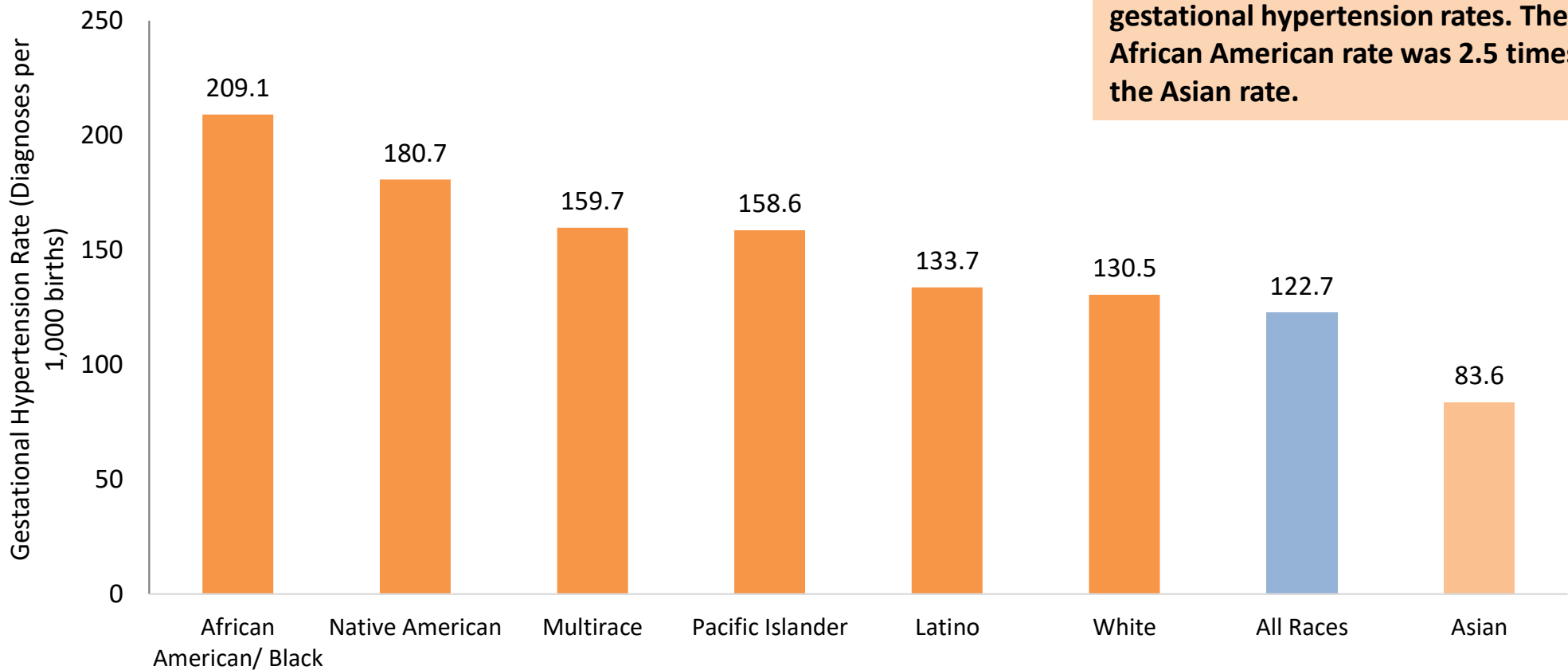


\*Race/Ethnicity defined differently in HCSI data.



# Gestational Hypertension Rate by Race/Ethnicity, 2019-2020

2,111 Gestational Hypertension Diagnoses

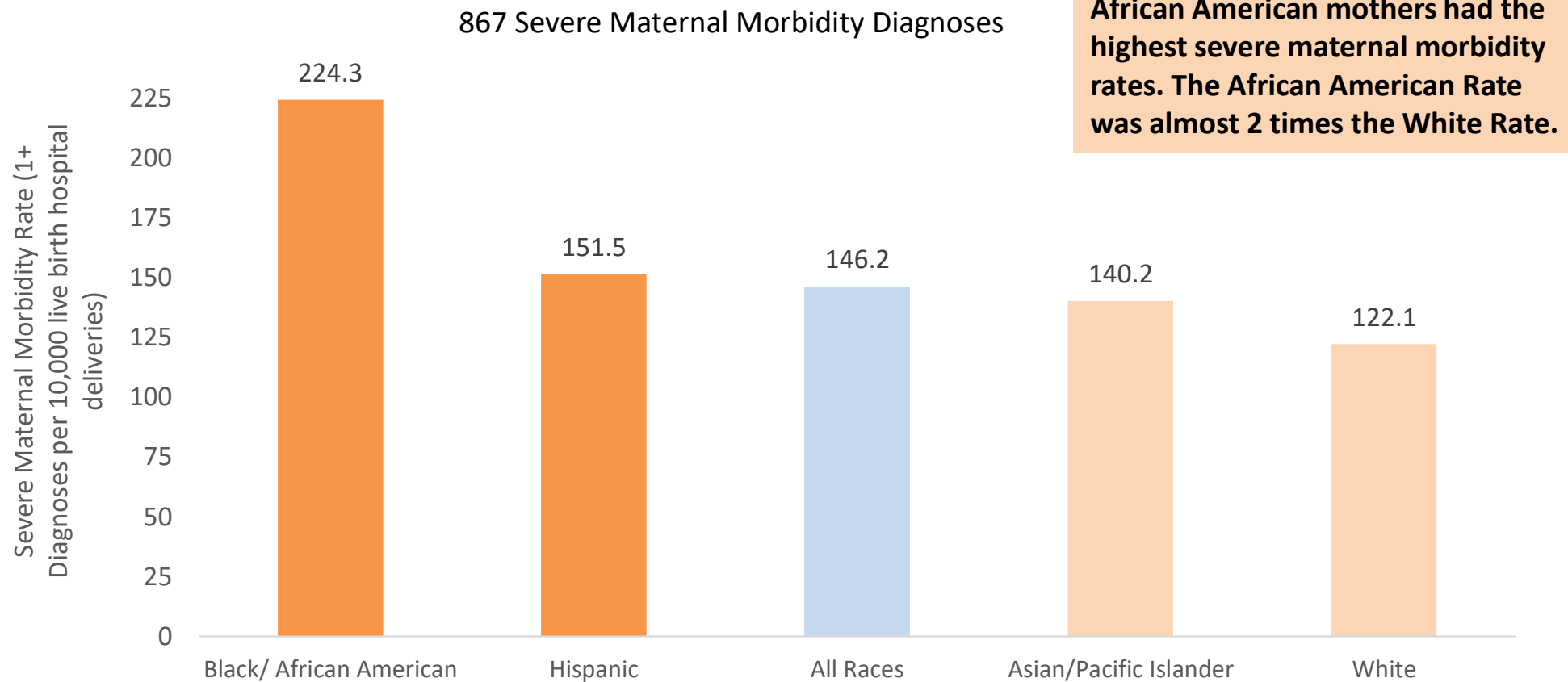


**African American and Native American mothers had the highest gestational hypertension rates. The African American rate was 2.5 times the Asian rate.**

\*Race/Ethnicity defined differently in HCSI data.



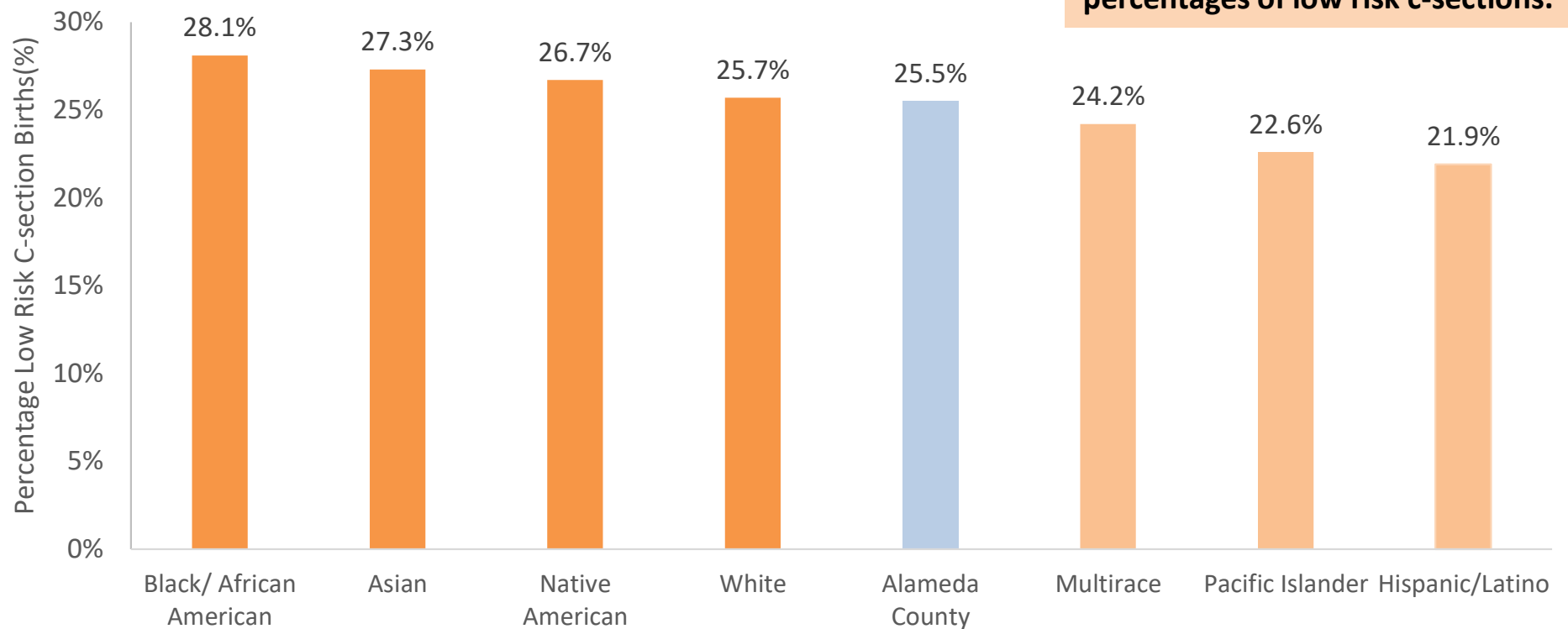
# Severe Maternal Morbidity by Race/Ethnicity, 2019-2021



\*CDPH combined Asian and Pacific Islanders and did not show data for Native American or Multirace Mothers at the count level due to small numbers.



