



WEST VIRGINIA SUDDEN UNEXPLAINED INFANT DEATHS

Calendar Year 2017
(January - December)

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Report for Calendar Year 2017

This report has been prepared by the West Virginia Department of Health and Human Resources (DHHR), Bureau for Public Health, Office of Maternal, Child and Family Health (OMCFH) in accordance with the requirements of West Virginia Code §16-1-6(p). Data reported is the most recent available due to process time by the Office of the Chief Medical Examiner and the Health Statistics Center and review process by the Child Death Review Panel and the Infant and Maternal Mortality Review Panel.

Sudden unexpected infant death (SUID) is any infant death (a child under one year of age) that is unexpected and initially unexplained. SUID also describes the sudden death of an infant that remains unexplained following autopsy, review of medical records, and death investigation performed by the medical examiner. Characteristically, these deaths occur quickly and usually during a sleep period; in most cases, the baby seems healthy. Both are referred to as SUID since all are unexpected and most are ultimately unexplained.

These unexplained deaths were formerly attributed to Sudden Infant Death Syndrome (SIDS), but recognition by the medical community of limitations in detecting accidental and non-accidental asphyxia in infancy has led to a nationwide change in diagnostic terminology. As a consequence, the use of "SUID," a diagnostic term which encompasses the possible contribution of asphyxia, as well as other avoidable injuries, to sudden infant death has gradually replaced the "diagnosis" of SIDS. SUID is now recognized as the major cause of death in babies from one month to one year of age.

During calendar year 2017, there were 31 resident SUID deaths reported by the DHHR's Bureau for Public Health, Health Statistics Center. These infant deaths were identified with a cause of death listed on the death certificate as ICD codes R95–R99 (Sudden Infant Death Syndrome, Other Sudden Death, Cause Unknown, and Other Ill-Defined and Unspecified Causes of Mortality) and W75 (Accidental Suffocation and Strangulation in Bed). It is these unexpected/unexplained infant deaths that are included in this annual report.

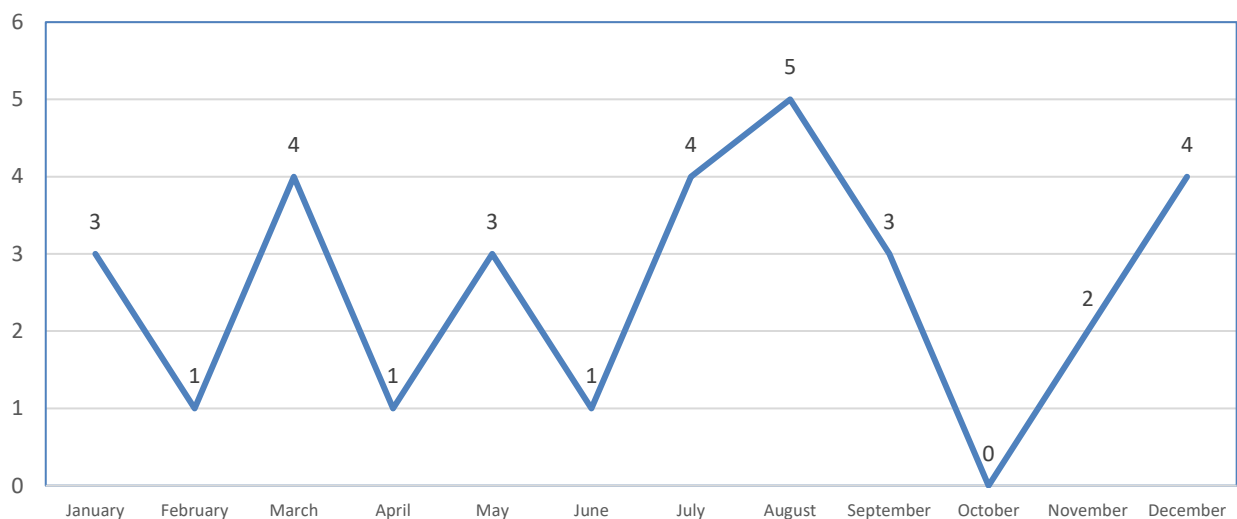
Medical examiners and scene investigators identify SUID risk factors that include hazardous sleeping environments such as co-sleeping/bed sharing, very soft or uneven bedding surfaces, heavy bedding, maternal smoking, smoke exposure in the home, and caretaker impairment. The findings are recorded on death certificates, in autopsy reports, and in scene investigation reports for the use of public health and safety professionals.

