2015
South Carolina
Residence Data

Infant Mortality
Highlights

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Highlights of 2015 Infant Mortality Report

1. Summary:

The South Carolina infant mortality rate increased from 6.5 infant deaths per 1,000 live births in 2014 to 7.0 infant deaths per 1,000 live births in 2015. This increase in infant mortality is due to a large increase in infant deaths among the minority population (black and other races) in South Carolina and a small increase in infant deaths among the white population in South Carolina. This results in an increase in the racial disparity in infant mortality. In 2014 infant deaths occurred among racial minorities 2.1 times as often as among whites. This disparity increased in 2015 to infant deaths among racial minorities occurring 2.3 times as often as among whites. Infant mortality remained nearly constant among infants born to Hispanic mothers, with the total number of births and the number of infant deaths both increasing slightly.

Table 1. Infant mortality rate to white mothers

Year	Births	Deaths	Rate
2014	37,923	177	4.7
2015	38,459	185	4.8
Percent Change	1.4%	4.3%	2.1%

Table 2. Infant mortality rate to black and other race mothers

Year	Births	Deaths	Rate
2014	19,660	195	9.9
2015	19,611	219	11.2
Percent Change	-0.2%	12.3%	13.1%

Table 3. Infant mortality rate to Hispanic mothers

Year	Births	Deaths	Rate
2014	4,568	21	4.6
2015	4,852	22	4.5
Percent Change	6.2%	4.8%	-2.2%

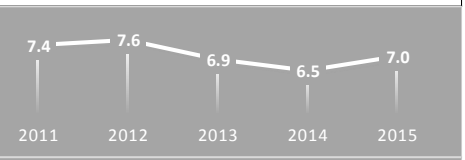
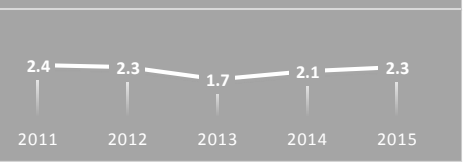
This overall increase in infant mortality from 2014 to 2015 is driven by increases in infant deaths during both the neonatal period (first 27 days of the infant's life) and the post-neonatal period (28-364 days of life). The increases in both neonatal and post-neonatal mortality were larger among minority populations than among the white population.

There were increases in very low birth weight (less than 1,500 grams or 3 pounds, 5 ounces), overall low birth weight births (less than 2,500 grams or 5 pounds, 8 ounces), extremely preterm births (less than 32 weeks gestation), and overall preterm births (less than 37 weeks gestation) in South Carolina in 2015, compared to 2014. Furthermore, there was an increase in birthweight-specific mortality among very low birth weight infants from 2014 to 2015, especially among the white population.

The number of deaths due to birth defects increased by 28.6% from 2014 to 2015. Data collected by the South Carolina Birth Defects Program indicate that there was a slight (3.5%) increase in birth defects among live births that occurred in 2015 compared to 2014. However, the number of

neural tube defects and critical congenital heart defects, which are considered to be high-risk, increased more substantially from 2014 to 2015. Therefore, infants with birth defects who died prior to being discharged from the hospital increased by 77% (from 35 deaths to 62 deaths) from 2014 to 2015. These results for very low birth weight, extremely preterm, and birth defects indicate that there were more very high-risk births in South Carolina in 2015 than there were in 2014 and that those very high-risk infants were less likely to survive to their first birthday in 2015 than in 2014.

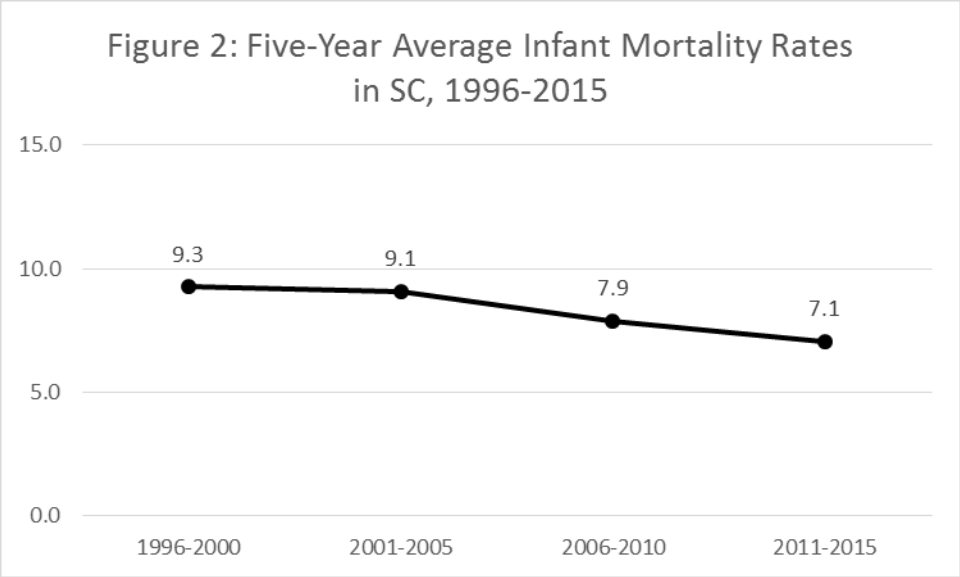
Figure 1: Comparison of South Carolina Infant Mortality from 2014 to 2015.