# Percentage Low Risk C-Section by Race/Ethnicity, 2018-2020

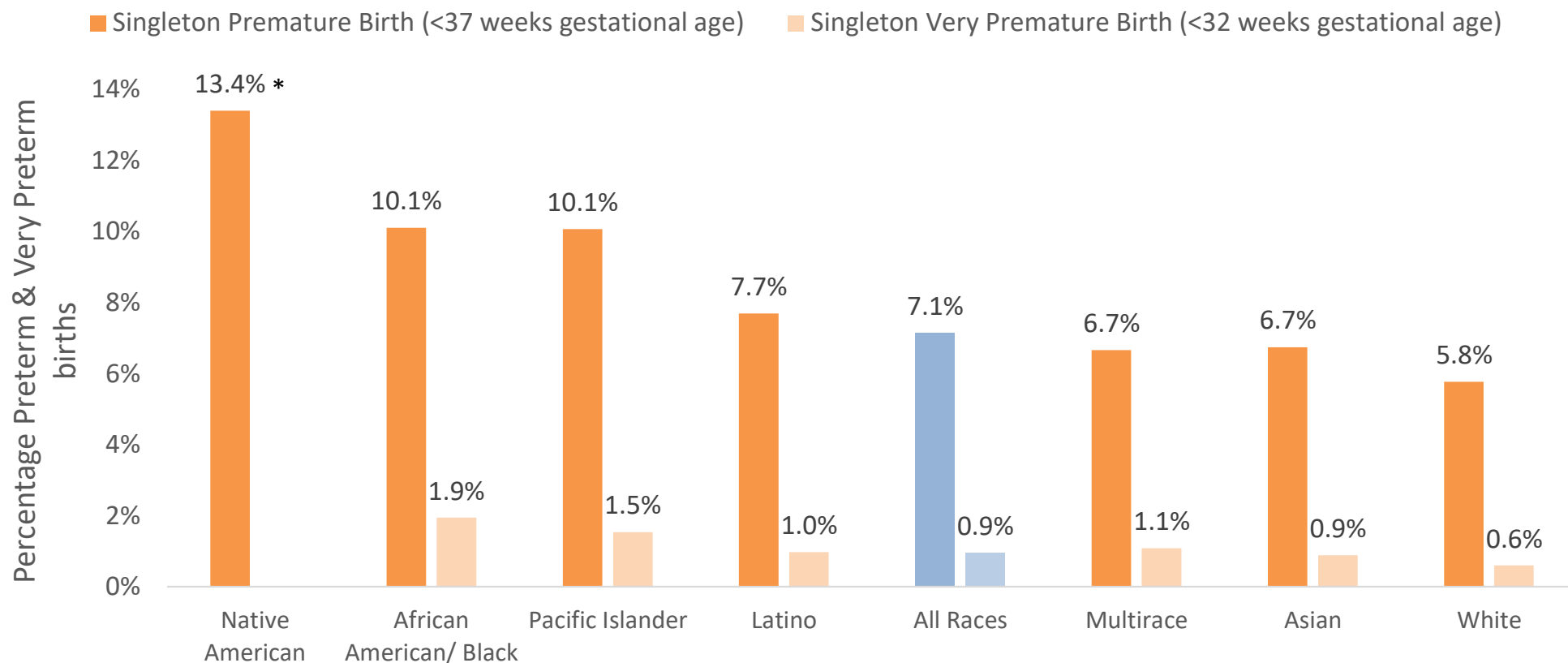


# Alameda County Infant Health Indicators





# Percentage Premature and Very Premature Births by race/ethnicity, 2018-2020



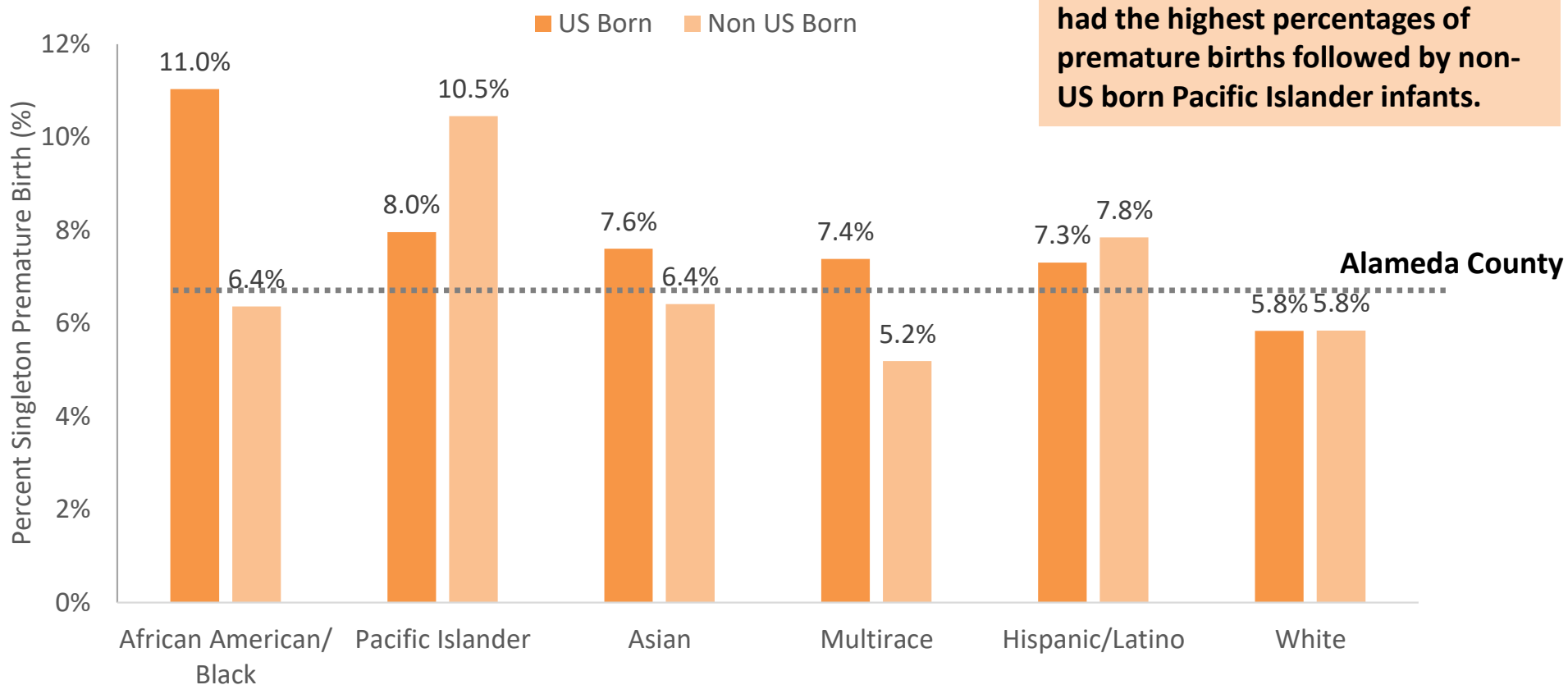
**Native American, African American, and Pacific Islander infants had the highest percentages of premature births.**

1,241 Preterm Births, 165 Very Preterm Births

\* Native American Premature Birth Rate is less stable due to small numbers (CI: .6.1-25.5).



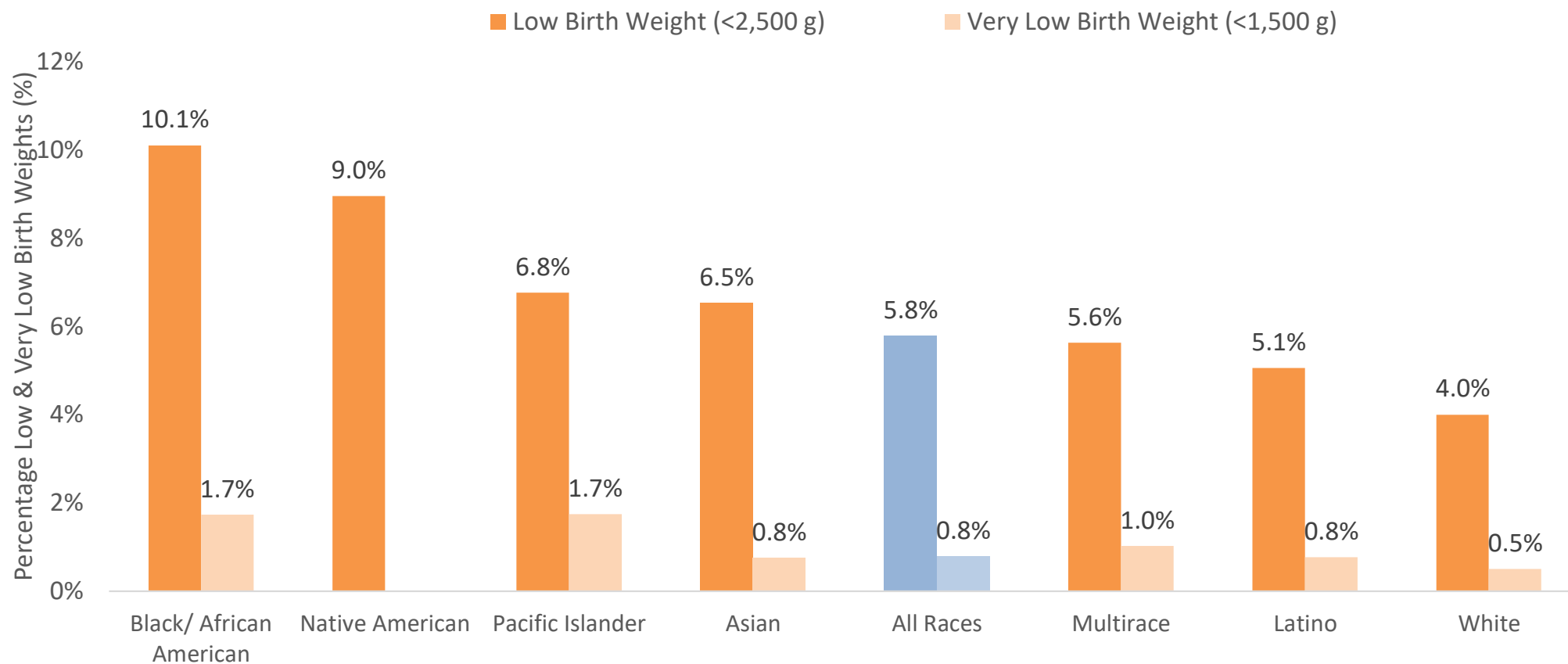
# Percentage Singleton Premature Births by Race/Ethnicity for US versus non-US Born Mothers, 2016-2020



\* Native American Premature Birth rate for non-US born mothers was not stable due to small numbers and is not shown.



# Percentage Low Birth Weight (LBW) and Very Low Birth Weight (VLBW) Births by Race/Ethnicity, 2018-2020



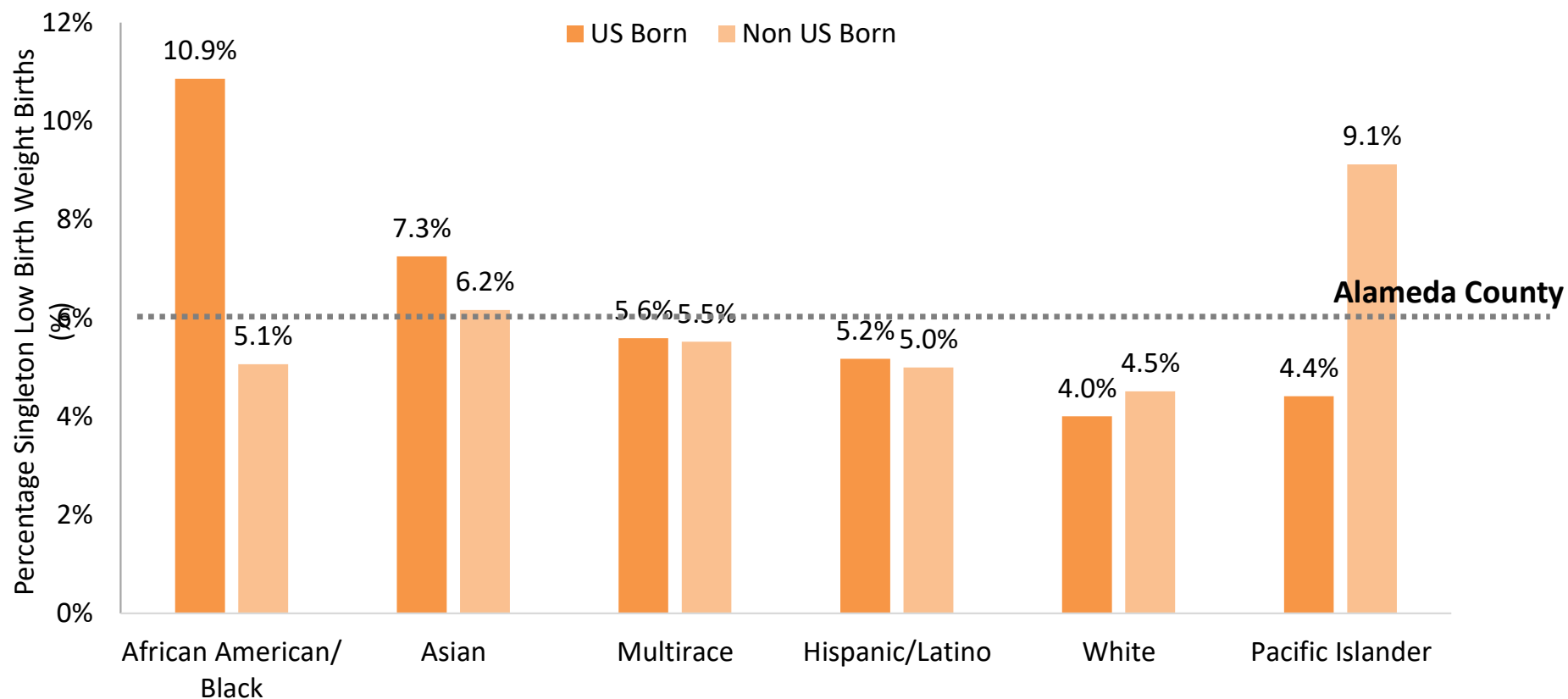
1,007 LBW Births, 138 VLBW Births

\* Native American Low Birth Weight is less stable due to small numbers (CI: .3.3-19.5).