The following tables offer summaries of the demographics and identified risk factors of SUID deaths occurring in West Virginia resident infants during calendar year 2017. Data reporting sources include the Health Statistics Center, Birth Score Program, and Office of the Chief Medical Examiner. Demographics and risk factors include the month of death, county of residence, age at death, sex of infant, race of infant, maternal age, maternal education, the position of the infant when placed to sleep and position found, use of hazardous bedding, maternal smoking during pregnancy, exposure to second-hand smoke in the home, prenatal care initiation, co-sleeping/bed sharing, gestation, birthweight, Birth Score, and Medicaid status. It is important to note that information on out-of-state births and deaths is not always available and is, therefore, shown as "unknown." Information for in-state births and deaths that is missing or left blank on the investigative report or other documents is also shown as "unknown."

The most prevalent identified risk factors in SUID deaths for 2017 were co-sleeping/bed sharing, hazardous bedding, position infant placed to sleep, and smoke exposure in the home. Co-sleeping/bed sharing was reported in 52% of cases with 13% of cases having unknown sleeping status. Hazardous bedding was reported in 77% of cases with 13% of cases having unknown bedding status. Infant position placed to sleep other than on back was reported in 58% of cases. Maternal smoking during pregnancy was reported in 65% of the cases and smoke exposure in the home was reported in 48% of cases, with 23% of cases having unknown status of smoke exposure in the home. These risk factors are the most modifiable behavioral factors that could significantly impact the rate of infant deaths, specifically SUID. Other variables of interest include the Medicaid status of the infant at time of death; 71% of cases reported Medicaid as the primary source of insurance and 71% of cases reported maternal education as high school graduate/GED or less.

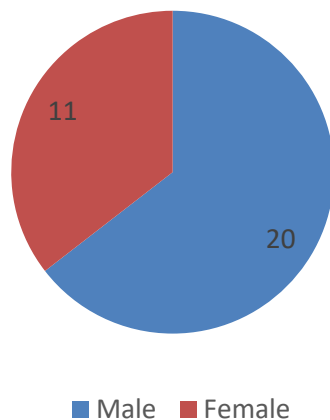
In 2017, there were SUID deaths in every month with the exception of October.

Deaths by Month



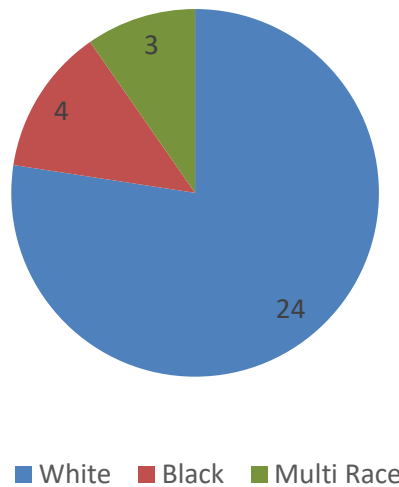
There were 20 (65%) male deaths and 11 (35%) female deaths.

Deaths by Gender



There were 24 (77%) white deaths, four (13%) black deaths, and three (10%) multi race deaths.

