

North Carolina
metamorphosis
project

healthy adolescents. healthy futures.

Special Thanks to The Duke Endowment

A cursive signature in dark brown ink, reading "J. B. Duke". The signature is fluid and elegant, with a large initial "J" and a long, sweeping tail.

THE DUKE ENDOWMENT

Thanks to the NCIOM Task Force on Adolescent Health, and Steering Committee

- **Co-chairs:** Carol Ford, Steven Cline, Howard Lee
- **Task Force Members:** Sen. Stan Bingham, Barbara Bowsher, Donna Breitenstein, Jane Brown, Rep. Angela Bryant, Mimi Chapman, Rep. Linda Coleman, Paula Hudson Collins, Tania Connaughton-Espino, Tamera Coyne-Beasley, Rep. Bob England, Rep. Susan Fisher, Patti Forest, Jennifer Garrett, Laura Gerald, Nelle Gregory, Lloyd Hackley, Mark Holmes, Deborah Horton, Michelle Hughes, Dan Krowchuk, Peter Leone, Bronwyn Lucas, Sharon Mangan, Steve North, Connie Parker, Kay Phillips, Marcus Plescia, Sen. William Purcell, Kristin Rager, Joel Rosch, Kevin Ryan, Adam Searing, Steve Shore, Pam Silberman, Don Stedman, Carol Tant, Tom Vitaglione, Rep. Douglas Yongue, Berkeley Yorkery, Irene Zipper
- **Steering Committee Members :** Matt Avery, Steven Cline, Tamera Coyne-Beasley, Amy Davenport, Carol Ford, Michael Foster, Mark Holmes, Lewis Margolis, Jim Martin, Michael Sanderson, Alexandra Sirota, Ilene Speizer, Tara Strigo, Carol Tyson, Andrea Weathers, Tom Vitaglione, Berkeley Yorkery

2012 Summit Steering Committee Members

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Hannah Klaus

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Joanna Matanga

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Summit Objectives

- Provide an update on the status of adolescent health and Adolescent Health Task Force recommendations
- Understand the current political landscape
- Set some priorities to Adolescent Health Advocacy Day
- Develop new collaborators in adolescent health
- Discuss how your adolescent priority may be advanced with new and old partners
- Commit to new actions to promote adolescent health and well being

The Status of Adolescent Health in North Carolina

Tamera Coyne-Beasley, MD, MPH

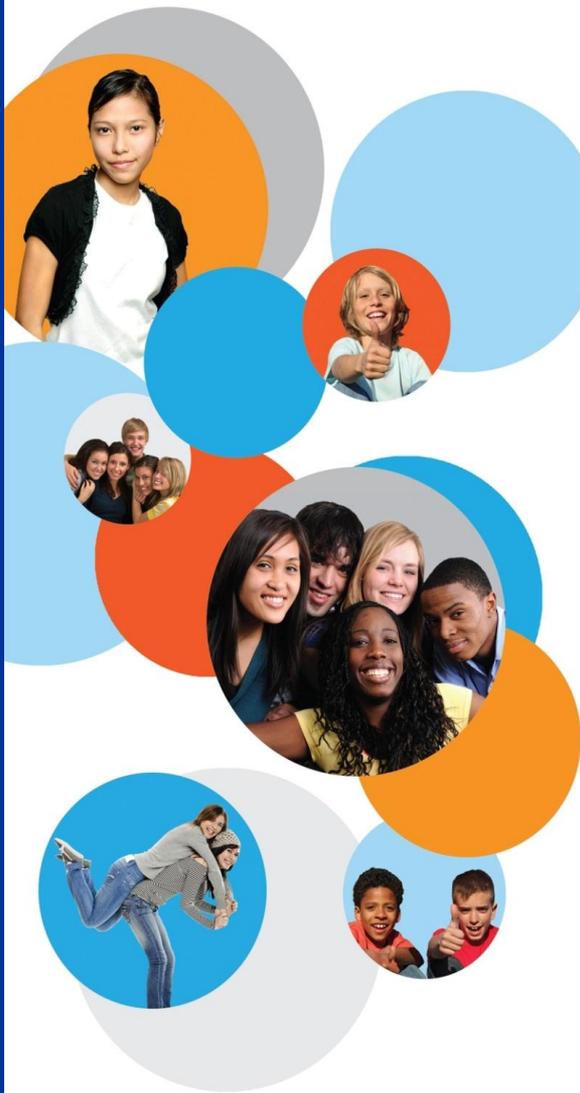
Professor of Pediatrics and Internal Medicine

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Director, NC Metamorphosis Project

NC Multi-site Adolescent Research Consortium & Coalition for Health



Healthy Foundations for Healthy Youth:

A Report of the NCIOM Task Force on Adolescent Health

December 2009

North Carolina Institute of Medicine
In collaboration with the North Carolina Metamorphosis Project

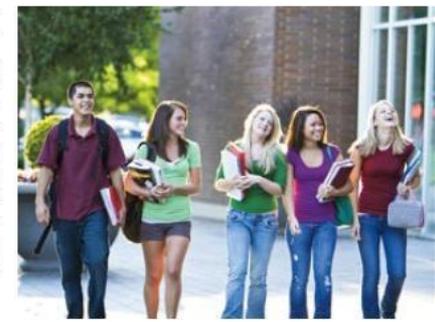
Supported by The Duke Endowment



2009 Portrait of Adolescent Health in North Carolina



Adolescence is a time of metamorphosis. Much like in early childhood, adolescents' brains develop at a rapid pace. Their bodies transform from those of children into those of adults. Adolescents' decisions and behaviors affect their health, and patterns of behaviors established during this period may accompany them into adulthood. Experiences adolescents have in their families, schools and communities strongly influence what happens during this time period. Adolescents are guided by the relationships they build with adults, as well as the programs and policies that make needed services and opportunities available. We must invest in supporting adolescent health. A competitive North Carolina is only possible with a healthy, trained workforce and engaged citizenry.



KEY FINDINGS

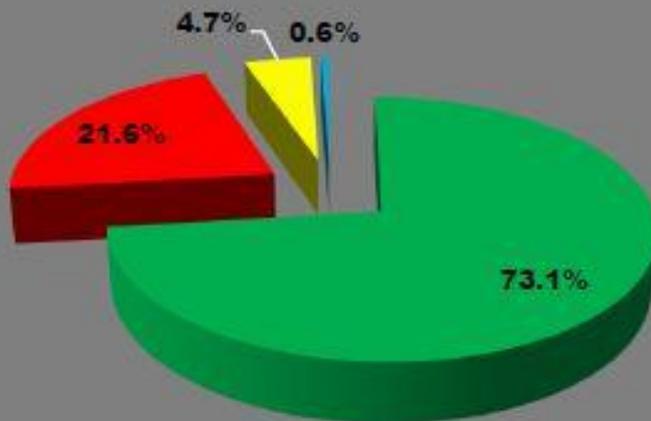
- 1 Many adolescents in North Carolina face barriers to healthy development and a pathway to successful adulthood because they lack healthy foundations.
 - One in five adolescents feels alone in his or her life, suggesting the lack of a strong connection with family or other important supportive adults.
 - Many adolescents lack connections to health care. Less than half of adolescents report having a consistent relationship with a medical professional. One-quarter of adolescents ages 18-21 lack health insurance coverage.
 - More than one-third of adolescents do not complete high school within four years, and those who drop-out often lack connections to training or job programs.
- 2 Adolescents participate in behaviors that can negatively impact their health today and in the future.
 - More than one in three high school students reported consuming alcohol during the past 30 days.
 - Nearly 40 percent of sexually active adolescents did not use a condom during their last sexual encounter. Chlamydia, gonorrhea and HIV rates among adolescents aged 13 to 19 have increased from 2003 to 2007.
- 3 Many adolescents are making better decisions and are more engaged in their community than four years ago.
 - The smoking rate has declined by 30 percent from 2003 to 2007.
 - Nearly 2 out of 3 adolescents are engaged in extracurricular activities.

