



**2009
South Carolina
Residence Data**



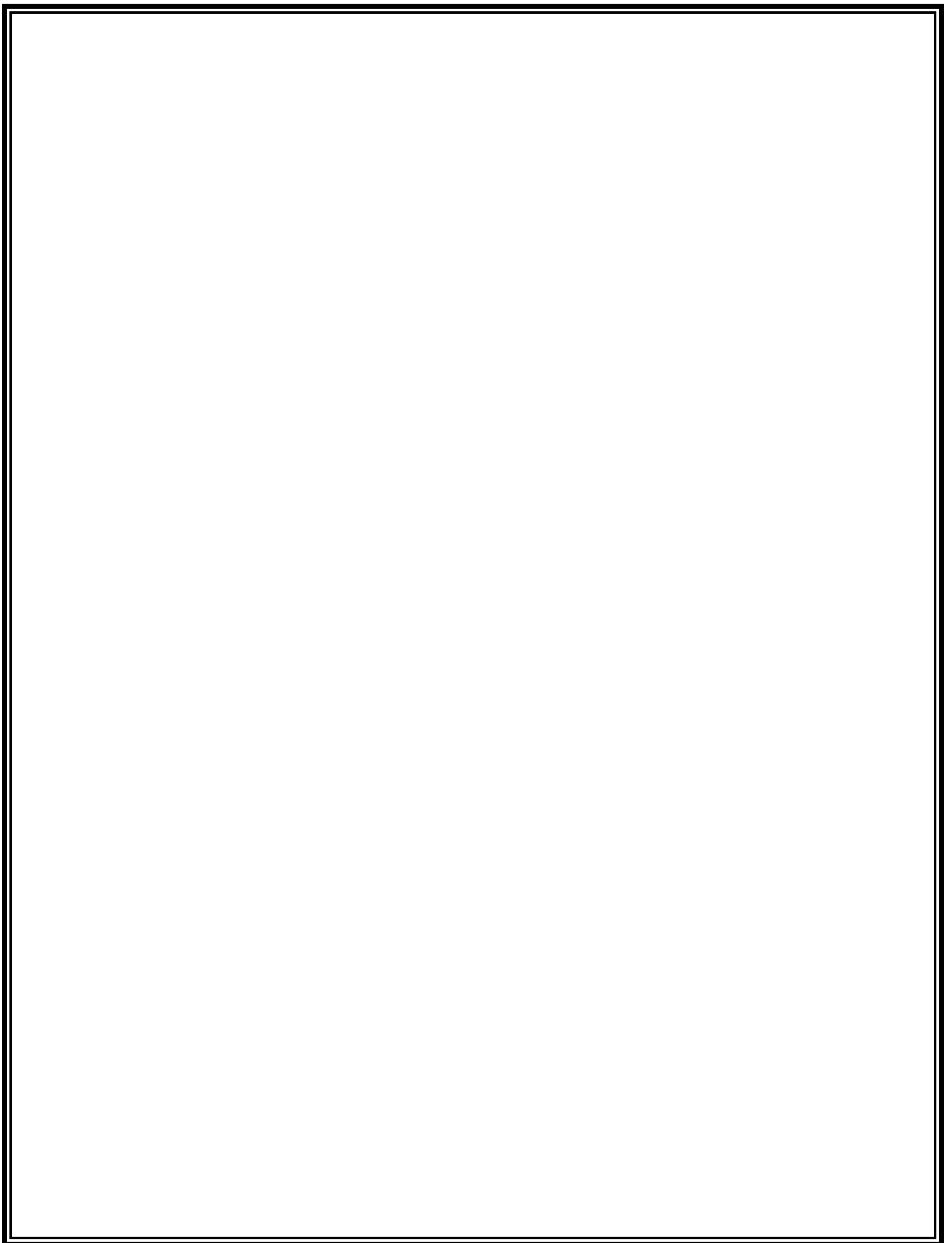
**Infant Mortality
Highlights**

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Highlights of 2009 Infant Mortality

1. Changes from 2008 to 2009 in SC:

The 2009 South Carolina infant mortality rate is 7.1 infant deaths per 1,000 live births, a 11.3% decrease from previous year's rate of 8.0. This overall rate is due to a 14.8% decrease of infant death in White race group from 6.1 per 1,000 live births in 2008 to 5.2 in 2009 and a 7.9% decrease in Black and Other group from a rate of 11.4 per 1,000 live births in 2008 to 10.5 per 1,000 live births in 2009.