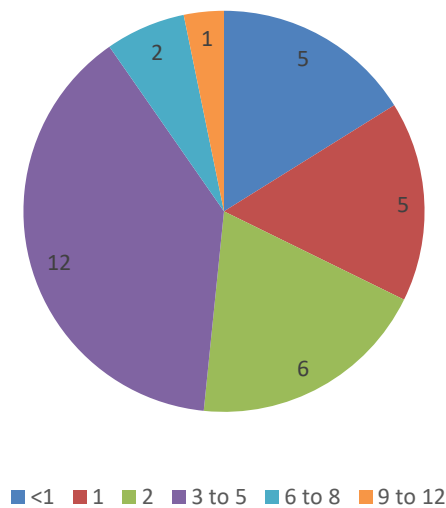
Deaths by Race*



* Infant race at time of death

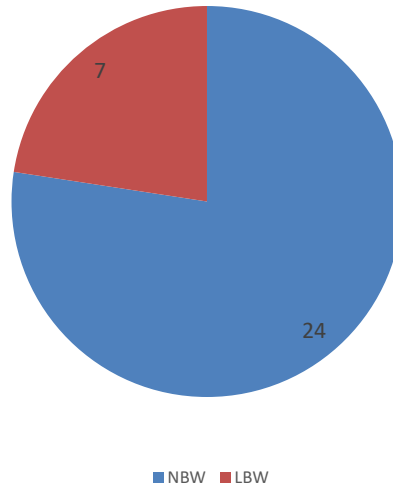
Five (16%) deaths occurred at less than one month of age, five (16%) deaths occurred at one month of age, six (19%) deaths occurred at two months of age, 12 (39%) deaths occurred at three to five months of age, two (7%) deaths occurred at six to eight months of age, and one (3%) death occurred at nine to twelve months of age.

Deaths by Age in Months



Twenty-four (77%) deaths were normal birthweight and seven (23%) deaths were low birthweight.

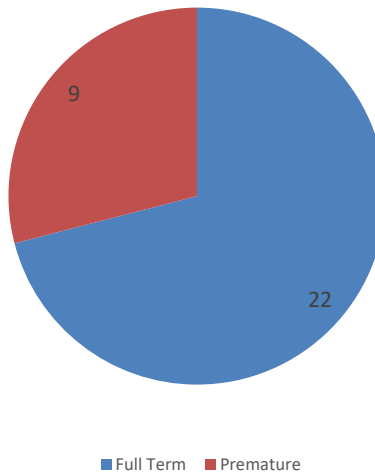
Deaths by Birthweight*



*Normal: ≥ 2500 grams Low: < 2500 grams

There were 22 (71%) full term deaths and nine (29%) deaths were premature.

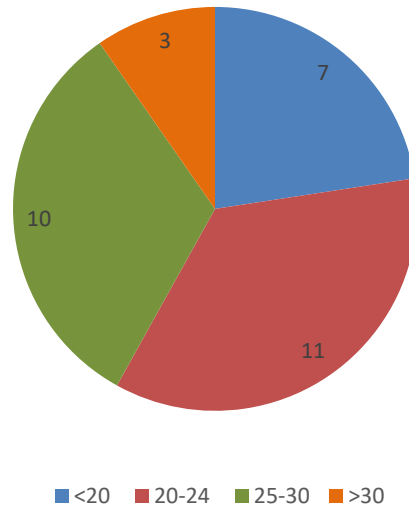
Deaths by Gestation*



*Full Term: ≥ 37 weeks Premature: < 37 weeks

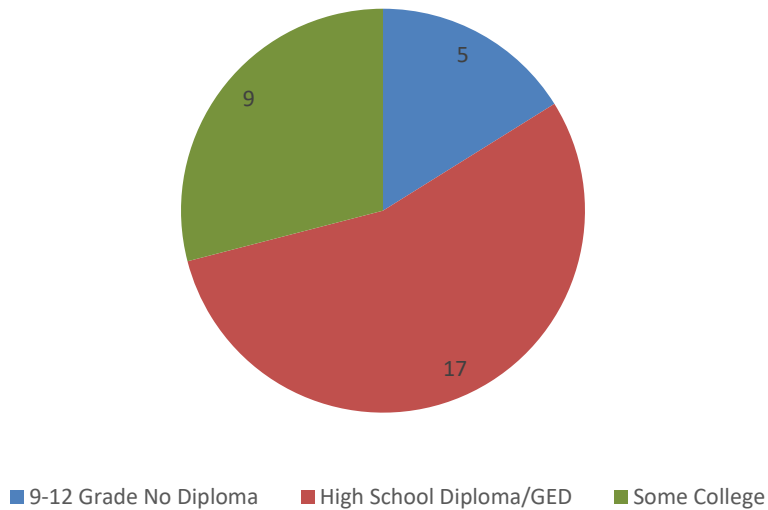
Seven (23%) deaths occurred to mothers less than 20 years of age, 11 (35%) deaths occurred to mothers 20-24 years of age, ten (32%) deaths occurred to mothers 25-30 years of age, and three (10%) deaths occurred to mothers greater than 30 years of age.

