

North Carolina Infant and Child Fatality Update 2018

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Objectives

- Describe trends in the 2017 Child Death Rate in North Carolina by:
 - Age
 - Region
 - Cause
- Compare infant and child fatality rates with national estimates

Trends in North Carolina Resident Births

Each Day in North Carolina 1997 vs 2017

Resident Events	1997	2017
Live Births	293	329
Fetal Deaths	2.4	2.2
Infant Deaths (< 1 year)	2.7	2.3
Neonatal Deaths (<28 days)	1.9	1.6
Postneonatal Deaths (28-365 days)	0.8	0.8

- 36 more babies born every day on average

Every Day in North Carolina

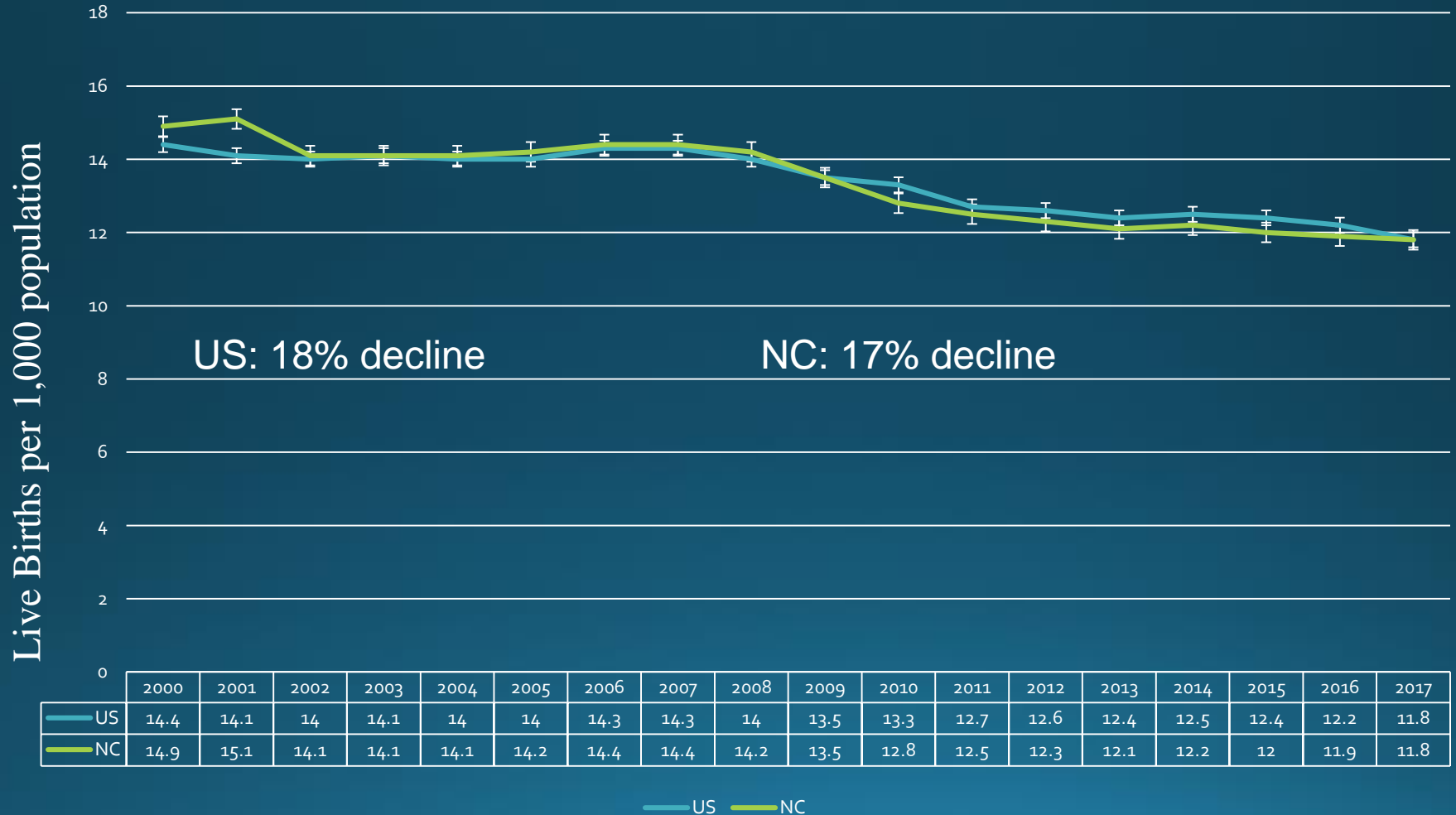
1997 vs 2017

Resident Events	1997	2017
Low Birthweight Births (<2500 grams)	26	31
Births to Unmarried Mothers	94	135
Teen Births, Ages 15-19	41	19

Source: North Carolina State Center for Health Statistics, 1997 & 2017 Vital Statistics Reports

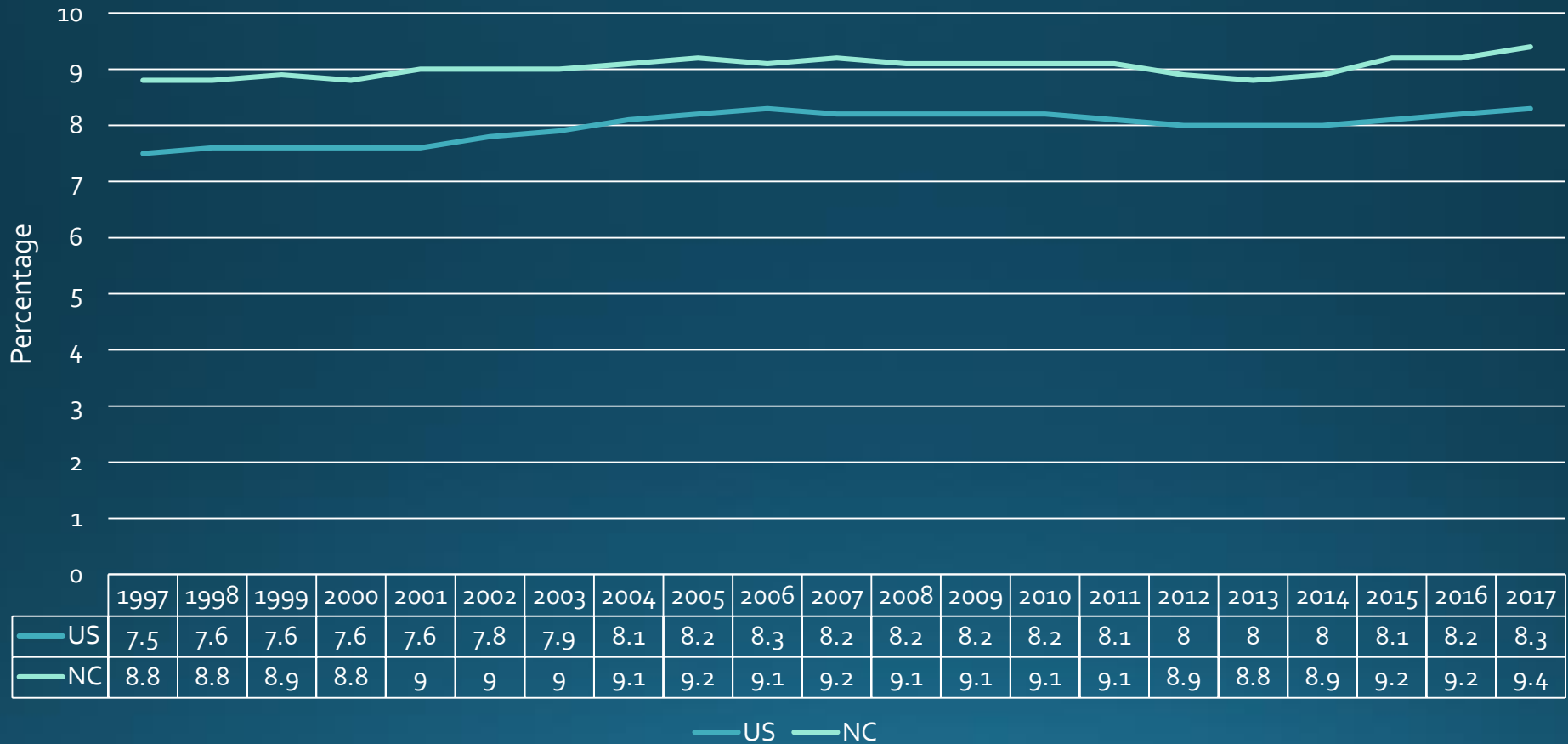
Live Birth Rates: 1997-2017

US vs NC



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

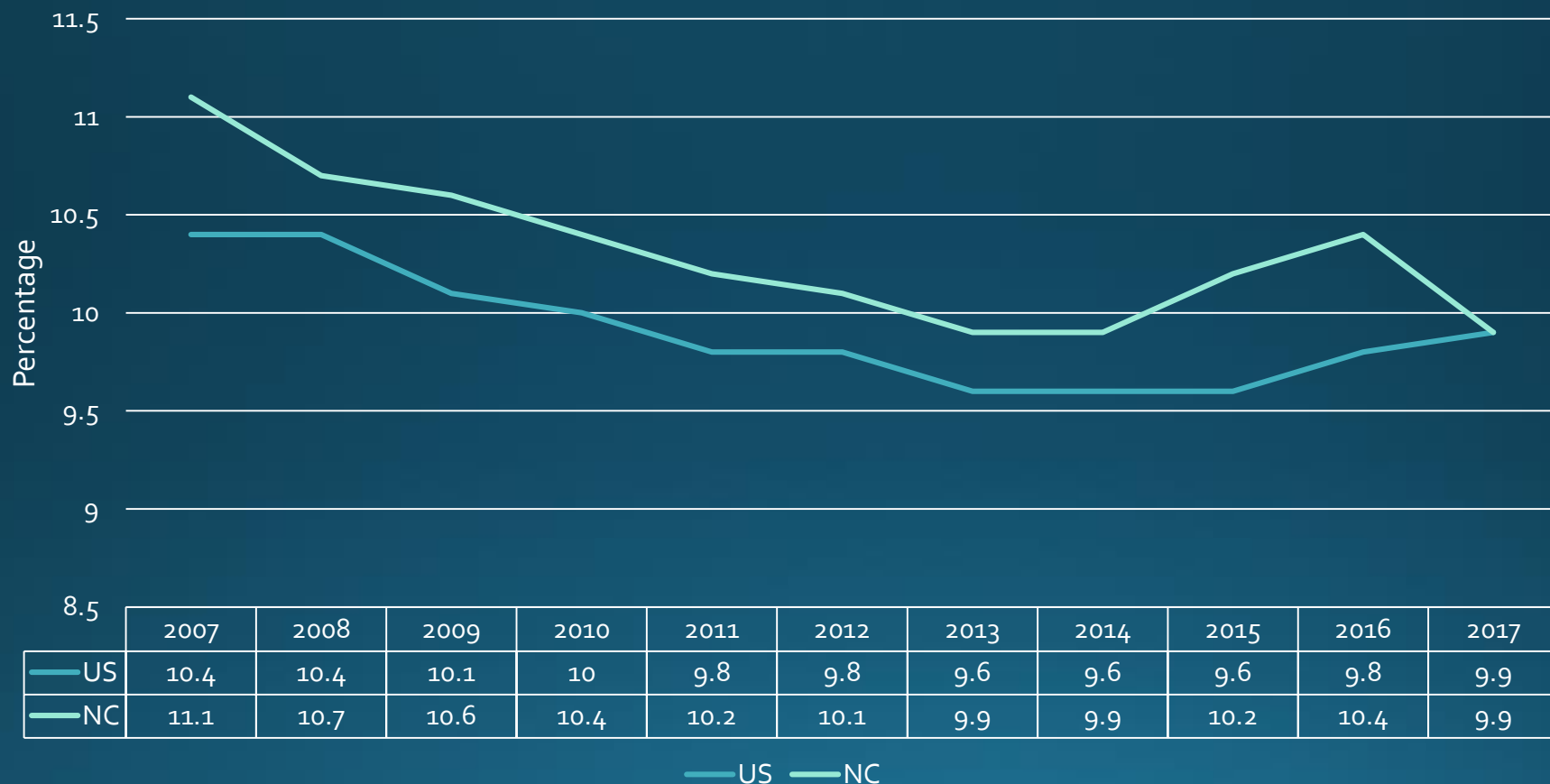
Percentage of Live Births with Low Birth Weight (<2500 grams) 1997-2017:US vs NC



