

2014 South Carolina Residence Data



Infant Mortality Highlights

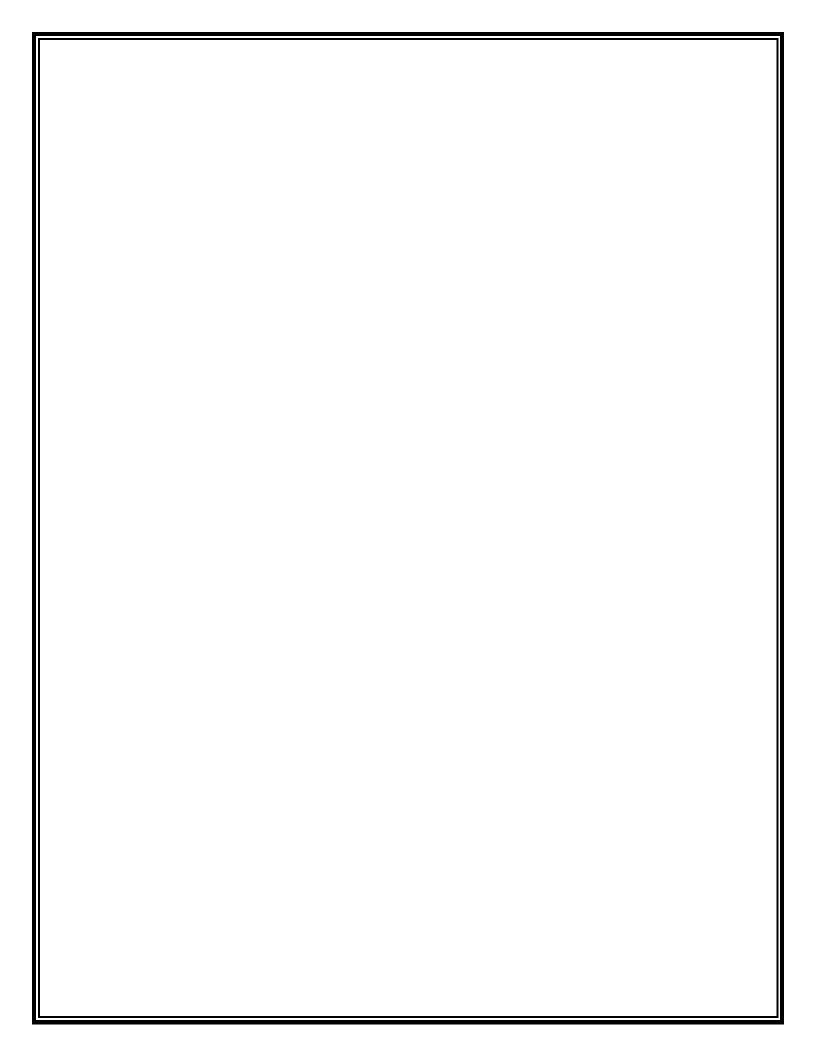
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Highlights of 2014 Infant Mortality Report

Summary:

The South Carolina infant mortality rate decreased from 6.9 infant deaths per 1,000 live births in 2013 to 6.5 infant deaths per 1,000 live births in 2014. This decrease in infant mortality is due to a large decrease in infant deaths among the white population in South Carolina, while there was an increase in infant mortality among minority populations (black and other races). This results in an increase in the racial disparity in infant mortality. In 2013 infant deaths occurred among racial minorities 1.7 times as often as among whites, which in 2014 this increased to infant deaths among racial minorities occurring 2.1 times as often as among whites.

This overall decrease in infant mortality from 2013 to 2014 is driven by a decrease in infant deaths during the first 27 days of the infant's life (the neonatal period). Neonatal mortality decreased substantially among the white population while increasing among the racial minority populations. Mortality rates remained steady from 2013 to 2014 during the post-neonatal period (28-364 days of life) overall and across races.