NC Adolescent Population

- 1,909,053 young people between 10 – 24
- Nearly 20% of our state's population
- Diverse population
 - Wide variations in normal development during the second decade of life

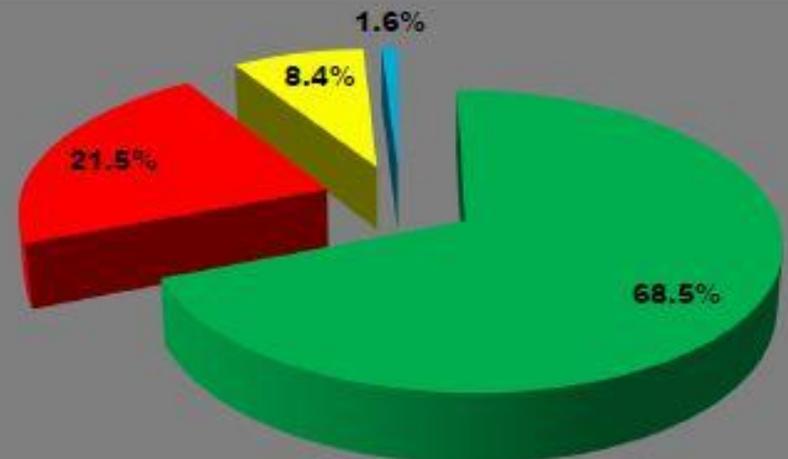
North Carolina Population by Race: 2000 - 2010

2000 Census



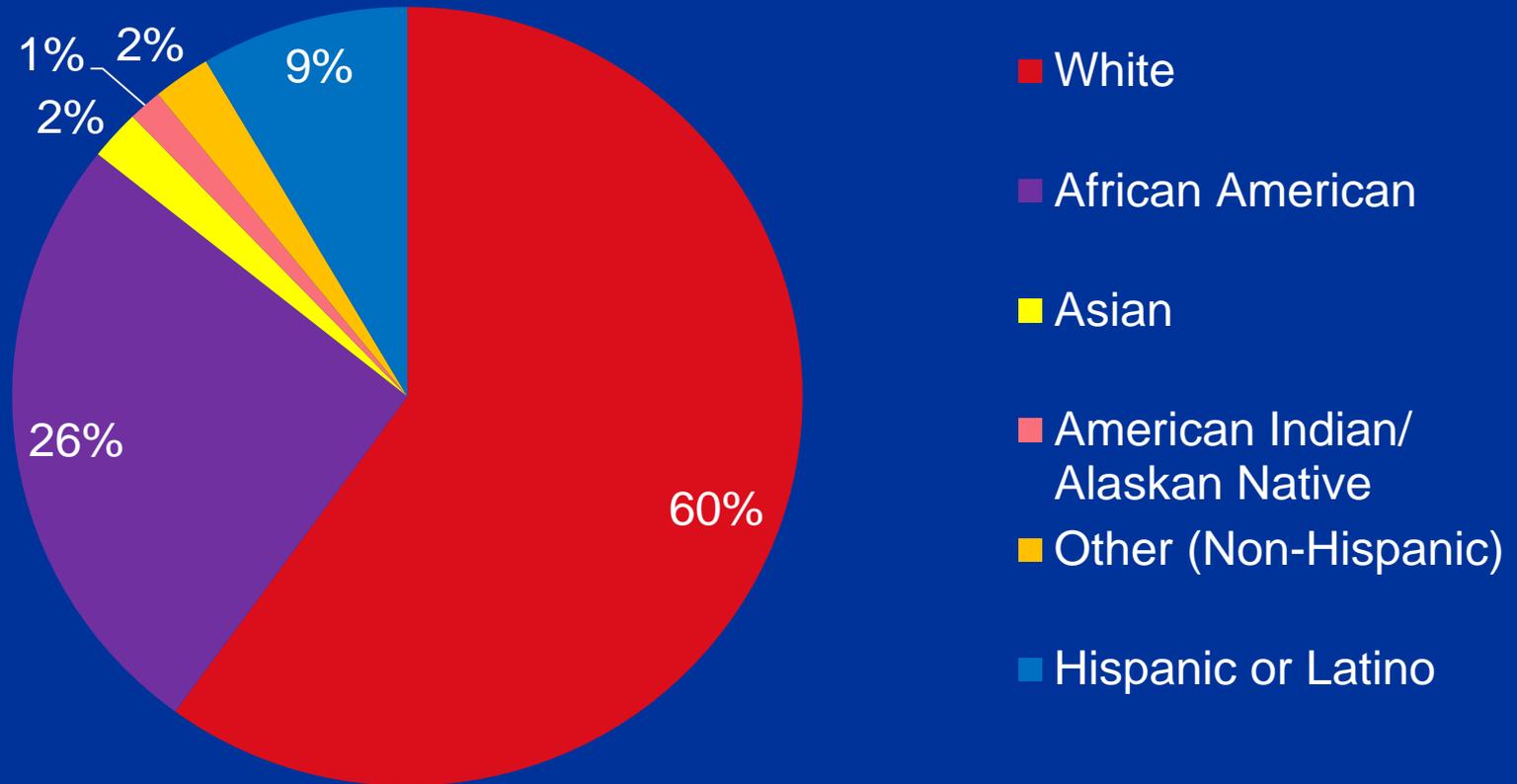
- White: 73.1%
- Black or African American: 21.6%
- Hispanic/Latino: 4.7%
- Other: 0.6%

2010 Census



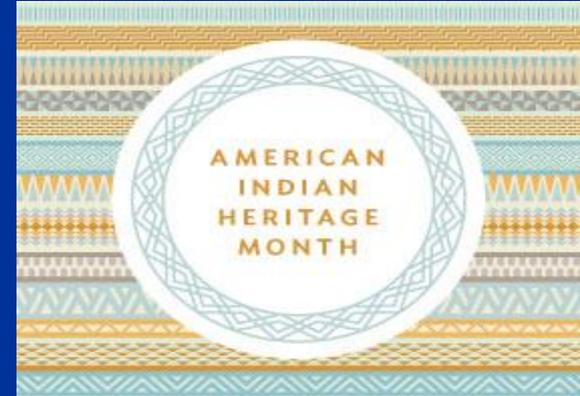
- White: 68.5%
- Black or African American: 21.5%
- Hispanic/Latino: 8.4%
- Other: 1.6%

Adolescent Population (10-17 years old) by Race/Ethnicity



BRFSS: 2010 NC Child Population and Stratification Report

Race



- Race is considered a "marker" for certain health problems.
- Race or ethnicity per se does not cause a particular health problem or status.
 - It is likely that factors such as income, education, access to health care, stress, and racism are among the major causes of the poorer health of minorities on many health measures, compared to whites.

