

## North Carolina Statewide and County Trends in Key Health Indicators: Technical Notes

- 1. Percentage of Resident Live Births Classified as Low Birthweight** – Percentages are derived from information collected from the North Carolina resident live birth certificate files. Numerators include children born 2,500 grams (5 lbs 8 ozs) or less, regardless of the gestation period. Denominators are all live births occurring to residents.
- 2. Percentage of Resident Live Births Classified as Very Low Birthweight** – Percentages are derived from information collected from the North Carolina resident live birth certificate files. Numerators include children born 1,500 grams (3 lbs 4 ozs) or less, regardless of the gestation period. Denominators are all live births occurring to residents.
- 3. Percentage of Resident Live Births that were Premature** – Percentages are derived from information collected from the North Carolina resident live birth certificate files. Numerators represent the number of infants born at less than 37 weeks of gestation, based on the clinical/obstetric estimates of gestation. Denominators are all live births occurring to residents.
- 4. Percentage of Resident Live Births Delivered by Cesarean Section** – Percentages are derived from information collected from the North Carolina resident live birth certificate files. Numerators represent the number of live births where the method of delivery was reported as either a primary or a repeat Cesarean section. Denominators are all live births occurring to residents.
- 5. Teen Births (Ages 15-19) per 1,000 Female Residents** – Rates represent the number of live births per 1,000 women ages 15-19. Numerators include all live births occurring to residents ages 15-19. Population denominators for the rates are derived from resident population estimates for women ages 15-19 based on the National Center for Health Statistics Bridged Population files (see below).
- 6. Percentage of Resident Teen Births (Ages 15-19) that Were Repeat Pregnancies** - Percentages are derived from information collected from the North Carolina resident live birth certificate files. Numerators represent the number of live births occurring to female residents ages 15 to 19 where a history of prior birth, infant death, or other delivery outcome was recorded. Denominators are the total number of teen births.
- 7. Infant Deaths per 1,000 Live Births** - These death rates are derived from information collected from North Carolina resident birth and death certificates. Numerators are all deaths occurring to resident infants (less than 365 days old at the time of death) during the time period. Denominators include all resident live births recorded during the same time period. Rates represent the number of infant deaths per 1,000 live births.
- 8. Child Deaths per 100,000 Residents Ages 0-17** - These mortality rates are derived from information collected from North Carolina resident death certificates. Numerators are all resident deaths occurring to youth ages 0 through 17 during the time period. Population denominators for the rates are derived from resident population estimates for ages 0 through 17 based on the National Center for Health Statistics Bridged Population files (see below).
- 9. Age-Adjusted Cardiovascular Disease Death Rates** – These mortality rates are derived from information collected from North Carolina resident death certificates. Cardiovascular disease deaths include all resident deaths where heart disease was coded as the underlying (primary) cause of death. Deaths from 1999 forward were coded under the tenth revision of the International Classification of Diseases (ICD) – codes used were: I00-I02; I05-I15; I20-I28; I30-I51; I60-I78. Population denominators for the rates are derived from resident population estimates based on the National Center for Health Statistics Bridged Population files (see below). Age-adjusted death rates were calculated using the projected United States 2000 population as the standard. Age-adjusted cardiovascular disease death rates are per 100,000 resident population.
- 10. Age-Adjusted Heart Disease Death Rates** – These mortality rates are derived from information collected from North Carolina resident death certificates. Heart disease deaths include all resident deaths where heart disease was coded as the underlying (primary) cause of death. Deaths from 1999 forward were coded under the tenth revision of the ICD – codes used were: I00-I09; I11; I13; & I20-I51. Population denominators for the rates are derived from resident

population estimates based on the National Center for Health Statistics Bridged Population files. Age-adjusted death rates were calculated using the projected United States 2000 population as the standard. Age-adjusted heart disease death rates are per 100,000 resident population.

**11. Age-Adjusted Stroke Death Rates** – These mortality rates are derived from information collected from North Carolina resident death certificates. Stroke deaths include all resident deaths where cerebrovascular disease was coded as the underlying (primary) cause of death. Deaths from 1999 forward were coded under the tenth revision of the ICD – codes used were: I60-I69. Population denominators for the rates are derived from resident population estimates based on the National Center for Health Statistics Bridged Population files. Age-adjusted death rates were calculated using the projected United States 2000 population as the standard. Age-adjusted stroke death rates are per 100,000 resident population.

