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Office of the Chief Medical Examiner Annual Report 2016

Commonwealth of Virginia
Virginia Department of Health
Office of the Chief Medical Examiner, 2016
Compiled by Kathrin 'Rosie' Hobron, MPH
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Office of the Chief Medical Examiner
Annual Report 2016

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INTRODUCTION

Executive Summary

The Virginia Department of Health, Office of the Chief Medical Examiner (OCME) is proud to present the 2016 Annual Report. The OCME Forensic Epidemiologist, Kathrin Hobron, MPH, and Mr. Chris Batten, the OCME IT Manager, were instrumental in collating data and preparing this detailed report. In addition to fulfilling accreditation requirements for the Virginia OCME by the National Association of Medical Examiners (NAME), the OCME Annual Report provides specific information about deaths occurring in the Commonwealth of Virginia during the 2016 calendar year and investigated by the OCME. This information is a valuable resource for Virginia's citizens and leaders to identify trends in preventable deaths, which can be used to protect the lives of all Virginians through education and changes in public policy.

As a model statewide death investigation system with four district offices, the OCME fulfills a core function mandated by Code of Virginia, § 32.1-283. By Code, the OCME is tasked with investigating the deaths of individuals who died in Virginia from trauma or violence, when sudden and unexpected, while unattended by a physician, under suspicious circumstances or in the custody of law enforcement or other state or local authority. When deaths are reported to one of the four district OCME offices, the case information is entered into the Virginia Medical Examiner Database (VMEDS) and the case is managed through this statewide data system allowing for consistent, reliable data that can be reviewed and interpreted for the annual report. Analysis of this reveals several trends of which the citizens and leaders of Virginia should be aware.

Some of the important trends for 2016 include:

- All OCME deaths from all manners (accident, homicide, natural, suicide, and undetermined) increased in 2016 compared to 2015
- Accidental deaths have been increasing since 2011 with an increase of 12.8% from 2015 to 2016
- Of all deaths investigated by the OCME in 2016, 47.2% (n=3,240) were accidents
- Gun-related homicides increased by 31.2% in 2016 compared to 2015 (374 and 285 deaths, respectively)

- Black males had the highest homicide rate (33.8 per 100,000) in 2016. Black males were victims of homicide at a rate 2.4 times that of white males, 7.9 times that of Hispanic males, and 12.5 times that of Asian males
- Richmond City had both the largest number of homicides by locality of residence and locality of injury (n=52 and n=68, respectively). Danville City had both the highest homicide rate by locality of residence and the highest homicide rate by location of injury (35.8 and 38.2 per 100,000, respectively)
- The majority (63.3%) of gun related deaths were due to suicide in 2016, similar to previous years
- Whites committed suicide at a rate 5.9 times that of Hispanics, 3.7 times that of Asians, 2.6 times that of Blacks, and 2.6 times that of Native Americans
- The number of drug/poisoning deaths in 2016 increased by 38.9% compared to 2015, the biggest single year increase ever recorded in Virginia
- The 2016 rate of drug/poison deaths that occurred in Virginia was 17.0 per 100,000 persons
- Fatal fentanyl and/or heroin overdoses surpassed prescription opioid (excluding fentanyl) overdoses in 2015 and this trend continued at a greater magnitude in 2016
- Fentanyl and/or heroin was involved in 57.0% of all drug/poison cases in Virginia in 2016
- Over 94% of all fatal opioid overdoses in 2016 were accidents
- Out of all opioids in 2016, fentanyl (Rx, illicit, and analogs) were responsible for the largest number of deaths (54.8%)

Final thanks must go to the dedicated and caring staff of the Office of the Chief Medical Examiner who must everyday help grieving families navigate the tragedy of their loved one's death. Their commitment to our mission allows the Virginia OCME to remain a respected, model system for the nation.

Office of the Chief Medical Examiner

Annual Report 2016

Virginia Department of Health

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Introduction

This report represents the deaths investigated by the Virginia Department of Health, Office of the Chief Medical Examiner in 2016.

Data Collection and Preparation

The data in this report reflect deaths accepted by the Office of the Chief Medical Examiner (OCME) pursuant to §32.1-283 of the Code of Virginia for the 2016 calendar year. These deaths are both Virginia residents and non-residents whose deaths generally occurred within the borders of the Commonwealth of Virginia. The Virginia OCME classifies these deaths by its own coding schema, which differs from mortality data published by other OCME surveillance groups, law enforcement agencies, the Virginia Center for Health Statistics, and the Centers for Disease Control and Prevention. Any discrepancies between data presented by the OCME and other nosology groups are the result of data collection and analytic variations among these groups.

Statistical Summary

- Data is based upon both Virginia residents and non-Virginia residents, whose deaths have come under the jurisdiction of the Virginia Office of the Chief Medical Examiner
- Rates
    - Rates are per 100,000 persons of the specific Virginia population being described
    - Crude rates are used for all deaths occurring in Virginia, regardless of residential status
    - Rates calculated from small case counts (<5) are considered unreliable and should be interpreted with caution
- Race/Ethnicity
    - Asian, Black, Native American, and White races represent those who have been identified as non-Hispanic ethnicity
    - Hispanic are persons identified as White race with Hispanic ethnicity
    - Other race are persons that are identified as more than one race and/or Hispanic ethnicity (excluding White)
- Toxicology
    - Results are based on blood specimens and vitreous fluid

OVERVIEW – OFFICE OF THE CHIEF MEDICAL EXAMINER

The General Assembly of Virginia abolished the Office of Coroner's Physician in 1946 and appointed a Chief Medical Examiner. Four years later, the Office of the Chief Medical Examiner (OCME) became an agency within the Virginia Department of Health. The OCME is comprised of four district offices, all accredited by the National Association of Medical Examiners, to serve the citizens of the Commonwealth.

Jurisdictional Authority

Pursuant to § 32.1-283 of the Code of Virginia, all of the following deaths are investigated by the OCME:

- Any death from trauma, injury, violence, or poisoning attributable to accident, suicide or homicide
- Sudden deaths of persons in apparent good health and deaths unattended by a physician
- Deaths of persons in jail, prison, or other correctional institutions, as well as deaths in police custody This includes deaths during legal intervention such as a death following a police pursuit
- Deaths of patients/residents of state mental health facilities
- Sudden death of any infant less than eighteen months of age whose death might be attributable to Sudden Infant Death Syndrome
- Any other suspicious, unusual, or unnatural death

In Virginia, local medical examiners and medicolegal death investigators conduct medicolegal death investigations. Medicolegal death investigators located in the four district offices served as the principal case investigators for deaths falling within the OCME's jurisdiction and statutory authority. Medicolegal death investigators receive initial notification of death and determine if the death is under the jurisdiction of the OCME. After determining that a death is under their jurisdiction, medicolegal death investigators or local medical examiners may investigate the death scene and circumstances. In 2016, the OCME worked with approximately 175 local medical examiners that may have externally examined the body, collected toxicology samples, and signed the certificate of death. Using professionally established guidelines, certain cases were determined to require a medicolegal autopsy, which includes both an internal and external examination.

When an autopsy is required, it is conducted at one of four district offices: Central, Northern, Tidewater, or Western. Each OCME district is staffed by board certified forensic pathologists (American Board of Pathology), board certified medicolegal death investigators (American Board of Medicolegal Death Investigators), administrative and morgue personnel. The Chief Medical Examiner is based in the Central District office and is responsible for the overall operations of Virginia's medical examiner system.

The overall vision of the Virginia OCME is to be a model medical examiner system. There are two separate parts of the mission that form the core of OCME staff members' efforts in accomplishing this goal:

Medicolegal Mission

- Conduct medicolegal death investigations
- Perform examinations to certify cause and manner of death and recover evidence
- Testify in court proceedings
- Educate peers and professionals on subjects related to death investigation

Public Health Mission

- Reduce violent death by conducting surveillance and fatality reviews
- Provide support and technical assistance to local fatality review teams
- Identify index cases and pathogens in disease outbreaks in the interest of public health
- Cooperate with organ procurement organizations to save and enhance lives through organ and tissue donation and transplantation
- Administer the Virginia State Anatomical Program to provide cadavers for medical education

Virginia's local medical examiners and forensic pathologists are committed to public safety and public health. To promote public safety, they testify to their findings in criminal and civil courts throughout the Commonwealth. They advance public health through their investigations of deaths that present a hazard to Virginia's citizens, such as emerging infections and bioterrorism.

Virginia Demographics in 2016

In 2016, the estimated population of the Commonwealth was 8,411,808 persons. The average age of Virginia residents was 37.5 years and females represented 50.8% of the population. Whites constituted 62.4% of the population, Blacks 19.1%, Asians 6.5%, Native Americans 0.3% and Hispanics 9.1% of Virginia's people.

Fatality Review and Surveillance Programs

In addition to conducting medicolegal death investigations to identify the cause and manner of death, the OCME oversees several public health surveillance projects and fatality review team initiatives. Surveillance projects include the Family and Intimate Partner Violence Homicide Surveillance Project (FIPV), the Virginia Violent Death Reporting System (VVDRS), and the Pregnancy-Associated Mortality Surveillance System (PAMSS). Fatality review is performed on child and maternal deaths at the state level and on adult, child, and domestic violence related deaths at the local and regional level.

These activities are designed to provide a better understanding of the circumstances of death so that legislators, policy makers, and other stakeholders can make informed decisions for injury and violence prevention. Surveillance projects and fatality review teams allow for something good to come from violence and destruction of human life.

The Virginia Violent Death Reporting System (VVDRS) was implemented in 2003 as part of the National Violent Death Reporting System (NVDRS). Virginia was among the first six states and the first statewide medical examiner system to be funded for this project, which is now operating in 42 states and territories.

The VVDRS collects information about deaths due to violence (suicide, homicide, legal intervention, unintentional firearm discharge, deaths of an undetermined manner, and deaths due to terrorism) and correlates victim information with the circumstances surrounding the death. Data from several sources, among them forensic pathology, forensic science, law enforcement, vital records, and health statistics, are linked to provide a comprehensive picture of violent death in the Commonwealth of Virginia.

Data from VVDRS have described suicide risk as it relates to entering nursing homes or long-term care facilities; violent death among persons who are homeless; how the nature and risk for homicide changes over the life course; violent deaths that occurred when the decedent was in jail, prison, or about to be arrested; and homicide and suicide in the workplace. VVDRS data are routinely used to support and inform Virginia's Statewide Suicide Prevention across the Lifespan plan. The Virginia Department of Behavioral Health and Developmental Services used VVDRS data to build a dashboard to support data informed suicide prevention and response efforts in Virginia communities.

VVDRS research and surveillance activities have also documented the following:

- Suicide is more common than homicide. In 2015, there were 358 homicide victims and 1,074 suicide decedents, a ratio of three completed suicides for each homicide.
- Suicide rates in Virginia remain elevated. In 2005, the suicide rate for Virginians over the age of 10 years was 13.0 per 100,000 persons in the population. The rate continued to rise to a peak in 2014, when the suicide rate in Virginia had increased to 15.3 per 100,000 Virginia residents. However, 2015 saw a slight decrease in the suicide rate to 14.6 per 100,000 Virginia residents.
- In 2015, 27% of suicide decedents were a Virginia resident 60 years of age or older.
- At the same time, the homicide rate in Virginia has dropped from a rate of 6.2 persons per 100,000 (in 2005) to a rate of 4.3 (in 2015). This reduction in the overall homicide rate is attributed to the decline in homicides among Black males. More than half (57%) of all homicide victims in Virginia in 2015 were Black males.
- Overall, mechanisms of fatal injury in violent deaths involve firearms (59%), asphyxia[1] (16%), and poisons (13%). Firearm use is most frequent in legal interventions and homicides. Along with firearms, asphyxia deaths and those from the use of poisons are more common in deaths attributed to suicide. Suicide deaths by poisoning most commonly involve at least one the following: opiates (39.2%), antidepressants (34.1%), and benzodiazepines (19.8%).

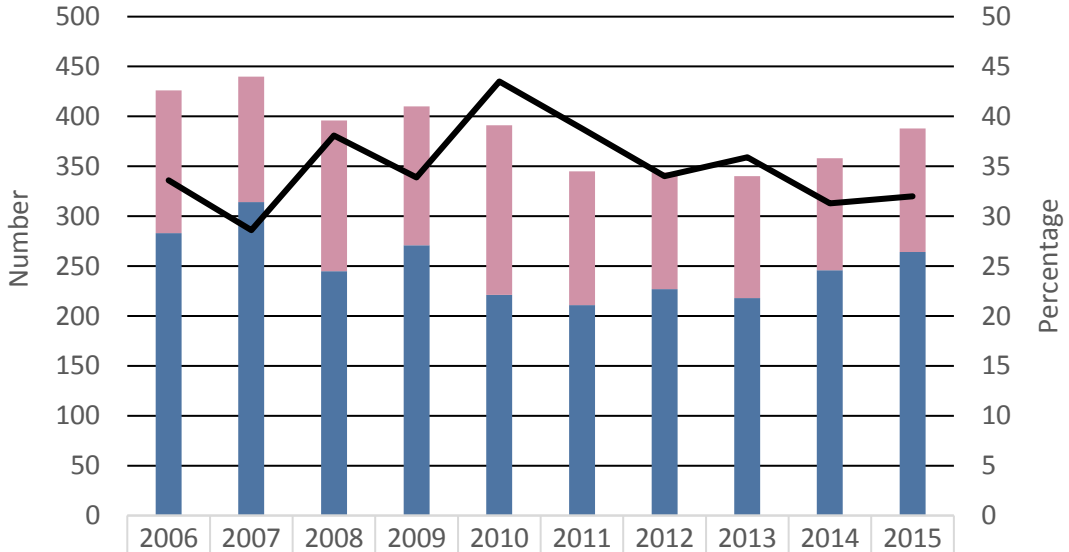
Funded by the Centers for Disease Control and Prevention (CDC), VVDRS published reports on these topics and others. They are available at http://www.vdh.virginia.gov/medical-examiner/fatality-review-surveillance-programs-reports/virginia-violent-death-reporting-system/

[1] Asphyxia includes hanging, suffocation, and strangulation deaths.

The Family and Intimate Partner Violence Homicide Surveillance Project (FIPV) was established in 1999 to describe the magnitude of lethal domestic violence in Virginia. Project staff members examine death investigation records and news reports to identify cases in which the alleged offender was an intimate partner or family member, or where the death was directly related to domestic violence. After cases are identified, they are placed in one of six violence-related homicide categories: intimate partner, intimate partner associated, child by caregiver, adult by caregiver, other family, and family associated. Information collected through this project is analyzed and published by the OCME.

A review of homicide data from 2015 indicates there were 124 Family and Intimate Partner (FIP) homicides that year, representing 32% of all homicides (388) in Virginia in 2015. This represents a 10% increase in the number of FIP homicides from 2014. While the percentage of homicides attributed to family or intimate partner violence remained consistent at roughly one in three between 2006 and 2015 (34% overall; see Figure 1), this percentage increased slightly in 2015 as compared to 2014.

Figure 1: Number of Homicides and Family and Intimate Partner (FIP) Homicides and Percent of Homicides Attributed to Family or Intimate Partner Violence Virginia (N=3,838): 2006-2015



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
FIP Homicides	143	126	151	139	170	134	117	122	112	124
Non-FIP Homicides	283	314	245	271	221	211	227	218	246	264
Percentage FIP	34	29	38	34	44	39	34	36	31	32

Seventeen years of data reveal the following trends:

- On average, one-third of all homicides are due to family or intimate partner conflict.
- Males and females are both vulnerable; however, women have a greater probability of being killed by current or former intimate partners, whereas males have a greater probability of being killed in the crossfire of an intimate partner relationship or by a family member.
- Racial disparities continue to exist: Black Virginians are at significantly greater risk for family and intimate partner homicide than white Virginians.
- Most victims are killed with a firearm and while in a private residence.
- Risk factors associated with intimate partner violence, such as prior acts of violence, substance abuse, and periods of separation or divorce, are also associated with intimate partner homicide.
- The majority of murder-suicide in Virginia is related to intimate partner conflict. Approximately 33% of intimate partner homicides involve the suicide of the alleged offender.

Data from the FIPV are disseminated to stakeholders and used to inform public policy and prevention activities. Annual reports from the Office of the Attorney General and the Family and Children's Trust Fund utilize FIPV data to describe family violence in Virginia.

Published reports from this project are available at: http://www.vdh.virginia.gov/medical-examiner/fatality-review-surveillance-programs-reports/family-and-intimate-partner-homicide-surveillance/reports-and-publications/

Domestic Violence Fatality Review was established in 1999 when the General Assembly enacted §32.1-283.3 of the Code of Virginia. This statute provides for the establishment of local and regional domestic violence fatality review teams and directs the OCME to provide technical assistance and support to these teams.

Domestic violence fatality review has gained prominence and momentum in the last decade, both here in Virginia and across the United States. The purpose of domestic violence fatality review is to prevent future deaths by carefully examining the events that led to a fatality; by analyzing system responses to those deaths; and by improving a community's coordinated response to domestic violence. Multidisciplinary teams are formed at the local or regional level. Membership in these teams varies among localities, but generally includes

representatives from law enforcement, Commonwealth Attorneys, social services, courts, probation and parole, domestic violence programs, mental health, and healthcare.

Virginia has made great progress in the area of domestic violence fatality review. Twenty local or regional teams have been established throughout the Commonwealth. Reports published by Virginia's teams provide information on the victims and perpetrators in these fatal incidents, as well as the lethality factors that shaped these tragedies. Teams have developed recommendations for improved community response when deadly violence occurs among family members or intimate partners.

The OCME has developed the Virginia Domestic Violence Fatality Review Information System (VAFRIS), a web-based database for use by local teams in collecting and reporting information gathered during the fatality review process. This innovative database houses more than 100 variables including demographics, criminal history, lethality risk factors, and community response assessment. Through guidance on data collection and templates for creating reports, VAFRIS provides an invaluable tool for teams in communicating fatality review findings to their communities. Seventeen users representing eleven teams have now registered user accounts, with three teams already in the process of entering case data.

Information on Virginia's domestic violence fatality review effort, as well as links to state and national resources, can be found at http://www.vdh.virginia.gov/medical-examiner/fatality-review-surveillance-programs-reports/domestic-violence-fatality-review/.

The State Child Fatality Review Team was established in 1995 by the Virginia General Assembly and the Governor of Virginia. Working in the spirit of public health, the multidisciplinary team conducts retrospective reviews of the circumstances surrounding violent and unexpected child death and develops consensus recommendations for intervention and prevention of future child deaths. The team reviews child deaths in a topical manner. By reviewing cases based on a specific type of death, the team is able to determine risk and protective factors associated with that type of injury and to develop targeted recommendations for intervention and prevention. Team members include representatives from pediatrics, emergency medicine, child psychiatry, law enforcement, mental health, social services, forensic pathology, Commonwealth Attorneys, local fire and

emergency medical services providers, injury prevention groups, child advocacy organizations, and other state agencies.

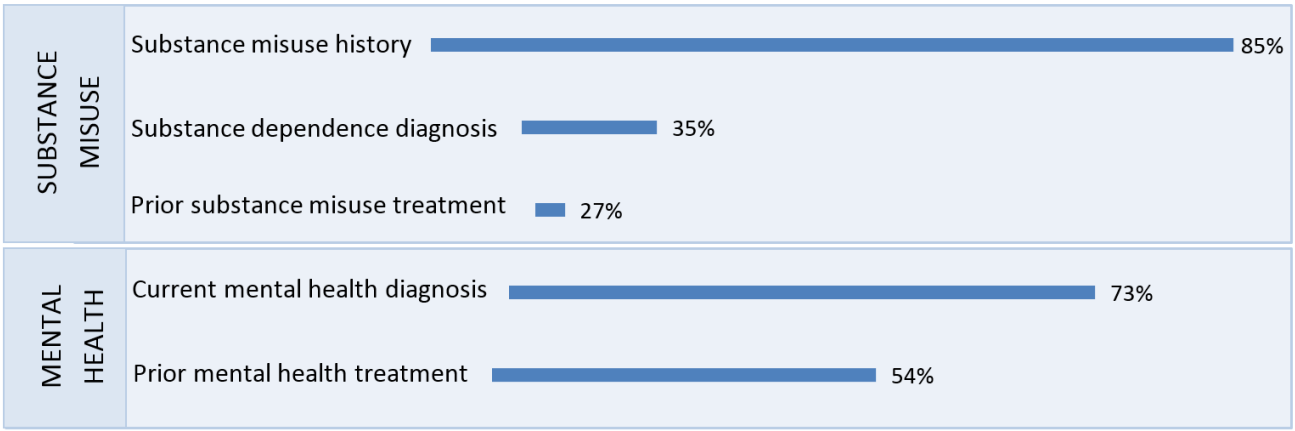
Over the years, the team has identified common trends observed in child deaths, including the presence of family violence and economic instability as risk factors for homicide of young children, the importance of adult supervision in preventing unintentional injury death, and the prevalence of family substance abuse and mental health problems in cases of sleep-related infant deaths and deaths due to poisoning. Through its many reviews, the Virginia State Child Fatality Review Team has discerned that child death in Virginia is patterned and largely preventable.

The team has completed reviews in the following areas: firearm, suicide, unintentional injury to children under the age of five, caretaker homicide, motor vehicle collision, child deaths from heat-related motor vehicle entrapment, non-caretaker homicide, and sleep-related infant death.

In 2014, the team reviewed child deaths due to poisoning between 2009 and 2013. Findings from that review include:

- Between 2009 and 2013, 41 children aged 0-17 died from poisoning
- Most deaths occurred in the Western OCME district (39%) or the Central district (24%). The Western region had a child poisoning death rate of 0.82 per 100,000, which was more than double the rate of any other region in Virginia
- The majority (56%) of child poisonings were accidental in nature, followed by 22% that were undetermined and 17% that involved a suicide
- Over one-half (56%) of the deaths were among males and roughly three of four (73%) were to white children
- Nearly two-thirds of the deaths were teenagers aged 14-17 years (61%). Over one quarter of the deaths were children aged 1-4 years (27%)
- Approximately three-quarters of children had a history of illicit substance use (73%) that mainly involved marijuana use (69%) followed by heroin, MDMA/ecstasy, cocaine, inhalant (huffing), Lysergic Acid Diethylamide (LSD), and methamphetamine

Figure 1: Substance Misuse and Mental Health among Teen Overdose Decedents in Virginia, Ages 13-17, 2009-2013 (N=26)



- While mental health disorders and substance misuse were frequently co-occurring conditions, coordinated and concurrent treatment for both was rarely provided
- Poisonings among infants and young children aged 0-6 were caused by caregiver neglect, by inappropriate and unsafe storage of medications and household products, and by caregivers administering incorrect medications and/or dosages of medications
- A single drug or substance caused or contributed to the child's death in over half of the cases (59%) while multiple drugs or substances were involved in 39% of death
- Prescription medications caused or contributed to more child deaths than any other substance. Methadone and oxycodone were detected in more deaths than any other medications, causing or contributing to six deaths each. Morphine was the second most common substance detected, accounting for five non-heroin deaths. Diphenhydramine (Benadryl) and fentanyl caused or contributed to four deaths each, and fluoxetine (Prozac) and hydrocodone were each responsible for three deaths.
- After careful review and discussion, the team concluded that close to three of four children were inappropriately supervised or supervised by an incapacitated caregiver at the time of the fatal incident (73%). The team determined that 93% of child poisoning deaths reviewed were preventable.

In 2012, Virginia established regional child fatality review teams in all five Virginia Department of Social Services (VDSS) regions in the Commonwealth. These teams review all child deaths investigated by a local department of social services for suspicions of abuse or neglect, regardless of the finding. The OCME provides training and

technical assistance to these teams, assisting them with the theory and practice of effective child fatality review, developing guidance documents, and providing trainings for team members, coordinators and recorders. The OCME also assists these regional teams with the process of developing recommendations for intervention and prevention of child deaths as well as helping to improve data collection, entry, and quality assurance strategies.

A summary of recent efforts by these local teams can be found at https://www.dss.virginia.gov/files/about/reports/children/cps/all_other/2017/SFY16_Child_Fatality_Report_Final.pdf

Child fatality review is supported by the Virginia Department of Health, Office of Family Services with Title V funds from the U.S. Department of Health and Human Services, Maternal and Child Health Bureau.

Published reports are available at: http://www.vdh.virginia.gov/medical-examiner/fatality-review-surveillance-programs-reports/child-fatality-review-in-virginia/reports/

Virginia's Pregnancy-Associated Mortality Surveillance System (PAMSS) and Maternal Mortality Review Team (MMRT) are housed in the OCME. Surveillance of all deaths of women occurring during pregnancy or within one year of pregnancy (termed "pregnancy-associated death") is conducted to provide up-to-date information on patterns and trends. Data from PAMSS indicates pregnancy-associated maternal death in Virginia remains a significant public health problem. Recent reports from PAMSS noted the following:

- In the ten-year period between 2004 and 2013, the maternal mortality ratio in Virginia declined from 45.3 deaths per 100,000 live births to 36.3 deaths per 100,000 live births
- The majority of pregnancy-associated deaths in Virginia are from natural causes (53%) or from unintentional injury deaths (26%) such as motor vehicle collisions and drug overdoses. Common causes of natural death include cardiac disorders, infections, embolisms, and exacerbations of chronic disease
- Black women in the United States and Virginia are known to suffer the greatest burden of pregnancy-associated death, a perplexing and consistently reported fact. In each of the 15 years of pregnancy-associated deaths reported in Virginia, the mortality ratio for Black women exceeded that for White women. The overall pregnancy-associated mortality ratio for the 15-year period between 1999 and 2014

was 79.3 per 100,000 live births among Black women and 34.2 per 100,000 live births among white women – Black women died at 2.3 times the rate of White women

Rising maternal mortality rates throughout the United States have led to renewed interest in expanding state-based review Teams. Virginia's Maternal Mortality Review Team is one of the longest continuously functioning multidisciplinary review teams in the US. The team was established in March of 2002 as a partnership between the Office of Family Health Services and the OCME. The OCME provides coordination for the Team. Virginia's team is often asked to provide resources to other states considering undertaking maternal mortality reviews.

The Maternal Mortality Review Team reviews all cases of pregnancy-associated death, regardless of the cause or manner of death or outcome of the pregnancy. Systematic, retrospective review of these deaths is undertaken for the purpose of understanding the circumstances surrounding the death so that recommendations and interventions can be made to prevent future deaths.

The team is multidisciplinary and includes representatives from: Medical Society of Virginia; Virginia Section of the American College of Obstetricians and Gynecologists; Virginia College of Emergency Physicians; Virginia Chapter of the American College of Nurse Midwives; Association of Women's Health, Obstetrics and Neonatal Nurses; Virginia Chapter of the National Association of Social Workers; Virginia Hospital and Healthcare Association; Virginia Sexual and Domestic Violence Action Alliance; Virginia Dietetic Association; local health departments; and state planning agencies. Maternal mortality review is supported by the Virginia Department of Health, Office of Family Health Services with Title V funds from the U.S. Department of Health and Human Services, Maternal and Child Health Bureau.

Maternal mortality review is supported by the Virginia Department of Health, Office of Family Health Services with Title V funds from the U.S. Department of Health and Human Services, Maternal and Child Health Bureau.
Published reports are available at:
http://www.vdh.virginia.gov/medical-examiner/fatality-review-surveillance-programs-reports/virginia-pregnancy-associated-mortality-surveillance-system-pamss/

http://www.vdh.virginia.gov/medical-examiner/fatality-review-surveillance-programs-reports/maternal-mortality-review-team/virginia-maternal-mortality-review-team-reports/

Virginia's Sudden Death in the Young (SDY) Project began in January 2015 in four communities served by the Tidewater OCME: the cities of Hampton, Newport News, Norfolk, and Virginia Beach. Using techniques from surveillance and fatality review, this project involves intensive data collection and multidisciplinary review of all deaths involving infants, children and youth up to 19 years of age for which the cause of death was undetermined or not fully understood. These deaths include those from cardiac or neurological causes such as epilepsy or those attributed to Sudden Infant Death Syndrome (SIDS) and Sudden Unexpected Infant Death (SUID). Understanding the precise etiology of these deaths and defining who is at-risk is a necessary first step to designing interventions and preventions to reduce these deaths. Virginia is one of 10 states participating in this national project.

Findings from Virginia's Sudden Death in the Young Project include the following:

- A total of 28 cases were identified in 2015, and 28 cases were identified for 2016.
- Males are no more likely than females to die an SDY death. However, black infants and children are at disproportionate risk for an SDY death, representing 59% of all SDY deaths for these two years.
- The majority (80%) of SDY deaths were infants and the majority of these infant deaths were related to unsafe sleep environments (60%), the presence of infectious diseases such as rhinovirus or parainfluenza virus (27%), and/or prematurity (11%).
- Common trends noted in cases involving infants with unsafe sleep risk factors, included families with economic and/or housing instability, substance abuse, mental health problems and past involvement with the criminal justice system. Many of the infants who died in an unsafe sleep environment had combinations of risk factors identified such as prematurity, and respiratory infection along with the co-occurrence of multiple familial risk factors as noted above.
- Roughly one in five SDY deaths (21%) occurred among children ages 1 to 17 years. Causes of death among these children were related to drowning in 50% of cases and to myocarditis in an additional 33% of cases.

The SDY project involves an intensive death investigation of each case. This requires the collection and review of extensive records for the child and family including past medical histories, social service histories, school records for the child where applicable, criminal histories and other relevant records for the case. This information is used by both a multidisciplinary child fatality review team and a clinical review team. The project

utilizes the VDSS Eastern Region review team which is comprised of direct service providers in the areas of social services, law enforcement, education and child advocacy. Their role is to assess family protective and risk factors for each death, to evaluate the quality of agency response, and to identify prevention strategies. The clinical review team is made up of a pediatric neurologist, geneticist, maternal fetal medicine specialist, pediatrician, cardiologists, and a forensic pathologist. Their role is to identify undiagnosed medical risk factors that may have contributed to the child's death. The critical purpose of these investigations and reviews is to determine if causes of death can be further clarified, refined, and described, and then ultimately lead to the prevention of these premature deaths.

An optional component of the project allows consenting families to participate in a study of these deaths through an SDY Case Registry, which is being conducted by the Centers for Disease Control and Prevention (CDC), the National Heart, Lung, and Blood Institute (NHLBI), and the National Institute of Neurological Disorders and Stroke (NINDS) at the National Institutes of Health. Consent includes the storage of bio-specimens for DNA banking and testing in the event that medical insights or breakthroughs in the future promise additional information about the child's death. To date, 25% of families have consented to participate in the SDY Case Registry, and 8% have declined to participate.

Adult Fatality Review was established for Virginia localities effective July 1, 2015. Currently, there is one regional team established in the Commonwealth. Similar to child and domestic violence death review efforts, local communities may now convene such teams to examine deaths of any persons 60 years of age or older or any vulnerable or incapacitated adult 18 years of age or older, under three different scenarios: (1) persons who were the subject of an adult protective services or law enforcement investigation; (2) adults whose death was due to abuse, neglect, or exploitation or acts suggesting abuse, neglect, or exploitation; and (3) persons whose death was investigated by the Office of the Chief Medical Examiner as suspicious, unusual, or unnatural. The goal of this process is to identify at risk populations in their communities, opportunities for improved response to adult abuse and neglect, and best practices for preventing further abuse and violence.

Further information about these teams can be found at: http://www.vdh.virginia.gov/medical-examiner/fatality-review-surveillance-programs-reports/adult-fatality-review/

In Virginia, information learned from fatality review efforts will support the development of recommendations and information sharing with critical stakeholders to reduce injury and death.

Training and Education

Forensic Pathology Training Programs

Website — **http://www.vdh.virginia.gov/medical-examiner/forensic-pathology-training-programs/**

The Virginia Commonwealth University School of Medicine (VCU), in conjunction with the OCME, offers an Accreditation Council for Graduate Medical Education (ACGME) accredited fellowship in the subspecialty of forensic pathology. The 12 forensic pathologists of the Central, Tidewater, and Western District offices are the core faculty of the Department of Legal Medicine at VCU, chaired by the Chief Medical Examiner. OCME office staff has full access to facilities at VCU and its medical, dental, pharmacy, hospital administration, nursing, and other health science schools.

Current medical students may rotate through the OCME on a month long elective rotation. Pathology residents desiring exposure to forensic pathology as part of a general anatomic pathology program may also complete a month long rotation through the OCME. The residents are usually from the Virginia Commonwealth University and University of Virginia pathology programs, but residents from other in state or out of state programs may be accepted for training. In addition to these rotations though the OCME, a forensic pathology training program is available and is designed to provide training and experience to physicians wanting a career in forensics. It is the aim of the forensic pathology training program that, by the end of the fellowship year, the trainee can adequately manage the great majority of medicolegal death investigations with self-assurance and technical competence. After the 12-month fellowship, the physician should have obtained enough experience to be eligible to take the American Board of Pathology examination in forensic pathology. Upon completion, the trainee will be ready to accept a position in all types of Medical Examiner/Coroner systems.

During the last academic year 2015-2016, the OCME trained three fellows as well as several pathology residents and medical students.

National Association of Medical Examiners Accreditation

The National Association of Medical Examiners (NAME) is the professional organization for physician medical examiners, medicolegal death investigators and death investigation system administrators who investigate deaths of public interest, either legal or public health, in the United States. NAME has developed an accreditation process to improve the quality of death investigation within medical examiner offices and systems. When an office is accredited by NAME, it is an endorsement that the office has provided an environment adequate for a medical examiner to practice his or her profession and that the office can adequately serve its jurisdiction. The accreditation process includes but is not limited to: inspection of facilities, review of facility and personnel safety, qualification of medical examiners, review of medicolegal procedures, and review of reports and records. One requirement within the reports and records section is an annual statistical report, which the Virginia OCME fulfills with this report. The following two tables provide data on the NAME required fields on 2016 death investigations:

	Central	Northern	Tidewater	Western	Total
TOTAL DEATHS STATEWIDE					
Total Deaths Reported to OCME	5163	3011	2293	3513	**13980**
OCME Cases by Examination Type					
Complete examinations (autopsy)	830	394	640	550	**2414**
External examination	1399	994	873	1005	**4271**
Partial examination	35	130	7	11	**183**
TOTAL CASES ACCEPTED BY THE OCME	**2264**	**1518**	**1520**	**1566**	**6868**
OCME Cases by Manner of Death					
Accident	1101	747	694	698	**3240**
Homicide	159	57	176	86	**478**
Natural	600	373	360	431	**1764**
Suicide	351	294	212	299	**1156**
Undetermined	53	47	78	52	**230**
TOTAL CASES ACCEPTED BY THE OCME	**2264**	**1518**	**1520**	**1566**	**6868**

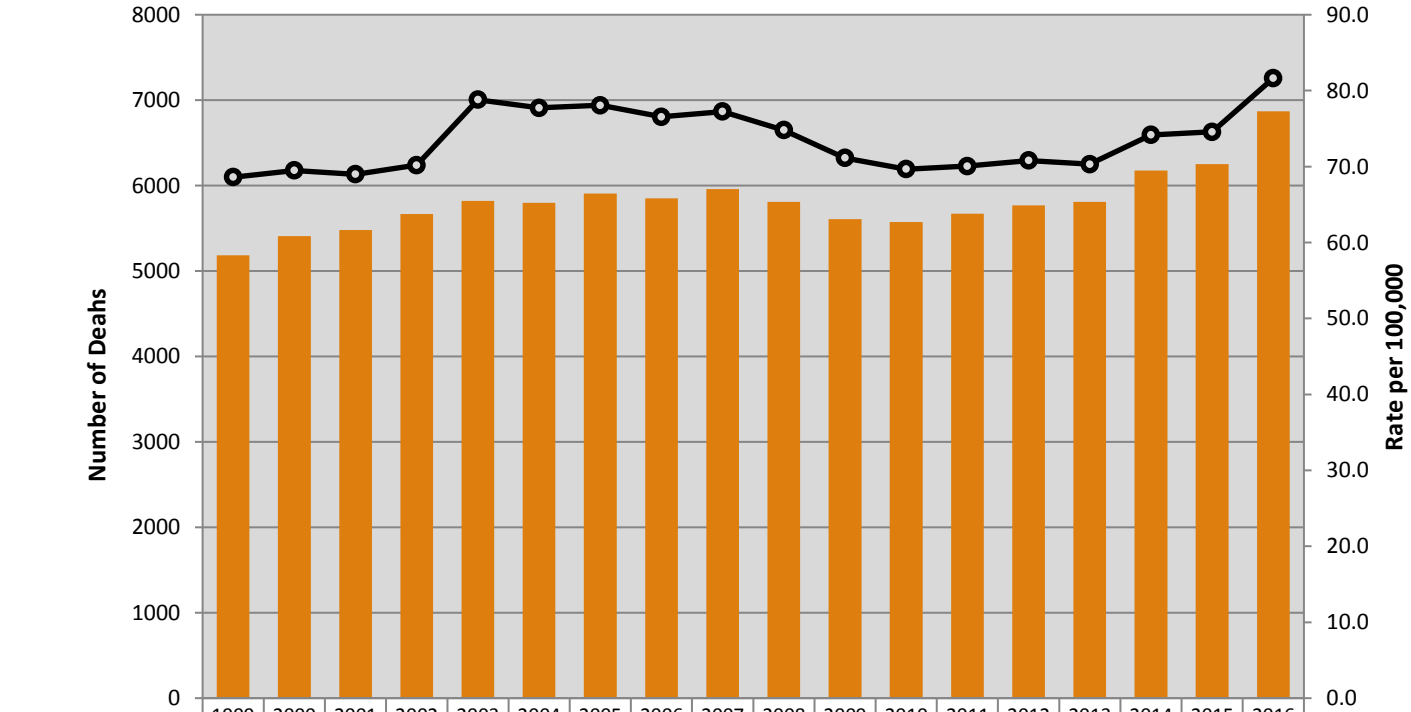
	Central	Northern	Tidewater	Western	Total
Bodies transported by office	2264	1518	1520	1566	**6868**
Bodies transported to office	1512	793	1015	886	**4206**
Cases with toxicology (including retro cases)	1255	1021	966	801	**4043**
Exhumations	0	0	0	0	**0**
Eye donations on OCME cases	45	57	110	19	**231**
Hospital autopsies under OCME jurisdiction	0	0	0	0	**0**
Organ and tissue donations on OCME cases	29	58	132	35	**254**
Retrospective cases (cases handled separately)	66	41	33	104	**244**
Scene visits	407	53	399	65	**924**
Unclaimed bodies	1	11	14	22	**48**
Unidentified bodies after examination	2	0	0	0	**0**

SECTION 1: TOTAL OCME CASES (N=6,868)

In 2016, the Office of the Chief Medical Examiner (OCME) investigated 13,980 deaths, which accounted for 21.3% of the estimated total deaths in Virginia. The OCME accepted 6,868 or 49.1% of these deaths as either autopsies or external examinations (views). [NOTE: Retrospective cases are not included in the accepted total case count, but are examined separately in Section 9. While these deaths were investigated in 2016, they may not necessarily have occurred in 2016]. The caseload for 2016 represented a 9.9% increase from 2015. Of the deaths investigated by the OCME in 2016:

- Deaths from all manners increased in 2016 compared to 2015
- Blacks continue to share a higher burden of homicides compared to their portion within the general population
- White males continue to have the highest rate of suicide in the Commonwealth
- Males continue to represent a larger portion of OCME deaths (68.5%) than females
- The 55-64 year old age group had the greatest number of OCME deaths, representing 17.1% of OCME cases
- Fairfax County had the largest number of both residential deaths (n=444) and deaths by injury locality (n=497). Greensville County and Sussex County had the highest rates of death by residential locality and injury locality (221.1 and 260.8 per 100,000, respectively)

Figure 1.1 Number and Rate of OCME Cases by Year of Death, 1999-2016



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Deaths	5184	5408	5478	5666	5821	5799	5908	5851	5958	5811	5608	5573	5672	5767	5809	6176	6252	6868
Mortality Rate	68.6	69.5	69.0	70.2	78.8	77.7	78.1	76.6	77.3	74.8	71.1	69.7	70.1	70.8	70.3	74.2	74.6	81.6

Figure 1.2 Number of OCME Cases by Manner of Death, 1999-2016

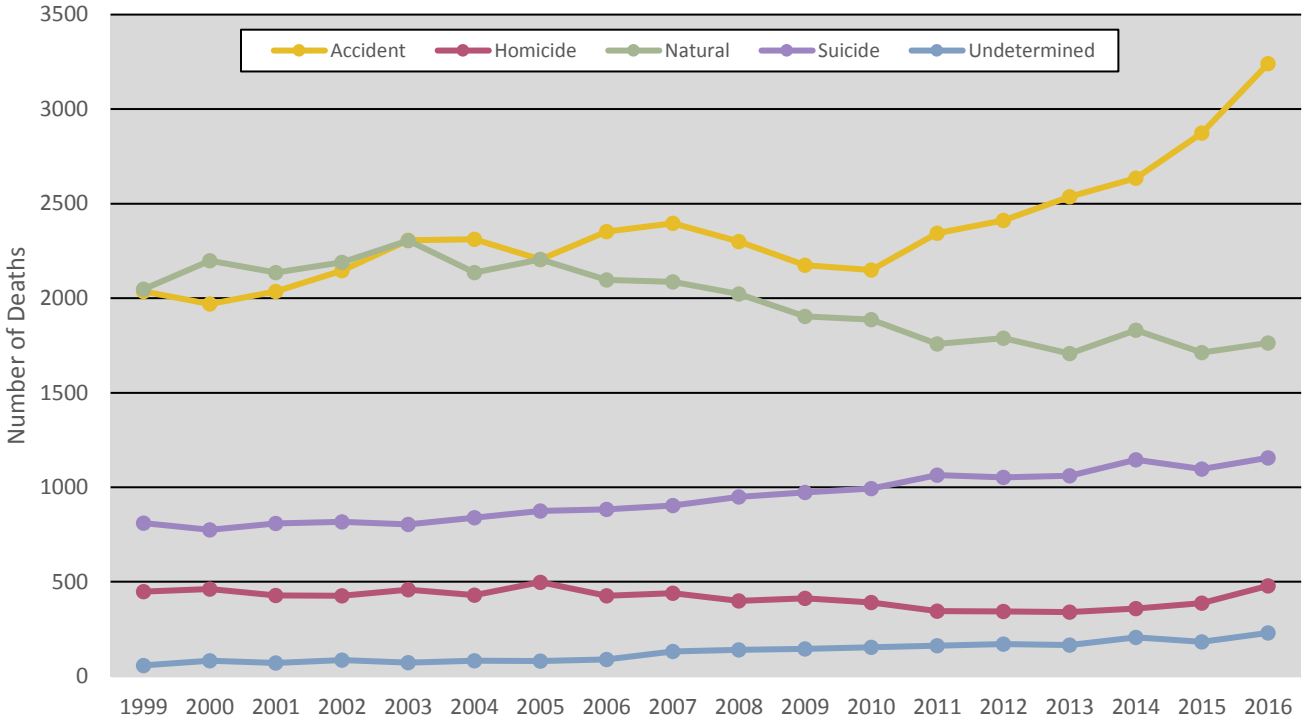


Figure 1.3 Percentage of OCME Cases by Manner of Death, 2016

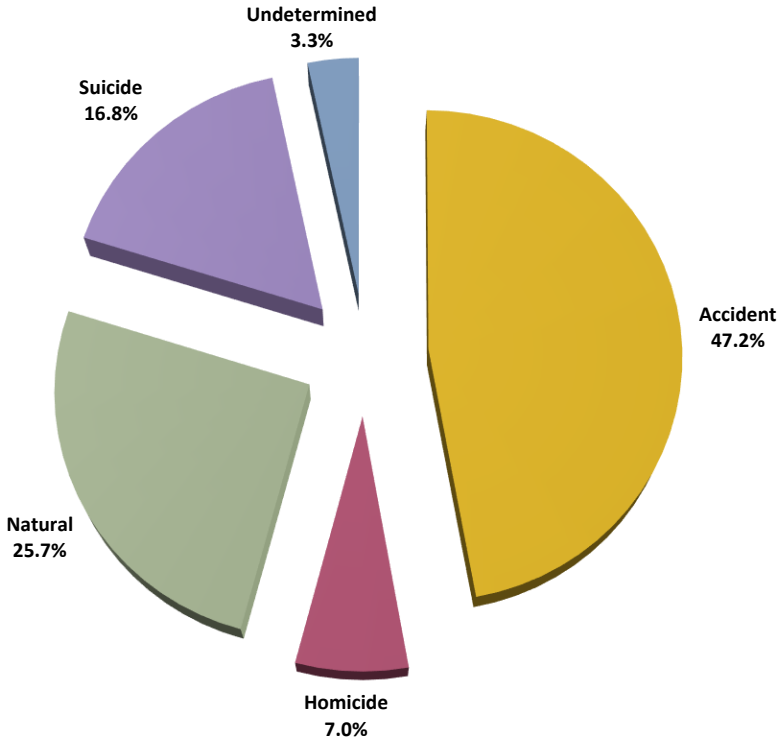


Table 1.1 Number of OCME Cases by District and Manner of Death, 2016

	OCME District				
Manner	**Central**	**Northern**	**Tidewater**	**Western**	**Total**
Accident	1101	747	694	698	**3240**
Homicide	159	57	176	86	**478**
Natural	600	373	360	431	**1764**
Suicide	351	294	212	299	**1156**
Undetermined	53	47	78	52	**230**
TOTAL	**2264**	**1518**	**1520**	**1566**	**6868**

Table 1.2 Number of OCME Cases by Autopsy Status and District, 2016

	Autopsy Performed		
OCME District	**Yes**	**No**	**Total**
Central	865	1399	**2264**
Northern	524	994	**1518**
Tidewater	647	873	**1520**
Western	561	1005	**1566**
TOTAL	**2597**	**4271**	**6868**

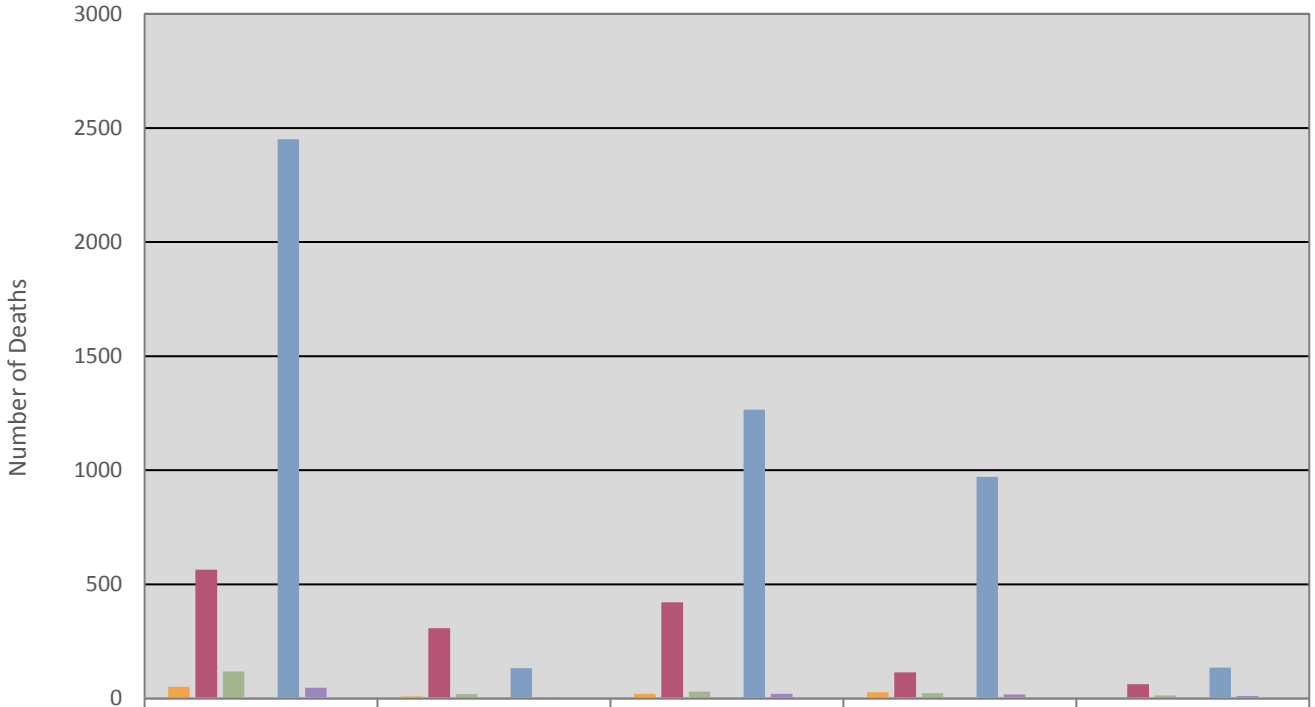
Table 1.3 Number of OCME Cases by Manner of Death and Autopsy Status, 2016

	Manner of Death					
Autopsy	**Accident**	**Homicide**	**Natural**	**Suicide**	**Undetermined**	**Total**
Yes	737	478	414	774	194	**2597**
No	2503	0	1350	382	36	**4271**
% Yes	**22.7%**	**100.0%**	**23.5%**	**67.0%**	**84.3%**	**37.8%**
TOTAL	**3240**	**478**	**1764**	**1156**	**230**	**6868**

Table 1.4 Number and Percentage of OCME Cases by Race/Ethnicity, 2016

Race/Ethnicity	Cases	Percent
Asian	111	1.6%
Black	1471	21.4%
Hispanic	205	3.0%
Native American	11	0.2%
White	4957	72.2%
Other	103	1.5%
Unknown	10	0.1%
TOTAL	**6868**	**100.0%**

Figure 1.4 Number of OCME Cases by Manner of Death and Race/Ethnicity, 2016



	Accident	Homicide	Natural	Suicide	Undetermined
Asian	51	10	21	27	2
Black	565	308	422	114	62
Hispanic	118	19	30	24	14
Native American	3	2	3	2	1
White	2451	133	1266	971	136
Other	47	6	21	18	11
Unknown	5	0	1	0	4

Figure 1.5 Number of OCME Cases by Age Group, 2016

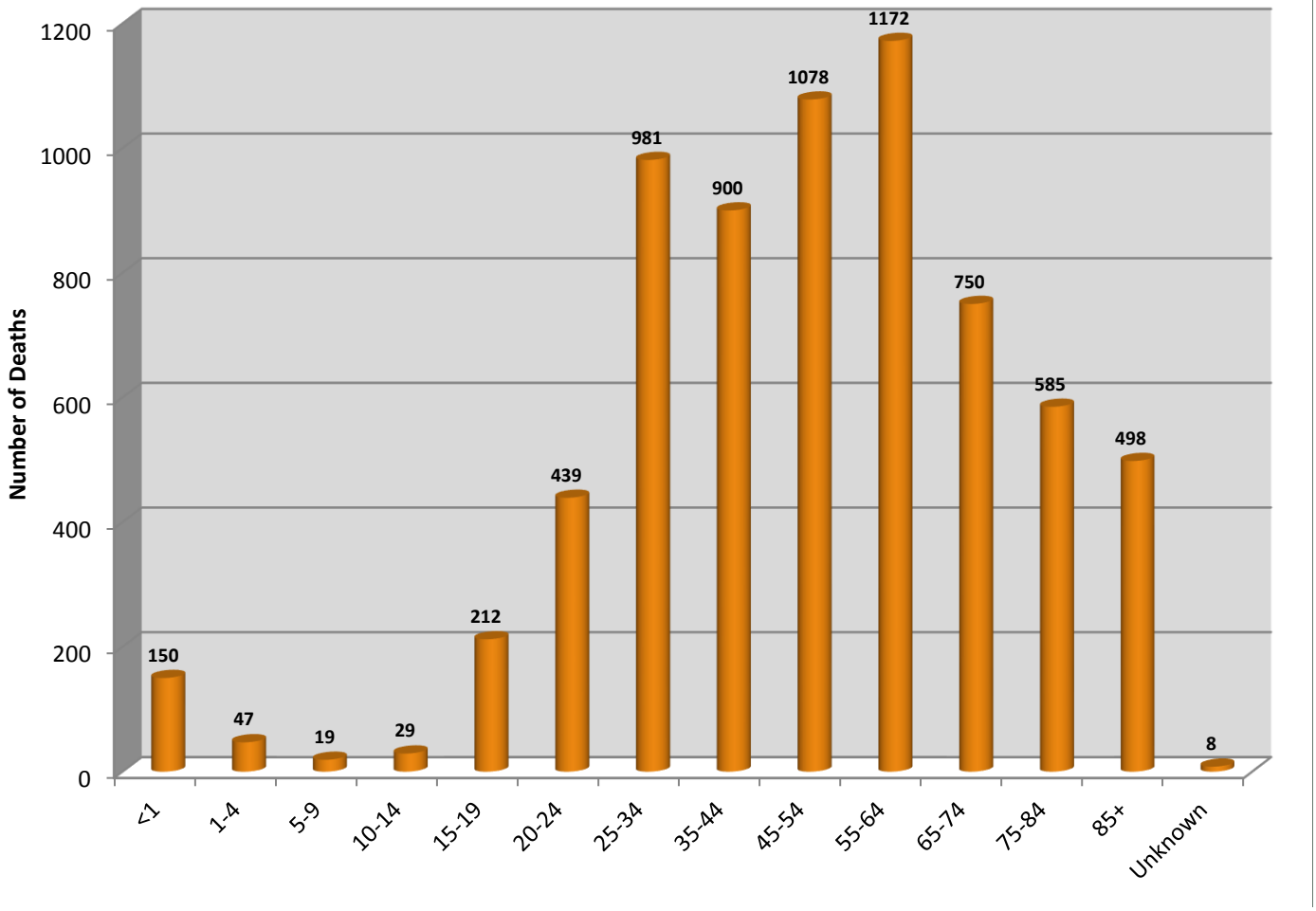


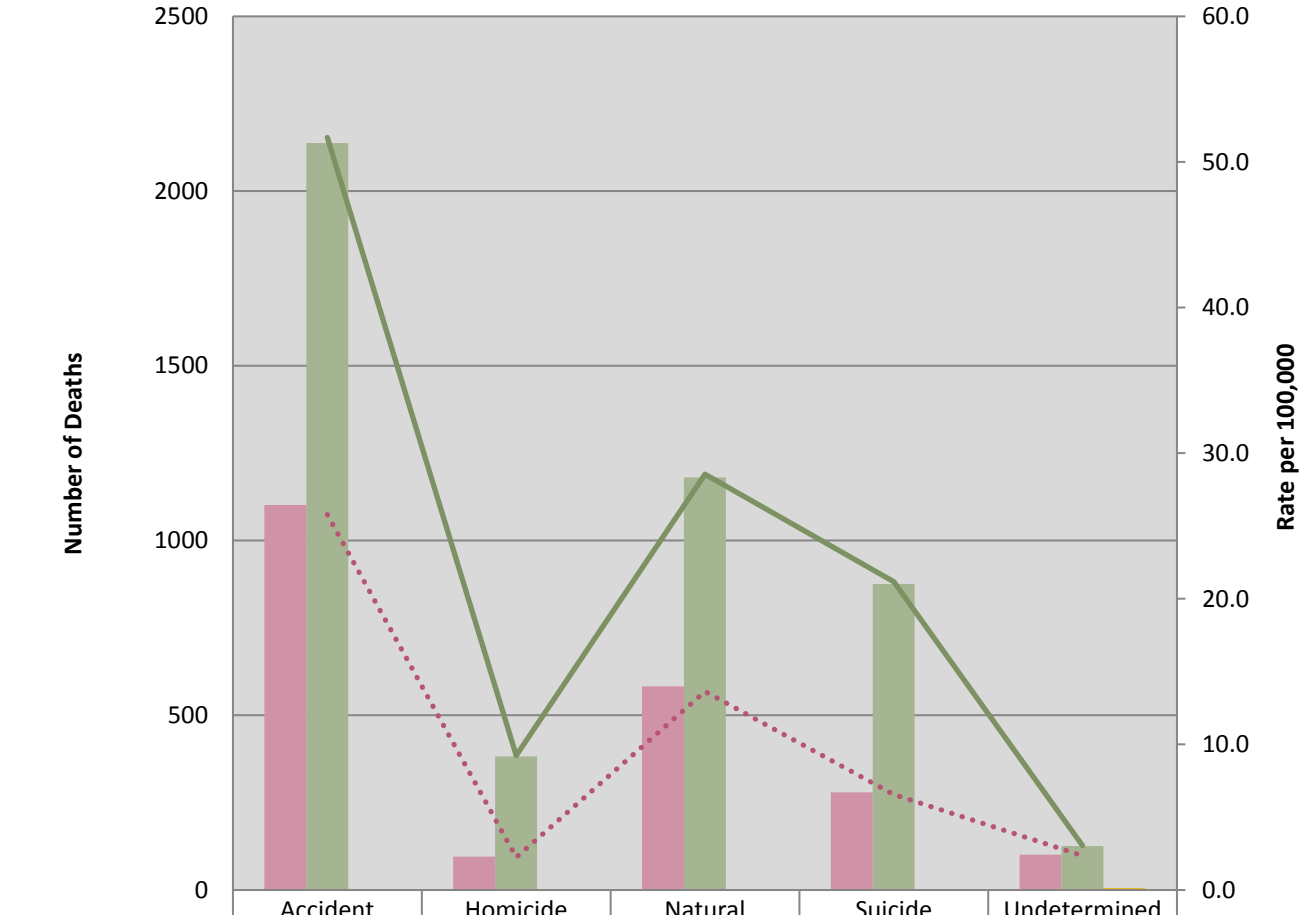
Table 1.5 Number and Percentage of OCME Cases by Gender, 2016

Gender	Cases	Percent
Female	2162	31.5%
Male	4703	68.5%
Unknown	3	0.0%
TOTAL	**6868**	**100.0%**

Table 1.6 Number and Percentage of OCME Cases by Manner of Death and Gender, 2016

Gender	Accident		Homicide		Natural		Suicide		Undetermined		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Female	1102	16.0%	96	1.4%	583	8.5%	280	4.1%	101	1.5%	**2162**	**31.5%**
Male	2138	31.1%	382	5.6%	1181	17.2%	876	12.8%	126	1.8%	**4703**	**68.5%**
Unknown	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	0.0%	**3**	**0.0%**
TOTAL	**3240**	**47.2%**	**388**	**5.6%**	**1712**	**24.9%**	**1097**	**16.0%**	**180**	**2.6%**	**6868**	**100.0%**

Figure 1.6 Number and Rate of OCME Cases by Manner of Death and Gender, 2016



	Accident	Homicide	Natural	Suicide	Undetermined
Female	1102	96	583	280	101
Male	2138	382	1181	876	126
Unknown	0	0	0	0	3
Female Rate	25.8	2.2	13.6	6.5	2.4
Male Rate	51.7	9.2	28.5	21.2	3.0

Table 1.7 Number of OCME Cases by Manner of Death, Gender, and Age Group, 2016

		Manner of Death					
Gender	**Age Group**	**Accident**	**Homicide**	**Natural**	**Suicide**	**Undetermined**	**Total**
FEMALE	**<1**	9	2	3	0	42	**56**
	1-4	15	6	3	0	4	**28**
	5-9	2	2	1	0	1	**6**
	10-14	1	1	0	5	1	**8**
	15-19	30	5	7	16	2	**60**
	20-24	50	8	5	15	4	**82**
	25-34	137	24	35	53	7	**256**
	35-44	153	19	57	38	10	**277**
	45-54	142	7	84	64	7	**304**
	55-64	118	10	138	42	8	**316**
	65-74	100	7	108	31	7	**253**
	75-84	137	1	80	13	4	**235**
	85+	207	4	62	3	4	**280**
	Unknown	1	0	0	0	0	**1**
	Subtotal	**1102**	**96**	**583**	**280**	**101**	**2162**
MALE	**<1**	10	8	13	0	63	**94**
	1-4	14	3	1	0	1	**19**
	5-9	9	1	2	0	1	**13**
	10-14	7	2	2	9	1	**21**
	15-19	69	38	6	38	1	**152**
	20-24	166	85	13	89	4	**357**
	25-34	426	96	53	138	12	**725**
	35-44	312	71	104	130	6	**623**
	45-54	316	38	277	135	8	**774**
	55-64	304	23	363	152	14	**856**
	65-74	171	13	214	92	7	**497**
	75-84	187	4	100	55	4	**350**
	85+	146	0	33	38	1	**218**
	Unknown	1	0	0	0	3	**4**
	Subtotal	**2138**	**382**	**1181**	**876**	**126**	**4703**
UNKNOWN	***Unknown***	**0**	**0**	**0**	**0**	**3**	**3**
	Subtotal	**0**	**0**	**0**	**0**	**3**	**3**
TOTAL		**3240**	**478**	**1764**	**1156**	**230**	**6868**

Figure 1.7 Number of OCME Cases by Month of Death, 2016

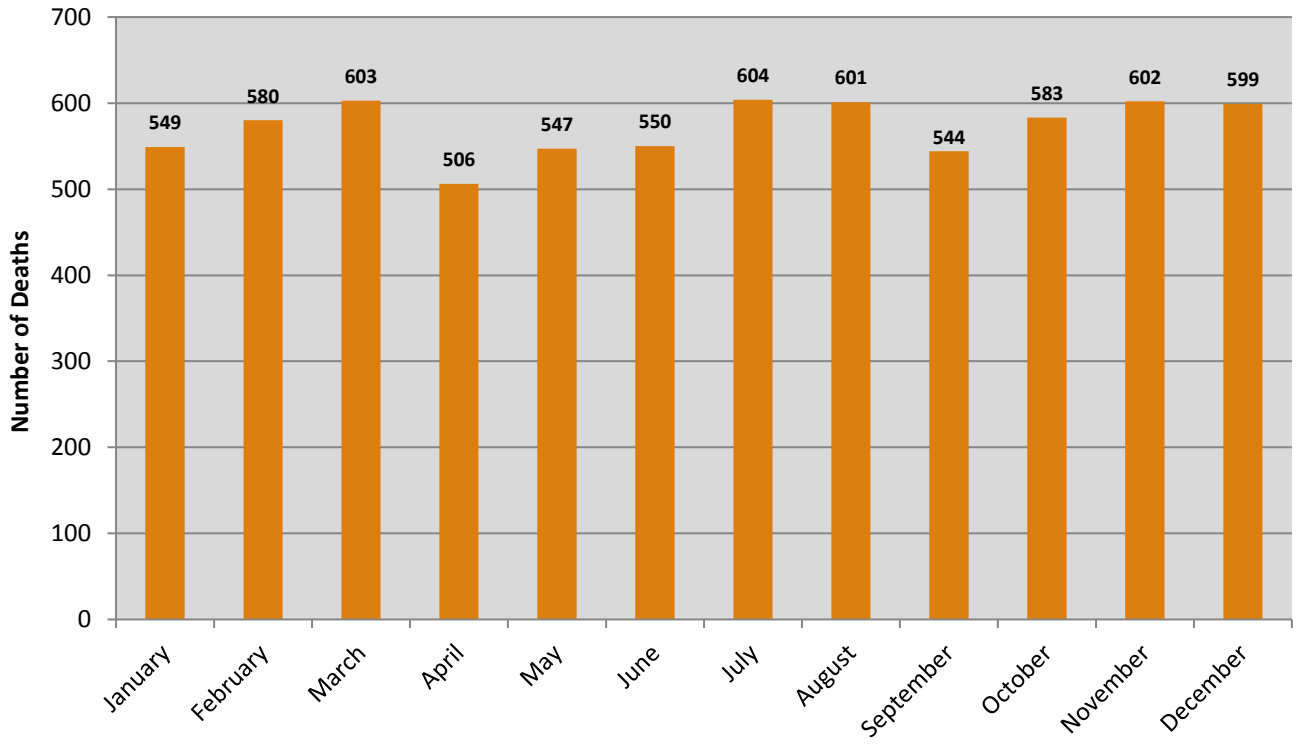


Figure 1.8 Number of OCME Cases by Month and Manner of Death, 2016

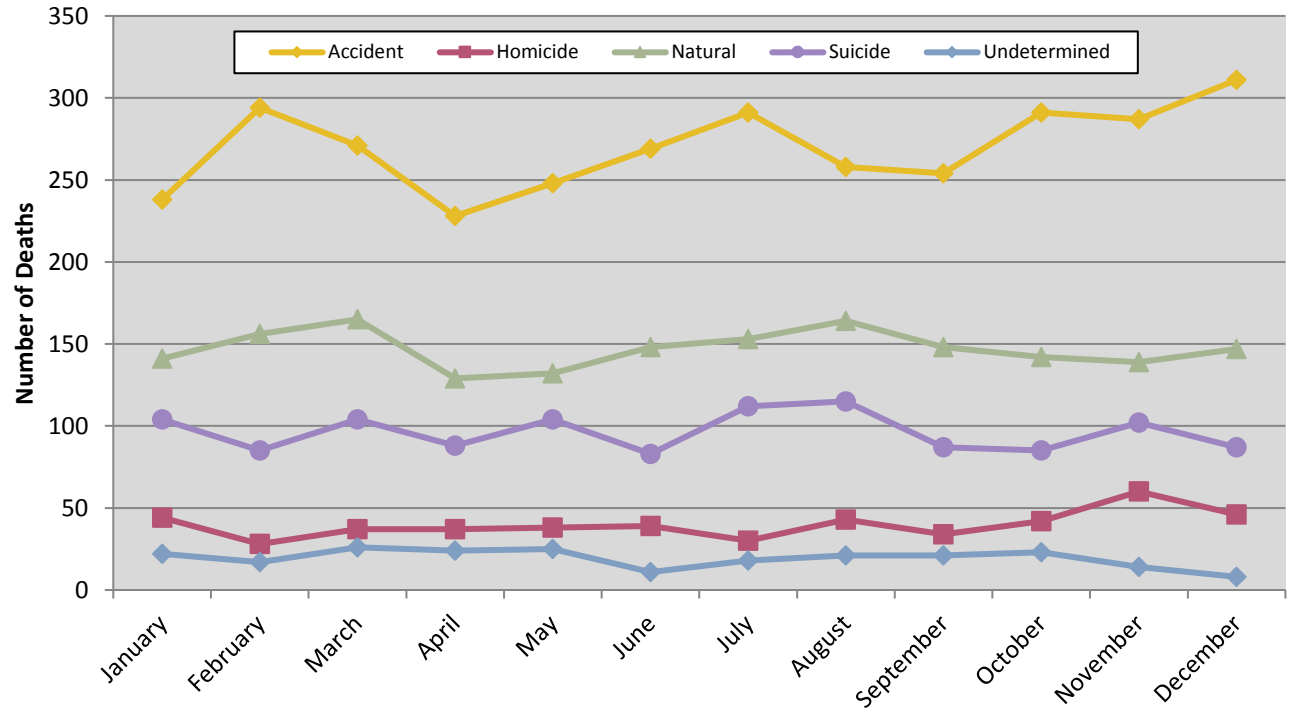


Figure 1.9 Number of OCME Cases by Day of Death, 2016

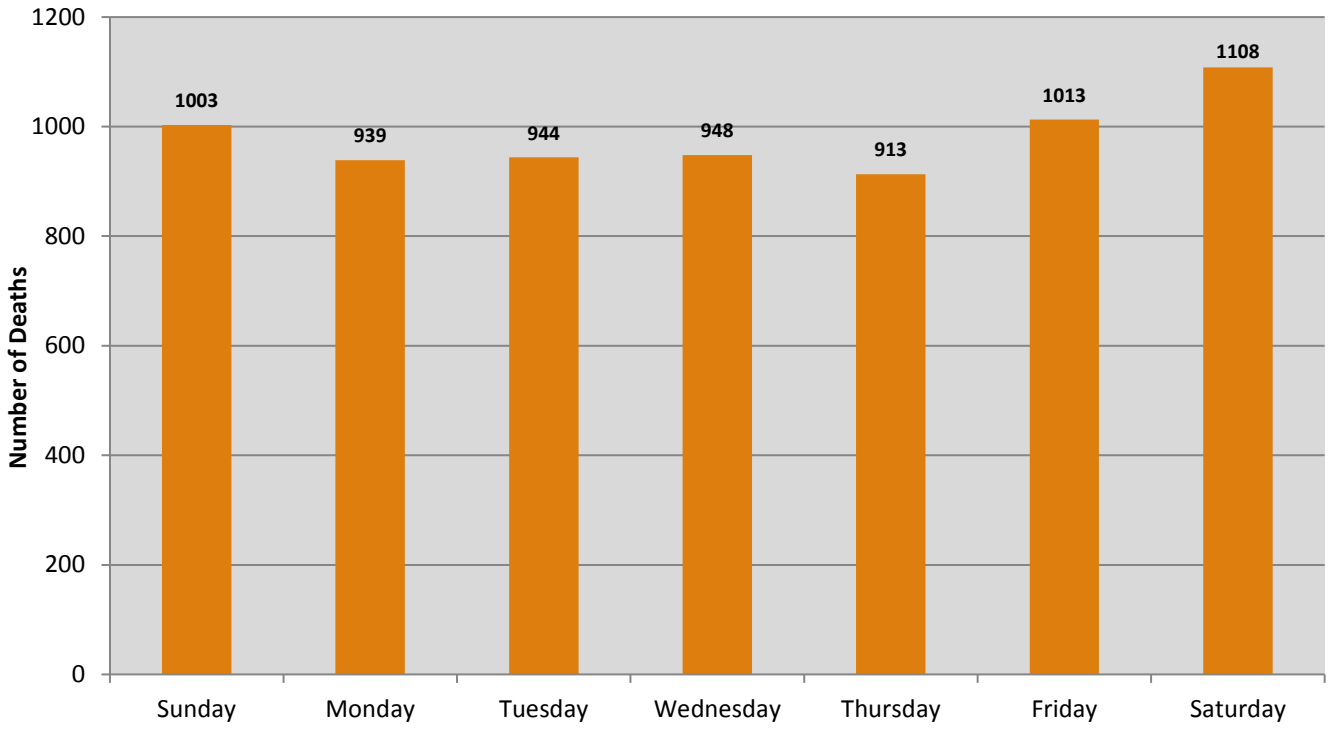


Figure 1.10 Number of OCME Cases by Day and Manner of Death, 2016

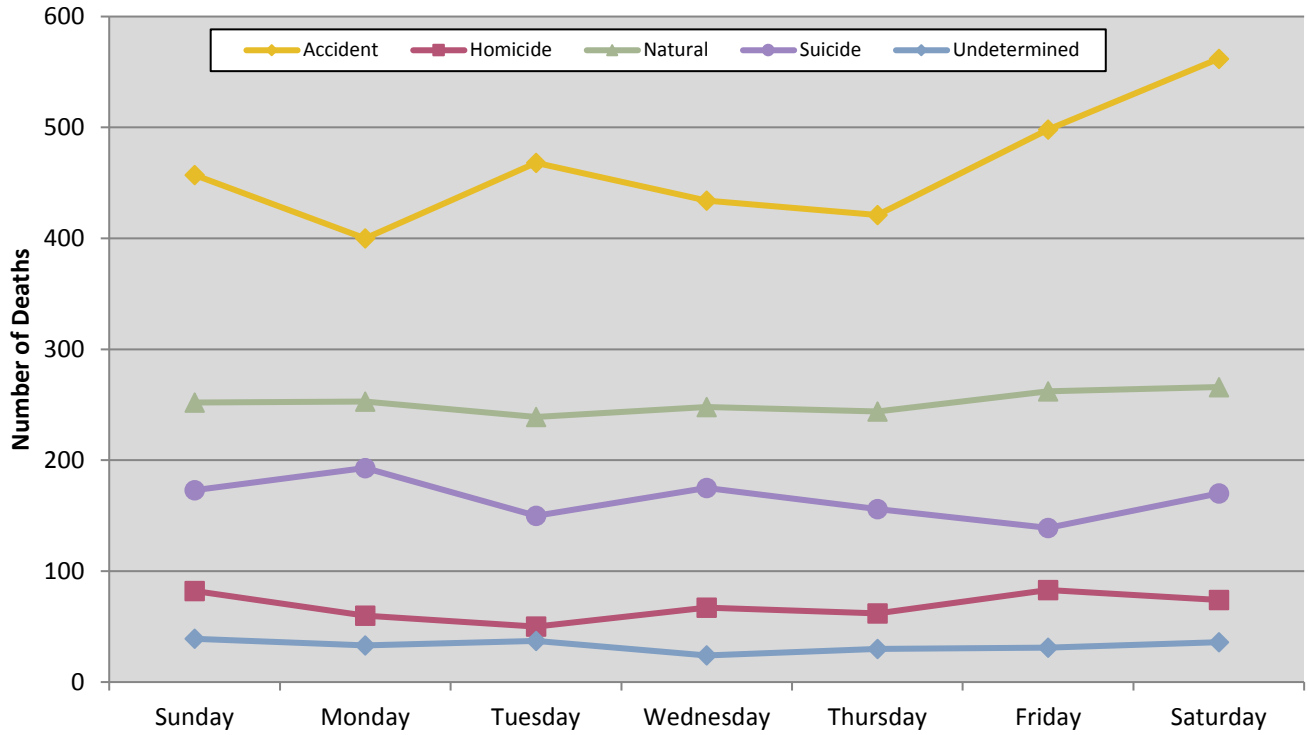


Table 1.8 Number and Rate of OCME Cases by Manner of Death and Locality of Residence, 2016