The neonatal mortality rate for White infants decreased by 13.9% from the last year. The neonatal mortality rate for Black & Other decreased by 11.0%. Thus, the neonatal mortality for all races decreased by 12.2% from 4.9 in 2008 to 4.3 in 2009.

The postneonatal mortality rate for White infants decreased by 12.0% and the postneonatal mortality for Black and Other decreased by 2.4% from 2008. The overall postneonatal mortality for all races decreased by 9.7% from 3.1 to 2.8 deaths per 1,000 live births in 2009.

Table 1. Neonatal and Postneonatal mortality

Neonatal Mortality			
Year	Total	White	Black & Other
2008	4.9	3.6	7.3
2009	4.3	3.1	6.5
Percent Change	-12.2%	-13.9%	-11.0%
Postneonatal Mortality			
Year	Total	White	Black & Other
2008	3.1	2.5	4.1
2009	2.8	2.2	4.0
Percent Change	-9.7%	-12.0%	-2.4%

Notes: Rates are per 1,000 live births;
Race of mother is used

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

Table 2. IMR by race in US and select states

	2006			2007			2008			2009		
	Total	White	Black	Total	White	Black	Total	White	Black	Total	White	Black
United States	6.7	5.6	13.3	6.8	5.7	12.9	6.6	5.5	12.7	6.4	5.3	12.7
South Carolina	8.4	5.7	13.2**	8.5	6.2	12.9**	8.0	6.1	11.4**	7.1	5.2	10.5**
Alabama	9.0	6.7	14.3	10.0	8.0	14.6	9.5	7.6	14.1	8.2	6.2	13.3
Georgia	8.1	6.0	12.8	7.9	5.8	12.8	8.0	7.3	13.8			
Mississippi	10.5	6.9	14.4**	10.1	6.6	14.1**	9.9	7.4	12.9**	10.0	7.0	13.6
North Carolina	8.1	6.0	13.6**	8.5	6.3	13.9**	8.2	6.0	13.5**	7.9	5.4	14.1**
Tennessee	8.7	6.6	16.8	8.3	6.2	16.4	8.0	6.1	15.0	8.0	6.0	16.0

*Includes unknown race

** Includes other race

3. Leading cause of infant deaths in 2009:

The top two leading causes of infant death remain the same as in 2008. In descending order for 2009, they are,

- “Congenital malformations, deformations, etc. (ICD-10 codes Q00-Q99)”
- “Disorders related to short gestation and low birthweight (ICD-10 code P07)”.

Infant death caused by “Congenital malformations, deformations, etc. (ICD-10 codes Q00-Q99)” decreased by 15.5% in 2009 from 84 in 2008 to 71 in 2009. The cause “Disorders related to short gestation and low birthweight (ICD-10 code P07)” decreased by 1.4% from 69 in 2008 to 68 in 2009

The third leading cause in 2009 is again

- “Sudden infant death syndrome (ICD-10 code R95)”

The number of Infant deaths caused by “Sudden infant death syndrome (ICD-10 code R95)” decreased by 22.8% from 57 in 2008 to 44 in 2009.

Table 3. Leading causes of death comparison

Cause of Infant Death Ranked by 2009 Data (ICD-10 Codes)	2008	2009	% Change
Total Infant Death	504	430	-14.7%
Congenital malformations, deformations, etc. (Q00-Q99)	84	71	-15.5%
Disorders related to short gestation and low birthweight, NEC (P07)	69	68	-1.4%
Sudden infant death syndrome (R95)	57	44	-22.8%
Accidents (V01-X59, Y85-Y86)	41	33	-19.5%
Fetus and newborn affected by maternal complications of pregnancy (P01)	53	28	-47.2%
Bacterial sepsis of newborn (P36)	14	14	0.0%
Newborn affected by complication of placenta, ect. (P02)	12	13	8.3%
Neonatal hemorrhage (P50-P52, P54)	8	11	37.5%
Diseases of circulatory system (I00-I99)	14	10	-28.6%
Assault (Homicide) (X85-Y09, Y87.1)	6	9	50.0%
All other causes	146	129	-11.6%

4. Infant Mortality Rate to Hispanic Mother

Infant mortality rate to Hispanic mother in 2009 is 5.6 per 1,000 live births, a 6.1% decrease from the previous year.