	Total Infant Mortality Rate	Neonatal Mortality Rate	Postneonatal Mortality Rate	Five Year Total Infant Mortality Trend
All Races:	↑	↑	↑	
White:	↑	↑	→	
African American and Other:	↑	↑	↑	
Racial Disparity:	↑	↑	↑	

Source: SC DHEC: PHSIS – Division of Biostatistics

2. IMR Trend in South Carolina:

Because infant mortality is a rare event, year-to-year changes in infant mortality can be subject to instability and statistical fluctuation. Therefore, combining several years can give a more accurate trajectory of infant mortality overall. Examining five-year average trends in the SC infant mortality rate demonstrate a clear, substantial reduction in infant mortality over the past two decades.



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

The race-specific infant mortality rates among both white and black women in SC is nearly identical to the US race-specific infant mortality rates. In 2012 SC had the fifth lowest infant mortality rate in the Southeastern US (behind Florida, Georgia, Tennessee, and North Carolina). By 2014 SC had the second lowest infant mortality rate in the Southeastern US (behind Florida). Only two Southeastern states (Georgia and Florida) have released their 2015 infant mortality rates at this time. Georgia's rate is higher than SC's while Florida's rate is lower that SC's rate.

Table 4. IMR by race in US and select states

	2012			2013			2014			2015		
	Total	**White**	**Black**	**Total**	**White**	**Black**	**Total**	**White**	**Black**	**Total**	**White**	**Black**
United States	6.0	5.1	11.2	6.0	5.1	11.1	5.8	4.8	11.4			
South Carolina	**7.6**	**5.3**	**12.5**	**6.9**	**5.5**	**10.0**	**6.5**	**4.7**	**10.2**	**7.0**	**4.8**	**11.6**
Alabama	8.9	6.6	14.4	8.6	6.9	12.6	8.7	6.0	13.9			
Florida	6.3	4.7	11.5	6.2	4.6	11.1	6.1	4.5	10.8	6.1	4.5	11.0
Georgia	6.7	5.3	10.5	7.2	5.5	11.6	7.7	5.5	13.3	7.8	5.8	13.1
Mississippi	8.8	5.4	13.1	9.7	7.3	12.6	8.2	5.9	11.2			
North Carolina	7.4	5.5	13.9	7.0	5.5	12.5	7.1	5.1	12.8			
Tennessee	7.2	5.9	12.1	6.8	5.3	11.6	6.9	5.2	12.4			

*Total may include unknown race

Source: SC DHEC: PHSIS – Division of Biostatistics

4. Leading Causes of Infant Deaths in 2014:

The four leading causes of death in SC remained the same in 2015 as they were in 2014. In descending order for 2014, the leading causes of infant death were:

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

From 2014 to 2015 there was a 28.6% increase in deaths attributed to birth defects and an 11.3% increase in deaths due to preterm birth and low birth weight. Additionally, there was 9.7% reduction in deaths attributed to SIDS and a 5.0% reduction in deaths due to accidents. However, in 2015, 36 of the 38 accidental deaths were due to accidental suffocation and strangulation in bed and other accidental threats to breathing, all of which were related to infant sleeping. There were a total of 78 sudden unexplained infant deaths in 2014, compared to 77 in 2014.

Table 5. Leading causes of death comparison

Cause of Infant Death Ranked by 2015 Data (ICD-10 Codes)	2014	2015	% Change
Total Infant Deaths	**372**	**405**	**8.9%**
Disorders related to short gestation and low birthweight, NEC (P07)	71	79	11.3%
Congenital malformations, deformations, etc. (Q00-Q99)	56	72	28.6%
Accidents (V01-X59, Y85-Y86)	40	38	-5.0%
Sudden infant death syndrome (R95)	31	28	-9.7%
Fetus and newborn affected by maternal complications of pregnancy (P01)	18	24	33.3%
Newborn affected by complication of placenta, etc. (P02)	16	13	-18.8%
Atelectasis (P28.0-P28.1)	5	11	120.0%
Diseases of circulatory system (I00-I99)	9	9	0.0%
Respiratory distress of newborn (P22)	1	8	700.0%
Assault (homicide) (X85-Y09,Y87.1)	3	8	166.7%
All other causes	111	115	3.6%

Table 6. Breakdown of infant deaths due to accidents

	2009	2010	2011	2012	2013	2014	2015	Total (2009-2015)
Accidental suffocation and strangulation in bed (W75, W84)	22	25	21	39	21	31	35	194
Other accidental threats to breathing	3	2	2	0	2	3	1	13
Transportation	5	1	3	1	0	3	0	13
Drowning	0	0	1	0	0	1	0	2
Poison	1	0	1	0	0	1	0	3
Other accidents	2	4	2	1	0	1	2	12
Total	33	32	30	41	23	40	38	237

Table 7. Breakdown of Sudden Unexplained Infant Deaths

	2009	2010	2011	2012	2013	2014	2015	Total (2009-2015)
Accidental suffocation and strangulation in bed (W75, W84)	22	25	21	39	21	31	35	194
Sudden Infant Death Syndrome (R95)	44	49	45	33	35	31	28	265
Hanging, strangulation, and suffocation, undetermined intent (Y20)	5	4	2	1	9	4	4	29
Other ill-defined and unspecified causes of mortality (R99)	8	8	10	12	6	11	11	66
Total	79	86	78	85	71	77	78	554