

Webinar on
2023 North
Carolina Child
Death & Infant
Mortality Data

March 17, 2025

Child Fatality Task Force



***Our Children, Our Future,
Our RESPONSIBILITY***

Today's Program . . .

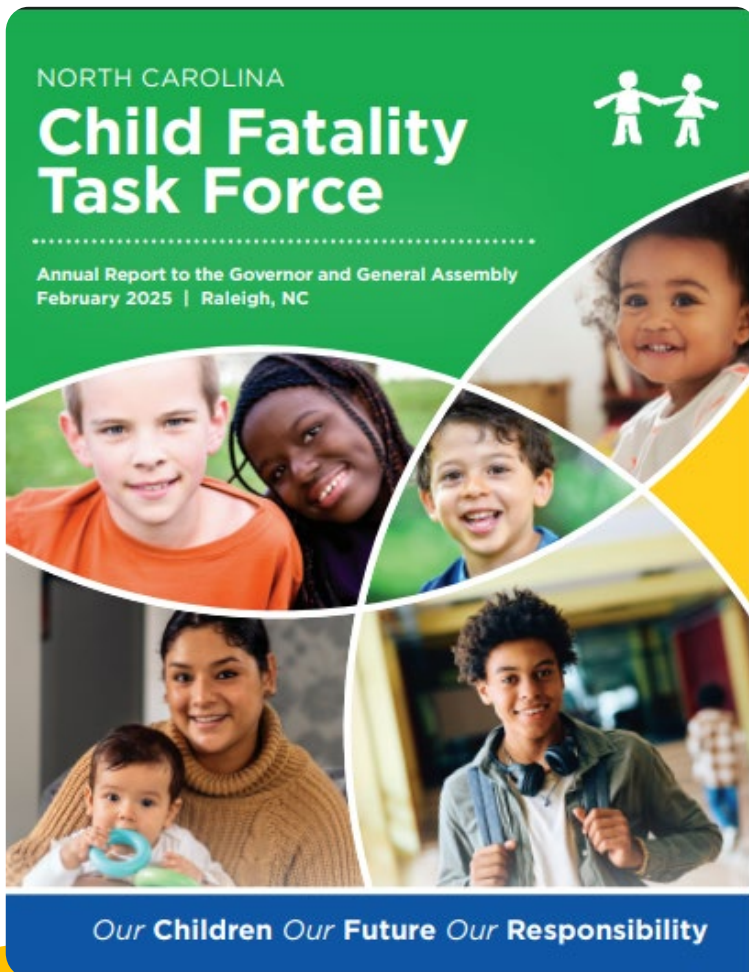
Lots of data to get through!

Time for Q & A at the end (limited)

Put Qs in the chat; last slide has contact info for Qs after webinar

These webinar slides will be posted on the CFTF website under the section “reports and data,” subsection “child fatality data reports”

CFTF website: <https://sites.ncleg.gov/nccftf/>



2025 CFTF Annual Report with Action Agenda addressing . . .

- Suicide & the youth mental health crisis
- Firearm deaths & firearm safe storage
- Infant mortality & birth outcomes
- Family supports to promote child well-being & prevent child maltreatment
- Child Passenger Safety
- Harms from vaping and intoxicating cannabis

Annual report is in the reports section of the website:
<https://webservices.ncleg.gov/ViewDocSiteFile/94479>



NC Department of Health and Human Services

North Carolina Infant & Child Deaths: 2023 Data Update

Kathleen Jones-Vessey

Division of Public Health
Title V Office

March 17, 2025



What we'll cover today

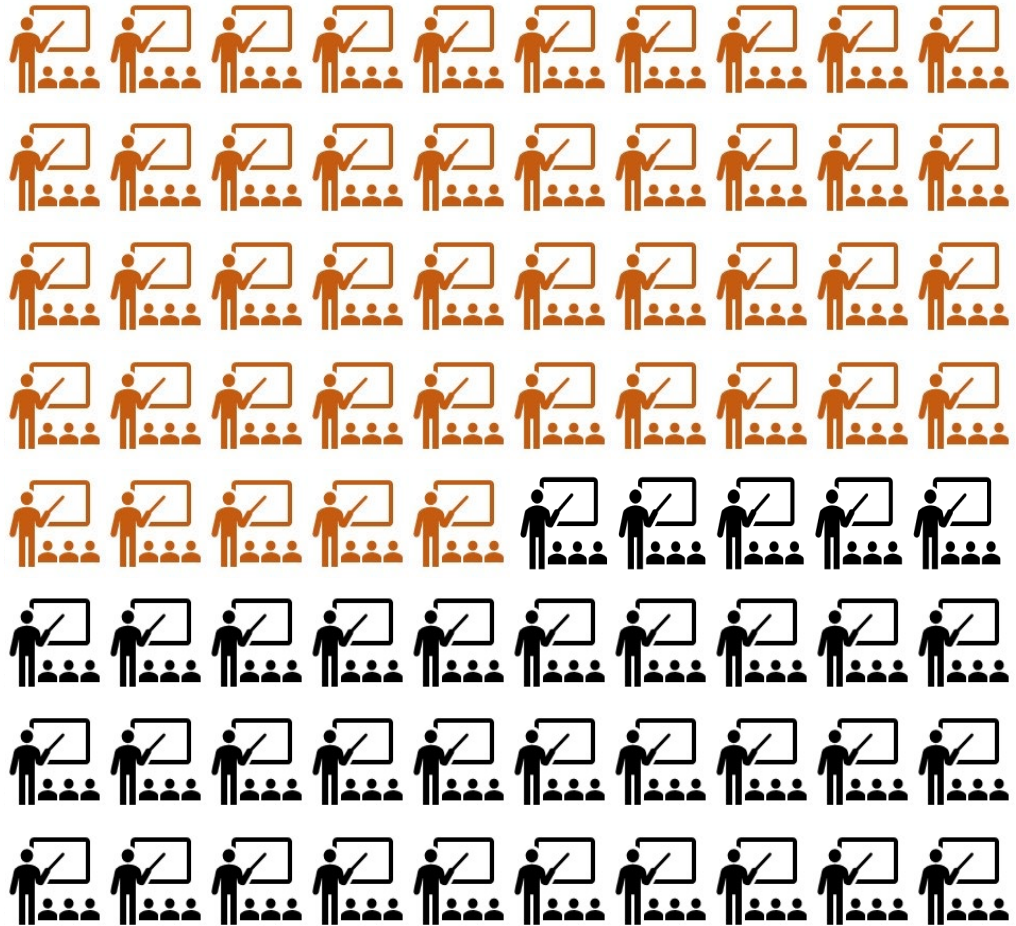
The latest infant & child mortality updates including:

- Trends over time
- National comparisons
- Leading causes of death & deeper dives into specific causes of death
- Breakdowns by age group, urban/rural, race/ethnicity & region

80

Classrooms of Children*

- 1,436 NC children ages 0-17 died in 2023
- **OVER HALF** were Infants (58%)
- Nearly **4 in 10** (39%) were Non-Hispanic black children, while they comprise only 22% of the population of children in NC





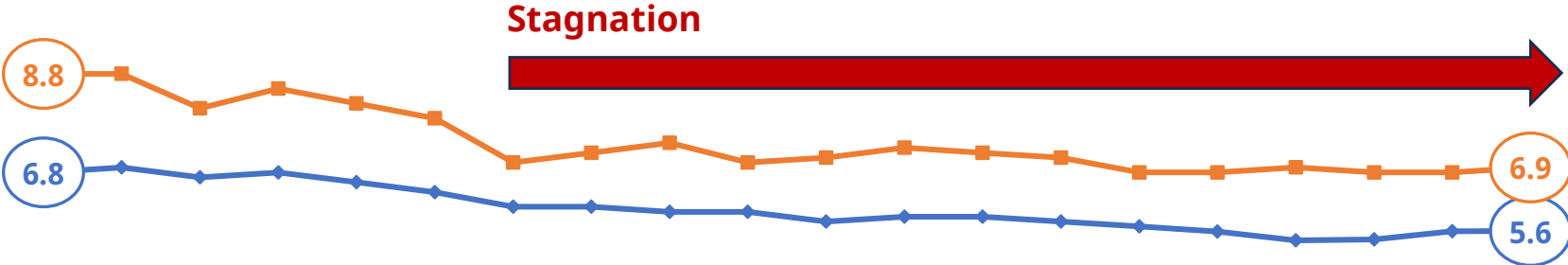
Infant Deaths



North Carolina infant mortality rates remain consistently higher than US rates

Infant death rates*: US & NC Residents 2004-2023

2004-2023:
 US rate decreased **18%**
 NC rate decreased **22%**



| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| — U.S. | 6.8 | 6.9 | 6.7 | 6.8 | 6.6 | 6.4 | 6.1 | 6.1 | 6.0 | 6.0 | 5.8 | 5.9 | 5.9 | 5.8 | 5.7 | 5.6 | 5.4 | 5.4 | 5.6 | 5.6 |
| — N.C. | 8.8 | 8.8 | 8.1 | 8.5 | 8.2 | 7.9 | 7.0 | 7.2 | 7.4 | 7.0 | 7.1 | 7.3 | 7.2 | 7.1 | 6.8 | 6.8 | 6.9 | 6.8 | 6.8 | 6.9 |

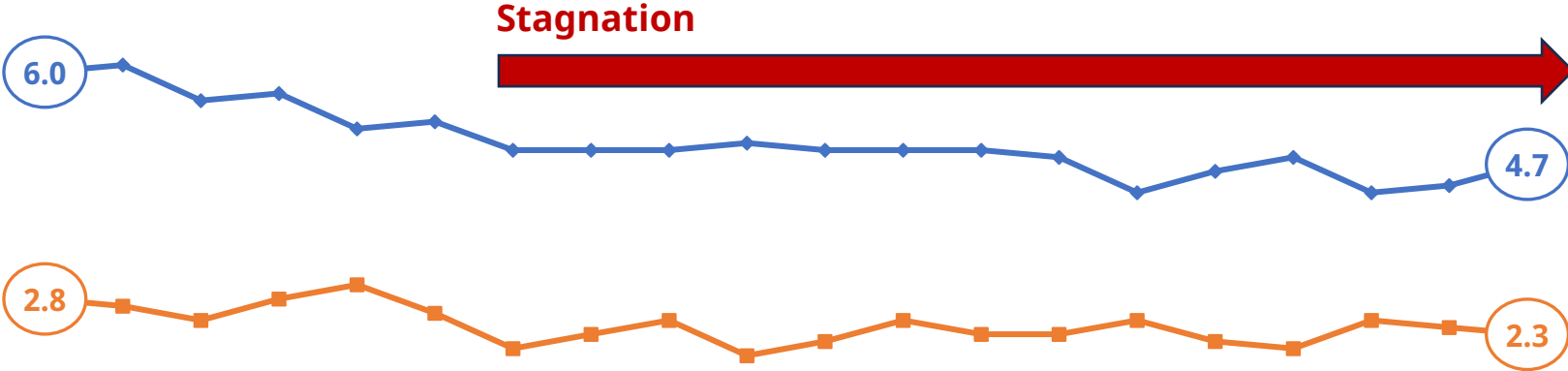
Source: NC State Center for Health Statistics & CDC/National Center for Health Statistics

* Deaths per 1,000 live births

North Carolina's neonatal & postneonatal death rates have both decreased over the last 2 decades

Neonatal (< 28 days) & Postneonatal (>= 28 days) Mortality Rates, NC Residents 2004-2023

2004 to 2023:
 Neonatal decreased **22%**
 Postneonatal decreased **18%**

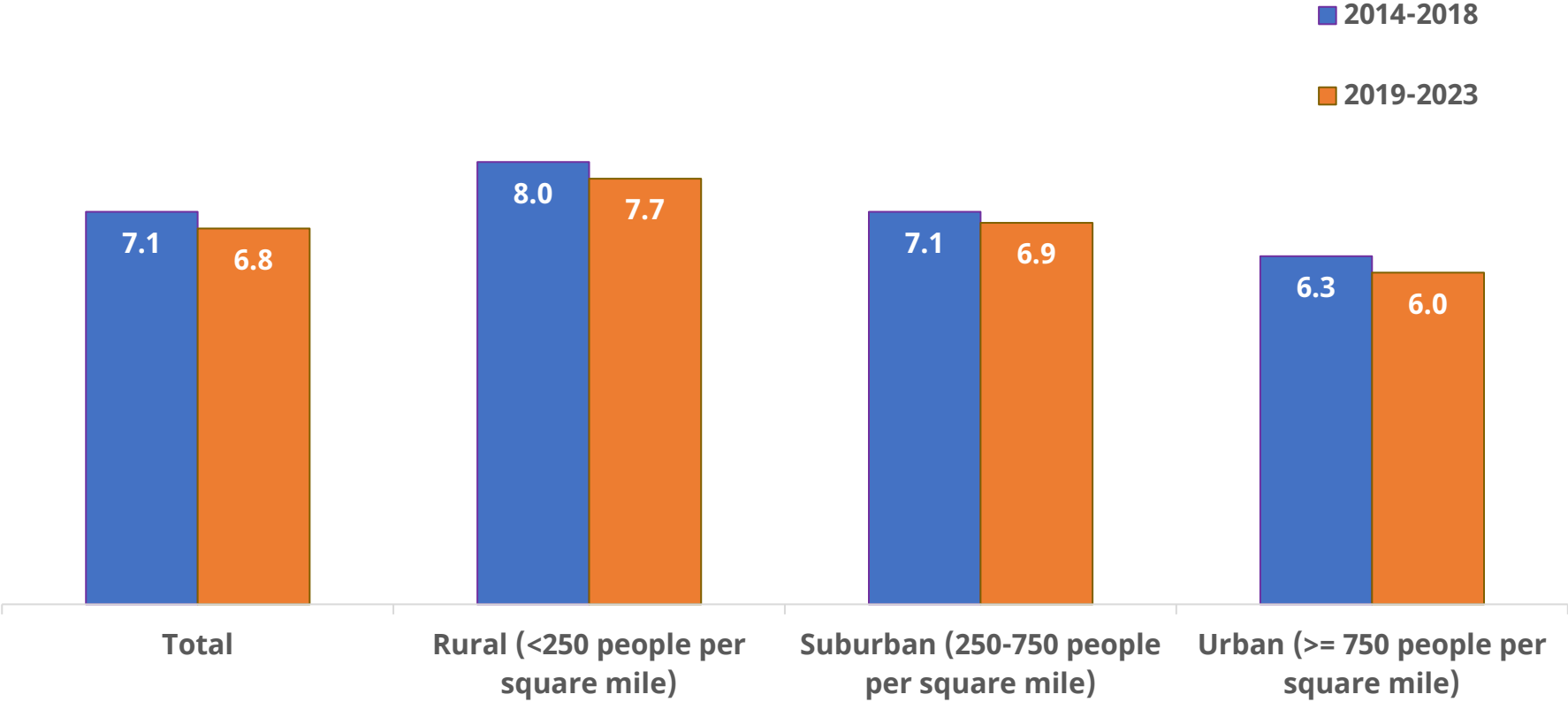


| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Neonatal | 6.0 | 6.1 | 5.6 | 5.7 | 5.2 | 5.3 | 4.9 | 4.9 | 4.9 | 5.0 | 4.9 | 4.9 | 4.9 | 4.8 | 4.3 | 4.6 | 4.8 | 4.3 | 4.4 | 4.7 |
| Postneonatal | 2.8 | 2.7 | 2.5 | 2.8 | 3.0 | 2.6 | 2.1 | 2.3 | 2.5 | 2.0 | 2.2 | 2.5 | 2.3 | 2.3 | 2.5 | 2.2 | 2.1 | 2.5 | 2.4 | 2.3 |

