

FAST FACTS

- Maryland's infant mortality rate in 2019 was 5.9 per 1,000 live births, a 3% decrease compared with the 2018 rate. This is the lowest infant mortality rate recorded in Maryland's history.
- The infant mortality rate decreased by 9% between 2018 and 2019 among NH black infants, but increased by 34% among Hispanic infants. There was no change in the rate among NH white infants.
- The neonatal rate decreased by 7% between 2018 and 2019. The postneonatal mortality rates increased 5% between 2018 and 2019.
- The leading causes of infant death in 2019 were low birth weight, congenital abnormalities, Sudden Infant Death Syndrome, maternal complications of pregnancy, and infectious diseases.
- The average infant mortality rate has fallen by 4% in Maryland over the past decade, with an 8% decline in the average rate among NH black infants and a 2% decline among NH white infants. Over the same time period, the Hispanic infant mortality rate has risen by 15%.
- 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, 2019

October 2020

Trends

The infant mortality rate in Maryland was 5.9 per 1,000 live births in 2019, a 3% decrease compared with the 2018 rate (6.1). The total number of infant deaths declined between 2018 (432) and 2019 (414), along with the number of births. In 2019 there were 207 deaths among infants born to non-Hispanic (NH) black women, 120 deaths among infants born to non-Hispanic (NH) white women, 66 deaths among infants born to Hispanic women, and 17 deaths among infants born to non-Hispanic Asian women.

There was a 9% decrease in the non-Hispanic black infant mortality rate, from 10.2 in 2018 to 9.3 in 2019. Rates among Hispanic infants increased over the same period by 34%. Rates were unchanged among non-Hispanic White infants (Table 1).

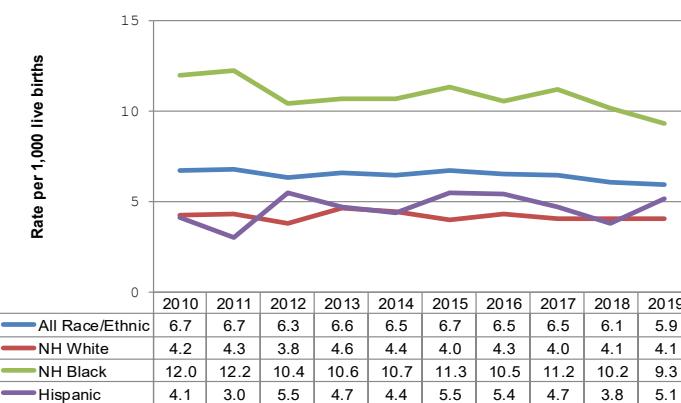
Table 1. Infant, Neonatal and Postneonatal Mortality Rates* for Selected Years, Maryland.

| | Rate* by year | | Average rate* | |
|-------------------------------|---------------|------|---------------|-----------|
| | 2018 | 2019 | 2010-2014 | 2015-2019 |
| Infant mortality | | | | |
| All Race/Ethnic | 6.1 | 5.9 | 6.6 | 6.3 |
| NH White | 4.1 | 4.1 | 4.3 | 4.1 |
| NH Black | 10.2 | 9.3 | 11.2 | 10.5 |
| Hispanic | 3.8 | 5.1 | 4.3 | 4.9 |
| Neonatal mortality | | | | |
| All Race/Ethnic | 4.2 | 3.9 | 4.7 | 4.4 |
| NH White | 2.6 | 2.7 | 3.0 | 2.7 |
| NH Black | 6.9 | 6.4 | 8.1 | 7.4 *** |
| Hispanic | 2.9 | 3.3 | 3.1 | 3.5 |
| Postneonatal mortality | | | | |
| All Race/Ethnic | 1.9 | 2.0 | 1.8 | 1.9 |
| NH White | 1.5 | 1.4 | 1.2 | 1.4 |
| NH Black | 3.3 | 2.9 | 3.1 | 3.1 |
| Hispanic | 0.9 | 1.9 | 1.2 | 1.4 |

*Per 1,000 live births

**Rates for 2010-2014 and 2015-2019 differ significantly ($p < .05$)

Figure A. Infant Mortality Rates by Race/ethnicity, Maryland, 2010-2019.



