

FAST FACTS

- Maryland's infant mortality rate in 2017 was 6.5 per 1,000 live births, similar to the 2016 rate.

- The infant mortality rate increased by 7% between 2016 and 2017 among NH black infants, but decreased 7% among NH white infants and 13% among Hispanic infants.

- The neonatal mortality rate declined by 6% and the postneonatal mortality rate rose by 5% between 2016 and 2017.

- The leading causes of infant death in 2017 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 7% in Maryland over the past decade, with a 12% decline in the average rate among NH black infants and a 4% decline among NH white infants. Over the same time period, the Hispanic infant mortality rate has risen by 29%.

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

Maryland Vital Statistics

Infant Mortality in Maryland, 2017

September 2018

Trends

The infant mortality rate in Maryland was 6.5 per 1,000 live births in 2017, remaining stable compared with the 2016 rate. The total number of infant deaths declined between 2016 (478) and 2017 (462), along with the number of births.

There were 258 deaths among infants born to non-Hispanic (NH) black women, 123 deaths among infants born to non-Hispanic white women, 57 deaths among infants born to Hispanic women, and 17 deaths among infants born to non-Hispanic Asian women.

There was a 7% increase in the non-Hispanic black infant mortality rate, which rose from 10.5 in 2016 to 11.2 in 2017. Rates among Hispanic and non-Hispanic white infants declined over the same period by 13% and 7% respectively (Table 1).

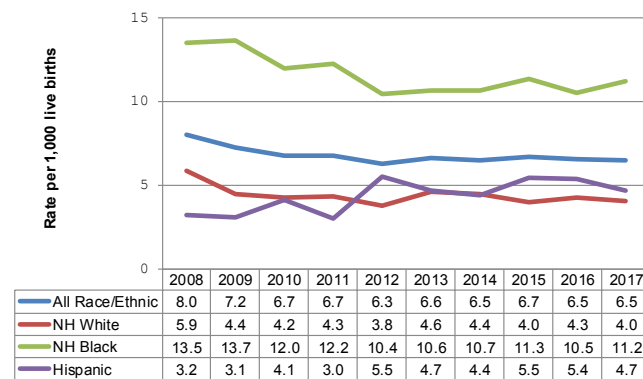
Table 1. Infant, Neonatal and Postneonatal Mortality Rates* for Selected Years, Maryland.

	Rate* by year		Average rate*	
	2016	2017	2008-2012	2013-2017
Infant mortality				
All Race/Ethnic	6.5	6.5	7.0	6.5 ***
NH White	4.3	4.0	4.5	4.3
NH Black	10.5	11.2	12.4	10.9 ***
Hispanic	5.4	4.7	3.8	4.9 ***
Neonatal mortality				
All Race/Ethnic	4.7	4.4	5.1	4.6 ***
NH White	2.9	2.6	3.2	2.9 ***
NH Black	7.5	7.6	9.1	7.7 ***
Hispanic	3.8	3.5	2.8	3.6 ***
Postneonatal mortality				
All Race/Ethnic	1.9	2.0	1.9	1.9
NH White	1.4	1.5	1.3	1.4
NH Black	3.1	3.6	3.3	3.1
Hispanic	1.6	1.1	1.0	1.3

*Per 1,000 live births

***Rates for 2008-2012 and 2013-2017 differ significantly (p<.05)

Figure A. Infant Mortality Rates by Race/ethnicity, Maryland, 2008-2017.



Infant mortality rates have improved in Maryland over the past decade, falling from an average rate of 7.0 per 1,000 live births during the years 2008-2012 to an average of 6.5 per 1,000 live births during 2013-2017. This 7% decline is statistically significant. Rates fell by 12% among non-Hispanic blacks and by 4% among non-Hispanic whites. The infant mortality rate increased by 29% over the two periods among Hispanic infants (Table 1).