Locality of Residence	Accident Total	Accident Rate	Homicide Total	Homicide Rate	Natural Total	Natural Rate	Suicide Total	Suicide Rate	Undet. Total	Undet. Rate	Total	Total Rate
Accomack County	13	39.5	5	15.2	11	33.4	4	12.1	3	9.1	**36**	**109.3**
Albemarle County	32	29.9	1	0.9	16	15.0	7	6.5	0	0.0	**56**	**52.4**
Alexandria City	34	21.8	3	1.9	25	16.0	14	9.0	0	0.0	**76**	**48.8**
Alleghany County	11	70.5	0	0.0	8	51.3	5	32.1	0	0.0	**24**	**153.9**
Amelia County	10	77.4	4	31.0	2	15.5	2	15.5	0	0.0	**18**	**139.4**
Amherst County	15	47.4	1	3.2	17	53.7	4	12.6	1	3.2	**38**	**120.1**
Appomattox County	7	45.2	0	0.0	9	58.2	2	12.9	0	0.0	**18**	**116.3**
Arlington County	30	13.0	1	0.4	29	12.6	17	7.4	2	0.9	**79**	**34.3**
Augusta County	28	37.3	4	5.3	13	17.3	11	14.7	1	1.3	**57**	**76.0**
Bath County	2	44.7	0	0.0	2	44.7	0	0.0	0	0.0	**4**	**89.4**
Bedford County	38	48.7	2	2.6	16	20.5	10	12.8	3	3.8	**69**	**88.5**
Bland County	3	46.1	0	0.0	1	15.4	2	30.7	0	0.0	**6**	**92.1**
Botetourt County	13	39.1	1	3.0	2	6.0	8	24.1	3	9.0	**27**	**81.2**
Bristol City	2	11.8	1	5.9	15	88.4	3	17.7	0	0.0	**21**	**123.8**
Brunswick County	7	43.1	0	0.0	7	43.1	2	12.3	0	0.0	**16**	**98.5**
Buchanan County	10	45.1	5	22.5	9	40.6	4	18.0	2	9.0	**30**	**135.3**
Buckingham County	10	58.7	1	5.9	9	52.8	2	11.7	0	0.0	**22**	**129.0**
Buena Vista City	1	15.5	0	0.0	0	0.0	0	0.0	0	0.0	**1**	**15.5**
Campbell County	18	32.8	6	10.9	11	20.0	8	14.6	1	1.8	**44**	**80.1**
Caroline County	20	66.3	1	3.3	14	46.4	8	26.5	0	0.0	**43**	**142.5**
Carroll County	7	23.7	0	0.0	9	30.5	4	13.5	1	3.4	**21**	**71.1**
Charles City County	9	127.3	2	28.3	0	0.0	0	0.0	0	0.0	**11**	**155.6**
Charlotte County	10	82.4	1	8.2	5	41.2	3	24.7	0	0.0	**19**	**156.6**
Charlottesville City	12	25.6	1	2.1	8	17.1	3	6.4	1	2.1	**25**	**53.3**
Chesapeake City	92	38.7	20	8.4	40	16.8	29	12.2	9	3.8	**190**	**79.9**
Chesterfield County	135	39.8	16	4.7	52	15.3	52	15.3	5	1.5	**260**	**76.7**
Clarke County	11	76.5	1	7.0	2	13.9	2	13.9	0	0.0	**16**	**111.3**
Colonial Heights City	14	78.8	1	5.6	8	45.0	5	28.1	2	11.3	**30**	**168.8**

Locality of Residence	Accident Total	Accident Rate	Homicide Total	Homicide Rate	Natural Total	Natural Rate	Suicide Total	Suicide Rate	Undet. Total	Undet. Rate	Total	Total Rate
Covington City	5	90.6	0	0.0	2	36.2	1	18.1	0	0.0	**8**	**145.0**
Craig County	2	38.8	0	0.0	1	19.4	4	77.5	1	19.4	**8**	**155.1**
Culpeper County	23	45.9	1	2.0	10	20.0	5	10.0	1	2.0	**40**	**79.9**
Cumberland County	3	31.1	0	0.0	3	31.1	1	10.4	0	0.0	**7**	**72.5**
Danville City	17	40.6	15	35.8	13	31.0	10	23.9	4	9.5	**59**	**140.8**
Dickenson County	13	86.9	0	0.0	6	40.1	5	33.4	0	0.0	**24**	**160.3**
Dinwiddie County	10	35.5	3	10.7	11	39.1	4	14.2	1	3.6	**29**	**103.0**
Emporia City	2	37.7	0	0.0	2	37.7	0	0.0	0	0.0	**4**	**75.4**
Essex County	6	53.9	0	0.0	4	36.0	1	9.0	0	0.0	**11**	**98.9**
Fairfax City	10	41.4	0	0.0	5	20.7	2	8.3	1	4.1	**18**	**74.5**
Fairfax County	216	19.0	14	1.2	106	9.3	95	8.3	13	1.1	**444**	**39.0**
Falls Church City	3	21.4	0	0.0	4	28.5	1	7.1	1	7.1	**9**	**64.2**
Fauquier County	45	65.2	1	1.4	14	20.3	11	15.9	0	0.0	**71**	**102.8**
Floyd County	7	44.5	1	6.4	5	31.8	0	0.0	0	0.0	**13**	**82.6**
Fluvanna County	4	15.2	0	0.0	8	30.5	0	0.0	1	3.8	**13**	**49.5**
Franklin City	3	36.1	0	0.0	1	12.0	0	0.0	0	0.0	**4**	**48.2**
Franklin County	39	69.6	2	3.6	7	12.5	9	16.1	0	0.0	**57**	**101.7**
Frederick County	38	45.0	0	0.0	18	21.3	14	16.6	4	4.7	**74**	**87.7**
Fredericksburg City	17	60.1	1	3.5	13	45.9	1	3.5	0	0.0	**32**	**113.1**
Galax City	1	14.8	2	29.5	1	14.8	0	0.0	1	14.8	**5**	**73.8**
Giles County	6	35.6	0	0.0	4	23.7	4	23.7	0	0.0	**14**	**83.1**
Gloucester County	25	67.2	1	2.7	10	26.9	11	29.6	0	0.0	**47**	**126.3**
Goochland County	5	22.1	1	4.4	10	44.1	7	30.9	1	4.4	**24**	**105.9**
Grayson County	7	46.3	1	6.6	2	13.2	4	26.5	0	0.0	**14**	**92.7**
Greene County	6	31.0	0	0.0	6	31.0	3	15.5	0	0.0	**15**	**77.4**
Greensville County	7	59.8	0	0.0	17	145.2	1	8.5	1	8.5	**26**	**222.1**
Halifax County	22	62.9	4	11.4	10	28.6	5	14.3	0	0.0	**41**	**117.2**
Hampton City	63	46.5	21	15.5	34	25.1	17	12.6	12	8.9	**147**	**108.6**
Hanover County	36	34.5	2	1.9	16	15.3	12	11.5	1	1.0	**67**	**64.2**
Harrisonburg City	11	20.7	2	3.8	7	13.2	5	9.4	2	3.8	**27**	**50.9**

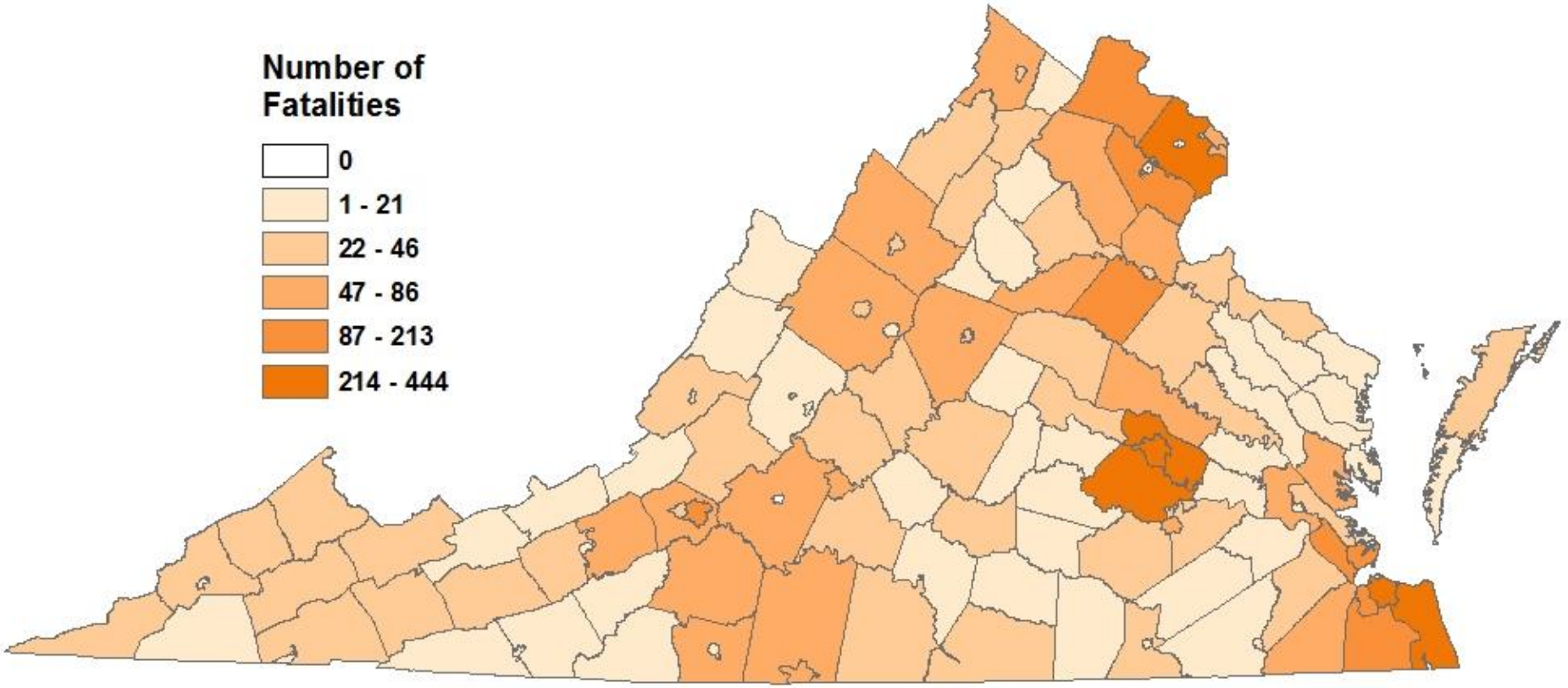
Locality of Residence	Accident Total	Accident Rate	Homicide Total	Homicide Rate	Natural Total	Natural Rate	Suicide Total	Suicide Rate	Undet. Total	Undet. Rate	Total	Total Rate
Henrico County	119	36.4	19	5.8	49	15.0	40	12.3	9	2.8	**236**	**72.3**
Henry County	29	56.4	4	7.8	13	25.3	11	21.4	4	7.8	**61**	**118.6**
Highland County	1	45.1	0	0.0	2	90.3	1	45.1	0	0.0	**4**	**180.5**
Hopewell City	18	79.2	4	17.6	5	22.0	2	8.8	1	4.4	**30**	**132.0**
Isle of Wight County	15	41.0	0	0.0	2	5.5	7	19.1	2	5.5	**26**	**71.0**
James City County	23	30.9	0	0.0	14	18.8	11	14.8	1	1.3	**49**	**65.9**
King and Queen County	2	27.9	1	14.0	3	41.9	2	27.9	0	0.0	**8**	**111.7**
King George County	14	53.9	0	0.0	5	19.2	7	26.9	0	0.0	**26**	**100.1**
King William County	13	79.6	1	6.1	7	42.9	5	30.6	0	0.0	**26**	**159.2**
Lancaster County	10	91.1	0	0.0	4	36.5	3	27.3	0	0.0	**17**	**154.9**
Lee County	9	37.2	0	0.0	8	33.1	3	12.4	2	8.3	**22**	**91.0**
Lexington City	0	0.0	0	0.0	2	28.4	5	71.0	0	0.0	**7**	**99.4**
Loudoun County	70	18.1	5	1.3	31	8.0	42	10.9	5	1.3	**153**	**39.6**
Louisa County	25	71.0	3	8.5	9	25.5	6	17.0	1	2.8	**44**	**124.9**
Lunenburg County	3	24.4	2	16.3	7	57.0	3	24.4	1	8.1	**16**	**130.4**
Lynchburg City	26	32.4	4	5.0	15	18.7	9	11.2	0	0.0	**54**	**67.3**
Madison County	7	53.5	1	7.6	2	15.3	3	22.9	1	7.6	**14**	**107.1**
Manassas City	8	19.3	1	2.4	4	9.6	3	7.2	3	7.2	**19**	**45.8**
Manassas Park City	2	12.6	0	0.0	2	12.6	0	0.0	1	6.3	**5**	**31.4**
Martinsville City	5	37.2	1	7.4	5	37.2	0	0.0	2	14.9	**13**	**96.7**
Mathews County	4	45.5	1	11.4	3	34.2	3	34.2	0	0.0	**11**	**125.3**
Mecklenburg County	15	48.6	2	6.5	8	25.9	5	16.2	0	0.0	**30**	**97.1**
Middlesex County	9	83.5	0	0.0	6	55.7	3	27.8	0	0.0	**18**	**167.0**
Montgomery County	26	26.4	1	1.0	16	16.2	15	15.2	1	1.0	**59**	**59.8**
Nelson County	11	74.0	0	0.0	8	53.8	3	20.2	0	0.0	**22**	**148.0**
New Kent County	5	23.6	3	14.2	4	18.9	5	23.6	1	4.7	**18**	**85.1**
Newport News City	75	41.2	31	17.0	39	21.4	24	13.2	10	5.5	**179**	**98.4**
Norfolk City	117	47.7	38	15.5	65	26.5	23	9.4	10	4.1	**253**	**103.2**
Northampton County	5	41.2	3	24.7	2	16.5	2	16.5	0	0.0	**12**	**98.9**
Northumberland County	9	73.6	0	0.0	3	24.5	2	16.4	0	0.0	**14**	**114.5**

Locality of Residence	Accident Total	Accident Rate	Homicide Total	Homicide Rate	Natural Total	Natural Rate	Suicide Total	Suicide Rate	Undet. Total	Undet. Rate	Total	Total Rate
Norton City	2	51.8	0	0.0	1	25.9	2	51.8	0	0.0	**5**	**129.4**
Nottoway County	10	64.1	0	0.0	8	51.3	1	6.4	0	0.0	**19**	**121.8**
Orange County	25	70.4	0	0.0	15	42.2	6	16.9	3	8.4	**49**	**137.9**
Page County	15	63.4	0	0.0	8	33.8	8	33.8	6	25.4	**37**	**156.4**
Patrick County	9	50.2	0	0.0	5	27.9	4	22.3	1	5.6	**19**	**106.0**
Petersburg City	26	81.6	8	25.1	21	65.9	6	18.8	5	15.7	**66**	**207.0**
Pittsylvania County	21	34.0	3	4.9	14	22.7	13	21.1	2	3.2	**53**	**85.9**
Poquoson City	5	41.6	0	0.0	2	16.6	2	16.6	0	0.0	**9**	**74.9**
Portsmouth City	50	52.5	17	17.8	32	33.6	13	13.6	5	5.2	**117**	**122.8**
Powhatan County	5	17.6	1	3.5	9	31.6	4	14.1	1	3.5	**20**	**70.3**
Prince Edward County	14	60.5	0	0.0	4	17.3	3	13.0	1	4.3	**22**	**95.1**
Prince George County	9	23.8	2	5.3	9	23.8	7	18.5	0	0.0	**27**	**71.3**
Prince William County	97	21.3	21	4.6	42	9.2	48	10.5	5	1.1	**213**	**46.8**
Pulaski County	19	55.6	2	5.8	10	29.2	8	23.4	2	5.8	**41**	**119.9**
Radford City	6	34.3	0	0.0	2	11.4	3	17.2	0	0.0	**11**	**62.9**
Rappahannock County	3	40.6	0	0.0	2	27.1	1	13.5	0	0.0	**6**	**81.2**
Richmond City	118	52.9	52	23.3	54	24.2	27	12.1	9	4.0	**260**	**116.5**
Richmond County	1	11.4	0	0.0	2	22.8	3	34.2	1	11.4	**7**	**79.8**
Roanoke City	50	50.2	10	10.0	43	43.1	20	20.1	3	3.0	**126**	**126.4**
Roanoke County	33	35.1	5	5.3	12	12.8	17	18.1	2	2.1	**69**	**73.4**
Rockbridge County	12	53.6	0	0.0	4	17.9	2	8.9	2	8.9	**20**	**89.3**
Rockingham County	29	36.4	1	1.3	8	10.0	12	15.0	1	1.3	**51**	**64.0**
Russell County	14	51.2	0	0.0	13	47.5	7	25.6	0	0.0	**34**	**124.2**
Salem City	13	50.9	0	0.0	4	15.7	6	23.5	0	0.0	**23**	**90.0**
Scott County	7	31.9	1	4.6	2	9.1	5	22.8	0	0.0	**15**	**68.4**
Shenandoah County	18	41.7	1	2.3	7	16.2	11	25.5	0	0.0	**37**	**85.7**
Smyth County	9	29.0	1	3.2	10	32.2	4	12.9	0	0.0	**24**	**77.3**
Southampton County	9	49.8	2	11.1	6	33.2	2	11.1	0	0.0	**19**	**105.2**
Spotsylvania County	59	44.7	3	2.3	33	25.0	25	18.9	0	0.0	**120**	**90.9**
Stafford County	43	29.8	7	4.8	22	15.2	14	9.7	0	0.0	**86**	**59.6**

Locality of Residence	Accident Total	Accident Rate	Homicide Total	Homicide Rate	Natural Total	Natural Rate	Suicide Total	Suicide Rate	Undet. Total	Undet. Rate	Total	Total Rate
Staunton City	6	24.6	1	4.1	7	28.7	7	28.7	1	4.1	**22**	**90.3**
Suffolk City	22	24.6	7	7.8	20	22.4	5	5.6	1	1.1	**55**	**61.6**
Surry County	3	45.8	0	0.0	1	15.3	0	0.0	0	0.0	**4**	**61.1**
Sussex County	8	69.5	0	0.0	9	78.2	1	8.7	0	0.0	**18**	**156.5**
Tazewell County	14	33.2	1	2.4	12	28.5	6	14.2	1	2.4	**34**	**80.7**
Virginia Beach City	142	31.4	18	4.0	69	15.2	63	13.9	21	4.6	**313**	**69.2**
Warren County	21	53.6	0	0.0	12	30.6	7	17.9	2	5.1	**42**	**107.3**
Washington County	10	18.4	1	1.8	16	29.5	14	25.8	2	3.7	**43**	**79.3**
Waynesboro City	7	32.0	0	0.0	5	22.8	4	18.3	2	9.1	**18**	**82.2**
Westmoreland County	11	62.5	0	0.0	6	34.1	4	22.7	2	11.4	**23**	**130.7**
Williamsburg City	2	13.1	0	0.0	0	0.0	2	13.1	0	0.0	**4**	**26.3**
Winchester City	17	61.8	0	0.0	10	36.3	3	10.9	0	0.0	**30**	**109.0**
Wise County	20	51.0	1	2.5	16	40.8	6	15.3	3	7.6	**46**	**117.3**
Wythe County	14	48.2	1	3.4	5	17.2	7	24.1	0	0.0	**27**	**93.1**
York County	13	19.1	3	4.4	5	7.4	4	5.9	1	1.5	**26**	**38.2**
Subtotal (in-state)	**2962**	**35.2**	**445**	**5.3**	**1630**	**19.4**	**1109**	**13.2**	**219**	**2.6**	**6365**	**69.0**
Out of State	259	ND	31	ND	117	ND	41	ND	7	ND	**455**	**ND**
Unknown	19	ND	2	ND	17	ND	6	ND	4	ND	**48**	**ND**
Subtotal (out-of-state)	**278**	**ND**	**33**	**ND**	**134**	**ND**	**47**	**ND**	**11**	**ND**	**503**	**ND**
TOTAL	**3240**	**38.5**	**478**	**5.7**	**1764**	**21.0**	**1156**	**13.7**	**230**	**2.7**	**6868**	**81.6**

Note: No denominator is represented by ND

Map 1.1 Number of OCME Cases by Locality of Residence, 2016



Map 1.2 Rates of OCME Cases by Locality of Residence, 2016

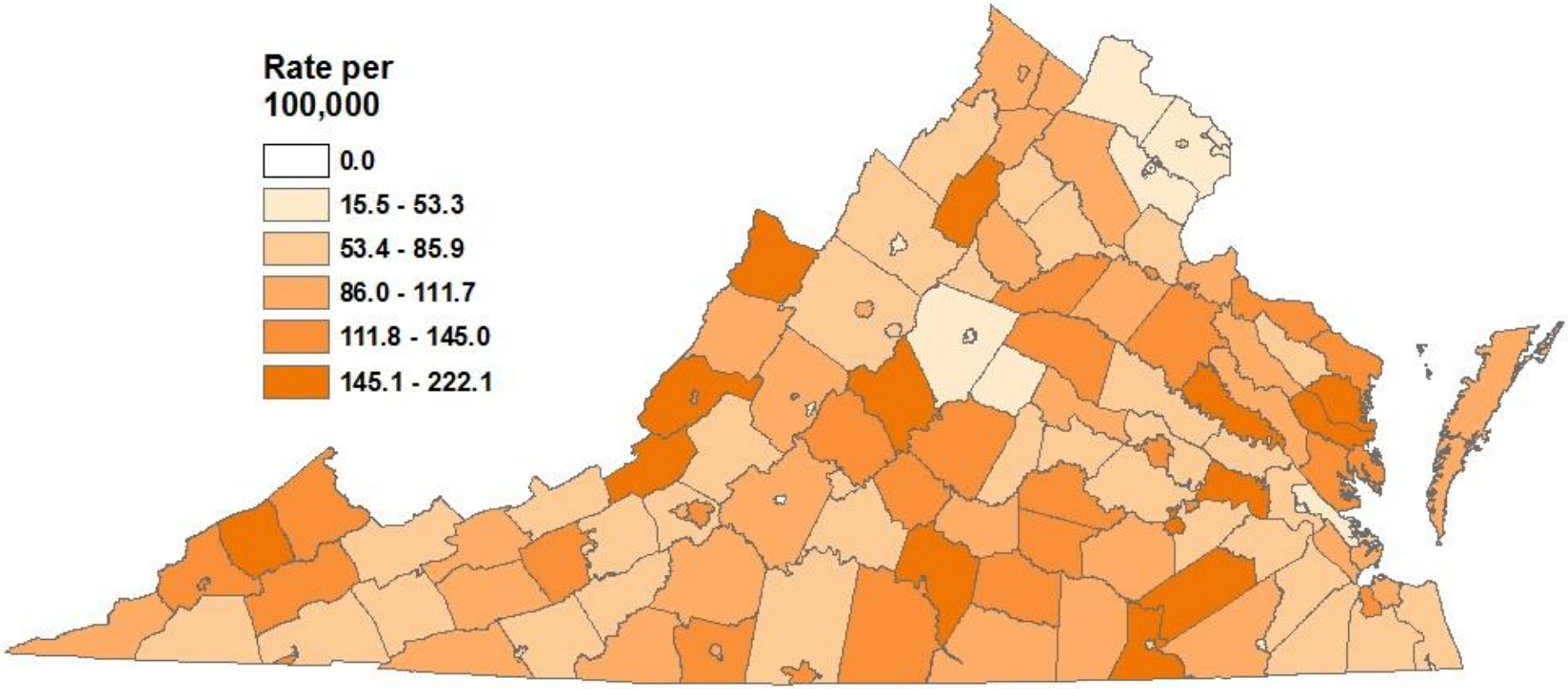


Table 1.9 Number and Rate of OCME Cases by Manner of Death and Locality of Injury, 2016

Locality of Injury	Accident Total	Accident Rate	Homicide Total	Homicide Rate	Natural Total	Natural Rate	Suicide Total	Suicide Rate	Undet. Total	Undet. Rate	Total	Total Rate
Accomack County	16	48.6	4	12.1	13	39.5	4	12.1	3	9.1	**40**	**121.4**
Albemarle County	35	32.7	1	0.9	16	15.0	7	6.5	0	0.0	**59**	**55.2**
Alexandria City	25	16.0	6	3.9	34	21.8	16	10.3	0	0.0	**81**	**52.0**
Alleghany County	13	83.4	0	0.0	7	44.9	5	32.1	0	0.0	**25**	**160.3**
Amelia County	9	69.7	2	15.5	2	15.5	2	15.5	0	0.0	**15**	**116.2**
Amherst County	17	53.7	1	3.2	17	53.7	6	19.0	0	0.0	**41**	**129.6**
Appomattox County	8	51.7	0	0.0	6	38.8	2	12.9	0	0.0	**16**	**103.4**
Arlington County	30	13.0	0	0.0	31	13.5	18	7.8	3	1.3	**82**	**35.6**
Augusta County	36	48.0	5	6.7	12	16.0	15	20.0	2	2.7	**70**	**93.3**
Bath County	3	67.0	0	0.0	2	44.7	0	0.0	0	0.0	**5**	**111.7**
Bedford County	38	48.7	1	1.3	14	18.0	12	15.4	5	6.4	**70**	**89.8**
Bland County	2	30.7	0	0.0	2	30.7	2	30.7	0	0.0	**6**	**92.1**
Botetourt County	15	45.1	1	3.0	2	6.0	7	21.1	3	9.0	**28**	**84.3**
Bristol City	1	5.9	1	5.9	14	82.5	2	11.8	0	0.0	**18**	**106.1**
Brunswick County	11	67.7	0	0.0	6	36.9	3	18.5	0	0.0	**20**	**123.1**
Buchanan County	9	40.6	4	18.0	10	45.1	5	22.5	2	9.0	**30**	**135.3**
Buckingham County	12	70.4	1	5.9	9	52.8	3	17.6	0	0.0	**25**	**146.6**
Buena Vista City	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**0**	**0.0**
Campbell County	24	43.7	6	10.9	15	27.3	7	12.7	1	1.8	**53**	**96.4**
Caroline County	29	96.1	1	3.3	14	46.4	6	19.9	0	0.0	**50**	**165.7**
Carroll County	10	33.9	1	3.4	9	30.5	5	16.9	1	3.4	**26**	**88.0**
Charles City County	8	113.1	0	0.0	0	0.0	2	28.3	0	0.0	**10**	**141.4**
Charlotte County	9	74.2	2	16.5	4	33.0	1	8.2	0	0.0	**16**	**131.9**
Charlottesville City	19	40.5	1	2.1	13	27.7	4	8.5	2	4.3	**39**	**83.1**
Chesapeake City	101	42.4	13	5.5	36	15.1	29	12.2	12	5.0	**191**	**80.3**
Chesterfield County	124	36.6	9	2.7	49	14.5	51	15.0	7	2.1	**240**	**70.8**
Clarke County	17	118.3	1	7.0	2	13.9	2	13.9	0	0.0	**22**	**153.1**
Colonial Heights City	15	84.4	0	0.0	6	33.8	6	33.8	2	11.3	**29**	**163.2**

Locality of Injury	Accident Total	Accident Rate	Homicide Total	Homicide Rate	Natural Total	Natural Rate	Suicide Total	Suicide Rate	Undet. Total	Undet. Rate	Total	Total Rate
Covington City	3	54.4	0	0.0	2	36.2	1	18.1	0	0.0	**6**	**108.7**
Craig County	3	58.2	0	0.0	1	19.4	4	77.5	1	19.4	**9**	**174.5**
Culpeper County	24	47.9	4	8.0	10	20.0	5	10.0	1	2.0	**44**	**87.9**
Cumberland County	3	31.1	0	0.0	3	31.1	1	10.4	0	0.0	**7**	**72.5**
Danville City	22	52.5	16	38.2	15	35.8	9	21.5	4	9.5	**66**	**157.5**
Dickenson County	14	93.5	0	0.0	6	40.1	6	40.1	0	0.0	**26**	**173.7**
Dinwiddie County	18	64.0	2	7.1	13	46.2	4	14.2	0	0.0	**37**	**131.5**
Emporia City	3	56.6	0	0.0	0	0.0	0	0.0	0	0.0	**3**	**56.6**
Essex County	7	62.9	0	0.0	5	45.0	1	9.0	0	0.0	**13**	**116.9**
Fairfax City	10	41.4	0	0.0	5	20.7	1	4.1	0	0.0	**16**	**66.2**
Fairfax County	253	22.2	19	1.7	121	10.6	93	8.2	11	1.0	**497**	**43.6**
Falls Church City	1	7.1	0	0.0	5	35.7	1	7.1	1	7.1	**8**	**57.1**
Fauquier County	53	76.7	1	1.4	13	18.8	9	13.0	0	0.0	**76**	**110.0**
Floyd County	8	50.9	0	0.0	6	38.1	0	0.0	0	0.0	**14**	**89.0**
Fluvanna County	3	11.4	0	0.0	8	30.5	1	3.8	1	3.8	**13**	**49.5**
Franklin City	3	36.1	0	0.0	1	12.0	0	0.0	0	0.0	**4**	**48.2**
Franklin County	42	74.9	1	1.8	9	16.1	8	14.3	0	0.0	**60**	**107.0**
Frederick County	40	47.4	0	0.0	21	24.9	13	15.4	3	3.6	**77**	**91.2**
Fredericksburg City	24	84.8	3	10.6	19	67.1	1	3.5	0	0.0	**47**	**166.1**
Galax City	1	14.8	2	29.5	0	0.0	0	0.0	1	14.8	**4**	**59.0**
Giles County	12	71.2	0	0.0	4	23.7	4	23.7	0	0.0	**20**	**118.6**
Gloucester County	24	64.5	1	2.7	9	24.2	10	26.9	0	0.0	**44**	**118.2**
Goochland County	5	22.1	0	0.0	7	30.9	8	35.3	1	4.4	**21**	**92.6**
Grayson County	8	53.0	1	6.6	1	6.6	4	26.5	0	0.0	**14**	**92.7**
Greene County	4	20.6	0	0.0	5	25.8	4	20.6	0	0.0	**13**	**67.1**
Greensville County	7	59.8	1	8.5	21	179.4	0	0.0	1	8.5	**30**	**256.3**
Halifax County	20	57.2	3	8.6	11	31.4	7	20.0	0	0.0	**41**	**117.2**
Hampton City	58	42.8	25	18.5	41	30.3	19	14.0	10	7.4	**153**	**113.0**
Hanover County	30	28.7	4	3.8	20	19.2	14	13.4	1	1.0	**69**	**66.1**
Harrisonburg City	13	24.5	2	3.8	7	13.2	8	15.1	0	0.0	**30**	**56.5**

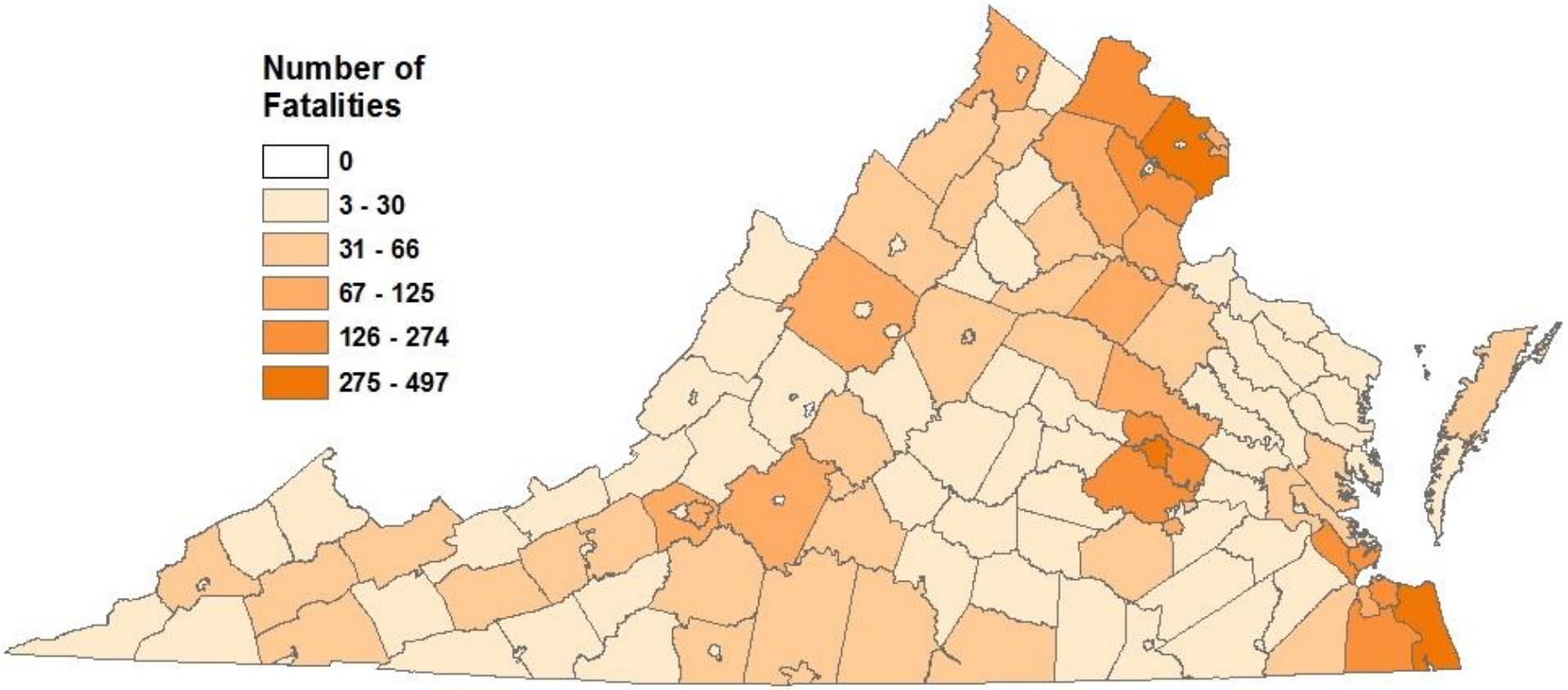
Locality of Injury	Accident Total	Accident Rate	Homicide Total	Homicide Rate	Natural Total	Natural Rate	Suicide Total	Suicide Rate	Undet. Total	Undet. Rate	Total	Total Rate
Henrico County	121	37.1	18	5.5	46	14.1	31	9.5	10	3.1	**226**	**69.2**
Henry County	30	58.3	4	7.8	14	27.2	10	19.4	5	9.7	**63**	**122.5**
Highland County	1	45.1	0	0.0	2	90.3	2	90.3	0	0.0	**5**	**225.6**
Hopewell City	13	57.2	5	22.0	8	35.2	5	22.0	1	4.4	**32**	**140.8**
Isle of Wight County	15	41.0	0	0.0	3	8.2	7	19.1	2	5.5	**27**	**73.8**
James City County	26	34.9	1	1.3	21	28.2	9	12.1	0	0.0	**57**	**76.6**
King and Queen County	3	41.9	1	14.0	3	41.9	2	27.9	0	0.0	**9**	**125.7**
King George County	13	50.0	0	0.0	5	19.2	6	23.1	0	0.0	**24**	**92.4**
King William County	12	73.5	1	6.1	7	42.9	5	30.6	0	0.0	**25**	**153.1**
Lancaster County	11	100.3	0	0.0	4	36.5	4	36.5	0	0.0	**19**	**173.2**
Lee County	10	41.4	1	4.1	9	37.2	3	12.4	2	8.3	**25**	**103.4**
Lexington City	1	14.2	0	0.0	2	28.4	4	56.8	0	0.0	**7**	**99.4**
Loudoun County	69	17.9	5	1.3	31	8.0	45	11.7	5	1.3	**155**	**40.2**
Louisa County	28	79.5	3	8.5	11	31.2	7	19.9	0	0.0	**49**	**139.1**
Lunenburg County	4	32.6	2	16.3	7	57.0	4	32.6	1	8.1	**18**	**146.7**
Lynchburg City	26	32.4	4	5.0	16	19.9	7	8.7	0	0.0	**53**	**66.1**
Madison County	3	22.9	0	0.0	2	15.3	4	30.6	1	7.6	**10**	**76.5**
Manassas City	8	19.3	1	2.4	2	4.8	4	9.6	2	4.8	**17**	**41.0**
Manassas Park City	0	0.0	0	0.0	2	12.6	1	6.3	1	6.3	**4**	**25.1**
Martinsville City	4	29.8	0	0.0	3	22.3	0	0.0	1	7.4	**8**	**59.5**
Mathews County	4	45.5	1	11.4	2	22.8	3	34.2	0	0.0	**10**	**113.9**
Mecklenburg County	18	58.3	3	9.7	7	22.7	7	22.7	0	0.0	**35**	**113.3**
Middlesex County	8	74.2	0	0.0	6	55.7	1	9.3	0	0.0	**15**	**139.2**
Montgomery County	28	28.4	1	1.0	15	15.2	17	17.2	0	0.0	**61**	**61.9**
Nelson County	8	53.8	0	0.0	7	47.1	2	13.5	1	6.7	**18**	**121.1**
New Kent County	9	42.6	0	0.0	4	18.9	5	23.6	0	0.0	**18**	**85.1**
Newport News City	75	41.2	31	17.0	37	20.3	30	16.5	11	6.0	**184**	**101.2**
Norfolk City	126	51.4	48	19.6	65	26.5	26	10.6	9	3.7	**274**	**111.8**
Northampton County	15	123.6	4	33.0	4	33.0	2	16.5	0	0.0	**25**	**205.9**
Northumberland County	3	24.5	0	0.0	2	16.4	2	16.4	0	0.0	**7**	**57.3**

Locality of Injury	Accident Total	Accident Rate	Homicide Total	Homicide Rate	Natural Total	Natural Rate	Suicide Total	Suicide Rate	Undet. Total	Undet. Rate	Total	Total Rate
Norton City	1	25.9	0	0.0	1	25.9	1	25.9	0	0.0	**3**	**77.6**
Nottoway County	9	57.7	2	12.8	10	64.1	1	6.4	1	6.4	**23**	**147.5**
Orange County	27	76.0	0	0.0	14	39.4	6	16.9	3	8.4	**50**	**140.7**
Page County	13	55.0	0	0.0	8	33.8	6	25.4	6	25.4	**33**	**139.5**
Patrick County	6	33.5	0	0.0	4	22.3	5	27.9	1	5.6	**16**	**89.3**
Petersburg City	25	78.4	10	31.4	27	84.7	8	25.1	4	12.5	**74**	**232.1**
Pittsylvania County	21	34.0	3	4.9	14	22.7	14	22.7	2	3.2	**54**	**87.5**
Poquoson City	3	25.0	0	0.0	1	8.3	2	16.6	0	0.0	**6**	**49.9**
Portsmouth City	52	54.6	15	15.7	31	32.5	16	16.8	4	4.2	**118**	**123.9**
Powhatan County	3	10.5	1	3.5	14	49.2	4	14.1	0	0.0	**22**	**77.3**
Prince Edward County	14	60.5	0	0.0	8	34.6	2	8.6	1	4.3	**25**	**108.0**
Prince George County	7	18.5	0	0.0	8	21.1	7	18.5	0	0.0	**22**	**58.1**
Prince William County	108	23.7	20	4.4	44	9.7	47	10.3	6	1.3	**225**	**49.4**
Pulaski County	21	61.4	2	5.8	12	35.1	12	35.1	2	5.8	**49**	**143.3**
Radford City	4	22.9	0	0.0	2	11.4	2	11.4	0	0.0	**8**	**45.8**
Rappahannock County	1	13.5	0	0.0	3	40.6	1	13.5	0	0.0	**5**	**67.7**
Richmond City	146	65.4	68	30.5	74	33.2	30	13.4	11	4.9	**329**	**147.4**
Richmond County	6	68.4	0	0.0	4	45.6	4	45.6	0	0.0	**14**	**159.6**
Roanoke City	48	48.2	15	15.1	41	41.1	17	17.1	2	2.0	**123**	**123.4**
Roanoke County	44	46.8	4	4.3	19	20.2	16	17.0	1	1.1	**84**	**89.3**
Rockbridge County	13	58.1	0	0.0	6	26.8	4	17.9	1	4.5	**24**	**107.2**
Rockingham County	25	31.4	0	0.0	9	11.3	14	17.6	3	3.8	**51**	**64.0**
Russell County	16	58.5	0	0.0	10	36.5	7	25.6	0	0.0	**33**	**120.6**
Salem City	10	39.1	0	0.0	6	23.5	7	27.4	1	3.9	**24**	**93.9**
Scott County	9	41.0	2	9.1	2	9.1	7	31.9	1	4.6	**21**	**95.8**
Shenandoah County	20	46.3	1	2.3	7	16.2	15	34.7	0	0.0	**43**	**99.6**
Smyth County	11	35.4	2	6.4	11	35.4	4	12.9	0	0.0	**28**	**90.1**
Southampton County	7	38.8	3	16.6	13	72.0	2	11.1	0	0.0	**25**	**138.5**
Spotsylvania County	67	50.8	2	1.5	29	22.0	26	19.7	1	0.8	**125**	**94.7**
Stafford County	45	31.2	7	4.8	22	15.2	18	12.5	0	0.0	**92**	**63.7**

Locality of Injury	Accident Total	Accident Rate	Homicide Total	Homicide Rate	Natural Total	Natural Rate	Suicide Total	Suicide Rate	Undet. Total	Undet. Rate	Total	Total Rate
Staunton City	5	20.5	1	4.1	8	32.8	3	12.3	1	4.1	**18**	**73.9**
Suffolk City	25	28.0	4	4.5	17	19.0	6	6.7	3	3.4	**55**	**61.6**
Surry County	3	45.8	0	0.0	2	30.6	0	0.0	0	0.0	**5**	**76.4**
Sussex County	16	139.1	0	0.0	11	95.6	3	26.1	0	0.0	**30**	**260.8**
Tazewell County	14	33.2	1	2.4	10	23.7	7	16.6	1	2.4	**33**	**78.3**
Virginia Beach City	130	28.7	21	4.6	74	16.3	61	13.5	22	4.9	**308**	**68.1**
Warren County	21	53.6	0	0.0	14	35.8	10	25.5	3	7.7	**48**	**122.6**
Washington County	14	25.8	1	1.8	17	31.4	14	25.8	2	3.7	**48**	**88.5**
Waynesboro City	7	32.0	1	4.6	6	27.4	3	13.7	1	4.6	**18**	**82.2**
Westmoreland County	15	85.3	0	0.0	6	34.1	4	22.7	2	11.4	**27**	**153.5**
Williamsburg City	7	46.0	0	0.0	1	6.6	2	13.1	0	0.0	**10**	**65.7**
Winchester City	14	50.9	0	0.0	10	36.3	4	14.5	1	3.6	**29**	**105.4**
Wise County	19	48.4	1	2.5	17	43.3	5	12.7	3	7.6	**45**	**114.7**
Wythe County	18	62.0	0	0.0	10	34.5	7	24.1	1	3.4	**36**	**124.1**
York County	18	26.5	4	5.9	6	8.8	4	5.9	1	1.5	**33**	**48.5**
Subtotal (in-state)	**3152**	**37.5**	**471**	**5.6**	**1744**	**20.7**	**1151**	**13.7**	**223**	**2.7**	**6741**	**80.1**
Out of State	65	ND	4	ND	8	ND	4	ND	1	ND	**82**	**ND**
Unknown	23	ND	3	ND	12	ND	1	ND	6	ND	**45**	**ND**
Subtotal (out-of-state)	**88**	**ND**	**7**	**ND**	**20**	**ND**	**5**	**ND**	**7**	**ND**	**127**	**ND**
TOTAL	**3240**	**38.5**	**478**	**5.7**	**1764**	**21.0**	**1156**	**13.7**	**230**	**2.7**	**6868**	**81.6**

Note: No denominator is represented by ND

Map 1.3 Number of OCME Cases by Locality of Injury, 2016



Map 1.4 Rate of OCME Cases by Locality of Injury, 2016

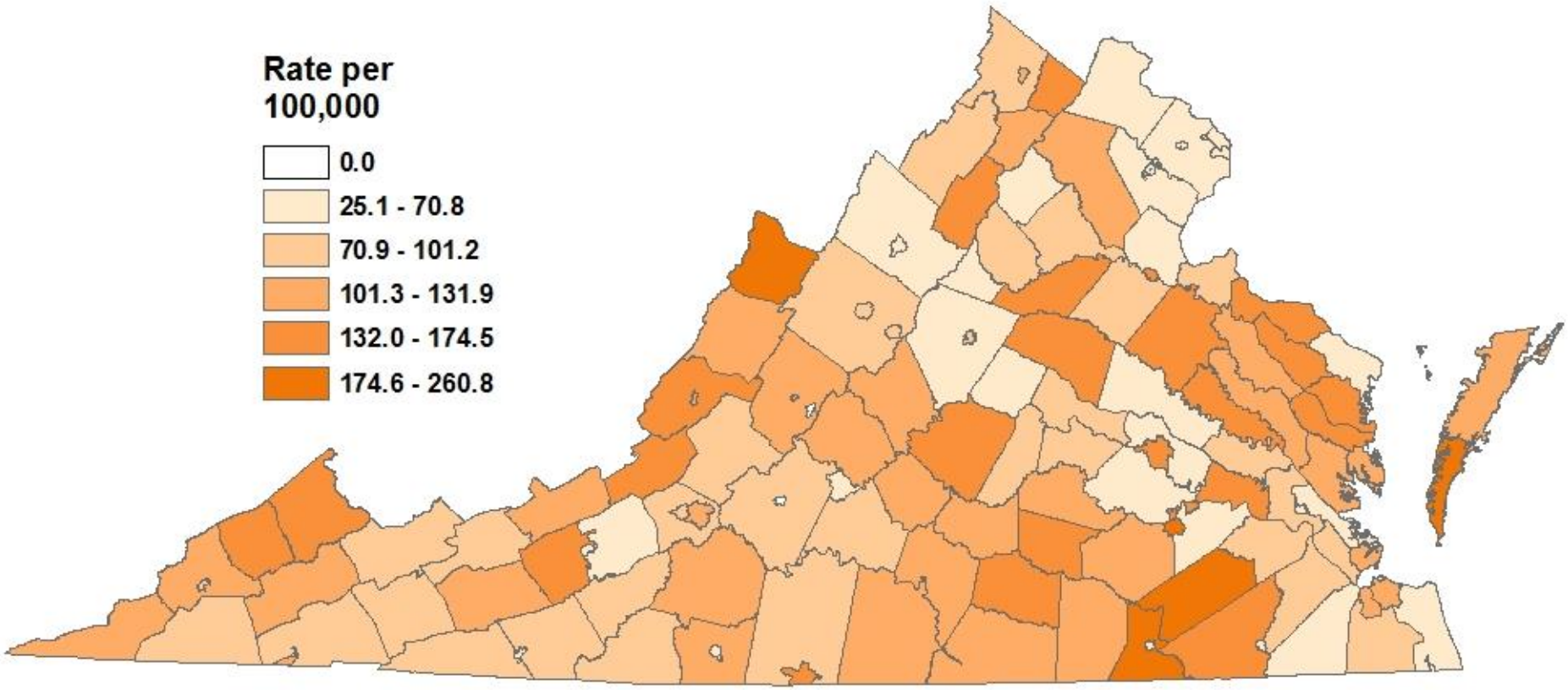


Table 1.10 Number of OCME Cases by Manner of Death and Locality of Death, 2016

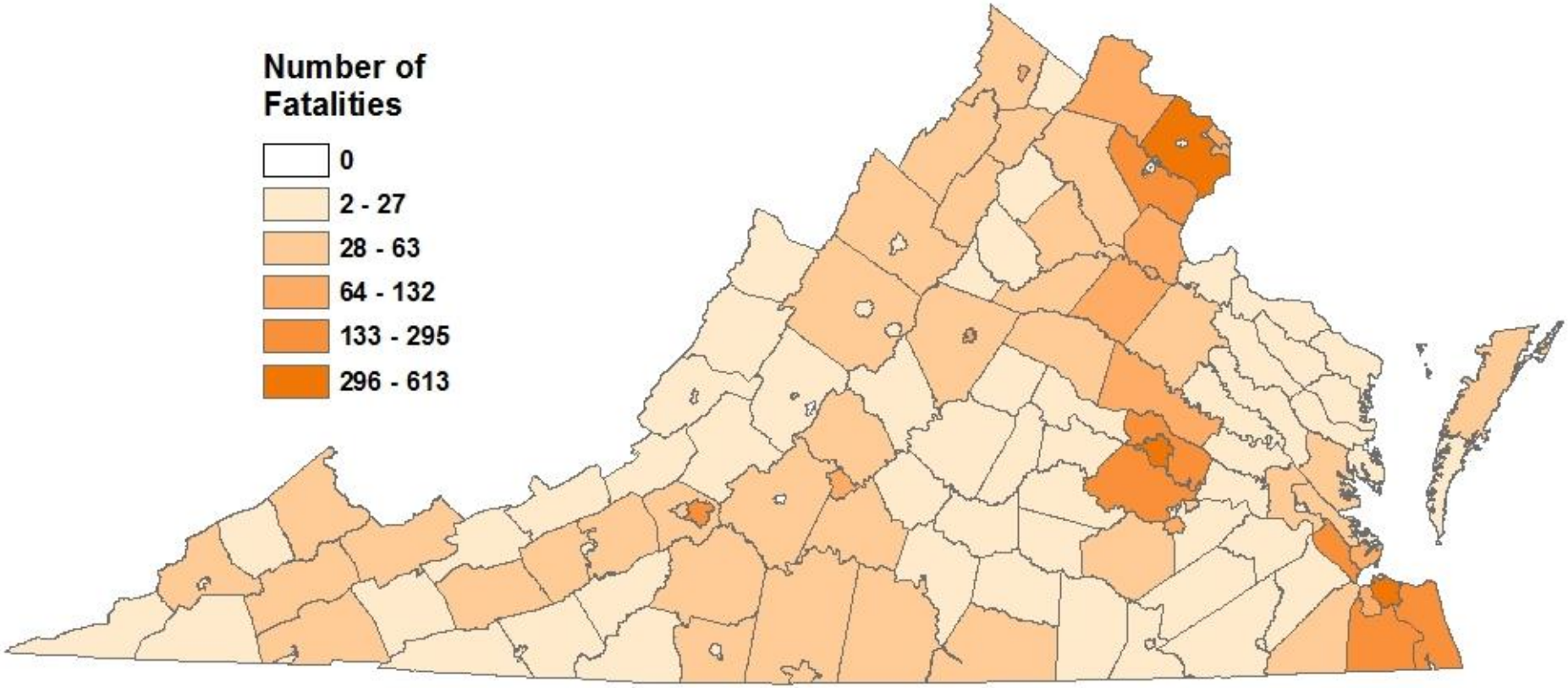
Locality of Death	Accident Total	Homicide Total	Natural Total	Suicide Total	Undet. Total	Total
Accomack County	13	4	12	4	1	**34**
Albemarle County	37	0	16	8	2	**63**
Alexandria City	24	5	36	14	1	**80**
Alleghany County	11	0	8	4	0	**23**
Amelia County	6	2	2	2	0	**12**
Amherst County	14	1	12	6	0	**33**
Appomattox County	6	0	5	0	0	**11**
Arlington County	38	0	32	19	3	**92**
Augusta County	27	4	12	12	3	**58**
Bath County	2	0	2	0	0	**4**
Bedford County	26	1	13	9	5	**54**
Bland County	2	0	0	2	0	**4**
Botetourt County	8	0	0	6	2	**16**
Bristol City	1	0	14	2	0	**17**
Brunswick County	8	0	5	2	0	**15**
Buchanan County	8	4	10	5	2	**29**
Buckingham County	10	1	7	3	0	**21**
Buena Vista City	0	0	0	0	0	**0**
Campbell County	17	6	14	6	0	**43**
Caroline County	19	1	9	6	0	**35**
Carroll County	8	0	8	5	1	**22**
Charles City County	4	0	0	1	0	**5**
Charlotte County	6	2	4	1	0	**13**
Charlottesville City	73	4	19	13	4	**113**
Chesapeake City	90	11	35	29	8	**173**
Chesterfield County	97	6	46	45	6	**200**
Clarke County	6	1	2	1	0	**10**
Colonial Heights City	6	0	6	4	1	**17**
Covington City	1	0	2	0	0	**3**
Craig County	3	0	1	3	1	**8**
Culpeper County	20	4	10	5	1	**40**
Cumberland County	3	0	3	1	0	**7**
Danville City	16	15	16	7	6	**60**
Dickenson County	14	0	7	5	0	**26**
Dinwiddie County	13	2	10	4	0	**29**
Emporia City	3	0	3	0	1	**7**
Essex County	6	0	6	2	1	**15**
Fairfax City	4	0	6	1	0	**11**
Fairfax County	339	27	125	109	13	**613**

Locality of Death	Accident Total	Homicide Total	Natural Total	Suicide Total	Undet. Total	Total
Falls Church City	0	0	5	1	0	**6**
Fauquier County	33	1	12	7	0	**53**
Floyd County	4	0	6	0	0	**10**
Fluvanna County	2	0	5	1	0	**8**
Franklin City	2	0	2	0	0	**4**
Franklin County	28	1	7	8	0	**44**
Frederick County	32	0	16	9	1	**58**
Fredericksburg City	63	4	22	4	2	**95**
Galax City	4	2	1	1	1	**9**
Giles County	9	0	4	3	0	**16**
Gloucester County	16	1	10	9	0	**36**
Goochland County	4	0	5	8	1	**18**
Grayson County	5	0	1	3	0	**9**
Greene County	2	0	5	4	0	**11**
Greensville County	2	0	12	0	0	**14**
Halifax County	17	3	11	7	0	**38**
Hampton City	48	12	41	19	9	**129**
Hanover County	36	2	20	13	0	**71**
Harrisonburg City	9	2	7	7	0	**25**
Henrico County	109	14	48	25	7	**203**
Henry County	13	2	13	9	1	**38**
Highland County	1	0	2	2	0	**5**
Hopewell City	10	5	9	6	1	**31**
Isle of Wight County	9	0	3	4	1	**17**
James City County	13	2	9	8	0	**32**
King and Queen County	2	1	3	2	0	**8**
King George County	9	0	5	6	0	**20**
King William County	7	1	7	5	0	**20**
Lancaster County	7	0	4	3	0	**14**
Lee County	8	0	5	3	1	**17**
Lexington City	1	0	3	2	1	**7**
Loudoun County	54	4	29	40	5	**132**
Louisa County	16	3	10	6	0	**35**
Lunenburg County	4	1	5	4	1	**15**
Lynchburg City	44	3	26	10	0	**83**
Madison County	2	0	2	4	1	**9**
Manassas City	14	1	5	4	2	**26**
Manassas Park City	0	0	0	0	0	**0**
Martinsville City	8	1	4	0	4	**17**
Mathews County	4	1	2	2	0	**9**
Mecklenburg County	14	3	10	7	0	**34**
Middlesex County	7	0	5	1	0	**13**

Locality of Death	Accident Total	Homicide Total	Natural Total	Suicide Total	Undet. Total	Total
Montgomery County	21	0	15	17	0	**53**
Nelson County	3	0	6	2	1	**12**
New Kent County	6	0	2	3	0	**11**
Newport News City	105	43	38	31	13	**230**
Norfolk City	200	64	72	31	19	**386**
Northampton County	15	3	5	2	2	**27**
Northumberland County	3	0	2	2	0	**7**
Norton City	4	0	2	1	0	**7**
Nottoway County	7	2	6	0	0	**15**
Orange County	23	0	13	6	1	**43**
Page County	10	0	8	5	6	**29**
Patrick County	6	0	4	5	1	**16**
Petersburg City	33	9	33	12	5	**92**
Pittsylvania County	16	3	11	14	0	**44**
Poquoson City	3	0	2	3	0	**8**
Portsmouth City	46	9	31	15	3	**104**
Powhatan County	2	1	10	3	0	**16**
Prince Edward County	11	0	10	2	1	**24**
Prince George County	7	0	7	6	0	**20**
Prince William County	75	15	43	45	5	**183**
Pulaski County	14	2	10	11	1	**38**
Radford City	2	0	2	1	0	**5**
Rappahannock County	1	0	3	1	0	**5**
Richmond City	260	82	99	50	19	**510**
Richmond County	5	0	1	2	0	**8**
Roanoke City	160	19	48	35	7	**269**
Roanoke County	21	2	12	14	0	**49**
Rockbridge County	9	0	5	5	0	**19**
Rockingham County	23	0	9	13	3	**48**
Russell County	15	0	10	7	0	**32**
Salem City	22	1	13	8	2	**46**
Scott County	9	2	2	6	0	**19**
Shenandoah County	16	1	7	13	0	**37**
Smyth County	11	2	10	4	0	**27**
Southampton County	5	3	11	2	0	**21**
Spotsylvania County	52	2	32	23	0	**109**
Stafford County	33	5	20	18	0	**76**
Staunton City	4	0	8	3	0	**15**
Suffolk City	14	5	18	7	3	**47**
Surry County	1	0	1	0	0	**2**
Sussex County	12	0	9	3	0	**24**
Tazewell County	16	1	11	7	1	**36**

Locality of Death	Accident Total	Homicide Total	Natural Total	Suicide Total	Undet. Total	Total
Virginia Beach City	123	19	74	60	19	**295**
Warren County	15	0	14	9	2	**40**
Washington County	14	0	18	14	2	**48**
Waynesboro City	1	1	6	3	0	**11**
Westmoreland County	12	0	6	4	0	**22**
Williamsburg City	6	0	1	2	0	**9**
Winchester City	53	0	17	7	4	**81**
Wise County	18	2	19	5	4	**48**
Wythe County	13	0	12	5	1	**31**
York County	21	2	16	5	0	**44**
Subtotal (in-state)	**3238**	**471**	**1763**	**1155**	**226**	**6853**
Out of State	1	7	1	1	2	**12**
Unknown	1	0	0	0	2	**3**
Subtotal (out-of-state)	**2**	**7**	**1**	**1**	**4**	**15**
TOTAL	**3240**	**478**	**1764**	**1156**	**230**	**6868**

Map 1.5 Number of OCME Cases by Locality of Death, 2016



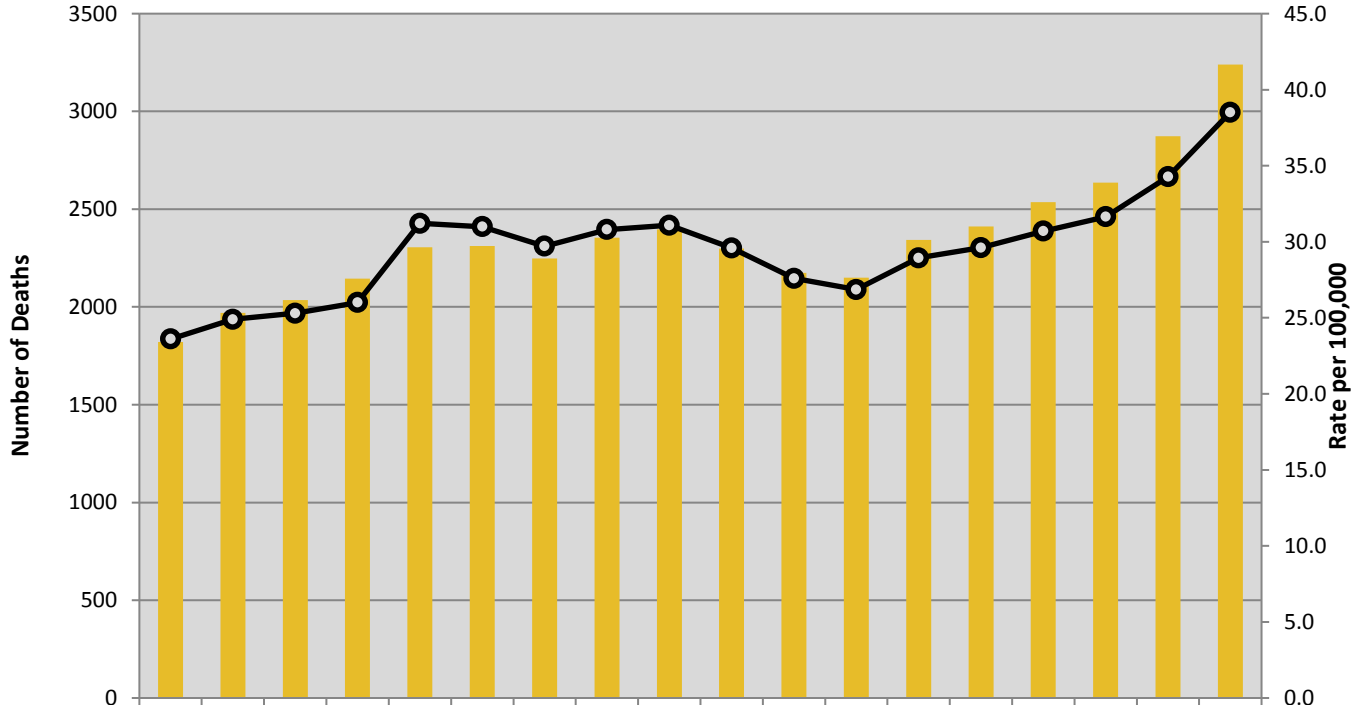
SECTION 2: MANNER OF DEATH

ACCIDENTAL DEATHS (N=3,240)

Accidents accounted for 47.2% of the deaths investigated by the OCME in 2016, which is the greatest proportion of deaths by any manner.

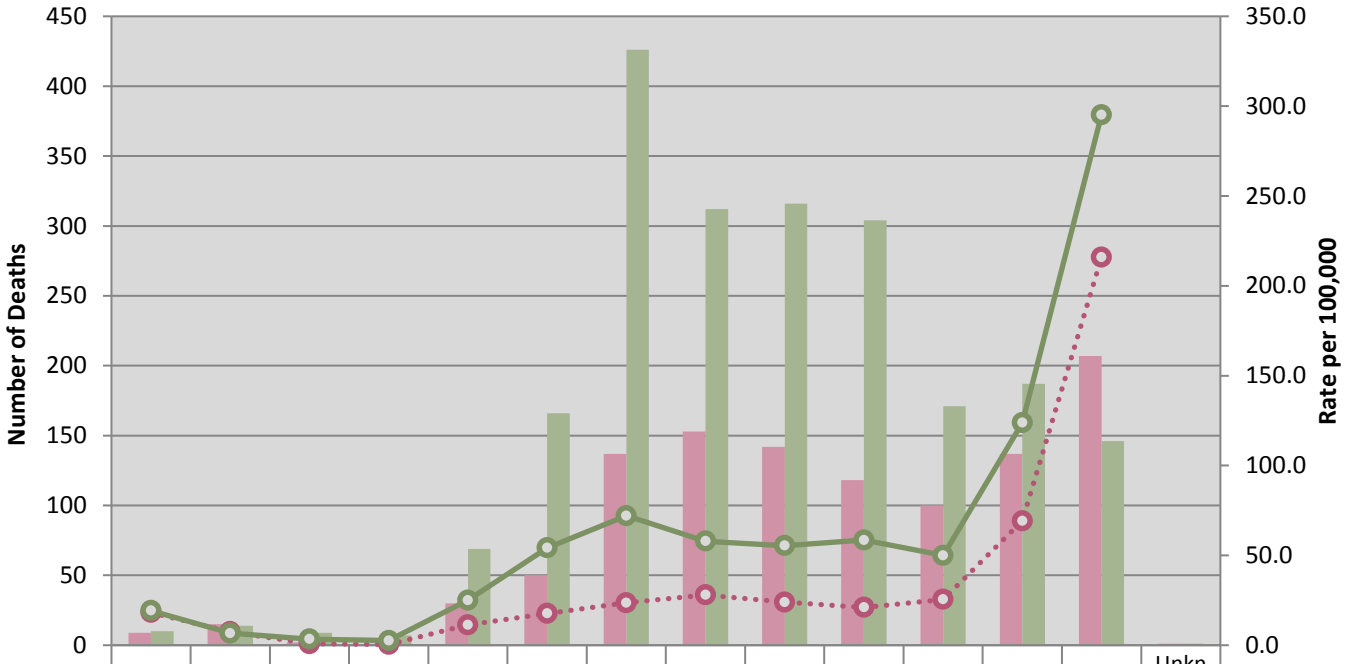
- The total number of accidental deaths increased 12.8% from 2015
- For the third year in a row, fatal drug overdoses were the most common cause of accidental death (39.4%), followed by accidental motor vehicle deaths (26.8%)
- Seniors 85 years and older had the highest mortality rate due to falls (202.3 per 100,000 persons)
- Of the 69.7% of decedents of accidental death that were tested for ethanol, 29.4% had ethanol detected through toxicology testing. Of those tested, 20.5% had a blood alcohol level of 0.08% BAC or greater; the level of legal intoxication

Figure 2.1 Number and Rate of Accidental Deaths by Year of Death, 1999-2016



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Deaths	1820	1969	2035	2145	2305	2312	2248	2354	2397	2299	2175	2149	2343	2412	2536	2635	2873	3240
Mortality Rate	23.6	24.9	25.3	26.0	31.2	31.0	29.7	30.8	31.1	29.6	27.6	26.9	28.9	29.6	30.7	31.6	34.3	38.5

Figure 2.2 Number and Rate of Accidental Deaths by Age Group and Gender, 2016



	<1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Unknown
Female	9	15	2	1	30	50	137	153	142	118	100	137	207	1
Male	10	14	9	7	69	166	426	312	316	304	171	187	146	1
Female Rate	18.2	7.5	0.8	0.4	11.3	17.7	23.6	28.0	24.0	21.0	25.5	69.2	215.9	*
Male Rate	19.3	6.7	3.4	2.6	25.0	54.1	72.1	57.9	55.4	58.5	50.0	123.8	295.2	*

*No rate can be calculated

Figure 2.3 Percentage of Accidental Deaths by Race/Ethnicity, 2016

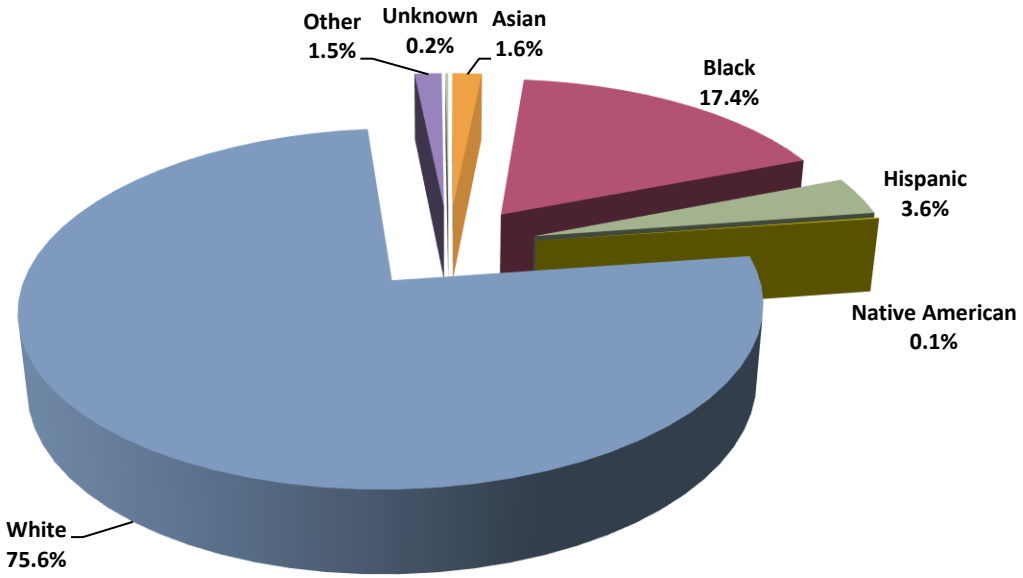
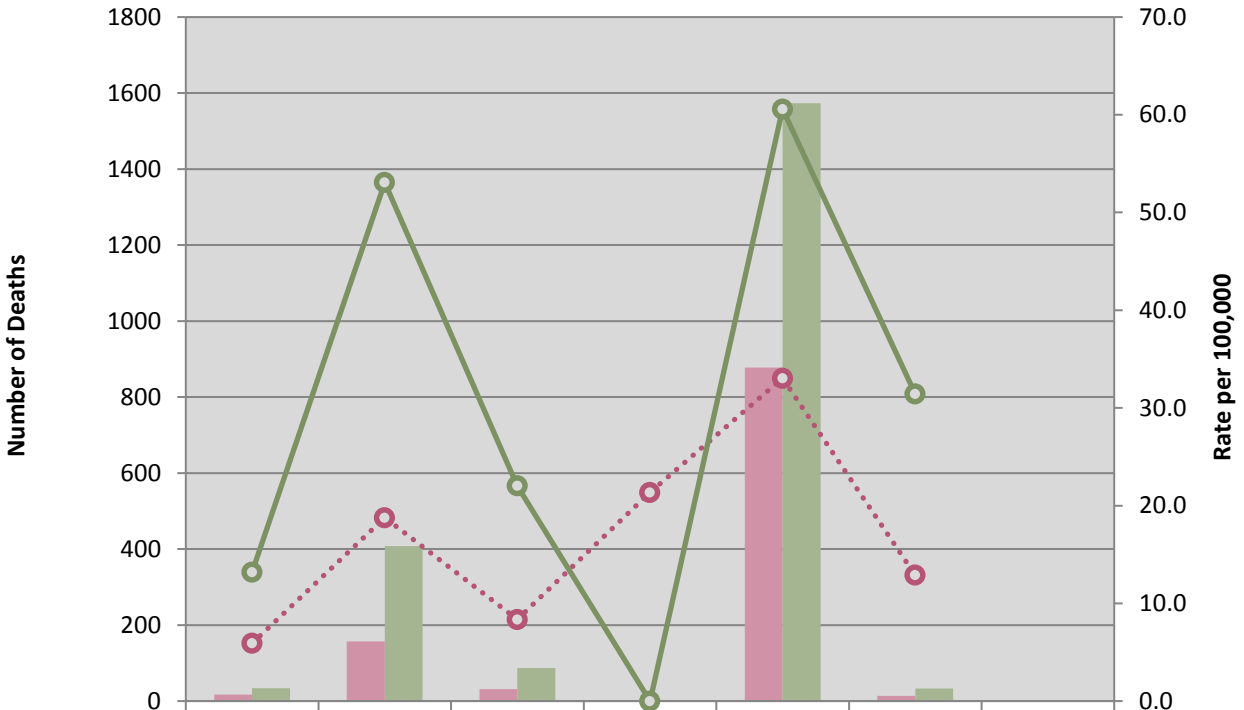


Figure 2.4 Number and Rate of Accidental Deaths by Race/Ethnicity and Gender, 2016



	Asian	Black	Hispanic	Native American	White	Other	Unknown
Female	17	157	31	3	878	14	2
Male	34	408	87	0	1573	33	3
Female Rate	5.9	18.8	8.4	21.4	33.0	12.9	*
Male Rate	13.2	53.1	22.0	0.0	60.6	31.4	*

*No rate can be calculated

** Rates calculated from small sample sizes (<5 deaths) is considered unreliable and should be interpreted with caution (Native Americans)

Table 2.1 Number of Accidental Death Cases by Cause and Method of Death, 2016

Method of Death		Autopsied	Total Cases
Animal/Insect			
	Bit, stung, or kicked by an animal/insect	1	**4**
Asphyxia			
	Choked on food/foreign object	2	**36**
	Drowned	59	**91**
	Hanged	0	**2**
	Inhaled toxic agent (carbon monoxide)	1	**2**
	Mechanical/Positional asphyxia	13	**19**
	Other asphyxia	1	**2**
	Strangled/Neck compression	1	**1**
	Suffocated/Smothered	9	**9**
Drug Poisoning			
	Ingested and/or injected ethanol, illicit, prescription, and/or other type of drug	405	**1278**
Electrical			
	Contacted electrical current	4	**7**
Exposure			
	Exposed to cold	13	**26**
	Exposed to heat	5	**9**
Fall/Jump			
	Fell/Jumped from any height	44	**711**
Fire			
	Thermal burns and/or inhalation of combustion products	35	**91**
Motor Vehicle Collision			
	Aircraft	3	**4**
	All terrain vehicle	3	**22**
	Bicycle	2	**12**
	Boat	0	**4**
	Bus	0	**1**
	Car	46	**402**
	Construction equipment	5	**6**
	Dirt bike	0	**1**
	Dump truck	2	**3**
	Farm equipment	1	**8**
	Golf cart	1	**2**
	Lawnmower	0	**6**
	Mo-ped	0	**8**
	Motorcycle	1	**78**
	Multiple	1	**3**
	Pickup truck	5	**92**
	Sport utility vehicle	10	**93**