Age at Time of Death

The overall neonatal mortality rate (i.e., deaths to infants under 28 days of age per 1,000 live births) decreased 7% from 4.2 in 2018 to 3.9 in 2019 (Table 1). The rate decreased 7% from 6.9 to 6.4 among non-Hispanic black infants. The rate increased 14% from 2.9 to 3.3 among Hispanic neonates and increased by 4% from 2.6 to 2.7 among non-Hispanic white infants.

The postneonatal mortality rate (i.e., deaths from 28 days through 11 months of age per 1,000 live births) increased 5% from 1.9 in 2018 to 2.0 in 2019. The rate decreased 12%

Infant mortality rates have improved in Maryland over the past decade, falling from an average rate of 6.6 per 1,000 live births during the years 2010-2014 to an average of 6.3 per 1,000 live births during 2015-2019. The average rates fell by 6% among non-Hispanic blacks, and decreased by 5% among non-Hispanic whites. However, the average infant mortality rate increased by 14% over the two periods among Hispanic infants (Table 1).

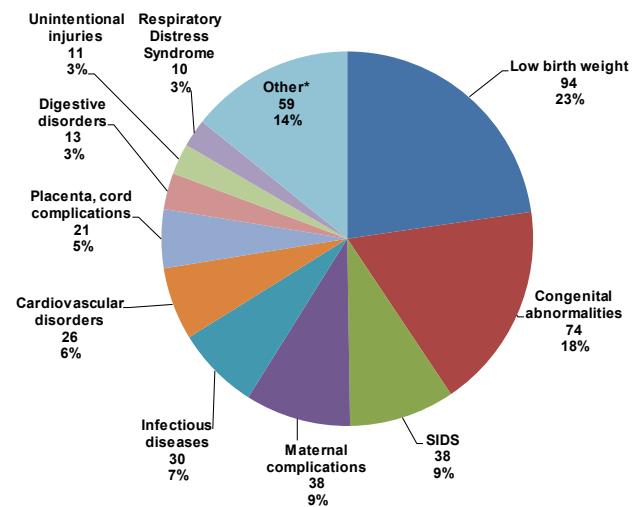
among non-Hispanic black infants, from 3.3 to 2.9, and also decreased 7% among non-Hispanic white infants. The postneonatal rate increased by 111% from 0.9 in 2018 to 1.9 in 2019 among Hispanic infants. (Table 1).

From 2010-2014 to 2015-2019, the average neonatal mortality rate declined by 6%. There was a significant decline (9%) among non-Hispanic black neonates. There was a 13% increase in the Hispanic neonatal mortality rate over the same period. The average postneonatal mortality rate increased 6% between the two 5 year periods. The rate was stable among non-Hispanic black infants and increased by 17% among Hispanic infants and non-Hispanic white infants.

Causes of death

The leading causes of infant death in 2019 were disorders relating to short gestation and low birth weight (LBW); congenital malformations, deformations, and chromosomal abnormalities (Congenital abnormalities); Sudden Infant Death Syndrome (SIDS); maternal complications of pregnancy; infectious diseases, cardiovascular disorders; 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 2019



Following a substantial decline in infant deaths attributed to SIDS between 2015 (64) and 2016 (43), there were increases in 2017(55) and 2018 (57). In 2019, deaths due to SIDS dropped to a low of 38. The number of infant homicides increased from 2 in 2018 to 5 in 2019.

The leading causes of neonatal mortality in 2019 were LBW (33%) , congenital abnormalities (16%), and maternal complications of pregnancy (11%). The leading causes of postneonatal mortality were Sudden Infant Death Syndrome (25%), congenital abnormalities (21%), infectious diseases (9%), and unintentional injuries (8%).