Age at Time of Death

The overall neonatal mortality rate (deaths to infants under 28 days of age per 1,000 live births) decreased from 4.7 in 2016 to 4.4 in 2017 (Table 1). The rate increased from 7.5 to 7.6 among non-Hispanic black infants, while it decreased from 2.9 to 2.6 among non-Hispanic white infants and from 3.8 to 3.5 among Hispanic infants. The postneonatal mortality rate (deaths from 28 days through 11 months of age per 1,000 live births) increased slightly, from 1.9 in 2016 to 2.0 in 2017. Postneonatal mortality rates increased from 1.4 to 1.5 among non-Hispanic white infants, from 3.1 to

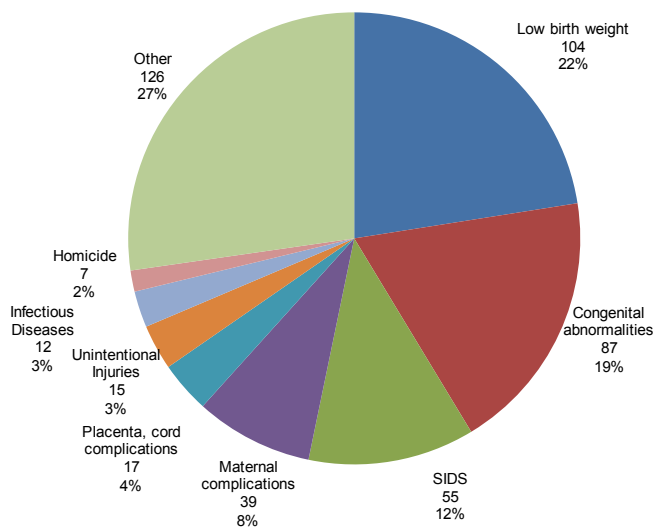
3.6 among non-Hispanic black infants, and decreased from 1.6 to 1.1 among Hispanic infants (Table 1).

From 2008-2012 to 2013-2017, the average neonatal mortality rate declined significantly by 10%. Significant declines were noted among non-Hispanic white and non-Hispanic black neonates. There was a significant increase (29%) in the Hispanic neonatal mortality rate over the same period. The average postneonatal mortality rate was stable over the past 10 years. The rate declined among non-Hispanic black infants and increased among Hispanic infants and non-Hispanic white infants.

Causes of death

The leading causes of infant death in 2017 were disorders relating to short gestation and unspecified low birth weight (LBW); congenital malformations, deformations, and chromosomal abnormalities (Congenital abnormalities); 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 2017



Following a substantial decline in infant deaths attributed to SIDS between 2016, 64, and 2017, 43, there was an increase to 55 deaths in 2017. The number of infant homicides declined from 15 in 2016 to 7 in 2017.

The leading causes of neonatal mortality in 2017 were LBW (33%), congenital abnormalities (19%), and maternal complications of pregnancy (12%). The leading causes of postneonatal mortality were Sudden Infant Death Syndrome (36%), congenital abnormalities (18%), unintentional injuries (9%), and infectious diseases (8%).

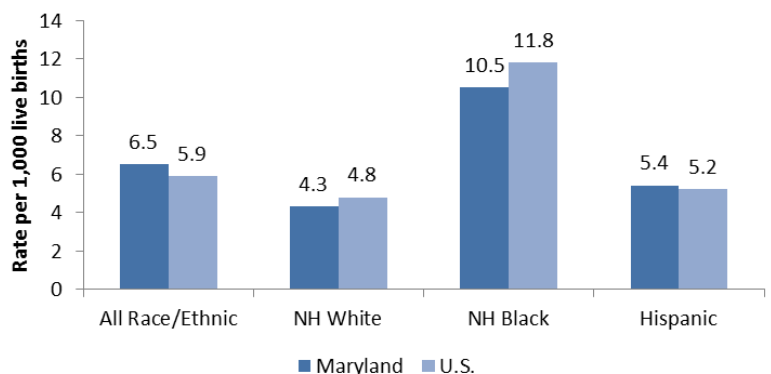
Congenital abnormalities were the leading cause of death among Hispanic (37%) and non-Hispanic white (20%) infants in 2017. Low birth weight was the leading cause of death among non-Hispanic black infants (24%). Cause-specific mortality rates continue to be higher for non-Hispanic black infants than non-Hispanic white infants for all leading causes of death. Compared with non-Hispanic white infants, non-Hispanic black infants were four times more likely to die in 2017 as a result of LBW, twice as likely to die from congenital abnormalities, two and one half times more likely to die from SIDS, and thirteen times more likely to die from maternal complications of pregnancy.