Source: NC State Center for Health Statistics

Infant death rates are higher in rural areas of North Carolina

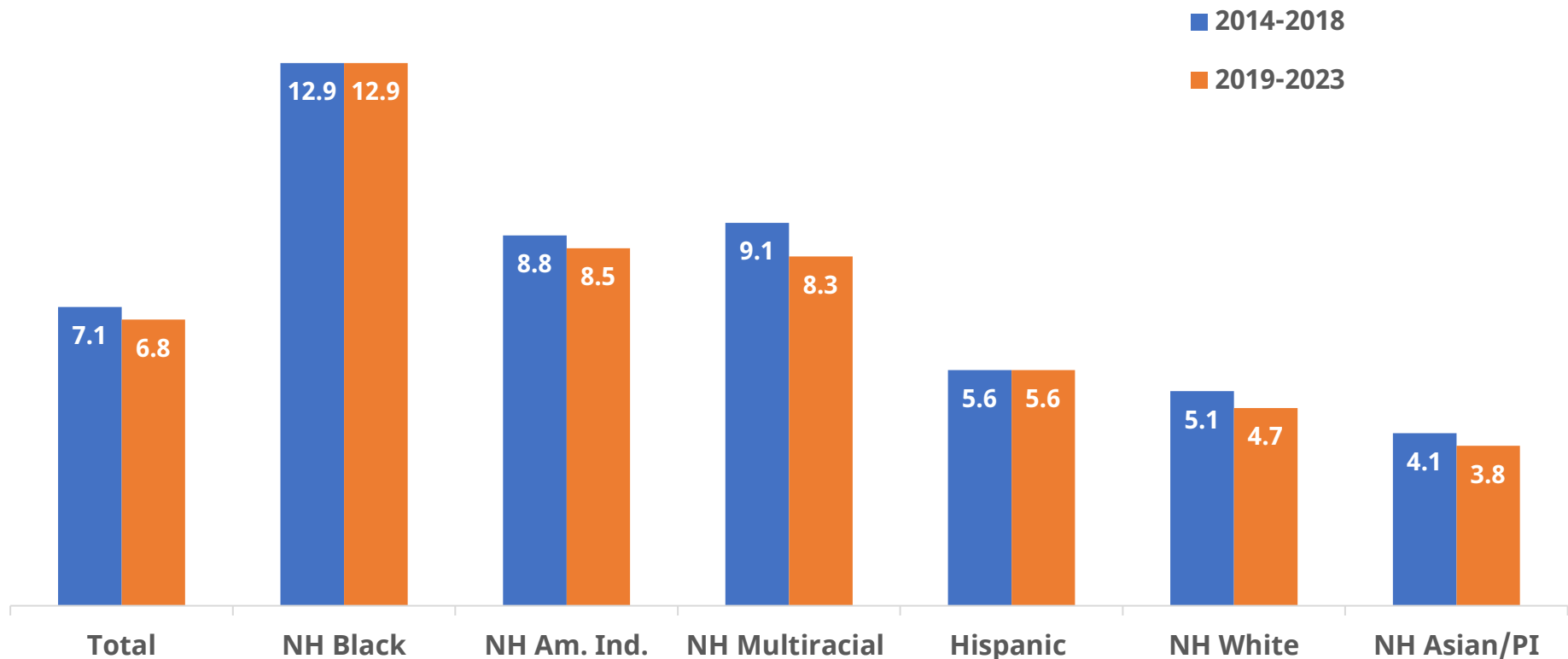
Infant Death Rates* by Urban/Rural Status (as defined by NC Rural Center), NC Residents 2014-2018 & 2019-2023



NC Rural Center Classifications: <https://www.ncruralcenter.org/how-we-define-rural/>

Infant mortality rates are consistently higher among North Carolina's Black, American Indian, & multiracial populations

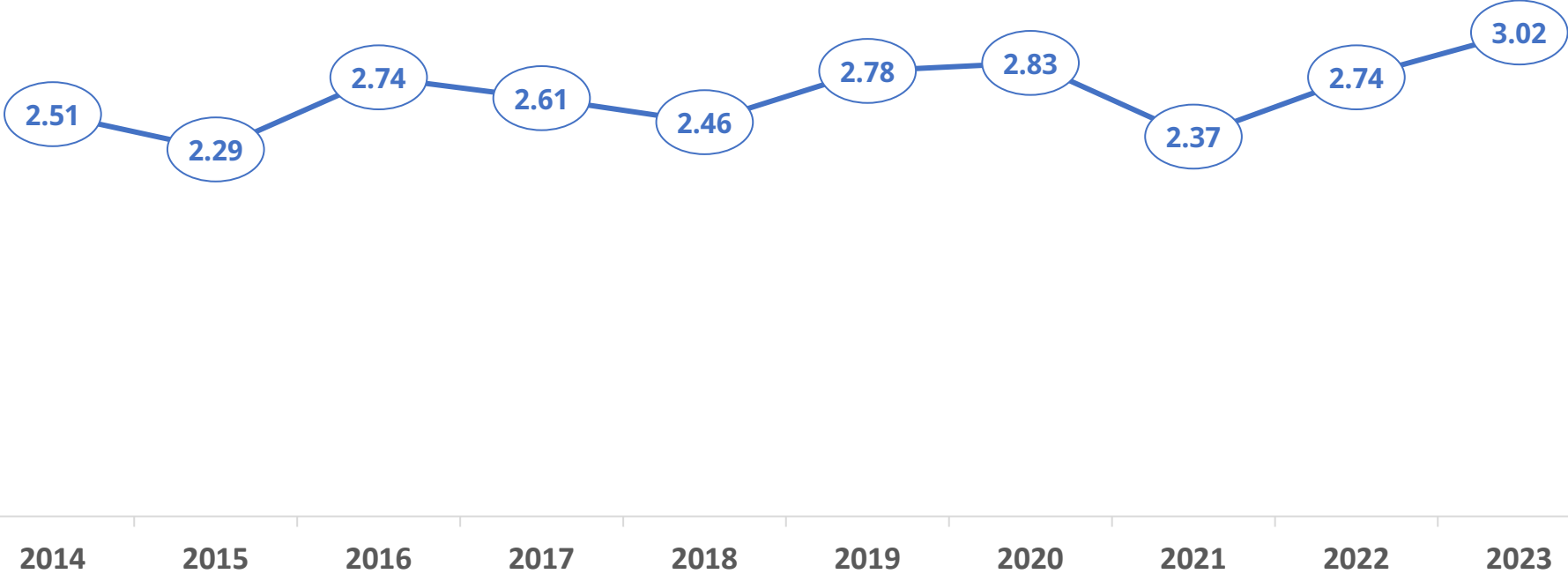
Infant Death Rates per 1,000 live births by Race/Ethnicity, NC Residents 2014-2018 & 2019-2023



In 2023, Non-Hispanic Black infants died at rates more than three times higher than Non-Hispanic White infants

Infant Mortality Disparity Ratios, NC Residents 2014-2023
* Ratio of Non-Hispanic Black to Non-Hispanic White (Single Race) Infant Mortality Rates

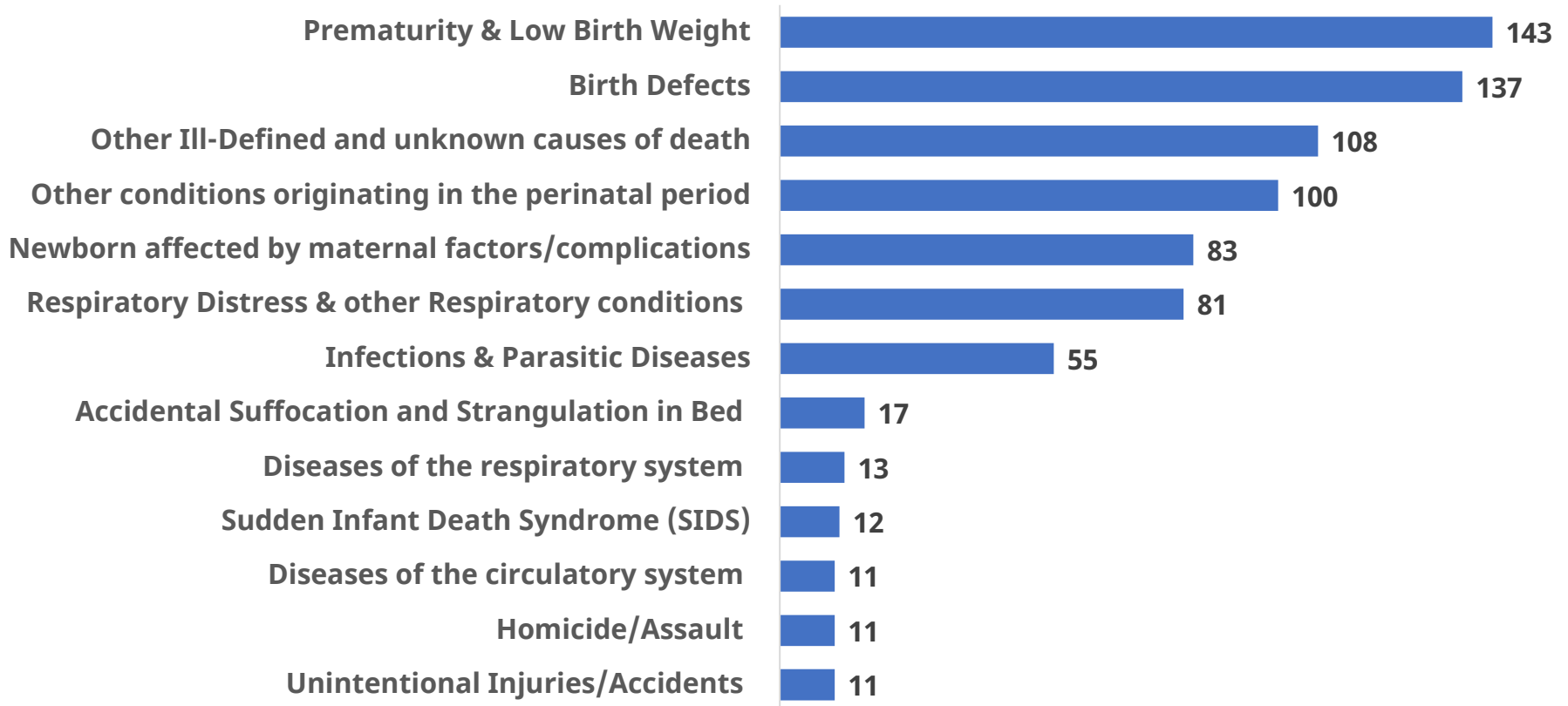
NC Perinatal Health Strategic Plan Goal: 1.90
Healthy NC 2030 Target: 1.50



Source: NCDHHS Division of Public Health, Title V Office analysis of NC Resident Death Certificate Data

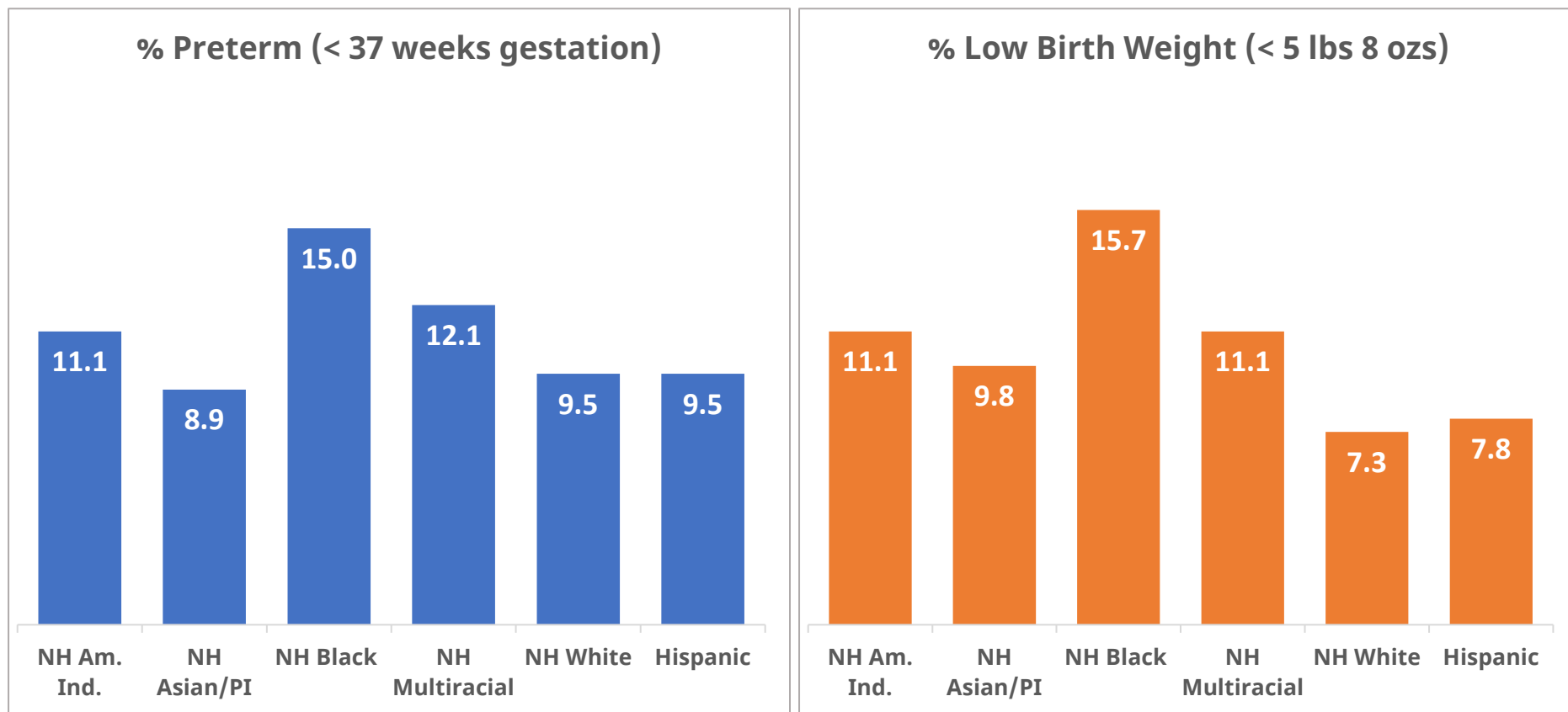
1 in 3 infant deaths in NC were attributable to prematurity/low birth weight or birth defects in 2023

*Leading Causes of Death Among Infants: Number of Deaths by Cause, NC 2023
(N=828 Total Deaths)*



Racial/ethnic differences in preterm and low birth weight persist among North Carolina births

Percent of Births that are Preterm and Low Birthweight by Race/Ethnicity, NC Residents 2023



Note: SCHS has implemented a new race reporting methodology. Race figures presented here are not comparable with earlier reports based on bridged race methodology.