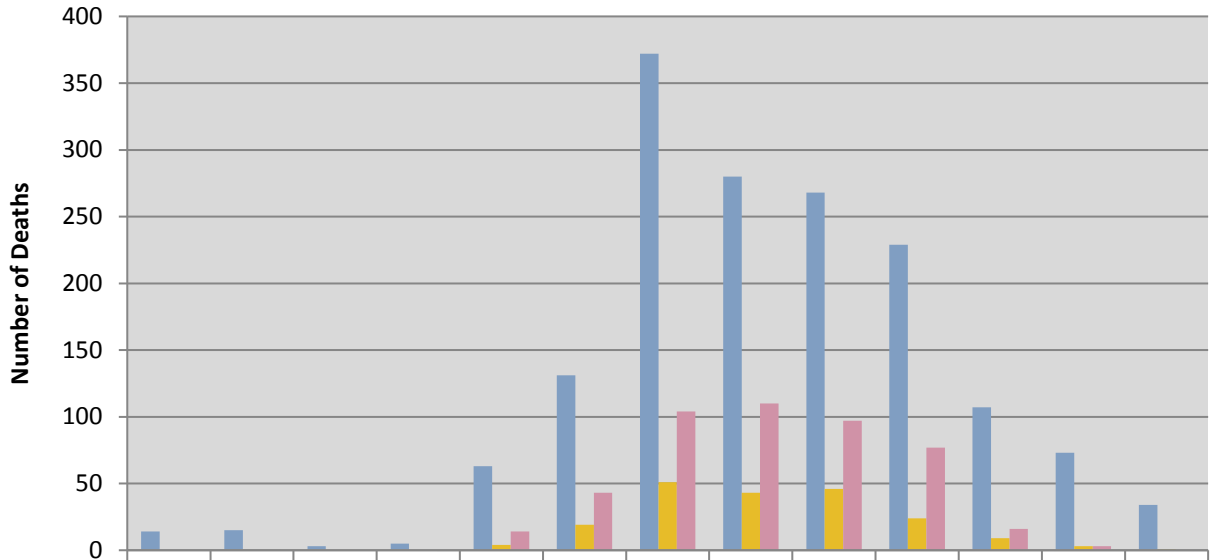
Tractor trailer	14	**33**
Train	1	**7**
Truck (other)	3	**13**
Van	4	**37**
Unspecified/Unknown	10	**32**
Traumatic Injury		
Accidental discharge of firearm		
Handgun	5	**5**
Rifle	1	**1**
Shotgun	2	**2**
Hit/Crushed by falling object	8	**25**
Sharp force injury		
Other/Undetermined		
Other	16	**51**
Undetermined	0	**1**
TOTAL ACCIDENTAL DEATHS	**737**	**3240**

Table 2.2 Number and Rate of the Top 5 Accidental Methods of Death by Age Group, 2016

Age Group	Method of Death										TOTAL
	Drowning		Drug Use		Fall		Fire/Smoke Inhalation		Motor Vehicle Collision		
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	
<1	0	0.0	0	0.0	0	0.0	0	0.0	6	5.9	**6**
1-4	6	1.5	1	0.2	1	0.2	3	0.7	12	2.9	**23**
5-9	2	0.4	0	0.0	0	0.0	2	0.4	5	1.0	**9**
10-14	1	0.2	0	0.0	0	0.0	3	0.6	4	0.8	**8**
15-19	3	0.6	20	3.7	1	0.2	3	0.6	69	12.8	**96**
20-24	7	1.2	115	19.5	3	0.5	1	0.2	82	13.9	**208**
25-34	13	1.1	385	32.8	3	0.3	5	0.4	140	11.9	**546**
35-44	11	1.0	306	28.2	12	1.1	1	0.1	122	11.2	**452**
45-54	13	1.1	258	22.2	22	1.9	15	1.3	124	10.7	**432**
55-64	17	1.6	167	15.5	66	6.1	13	1.2	118	10.9	**381**
65-74	9	1.2	23	3.1	105	14.3	24	3.3	82	11.2	**243**
75-84	6	1.7	2	0.6	204	58.5	16	4.6	71	20.4	**299**
85+	3	2.1	1	0.7	294	202.3	5	3.4	30	20.6	**333**
Unknown	0	ND	0	ND	0	ND	0	ND	2	ND	**2**
TOTAL	**91**	**1.1**	**1278**	**15.2**	**711**	**8.5**	**91**	**1.1**	**867**	**10.3**	**3038**

* Highlighted pink cells indicate the highest rate among the method of death within the corresponding age group; rates are per 100,000
** No denominator is represented by 'ND'

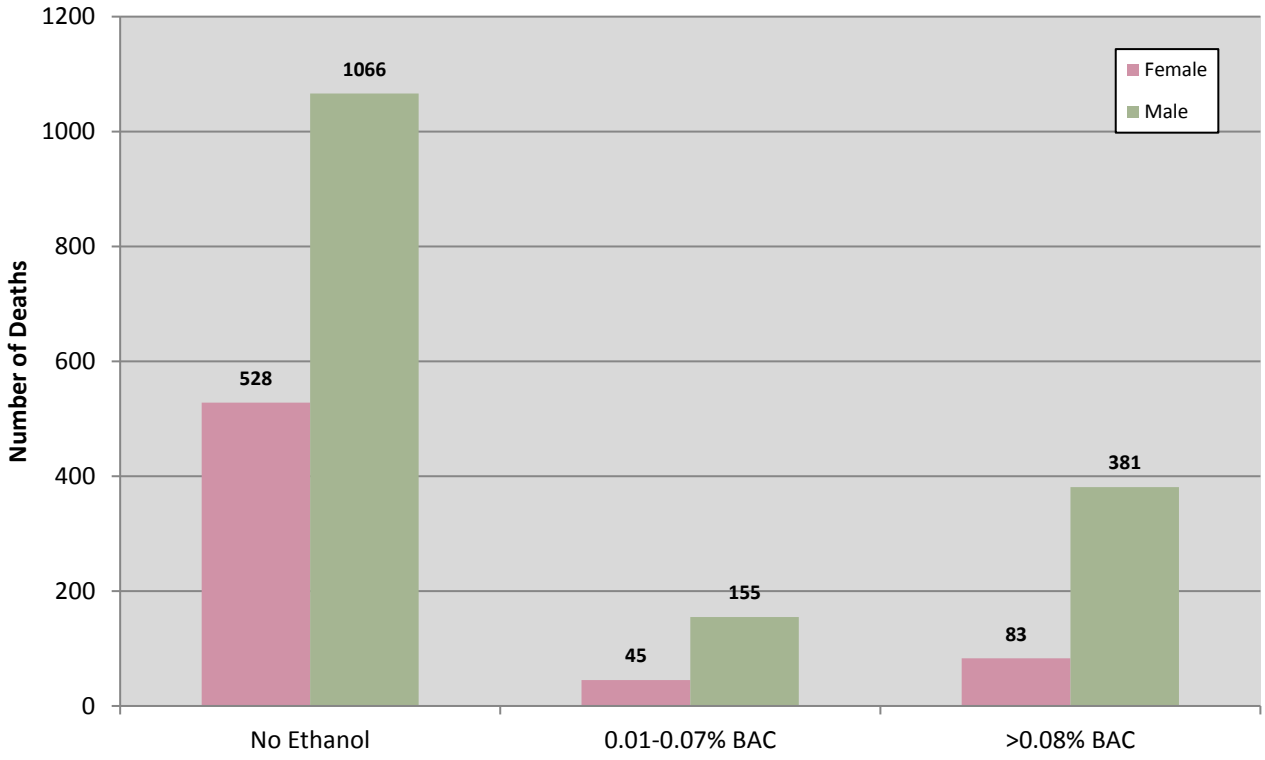
Figure 2.5 Number of Accidental Deaths by Age Group and Ethanol Level (N=2,258), 2016



	<1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
No Ethanol	14	15	3	5	63	131	372	280	268	229	107	73	34
0.01-0.07% BAC	0	0	0	0	4	19	51	43	46	24	9	3	1
>0.08% BAC	0	0	0	0	14	43	104	110	97	77	16	3	0

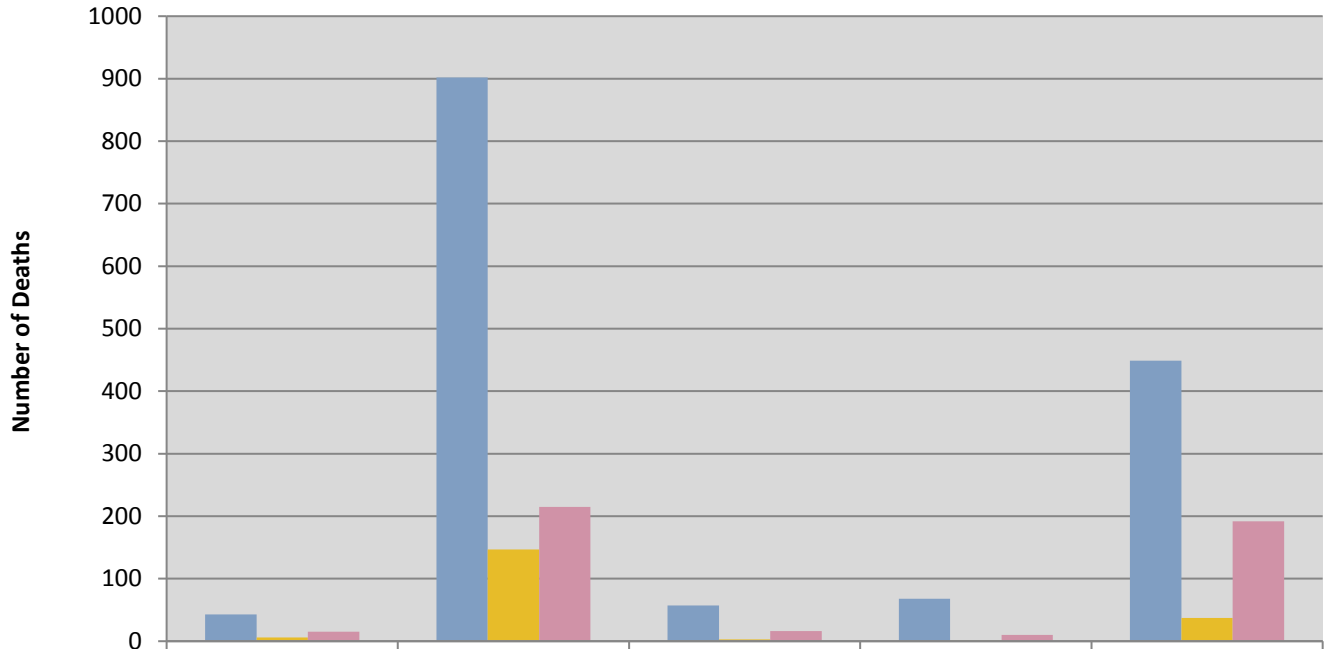
*Note: Of the 3,240 accidental deaths, 30.3% (n=982) did not receive toxicology testing

Figure 2.6 Number of Accidental Deaths by Ethanol Level and Gender (N=2,258), 2016



*Note: Of the 3,240 accidental deaths, 30.3% (n=982) did not receive toxicology testing

Figure 2.7 Number of the Top 5 Accidental Methods of Death by Ethanol Level, 2016



	Drowning (n=64)	Drug Use (n=1264)	Fall (n=76)	Fire/Smoke (n=79)	Motor Vehicle (n=678)
No Ethanol	43	902	57	68	449
0.01-0.07% BAC	6	147	3	1	37
>0.08% BAC	15	215	16	10	192

Figure 2.8 Number of Accidental Deaths by Month of Death, 2016

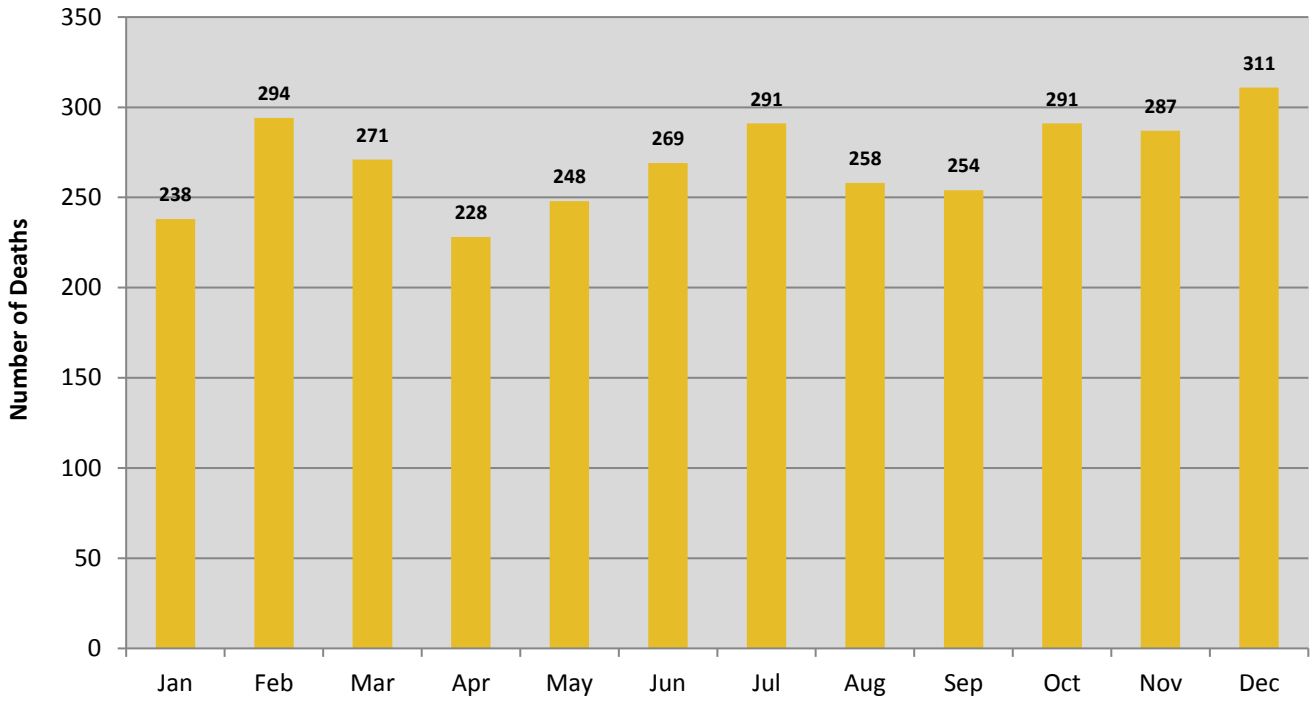


Figure 2.9 Number of Accidental Deaths by Day of Death, 2016

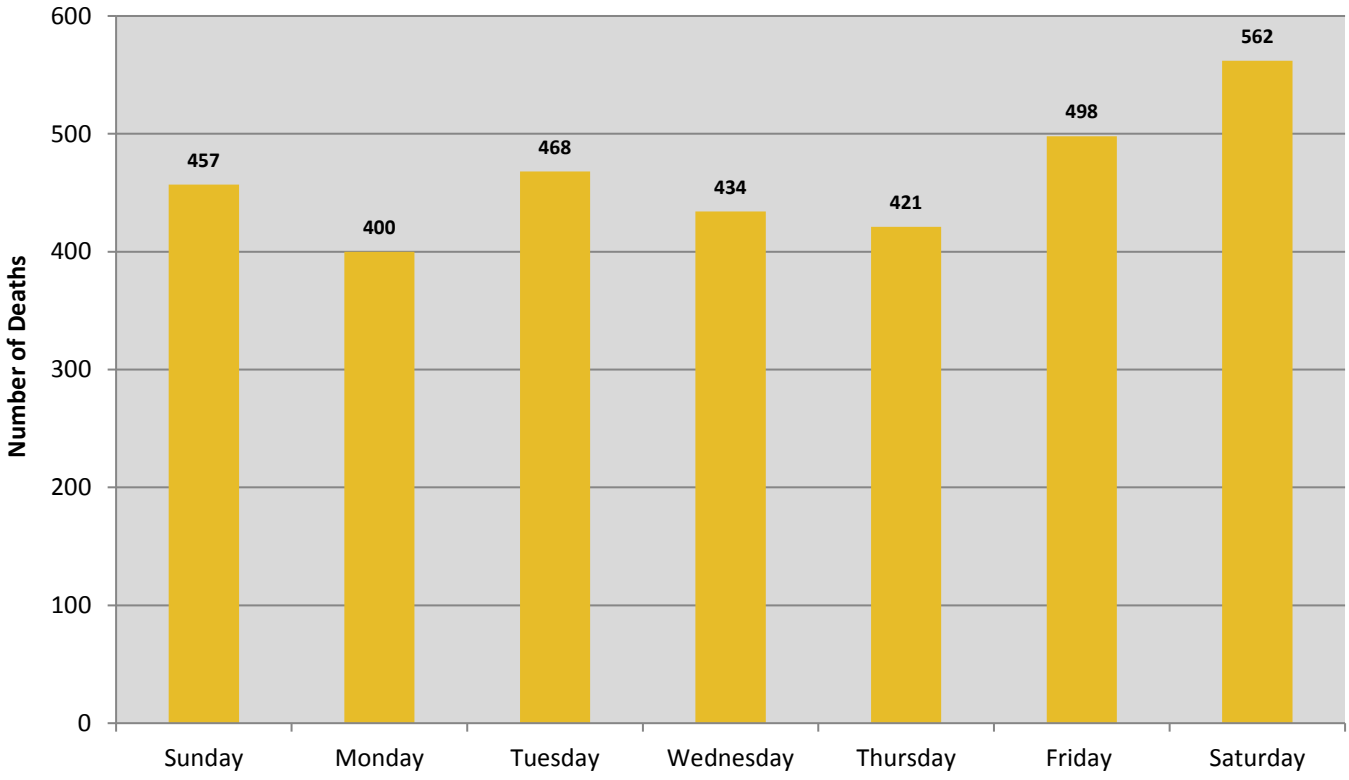


Table 2.3 Number of Accidental Deaths by Locality of Injury and Year of Death, 2006-2016

Locality of Injury	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	TOTAL
Accomack County	22	20	11	19	18	16	15	12	15	10	16	174
Albemarle County	17	20	33	25	28	34	28	32	44	40	35	336
Alexandria City	21	21	21	22	14	22	16	21	21	31	25	235
Alleghany County	10	14	8	5	6	4	7	8	10	7	13	92
Amelia County	4	7	11	9	4	8	9	5	7	6	9	79
Amherst County	11	8	16	9	5	18	19	12	12	9	17	136
Appomattox County	2	6	7	4	3	5	4	4	8	4	8	55
Arlington County	18	19	30	34	27	24	34	32	31	34	30	313
Augusta County	26	34	38	33	31	27	33	32	29	23	36	342
Bath County	2	3	1	4	3	3	6	2	1	1	3	29
Bedford City	3	5	5	4	4	2	0	2	*	*	*	25
Bedford County	22	27	16	30	31	24	40	32	24	31	38	315
Bland County	0	6	2	7	4	7	2	2	3	3	2	38
Botetourt County	12	12	13	11	11	19	15	12	14	20	15	154
Bristol City	6	10	3	3	7	5	7	1	6	2	1	51
Brunswick County	16	7	6	8	13	8	14	15	11	12	11	121
Buchanan County	21	18	19	11	23	18	20	13	15	15	9	182
Buckingham County	3	9	6	3	5	5	7	5	15	3	12	73
Buena Vista City	0	0	1	2	0	1	2	0	1	2	0	9
Campbell County	32	16	31	12	17	14	25	21	20	23	24	235
Caroline County	9	14	8	9	13	14	10	17	7	19	29	149
Carroll County	17	15	19	11	7	13	14	15	19	14	10	154
Charles City County	4	8	7	7	7	6	5	3	5	4	8	64
Charlotte County	4	6	6	5	6	9	5	6	4	7	9	67
Charlottesville City	21	28	11	16	12	9	8	11	13	18	19	166
Chesapeake City	55	60	48	53	43	58	57	67	59	86	101	687
Chesterfield County	56	68	92	68	70	74	82	78	89	96	124	897
Clarke County	5	6	5	8	10	4	8	5	8	6	17	82
Colonial Heights City	6	3	4	2	2	3	3	5	6	3	15	52

Locality of Injury	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	TOTAL
Covington City	4	0	2	2	0	1	0	1	3	1	3	17
Craig County	7	2	2	4	2	2	1	4	3	2	3	32
Culpeper County	16	24	12	12	14	15	20	23	27	19	24	206
Cumberland County	1	2	4	3	2	3	4	9	2	6	3	39
Danville City	16	13	22	20	20	19	16	20	20	17	22	205
Dickenson County	11	16	13	5	11	13	10	8	10	11	14	122
Dinwiddie County	12	14	20	12	10	8	9	15	6	12	18	136
Emporia City	2	8	2	1	3	3	3	4	1	2	3	32
Essex County	4	7	4	7	5	8	3	2	5	5	7	57
Fairfax City	3	4	5	11	5	7	11	11	11	6	10	84
Fairfax County	221	156	144	148	152	195	184	197	210	243	253	2103
Falls Church City	2	1	0	2	1	6	0	2	4	0	1	19
Fauquier County	21	31	26	33	32	33	27	30	28	50	53	364
Floyd County	13	10	5	8	5	10	5	10	8	10	8	92
Fluvanna County	9	7	14	7	6	5	7	5	6	13	3	82
Franklin City	2	2	1	1	2	0	1	2	3	4	3	21
Franklin County	27	22	23	26	21	33	38	17	23	19	42	291
Frederick County	24	24	26	31	27	29	25	36	36	40	40	338
Fredericksburg City	22	14	15	6	11	12	21	14	8	22	24	169
Galax City	0	3	0	0	0	3	4	2	2	2	1	17
Giles County	9	5	9	9	10	3	10	12	14	10	12	103
Gloucester County	21	10	16	10	20	15	12	16	13	11	24	168
Goochland County	6	15	10	14	8	8	13	5	6	12	5	102
Grayson County	13	5	2	6	5	5	6	7	5	5	8	67
Greene County	4	14	5	4	7	2	9	5	7	5	4	66
Greensville County	10	3	2	5	6	2	5	3	9	5	7	57
Halifax County	15	22	27	14	20	16	9	9	23	15	20	190
Hampton City	31	27	28	25	35	38	24	38	29	35	58	368
Hanover County	21	27	26	13	18	30	26	36	42	32	30	301
Harrisonburg City	11	1	3	5	4	8	6	10	10	9	13	80
Henrico County	89	65	77	73	70	58	72	95	88	109	121	917

Locality of Injury	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	TOTAL
Henry County	34	15	34	22	26	31	31	23	28	24	30	298
Highland County	1	2	2	2	2	1	0	1	2	2	1	16
Hopewell City	5	7	6	7	7	6	6	3	7	7	13	74
Isle of Wight County	16	16	14	12	13	7	11	11	15	11	15	141
James City County	17	9	24	16	13	19	11	27	16	27	26	205
King and Queen County	5	7	5	8	2	1	3	4	4	4	3	46
King George County	5	7	8	10	2	8	10	13	16	8	13	100
King William County	3	6	5	9	2	6	6	8	5	7	12	69
Lancaster County	9	9	6	2	2	8	2	6	2	5	11	62
Lee County	11	16	10	13	8	15	11	11	7	6	10	118
Lexington City	3	2	1	2	4	1	2	2	1	2	1	21
Loudoun County	23	36	27	29	32	36	52	55	64	50	69	473
Louisa County	16	24	17	21	14	11	13	17	7	11	28	179
Lunenburg County	6	11	9	5	2	1	6	7	5	5	4	61
Lynchburg City	13	24	24	16	25	21	34	25	26	28	26	262
Madison County	3	9	6	3	5	4	6	5	5	7	3	56
Manassas	8	8	6	12	4	6	16	4	11	12	8	95
Manassas Park	Unknown	1	0	1	3	4	0	0	3	1	0	13
Martinsville City	8	3	8	6	7	7	6	10	8	8	4	75
Mathews County	8	4	1	4	2	2	3	6	3	6	4	43
Mecklenburg County	18	17	11	16	10	13	13	15	16	15	18	162
Middlesex County	3	7	6	6	6	1	4	4	6	7	8	58
Montgomery County	15	24	27	24	30	28	23	26	23	21	28	269
Nelson County	6	11	6	11	6	9	9	9	11	9	8	95
New Kent County	15	7	7	8	12	11	9	6	11	15	9	110
Newport News City	52	35	36	53	40	45	33	43	54	64	75	530
Norfolk City	59	79	59	67	49	73	71	89	68	86	126	826
Northampton County	6	7	10	9	5	3	2	5	12	4	15	78
Northumberland County	2	3	8	4	6	9	8	7	7	6	3	63
Norton City	3	0	1	1	2	0	1	2	0	1	1	12
Nottoway County	6	7	3	14	6	7	5	7	8	9	9	81

Locality of Injury	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	TOTAL
Orange County	6	14	13	10	14	16	9	19	25	16	27	169
Page County	4	10	4	7	8	14	12	10	7	6	13	95
Patrick County	5	7	11	8	8	5	9	12	9	10	6	90
Petersburg City	16	22	14	14	13	3	11	10	12	8	25	148
Pittsylvania County	28	30	37	29	25	27	34	22	30	33	21	316
Poquoson City	5	1	1	3	1	2	0	2	1	4	3	23
Portsmouth City	29	20	18	29	23	28	19	33	30	45	52	326
Powhatan County	14	6	7	5	3	7	12	12	9	7	3	85
Prince Edward County	9	14	5	14	11	4	9	10	5	13	14	108
Prince George County	9	12	12	10	12	11	11	13	13	16	7	126
Prince William County	69	56	65	63	72	78	92	79	88	65	108	835
Pulaski County	16	23	19	15	19	19	14	18	25	18	21	207
Radford City	2	5	9	3	8	3	8	2	6	4	4	54
Rappahannock County	0	4	2	3	6	4	5	4	2	1	1	32
Richmond City	127	134	85	69	67	88	77	79	89	105	146	1066
Richmond County	2	2	6	2	4	4	5	3	5	2	6	41
Roanoke City	37	30	32	41	36	39	40	57	49	54	48	463
Roanoke County	27	22	23	19	17	26	27	28	36	41	44	310
Rockbridge County	12	14	10	13	7	10	14	7	13	16	13	129
Rockingham County	30	21	19	16	18	16	25	22	37	37	25	266
Russell County	19	19	15	11	16	20	14	12	9	14	16	165
Salem City	13	7	8	8	8	4	12	12	12	8	10	102
Scott County	6	8	11	9	5	8	9	10	7	6	9	88
Shenandoah County	14	5	24	13	12	15	17	15	23	32	20	190
Smyth County	13	10	11	7	12	10	9	12	10	14	11	119
Southampton County	10	15	10	10	11	6	8	17	9	11	7	114
Spotsylvania County	29	39	31	29	43	36	34	39	38	53	67	438
Stafford County	18	44	25	24	21	23	33	33	26	48	45	340
Staunton City	7	6	8	7	5	8	3	4	10	7	5	70
Suffolk City	16	37	26	17	30	25	25	30	27	34	25	292
Surry County	2	7	4	1	6	2	1	4	2	3	3	35

Locality of Injury	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	TOTAL
Sussex County	13	15	17	11	12	5	2	3	8	6	16	108
Tazewell County	36	11	16	19	25	30	23	14	20	17	14	225
Virginia Beach City	101	106	102	110	77	112	111	119	116	126	130	1210
Warren County	6	12	17	9	25	23	15	20	20	20	21	188
Washington County	18	20	22	14	21	28	16	10	21	23	14	207
Waynesboro City	7	2	7	6	7	3	13	8	5	10	7	75
Westmoreland County	13	9	11	6	11	10	7	7	5	13	15	107
Williamsburg City	6	5	3	6	2	9	5	6	6	1	7	56
Winchester City	15	2	4	10	7	7	16	17	19	19	14	130
Wise County	31	28	15	22	22	23	19	23	14	17	19	233
Wythe County	11	14	24	12	13	9	17	14	21	25	18	178
York County	14	17	14	7	15	17	8	16	18	16	18	160
Subtotal (in-state)	*2316*	*2322*	*2227*	*2105*	*2081*	*2275*	*2333*	*2456*	*2547*	*2753*	*3152*	*26567*
Out of State	29	51	46	52	54	54	59	62	62	81	65	615
Unknown	8	24	26	18	14	14	20	18	26	39	23	230
Subtotal (out-of-state)	*37*	*75*	*72*	*70*	*68*	*68*	*79*	*80*	*88*	*120*	*88*	*845*
TOTAL	**2353**	**2397**	**2299**	**2175**	**2149**	**2343**	**2412**	**2536**	**2635**	**2873**	**3240**	**21814**

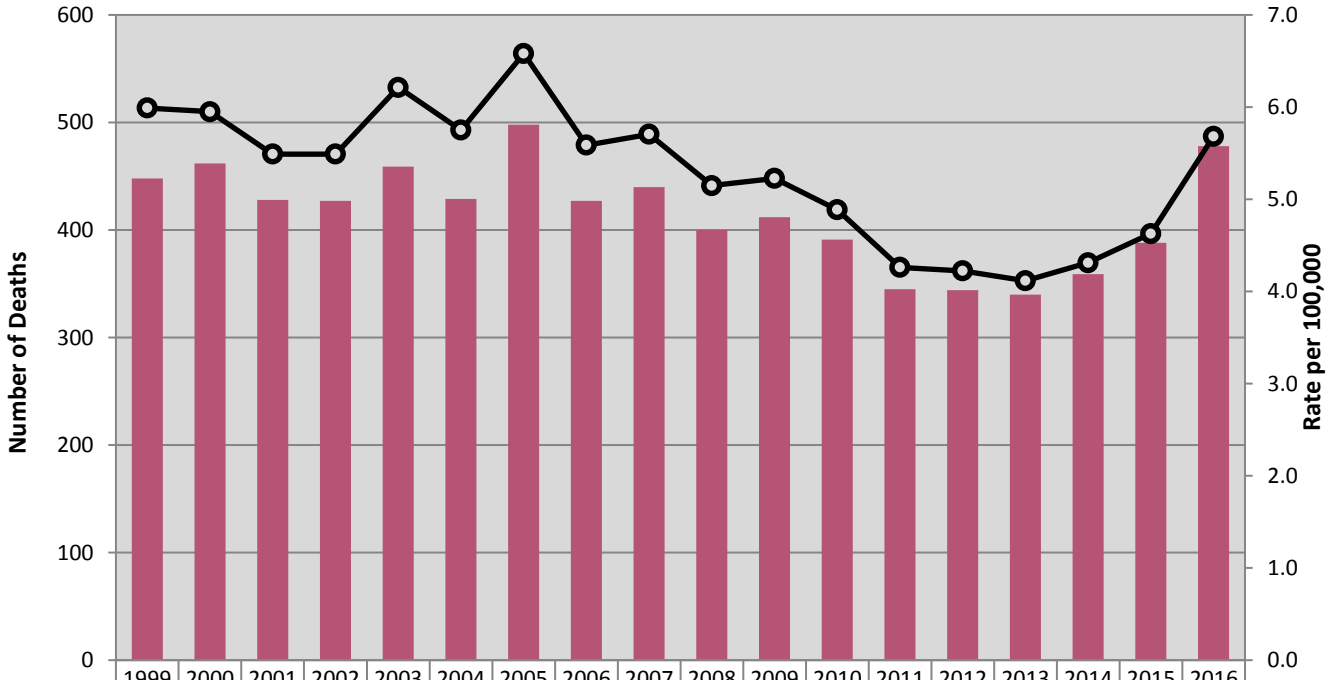
* Bedford City was incorporated into Bedford County in 2014 and therefore numbers are combined from there forward

HOMICIDE DEATHS (N=478)

The number of homicides in 2016 increased significantly compared to 2015 (23.2%). As previous years have shown, homicides most frequently occurred among males (79.9%) and among blacks (64.4%). Males aged 20-24 years demonstrate the highest homicide rate with 27.7 deaths per 100,000 persons.

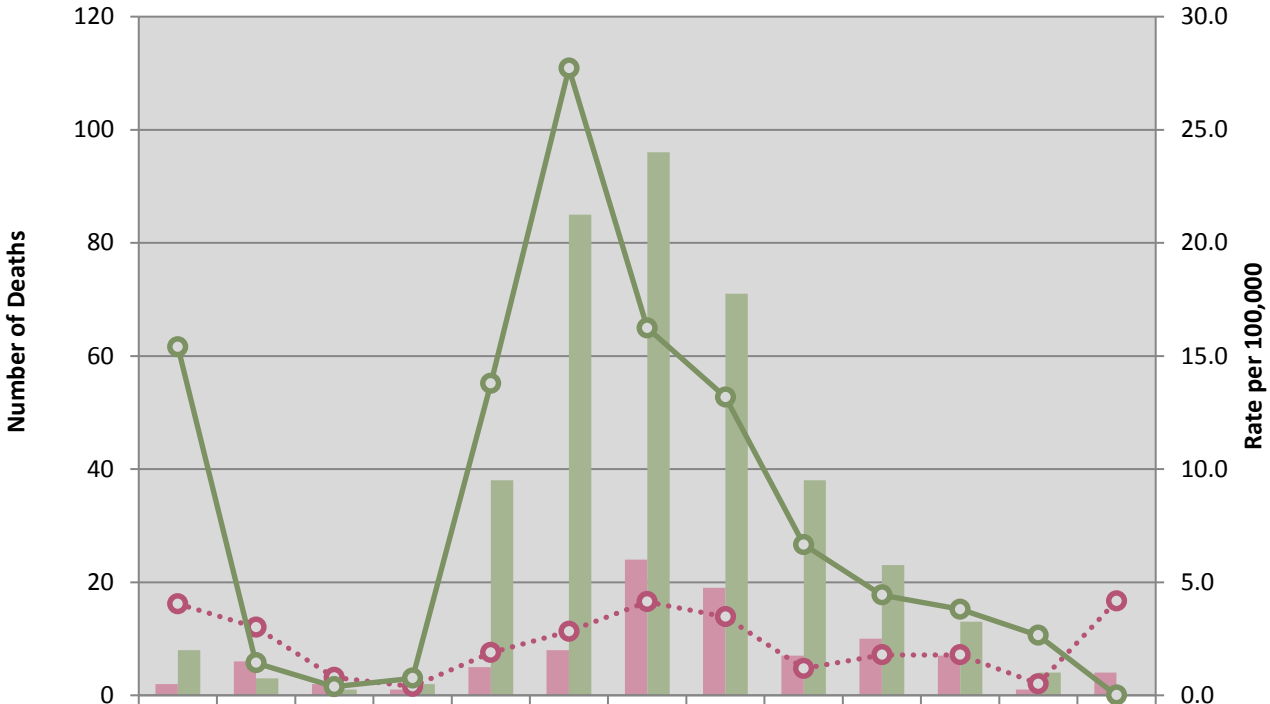
- Gun-related homicides increased by 31.2% in 2016 compared to 2015 (374 and 285 deaths, respectively)
- Over seventy-eight percent of all homicides were committed using a firearm, with handguns (the most common type) used in 81.0% of all firearm-related homicides
- Over sixty-three percent of all homicides in the Commonwealth were committed using a handgun
- Of the 94.5% of homicide victims tested for ethanol, 28.6% had ethanol present. Furthermore, 16.6% of those tested had a blood alcohol of 0.08% BAC or greater
- Richmond City had both the largest number of homicides by locality of residence and locality of injury (n=52 and n=68, respectively). Danville City had both the highest homicide rate by locality of residence and the highest homicide rate by location of injury (35.8 and 38.2 per 100,000, respectively).

Figure 2.10 Number and Rate of Homicide Deaths by Year of Death, 1999-2016



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Deaths	448	462	428	427	459	429	498	427	440	400	412	391	345	344	340	359	388	478
Mortality Rate	6.0	6.0	5.5	5.5	6.2	5.8	6.6	5.6	5.7	5.1	5.2	4.9	4.3	4.2	4.1	4.3	4.6	5.7

Figure 2.11 Number and Rate of Homicide Deaths by Age Group and Gender, 2016



	<1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Female	2	6	2	1	5	8	24	19	7	10	7	1	4
Male	8	3	1	2	38	85	96	71	38	23	13	4	0
Female Rate	4.0	3.0	0.8	0.4	1.9	2.8	4.1	3.5	1.2	1.8	1.8	0.5	4.2
Male Rate	15.4	1.4	0.4	0.8	13.8	27.7	16.2	13.2	6.7	4.4	3.8	2.6	0.0

Figure 2.12 Percentage of Homicide Deaths by Race/Ethnicity, 2016

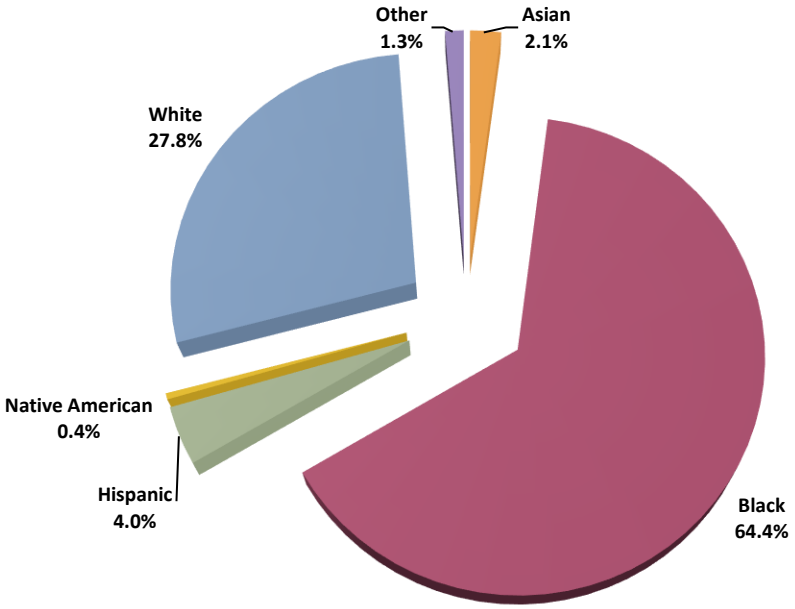
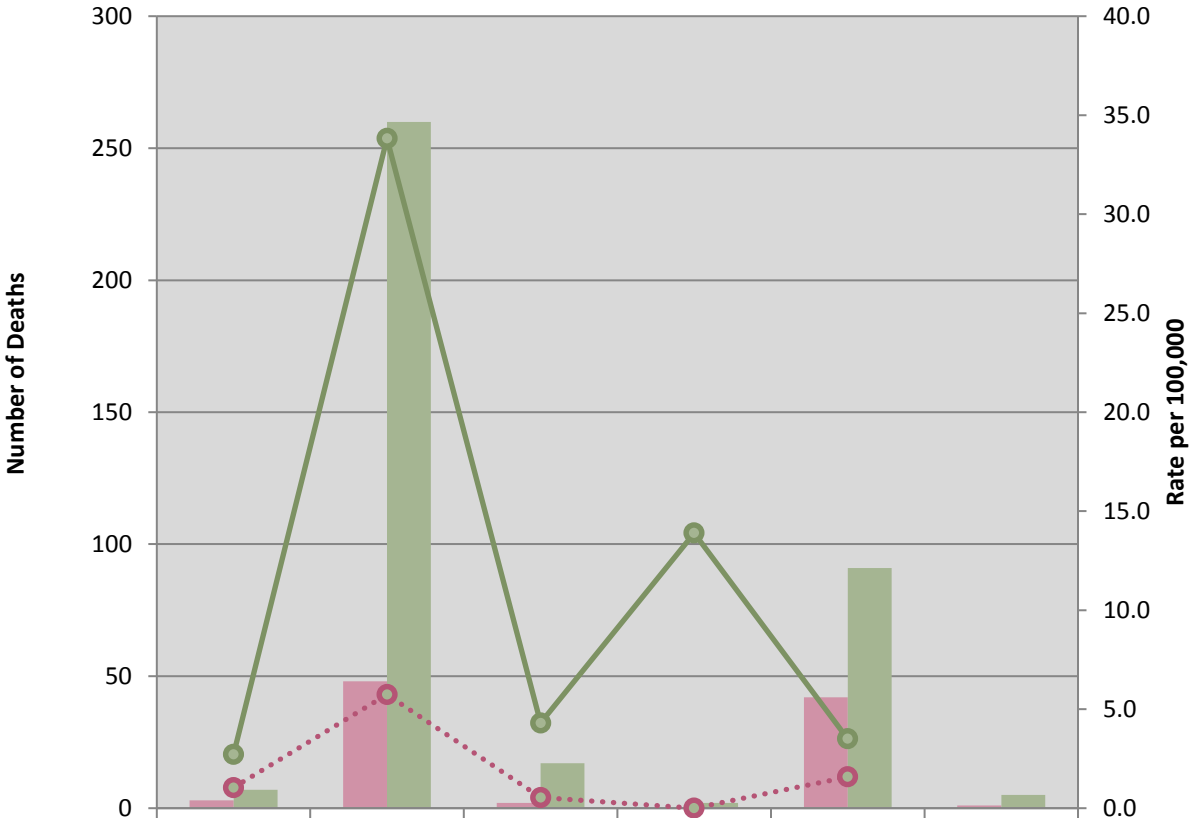


Figure 2.13 Number and Rate of Homicide Deaths by Race/Ethnicity and Gender, 2016



	Asian	Black	Hispanic	Native American	White	Other
Female	3	48	2	0	42	1
Male	7	260	17	2	91	5
Female Rate	1.0	5.7	0.5	0.0	1.6	*
Male Rate	2.7	33.8	4.3	13.9	3.5	*

*No rate can be calculated

** Rates calculated from small case counts (n<5) are considered unreliable and should be interpreted with caution (Asians, Hispanics, and Native Americans)

Table 2.4 Number of Homicide Deaths by Cause and Method of Death, 2016

Method of Death	Autopsied	Total Cases
Asphyxia		
Strangled by assailant(s)	11	**11**
Suffocated/Smothered by assailant(s)	1	**1**
Other asphyxia	3	3
Drug Poisoning		
Ingested and/or injected ethanol, illicit, prescription, and/or other type of drug	1	1
Fall/Jump/Push		
Fell/Jumped/Pushed from any height	2	**2**
Fire		
Thermal and/or inhalational Injuries	2	**2**
Motor Vehicle Collision		
Struck by a vehicle	3	**3**
Traumatic Injury		
Beaten by assailant(s)	39	**39**
Shot by assailant(s)		
Handgun	303	**303**
Multiple	3	**3**
Other	1	1
Rifle	11	**11**
Shotgun	11	**11**
Unspecified/Unknown	45	**45**
Stabbed by assailant(s)	39	**39**
Other/Unknown		
Other	3	**3**
TOTAL HOMICIDE DEATHS	**478**	**478**

Figure 2.14 Number of the Leading Homicide Deaths by Method, 2016

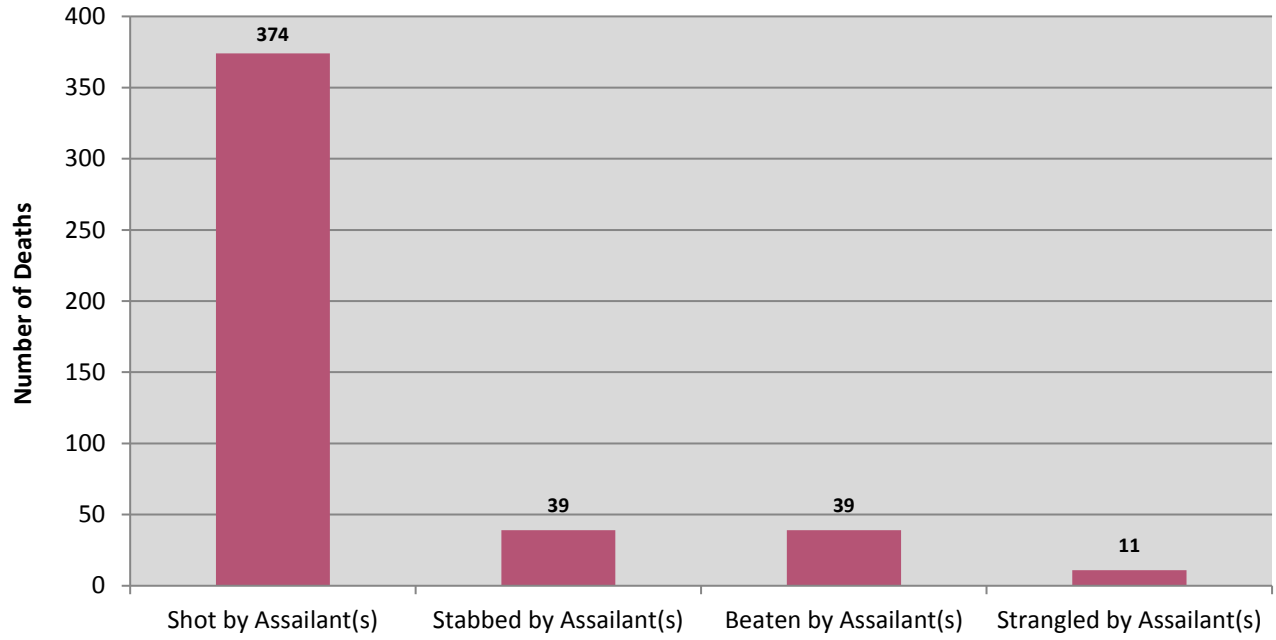
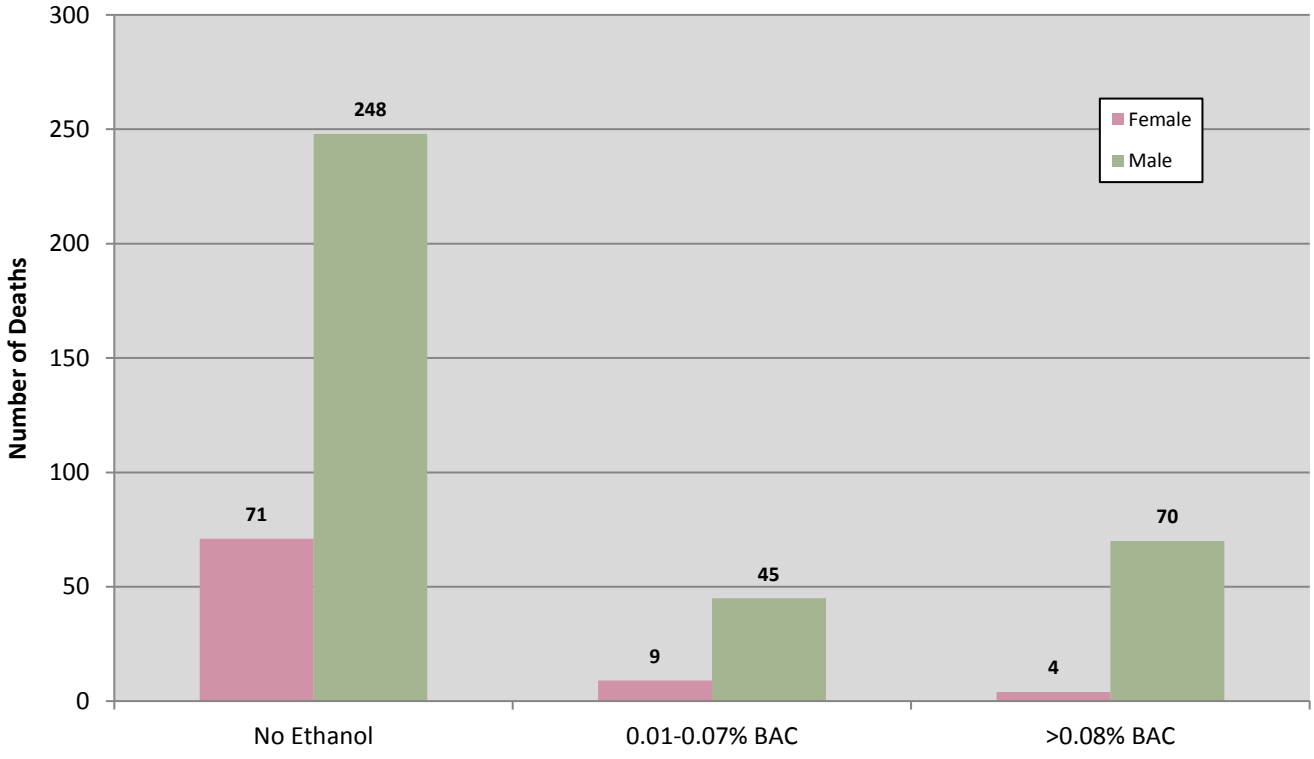
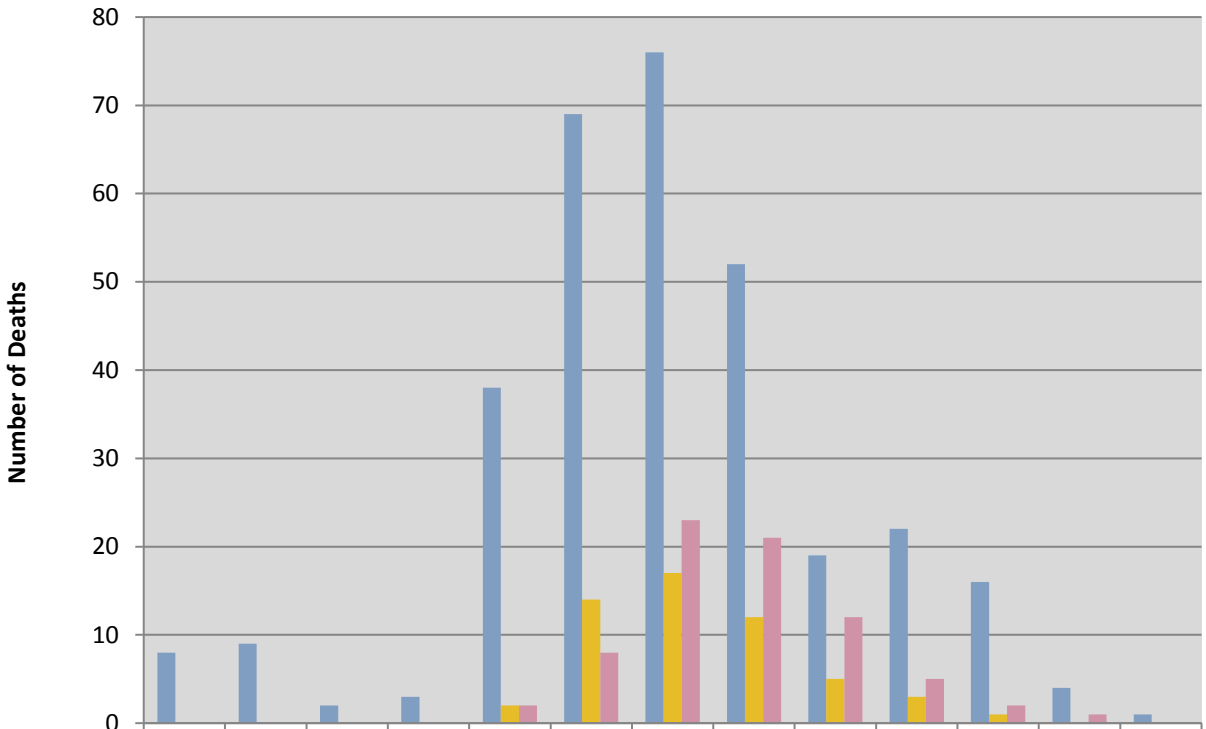


Figure 2.15 Number of Homicide Deaths by Ethanol Level and Gender (N=447), 2016



*Note: Of the 478 homicide deaths, 6.5% (n=31) did not receive toxicology testing

Figure 2.16 Number of Homicide Deaths by Age Group and Ethanol Level (N=447), 2016



	<1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
No Ethanol	8	9	2	3	38	69	76	52	19	22	16	4	1
0.01-0.07% BAC	0	0	0	0	2	14	17	12	5	3	1	0	0
>0.08 BAC	0	0	0	0	2	8	23	21	12	5	2	1	0

*Note: Of the 478 homicide deaths, 6.5% (n=31) did not receive toxicology testing

Table 2.5 Number of Homicide Deaths by Method of Death and Ethanol Level (N=447), 2016

Method of Death	No Ethanol	0.01-0.07% BAC	>0.08% BAC
Asphyxia			
Strangled by assailant(s)	6	2	0
Suffocated/Smothered by assailant(s)	1	0	0
Other asphyxia	2	1	0
Drug Poisoning			
Ingested and/or injected ethanol, illicit, prescription, and/or other type of drug	1	0	0
Fall/Jump/Push			
Fell/Jumped/Pushed from any height	1	0	1
Fire			
Thermal and/or inhalational Injuries	2	0	0
Motor Vehicle Collision			
Struck by a vehicle	1	1	0
Traumatic Injury			
Beaten by assailant(s)	25	3	3
Shot by assailant(s)			
Handgun	211	37	40
Multiple	1	0	2
Other	0	0	1
Rifle	6	0	4
Shotgun	8	0	3
Unspecified/Unknown	26	6	12
Stabbed by assailant(s)	27	4	8
Other/Unknown			
Other	1	0	0
TOTAL HOMICIDE DEATHS	**319**	**54**	**74**

*Note: Of the 478 homicide deaths, 6.5% (n=31) did not receive toxicology testing

Figure 2.17 Number of Homicide Deaths by Month of Death, 2016

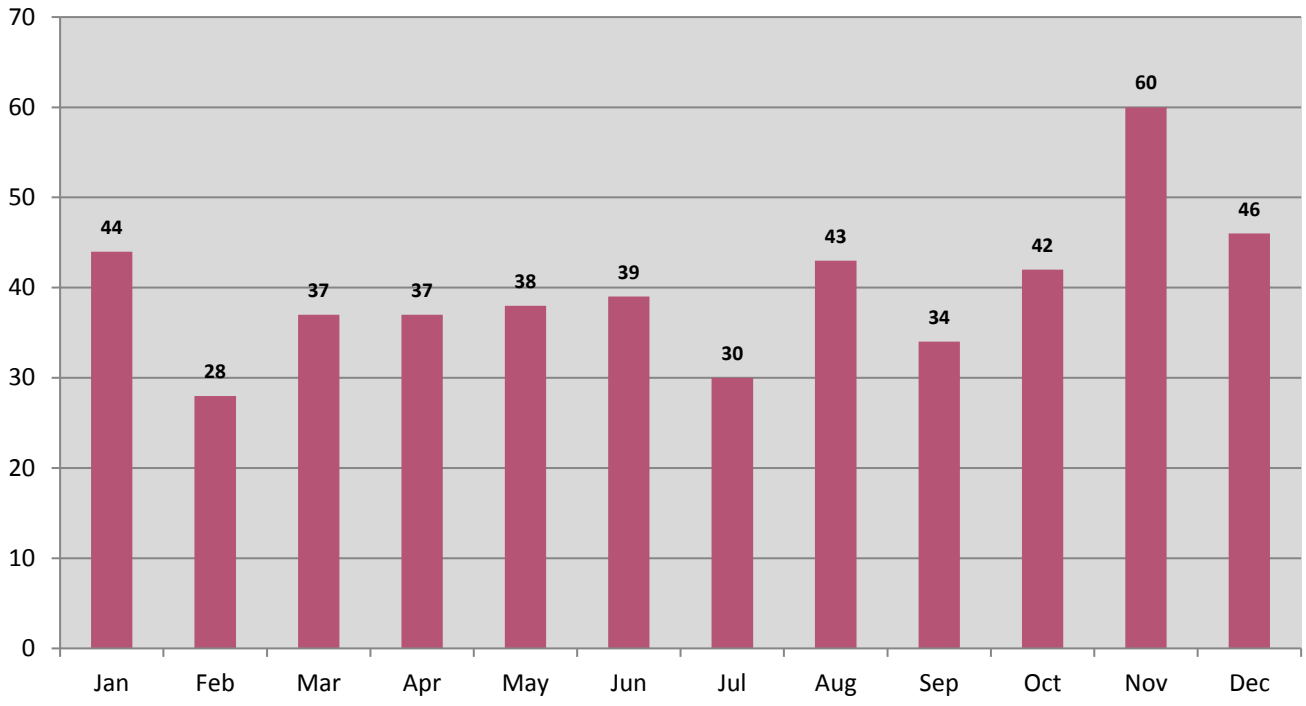


Figure 2.18 Number of Homicide Deaths by Day of Death, 2016

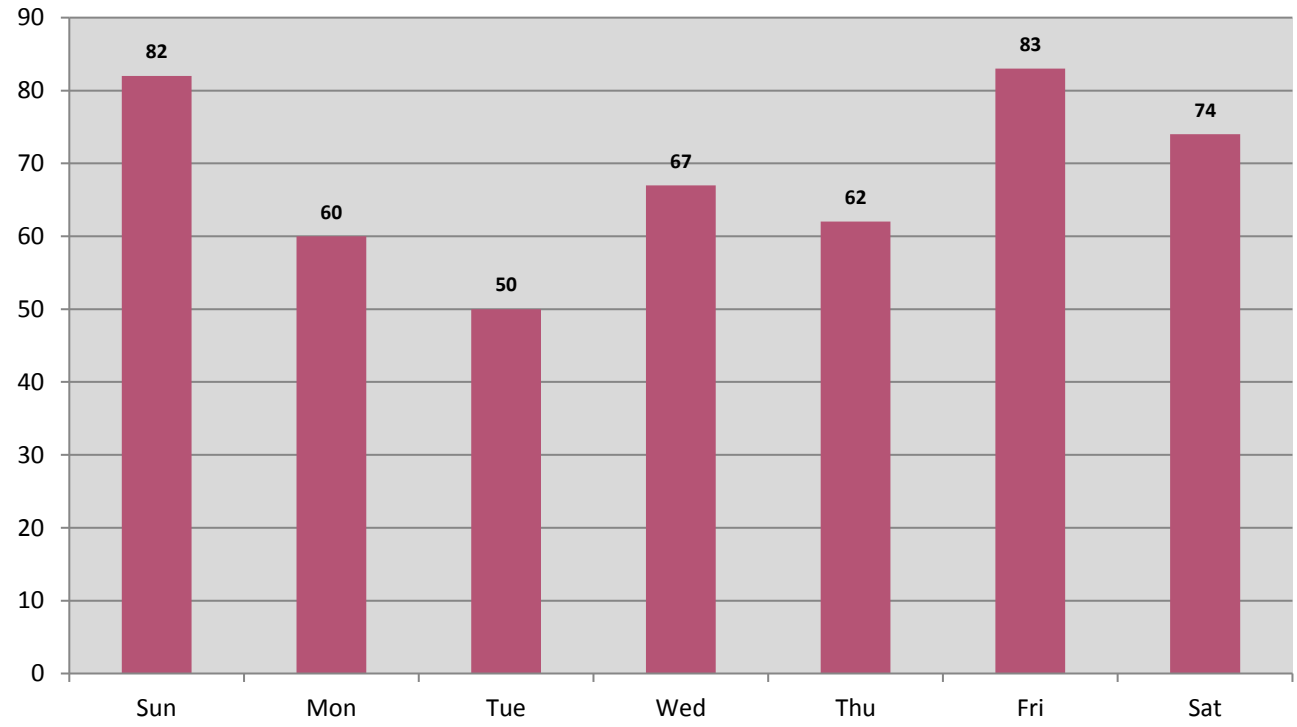


Table 2.6 Number and Rate of Homicide Deaths by Locality of Residence, 2016

Locality of Residence	Deaths	Rate
Accomack County	5	15.2
Albemarle County	1	0.9
Alexandria City	3	1.9
Alleghany County	0	0.0
Amelia County	4	31.0
Amherst County	1	3.2
Appomattox County	0	0.0
Arlington County	1	0.4
Augusta County	4	5.3
Bath County	0	0.0
Bedford County	2	2.6
Bland County	0	0.0
Botetourt County	1	3.0
Bristol City	1	5.9
Brunswick County	0	0.0
Buchanan County	5	22.5
Buckingham County	1	5.9
Buena Vista City	0	0.0
Campbell County	6	10.9
Caroline County	1	3.3
Carroll County	0	0.0
Charles City County	2	28.3
Charlotte County	1	8.2
Charlottesville City	1	2.1
Chesapeake City	20	8.4
Chesterfield County	16	4.7
Clarke County	1	7.0
Colonial Heights City	1	5.6
Covington City	0	0.0
Craig County	0	0.0
Culpeper County	1	2.0
Cumberland County	0	0.0
Danville City	15	35.8
Dickenson County	0	0.0
Dinwiddie County	3	10.7
Emporia City	0	0.0
Essex County	0	0.0
Fairfax City	0	0.0
Fairfax County	14	1.2
Falls Church City	0	0.0
Fauquier County	1	1.4

Locality of Residence	Deaths	Rate
Floyd County	1	6.4
Fluvanna County	0	0.0
Franklin City	0	0.0
Franklin County	2	3.6
Frederick County	0	0.0
Fredericksburg City	1	3.5
Galax City	2	29.5
Giles County	0	0.0
Gloucester County	1	2.7
Goochland County	1	4.4
Grayson County	1	6.6
Greene County	0	0.0
Greensville County	0	0.0
Halifax County	4	11.4
Hampton City	21	15.5
Hanover County	2	1.9
Harrisonburg City	2	3.8
Henrico County	19	5.8
Henry County	4	7.8
Highland County	0	0.0
Hopewell City	4	17.6
Isle of Wight County	0	0.0
James City County	0	0.0
King and Queen County	1	14.0
King George County	0	0.0
King William County	1	6.1
Lancaster County	0	0.0
Lee County	0	0.0
Lexington City	0	0.0
Loudoun County	5	1.3
Louisa County	3	8.5
Lunenburg County	2	16.3
Lynchburg City	4	5.0
Madison County	1	7.6
Manassas	1	2.4
Manassas Park	0	0.0
Martinsville City	1	7.4
Mathews County	1	11.4
Mecklenburg County	2	6.5
Middlesex County	0	0.0
Montgomery County	1	1.0

Locality of Residence	Deaths	Rate
Nelson County	0	0.0
New Kent County	3	14.2
Newport News City	31	17.0
Norfolk City	38	15.5
Northampton County	3	24.7
Northumberland County	0	0.0
Norton City	0	0.0
Nottoway County	0	0.0
Orange County	0	0.0
Page County	0	0.0
Patrick County	0	0.0
Petersburg City	8	25.1
Pittsylvania County	3	4.9
Poquoson City	0	0.0
Portsmouth City	17	17.8
Powhatan County	1	3.5
Prince Edward County	0	0.0
Prince George County	2	5.3
Prince William County	21	4.6
Pulaski County	2	5.8
Radford City	0	0.0
Rappahannock County	0	0.0
Richmond City	52	23.3
Richmond County	0	0.0
Roanoke City	10	10.0
Roanoke County	5	5.3
Rockbridge County	0	0.0
Rockingham County	1	1.3
Russell County	0	0.0

Locality of Residence	Deaths	Rate
Salem City	0	0.0
Scott County	1	4.6
Shenandoah County	1	2.3
Smyth County	1	3.2
Southampton County	2	11.1
Spotsylvania County	3	2.3
Stafford County	7	4.8
Staunton City	1	4.1
Suffolk City	7	7.8
Surry County	0	0.0
Sussex County	0	0.0
Tazewell County	1	2.4
Virginia Beach City	18	4.0
Warren County	0	0.0
Washington County	1	1.8
Waynesboro City	0	0.0
Westmoreland County	0	0.0
Williamsburg City	0	0.0
Winchester City	0	0.0
Wise County	1	2.5
Wythe County	1	3.4
York County	3	4.4
Subtotal (in-state)	445	5.3
Out of State	31	ND
Unknown	2	ND
Subtotal (out-of-state)	33	ND
TOTAL	**478**	**5.7**

*No denominator is represented by ND

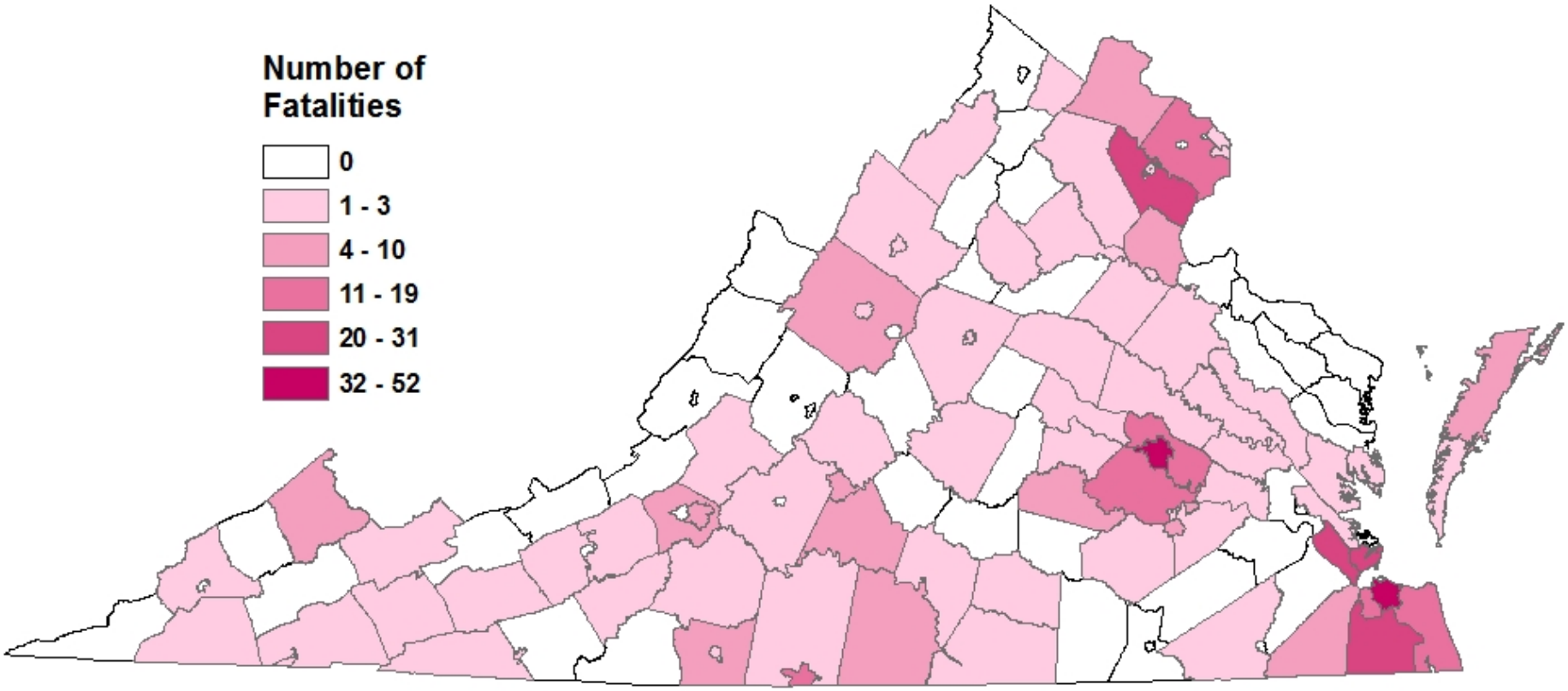
Table 2.7 Top 10 Localities with the Largest Number of Residential Homicides, 2016

Rank #	Locality of Residence	Homicides
1	Richmond City	52
2	Norfolk City	38
3	Portsmouth City	31
4	Newport News City	21
	Hampton City	21
6	Prince William County	20
7	Chesapeake City	19
8	Henrico County	18
9	Virginia Beach City	17
10	Chesterfield County	16

Table 2.8 Top 10 Localities with the Highest Rate of Residential Homicides, 2016

Rank #	Locality of Residence	Homicide Rate
1	Danville City	35.8
2	Amelia County	31.0
3	Galax City	29.5
4	Charles City County	28.3
5	Petersburg City	25.1
6	Northampton County	24.7
7	Richmond City	23.3
8	Buchanan County	22.5
9	Portsmouth City	17.8
10	Hopewell City	17.6

Map 2.1 Number of Homicides by Locality of Residence, 2016



Map 2.2 Homicide Rates by Locality of Residence, 2016

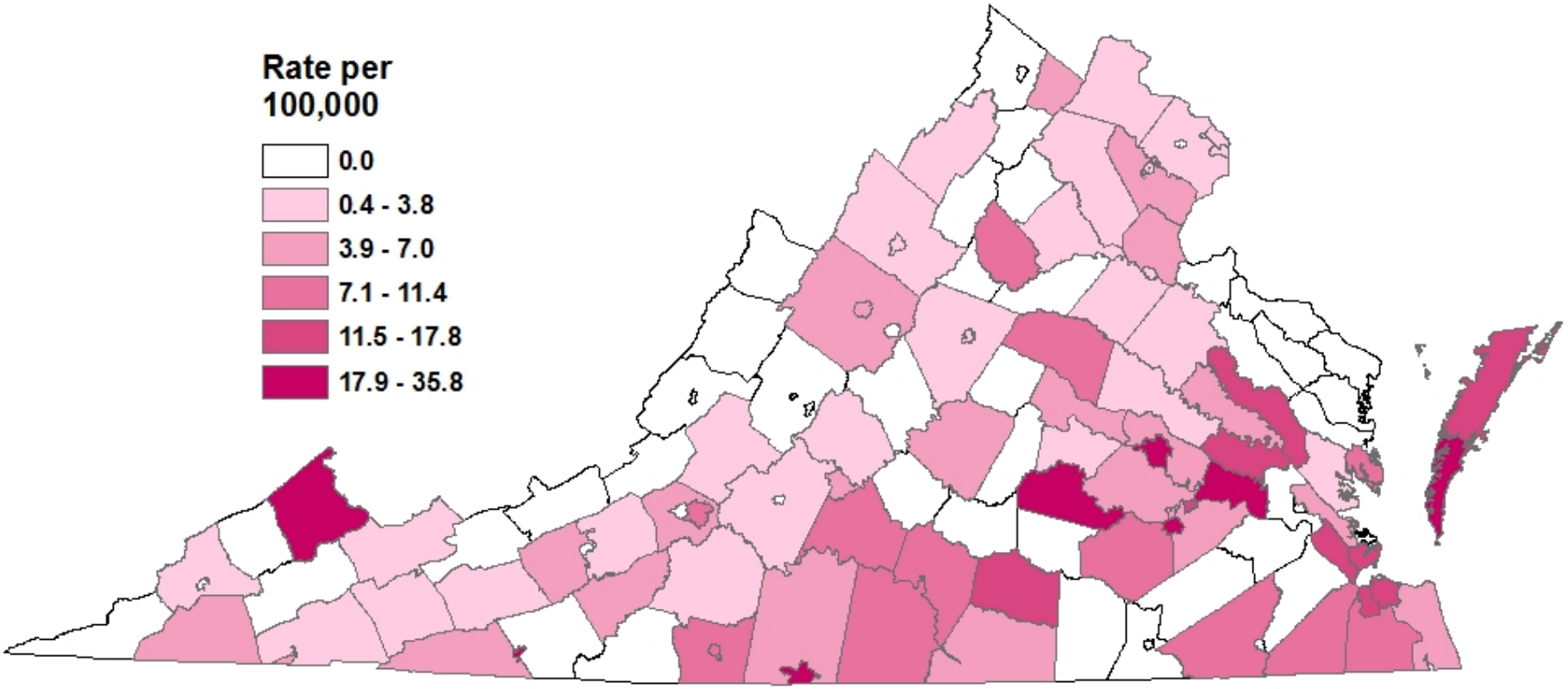


Table 2.9 Number and Rate of Homicide Deaths by Locality of Injury, 2016

Locality of Injury	Deaths	Rate
Accomack County	4	12.1
Albemarle County	1	0.9
Alexandria City	6	3.9
Alleghany County	0	0.0
Amelia County	2	15.5
Amherst County	1	3.2
Appomattox County	0	0.0
Arlington County	0	0.0
Augusta County	5	6.7
Bath County	0	0.0
Bedford County	1	1.3
Bland County	0	0.0
Botetourt County	1	3.0
Bristol City	1	5.9
Brunswick County	0	0.0
Buchanan County	4	18.0
Buckingham County	1	5.9
Buena Vista City	0	0.0
Campbell County	6	10.9
Caroline County	1	3.3
Carroll County	1	3.4
Charles City County	0	0.0
Charlotte County	2	16.5
Charlottesville City	1	2.1
Chesapeake City	13	5.5
Chesterfield County	9	2.7
Clarke County	1	7.0
Colonial Heights City	0	0.0
Covington City	0	0.0
Craig County	0	0.0
Culpeper County	4	8.0
Cumberland County	0	0.0
Danville City	16	38.2
Dickenson County	0	0.0
Dinwiddie County	2	7.1
Emporia City	0	0.0
Essex County	0	0.0
Fairfax City	0	0.0
Fairfax County	19	1.7
Falls Church City	0	0.0

Locality of Injury	Deaths	Rate
Fauquier County	1	1.4
Floyd County	0	0.0
Fluvanna County	0	0.0
Franklin City	0	0.0
Franklin County	1	1.8
Frederick County	0	0.0
Fredericksburg City	3	10.6
Galax City	2	29.5
Giles County	0	0.0
Gloucester County	1	2.7
Goochland County	0	0.0
Grayson County	1	6.6
Greene County	0	0.0
Greensville County	1	8.5
Halifax County	3	8.6
Hampton City	25	18.5
Hanover County	4	3.8
Harrisonburg City	2	3.8
Henrico County	18	5.5
Henry County	4	7.8
Highland County	0	0.0
Hopewell City	5	22.0
Isle of Wight County	0	0.0
James City County	1	1.3
King and Queen County	1	14.0
King George County	0	0.0
King William County	1	6.1
Lancaster County	0	0.0
Lee County	1	4.1
Lexington City	0	0.0
Loudoun County	5	1.3
Louisa County	3	8.5
Lunenburg County	2	16.3
Lynchburg City	4	5.0
Madison County	0	0.0
Manassas	1	2.4
Manassas Park	0	0.0
Martinsville City	0	0.0
Mathews County	1	11.4
Mecklenburg County	3	9.7

Locality of Injury	Deaths	Rate
Middlesex County	0	0.0
Montgomery County	1	1.0
Nelson County	0	0.0
New Kent County	0	0.0
Newport News City	31	17.0
Norfolk City	48	19.6
Northampton County	4	33.0
Northumberland County	0	0.0
Norton City	0	0.0
Nottoway County	2	12.8
Orange County	0	0.0
Page County	0	0.0
Patrick County	0	0.0
Petersburg City	10	31.4
Pittsylvania County	3	4.9
Poquoson City	0	0.0
Portsmouth City	15	15.7
Powhatan County	1	3.5
Prince Edward County	0	0.0
Prince George County	0	0.0
Prince William County	20	4.4
Pulaski County	2	5.8
Radford City	0	0.0
Rappahannock County	0	0.0
Richmond City	68	30.5
Richmond County	0	0.0
Roanoke City	15	15.1
Roanoke County	4	4.3
Rockbridge County	0	0.0
Rockingham County	0	0.0

Locality of Injury	Deaths	Rate
Russell County	0	0.0
Salem City	0	0.0
Scott County	2	9.1
Shenandoah County	1	2.3
Smyth County	2	6.4
Southampton County	3	16.6
Spotsylvania County	2	1.5
Stafford County	7	4.8
Staunton City	1	4.1
Suffolk City	4	4.5
Surry County	0	0.0
Sussex County	0	0.0
Tazewell County	1	2.4
Virginia Beach City	21	4.6
Warren County	0	0.0
Washington County	1	1.8
Waynesboro City	1	4.6
Westmoreland County	0	0.0
Williamsburg City	0	0.0
Winchester City	0	0.0
Wise County	1	2.5
Wythe County	0	0.0
York County	4	5.9
Subtotal (in-state)	471	5.6
Out of State	4	ND
Unknown	3	ND
Subtotal (out-of-state)	7	ND
TOTAL	**478**	**5.7**

Note: No denominator is represented by ND.