**African Americans, Native Americans and Pacific Islander infants had the highest percentages of low birth weight births.**



# Percentage Singleton Low Birth Weight by Race/Ethnicity for US versus non-US Born Mothers, 2016-2020

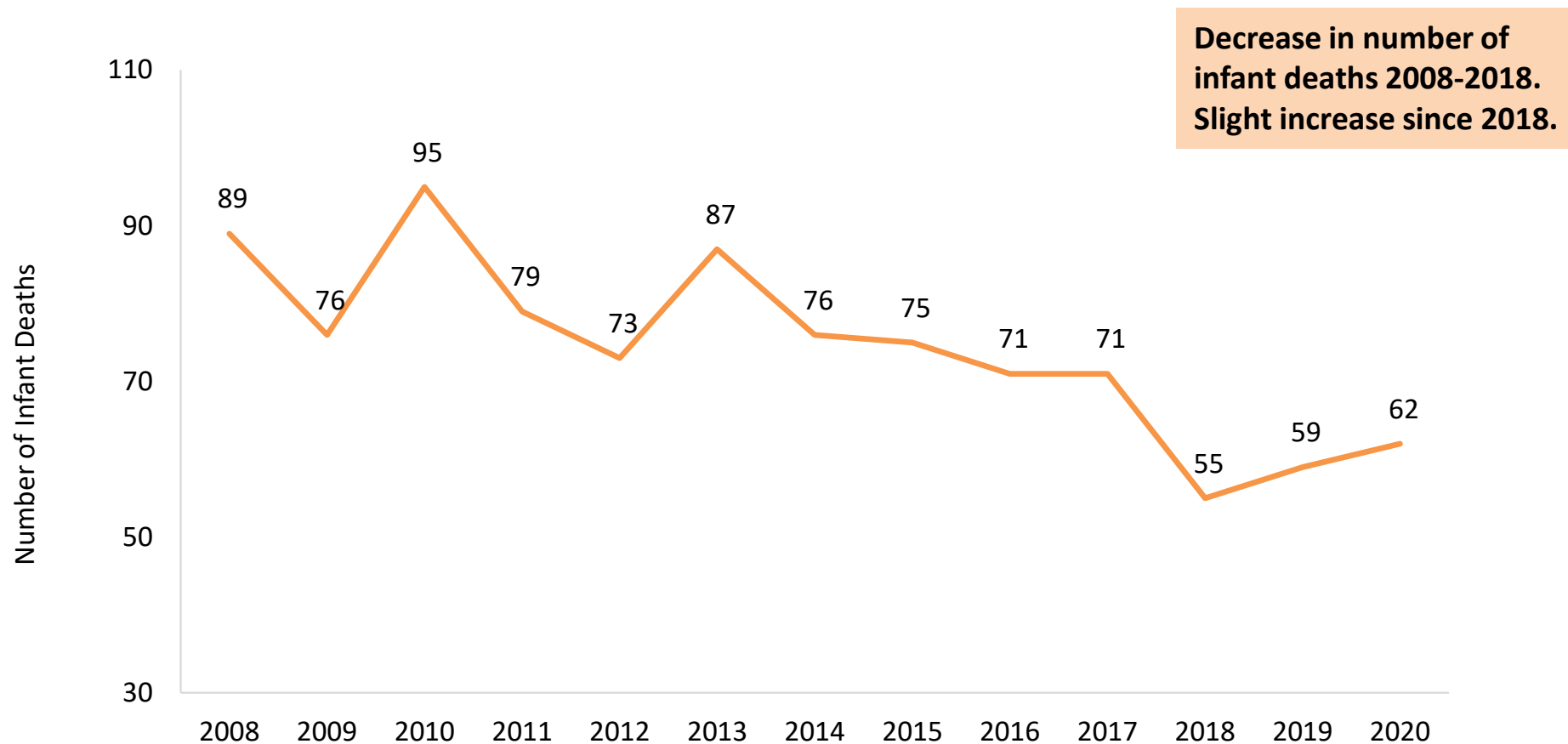


**US Born African American infants had the highest percentages of low birth weight births followed by non-US born Pacific Islanders.**

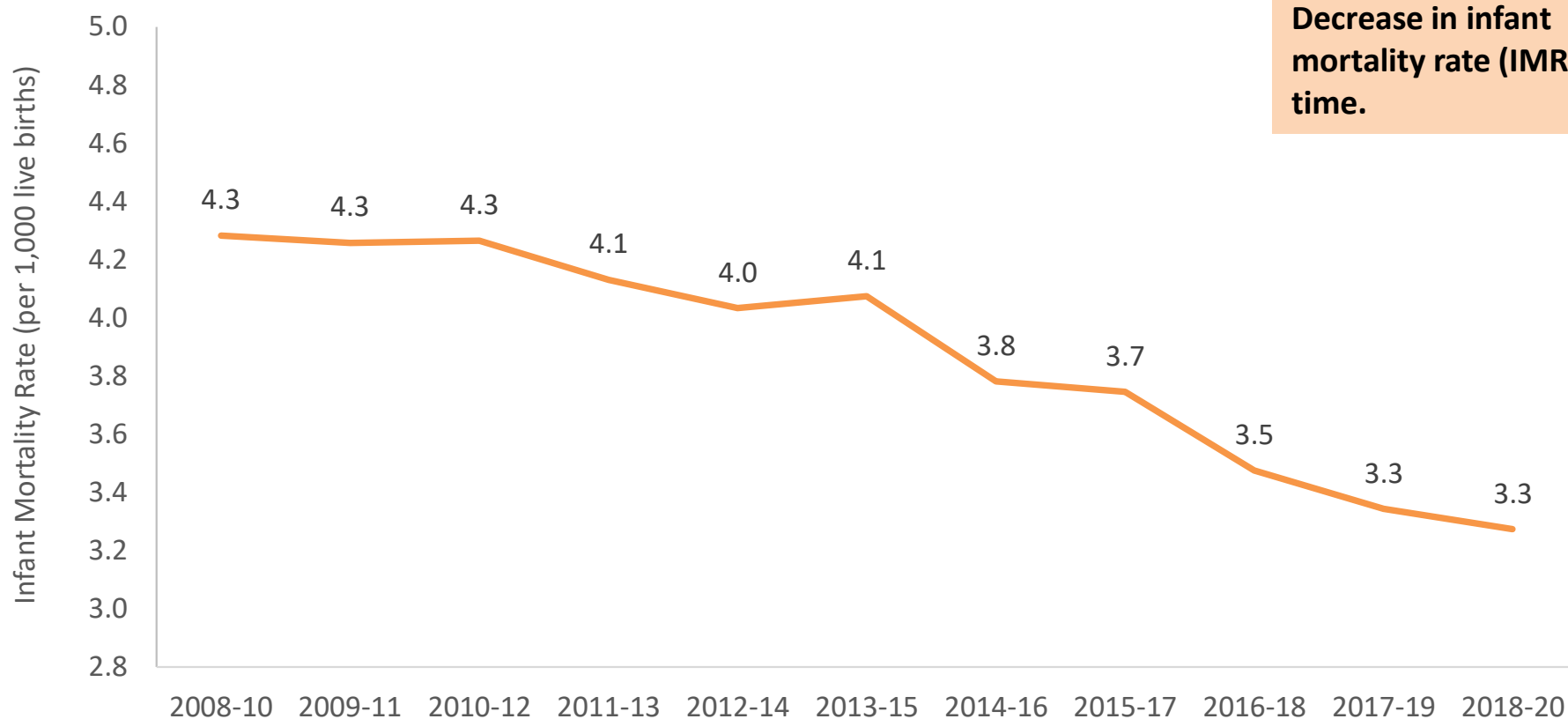
\* Native American low birth weight percentage for non-US born mothers was not stable due to small numbers and is not shown.



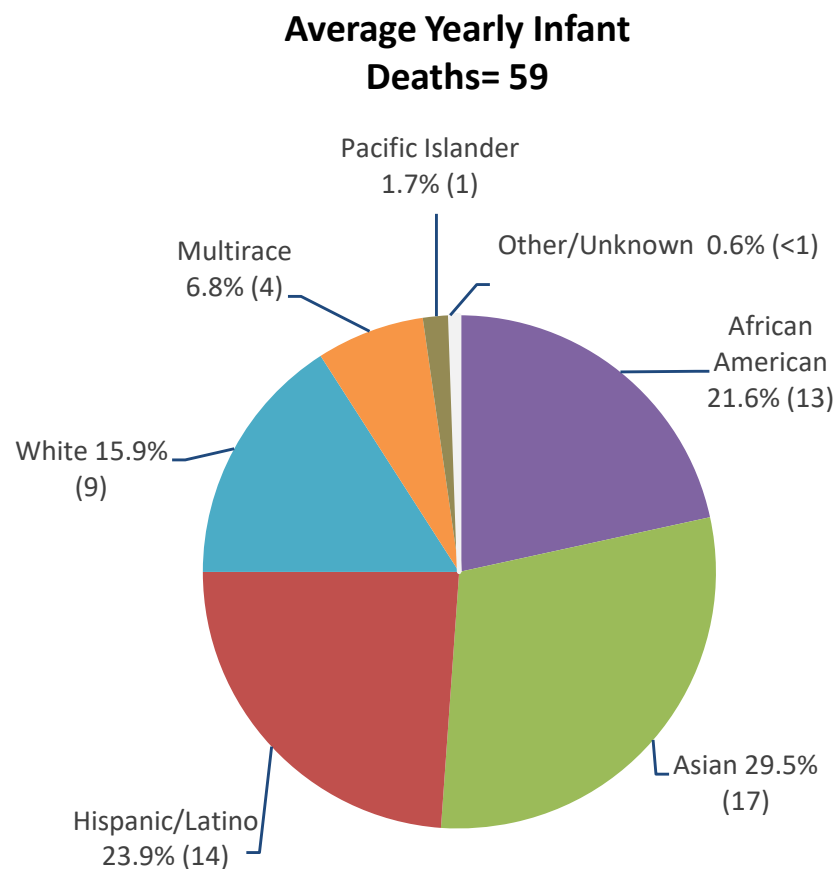
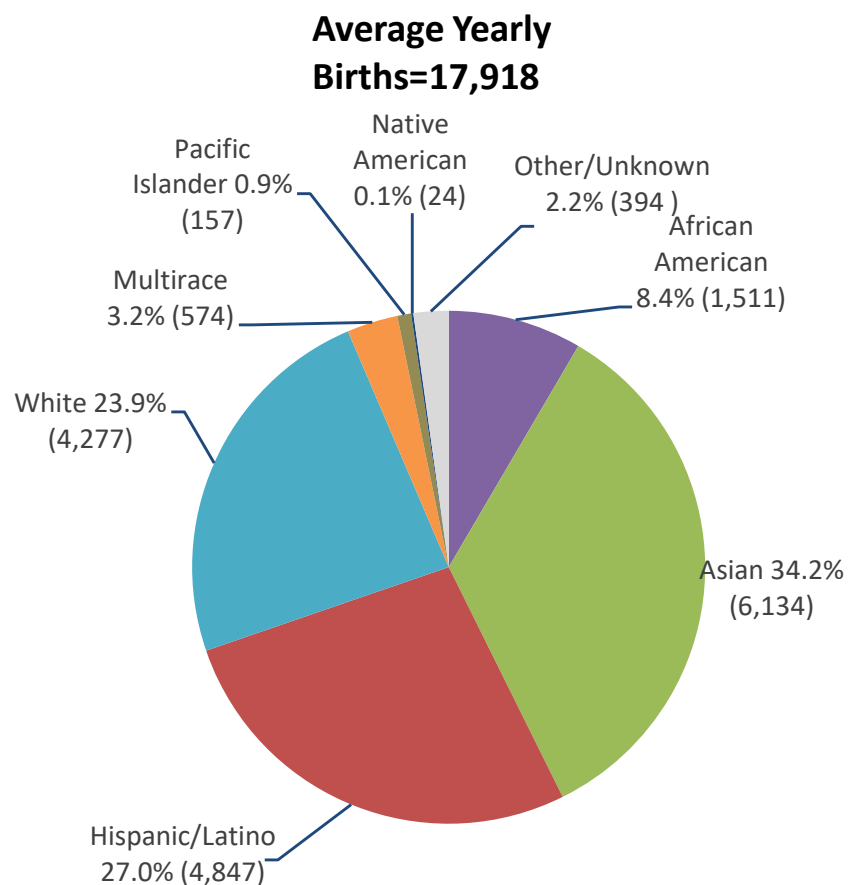
# Number of Infant Deaths in Alameda County, 2008-2020



