



Maryland Vital Statistics

Infant Mortality in Maryland, 2015

September 2016

FAST FACTS

- Maryland's infant mortality rate in 2015 was 6.7 per 1,000 live births, a 3% increase over the 2014 rate of 6.5.

- The infant mortality rate increased by 3% between 2014 and 2015 among white infants, and by 6% among black infants.

- The neonatal mortality rate increased by 6% and the postneonatal mortality rate declined by 4% between 2014 and 2015.

- The leading causes of infant death in 2015 were low birth weight, congenital abnormalities, sudden infant death syndrome, maternal complications of pregnancy, and complications of the placenta, cord and membranes.

- The average infant mortality rate has fallen by 14% in Maryland over the past decade, with an 11% decline in the average rate among white infants and a 17% decline among black infants. Both neonatal and postneonatal mortality rates have fallen substantially.

- Despite the statewide decline in the infant mortality rate over the past decade, there are areas of the State where rates have been increasing.

Trends

The infant mortality rate in Maryland was 6.7 per 1,000 live births in 2015, a 3% increase over the 2014 rate of 6.5. A total of 491 infants died in 2015 compared with 476 in 2014. There were 188 deaths among infants born to white women, 272 deaths among infants born to black women, 25 deaths among infants born to Asian women, and 64 deaths among infants born to Hispanic women, who may be any race.

The increase in the overall infant mortality rate between 2014 and 2015 was the result of a 3% rise in the white infant mortality rate, which increased from 4.2 in 2014 to 4.3 in 2015, and a 6% rise in the black infant mortality rate, which increased from 10.6 in 2014 to 11.2 in 2015 (Table 1).

Table 1. Infant, Neonatal and Postneonatal Mortality Rates* for Selected Years, Maryland.

	Rate* by year		Average rate*	
	2014	2015	2006-10	2011-15
Infant mortality				
All races**	6.5	6.7	7.6	6.6 ***
White	4.2	4.3	4.7	4.2 ***
Black	10.6	11.2	13.1	10.9 ***
Neonatal mortality				
All races**	4.6	4.9	5.5	4.8 ***
White	2.8	3.1	3.4	3.0 ***
Black	7.7	8.3	9.5	8.0 ***
Postneonatal mortality				
All races**	1.9	1.8	2.1	1.8 ***
White	1.4	1.3	1.4	1.2 ***
Black	2.9	2.9	3.7	2.9 ***

*Per 1,000 live births

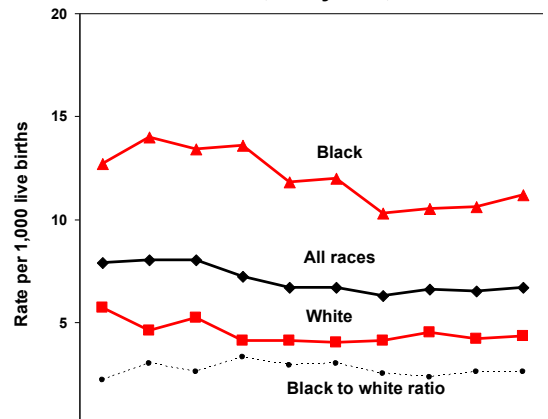
**Includes races other than White and Black

***Rates for 2006-2010 and 2011-2015 differ significantly (p<.05)

Age at Time of Death

The overall neonatal mortality rate (deaths to infants under 28 days of age per 1,000 live births) increased from 4.6 in 2014 to 4.9 in 2015 (Table 1). The rate increased from 2.8 to 3.1 among white infants and from 7.7 to 8.3 among black infants. The postneonatal mortality rate (deaths from 28 days through 11 months of age per 1,000 live births) declined slightly, from 1.9 in 2014 to 1.8 in 2015. Postneonatal mortality rates declined slightly

Figure A. Infant Mortality Rates by Race and Black to White Ratio, Maryland, 2006-2015.