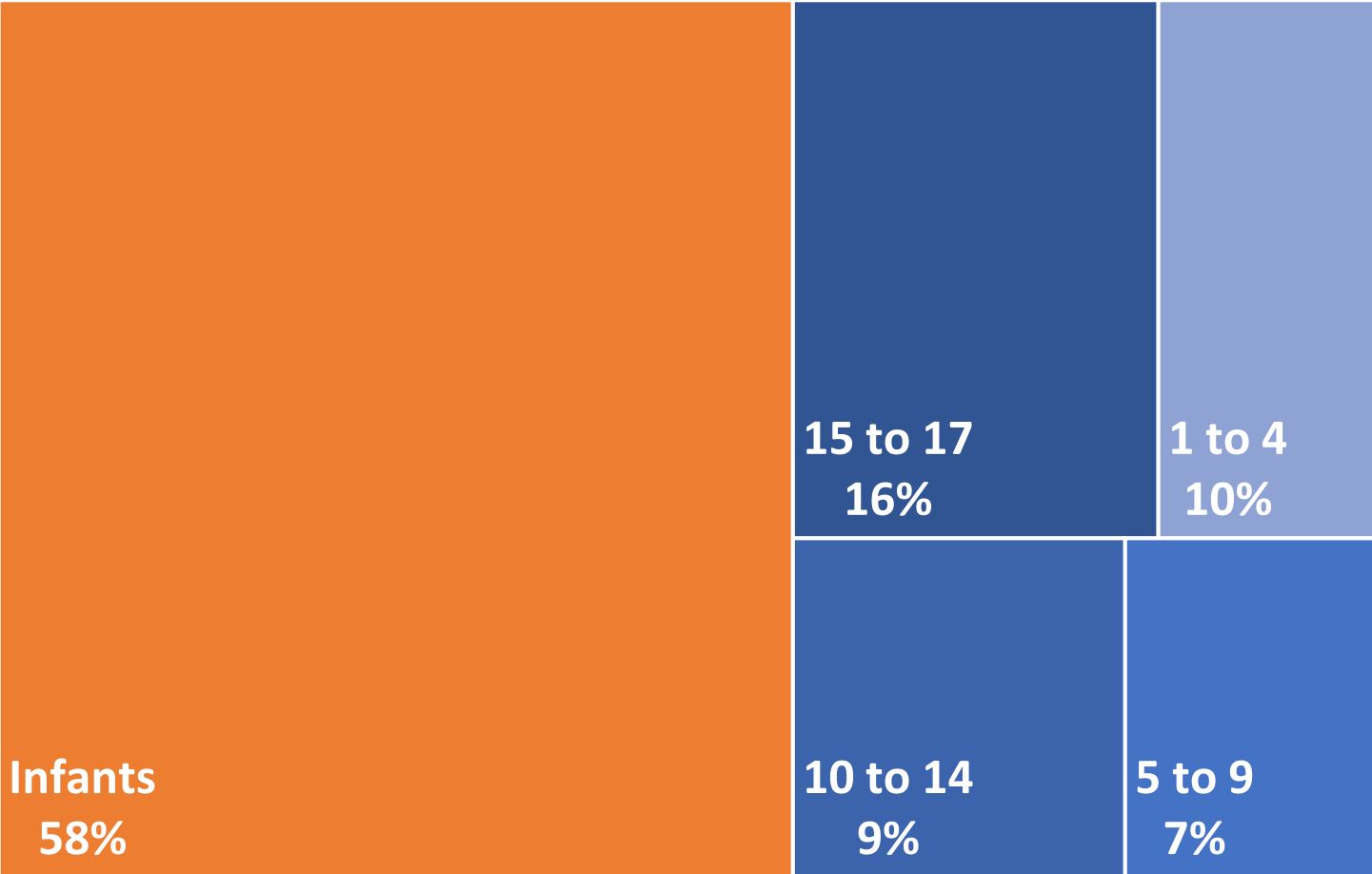


Child Deaths



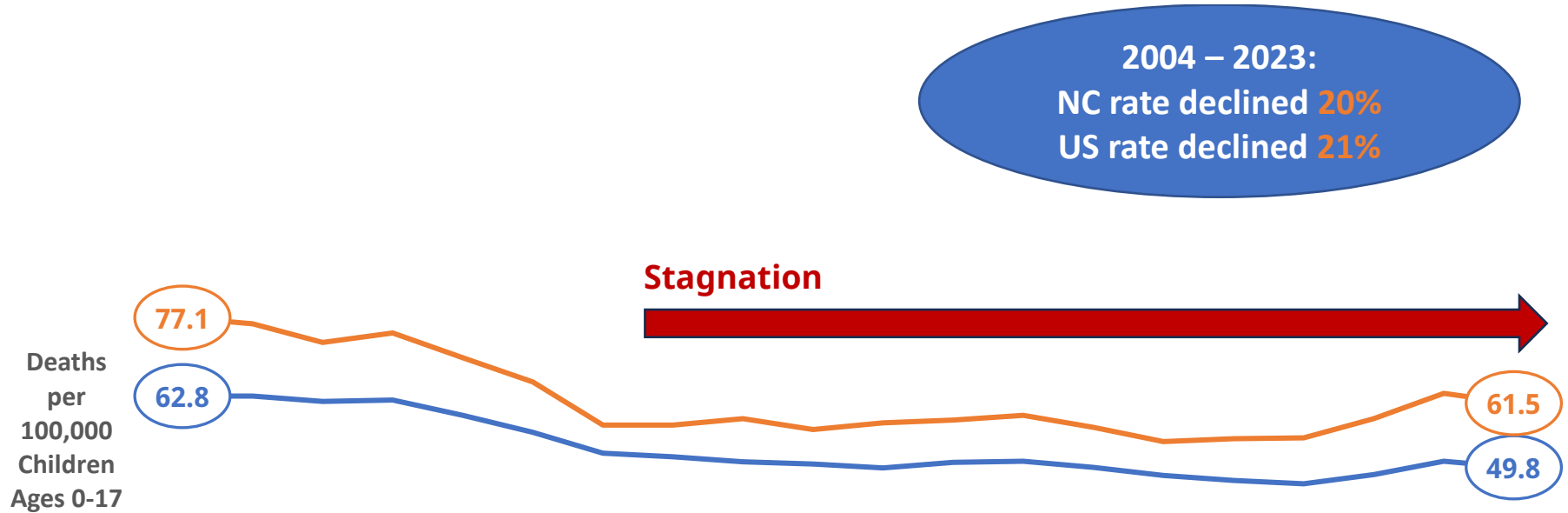
Infants comprise the largest proportion of child deaths in North Carolina, followed by older teens (ages 15-17)

Child Deaths by Age Group, NC Residents 2023 (N=1,436 deaths)



North Carolina's child death rates remain consistently higher than US rates over the last two decades

Child Death Rates, NC & US 2004-2023

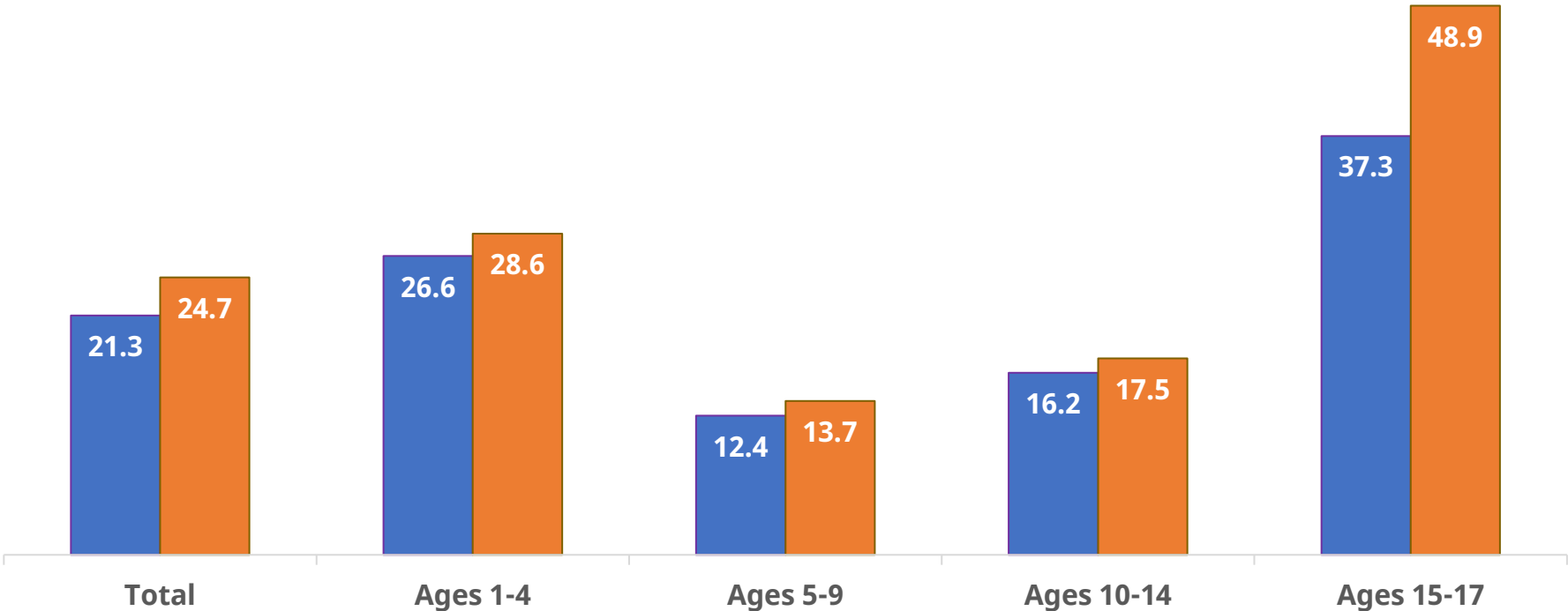


| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| — US | 62.8 | 62.8 | 61.8 | 62.1 | 59.3 | 56.2 | 52.4 | 51.7 | 50.8 | 50.4 | 49.7 | 50.7 | 50.9 | 49.8 | 48.3 | 47.4 | 46.8 | 48.5 | 50.9 | 49.8 |
| — NC | 77.1 | 76.0 | 72.6 | 74.3 | 69.8 | 65.4 | 57.5 | 57.5 | 58.7 | 56.7 | 57.9 | 58.4 | 59.3 | 57.1 | 54.5 | 55.0 | 55.2 | 58.7 | 63.3 | 61.5 |

Excluding infants, adolescents ages 15 to 17 consistently have the highest mortality & rates increased significantly over the last decade in this age group

Child Death Rates* (Ages 1 to 17) by Age Group, NC Residents 2014-2018 & 2019-2023

■ 2014-2018
■ 2019-2023

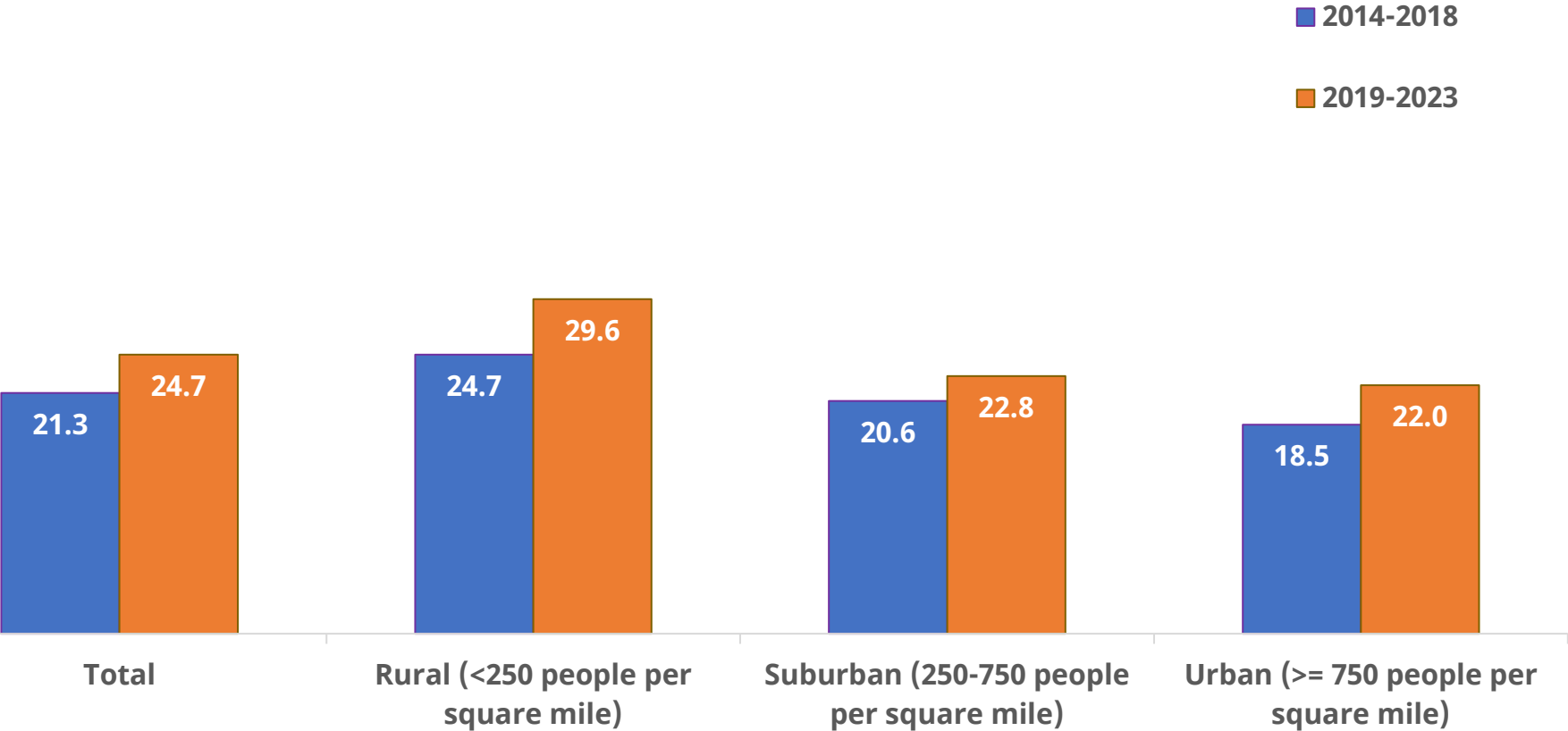


Source: NCDHHS Division of Public Health, Title V Office analysis of NC Resident Death Certificate Data

* Deaths per 100,000 Resident Children Ages 1 to 17

Rural areas of North Carolina have higher child death rates

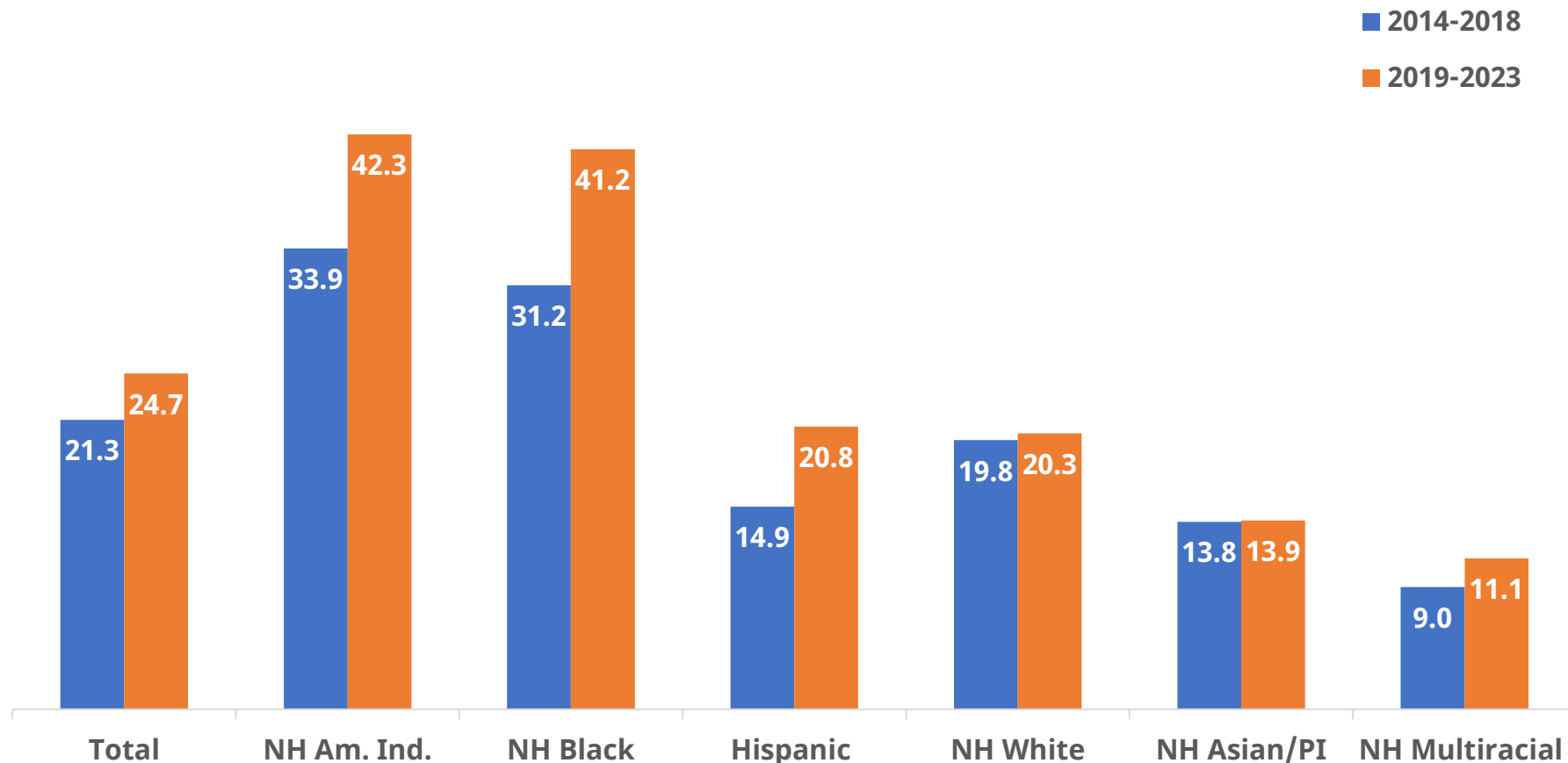
Child Death Rates* (Ages 1 to 17) by Urban/Rural Status (as defined by NC Rural Center), NC Residents 2014-2018 & 2019-2023