NC is 13% above the national average in 2017

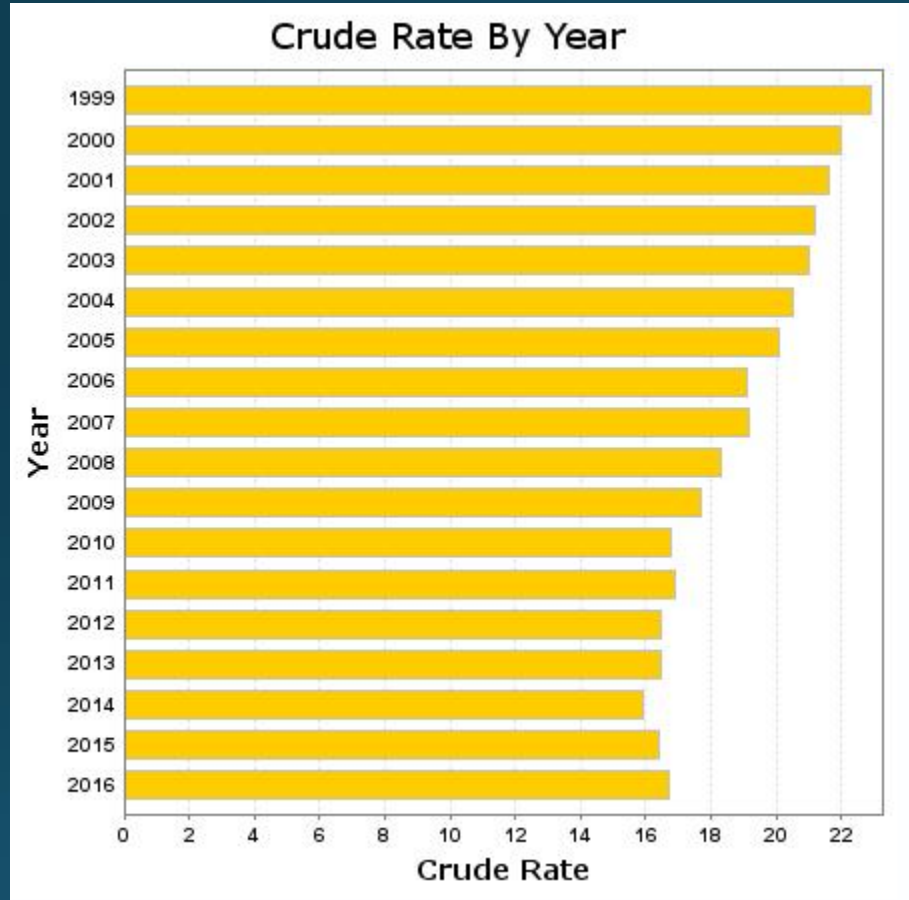
Source: NC State Center for Health Statistics & CDC/National Center for Health Statistics

Percentage of Live Births born Preterm (<37 weeks) 2007-2017: US vs NC



Trends in North Carolina Child Death Rates

United States Child Death Rates (Ages 1-14 yrs) 1999-2016



2016:16.7 per 100,000 children

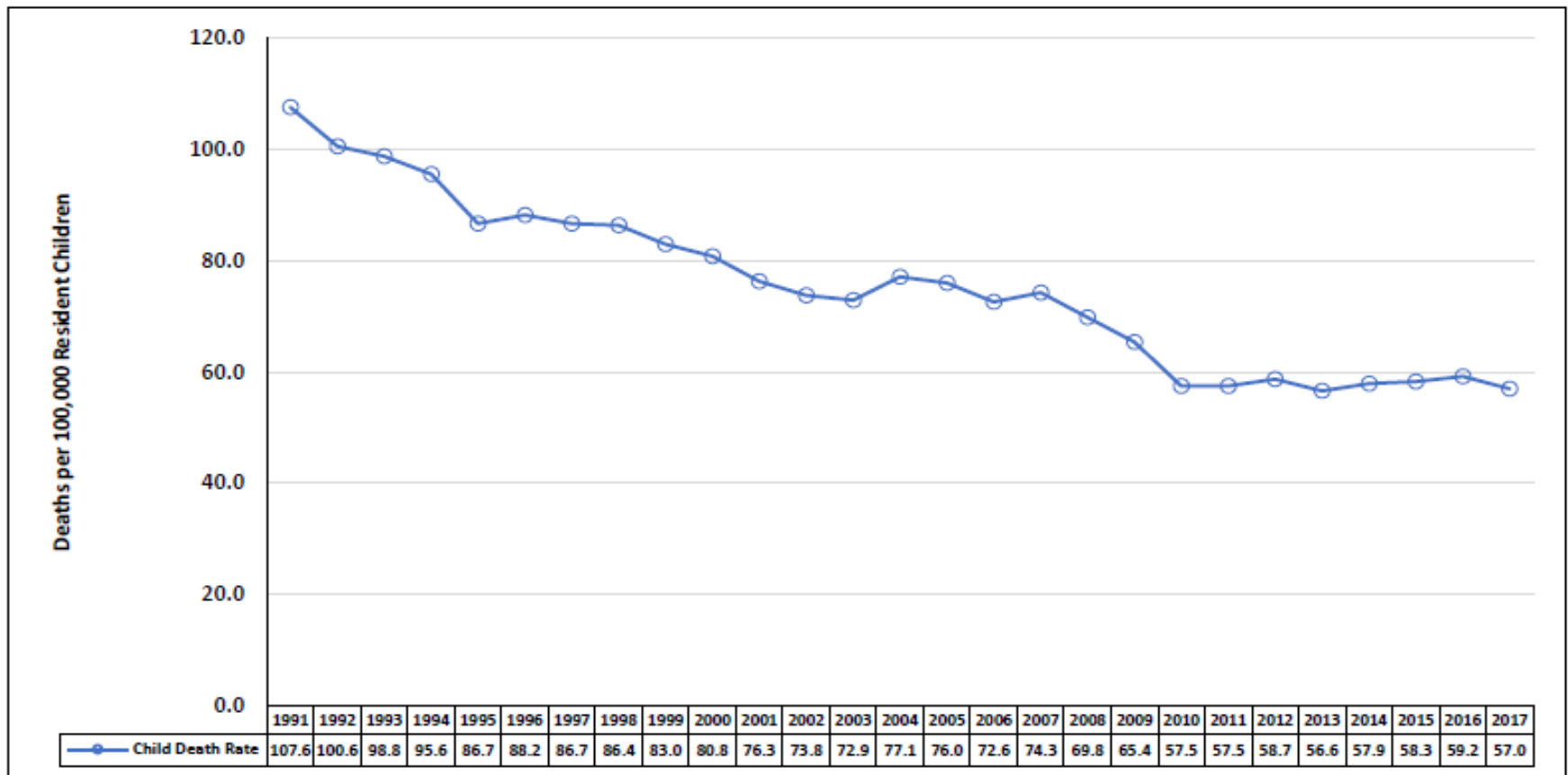


27% Decline Nationally

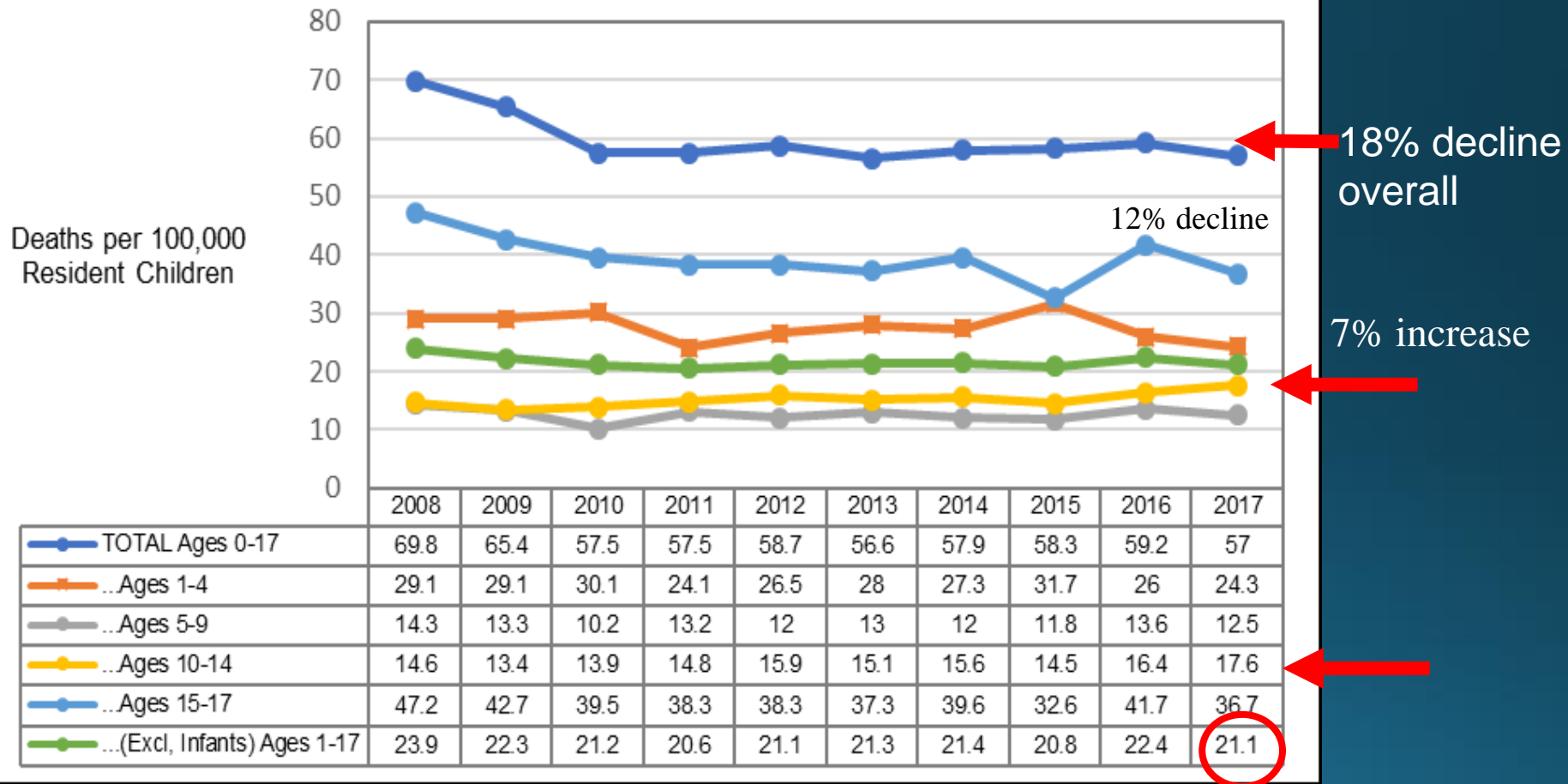
Deaths per 100,000 Children

North Carolina Resident Child Death Rates (Ages 0-17 yrs) 1991-2017

47% in child death rate between 1991-2017

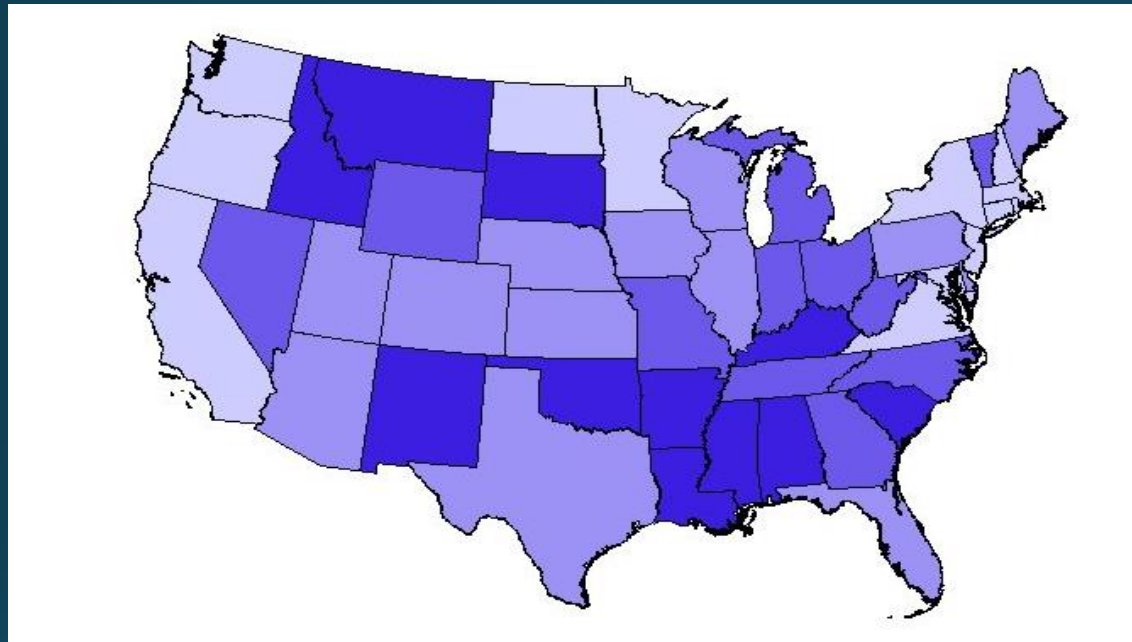


Trends in North Carolina Resident Child Death Rates by Age: 2008-2017

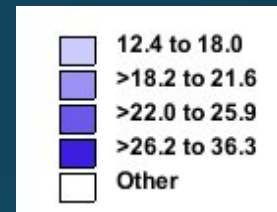


Child Mortality Rates (1-17yrs)