There were fewer very low birth weight (less than 1,500 grams or 3 pounds, 5 ounces) and extremely preterm births (less than 32 weeks gestation) in South Carolina in 2014, compared to 2013. Furthermore, there was a decrease in birthweight-specific mortality among very low birth weight infants from 2013 to 2014. Data collected by the South Carolina Birth Defects Program indicate that there were fewer birth defects among live births that occurred in 2014 compared to 2013. However, the number of neural tube defects and critical congenital heart defects, which are considered to be high-risk, did not decrease from 2013 to 2014. These results for very low birth weight, extremely preterm, and birth defects indicate that there were fewer very high-risk births in South Carolina in 2014 than there were in 2013 and those that were very high-risk were more likely to survive to their first birthday in 2014 than in 2013.

1. Changes from 2013 to 2014 in SC:

The 2014 South Carolina infant mortality rate is 6.5 infant deaths per 1,000 live births, a 5.8% decrease from previous year's rate of 6.9. This is the lowest infant mortality rate on record for South Carolina. There was a substantial decrease in infant mortality among white women (14.5% decrease) and a small increase in infant mortality among black and other women (4.2%). This led to an increase in the racial disparity in infant mortality from 2013 to 2014, with minority infants dying at 1.73 times the rate of white infants in 2013 and minority infants dying at 2.11 times the rate of white infants in 2014.

For white women, there was a large drop in deaths in the neonatal period (first 27 days of life; 18.9% decrease from 2013 to 2014) and a small drip in deaths in the postneonatal period (28-364 days of life; 5.6% decrease from 2013 to 2014). For black and other women, there was a 4.2% increase in neonatal deaths and a 3.2% increase in postneonatal deaths from 2013 to 2014. Overall, there was a 6.5% decrease in neonatal mortality and a no change in postneonatal mortality from 2013 to 2014.

Source: SC DHEC: PHSIS – Division of Biostatistics

Table 1. Neonatal and Postneonatal Mortality Rates¹ by Race²

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|--------------------|--|--------|------|--|--|--|--|--|--|--|
| Neonatal Mortality | | | | | | | | | | |
| Year | Year Total White | | | | | | | | | |
| 2013 | 4.6 | 3.7 | 6.4 | | | | | | | |
| 2014 | 4.3 | 3.0 | 6.8 | | | | | | | |
| Percent Change | -6.5% | -18.9% | 6.2% | | | | | | | |
| | | | | | | | | | | |

| Postneonatal Mortality | | | | | | | | | | |
|------------------------|-------|--------|---------------|--|--|--|--|--|--|--|
| Year | Total | White | Black & Other | | | | | | | |
| 2013 | 2.2 | 1.8 | 3.1 | | | | | | | |
| 2014 | 2.2 | 1.7 | 3.2 | | | | | | | |
| Percent | 0.0% | -5.6% | 3.2% | | | | | | | |
| Change | 0.076 | -5.070 | 3.270 | | | | | | | |

Notes: ¹Rates per 1,000 live births

²Race of mother

The number of deaths to Hispanic infants decreased from 2013 to 2014 while the overall number of births to Hispanic women increased, resulting in a decrease in the Hispanic infant mortality rate. The Hispanic infant mortality rate in 2014 (4.6) was very close to the white infant mortality rate in 2014 (4.7) and much lower than black and other race infant mortality rate in 2014 (9.9).

Table 2. Infant mortality rate to Hispanic mothers

| Year | Births | Deaths | Rate |
|----------------|--------|--------|--------|
| 2013 | 4,360 | 25 | 5.7 |
| 2014 | 4,568 | 21 | 4.6 |
| Percent Change | 4.8% | -16.0% | -19.3% |