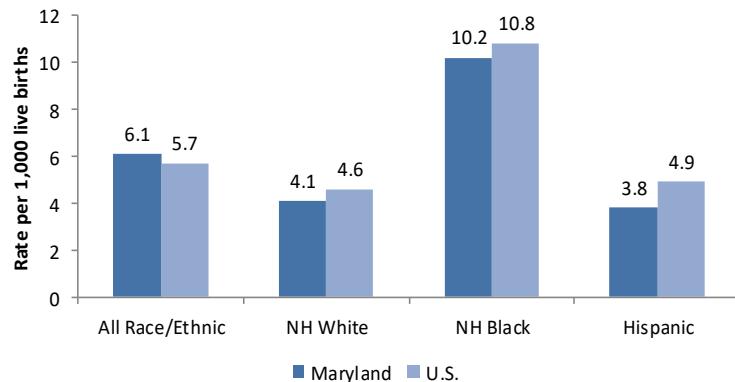
Low birth weight was the leading cause of death among non-Hispanic black infants (28%) in 2019. Congenital abnormalities were the leading cause of death among Hispanic (26%) infants and among non-Hispanic white (22%) infants. Cause-specific mortality rates continue to be higher for non-Hispanic black infants than non-Hispanic white infants for all leading causes of death. Compared with non-Hispanic white infants, non-Hispanic black infants were nearly four times more likely to die in 2019 as a result of LBW, 30% more likely to die from congenital abnormalities, twice as likely to die from SIDS, and four 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 2018, 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. White infant mortality rates have historically been lower in Maryland than in the nation, and this remained true in 2018. Maryland's non-Hispanic Black and Hispanic infant mortality rates were also lower than the national rate in 2018.

Figure C. Infant Mortality Rates by Race/ethnicity, Maryland and the U.S., 2018



Regional and county differences

The number of infant deaths and infant mortality rates by race/ethnicity, region, and political subdivision for 2018 and 2019 are shown in Table 2. The only statistically significant changes between 2018 and 2019 among all races/ethnicities combined occurred in the Eastern Shore Area jurisdictions (40% decrease). Among non-Hispanic whites, there was a significant 51% decrease in the Eastern Shore Area jurisdictions. Among non-Hispanic blacks, there was a statistically significant 74% increase in the Baltimore County rate. The National Capital Area observed a 33% decline in rates among non-Hispanic Black infants between 2018 and 2019, driven by a 33% decrease in Prince George's County.

Over the past decade, comparing the periods between 2009-2013 and 2014-2018, there has been a 4% decline in infant mortality rates statewide (Table 3). This drop was led by declines in the Baltimore Metro Area, including a significant 19% drop in Anne Arundel County and a 15% reduction in Baltimore City.

There were many areas of Maryland that experienced increases over this time frame, including counties in the Northwest Area (except Garrett) and those in the Southern Area. Many counties in the Eastern Shore area had also had higher infant mortality rates in second five-year periods (Table 3).

TABLE 2. INFANT DEATHS AND INFANT MORTALITY RATES BY RACE/ETHNICITY, REGION AND POLITICAL SUBDIVISION,
MARYLAND, 2018 AND 2019.