United States; 2016



Child Deaths per 100,000
children



Alaska



Hawaii

NC: 22.4/100,000 children

United States Child Death Rankings (Ages 1-17 yrs) 2016

Rank	State	Rate per 100,000
1	Alaska	36.3
2	South Dakota	35.3
3	Montana	32.6
4	Mississippi	31.6
5	Louisiana	31.4
6	Oklahoma	29
7	Alabama	27.6
8	New Mexico	27.5
9	South Carolina	26.5
10	Kentucky	26.5
11	Idaho	26.3
12	Arkansas	26.2

23	North Carolina	22.4
24	Ohio	22

2015

Rate: 20.8/100,000

Ranking: 25th

2016

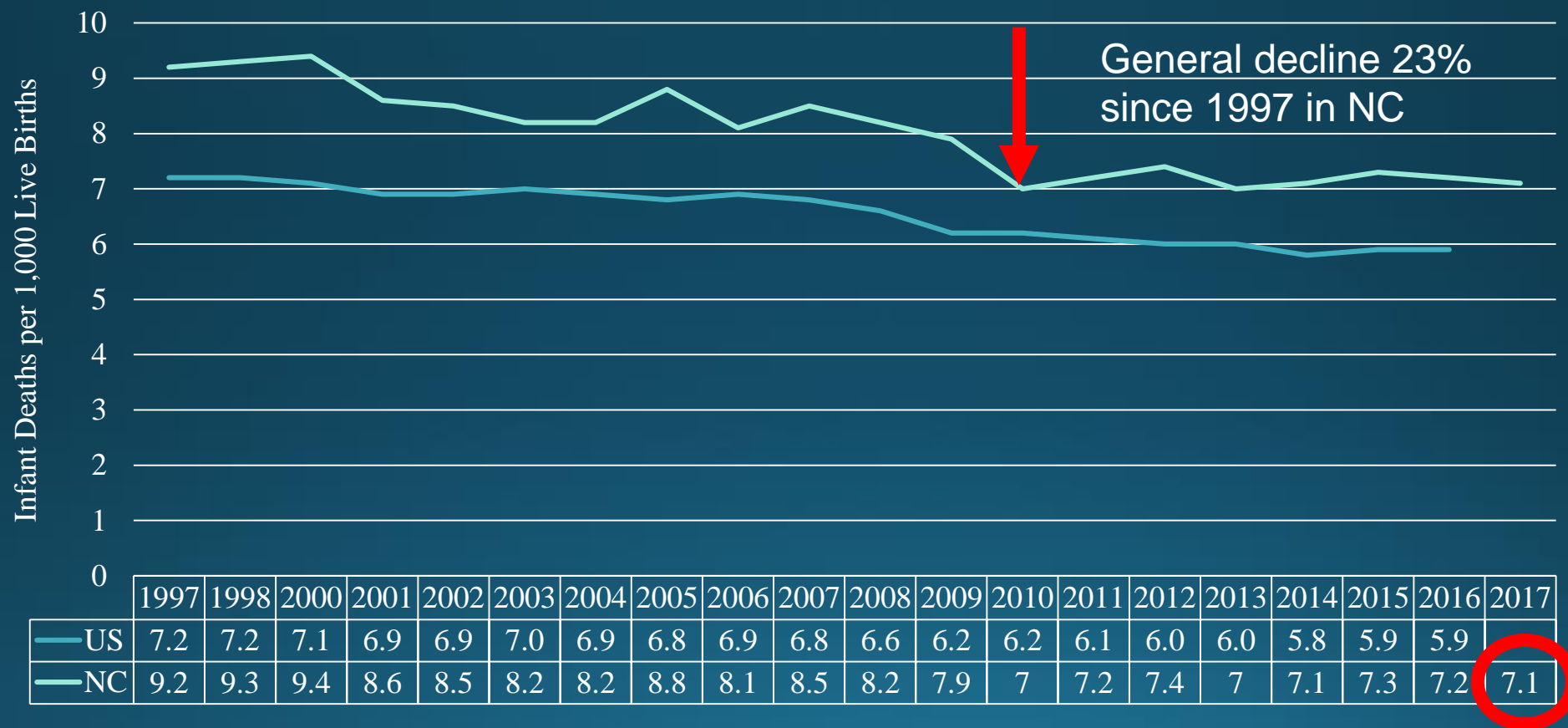
Rate: 22.4/100,000

Ranking: 23rd



Infant Mortality Rates: 1997-2017

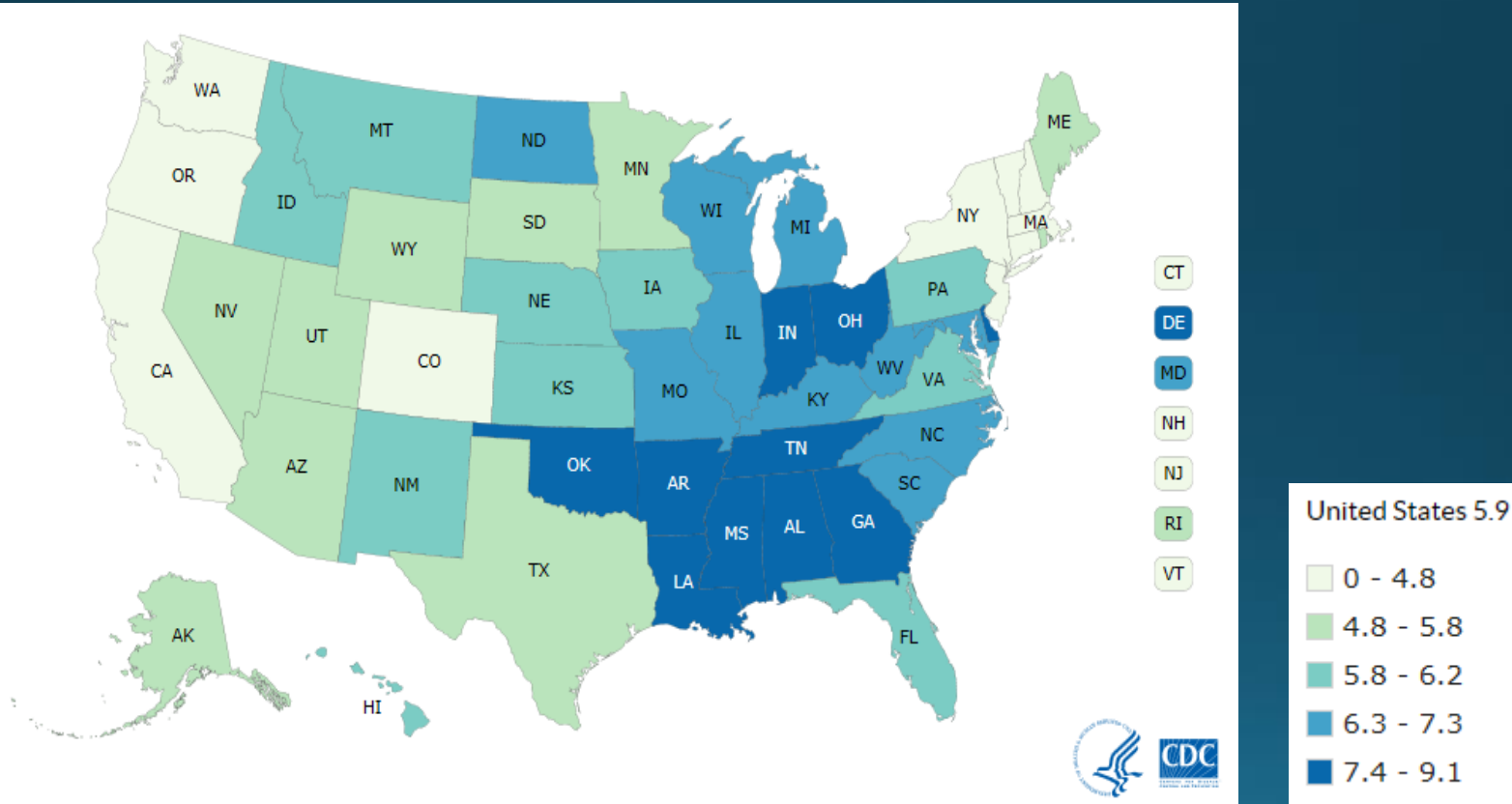
United States vs North Carolina



Infant Mortality by State 2016

US Rate: 5.9/1,000 live births

NC Rate: 7.2/1,000 live births



United States Infant Mortality Rate Rankings 2016

U.S. Rate=5.9			Infant Deaths per 1,000 Live Births
Ranking	State		
1	Alabama		9.1
2	Mississippi		8.6
3	Arkansas		8.1
4	Louisiana		8.0
5	Delaware		7.9
6	Georgia		7.5
7	Indiana		7.5
8	Ohio		7.4
9	Oklahoma		7.4
10	Tennessee		7.4
11	West Virginia		7.3
12	North Carolina		7.2
13	South Carolina		7
14	Kentucky		6.7