# Infant Mortality Rate Trend in Alameda County, 2008-2020



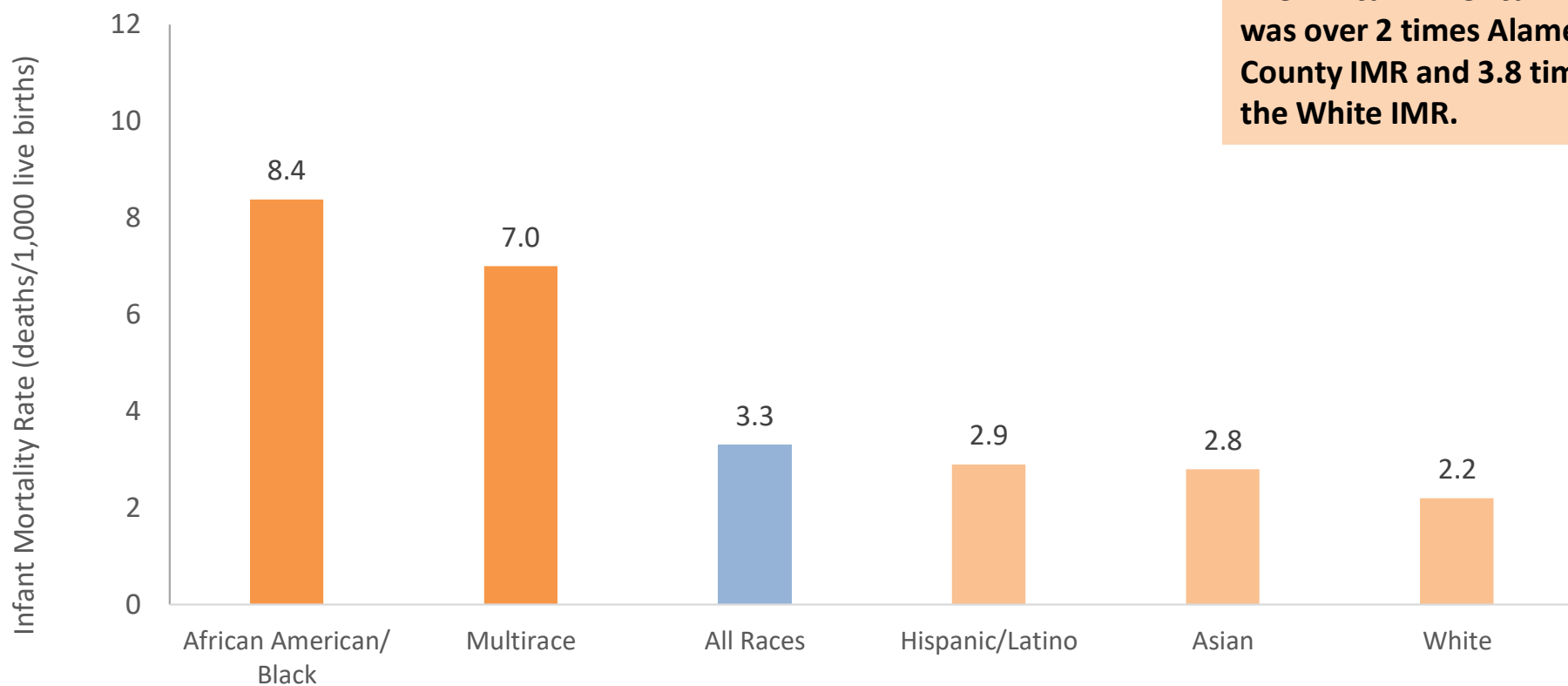
# Percentage of Births v. Infant Deaths by Race/Ethnicity, 2018-2020



**African Americans bear a disproportionate share of infant deaths in AC.**



# Infant Mortality Rate (IMR) by Race/Ethnicity, 2018-2020



**The African American IMR was over 2 times Alameda County IMR and 3.8 times the White IMR.**

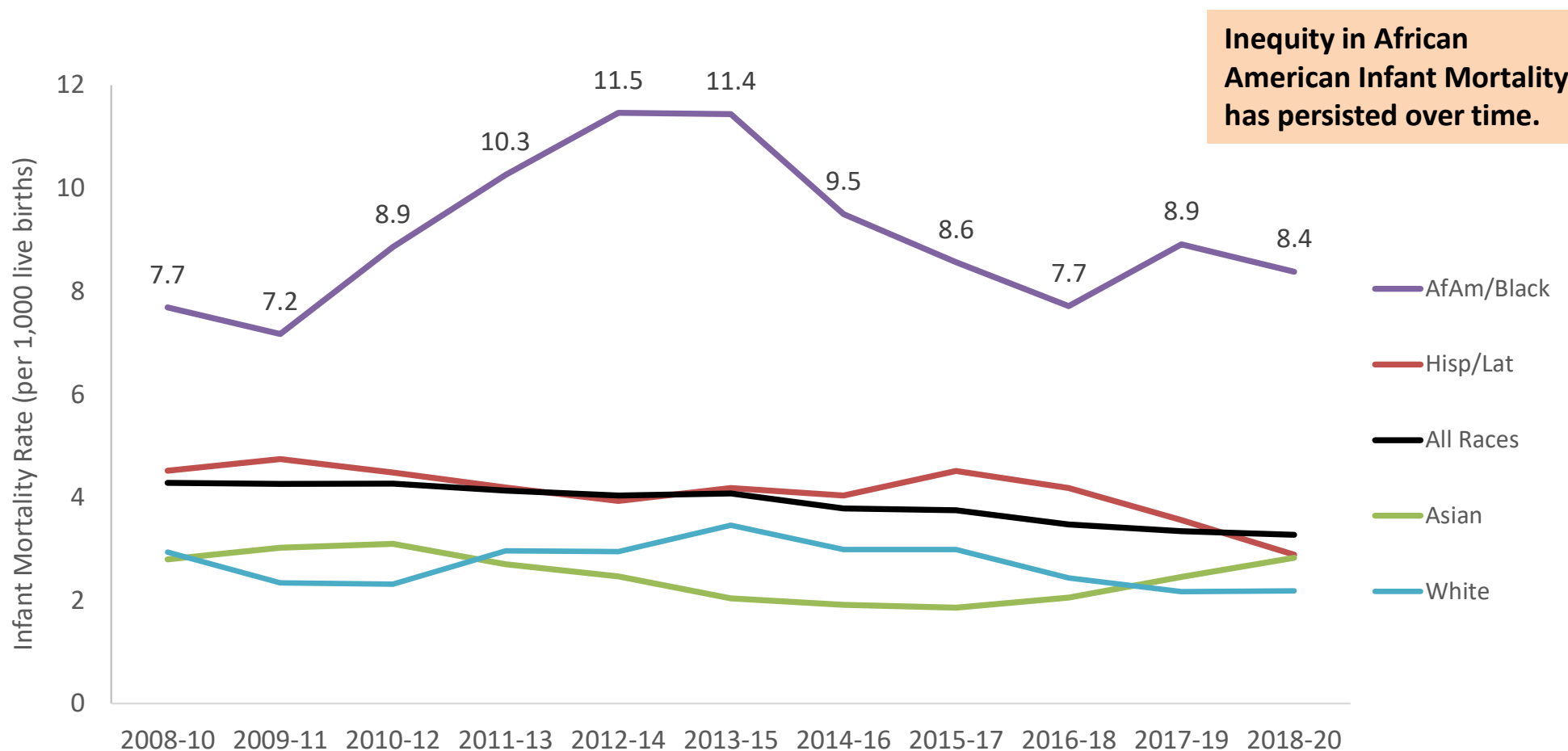
**Average Annual Number Infant Deaths = 54**

\*Multirace, Native American and Pacific Islander Infant Mortality Rates are not shown due to small numbers and unstable rates





# Infant Mortality Rate Trend by Race/Ethnicity, 2008-2020

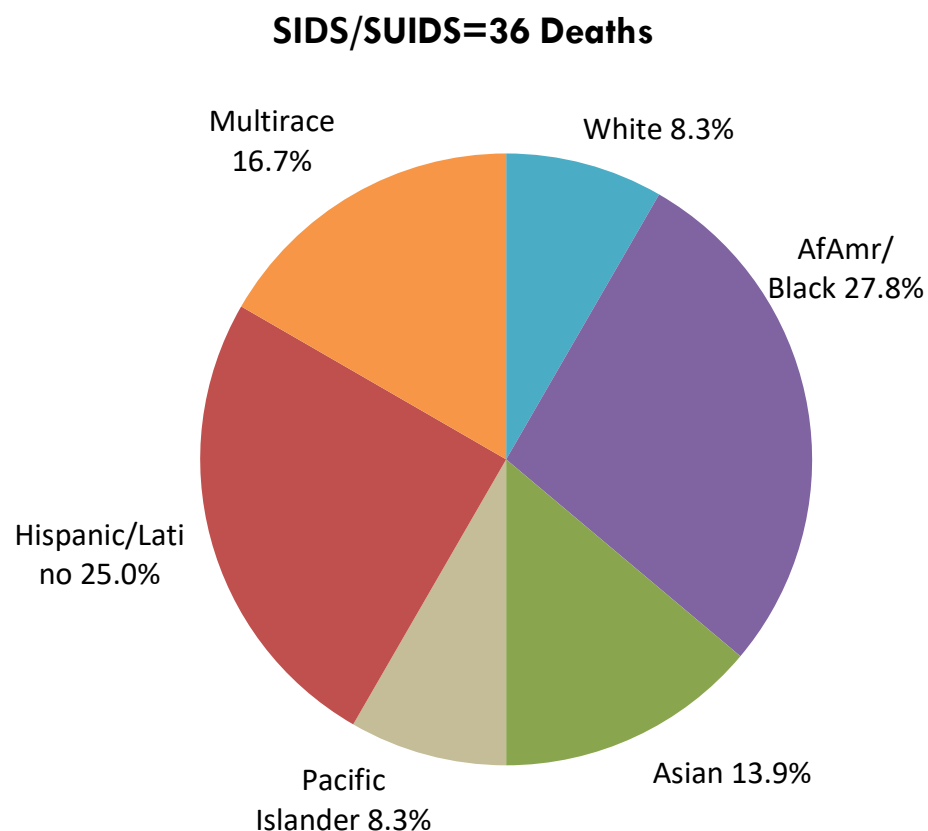


\*Multirace, Native American and Pacific Islander Infant Mortality Rates are not shown due to small numbers and unstable rates.



# Percentage Share SIDS Deaths in Alameda County, 2016-2020

Over the last five years, in Alameda County there was an average of 6 SIDS deaths per year.



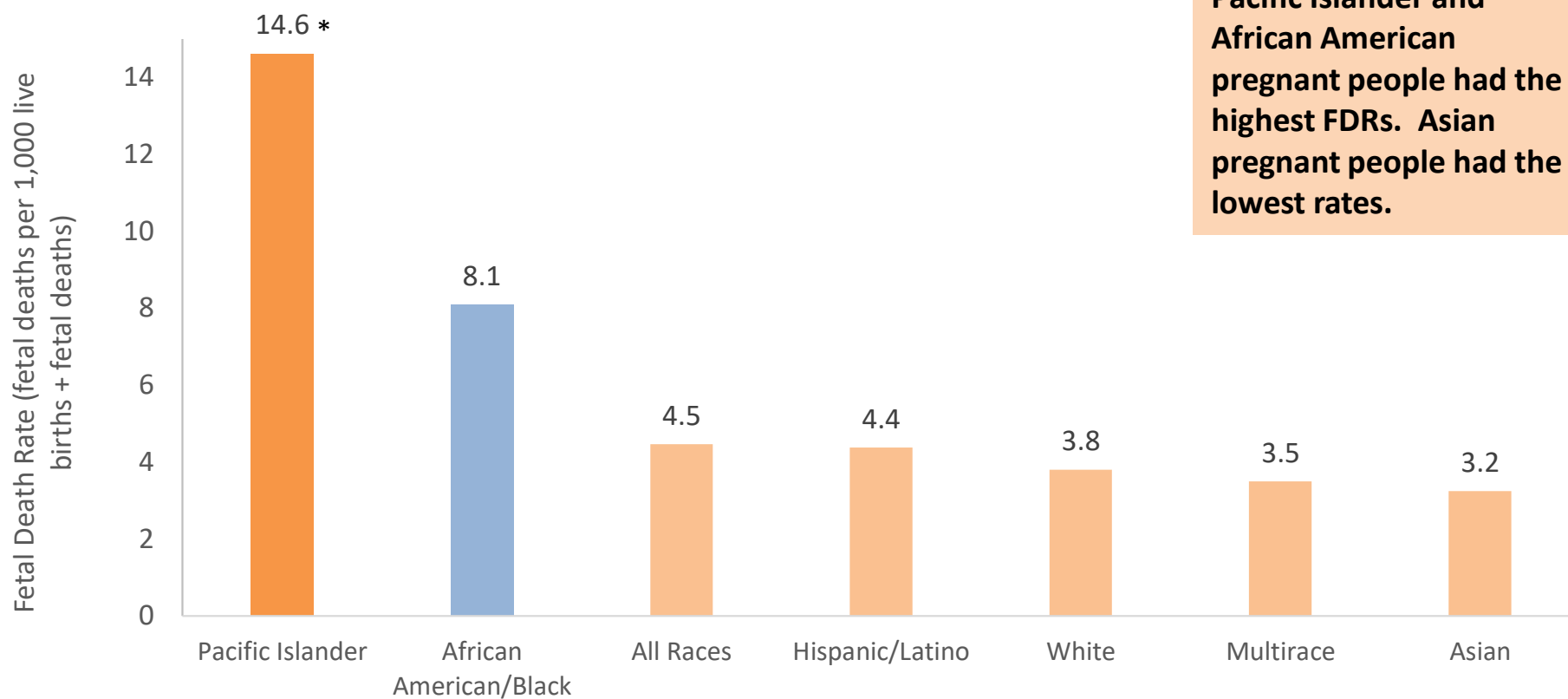
**African American infants bear a disproportionate share of SIDS deaths in AC.**

\*There were no Native American SIDS deaths during this period.



Source: CAPE, with data from Alameda County Vital Statistics files, 2016-2020.

# Fetal Death Rate (FDR) by Race/Ethnicity, 2018-2020



Average Annual Number Fetal Deaths = 80

\* Pacific Islander Fetal Death Rate is less stable due to small numbers (CI: .5.9-30.1).

\*\*Native American Fetal Mortality Rates are not shown due to small numbers and unstable rates.

\*\*\*Race/Ethnicity categorized differently in Fetal Death data.