Adolescence is Experienced Within Diverse Contexts in NC

- Examples:
 - 26% living with chronic health condition or disability (ages 11-17)*
 - Approximately 1 in 3 young people in foster care is an adolescent (age 13-21)**

*CHAMP, 2011

**Duncan, D. F., Kum, H. C., Flair, K. A., Stewart, C. J., & Weigensberg, E. C. (2009). NC Child Welfare Program. Fostering Perspectives, vol. 13, no. 2 (May 2009)

Persons 18-24 years old Living in Poverty



Source: NC – Kids Count Data Center, Annie Cassie Foundation

NC Adolescent Cases of Abuse Among Uninsured and Private Insured Patients

- In 2011, there were 390 reported cases of adolescent abuse
- In 2012, there have been 404 reported cases
- These statistics relate to all forms of child maltreatment, reported to CPS and investigated, and referred for medical care
 - Families with Medicaid not included
 - Most likely is a significant underrepresentation of adolescent abuse

Source: Child Medical Evaluation Program, 2012; adolescents age 10-21

Percent Insured in North Carolina CHAMP and BRFSS 2007, 2010



Overview of Health Outcomes

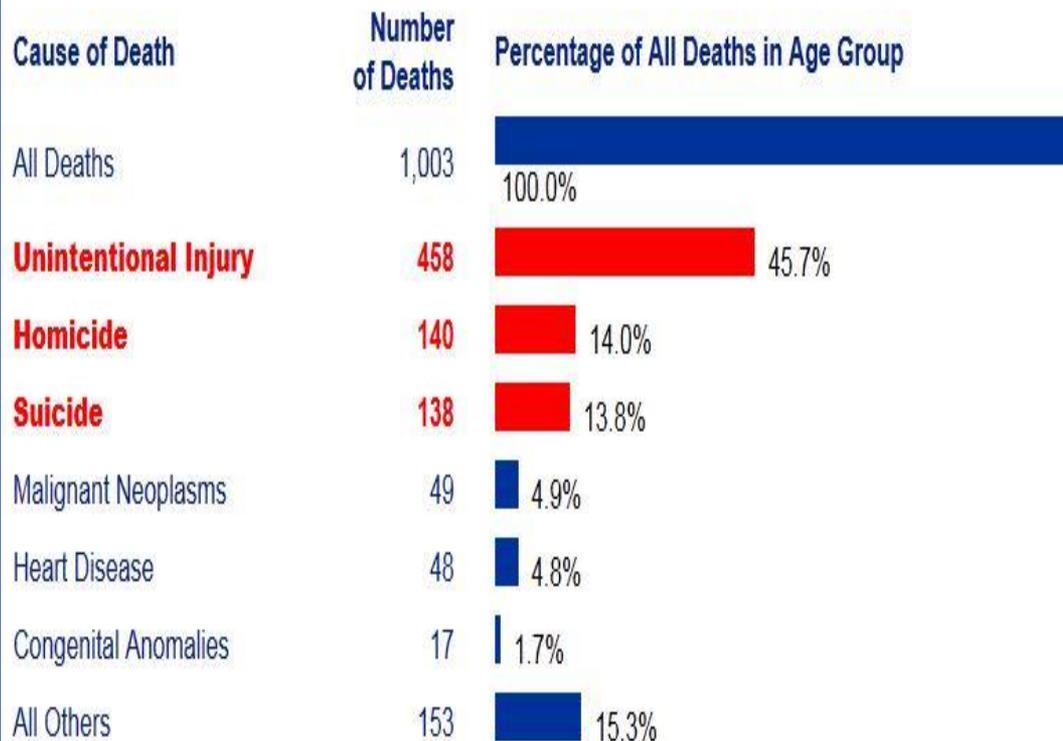
Health Outcomes

- 74% of deaths among young people ages 10-24 are from:
 - Unintentional injury
 - Homicide
 - Suicide

10 Leading Causes of Deaths, North Carolina

2010, All Races, Both Sexes

Ages: 10-24



[Download Results in a Spreadsheet \(CSV\) File](#)

[Help with Download](#)

WISQARS™

Note: Leading Cause categories with counts of less than 10 deaths have been collapsed into "All Other".

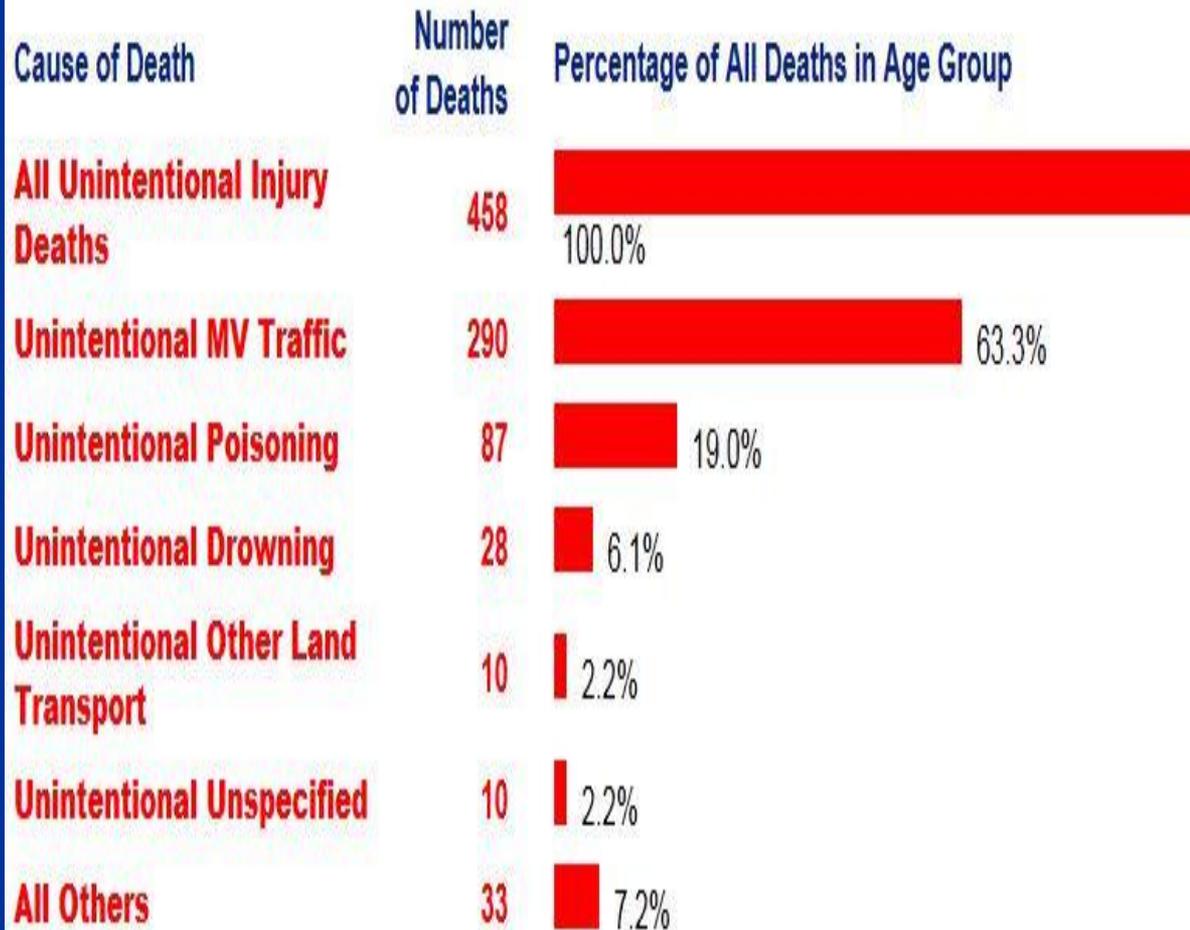
Produced By: Office of Statistics and Programming, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention