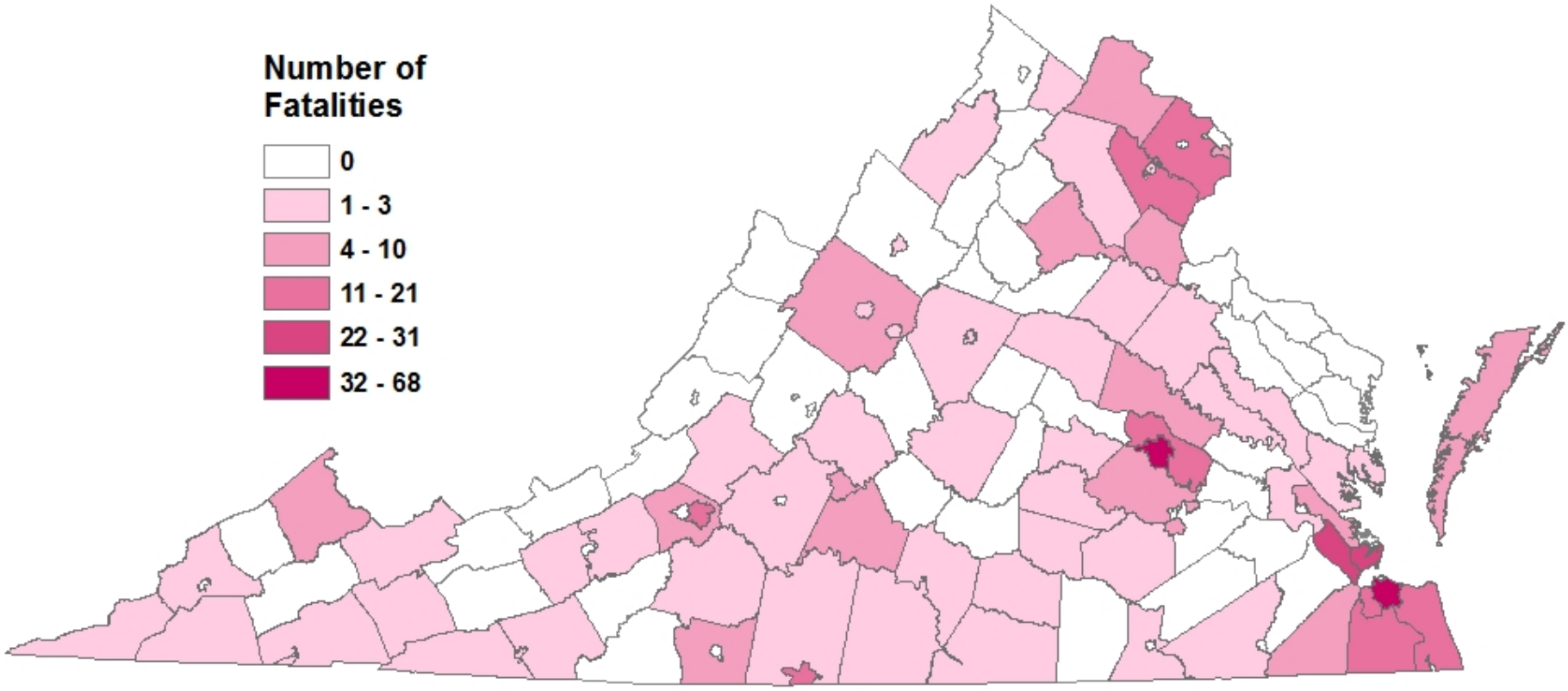
Table 2.10 Top 10 Localities with the Largest Number of Homicides by Locality of Injury, 2016

Rank #	Locality of Injury	Homicides
1	Richmond City	68
2	Norfolk City	48
3	Newport News City	31
4	Hampton City	25
5	Virginia Beach City	21
6	Prince William County	20
7	Fairfax County	19
8	Henrico County	18
9	Danville City	16
10	Portsmouth City	15

Table 2.11 Top 10 Locations City/Counties with the Highest Rate of Homicides by Locality of Injury, 2016

Rank #	Locality of Injury	Homicide Rate
1	Danville City	38.2
2	Northampton County	33.0
3	Petersburg City	31.4
4	Richmond City	30.5
5	Galax City	29.5
6	Hopewell City	22.0
7	Norfolk City	19.6
8	Hampton City	18.5
9	Buchanan County	18.0
10	Newport News City	17.0

Map 2.3 Number of Homicides by Locality of Injury, 2016



Map 2.4 Homicide Rates by Locality of Injury, 2016

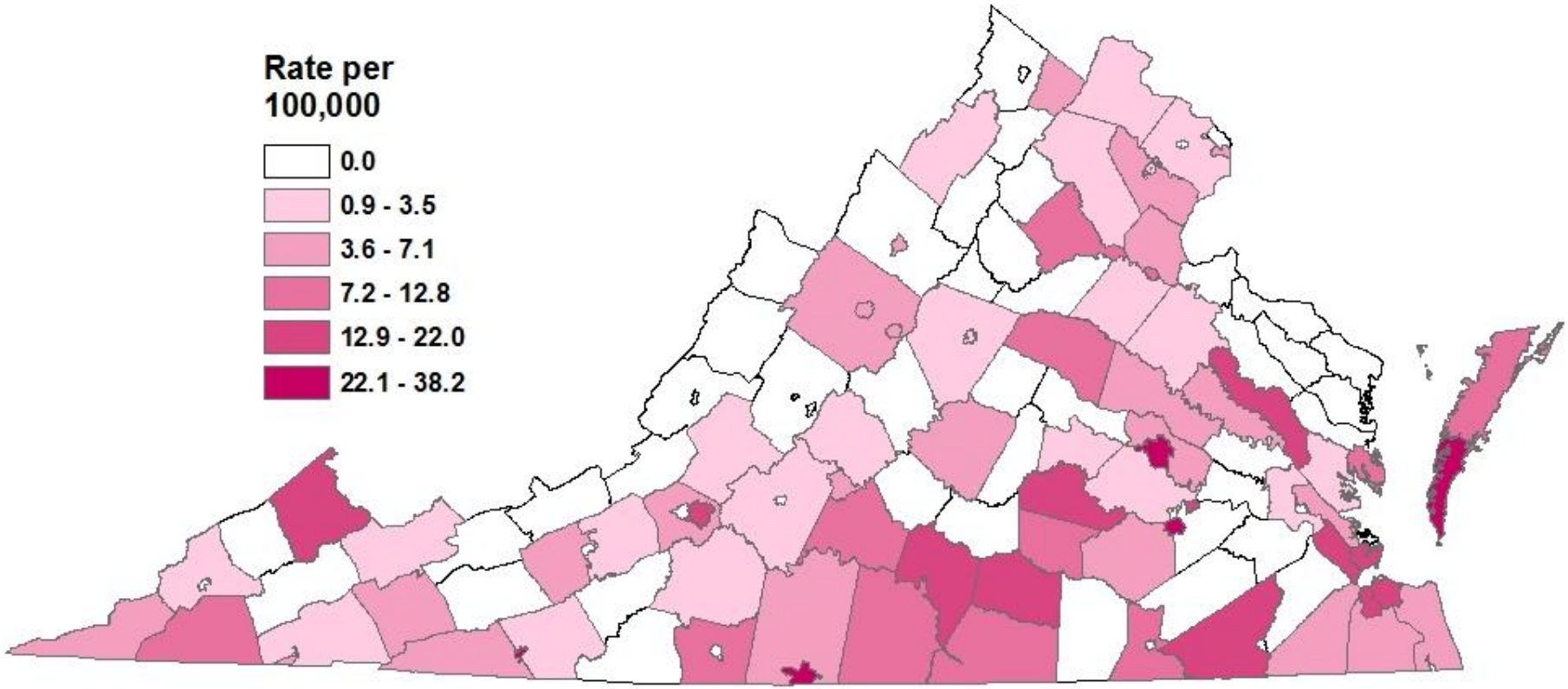


Table 2.12 Number of Homicide Deaths by Locality of Death and Year of Death, 2006-2016

Locality of Death	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	TOTAL
Accomack County	5	4	2	2	2	4	1	3	4	3	4	**34**
Albemarle County	1	0	1	0	3	0	3	2	2	1	0	**13**
Alexandria City	4	7	4	4	2	0	2	6	4	3	5	**41**
Alleghany County	0	3	1	0	2	2	1	2	0	0	0	**11**
Amelia County	0	0	0	0	0	0	0	0	0	0	2	**2**
Amherst County	0	1	1	1	0	1	0	1	2	0	1	**8**
Appomattox County	0	1	1	0	7	1	0	0	1	3	0	**14**
Arlington County	3	3	4	2	0	0	5	0	1	2	0	**20**
Augusta County	3	1	1	1	3	3	2	0	4	1	4	**23**
Bath County	0	0	0	2	0	0	0	0	0	0	0	**2**
Bedford City	0	0	0	0	0	0	0	0	*	*	*	**0**
Bedford County	1	2	0	0	2	0	0	0	4	3	1	**13**
Bland County	0	0	0	1	1	0	0	0	0	0	0	**2**
Botetourt County	0	0	0	0	0	0	0	1	0	0	0	**1**
Bristol City	4	0	0	0	1	1	1	0	0	0	0	**7**
Brunswick County	3	1	2	0	0	0	1	0	0	0	0	**7**
Buchanan County	1	0	2	6	3	6	1	0	1	1	4	**25**
Buckingham County	1	1	0	0	0	1	0	0	2	0	1	**6**
Buena Vista City	0	0	0	0	0	0	0	1	0	0	0	**1**
Campbell County	2	2	2	5	2	1	3	3	0	0	6	**26**
Caroline County	5	4	0	0	0	0	0	0	0	1	1	**11**
Carroll County	1	4	1	1	1	0	0	3	1	0	0	**12**
Charles City County	0	0	1	0	1	0	0	0	0	0	0	**2**
Charlotte County	0	0	1	1	0	1	1	1	0	2	2	**9**
Charlottesville City	5	6	12	3	5	3	4	6	8	4	4	**60**
Chesapeake City	7	7	7	10	9	10	9	8	8	11	11	**97**
Chesterfield County	5	6	9	3	6	11	9	9	9	8	6	**81**
Clarke County	0	0	1	1	0	0	0	0	0	0	1	**3**

Locality of Death	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	TOTAL
Colonial Heights City	0	0	0	0	0	2	0	0	1	1	0	**4**
Covington City	0	0	0	0	1	0	0	1	0	0	0	**2**
Craig County	0	0	1	0	0	0	0	0	0	0	0	**1**
Culpeper County	1	1	0	0	0	3	1	2	6	1	4	**19**
Cumberland County	0	1	0	2	0	0	1	0	0	0	0	**4**
Danville City	5	5	8	10	7	7	5	5	3	6	15	**76**
Dickenson County	0	1	1	1	2	2	0	1	1	0	0	**9**
Dinwiddie County	5	1	1	0	2	0	3	4	0	2	2	**20**
Emporia City	1	2	2	1	2	1	1	0	1	2	0	**13**
Essex County	0	0	0	0	1	1	0	1	1	1	0	**5**
Fairfax City	1	0	1	0	0	0	0	0	0	0	0	**2**
Fairfax County	29	20	28	24	19	16	19	10	16	17	27	**225**
Falls Church City	0	0	0	1	0	0	1	1	0	0	0	**3**
Fauquier County	2	4	1	2	1	1	3	2	1	1	1	**19**
Floyd County	0	0	2	1	0	1	0	0	0	0	0	**4**
Fluvanna County	0	0	1	0	0	0	0	0	0	1	0	**2**
Franklin City	0	0	0	2	1	0	0	0	1	0	0	**4**
Franklin County	2	1	0	4	4	2	0	4	2	9	1	**29**
Frederick County	7	0	1	2	1	1	2	2	2	2	0	**20**
Fredericksburg City	0	2	3	4	3	3	3	4	1	7	4	**34**
Galax City	1	2	0	1	0	0	0	0	0	0	2	**6**
Giles County	1	0	0	0	0	0	0	0	1	0	0	**2**
Gloucester County	0	1	1	0	1	2	3	0	0	0	1	**9**
Goochland County	1	0	2	0	1	0	0	1	1	1	0	**7**
Grayson County	0	0	7	0	0	0	0	1	0	1	0	**9**
Greene County	0	1	0	0	0	3	0	0	0	0	0	**4**
Greensville County	5	0	5	4	3	2	0	2	0	1	0	**22**
Halifax County	1	3	5	0	2	2	0	0	0	1	3	**17**
Hampton City	14	6	4	7	9	3	7	20	7	11	12	**100**
Hanover County	2	0	1	0	2	2	5	0	1	3	2	**18**
Harrisonburg City	4	0	0	0	1	2	1	1	0	1	2	**12**

Locality of Death	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	TOTAL
Henrico County	10	6	15	7	9	9	9	6	6	9	14	**100**
Henry County	7	3	3	5	6	4	5	1	3	2	2	**41**
Highland County	0	0	0	0	0	0	0	0	0	0	0	**0**
Hopewell City	4	2	4	2	2	1	2	2	5	3	5	**32**
Isle of Wight County	1	0	0	1	0	1	2	1	1	1	0	**8**
James City County	1	0	1	0	0	1	1	2	0	2	2	**10**
King and Queen County	0	0	0	0	0	0	1	0	0	0	1	**2**
King George County	0	0	0	1	0	0	0	0	1	1	0	**3**
King William County	0	1	0	0	0	0	0	0	0	0	1	**2**
Lancaster County	2	0	1	0	2	1	1	0	0	0	0	**7**
Lee County	0	1	2	1	4	4	0	2	0	0	0	**14**
Lexington City	0	0	0	0	0	0	0	0	0	0	0	**0**
Loudoun County	4	1	3	4	1	2	2	5	4	2	4	**32**
Louisa County	0	4	1	1	3	0	1	0	1	0	3	**14**
Lunenburg County	1	1	2	1	0	0	0	1	0	0	1	**7**
Lynchburg City	2	1	5	0	4	5	3	1	8	4	3	**36**
Madison County	0	0	1	0	1	3	1	1	0	1	0	**8**
Manassas	1	2	5	2	0	3	1	2	2	0	1	**19**
Manassas Park	0	0	0	0	0	0	0	0	0	0	0	**0**
Martinsville City	0	2	3	0	4	3	1	2	2	3	1	**21**
Mathews County	0	0	0	1	0	0	0	0	0	0	1	**2**
Mecklenburg County	0	1	4	3	2	1	0	2	1	1	3	**18**
Middlesex County	1	0	0	0	0	1	0	1	2	0	0	**5**
Montgomery County	3	31	2	8	2	1	0	2	2	2	0	**53**
Nelson County	0	1	0	1	1	1	0	1	0	0	0	**5**
New Kent County	0	0	1	1	0	0	0	0	0	0	0	**2**
Newport News City	20	31	23	31	30	21	29	18	26	31	43	**303**
Norfolk City	34	75	41	63	47	40	56	38	48	48	64	**554**
Northampton County	2	3	0	0	2	1	1	4	0	3	3	**19**
Northumberland County	0	1	0	0	0	0	1	0	0	0	0	**2**
Norton City	0	0	0	0	0	0	0	0	0	0	0	**0**

Locality of Death	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	TOTAL
Nottoway County	0	1	0	0	0	0	2	0	1	0	2	**6**
Orange County	2	0	1	0	1	0	1	0	2	0	0	**7**
Page County	1	0	0	0	1	0	1	0	3	0	0	**6**
Patrick County	0	1	0	0	0	0	0	0	1	2	0	**4**
Petersburg City	10	8	4	11	11	8	5	6	12	18	9	**102**
Pittsylvania County	2	3	3	2	4	4	1	0	2	0	3	**24**
Poquoson City	0	0	0	0	0	0	0	0	0	0	0	**0**
Portsmouth City	18	11	14	16	13	13	8	7	7	23	9	**139**
Powhatan County	0	0	3	1	1	3	0	0	0	1	1	**10**
Prince Edward County	0	1	1	7	1	1	1	3	0	0	0	**15**
Prince George County	0	0	0	1	2	0	0	1	1	0	0	**5**
Prince William County	12	11	10	9	9	7	1	5	4	9	15	**92**
Pulaski County	1	0	2	1	2	0	1	1	4	0	2	**14**
Radford City	1	0	0	0	1	0	1	0	0	0	0	**3**
Rappahannock County	1	0	0	0	1	0	0	0	0	0	0	**2**
Richmond City	85	76	47	58	56	50	55	56	55	54	82	**674**
Richmond County	0	0	1	0	0	0	0	0	0	0	0	**1**
Roanoke City	13	12	23	14	14	15	12	18	7	17	19	**164**
Roanoke County	1	2	0	1	4	0	1	0	1	0	2	**12**
Rockbridge County	0	1	0	0	1	1	0	0	0	1	0	**4**
Rockingham County	1	1	1	2	0	1	0	0	4	0	0	**10**
Russell County	2	0	1	1	0	2	0	2	3	0	0	**11**
Salem City	0	1	1	0	1	0	1	0	0	1	1	**6**
Scott County	0	2	1	0	1	1	1	0	0	0	2	**8**
Shenandoah County	0	0	0	1	0	0	1	1	3	0	1	**7**
Smyth County	0	0	1	0	0	2	1	0	0	0	2	**6**
Southampton County	1	3	0	2	1	0	0	0	0	0	3	**10**
Spotsylvania County	4	4	0	3	5	2	1	3	1	1	2	**26**
Stafford County	1	2	3	4	1	2	1	3	1	4	5	**27**
Staunton City	0	0	1	2	0	0	0	1	1	1	0	**6**
Suffolk City	8	2	5	5	3	3	2	6	2	2	5	**43**

Locality of Death	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	TOTAL
Surry County	0	0	1	0	2	0	0	0	0	0	0	**3**
Sussex County	1	0	1	0	0	0	1	2	0	0	0	**5**
Tazewell County	0	3	2	5	3	0	2	0	1	1	1	**18**
Virginia Beach City	20	16	18	16	13	14	14	17	17	18	19	**182**
Warren County	2	0	0	1	0	0	0	0	1	1	0	**5**
Washington County	0	0	2	1	2	2	1	2	4	0	0	**14**
Waynesboro City	0	1	0	0	1	0	0	0	0	0	1	**3**
Westmoreland County	2	1	1	0	0	0	1	0	0	2	0	**7**
Williamsburg City	1	0	0	0	0	0	0	0	0	0	0	**1**
Winchester City	2	2	2	0	0	2	1	1	1	2	0	**13**
Wise County	0	2	0	2	0	0	4	0	2	2	2	**14**
Wythe County	1	0	2	0	0	1	0	0	0	0	0	**4**
York County	3	1	1	0	0	3	0	4	4	1	2	**19**
Subtotal (in-state)	422	439	398	408	388	341	337	339	354	386	471	**4283**
Out of State	1	1	2	4	3	4	7	1	4	2	7	**36**
Unknown	4	0	0	0	0	0	0	0	1	0	0	**5**
Subtotal (out-of-state)	5	1	2	4	3	4	7	1	5	2	7	**41**
TOTAL	**427**	**440**	**400**	**412**	**391**	**345**	**344**	**340**	**359**	**388**	**478**	**4324**

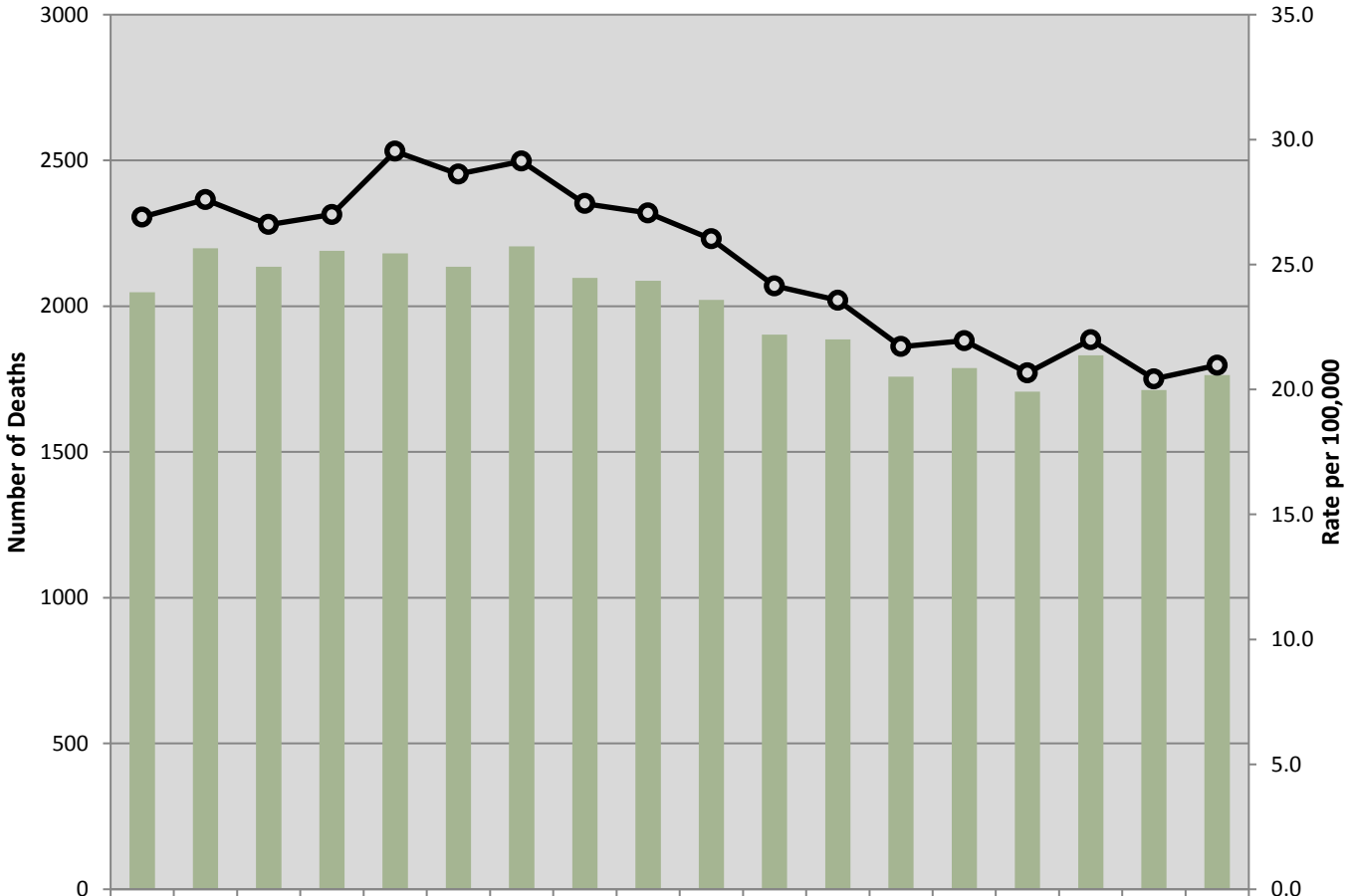
*Bedford City was incorporated into Bedford County in 2014 and therefore numbers are combined from there forward

NATURAL DEATHS (N=1,764)

Most natural deaths that occur in Virginia do not fall under the jurisdiction of the medical examiner. Natural deaths enter the medical examiner system as deaths that are sudden, unexpected, or suspicious, which upon examination and investigation are then established as natural. Natural deaths may also fall under the OCME's jurisdiction when the decedent does not have a primary care physician to certify their deaths, the decedent dies while in-custody, or the decedent is a patient of a state mental health facility.

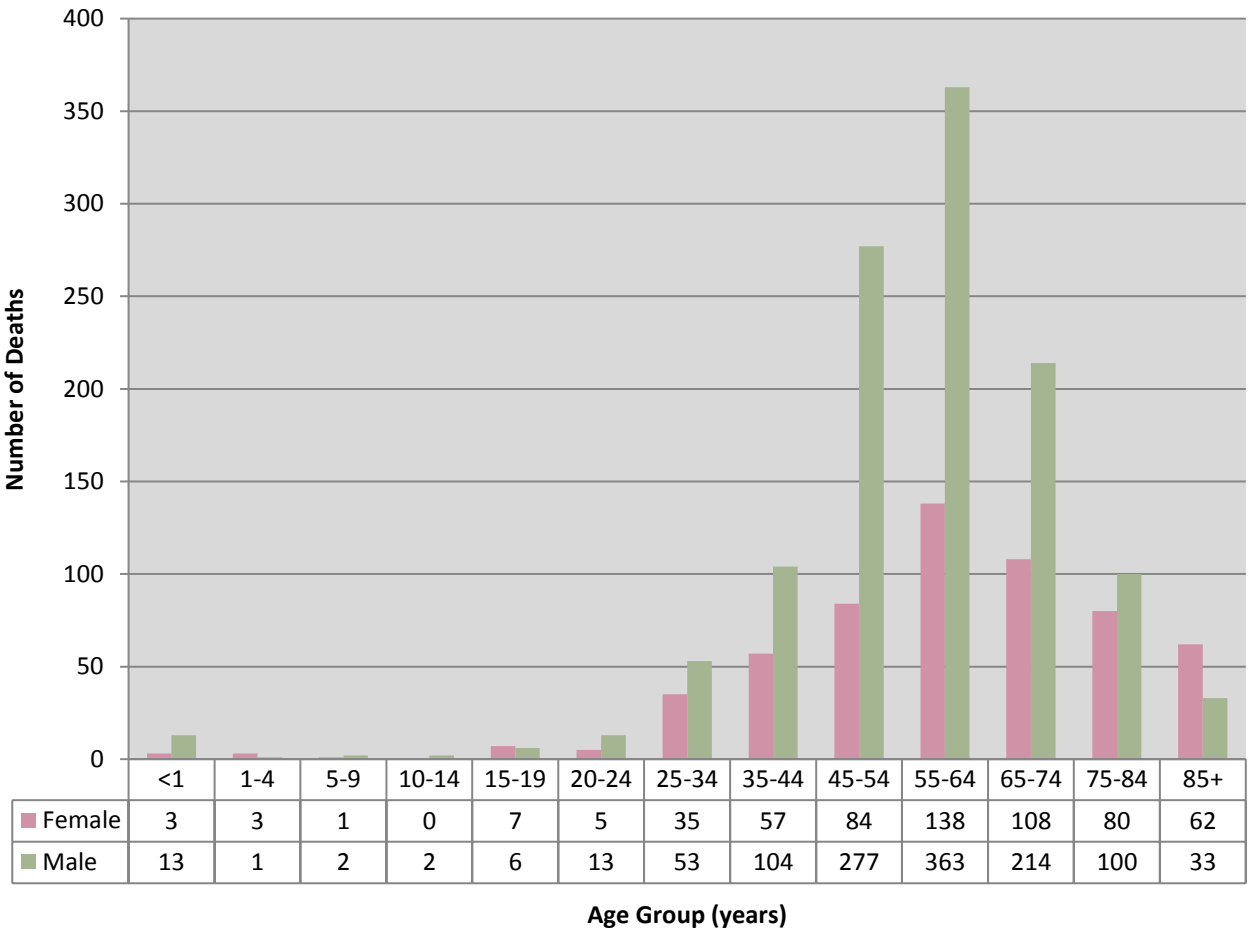
- Natural deaths accounted for 25.7% of all deaths investigated by the OCME in 2016
- The number of natural deaths accepted by OCME increased in 2016 compared with 2015 (an increase of 52 deaths or 3.0%).

Figure 2.19 Number and Rate of Natural Deaths by Year of Death, 1999-2016



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Deaths	2048	2199	2135	2190	2181	2135	2205	2097	2087	2022	1903	1886	1758	1788	1707	1831	1712	1764
Mortality Rate	26.9	27.6	26.6	27.0	29.5	28.6	29.1	27.4	27.1	26.0	24.1	23.6	21.7	22.0	20.7	22.0	20.4	21.0

Figure 2.20 Number of Natural Deaths by Age Group and Gender, 2016



	<1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Female	3	3	1	0	7	5	35	57	84	138	108	80	62
Male	13	1	2	2	6	13	53	104	277	363	214	100	33

Table 2.13 Number of Natural Deaths by Cause and Method of Death, 2016

Method and Cause of Death	Autopsied	Total Cases
Cardiovascular Diseases/Disorders		
Acute coronary insufficiency	1	**144**
Arrhythmogenic right ventricular dysplasia	1	**1**
Atherosclerosis	44	**572**
Atherosclerosis and hypertension	72	**145**
Cardiac dysrhythmia of undetermined etiology	17	**29**
Cardiomyopathy not otherwise specified	10	**13**
Congenital defect	0	**1**
Hypertension	45	**237**
Other cardiac disease/disorder	15	**19**
Valvular disorder	2	**6**
Vascular dissection/rupture	8	**9**
Central Nervous System Diseases/Disorders		
Central nervous system malignancy	1	**1**
Degenerative disease	3	**13**
Other CNS disease/disorder	5	**11**
Meningitis (bacterial or viral)	2	**2**
Seizure disorder	7	**21**
Vascular disease	16	**36**
Gastrointestinal Diseases/Disorders		
Cirrhosis	8	**26**
GI hemorrhage	5	**15**
GI malignancy	13	**21**
Hepatitis	0	**5**
Other GI disease/disorder	10	**21**
Genitourinal Diseases/Disorders		
Genitourinal malignancy	4	**7**
Other GU disease/disorder	1	**2**
Renal disease	2	**6**
Other Natural Diseases/Disorders		
Other malignancy	1	**3**
Other natural disease/disorder	3	**5**
Perinatal and Pediatric Diseases/Disorders		
Fetal complications	1	**1**
Maternal complications	5	**5**
Other perinatal or pediatric disorder	1	**1**
Sudden Infant Death Syndrome (SIDS)	1	**1**
Pulmonary Disease/Disorders		
Asthma	2	**5**
COPD	1	**22**
Emboli	24	**26**

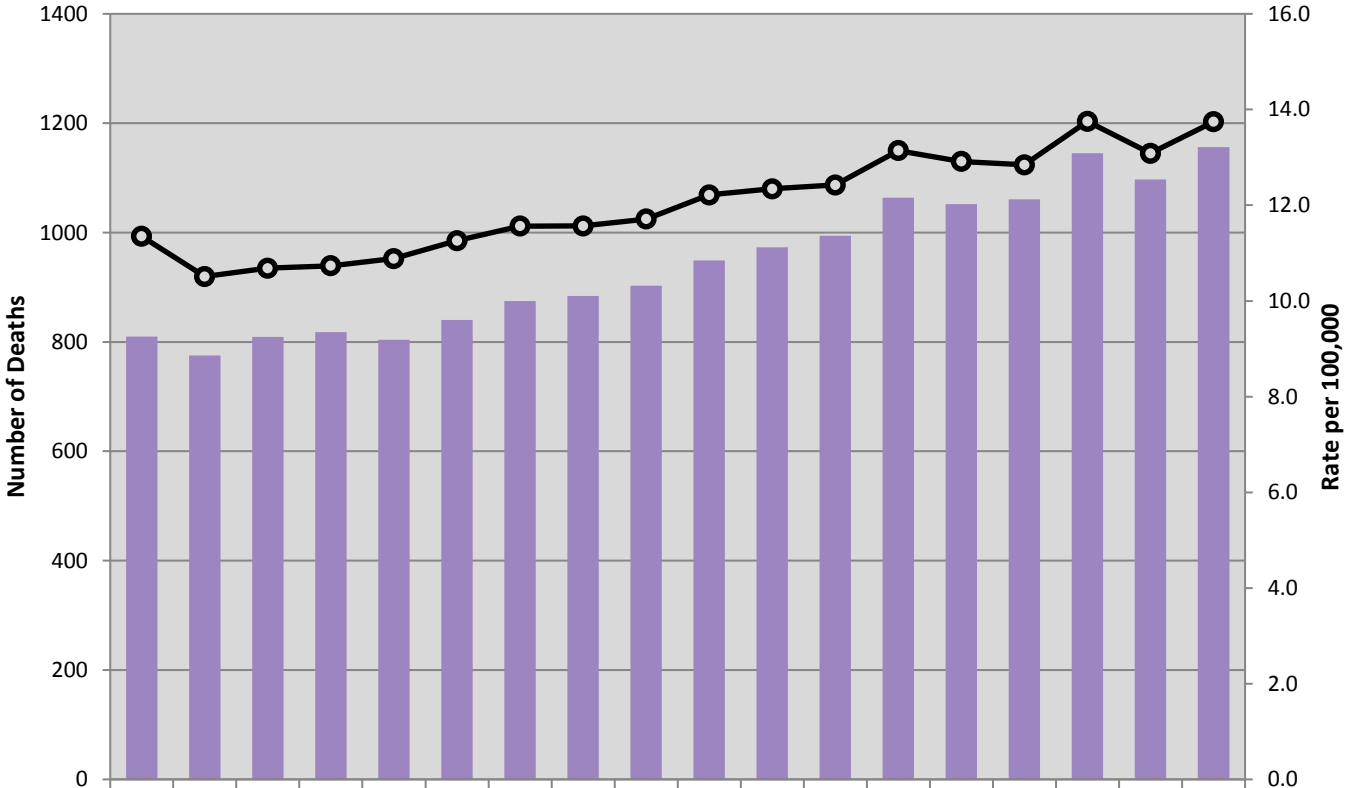
Pneumonia	25	**41**
Pulmonary malignancy	6	**18**
Other pulmonary disease/disorder	2	**9**
Systemic Diseases/Disorders		
AIDS/HIV	1	**6**
Blood disorders	0	**4**
Chronic alcoholism	24	**141**
Chronic drug abuse	2	**4**
Complications of dementia (including inanition)	0	**1**
Diabetes	5	**45**
Metastatic malignancy of unknown primary	1	**5**
Obesity	4	**20**
Other infectious disease	1	**1**
Other systemic disease/disorder	4	**14**
Sepsis	8	**23**
TOTAL NATURAL DEATHS	**414**	**1764**

SUICIDE DEATHS (N=1,156)

In general, suicide deaths have been slowly increasing since 1999 with an increase in the number of deaths in 2016 when compared to 2015 (increase of 5.4%). The largest number of victims were male (75.8%), white (84.0%), and aged 45-54 years of age (17.2%). Males 85 years of age and older as well as white males had the highest rates of suicide compared to other groups within the total population (76.8 and 28.1 per 100,000 persons, respectively).

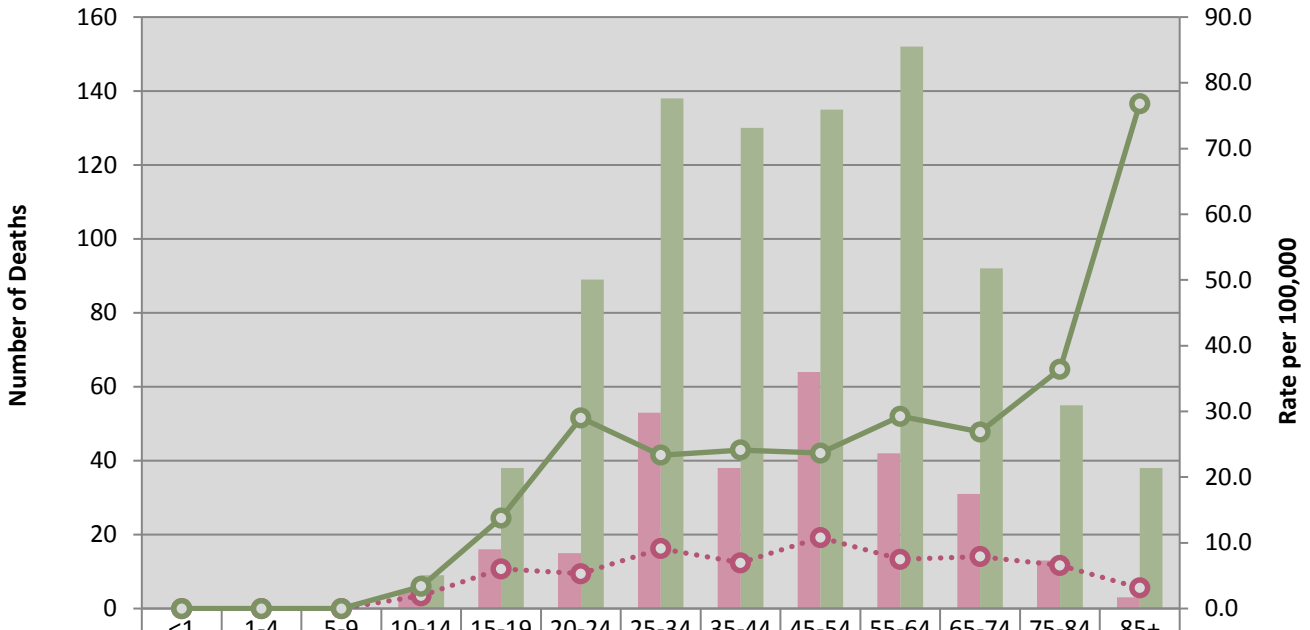
- Whites committed suicide at a rate 5.9 times that of Hispanics, 3.7 times that of Asians, 2.6 times that of Blacks, and 2.6 times that of Native Americans
- Males were 3.1 times more likely to commit suicide than females
- Firearms (specifically handguns), hangings, and drug use were the 3 most commonly used methods in suicides, with these deaths representing 58.0%, 21.0%, and 9.8% of all suicides, respectively

Figure 2.21 Number and Rate of Suicide Deaths by Year of Death, 1999-2016



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Deaths	810	775	809	818	804	840	875	884	903	949	973	994	1064	1052	1061	1145	1097	1156
Mortality Rate	11.3	10.5	10.7	10.7	10.9	11.3	11.6	11.6	11.7	12.2	12.3	12.4	13.1	12.9	12.8	13.8	13.1	13.7

Figure 2.22 Number and Rate of Suicide Deaths by Age Group and Gender, 2016



	<1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Female	0	0	0	5	16	15	53	38	64	42	31	13	3
Male	0	0	0	9	38	89	138	130	135	152	92	55	38
Female Rate	0.0	0.0	0.0	2.0	6.0	5.3	9.1	6.9	10.8	7.5	7.9	6.6	3.1
Male Rate	0.0	0.0	0.0	3.4	13.8	29.0	23.3	24.1	23.7	29.3	26.9	36.4	76.8

Figure 2.23 Percentage of Suicide Deaths by Race/Ethnicity, 2016

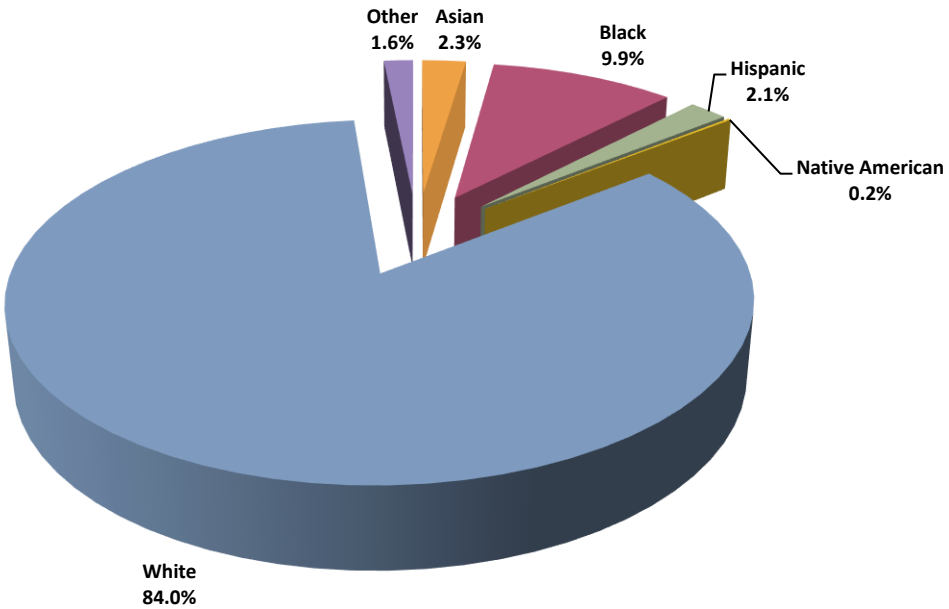
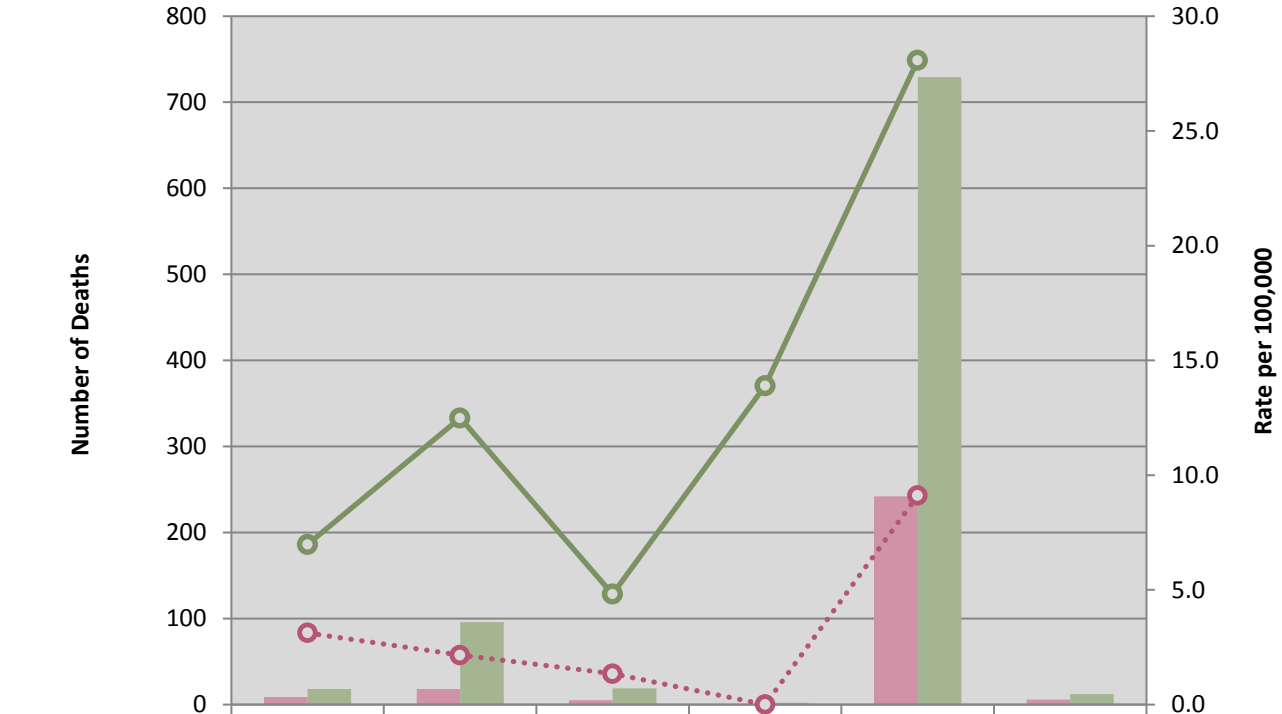


Figure 2.24 Number and Rate of Suicide Deaths by Race/Ethnicity and Gender, 2016



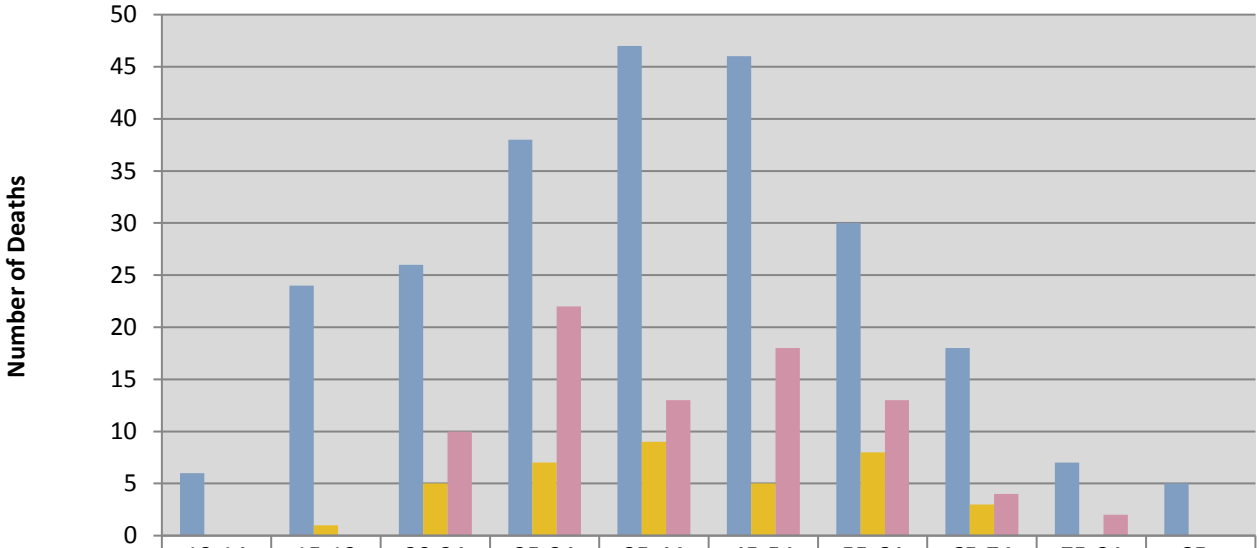
	Asian	Black	Hispanic	Native American	White	Other
Female	9	18	5	0	242	6
Male	18	96	19	2	729	12
Female Rate	3.1	2.2	1.3	0.0	9.1	*
Male Rate	7.0	12.5	4.8	13.9	28.1	*

*No rate can be calculated
** Rates calculated from small case counts (n<5) are considered unreliable and should be interpreted with caution (Hispanics and Native Americans)

Table 2.14 Number of Suicide Deaths by Cause and Method of Death, 2016

Method of Death	Autopsied	Total Cases
Asphyxia		
Carbon monoxide (CO) poisoning-motor vehicle exhaust	**1**	**12**
Carbon monoxide (CO) poisoning-other	**0**	**3**
Drowned	**10**	**12**
Hanged	**45**	**243**
Helium asphyxia	**0**	**6**
Oxygen depletion or replacement	**0**	**6**
Plastic bag asphyxia	**1**	**6**
Strangled/Neck compression	**0**	**1**
Suffocated/Smothered	**0**	**3**
Drug Use		
Ingested ethylene glycol	**2**	**2**
Ingested and/or injected illicit, prescription, and/or other type of drug	**26**	**113**
Other poisoning (e.g. heavy metals, detergent suicide)	**0**	**2**
Environmental Exposure		
Exposed to cold	**1**	**1**
Jump/Fall		
Jumped/Fell from height	**5**	**28**
Other		
Other	**0**	**1**
Traumatic Injury		
Cut/Stabbed self	**10**	**29**
Electrocuted	**1**	**2**
Thermal burns and/or inhalation of combustible material	**1**	**3**
Shot self with firearm		
Handgun	**546**	**546**
Rifle	**54**	**54**
Shotgun	**68**	**68**
Unknown	**1**	**2**
Vehicular		
Car	**1**	**5**
Pickup truck	**0**	**1**
Sport utility vehicle	**0**	**2**
Train	**1**	**5**
TOTAL SUICIDE DEATHS	**774**	**1156**

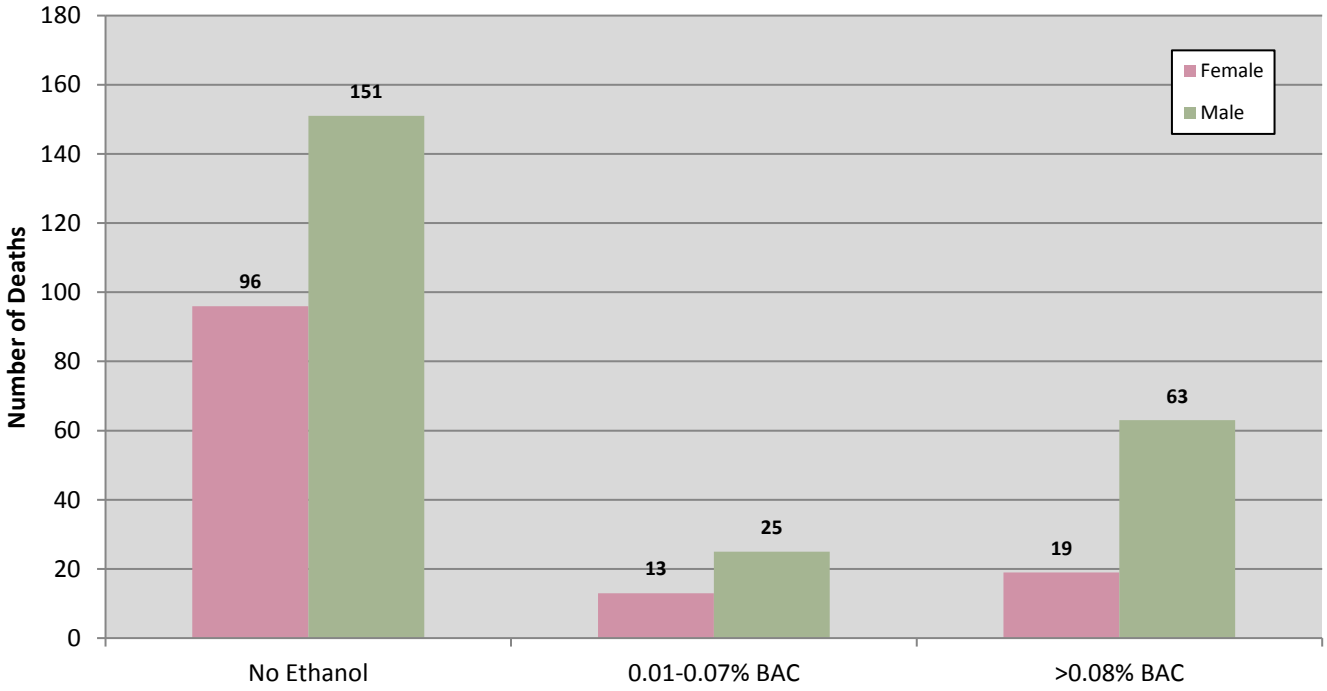
Figure 2.25 Number of Suicide Deaths by Age Group and Ethanol Level (N=367), 2016



	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
No Ethanol	6	24	26	38	47	46	30	18	7	5
0.01-0.07% BAC	0	1	5	7	9	5	8	3	0	0
>0.08% BAC	0	0	10	22	13	18	13	4	2	0

*Note: Of the 1,156 suicides, 68.3% (n=789) did not receive toxicology testing

Figure 2.26 Number of Suicide Deaths by Gender and Ethanol Level (N=367), 2016



*Note: Of the 1,156 suicides, 68.3% (n=789) did not receive toxicology testing

Table 2.15 Number of Suicide Deaths by Manner of Death and Ethanol Level (N=367), 2016

Method of Death	No Ethanol	0.01-0.07% BAC	>0.08% BAC	TOTAL
Asphyxia				
Carbon monoxide (CO) poisoning-motor vehicle exhaust	9	2	1	12
Carbon monoxide (CO) poisoning-other	2	1	0	3
Drowned	3	3	2	8
Hanged	47	5	8	60
Helium asphyxia	3	0	0	3
Oxygen depletion or replacement	2	2	0	4
Plastic bag asphyxia	2	1	0	3
Strangled/Neck compression	0	0	0	0
Suffocated/Smothered	0	0	0	0
Drug Use				0
Ingested ethylene glycol	1	0	0	1
Ingested and/or injected illicit, prescription, and/or other type of drug	79	12	14	105
Other poisoning (e.g. heavy metals, detergent suicide)	2	0	0	2
Environmental Exposure				0
Exposed to cold	1	0	0	1
Jump/Fall				0
Jumped/Fell from height	8	0	5	13
Other				0
Other				0
Traumatic Injury				0
Cut/Stabbed self	4	1	5	10
Electrocuted	1	0	0	1
Thermal burns and/or inhalation of combustible material	2	0	0	2
Shot self with firearm				0
Handgun	60	10	41	111
Rifle	7	0	0	7
Shotgun	7	1	2	10
Unknown	0	0	0	0
Vehicular				0
Car	4	0	1	5
Pickup truck	0	0	1	1
Sport utility vehicle	1	0	1	2
Train	2	0	1	3
TOTAL SUICIDE DEATHS	**247**	**38**	**82**	**367**

*Note: Of the 1,156 suicides, 68.3% (n=789) did not receive toxicology testing

Figure 2.27 Number of Suicide Deaths by Month of Death, 2016

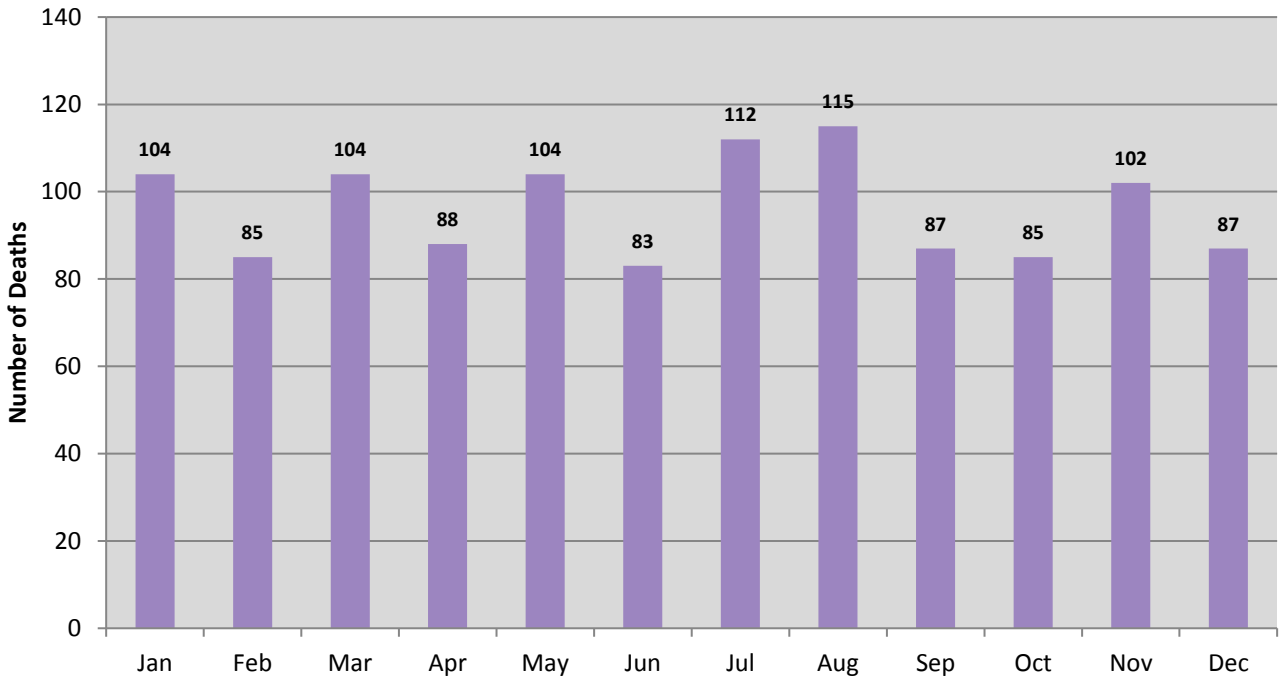


Figure 2.28 Number of Suicide Deaths by Day of the Week, 2016

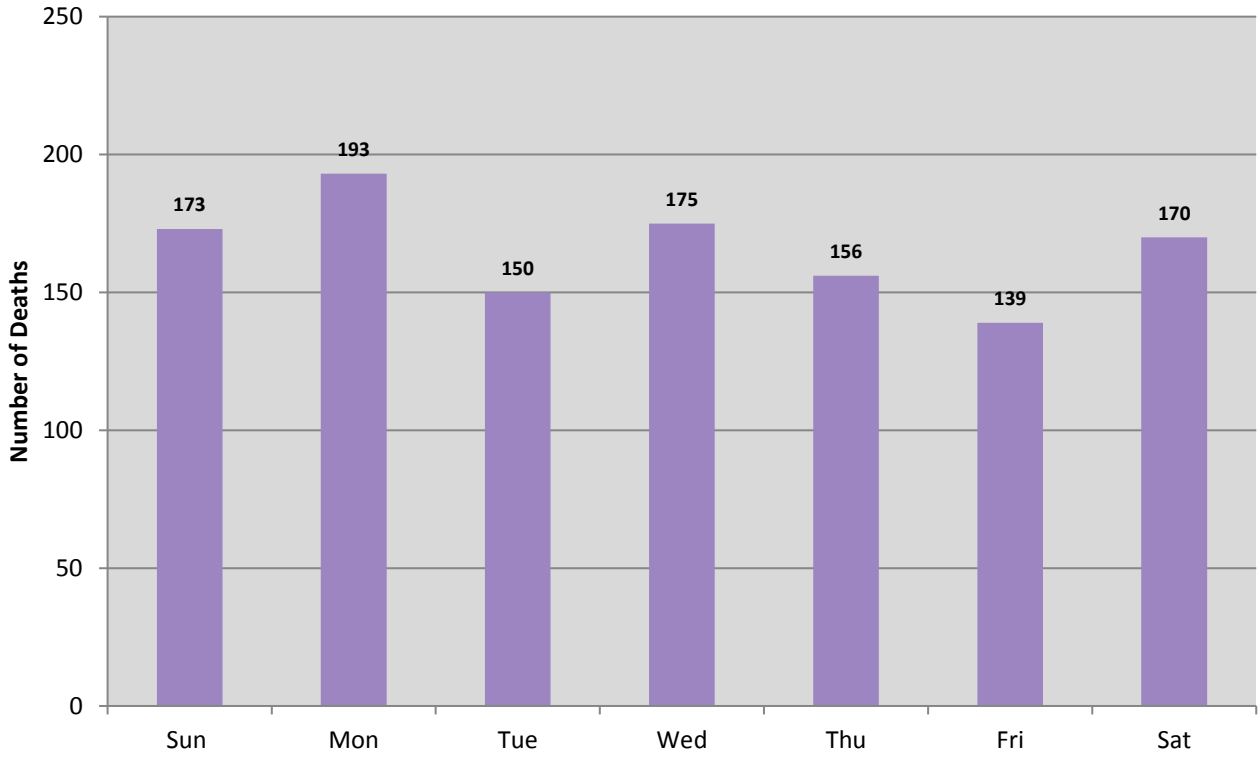


Table 2.16 Number and Rate of Suicide Deaths by Locality of Residence, 2016

Locality of Residence	Deaths	Rate
Accomack County	4	12.1
Albemarle County	7	6.5
Alexandria City	14	9.0
Alleghany County	5	32.1
Amelia County	2	15.5
Amherst County	4	12.6
Appomattox County	2	12.9
Arlington County	17	7.4
Augusta County	11	14.7
Bath County	0	0.0
Bedford County	10	12.8
Bland County	2	30.7
Botetourt County	8	24.1
Bristol City	3	17.7
Brunswick County	2	12.3
Buchanan County	4	18.0
Buckingham County	2	11.7
Buena Vista City	0	0.0
Campbell County	8	14.6
Caroline County	8	26.5
Carroll County	4	13.5
Charles City County	0	0.0
Charlotte County	3	24.7
Charlottesville City	3	6.4
Chesapeake City	29	12.2
Chesterfield County	52	15.3
Clarke County	2	13.9
Colonial Heights City	5	28.1
Covington City	1	18.1
Craig County	4	77.5
Culpeper County	5	10.0
Cumberland County	1	10.4
Danville City	10	23.9
Dickenson County	5	33.4
Dinwiddie County	4	14.2
Emporia City	0	0.0
Essex County	1	9.0
Fairfax City	2	8.3
Fairfax County	95	8.3
Falls Church City	1	7.1
Fauquier County	11	15.9

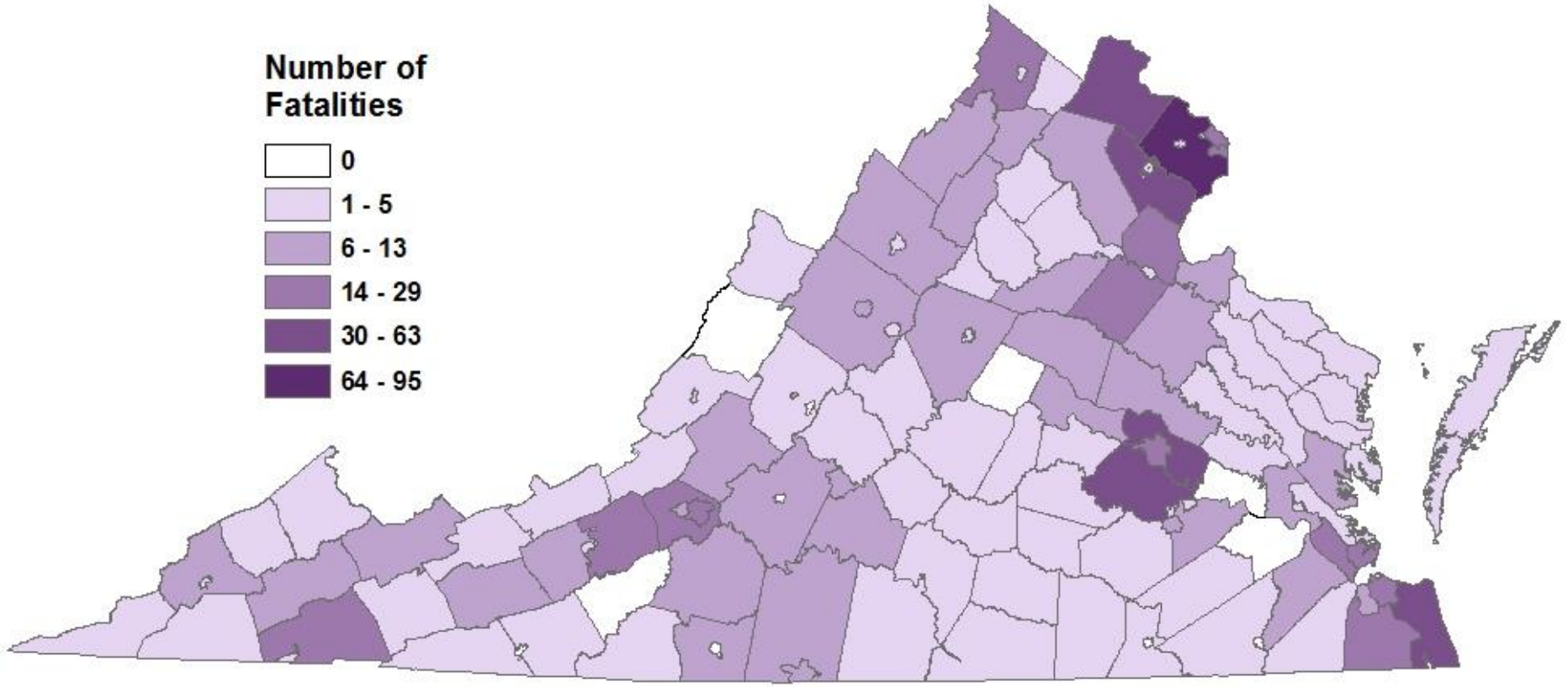
Locality of Residence	Deaths	Rate
Floyd County	0	0.0
Fluvanna County	0	0.0
Franklin City	0	0.0
Franklin County	9	16.1
Frederick County	14	16.6
Fredericksburg City	1	3.5
Galax City	0	0.0
Giles County	4	23.7
Gloucester County	11	29.6
Goochland County	7	30.9
Grayson County	4	26.5
Greene County	3	15.5
Greensville County	1	8.5
Halifax County	5	14.3
Hampton City	17	12.6
Hanover County	12	11.5
Harrisonburg City	5	9.4
Henrico County	40	12.3
Henry County	11	21.4
Highland County	1	45.1
Hopewell City	2	8.8
Isle of Wight County	7	19.1
James City County	11	14.8
King and Queen County	2	27.9
King George County	7	26.9
King William County	5	30.6
Lancaster County	3	27.3
Lee County	3	12.4
Lexington City	5	71.0
Loudoun County	42	10.9
Louisa County	6	17.0
Lunenburg County	3	24.4
Lynchburg City	9	11.2
Madison County	3	22.9
Manassas	3	7.2
Manassas Park	0	0.0
Martinsville City	0	0.0
Mathews County	3	34.2
Mecklenburg County	5	16.2
Middlesex County	3	27.8
Montgomery County	15	15.2

Locality of Residence	Deaths	Rate
Nelson County	3	20.2
New Kent County	5	23.6
Newport News City	24	13.2
Norfolk City	23	9.4
Northampton County	2	16.5
Northumberland County	2	16.4
Norton City	2	51.8
Nottoway County	1	6.4
Orange County	6	16.9
Page County	8	33.8
Patrick County	4	22.3
Petersburg City	6	18.8
Pittsylvania County	13	21.1
Poquoson City	2	16.6
Portsmouth City	13	13.6
Powhatan County	4	14.1
Prince Edward County	3	13.0
Prince George County	7	18.5
Prince William County	48	10.5
Pulaski County	8	23.4
Radford City	3	17.2
Rappahannock County	1	13.5
Richmond City	27	12.1
Richmond County	3	34.2
Roanoke City	20	20.1
Roanoke County	17	18.1
Rockbridge County	2	8.9
Rockingham County	12	15.0

Locality of Residence	Deaths	Rate
Russell County	7	25.6
Salem City	6	23.5
Scott County	5	22.8
Shenandoah County	11	25.5
Smyth County	4	12.9
Southampton County	2	11.1
Spotsylvania County	25	18.9
Stafford County	14	9.7
Staunton City	7	28.7
Suffolk City	5	5.6
Surry County	0	0.0
Sussex County	1	8.7
Tazewell County	6	14.2
Virginia Beach City	63	13.9
Warren County	7	17.9
Washington County	14	25.8
Waynesboro City	4	18.3
Westmoreland County	4	22.7
Williamsburg City	2	13.1
Winchester City	3	10.9
Wise County	6	15.3
Wythe County	7	24.1
York County	4	5.9
Subtotal (in-state)	1109	13.2
Out of State	41	ND
Unknown	6	ND
Subtotal (out-of-state)	47	ND
TOTAL	**1156**	**13.7**

Note: No denominator is represented by ND

Map 2.5 Number of Suicides by Locality of Residence, 2016



Map 2.6 Suicide Rates by Locality of Residence, 2016

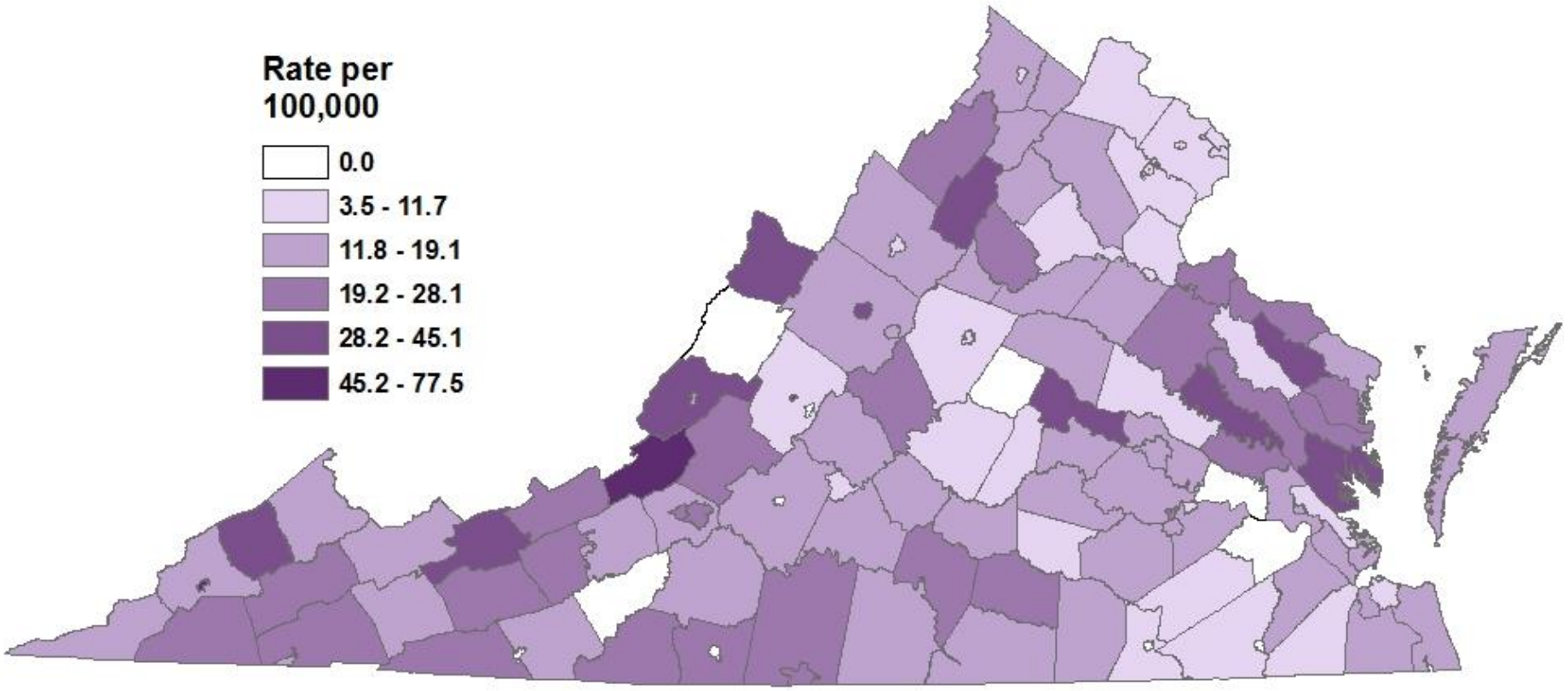


Table 2.17 Number of Suicide Deaths by Locality of Injury and Year of Death, 2006-2016

Locality of Injury	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Accomack County	4	2	1	4	6	6	1	4	4	9	4	**45**
Albemarle County	2	6	8	13	6	11	10	12	15	11	7	**101**
Alexandria City	12	11	13	14	14	14	10	16	15	10	16	**145**
Alleghany County	3	2	0	4	6	5	4	1	2	3	5	**35**
Amelia County	2	1	1	3	1	4	6	1	5	6	2	**32**
Amherst County	4	6	6	7	7	4	7	2	10	2	6	**61**
Appomattox County	2	0	0	3	3	2	2	1	2	8	2	**25**
Arlington County	14	12	28	10	21	16	16	18	18	11	18	**182**
Augusta County	12	11	13	16	11	14	16	20	20	15	15	**163**
Bath County	1	0	1	0	0	1	1	2	2	2	0	**10**
Bedford City	1	1	1	2	2	0	1	3	*	*	*	*
Bedford County	7	6	9	14	14	13	8	10	10	15	12	**118**
Bland County	2	1	0	3	1	1	1	1	3	2	2	**17**
Botetourt County	3	4	3	5	2	6	5	7	1	9	7	**52**
Bristol City	4	4	1	2	3	3	1	1	5	0	2	**26**
Brunswick County	2	2	1	1	3	1	1	2	2	2	3	**20**
Buchanan County	5	6	7	7	10	1	5	4	3	5	5	**58**
Buckingham County	3	3	5	1	3	2	2	4	2	2	3	**30**
Buena Vista City	0	0	1	1	1	0	0	1	0	0	0	**4**
Campbell County	6	3	7	6	6	10	9	13	8	12	7	**87**
Caroline County	3	6	3	3	5	2	2	8	12	4	6	**54**
Carroll County	6	8	6	10	9	7	6	8	6	8	5	**79**
Charles City County	0	0	2	2	2	3	7	1	2	2	2	**23**
Charlotte County	3	2	1	3	2	3	1	3	1	3	1	**23**
Charlottesville City	11	7	5	4	3	1	7	5	6	5	4	**58**
Chesapeake City	19	20	18	25	25	24	26	26	31	36	29	**279**
Chesterfield County	29	25	32	32	34	40	39	46	49	31	51	**408**
Clarke County	2	1	3	3	3	5	0	1	3	8	2	**31**
Colonial Heights City	1	2	3	1	2	1	6	2	6	4	6	**34**