# Alameda County Perinatal & Infant Health Indicators by Social Gradient



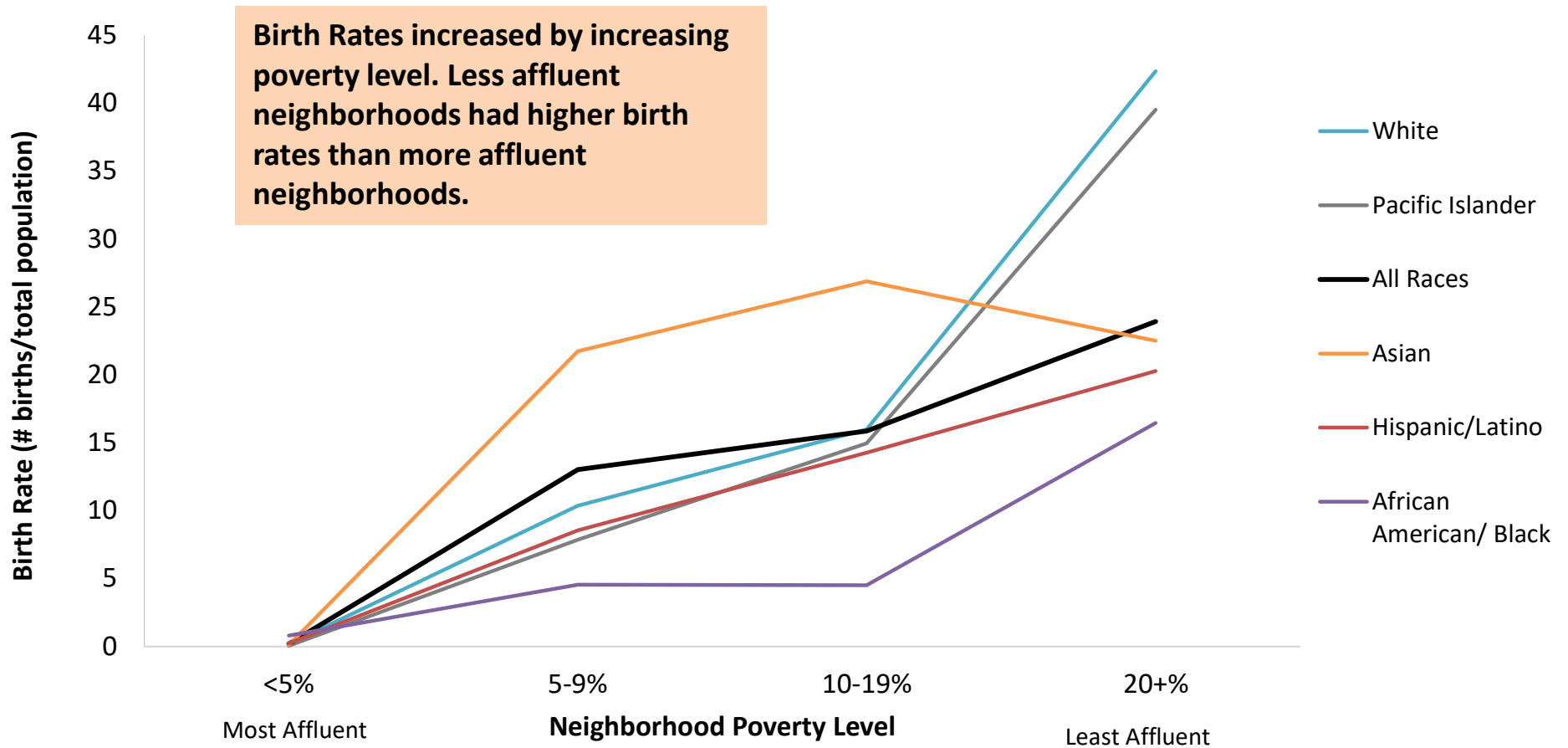
# Social Gradient and Birth Rates

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- ❑ Social gradient: people who are less affluent (lower SES) have worse health outcomes than those who are more affluent.
- ❑ Race and Class (socioeconomic status) are closely connected.
  - ▣ The most affluent AC neighborhoods have high % of Whites and Asians.
  - ▣ The least affluent AC neighborhoods have high % of Latinos and African Americans.
- ❑ Birth Rates and Teen Birth Rates have social gradients.
  - ▣ Poorer neighborhoods have ↑ Birth Rates and Teen Birth Rates compared to more affluent neighborhoods across all race/ethnic groups.
  - ▣ Within race/ethnic groups, those living in poorer neighborhoods have ↑ Birth Rates and Teen Birth Rates compared to those living in more affluent neighborhoods.



# Birth Rate by Race/Ethnicity & Poverty Level, 2015-2019

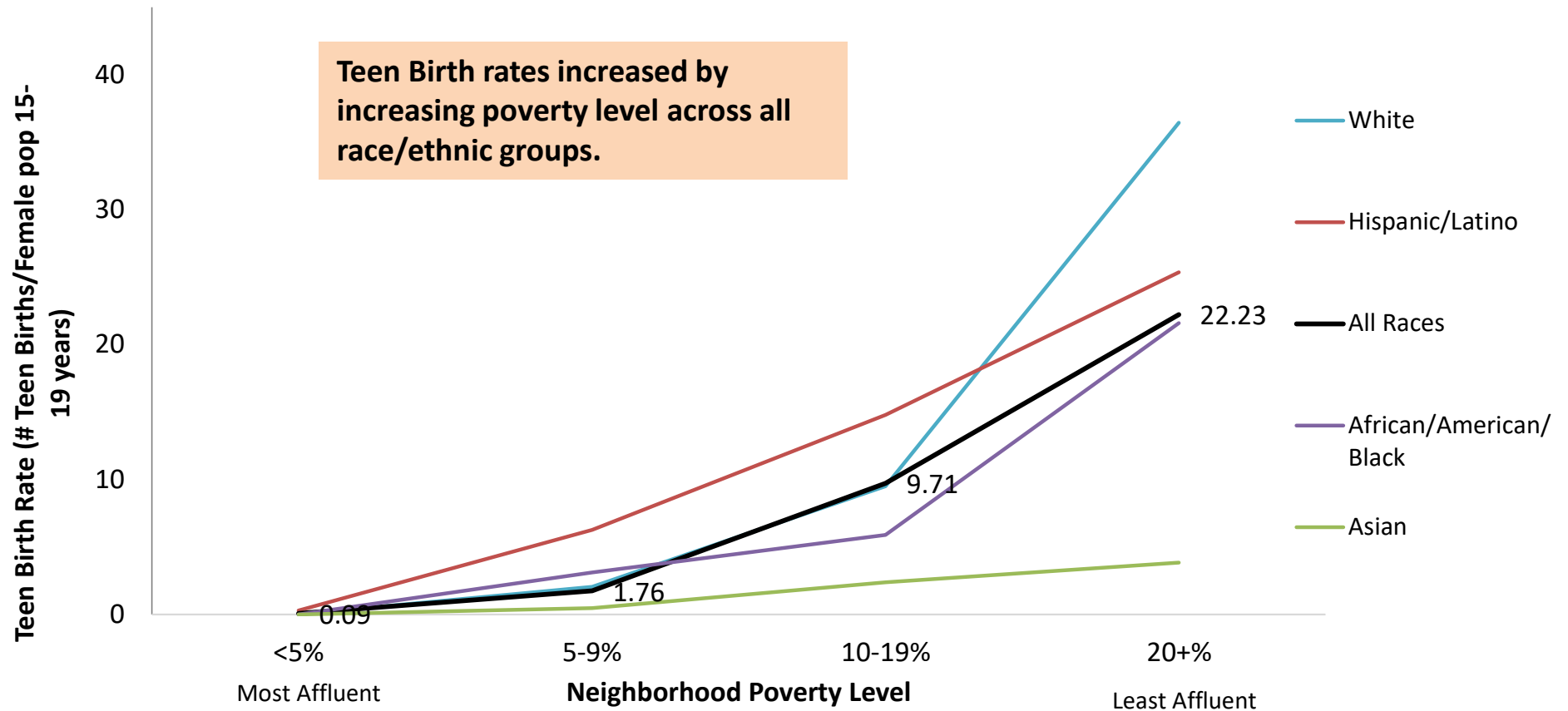


\*Multirace and Native American Teen Birth Rates are not shown due to small numbers and unstable rates.

Sources: CAPE, with data from ESRI and Alameda County Vital Statistics files, 2015-2019.



# Teen Birth Rate by Poverty Level and Race/Ethnicity, 2015-2019



\*Multirace, Native American and Pacific Islander Teen Birth Rates are not shown due to small numbers and unstable rates.



# MCH Indicators not Impacted by Social Gradient

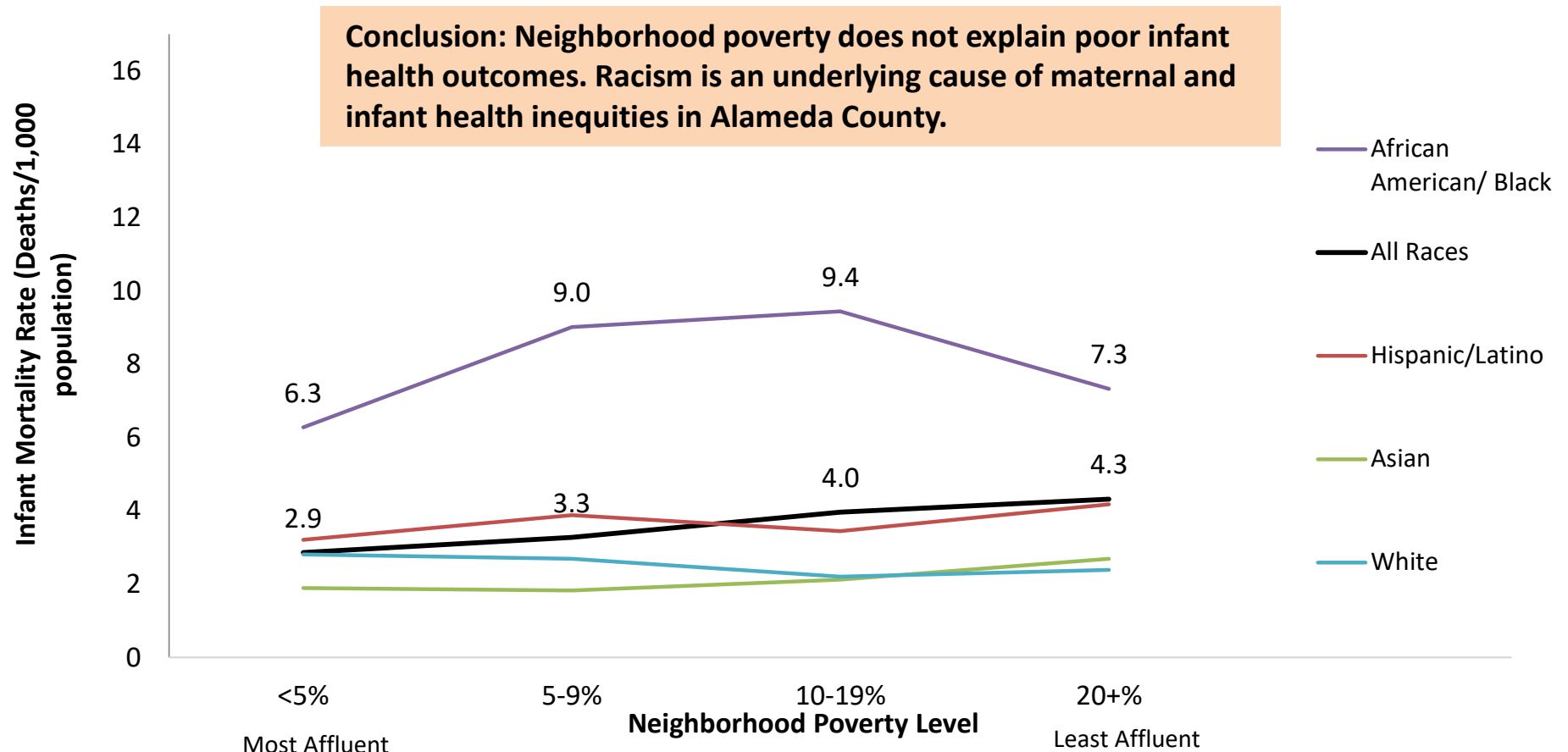
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- All other MCH Indicators do not follow a social gradient (Infant Mortality, Low Birth Weight, Prenatal Care, Premature Birth).
- This means racial/ethnic inequities persist when controlling for neighborhood poverty.
- African American Rates are higher than every other group across all neighborhood poverty levels.
- African American have ↑ Infant Mortality Rates (IMRs), premature births, and low birth weight babies compared to Whites, Asians and Latinos regardless of neighborhood poverty.
- **Conclusion: Neighborhood poverty does not explain poor infant health outcomes. Racism is an underlying cause of maternal and infant health inequities in Alameda County.**





# Infant Mortality Rate by Poverty Level and Race/Ethnicity, 2016-2020



\*Multirace, Native American and Pacific Islander Infant Mortality Rates are not shown due to small numbers and unstable rates.