**12. Age-Adjusted Diabetes Death Rates** – These mortality rates are derived from information collected from North Carolina resident death certificates. Diabetes deaths include all resident deaths where diabetes mellitus was coded as the underlying (primary) cause of death. Deaths from 1999 forward were coded under the tenth revision of the ICD – codes used were: E10-E14. Population denominators for the rates are derived from resident population estimates based on the National Center for Health Statistics Bridged Population files (see below). Age-adjusted death rates were calculated using the projected United States 2000 population as the standard. Age-adjusted diabetes death rates are per 100,000 resident population.

**13. Age-adjusted Colorectal Cancer Death Rates** – These mortality rates are derived from information collected from North Carolina resident death certificates. Colon/rectum cancer deaths include all resident deaths where cancer of the colon or rectum was coded as the underlying (primary) cause of death. Deaths from 1999 forward were coded under the tenth revision of the ICD – codes used were: C18-C20 and C26.0. Population denominators for the rates are derived from resident population estimates based on the National Center for Health Statistics Bridged Population files (see below). Age-adjusted death rates were calculated using the projected United States 2000 population as the standard. Age-adjusted colon cancer rates are per 100,000 resident population.

**14. Age-Adjusted Trachea, Bronchus, & Lung Cancer Death Rates** – These mortality rates are derived from information collected from North Carolina resident death certificates. Lung cancer deaths include all resident deaths where lung, trachea, and bronchus were coded as the underlying (primary) cause of death. Deaths from 1999 forward were coded under the tenth revision of the ICD – codes used were: C33-C34. Population denominators for the rates are derived from resident population estimates based on the National Center for Health Statistics Bridged Population files (see below). Age-adjusted death rates were calculated using the projected United States 2000 population as the standard. Age-adjusted lung cancer death rates are per 100,000 resident population.

**15. Age-Adjusted Female Breast Cancer Incidence Rates** – Breast cancer incidence rates are based on data collected by the North Carolina Central Cancer Registry (CCR). Legislation passed in 1999 requires all healthcare providers that detect, diagnose, or treat cancer to report all cases to the CCR. The numerators for the breast cancer incidence rates are the number of newly diagnosed female breast cancer cases reported to the CCR. Population denominators for the rates are derived from resident female population estimates based on the National Center for Health Statistics Bridged Population files (see below). The breast cancer incidence rates are age-adjusted, per 100,000 resident population.

**16. Age-Adjusted Prostate Cancer Incidence Rates** - Prostate cancer incidence rates are based on data collected by the North Carolina Central Cancer Registry (CCR). Legislation passed in 1999 requires all healthcare providers that detect, diagnose, or treat cancer to report all cases to the CCR. The numerators for the prostate cancer incidence rates are the number of newly diagnosed prostate cancer cases reported to the CCR. Population denominators for the rates are derived from resident male population estimates based on the National Center for Health Statistics Bridged Population files (see below). The prostate cancer incidence rates are age-adjusted, per 100,000 resident population.

**17. Age-Adjusted Unintentional Motor Vehicle Injury Death Rates** – These mortality rates are derived from information collected from North Carolina resident death certificates. Motor Vehicle Injury deaths include all resident deaths where unintentional motor vehicle injury was coded as the underlying (primary) cause of death. Deaths from 1999 forward were coded under the tenth revision of the ICD – codes used were: V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, and V89.2. Population denominators for the rates are derived from resident population estimates based on the National Center for Health Statistics Bridged Population files (see below). Age-adjusted death rates were calculated using the

projected United States 2000 population as the standard. Age-adjusted unintentional motor vehicle death rates are per 100,000 resident population.