2. IMR Disparity and Trends in US and Select States:

Table 3. IMR by race in US and select states

| rable of mire by | able 3. INIT by face in 60 and select states | | | | | | | | | | | |
|------------------|--|-------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 2011 | | 2012 2013 | | | 2014 | | | | | | |
| | Total | White | Black | Total | White | Black | Total | White | Black | Total | White | Black |
| United States | 6.1 | 5.1 | 11.5 | 6.0 | 5.1 | 11.2 | 6.0 | 5.1 | 11.1 | | | |
| South Carolina | 7.4 | 5.0 | 12.2 | 7.6 | 5.3 | 12.5 | 6.9 | 5.5 | 10.0 | 6.5 | 4.7 | 10.2 |
| Alabama | 8.1 | 6.1 | 13.0 | 8.9 | 6.6 | 14.4 | 8.6 | 6.9 | 12.6 | | | |
| Georgia | 6.8 | 5.8 | 11.4 | 6.7 | 5.3 | 10.5 | 7.2 | 5.5 | 11.1 | | | |
| Mississippi | 9.4 | 6.5 | 13.2 | 8.8 | 5.4 | 13.1 | 9.7 | 7.3 | 12.6 | | | |
| North Carolina | 7.2 | 5.5 | 12.9 | 7.4 | 5.5 | 13.9 | 7.0 | 5.5 | 12.5 | | | |
| Tennessee | 7.4 | 6.0 | 12.8 | 7.2 | 5.9 | 12.1 | 6.8 | 5.3 | 11.6 | | | |

^{*}Total may include unknown race

South Carolina generally has an infant mortality rate that's near the average of other Southeastern states, but usually higher than the rate in both Georgia and North Carolina. At this

Source: SC DHEC: PHSIS - Division of Biostatistics

time, no other Southeastern states have released their 2014 infant mortality rate statistics. However, in 2013 South Carolina's infant mortality rate was lower than both Georgia's infant mortality rate (7.2 deaths per 1,000 live birth) and North Carolina's infant mortality rate (7.0 deaths per 1,000 live births).

3. Leading Causes of Infant Deaths in 2014:

The four leading causes of death in SC remained the same in 2014 as they were in 2013, but their order has changed slightly. In descending order for 2014, the leading causes of infant death were:

- Disorders related to short gestation and low birthweight (preterm birth and low birthweight)
- Congenital malformation, deformation, etc. (birth defects)
- Accidents
- Sudden Infant Death Syndrome (SIDS)

From 2013 to 2014 there was a 73.9% increase in deaths attributed to accidents and a 11.4% decrease in deaths attributed to SIDS, moving deaths due to accidents ahead of deaths due to SIDS in 2014. In 2014, 34 of the 40 accidental deaths were due to accidental suffocation and strangulation in bed and other accidental threats to breathing. There were a total of 77 sudden unexplained infant deaths in 2014, compared to 71 in 2013.

From 2013 to 2014 there was a 23.3% decrease in infant deaths attributed to birth defects, dropping from 73 deaths in 2013 to 56 deaths in 2014. Additional clinical causes of infant death that decreased meaningfully from 2013 to 2014 include preterm birth and low birthweight, maternal complications of pregnancy, bacterial sepsis, and diseases of the circulatory system.

Table 4. Leading causes of death comparison

| Cause of Infant Death Ranked by 2014 Data (ICD-10 Codes) | 2013 | 2014 | % Change |
|---|------|------|----------|
| Total Infant Deaths | 389 | 372 | -4.4% |
| | | | |
| Disorders related to short gestation and low birthweight, NEC (P07) | 76 | 71 | -6.6% |
| Congenital malformations, deformations, etc. (Q00-Q99) | 73 | 56 | -23.3% |
| Accidents (V01-X59, Y85-Y86) | 23 | 40 | 73.9% |
| Sudden infant death syndrome (R95) | 35 | 31 | -11.4% |
| Fetus and newborn affected by maternal complications of pregnancy (P01) | 20 | 18 | -10.0% |
| Newborn affected by complication of placenta, etc. (P02) | 12 | 16 | 33.3% |
| Necrotizing enterocolitis of newborn (P77) | 9 | 9 | 0.0% |
| Bacterial sepsis of newborn (P36) | 11 | 8 | -27.3% |
| Diseases of circulatory system (I00-I99) | 9 | 6 | -33.3% |
| Neonatal hemorrhage (P50-P52, P54) | 4 | 6 | 50.0% |
| | | | |
| All other causes | 117 | 111 | -5.1% |