NC Rural Center Classifications: <https://www.ncruralcenter.org/how-we-define-rural/>

Mortality rates are consistently higher among North Carolina's American Indian & Black children

Child Death Rates* (Ages 1 to 17) by Race/Ethnicity, NC Residents 2014-2018 & 2019-2023

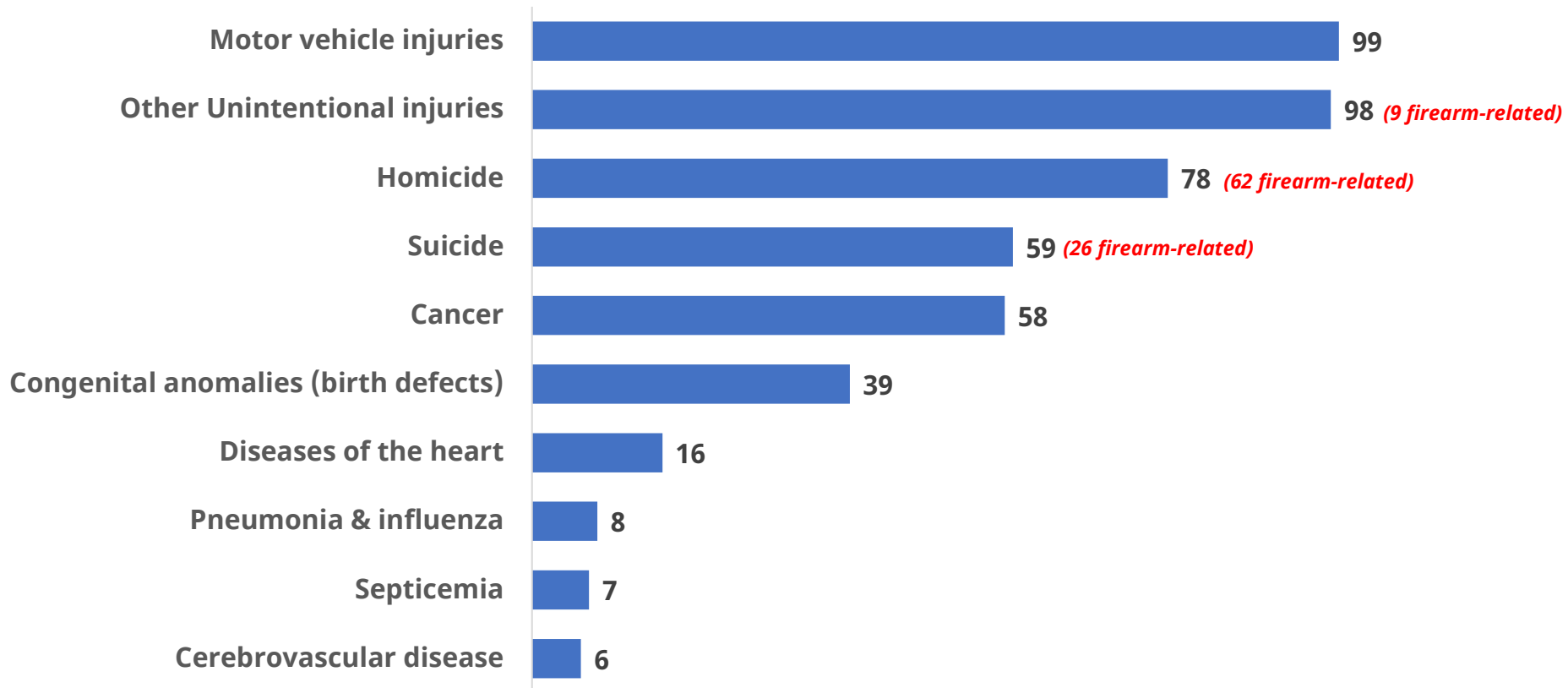


Source: NCDHHS Division of Public Health, Title V Office analysis of NC Resident Death Certificate Data

NH = Non-Hispanic. * Deaths per 100,000 Resident Children Ages 1 to 17

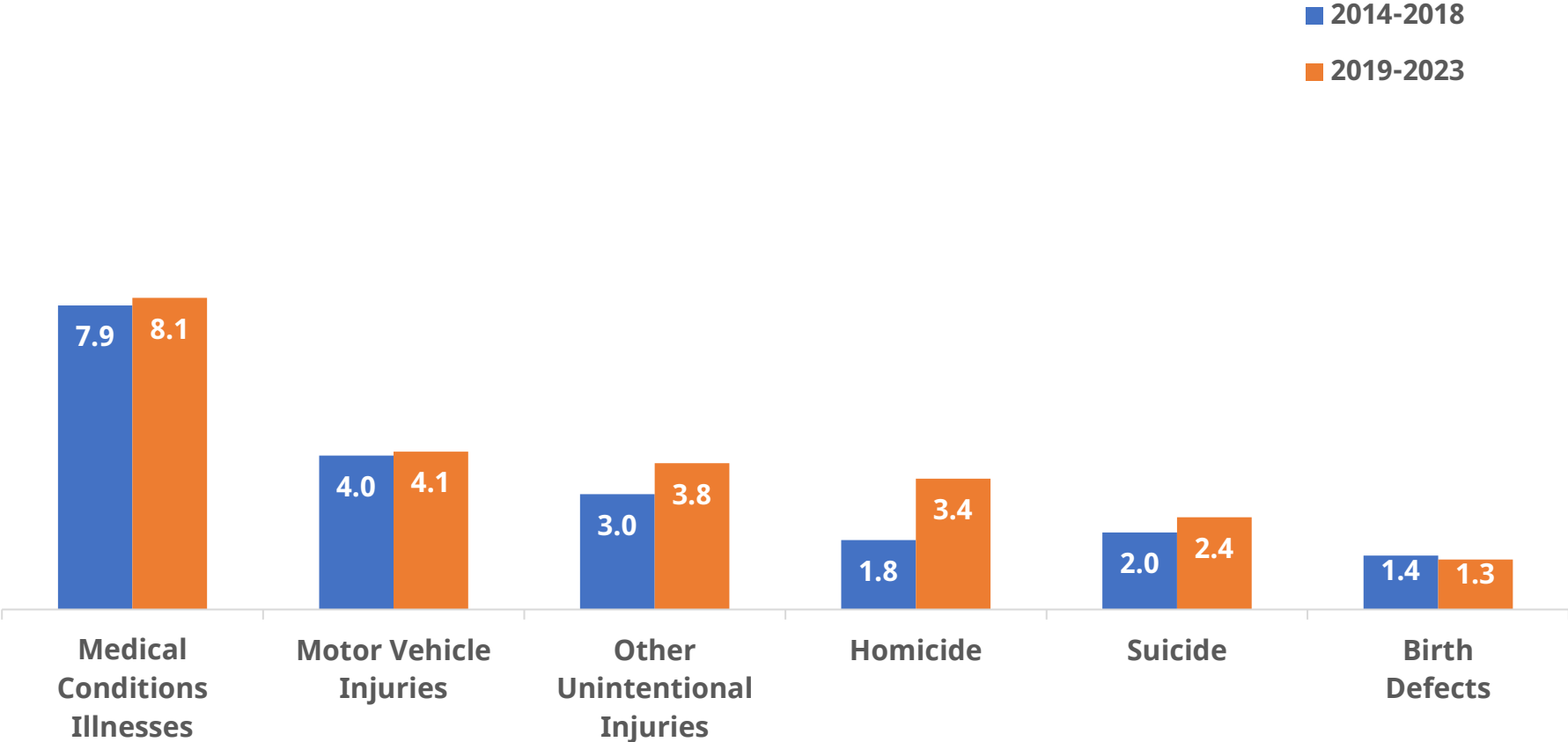
In 2023, injuries were the leading cause of death among children ages 1 to 17, comprising 55% of all (non-infant) child deaths

*Leading Causes of Death Among Children Ages 1 to 17: Number of Deaths by Cause, NC 2023
(N=608 Total Deaths)*



Child homicide rates have increased more than other cause of death categories

Child Death Rates* (Ages 1 to 17) for Selected Causes of Death, NC Residents 2014-2018 & 2019-2023

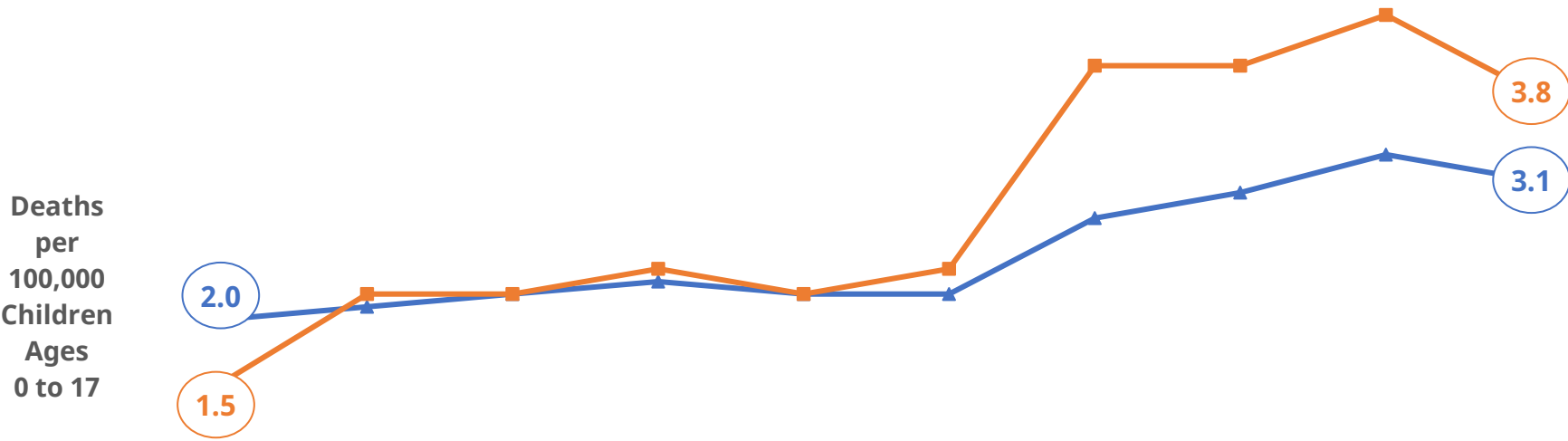


Source: NCDHHS Division of Public Health, Title V Office analysis of NC Resident Death Certificate Data

* Deaths per 100,000 Resident Children Ages 1 to 17

North Carolina child homicide rates remain above US rates since 2019

Child Homicide Rates, Ages 0 to 17: US & NC, 2014-2023

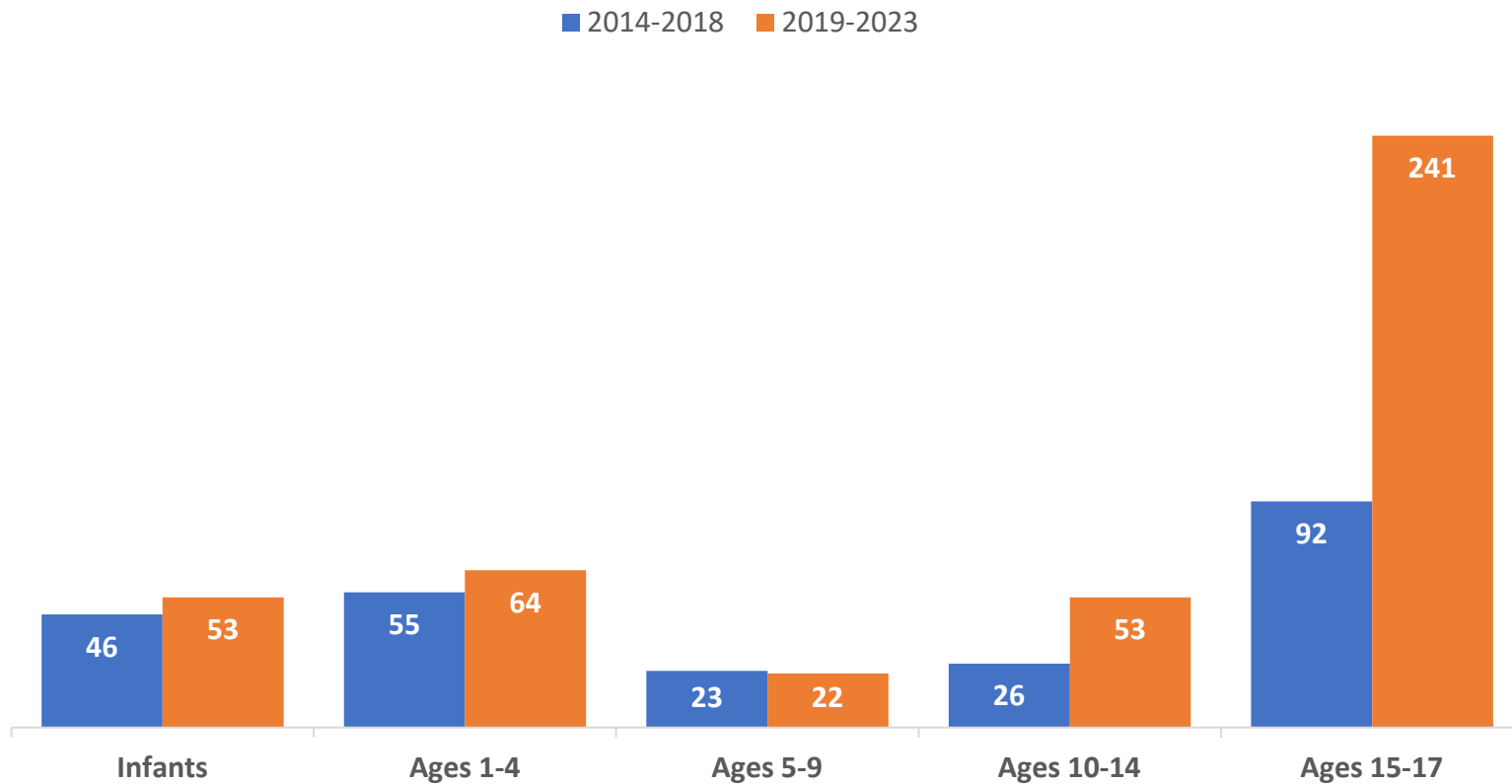


| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--------|------|------|------|------|------|------|------|------|------|------|
| —▲— US | 2.0 | 2.1 | 2.2 | 2.3 | 2.2 | 2.2 | 2.8 | 3.0 | 3.3 | 3.1 |
| —■— NC | 1.5 | 2.2 | 2.2 | 2.4 | 2.2 | 2.4 | 4.0 | 4.0 | 4.4 | 3.8 |

* Homicide includes the following ICD mortality codes : X85-Y09 (Assault), Y87.1 (Sequelae of assault), U01 (Terrorism Assault)

Older teens (ages 15 to 17) account for the largest increase in child homicides over the last decade