Data Source: National Center for Health Statistics (NCHS), National Vital Statistics System

10 Leading Causes of Unintentional Injury Deaths, North Carolina

2010, All Races, Both Sexes

Ages: 10-24



Mental Health Outcomes	2003	2007	2011
Agree/strongly agree that they feel alone in their life*	16.3%	20.4%	29.5%
Felt so sad/hopeless almost everyday for at least 2 weeks during the past year that they stopped doing normal activities*	30.6%	26.9%	28.3%
Seriously considered suicide within the past 12 months*	18.1%	12.5%	14.3%
Suicide rate per 10,000 (15-24 yo)**	1.17	0.92	1.01

* From 2003, 2007, 2011 NC Youth Risk Behavior Survey of 9th-12th grade students

**WISQARS, North Carolina Violent Death Reporting System

Substance and Violence Behaviors Among NC High School Students

Substance and Alcohol Abuse	2003	2007	2011
Smoked cigarettes in the past 30 days	27.3%	19.0%	17.7%
Used alcohol in past 30 days	39.4%	37.7%	34.3%
Used cocaine in their lifetime	8.4%	7.0%	7.1%
Used methamphetamines in their lifetime	6.6%	4.7%	4.8%
Violence			
Physical fight during past 12 months	30.9%	30.1%	27.6%
Carried weapon in the past 30 days	19.5%	21.2%	20.8%
Did not go to school because felt unsafe	5.8%	7.0%	6.8%
Hit, slapped or physically hurt on purpose by boyfriend or girlfriend during the past 12 months	-	13.2%	14.1%

*Data from NC Youth Risk Behavior Survey of 9-12th grade students

Table 8 — Crime Index Arrests for Juveniles Under 16 — 2007 to 2011

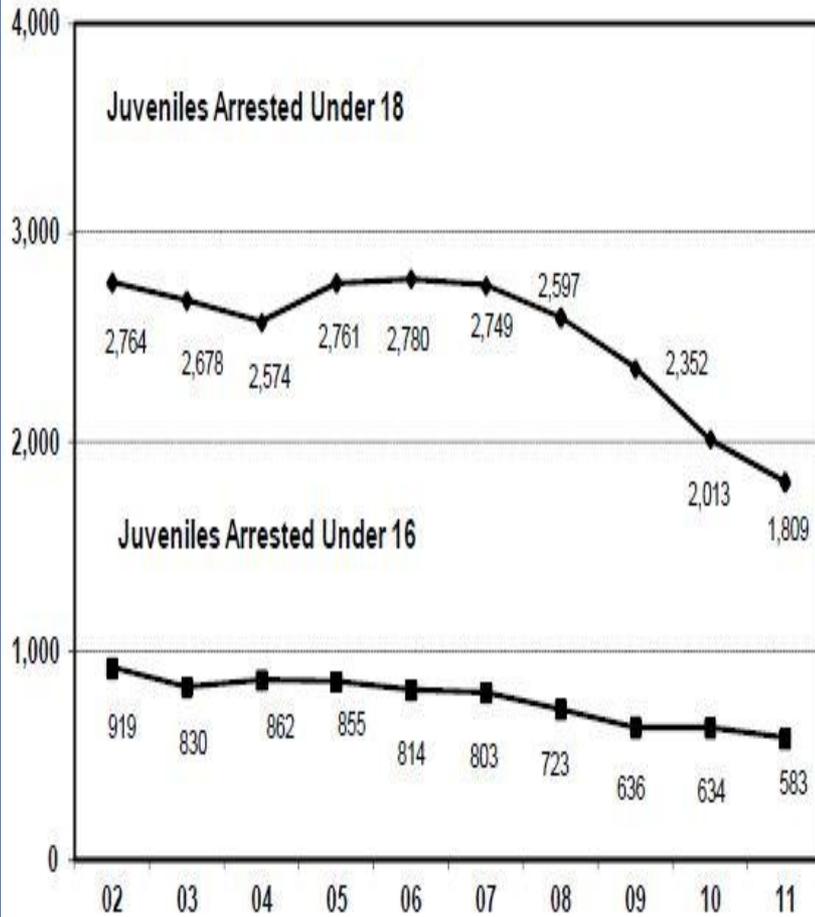
Juveniles Under 16	Total Index	Violent	Property	Murder	Rape	Robbery	Agg. Assault	Burglary	Larceny	MVT
2007	5,744	803	4,941	13	44	268	478	1,322	3,485	134
2009	5,320	723	4,597	4	44	212	463	1,187	3,289	121
2009	4,559	636	3,923	6	38	183	409	1,075	2,762	86
2010	4,190	634	3,556	9	49	167	409	876	2,583	97
2011	4,287	583	3,704	3	29	172	379	899	2,731	74
07/11 %	-25%	-27%	-25%	-77%	-34%	-36%	-21%	-32%	-22%	-45%

NOTE: The Uniform Crime Reporting program defines juvenile arrests as individuals under 18 years of age who are handled or processed by law enforcement in circumstances for which — if the individual were an adult — an arrest would be counted. Officers complete "Juvenile Contact" forms which count juvenile arrests by the offense classification.

