



**2004  
South Carolina  
Residence Data**

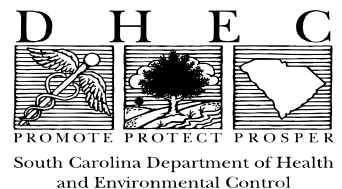


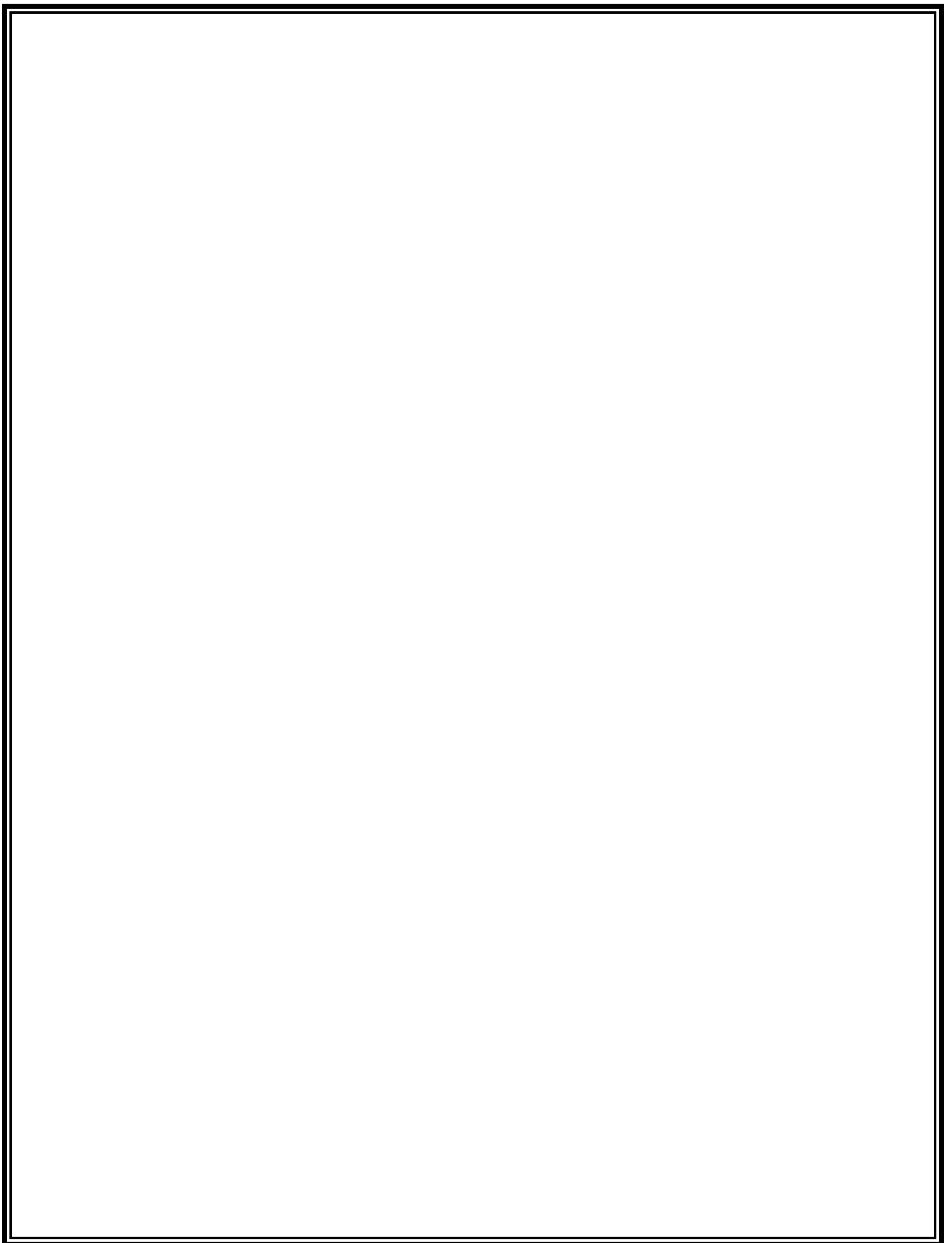
**Infant Mortality  
Highlights**

**June 2006**

**South Carolina Department of Health and Environmental Control  
Office of Public Health Statistics and Information Services  
Division of Biostatistics and Health GIS  
2600 Bull Street  
Columbia, SC 29201**

**Phone: (803)898-3649  
Fax: (803)898-3661**





# Highlights of 2004 Infant Mortality

## 1. Changes from 2003 to 2004 in SC:

The 2004 South Carolina infant mortality rate is 9.3 infant deaths per 1,000 live births, a 12.0% increase from last year's rate of 8.3. This is due to a 13.1% increase of infant death in Black and Other group from 13.0 per 1,000 live births in 2003 to 14.7 in 2004, and 8.5% increase in White group from 5.9 in 2003 to 6.4 in 2004.