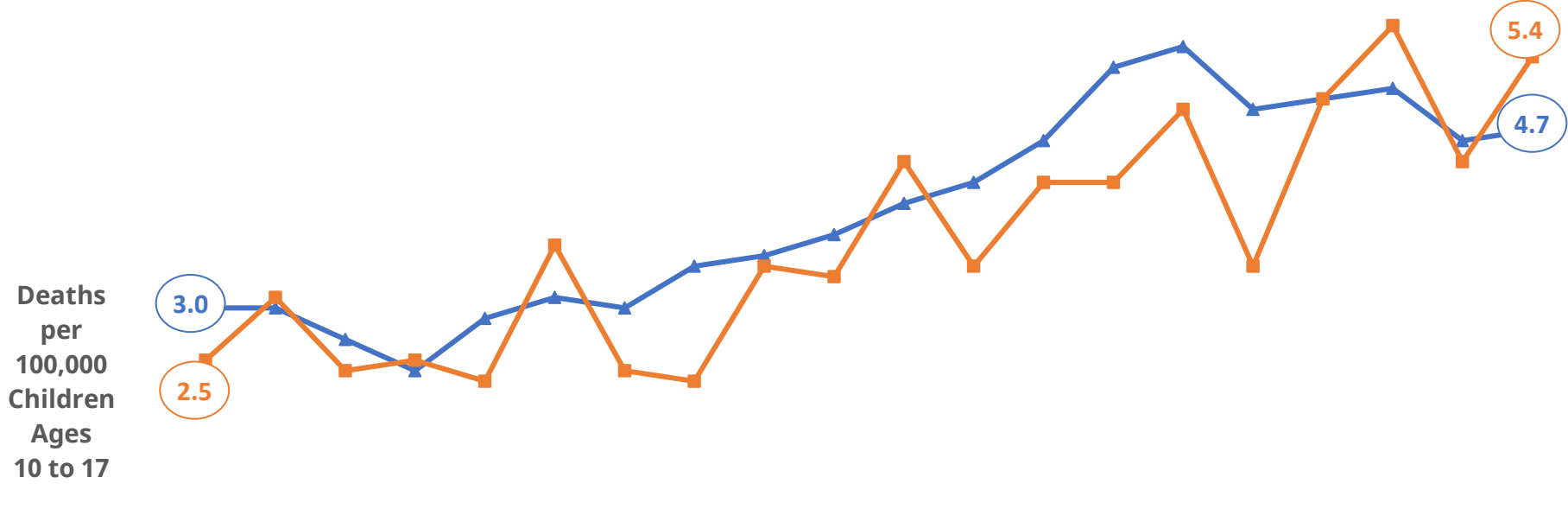
Number of Child Homicides by Age Group, NC Residents 2014-2018 & 2019-2023



* Homicide includes the following ICD mortality codes : X85-Y09 (Assault), Y87.1 (Sequelae of assault), U01 (Terrorism Assault)

Among children ages 10 to 17, suicide rates have increased over the last 20 years

Suicide Rates, Ages 10 to 17: US & NC 2004-2023*

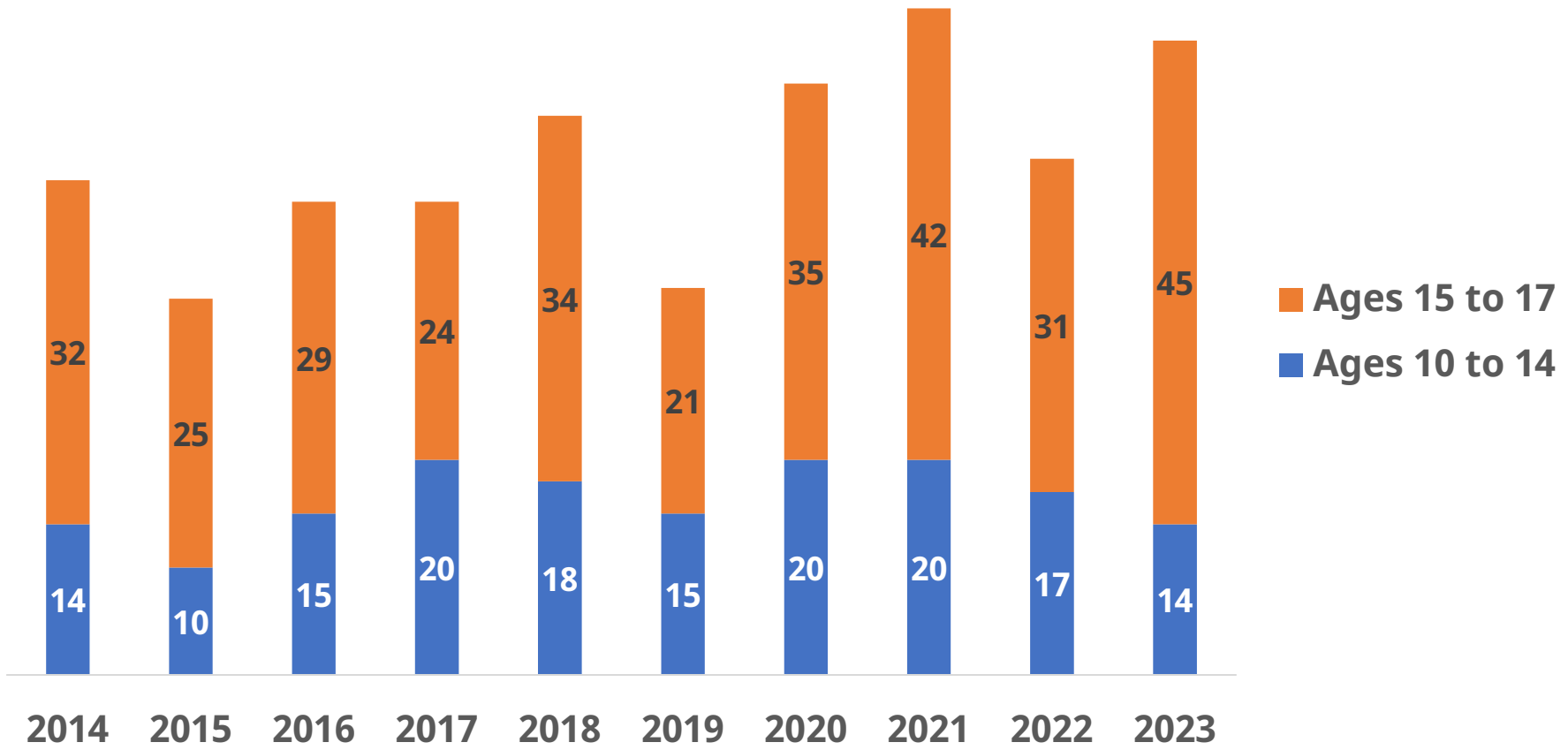


| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| US | 3.0 | 3.0 | 2.7 | 2.4 | 2.9 | 3.1 | 3.0 | 3.4 | 3.5 | 3.7 | 4.0 | 4.2 | 4.6 | 5.3 | 5.5 | 4.9 | 5.0 | 5.1 | 4.6 | 4.7 |
| NC | 2.5 | 3.1 | 2.4 | 2.5 | 2.3 | 3.6 | 2.4 | 2.3 | 3.4 | 3.3 | 4.4 | 3.4 | 4.2 | 4.2 | 4.9 | 3.4 | 5.0 | 5.7 | 4.4 | 5.4 |

* Suicides include the following ICD mortality codes : X60-X84 (Intentional self-harm; Y87.0 (Sequelae of intentional self-harm), U03 (Suicide Terrorism)

Older teens - ages 15 to 17 - comprise the largest proportion of suicide deaths in NC

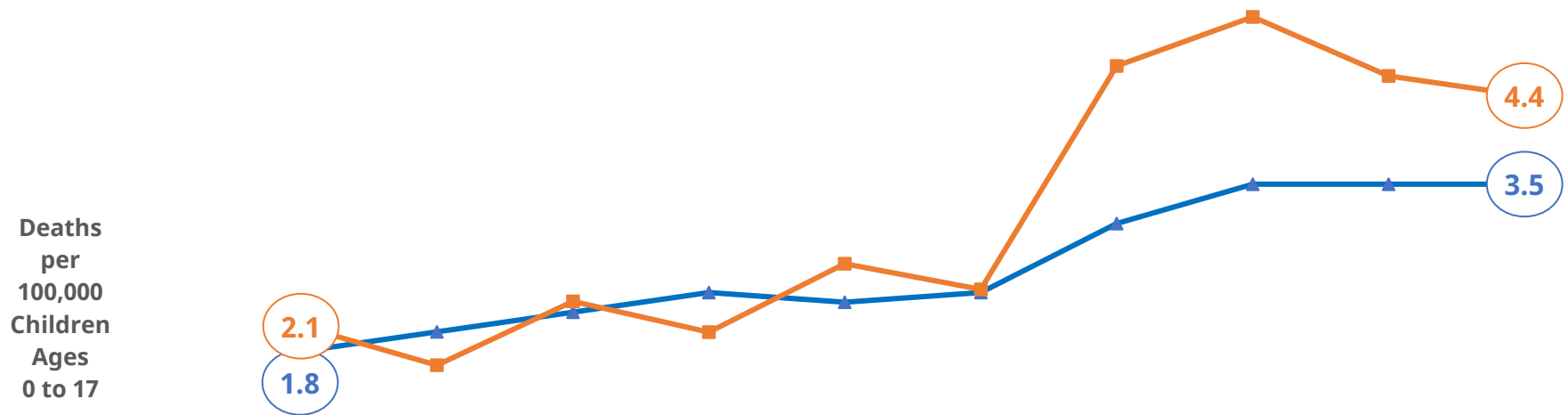
Number of Suicides by Age Group: Ages 10 to 17, NC 2014-2023



* Suicides include the following ICD mortality codes : X60-X84 (Intentional self-harm; Y87.0 (Sequelae of intentional self-harm), U03 (Suicide Terrorism)

NC firearm-related* child death rates have more than doubled since 2014

Firearm-related Mortality Rates, Children Ages 0 to 17: NC & US, 2014-2023*

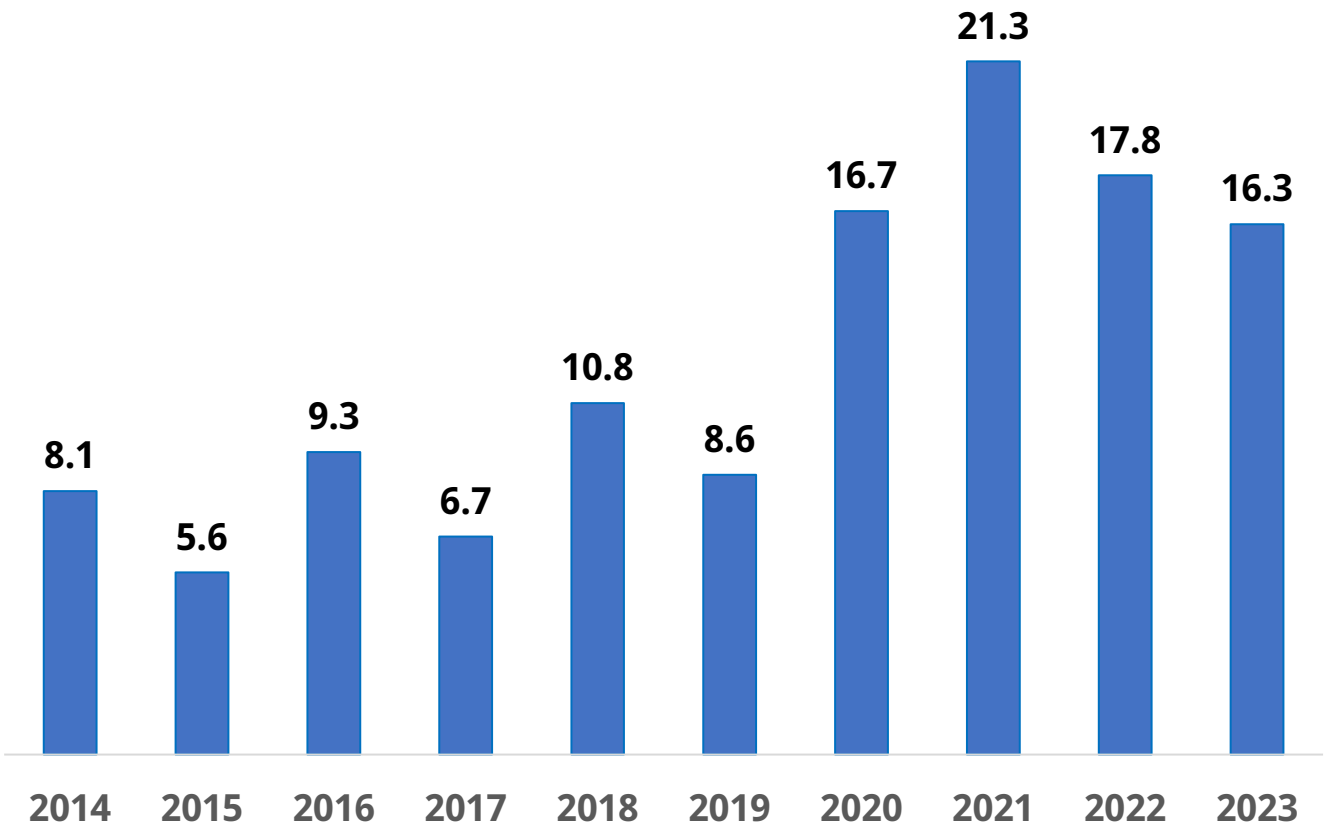


| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--------|------|------|------|------|------|------|------|------|------|------|
| —▲— US | 1.8 | 2.0 | 2.2 | 2.4 | 2.3 | 2.4 | 3.1 | 3.5 | 3.5 | 3.5 |
| —■— NC | 2.1 | 1.7 | 2.3 | 2.0 | 2.7 | 2.4 | 4.7 | 5.2 | 4.6 | 4.4 |

* Firearm-related deaths include the following ICD mortality codes : W32-W34 (Unintentional), X72-X74 (Suicide), X93-X95 (Homicide), U014 (Terrorism), & Y22-Y24 (Undetermined Intent)

Firearm-related* mortality rates among older teens were higher after 2019

Firearm-related Mortality Rates*, Children Ages 15 to 17: NC, 2014-2023

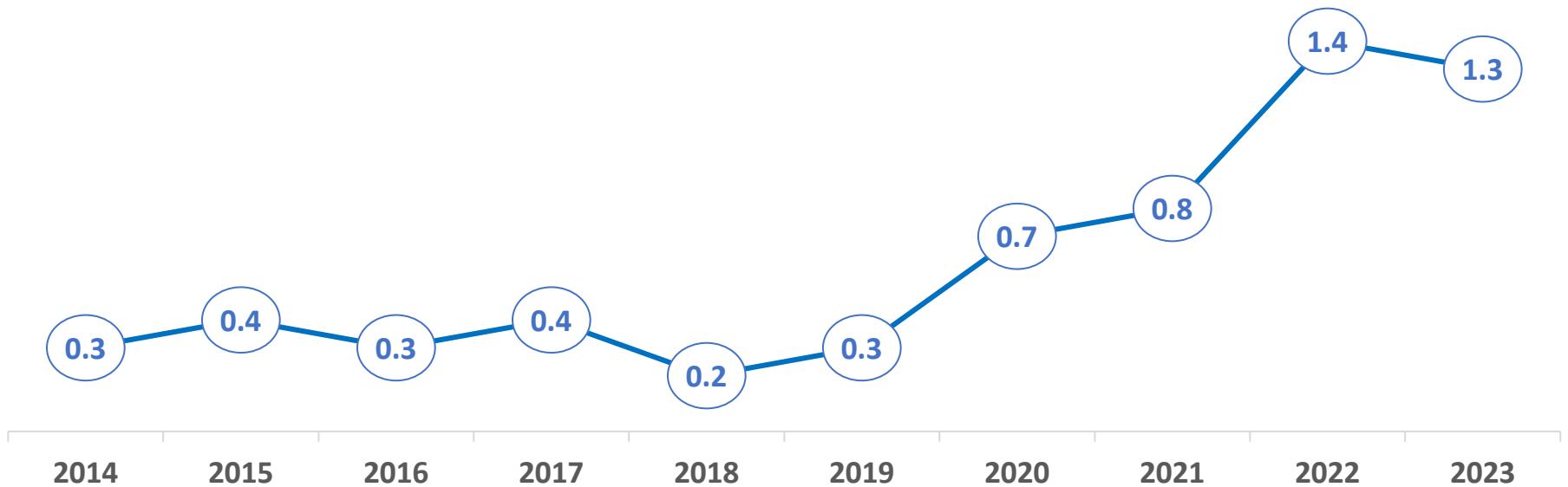


> In 2023, firearms were the lethal means used in **47%** of suicides and **94%** of homicides occurring among teens ages 15 – 17