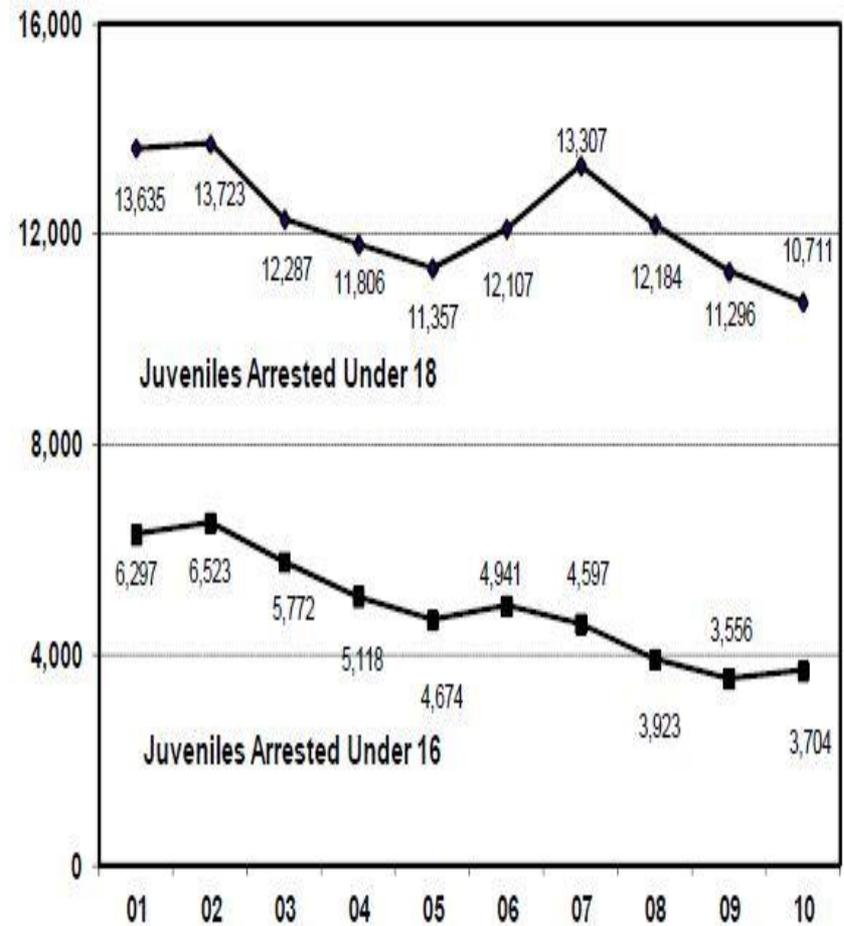
Juvenile Arrests

2010 - 2011

Violent Crime



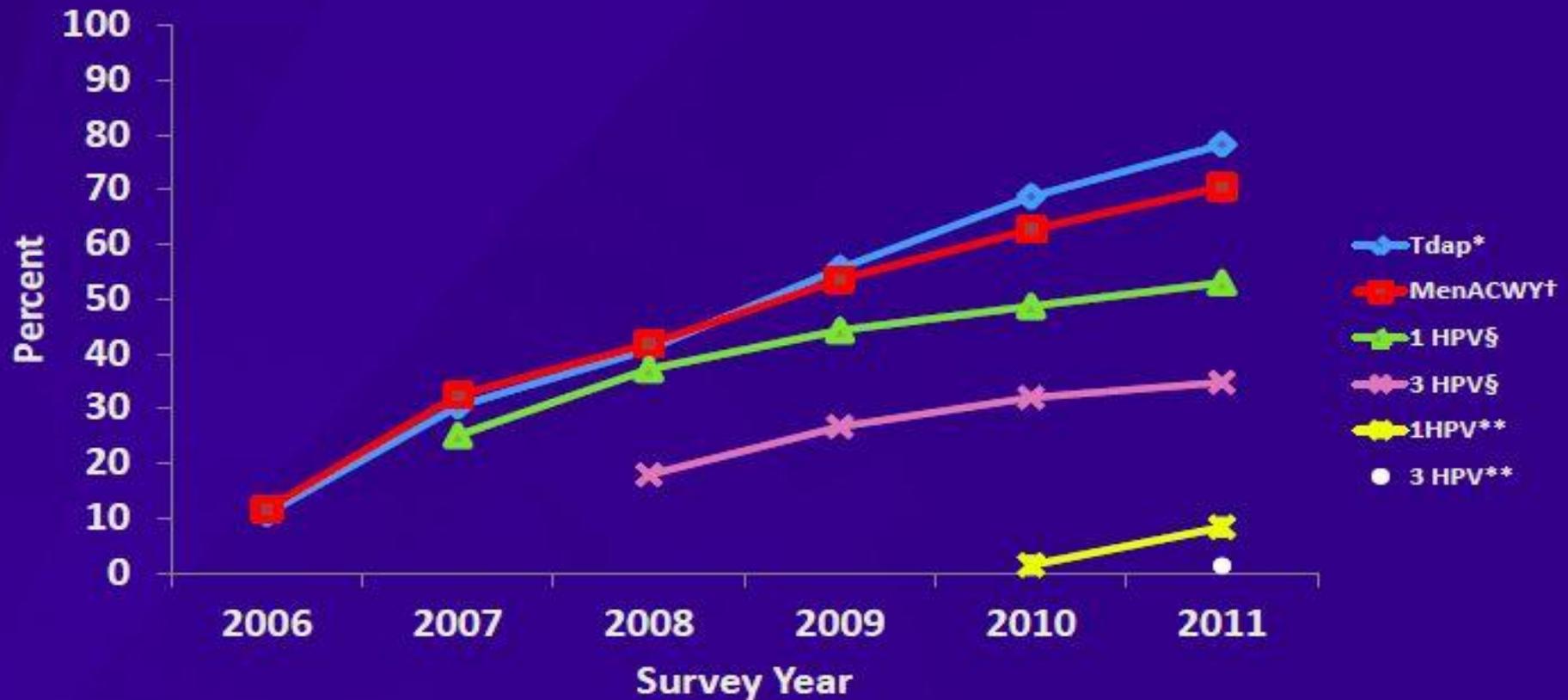
Property Crime



Sexual Behavior and Health Outcomes	2007	2009	2011
Ever had sexual intercourse	47.5%	52.1%	49.3%
Did not use a condom at last sexual intercourse	N/A	38.5%	46.3%
Chlamydia rate per 100,000 (15-19 yo)	1726.4	2435.3	2796.3
Gonorrhea rate per 100,000 (15-19 yo)	658.5	647.1	690.3
HIV rate per 100,000 (15-19 yo)	16.4	13.5	14.1
Teen pregnancy rate per 1,000 (15-19 yo)	63	56	43.8

Sources: Youth Risk Behavior Survey; NC 2011 HIV/STD Surveillance Report; NC DHHS, Division of Public Health, State Center for Health Statistics

HPV, Tdap, and MenACWY vaccination estimates among adolescents, 13-17 years, NIS-Teen, United States, 2006-2011



* Tetanus toxoid, diphtheria toxoid, acellular pertussis vaccine since age 10

† Meningococcal conjugate vaccine

§ Among Females

** Among Males

Physical Activities and Nutrition Behaviors Among NC High School Students

Physical Activity/Nutrition/Weight	2003	2007	2011
Physically activity for 60 mins a day or more per day on 5 or more of past 7 days	-	44.3%	47.6%
Watched TV 3 or more hours per day	-	35.3%	34.7%
Drank a 100% fruit juices one or more times during the past 7 days	-	75.8%	74.7%
Ate fruits and vegetables 5 or more times a day during the past 7 days	-	14.8%	19.4%
Obese at or above the 95% for BMI	12.5%	12.8%	12.9%