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
All races	7.9	8.0	8.0	7.2	6.7	6.7	6.3	6.6	6.5	6.7
White	5.7	4.6	5.2	4.1	4.1	4.0	4.1	4.5	4.2	4.3
Black	12.7	14.0	13.4	13.6	11.8	12.0	10.3	10.5	10.6	11.2
Ratio	2.2	3.0	2.6	3.3	2.9	3.0	2.5	2.3	2.6	2.6

Infant mortality rates have improved substantially in Maryland over the past decade, falling from an average rate of 7.6 per 1,000 live births during the years 2006-2010 to an average of 6.6 per 1,000 live births during 2011-2015. This 14% decline is statistically significant. There were also statistically significant declines in rates for both major racial groups over the past decade; the average rate fell by 13% among whites and by 15% among blacks (Table 1).

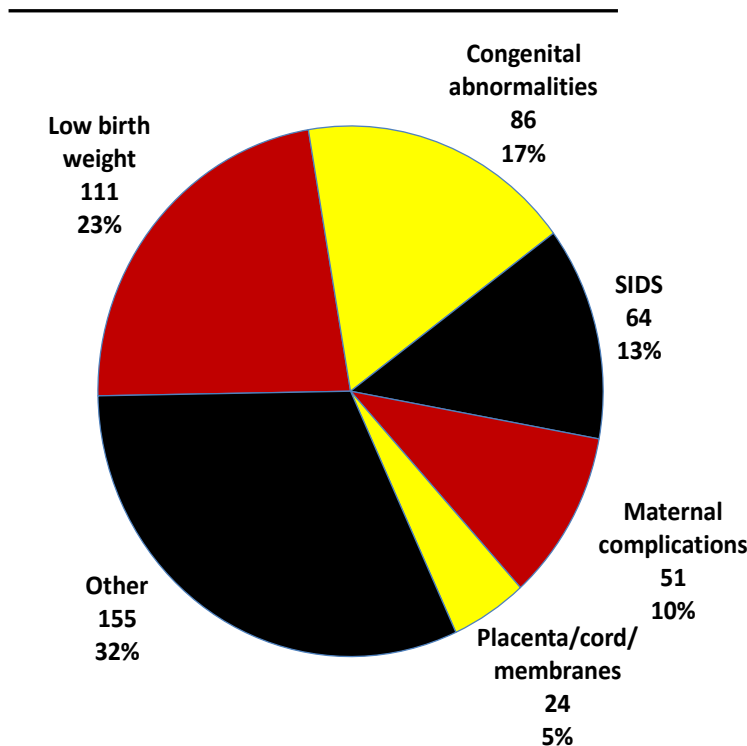
from 1.4 to 1.3 among white infants, and were unchanged among black infants at 2.9 per 1,000 live births and (Table 1). Neonatal and postneonatal mortality rates have both shown statistically significant declines over the past 10 years. From 2006-2010 to 2011-2015, the average neonatal mortality rate declined by 13% and the average postneonatal mortality rate by 15%. Rates have declined among both white and black infants.

Causes of death

The leading causes of infant death in 2015 were disorders relating to short gestation and unspecified low birth weight (“LBW”); congenital malformations, deformations, and chromosomal abnormalities (“congenital abnormali-

ties”); Sudden Infant Death Syndrome (“SIDS”); maternal complications of pregnancy; and complications of the placenta, cord and membranes. Maternal complications of pregnancy include conditions such as premature rupture of membranes and cervical incompetence. (Figure B).

Figure B. Leading Causes of Infant Death, Maryland, 2015.



Although none of the changes was statistically significant, death rates for all of the major causes of infant death increased between 2014 and 2015. Most notably, there was a 36% increase in the number of SIDS deaths between the two years; 64 infants died in 2015 compared to 47 in 2014.

The leading causes of neonatal mortality in 2015 were LBW, congenital abnormalities, and maternal complications of pregnancy. Sudden Infant Death Syndrome and congenital abnormalities were the leading causes of postneonatal mortality.