Locality of Injury	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Covington City	2	2	1	0	0	2	2	2	1	2	1	**15**
Craig County	0	1	2	4	0	2	1	4	0	2	4	**20**
Culpeper County	6	10	2	11	5	7	9	5	9	9	5	**78**
Cumberland County	0	1	2	2	0	3	1	3	1	0	1	**14**
Danville City	7	3	4	8	7	6	4	5	9	3	9	**65**
Dickenson County	2	5	5	8	7	5	7	7	7	4	6	**63**
Dinwiddie County	3	3	1	1	7	3	2	1	3	7	4	**35**
Emporia City	3	0	2	1	1	0	0	0	0	0	0	**7**
Essex County	0	1	3	2	3	2	3	2	5	0	1	**22**
Fairfax City	2	2	1	6	4	2	2	4	3	7	1	**34**
Fairfax County	85	87	88	104	87	90	98	109	107	85	93	**1033**
Falls Church City	0	1	3	0	1	0	2	1	0	0	1	**9**
Fauquier County	7	4	8	9	14	14	13	16	9	11	9	**114**
Floyd County	2	2	1	3	4	4	5	5	6	3	0	**35**
Fluvanna County	2	3	4	2	2	3	5	6	2	1	1	**31**
Franklin City	0	0	0	0	1	0	1	1	2	0	0	**5**
Franklin County	5	8	6	7	3	10	11	12	6	10	8	**86**
Frederick County	9	7	7	8	8	14	19	12	20	14	13	**131**
Fredericksburg City	6	4	5	2	4	5	3	2	3	9	1	**44**
Galax City	1	1	2	1	3	3	1	0	1	2	0	**15**
Giles County	2	3	3	5	3	4	2	3	2	1	4	**32**
Gloucester County	7	6	9	4	8	12	9	4	4	14	10	**87**
Goochland County	2	5	2	4	2	0	1	6	4	7	8	**41**
Grayson County	3	2	5	2	2	8	5	2	4	1	4	**38**
Greene County	4	2	2	3	4	3	1	1	2	1	4	**27**
Greensville County	2	0	0	2	2	4	1	4	1	0	0	**16**
Halifax County	8	4	4	5	5	4	6	3	6	7	7	**59**
Hampton City	13	16	18	16	9	7	13	17	18	15	19	**161**
Hanover County	12	15	17	11	6	15	23	21	16	13	14	**163**
Harrisonburg City	2	4	4	6	6	2	1	4	6	5	8	**48**
Henrico County	37	25	25	39	30	42	31	41	36	36	31	**373**

Locality of Injury	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Henry County	11	12	19	13	16	10	9	9	10	10	10	**129**
Highland County	0	0	0	0	1	1	1	2	1	2	2	**10**
Hopewell City	1	2	2	3	3	2	3	4	5	4	5	**34**
Isle of Wight County	5	1	0	3	2	4	6	4	5	7	7	**44**
James City County	5	4	9	7	9	6	10	4	12	11	9	**86**
King and Queen County	2	4	2	1	1	1	3	0	1	1	2	**18**
King George County	3	2	2	3	6	3	4	8	5	3	6	**45**
King William County	1	1	1	4	0	2	7	2	3	5	5	**31**
Lancaster County	0	3	4	1	2	2	4	2	2	4	4	**28**
Lee County	5	4	7	5	2	5	9	4	5	7	3	**56**
Lexington City	0	1	0	0	0	0	1	1	1	2	4	**10**
Loudoun County	20	23	13	24	20	35	35	34	34	36	45	**319**
Louisa County	5	8	2	5	9	7	3	3	2	5	7	**56**
Lunenburg County	6	1	1	3	1	2	3	2	2	3	4	**28**
Lynchburg City	8	6	13	5	9	10	6	4	7	10	7	**85**
Madison County	2	4	3	1	3	1	4	1	4	6	4	**33**
Manassas	2	3	9	3	1	5	5	4	7	4	4	**47**
Manassas Park	Unknown	1	0	0	1	0	0	2	3	1	1	**9**
Martinsville City	0	4	0	1	1	4	1	3	2	2	0	**18**
Mathews County	1	0	2	0	1	2	1	1	3	2	3	**16**
Mecklenburg County	4	6	7	5	8	4	4	4	3	6	7	**58**
Middlesex County	0	1	1	5	1	3	3	4	0	3	1	**22**
Montgomery County	11	22	8	5	9	14	8	7	11	10	17	**122**
Nelson County	2	1	3	4	4	3	3	4	3	2	2	**31**
New Kent County	3	2	2	3	1	6	5	3	5	4	5	**39**
Newport News City	11	15	18	14	20	23	29	19	25	22	30	**226**
Norfolk City	27	33	29	22	29	28	29	30	34	23	26	**310**
Northampton County	0	4	1	0	1	5	0	2	3	3	2	**21**
Northumberland County	1	3	2	0	4	3	0	0	1	2	2	**18**
Norton City	0	0	2	1	0	1	1	0	0	0	1	**6**
Nottoway County	1	0	4	4	3	3	2	1	5	4	1	**28**

Locality of Injury	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Orange County	6	4	5	2	4	5	12	6	9	10	6	**69**
Page County	6	5	7	3	4	8	4	5	11	5	6	**64**
Patrick County	3	4	4	4	7	4	5	9	5	6	5	**56**
Petersburg City	1	4	7	3	4	3	4	2	6	5	8	**47**
Pittsylvania County	13	9	6	13	9	9	12	16	5	10	14	**116**
Poquoson City	1	1	1	0	0	0	0	2	1	0	2	**8**
Portsmouth City	8	14	10	11	16	8	20	9	13	16	16	**141**
Powhatan County	5	1	4	2	8	6	5	4	6	6	4	**51**
Prince Edward County	3	3	1	5	3	3	4	3	4	4	2	**35**
Prince George County	6	7	7	7	5	4	2	5	8	6	7	**64**
Prince William County	32	28	35	41	41	28	33	37	38	30	47	**390**
Pulaski County	11	10	2	6	9	9	6	7	1	8	12	**81**
Radford City	1	0	2	0	2	1	1	5	2	1	2	**17**
Rappahannock County	0	4	3	1	3	2	5	0	2	2	1	**23**
Richmond City	32	25	22	35	21	32	25	27	23	25	30	**297**
Richmond County	1	1	4	0	2	1	1	1	0	1	4	**16**
Roanoke City	10	15	19	13	18	19	25	16	21	16	17	**189**
Roanoke County	11	7	19	9	20	14	13	12	17	14	16	**152**
Rockbridge County	5	4	6	5	5	6	3	3	7	4	4	**52**
Rockingham County	9	10	9	4	12	10	9	10	10	21	14	**118**
Russell County	5	4	10	7	5	6	6	6	4	4	7	**64**
Salem City	4	7	5	0	2	6	6	6	9	7	7	**59**
Scott County	3	12	5	4	5	6	5	4	2	4	7	**57**
Shenandoah County	7	5	8	8	5	9	7	7	8	10	15	**89**
Smyth County	3	11	5	3	3	6	7	10	6	5	4	**63**
Southampton County	4	1	4	3	4	2	2	2	1	2	2	**27**
Spotsylvania County	13	18	17	10	22	11	13	15	14	14	26	**173**
Stafford County	6	14	15	15	5	9	13	19	11	20	18	**145**
Staunton City	4	7	1	6	4	4	1	3	3	2	3	**38**
Suffolk City	11	1	10	6	5	14	12	12	14	11	6	**102**
Surry County	0	1	0	4	1	0	2	1	0	0	0	**9**

Locality of Injury	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Sussex County	1	2	1	4	4	1	1	4	0	2	3	**23**
Tazewell County	11	4	4	12	6	6	8	5	5	14	7	**82**
Virginia Beach City	61	49	45	59	63	65	51	49	71	46	61	**620**
Warren County	3	12	8	6	5	7	8	7	8	6	10	**80**
Washington County	6	10	11	13	10	10	11	9	8	12	14	**114**
Waynesboro City	6	3	3	4	2	3	2	4	0	6	3	**36**
Westmoreland County	4	2	4	2	2	5	5	3	4	1	4	**36**
Williamsburg City	10	2	1	1	8	6	1	0	6	4	2	**41**
Winchester City	6	1	7	2	6	5	3	3	9	7	4	**53**
Wise County	9	13	8	4	5	9	3	3	8	7	5	**74**
Wythe County	4	4	8	5	2	7	4	3	5	9	7	**58**
York County	3	8	11	6	11	15	8	7	8	6	4	**87**
Subtotal (in-state)	882	897	945	968	989	1055	1049	1055	1133	1087	1151	**11211**
Out of State	2	6	3	4	4	9	3	5	9	8	4	**57**
Unknown	0	0	1	1	1	0	0	1	3	2	1	**10**
Subtotal (out-of-state)	*2*	*6*	*4*	*5*	*5*	*9*	*3*	*6*	*12*	*10*	*5*	***67***
TOTAL	**884**	**903**	**949**	**973**	**994**	**1064**	**1052**	**1061**	**1145**	**1097**	**1156**	**11278**

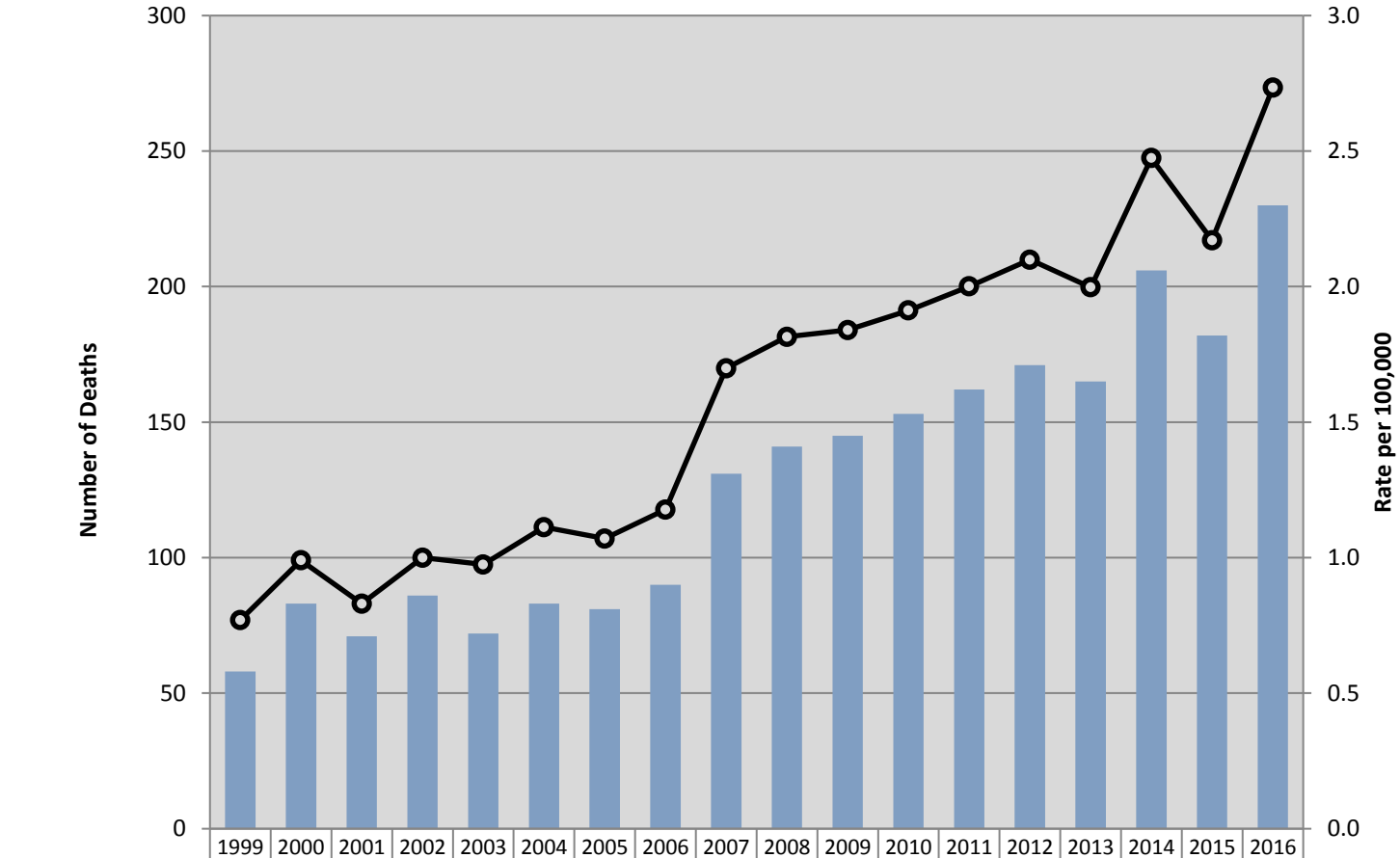
*Bedford City was incorporated into Bedford County in 2014 and therefore, numbers are combined from there forward

UNDETERMINED DEATHS (N=230)

Undetermined deaths are those in which after examination, two or more manners cannot be eliminated and therefore the death must be ruled undetermined. In 2016, the number of undetermined deaths increased by 26.4% compared to 2015. Generally, undetermined deaths have increased since 2006 mainly due to the transition in nomenclature of sudden infant death syndrome (SIDS) to sudden unexpected infant death (SUID), where SIDS deaths are classified as natural deaths and SUID deaths are classified as undetermined deaths.

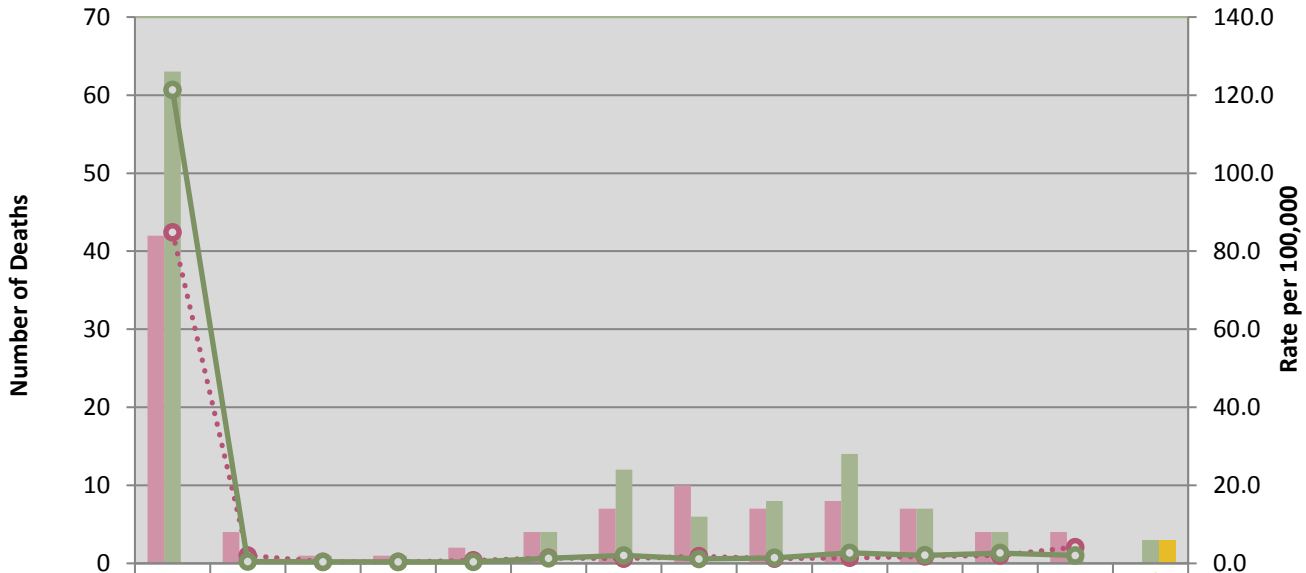
- Over forty percent of the cases assigned an undetermined manner had a determined cause of death
- Nearly 36% of deaths with an undetermined manner were among infants less than 1 year of age

Figure 2.29 Number and Rate of Undetermined Deaths by Year of Death, 1999-2016



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Deaths	58	83	71	86	72	83	81	90	131	141	145	153	162	171	165	206	182	230
Mortality Rate	0.8	1.0	0.8	1.0	1.0	1.1	1.1	1.2	1.7	1.8	1.8	1.9	2.0	2.1	2.0	2.5	2.2	2.7

Figure 2.30 Number and Rate of Undetermined Deaths by Age Group and Gender, 2016



	<1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Unknown
Female	42	4	1	1	2	4	7	10	7	8	7	4	4	0
Male	63	1	1	1	1	4	12	6	8	14	7	4	1	3
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Female Rate	84.8	2.0	0.4	0.4	0.8	1.4	1.2	1.8	1.2	1.4	1.8	2.0	4.2	*
Male Rate	121.3	0.5	0.4	0.4	0.4	1.3	2.0	1.1	1.4	2.7	2.0	2.6	2.0	*

*No rate can be calculated

Figure 2.31 Percentage of Undetermined Deaths by Race/Ethnicity, 2016

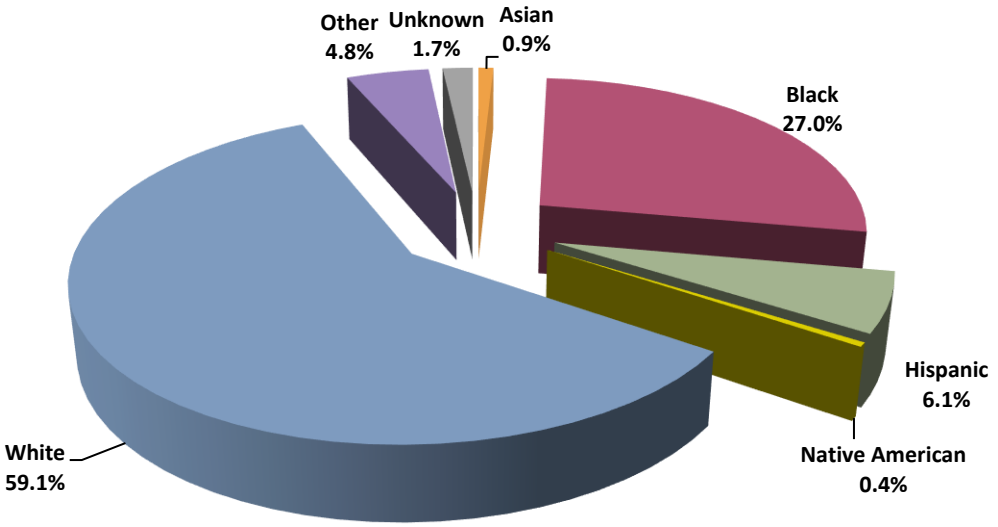


Table 2.18 Number of Undetermined Deaths by Cause of Death, 2016

Undetermined Manner of Death with Cause of Death Determined	Autopsied	Total Cases
Asphyxia		
Drowned	5	5
Suffocated/Smothered	1	1
Other asphyxia	2	2
Drug Use		
Ingested and/or injected illicit, prescription, and/or OTC medication	16	32
Fire		
Thermal burns and/or inhalation of combustion products	8	8
Jump/Fall		
Jumped/Fell from height	2	4
Motor Vehicle		
Car	2	3
Sport utility vehicle	0	1
Train	0	2
Unknown	1	1
Traumatic Injury		
Gunshot wound		
Handgun	6	6
Sharp force injury	1	1
Other/Unknown traumatic causes	5	6
Other		
Other	14	21
Subtotal (Undetermined Manner with Determined Cause of Death)	**63**	**93**
Undetermined Manner of Death and Undetermined Cause of Death		
Skeletal/Mummified remains	15	**16**
Sudden Unexpected Infant Death (SUID)	83	**83**
Undetermined after autopsy and/or toxicology	33	**38**
Subtotal (Undetermined Manner and Undetermined Cause of Death)	**131**	**137**
TOTAL UNDETERMINED DEATHS	**194**	**230**

SECTION 3: DEATHS OF CHILDREN (N=328)

Child deaths are deaths of persons aged 17 years and younger.

The OCME investigated 328 deaths of children, representing 4.8% of all OCME deaths in 2016.

- Males represented 62.2% of all child cases
- Infants under one year of age had the largest percentage of child death investigations (45.7%)
- The leading cause of death for infants and very young children was sudden unexpected infant death (SUID) cases. For older children over 12 years of age, the leading cause of death was suicidal gunshot wounds

Figure 3.1 Number of Child Deaths by Manner, 2016

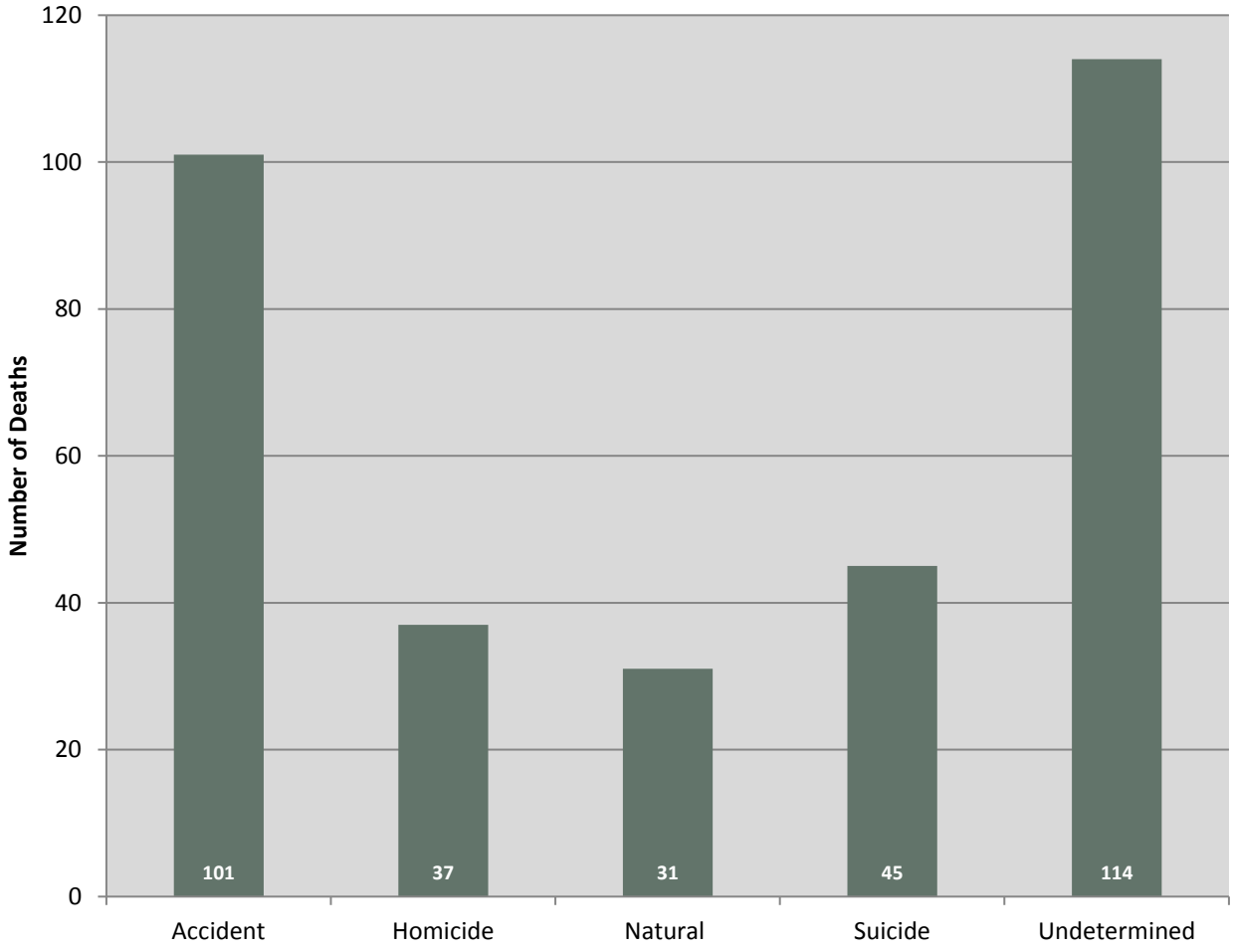
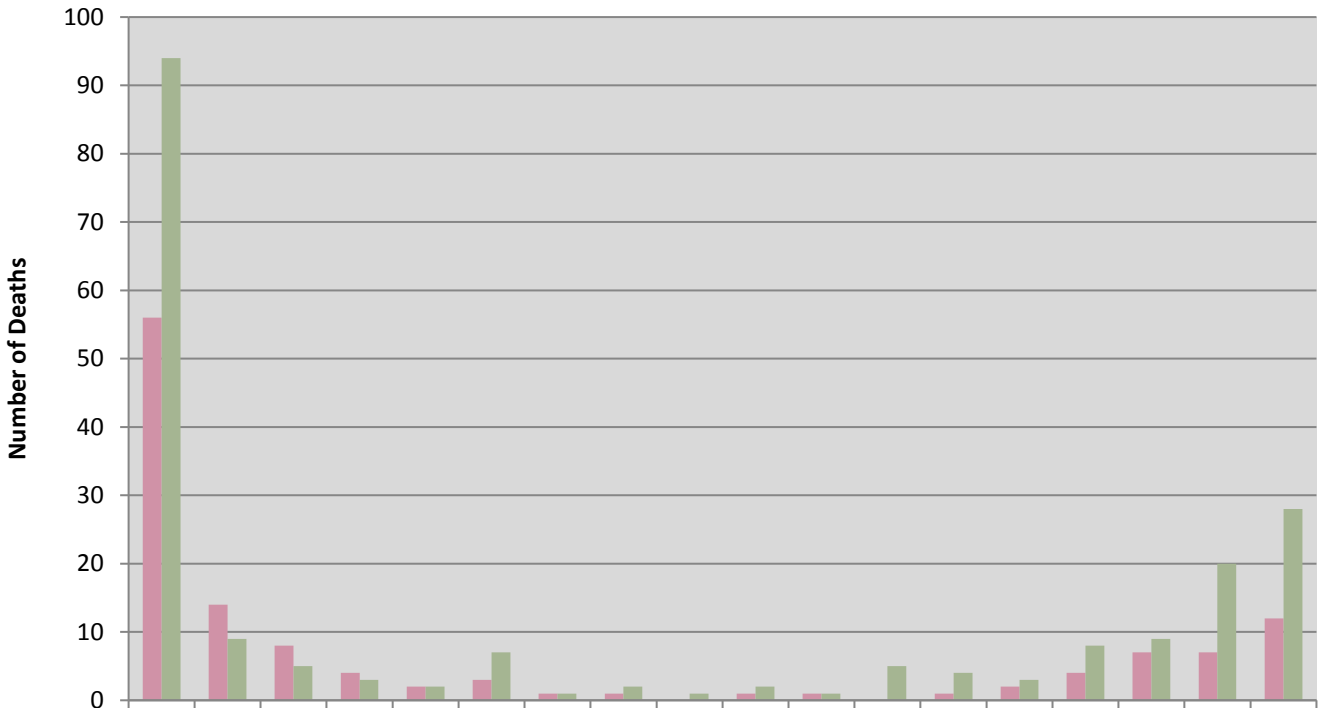


Figure 3.2 Number of Child Deaths by Age and Gender, 2016



	<1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Female	56	14	8	4	2	3	1	1	0	1	1	0	1	2	4	7	7	12
Male	94	9	5	3	2	7	1	2	1	2	1	5	4	3	8	9	20	28

Figure 3.3 Percentage of Child Deaths by Race/Ethnicity, 2016

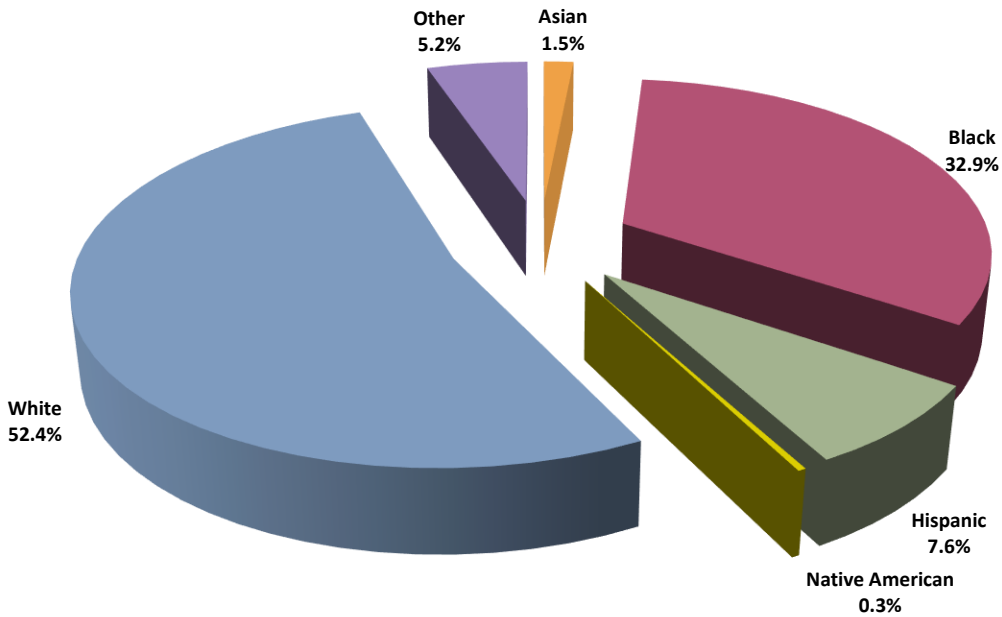
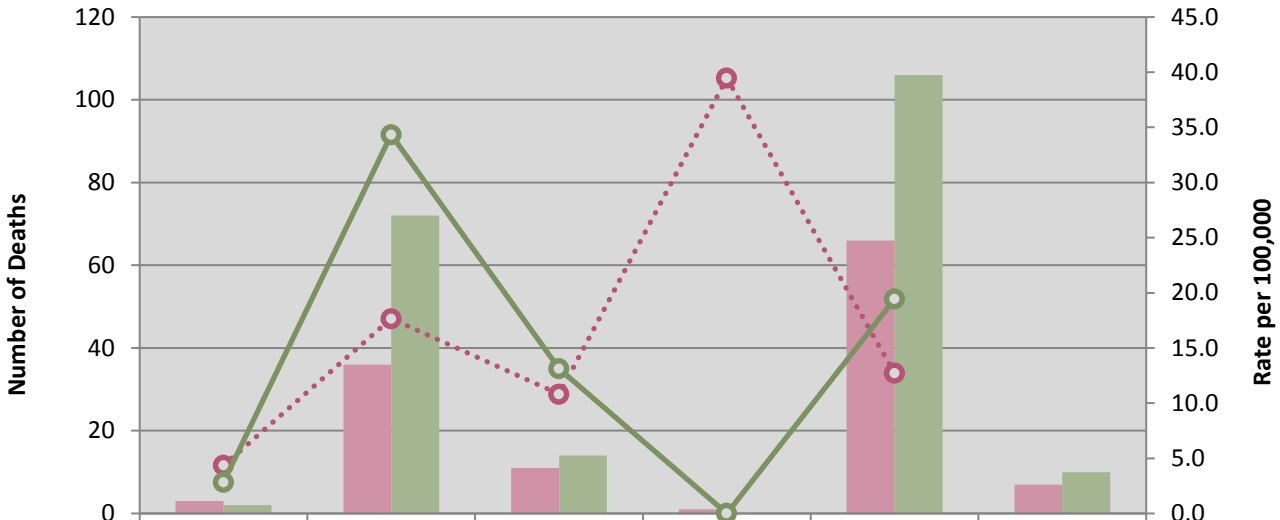


Figure 3.4 Number and Rate of Child Deaths by Gender and Race/Ethnicity, 2016



	Asian	Black	Hispanic	Native American	White	Other
Female	3	36	11	1	66	7
Male	2	72	14	0	106	10
Female Rate	4.4	17.7	10.8	39.5	12.7	*
Male Rate	2.8	34.3	13.1	0.0	19.4	*

*No rate can be calculated
** Rates calculated from small case counts (n<5) are considered unreliable and should be interpreted with caution (Asians and Native Americans)

Figure 3.5 Number of Child Deaths by Manner and Race/Ethnicity, 2016

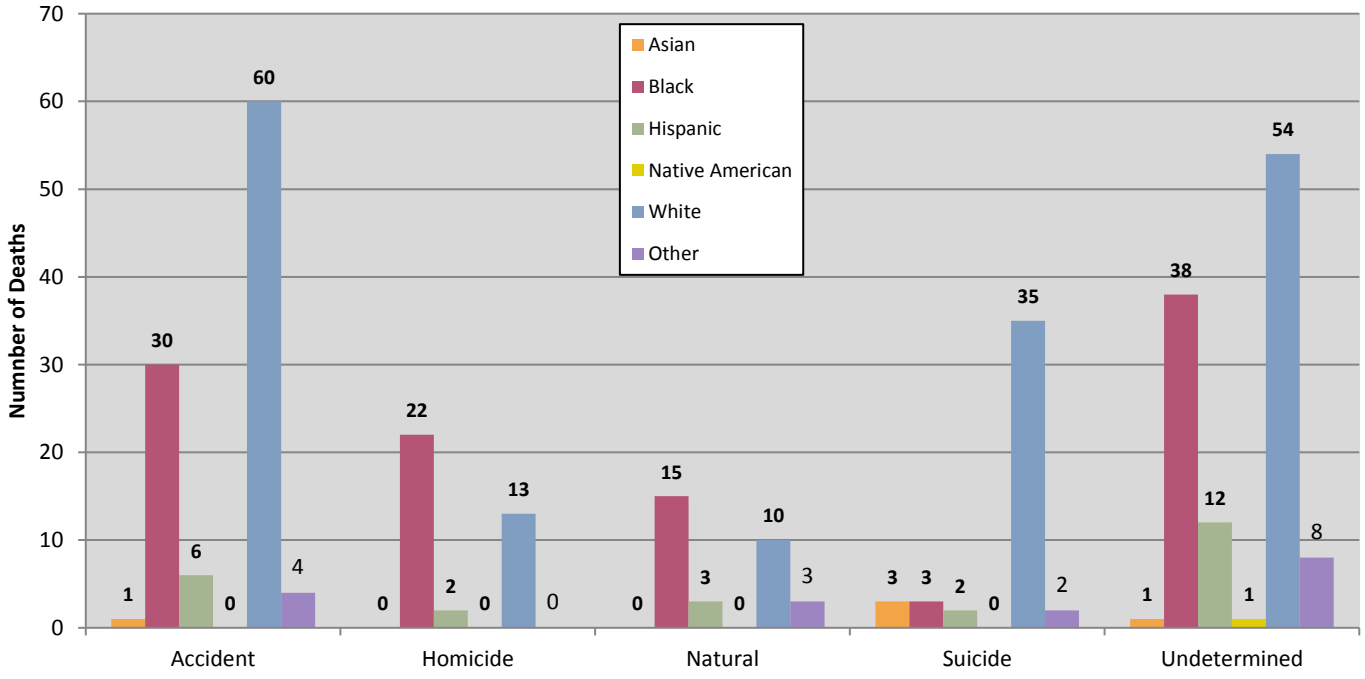


Table 3.1 Number of Child Deaths by Cause of Death, 2016

NATURAL CHILD DEATHS	Autopsied	Total Cases
Cardiovascular Diseases/Disorders		
Cardiac arrhythmia not otherwise specified	1	**1**
Cardiomyopathy not otherwise specified	2	**2**
Other cardiac disease/disorder	3	**3**
Central Nervous System Diseases/Disorders		
Other CNS disease/disorder	1	**1**
Meningitis (bacterial or viral)	2	**2**
Seizure Disorder	2	**2**
Gastrointestinal Diseases/Disorders		
Other gastrointestinal disease/disorder	0	**1**
Genitourinal Diseases/Disorders		
Renal disease	1	**1**
Perinatal and Pediatric Diseases/Disorders		
Fetal complications	1	**1**
Maternal complications	3	**3**
Sudden infant death syndrome (SIDS)	1	**1**
Pulmonary Diseases/Disorders		
Other pulmonary diseases/disorders	1	**1**
Pneumonia	6	**6**
Systemic Diseases/Disorders		
Other infectious disease	1	**1**
Sepsis	2	**2**
Other Natural Death/Disorder		
Other natural death/disorder	1	**1**
Subtotal of Natural Child Deaths	**28**	**29**
UNNATURAL CHILD DEATHS	**Autopsied**	**Total Cases**
Asphyxia		
Choked (aspiration of food or foreign object)	1	**2**
Drowned	10	**12**
Hanged	13	**17**
Mechanical/Positional asphyxia	4	**5**
Strangled/Neck compression	1	**1**
Suffocated/Smothered	11	**11**
Other asphyxia	1	**1**
Drug Use		
Ingested and/or injected illicit, prescription, and/or other type of drug	10	**12**
Environmental Exposure		
Exposed to cold	1	**1**
Fall/Jump		
Fall/Jump from height	1	**2**

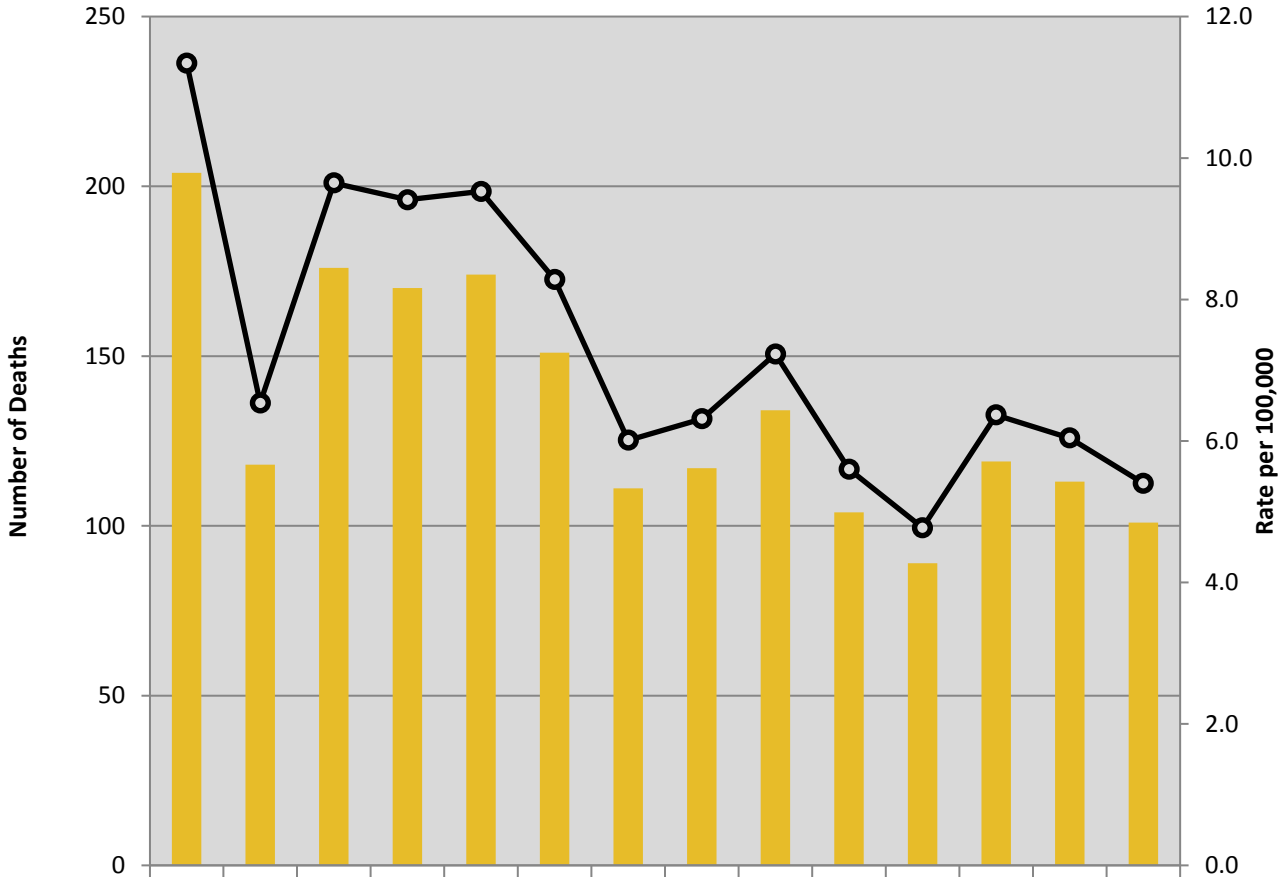
Fire Injuries		
Thermal burns and/or inhalation of combustion products	13	**17**
Gunshot Wound		
Handgun	32	**32**
Rifle	3	**3**
Shotgun	3	**3**
Unknown	2	**2**
Motor Vehicle		
Boat	0	**1**
Car	1	**20**
Dirt bike	0	**1**
Farm equipment	1	**1**
Motorcycle	0	**1**
Pickup truck	0	**6**
Sport utility vehicle	2	**6**
Tractor trailer	0	**1**
Truck other	1	**2**
Van	1	**4**
Traumatic Injury		
Beatings	17	**17**
Electrocuted	1	**1**
Sharp force injuries	2	**2**
Other Unnatural Deaths		
Other	6	**8**
Subtotal of Unnatural Child Deaths	**138**	**192**
UNDETERMINED CHILD DEATHS	**Autopsied**	**Total Cases**
Undetermined After Autopsy and/or Investigation		
Skeletal/Mummified remains	1	1
Sudden unexpected infant death (SUID)	85	**85**
Undetermined after autopsy and/or toxicology	21	**21**
Subtotal of Undetermined Child Deaths	**107**	**107**
TOTAL CHILD DEATHS	**273**	**328**

ACCIDENTAL CHILD DEATHS (N=101)

The number of accidental child deaths decreased by 10.6% between 2015 and 2016.

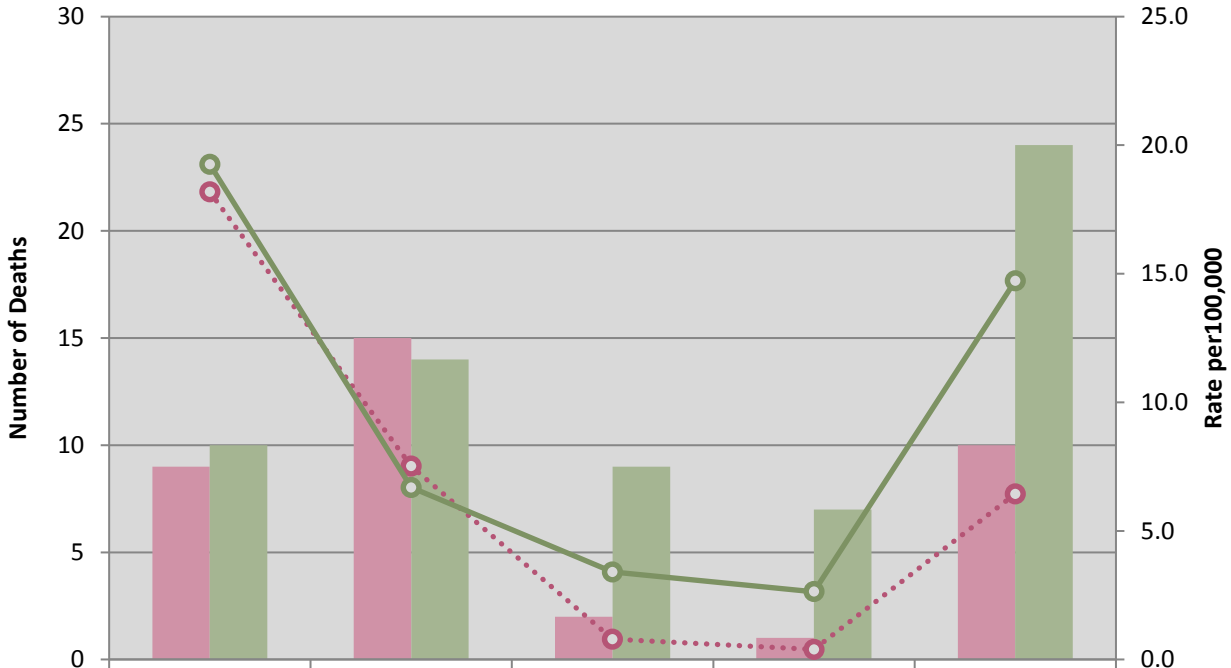
- The largest number of accidental deaths occurred among males (63.4%), whites (59.4%), and children aged 15-17 years (33.7%)
- Black males had the highest rate of accidental death (9.1 deaths per 100,000 persons aged 0-17 years), followed by white males (7.0 deaths per 100,000 persons aged 0-17 years)
- Motor vehicle accidents were the leading method of death (42.8%), followed by accidental drownings (11.9%) and fires (11.9%)

Figure 3.6 Number and Rate of Accidental Child Deaths by Year, 2003-2016



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Deaths	204	118	176	170	174	151	111	117	134	104	89	119	113	101
Mortality Rate	11.3	6.5	9.6	9.4	9.5	8.3	6.0	6.3	7.2	5.6	4.8	6.4	6.0	5.4

Figure 3.7 Number and Rate of Accidental Child Deaths by Age Group and Gender, 2016



	<1	1-4	5-9	10-14	15-17
Female	9	15	2	1	10
Male	10	14	9	7	24
Female Rate	18.2	7.5	0.8	0.4	6.4
Male Rate	19.3	6.7	3.4	2.6	14.7

Figure 3.8 Percentage of Accidental Child Deaths by Race/Ethnicity, 2016

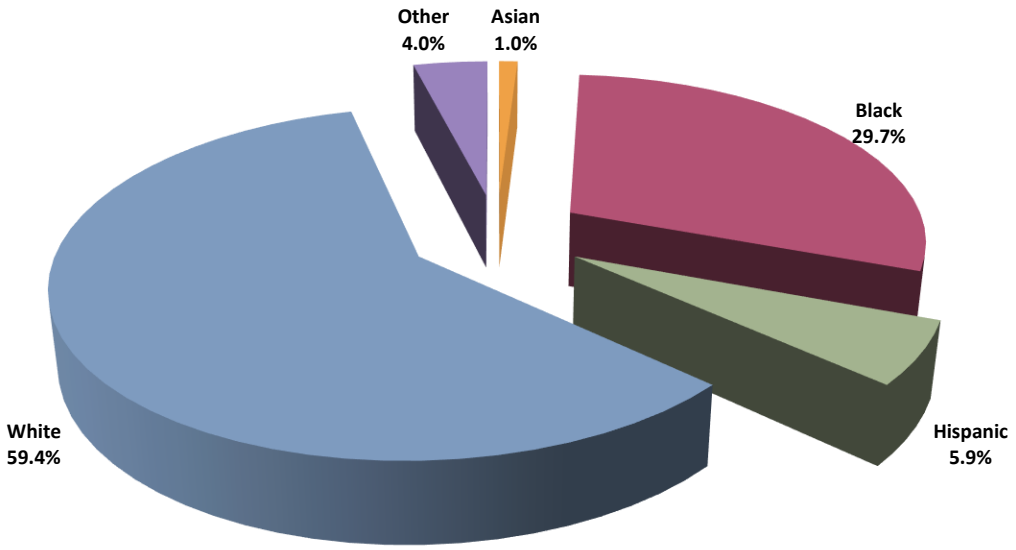
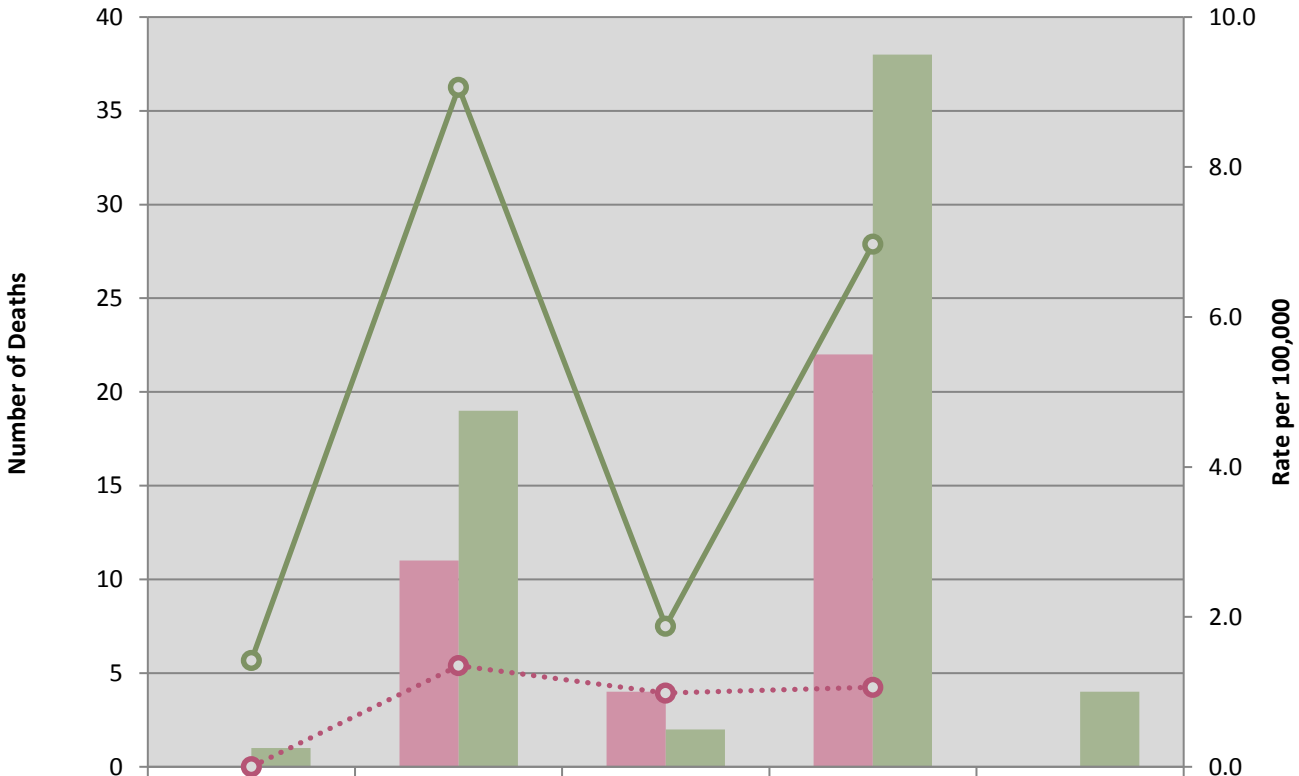


Figure 3.9 Number and Rate of Accidental Child Deaths by Gender and Race/Ethnicity, 2016



	Asian	Black	Hispanic	White	Other
Female	0	11	4	22	0
Male	1	19	2	38	4
Female Rate	0.0	5.4	3.9	4.2	*
Male Rate	1.4	9.1	1.9	7.0	*

*No rate can be calculated
** Rates calculated from small case counts (n<5) are considered unreliable and should be interpreted with caution (Asians and Hispanics)

Figure 3.10 Number of Accidental Child Deaths by Month of Death, 2016

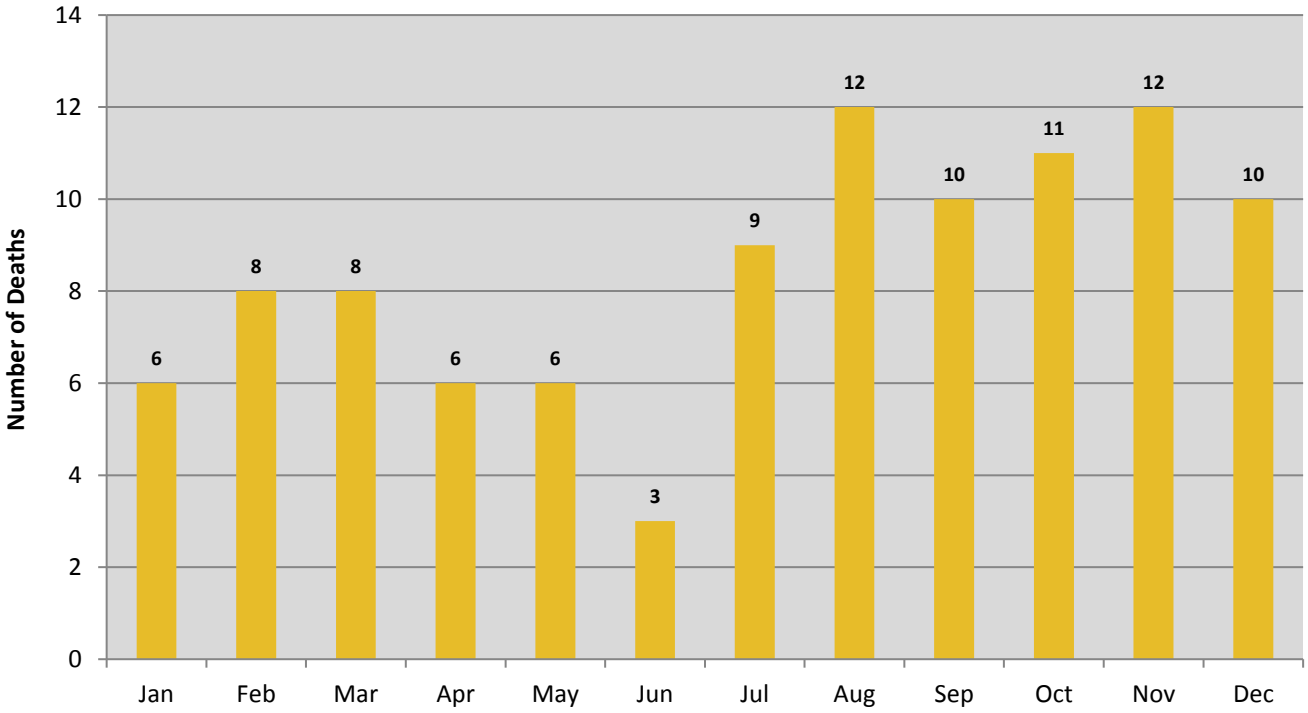


Figure 3.11 Number of Accidental Child Deaths by Day of Week, 2016

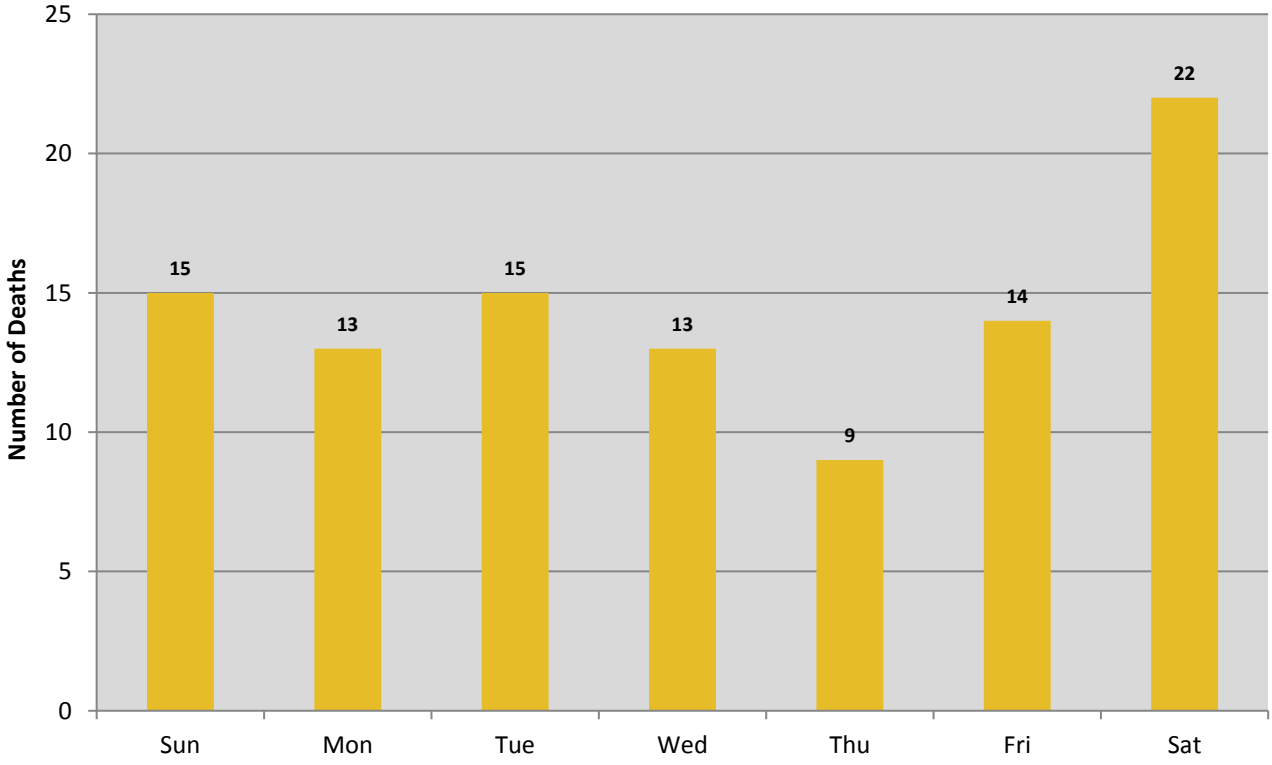


Table 3.2 Number of Accidental Child Deaths by Cause and Method of Death, 2016

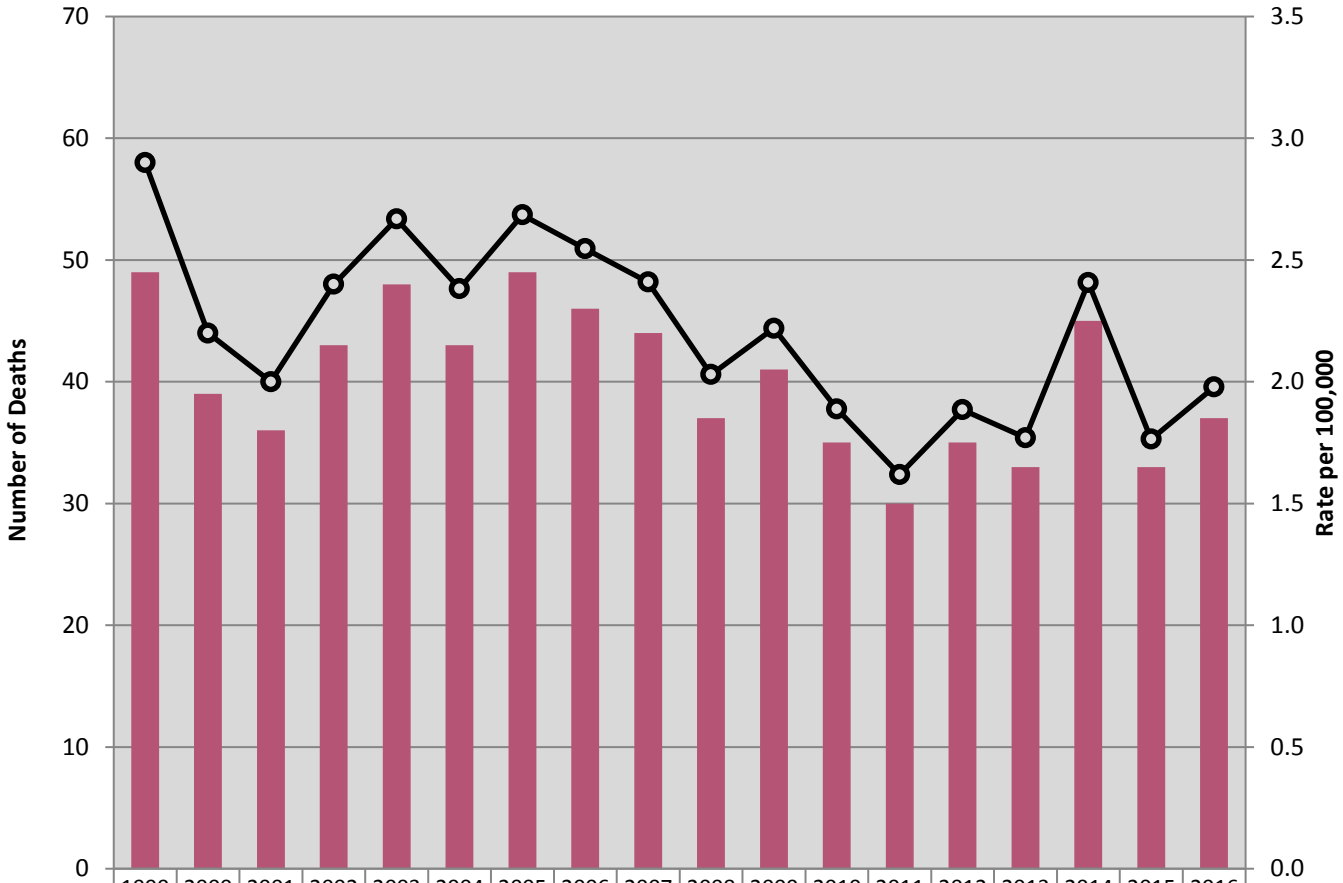
Method of Death	Autopsied	Total Cases
Asphyxia		
Choked (aspiration of food or foreign object)	1	**2**
Drowned	10	**12**
Mechanical/Positional asphyxia	4	**5**
Strangled/Neck compression	1	**1**
Suffocated/Smothered	9	**9**
Drug Use		
Ingested and/or injected illicit, prescription, and/or other type of drug	7	**8**
Electrical		
Contacted electrical current	1	**1**
Environmental Exposure		
Exposed to heat	1	**1**
Fall/Jump		
Fall/Jump from height	1	**1**
Fire Injuries		
Thermal burns and/or inhalation of combustion products	8	**12**
Gunshot Wound		
Handgun	3	**3**
Shotgun		
Motor Vehicle		
Boat	0	**1**
Car	1	**20**
Dirt bike	0	**1**
Farm equipment	1	**1**
Motorcycle	0	**1**
Pickup truck	0	**6**
Sport utility vehicle	2	**6**
Tractor trailer	0	**1**
Truck other	1	**2**
Van	1	**4**
Other Unnatural Deaths		
Other	1	**3**
TOTAL ACCIDENTAL CHILD DEATHS	**53**	**101**

CHILD HOMICIDE DEATHS (N=37)

The number of child homicide deaths in 2016 increased by 12.1% when compared to 2015. Homicides represented 11.3% of all child deaths.

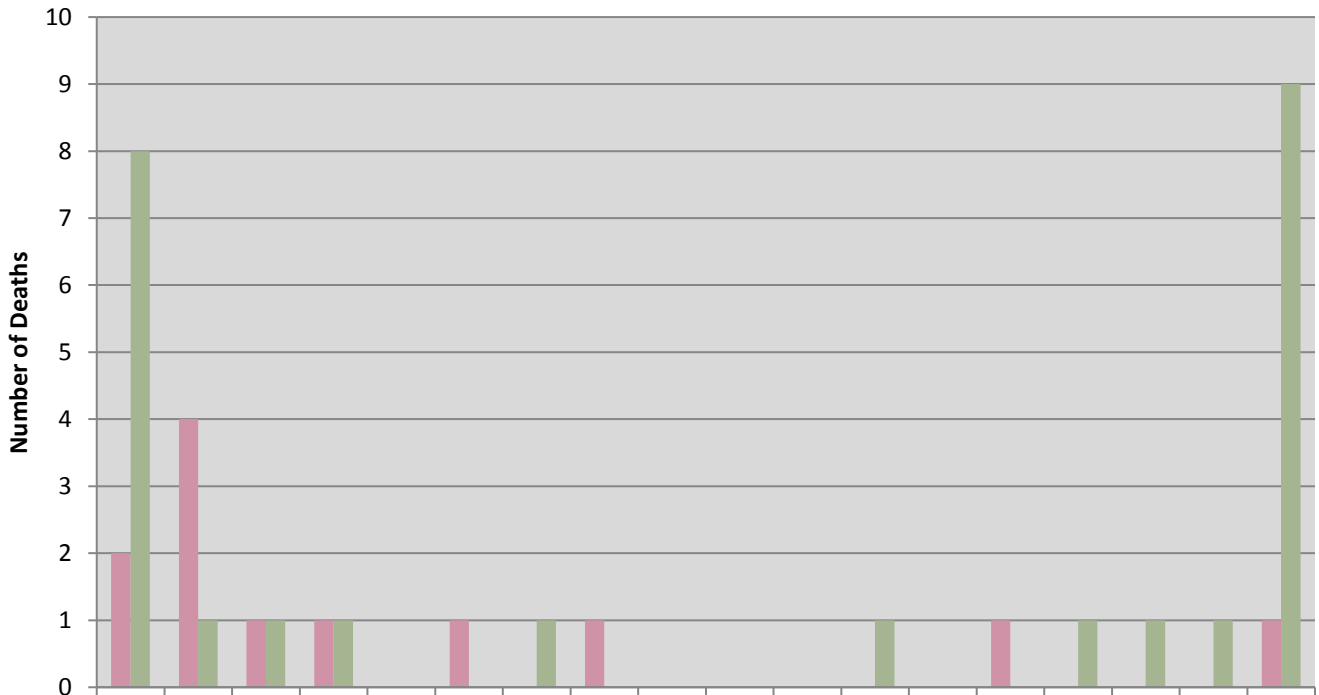
- Homicides in children occurred most frequently among males (67.6%) and among blacks (59.4%)
- Black males had the highest rate of child homicides with 8.1 deaths per 100,000 persons aged 0-17 years
- Beatings (51.5%) were the most common method of child homicide in 2016, followed by gunshot wounds (45.4%)

Figure 3.12 Number and Rate of Child Homicide Deaths by Year, 1999-2016



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Deaths	49	39	36	43	48	43	49	46	44	37	41	35	30	35	33	45	33	37
Mortality Rate	2.9	2.2	2.0	2.4	2.7	2.4	2.7	2.5	2.4	2.0	2.2	1.9	1.6	1.9	1.8	2.4	1.8	2.0

Figure 3.13 Number of Child Homicide Deaths by Age and Gender, 2016



	<1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Female	2	4	1	1	0	1	0	1	0	0	0	0	0	1	0	0	0	1
Male	8	1	1	1	0	0	1	0	0	0	0	1	0	0	1	1	1	9

Figure 3.14 Percentage of Child Homicide Deaths by Race/Ethnicity, 2016

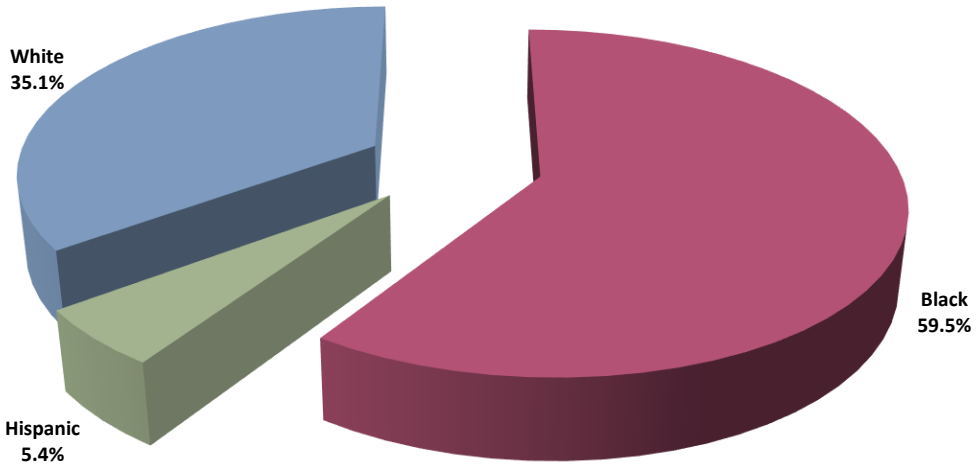
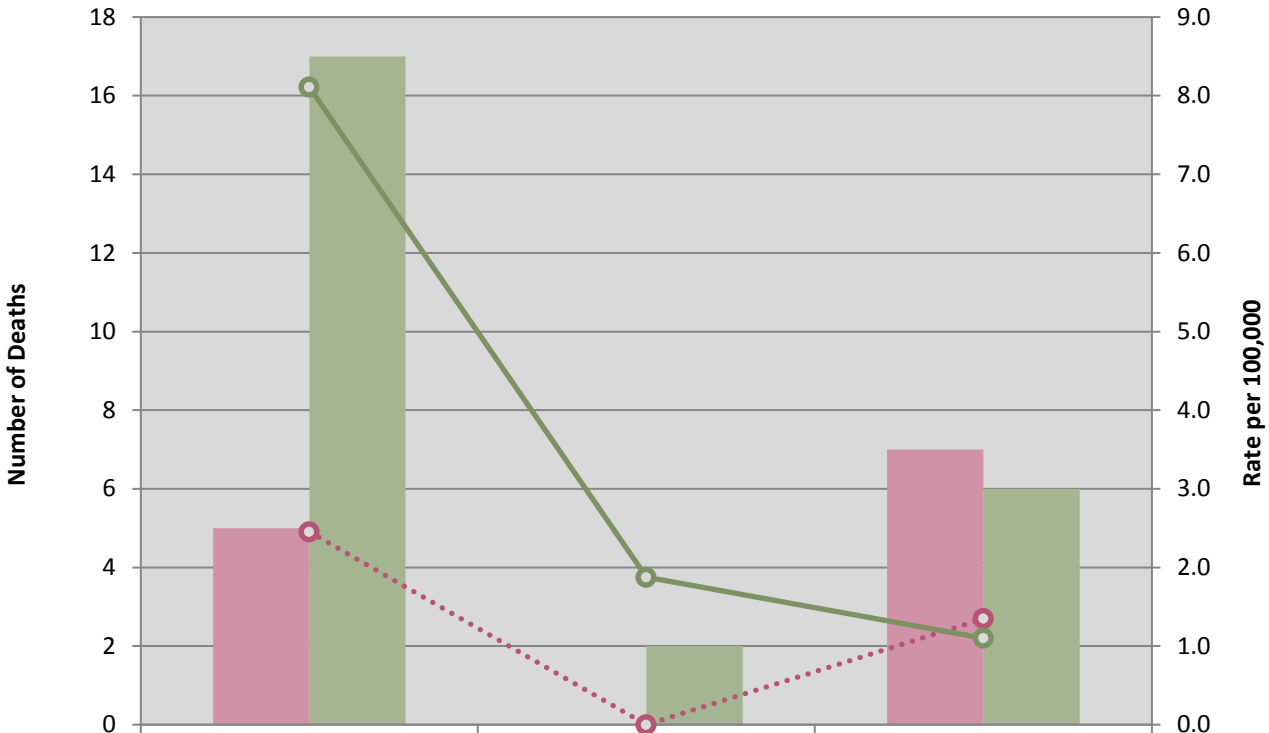


Figure 3.15 Number and Rate of Child Homicide Deaths by Gender and Race/Ethnicity, 2016



	Black	Hispanic	White
Female	5	0	7
Male	17	2	6
Female Rate	2.5	0.0	1.3
Male Rate	8.1	1.9	1.1

* Rates calculated from small case counts (n<5) are considered unreliable and should be interpreted with caution (Hispanics)

Figure 3.16 Number of Child Homicide Deaths by Month of Death, 2016

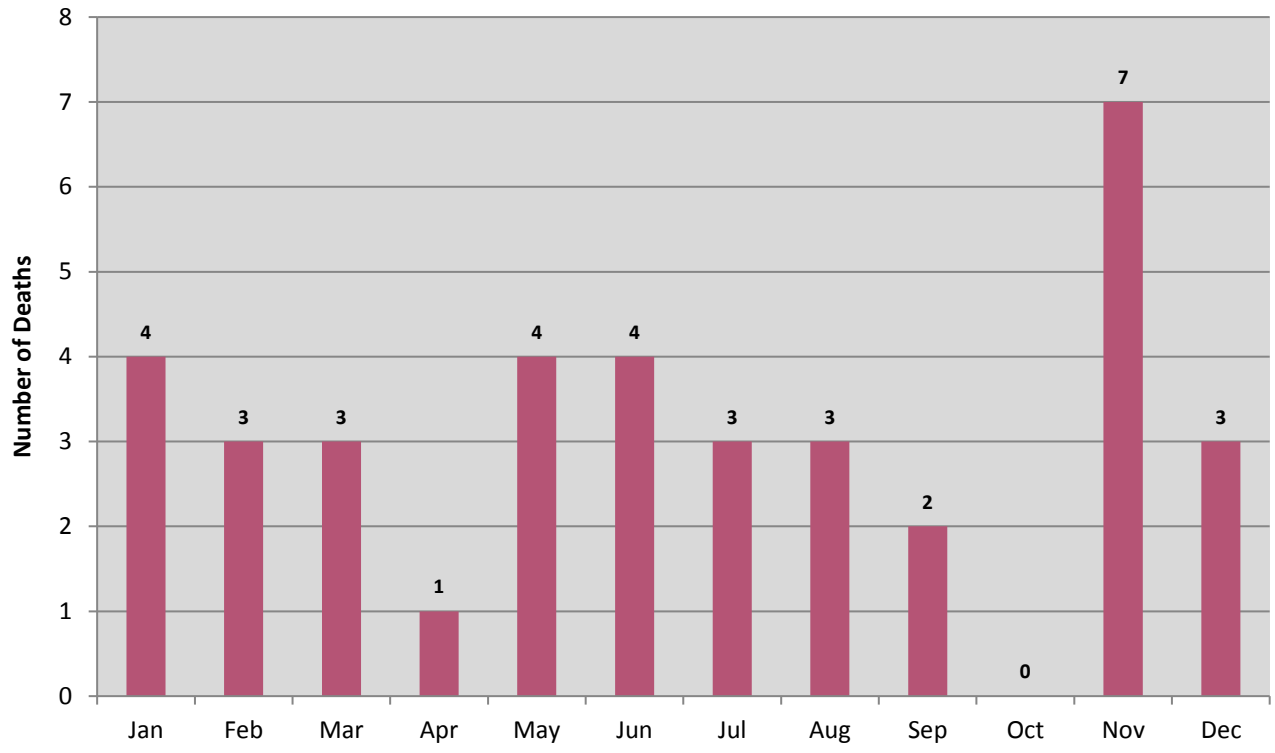


Figure 3.17 Number of Child Homicide Deaths by Day of the Week, 2016

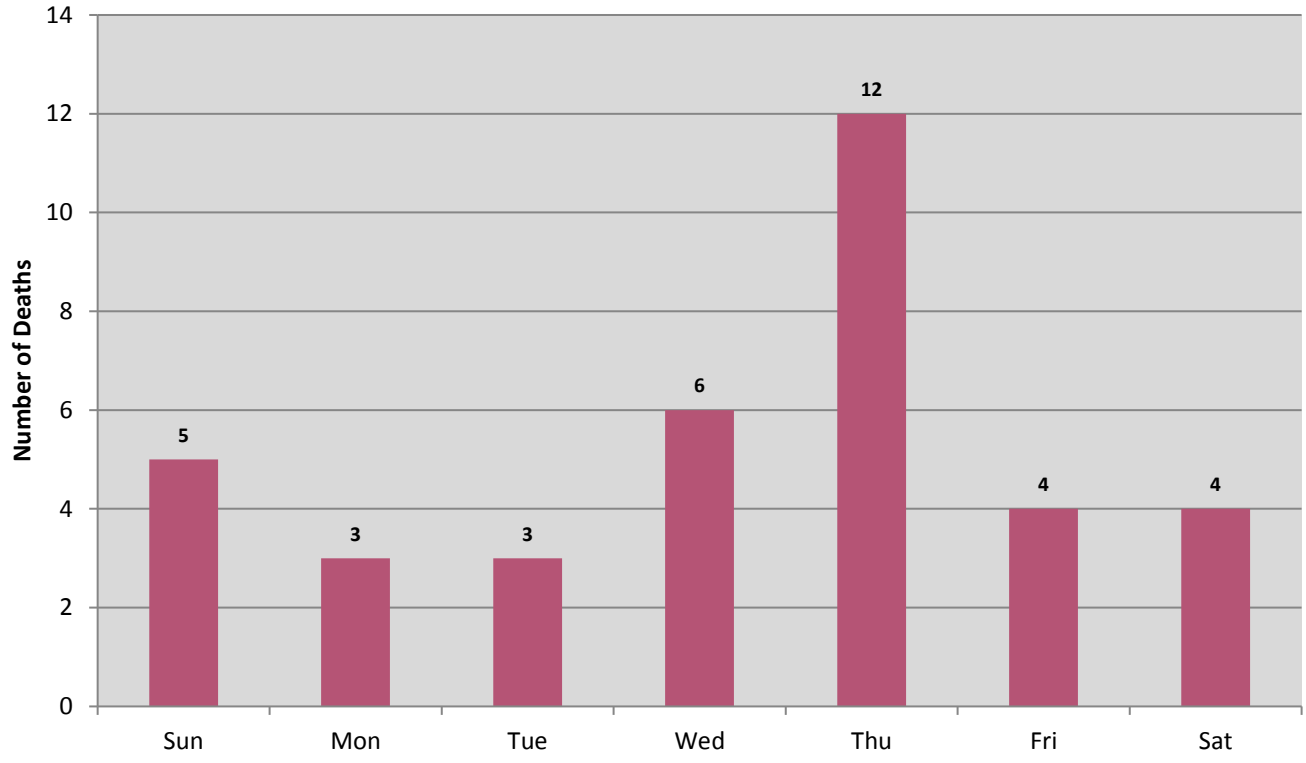


Table 3.3 Number of Child Homicide Deaths by Cause and Method of Death, 2016

Method of Death	Autopsied	Total Cases
Asphyxia		
Suffocated/Smothered	1	**1**
Drug Use		
Ingested and/or injected illicit, prescription, and/or other type of drug	1	**1**
Fire Injuries		
Thermal burns and/or inhalation of combustion products	2	**2**
Traumatic Injury		
Beaten by assailant(s)	17	**17**
Sharp force injuries	1	**1**
Shot by assailant(s) with firearm		
Handgun	12	12
Rifle	1	1
Unknown	2	2
TOTAL CHILD HOMICIDE DEATHS	**33**	**33**

NATURAL CHILD DEATHS (N=31)

Infants made up the largest proportion of natural child deaths (51.6%) that fell under the OCME's jurisdiction.