Data from NC Youth Risk Behavior Survey of 9-12th grade students

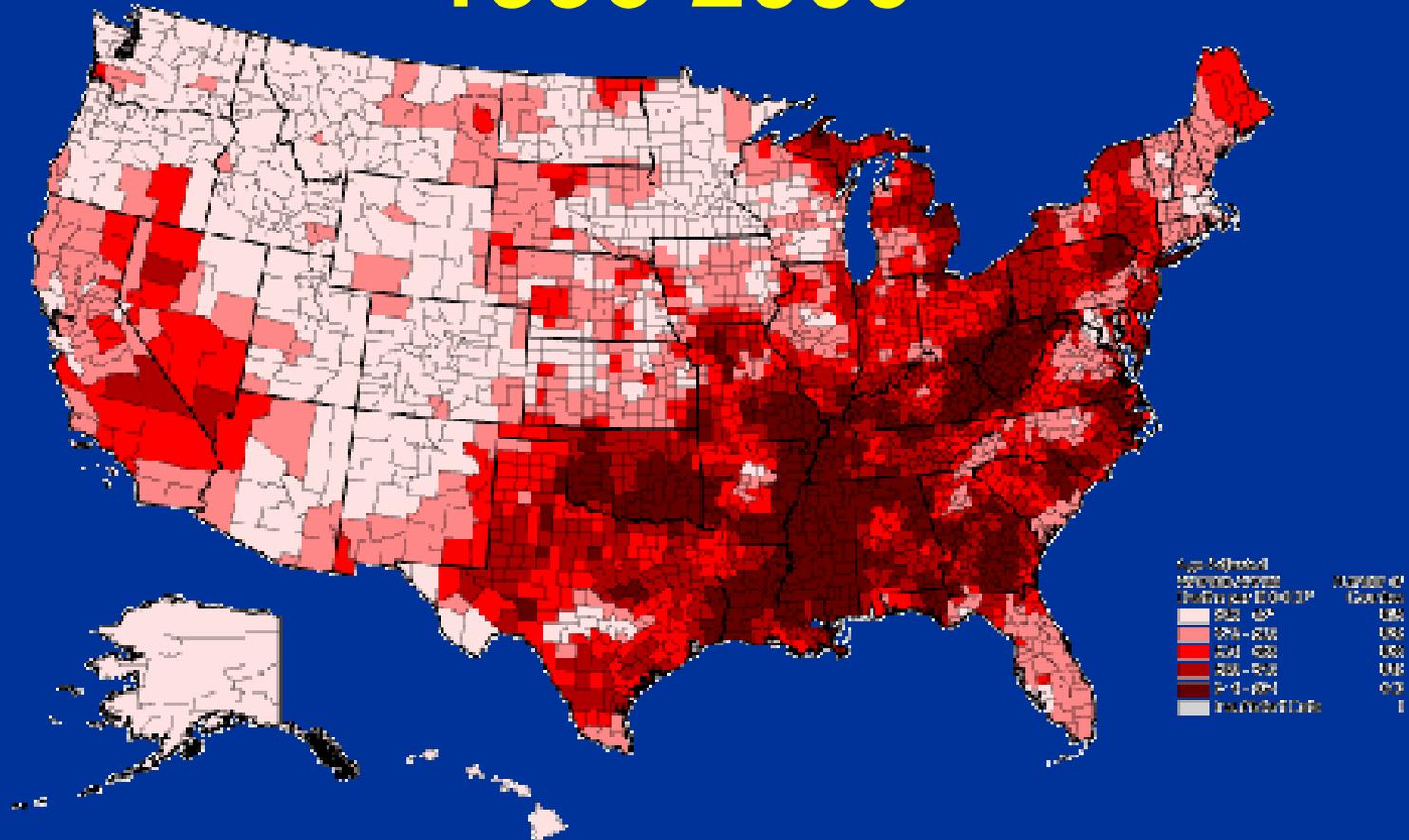
Risk Factors Identified During
Adolescence



Adult
Cardiovascular Disease &
Cancer

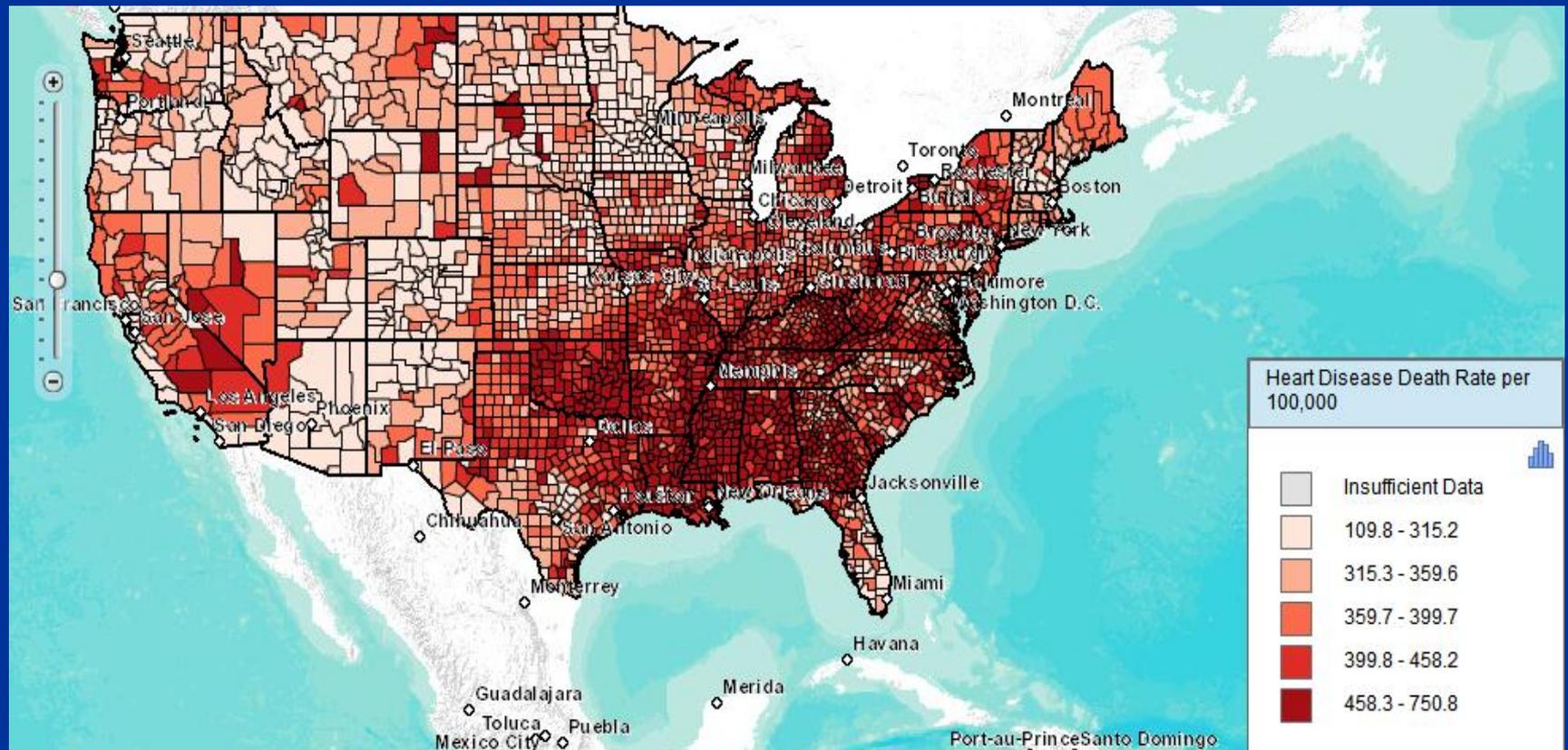


Heart Disease Death Rates- Adults Ages 35 Years and Older, 1996-2000



(Centers for Disease Control and Prevention)

Heart Disease Death Rates- Adults Ages 35 Years and Older, 2007-2009



(Centers for Disease Control and Prevention)

Selected Health Disparities

- White high school students report highest use of tobacco among all groups
- Black females have chlamydia rates 7x rates of white females.
- Young adults aged 18-25 are more likely to report illicit drug use than other age groups
- Latino and black teens are more likely to be overweight or obese
- Whites and males have higher rates of suicide than other groups
- American Indians report most poor mental health days