**18. Age-Adjusted Unintentional Injury (excluding MVA) Injury Death Rates** – These mortality rates are derived from information collected from North Carolina resident death certificates. Other unintentional Injury deaths include all resident deaths where unintentional injuries (other than motor vehicle injuries) were coded as the underlying (primary) cause of death. Deaths prior to 1999 were coded under the ninth revision of the International Classification of Diseases (ICD): E800-E807 and E826-E949. Deaths from 1999 forward were coded under the tenth revision of the ICD – codes used were: V01, V05-V06, V09.1, V09.3-V09.9, V10-V11, V15-V18, V19.3, V19.8-V19.9, V80.0-V80.2, V80.6-V80.9, V81.2-V81.9, V82.2-V82.9, V87.9, V88.9, V89.1, V89.3, V89.9, V90-V99, W00-X59, Y85, and Y86. Population denominators for the rates are derived from resident population estimates based on the National Center for Health Statistics Bridged Population files (see below). Age-adjusted death rates were calculated using the projected United States 2000 population as the standard. Age-adjusted other unintentional injury death rates are per 100,000 resident populations.

**19. Age-Adjusted Homicide Rates** – These mortality rates are derived from information collected from North Carolina resident death certificates. Homicide deaths include all resident deaths where assault/homicide was coded as the underlying (primary) cause of death. Deaths from 1999 forward were coded under the tenth revision of the ICD – codes used were: X85-Y09, Y871. Population denominators for the rates are derived from resident population estimates based on the National Center for Health Statistics Bridged Population files (see below). Age-adjusted death rates were calculated using the projected United States 2000 population as the standard. Age-adjusted homicide death rates are per 100,000 resident population.

**20. Age-Adjusted Suicide Death Rates** – These mortality rates are derived from information collected from North Carolina resident death certificates. Suicide deaths include all resident deaths where intentional self-harm (suicide) was coded as the underlying (primary) cause of death. Deaths from 1999 forward were coded under the tenth revision of the ICD – codes used were: X60-X84, Y870. Population denominators for the rates are derived from resident population estimates based on the National Center for Health Statistics Bridged Population files (see below). Age-adjusted death rates were calculated using the projected United States 2000 population as the standard. Age-adjusted suicide death rates are per 100,000 resident population.

**21. Number of Primary Care Physicians per 10,000 Residents** – Rates are based on data compiled by the North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research. Primary care physician numbers include those who are active in the profession and those with unknown activity status; inactive are excluded. Non-resident-in-training, non-federal MD's, and DO's are included. Federal physicians are those in the armed services, US Public Health Service, Indian Health Service, and the Veterans Administration. Primary care physicians are those who indicate a primary specialty of family practice, general practice, internal medicine, pediatrics, or OB/GYN.

**22. Number of Dentists per 10,000 Residents** - Rates are based on data compiled by the North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research. Dentists include all licensed by the NC Board of Dental Examiners who are in-state and who are active or have unknown activity status.

**23. Number of Registered Nurses per 10,000 Residents** – Rates are based on data compiled by the North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research. Registered Nurses includes those who are licensed and active within the profession or have unknown activity status.

**24. Number of Physician Assistants per 10,000 Residents** - Rates are based on data compiled by the North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research. Physician Assistants includes those who are licensed and active within the profession or have unknown activity status.

## **Population Data Presented in County Trend Reports:**

**Total Resident Population** – These figures are derived from population estimates generated by the U.S. Census Bureau as of July 1, 2015 (Vintage 2015 Postcensal estimates). These bridged-race population estimates are produced by the Population Estimates Program of the U.S. Census Bureau in collaboration with the National Center for Health Statistics (NCHS). The estimates were released by the Census Bureau and by NCHS on June 28, 2016. Data are available at: [http://www.cdc.gov/nchs/nvss/bridged\\_race.htm](http://www.cdc.gov/nchs/nvss/bridged_race.htm)

**Population Denominators Used for Calculating Death and Hospitalization Rates** – National Center for Health Statistics Bridged Population estimates were used for calculating all death rates included in this report. Rates for 2001-2009 time periods used revised Intercensal estimates. Estimates for 2010 used the Census estimate. Postcensal vintage 2015 estimates were used for 2011-2015 period. Data are available at: [http://www.cdc.gov/nchs/nvss/bridged\\_race.htm](http://www.cdc.gov/nchs/nvss/bridged_race.htm)