Table 4. Infant mortality rate to Hispanic mother

Year	Births	Deaths	Rate
2008	6,229	37	5.9
2009	5,557	31	5.6
Percent Change	-10.8%	-16.2%	-6.1%

5. Breakdown of Infant Deaths due to Accidents

Table 5. Breakdown of Infant Deaths due to Accidents

	2003	2004	2005	2006	2007	2008	2009	Total (2003-2009)
Accidental suffocation and strangulation in bed	10	10	14	22	34	37	22	149
Other accidental threats to breathing	2	6	4	5	2	2	3	24
Transportation	0	1	3	1	3	1	5	14
Drowning	0	0	4	2	0	0	0	6
Poison	1	0	2	1	1	0	1	6
Other accidents	0	4	1	2	3	1	2	13

6. Trends in Multiple Births in SC

Table 6. Multiple birth trends in SC, 2005–2009, All Race

Year	Singleton Births	Singleton Deaths	Infant Mortality Rate*	Twin Births***	Twin Deaths	Infant Mortality Rate*	Higher Order (3+) Births	Higher Order (3+) Deaths	Infant Mortality Rate*	Total Births**	Total Deaths**	Infant Mortality Rate*
2005	55,703	463	8.3	1,771	82	46.3	64	4	62.5	57,538	549	9.5
2006	60,110	454	7.6	2,018	53	26.3	62	8	129.0	62,191	520	8.4
2007	60,783	473	7.8	2,059	63	30.6	91	1	11.0	62,933	538	8.5
2008	60,954	420	6.9	2,071	75	36.2	52	9	173.1	63,077	504	8.0
2009	58,515	377	6.4	2,072	48	23.2	95	4	42.1	60,682	430	7.1
Total	296,065	2,187	7.4	9,991	321	32.1	364	26	71.4	306,421	2,541	8.3

* Rates are per 1,000 births. Rates calculated with 20 or fewer deaths are unreliable and should be used cautiously

** Includes Unknown Birth Number

*** Twin births do not include twin fetal deaths

7. Statistically significant changes in maternal characteristics by Race¹ in SC from 2008 to 2009:

Table 7.

	2008		2009		Z-TEST	p-Value
	Percent	Number	Percent	Number		
MOTHER < 18 YEARS						
TOTAL ²	4.16	2,627	3.77	2,289	-3.5354	0.0004
White	2.95	1,203	2.79	1,097	-1.4132	0.1576
Black & Other	6.38	1,424	5.60	1,192	-3.4249	0.0006
< 5 PRENATAL CARE VISITS						
TOTAL ²	6.15	3,882	5.80	3,518	-2.6475	0.0081
White	5.21	2,123	5.04	1,983	-1.1216	0.2620
Black & Other	7.87	1,757	7.20	1,532	-2.6625	0.0078
PRENATAL CARE BEGAN FIRST TRIMESTER						
TOTAL ²	68.98	43,513	70.33	42,675	5.1316	0.0000
White	72.57	29,545	74.03	29,129	4.6683	0.0000
Black & Other	62.48	13,946	63.52	13,520	2.2539	0.0242
KOTELCHUCK INDEX: ADEQUATE, ADEQUATE PLUS						
TOTAL ²	71.63	45,185	73.81	44,791	8.5980	0.0000
White	74.29	30,244	76.23	29,994	6.3634	0.0000
Black & Other	66.82	14,916	69.39	14,769	5.7436	0.0000
KOTELCHUCK INDEX: INTERMEDIATE						
TOTAL ²	7.24	4,565	6.38	3,869	-6.0109	0.0000
White	7.59	3,092	6.67	2,625	-5.0724	0.0000
Black & Other	6.59	1,470	5.84	1,244	-3.2013	0.0014
KOTELCHUCK INDEX: INADEQUATE						
TOTAL ²	20.29	12,799	18.86	11,447	-6.3236	0.0000
White	17.29	7,040	16.19	6,372	-4.1584	0.0000
Black & Other	25.79	5,756	23.81	5,067	-4.7862	0.0000
HISPANIC MOTHER						
TOTAL ²	9.88	6,229	9.16	5,557	-4.2996	0.0000
White	14.74	6,002	13.55	5,331	-4.8446	0.0000
Black & Other	1.02	227	1.06	226	0.4617	0.6443

¹ Race of Mother

² Includes unknown races

Table 7 on previous page is about maternal characteristics selected from table 9 in “South Carolina 2009 Infant Mortality and Birth Characteristics”(a more detailed publication by the Division of Biostatistics).