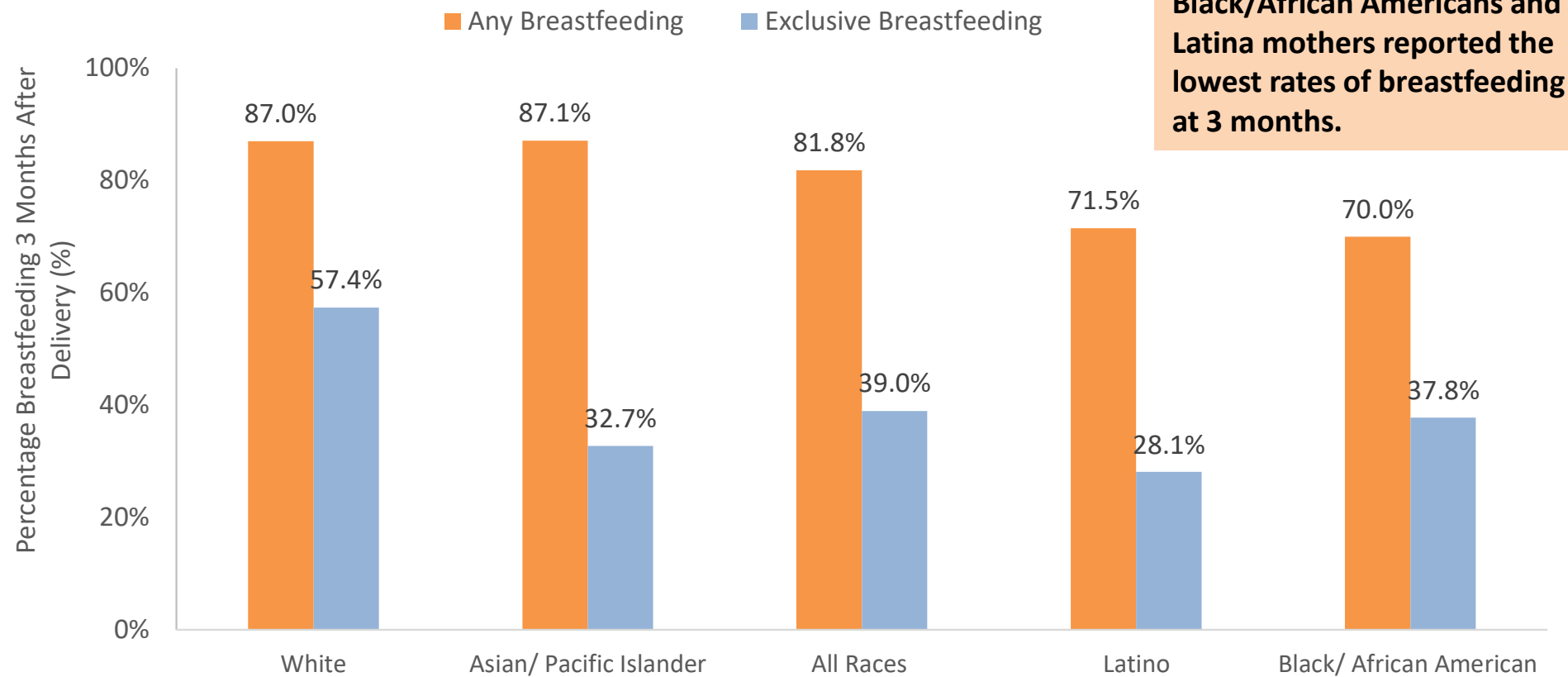


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# Alameda County Breastfeeding and Infant Sleep



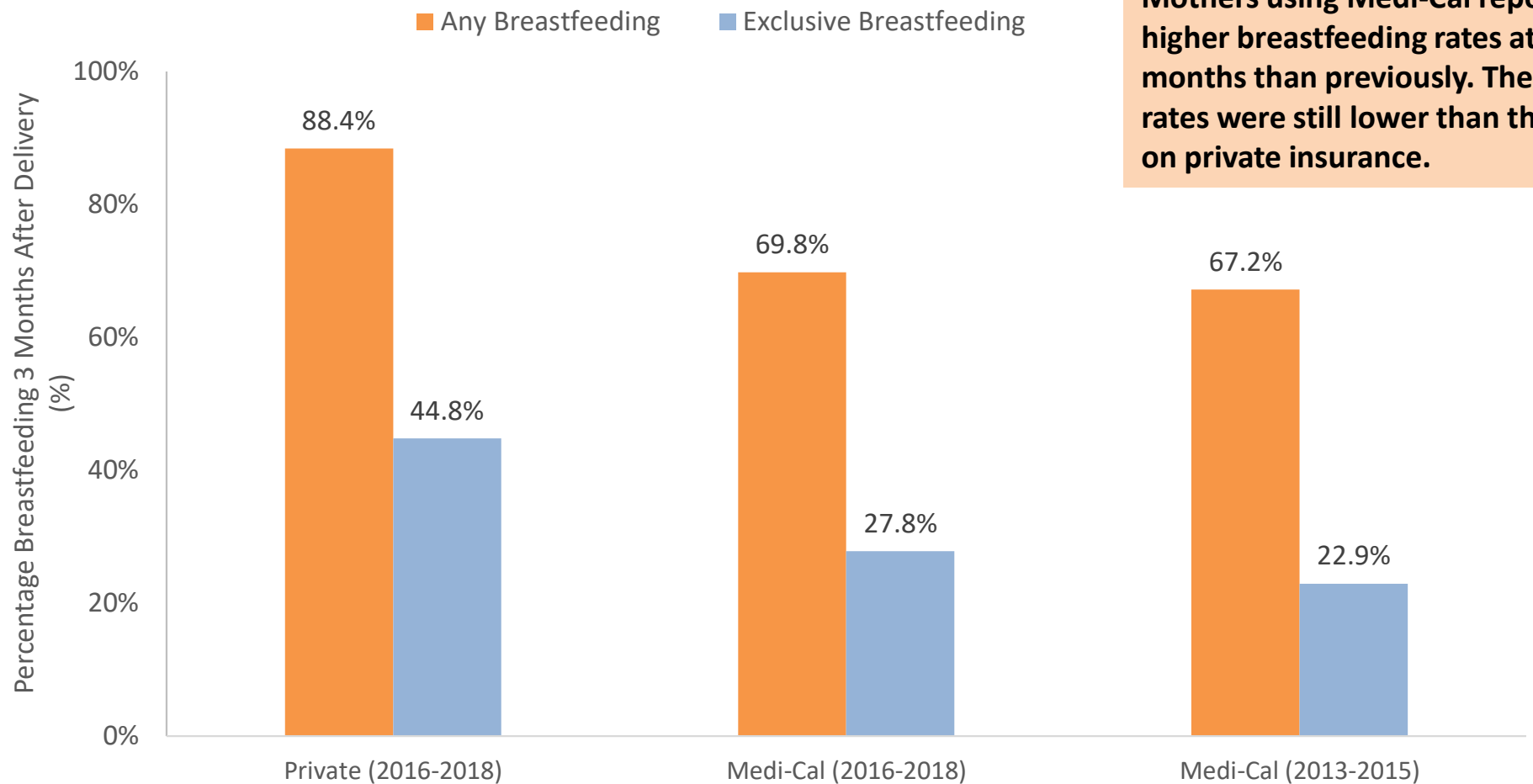
# Percentage Breastfeeding at Three Months by Race/Ethnicity, 2016-2018



\*MIHA combines Asian and Pacific Islander due to small sample size of Pacific Islanders. MIHA does not show data for Native American or Multirace Mothers at the state or county level.



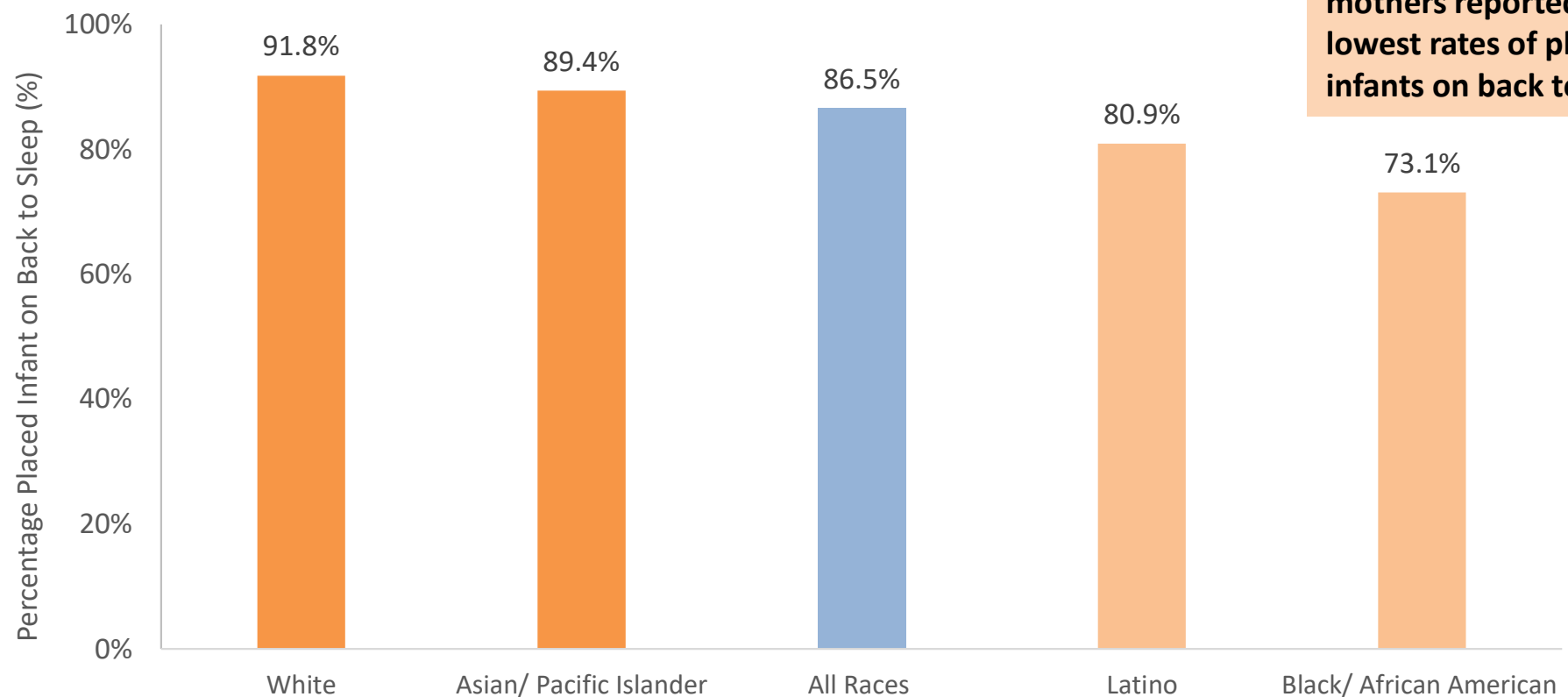
# Percentage Breastfeeding at Three Months: Medi-Cal vs. Private Insurance



**Mothers using Medi-Cal reported higher breastfeeding rates at 3 months than previously. Their rates were still lower than those on private insurance.**