Comparison of rates in Maryland and the U.S.

Figure C shows a comparison of infant mortality rates in Maryland and the U.S. in 2016, the most recent year for which national data are available.

Maryland's infant mortality rate for all race and ethnicities 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. Maryland's Hispanic infant mortality rate was higher than the national rate in 2016.

Figure C. Infant Mortality Rates by Race/ethnicity, Maryland and the U.S., 2016



Regional and county differences

The number of infant deaths and infant mortality rates by race/ethnicity, region, and political subdivision for 2016 and 2017 are shown in Table 2. The only statistically significant changes between 2016 and 2017 occurred in the Baltimore Metro Area, where there was a 40% drop in the non-Hispanic white infant mortality rate, driven by decreased infant deaths in each jurisdiction in the region.

Over the past decade, there has been a statistically significant decline of 7% in infant mortality rates statewide (Table 3). This drop was led by declines in the Baltimore Metro Area, especially in Baltimore City which experienced an 18%

reduction, and by the National Capital Area, especially in Prince George’s County which experienced a 16% drop over the periods between 2008-2012 and 2013-2017. Dorchester County saw a statistically significant 57% decline in infant mortality rates over the last decade.

There were many areas of Maryland that experienced increases over this time frame, including most counties in the Northwest, Southern, and Eastern Shore regions.

TABLE 2. INFANT DEATHS AND INFANT MORTALITY RATES BY RACE/ETHNICITY, REGION AND POLITICAL SUBDIVISION, MARYLAND, 2016 AND 2017.

Region and political subdivision	ALL RACE/ETHNICITIES				NON-HISPANIC WHITE				NON-HISPANIC BLACK				HISPANIC			
	Number of infant deaths		Infant mortality rate*		Number of infant deaths		Infant mortality rate*		Number of infant deaths		Infant mortality rate*		Number of infant deaths		Infant mortality Rate*	
	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
Maryland	478	462	6.5	6.5	136	123	4.3	4.0	247	258	10.5	11.2	64	57	5.4	4.7
Northwest Area	27	38	5.0	7.2	20	29	4.8	7.5	5	8	9.0	13.3	2	1	**	**
Garrett	1	2	**	**	1	2	**	**	0	0	**	**	0	0	**	**
Allegany	5	3	8.1	**	4	3	**	**	1	0	**	**	0	0	**	**
Washington	12	16	7.1	9.8	8	13	6.3	10.6	2	3	**	**	2	0	**	**
Frederick	9	17	3.2	6.3	7	11	3.5	6.1	2	5	**	15.5	0	1	**	**
Baltimore Metro Area	207	189	6.2	5.8	73	42	4.5	2.7 ***	113	117	10.4	11.0	11	17	3.3	5.0
Baltimore City	75	69	8.8	8.7	13	6	5.9	2.9	58	58	11.3	12.2	3	3	**	**
Baltimore County	58	64	5.9	6.5	19	14	4.0	3.1	31	41	9.8	12.4	3	6	**	5.7
Anne Arundel	39	28	5.6	4.1	23	12	5.3	2.8	13	10	10.1	7.9	3	5	**	5.3
Carroll	5	4	2.9	**	5	4	3.3	**	0	0	**	**	0	0	**	**
Howard	17	19	4.8	5.4	7	3	4.3	**	4	7	**	8.7	2	2	**	**
Harford	13	5	4.8	1.9	6	3	3.1	**	7	1	14.4	**	0	1	**	**
National Capital Area	167	160	6.6	6.4	18	15	3.2	2.8	93	100	9.5	10.4	42	36	5.8	4.8
Montgomery	73	58	5.6	4.6	16	14	3.6	3.3	26	18	9.2	6.5	20	17	5.5	4.7
Prince George's	94	102	7.6	8.2	2	1	**	**	67	82	9.7	12.0	22	19	6.1	5.0
Southern Area	35	35	8.4	8.6	11	17	4.4	7.2	19	14	15.7	11.4	2	2	**	**
Calvert	6	6	6.6	6.7	1	4	**	**	3	2	**	**	1	0	**	**
Charles	19	20	10.5	10.9	4	8	**	12.2	13	9	14.9	10.0	0	1	**	**
Saint Mary's	10	9	7.0	6.7	6	5	5.7	5.1	3	3	**	**	1	1	**	**
Eastern Shore Area	42	40	8.8	8.3	14	20	4.4	6.2	17	19	16.3	18.9	7	1	15.6	**
Cecil	8	3	7.2	**	3	1	**	**	3	1	**	**	2	1	**	**
Kent	2	1	**	**	1	1	**	**	1	0	**	**	0	0	**	**
Queen Anne's	0	2	**	**	0	2	**	**	0	0	**	**	0	0	**	**
Caroline	4	2	**	**	3	2	**	**	0	0	**	**	0	0	**	**
Talbot	3	2	**	**	2	1	**	**	0	1	**	**	1	0	**	**
Dorchester	1	1	**	**	0	1	**	**	1	0	**	**	0	0	**	**
Wicomico	12	14	9.7	10.9	2	8	**	12.5	9	6	19.9	12.1	1	0	**	**
Somerset	4	10	**	41.2	1	4	**	**	2	6	**	64.5	1	0	**	**
Worcester	8	5	19.0	12.6	2	0	**	**	1	5	**	80.6	2	0	**	**