BITTERSWEET

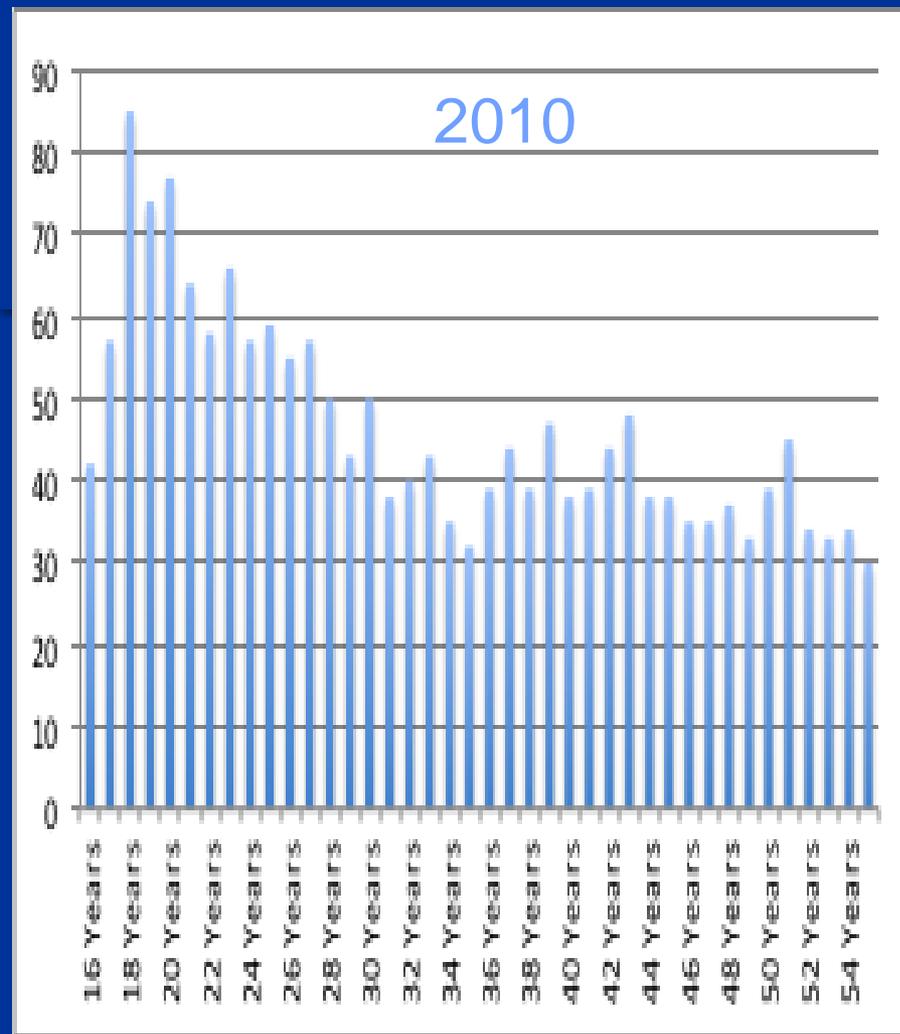
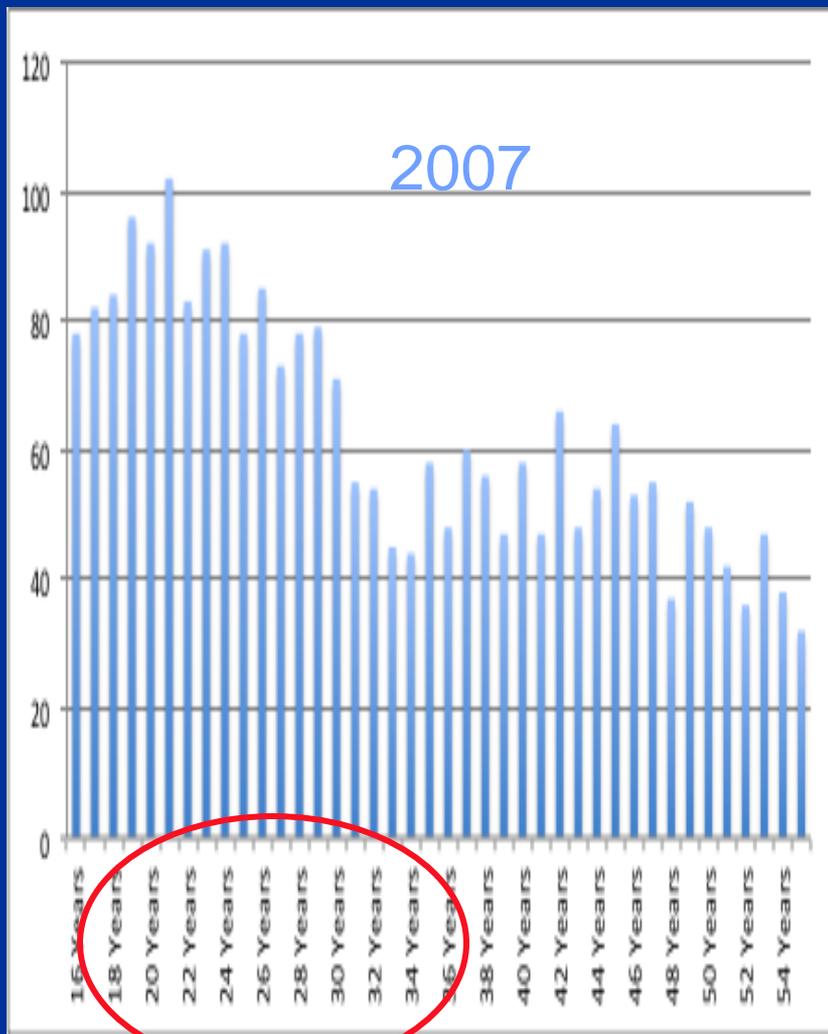
Selected Major Success Teen Pregnancy

- NC Teen Pregnancy rate fell 12% in 2011
- Racial and ethnic disparities are narrowing
- Fewer pregnancies resulted in fewer births and abortions
 - The teen birth rate dropped by 9% and the teen abortion rate dropped by 21%
- Fewer teens are getting pregnant again
 - Only 26% of pregnancies happened to a teen previously pregnant

Selected Major Success

- Child Death rate down 46% since inception of the Child Fatality Task Force
 - With passage of the graduated drivers' license program, NC driver crashes are down
 - 38% for 16 year olds
 - 20% for 17 year olds

NC Crash Counts by Age – Driver Crash Involvements



Cohort Graduation Rate 2007-2009

	All	White	Black	Hispanic	American Indian	Asian/ Pacific Islander	Multi-Racial	E.D.	L.E.P.	Students with Disabilities
2008 - 09	71.7%	77.7%	63.2%	58.9%	60.0%	83.6%	71.5%	61.8%	52.1%	56.8%
2007 - 08	70.3%	75.7%	62.7%	56.4%	53.8%	81.0%	68.4%	N/A	N/A	56.6%
Percent Change between years	1.4%	2.0%	0.5%	2.5%	6.2%	2.6%	3.1%	N/A	N/A	0.2%