NC Ranking

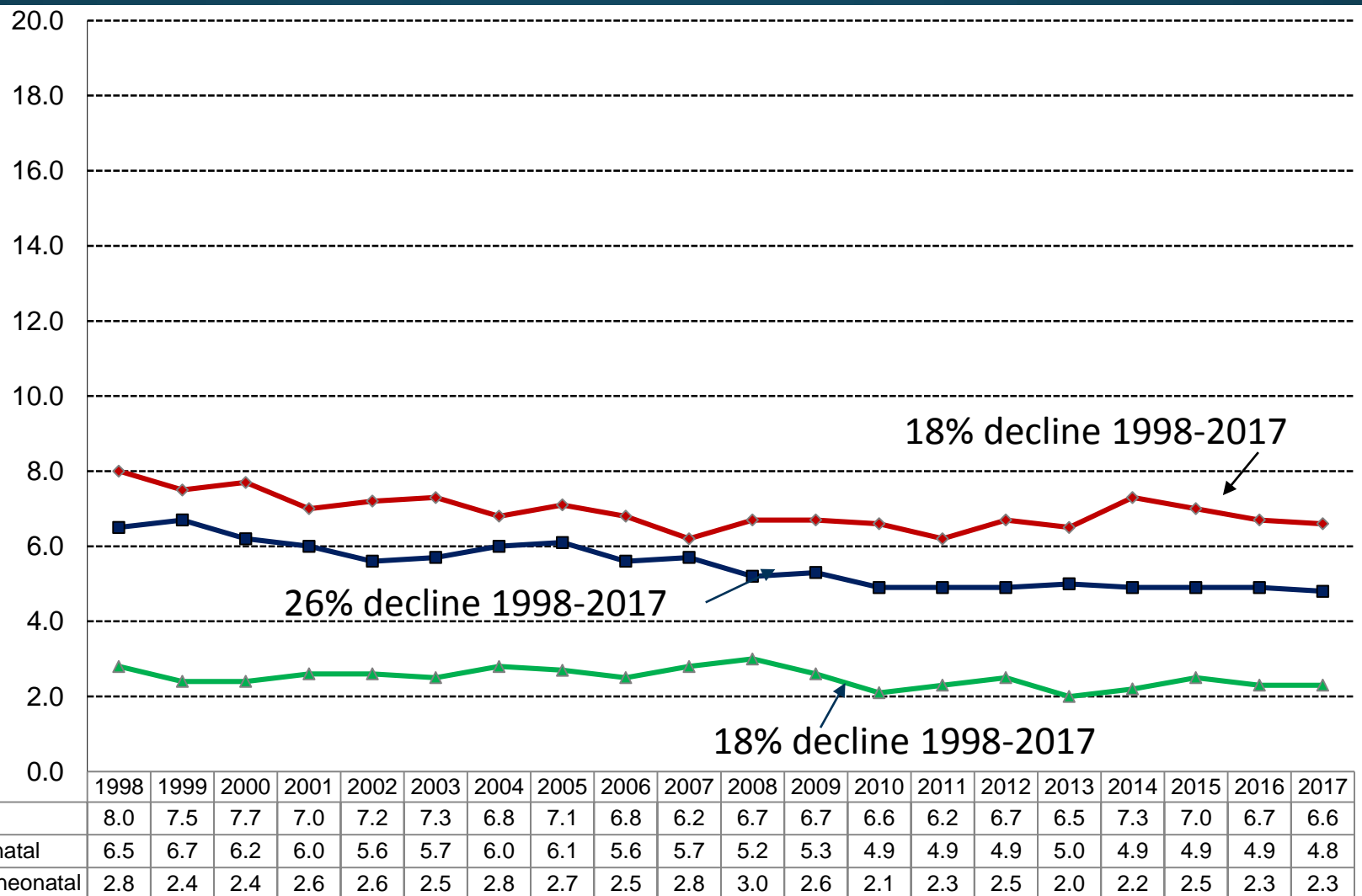
2014: 8th

2015: 7th

2016: 12th



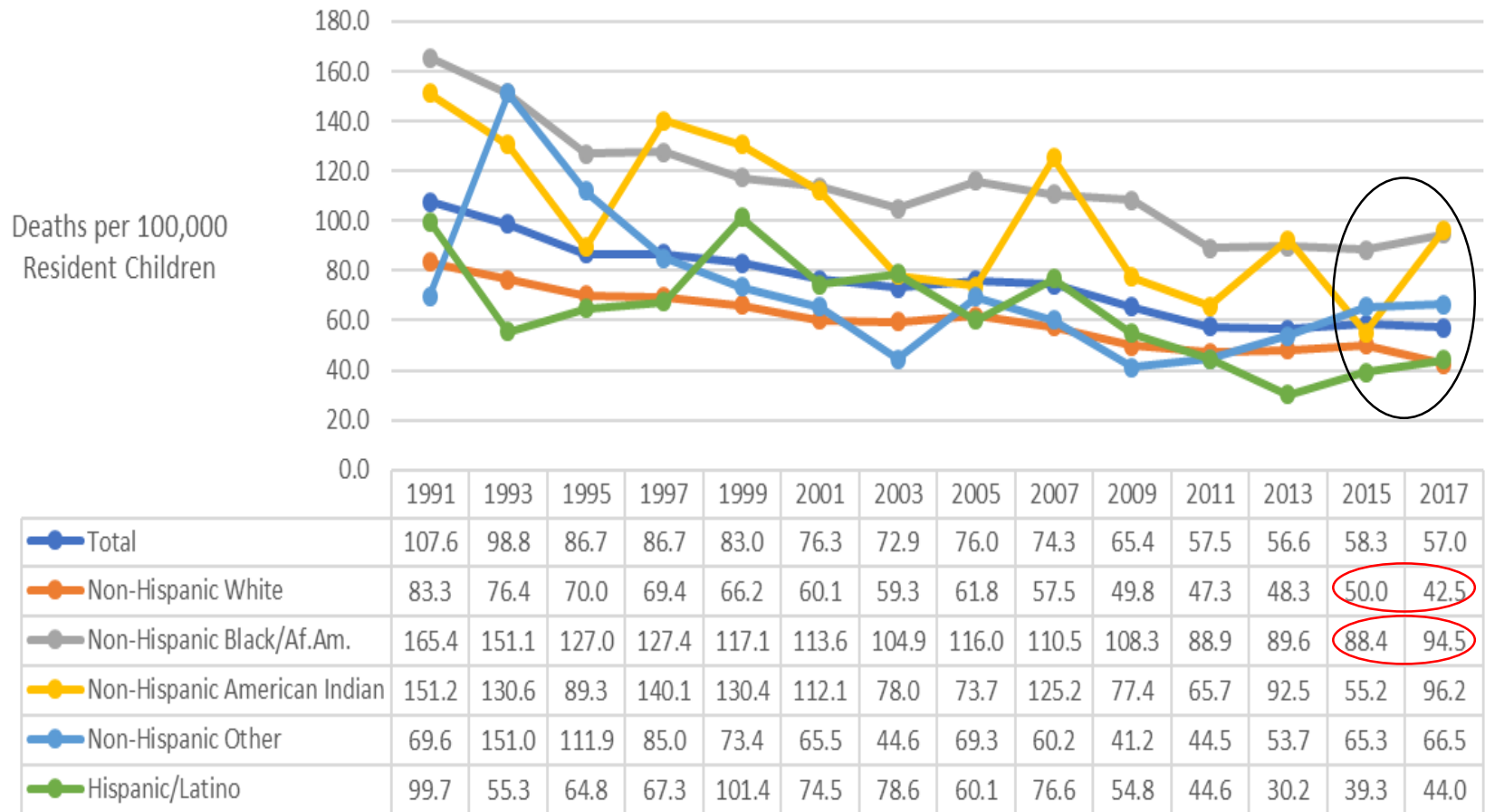
NC Fetal, Neonatal & Postneonatal Mortality Rates: 1998-2017



Source: NC State Center for Health Statistics, 1998-2017 Vital Statistics Reports

Distribution of Child Death Rates by Race/Ethnicity in North Carolina

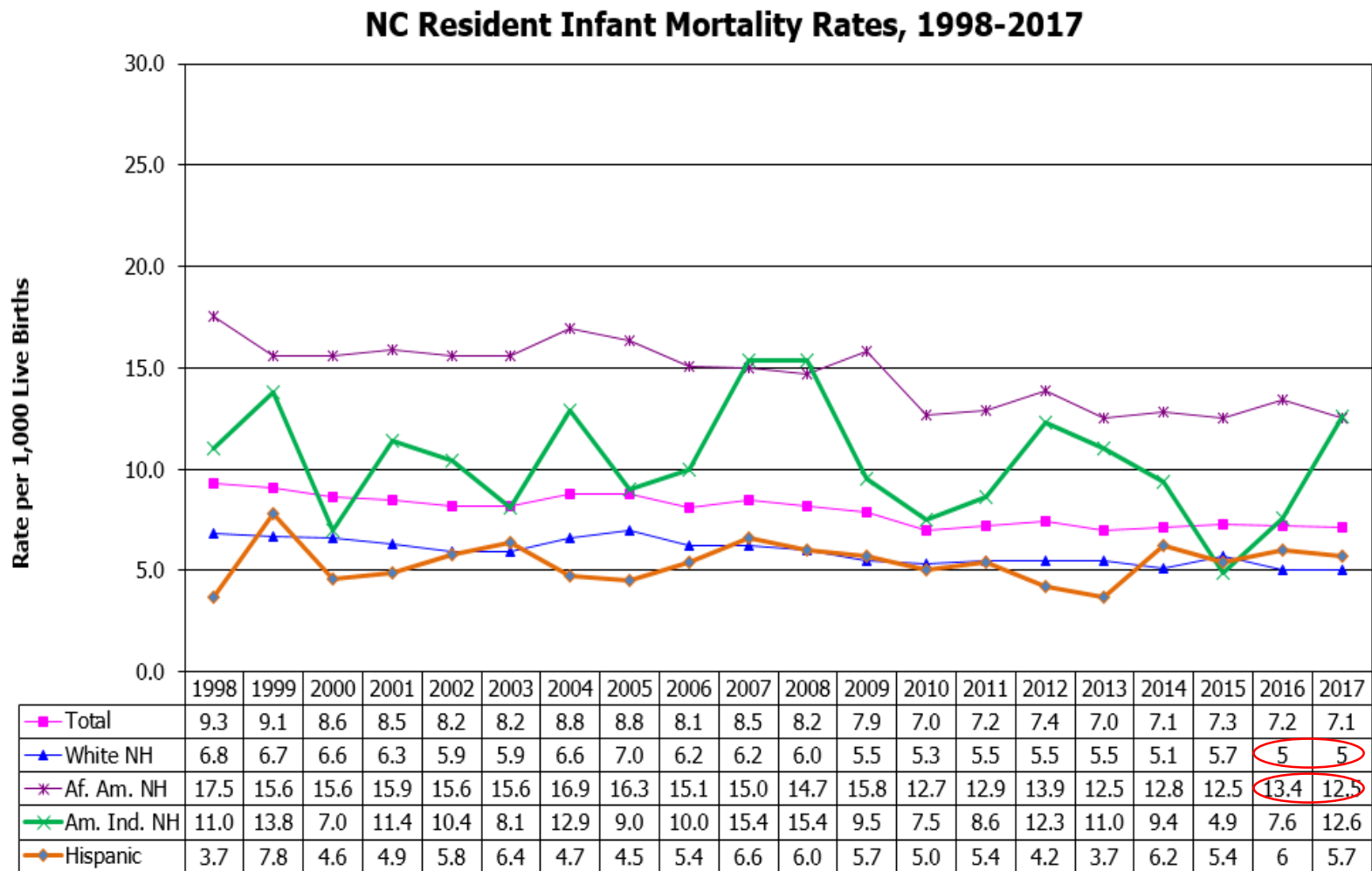
Trends in North Carolina Child Death Rates by Race/Ethnicity (Ages 0-17 yrs) 1991-2017



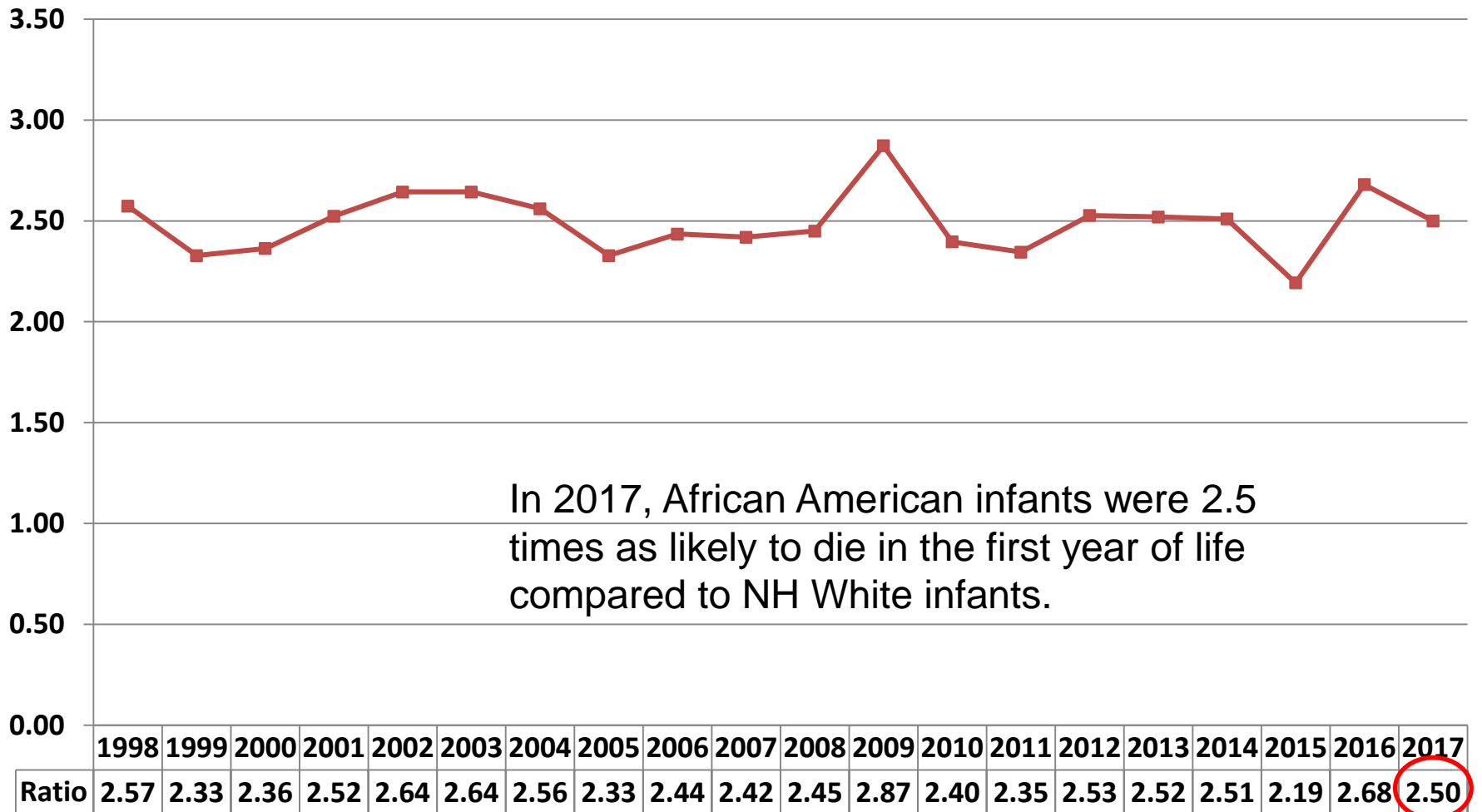
- Rate for African American is twice that of White Non Hispanics over time
- Disparity ratio: 2.2