- Pneumonia was the most common category of natural deaths among children

NOTE: Due to the change of OCME case definitions which includes the addition of the sudden unexpected infant death (SUID) classification of infant death in 2007 (undetermined manner of death), sudden infant death syndrome (SIDS) cases have drastically decreased (natural manner of death)

Figure 3.18 Number of Natural Child Deaths by Age Group and Gender, 2016

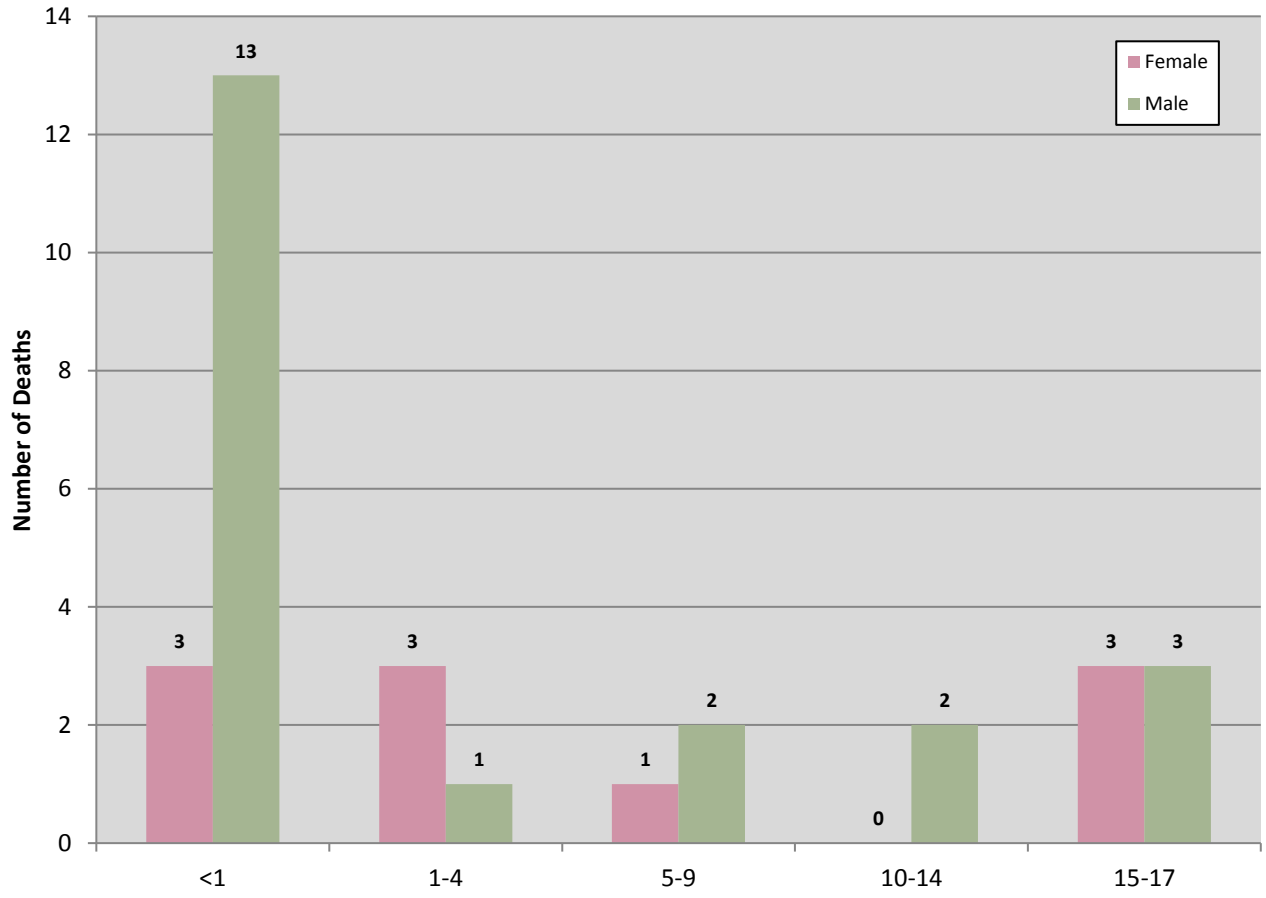


Figure 3.19 Percentage of Natural Child Deaths by Race/Ethnicity, 2016

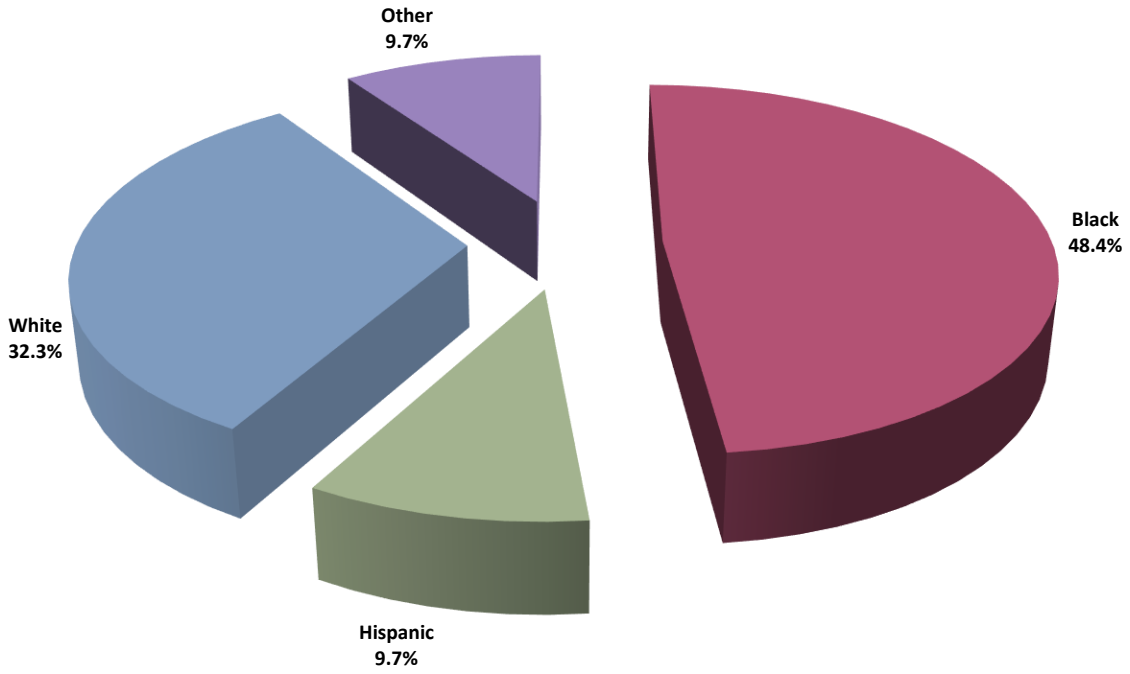


Figure 3.20 Number of OCME SIDS Cases by Year of Death, 2003-2016

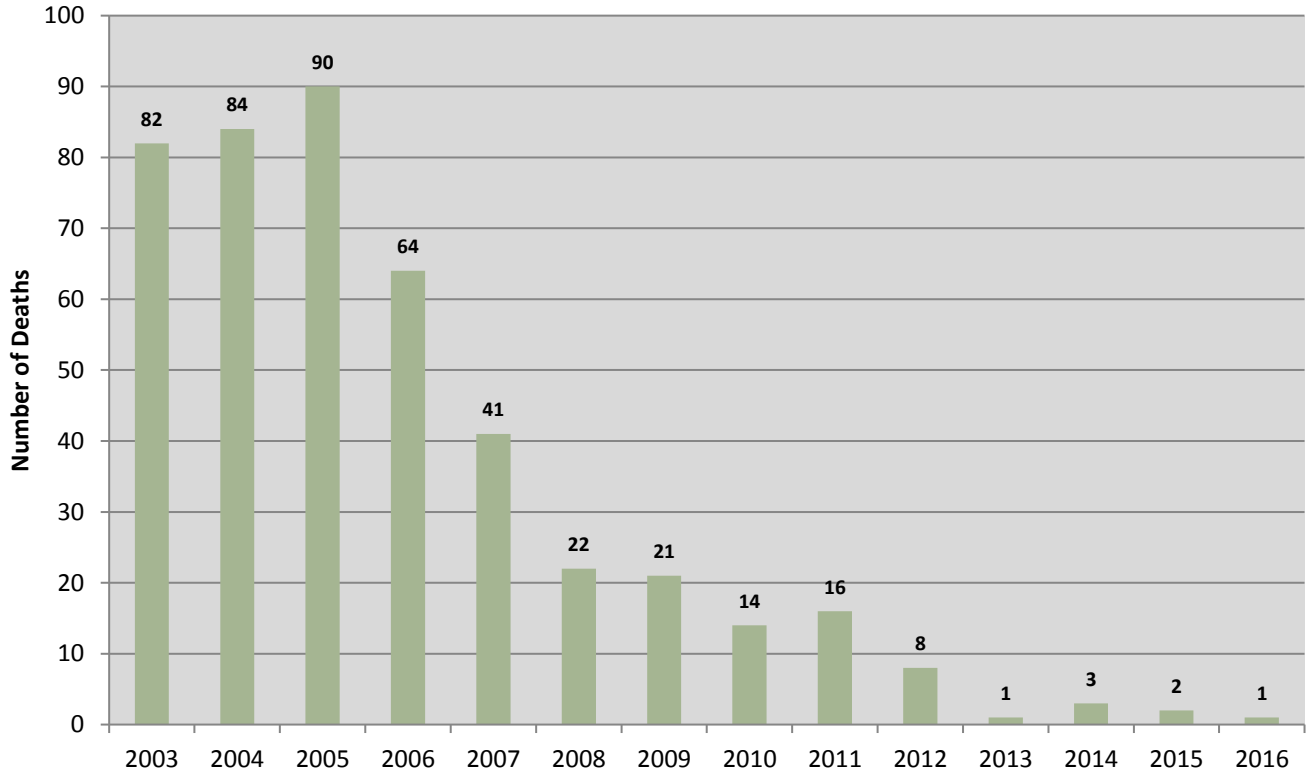


Table 3.4 Number of Natural Child Deaths by Cause and Method of Death, 2016

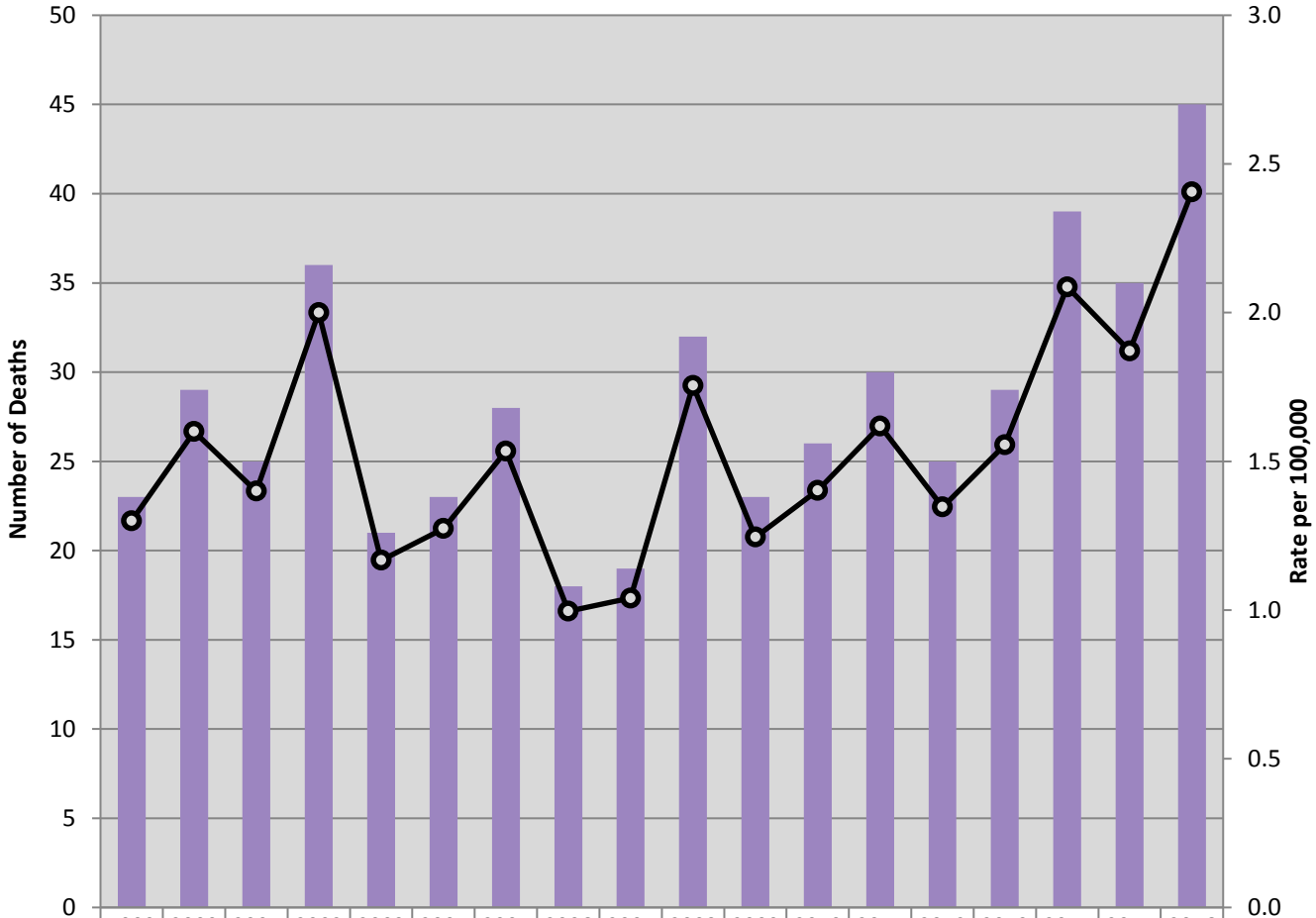
NATURAL CHILD DEATHS	Autopsied	Total Cases
Cardiovascular Diseases/Disorders		
Cardiomyopathy no otherwise specified	2	**2**
Cardiac arrhythmia not otherwise specified	1	**1**
Other cardiac disease/disorder	3	**3**
Central Nervous System Diseases/Disorders		
Meningitis (bacterial or viral)	2	**2**
Seizure disorder	2	**2**
Other central nervous system disease/disorder	1	**1**
Gastrointestinal Disease/Disorder		
Other gastrointestinal disease/disorder	0	**1**
Genitourinal Disease/Disorder		
Renal disease	1	**1**
Other Natural Disease/Disorder		
Other natural disease/disorder	3	**3**
Perinatal and Pediatric Diseases/Disorders		
Fetal complications	1	**1**
Maternal complications	3	**3**
Sudden Infant Death Syndrome (SIDS)	1	**1**
Pulmonary Diseases/Disorders		
Pneumonia	6	**6**
Other pulmonary diseases/disorders	1	**1**
Systemic Diseases/Disorders		
Other infectious disease	1	**1**
Sepsis	2	**2**
TOTAL NATURAL CHILD DEATHS	**30**	**31**

CHILD SUICIDE DEATHS (N=45)

The number of child suicide deaths in 2016 increased by 28.6% when compared to 2015.

- Child suicides are very similar to adult suicides as they occur more frequently in males (62.2%) and whites (77.8%)
- White males have the highest rate of child suicide (4.6 deaths per 100,000 persons aged 0-17 years)
- The most common methods of child suicides were gunshot wounds (48.9%) and hangings (37.8%)

Figure 3.21 Number and Rate of Child Suicide Deaths by Year, 1999-2016



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Deaths	23	29	25	36	21	23	28	18	19	32	23	26	30	25	29	39	35	45
Mortality Rate	1.3	1.6	1.4	2.0	1.2	1.3	1.5	1.0	1.0	1.8	1.2	1.4	1.6	1.3	1.6	2.1	1.9	2.4

Figure 3.22 Number of Child Suicide Deaths by Age and Gender, 2016

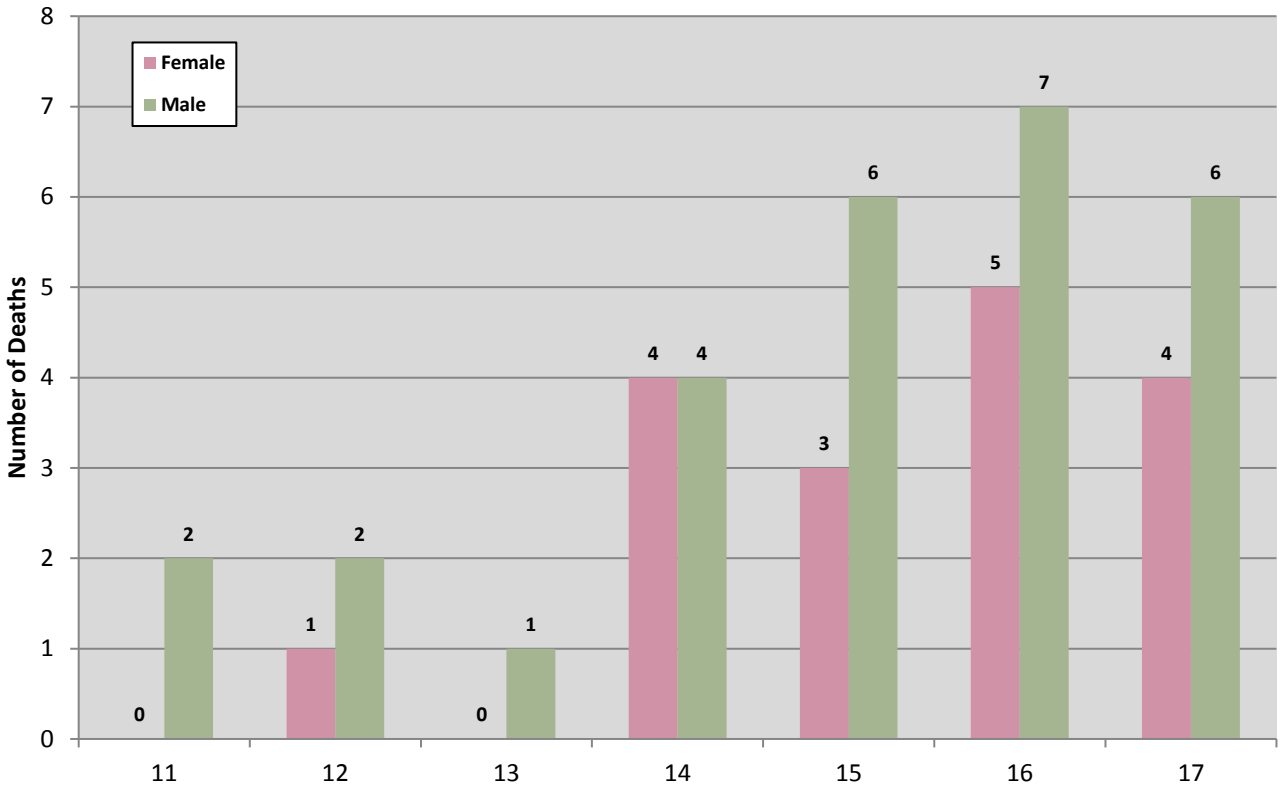


Figure 3.23 Percentage of Child Suicide Deaths by Race/Ethnicity, 2016

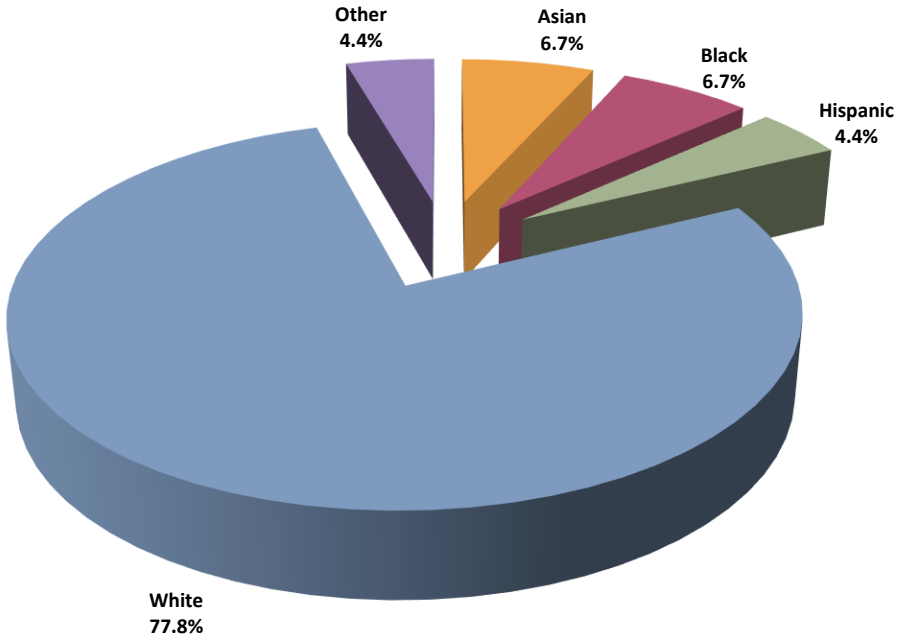
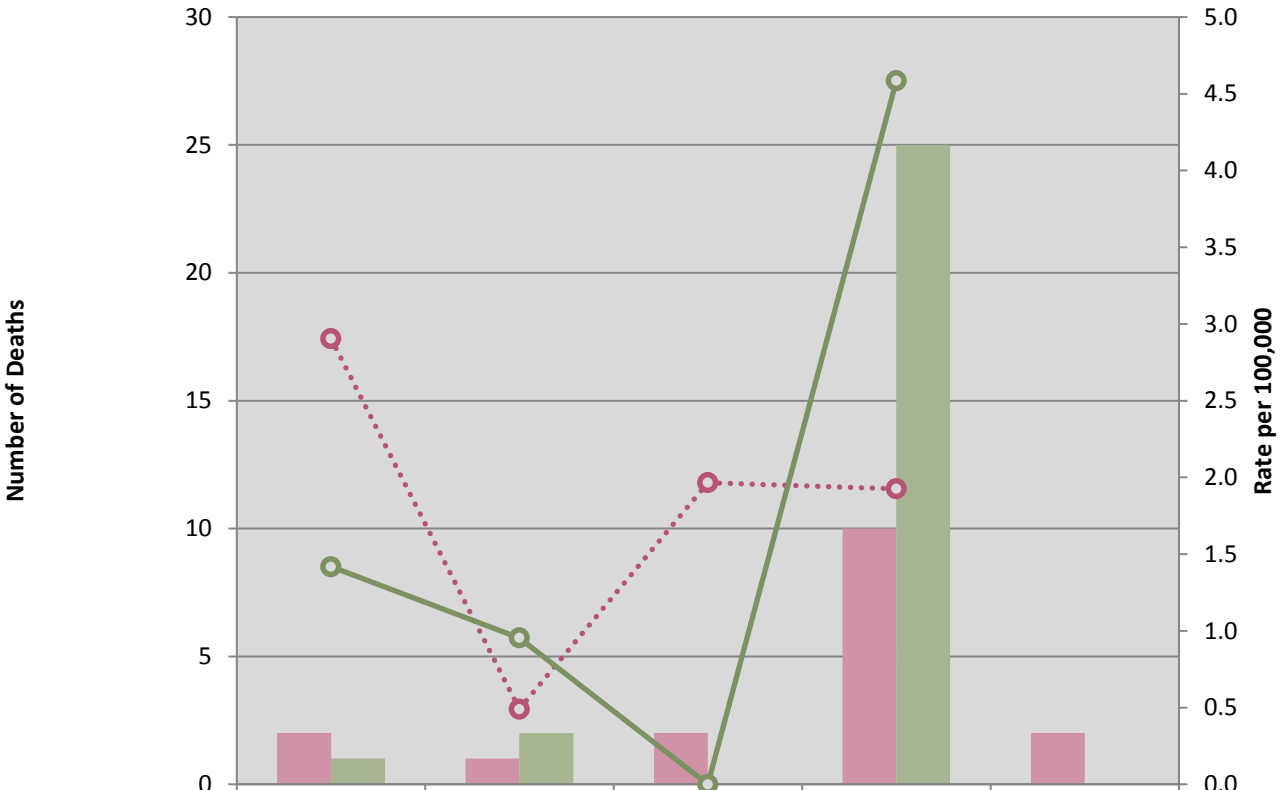


Figure 3.24 Number and Rate of Child Suicide Deaths by Gender and Race/Ethnicity, 2016



	Asian	Black	Hispanic	White	Other
Female	2	1	2	10	2
Male	1	2	0	25	0
Female Rate	2.9	0.5	2.0	1.9	*
Male Rate	1.4	1.0	0.0	4.6	*

*No rate can be calculated
** Rates calculated from small case counts (n<5) are considered unreliable and should be interpreted with caution (all but Whites)

Figure 3.25 Number of Child Suicide Deaths by Month, 2016

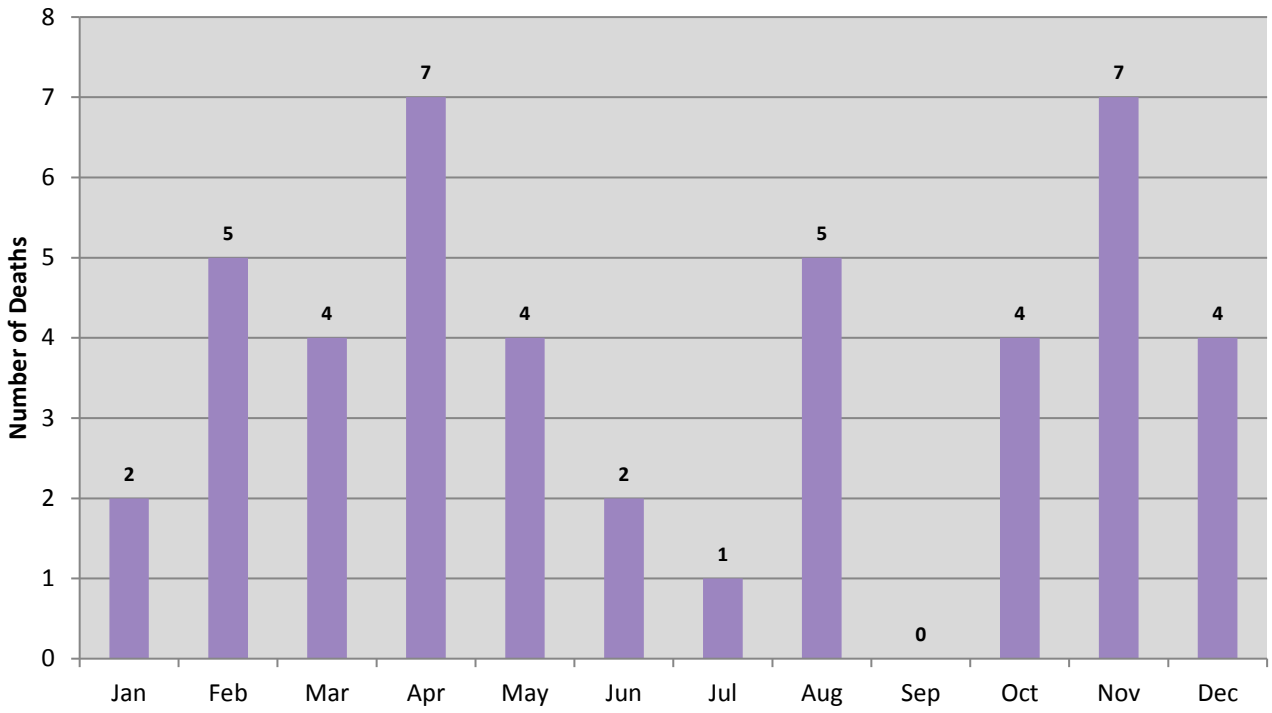


Figure 3.26 Number of Child Suicide Deaths by Day of the Week, 2016

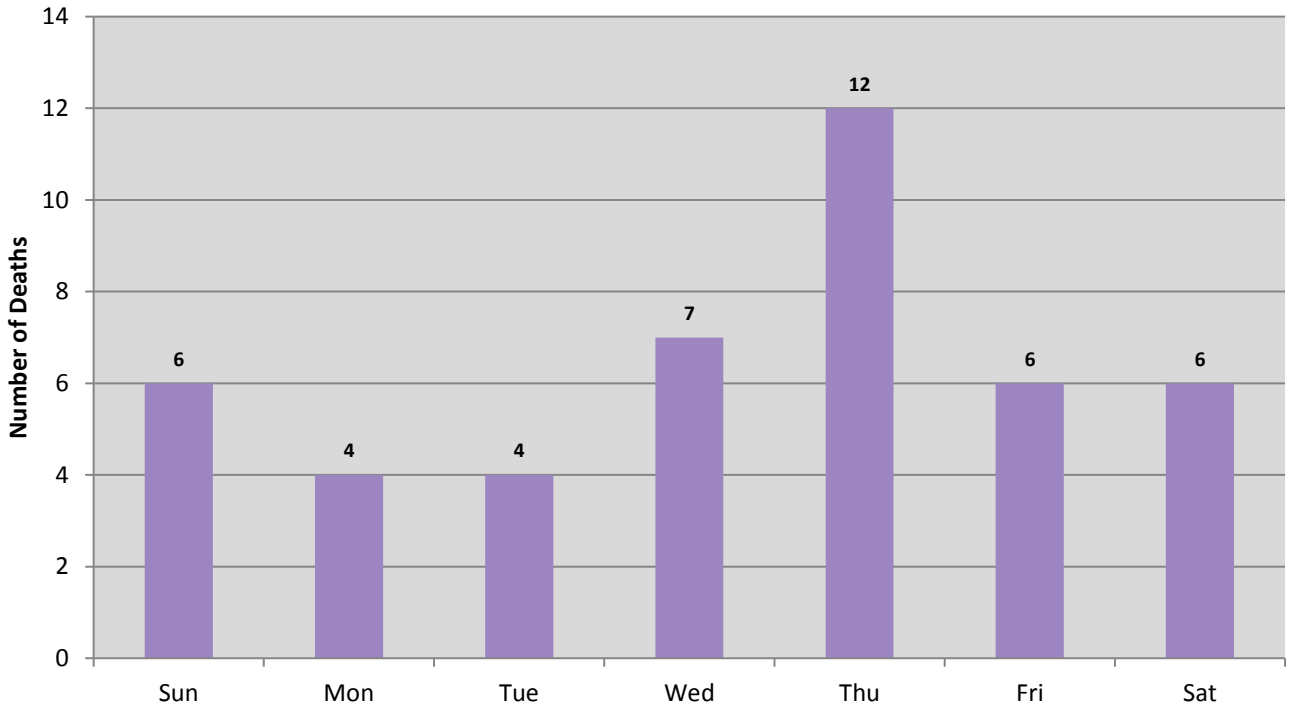


Table 3.5 Number of Child Suicide Deaths by Cause and Method of Death, 2016

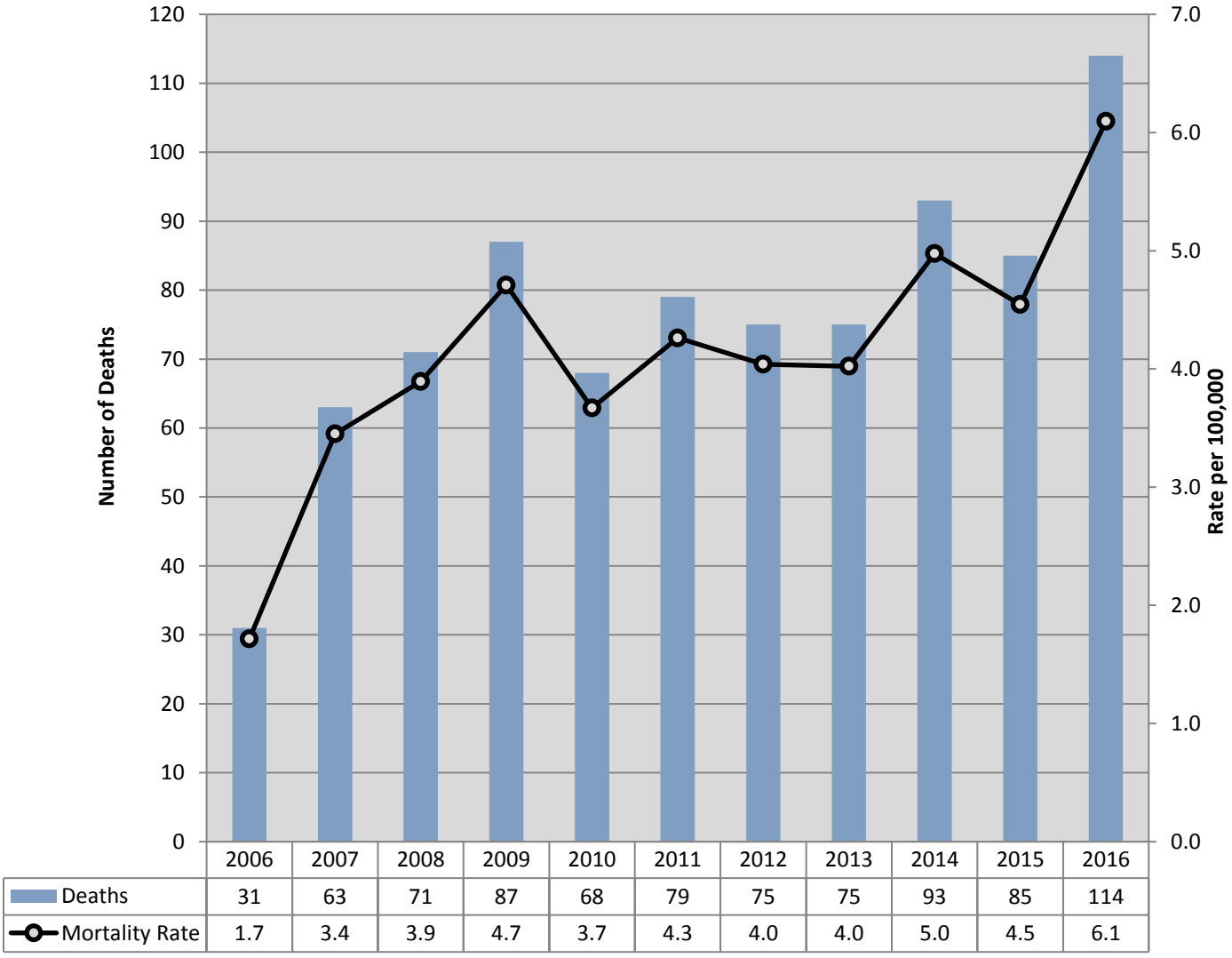
Method of Death	Autopsied	Total Cases
Asphyxia		
Hanged	13	**17**
Drug Use		
Ingested and/or injected illicit, prescription, and/or other type of drug	2	**3**
Fall/Jump		
Fall/Jump from height	0	**1**
Fire Injuries		
Thermal burns and/or inhalation of combustion products	1	**1**
Traumatic Injury		
Gunshot Wound		
Handgun	17	17
Rifle	2	2
Shotgun	3	3
Stab wounds to self	1	1
TOTAL CHILD SUICIDE DEATHS	**39**	**45**

UNDETERMINED CHILD DEATHS (N=114)

A total of 114 undetermined deaths of children occurred in 2016, an increase of 34.1% compared to 2015, and representing 34.8% of all child deaths that occurred in 2016.

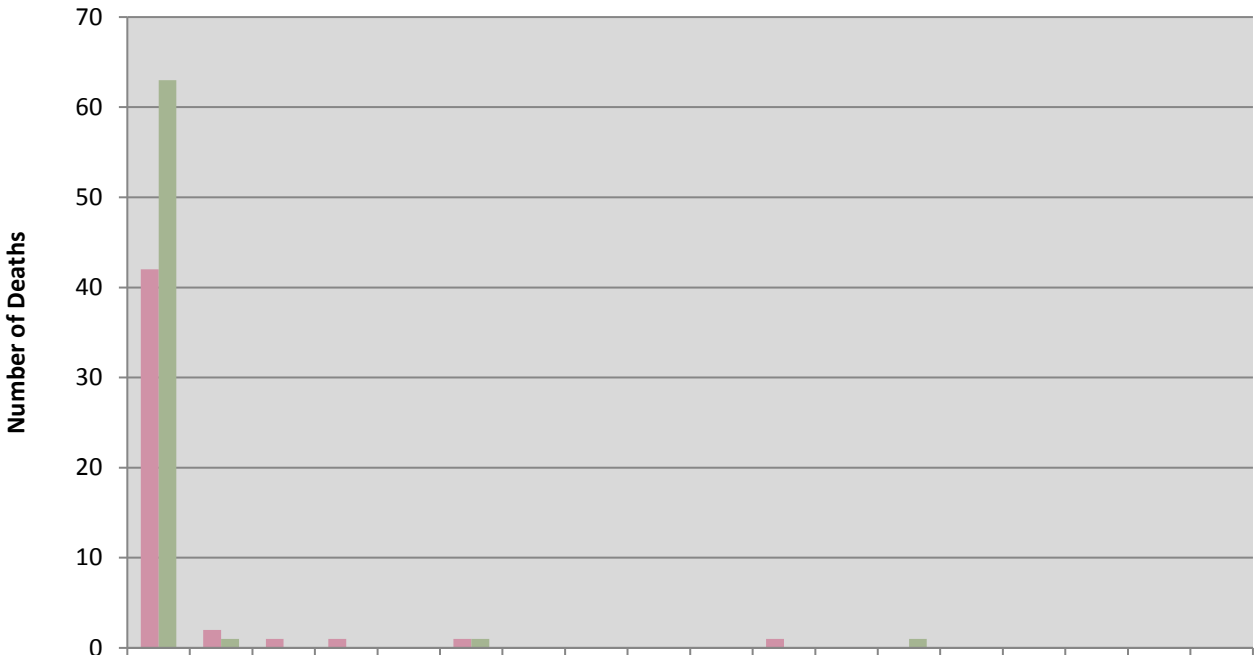
- Infants accounted for 92.1% of undetermined deaths
- Sudden unexpected infant death (SUID) deaths of infants <1 year of age represented 72.8% of all undetermined child deaths

Figure 3.27 Number and Rate of Undetermined Child Deaths by Year, 2006-2016



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Deaths	31	63	71	87	68	79	75	75	93	85	114
Mortality Rate	1.7	3.4	3.9	4.7	3.7	4.3	4.0	4.0	5.0	4.5	6.1

Figure 3.28 Number of Undetermined Child Deaths by Age and Gender, 2016



	<1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Female	42	2	1	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0
Male	63	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0

Figure 3.29 Percentage of Undetermined Child Deaths by Race/Ethnicity, 2016

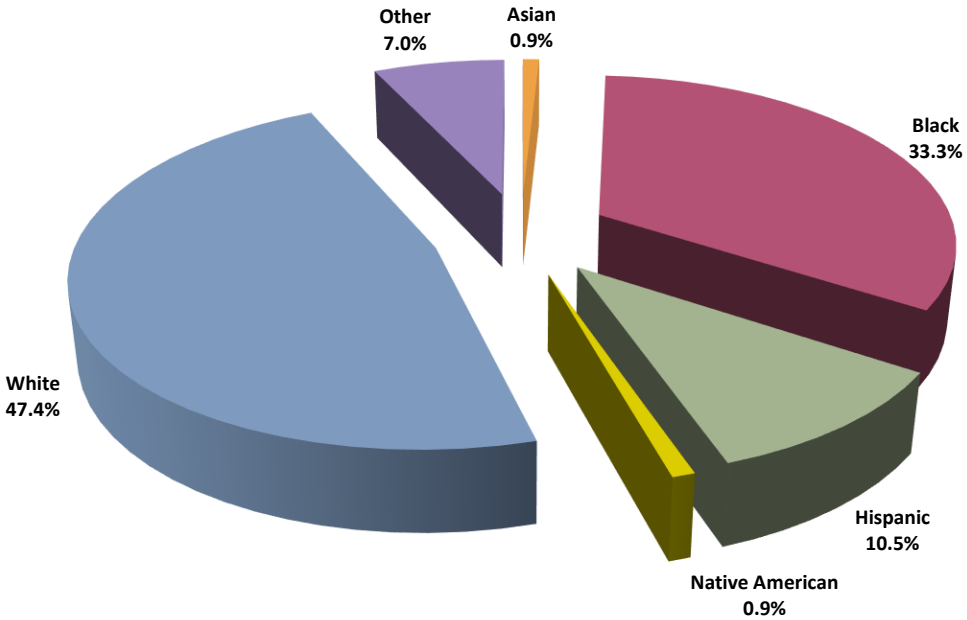
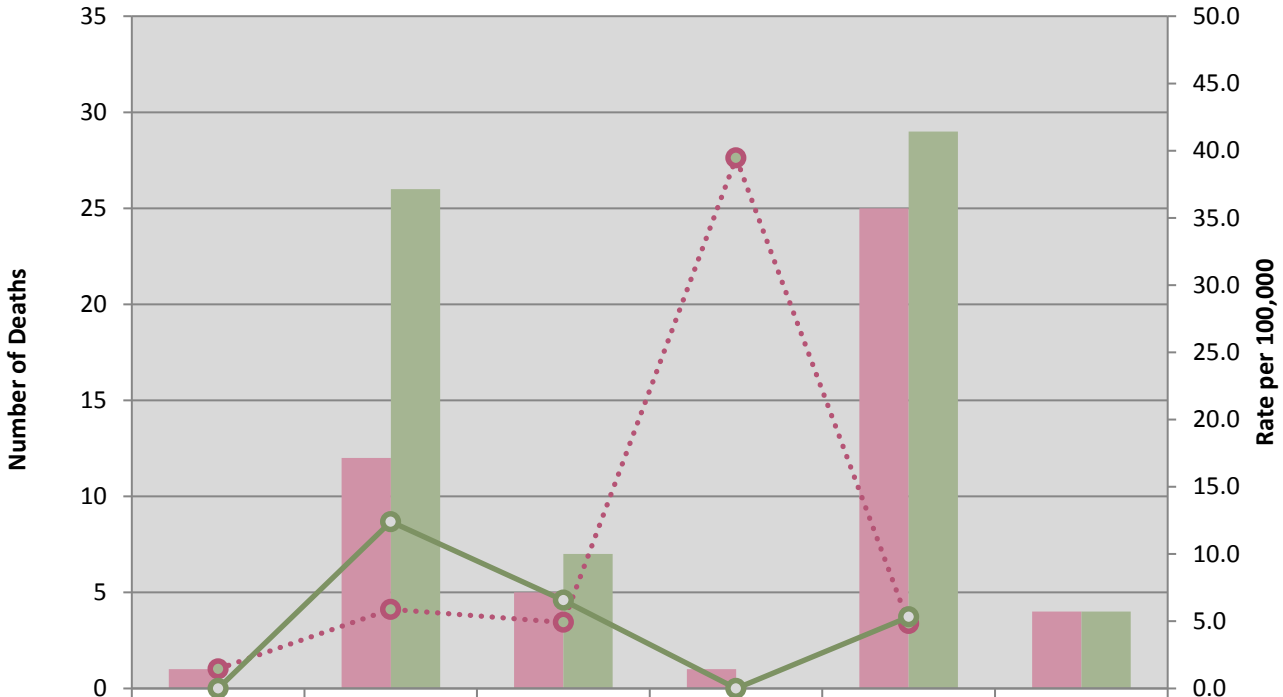


Figure 3.30 Number and Rate of Undetermined Child Deaths by Gender and Race/Ethnicity, 2016



	Asian	Black	Hispanic	Native American	White	Other
Female	1	12	5	1	25	4
Male	0	26	7	0	29	4
Female Rate	1.5	5.9	4.9	39.5	4.8	*
Male Rate	0.0	12.4	6.6	0.0	5.3	*

*No rate can be calculated

** Rates calculated from small case counts (n<5) are considered unreliable and should be interpreted with caution (Asian and Native Americans)

Table 3.6 Number of Undetermined Child Deaths by Cause and Method of Death, 2016

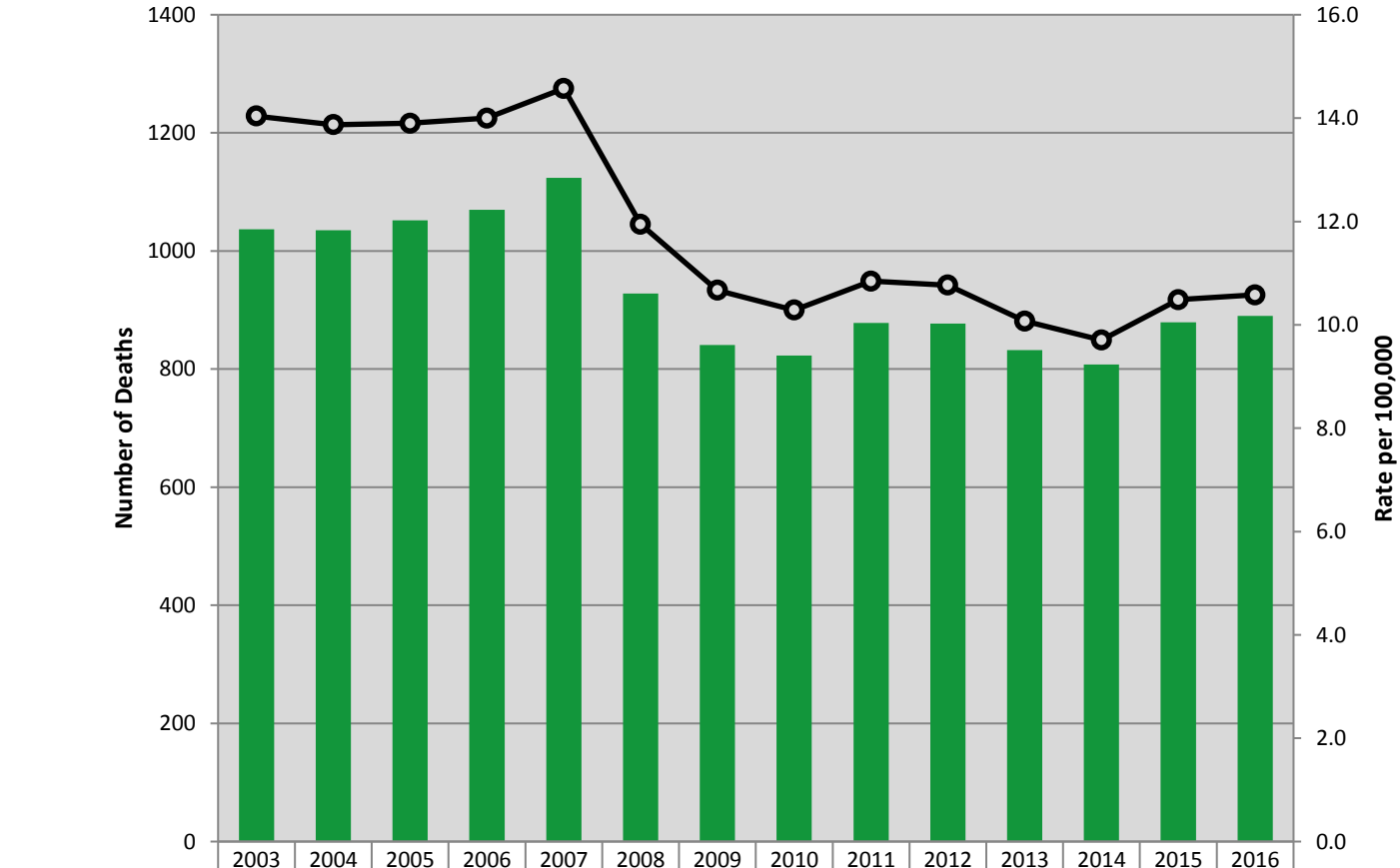
Determined Cause and Method of Death	Autopsied	Total Cases
Asphyxia		
Suffocated/Smothered	1	1
Other asphyxia	1	1
Fire Injuries		
Thermal burns and/or inhalation of combustion products	2	2
Other Unnatural		
Other	5	5
Subtotal for Determined Cause and Method of Death	9	9
Undetermined Manner and Cause of Death		
Skeletal/Mummified remains	1	1
Sudden Unexpected Infant Death (SUID)	83	83
Other or undetermined after autopsy and/or toxicology	21	21
Subtotal for Undetermined Manner and Cause of Death	105	105
TOTAL UNDETERMINED CHILD DEATHS	**114**	**114**

SECTION 4: MOTOR VEHICLE FATALITIES (N=890)

The OCME investigated 890 motor vehicle collision-related deaths in 2016, which was an increase of 1.3% when compared to 2015.

- The vast majority of cases were accidents (97.4%) and victims were most often male (70.4%)
- Of the 697 motor vehicle fatalities tested for ethanol, 28.3% (n=197) had a blood alcohol content greater than or equal to 0.08% BAC; of those 197 decedents who were at or above the legal limit of alcohol, 74.6% were drivers
- Persons aged 25-34 years old had more deaths (16.2%) due to motor vehicle incidents than any other age group, but males 75-84 years had the highest rate of death (31.1 deaths per 100,000)
- Twenty-seven children under the age of 15 years died in motor vehicle-related incidents

Figure 4.1 Number and Rate of Motor Vehicle Deaths by Year, 2003-2016



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Deaths	1037	1035	1052	1070	1124	928	841	823	878	877	832	808	879	890
Mortality Rate	14.0	13.9	13.9	14.0	14.6	11.9	10.7	10.3	10.8	10.8	10.1	9.7	10.5	10.6

Figure 4.2 Percentage of Motor Vehicle Deaths by Manner, 2016

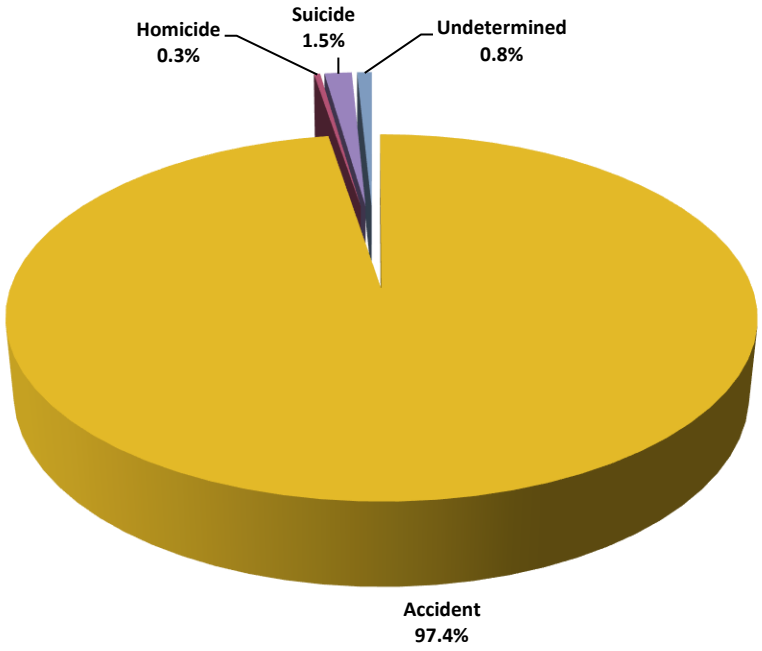
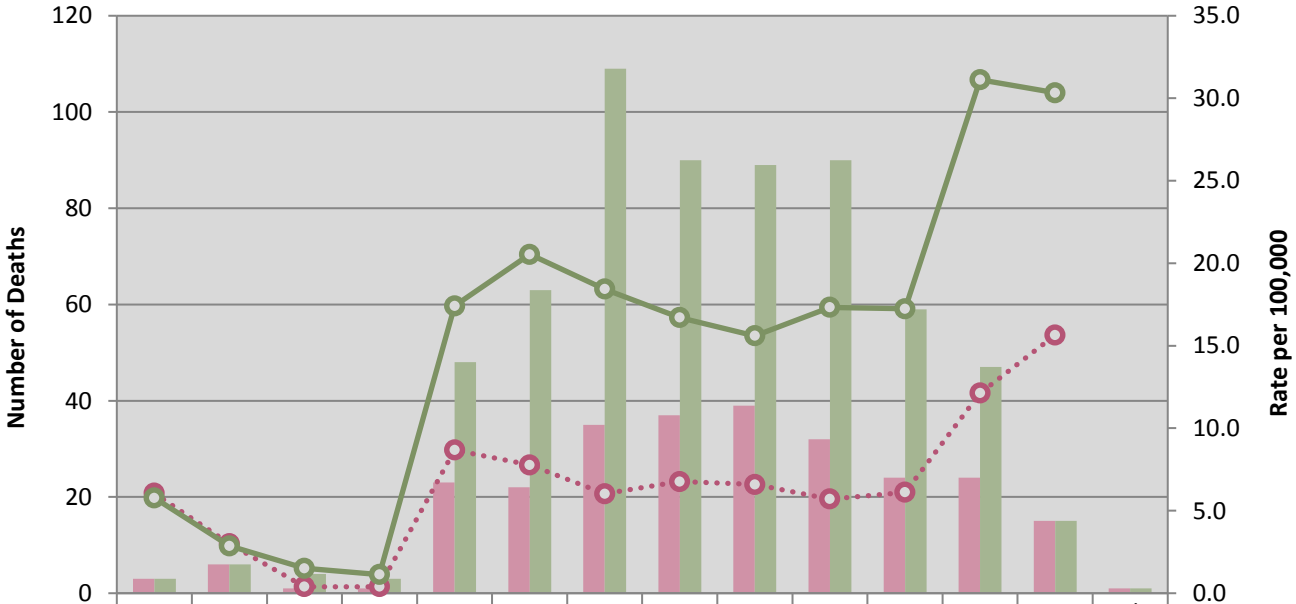


Figure 4.3 Number and Rate of Motor Vehicle Deaths by Age Group and Gender, 2016



	<1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Unknown
Female	3	6	1	1	23	22	35	37	39	32	24	24	15	1
Male	3	6	4	3	48	63	109	90	89	90	59	47	15	1
Female Rate	6.1	3.0	0.4	0.4	8.7	7.8	6.0	6.8	6.6	5.7	6.1	12.1	15.6	*
Male Rate	5.8	2.9	1.5	1.1	17.4	20.5	18.4	16.7	15.6	17.3	17.2	31.1	30.3	*

*No rate can be calculated

Figure 4.4 Percentage of Motor Vehicle Deaths by Race/Ethnicity, 2016

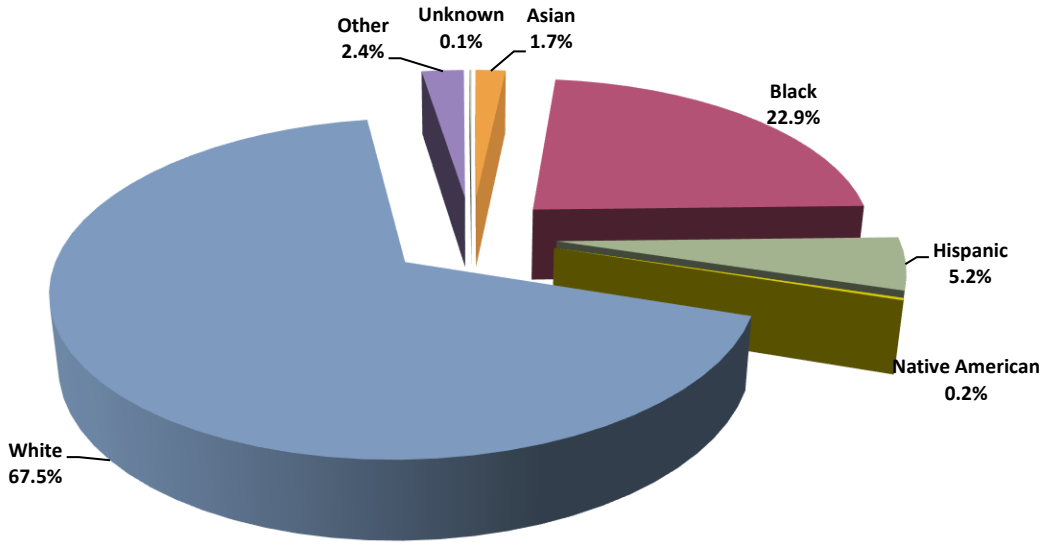
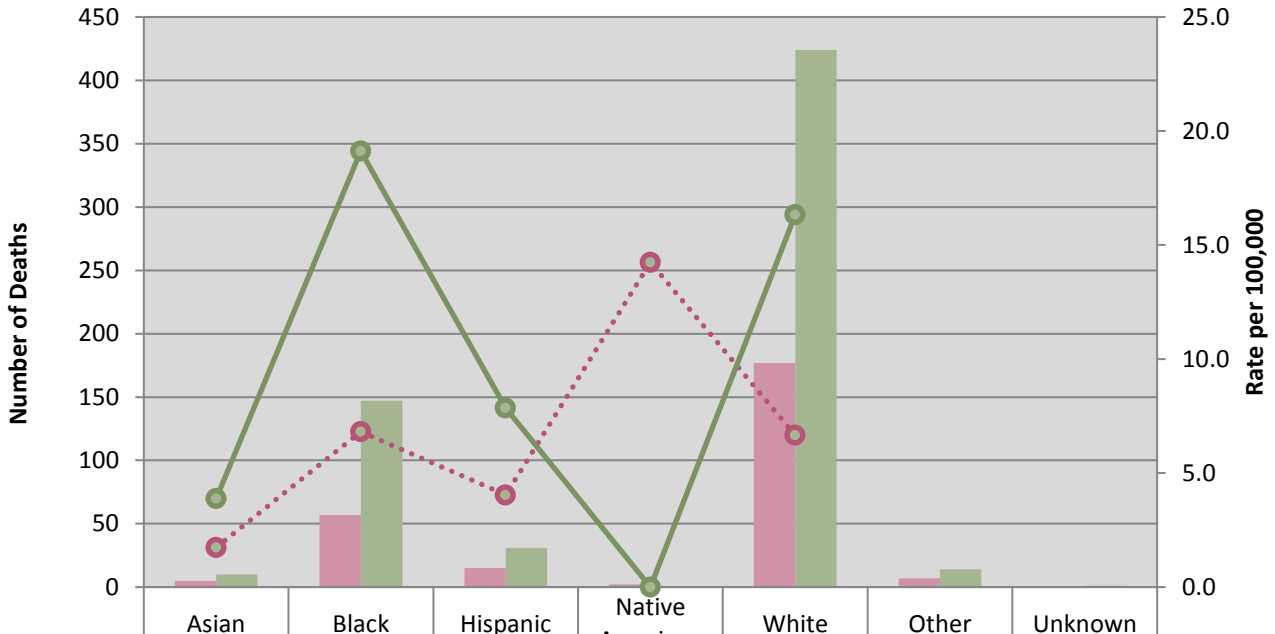


Figure 4.5 Number and Rate of Motor Vehicle Deaths by Race/Ethnicity and Gender, 2016

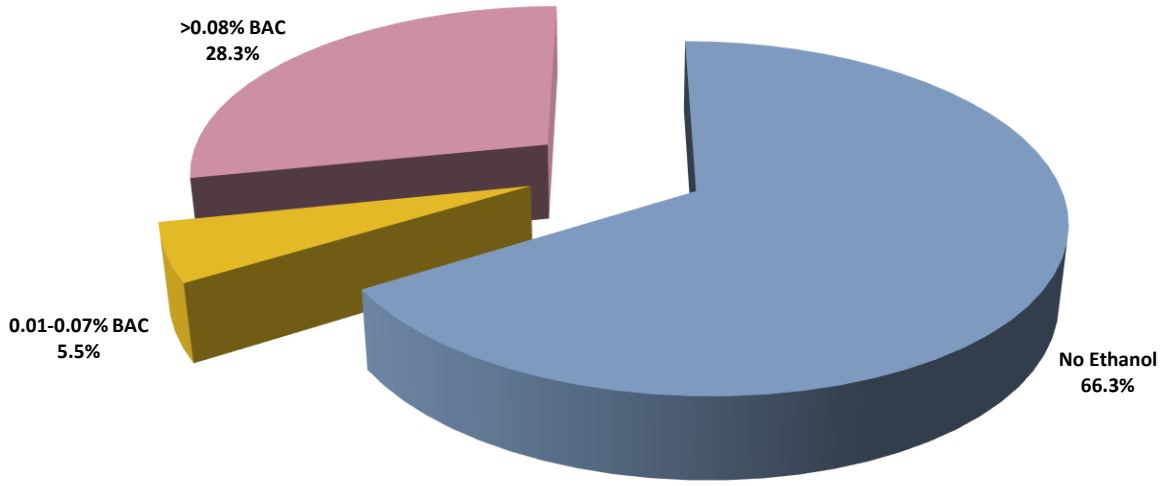


	Asian	Black	Hispanic	Native American	White	Other	Unknown
Female	5	57	15	2	177	7	0
Male	10	147	31	0	424	14	1
Female Rate	1.7	6.8	4.0	14.2	6.7	*	*
Male Rate	3.9	19.1	7.9	0.0	16.3	*	*

*No rate can be calculated

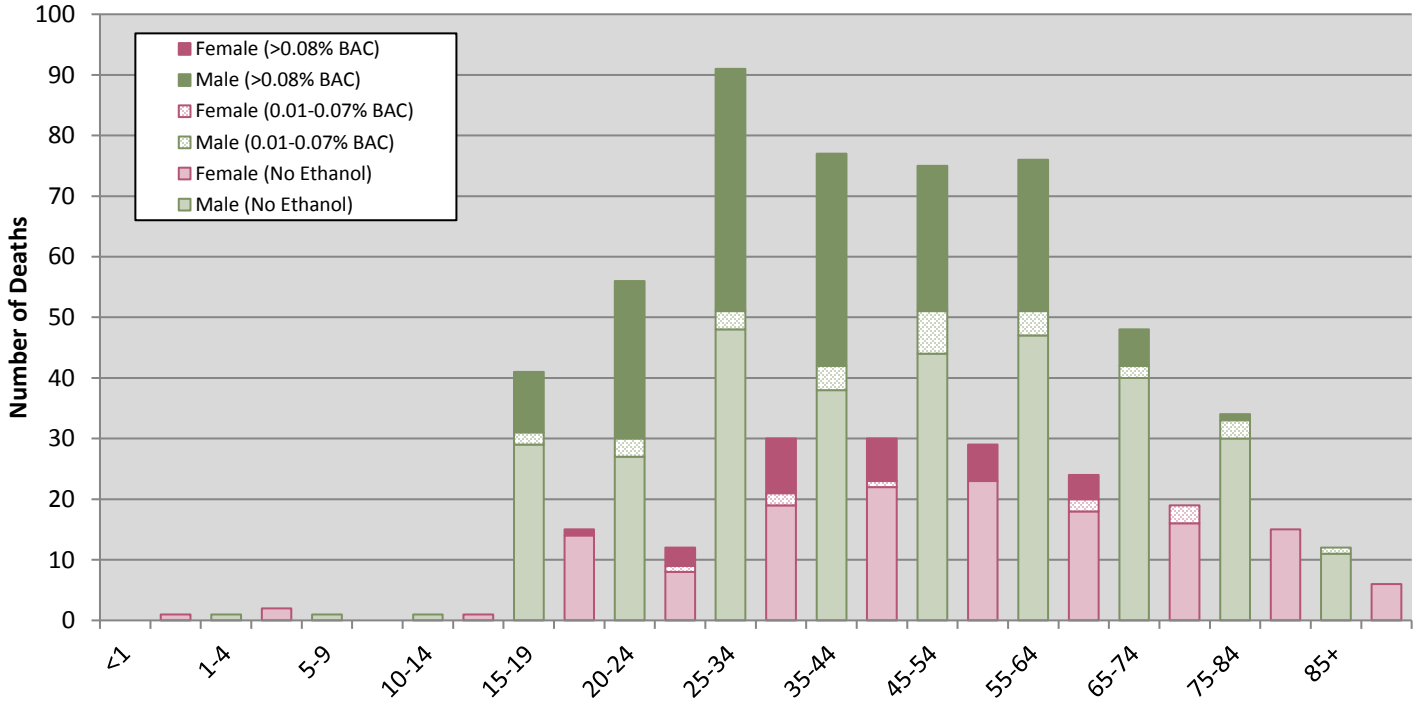
** Rates calculated from small case counts (n<5) are considered unreliable and should be interpreted with caution (Native Americans)

Figure 4.6 Percentage of Motor Vehicle Deaths by Ethanol Amount (N=697), 2016



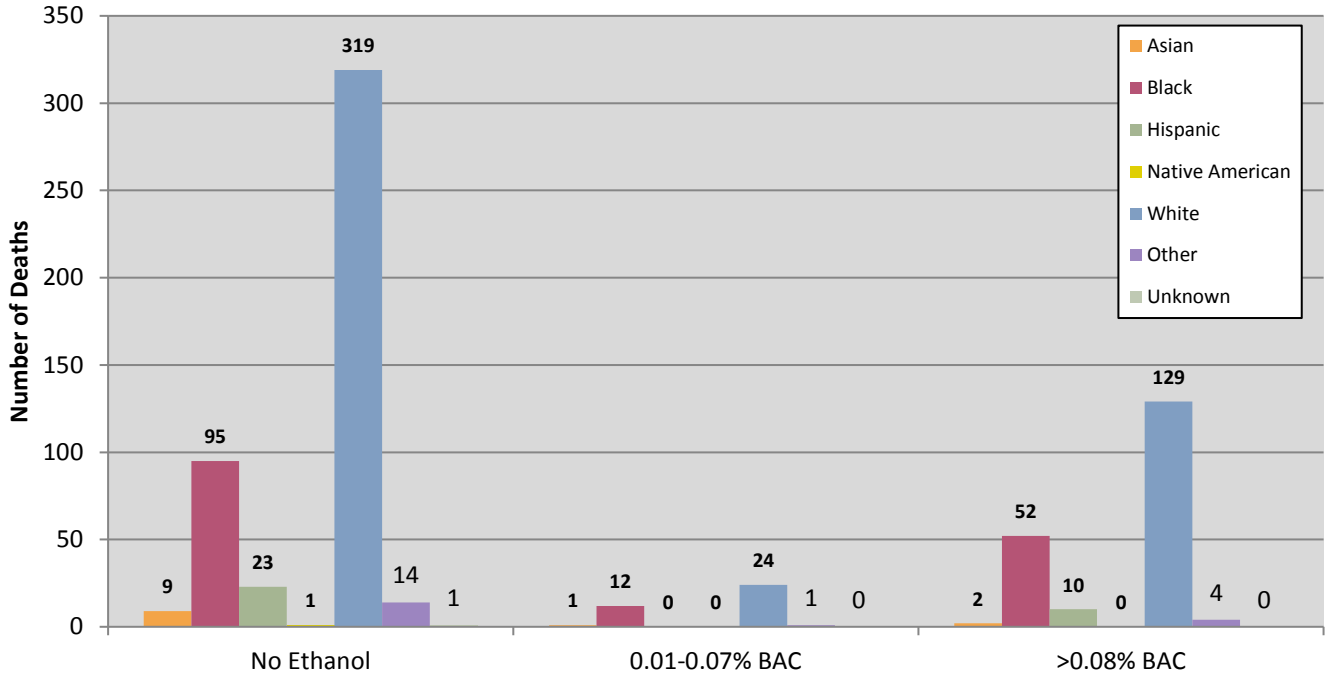
*Note: Of the 890 motor vehicle deaths, 21.7% (n=193) did not receive toxicology testing

Figure 4.7 Number of Motor Vehicle Deaths by Age Group, Gender, and Ethanol Amount (N=697), 2016



*Note: Of the 890 motor vehicle deaths, 21.7% (n=193) did not receive toxicology testing

Figure 4.8 Number of Motor Vehicle Deaths by Ethanol Level and Race/Ethnicity (N=697), 2016