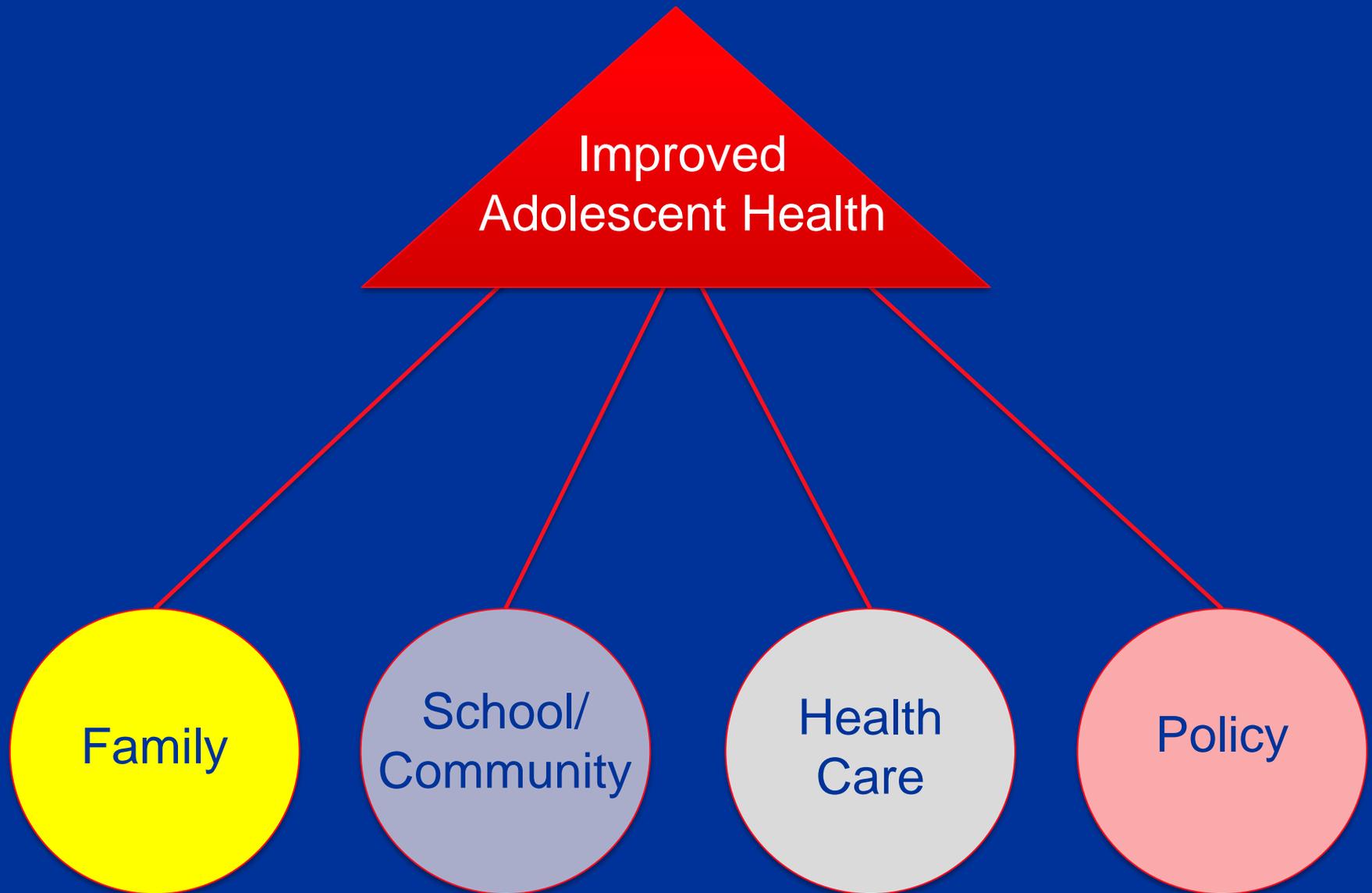
- E.D. = Economically Disadvantaged Students
.....
- L.E.P. = Limited English Proficient Students

Selected Major Success Cohort Graduation Rate 2011-2012

	All	White	Black	Hispanic	American Indian	Asian	Pacific Islander	Two or More Races	E.D.	L.E.P.	Students with Disabilities
2011 - 12	80.4%	84.7%	74.7%	73.0%	73.7%	87.5%	N/A	80.6%	74.7%	50.0%	59.9%
2010 - 11	77.9%	82.6%	71.5%	68.8%	69.7%	86.9%	N/A	77.2%	71.2%	48.1%	57.2%
Percent Change between years	2.5%	2.1%	3.2%	4.2%	4.0%	0.6%	N/A	3.4%	3.5%	1.9%	2.7%

- E.D. = Economically Disadvantaged Students
- L.E.P. = Limited English Proficient Students

Opportunities to Improve Adolescent Health

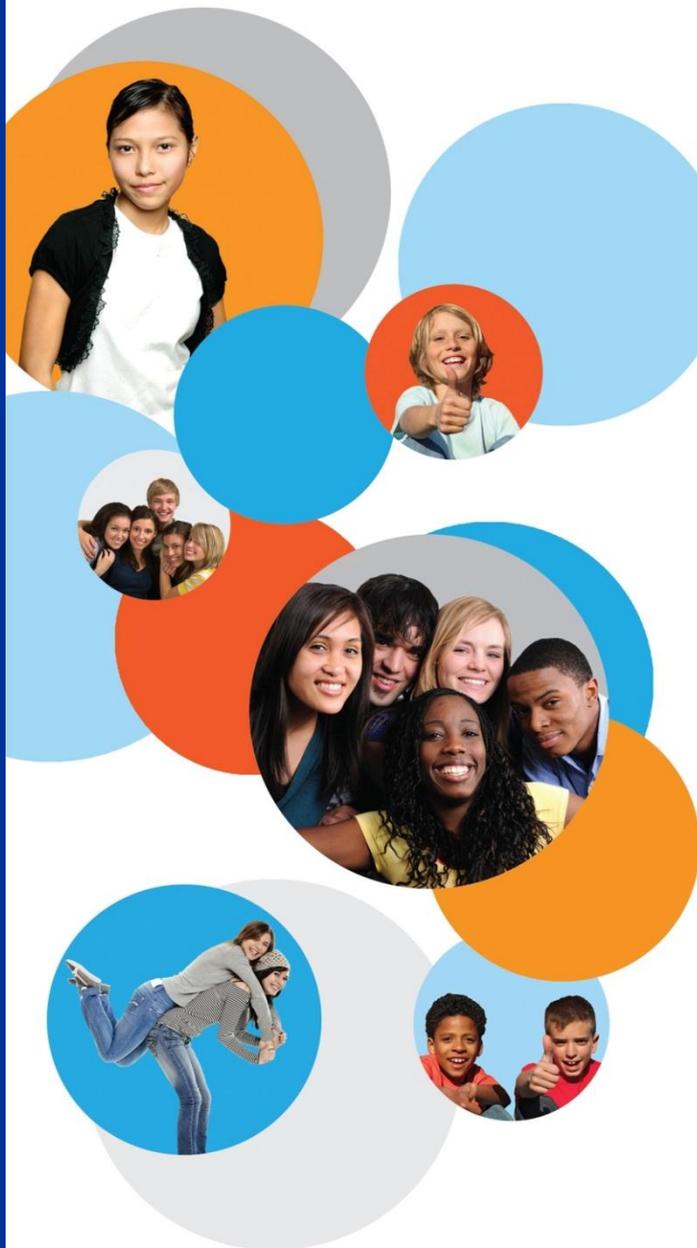


Science is Evolving...

- Since Task Force work completed:
 - CDC publishes “Science-Based Approaches to Improve Adolescent Reproductive Health”
 - Institute of Medicine publishes review of research on “Preventing Mental, Emotional, and Behavioral Problems among Young People”
 - Child Trend publishes “What Works for Parent Involvement Programs for Adolescents: Lessons from Experimental Evaluations”

The Future

- Further collaboration across disciplines
- Expansion of the use of technology
- Expanded data collection to understand and meet the needs of our growing diverse adolescent population
- Greater understanding and measurement of resiliency and protective factors
- Increased use of evidence based strategies
- Further expansion of health related services in schools
- Further engagement of youth



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