Deaths by Maternal Age



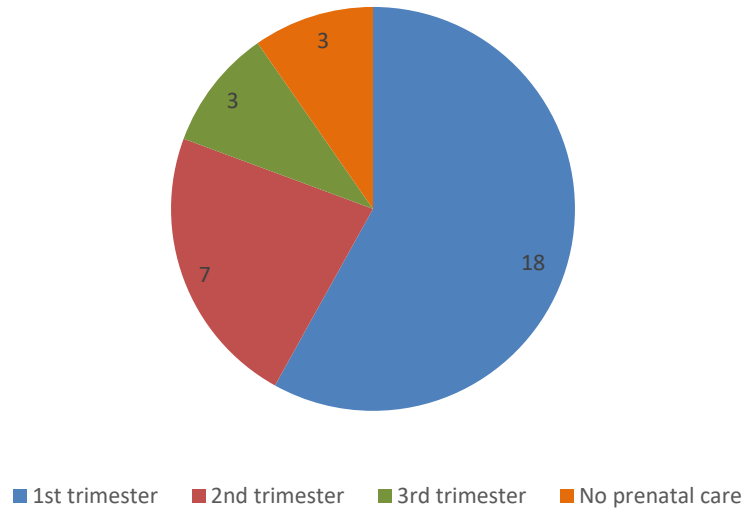
Five (16%) deaths occurred to mothers with less than a high school diploma, 17 (55%) deaths occurred to mothers with a high school diploma or GED, and nine (29%) deaths occurred to mothers with some college education.

Deaths by Maternal Education



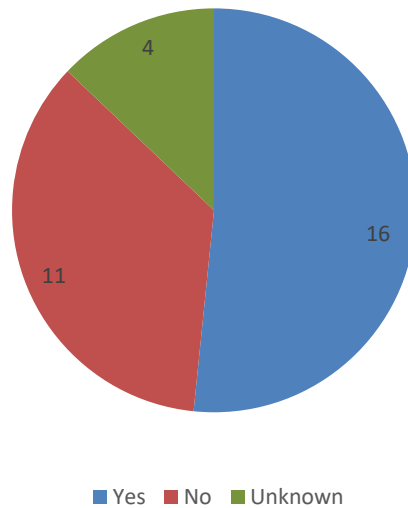
Eighteen (57%) deaths occurred to mothers with first trimester prenatal care, seven (23%) deaths occurred to mothers with second trimester prenatal care, three (10%) deaths occurred to mothers with third trimester prenatal care, and three (10%) death occurred to mothers with no prenatal care.

Deaths by Maternal Prenatal Care



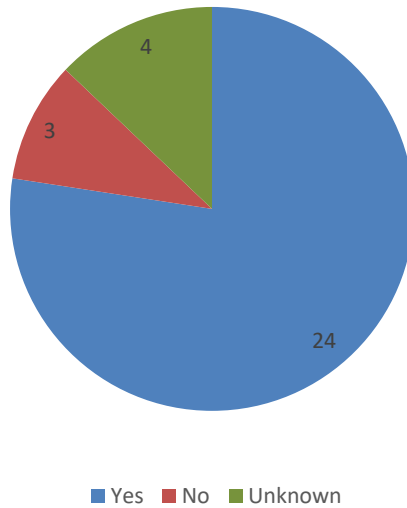
Co-sleeping/bed-sharing was reported in 16 (52%) deaths, no co-sleeping/bed-sharing was reported in 11 (35%) of the deaths, and in four (13%) of the deaths, co-sleeping/bed-sharing at the time of death was unknown.

Deaths by Co-sleeping/Bed-sharing



Hazardous bedding was reported in 24 (77%) deaths, non-hazardous bedding was reported in three (10%) of the deaths, and in four (13%) of the deaths, hazardous bedding at the time of death was unknown.