NC Resident Infant Death Rates, 2007-2017

Racial Distribution





North Carolina Infant Mortality Disparity Ratio*: 1998-2017



* Ratio of Non-Hispanic Af. Am. to Non-Hispanic White Infant Mortality Rates Source: North Carolina State Center for Health Statistics, 2017 Infant Mortality Report



Progress towards Healthy North Carolina 2020 Goals

Reduce the overall infant mortality rate per 1,000 live births

	Baseline (2008)	8.2	
	Current (2017)	7.1	
	Prior Year (2016)	7.2	
	Target	6.3	

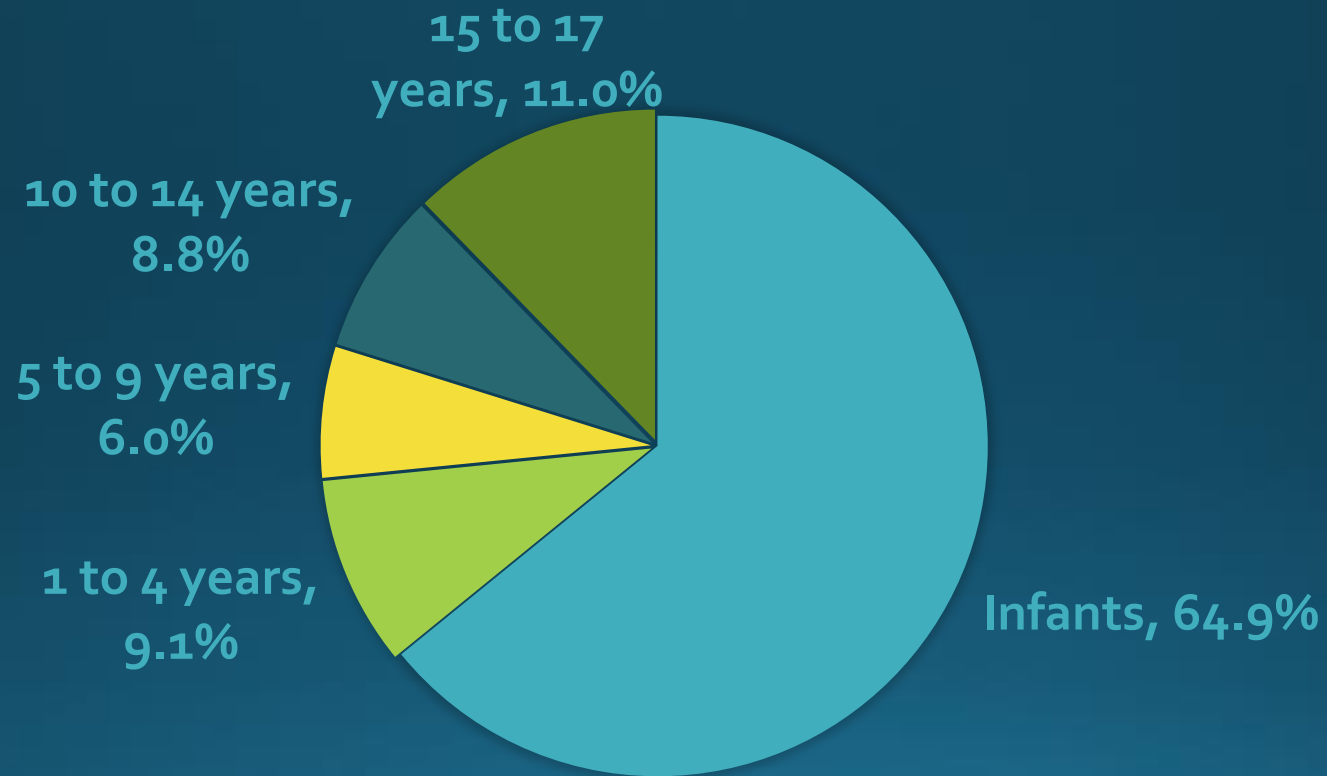
Progress towards Healthy North Carolina 2020 Goals

Reduce the infant mortality racial disparity between whites and African Americans

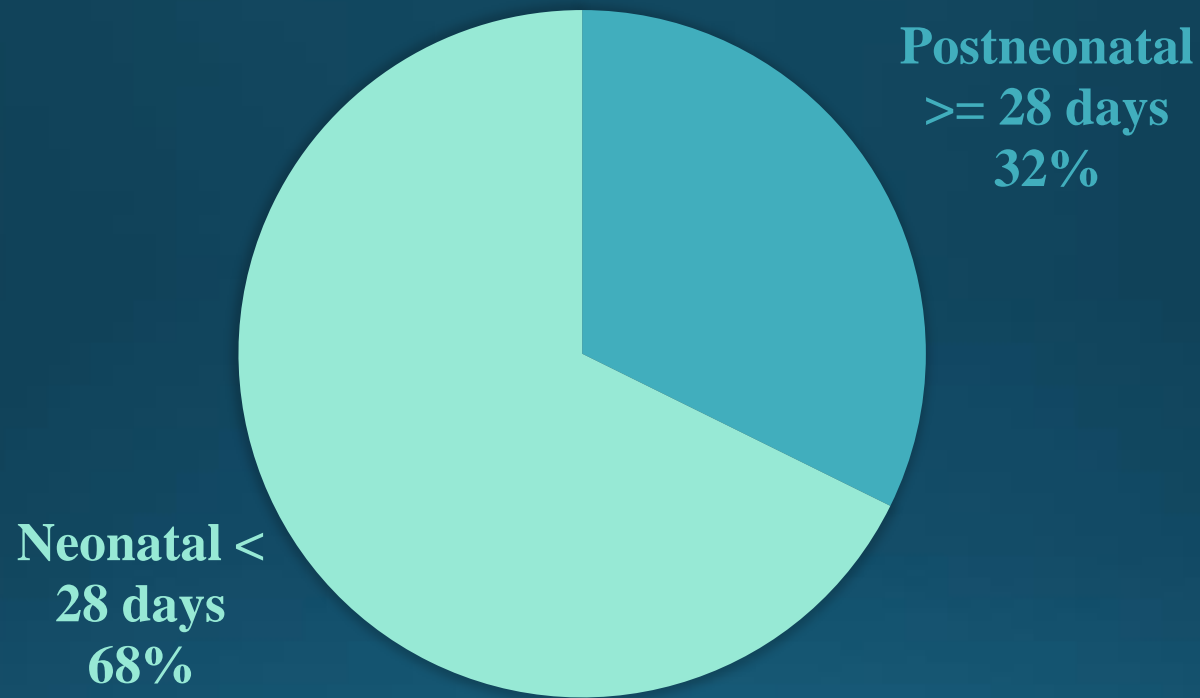
	Baseline (2008)	2.45	
	Current (2017)	2.50	
	Prior Year (2016)	2.68	
	Target	1.92	

When are child deaths
occurring ?

Child Deaths by Age Group, 2017



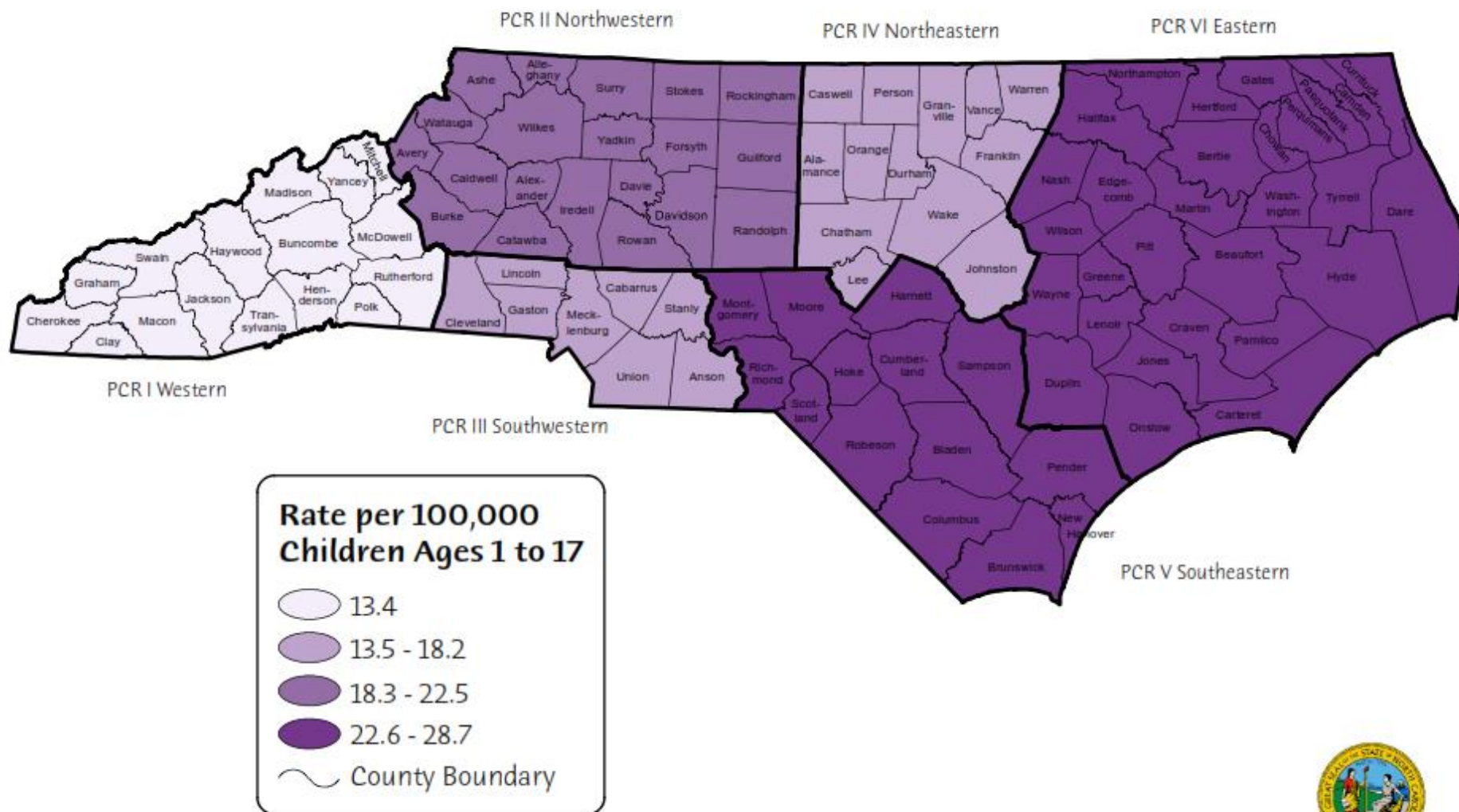
NC Infant Deaths by Age, 2017



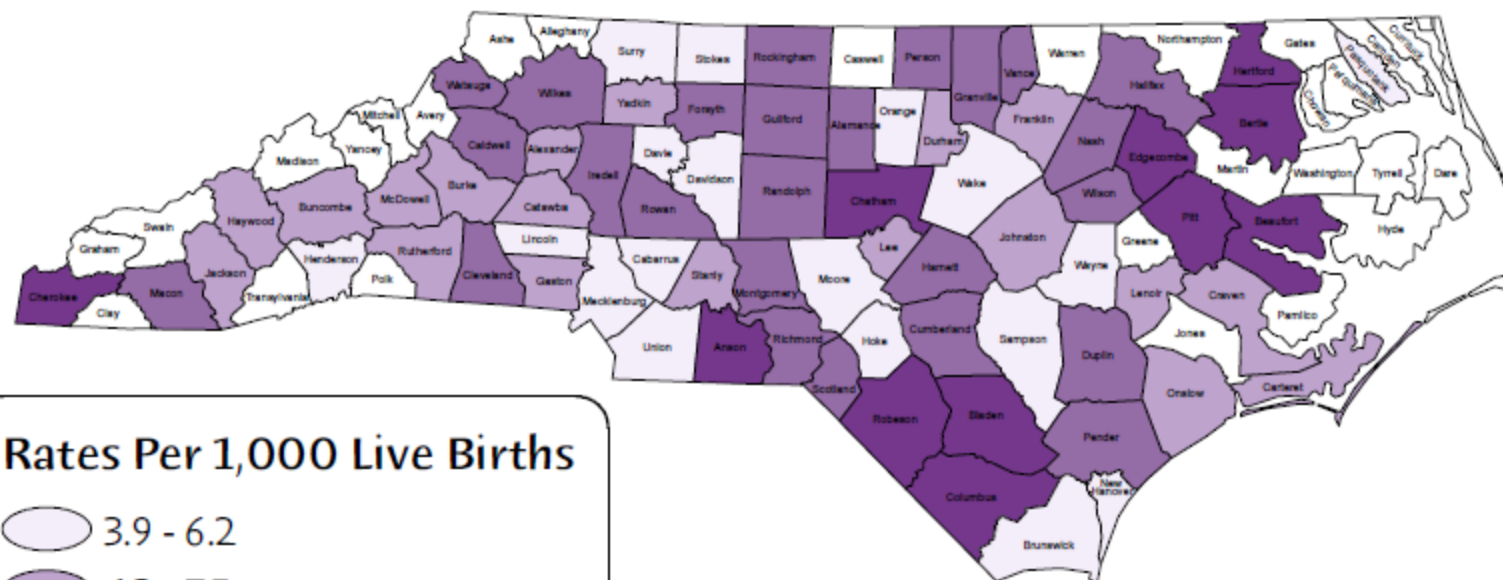
Most infant deaths occur within the first 28 days after birth