# Percentage Placed Infant on Back to Sleep by Race/Ethnicity, 2016-2018

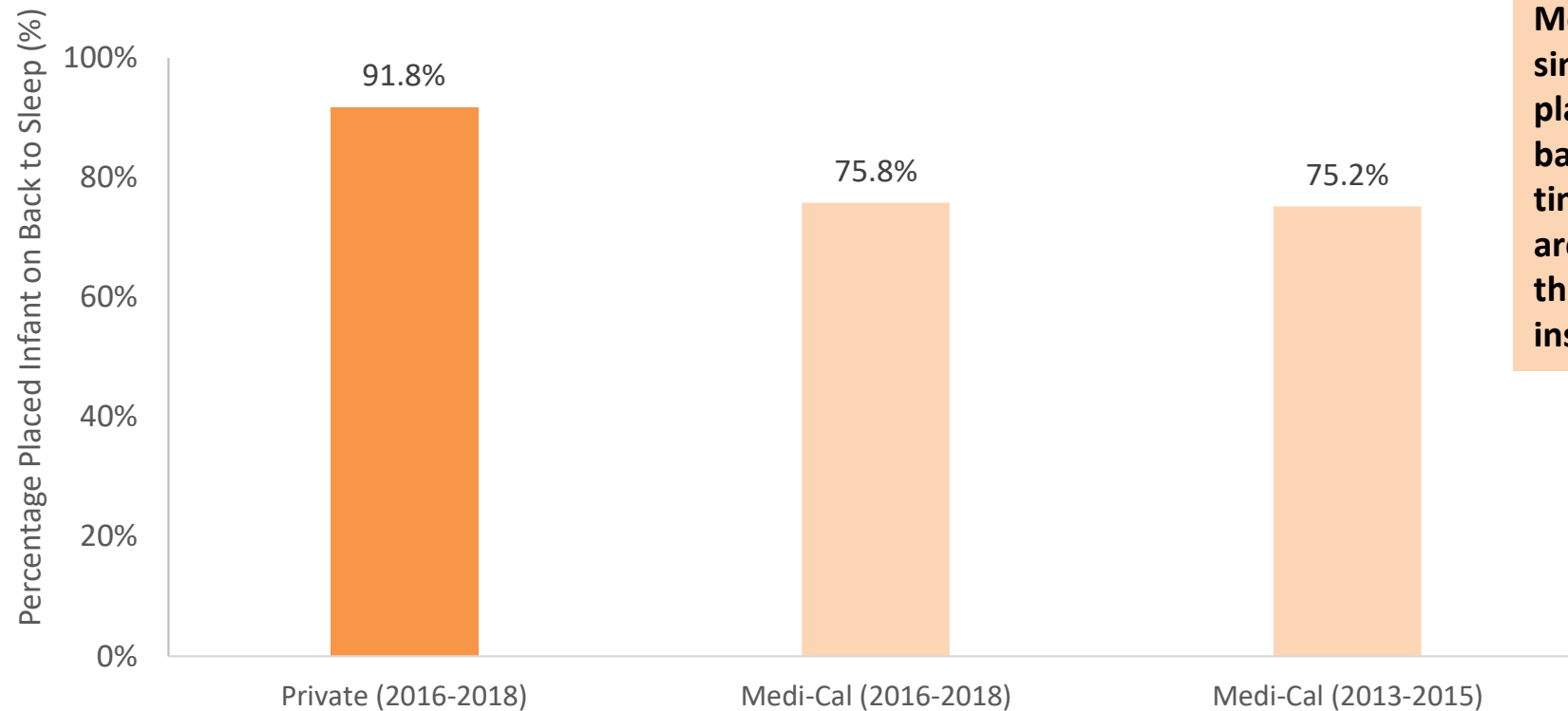


**Black/African American mothers reported the lowest rates of placing infants on back to sleep.**

\*MIHA combines Asian and Pacific Islander due to small sample size of Pacific Islanders. MIHA does not show data for Native American or Multirace Mothers at the state or county level.



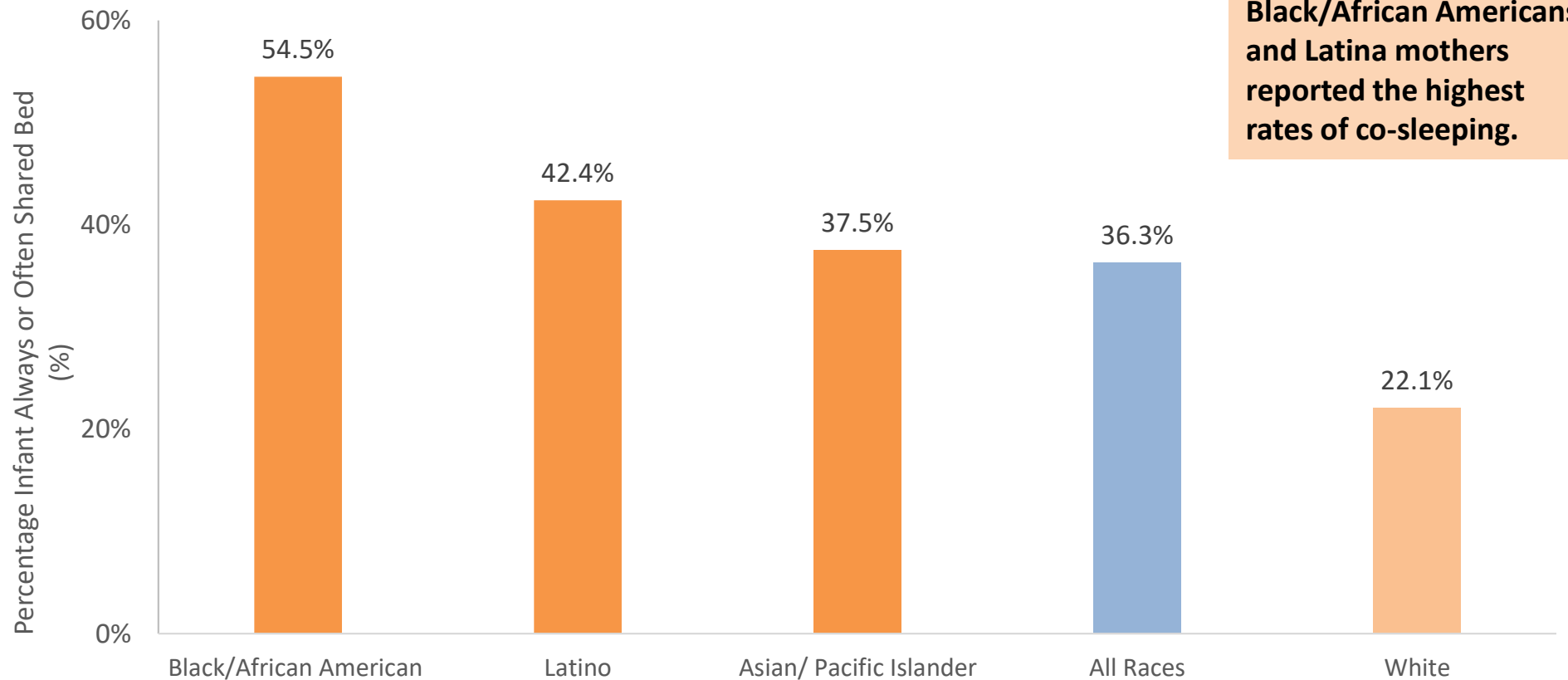
# Percentage Placed Infant on Back to Sleep: Medi-Cal vs. Private Insurance



**Mothers using Medi-Cal reported similar rates of placing infant on back to sleep over time. These rates are lower than those on private insurance.**



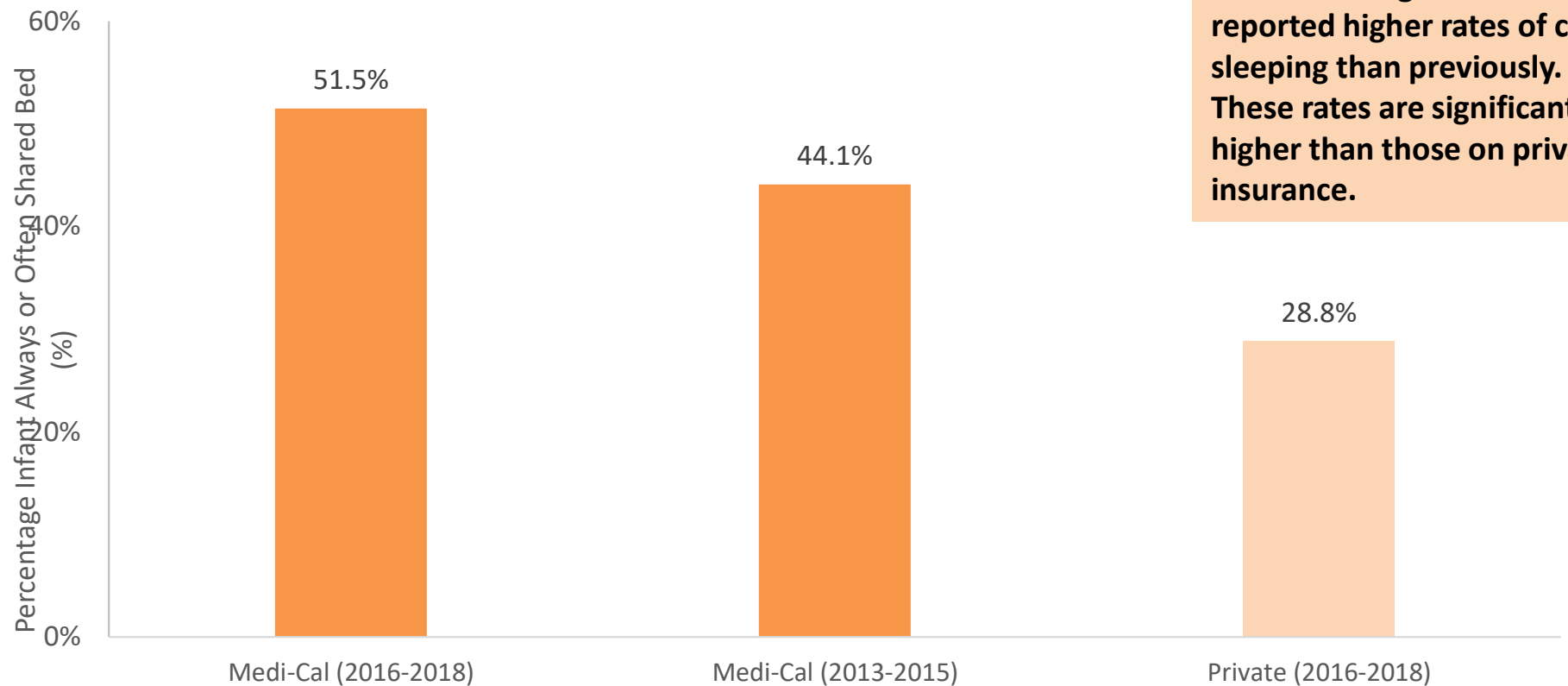
# Percentage Infant Always or Often Shared Bed by Race/Ethnicity, 2016-2018



\*MIHA combines Asian and Pacific Islander due to small sample size of Pacific Islanders. MIHA does not show data for Native American or Multirace Mothers at the state or county level.



# Percentage Infant Often/Always Shared Bed: Medi-Cal vs. Private Insurance



**Mothers using Medi-Cal reported higher rates of co-sleeping than previously. These rates are significantly higher than those on private insurance.**



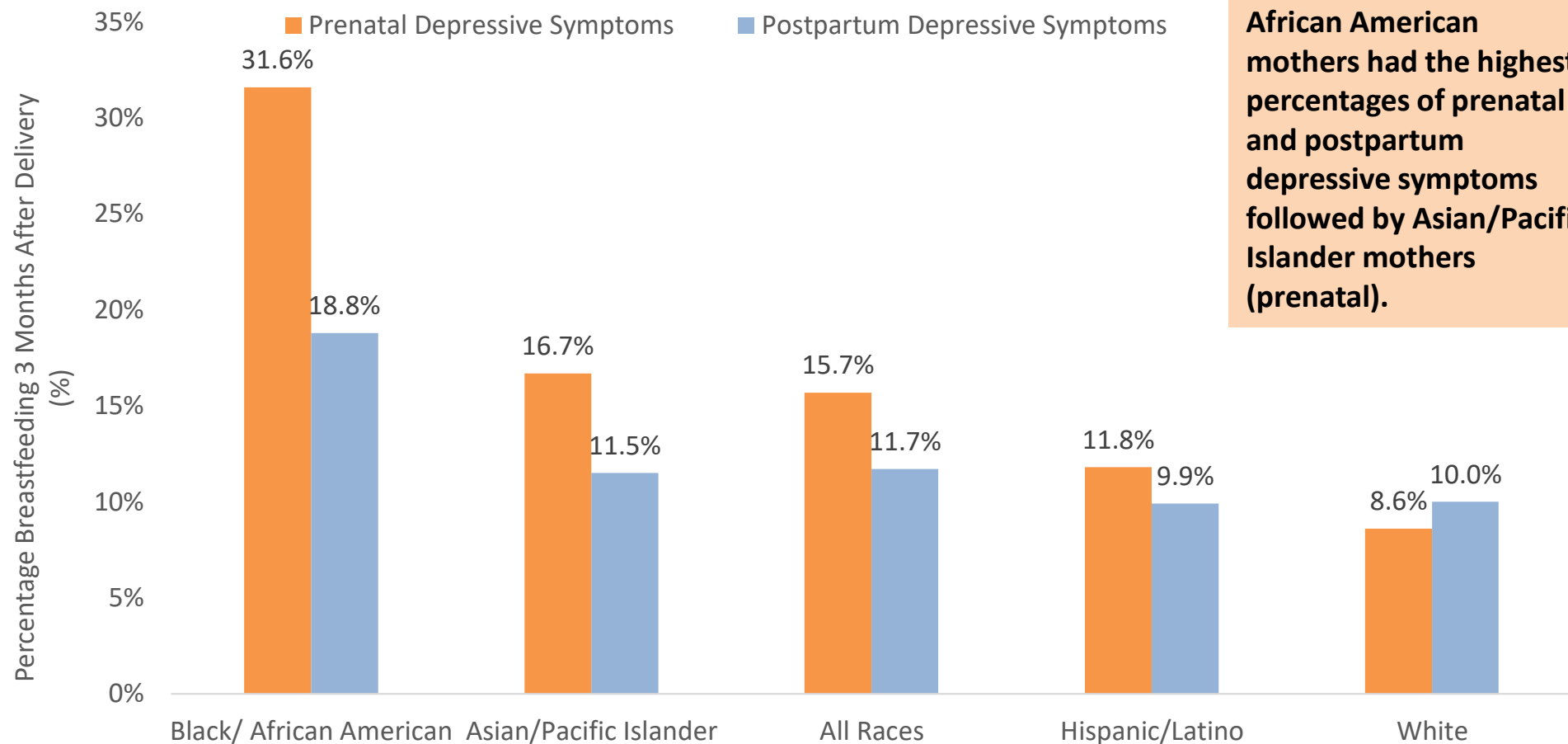


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# Alameda County Perinatal Mental Health