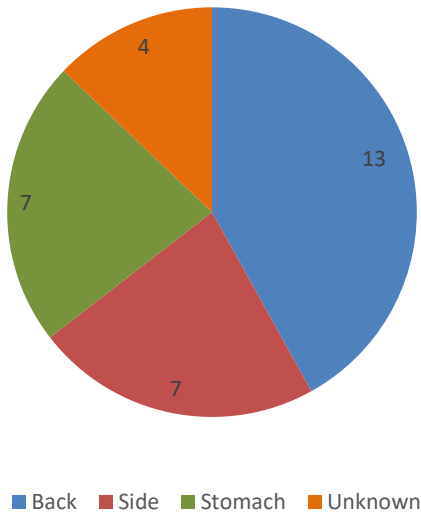
Deaths by Hazardous Bedding*



*Any bedding other than crib with no other sleeping environment risks

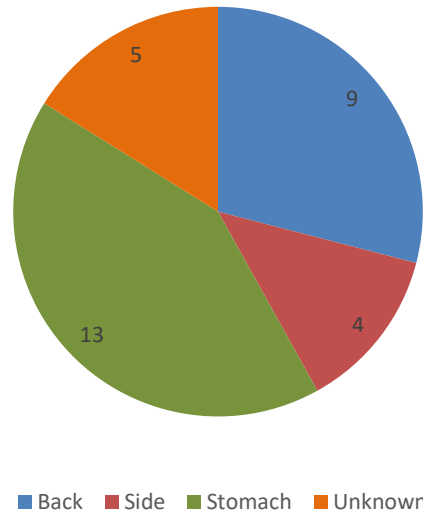
Infant placed to sleep on back was reported in 13 (42%) deaths, infants placed to sleep on their side was reported in seven (23%) of the deaths, infants placed to sleep on their stomach was reported in seven (23%) of the deaths, and in four (13%) of the deaths, infant placement to sleep at the time of death was unknown.

Deaths by Infant Placement to Sleep



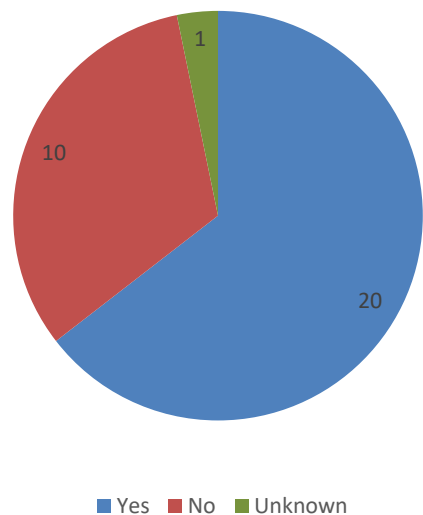
Infant found on back was reported in nine (29%) deaths, infants found on their side was reported in four (13%) of the deaths, infants found on their stomach was reported in 13 (42%) of the deaths, and in five (16%) of the deaths, infant position found at the time of death was unknown.

Deaths by Position Infant Found



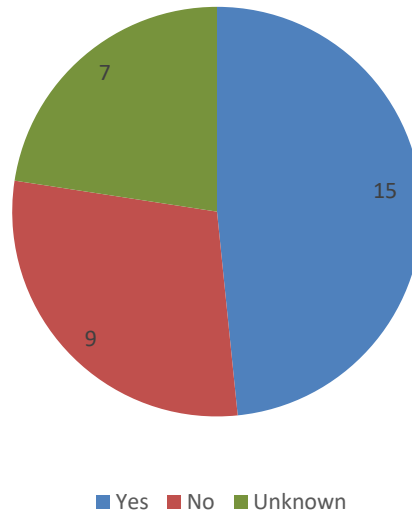
Maternal smoking during pregnancy was reported in 20 (65%) deaths, no maternal smoking was reported in ten (32%) of the deaths, and in one (3%) death, maternal smoking during pregnancy was unknown.

Deaths by Maternal Smoking during Pregnancy



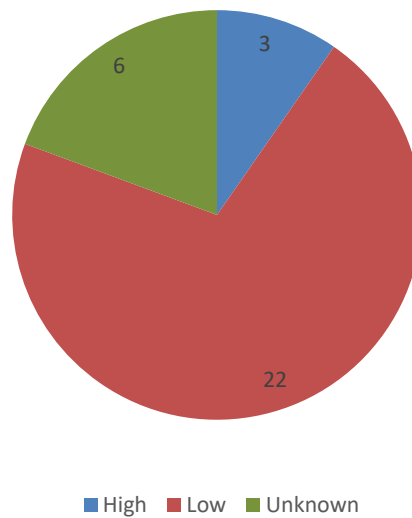
Smoke exposure in the home was reported in 15 (48%) deaths, no smoke exposure in the home was reported in nine (29%) of the deaths, and in seven (23%) of the deaths, smoke exposure in the home was unknown.