* Firearm-related deaths include the following ICD mortality codes : W32-W34 (Unintentional), X72-X74 (Suicide), X93-X95 (Homicide), U014 (Terrorism), & Y22-Y24 (Undetermined Intent)

Child deaths due to accidental poisoning increased in North Carolina from 2020 forward

Unintentional Poisoning Rates, Children Ages 0 to 17: NC, 2014-2023*



** Unintentional poisoning deaths include the following ICD mortality codes : X40-X49 (Accidental Poisoning & Exposure to Noxious Substances)*

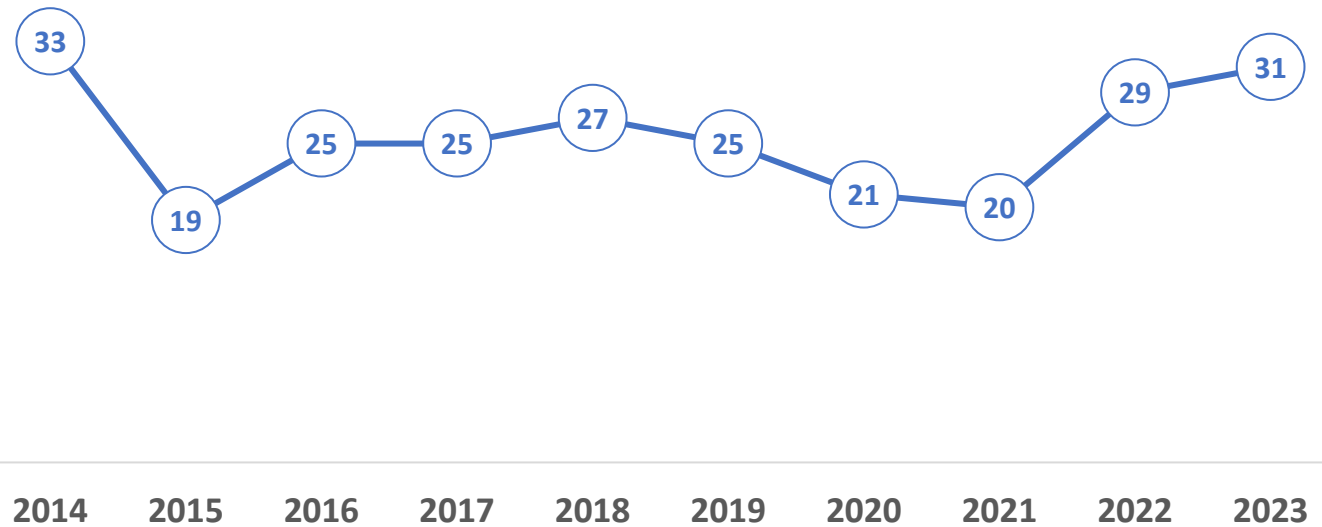
Patterns in accidental poisoning deaths among NC children in 2023



- 31 children died of accidental overdose in 2023
- Most (87%) noted fentanyl in the literal cause(s) of death (*either alone or in combination with other drugs*)
- 6 in 10 involved adolescents ages 15 to 17 (61%)
- 65% were male
- 58% were Non-Hispanic White
- 29% were Non-Hispanic Black

Child deaths due to accidental drownings increased in 2022 & 2023

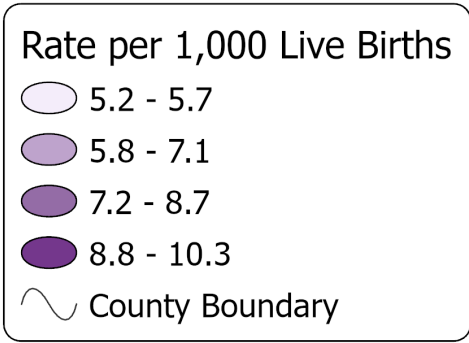
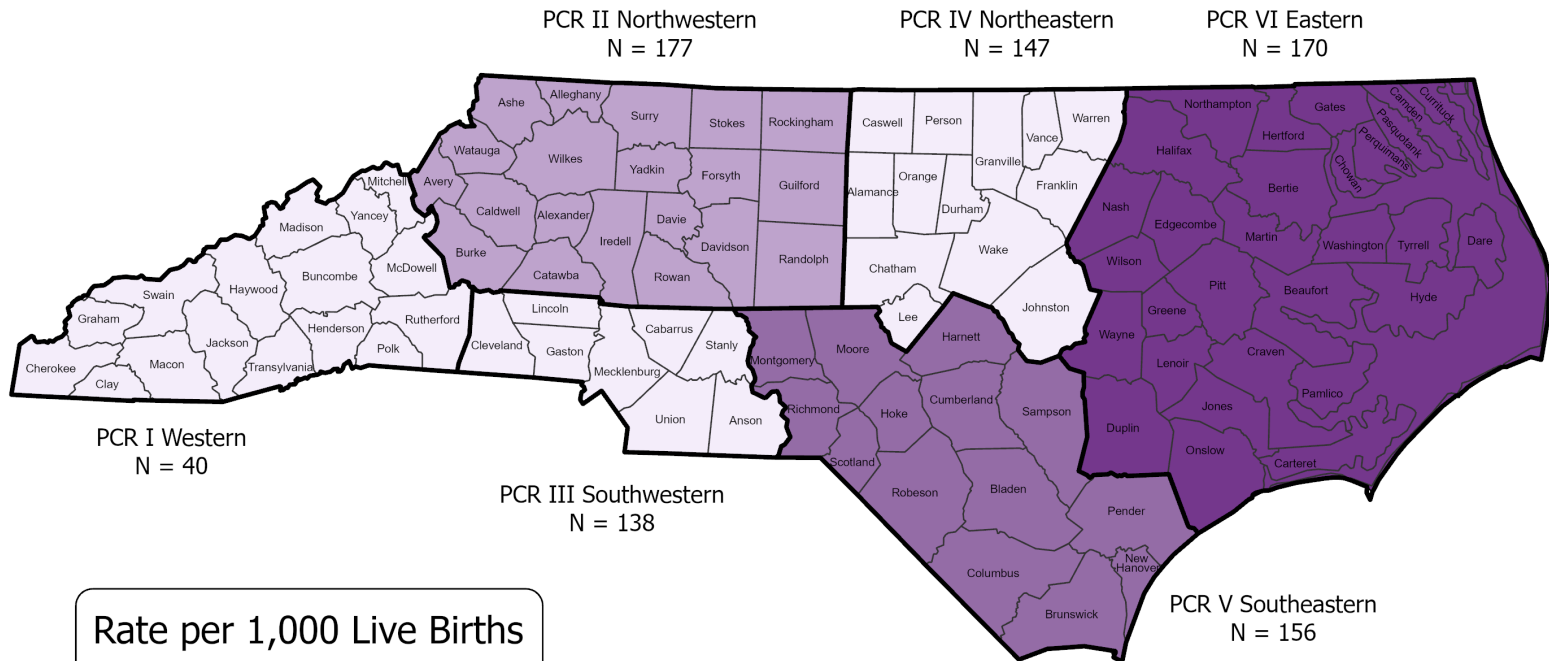
Accidental Drowning Deaths, Children Ages 0 to 17: NC, 2014-2023*



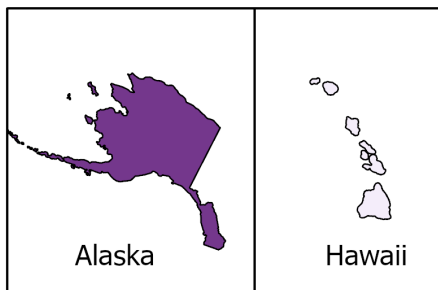
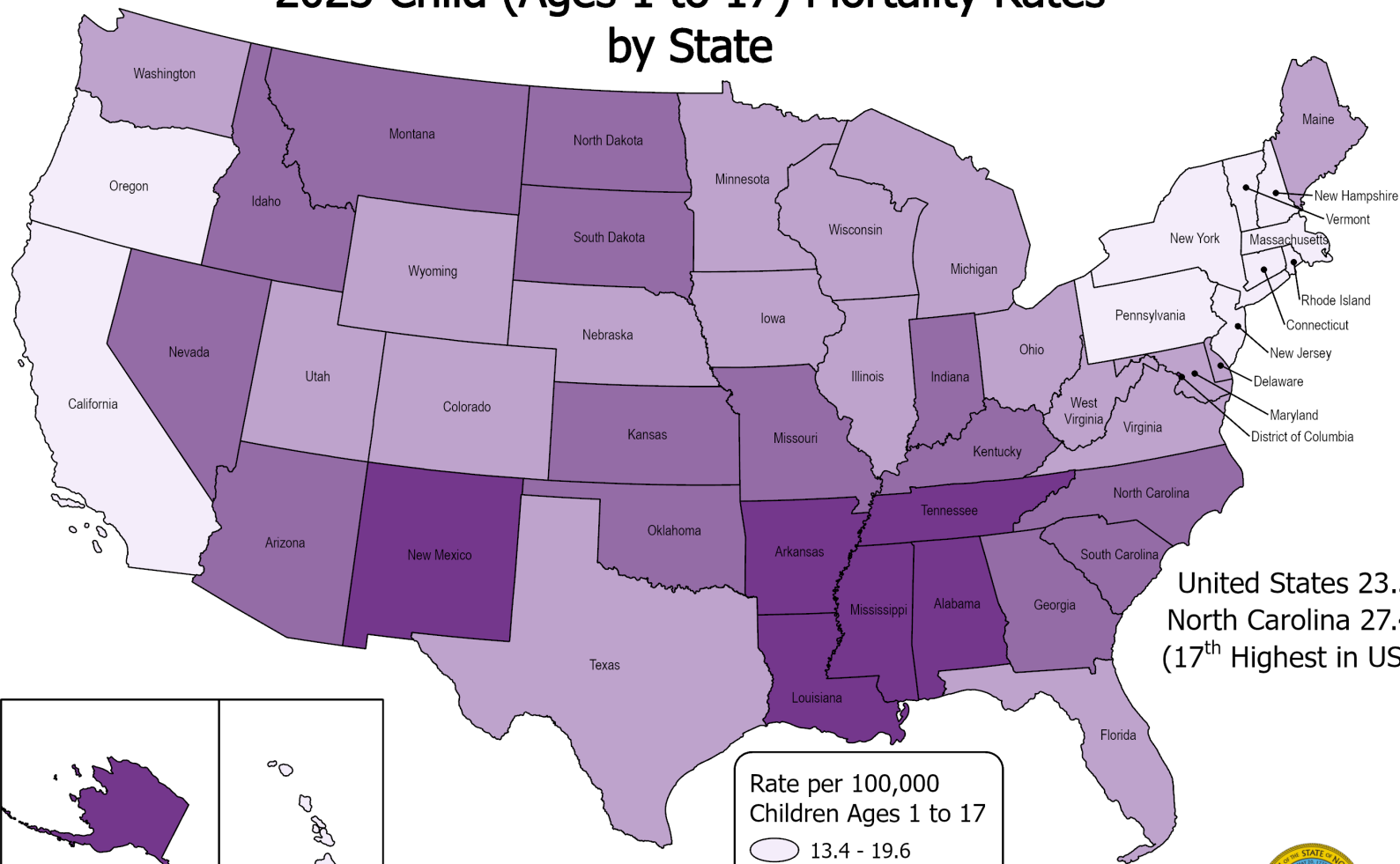
* Accidental drowning deaths include the following ICD mortality codes: W65 - W73 (Accidental drowning and submersion)

Geographic Patterns in Infant & Child Mortality

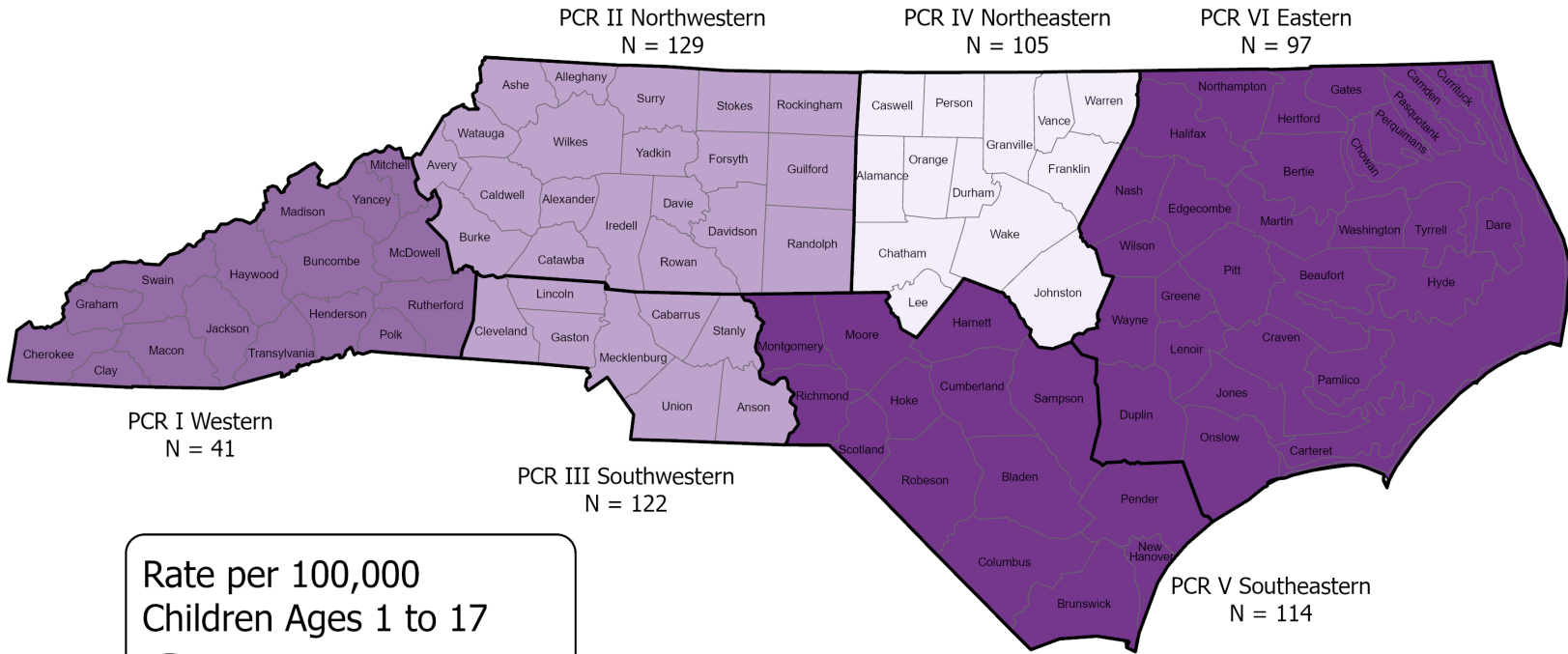
North Carolina Infant Mortality Rates by Perinatal Care Regions (PCR) 2023



United States 2023 Child (Ages 1 to 17) Mortality Rates by State



North Carolina Child (Ages 1 to 17) Mortality Rates by Perinatal Care Regions (PCR) 2023



