

## IV. Technical Notes

### Residence Allocation

Except as otherwise indicated, births and deaths in this report are based on place of residence. In the case of a birth or fetal death, residence is the usual residence of the mother. For deaths of people in long-term institutions (mental, penal, orphan, nursing home, rest home, etc.), the institution is considered the usual residence, provided the decedent has resided in the institution at least one year. College students and military personnel are considered residents of the college or military community.

North Carolina participates in an interchange program whereby nonresident birth and death certificates are sent to the state of residence. The National Center for Health Statistics acts as a control for this interchange through a report from each state that lists the number of each type of vital record sent to every other state. However, delays or omissions in the interchange undoubtedly occur.

### Occurrence Allocation

Items 10 and 19 of the tables allocate live births and deaths respectively to place of occurrence regardless of place of residence.

### Race and Ethnicity Allocation

Three categories, “White Non-Hispanic,” “African American Non-Hispanic,” and “Hispanic” are used in this report. For more reports containing more detailed racial breakdowns, please contact the State Center for Health Statistics. For births and fetal deaths, the child is considered to be the same race and ethnicity as the mother.

### Completeness of Registration of Vital Events

Completeness of registration is defined as the degree to which reported birth and death counts agree with the true counts in a given time frame. Birth registration, tested for completeness in 1940 and 1950, was found to be 86 and 96 percent complete respectively.<sup>1</sup> Death registration is believed to be even more complete than birth registration. Fetal death registration, tested for completeness in 1974, was found to be 99 percent complete.<sup>2</sup>

Delayed registration results in incomplete recording of vital events for a specific time period. Frequency counts in this report are based on 2018 events filed with the local registrar prior to April 1, 2019 and processed in the state office before the end of July 2019. Based on examinations of lagtimes in prior years, the number of calendar year events filed after April 1 of the subsequent year is considered negligible.

In addition to the above, a source of incompleteness in residence data could involve failure of other states to send data (electronically or paper transcripts) for North Carolina resident events occurring in their states. The extent to which this occurs is unknown.

### Accuracy of Items on Certificate

Vital Records maintains continuous surveillance of certificates to detect inconsistencies in related items (e.g., newborn’s name vs. sex). However, the true extent of bias and unreliability of vital records data is not known. One study by the State Center for Health Statistics has addressed the issue of the validity of selected birth certificate items, as compared with information recorded in the mother’s hospital medical record.<sup>3</sup>

## Missing Values

As a result of efforts to reconcile inconsistencies in the data and to complete unanswered items, missing values are rare for the characteristics included in this report. The following table shows the number of missing values in the statistical

files used to produce this report. In the case of race, marital status and method of delivery, most of the missing values are due to absence of these items on certificates from other states.

### Number of Missing Values by Item North Carolina 2018

#### Live Births

Sex .....	1
Birth Weight .....	29
Marital Status .....	55
Race .....	111
Mother Smoked During Pregnancy .....	36
Method of Delivery .....	38

#### Deaths

Age .....	3
Race .....	59
Sex .....	0

#### Fetal Deaths

Marital Status .....	3
Race .....	3