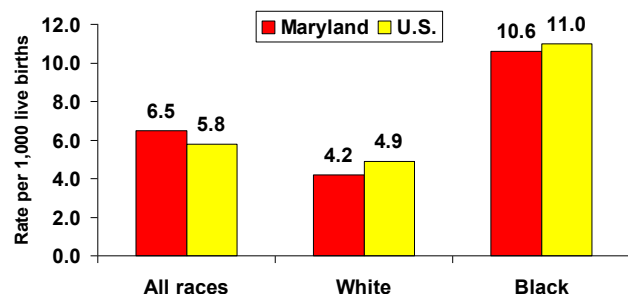
Congenital abnormalities were the leading cause of death among white infants, and low birth weight was the leading cause of death among black infants. Cause-specific mortality rates continue to be higher for black infants than white infants for all leading causes of death. Compared with white infants, black infants were four times more likely to die in 2015 as a result of LBW and maternal complications of pregnancy, and three times more likely to die from SIDS.

Comparison of rates in Maryland and the U.S.

Maryland’s infant mortality rate for all races combined has historically been higher than the national rate, mainly because the Maryland population is comprised of a higher proportion of black residents, a group with typically higher infant mortality rates than whites. While white infant mortality rates have historically been lower in Maryland than in the nation, black rates have also been lower in Maryland than nationally in recent years.

Figure C shows a comparison of infant mortality rates in Maryland and the U.S. in 2014, the most recent year for which national data are available.

Figure C. Infant Mortality Rates by Race, Maryland and the U.S., 2014.



Regional and county differences

The number of infant deaths and infant mortality rates by race, region, and political subdivision for 2014 and 2015 are shown in Table 2. The only statistically significant change between 2014 and 2015 occurred in Prince George's County, where there was a 62% rise in the black infant mortality rate due to increases in deaths from congenital anomalies, low birth weight, and SIDS. Despite the large one year increase, the average infant mortality rate in Prince George's County has fallen by 15% over the past decade, a statistically significant decline (Table 3). There have also been statistically significant declines over the past decade in Baltimore City and Dorchester County.

The average infant mortality rate declined in all regions of the State between 2006-2010 and 2011-2015 except in the Eastern Shore Area, where rates increased in most counties including Talbot County, which was the only county in the State with a statistically significant increase in infant mortality between the two time periods.

Although the decline was not statistically significant, the infant mortality rate in Baltimore City fell from 10.4 in 2014 to 8.4 in 2015, a 19% decline. In contrast, the infant mortality rate in nearby Howard County increased from 4.5 to 7.6, a 68% increase.

TABLE 2. INFANT DEATHS AND INFANT MORTALITY RATES BY RACE, REGION AND POLITICAL SUBDIVISION, MARYLAND, 2014 AND 2015.

Region and political subdivision	ALL RACES				WHITE				BLACK			
	Number of infant deaths		Infant mortality rate*		Number of infant deaths		Infant mortality rate*		Number of infant deaths		Infant mortality rate*	
	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
Maryland	476	491	6.5	6.7	181	188	4.2	4.3	260	272	10.6	11.2
Northwest Area	34	33	6.1	6.0	26	23	5.5	4.9	8	9	12.8	14.9
Garrett	4	4	**	**	3	4	**	**	1	0	**	**
Allegany	6	5	9.1	7.3	6	5	9.5	7.8	0	0	**	**
Washington	14	13	7.7	7.7	7	8	4.6	5.7	7	5	29.2	19.8
Frederick	10	11	3.6	3.9	10	6	4.4	2.5	0	4	**	**
Baltimore Metro Area	235	210	7.0	6.3	82	81	4.1	4.1	142	112	12.6	10.0
Baltimore City	92	73	10.4	8.4	21	16	7.1	5.4	71	52	12.8	9.7
Baltimore County	69	61	6.9	6.1	18	27	3.1	4.7	47	32	14.6	9.8
Anne Arundel	40	35	5.7	5.1	20	19	3.8	3.7	16	12	12.7	9.3
Carroll	5	5	3.1	3.0	5	4	3.3	**	0	1	**	**
Howard	16	27	4.5	7.6	6	11	3.1	5.5	7	10	8.9	13.5
Harford	13	9	4.8	3.3	12	4	5.5	**	1	5	**	10.6
National Capital Area	148	180	5.8	7.1	41	49	3.3	3.9	84	119	8.1	11.7 ***
Montgomery	63	70	4.8	5.3	29	36	3.6	4.4	24	25	8.3	8.5
Prince George's	85	110	6.9	8.9	12	13	2.9	2.9	60	94	8.0	13.0 ***
Southern Area	27	25	6.4	5.9	13	9	4.6	3.2	14	15	11.6	12.6
Calvert	6	4	6.6	**	5	2	6.5	**	1	2	**	**
Charles	11	9	5.9	4.9	4	2	**	**	7	7	8.4	8.1
Saint Mary's	10	12	6.8	8.3	4	5	**	4.3	6	6	23.4	26.0
Eastern Shore Area	32	43	7.1	9.0	19	26	5.6	7.2	12	17	11.9	16.1
Cecil	5	8	5.3	6.8	4	7	**	6.7	1	1	**	**
Kent	0	2	**	**	0	0	**	**	0	2	**	**
Queen Anne's	3	1	**	**	3	1	**	**	0	0	**	**
Caroline	2	5	**	12.8	2	4	**	**	0	1	**	**
Talbot	3	6	**	18.6	3	3	**	**	0	3	**	**
Dorchester	1	4	**	**	1	1	**	**	0	3	**	**
Wicomico	12	8	9.9	6.5	5	6	6.8	8.2	6	2	13.6	**
Somerset	4	3	**	**	1	2	**	**	3	1	**	**
Worcester	2	6	**	13.8	0	2	**	**	2	4	**	**