Distribution of Child Death Rates by Region in North Carolina

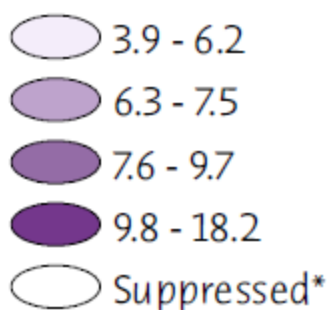
North Carolina 2017 Child (Ages 1 to 17) Death Rates by Perinatal Care Regions (PCR)



North Carolina Infant Mortality Rates by County 2013 - 2017

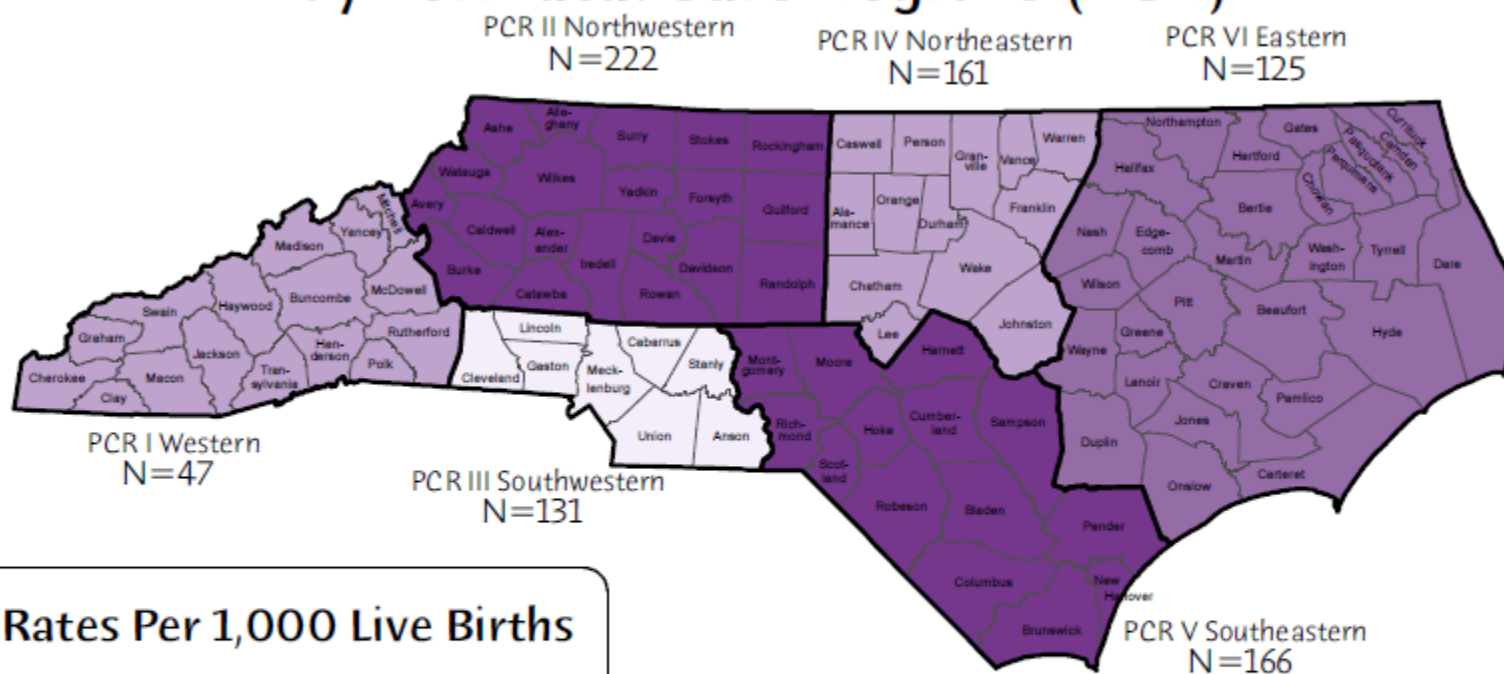


Rates Per 1,000 Live Births



* Rates based on less than 10 deaths are unreliable and have been suppressed.

North Carolina 2017 Infant Mortality Rates by Perinatal Care Regions (PCR)



Rates Per 1,000 Live Births

5.2

5.3 - 6.4

6.5 - 7.1

7.2 - 9.2

County Boundary



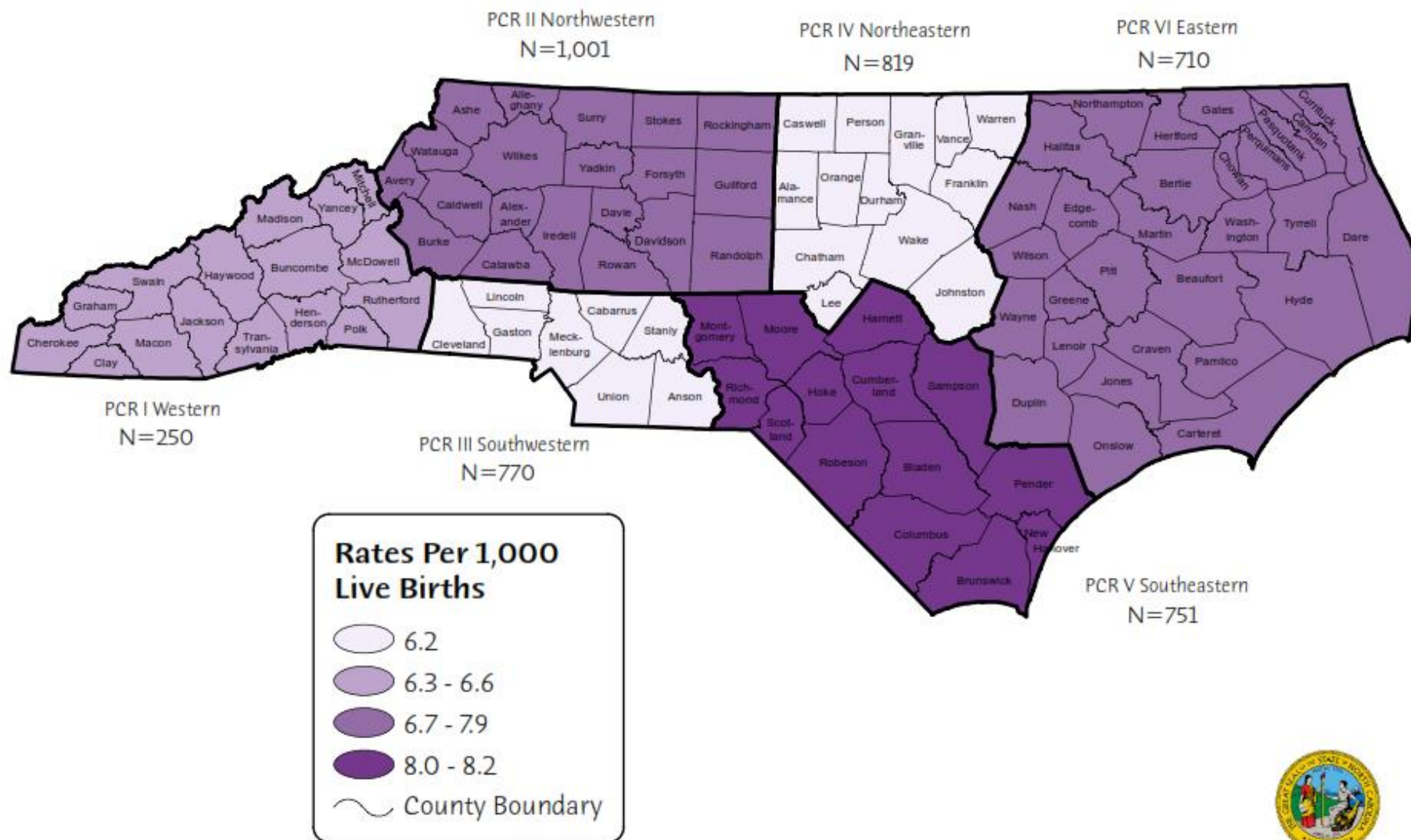
NC DEPARTMENT OF
HEALTH AND HUMAN SERVICES

STATE CENTER FOR HEALTH STATISTICS

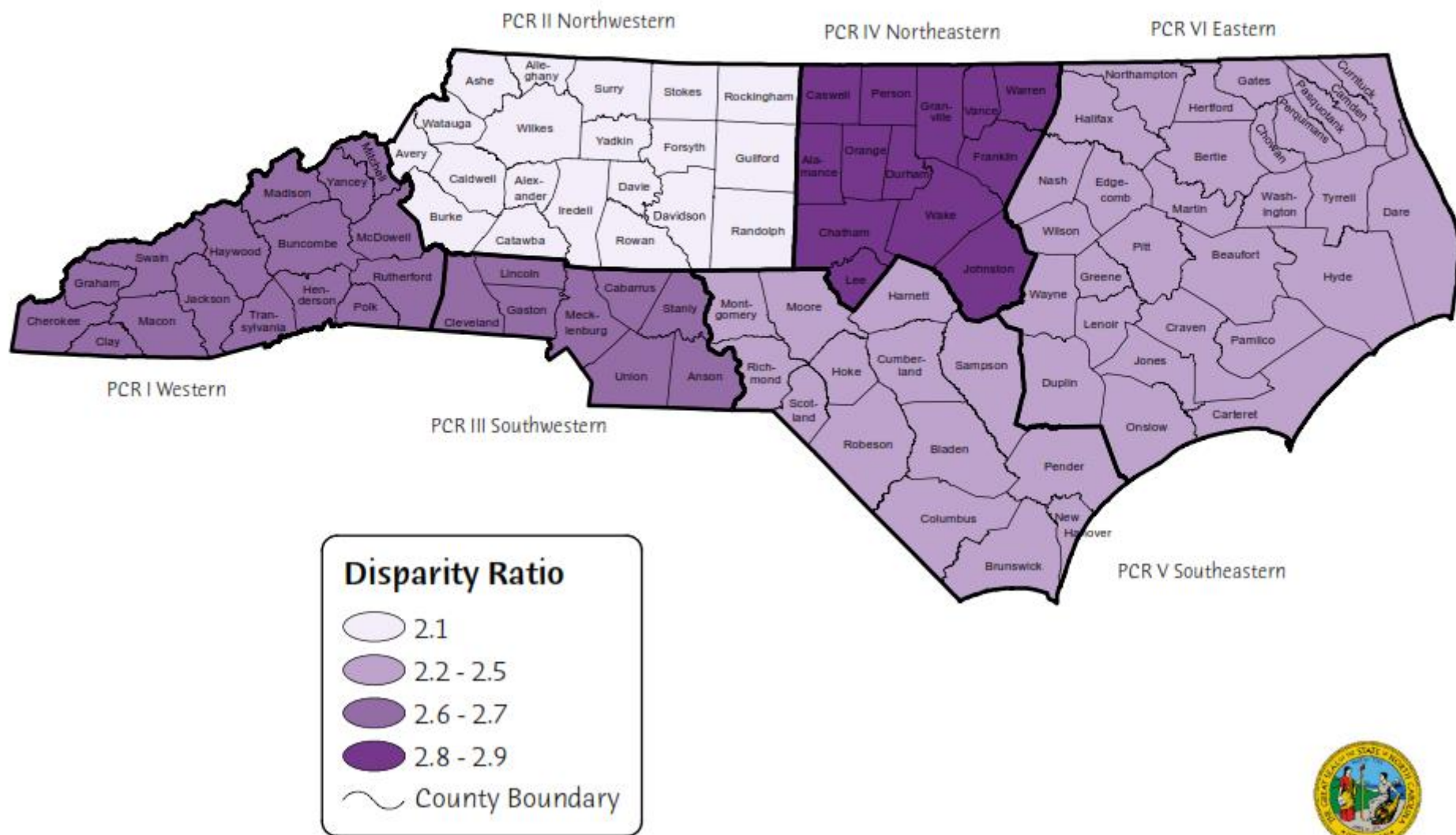
North Carolina

Infant Mortality Rates by Perinatal Care Regions (PCR)