Z-test in table 7 in the second to the last column indicates the change in 2009 vs. 2008 is either increase or decrease. If Z-test value is positive, then there was an increase in 2009 vs. 2008; and a decrease otherwise.

The *P* value in the last column is for statistical evaluation. If *P* value is less than 0.05, then the conclusion of “a statistically significant change (either decrease or increase)” can be derived.

For example, in “MOTHER < 18 YEARS” category, there was a statistically significant decrease in percent of mothers younger than 18 years in 2009 vs. 2008 for All Races with *P* values of 0.0004.

8. Infant death leading causes of death, 2007 to 2009:

Table 8.1 South Carolina Infant Death, Resident Data, 2007-2009, All races

Rank	Cause of death	Number	Mortality rate*
	.....Total Infant Deaths.....	1472	7.9
1	Congenital Malformations, etc. (Q00-Q99).....	240	1.3
2	Disorders Related to Short Gestation, etc. (P07).....	225	1.2
3	Sudden Infant Death Syndrome (R95).....	147	0.8
4	Newborn Affected by Maternal Comp of Pregnancy (P01).....	119	0.6
5	Accidents (V01-X59,Y85-Y86).....	117	0.6
6	Bacterial Sepsis of Newborn (P36).....	43	0.2
7	Newborn Affected by Comp of Placenta, etc. (P02).....	42	0.2
8	Disease of Circulatory System (I00-I99).....	34	0.2
9	Respiratory Distress of Newborn (P22).....	30	0.2
10	Neonatal hemorrhage (P50-P52, P54).....	26	0.1
	.....All Other Causes.....	449	2.4

Table 8.2 South Carolina Infant death, Resident Data, 2007-2009, White

Rank	Cause of death	Number	Mortality rate*
	.....All White Infant Deaths.....	686	5.7
1	Congenital Malformations, Etc. (Q00-Q99).....	148	1.2
2	Sudden Infant Death Syndrome (R95).....	83	0.7
3	Disorders Related To Short Gestation, Etc. (P07).....	81	0.7
4	Accidents (V01-X59,Y85-Y86).....	68	0.6
5	Newborn Affected By Maternal Comp Of Pregnancy (P01).....	37	0.3
6	Disease of Circulatory System (I00-I99).....	18	0.1
7	Bacterial Sepsis of Newborn (P36).....	17	0.1
8	Newborn Affected by Comp of Placenta, etc. (P02).....	15	0.1
9	Intrauterine Hypoxia And Birth Asphyxia (P20-P21).....	14	0.1
10	Respiratory Distress of Newborn (P22).....	13	0.1
11	Neonatal hemorrhage (P50-P52, P54).....	13	0.1
	.....All Other Causes.....	179	1.5

Table 8.3 South Carolina Infant death, Resident Data, 2007-2009, Black and Others

Rank	Cause of death	Number	Mortality rate*
	.....All Black And Other Infant Deaths.....	785	11.9
1	Disorders Related To Short Gestation, Etc. (P07).....	144	2.2
2	Congenital Malformations, Etc. (Q00-Q99).....	91	1.4
3	Newborn Affected By Maternal Comp Of Pregnancy (P01).....	82	1.2
4	Sudden Infant Death Syndrome (R95).....	64	1.0
5	Accidents (V01-X59,Y85-Y86).....	49	0.7
6	Newborn Affected By Comp Of Placenta, Etc. (P02).....	27	0.4
7	Bacterial Sepsis Of Newborn (P36).....	26	0.4
8	Respiratory Distress of Newborn (P22).....	17	0.3
9	Disease Of Circulatory System (I00-I99).....	16	0.2
10	Necrotizing Enterocolitis of Newborn (P77).....	16	0.2
	.....All Other Causes.....	253	3.8

* Rates are per 1,000 live births.

(End Of This Highlight Package)