



West Virginia Fatality and Mortality Review Team

Annual Report 2019

Child Fatality Review Panel CY 2015

Domestic Violence Fatality Review Panel CY 2014

Infant and Maternal Mortality Review Panel

Maternal Deaths CY 2014 & Infant Deaths CY 2013

Unintentional Pharmaceutical Drug Overdose Review Panel

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West Virginia Fatality and Mortality Review Team
Annual Report 2019



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The following report is filed in compliance with W. Va. Code §61-12A-1, *et seq.*, known as the Fatality and Mortality Review Team which is created under the West Virginia Department of Health and Human Resources, Bureau for Public Health.

All individuals listed were in office at time of report distribution.

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INTRODUCTION

The following report is filed in compliance with W. Va. Code §61-12A-1, *et seq.*, by the Fatality and Mortality Review Team (FMRT) of the West Virginia Department of Health and Human Resources (DHHR), Bureau for Public Health.

W. Va. Code §61-12A-1, *et seq.* establishes standard procedures for the formation and conduction of business of the FMRT. The FMRT is a multidisciplinary team created to oversee and coordinate the examination, review, and assessment of special cases of death where other than natural causes are suspected.

The FMRT consists of four members which includes DHHR's Chief Medical Examiner (chairperson), DHHR's Commissioner of the Bureau for Public Health (or designee), the Superintendent of the West Virginia State Police (or designee) and a prosecuting attorney appointed by the Governor. To carry out the purpose of the team, four Advisory Panels were established and set up as follows:

- A Child Fatality Review Panel (CFRP) created to examine, analyze, and review deaths of children under the age of 18 years;
- A Domestic Violence Fatality Review Panel (DVFRP) created to examine, analyze, and review deaths resulting from suspected domestic violence;
- An Infant and Maternal Mortality Review Panel (IMMRP) created to examine, analyze, and review the deaths of infants and women who die during pregnancy, at the time of birth or within one year of the birth of a child; and
- An Unintentional Pharmaceutical Drug Overdose Review Panel (UPDORP) created to examine, analyze, and review deaths from unintentional prescription or pharmaceutical drug overdoses.

The FMRT is required to submit an annual report to the Governor and to the Legislative Oversight Committee on Health and Human Resources Accountability concerning its activities and the activities of the Advisory Panels including statistical information concerning cases reviewed during the year, trends and patterns concerning these cases and the panel's recommendations to reduce the number of fatalities and mortalities that occur in West Virginia.

Cases subject to review by the panels are prepared for review at different points in time. Each of the review panels has different timelines, caseloads, investigative approaches and processes that comprise the panel work. As such, the panels are currently working on different schedules and calendar year reviews.

This report embodies the findings of the CFRP for the calendar year 2015 which may differ from information reported by DHHR's West Virginia Health Statistics Center, and DVFRP for the calendar year 2014. The IMMRP data reporting includes maternal deaths for 2014 and infant deaths for 2013. At the time of this report, UPDORP has not been activated.

CHILD FATALITY REVIEW PANEL

Overview

The CFRP is responsible for reviewing the facts and circumstances surrounding deaths of all children, under the age of 18, who were residents of the State of West Virginia at the time of their death.

The CFRP is required to provide statistical data and analysis concerning the causes of child fatalities in West Virginia, promote public awareness of the prevalence and causes of child fatalities, as well as include recommendations for their reduction. The fundamental objective of the CFRP is to prevent future deaths of children by providing necessary tools and information to expectant parents, parents, grandparents, families, appropriate agencies, and the general public. CFRP recommendations are designed to make the needed changes in actions and policies to protect children, while holding perpetrators responsible for their actions, and reducing the overall number of child fatalities that occur in the state.

Membership

According to statute, CFRP operates under the auspices of the OCME, with the state Chief Medical Examiner acting as the chair of the panel and the coordinator housed within that office as well. Other mandated members of the panel include:

- Two prosecuting attorneys or their designees;
- State Superintendent of the West Virginia State Police or his or her designee;
- One law enforcement official other than a member of the State Police;
- One Child Protective Services (CPS) worker currently employed in investigating reports of child abuse or neglect;
- One physician specializing in the practice of pediatric or family medicine;
- One social worker who may be employed in the area of public health;
- Director of the Office of Maternal, Child, and Family Health (OMCFH) of DHHR's Bureau for Public Health or his or her designee;
- One representative of the Sudden Infant Death Syndrome Program in DHHR's Office of Maternal, Child, and Family Health;
- Director of the Division of Children's Mental Health Services in DHHR's Bureau for Behavioral Health or his or her designee;
- Director of the Office of Social Services in DHHR's Bureau for Children and Families [now Bureau for Social Services] or his or her designee
- Superintendent of the West Virginia Department of Education or his or her designee;
- Director of Division of Juvenile Services or his or her designee; and
- President of the West Virginia Association of School Nurses or his or her designee.

Types of Deaths Reviewed

The CFRP reviews all preventable death cases of any person under the age of 18. The majority of cases the panel reviews fit into the categories of accident, homicide, suicide, or undetermined. The deaths that occur attributable to natural disease typically are not selected for a panel review unless information reveals potential for the death to have been prevented.

Case Review Process

Initial screening of all fatalities is completed by the DHHR's Bureau for Public Health (BPH), and the OCME to determine if they meet the definition of a preventable child fatality. The OCME

investigators, pathologists, and the CFRP Coordinator review all potential cases and make a determination of the child's resident status based on all the information available at the time the case is first presented to the OCME. Typically, with this method of determination, it is rare that a case is overlooked. In an attempt to combat this issue, a list of all child fatalities is obtained from DHHR's West Virginia Health Statistics Center and serves as a way to catch any child deaths that may have been missed initially.

The CFRP Coordinator maintains a running list of all identified child fatalities to be reviewed by the panel. The panel only reviews closed cases and does not attempt to reopen the investigation of those deaths. The CFRP's definition of closed cases are those where the offender is dead, has been convicted in a death, or there is a determination of no further legal action. For the reasons previously mentioned, most cases are reviewed approximately two years following the actual event.

Case reviews are conducted in confidential meetings. All panel members and invited guests are required to sign an agreement to abide by the confidentiality standards specified in the FMRT statute.

Prior to case review by the CFRP, a request for records is sent to all agencies that were identified as having relevant information. The collected information typically includes demographic information, autopsy reports, criminal and civil court histories of the victim and offender, Child Protective Services (CPS) information, media reports, information regarding the use of legal or advocacy services, and the details of the incident including those occurring both prior to and following the death.

The CFRP members present a summary of the information collected for each case reviewed during the monthly meeting. This is followed by a panel discussion, which aims to address the following matters for each incident:

- What were the hazardous events that led up to the fatality?
- Were there any opportunities to prevent the fatality?
- Is training or education needed as it relates to specific areas or occupations?
- How does the incident relate to other reviewed incidents?
- Are there policies relevant to the incident that need to be reviewed or changed?
- Are there lessons or educational messages to be derived from this incident?

As part of the review, CFRP identifies which systems, if any, the victim or the offender, or both, had contact with prior to, during, or after the death. This information helps the panel identify possible recommendations for improvement to system responses to incidents. This method of constructing system recommendations does not in any way have the intention to place blame on any individual or organization. To further support this objective, the recommendations made throughout the year are assembled and presented as wide-ranging proposals for systemic improvements as opposed to case specific ones. The panel believes that these recommendations can be used to improve system responses across an array of agencies and service providers to drastically reduce or eliminate preventable child deaths in West Virginia.

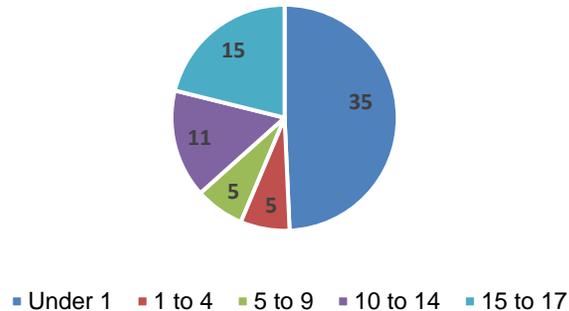
Findings

In 2015, the CFRP had 71 recorded preventable deaths. The information housed within this report will provide insight into the reasons children are dying and also provide recommendations as to the preventative measures that can be taken to reduce this number in the future.

Demographics

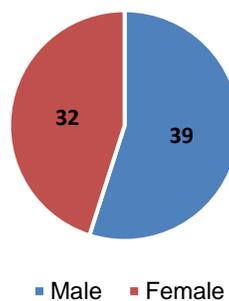
Figure 1 illustrates the distribution of child deaths by age with the percentages for each group. In 2015, the majority of deaths reviewed were among infants under one year of age. Of the 71 preventable deaths reviewed by the CFRP, 35 were infants. An infant death is defined as the death of a child prior to their first birthday. Young children aged one to four accounted for five total deaths. Children aged five to nine accounted for five deaths. There were 11 deaths in adolescents aged 10 to 14. Teens aged 15 through 17 numbered 15 deaths.

Figure 1: Total Deaths By Age Group



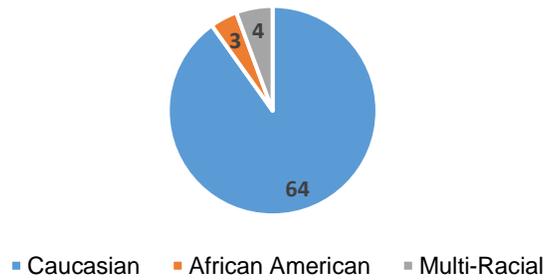
In Figure 2, the child deaths are separated by gender. There were 39 male child deaths and 32 female child deaths that occurred during 2015. This difference between male and female mortality is said to occur from birth and continue throughout life. Research shows the human male is more vulnerable than the female. At the time of birth, a male newborn is said to be about four to six weeks behind a female newborn physiologically. Also, the excess of fatal accidents involving males is attributed to the fact that they have a pattern of poor motor skills and cognitive regulation, which leads to a misjudgment of risk [1].

Figure 2: Deaths By Sex



The distribution of child deaths in West Virginia as related to race is shown in Figure 3. The data show that 64 of the 71 deaths were Caucasian children. This is followed by three deaths in African American children, and four deaths of children identifying with two or more races.

Figure 3: Deaths By Race



Manner of Death

The data is broken down into five manner of death types: natural, accident, suicide, homicide, and undetermined. For 2015, there was one death from complications of a natural disease that could have been prevented if properly taken care of. The remaining categories of death result from damage involving the structure and/or function of the body initiated by an external agent or force. These causes could be due to an accident (i.e., motor vehicle, drowning, fire, etc.) or intentional (i.e., suicide or homicide). Other deaths can be ruled undetermined that could be either accidental or intentional.

The majority of preventable deaths, 30 of 71, in children from birth to age 17 were due to accidental causes as shown in Figure 4. This was followed by undetermined deaths comprising 25 of 71. Suicides accounted for 9 of 71, and homicide deaths were 6 of 71.

Figure 4: 2015 Deaths By Manner

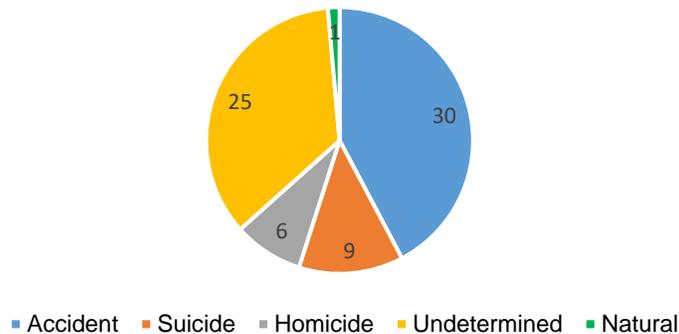


Figure 5 shows the manner of death by age group. The infants under age one comprised 22 of the 25 undetermined deaths. Overall, infants under age one had the highest number of deaths for all age groups with 35 of the 71 preventable deaths. Teens aged 15-17 had the second highest number of deaths with 15 of the 71.

Figure 5: Manner of Death By Age Group

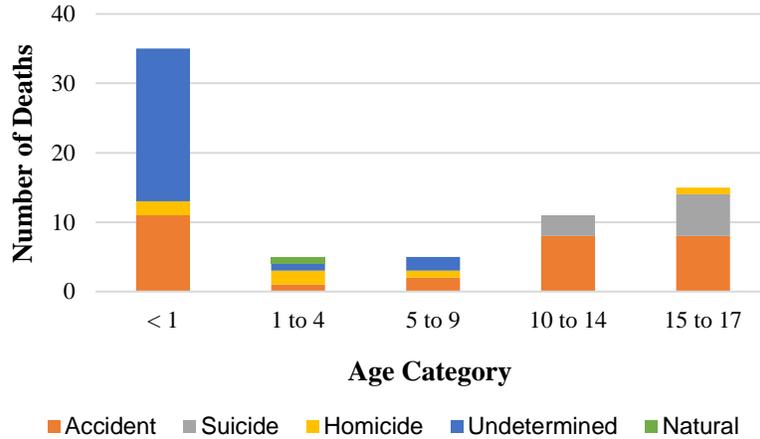
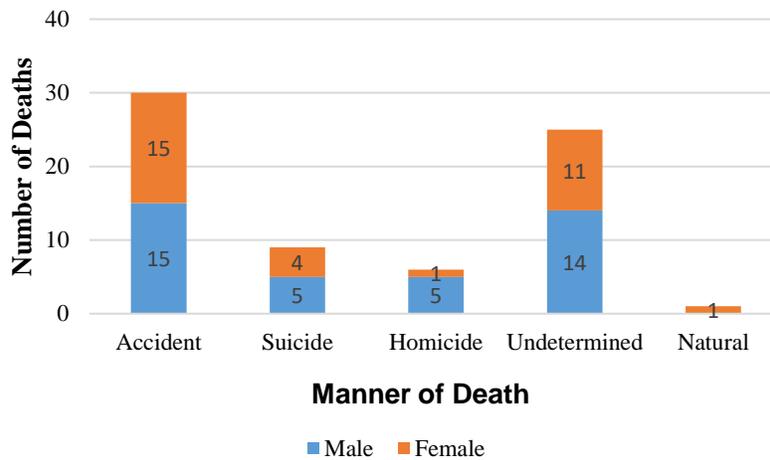


Figure 6 shows the 2015 deaths by manner of death and the gender of the child. In 2015, more male children died overall than female children. The data show males were more often the victims of homicide when compared to females. It also shows that more male infants died as a result of undetermined deaths when compared to females. The incidence of a female completing suicide compared to a male completing suicide was similar. For the nine total suicides that were reported in 2015, 56% were completed by males while only 44% were completed by females. When looking at the accidental deaths, males and females had the same number of deaths for 2015.

Figure 6: Deaths By Manner and Sex



Cause of Death

Each manner of death has subdivisions or categories termed causes, which give a more detailed explanation as to why the death occurred. The top three causes of death overall were unknown (undetermined), motor vehicle (accident), and third was asphyxia (accident). Unknown deaths accounted for 22 of the 71 total child deaths which is 30.9% overall. Motor vehicle deaths were responsible for 15.5% or 11 of the 71 deaths. Table 1 shows a detailed list of all preventable causes of death by manner for all age groups that occurred in 2015.