Source: SC DHEC: PHSIS – Division of Biostatistics

Table 5. Breakdown of infant deaths due to accidents

| | | | | | | | | Total |
|--|------|------|------|------|------|------|------|-------------|
| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | (2008-2014) |
| Accidental suffocation and strangulation in bed (W75, W84) | 37 | 22 | 25 | 21 | 39 | 21 | 31 | 196 |
| Other accidental threats to breathing | 2 | 3 | 2 | 2 | 0 | 2 | 3 | 14 |
| Transportation | 1 | 5 | 1 | 3 | 1 | 0 | 3 | 14 |
| Drowning | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 |
| Poison | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 3 |
| Other accidents | 1 | 2 | 4 | 2 | 1 | 0 | 1 | 11 |
| Total | 41 | 33 | 32 | 30 | 41 | 23 | 40 | 240 |

Table 6. Breakdown of Sudden Unexplained Infant Deaths

| rable of Breakdown of Gudden Ghexplanica infant Beating | | | | | | | | | |
|--|------|------|------|------|------|------|------|-------------|--|
| | | | | | | | | Total | |
| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | (2008-2014) | |
| Accidental suffocation and strangulation | | | | | | | | | |
| in bed (W75, W84) | 37 | 22 | 25 | 21 | 39 | 21 | 31 | 196 | |
| | | | | | | | | | |
| Sudden Infant Death Syndrome (R95) | 57 | 44 | 49 | 45 | 33 | 35 | 31 | 294 | |
| Hanging, strangulation, and suffocation, undetermined intent (Y20) | 4 | 5 | 4 | 2 | 1 | 9 | 4 | 29 | |
| Other ill-defined and unspecified causes | | | | | | | | | |
| of mortality (R99) | 5 | 8 | 8 | 10 | 12 | 6 | 11 | 60 | |
| Total | 103 | 79 | 86 | 78 | 85 | 71 | 77 | 579 | |

4. Risk Factors for Infant Deaths in 2013:

In 2014 there were fewer births to teen mothers than there were in 2013 (2.14% of all births in 2014 compared to 2.31% of all births in 2013), especially among minority women (2.79% of births in 2014 compared to 3.12% of births in 2013). There was an increase obesity prior to pregnancy among mothers delivering live births 2014 (28.7% of all live births to obese mothers) compared to 2013 (27.8% of all live births to obese mothers). This increase in obesity prior to pregnancy was observed among white mothers (23.7% of births in 2014 compared to 22.8% of birth in 2013) and minority mothers (38.2% of births in 2014 compared to 37.2% of births in 2013).

Table 7. Prevalence of selected risk factors for infant death in 2013 and 2014

| | 20 | 13 | 2014 | | | | | | | |
|-------------------------|----------|--------------|---------|--------|--|--|--|--|--|--|
| | Percent | Number | Percent | Number | | | | | | |
| Mother <18 Years of Age | | | | | | | | | | |
| Total | 2.31% | 1,313 | 2.14% | 1,235 | | | | | | |
| White | 1.89% | 704 | 1.81% | 685 | | | | | | |
| Black and Other | 3.12% | 608 | 2.79% | 549 | | | | | | |
| | Obese Pr | ior to Pregn | ancy | | | | | | | |
| Total | 27.8% | 15,751 | 28.7% | 16,509 | | | | | | |
| White | 22.8% | 8,480 | 23.7% | 8,988 | | | | | | |
| Black and Other | 37.2% | 7,262 | 38.2% | 7,513 | | | | | | |

Source: SC DHEC: PHSIS – Division of Biostatistics