Rate per 100,000
Children Ages 1 to 17

- 20.1
- 20.2 - 26.2
- 26.3 - 29.5
- 29.6 - 37.4

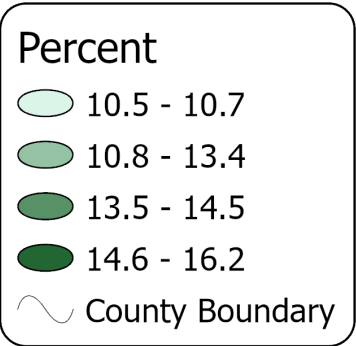
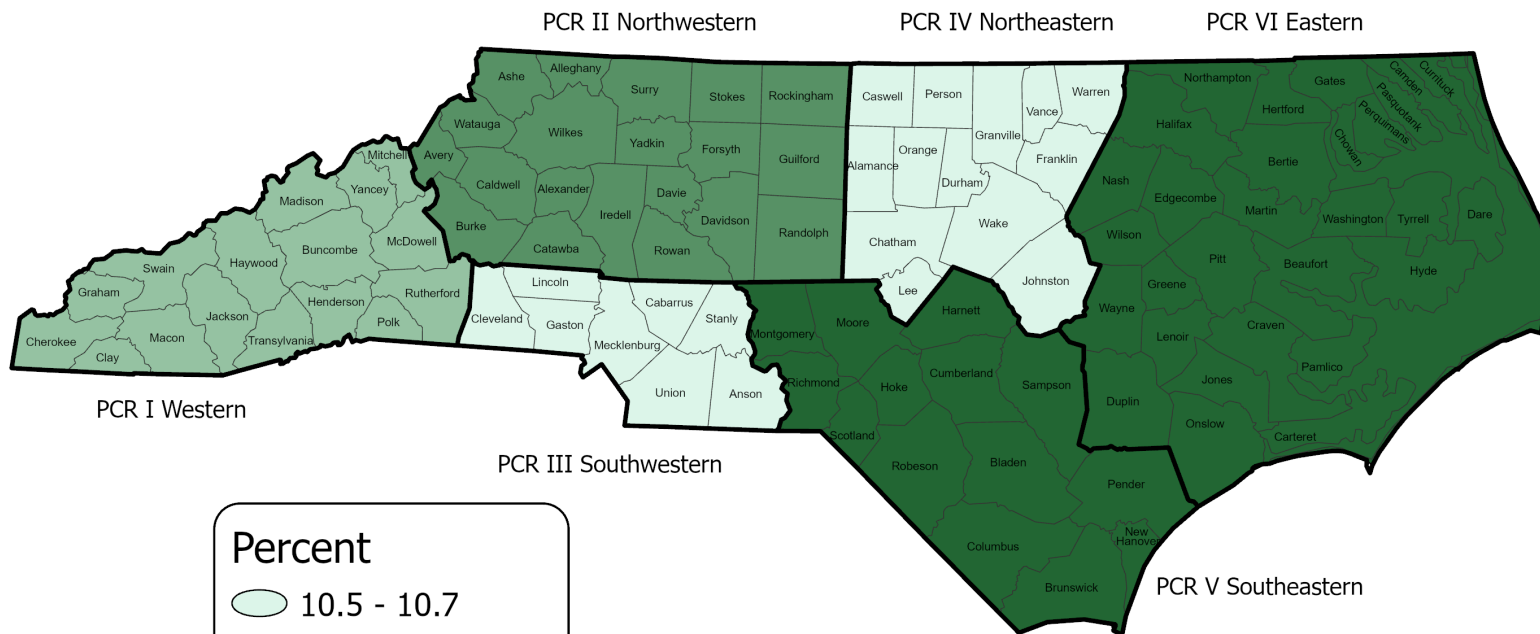
County Boundary



Geographic Patterns in Non-Medical Drivers of Health in North Carolina

North Carolina

2023 Estimated Percent Population Below Poverty by Perinatal Care Regions (PCR)



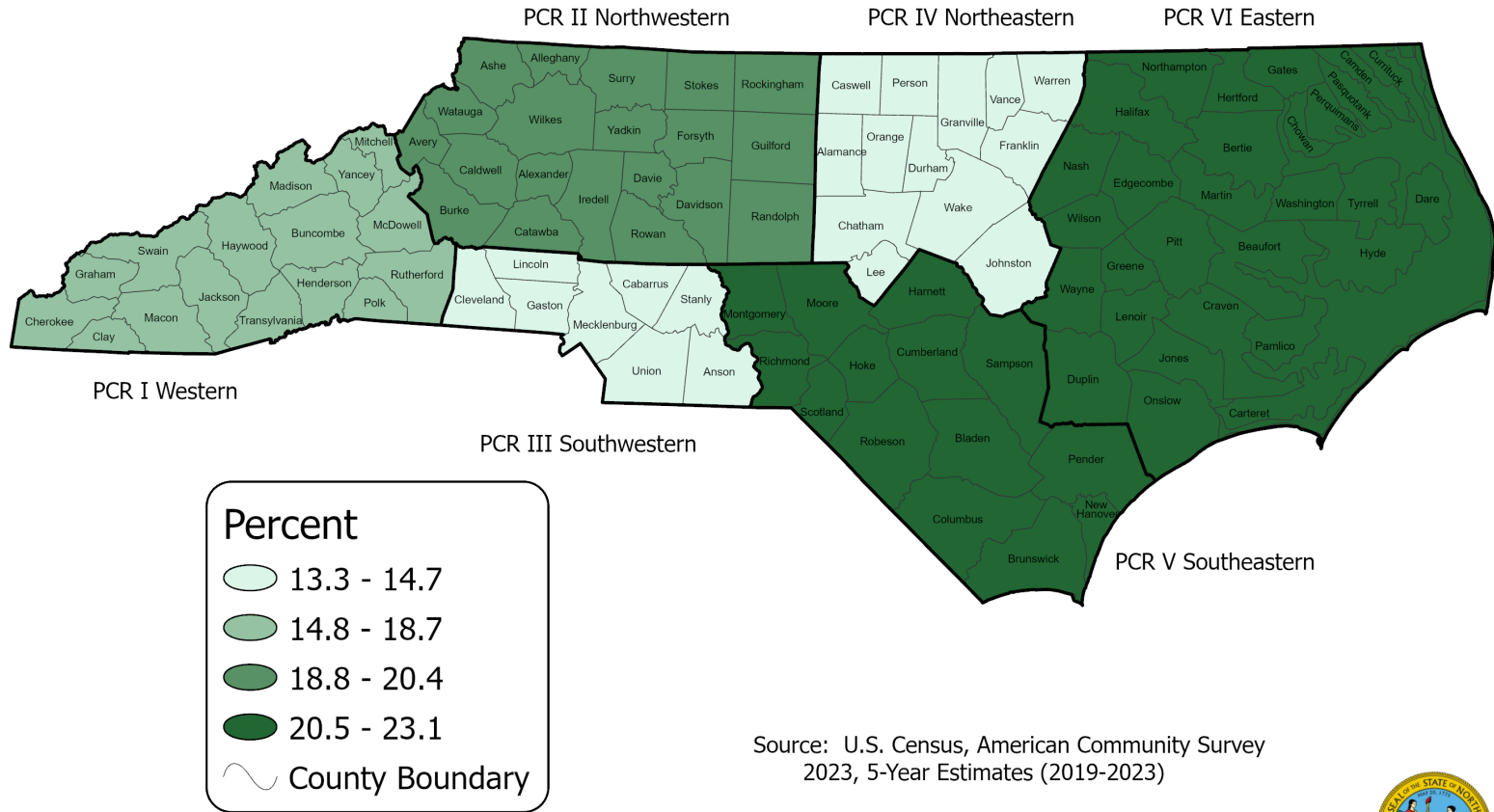
Source: U.S. Census, American Community Survey
2023, 5-Year Estimates (2019-2023)



NC DEPARTMENT OF
HEALTH AND HUMAN SERVICES

North Carolina

2023 Estimated Percent Children Ages 0 to 17 Below Poverty by Perinatal Care Regions (PCR)



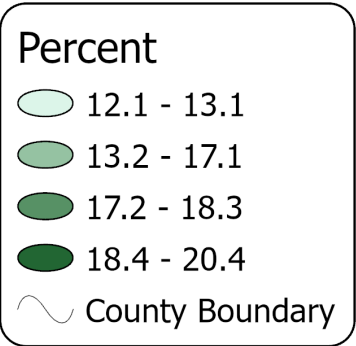
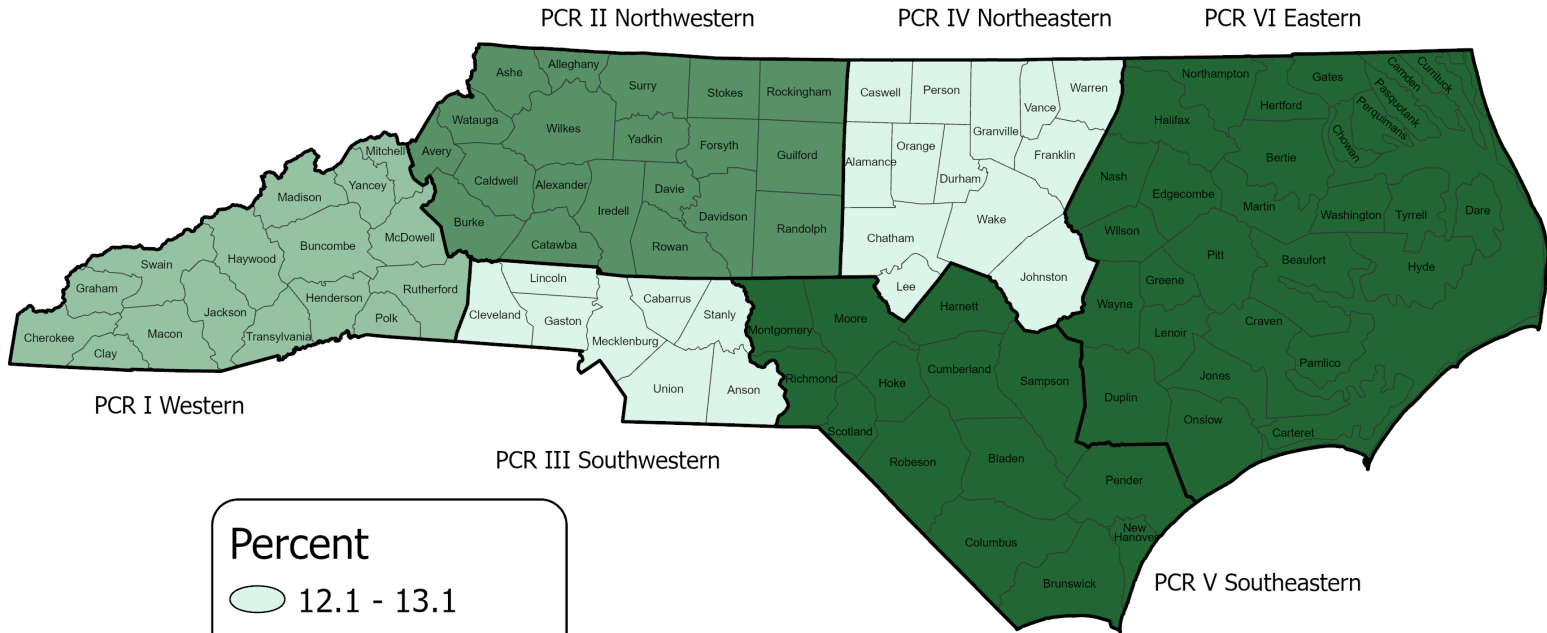
Source: U.S. Census, American Community Survey
2023, 5-Year Estimates (2019-2023)



NC DEPARTMENT OF
HEALTH AND HUMAN SERVICES

North Carolina

2023 Estimated Percent Females Ages 15 to 44 Below Poverty by Perinatal Care Regions (PCR)

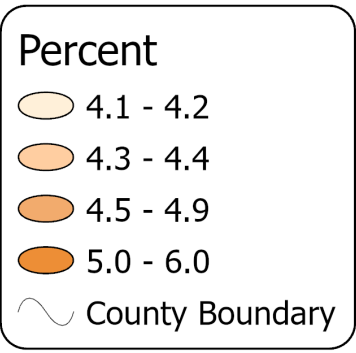
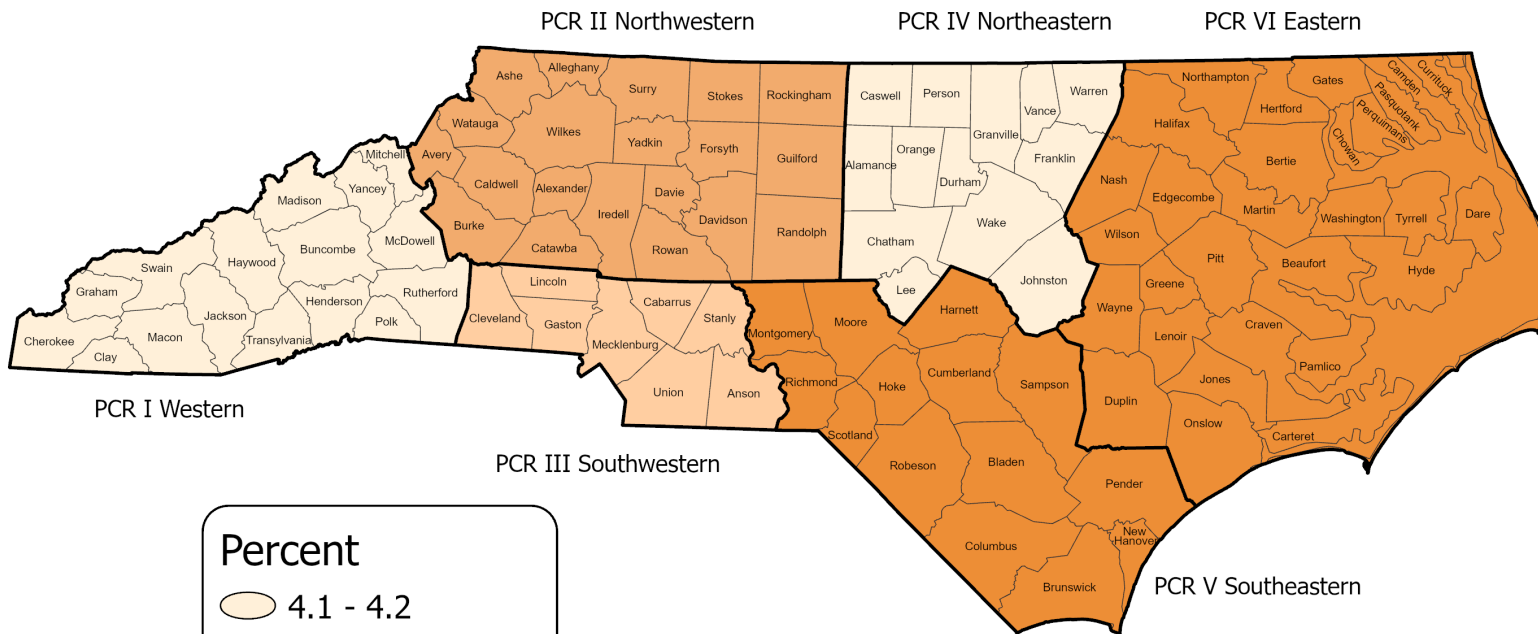


Source: U.S. Census, American Community Survey
2023, 5-Year Estimates (2019-2023)