Table 1: Causes of Death By Manner and Age Group

Manner	Cause	<1	1 to 4	5 to 9	10 to 14	15 to 17
Accident	Any Medical Cause	4	-	-	-	-
	Motor Vehicle	1	-	2	3	5
	Fire, Burn, or Electrocution	-	-	-	1	-
	Drowning	-	1	-	3	-
	Asphyxia	6	-	-	-	-
	Fall or Crush	-	-	-	1	-
	Poisoning, Overdose, or Acute Intoxication	-	-	-	1	1
	Unknown	-	-	-	-	1
Suicide	Asphyxia	-	-	-	2	2
	Weapon	-	-	-	1	3
	Poisoning, Overdose, or Acute Intoxication	-	-	-	-	1
Homicide	Asphyxia	-	1	-	-	-
	Weapon	2	1	1	-	1
Undetermined	Fire, Burn, or Electrocution	-	-	2	-	-
	Poisoning, Overdose, or Acute Intoxication	1	-	-	-	-
	Unknown	21	1	-	-	-
Natural	Medical Condition	-	1	-	-	-

Distribution of Deaths for Various Categories

Figure 7 shows all preventable deaths that occurred for each month in 2015. Most child deaths occurred in June, followed by January. There were two months tied for the fewest total deaths which were August and September.

Figure 7: 2015 Child Deaths By Month

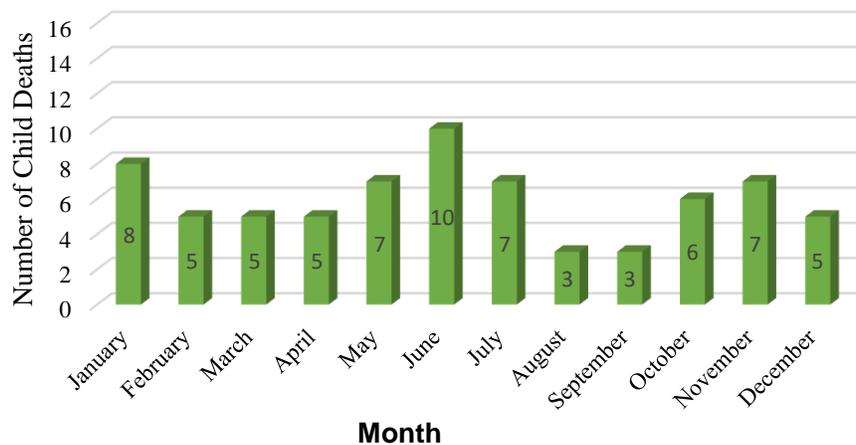
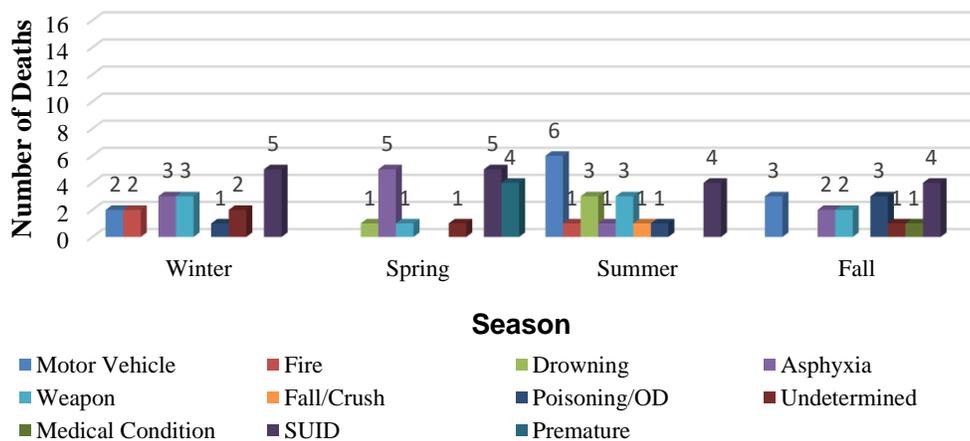


Figure 8 shows preventable causes of death by season.^a The data shows that most motor vehicle accidents occurred in summer. Most drowning deaths also occurred during the summer. This is expected given that summer is the most popular time for children to go swimming. There was one death during the spring due to drowning. According to information from the Centers for Disease Control and Prevention (CDC), about one in five children aged 14 and younger dies from drowning each year [2]. Correspondingly, for every one child who dies from drowning, there are another five who are taken to the emergency department to receive care for non-fatal submersion injuries [2]. For 2015, there were two fire-related deaths in the state. Both fire deaths occurred in the winter.

Figure 8: Deaths By Cause Per Season



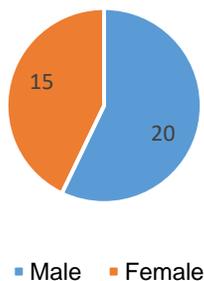
Infant Deaths

An infant death is the death of a child any time after their birth but prior to reaching their first birthday. In 2015, there were 35 preventable infant deaths reviewed by the CFRP. The age category with the most preventable deaths in 2015 was infants. Infant mortality is characteristically used as an indicator of overall health of a society [3].

Demographics

Figure 9 shows the infant deaths in West Virginia divided into the category of gender. It shows that 20 male infants and 15 female infants died in 2015. This displays that 57% of infant deaths were in males and 43% were in females.

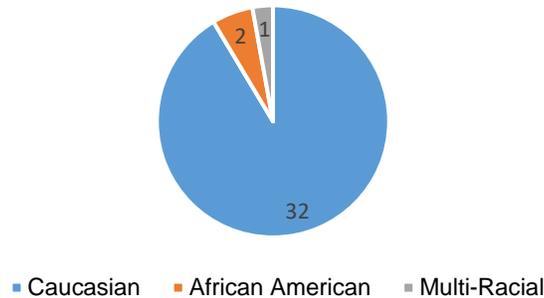
Figure 9: Infant Deaths By Gender



^a For the purposes of this report, the seasons are as follows: Winter-Dec., Jan., Feb.; Spring-Mar., Apr., May; Summer-Jun., Jul., Aug.; and Fall-Sept., Oct., Nov.

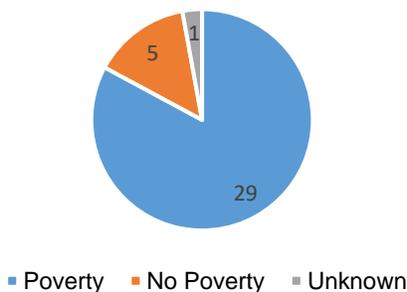
Infant deaths by race are shown in Figure 10. This figure shows that most of the deaths (32) occurred in Caucasian infants. There were two African American infants, and one multi-racial infant.

Figure 10: Infant Deaths By Race



The poverty status^b of infants who died of preventable deaths in West Virginia in 2015 provides a figure that indicates a possible correlation. Figure 11 shows the 35 deaths by poverty status of the parents at the time of the infant's death. There were 29 of the 35 infants who were considered to be in poverty. This accounts for 83% of all preventable infant deaths. In West Virginia, the infants in poverty were more likely than their non-poverty counterparts to die from a preventable death. A report by He *et al.* states the high infant mortality rate in the United States has some association with disparities in socioeconomic status [4]. Financial situation can affect nutrition, food security, education, and health care [4].

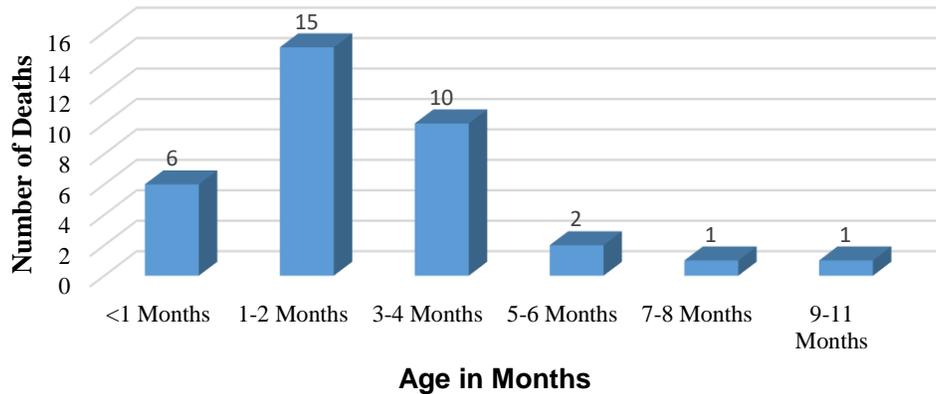
Figure 11: Preventable Infant Deaths By Poverty Status



Infant deaths per age category in months are shown in Figure 12. This figure shows the number of deaths was highest in the one- to two-month-old infants. Afterwards, the number of deaths begins to fall. The data seem to show the number of deaths continues to decrease as the age of the infant increases.

^b Poverty status is determined by family receiving Medicaid at time of infant's death.

Figure 12: Infant Deaths By Age In Months



Manner of Death in Infants

The data on preventable death for infants is divided into three manner of death categories: accident, homicide, and undetermined. Figure 13 shows there were 22 deaths deemed undetermined, 11 deemed accidents, and two deemed homicides.

Figure 13: Manner of Death In Infants

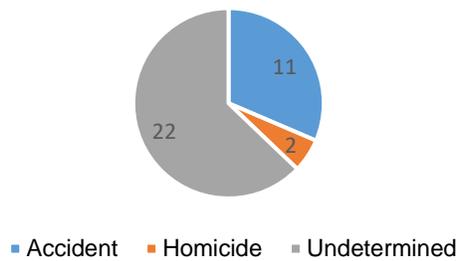
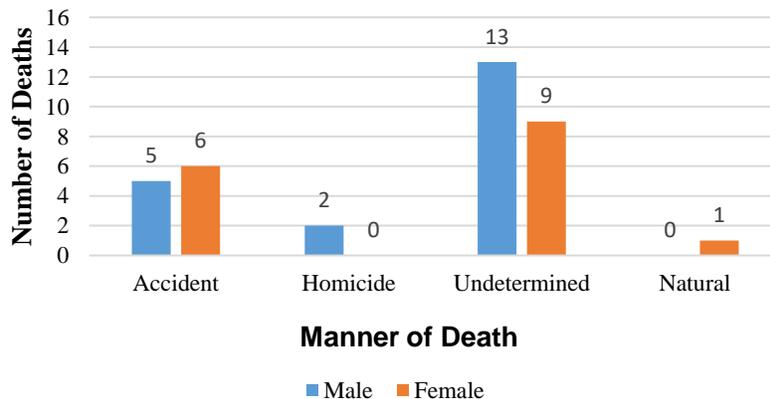


Figure 14 shows the manners of death for infants by the gender of the infant. This figure shows that overall male infants died at higher numbers than female infants. Male infants accounted for the most undetermined deaths. The homicides were both male infants. The category of accidental death is the only one in which female infants died at a higher number in 2015.

Figure 14: Infant Manner of Death By Gender



Causes of Death In Infants

The leading cause of preventable death in West Virginia infants in 2015 was unknown (undetermined). Most of those deaths were attributed to an unsafe sleep environment. The sleep-related deaths are coded differently than they were in the last 20-30 years. In the past, most deaths were labeled as Sudden Infant Death Syndrome (SIDS) deaths even when there was evidence of unsafe sleep conditions; whereas now, they can be labeled differently depending on findings during investigation such as Sudden Unexplained Infant Death (SUID), undetermined/unknown cause, asphyxia, or suffocation. SUID is a general category under which all sudden unexpected deaths in infants fall, including SIDS. To further differentiate between the two terms, SUID is an infant death that does not have a specific cause but has associated risk factors that may have contributed to the death, whereas SIDS is the cause of deaths after the autopsy, death scene investigation, and medical history rules out all other possible causes and contributing risk factors.

There were 24 sleep-related deaths that occurred in 2015 in the state. It is important to look at the way these deaths were recorded to better understand the information within this report. The manner of death for 18 of 24 sleep-related deaths was undetermined. The causes for those same deaths were listed as 17 SUID and one undetermined/unknown. The remaining six of 24 sleep-related deaths had the manner of death as accident with the causes of death being listed as asphyxia for three, and the remaining three were suffocation.

The 24 unsafe sleep-related deaths are divided into four main categories which are co-sleeping, unsafe sleep surface, unsafe sleep position, and unsafe bedding. Figure 15 shows this information separated into the categories previously mentioned. It is important to mention that some of the co-sleeping deaths had other contributing factors such as unsafe sleep position and unsafe sleep surface, which are not reflected in the values shown. Co-sleeping or sharing a sleeping surface with an adult, child, or pet accounted for 17 of the 24 total sleep-related deaths. There were three deaths that were attributed solely to an unsafe sleeping position meaning the infant was not on their back. Unsafe sleeping surface was a risk factor in four of the deaths. An unsafe sleeping surface is any surface that is not designed for an infant such as a couch. There were no deaths caused solely by unsafe bedding, meaning too many covers or blankets with the infant.

Figure 15: 2015 Unsafe Sleep-Related Deaths

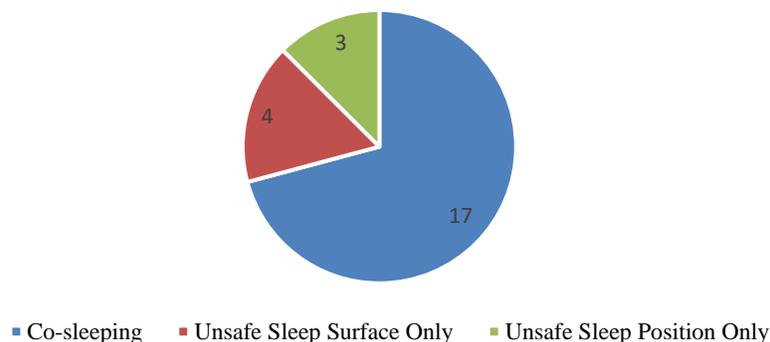


Figure 16 shows whether a crib or port-a-crib was in the home for infant use. The data shows that 18 of 24 had a crib in the home for infant use. Only four of 24 infants did not have a crib available. There were two infants in which it was unknown if a crib was available or not. This is an important factor to consider since 17 of the 24 sleep-related deaths were attributed to co-sleeping.

Figure 16: Availability of Crib/ Port-a-crib for Infant Use

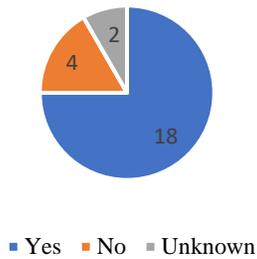
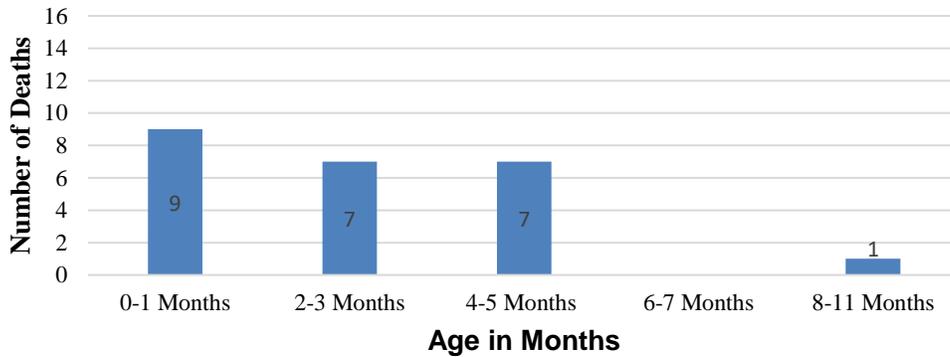


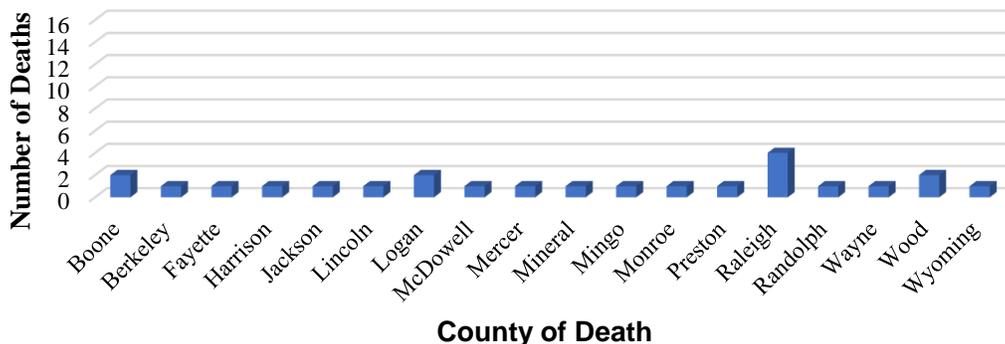
Figure 17 shows the unsafe sleeping deaths by age in months. The data shows an overall downward trend in the number of unsafe sleep deaths as the infant’s age increases. According to the numbers for 2015, infants ranging in age from birth to one month old were the most likely to die from unsafe sleep practices. This number reduced to seven deaths in the next two age categories of two to three months and four to five months. No deaths were recorded for the six- to seven-month-olds and the eight- to 11-month-old age category only had one death.