The neonatal mortality rates for white and black & other infant increased by 15.4% and 5.2% respectively from the last year. Thus the neonatal mortality for all races increased by 8.5% from 5.9 in 2003 to 6.4 in 2004.

The postneonatal mortality rate for White infant stayed the same in 2004. The postneonatal mortality for Black and Other increased by 39.4% from 3.3 in 2003 to 4.6 in 2004. Thus, the postneonatal mortality for all races increased by 16.7% from 2.4 in 2003 to 2.8 in 2004.

**Table 1. Neonatal and Postneonatal mortality**

<b>Neonatal Mortality</b>			
Year	Total	White	Black & Other
2003	5.9	3.9	9.6
2004	6.4	4.5	10.1
<b>Percent Change</b>	8.5%	15.4%	5.2%
<b>Postneonatal Mortality</b>			
Year	Total	White	Black & Other
2003	2.4	1.9	3.3
2004	2.8	1.9	4.6
<b>Percent Change</b>	16.7%	0.00%	39.4%

Notes: Rates are per 1,000 live births, and race of mother is used

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

**Table 1. IMR by race in US and select states**

	2001			2002			2003			2004		
	Total	White	Black	Total	White	Black	Total	White	Black	Total	White	Black
<b>United States</b>	<b>6.9</b>	<b>5.7</b>	<b>14.2</b>	7.0	5.8	14.3	6.7	5.8	14.1			
<b>South Carolina</b>	<b>8.9</b>	<b>5.8</b>	<b>14.5</b>	<b>9.3</b>	<b>5.9</b>	<b>15.4</b>	<b>8.3</b>	<b>5.9</b>	<b>13.0*</b>	<b>9.3</b>	<b>6.4</b>	<b>14.7**</b>
<b>Alabama</b>	9.4	6.8	14.7	9.1	7.0	13.7	8.7	6.5	14.1	8.7	6.7	13.3
<b>Georgia</b>	8.5	6.2	13.2	8.9	6.6	13.7	8.5	6.2	13.8	8.5	6.1	12.9
<b>Mississippi</b>	10.5	6.9	14.7	10.3	6.8	14.4	10.7	6.8	15.4			
<b>North Carolina</b>	8.5	6.1	14.8	8.2	5.9	14.2	8.2	5.9	14.0*	8.8	6.2	15.6
<b>Tennessee</b>	8.7	6.7	16.2	9.4	7.1	18.4	9.2	7.0	10.0			

\*Including unknown race.

\*\* Including others.

### **3. Leading cause of infant deaths in 2004:**

The top three leading causes of infant death remain the same as in 2004, but their order is changed. In descending order for 2004, they are,

- “Congenital malformations, deformations, etc. (ICD-10 codes Q00-Q99)”
- “Disorders relating to short gestation and low birthweight (ICD-10 code P07)”
- “Newborn affected by maternal complications of pregnancy (ICD-10 code P01)”

Infant death caused by “Congenital malformations, deformations, etc. (ICD-10 codes Q00-Q99)” increased by 32.4% from 71 in 2003 to 94 in 2004, which moved from the second cause of infant death of the previous year to the leading first place in 2004.

**Table 3. Leading causes of death comparison**

Cause of Infant Death Ranked by 2004 Data (ICD-10 Codes)	2003	2004	% Change
<b>Total Infant Death</b>	<b>463</b>	<b>524</b>	<b>13.2%</b>
Congenital malformations, deformations, etc. (Q00-Q99)	71	94	32.4%
Disorders relating to short gestation and low birth weight, NEC (P07)	102	91	-10.8%
Fetus and newborn affected by maternal complications of pregnancy (P01)	39	38	-2.6%
Sudden infant death syndrome (R95)	33	29	-12.0%
Respiratory distress of newborn (P22)	12	23	92.0%
Newborn affected by complication of placenta, ect. (P02)	16	22	37.5%
Bacterial sepsis of newborn (P36)	15	22	47.0%
Accidents (V01-X59, Y85-Y86)	13	21	61.5%
Diseases of Circulatory System (I00-I99)	13	11	-15.4%
Gastritis, Duodenitis, etc. (K29, K50-K55)	7	10	42.9%
All other causes	142	163	14.8%

### **4. Infant Mortality Rate to Hispanic Mother**

Infant mortality rate to Hispanic mother in 2004 is 6.9 per 1,000 live births, a 25.5% increase from last year.