*Per 1,000 live births

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

***Rates for 2016 and 2017 differ significantly (p<.05).



MARYLAND
Department of Health

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

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Region and political subdivision	Number of infant deaths		Average infant mortality rate*		Percent change**
	2008-2012	2013-2017	2008-2012	2013-2017	
Maryland	2605	2381	7.0	6.5	-6.5 ***
Northwest Area	138	163	4.9	6.0	21.8
Garrett	7	14	4.9	9.6	96.8
Allegany	19	25	5.4	7.6	42.1
Washington	45	64	5.1	7.5	46.8 ***
Frederick	67	60	4.7	4.3	-8.3
Baltimore Metro Area	1248	1068	7.4	6.4	-12.3 ***
Baltimore City	527	400	11.4	9.3	-17.8 ***
Baltimore County	325	313	6.6	6.4	-3.1
Anne Arundel	209	180	6.0	5.2	-12.8
Carroll	31	26	3.8	3.2	-16.7
Howard	92	95	5.4	5.4	-0.5
Harford	64	54	4.6	4.0	-12.8
National Capital Area	913	808	7.1	6.4	-10.5 ***
Montgomery	342	325	5.1	5.0	-2.7
Prince George's	571	483	9.3	7.9	-15.6 ***
Southern Area	125	146	5.9	7.0	18.9
Calvert	25	24	5.4	5.3	-1.9
Charles	59	73	6.4	8.0	25.4
Saint Mary's	41	49	5.7	6.9	22.2
Eastern Shore Area	181	196	7.2	8.3	15.8
Cecil	29	31	4.9	5.7	16.2
Kent	6	8	6.4	10.0	55.3
Queen Anne's	14	9	5.7	3.8	-32.6
Caroline	20	17	9.3	8.8	-4.6
Talbot	11	16	6.4	9.5	49.6
Dorchester	25	10	12.5	5.4	-56.9 ***
Wicomico	50	58	7.8	9.4	21.6
Somerset	11	23	8.4	18.1	116.8 ***
Worcester	15	24	6.6	11.3	72.0

*Per 1,000 live births

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

***Rates for 2008-2012 and 2013-2017 differ significantly (p<.05).



Maryland Department of Health
Vital Statistics Administration

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