Figure 17: 2015 Unsafe Sleep Deaths By Age



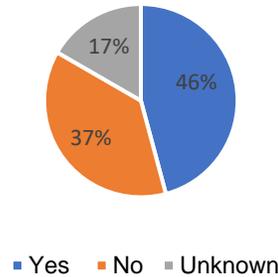
Looking at the unsafe sleep deaths by county in Figure 18, the deaths took place in 18 of the 55 counties. The data show that the most unsafe sleep-related deaths occurred in Raleigh County where there were four deaths in 2015. There were three other counties that had two unsafe sleep-related deaths each and the remaining 14 counties all had one death each.

Figure 18: 2015 Unsafe Sleep-Related Deaths Per County



Another interesting statistic is the secondhand smoke exposure in the unsafe sleep-related deaths as smoking is also a risk factor in SUID deaths. Figure 19 shows that 46% or 11 of the 24 infants who died were exposed to secondhand smoke. There were nine of 24 infants who lived in non-smoking homes and the remaining four had an unknown status. This is an important risk to consider as the CDC states infants who are exposed to secondhand smoke after birth are at a greater risk for sudden, unexplained death because the chemicals in secondhand smoke appear to affect the brain in ways that interfere with the regulation of the infants' breathing [5].

Figure 19: Secondhand Smoke Exposure In Sleep-Related Deaths

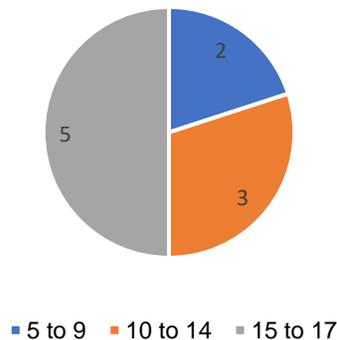


Motor Vehicle Deaths

Motor vehicle accidents were the leading preventable cause of death in West Virginia children ages one through 17 for 2015. In the United States, motor vehicle injuries were also the leading cause of death. The CDC reported that during 2015, 663 children aged 12 years and younger died as occupants in motor vehicle accidents [6]. They also found that of the children 12 years and younger who died, 35% were not restrained [6]. The CDC reports that for teens aged 16-19, 2,333 were killed in 2015 in motor vehicle accidents [6]. This information shows that about six teens died every day from injuries sustained in motor vehicle accidents [6].

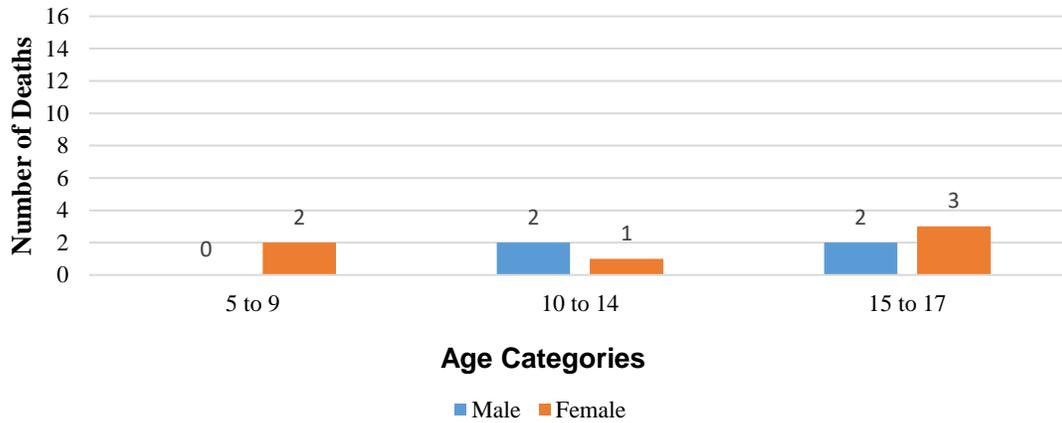
In 2015, a total of 10 children ages one to 17 died in West Virginia as a result of a motor vehicle accident either as the driver, passenger, or pedestrian. Figure 20 shows the deaths by the age categories. This clearly shows that exactly half (five of 10) of the motor vehicle accident deaths that were reviewed occurred in teens aged 15-17. This was followed by children aged 10 to 14 with three deaths, children aged 5 to 9 with two deaths, and children aged 1 to 4 had zero deaths. The data follow the statistics regarding motor vehicle accidents, which state that the risk of motor vehicle crashes is higher among 16–19-year-old children than amongst any other age group [6].

Figure 20: 2015 Motor Vehicle Deaths By Age



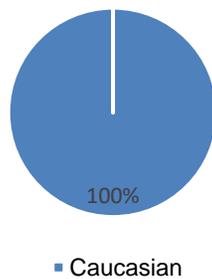
The number of deaths by gender and age category is shown in Figure 21. For teens aged 15-17 and children aged 5 to 9, there were more deaths in females than males. In children aged 10-14, males outnumbered females. There were no deaths for the 1 to 4 year olds in 2015.

Figure 21: 2015 Motor Vehicle Deaths By Age and Gender



Regarding the motor vehicle deaths by race in Figure 22, Caucasian children represent 100% of the children that died in motor vehicle accidents in 2015.

Figure 22: 2015 Motor Vehicle Deaths By Race



The breakdown of motor vehicle deaths by type of vehicle involved is presented in Figure 23. Four deaths involved a car, followed by three deaths involving an all-terrain vehicle (ATV), and two deaths involving a motorcycle. There was one death in which the child was a pedestrian and the type of vehicle involved in the incident was of an unknown type.

Figure 23: Death By Type of Vehicle

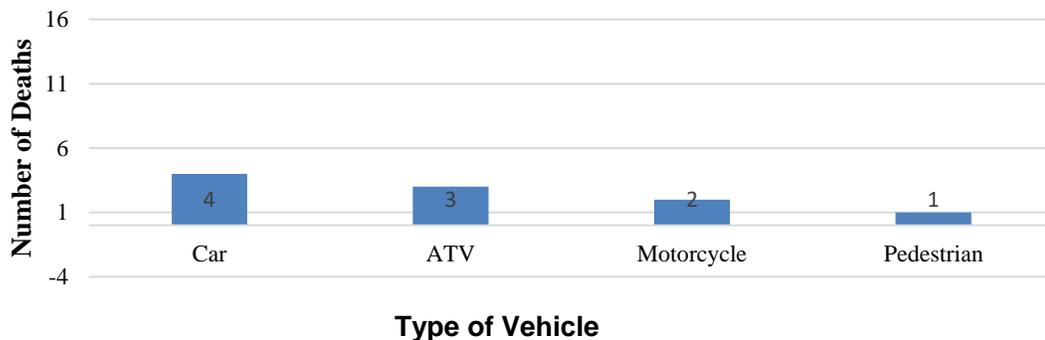


Figure 24 shows the majority of children who died were passengers at the time of their death, which includes two front seat passengers, three back seat passengers, and one passenger of unknown position prior to the accident leading to their death. There were three children driving at the time of their death and one was a pedestrian.

Figure 24: Position of Child

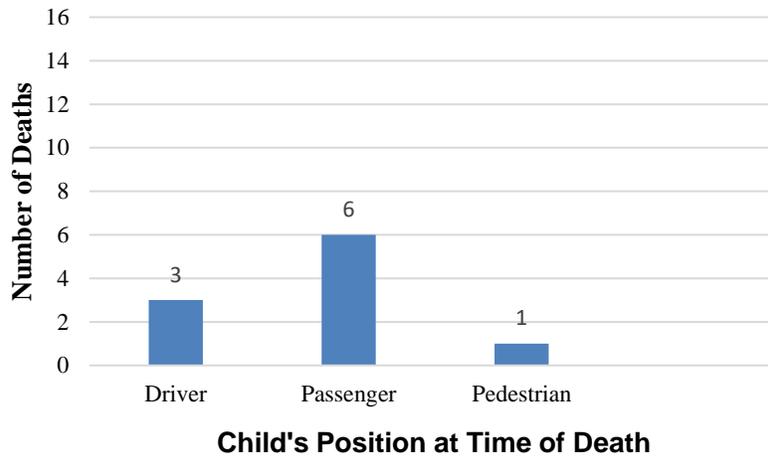
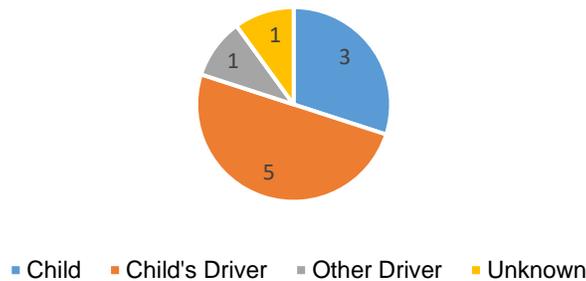


Figure 25 shows the party responsible for causing the motor vehicle accident that resulted in the death of a child. The figure shows that half of the deaths (five of 10) were caused by the child's driver. There were three deaths in which the accident was caused by the child driving, one death was caused by the other driver, and one death in which the person responsible for the accident was unknown.

Figure 25: Person Responsible for Accident



Of the deaths that were caused by the child's driver, two were the sibling of the child, one was the grandparent of the child, and two were friends of the child.

Figure 26 contains the locations in which the fatal incidents occurred. In 2015, the fatal incidents only occurred in five different locations. The majority of the motor vehicle accidents (50%) occurred on rural roads, which was followed by 20% occurring on the highway. Rural roads accounted for five deaths and highways accounted for two deaths. As the figure shows, rural roads drastically outnumbered the other locations. There was one death each for driveway, intersection, and off road.

Figure 26: Location of Incident



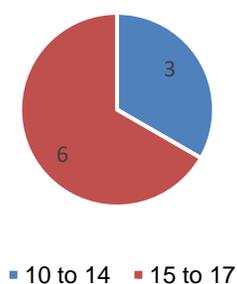
With motor vehicle accidents accounting for 10 childhood deaths in West Virginia for 2015, it is important to look at some of the risk factors the fatalities shared. Speeding was a contributing factor in four of the accidents and recklessness was a contributing factor in three of the accidents. Driving while under the influence of drugs or alcohol was a factor in one of the accidents and the driver was the sibling of the child. One child that was driving at the time of the fatal accident was using an electronic device. When looking at safety measures, there were three accidents in which a seatbelt was present but was not used. Also, there was one ATV accident in which the child was not wearing a helmet.

Suicide Deaths

Suicide was the second most common cause of preventable childhood deaths for West Virginia in 2015. The suicide deaths of children reviewed by the CFRP in West Virginia were comprised of those ranging in age from 12 through 17 years old. Data indicate that for every successful suicide, there were 25 attempts [7]. Overall, females were three times more likely than males to attempt suicide; however, males were four times more likely to die by suicide [8].

In West Virginia, nine children completed suicide in 2015. Figure 27 shows the suicides divided into two different age categories. Even though it was previously stated that no child younger than 12 completed suicide, the age categories shown here follow the same age categories used throughout the rest of the report. These data show that a majority of the suicide deaths (six of nine) occurred in teens aged 15-17. There were three suicides that occurred in children aged 10-14.

Figure 27: Suicide Deaths By Age



Looking at the deaths by gender in Figure 28, more deaths occurred in males. These data follow the national trend that males die by suicide more often than females. In 2015, five males completed suicide compared to four females. When looking at suicides by race, all nine suicides were completed by Caucasians.

Figure 28: Suicide Deaths By Gender

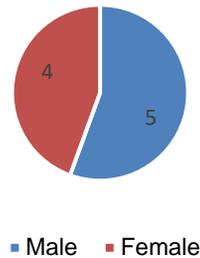


Figure 29 shows the suicide deaths by cause. There were four of the suicides completed by using a weapon, four were completed by asphyxia, and one completed by overdose. All four of the weapon suicides were completed using a firearm. Nationwide, firearm deaths account for 50% of all suicides [8].

Figure 29: Suicide Deaths By Cause

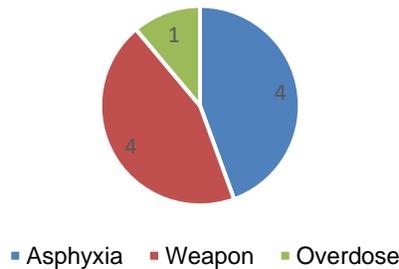
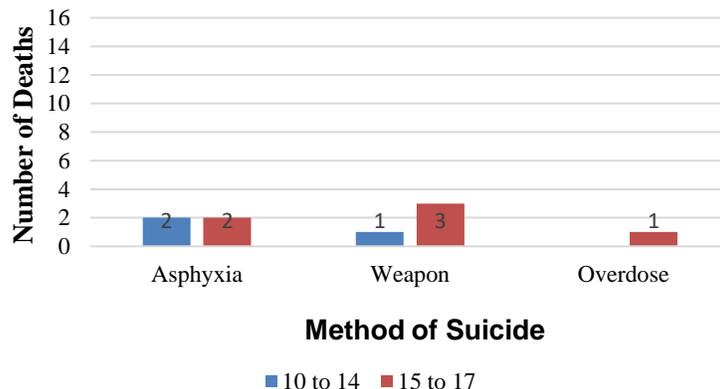


Figure 30 shows suicide deaths by cause separated into age categories. This allows a visualization of which types of death were most common for each group. With respect to the asphyxia deaths, all four were completed using a belt. There was one asphyxia death completed by a male and three completed by females.

Figure 30: Suicide Cause By Age



The firearm deaths that occurred can be broken out by the type of firearm used in the suicide. Figure 31 shows a majority of the firearm deaths (three of four) was carried out using a handgun. A shotgun was used in one suicide. All four of the firearm suicides were completed by males.