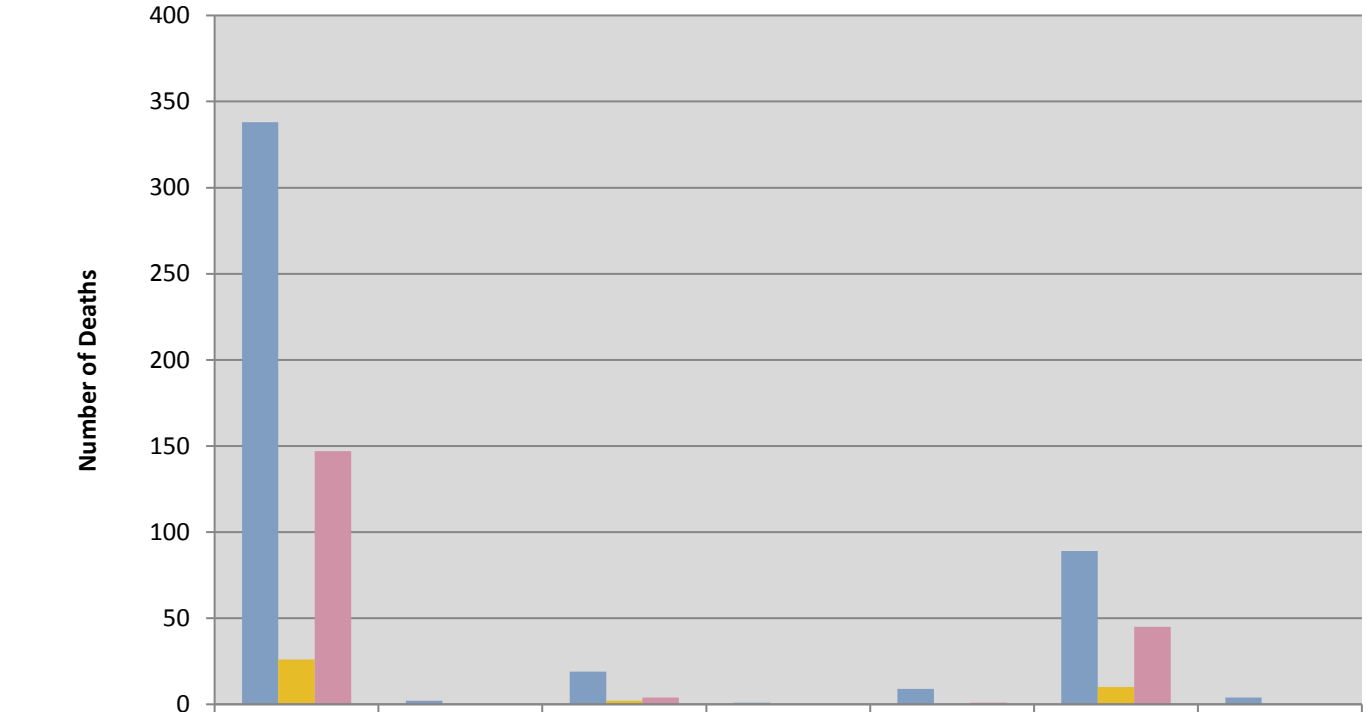


*Note: Of the 890 motor vehicle deaths, 21.7% (n=193) did not receive toxicology testing

Table 4.1 Number of Motor Vehicle Deaths by Age Group and Position during Collision, 2016

Age Group (years)	Driver	Passenger Cargo	Passenger Front	Passenger Other	Passenger Rear	Pedestrian	Unknown	TOTAL
<1	0	0	0	2	2	2	0	**6**
1-4	0	0	0	0	9	3	0	**12**
5-9	0	0	0	0	4	1	0	**5**
10-14	1	0	1	0	0	2	0	**4**
15-19	48	2	12	0	3	6	0	**71**
20-24	55	0	12	1	4	11	2	**85**
25-34	103	1	14	0	5	19	2	**144**
35-44	75	0	10	0	3	35	4	**127**
45-54	94	0	8	0	2	23	1	**128**
55-64	87	0	10	1	2	20	2	**122**
65-74	49	1	4	0	0	27	2	**83**
75-84	43	0	8	0	6	12	2	**71**
85+	17	0	3	0	4	6	0	**30**
Unknown	0	0	0	1	0	0	1	**2**
TOTAL	**572**	**4**	**82**	**5**	**44**	**167**	**16**	**890**

Figure 4.9 Number of Motor Vehicle Deaths by Position during Collision and Ethanol Level (N=697), 2016



	Driver	Passenger Cargo	Passenger Front	Passenger Other	Passenger Rear	Pedestrain	Unknown
No Ethanol	338	2	19	1	9	89	4
0.01-0.07% BAC	26	0	2	0	0	10	0
>0.08% BAC	147	0	4	0	1	45	0

*Note: Of the 890 motor vehicle deaths, 21.7% (n=193) did not receive toxicology testing

Table 4.2 Number of Motor Vehicle Deaths by Position during Collision, Vehicle Type, and Ethanol Level, 2016

Position During Collision	Vehicle Type	No Ethanol	0.01-0.07% BAC	>0.08% BAC	Total
Driver	Aircraft	1	0	0	**1**
	All Terrain Vehicle	9	1	8	**18**
	Bicycle	4	0	2	**6**
	Boat	1	0	1	**2**
	Car	161	13	76	**250**
	Farm Equipment	1	0	0	**1**
	Golf Cart	1	0	0	**1**
	Lawnmower	0	1	0	**1**
	Mo-Ped	5	0	2	**7**
	Motorcycle	46	3	18	**67**
	Pickup Truck	34	2	23	**59**
	Sport Utility Vehicle	40	3	13	**56**
	Tractor Trailer	19	2	1	**22**
	Truck Other	6	0	1	**7**
	Unknown	4	0	1	**5**
	Van	6	1	1	**8**
	Subtotal	**338**	**26**	**147**	**511**
Passenger Cargo	Motorcycle	1	0	0	**1**
	Van	1	0	0	**1**
	Subtotal	**2**	**0**	**0**	**2**
Passenger Front	Aircraft	1	0	0	**1**
	Car	10	1	2	**13**
	Pickup Truck	2	0	1	**3**
	Sport Utility Vehicle	3	1	1	**5**
	Tractor Trailer	2	0	0	**2**
	Unknown	1	0	0	**1**
	Subtotal	**19**	**2**	**4**	**25**
Passenger Other	Van	1	0	0	**1**
	Subtotal	**1**	**0**	**0**	**1**
Passenger Rear	Bus	1	0	0	**1**
	Car	5	0	1	**6**
	Motorcycle	1	0	0	**1**
	Multiple	1	0	0	**1**
	Van	1	0	0	**1**
	Subtotal	**9**	**0**	**1**	**10**
Pedestrian	Bicycle	1	0	1	**2**
	Car	30	4	20	**54**

	Construction Heavy Equipment	5	1	0	**6**
	Dump Truck	1	0	1	**2**
	Lawnmower	1	0	0	**1**
	Multiple	2	0	0	**2**
	Pickup Truck	11	2	4	**17**
	Sport Utility Vehicle	11	0	9	**20**
	Tractor Trailer	2	0	2	**4**
	Train	9	0	2	**11**
	Truck Other	5	0	0	**5**
	Unknown	7	2	3	**12**
	Van	4	1	3	**8**
	Subtotal	**89**	**10**	**45**	**144**
Unknown	Aircraft	1	0	0	**1**
	Unknown	3	0	0	**3**
	Subtotal	**4**	**0**	**0**	**4**

*Note: Of the 890 motor vehicle deaths, 21.7% (n=193) did not receive toxicology testing

Figure 4.10 Number of OCME Motor Vehicle Fatalities by Month of Death, 2016

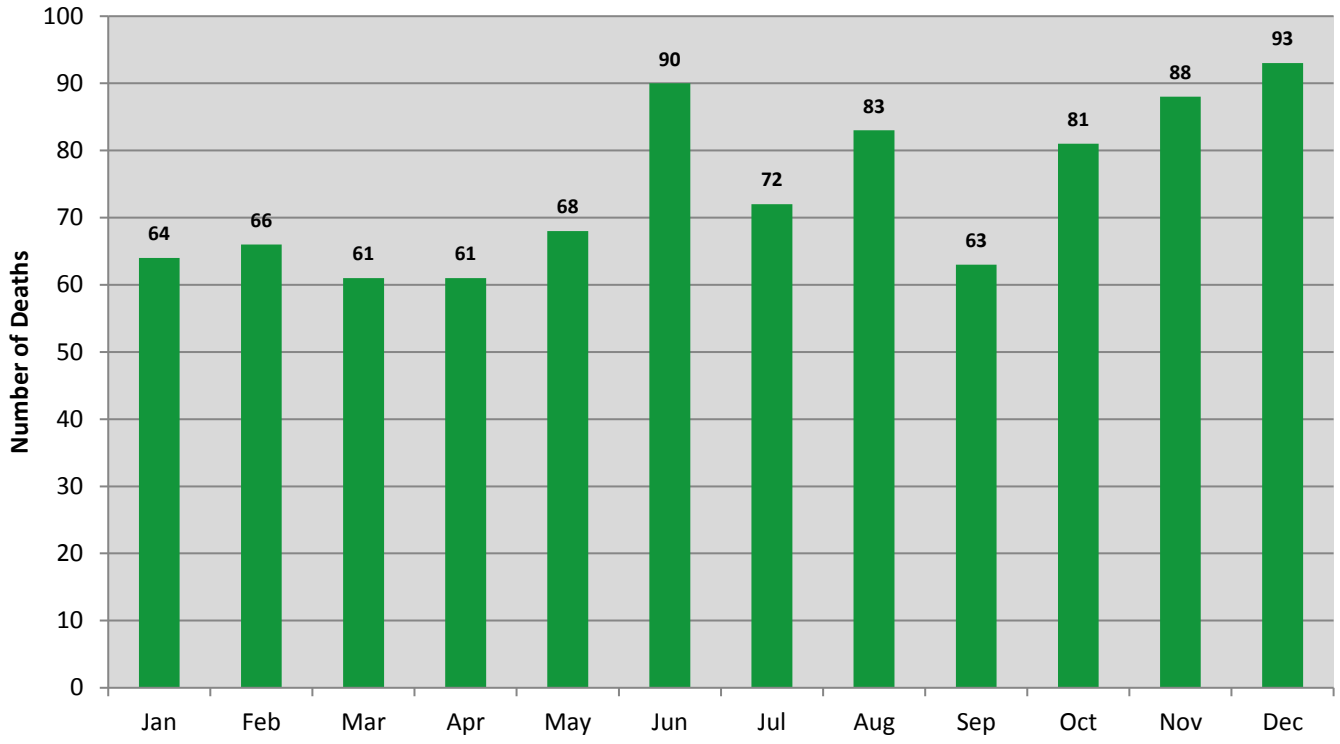


Figure 4.11 Number of OCME Motor Vehicle Fatalities by Day of Week, 2016

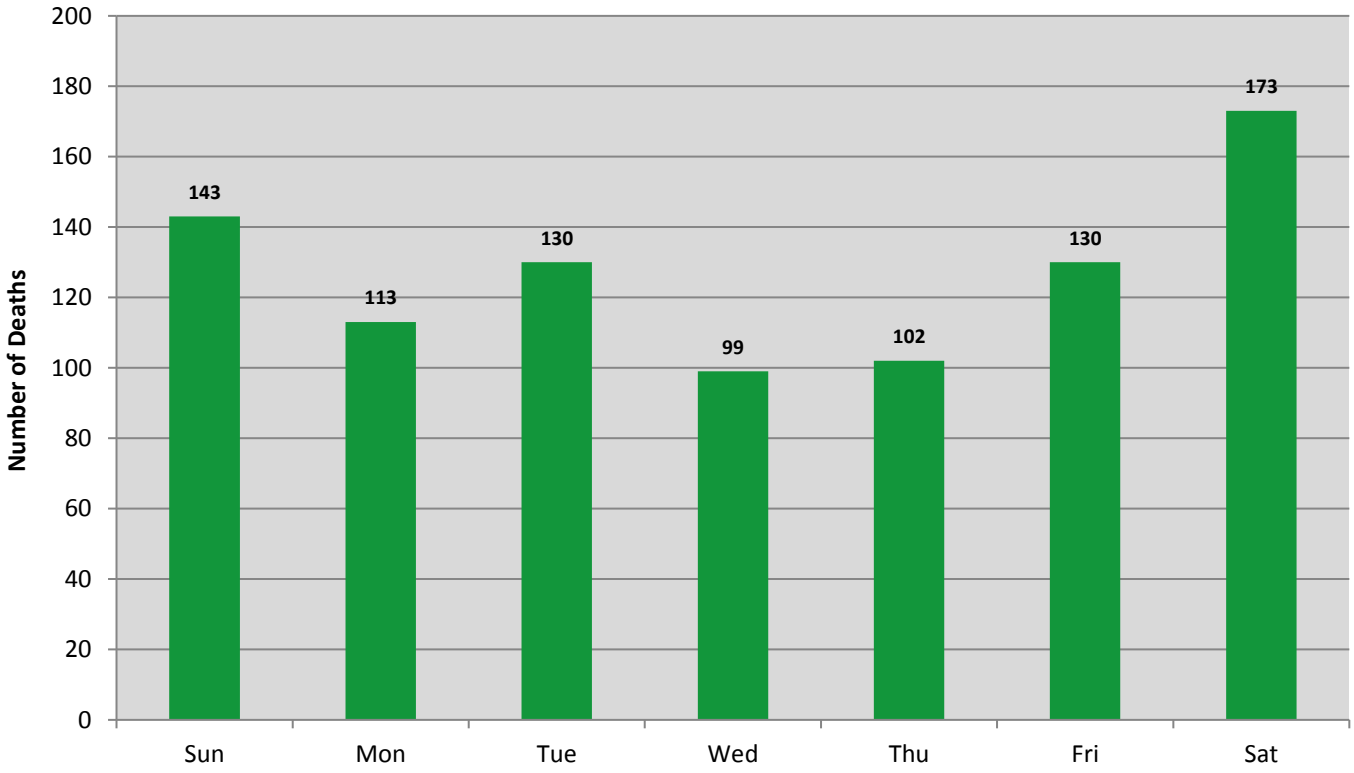


Table 4.3 Number and Rate of Motor Vehicle Deaths by Locality of Residence, 2016

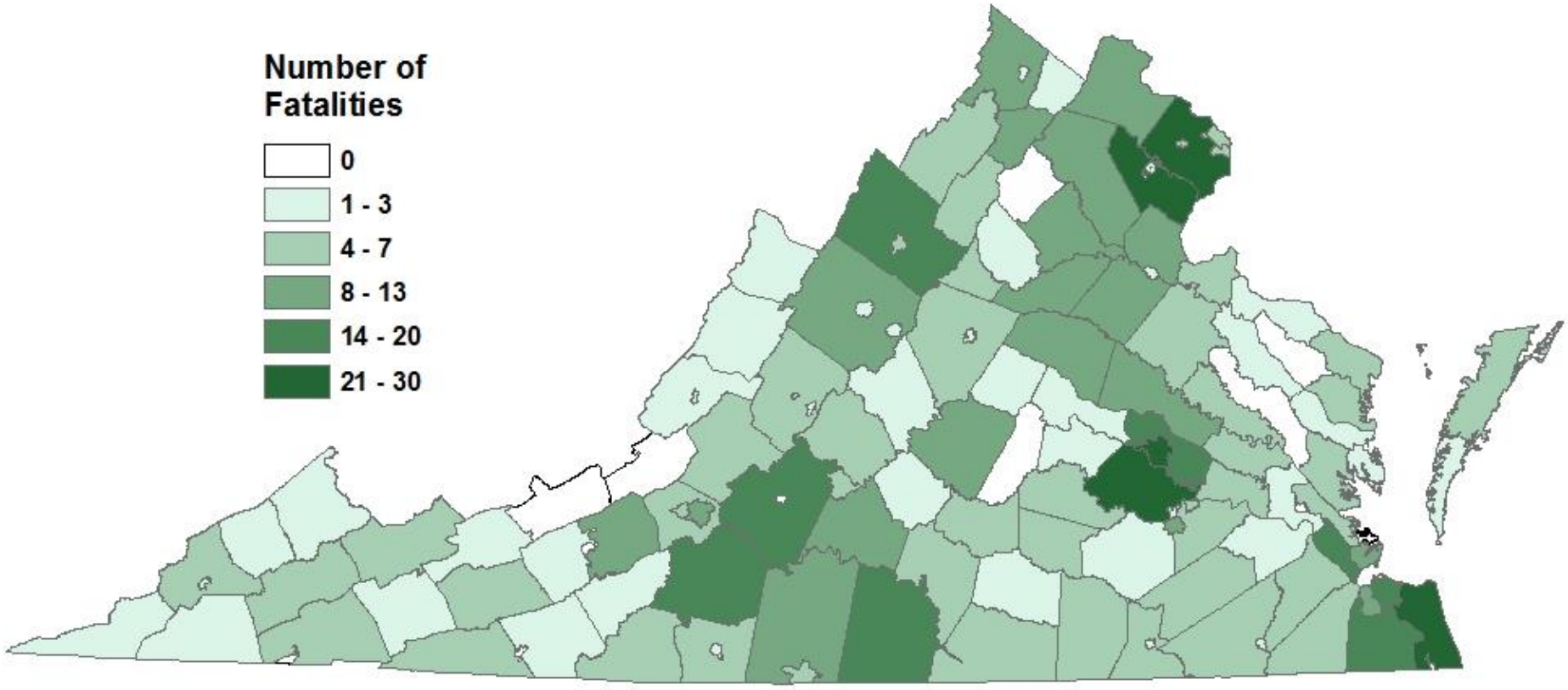
Locality of Residence	Deaths	Rate
Accomack County	5	15.2
Albemarle County	7	6.5
Alexandria City	5	3.2
Alleghany County	3	19.2
Amelia County	5	38.7
Amherst County	5	15.8
Appomattox County	3	19.4
Arlington County	4	1.7
Augusta County	11	14.7
Bath County	1	22.3
Bedford County	17	21.8
Bland County	1	15.4
Botetourt County	4	12.0
Bristol City	0	0.0
Brunswick County	4	24.6
Buchanan County	3	13.5
Buckingham County	8	46.9
Buena Vista City	1	15.5
Campbell County	10	18.2
Caroline County	4	13.3
Carroll County	3	10.2
Charles City County	6	84.9
Charlotte County	7	57.7
Charlottesville City	3	6.4
Chesapeake City	14	5.9
Chesterfield County	28	8.3
Clarke County	1	7.0
Colonial Heights City	2	11.3
Covington City	2	36.2
Craig County	0	0.0
Culpeper County	9	18.0
Cumberland County	0	0.0
Danville City	4	9.5
Dickenson County	2	13.4
Dinwiddie County	3	10.7
Emporia City	1	18.9
Essex County	2	18.0
Fairfax City	5	20.7
Fairfax County	30	2.6

Locality of Residence	Deaths	Rate
Falls Church City	1	7.1
Fauquier County	12	17.4
Floyd County	1	6.4
Fluvanna County	1	3.8
Franklin City	2	24.1
Franklin County	16	28.5
Frederick County	9	10.7
Fredericksburg City	2	7.1
Galax City	0	0.0
Giles County	0	0.0
Gloucester County	7	18.8
Goochland County	1	4.4
Grayson County	4	26.5
Greene County	4	20.6
Greensville County	4	34.2
Halifax County	15	42.9
Hampton City	13	9.6
Hanover County	11	10.5
Harrisonburg City	4	7.5
Henrico County	20	6.1
Henry County	6	11.7
Highland County	1	45.1
Hopewell City	4	17.6
Isle of Wight County	4	10.9
James City County	2	2.7
King and Queen County	0	0.0
King George County	6	23.1
King William County	5	30.6
Lancaster County	4	36.5
Lee County	3	12.4
Lexington City	0	0.0
Loudoun County	13	3.4
Louisa County	8	22.7
Lunenburg County	2	16.3
Lynchburg City	5	6.2
Madison County	3	22.9
Manassas City	1	2.4
Manassas Park City	1	6.3
Martinsville City	2	14.9

Locality of Residence	Deaths	Rate
Mathews County	1	11.4
Mecklenburg County	6	19.4
Middlesex County	2	18.6
Montgomery County	9	9.1
Nelson County	1	6.7
New Kent County	5	23.6
Newport News City	15	8.2
Norfolk City	19	7.8
Northampton County	1	8.2
Northumberland County	7	57.3
Norton City	1	25.9
Nottoway County	5	32.1
Orange County	10	28.1
Page County	6	25.4
Patrick County	5	27.9
Petersburg City	9	28.2
Pittsylvania County	9	14.6
Poquoson City	0	0.0
Portsmouth City	11	11.5
Powhatan County	3	10.5
Prince Edward County	7	30.2
Prince George County	6	15.9
Prince William County	25	5.5
Pulaski County	3	8.8
Radford City	0	0.0
Rappahannock County	0	0.0
Richmond City	24	10.8
Richmond County	0	0.0
Roanoke City	10	10.0
Roanoke County	7	7.4
Rockbridge County	4	17.9
Rockingham County	15	18.8
Russell County	5	18.3
Salem City	5	19.6
Scott County	2	9.1
Shenandoah County	4	9.3
Smyth County	3	9.7
Southampton County	5	27.7
Spotsylvania County	13	9.8
Stafford County	8	5.5
Staunton City	2	8.2
Suffolk City	6	6.7
Surry County	3	45.8
Sussex County	4	34.8
Tazewell County	6	14.2
Virginia Beach City	25	5.5
Warren County	9	23.0
Washington County	5	9.2
Waynesboro City	2	9.1
Westmoreland County	2	11.4
Williamsburg City	0	0.0
Winchester City	1	3.6
Wise County	6	15.3
Wythe County	4	13.8
York County	6	8.8
Subtotal (in-state)	772	9.2
Out of State	114	ND
Unknown	4	ND
Subtotal (out-of-state)	118	ND
TOTAL	**890**	**10.6**

Note: No denominator is represented by ND

Map 4.1 Number of Motor Vehicle Fatalities by Locality of Residence, 2016



Map 4.2 Rate of Motor Vehicle Fatalities by Locality of Residence, 2016

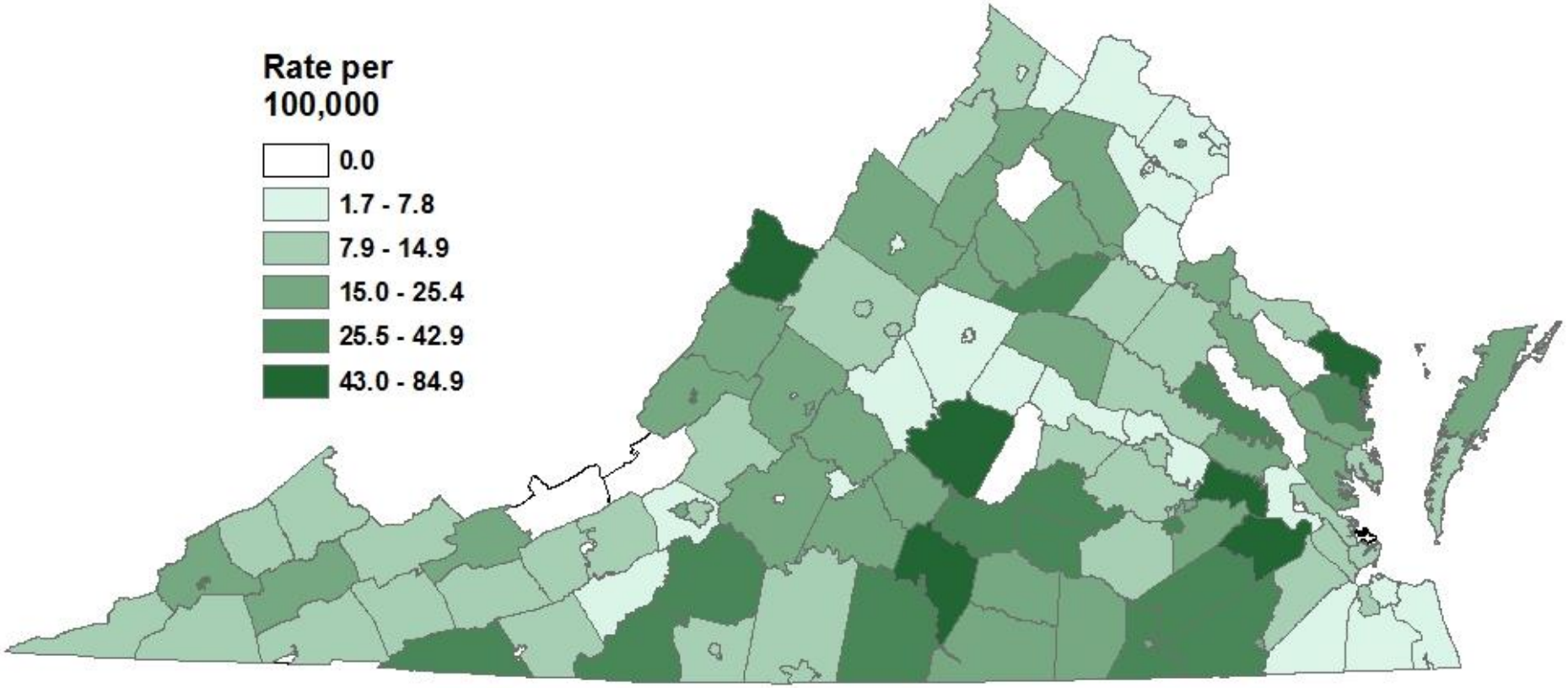


Table 4.4 Number and Rate of Motor Vehicle Deaths by Locality of Injury, 2016

Locality of Injury	Deaths	Rate
Accomack County	7	21.2
Albemarle County	11	10.3
Alexandria City	2	1.3
Alleghany County	5	32.1
Amelia County	5	38.7
Amherst County	6	19.0
Appomattox County	3	19.4
Arlington County	1	0.4
Augusta County	19	25.3
Bath County	2	44.7
Bedford County	17	21.8
Bland County	1	15.4
Botetourt County	4	12.0
Bristol City	0	0.0
Brunswick County	7	43.1
Buchanan County	3	13.5
Buckingham County	10	58.7
Buena Vista City	0	0.0
Campbell County	12	21.8
Caroline County	12	39.8
Carroll County	6	20.3
Charles City County	5	70.7
Charlotte County	7	57.7
Charlottesville City	3	6.4
Chesapeake City	22	9.2
Chesterfield County	29	8.6
Clarke County	4	27.8
Colonial Heights City	5	28.1
Covington City	0	0.0
Craig County	0	0.0
Culpeper County	6	12.0
Cumberland County	1	10.4
Danville City	4	9.5
Dickenson County	2	13.4
Dinwiddie County	8	28.4
Emporia City	1	18.9
Essex County	3	27.0
Fairfax City	5	20.7
Fairfax County	43	3.8
Falls Church City	0	0.0
Fauquier County	17	24.6

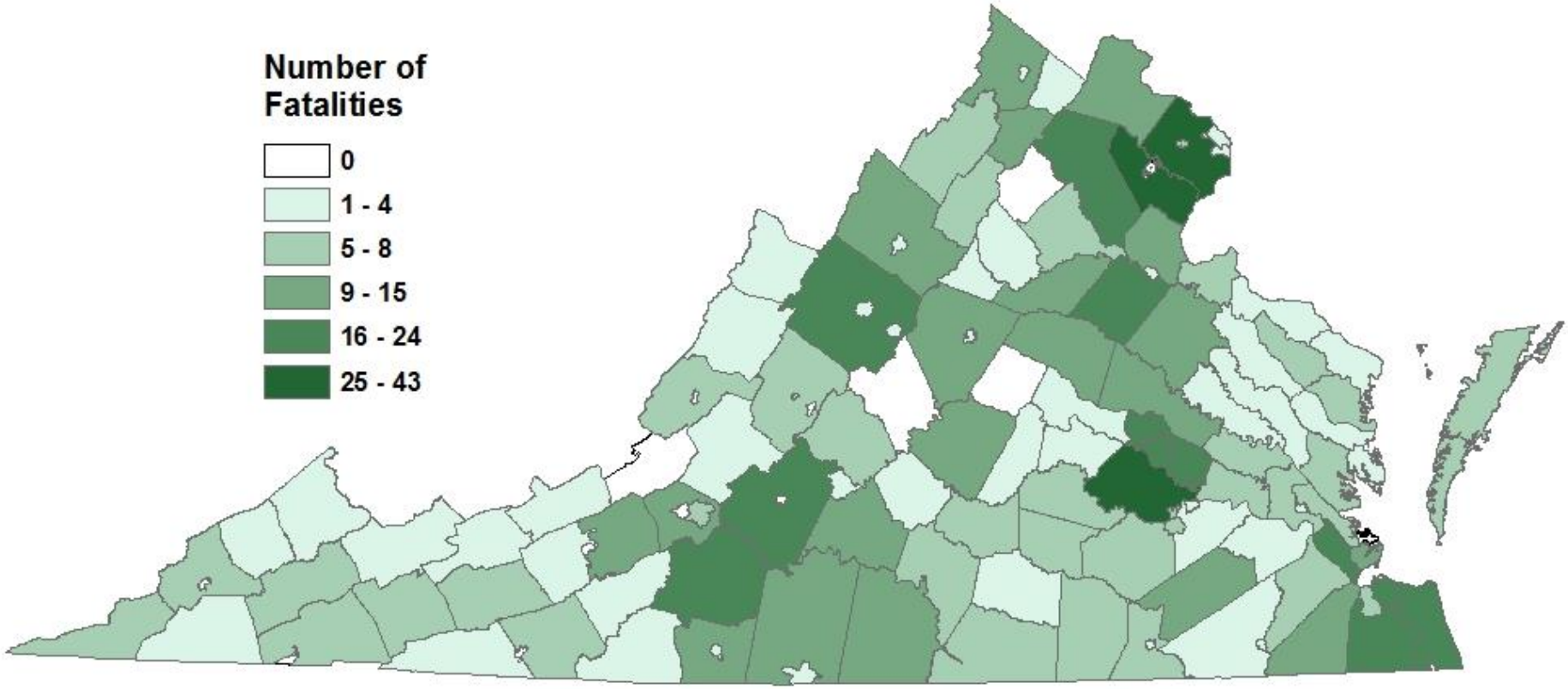
Locality of Injury	Deaths	Rate
Floyd County	1	6.4
Fluvanna County	0	0.0
Franklin City	2	24.1
Franklin County	18	32.1
Frederick County	9	10.7
Fredericksburg City	3	10.6
Galax City	0	0.0
Giles County	1	5.9
Gloucester County	6	16.1
Goochland County	2	8.8
Grayson County	3	19.9
Greene County	2	10.3
Greensville County	5	42.7
Halifax County	13	37.2
Hampton City	9	6.6
Hanover County	9	8.6
Harrisonburg City	3	5.7
Henrico County	24	7.4
Henry County	9	17.5
Highland County	1	45.1
Hopewell City	1	4.4
Isle of Wight County	5	13.7
James City County	5	6.7
King and Queen County	2	27.9
King George County	7	26.9
King William County	3	18.4
Lancaster County	5	45.6
Lee County	5	20.7
Lexington City	1	14.2
Loudoun County	13	3.4
Louisa County	10	28.4
Lunenburg County	3	24.4
Lynchburg City	3	3.7
Madison County	2	15.3
Manassas City	0	0.0
Manassas Park City	0	0.0
Martinsville City	1	7.4
Mathews County	2	22.8
Mecklenburg County	8	25.9
Middlesex County	2	18.6
Montgomery County	9	9.1

Locality of Injury	Deaths	Rate
Nelson County	0	0.0
New Kent County	7	33.1
Newport News City	16	8.8
Norfolk City	20	8.2
Northampton County	8	65.9
Northumberland County	2	16.4
Norton City	0	0.0
Nottoway County	5	32.1
Orange County	11	31.0
Page County	5	21.1
Patrick County	2	11.2
Petersburg City	6	18.8
Pittsylvania County	14	22.7
Poquoson City	0	0.0
Portsmouth City	8	8.4
Powhatan County	1	3.5
Prince Edward County	7	30.2
Prince George County	3	7.9
Prince William County	30	6.6
Pulaski County	2	5.8
Radford City	0	0.0
Rappahannock County	0	0.0
Richmond City	23	10.3
Richmond County	5	57.0
Roanoke City	8	8.0
Roanoke County	11	11.7
Rockbridge County	8	35.7
Rockingham County	15	18.8
Russell County	7	25.6
Salem City	0	0.0

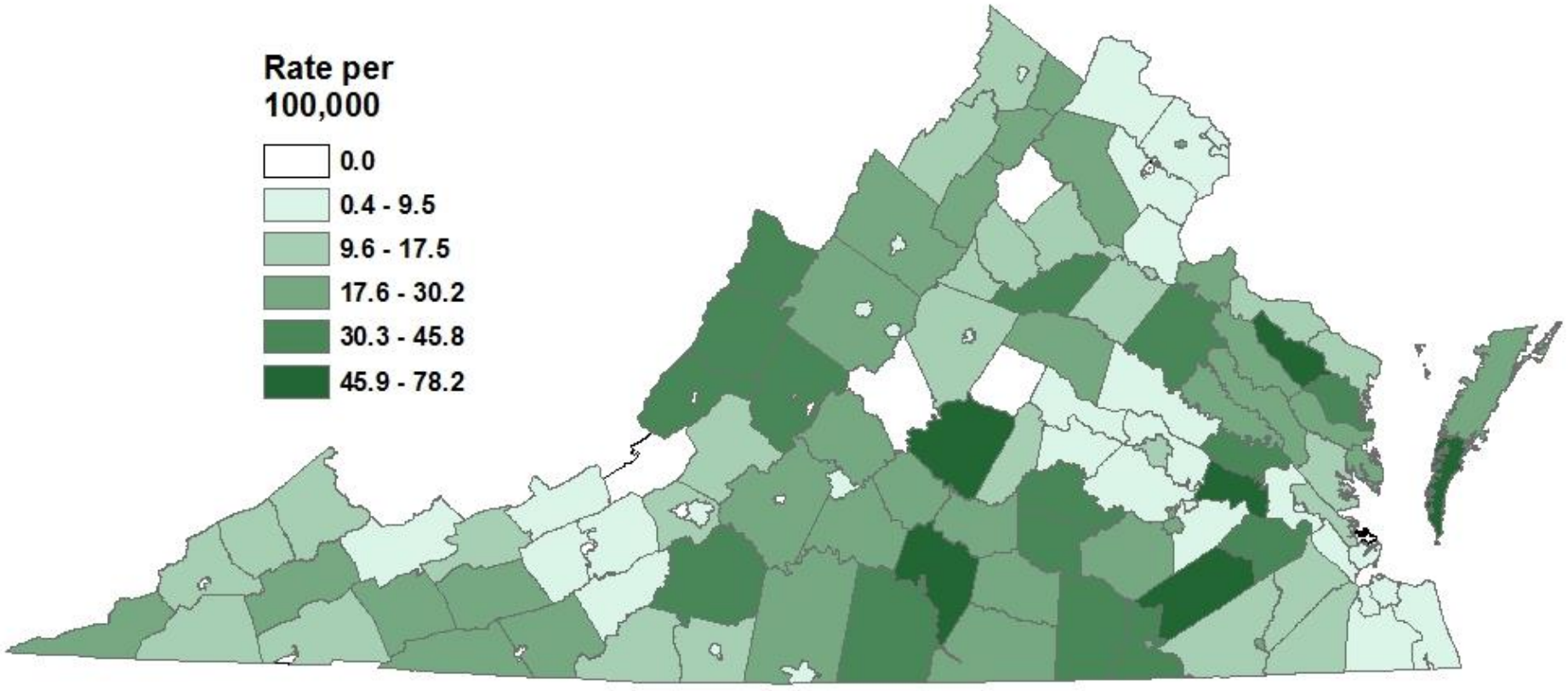
Locality of Injury	Deaths	Rate
Scott County	3	13.7
Shenandoah County	7	16.2
Smyth County	6	19.3
Southampton County	2	11.1
Spotsylvania County	17	12.9
Stafford County	9	6.2
Staunton City	1	4.1
Suffolk City	10	11.2
Surry County	3	45.8
Sussex County	9	78.2
Tazewell County	4	9.5
Virginia Beach City	21	4.6
Warren County	10	25.5
Washington County	7	12.9
Waynesboro City	2	9.1
Westmoreland County	3	17.1
Williamsburg City	1	6.6
Winchester City	1	3.6
Wise County	6	15.3
Wythe County	7	24.1
York County	8	11.8
Subtotal (in-state)	866	10.3
Out of State	20	ND
Unknown	4	ND
Subtotal (out-of-state)	24	ND
TOTAL	**890**	**10.6**

Note: No denominator is represented by ND

Map 4.3 Number of Motor Vehicle Fatalities by Locality of Injury, 2016



Map 4.4 Rate of Motor Vehicle Fatalities by Locality of Injury, 2016



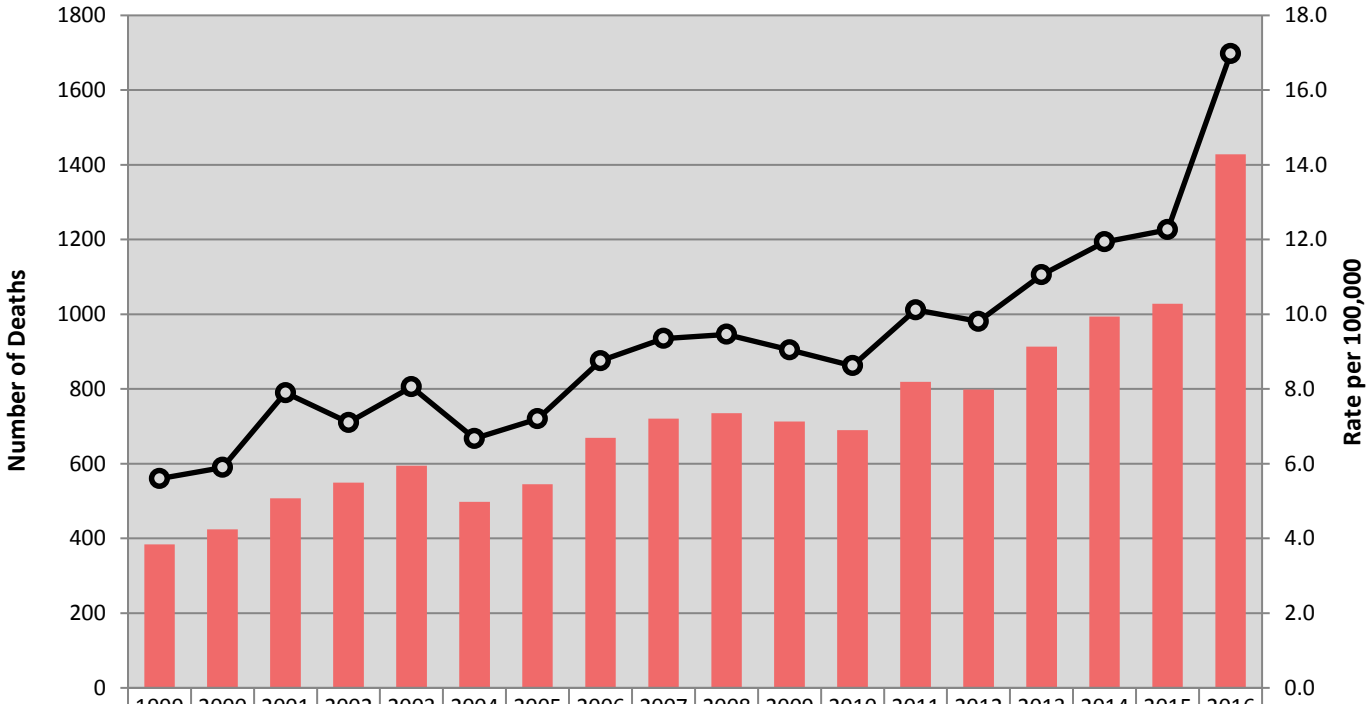
SECTION 5: DRUG/POISON DEATHS (N=1,428)

TOTAL DRUG/POISON DEATHS (N=1,428)

The number of drug/poisoning deaths in 2016 increased by 38.9% compared to 2015, the biggest single year increase ever recorded in Virginia.

- The 2016 rate of drug/poison deaths that occurred in Virginia was 17.0 per 100,000 persons
- The majority were accidents (89.5%), male (66.2%), whites (78.2%), and 25-34 year olds (28.3%)
- Illicit opioids like heroin and illicit fentanyl have the highest mortality rates in urban localities like Central and Eastern Virginia, whereas prescription opioids have the highest mortality rates in rural areas of the state like the Western region of Virginia

Figure 5.1 Number and Rate of Fatal Drug/Poison Overdoses by Year of Death, 1999-2016



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Deaths	384	424	507	549	595	498	545	669	721	735	713	690	819	799	913	994	1028	1428
Mortality Rate	5.6	5.9	7.9	7.1	8.1	6.7	7.2	8.8	9.3	9.5	9.0	8.6	10.1	9.8	11.1	11.9	12.3	17.0

Table 5.1 Number and Percentage of Fatal Drug/Poison Overdoses by OCME District, 2016

OCME District	OCME Cases	Percentage
Central	441	30.9%
Northern	359	25.1%
Tidewater	378	26.5%
Western	250	17.5%
TOTAL	**1428**	**100.0%**

Figure 5.2 Percentage of Fatal Drug/Poison Overdoses by Manner of Death, 2016

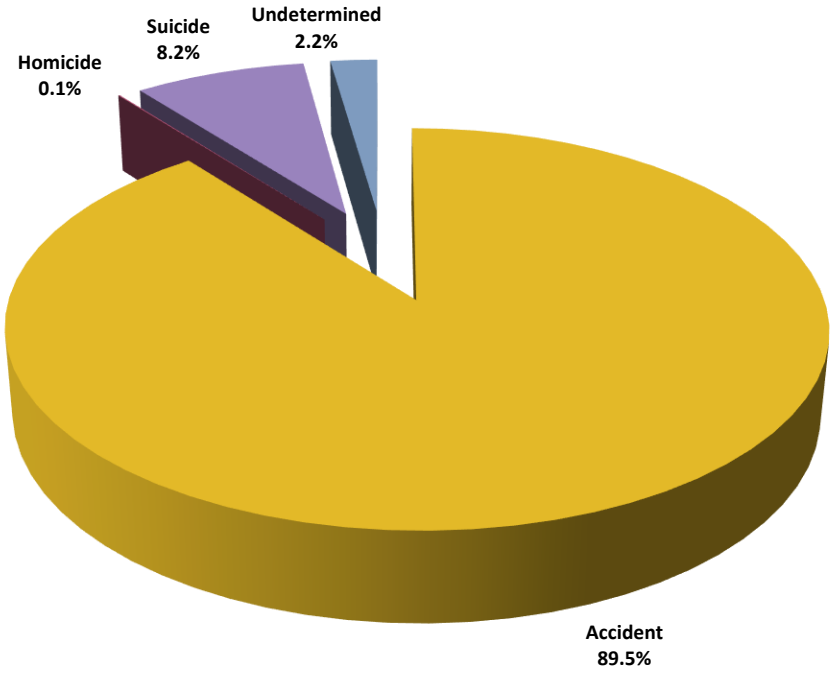
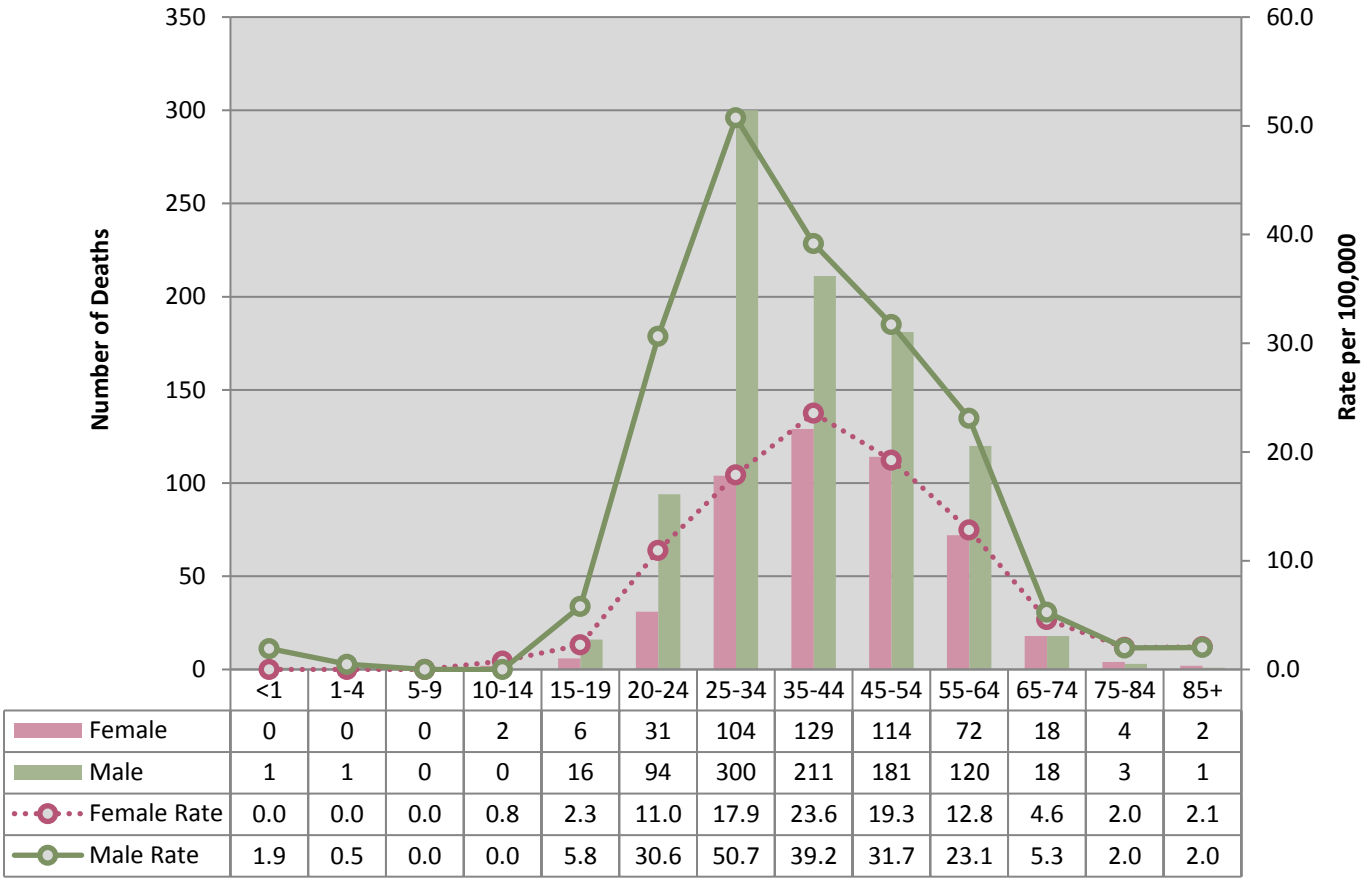


Figure 5.3 Number and Rate of Fatal Drug/Poison Overdoses by Age Group and Gender, 2016



	<1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Female	0	0	0	2	6	31	104	129	114	72	18	4	2
Male	1	1	0	0	16	94	300	211	181	120	18	3	1
Female Rate	0.0	0.0	0.0	0.8	2.3	11.0	17.9	23.6	19.3	12.8	4.6	2.0	2.1
Male Rate	1.9	0.5	0.0	0.0	5.8	30.6	50.7	39.2	31.7	23.1	5.3	2.0	2.0

Table 5.2 Number of Fatal Drug/Poison Overdoses by Age Group and Manner of Death, 2016

Age Group (years)	Accident	Homicide	Suicide	Undetermined	Total
<1	0	1	0	0	1
1-4	1	0	0	0	1
5-9	0		0	0	0
10-14	0	0	2	0	2
15-19	20	0	2	0	22
20-24	115	0	6	4	125
25-34	385	0	13	6	404
35-44	306	0	26	8	340
45-54	258	0	31	6	295
55-64	167	0	18	7	192
65-74	23	0	12	1	36
75-84	2	0	5	0	7
85+	1	0	2	0	3
Total	**1278**	**1**	**117**	**32**	**1428**

Figure 5.4 Percentage of Fatal Drug/Poison Overdoses by Race/Ethnicity, 2016

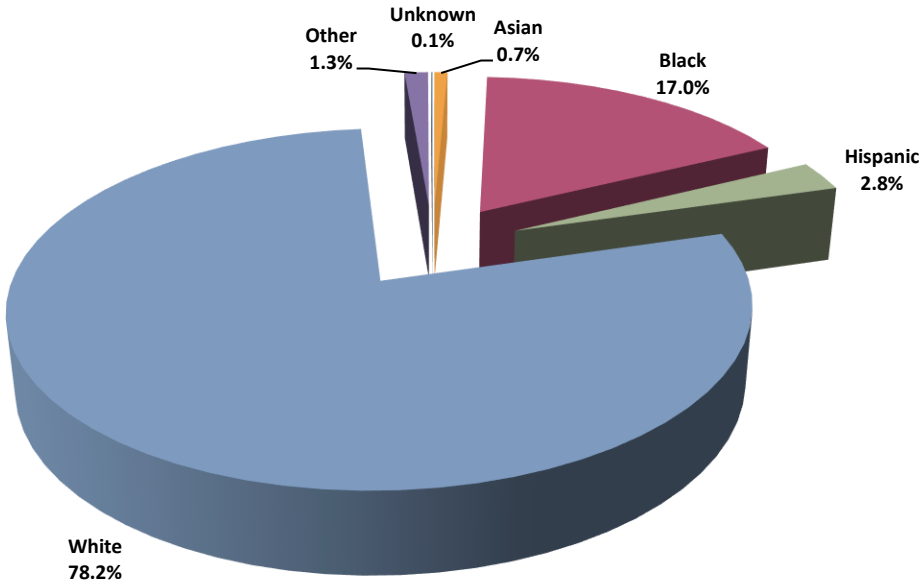
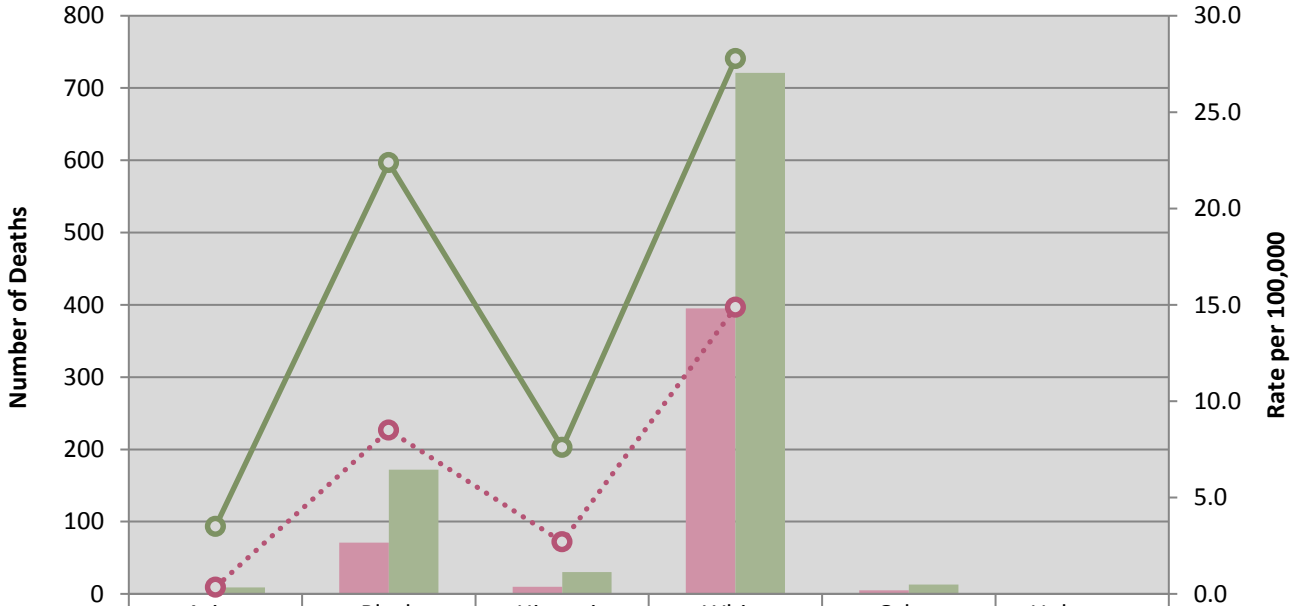


Figure 5.5 Number and Rate of Fatal Drug/Poison Overdoses by Race/Ethnicity and Gender, 2016



	Asian	Black	Hispanic	White	Other	Unknown
Female	1	71	10	395	5	0
Male	9	172	30	721	13	1
Female Rate	0.3	8.5	2.7	14.9	*	*
Male Rate	3.5	22.4	7.6	27.8	*	*

*No rate can be calculated

** Rates calculated from small case counts (n<5) are considered unreliable and should be interpreted with caution (Asians)

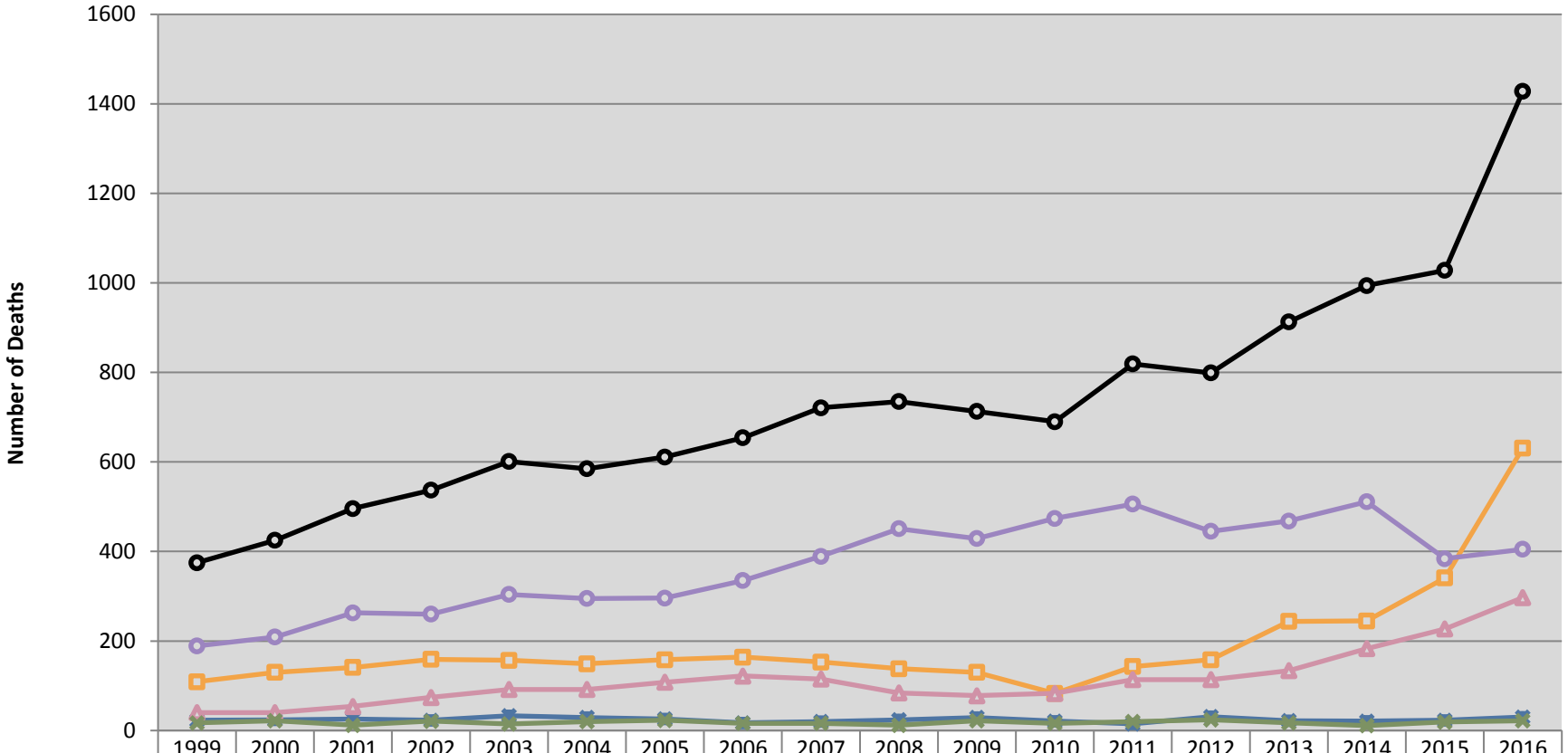
Table 5.3 Number of Fatal Drug/Poison Overdoses by OCME District and Cause of Death, 2016

Cause of Death	Central	Northern	Tidewater	Western	Total
Illegal (street) drug poisoning	187	206	174	64	**631**
Prescription drug poisoning	112	70	87	136	**405**
Mixed drug category	112	67	88	30	**297**
Ethanol poisoning	14	7	6	3	**30**
Over the counter drug poisoning	8	3	7	4	**22**
Inhalant poisoning	2	3	5	8	**18**
Drug type not specified	3	0	11	2	**16**
Other poisons (heavy metals, etc.)	1	2	0	3	**6**
Ethylene glycol poisoning	2	1	0	0	**3**
Total	**441**	**359**	**378**	**250**	**1428**

Table 5.4 Number of Fatal Drug/Poison Overdoses Manner and Cause of Death, 2016

Cause of Death	Accident	Homicide	Suicide	Undetermined	Total
Illegal (street) drug poisoning	624	0	1	6	**631**
Prescription drug poisoning	310	0	85	10	**405**
Mixed drug category	273	0	14	10	**297**
Ethanol poisoning	30	0	0	0	**30**
Over the counter drug poisoning	7	1	11	3	**22**
Inhalant poisoning	18	0	0	0	**18**
Drug type not specified	13	0	2	1	**16**
Other poisons (heavy metals, etc.)	2	0	2	2	**6**
Ethylene glycol poisoning	1	0	2	0	**3**
Total	**1278**	**1**	**117**	**32**	**1428**

Figure 5.6 Number of Fatal Drug/Poison Overdoses by Drug Category and Year of Death, 1999-2016



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Ethanol	23	24	26	23	33	29	26	17	20	24	29	21	15	31	22	21	23	30
Illegal	109	130	141	159	157	149	158	164	153	138	130	83	143	158	244	245	341	631
Mixed	40	40	54	74	92	92	108	122	115	84	78	83	114	114	134	183	227	297
OTC	17	22	12	21	15	20	23	16	16	12	22	16	20	24	17	11	19	22
Prescription	189	209	263	260	304	295	296	335	389	451	429	474	506	445	468	511	384	405
All Drug Deaths	375	425	496	537	601	585	611	654	721	735	713	690	819	799	913	994	1028	1428

*Note: all other categories of fatal drug overdose were excluded from this analysis because of low annual case counts (<20 deaths)

Figure 5.7 Number of Fatal Drug/Poison Overdoses by Drug Category and Gender, 2016

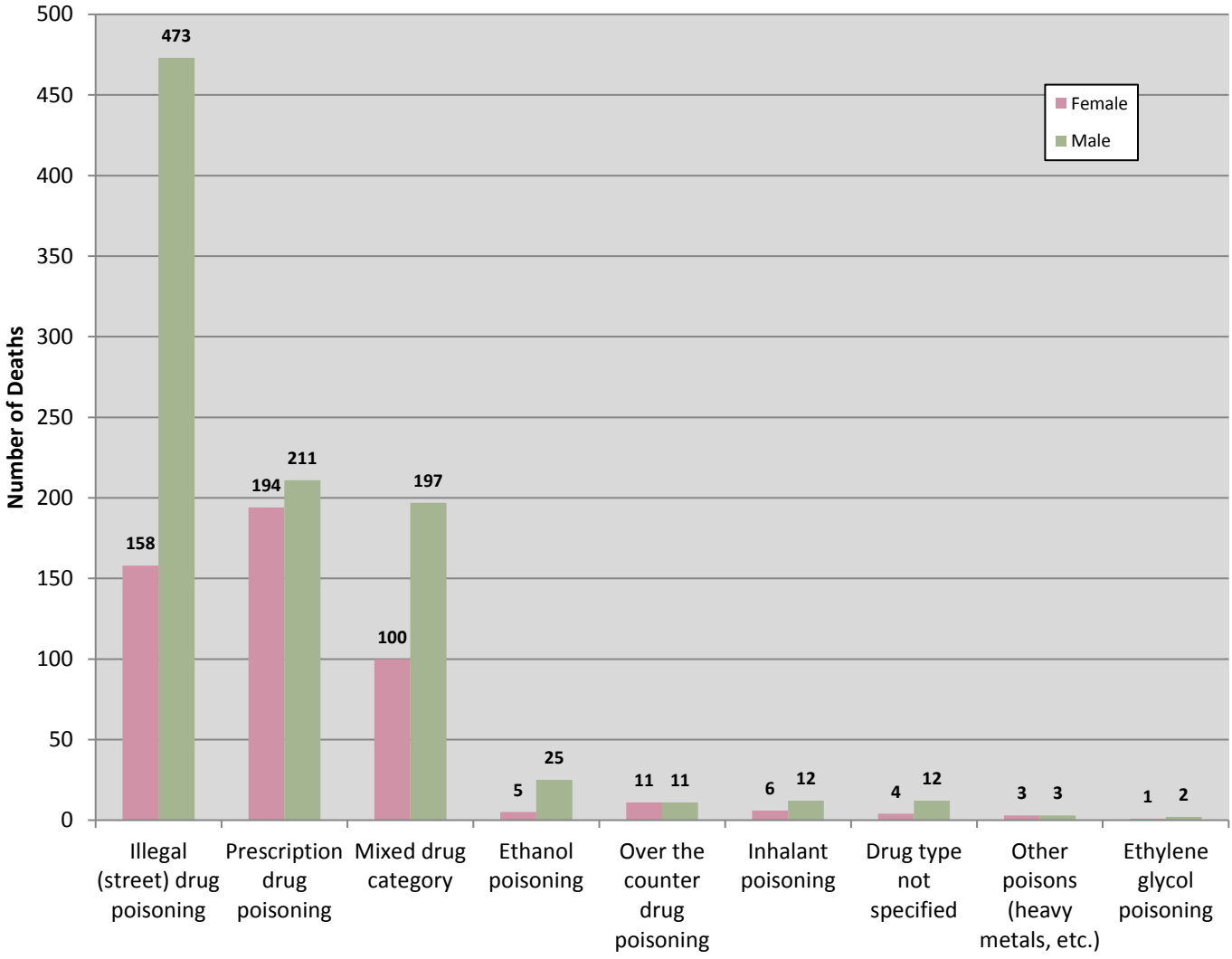
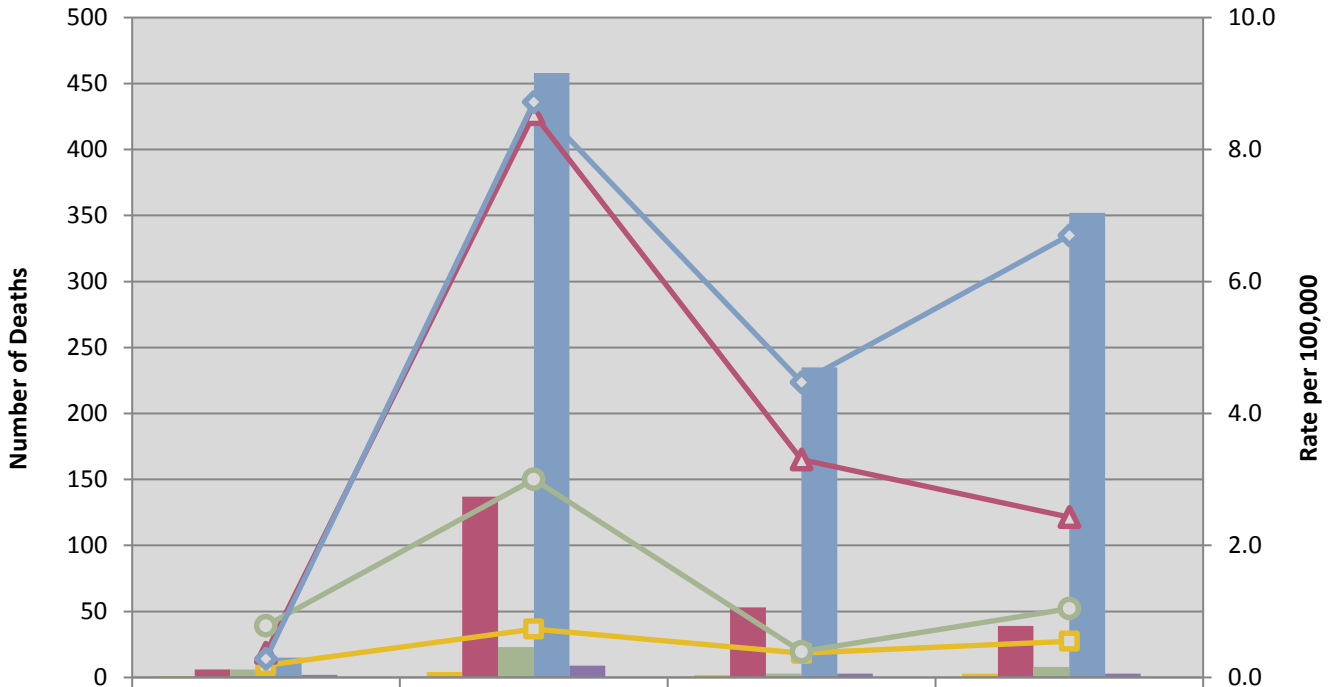
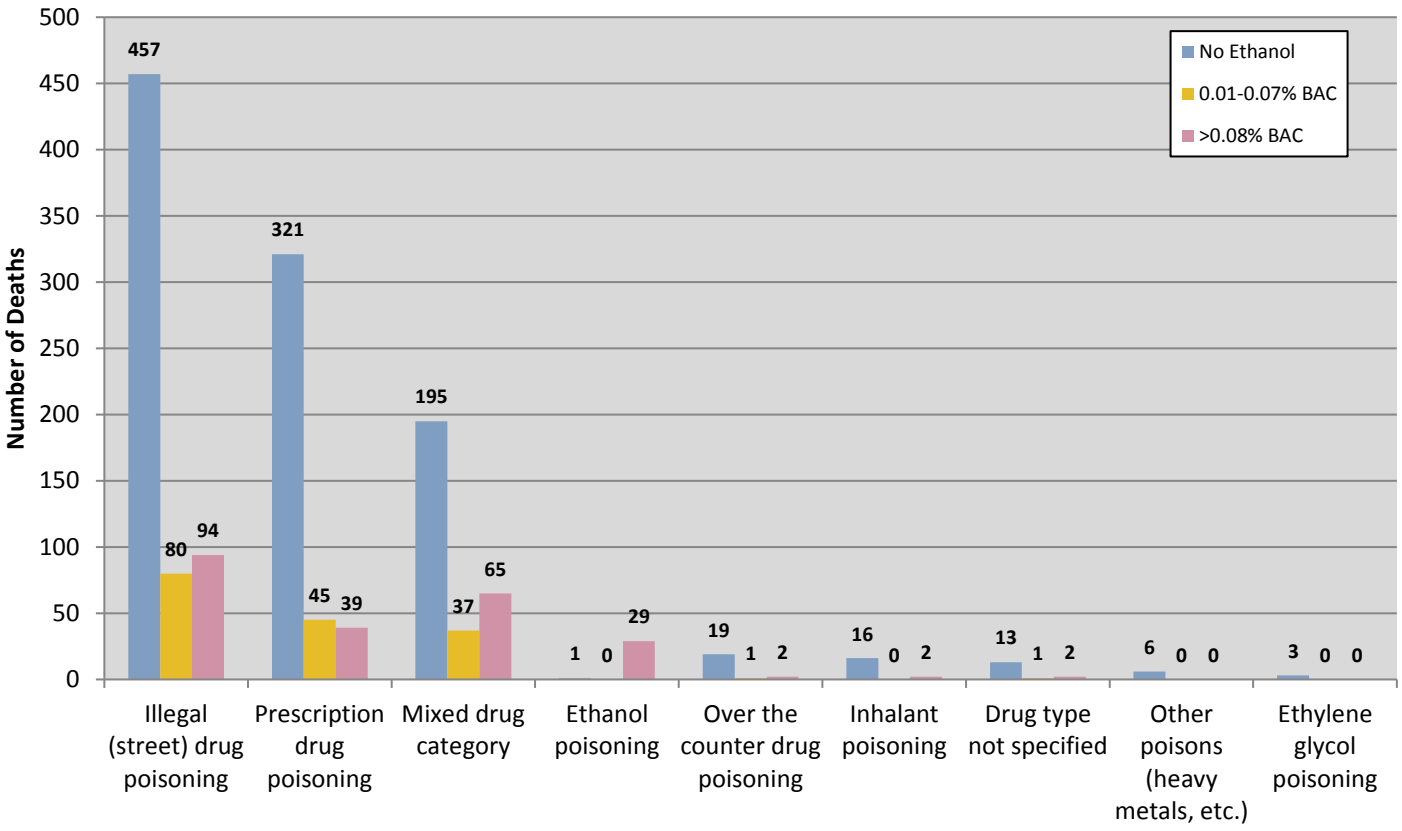


Figure 5.8 Number and Rate of Fatal Drug/Poison Overdoses by Drug Category and Race/Ethnicity, 2016



	Ethanol Poisoning	Illegal Drug Poisoning	Mixed Drug Category Poisoning	Prescription Drug Poisoning
Asian	1	4	2	3
Black	6	137	53	39
Hispanic	6	23	3	8
White	15	458	235	352
Other	2	9	3	3
Unknown	0	0	1	0
Asian Rate	0.2	0.7	0.4	0.5
Black Rate	0.4	8.5	3.3	2.4
Hispanic Rate	0.8	3.0	0.4	1.0
White Rate	0.3	8.7	4.5	6.7

Figure 5.9 Number of Fatal Drug/Poison Overdoses by Drug Category and Ethanol Level, 2016



*Ethanol poisoning deaths listed as 'no ethanol' detected or '0.01-0.07% BAC' were due to toxicology timing issues regarding metabolization of ethanol

Table 5.5 Number of Fatal Drug/Poison Overdoses by Cause of Death and Whether Alcohol Caused Death, 2016

Cause of Death	Caused Death	Contributed to Death	Did Not Cause Death	Total
Illegal (street) drug poisoning	79	33	519	631
Prescription drug poisoning	34	12	359	405
Mixed drug category	75	6	216	297
Ethanol poisoning	30	0	0	30
Over the counter drug poisoning	2	1	19	22
Inhalant poisoning	1	0	17	18
Drug type not specified	3	0	13	16
Other poisons (heavy metals, etc.)	0	0	6	6
Ethylene glycol poisoning	0	0	3	3
Total	**224**	**52**	**1152**	**1428**

Figure 5.10 Number of Fatal Drug/Poison Overdoses by Drug/Poison/Metabolites Detected, 2016

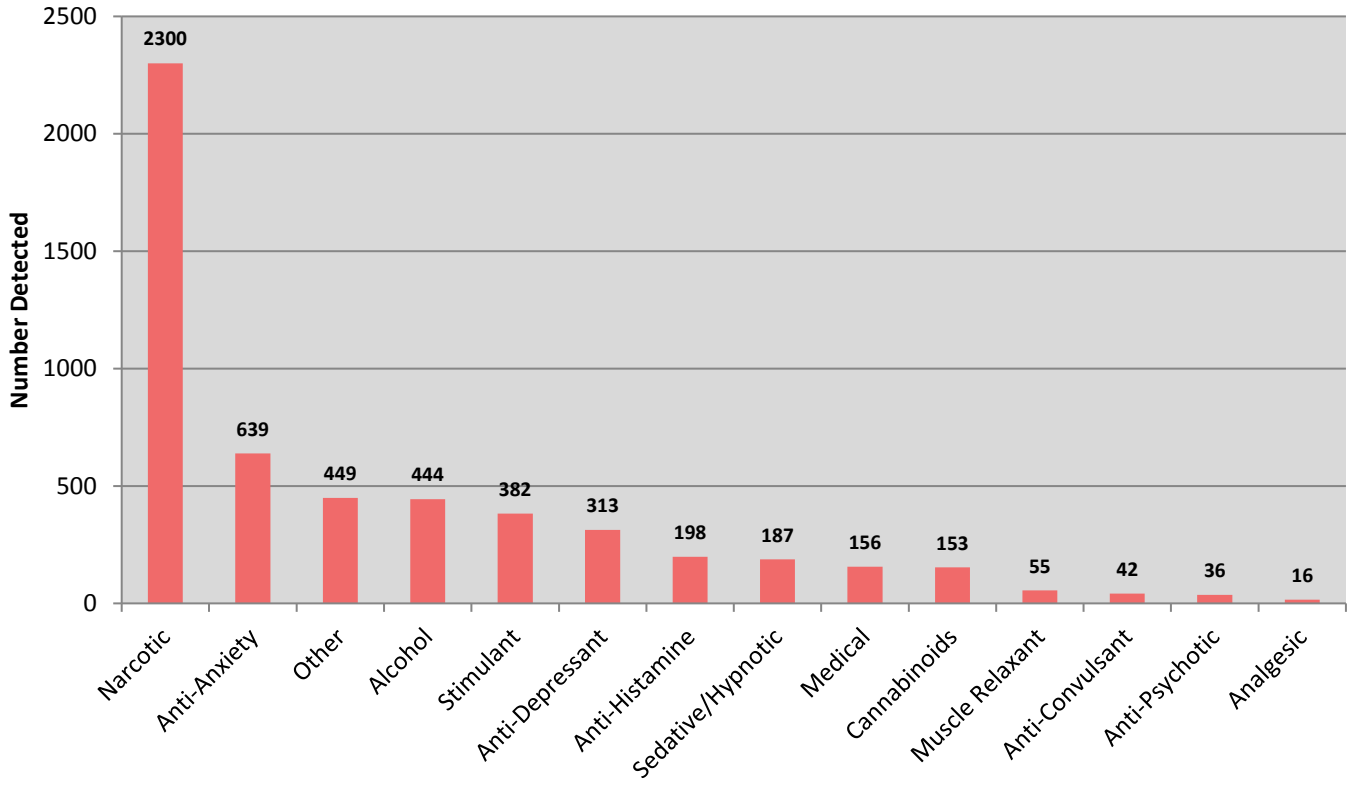


Table 5.6 Number and Percentage of Fatal Drug/Poison Overdoses by Drug/Poison/Metabolite Detected, 2016