North Carolina

2023 Estimated Percent Population Unemployed by Perinatal Care Regions (PCR)

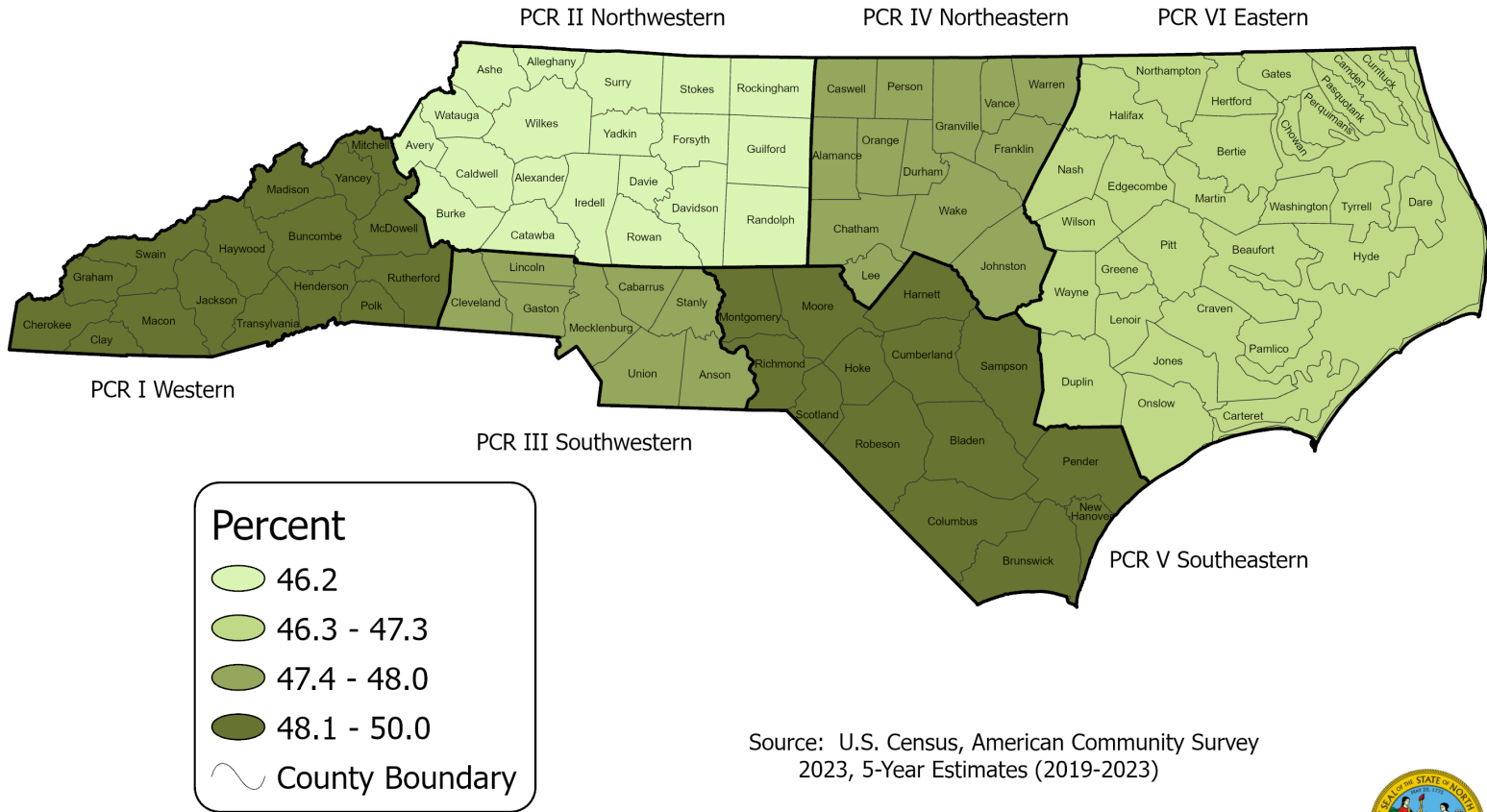


Source: U.S. Census, American Community Survey
2023, 5-Year Estimates (2019-2023)
Population = Age 16 and over in the Labor Force



North Carolina

2023 Estimated Percent Renters Spending Greater Than 30% of Household Income on Rent by Perinatal Care Regions (PCR)



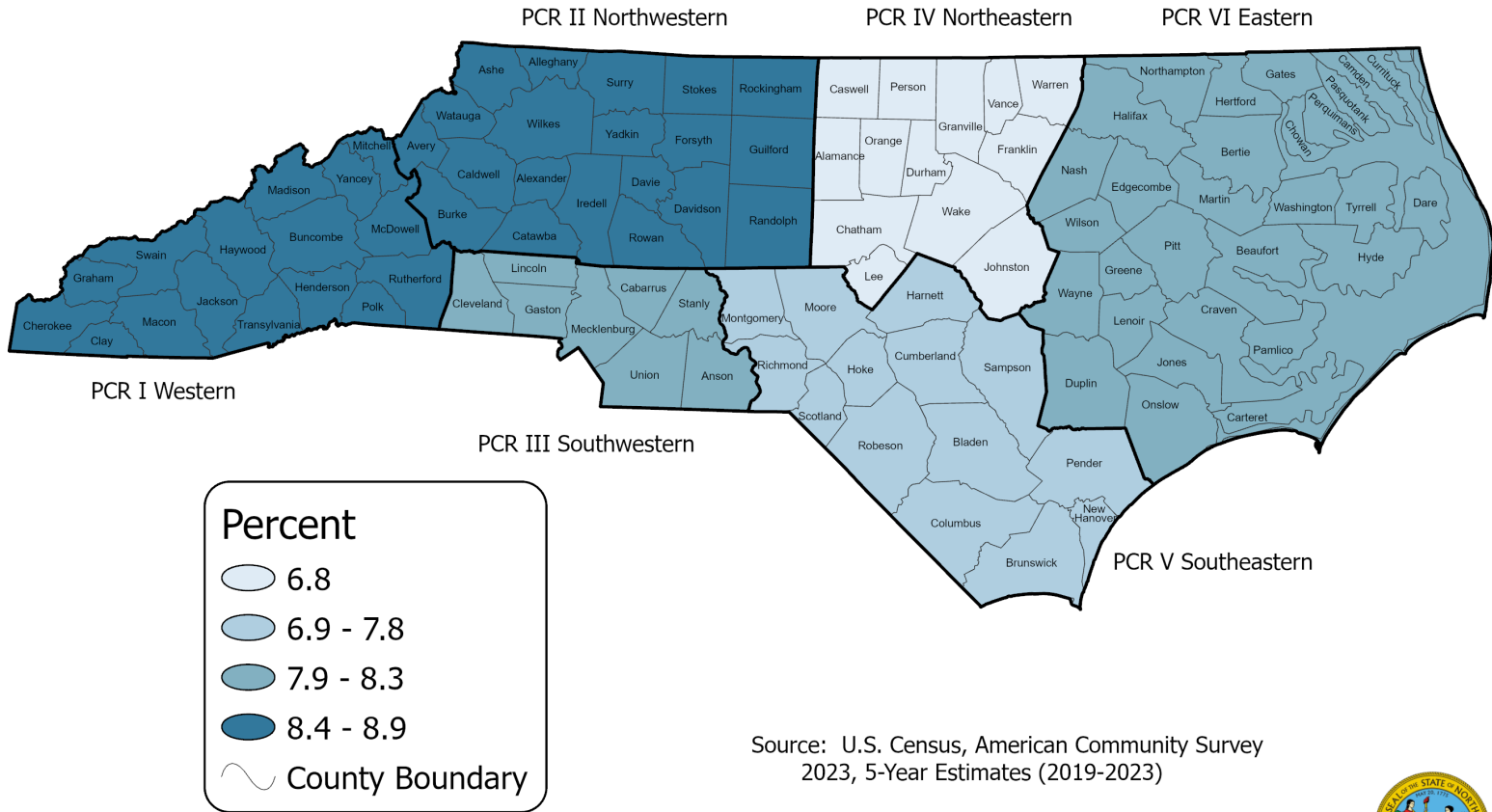
Source: U.S. Census, American Community Survey
2023, 5-Year Estimates (2019-2023)



NC DEPARTMENT OF
HEALTH AND HUMAN SERVICES

North Carolina

2023 Estimated Percent Females Ages 18 to 44 with No High School Diploma by Perinatal Care Regions (PCR)

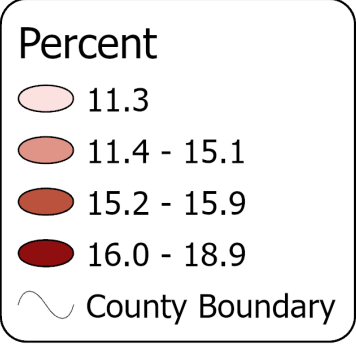
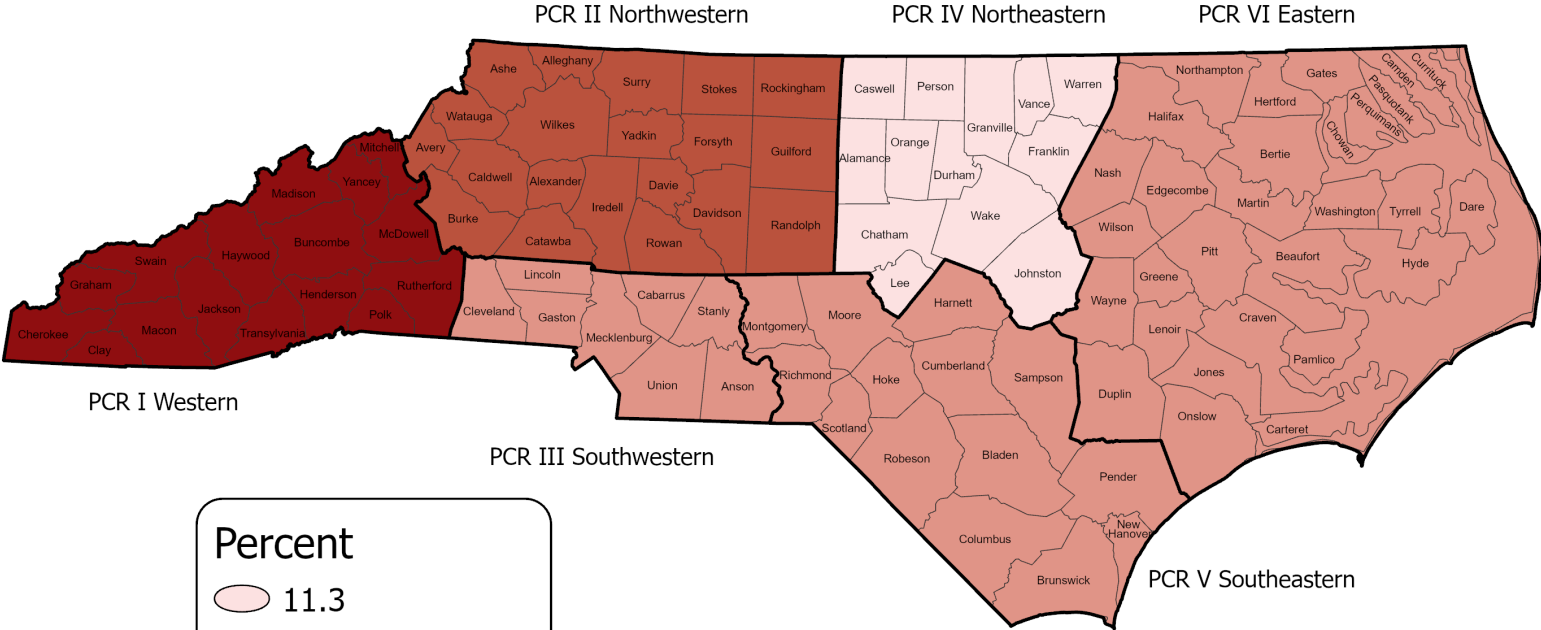


Source: U.S. Census, American Community Survey
2023, 5-Year Estimates (2019-2023)



North Carolina

2023 Estimated Percent Females Ages 19 to 44 with No Health Insurance by Perinatal Care Regions (PCR)

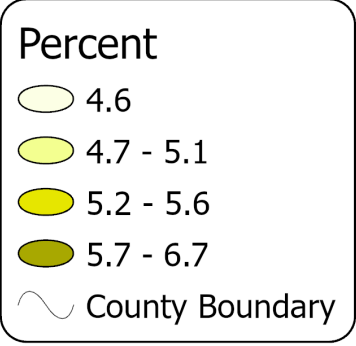
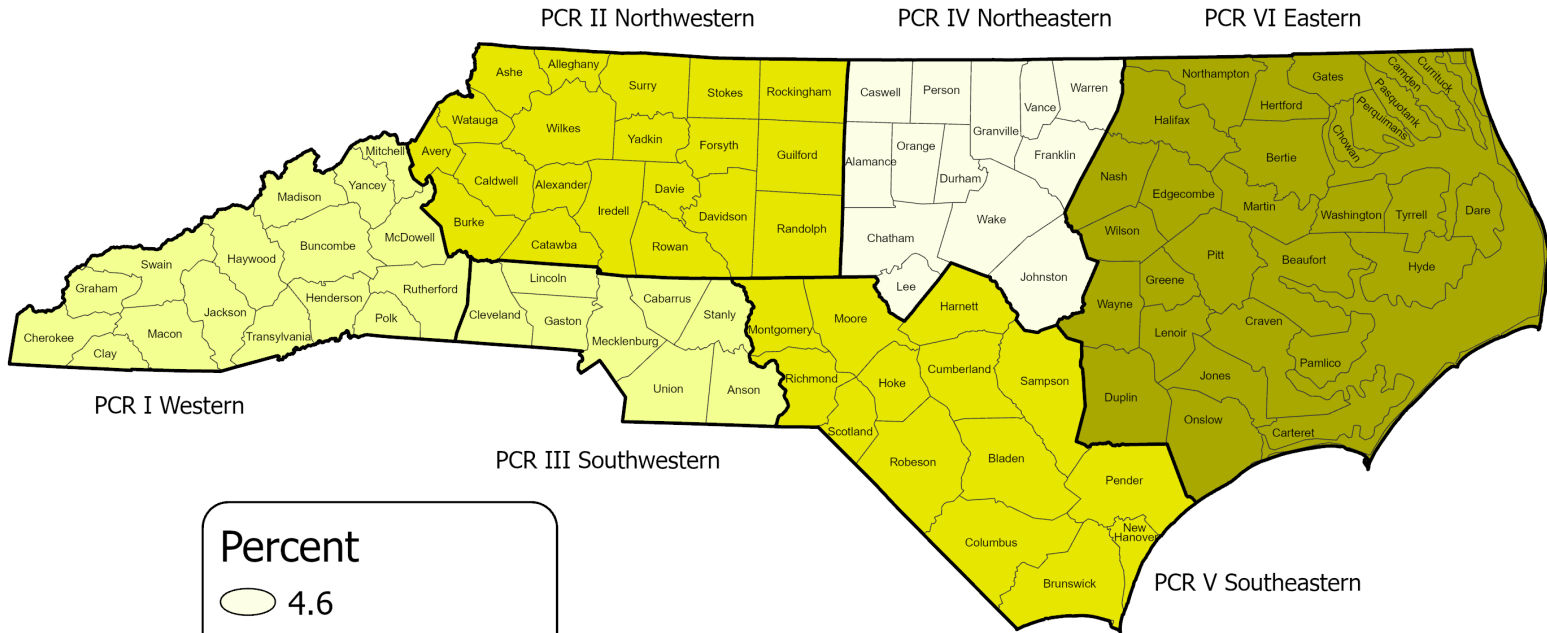


Source: U.S. Census, American Community Survey
2023, 5-Year Estimates (2019-2023)



North Carolina

2023 Estimated Percent of Households Without Access to a Vehicle by Perinatal Care Regions (PCR)



Source: U.S. Census, American Community Survey
2023, 5-Year Estimates (2019-2023)



Summary

- Infants account for over half of all child deaths in North Carolina
 - NC infant death & child death rates have stagnated for more than a decade & remained virtually unchanged in 2023
 - Rural regions of the state have higher rates of infant and child deaths
 - Racial differences in NC infant mortality, low birthweight, preterm birth & child deaths persist in 2023
 - In 2023, injuries (including MVAs, non-MVA injuries, homicides & suicides) were again the leading causes of death among North Carolina children ages 1 to 17
-

Summary (continued)

- Over the last decade, child death rates associated with homicides have increased more than other cause of death categories
 - Firearm-related death rates have more than doubled since 2014 overall, as well as among teens ages 15 to 17
 - Among teens ages 15 to 17, firearms were the lethal means used in 47% of suicides and 94% of homicides in 2023
 - Child deaths related to drownings & accidental poisonings remain high in 2023
 - Eastern regions of NC have the highest rates of infant & child death, as well as higher rates of many non-medical drivers (e.g., poverty, unemployment, etc.)
-

Infant Mortality & Child Death Reports available from NCDHHS Division of Public Health:

- **2023 Infant Mortality Report:**

<https://schs.dph.ncdhhs.gov/data/vital/ims/2023/>

- **2023 Child Death Report:**

<https://schs.dph.ncdhhs.gov/data/vital/cd/2023/>

- **NC Maternal & Infant Health Data Dashboard**

<https://www.dph.ncdhhs.gov/programs/title-v-maternal-and-child-health-block-grant/nc-maternal-and-infant-health-data-dashboard>



Questions?

Please use the chat function

For data questions after the webinar, contact NCDHHS
at news@dhhs.nc.gov

For questions about the Child Fatality Task Force,
contact Kella Hatcher at kella.hatcher@dhhs.nc.gov