| 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* | |
| | 2018 | 2019 | 2018 | 2019 | 2018 | 2019 | 2018 | 2019 | 2018 | 2019 | 2018 | 2019 | 2018 | 2019 | 2018 | 2019 |
| Maryland | 432 | 414 | 6.1 | 5.9 | 123 | 120 | 4.1 | 4.1 | 231 | 207 | 10.2 | 9.3 | 47 | 66 | 3.8 | 5.1 |
| Northwest Area | 26 | 38 | 4.7 | 6.9 | 15 | 22 | 3.7 | 5.6 | 8 | 11 | 13.1 | 17.0 | 2 | 5 | ** | 7.3 |
| Garrett | 1 | 2 | ** | ** | 1 | 2 | ** | ** | 0 | 0 | ** | ** | 0 | 0 | ** | ** |
| Allegany | 4 | 10 | ** | 15.5 | 3 | 9 | ** | 15.2 | 1 | 1 | ** | ** | 0 | 0 | ** | ** |
| Washington | 7 | 13 | 4.2 | 7.9 | 4 | 6 | ** | 5.0 | 3 | 6 | ** | 23.2 | 0 | 1 | ** | ** |
| Frederick | 14 | 13 | 4.7 | 4.4 | 7 | 5 | 3.6 | 2.6 | 4 | 4 | ** | ** | 2 | 4 | ** | ** |
| Baltimore Metro Area | 199 | 205 | 6.2 | 6.4 | 62 | 58 | 4.0 | 3.9 | 106 | 113 | 10.2 | 10.8 | 16 | 23 | 4.4 | 5.9 |
| Baltimore City | 71 | 68 | 9.2 | 8.8 | 6 | 9 | 3.0 | 4.4 | 60 | 51 | 13.4 | 11.4 | 4 | 6 | ** | 6.3 |
| Baltimore County | 60 | 68 | 6.1 | 7.1 | 25 | 17 | 5.7 | 4.0 | 23 | 40 | 6.9 | 12.0 *** | 3 | 8 | ** | 6.9 |
| Anne Arundel | 22 | 29 | 3.2 | 4.2 | 13 | 9 | 3.2 | 2.3 | 5 | 11 | 4.0 | 8.3 | 3 | 7 | ** | 6.5 |
| Carroll | 6 | 8 | 3.4 | 4.9 | 4 | 8 | ** | 5.5 | 2 | 0 | ** | ** | 0 | 0 | ** | ** |
| Howard | 23 | 17 | 6.7 | 5.1 | 6 | 6 | 4.1 | 4.4 | 11 | 8 | 14.5 | 10.3 | 2 | 1 | ** | ** |
| Harford | 17 | 15 | 6.5 | 5.6 | 8 | 9 | 4.2 | 4.8 | 5 | 3 | 10.8 | ** | 4 | 1 | ** | ** |
| National Capital Area | 149 | 124 | 6.1 | 5.2 | 12 | 18 | 2.3 | 3.6 | 98 | 62 | 10.4 | 7.0 *** | 26 | 35 | 3.5 | 4.7 |
| Montgomery | 52 | 51 | 4.2 | 4.2 | 10 | 17 | 2.4 | 4.3 | 25 | 16 | 9.2 | 6.2 | 9 | 12 | 2.5 | 3.4 |
| Prince George's | 97 | 73 | 8.0 | 6.2 | 2 | 1 | ** | ** | 73 | 46 | 10.9 | 7.3 *** | 17 | 23 | 4.5 | 5.9 |
| Southern Area | 17 | 22 | 4.2 | 5.3 | 8 | 9 | 3.5 | 3.8 | 9 | 12 | 7.1 | 9.6 | 0 | 0 | ** | ** |
| Calvert | 4 | 2 | ** | ** | 3 | 2 | ** | ** | 1 | 0 | ** | ** | 0 | 0 | ** | ** |
| Charles | 10 | 14 | 5.4 | 7.5 | 2 | 3 | ** | ** | 8 | 10 | 8.4 | 11.1 | 0 | 0 | ** | ** |
| Saint Mary's | 3 | 6 | ** | 4.4 | 3 | 4 | ** | ** | 0 | 2 | ** | ** | 0 | 0 | ** | ** |
| Eastern Shore Area | 41 | 25 | 8.6 | 5.2 *** | 26 | 13 | 8.3 | 4.1 *** | 10 | 9 | 9.7 | 8.9 | 3 | 3 | ** | ** |
| Cecil | 10 | 6 | 8.7 | 5.1 | 8 | 5 | 8.4 | 5.1 | 1 | 1 | ** | ** | 1 | 0 | ** | ** |
| Kent | 0 | 1 | ** | ** | 0 | 1 | ** | ** | 0 | 0 | ** | ** | 0 | 0 | ** | ** |
| Queen Anne's | 5 | 2 | 10.5 | ** | 3 | 2 | ** | ** | 0 | 0 | ** | ** | 1 | 0 | ** | ** |
| Caroline | 5 | 0 | 11.7 | ** | 2 | 0 | ** | ** | 1 | 0 | ** | ** | 1 | 0 | ** | ** |
| Talbot | 3 | 2 | ** | ** | 3 | 1 | ** | ** | 0 | 1 | ** | ** | 0 | 0 | ** | ** |
| Dorchester | 8 | 3 | 21.2 | ** | 3 | 0 | ** | ** | 5 | 2 | 37.3 | ** | 0 | 1 | ** | ** |
| Wicomico | 9 | 9 | 7.2 | 7.2 | 6 | 4 | 9.7 | ** | 3 | 3 | ** | ** | 0 | 2 | ** | ** |
| Somerset | 1 | 2 | ** | ** | 1 | 0 | ** | ** | 0 | 2 | ** | ** | 0 | 0 | ** | ** |
| Worcester | 0 | 0 | ** | ** | 0 | 0 | ** | ** | 0 | 0 | 80.6 | ** | 0 | 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 2018 and 2019 differ significantly (p<.05).