2013 - 2017



North Carolina Infant Mortality Racial Disparities Between White (Non-Hispanics) and African-American (Non-Hispanics) by Perinatal Care Regions (PCR) 2013 - 2017



Distribution of Child Death Rates by Cause in North Carolina

Leading Causes of Infant Death, NC 2017:

Number of Infant Deaths by Cause

Cause Category:	Deaths	Percent
Prematurity/Low Birth Weight	167	20.6
Birth Defects	145	19.0
Other Unknown Causes	109	11.9
Maternal complications	107	10.0
Other perinatal conditions	93	9.6
Infections	56	7.7
Respiratory Distress	54	5.7
All Other Causes (Residual)	44	4.7
Circulatory diseases	17	2.5
Respiratory diseases	17	2.4
Homicide	15	1.9
Accidental Suffocation and Strangulation in Bed	10	1.5
Accidents	9	1.5
SIDS	9	0.9

Source: North Carolina State Center for Health Statistics, 2017 Infant Mortality Report

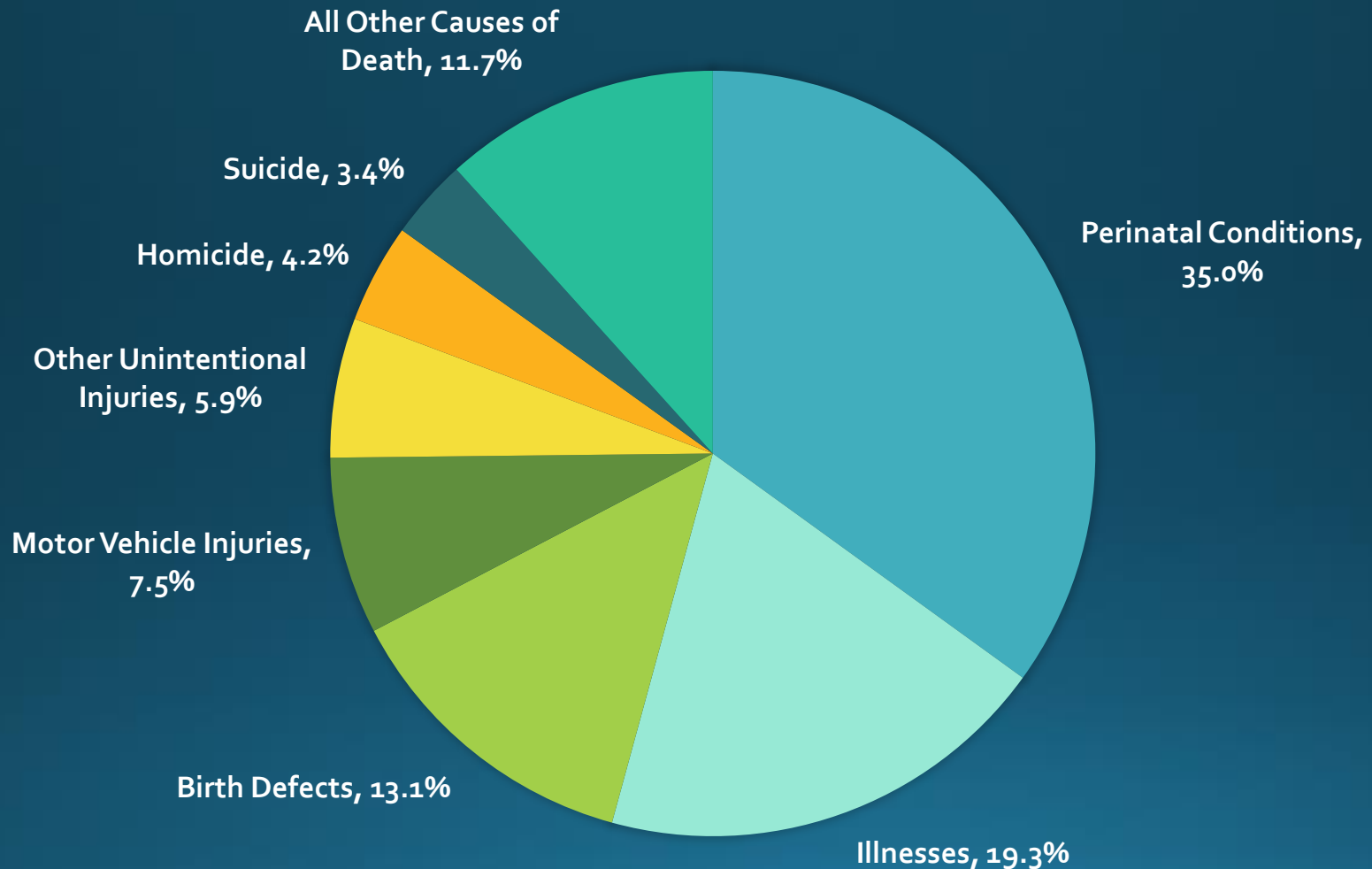
Sudden Unexpected Infant Deaths (SUID) by Listed Cause of Death: 2007-2017

Year	SIDS	Cause of Death Unknown	Accidental Suffocation/ Strangulation in Bed	TOTAL SUID	% of all Infant Deaths	Rate per 1,000 Live Births
2007	98	33	20	151	18.1	1.3
2008	136	29	21	186	22.4	1.6
2009	98	48	7	153	18.4	1.3
2010	53	46	13	112	13.5	0.9
2011	50	64	11	125	15.0	1.1
2012	28	92	16	136	16.3	1.1
2013	23	75	11	109	13.1	0.9
2014	28	105	11	144	16.7	1.2
2015	12	113	13	138	15.6	1.1
2016	13	104	22	139	15.9	1.2
2017	9	109	10	128	14.3	1.1

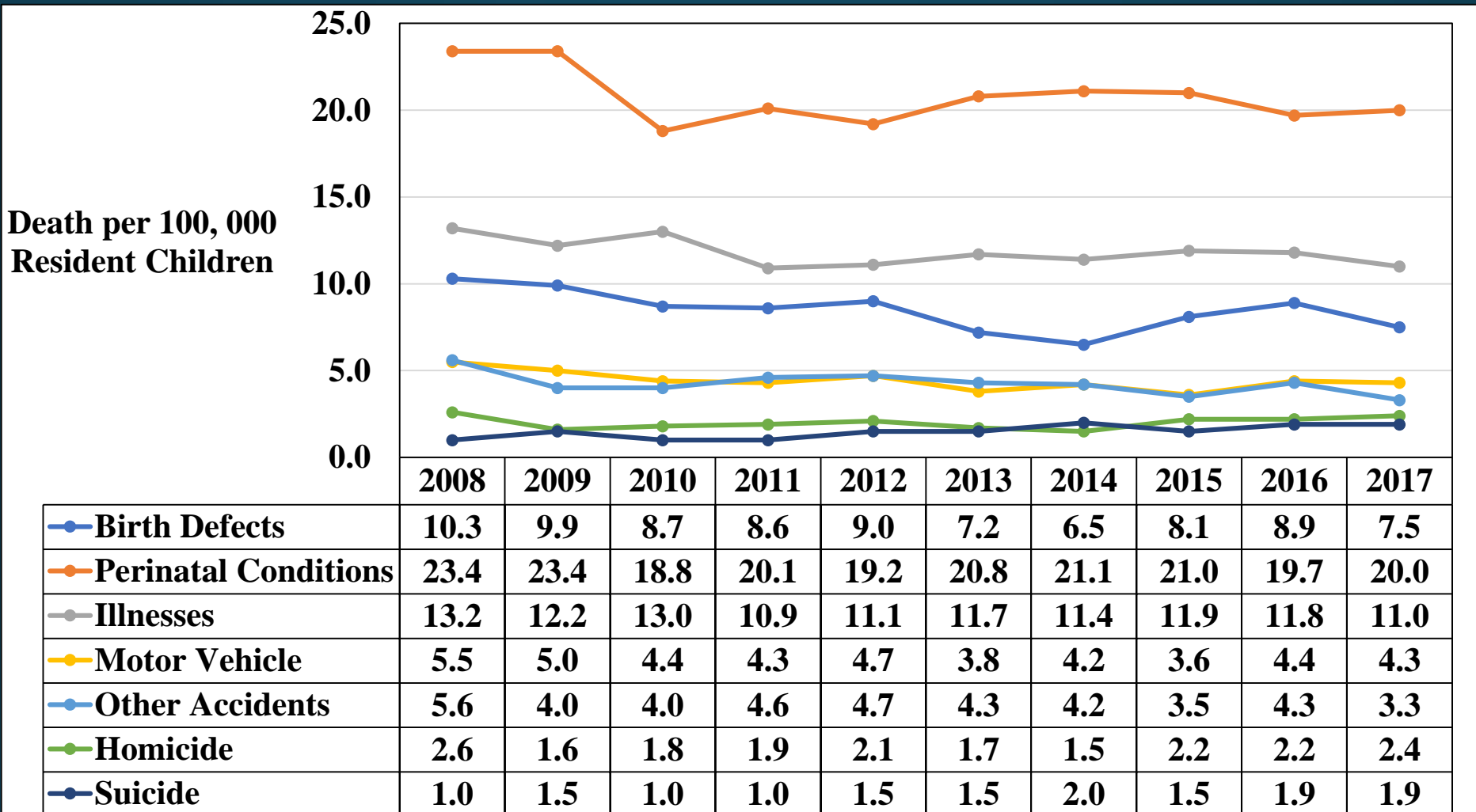
ICD-10 Codes: SIDS=R95; Suffocation=W75; Unknown=R99

Source: State Center for Health Statistics, 2007-2016 NC mortality files

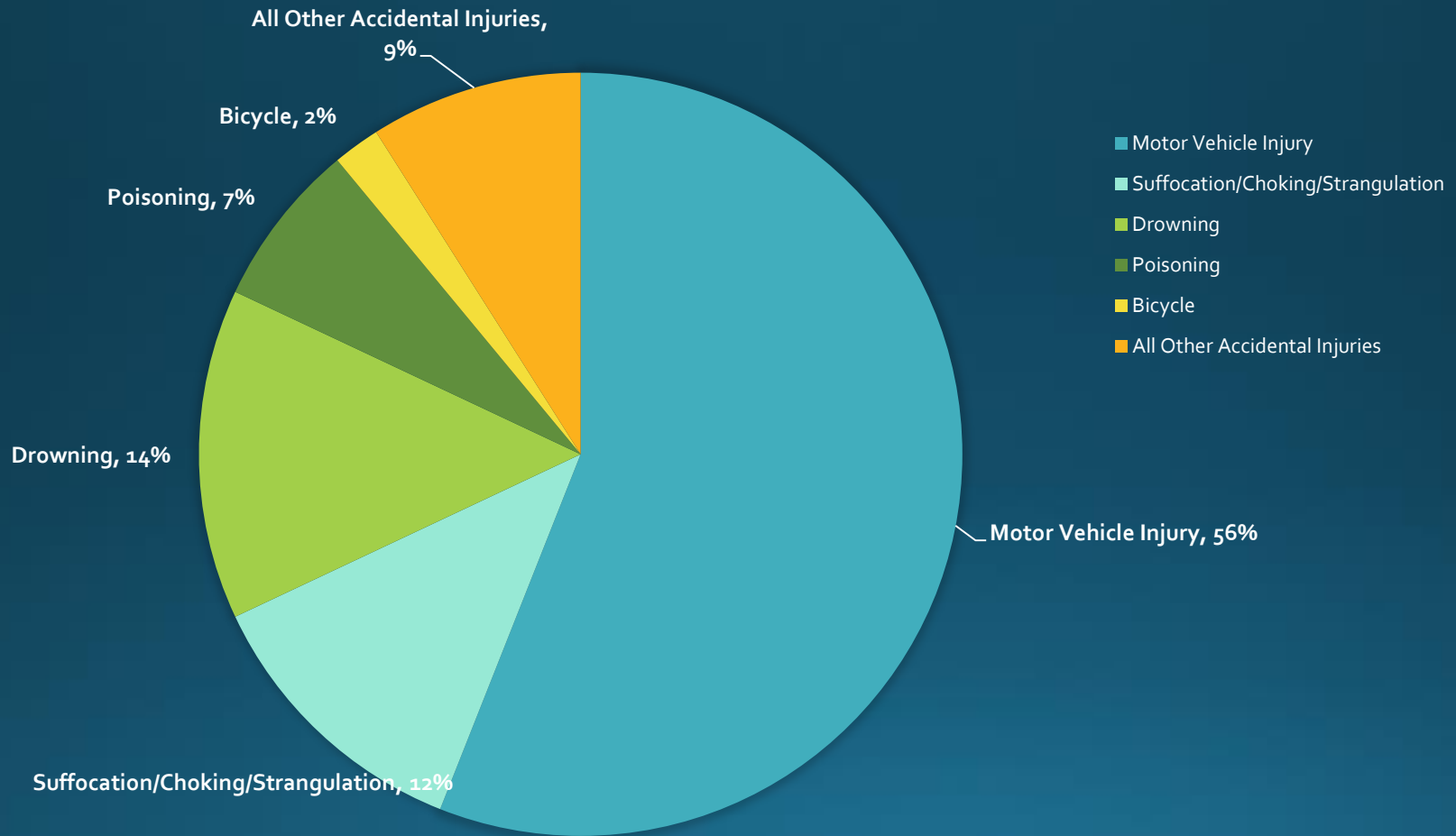
North Carolina Child Deaths (Ages 0-17 yrs) by Cause in 2017