**Table 4. Infant mortality rate to Hispanic mother**

Year	Births	Deaths	Rate
2003	3,671	20	5.5
2004	4,326	30	6.9
<b>Percent Change</b>	17.8%	50.0%	25.5%

## 5. Breakdown of Infant Deaths due to Maternal Complications (P01)

Table 5. Breakdown of Infant Deaths due to Maternal Complications (P01)

	1998	1999	2000	2001	2002	2003	2004	Total (98-04)	Percent
Premature Rupture of Membranes	17	9	10	17	18	10	10	91	32.6%
Multiple Pregnancy	18	17	4	12	9	13	13	86	30.8%
Incompetent Cervix	9	11	4	13	12	15	12	76	27.2%
Others	2	-	4	1	2	1	1	11	3.9%
Oligohydramnios	1	1	2	1	5	-	2	12	4.3%
Polyhydramnios	2	-	-	-	1	-	-	3	1.1%

## 6. Trends in Multiple Births in SC

Table 6. Multiple birth trends in SC, 2000–2004, 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*
2000	54,270	431	7.9	1,593	45	28.2	94	2	21.3	55,964	488	8.7
2001	53,954	432	8.0	1,706	56	32.8	81	4	49.4	55,748	496	8.9
2002	52,746	431	8.2	1,620	62	38.3	83	10	120.5	54,453	507	9.3
2003	53,591	392	7.3	1,779	67	37.7	78	2	25.6	55,461	463	8.3
2004	54,643	439	8.0	1,802	64	35.5	98	4	40.8	56,543	524	9.3
Total	269,204	2,125	7.9	8,500	294	34.6	434	22	50.7	278,169	2478	8.9

\* 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 Race<sup>1</sup> in SC from 2003 to 2004:**

**Table 7.**

	2003		2004		Z-TEST	p-Value
	Percent	Number	Percent	Number		
<b>&lt;5 PRENATAL CARE VISITS</b>						
TOTAL <sup>2</sup>	4.66	2,587	5.8921	3328	9.1795	0.0000
White	3.56	1,283	3.8965	1306	2.3151	0.0206
Black & Other	6.70	1,304	8.808	2018	8.0272	0.0000
<b>PRENATAL CARE BEGAN 1<sup>st</sup> TRIMESTER</b>						
TOTAL <sup>2</sup>	76.18	42,248	66.407	37508	-36.106	0.0000
White	80.03	28,813	72.566	24322	-23.181	0.0000
Black & Other	69.06	13,432	57.427	13157	-24.673	0.0000
<b>KESSNER INDEX: ADEQUATE</b>						
TOTAL <sup>2</sup>	67.57	37,477	56.11	31692	-39.466	0.0000
White	71.48	25,734	61.309	20549	-28.41	0.0000
Black & Other	60.36	11,740	48.531	11119	-24.335	0.0000
<b>KESSNER INDEX: LESS THAN ADQUATE</b>						
TOTAL <sup>2</sup>	29.32	16,263	37.024	20912	27.353	0.0000
White	25.71	9,257	31.154	10442	15.908	0.0000
Black & Other	36.01	7,005	45.594	10446	19.964	0.0000
<b>KOTELCHUCK INDEX: ADEQUATE PLUS</b>						
TOTAL <sup>2</sup>	38.85	21,546	41.314	23335	8.4143	0.0000
White	39.25	14,130	42.376	14203	8.3829	0.0000
Black & Other	38.12	7,414	39.776	9113	3.4892	0.0005
<b>KOTELCHUCK INDEX: ADEQUATE</b>						
TOTAL <sup>2</sup>	34.27	19,006	27.391	15471	-24.923	0.0000
White	36.43	13,116	30.471	10213	-16.632	0.0000
Black & Other	30.28	5,889	22.919	5251	-17.14	0.0000
<b>KOTELCHUCK INDEX: INADEQUATE</b>						
TOTAL <sup>2</sup>	14.36	7,966	18.787	10611	19.889	0.0000
White	11.74	4,225	13.519	4531	7.0787	0.0000
Black & Other	19.23	3,740	26.455	6061	17.577	0.0000

<sup>1</sup> Race of Mother

<sup>2</sup> Includes unknown races

Table 7 on previous page is about maternal characteristics selected from table 9 in “South Carolina 2004 Infant Mortality and Birth Characteristics”(another more detailed publication from us).