Figure 31: Type of Firearm Used in Suicides

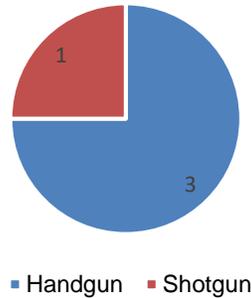
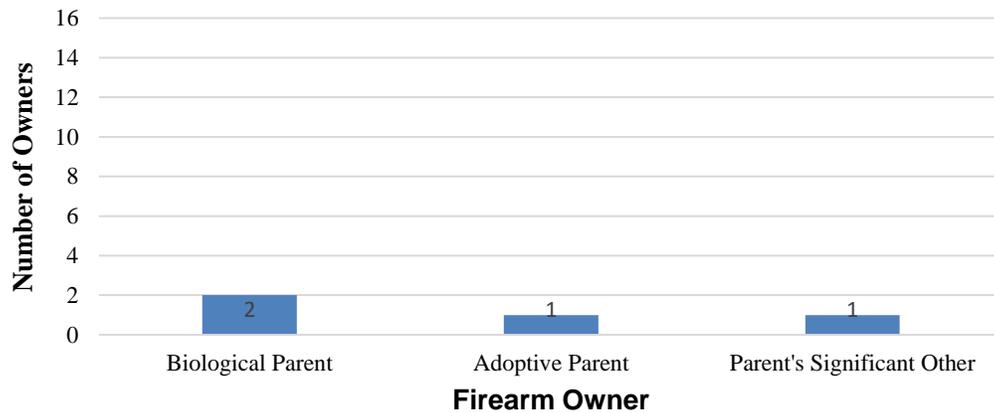


Figure 32 shows the owner of the fatal firearm used by the child. This information shows that half of the firearms were owned by the biological parent of the child. There was one death in which the adoptive parent was the owner of the firearm and another death in which the mother's boyfriend was the owner.

Figure 32: Owner of Firearm Used in Suicide



The common factor in a majority of the firearm deaths was that little to no safety features were used. Table 2 shows this information and displays whether the safety feature was used (yes) or not (no) in each of the four firearm deaths.

Table 2: Firearm Safety Features			
	Yes	No	Unknown
Trigger Lock	0	4	0
External Safety	1	3	0
Loaded Chamber Indicator	0	4	0
Magazine Disconnect	0	4	0
Minimum Pull Trigger	0	4	0
Locked Storage Cabinet	0	4	0
Stored with Ammunition	2	2	0
Stored Loaded	1	2	1

Looking at suicide deaths overall, there were common risk factors involved in the deaths, which are relevant to suicide prevention. It is important to keep in mind that there could be multiple risk factors for each case so these numbers will add up to more than nine. Table 3 shows the possible warning signs that the child showed that could have possibly been used as points of intervention.

Child Talked About Suicide	4
Prior Suicide Threats Made	3
Prior Suicide Attempts	2
History of Running Away	2
History of Self-Mutilation	2
Family History of Suicide	3

There were three suicide deaths in which the fatal incident was completely unexpected by the parents or the caregivers. Three of the nine children that completed suicide left a suicide note. Another important issue to examine when dealing with suicide is the events that took place at the time surrounding the suicide. These events are considered personal crises and could be either acute or cumulative with their effect on the child's despondency. Those factors are shown in Table 4.

Argument with Parents/Caregivers	4
Bullying	4
Family Discord	3
Drugs/Alcohol Use	3
Argument with Friends	3
School Failure	3
Other Death of Friend or Relative	2
Suicide by Friend or Relative	2
Breakup with Significant Other	2
Dealing with Rejection of a Love Interest	1
Punishment within Extracurricular Activity	1
Argument with Significant Other	1
Problems with Law Enforcement	1

CPS involvement was a factor that was examined as well. Five of the nine children that completed suicide had a CPS history of child maltreatment as the victim. Three of those five children had been placed outside the home at some point prior to their death. Mental health was another factor that was considered. There were two of the nine children that were receiving mental health services at the time of their death. One child had received mental health services at some point in the past.

Recommendations Based on 2015 Data Review

Note: Due to the retrospective nature of the CFRP, some of the recommendations listed may already be in the implementation process at time of report dissemination.

Infant Deaths

1. Recommend expanding the current Safe Sleep Campaign to include an emphasis on always keeping the child in their own crib, alone, and on their back. Increase education to parents, providers, and social service providers so anyone around an infant knows the current safe sleep information. Ensure that the hazards associated with co-sleeping are well known. Also, make it a point to let parents know that infant death CAN happen even if they only plan to co-sleep one time.
2. Recommend a ban on the sale of bumper pads in the state.
3. Recommend enactment of felony legislation for anyone who causes the death of their child while under the influence of substances. This could be verified by requiring an instant drug screen to all parents during the child death scene investigation.
4. Recommend medical professionals order further testing in instances when an infant does not meet developmental milestones to rule out possible abuse as opposed to waiting to see if the issue corrects itself.

Substance Use Disorder (SUD)

1. Recommend changing the current CPS screening policy on drugs to include drugs that are prescribed to the parent if levels are found to be above the therapeutic range.
2. Recommend changing the current CPS policy so a baby does not have to be a neonatal abstinence syndrome (NAS) baby to have a case opened. Any positive drug screen should result in an intake.
3. Recommend initiation of a requirement for hospitals to notify CPS when a child is born to a mother who has had a positive drug screen, and that hospitals are aware of pregnant women with a history of drug abuse.
4. Recommend reinforcing the importance of prenatal care to expectant mothers. Include in the education the importance of abstaining from drug, tobacco, and alcohol use during pregnancy. Reinforce the dangers of using these substances during pregnancy.
5. Recommend instituting provider education to school personnel on overdose and the trauma caused to the children who witness it. Make sure there is full utilization and expansion of the Handle with Care Program.
6. Recommend increasing drug treatment facilities for youth. With this, provide a program to work with families while the child is in treatment, so the child is not returning to a dysfunctional family. Make sure appropriate therapy is provided.
7. Recommend implementation of additional plans on disposal of medications found in the homes.

Automobile Safety

1. Recommend increasing safe driving education within school systems for children. Include seatbelt safety and the importance of always using a seatbelt.
2. Recommend creating an updated safe driving video including the newer hazards that face teen drivers. Include some real-life stories to make the video more real for teens.
3. Recommend increasing car seat education programs to make sure parents know the correct size for the child, proper installation, and proper placement in the car.
4. Recommend that the Don't Drink and Drive Campaign be expanded to Driving Under the Influence, which would also include substance abuse.
5. Recommend increasing awareness for parents about downloading applications to their child's phone to prevent texting while driving.

Suicide Prevention

1. Recommend increasing the amount of child suicide prevention education. Suicide prevention in school systems needs to increase to include fact sheets about what to look for in kids regarding suicide risk. This should be available to everyone, especially parents, educators, and anyone who is in close contact with children.
2. Recommend implementation and/or expansion of an anti-bullying campaign. This needs to include providing support against the stigma/bias against LGBTQ persons.
3. Recommend increasing education on symptoms of depression and drug use, which are correlated with suicide risk.
4. Recommend increasing training for the parental monitoring of social media and that any suicidal ideation should be reported to a trusted adult. Promote available options to increase awareness can help the child seek therapy or therapeutic medication.
5. Recommend a campaign on educating adults on the importance of preventing unsupervised access to means of committing suicide. This includes education on methods of ensuring that guns are safely stored in a locked area and unloaded.
6. Recommend a statute that allows emergency department personnel to report the names of suicide attempt victims to Prevent Suicide WV so that victim and family support services could be offered.
7. Recommend giving licensed physicians the ability to call in a child advocate to help commit a child for psychiatric evaluation in instances where the parents do not consent.
8. Recommend that schools be required to provide supportive follow up when a child completes suicide.

Fire Safety

1. Recommend increasing fire safety prevention and education to school aged children.
2. Recommend a campaign to make the public aware of the free smoke detectors that are available through the West Virginia Fire Marshal.

Water Safety

1. Recommend a water safety campaign with enhanced the messaging for parents and other adults regarding leaving children unattended near water, including the bathtub.
2. Recommend program to increase awareness of the importance of using life vests. Also, advise children that if they do not know how to swim, they should not horseplay around water.
3. Recommend that all pools in the state have lifeguard stands that are elevated for visibility purposes.

ATV/Motorcycle Safety

1. Recommend an amendment of current law regarding ATVs to add side-by-sides.
2. Recommend increased dissemination of information on the importance of wearing a helmet and not driving on paved roads. Include information on how to check for proper helmet size for a child.
3. Recommend a required license for an ATV, a required operator's course, and higher age restrictions.

Hunting Safety

1. Recommend additional hunting education campaigns and ensure that they are created to reach the target population.
2. Recommend reviewing and strengthening laws regarding gun purchases for children and increase education on the importance of keeping guns in a locked safe.

CPS Recommendations

1. Recommend a shift to make CPS behavioral based instead of compliance based because compliance does not guarantee changed behavior.
2. Recommend creation of a poster project to remind providers of their mandated reporting status.
3. Recommend changing the intake process to ensure that multiple people look at incident reports as they come in to allow more in-depth review.
4. Recommend improving the practice of screening in/out referrals. Consider implementing a rule that on the third referral, a case is opened for investigation.
5. Recommend CPS assessment of every household with a child under one year that is investigated.

Miscellaneous

1. Recommend creating a campaign to teach CPR to all parents before they leave the hospital after childbirth.
2. Recommend expanding services of free counseling/bereavement counseling to those in need after the death of a child.
3. Recommend linking the Child Abuse Registry, DHHR's Office of Vital Statistics, and health care provider information to ensure that if there is a pregnancy in someone known to be a child abuse offender, all are notified to watch for the baby to be born and notify CPS.
4. Recommend that an incident report be filed by law enforcement when attending a child death scene.
5. Recommend a statute that homeschooled children be regularly monitored by professionals to prevent abuse.
6. Recommend a requirement that all family court placements have background checks.
7. Recommend a public service announcement for "Camp Good Grief" so that grieving children can get the help they need following the loss of a loved one.
8. Recommend uniform use of Skylar's Law (re: Amber Alert System) throughout the entire state.

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DOMESTIC VIOLENCE FATALITY REVIEW PANEL

Overview

The West Virginia Domestic Violence Fatality Review Panel (DVFRP), a part of the Fatality and Mortality Review Team, is a statutory body enabled by the West Virginia Legislature under W. Va. Code §61-12A-1. Panel coordination and staff services are housed in DHHR's Office of the Chief Medical Examiner (OCME). The DVFRP is responsible for reviewing facts and circumstances surrounding all deaths that occurred in West Virginia of victims or suspected victims of domestic violence, including suicides, for those 18 years of age or older.

The DVFRP is required to provide statistical data and analysis concerning the causes of domestic violence fatalities in West Virginia, promote public awareness of the incidence and causes of domestic violence fatalities, as well as include recommendations for their reduction. The fundamental objective of the DVFRP is to prevent future homicides and suicides by providing necessary tools to families, individuals, and appropriate agencies. DVFRP recommendations are intended to protect victims and hold perpetrators accountable for their crime to reduce the number of domestic violence related deaths occurring in the state.

Membership

According to law, the DVFRP operates under the auspices of the OCME, with the State Chief Medical Examiner acting as the chair of the panel. The coordinator is housed within that office as well. Other mandated members of the panel include:

- Four prosecuting attorneys or their designees;
- State Superintendent of the West Virginia State Police or his/her designee;
- One county law enforcement official;
- One municipality police officer;
- One physician, resident, or nurse practitioner specializing in the practice of family medicine or emergency medicine;
- One physician, resident, or nurse practitioner specializing in the practice of obstetrics and gynecology;
- One adult protective service worker currently employed in investigating reports of adult abuse or neglect;
- One social worker who may be employed in medical social work;
- Commissioner of DHHR's Bureau for Behavioral Health or his/her designee;
- Commissioner of DHHR's Bureau for Children and Families or his/her designee;
- One domestic violence advocate from a licensed domestic violence program;
- A representative of the West Virginia Coalition Against Domestic Violence;
- Commissioner of the West Virginia Division of Corrections and Rehabilitation or his/her designee; and
- Director of Office of Epidemiology and Prevention Services in DHHR's Bureau for Public Health or his/her designee.

Types of Deaths Reviewed

The DVFRP reviews cases where the manner of death is classified by the OCME as homicide, suicide, undetermined, or accident. The majority of cases the panel reviews falls into the following categories:

- Homicide committed by current or former intimate partner, current or former roommate, or family member following an act of domestic violence, sexual violence, or stalking, with or without a prior domestic violence history;
- Homicide of perpetrator following an act of domestic violence, sexual violence, or stalking incident to include those caused by officer-involved shootings or bystander intervention;
- Suicide committed by a victim following an act of domestic violence, sexual violence, or stalking; and
- Suicide committed by a perpetrator following an act of domestic violence, sexual violence, or stalking.

Case Review Process

Initial screening of all fatalities is completed by the OCME to determine if they meet the definition for domestic violence. OCME investigators, pathologists and the Fatality and Mortality Review Program (FMRP) Coordinator review all potential cases and make a determination of the domestic violence status based on information available at the time the case is first presented to the OCME. With this method of determination, it is possible some domestic violence cases may be overlooked as vital information is missing at the time of the initial review. In an attempt to identify domestic violence issues, an internet search is performed on West Virginia homicides and undetermined deaths, which sometimes results in the identification of additional domestic violence incidents.

The FMRP Coordinator maintains a running list of all identified domestic violence fatalities which is reviewed by the entire DVFRP. The panel only reviews closed cases and does not attempt to reopen the investigation of those deaths. Closed cases are considered those where the offender is dead, has been convicted in a death, or there is a determination of no further legal action. Consequently, most cases are reviewed approximately two years following the actual event. Case reviews are conducted in confidential meetings. All panel members and invited guests are required to sign an agreement to abide by the confidentiality standards specified in the Fatality and Mortality Review Team statutes.

Prior to case review by the DVFRP, a request for records is sent to all agencies identified as having relevant information. Collected information typically includes demographic information, autopsy reports, criminal and civil court histories of the victim and offender, other known history of intimate partner violence, media reports, information regarding the use of legal or advocacy services, and the details of the incident including those occurring both prior to and following the death.

DVFRP members present a summary of the information collected for each case reviewed during the monthly meeting. This is followed by a panel discussion, which aims to address the following matters for each incident:

- Was the fatality the result of a domestic incident as defined by the state statute?
- What were the perilous events that led up to the fatality?
- Were there any opportunities to prevent the fatality?
- Is training or education needed as it relates to specific areas or occupations?
- How does the incident relate to other reviewed incidents?
- Are there policies relevant to the incident that need to be reviewed or changed?
- Are there lessons or educational messages to be derived from this incident?

As part of the review, the DVFRP identifies which systems, if any, the victim and/or the offender had contact with prior to, during, or after the death. This information helps the panel identify

possible recommendations for improvement to system responses to domestic violence. This method of constructing system recommendations does not in any way have the intention to place blame on any individual or organization. To further support this prerogative, recommendations made throughout the year are assembled and presented as wide-ranging proposals for systemic improvements as opposed to case specific ones. It is with optimism that the panel believes that these recommendations can be used to improve system responses across an array of agencies and service providers to reduce or eliminate domestic violence deaths in West Virginia.

Findings

This report focuses on the calendar year 2014 domestic violence related fatalities that occurred in West Virginia, among men and women aged 18 years and older. For 2014, there were 114 possible domestic violence cases identified for panel review. After the panel completed review of those cases, 75 were determined to be deaths resulting from domestic violence.

The National Coalition Against Domestic Violence (NCADV) defines domestic violence as the willful intimidation, physical assault, battery, sexual assault, and/or other abusive behavior as part of a systematic pattern of power and control perpetuated by one intimate partner against another [1]. This violence could include behaviors such as stalking, intimidation, threats, physical violence, sexual violence, emotional abuse, psychological abuse, or economic deprivation [1]. The DVFRP does not limit the definition of domestic violence to intimate partners only. The definition includes family members as well as roommates sharing a dwelling.