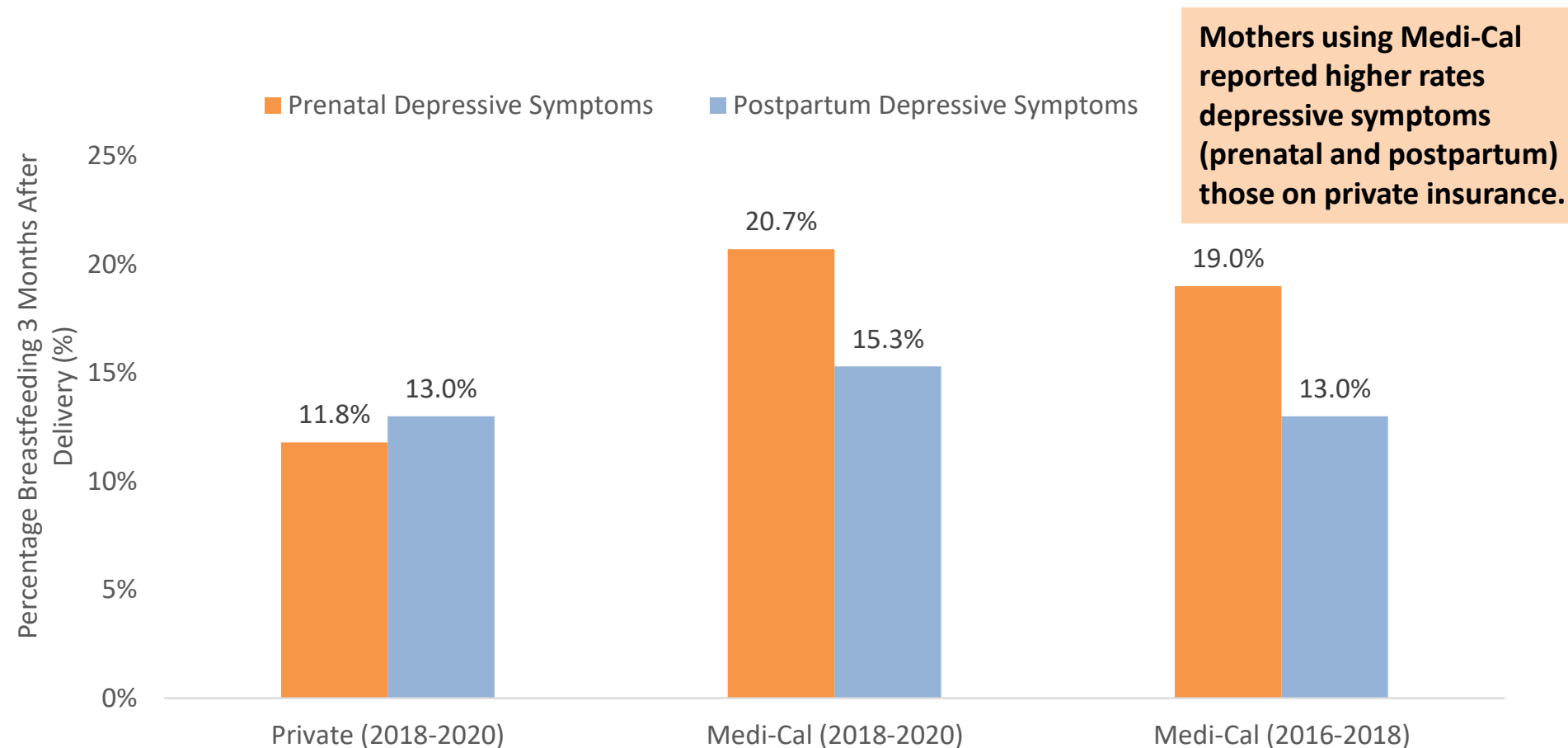
# Percentage Experiencing Depressive Symptoms, 2018-2020



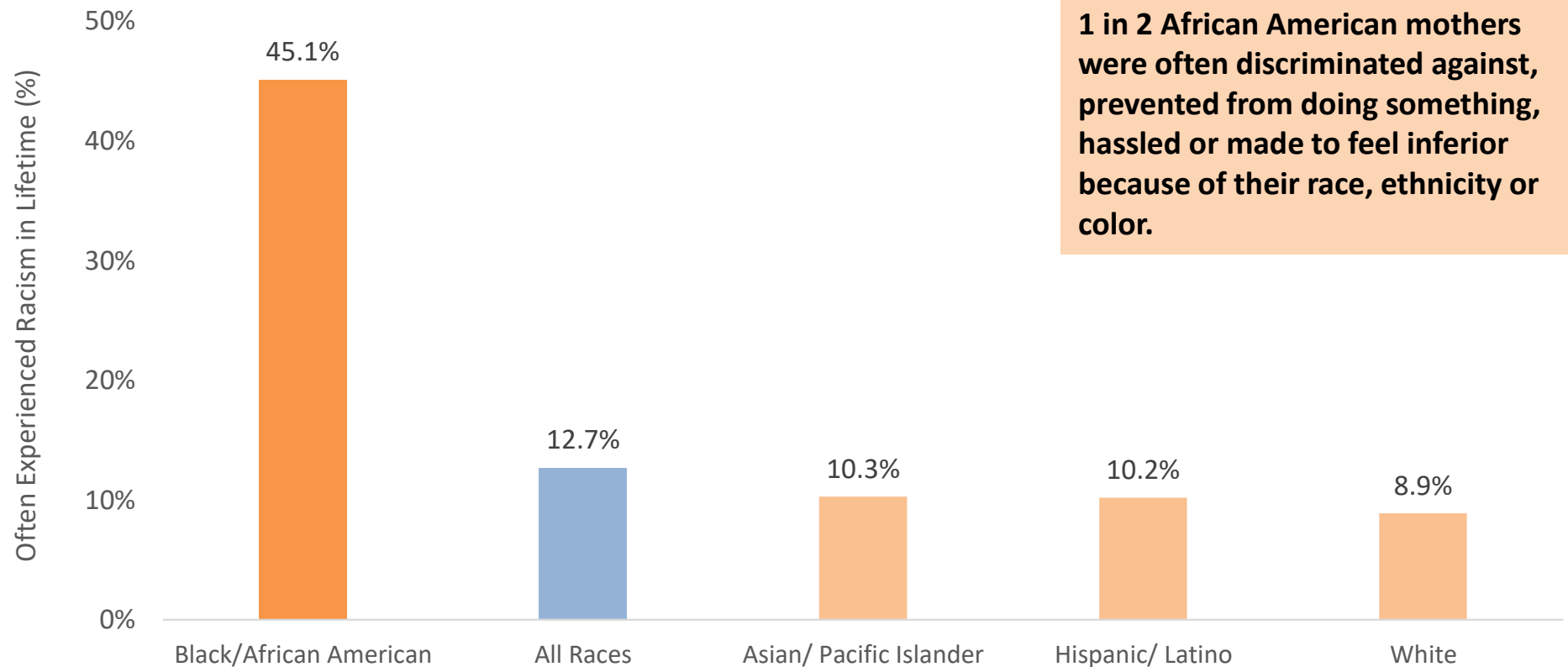
\*MIHA combines Asian and Pacific Islander due to small sample size of Pacific Islanders. MIHA does not show data for Native American or Multirace Mothers at the state or county level.



# Percentage Experiencing Depressive Symptoms: Medi-Cal vs. Private Insurance



# Percentage Often Experienced Racism Over Lifetime, 2016-2018



\*MIHA combines Asian and Pacific Islander due to small sample size of Pacific Islanders. MIHA does not show data for Native American or Multirace Mothers at the state or county level.



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# Take Home Points



# Key Takeaways: Alameda County Births

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- ❑ There has been a ↓ in births since 2008. (approx. 17,000 births in 2020.)
- ❑ AC has seen a dramatic ↓ in younger moms (teens and <35 years) and an ↑ in mature moms (35-49 years).
- ❑ There has been a ↓ in birth rates, fertility rates and teen birth rates since 2008.
- ❑ Zip Codes in East Oakland, Fremont and Fruitvale had the highest birth rates.
- ❑ Most births occurred at Kaisers (San Leandro and Oakland), Alta Bates and Neighboring County Facilities.
- ❑ 1 in 2 Black and Latina births were paid by Medi-Cal. Alta Bates, Highland and St. Rose serve majority Medi-Cal births.
- ❑ 1 in 2 Black and Latina pregnancies were unintended likely due to unmet need for contraception/family planning.



# Key Takeaways: Perinatal Health Indicators

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- ☐ Overall, AC moms and infants are very healthy!
- ☐ AC has high % of moms receiving prenatal care. (Pacific Islander and Medi-Cal inequities persist.)
- ☐ AC has lower % of moms receiving adequate number prenatal care visits (slightly higher for Medi-Cal).
- ☐ Inequities persist for Black/African American, Native American and Pacific Islander mothers (gestational hypertension, severe maternal morbidity, low birth weight, premature births.)



# Key Takeaways: Infant Health Indicators

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- ☐ AC has seen a ↓ in infant mortality over time other indicators have remained steady.
- ☐ Black/ African American infants bear a disproportionate burden of infant deaths and SIDS deaths in AC.
- ☐ Improving trends in breastfeeding among Black/African American mothers and Medi-Cal population, but lower rates persist.
- ☐ Worsening trend in safe sleep practices among Black/African American mothers and Medi-Cal populations.
- ☐ Black/ African American infants bear a disproportionate burden of infant deaths and SIDS deaths in AC.





# Key Takeaways: Black/African American Social Determinants of Health

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- ☐ Black mothers disproportionately face economic instability during their pregnancies.
- ☐ Black mothers experience health care access and utilization challenges pre-pregnancy, during pregnancy and postpartum.
- ☐ Black mothers experience higher rates of chronic asthma and hypertension.
- ☐ Black mothers experience higher rates of depression (during pregnancy and postpartum).
- ☐ Racism and discrimination are common and cumulative experiences for black mothers.
- ☐ **Conclusion: Racism is a key social determinant of black perinatal and infant health in Alameda County.**



# Maternal and Infant Population Data Sources



# MPCAH Population Data Sources



## Databases



**California Comprehensive  
Birth File -CCBF  
(Birth Certificates)**

**California Comprehensive  
Death File -CCDF  
(Death Certificates)**

**California Fetal Death  
File (Fetal Death Records)**

**California Birth Cohort  
File (Linked Birth and  
Death Records)**

**California Hospital Data  
Files – HCAI  
(Emergency Department  
Visits and  
Hospitalizations)**



## Surveys



**California Maternal and  
Infant Health Assessment-  
MIHA  
(Statewide Survey of  
Postpartum Women)**

**US American Community  
Survey  
(National Survey of US  
Households)**

**California Health  
Interview Survey- CHIS  
(Statewide Survey of CA  
Households)**



# Strengths & Limitations of Population Data

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## Strengths

- ☐ Birth and Death Databases most complete and accurate count of all births and deaths in AC.
- ☐ Hospital data best for medical diagnoses and procedures for childbirth, newborns and mothers' outcomes.
- ☐ Surveys best for population health status, behaviors, actions, utilization and social determinants.
- ☐ Population data identifies health inequities and measures trends.
- ☐ Population data allows for comparing within/across groups and meeting goals/objectives (HP2030, county rankings).

## Limitations

- ☐ Lag time between when data collected and available.
- ☐ Underreporting data elements in birth and death databases (Medi-Cal births).
- ☐ Inconsistent definitions across data sources (race/ethnicity).
- ☐ Surveys capture small proportion (sample) of entire population at a single point in time.
- ☐ Selection, response and recall bias in surveys.
- ☐ Respondents may be hesitant to report status, behaviors, hardships (**stigma**).
- ☐ No information on birth experiences or quality of care in population data.



# MPCAH Purpose and Values

- Promoting and supporting client-centered decisions and goals for health which include positive pregnancy outcomes, thriving births, families, and communities
- Maternal and infant mortality disparities drive interventions, programs and our collective work, specifically in the Black community and other populations such as parents of medically fragile and first-time mothers
- Values are:
  - ▣ Relationship-Based
  - ▣ Trauma-Informed
  - ▣ Race and Equity Focused



# Our Vision of Health Equity

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EVERYONE in Alameda County –  
no matter who you are,  
where you live,  
how much money you make,  
or the color of your skin –  
can lead a healthy,  
fulfilling and productive life.



# Resources

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For Additional Maternal,  
Paternal, Child, Adolescent  
Health Indicators Go To:

<http://www.acphd.org/data-reports/reports-by-topic/maternal,-child,-and-adolescent-health.aspx>