Deaths by Smoke Exposure in the Home



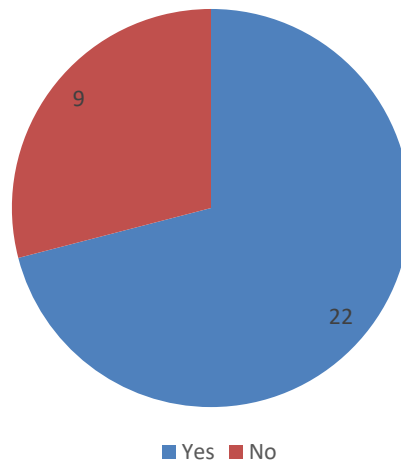
A high Birth Score was reported in three (10%) deaths, low Birth Score was reported in 22 (71%) of the deaths, and in six (19%) of the deaths, the Birth Score was unknown.

Deaths by Birth Score



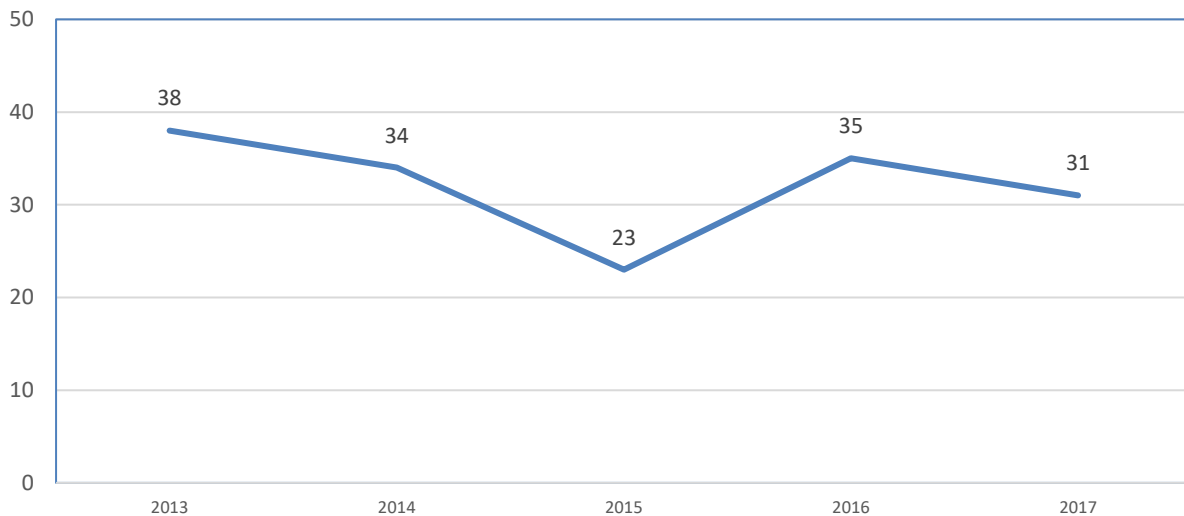
Medicaid coverage was reported in 22 (71%) deaths and coverage other than Medicaid was reported in nine (29%) of the deaths.

Deaths in Which There Was Medicaid Coverage



The following chart shows SUID deaths from 2013-2017.

SUID Deaths by Year



Research shows that firm bedding, placing the infant on his/her back to sleep in an appropriate infant sleep product such as a crib, not smoking cigarettes prenatally or exposing infant to second hand smoke, and not co-sleeping/bed-sharing with the infant can be effective preventive measures in reducing SUID.

OMCFH is an ongoing participant in the national *Back to Sleep* campaign since its inception in 1996 and continues to participate in the expanded *Safe to Sleep* campaign. OMCFH partners with Our Babies Safe and Sound to offer annual competency training to hospital staff and home visitation program staff, disseminate pertinent, current information about risk factors such as co-sleeping/bed sharing, early prenatal care, maternal smoking during pregnancy, infant exposure to secondhand smoke, and a safe sleeping environment. OMCFH provides current, relevant educational material statewide to health care providers as well as parents, grandparents, and other caregivers of West Virginia's infants.