Demographics

In 2014, a majority of the domestic violence deaths reviewed by the panel were males. Figure 1 shows the percentage of deaths that were male compared to the percentage of deaths that were female. Of the deaths reviewed, 49 of the 75 were males while 26 of the 75 were females. Data for West Virginia differ from what is generally seen nationally as current data show a higher rate of males. Nationally, the NCADV shows that on average one in three women and one in four men have been abused by an intimate partner [1].

Figure 1: Domestic Violence Deaths By Sex

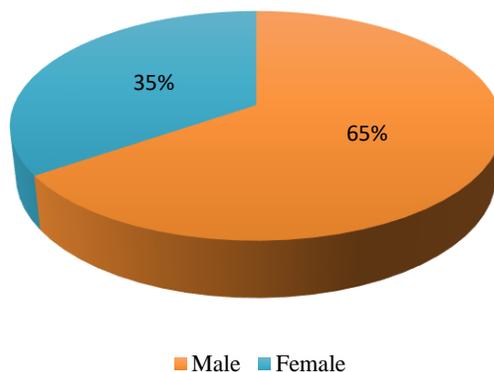
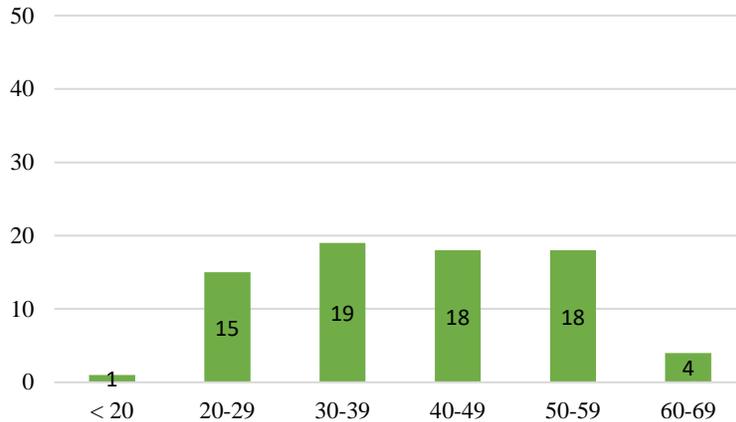


Figure 2 shows the domestic violence deaths by age. Age groups used were 10-year increments. The ages of domestic violence victims in West Virginia ranged from the youngest being 19 years old to the oldest being 66 years old.

Figure 2: Deaths By Age Group



When looking at deaths by race, a majority of the decedents were Caucasians. Figure 3 shows that 92%, or 69 of the 75 decedents, were Caucasians. Five of the 75 decedents, (7%), were African American. Biracial decedents composed the remaining 1% as there was one death recorded.

Figure 3: Deaths By Race

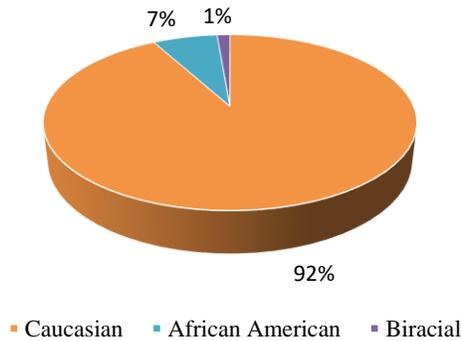


Figure 4 shows the deaths by both race and gender. Caucasian male deaths accounted for 60%, or 45 deaths, followed by Caucasian females accounting for 32%, or 24 reviewed deaths. African American males accounted for 5%, or four deaths, and African American females accounted for 1%, or one of the deaths. Biracial females accounted for 1% as well with one death. No biracial males were reported for 2014.

Figure 4: Deaths By Race and Sex

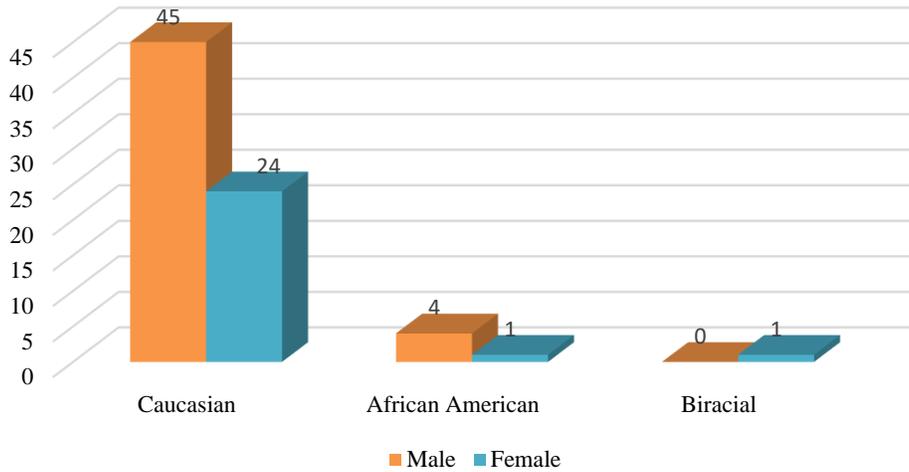
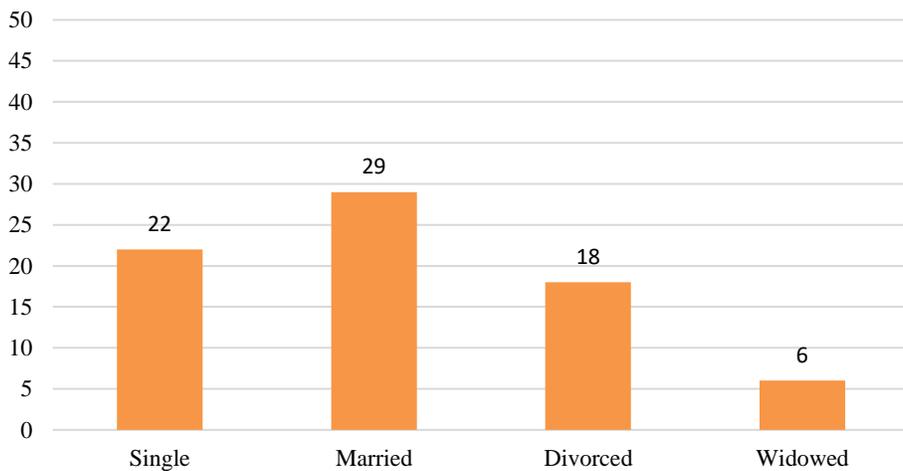


Figure 5 shows deaths distributed by marital status. It is important to note that a marital status of single denotes the individuals were not married at the time of death but could have been in a relationship. This information shows a majority of the reviewed deaths (39%) were among married couples. This was followed by single (29%) and divorced (24%) individuals that died as a result of domestic violence. Widowed individuals (8%) were the least likely to die from domestic violence related deaths. Ten of the 29 married deaths occurred in married individuals who were recently separated or in the process of a divorce. There were two recently divorced individuals that were still residing together. National data state women are most vulnerable to violence when separated from their intimate partner or during divorce [2]. There were 16 deaths that were part of a murder/suicide. Also, 26 of the 75 deaths were known to have relationship issues or have gone through a recent breakup.

Figure 5: Deaths By Marital Status



Manner of Death

Manner of death is broken into four categories: accident, suicide, homicide, and undetermined. Figure 6 shows most of the domestic violence deaths that were reviewed in West Virginia in 2014 were suicides. Thirty-six of the 75 reviewed deaths, or 48%, were determined to be suicides. This was followed closely by homicides at 44% with 33 reviewed deaths falling within that category. There were four deaths (5%) that were ruled as undetermined. Two of the deaths (3%) were determined to be an accident.

Figure 6: Deaths By Manner

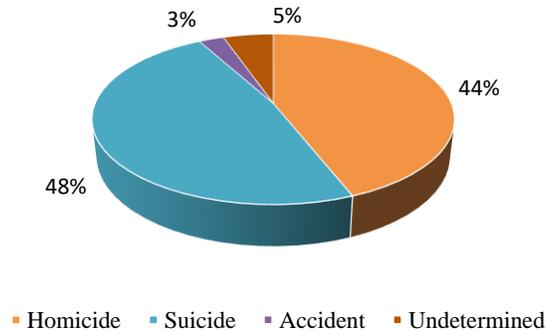
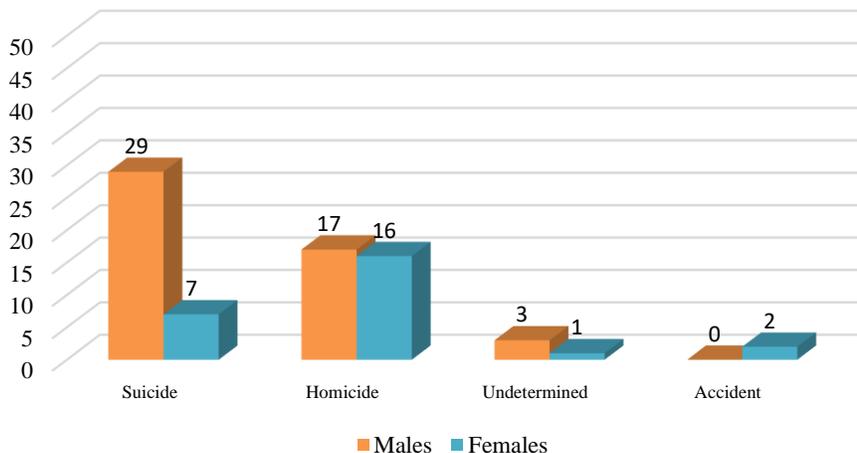


Figure 7 shows the manner of death by gender. The data show that males are most likely to commit suicide when related to domestic violence deaths. Male suicides were four times as likely as females and accounted for 81% or 29 reviewed suicide deaths. Female suicides accounted for 19% or seven of the deaths reviewed. The number of homicide deaths was similar between the two sexes. Male homicides accounted for 52% or 17 deaths and female homicides accounted for 48% or 16 deaths. Males accounted for a majority of undetermined deaths. There were three males (75%) and one female (25%). Overall, the accidental deaths were the least likely to occur as there were only two deaths determined to be an accident and both were females.

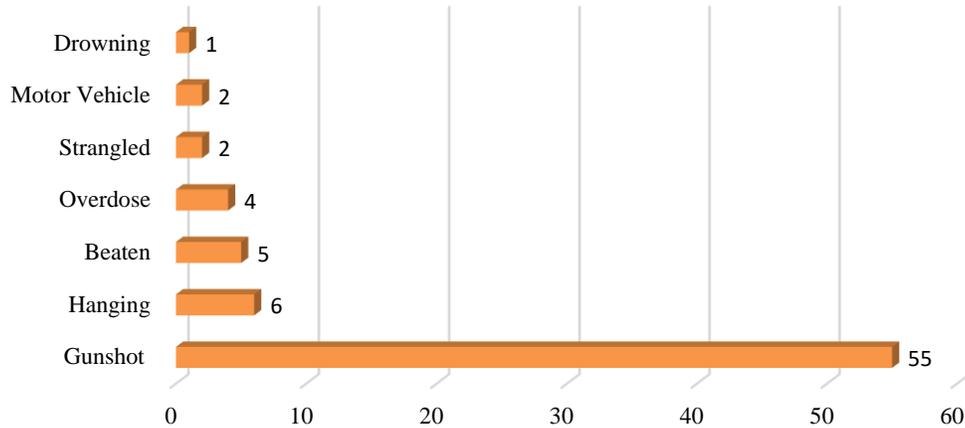
Figure 7: Manner of Death By Sex



Cause of Death

Within each manner of death, there are subdivisions termed causes which give a more detailed explanation as to why the death occurred. There were seven causes for reviewed domestic violence related deaths that occurred in West Virginia in 2014, as seen in Figure 8. The most prevalent cause of death was gunshot wounds, which accounted for 55 deaths or 73% of all reviewed deaths.

Figure 8: Cause of Death



Distribution of Deaths for Various Categories

Figure 9 shows the domestic violence related deaths that occurred in West Virginia, in 2014, by county. The counties included in the figure have two or more deaths. Most deaths occurred in Kanawha County with 10 reported deaths, followed by Monongalia County, which had seven. Counties that had one reported death each are Braxton, Brooke, Calhoun, Clay, Fayette, Jackson, Jefferson, Lewis, Lincoln, Mineral, Nicholas, Ohio, Randolph, and Summers. The remaining 24 counties did not have any reported domestic violence related deaths in 2014. These numbers are raw numbers for the reported deaths per county and did not take into account the population size of each county.

Figure 9: Number of Deaths Per County

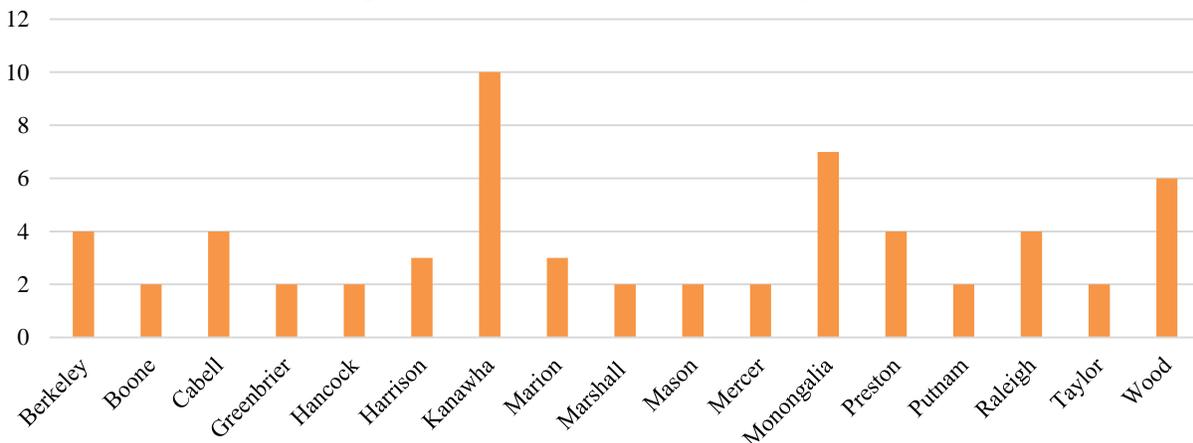


Figure 10 shows the number of domestic violence deaths in which there was a known domestic violence history between the perpetrator and the victim. This shows that 56%, or 42 of the 75 deaths reviewed, had a prior domestic violence history. There were 44%, or 33 of 75 reviewed deaths, with no known history.

Figure 10: History of Domestic Violence

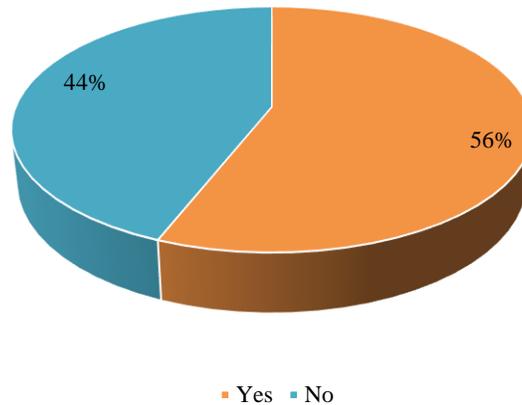


Figure 11 shows the number of victims that had an active domestic violence protection order against their significant other or the perpetrator at the time of their death. This number includes six suicides in which the current or former partner had a Domestic Violence Petition (DVP) against the individual completing suicide.