Trends in North Carolina Resident Child Death Rates for Selected Natural Causes of Death (Ages 0-17 yrs) 2008-2017

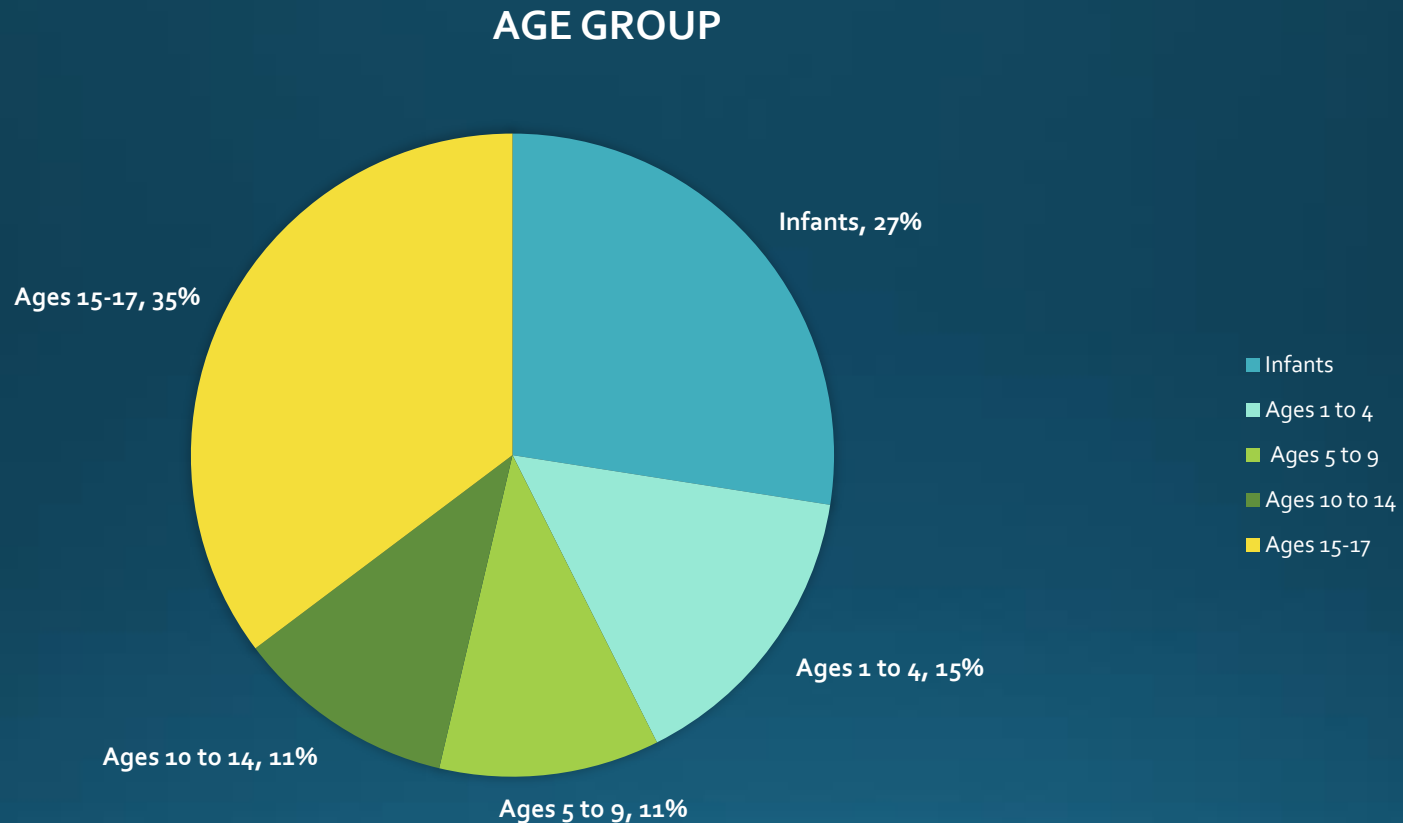


NC Child Deaths (Ages 0-17 yrs) by Type of Unintentional Injury 2017



NC Resident Child Deaths 2017

Homicide



Firearms were involved in 47% of child homicides

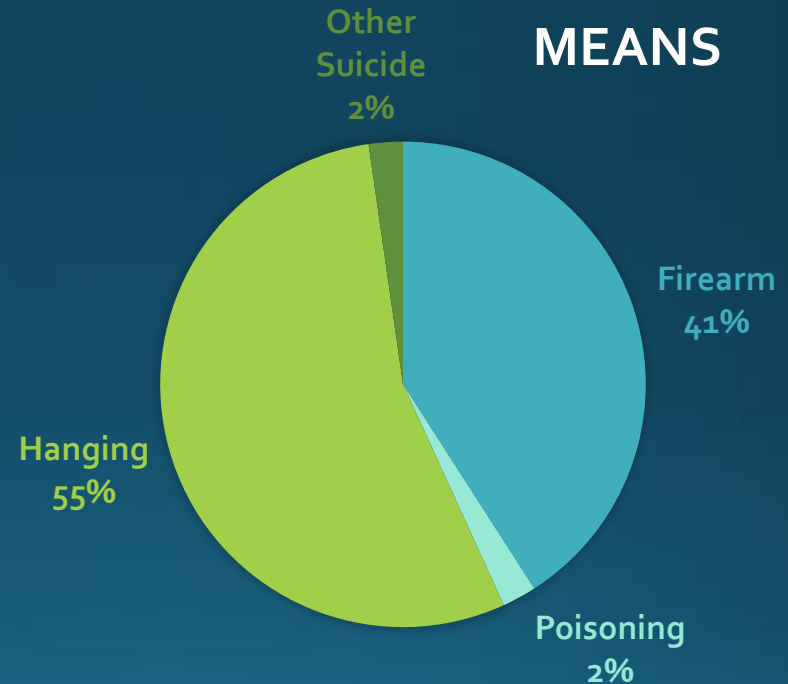
NC Resident Child Deaths 2017

Suicide

BY AGE GROUP



MEANS



Trends in NC Resident Child Deaths Suicide

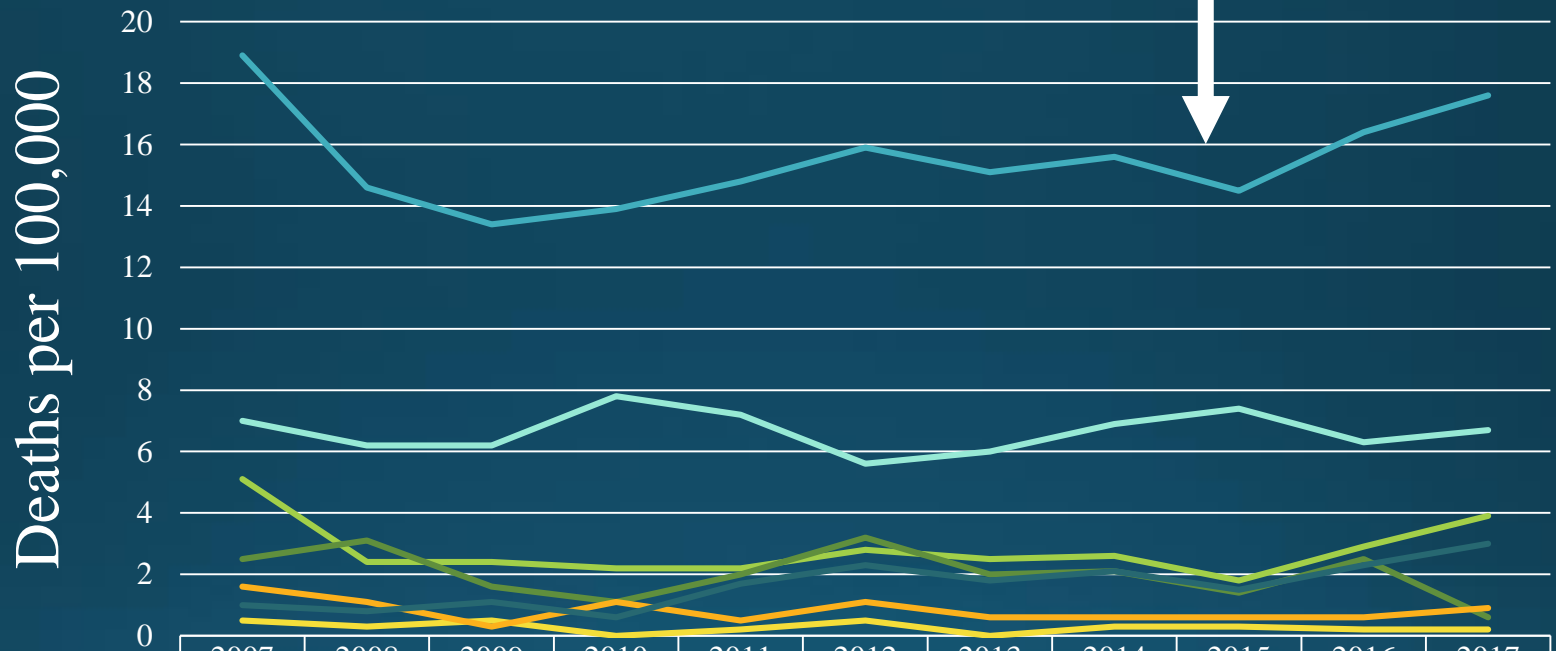
Suicide Rate per 100,000 children
10 to 14 yrs



Suicide Rate per 100,000 children
Ages 15 to 17 yrs



Trends in NC Death Rates among Children Between 10-14 Years Old by Cause of Death Over Time



	2007 Rate	2008 Rate	2009 Rate	2010 Rate	2011 Rate	2012 Rate	2013 Rate	2014 Rate	2015 Rate	2016 Rate	2017 Rate
Ages 10-14	18.9	14.6	13.4	13.9	14.8	15.9	15.1	15.6	14.5	16.4	17.6
Illnesses	7	6.2	6.2	7.8	7.2	5.6	6	6.9	7.4	6.3	6.7
Unintentional MVA	5.1	2.4	2.4	2.2	2.2	2.8	2.5	2.6	1.8	2.9	3.9
Other Unintentional Injuries	2.5	3.1	1.6	1.1	2	3.2	2	2.1	1.4	2.5	0.6
Poisoning	0.5	0.3	0.5	0	0.2	0.5	0	0.3	0.3	0.2	0.2
Homicide	1.6	1.1	0.3	1.1	0.5	1.1	0.6	0.6	0.6	0.6	0.9
Suicide	1	0.8	1.1	0.6	1.7	2.3	1.8	2.1	1.5	2.3	3

— Ages 10-14
 — Illnesses
 — Unintentional MVA
 — Other Unintentional Injuries
 — Poisoning
 — Homicide
 — Suicide

Summary

- NC ranks 23rd in the United States for child deaths between the ages of 1-17 yrs in 2016
- Child death rate (1-17yrs) of 21.1/100,00 resident children in 2017
- Infant deaths make up 65% of all child deaths in 2017
- NC ranks 12th for the highest infant mortality rate in the country in 2016
- Child death rate among African Americans is approximately twice that of White Non Hispanic Children, which has persisted over the last decade.
- There has been a slight narrowing of the infant mortality disparity gap between African Americans and White Non Hispanics in 2017. The African American rate declined slightly between 2016 and 2017.
- Child death rates are highest in the Eastern Perinatal Care Region of NC
- Prematurity and low birth weight remain the leading cause of infant deaths in North Carolina in 2017, accounting for approximately 30% of deaths

Do you have questions
or need
more data?



State Center for Health Statistics website: www.schs.state.nc.us/

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