*Per 1,000 live births

**Rates based on <5 deaths are not shown since rates based on small numbers are statistically unreliable.

***Rates for 2014 and 2015 differ significantly (p<.05).

TABLE 3. NUMBER OF INFANT DEATHS, AVERAGE INFANT MORTALITY RATE BY FIVE YEAR INTERVAL AND PERCENT CHANGE IN RATES BETWEEN INTERVALS BY REGION AND POLITICAL SUBDIVISION, MARYLAND, 2006-2010 AND 2011-2015.

Region and political subdivision	Number of infant deaths		Average infant mortality rate*		Percent change**
	2006-2010	2011-2015	2006-2010	2011-2015	
Maryland	2891	2392	7.6	6.6	-13.5 ***
Northwest Area	160	139	5.5	5.1	-7.3
Garrett	6	12	4.1	8.3	103.0
Allegany	23	24	6.4	7.1	11.0
Washington	60	47	6.5	5.4	-16.6
Frederick	71	56	4.8	4.0	-15.2
Baltimore Metro Area	1382	1112	7.9	6.7	-16.0 ***
Baltimore City	579	437	12.1	9.9	-18.3 ***
Baltimore County	358	304	7.1	6.2	-13.1
Anne Arundel	231	192	6.5	5.6	-14.1
Carroll	38	27	4.4	3.4	-23.1
Howard	93	92	5.5	5.3	-3.3
Harford	83	60	5.7	4.5	-21.5
National Capital Area	1002	834	7.7	6.6	-13.8 ***
Montgomery	387	329	5.7	5.0	-11.7
Prince George's	615	505	9.8	8.3	-15.2 ***
Southern Area	155	116	7.2	5.5	-23.1 ***
Calvert	26	23	5.5	5.0	-8.5
Charles	75	56	7.9	6.0	-23.8
St. Mary's	54	37	7.4	5.2	-29.4
Eastern Shore Area	192	191	7.3	8.0	10.0
Cecil	32	34	5.1	6.2	21.6
Kent	5	8	5.3	9.3	74.7
Queen Anne's	14	11	5.4	4.8	-10.4
Caroline	18	19	7.8	9.8	26.1
Talbot	8	19	4.4	11.6	164.5 ***
Dorchester	36	12	17.5	6.3	-63.9 ***
Wicomico	52	55	7.9	9.0	13.9
Somerset	12	15	9.1	11.7	28.8
Worcester	15	18	6.5	8.1	24.7

*Per 1000 live births.

**Percent change is based on the exact rates and not the rounded rates presented here.

***Rates for 2006-2010 and 2011-2015 differ significantly (p<.05).



For more information or to obtain Maryland vital statistics data please contact the:

Vital Statistics Administration

Maryland Department of Health and Mental Hygiene
4201 Patterson Avenue
Baltimore, MD 21215

Phone: 410-764-3514

or visit:

www.vsa.maryland.gov



**Maryland Department of Health and Mental Hygiene
Vital Statistics Administration**

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