Figure 11: Active DVP at Time of Death

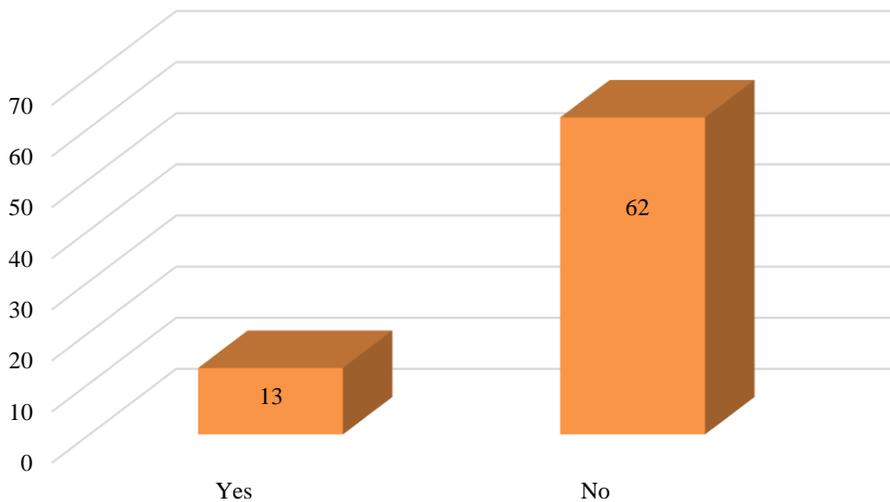
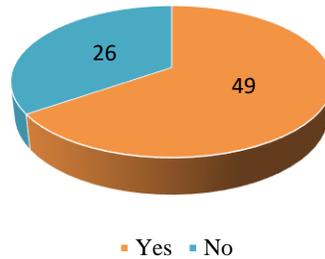


Figure 12 shows the amount of people that were involved in an argument prior to their death. For 2014, 49 of the 75 people were known to have an argument at the time immediately preceding their death.

Figure 12: Involved In Argument Prior To Death



Another possible correlation is the amount of domestic violence related decedents that were known to have a mental illness. Figure 13 shows that a little more than a quarter, 21 of the 75 reviewed deaths, had diagnosed mental health issues. Mental illnesses identified ranged from depression, anxiety, post-traumatic stress disorder (PTSD), to bipolar disorder.

Figure 13: Victim Had Mental Health Issues

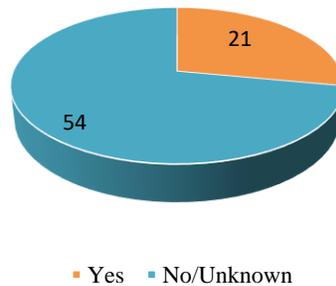


Figure 14 shows the substance abuse status of the domestic violence decedents. A little more than half, or 39 people, were not known to use either drugs or alcohol at any time prior to their deaths. There were 19 people that were known to use only alcohol, eight people used only drugs, and nine people were known to use both alcohol and drugs.

Figure 14: Known Substance Abuse History

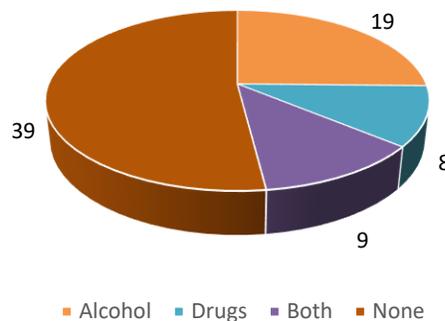
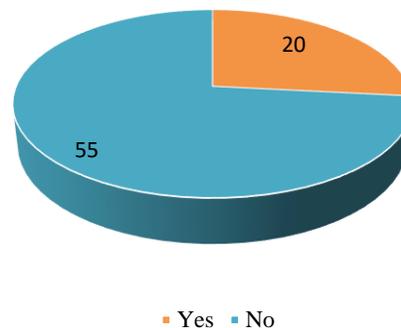


Figure 15 shows a very important statistic related to domestic violence related fatalities: the number of deaths that had children present. About 27% of the deaths had children present at the time of the fatal incident. Twenty of the 75 deaths reviewed had at least one child present. This is a major issue, as research has shown children who experience childhood trauma, including domestic violence, are at a greater risk of tobacco use, substance abuse, obesity, cancer, heart disease, depression, and unintended pregnancy [3].

Figure 15: Child Present at Time of Death



Data Limitations

Domestic violence fatalities reviewed by the DVFRP were determined to meet the definition of domestic violence set forth in the W. Va. Code. Some fatalities reviewed may have had elements of domestic violence identified in the victims' lives but could not be determined that domestic violence was linked to the cause of death. This accounts for the discrepancy between the 114 cases reviewed and the 75 cases determined to be domestic violence deaths as a result of review.

2014 DVFRP Recommendations

Note: Due to the retrospective nature of the DVFRP, some of the recommendations listed may already be in the implementation process at time of report dissemination.

1. The DVFRP recommends a centralized coordinator who would work to ensure that law enforcement response to domestic violence calls is consistent and conducted in accordance with West Virginia laws and Legislative rules. This includes one office to be established to coordinate the response statewide. This would be an office that could communicate and collaborate with all the systems and disciplines by employing a person(s) who would coordinate training and best practices based on the best examples from around the state and across the nation. By creating a collaborative environment, that includes the West Virginia Coalition Against Domestic Violence, the West Virginia Foundation for Rape Information Services, the DVFRP, all STOP Teams, all Sexual Assault Response Teams, and Title IX offices, a victim could expect the same comprehensive response anywhere in West Virginia.
2. The DVFRP recommends a change in W. Va. Code to allow the panel to review domestic violence deaths in more detail. DVFRP would like the ability to conduct voluntary facilitated interviews with family members of the victims or perpetrators to gain pertinent information that is not always gathered from other sources.
3. The DVFRP recommends a representative from the West Virginia Department of Veterans Affairs be added to the panel to participate in reviews. The panel believes this would help with gathering information about past military service of perpetrators and victims.

4. The DVFRP recommends it be granted a specific point of contact who is able to access information in the Domestic Violence Offender Registry and share registry contents with the panel as it would help the panel gather more information on victims and perpetrators.
5. The DVFRP recommends a change in W. Va. Code to allow the panel to review the mental health history of perpetrators even in instances where they are not deceased. Members of the panel believe this would help gain pertinent information that is typically not gathered from other sources.
6. The DVFRP recommends an updated domestic violence awareness campaign, which would include exploitation of the elderly.
7. The DVFRP recommends the implementation of lethality training for the regional jails. The panel believes this would allow intervention to be made at a point that could potentially save a life.
8. The DVFRP recommends increasing training for law enforcement to increase awareness of domestic violence and elder abuse; domestic violence between intimate partners is only a portion of actual domestic violence cases.
9. The DVFRP recommends continuation and expansion of the Kanawha County Pilot Project with the magistrate court where one judge handles all cases of a domestic violence offender. This allows the judge to see the entire history of the offender and make sure sentences are appropriate to the crimes committed.
10. The DVFRP recommends prosecuting attorneys include no access to firearms as a standard condition of bond. The panel believes the limitation of access to firearms for offenders could potentially reduce the number of firearm related deaths.
11. The DVFRP recommends more services be offered to families of victims. This would include access to scene cleanup as well as grief counseling free of charge. The panel believes there are a limited number of these types of services currently available in the state.
12. The DVFRP recommends a change be made to current Adult Protective Services (APS) policies to include contacting law enforcement when there is a reasonable suspicion of abuse, neglect, or exploitation even in cases that are not substantiated during their assessment.
13. The DVFRP recommends better communication methods be developed within all aspects of DHHR's Bureau for Children and Families.
14. The DVFRP recommends expanding "Mental Health First Aid" to help first responders and other bystanders to identify, understand, and respond to signs of mental illnesses or substance abuse disorders. It would give individuals the skills needed to reach out and provide initial help and support to someone in need and possibly help save lives.
15. The DVFRP recommends strengthening law enforcement training regarding calls for checking on the welfare of individuals to make sure they look more in-depth at the scene and screen for possible domestic violence issues, and not only take the word of an individual that "everything is fine."
16. The DVFRP recommends creating a public service announcement about reaching out for help if someone is threatening suicide or harm to themselves or others.
17. The DVFRP recommends increasing the number of monitored parenting and exchange centers (a neutral center where custody of children can be exchanged for visitation – with other accommodations depending on the parent's and child's situation) available as well increasing the usage of such services in domestic violence situations.

References

1. National Coalition Against Domestic Violence. Domestic Violence National Statistics. Accessed online at: www.ncadv.org.
2. Callie Marie Rennison (1101). Intimate Partner Violence and Age of Victim, 1993-1999. Bureau of Justice Statistics Special Report. Washington DC: U.S. Department of Justice. NCJ #187635. Estimates are provided from the National Crime Victimization Survey, which defines an intimate partner

as a current or former spouse, girlfriend, or boyfriend. Violent acts include murder, rape, sexual assault, robbery, aggravated assault, and simple assault.

3. Felitti, V.J., et al. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventative Medicine*, 14(4): 248-58. Centers for Disease Control and Prevention and the Kaiser Permanente's Health Appraisal Clinic, San Diego, CA. Available at <http://www.cdc.gov/NCCDPHP/ACE/index.htm>.

INFANT AND MATERNAL MORTALITY REVIEW PANEL

Overview

The Legislature found that there was a need for a process to study the causes of infant and maternal deaths. Comprehensive studies indicate that these mortalities are more complex than they initially appear on death certificates and believe that more extensive studies will enable development of a plan to reduce these deaths in the future. Thus, an additional multi-year report was added by legislation passed in 2020, now codified at W. Va. Code §61-12A-2.

The Infant and Maternal Mortality Review process is a method of understanding the diverse factors and issues that contribute to preventable deaths and identifying and implementing interventions to address these problems. The knowledge gained from the reviews may be used to enhance services, influence public health policy, and direct planning efforts intended to lower mortality rates.

Responsibilities of the Infant and Maternal Mortality Review Panel (IMMRP)

The responsibilities of the IMMRP are as follows: (1) identify infant and maternal death cases; (2) review medical records and other relevant data; (3) determine preventability of deaths; (4) establish trends, patterns and risk factors and develop recommendations for the prevention of infant and maternal deaths; (5) provide statistical analysis regarding the causes of infant and maternal fatalities; (6) disseminate findings and make recommendations to policymakers, health care providers and facilities; and (7) promote public awareness of the incidence and causes of infant and maternal fatalities, including recommendations for their reduction.

The IMMRP submits an annual report to the FMRT and to the Legislature concerning its activities and the incidence of infant and maternal fatalities within West Virginia. The report is to include statistics setting forth the number of infant and maternal fatalities, identifiable trends in infant and maternal fatalities in the state, including possible causes, if any, and recommendations to reduce the number of preventable infant and maternal fatalities in the state.

Definitions

Infant Death: Death of a live born infant in the first year of life.

Infant Mortality Rate: Number of infant deaths divided by the number of live births (rate reported per 1,000).

Live Birth: The complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy, which, after such expulsion or extraction, breathes or shows any evidence of life such as beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached.

Maternal Death: Death of a woman during pregnancy, at the time of birth or within one year of the birth of a child from any cause related to or aggravated by pregnancy or its management, but not from accidental or incidental causes.

In 1986, the CDC and the American College of Obstetricians and Gynecologists (ACOG) collaborated to issue a statement recommending the use of two enhanced surveillance definitions

as an approach to more accurately identify deaths among women in which pregnancy was a contributing factor.

Pregnancy-Associated Death (ACOG/CDC): The death of a woman while pregnant or within one year of termination of pregnancy, irrespective of cause.

Pregnancy-Related Death (ACOG/CDC): The death of a woman while pregnant or within one year of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by her pregnancy or its management, but not from accidental or incidental causes.

Pregnancy-related deaths are caused by:

- Complications of the pregnancy itself
- Chain of events initiated by the pregnancy
- Aggravation of an unrelated condition or event by the physiologic effects of pregnancy

Pregnancy-Related Maternal Mortality Rate: Number of maternal deaths related to or aggravated by pregnancy divided by the number of live births (rate reported per 100,000).

Review: The process by which all facts and circumstances about a deceased infant who has died in the first year of life; or, a woman who has died during pregnancy, at the time of birth, or within one year of giving birth, are known, and discussed among members of the IMMRP.

Unexpected Death: The death of an infant who has died in the first year of life; or, a woman who has died during pregnancy, at the time of birth or within one year of the birth of a child, whose immediate death is not anticipated.

Unexplained Death: The cause and manner of death of an infant who has died in the first year of life; or, a woman who has died during pregnancy, at the time of birth or within one year of the birth of a child, that cannot be determined after an autopsy and thorough investigation of the circumstances surrounding the death.

Case Identification of Maternal Deaths

Maternal deaths are identified by linking death certificates for women aged 10-50 years with birth certificates and fetal death certificates. Additional maternal deaths are identified by ICD 10 diagnostic codes O00–O99 – pregnancy, childbirth and the puerperium. All maternal deaths occurring within 365 days of pregnancy conclusion are designated as pregnancy-associated and further investigated.

Cases for review are limited to women of childbearing age who were residents of West Virginia at the time of their death. West Virginia residents who died in other jurisdictions are counted in DHHR's official West Virginia Health Statistics Center reports, but they are included in the case reviews only when additional information is available due to the difficulty in obtaining records across jurisdictions.

A Nurse Reviewer reviews death and birth certificates for all pregnancy-associated deaths. Once cases are identified as potentially pregnancy-related, medical records are obtained from all health care facilities providing care before, during and after the pregnancy conclusion. Hospital records at the time of death and autopsy reports are included when applicable. Medical records are de-identified, and a summary of events is developed. These documents are sent to all members

prior to the meeting. Information is entered into a CDC database known as the Maternal Mortality Review Information Application (MMRIA, or “Maria”). MMRIA is a standardized data collection tool to assist in understanding the causes of maternal mortality and eliminating preventable pregnancy-related deaths.

The IMMRP reviews all pregnancy-associated deaths to determine if they are pregnancy-related. The Panel determines whether the maternal death was preventable, possibly preventable, or not preventable. Opportunities for prevention and recommendations are determined through IMMRP discussion.

Case Identification of Infant Deaths

Infant deaths are identified by linking birth and death certificates for infants in the first year of life. Due to perinatal influences of the mother’s health and maternal risk factors, maternal medical information obtained during pregnancy is also reviewed.

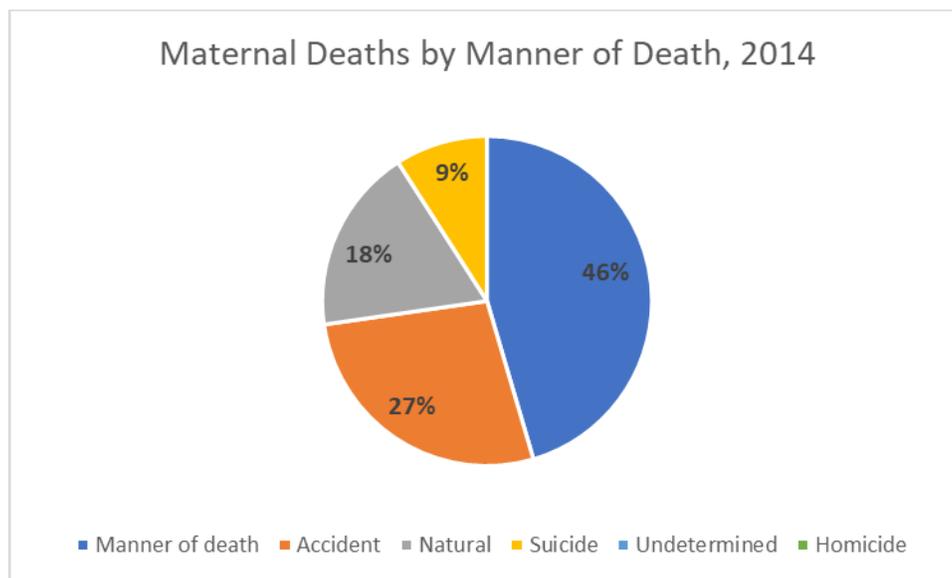
Case reviews are limited to live born infants who were residents of West Virginia at the time of their death. Infants who died in other jurisdictions are counted in official DHHR – West Virginia Health Statistic Center reports but are only included in case reviews when additional information is available due to the difficulty in obtaining records from other jurisdictions.