Z-test in table 7 in the second to the last column indicates the change in 2004 vs. 2003 is either increase or decrease. If Z-test value is positive, then there was an increase in 2004 vs. 2003; and a decrease otherwise.

And *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 “Kotelchuck Index: Adequate” category, there was a statistically significant decrease in percent of mothers with Adequate Kotelchuck Index in 2004 vs. 2003 for All Races, White and Black & Other race group, with *P* values of 0.0000 for all three categories.

## **8. Infant death leading causes of death, 2002 to 2004:**

**Table 8.1 South Carolina Infant Death, Resident Data, 2002-2004, All races**

<b>Rank</b>	<b>Cause of death</b>	<b>Number</b>	<b>Mortality rate*</b>
	.....Total Infant Deaths.....	1494	9.0
1	Disorders Related To Short Gestation, Etc. (P07).....	265	1.6
2	Congenital Malformations, Etc. (Q00-Q99).....	242	1.5
3	Newborn Affected By Maternal Comp Of Pregnancy (P01).....	124	0.7
4	Sudden Infant Death Syndrome (R95).....	99	0.6
5	Respiratory Distress Of Newborn (P22).....	59	0.4
6	Newborn Affected By Comp Of Placenta, Etc. (P02).....	58	0.3
7	Bacterial Sepsis Of Newborn (P36).....	56	0.3
8	Accidents (V01-X59,Y85-Y86).....	52	0.3
9	Disease Of Circulatory System (I00-I99).....	40	0.2
10	Intrauterine Hypoxia And Birth Asphyxia (P20-P21).....	34	0.2
	.....All Other Causes.....	465	2.8

**Table 8.2 South Carolina Infant death, Resident Data, 2002-2004,White**

<b>Rank</b>	<b>Cause of death</b>	<b>Number</b>	<b>Mortality rate*</b>
	.....All White Infant Deaths.....	655	6.3
1	Congenital Malformations, Etc. (Q00-Q99).....	137	1.3
2	Disorders Related To Short Gestation, Etc. (P07).....	73	0.7
3	Sudden Infant Death Syndrome (R95).....	50	0.5
4	Newborn Affected By Maternal Comp Of Pregnancy (P01).....	49	0.5
5	Accidents (V01-X59,Y85-Y86).....	35	0.3
6	Bacterial Sepsis Of Newborn (P36).....	25	0.2
7	Disease Of Circulatory System (I00-I99).....	24	0.2
8	Respiratory Distress Of Newborn (P22).....	23	0.2
9	Newborn Affected By Comp Of Placenta, Etc. (P02).....	20	0.2
10	Intrauterine Hypoxia And Birth Asphyxia (P20-P21).....	17	0.2
	.....All Other Causes.....	196	1.9

**Table 8.3 South Carolina Infant death, Resident Data, 2002-2004,Black and Others**

<b>Rank</b>	<b>Cause of death</b>	<b>Number</b>	<b>Mortality rate*</b>
	.....All Black And Other Infant Deaths.....	838	13.6
1	Disorders Related To Short Gestation, Etc. (P07).....	185	3.0
2	Congenital Malformations, Etc. (Q00-Q99).....	105	1.7
3	Newborn Affected By Maternal Comp Of Pregnancy (P01).....	75	1.2
4	Sudden Infant Death Syndrome (R95).....	49	0.8
5	Newborn Affected By Comp Of Placenta, Etc. (P02).....	38	0.6
6	Respiratory Distress Of Newborn (P22).....	36	0.6
7	Bacterial Sepsis Of Newborn (P36).....	31	0.5
8	Intrauterine Hypoxia And Birth Asphyxia (P20-P21).....	17	0.3
9	Accidents (V01-X59,Y85-Y86).....	17	0.3
10	Disease Of Circulatory System (I00-I99).....	16	0.3
	.....All Other Causes.....	269	4.4

\* Rates are per 1,000 live births.

(End Of This Highlight Package)