Maryland

DEPARTMENT OF HEALTH

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

Vital Statistics Administration
Maryland Department of Health
4201 Patterson Avenue
Baltimore, MD 21215

Phone: 410-764-3514

or visit:

www.health.maryland.gov/vsa

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, 2010-2014 AND 2015-2019.

| Region and political subdivision | Number of infant deaths | | Average infant mortality rate* | | Percent change** |
|----------------------------------|-------------------------|-------------|--------------------------------|------------|------------------|
| | 2010-2014 | 2015-2019 | 2010-2014 | 2015-2019 | |
| Maryland | 2397 | 2277 | 6.6 | 6.3 | -3.5 |
| Northwest Area | 134 | 162 | 4.9 | 5.9 | 21.7 |
| Garrett | 11 | 10 | 7.7 | 7.1 | -7.3 |
| Allegany | 24 | 27 | 7.0 | 8.3 | 18.1 |
| Washington | 45 | 61 | 5.1 | 7.3 | 41.6 |
| Frederick | 54 | 64 | 3.9 | 4.5 | 15.4 |
| Baltimore Metro Area | 1145 | 1010 | 6.9 | 6.2 | -9.9 *** |
| Baltimore City | 462 | 356 | 10.4 | 8.8 | -15.2 *** |
| Baltimore County | 309 | 311 | 6.3 | 6.3 | 0.5 |
| Anne Arundel | 190 | 153 | 5.5 | 4.4 | -19.2 *** |
| Carroll | 30 | 28 | 3.8 | 3.3 | -12.1 |
| Howard | 88 | 103 | 5.1 | 5.9 | 15.2 |
| Harford | 66 | 59 | 4.9 | 4.4 | -10.1 |
| National Capital Area | 821 | 780 | 6.5 | 6.3 | -3.6 |
| Montgomery | 316 | 304 | 4.8 | 4.8 | -0.1 |
| Prince George's | 505 | 476 | 8.4 | 7.8 | -6.7 |
| Southern Area | 115 | 134 | 5.5 | 6.5 | 18.0 |
| Calvert | 22 | 22 | 4.8 | 4.9 | 1.7 |
| Charles | 57 | 72 | 6.2 | 7.8 | 26.1 |
| Saint Mary's | 36 | 40 | 5.1 | 5.8 | 14.3 |
| Eastern Shore Area | 182 | 191 | 7.6 | 8.0 | 4.7 |
| Cecil | 33 | 35 | 6.0 | 6.1 | 2.2 |
| Kent | 6 | 6 | 6.9 | 7.9 | 13.9 |
| Queen Anne's | 15 | 10 | 6.5 | 4.1 | -37.9 |
| Caroline | 17 | 16 | 8.6 | 8.0 | -6.6 |
| Talbot | 14 | 16 | 8.4 | 9.7 | 15.2 |
| Dorchester | 12 | 17 | 6.3 | 9.4 | 48.4 |
| Wicomico | 54 | 52 | 8.8 | 8.3 | -5.9 |
| Somerset | 12 | 20 | 9.1 | 16.7 | 82.8 |
| Worcester | 19 | 19 | 8.6 | 9.3 | 7.9 |

*Per 1,000 live births

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

***Rates for 2010-2014 and 2015-2019 differ significantly ($p < .05$).



Maryland Department of Health Vital Statistics Administration

Larry Hogan, Governor, Boyd K. Rutherford, Lt. Governor, Robert R. Neall, Secretary,
Lee Hurt, Dr.P.H., Director, Vital Statistics Administration

The services and facilities of the Maryland Department of Health (MDH) are operated on a non-discriminatory basis. This policy prohibits discrimination on the basis of race, color, sex, or national origin and applies to the provisions of employment and granting of advantages, privileges, and accommodations.

The Department, in compliance with the Americans With Disabilities Act, ensures that qualified individuals with disabilities are given an opportunity to participate in and benefit from MDH services, programs, benefits, and employment opportunities.