Maternal Deaths 2014

Manner of Death

In 2014, there were 11 pregnancy-associated maternal deaths of which three were determined to be pregnancy-related. The manner of death was listed as five (45%) accident, three (27%) natural, two (18%) suicide, and one (9%) undetermined death.

The rate of pregnancy-related maternal mortality in 2014 was 14.8 per 100,000 (calculated as three maternal deaths divided by 20,303 resident births – based upon 2014 DHHR - West Virginia Health Statistics Center data).

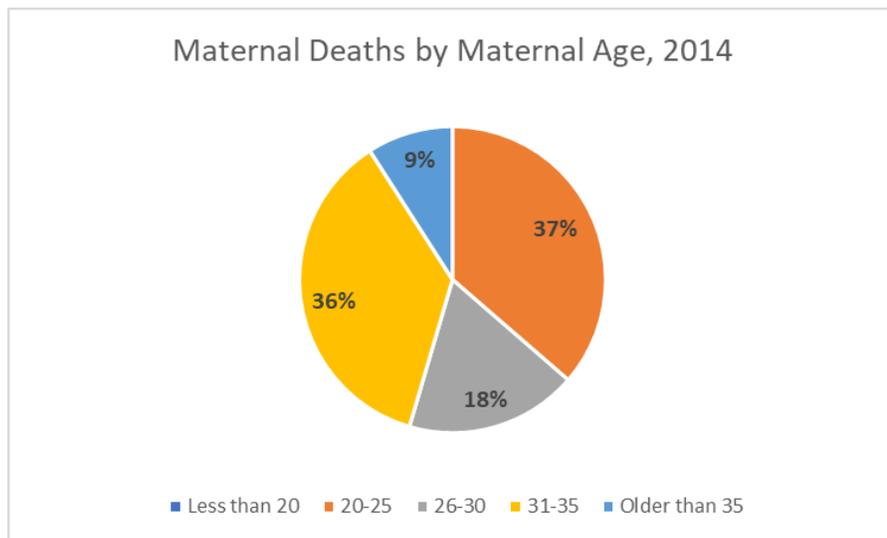


Cause of Death

In 2014, there were 11 pregnancy-associated maternal deaths. Drug abuse was the cause of four deaths. Three deaths were natural with causes of cardiomyopathy, exsanguination due to spontaneous pancreatic hemorrhage and exsanguination due to placental abruption. One death was the result of a self-inflicted gunshot wound, one death was the result of asphyxia due to hanging, one death was attributed to falling from a railway bridge, and one death was attributed to ligature compression of the neck.

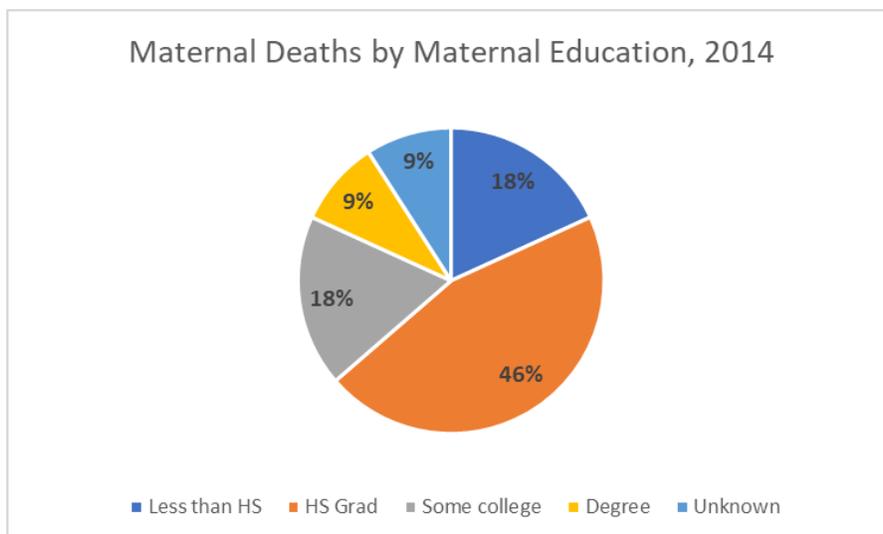
Maternal Age

In 2014, of the 11 pregnancy-associated maternal deaths, four were 20-25 years of age, two were 26-30 years of age, four were 31-35 years of age, and one was older than 35 years of age.



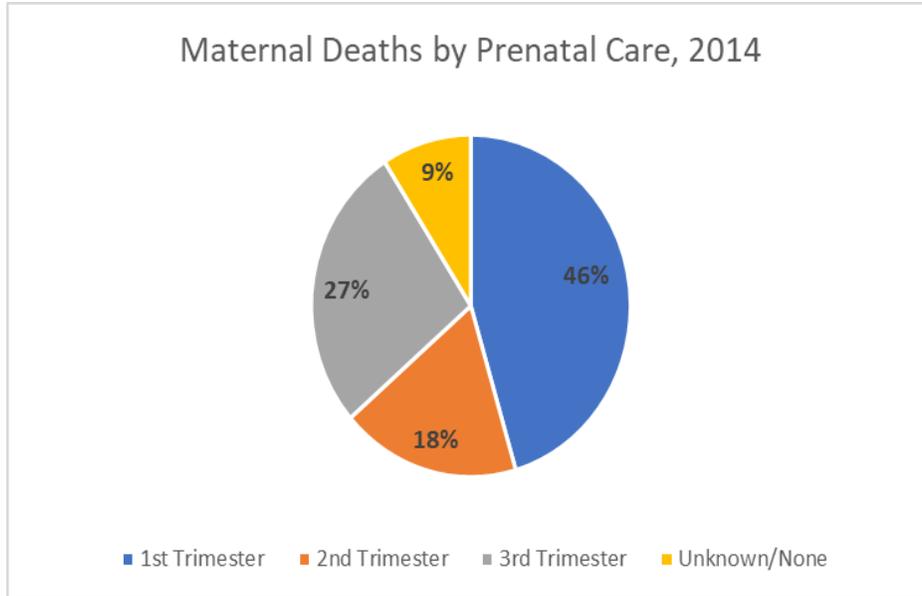
Maternal Education

In 2014, of the 11 pregnancy-associated maternal deaths, two had less than a high school education, five had at least a 12th grade education, two had some college, one had a college degree, and for one education was unknown.



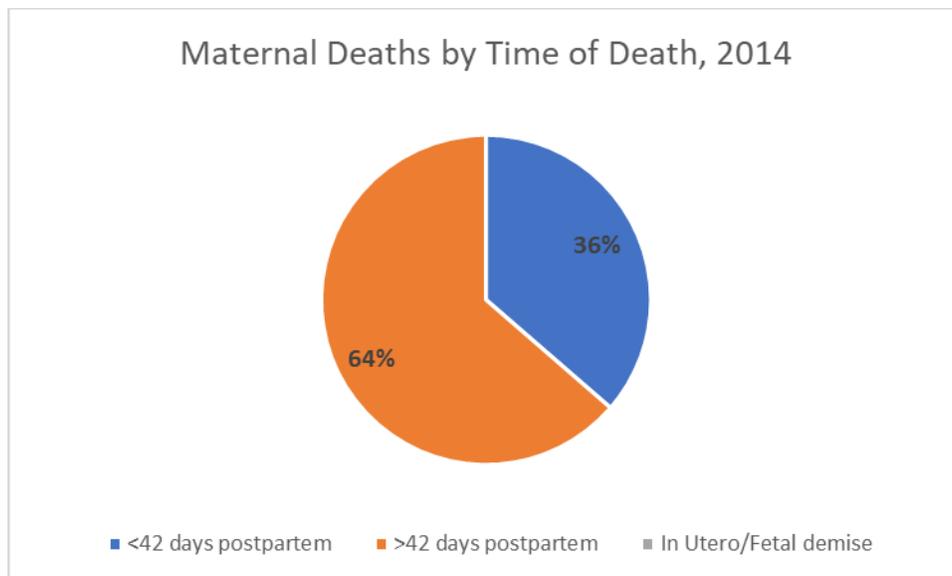
Maternal Prenatal Care

In 2014, of the 11 pregnancy-associated maternal deaths, five began prenatal care in the first trimester, two began prenatal care during the second trimester, three began prenatal care during the third trimester, and one had unknown prenatal care.



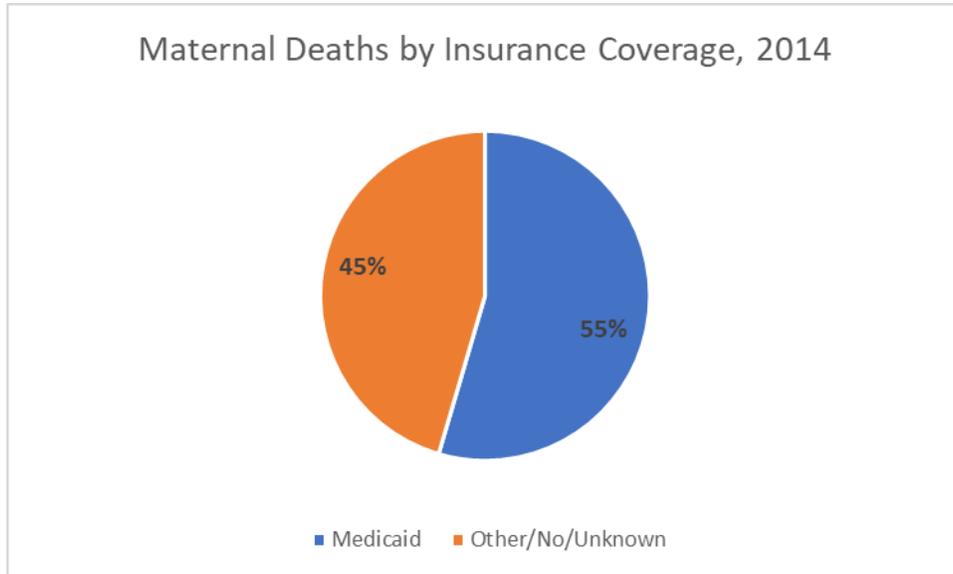
Time of Death

In 2014, of the 11 pregnancy-associated maternal deaths, four deaths, of which three were pregnancy-related, occurred less than 42 days postpartum, and seven deaths occurred greater than 42 days postpartum.



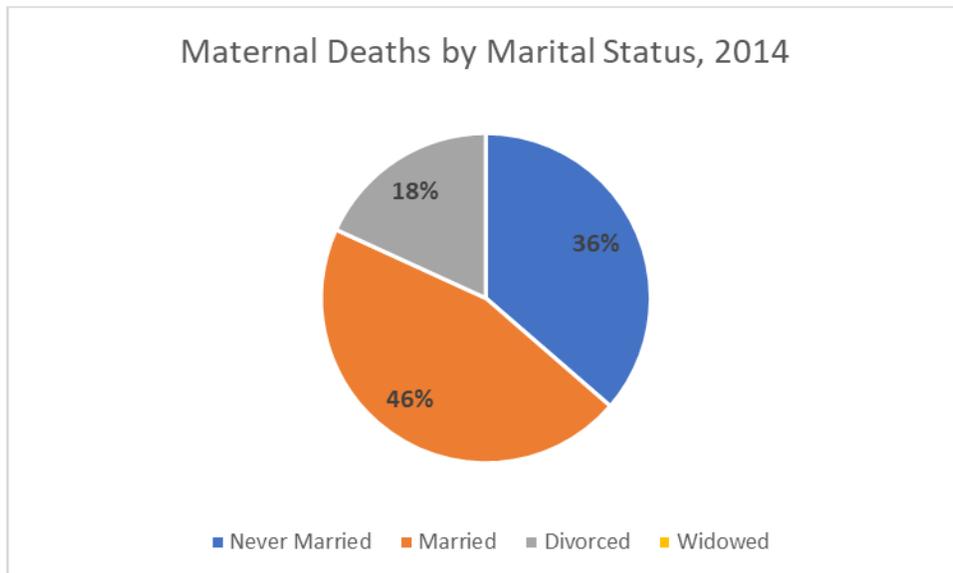
Maternal Insurance Coverage

In 2014, Medicaid was the primary insurance coverage for six of the 11 pregnancy-associated maternal deaths, five deaths were either covered by other insurance or had no/unknown insurance coverage.



Maternal Marital Status

In 2014, four of the 11 maternal deaths occurred to women who had never been married, five to women who were married, and two who were divorced.



Recommendations to Date: Maternal Deaths

Note: Due to the retrospective nature of the IMMRP, some of the recommendations listed may already be in the implementation process at time of report dissemination.

After review of cases, the following recommendations have been made by the IMMRP:

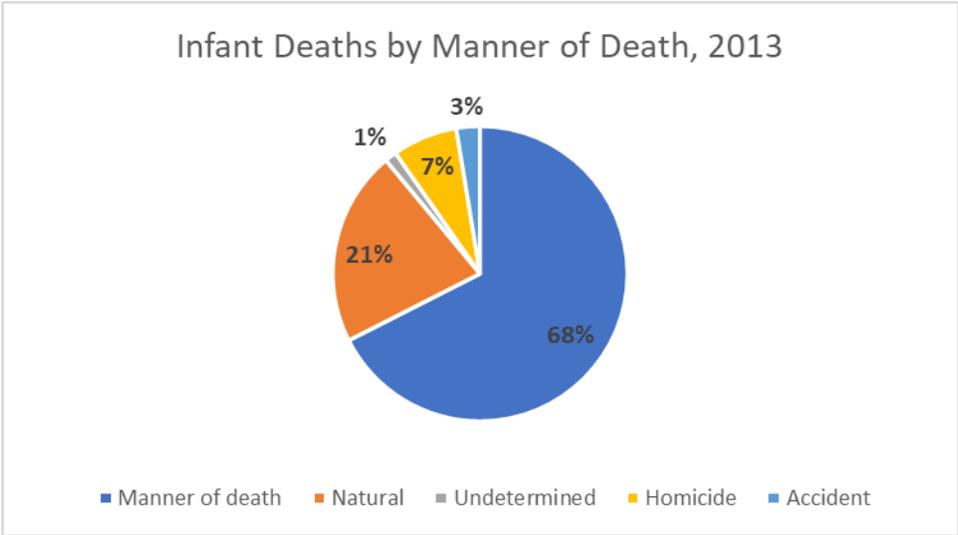
- Education to be provided on the use of vacuum delivery.
- All Maternal Mortality cases be referred to DHHR's Office of the Chief Medical Examiner (OCME) for determination regarding the need for an autopsy.
- Promote screening for postpartum depression prior to maternal discharge from hospital.
- Posters to promote screening and help for postpartum depression.
- Identify and/or promote drug treatment programs in jails; promote seamless referral system for continued treatment for continued treatment post-incarceration.
- Assess if West Virginia prisons provide substance use disorder (SUD) treatment on site.
- Identify and promote available drug treatment/mental health services.
- Review hospitals' criteria for admission of individuals with suicidal ideations (direct admits).
- Additional law enforcement investigation of maternal deaths due to suspected overdoses.
- Narcan be added to the Medicaid Pharmacy Formulary for pregnant women and during postpartum for up to one year after the delivery period.
- Developing a tool to educate on sex during pregnancy.
- Consider offering long-acting reversible contraception (LARC) at all medication-assisted treatment (MAT) offices for easy accessibility to decrease pregnancy in unstable patients. Improve the system to help postpartum mothers get LARC with minimal barriers.
- Provide options for infant and maternal cases to be received in hard copy or electronic versions.
- DHHR's State Health Officer and Commissioner for the Bureau for Public Health to recommend the IMMRP laws be modified to permit cases be identifiable and additional details be shared with IMMRP members.
- IMMRP members receive cases in advance of meeting to have adequate time to review cases and be able to indicate specific cases they would like to discuss by sending an email.
- Obtain out-of-state records for infants who are delivered or expired out of state and mothers who expired out-of-state.
- Request the Governor advocate with out-of-state governmental entities to commit to improved inter-jurisdictional data sharing.

Infant Deaths 2013

Manner of Death

For calendar year 2013, 154 infant deaths were reviewed by the IMMRP. The manner of death was listed as: 104 (68%) natural, 33 (21%) undetermined, two (1%) homicide, 11 (7%) accident, and the remaining four (3%) deaths could not establish a manner of death due to limited information.

The infant mortality rate for West Virginia in 2013 was 7.4 infant deaths per 1,000 live births (calculated as 154 infant deaths divided by 20,829 resident births - 2013 DHHR – West Virginia Health Statistics Center data). In 2013, the CDC reported the U.S. infant mortality rate as 5.9 infant deaths per 1,000 live births.

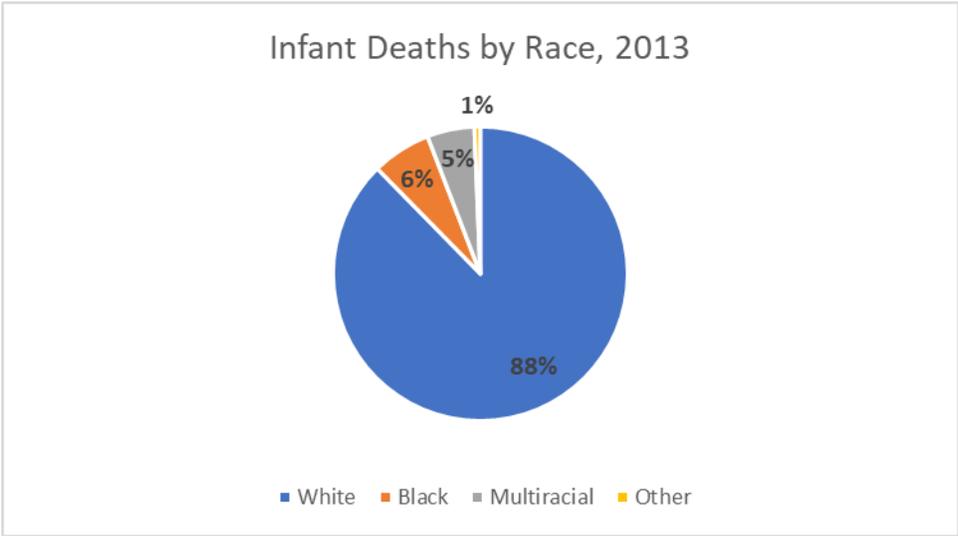


Cause of Death

In 2013, of the 154 infant deaths, 39 deaths were due to prematurity, 54 deaths were due to birth defects, 35 deaths were due to Sudden Unexplained Infant Deaths (SUID), 13 deaths were medical related, three were due to accidents, two were due to homicide, and the remaining eight deaths were either unknown, no information, undetermined or pending.

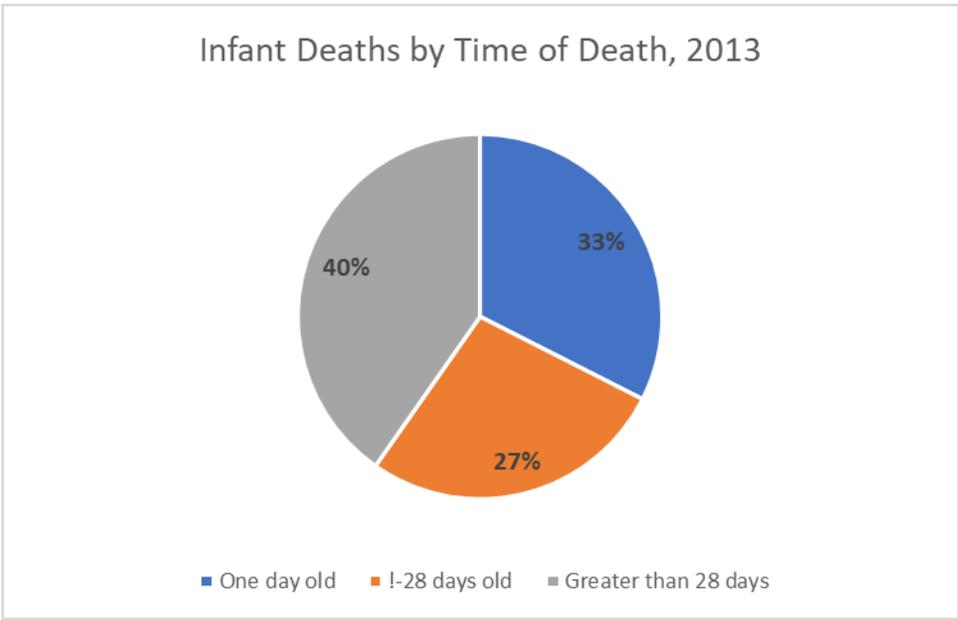
Infant Race

In 2013, 135 of the 154 infant deaths were white, ten were black, eight were multiracial, and one was of other race.



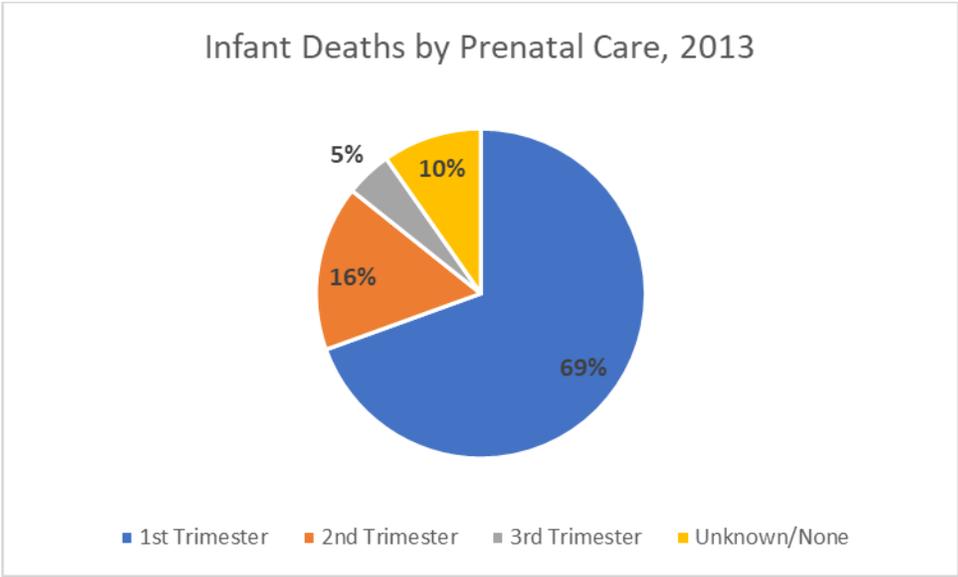
Infant Age at Time of Death

In 2013, 50 of the 154 deaths were less than one day old, 42 were 1-28 days old, and 62 were greater than 28 days old.



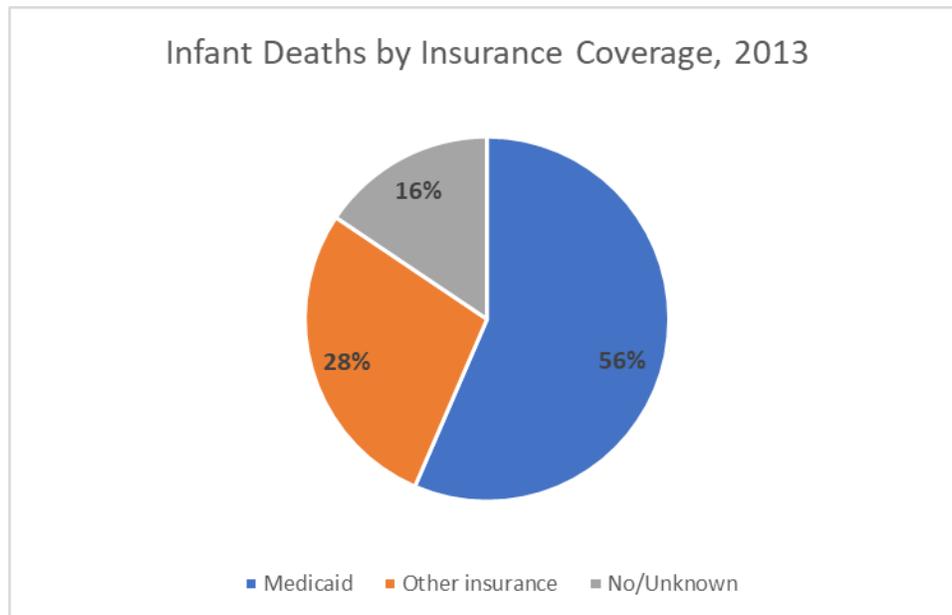
Maternal Prenatal Care

In 2013, 107 of the 154 infant deaths began prenatal care in the first trimester, 25 began prenatal care during the second trimester, seven began prenatal care in the third trimester, five had no prenatal care, and the remaining ten had unknown prenatal care.



Insurance Coverage

In 2013, Medicaid was the primary medical coverage in 87 of the 154 infant deaths while 43 were covered by other insurance, and 24 had no/unknown insurance coverage.



Recommendations to Date: Infant Deaths

Note: Due to the retrospective nature of the IMMRP, some of the recommendations listed may already be in the implementation process at time of report dissemination.

After review of cases, the following recommendations were noted:

- Consult with CPS about changing protocols to keep cases involving mothers that use drugs open and follow-up after the infant is taken home.
- Facilities keep cord tissue for one week after delivery at all West Virginia birthing facilities.
- Drug screening of all infants born in West Virginia.
- All pulse oximetry results will be added to the Birth Score.
- Notify physicians and/or hospitals of infants and mothers who experienced a poor outcome due to medical practice issues or provide education and training to hospital staff.
- Extend invitations to representatives from Level I and Level II birthing hospitals to join the IMMRP.
- Infants with a failed Critical Congenital Heart Disease (CCHD) not be discharged without an echocardiogram or transferred to another hospital that can perform an echocardiogram.
- Policy be developed to refer all preterm labor cases to facilities equipped to handle premature infants.
- Maternal mortality cases be able to request CPS information.
- Educate homeless shelters regarding safe sleeping environments for infants.
- Promotion of safe sleep messaging particularly with fathers and other infant caregivers. Review with pediatricians and obstetrics safe sleep messaging with new/expectant parents.
- Additional training on APGAR scoring and timing of death.
- Public service announcement regarding safe sleep guidelines.
- Training Level I and Level II hospitals on when to call a higher-level bedside neonatal intensive care unit (NICU) support and developing a NICU telehealth program for smaller community hospitals.
- CPS safety plans with safe sleep, in-home teaching.

- Infant to room-in with mother at facility after delivery; stress safe sleep guidelines; train staff to recognize impaired caretakers to ascertain who may be committing criminal activity on hospital property; and empower staff to call security when indicated.
- Early intervention in the home for support and education, quick follow-up for concerns of neglect.
- CPS or other early intervention home visit within a week of delivery and close follow-up to assure safety.
- Training for Level I hospital staff, pediatricians and emergency departments on APGARs, intubation, and when to call for appropriate transfer to higher level of care for mother or for NICU team to be present for impending birth.
- Follow protocol when suspicious deaths are referred to the DHHR's Medical Examiner so the scene can be visited, and the family interviewed in a timely manner.
- Creating a subcommittee regarding sleep related deaths.
- Proposed Physician Consultant to review infant cases to promote identification of trends and possible interventions to reduce infant mortalities and assist DHHR's Office of Maternal, Child and Family Health.
- Information that mothers receive is explained at the mother's level of understanding, this includes verbal, written, and video.
- Provide options for infant and maternal cases to be received in hard copy or electronic versions.
- DHHR's State Health Officer and Commissioner of the Bureau for Public Health to recommend the IMMRP law be modified to permit cases be identifiable and additional details be shared with IMMRP members.
- IMMRP members receive cases in advance of meeting to have adequate time to review cases and be able to indicate specific cases they would like to discuss by sending an email.
- Obtain out-of-state records for infants who are delivered or expired out-of-state and mothers who expired out of state.
- Request the Governor to advocate with out-of-state governmental entities to commit to improved inter-jurisdictional data sharing.

UNINTENTIONAL PHARMACEUTICAL DRUG OVERDOSE FATALITY REVIEW PANEL

Overview

The Unintentional Pharmaceutical Drug Overdose Fatality Review Panel (UPDORP) is responsible for reviewing and analyzing all deaths occurring within the State of West Virginia where the cause of death was determined to be due to unintentional pharmaceutical drug overdose, specifically excluding the death of persons suffering from a mortal disease or instances where the manner of the overdose death was suicide.

The UPDORP is required to ascertain and document trends, patterns and risk factors related to unintentional pharmaceutical drug overdose fatalities in the state which includes patterns related to the sale and distribution of pharmaceutical prescriptions by those otherwise licensed to provide said prescription. The fundamental objective of the UPDORP is to develop and implement standards for the uniform and consistent reporting of unintentional pharmaceutical drug overdose deaths by law enforcement or other emergency service responders and provide statistical information and analysis regarding the cause of unintentional pharmaceutical drug overdose fatalities.

Membership

According to legislative rule, UPDORP operates under the auspices of DHHR's Office of the Chief Medical Examiner (OCME), with the state Chief Medical Examiner (or designee) acting as the chair of the panel responsible for calling and coordinating all meetings. Other mandated members of the panel include:

- Director of the West Virginia Board of Pharmacy (or designee);
- Commissioner of DHHR's Bureau for Public Health (or designee);
- Director of DHHR's Office of Vital Statistics (or designee);
- Superintendent of the West Virginia State Police (or designee);
- One physician nominated by the West Virginia State Medical Association;
- One registered nurse nominated by the West Virginia Nurses Association;
- One doctor of osteopathy nominated by the West Virginia Society of Osteopathic Medicine;
- One licensed physician or doctor of osteopathy who practices pain management as a principal part of his or her practice;
- One doctor of pharmacy with a background in prescription drug abuse and diversion selected by the West Virginia Pharmacists Association;
- One licensed counselor selected by the West Virginia Association of Alcoholism and Drug Abuse Counselors;
- One representative of the United States Drug Enforcement Administration;
- One prosecuting attorney selected by the West Virginia Prosecuting Attorneys Institute;
- A person who is considered an expert in bioethics training;
- One licensed dentist recommended by the West Virginia Dental Association; and
- Any additional persons the chairperson of the panel determines is needed in the review and consideration of a particular case.

Findings

Even though the DVFRP, CFRP and IMMRP have continued to operate within the scope of the law, as of this report, UPDORP has not been activated.