Class	Drug/Poison/Active Metabolite	Number Detected	Percentage of Cases
Alcohol			**8.3%**
	Acetone	7	0.1%
	Ethanol	429	8.0%
	Isopropanol	7	0.1%
	Methanol	1	0.0%
Analgesic			**0.3%**
	Acetaminophen	12	0.2%
	Salicylate	4	0.1%
Anti-Anxiety			**11.9%**
	7-Aminoclonazepam	96	1.8%
	Alpha-Hydroxyalprazolam	52	1.0%
	Alprazolam	210	3.9%
	Buspirone	3	0.1%
	Delorazepam	2	0.0%

Class	Drug/Poison/Active Metabolite	Number Detected	Percentage of Cases
	Diazepam	109	2.0%
	Diclazepam	2	0.0%
	Etizolam	5	0.1%
	Flubromazepam	2	0.0%
	Lorazepam	22	0.4%
	Meprobamate	8	0.1%
	N-Desalkyflurazepam	3	0.1%
	Nordiazepam (Diazepam Metabolite)	125	2.3%
Anti-Convulsant			**0.8%**
	Carbamazepine	3	0.1%
	Lacosamide	1	0.0%
	Lamotrigine	10	0.2%
	Levetiracetam	6	0.1%
	Phenobarbital	3	0.1%
	Phenytoin	4	0.1%
	Topiramate	14	0.3%
	Valproic Acid	1	0.0%
Anti-Depressant			**5.8%**
	Amitriptyline	40	0.7%
	Bupropion	19	0.4%
	Citalopram	52	1.0%
	Desipramine	1	0.0%
	Desmethysertraline	4	0.1%
	Doxepin	6	0.1%
	Duloxetine	6	0.1%
	Fluoxetine	36	0.7%
	Lithium	2	0.0%
	Mirtazapine	19	0.4%
	Nortriptyline	40	0.7%
	Paroxetine	7	0.1%
	Sertraline	30	0.6%
	Trazodone	38	0.7%
	Venlafaxine	13	0.2%
Anti-Histamine			**3.7%**
	Chlorpheniramine	12	0.2%
	Cyproheptadine	1	0.0%
	Diphenhydramine	122	2.3%
	Doxylamine	18	0.3%
	Hyrdoxyzine	6	0.1%
	Meclizine	2	0.0%
	Promethazine	37	0.7%

Class	Drug/Poison/Active Metabolite	Number Detected	Percentage of Cases
Anti-Psychotic			**0.7%**
	Apripirazole	1	0.0%
	Clozapine	2	0.0%
	Haloperidol	1	0.0%
	Olanzapine	6	0.1%
	Prochlorperazine	1	0.0%
	Quetiapine	21	0.4%
	Risperidone	4	0.1%
Cannabinoids			**2.8%**
	Tetrahydrocannabinol Carboxylic Acid (THC)-various compounds	153	2.8%
Medical			**2.9%**
	Amlodipine	1	0.0%
	Atenolol	1	0.0%
	Benztropine	4	0.1%
	Butalbital	9	0.2%
	Dicyclomine	3	0.1%
	Diltiazem	1	0.0%
	Ephedrine/Pseudoephedrine	4	0.1%
	Flecainide	1	0.0%
	Furosemide	1	0.0%
	Gabapentin	57	1.1%
	Guaifenesin	2	0.0%
	Labetalol	1	0.0%
	Lidocaine	16	0.3%
	Loperamide	2	0.0%
	Metoprolol	2	0.0%
	Naloxone	22	0.4%
	Nevirapine	1	0.0%
	Norbuprenorphine	18	0.3%
	Phenylpropanolamine	1	0.0%
	Propranolol	3	0.1%
	Terazosin	1	0.0%
	Terbinafine	1	0.0%
	Verapamil	3	0.1%
	Warfarin	1	0.0%
Muscle Relaxant			**1.0%**
	Baclofen	1	0.0%
	Carisoprodol	6	0.1%
	Cyclobenzaprine	48	0.9%
Narcotic			**42.8%**

Class	Drug/Poison/Active Metabolite	Number Detected	Percentage of Cases
	0-Desmethyltramadol	1	0.0%
	6-Acetylmorphine (Heroin Metabolite)	240	4.5%
	Acetyl Fentanyl	46	0.9%
	Buprenorphine	21	0.4%
	Cis-3-Methylfentanyl	3	0.1%
	Codeine	126	2.3%
	Despropiony Fentanyl	201	3.7%
	Dextro/Levo Methorphan	28	0.5%
	Fentanyl	465	8.7%
	Furanyl Fentanyl	70	1.3%
	Hydrocodone	58	1.1%
	Hydromorphone	32	0.6%
	Methadone	79	1.5%
	Mitragynine	5	0.1%
	Morphine	529	9.9%
	Norfentanyl	33	0.6%
	O-Desmethyltramadol	1	0.0%
	Oxycocone	210	3.9%
	Oxymorphone	77	1.4%
	Para-Fluorobutyryl Fentanyl	20	0.4%
	Tapentadol	2	0.0%
	Tramadol	42	0.8%
	Trans-3-Methylfentanyl	1	0.0%
	U-47700	10	0.2%
Other			**8.4%**
	1,1 Difluoroethane	4	0.1%
	Benzoylecgonine	296	5.5%
	Butylone	3	0.1%
	Carboxyhemoglobin	5	0.1%
	Cocaethylene	48	0.9%
	Continine	23	0.4%
	Desmethylloperamide	2	0.0%
	Difluoroethane	15	0.3%
	Dihydrocodeine	7	0.1%
	Ethylene Glycol	1	0.0%
	Freon	1	0.0%
	Ketamine	4	0.1%
	Levamisole	18	0.3%
	Monoethylglycinexylidide (Megx)	1	0.0%
	Nicotine	9	0.2%
	Phencyclidine	8	0.1%
	Ritalinic Acid	1	0.0%

Class	Drug/Poison/Active Metabolite	Number Detected	Percentage of Cases
	Thiosulfate	1	0.0%
	Toluene	1	0.0%
	Xylenes	1	0.0%
Sedative/Hypnotic			**3.5%**
	Butabarbital	1	0.0%
	Chlordiazepoxide	5	0.1%
	Clobazam	1	0.0%
	Clonazepam	34	0.6%
	Flurazepam	2	0.0%
	Midazolam	12	0.2%
	Oxazepam	50	0.9%
	Pentobarbital	1	0.0%
	Secobarbital	2	0.0%
	Temazepam	54	1.0%
	Triazolam	1	0.0%
	Zolpidem	22	0.4%
	Zopiclone	2	0.0%
Stimulant			**7.1%**
	Alpha-Pyrrolidinovalerophenone	1	0.0%
	Amphetamine	68	1.3%
	Caffeine	49	0.9%
	Cocaine	194	3.6%
	Dibutylone	3	0.1%
	MDMA/MDA/MDFA (Mixed Compounds)	5	0.1%
	Methamphetamine	51	0.9%
	Methylphenidate	2	0.0%
	N-Ethylpentylone	6	0.1%
	Phendimetrazine	1	0.0%
	Phenmetrazine	1	0.0%
	Phentermine	1	0.0%
TOTAL DRUG/POISON/ACTIVE METABOLITES DETECTED		**5370**	**100.0%**

Figure 5.11 Number of Fatal Drug/Poison Overdoses by Class of Drug/Poison/Metabolite Detected that Caused or Contributed to Death, 2016

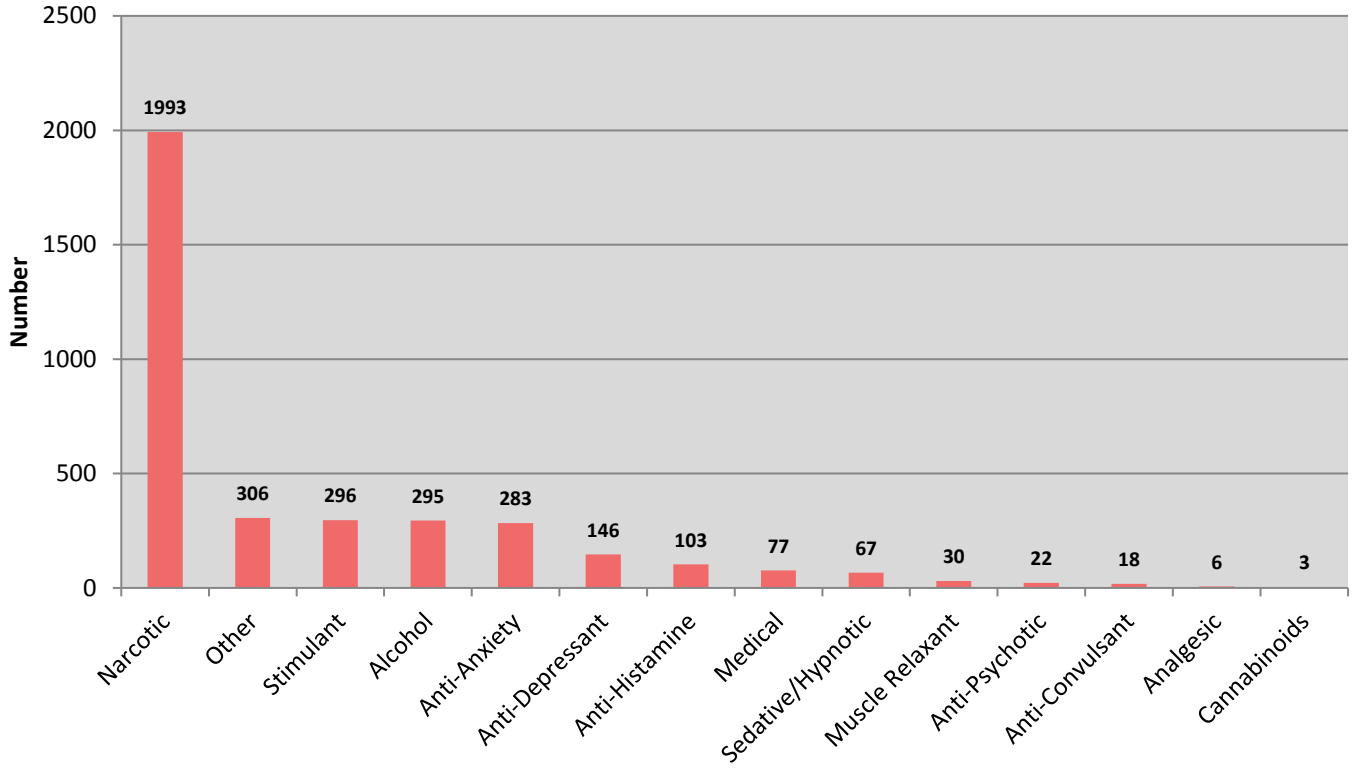


Table 5.7 Number of Fatal Drug/Poison Deaths by Drug/Poison/Metabolites Detected that Caused or Contributed to Death, 2016

Class	Drug/Poison/Active Metabolite	Number Detected	Percentage of Cases
Alcohol			**8.1%**
	Acetone	1	0.0%
	Ethanol	292	8.0%
	Isopropanol	2	0.1%
	Methanol	0	0.0%
Analgesic			**0.2%**
	Acetaminophen	4	0.1%
	Salicylate	2	0.1%
Anti-Anxiety			**7.8%**
	7-Aminoclonazepam	11	0.3%
	Alpha-Hydroxyalprazolam	15	0.4%
	Alprazolam	141	3.9%
	Buspirone	0	0.0%
	Delorazepam	2	0.1%
	Diazepam	49	1.3%

Class	Drug/Poison/Active Metabolite	Number Detected	Percentage of Cases
	Diclazepam	2	0.1%
	Etizolam	3	0.1%
	Flubromazepam	2	0.1%
	Lorazepam	12	0.3%
	Meprobamate	4	0.1%
	N-Desalkyflurazepam	0	0.0%
	Nordiazepam (Diazepam Metabolite)	42	1.2%
Anti-Convulsant			**0.5%**
	Carbamazepine	1	0.0%
	Lacosamide	1	0.0%
	Lamotrigine	4	0.1%
	Levetiracetam	0	0.0%
	Phenobarbital	2	0.1%
	Phenytoin	1	0.0%
	Topiramate	9	0.2%
	Valproic Acid	0	0.0%
Anti-Depressant			**4.0%**
	Amitriptyline	21	0.6%
	Bupropion	7	0.2%
	Citalopram	24	0.7%
	Desipramine	0	0.0%
	Desmethysertraline	1	0.0%
	Doxepin	4	0.1%
	Duloxetine	5	0.1%
	Fluoxetine	20	0.5%
	Lithium	0	0.0%
	Mirtazapine	6	0.2%
	Nortriptyline	20	0.5%
	Paroxetine	3	0.1%
	Sertraline	14	0.4%
	Trazodone	18	0.5%
	Venlafaxine	3	0.1%
Anti-Histamine			**2.8%**
	Chlorpheniramine	5	0.1%
	Cyproheptadine	1	0.0%
	Diphenhydramine	60	1.6%
	Doxylamine	12	0.3%
	Hyrdoxyzine	5	0.1%
	Meclizine	1	0.0%
	Promethazine	19	0.5%
Anti-Psychotic			**0.6%**

Class	Drug/Poison/Active Metabolite	Number Detected	Percentage of Cases
	Apripirazole	1	0.0%
	Clozapine	2	0.1%
	Haloperidol	0	0.0%
	Olanzapine	3	0.1%
	Prochlorperazine	0	0.0%
	Quetiapine	14	0.4%
	Risperidone	2	0.1%
Cannabinoids			**0.1%**
	Tetrahydrocannabinol Carboxylic Acid (THC)-various compounds	3	0.1%
Medical			**2.1%**
	Amlodipine	1	0.0%
	Atenolol	1	0.0%
	Benztropine	0	0.0%
	Butalbital	6	0.2%
	Dicyclomine	3	0.1%
	Diltiazem	0	0.0%
	Ephedrine/Pseudoephedrine	2	0.1%
	Flecainide	0	0.0%
	Furosemide	0	0.0%
	Gabapentin	36	1.0%
	Guaifenesin	2	0.1%
	Labetalol	1	0.0%
	Lidocaine	2	0.1%
	Loperamide	2	0.1%
	Metoprolol	2	0.1%
	Naloxone	0	0.0%
	Nevirapine	0	0.0%
	Norbuprenorphine	13	0.4%
	Phenylpropanolamine	1	0.0%
	Propranolol	3	0.1%
	Terazosin	1	0.0%
	Terbinafine	0	0.0%
	Verapamil	1	0.0%
	Warfarin	0	0.0%
Muscle Relaxant			**0.8%**
	Baclofen	1	0.0%
	Carisoprodol	4	0.1%
	Cyclobenzaprine	25	0.7%
Narcotic			**54.7%**
	0-Desmethyltramadol	0	0.0%

Class	Drug/Poison/Active Metabolite	Number Detected	Percentage of Cases
	6-Acetylmorphine (Heroin Metabolite)	214	5.9%
	Acetyl Fentanyl	38	1.0%
	Buprenorphine	12	0.3%
	Cis-3-Methylfentanyl	3	0.1%
	Codeine	31	0.9%
	Despropiony Fentanyl	191	5.2%
	Dextro/Levo Methorphan	12	0.3%
	Fentanyl	454	12.5%
	Furanyl Fentanyl	70	1.9%
	Hydrocodone	48	1.3%
	Hydromorphone	28	0.8%
	Methadone	72	2.0%
	Mitragynine	5	0.1%
	Morphine	505	13.9%
	Norfentanyl	30	0.8%
	O-Desmethyltramadol	1	0.0%
	Oxycocone	180	4.9%
	Oxymorphone	55	1.5%
	Para-Fluorobutyryl Fentanyl	0	0.0%
	Tapentadol	2	0.1%
	Tramadol	31	0.9%
	Trans-3-Methylfentanyl	1	0.0%
	U-47700	10	0.3%
Other			**8.4%**
	1,1 Difluoroethane	4	0.1%
	Benzoylecgonine	219	6.0%
	Butylone	3	0.1%
	Carboxyhemoglobin	0	0.0%
	Cocaethylene	42	1.2%
	Continine	0	0.0%
	Desmethylloperamide	1	0.0%
	Difluoroethane	11	0.3%
	Dihydrocodeine	7	0.2%
	Ethylene Glycol	1	0.0%
	Freon	1	0.0%
	Ketamine	2	0.1%
	Levamisole	3	0.1%
	Monoethylglycinexylidide (Megx)	0	0.0%
	Nicotine	0	0.0%
	Phencyclidine	8	0.2%
	Ritalinic Acid	1	0.0%
	Thiosulfate	1	0.0%

Class	Drug/Poison/Active Metabolite	Number Detected	Percentage of Cases
	Toluene	1	0.0%
	Xylenes	1	0.0%
Sedative/Hypnotic			**1.8%**
	Butabarbital	0	0.0%
	Chlordiazepoxide	3	0.1%
	Clobazam	1	0.0%
	Clonazepam	10	0.3%
	Flurazepam	0	0.0%
	Midazolam	0	0.0%
	Oxazepam	16	0.4%
	Pentobarbital	1	0.0%
	Secobarbital	2	0.1%
	Temazepam	19	0.5%
	Triazolam	0	0.0%
	Zolpidem	13	0.4%
	Zopiclone	2	0.1%
Stimulant			**8.1%**
	Alpha-Pyrrolidinovalerophenone	1	0.0%
	Amphetamine	56	1.5%
	Caffeine	0	0.0%
	Cocaine	176	4.8%
	Dibutylone	3	0.1%
	MDMA/MDA/MDFA (Mixed Compounds)	3	0.1%
	Methamphetamine	50	1.4%
	Methylphenidate	1	0.0%
	N-Ethylpentylone	6	0.2%
	Phendimetrazine	0	0.0%
	Phenmetrazine	0	0.0%
	Phentermine	0	0.0%
TOTAL DRUG/POISON/ACTIVE METABOLITES DETECTED		**3645**	**100.0%**

Table 5.8 Number and Rate of Fatal Drug/Poison Overdoses by Locality of Residence, 2016

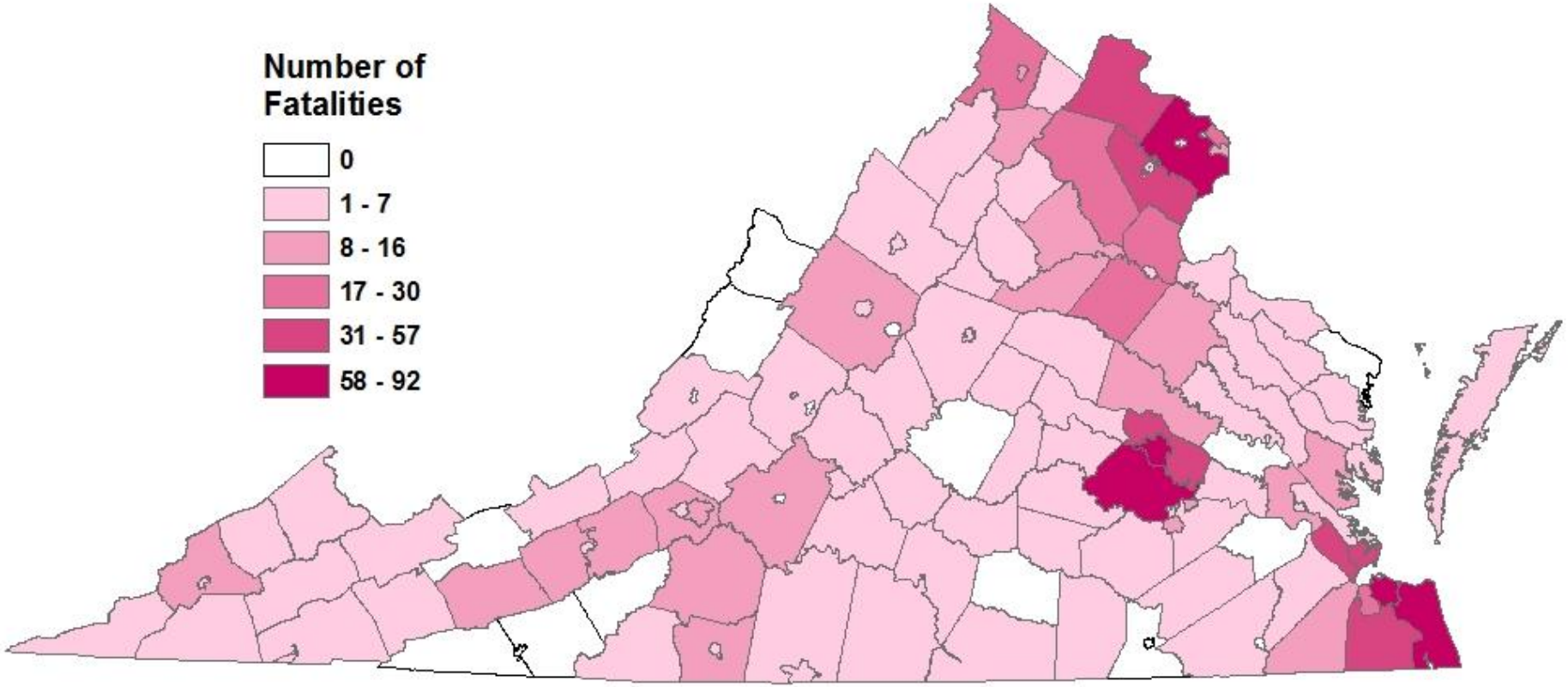
Locality of Residence	Deaths	Rate
Accomack County	4	12.1
Albemarle County	7	6.5
Alexandria City	14	9.0
Alleghany County	5	32.1
Amelia County	2	15.5
Amherst County	3	9.5
Appomattox County	2	12.9
Arlington County	22	9.6
Augusta County	8	10.7
Bath County	0	0.0
Bedford County	8	10.3
Bland County	0	0.0
Botetourt County	2	6.0
Bristol City	2	11.8
Brunswick County	2	12.3
Buchanan County	5	22.5
Buckingham County	0	0.0
Buena Vista City	0	0.0
Campbell County	6	10.9
Caroline County	10	33.1
Carroll County	0	0.0
Charles City County	1	14.1
Charlotte County	1	8.2
Charlottesville City	5	10.7
Chesapeake City	48	20.2
Chesterfield County	73	21.5
Clarke County	2	13.9
Colonial Heights City	4	22.5
Covington City	0	0.0
Craig County	1	19.4
Culpeper County	12	24.0
Cumberland County	2	20.7
Danville City	7	16.7
Dickenson County	7	46.8
Dinwiddie County	3	10.7
Emporia City	0	0.0
Essex County	3	27.0
Fairfax City	3	12.4
Fairfax County	92	8.1
Falls Church City	0	0.0
Fauquier County	24	34.7

Locality of Residence	Deaths	Rate
Floyd County	0	0.0
Fluvanna County	1	3.8
Franklin City	0	0.0
Franklin County	15	26.8
Frederick County	22	26.1
Fredericksburg City	7	24.7
Galax City	0	0.0
Giles County	3	17.8
Gloucester County	11	29.6
Goochland County	3	13.2
Grayson County	0	0.0
Greene County	1	5.2
Greensville County	0	0.0
Halifax County	2	5.7
Hampton City	37	27.3
Hanover County	11	10.5
Harrisonburg City	5	9.4
Henrico County	57	17.5
Henry County	12	23.3
Highland County	0	0.0
Hopewell City	9	39.6
Isle of Wight County	7	19.1
James City County	9	12.1
King and Queen County	2	27.9
King George County	6	23.1
King William County	5	30.6
Lancaster County	3	27.3
Lee County	3	12.4
Lexington City	1	14.2
Loudoun County	40	10.4
Louisa County	3	8.5
Lunenburg County	0	0.0
Lynchburg City	6	7.5
Madison County	3	22.9
Manassas City	5	12.1
Manassas Park City	1	6.3
Martinsville City	1	7.4
Mathews County	2	22.8
Mecklenburg County	4	12.9
Middlesex County	2	18.6
Montgomery County	14	14.2

Locality of Residence	Deaths	Rate
Nelson County	5	33.6
New Kent County	0	0.0
Newport News City	43	23.6
Norfolk City	75	30.6
Northampton County	3	24.7
Northumberland County	0	0.0
Norton City	1	25.9
Nottoway County	2	12.8
Orange County	14	39.4
Page County	6	25.4
Patrick County	4	22.3
Petersburg City	15	47.0
Pittsylvania County	5	8.1
Poquoson City	5	41.6
Portsmouth City	28	29.4
Powhatan County	2	7.0
Prince Edward County	5	21.6
Prince George County	5	13.2
Prince William County	50	11.0
Pulaski County	9	26.3
Radford City	3	17.2
Rappahannock County	2	27.1
Richmond City	73	32.7
Richmond County	2	22.8
Roanoke City	16	16.1
Roanoke County	14	14.9
Rockbridge County	1	4.5
Rockingham County	5	6.3
Russell County	7	25.6
Salem City	5	19.6
Scott County	3	13.7
Shenandoah County	7	16.2
Smyth County	5	16.1
Southampton County	3	16.6
Spotsylvania County	30	22.7
Stafford County	25	17.3
Staunton City	3	12.3
Suffolk City	8	9.0
Surry County	0	0.0
Sussex County	1	8.7
Tazewell County	6	14.2
Virginia Beach City	88	19.4
Warren County	8	20.4
Washington County	4	7.4
Waynesboro City	0	0.0
Westmoreland County	7	39.8
Williamsburg City	2	13.1
Winchester City	11	40.0
Wise County	13	33.1
Wythe County	9	31.0
York County	6	8.8
Subtotal (in-state)	1347	16.0
Out of State	75	ND
Unknown	6	ND
Subtotal (out-of-state)	81	ND
TOTAL	**1428**	**17.0**

Note: No denominator is represented by ND

Map 5.1 Number of Fatal Drug/Poison Overdoses by Locality of Residence, 2016



Map 5.2 Rates of Fatal Drug/Poison Overdoses by Locality of Residence, 2016

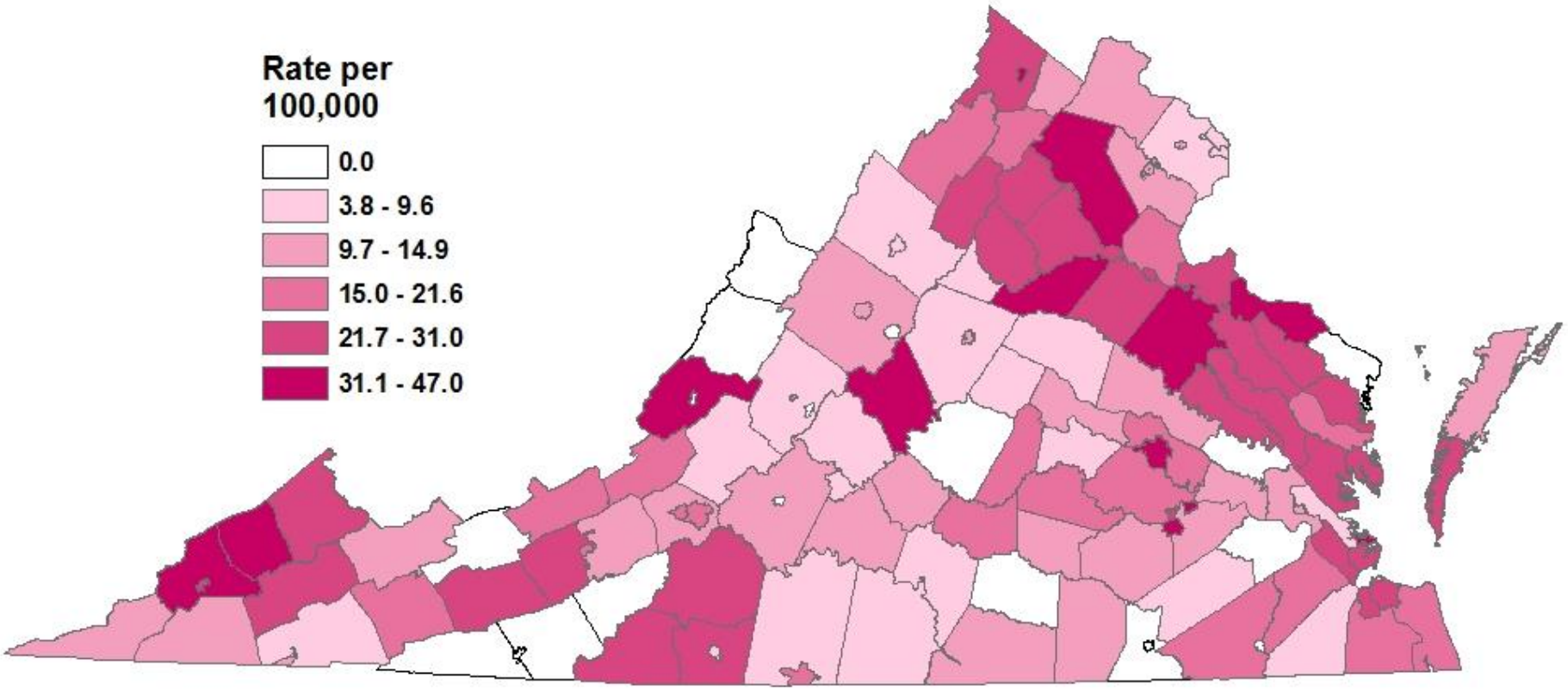


Table 5.9 Number and Rate of Fatal Drug/Poison Overdoses by Locality of Injury, 2016

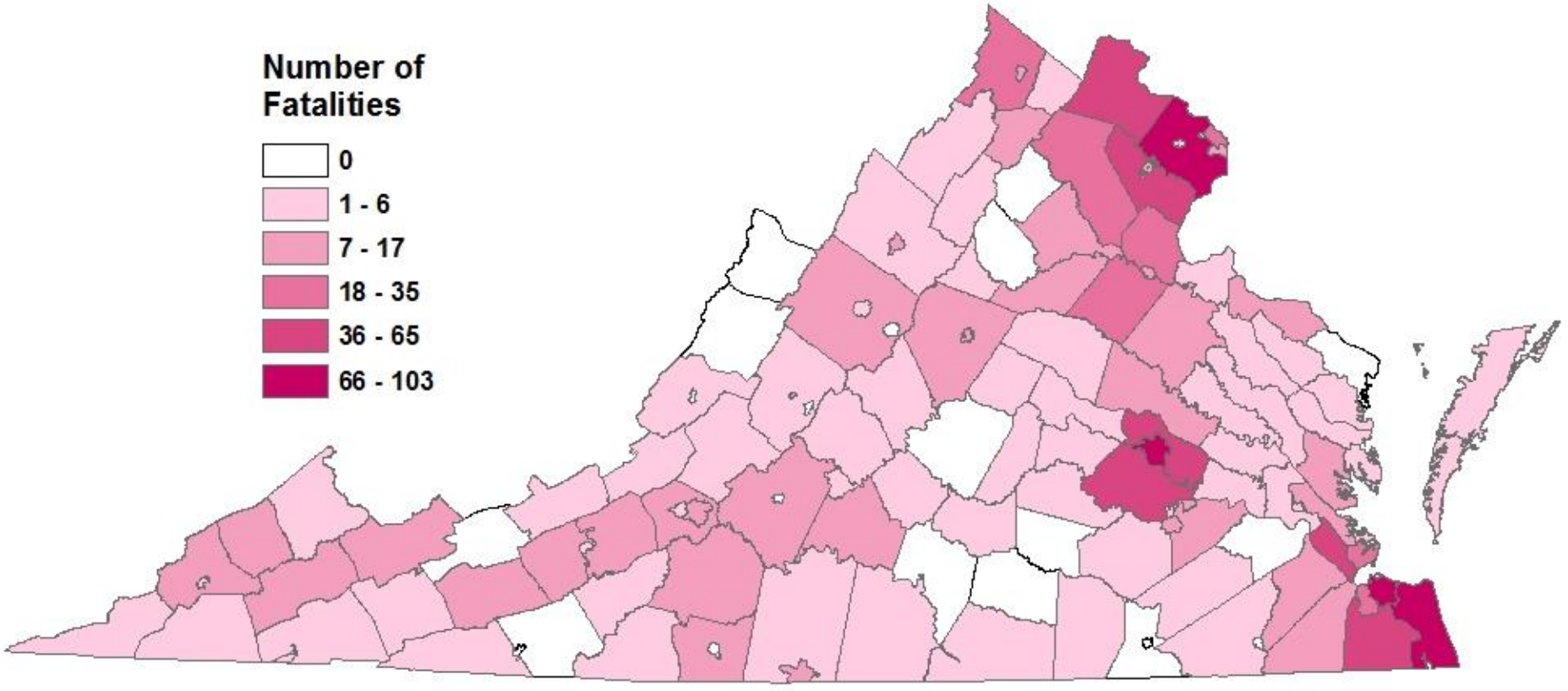
Locality of Injury	Deaths	Rate
Accomack County	5	15.2
Albemarle County	8	7.5
Alexandria City	12	7.7
Alleghany County	6	38.5
Amelia County	1	7.7
Amherst County	3	9.5
Appomattox County	3	19.4
Arlington County	26	11.3
Augusta County	9	12.0
Bath County	0	0.0
Bedford County	8	10.3
Bland County	0	0.0
Botetourt County	4	12.0
Bristol City	2	11.8
Brunswick County	1	6.2
Buchanan County	4	18.0
Buckingham County	0	0.0
Buena Vista City	0	0.0
Campbell County	7	12.7
Caroline County	10	33.1
Carroll County	0	0.0
Charles City County	1	14.1
Charlotte County	0	0.0
Charlottesville City	7	14.9
Chesapeake City	49	20.6
Chesterfield County	65	19.2
Clarke County	3	20.9
Colonial Heights City	2	11.3
Covington City	0	0.0
Craig County	1	19.4
Culpeper County	15	30.0
Cumberland County	1	10.4
Danville City	9	21.5
Dickenson County	8	53.4
Dinwiddie County	6	21.3
Emporia City	0	0.0
Essex County	3	27.0
Fairfax City	1	4.1
Fairfax County	103	9.0
Falls Church City	0	0.0
Fauquier County	25	36.2

Locality of Injury	Deaths	Rate
Floyd County	1	6.4
Fluvanna County	1	3.8
Franklin City	0	0.0
Franklin County	15	26.8
Frederick County	23	27.2
Fredericksburg City	11	38.9
Galax City	0	0.0
Giles County	4	23.7
Gloucester County	9	24.2
Goochland County	2	8.8
Grayson County	1	6.6
Greene County	2	10.3
Greensville County	0	0.0
Halifax County	2	5.7
Hampton City	35	25.8
Hanover County	10	9.6
Harrisonburg City	8	15.1
Henrico County	54	16.5
Henry County	12	23.3
Highland County	0	0.0
Hopewell City	10	44.0
Isle of Wight County	8	21.9
James City County	6	8.1
King and Queen County	1	14.0
King George County	5	19.2
King William County	5	30.6
Lancaster County	3	27.3
Lee County	2	8.3
Lexington City	1	14.2
Loudoun County	41	10.6
Louisa County	4	11.4
Lunenburg County	0	0.0
Lynchburg City	6	7.5
Madison County	0	0.0
Manassas City	7	16.9
Manassas Park City	1	6.3
Martinsville City	0	0.0
Mathews County	1	11.4
Mecklenburg County	5	16.2
Middlesex County	2	18.6
Montgomery County	15	15.2

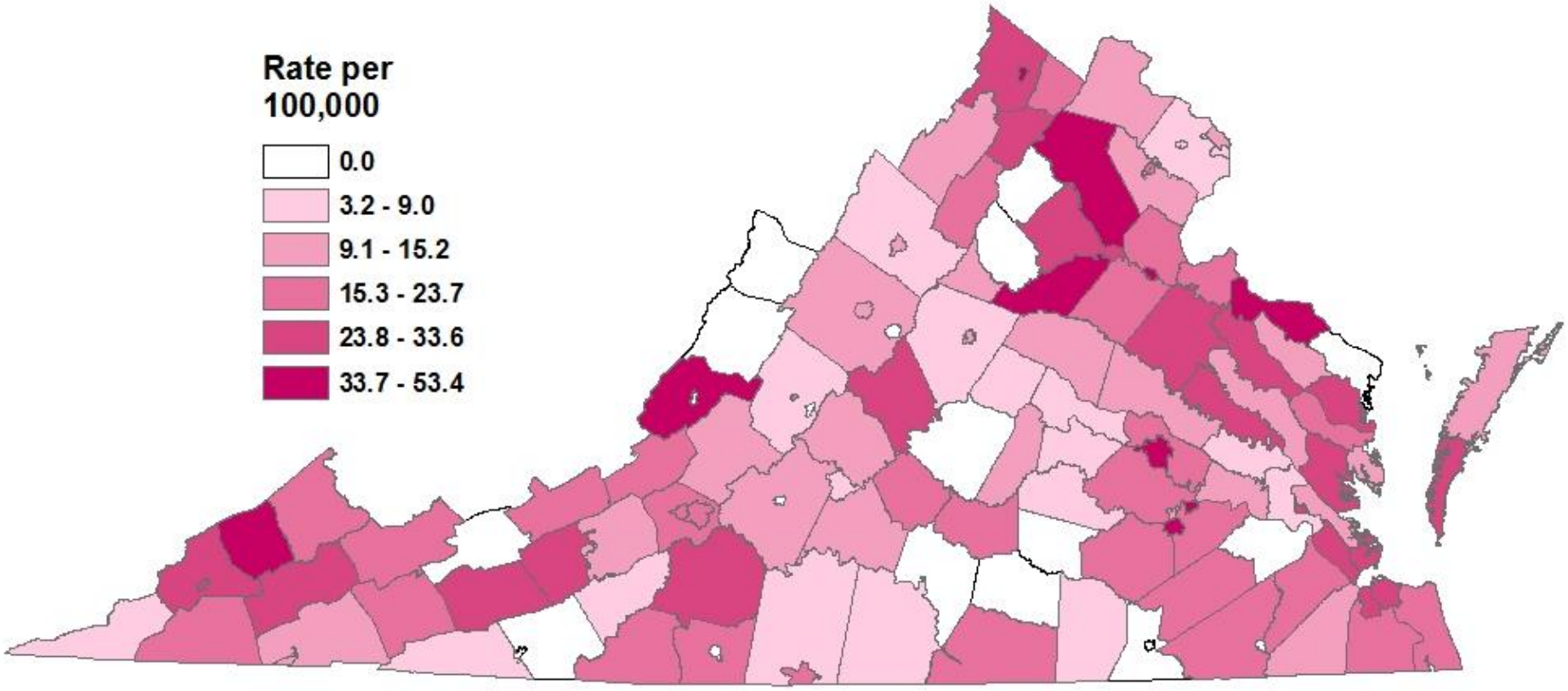
Locality of Injury	Deaths	Rate
Nelson County	5	33.6
New Kent County	1	4.7
Newport News City	47	25.8
Norfolk City	82	33.5
Northampton County	3	24.7
Northumberland County	0	0.0
Norton City	1	25.9
Nottoway County	0	0.0
Orange County	13	36.6
Page County	5	21.1
Patrick County	3	16.7
Petersburg City	16	50.2
Pittsylvania County	2	3.2
Poquoson City	3	25.0
Portsmouth City	31	32.5
Powhatan County	2	7.0
Prince Edward County	5	21.6
Prince George County	7	18.5
Prince William County	58	12.7
Pulaski County	11	32.2
Radford City	2	11.4
Rappahannock County	0	0.0
Richmond City	94	42.1
Richmond County	1	11.4
Roanoke City	17	17.1
Roanoke County	16	17.0
Rockbridge County	1	4.5
Rockingham County	4	5.0
Russell County	7	25.6
Salem City	6	23.5
Scott County	5	22.8
Shenandoah County	5	11.6
Smyth County	5	16.1
Southampton County	3	16.6
Spotsylvania County	28	21.2
Stafford County	23	15.9
Staunton City	3	12.3
Suffolk City	10	11.2
Surry County	0	0.0
Sussex County	2	17.4
Tazewell County	8	19.0
Virginia Beach City	83	18.3
Warren County	10	25.5
Washington County	6	11.1
Waynesboro City	0	0.0
Westmoreland County	9	51.2
Williamsburg City	4	26.3
Winchester City	10	36.3
Wise County	12	30.6
Wythe County	9	31.0
York County	9	13.2
Subtotal (in-state)	1408	16.7
Out of State	10	ND
Unknown	10	ND
Subtotal (out-of-state)	20	ND
TOTAL	**1428**	**17.0**

Note: No denominator is represented by ND

Map 5.3 Number of Fatal Drug/Poison Overdoses by Locality of Injury, 2016



Map 5.4 Rates of Fatal Drug/Poison Overdoses by Locality of Injury, 2016

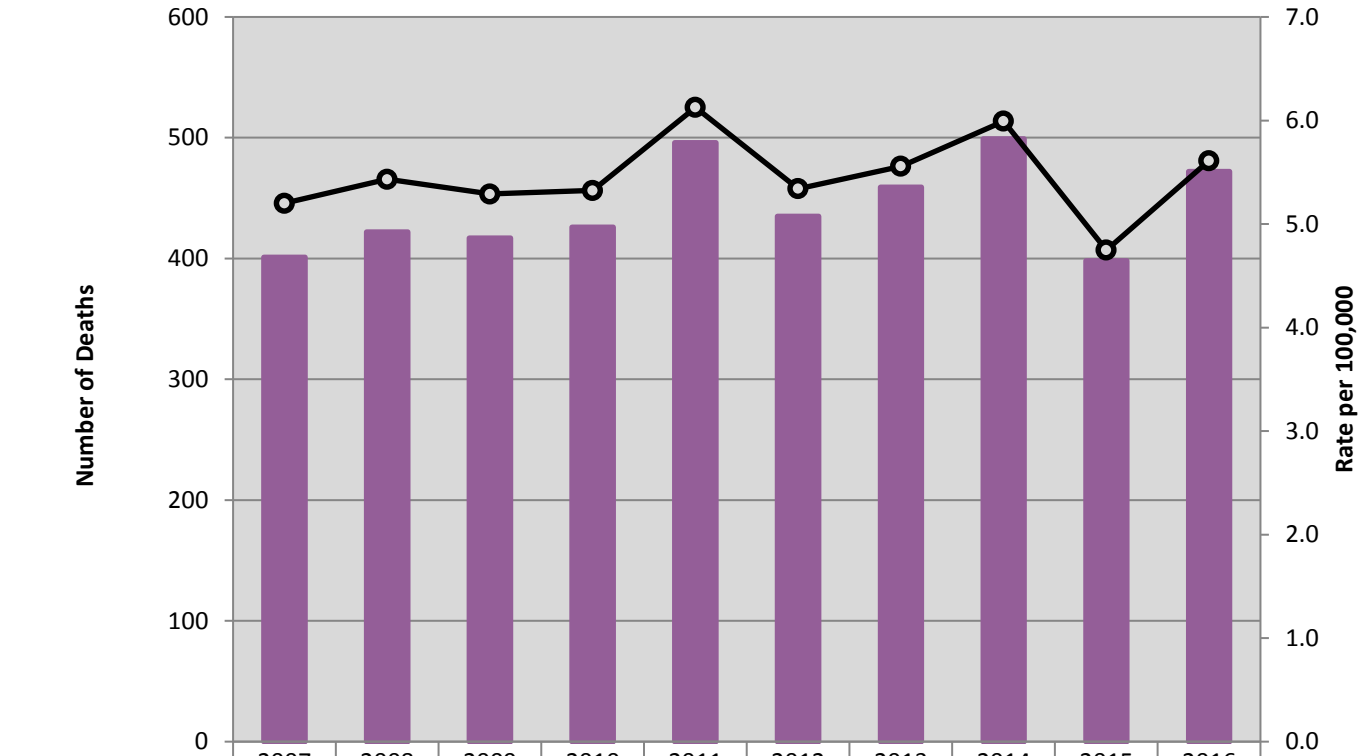


PRESCRIPTION OPIOIDS EXCLUDING FENTANYL (N=472)

Prior to 2015, the largest number of fatal drug overdoses were attributed to prescription opioids. Although heroin and/or fentanyl deaths surpassed prescription opioid deaths in 2015, one or more prescription opioids (excluding fentanyl) still represented 33.0% of all fatal drug overdoses in 2016.

- Oxycodone continued to be the most common prescription opioid causing or contributing to death
- Whites made up 83.3% of the fatal prescription opioid (excluding fentanyl) overdoses in 2016
- Males aged 25-34 years and white males had the highest rates of fatal prescription opioid (excluding fentanyl) overdose in 2016 (12.5 deaths and 8.6 deaths per 100,00 persons, respectively)

Figure 5.12 Number of All Fatal Drug Overdoses Compared to All Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Year of Death, 2007-2016



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Deaths	401	422	417	426	496	435	459	499	398	472
Mortality Rate	5.2	5.4	5.3	5.3	6.1	5.3	5.6	6.0	4.7	5.6

Figure 5.13 Number of Prescription Opioids (Excluding Fentanyl) Causing or Contributing to Death in Fatal Drug/Poison Overdoses, 2016

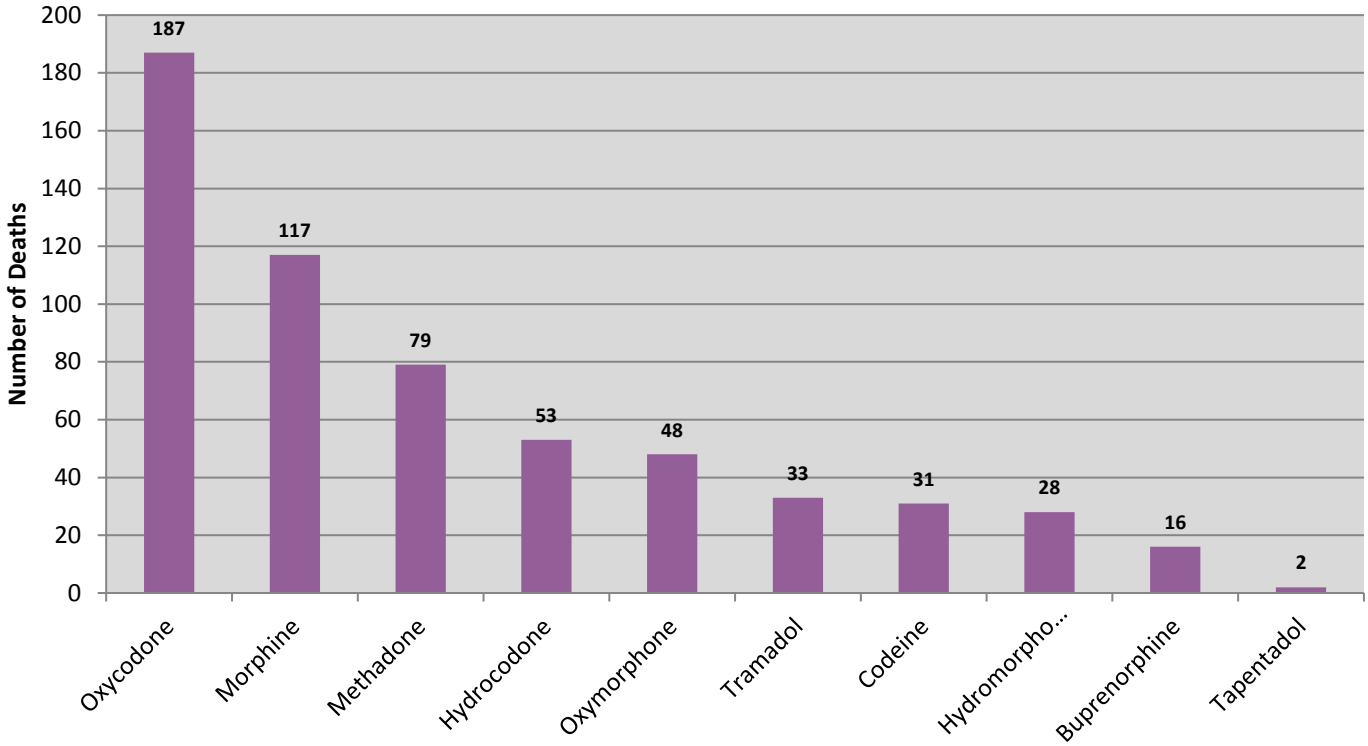


Figure 5.14 Percentage of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Manner of Death, 2016

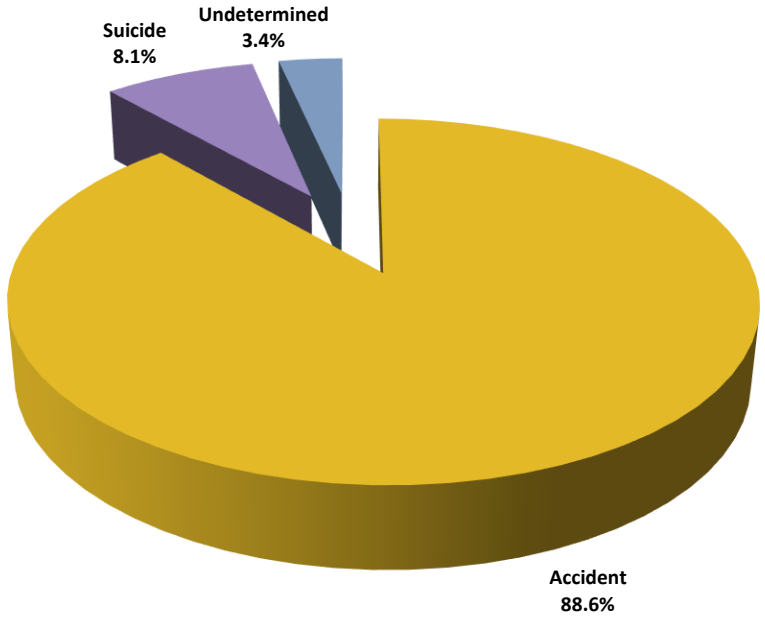
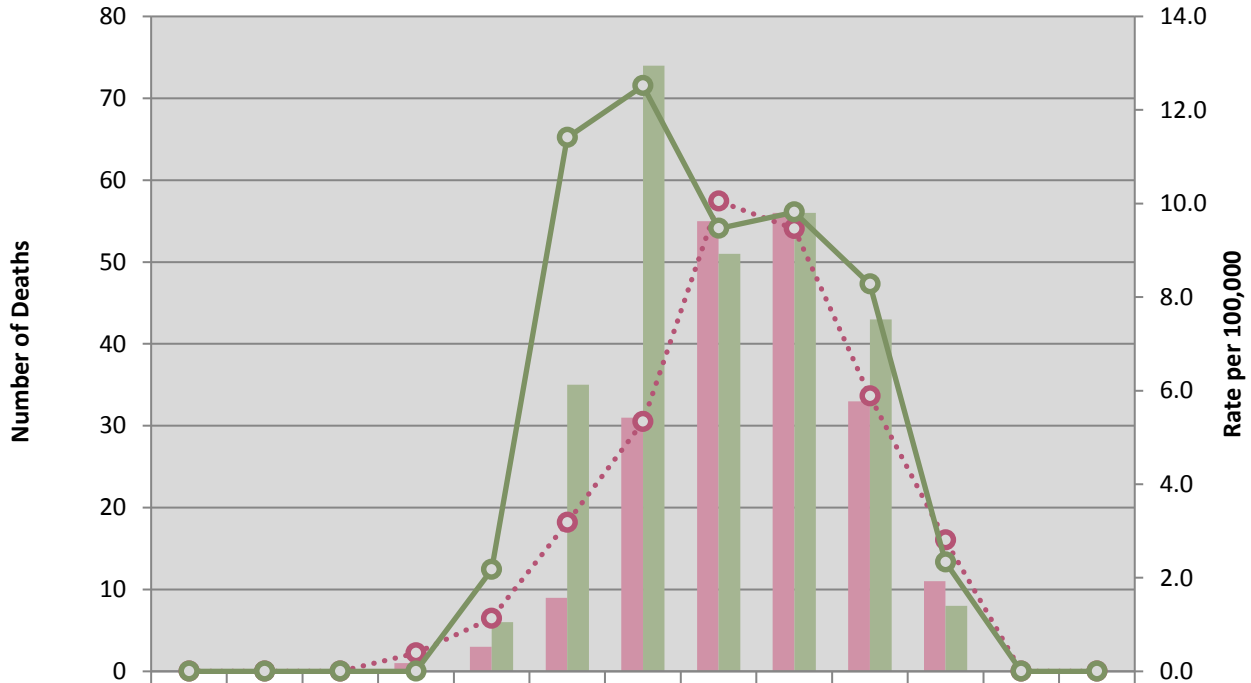


Table 5.10 Number of Prescription Opioids (Excluding Fentanyl) Detected in Fatal Drug Overdoses by OCME District, 2016

Prescription Opioid	Central	Northern	Tidewater	Western	TOTAL
Oxycodone	50	50	35	52	**187**
Morphine	22	56	29	10	**117**
Methadone	20	18	19	22	**79**
Hydrocodone	7	7	17	22	**53**
Oxymorphone	15	12	10	11	**48**
Tramadol	9	10	9	5	**33**
Codeine	5	5	20	1	**31**
Hydromorphone	2	12	6	8	**28**
Buprenorphine	0	2	1	13	**16**
Tapentadol	0	2	0	0	**2**
TOTAL	**130**	**174**	**146**	**144**	**594**

Figure 5.15 Number and Rate of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Age Group and Gender, 2016



	<1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Female	0	0	0	1	3	9	31	55	56	33	11	0	0
Male	0	0	0	0	6	35	74	51	56	43	8	0	0
Female Rate	0.0	0.0	0.0	0.4	1.1	3.2	5.3	10.1	9.5	5.9	2.8	0.0	0.0
Male Rate	0.0	0.0	0.0	0.0	2.2	11.4	12.5	9.5	9.8	8.3	2.3	0.0	0.0

Figure 5.16 Percentage of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Race/Ethnicity, 2016

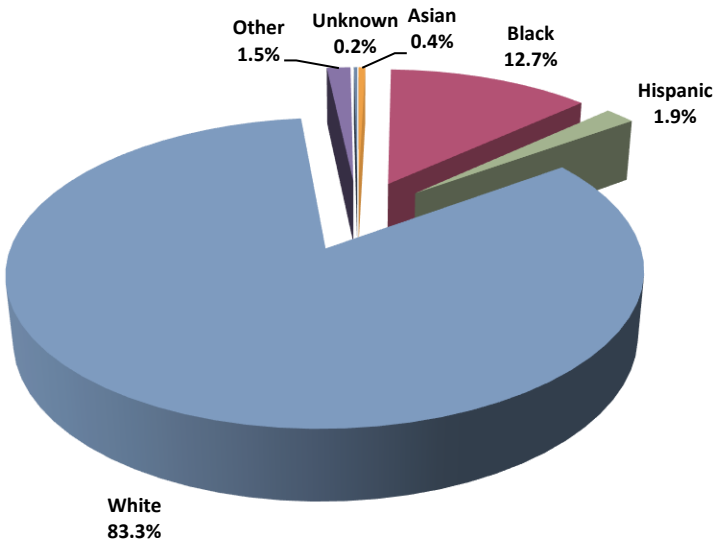
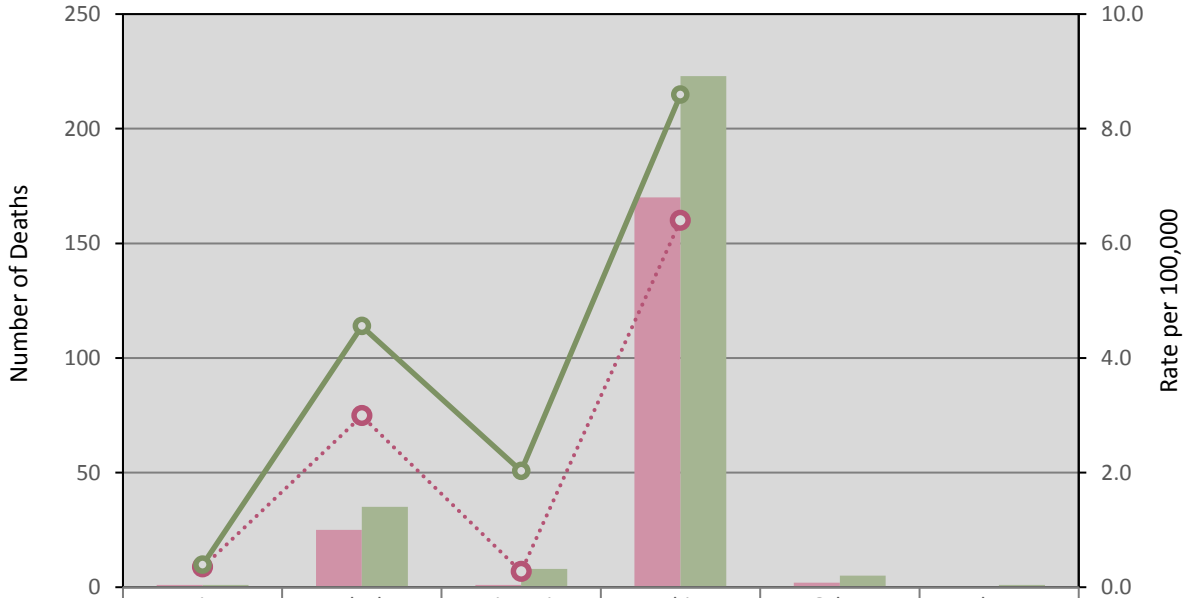


Figure 5.17 Number and Rate of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Race/Ethnicity and Gender, 2016



	Asian	Black	Hispanic	White	Other	Unknown
Female	1	25	1	170	2	0
Male	1	35	8	223	5	1
Female Rate	0.3	3.0	0.3	6.4	*	*
Male Rate	0.4	4.6	2.0	8.6	*	*

*No rate can be calculated

** Rates calculated from small case counts (n<5) are considered unreliable and should be interpreted with caution (Asians and Hispanics)

Table 5.11 Number and Rate of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Locality of Residence, 2016

Locality of Residence	Deaths	Rate
Accomack County	3	9.1
Albemarle County	1	0.9
Alexandria City	8	5.1
Alleghany County	1	6.4
Amelia County	0	0.0
Amherst County	1	3.2
Appomattox County	1	6.5
Arlington County	12	5.2
Augusta County	2	2.7
Bath County	0	0.0
Bedford County	2	2.6
Bland County	0	0.0
Botetourt County	1	3.0
Bristol City	0	0.0
Brunswick County	1	6.2
Buchanan County	4	18.0
Buckingham County	0	0.0
Buena Vista City	0	0.0
Campbell County	4	7.3
Caroline County	6	19.9
Carroll County	0	0.0
Charles City County	0	0.0
Charlotte County	0	0.0
Charlottesville City	1	2.1
Chesapeake City	9	3.8
Chesterfield County	17	5.0
Clarke County	0	0.0
Colonial Heights City	0	0.0
Covington City	0	0.0
Craig County	0	0.0
Culpeper County	4	8.0
Cumberland County	0	0.0
Danville City	4	9.5
Dickenson County	5	33.4
Dinwiddie County	0	0.0
Emporia City	0	0.0
Essex County	1	9.0
Fairfax City	1	4.1
Fairfax County	26	2.3

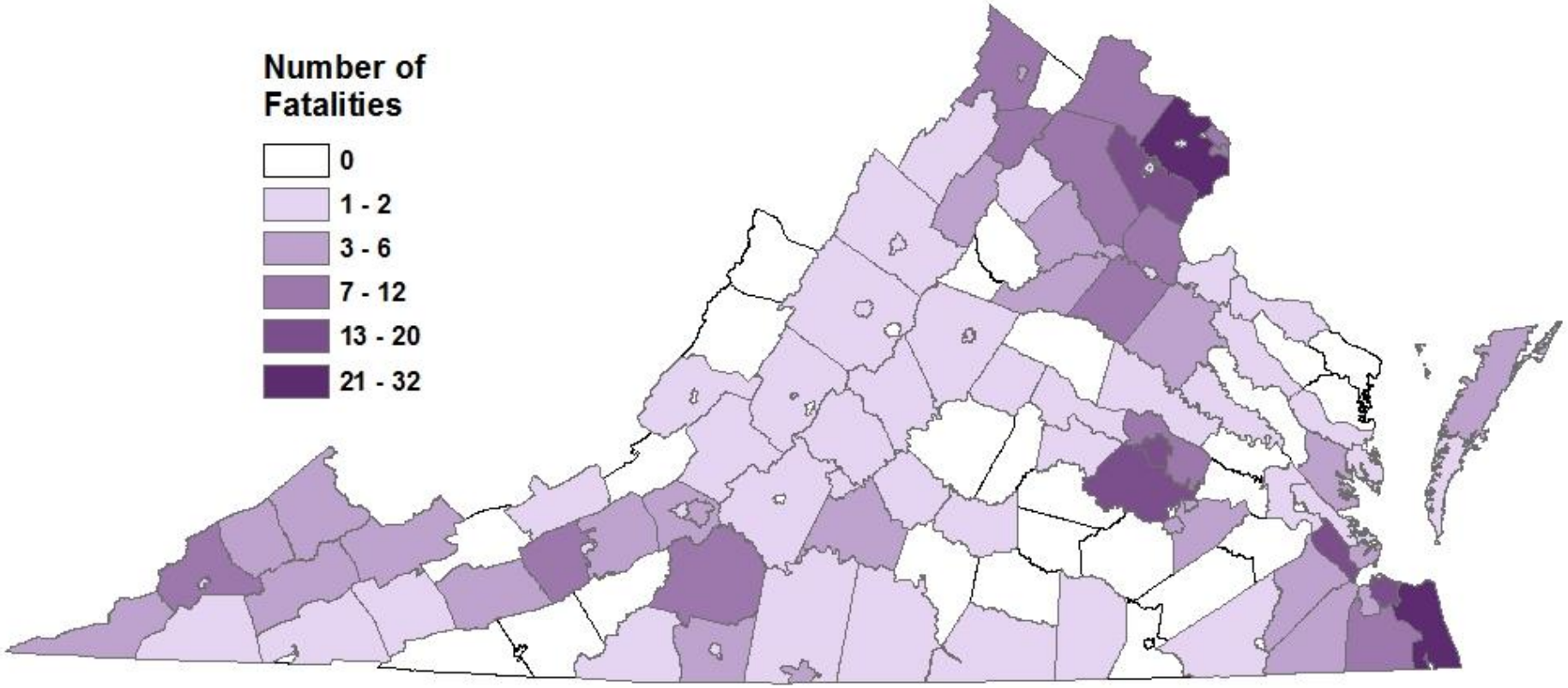
Locality of Residence	Deaths	Rate
Falls Church City	0	0.0
Fauquier County	8	11.6
Floyd County	0	0.0
Fluvanna County	1	3.8
Franklin City	0	0.0
Franklin County	7	12.5
Frederick County	7	8.3
Fredericksburg City	2	7.1
Galax City	0	0.0
Giles County	2	11.9
Gloucester County	4	10.7
Goochland County	1	4.4
Grayson County	0	0.0
Greene County	0	0.0
Greensville County	0	0.0
Halifax County	2	5.7
Hampton City	6	4.4
Hanover County	1	1.0
Harrisonburg City	1	1.9
Henrico County	11	3.4
Henry County	3	5.8
Highland County	0	0.0
Hopewell City	3	13.2
Isle of Wight County	3	8.2
James City County	2	2.7
King and Queen County	0	0.0
King George County	2	7.7
King William County	2	12.2
Lancaster County	0	0.0
Lee County	3	12.4
Lexington City	1	14.2
Loudoun County	10	2.6
Louisa County	0	0.0
Lunenburg County	0	0.0
Lynchburg City	2	2.5
Madison County	0	0.0
Manassas City	2	4.8
Manassas Park City	0	0.0
Martinsville City	1	7.4

Locality of Residence	Deaths	Rate
Mathews County	1	11.4
Mecklenburg County	1	3.2
Middlesex County	1	9.3
Montgomery County	4	4.1
Nelson County	2	13.5
New Kent County	0	0.0
Newport News City	17	9.3
Norfolk City	20	8.2
Northampton County	2	16.5
Northumberland County	0	0.0
Norton City	1	25.9
Nottoway County	0	0.0
Orange County	5	14.1
Page County	3	12.7
Patrick County	1	5.6
Petersburg City	6	18.8
Pittsylvania County	1	1.6
Poquoson City	1	8.3
Portsmouth City	5	5.2
Powhatan County	1	3.5
Prince Edward County	1	4.3
Prince George County	3	7.9
Prince William County	19	4.2
Pulaski County	8	23.4
Radford City	2	11.4
Rappahannock County	1	13.5
Richmond City	20	9.0
Richmond County	0	0.0
Roanoke City	5	5.0
Roanoke County	4	4.3

Locality of Residence	Deaths	Rate
Rockbridge County	1	4.5
Rockingham County	1	1.3
Russell County	6	21.9
Salem City	1	3.9
Scott County	1	4.6
Shenandoah County	2	4.6
Smyth County	1	3.2
Southampton County	1	5.5
Spotsylvania County	10	7.6
Stafford County	8	5.5
Staunton City	2	8.2
Suffolk City	3	3.4
Surry County	0	0.0
Sussex County	0	0.0
Tazewell County	4	9.5
Virginia Beach City	32	7.1
Warren County	7	17.9
Washington County	1	1.8
Waynesboro City	0	0.0
Westmoreland County	2	11.4
Williamsburg City	0	0.0
Winchester City	6	21.8
Wise County	8	20.4
Wythe County	5	17.2
York County	2	2.9
Subtotal (in-state)	441	5.2
Out of State	31	ND
Unknown	0	ND
Subtotal (out-of-state)	31	ND
TOTAL	**472**	**5.6**

Note: No denominator is represented by ND

Map 5.5 Number of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Locality of Residence, 2016



Map 5.6 Rates of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Locality of Residence, 2016

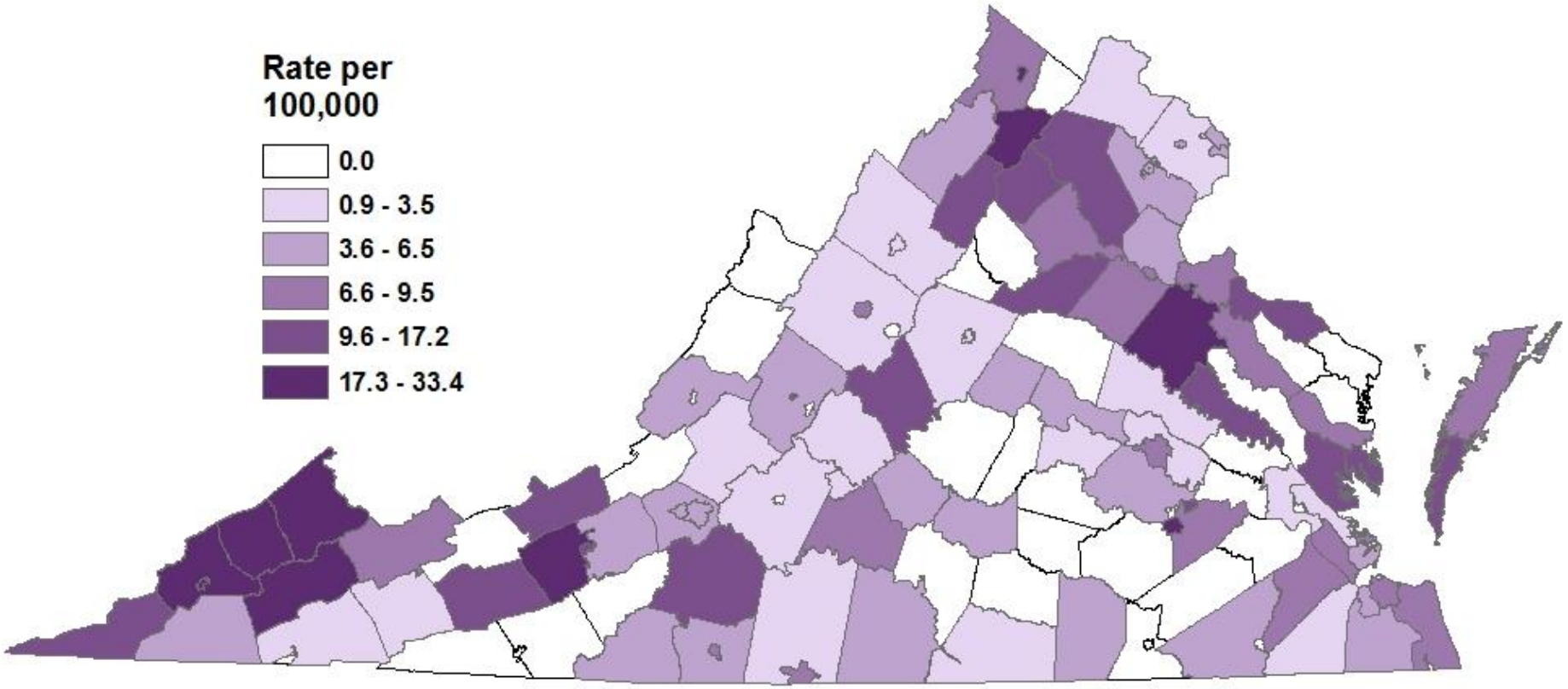


Table 5.12 Number and Rate of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Locality of Injury, 2016

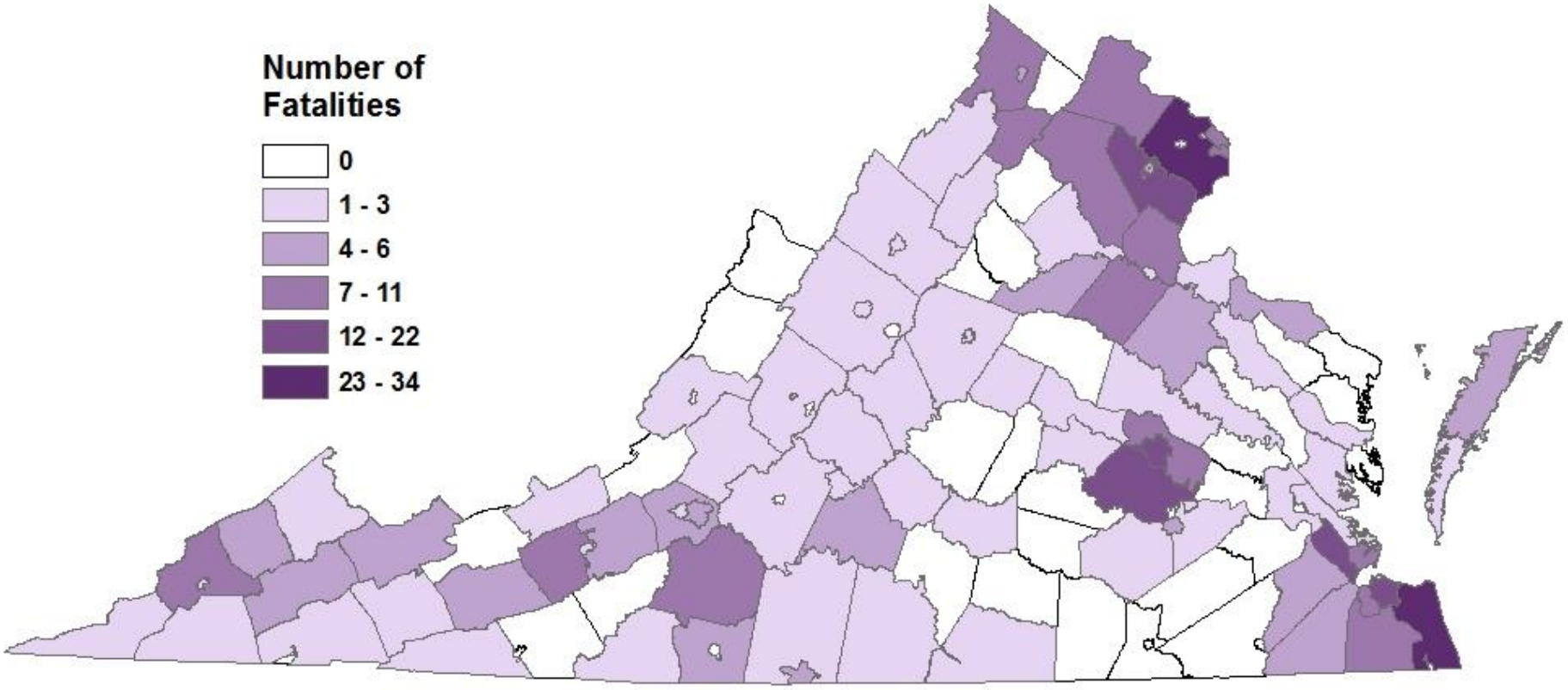
Locality of Injury	Deaths	Rate
Accomack County	4	12.1
Albemarle County	1	0.9
Alexandria City	7	4.5
Alleghany County	2	12.8
Amelia County	0	0.0
Amherst County	2	6.3
Appomattox County	1	6.5
Arlington County	11	4.8
Augusta County	2	2.7
Bath County	0	0.0
Bedford County	2	2.6
Bland County	0	0.0
Botetourt County	2	6.0
Bristol City	0	0.0
Brunswick County	0	0.0
Buchanan County	3	13.5
Buckingham County	0	0.0
Buena Vista City	0	0.0
Campbell County	5	9.1
Caroline County	5	16.6
Carroll County	0	0.0
Charles City County	0	0.0
Charlotte County	0	0.0
Charlottesville City	2	4.3
Chesapeake City	10	4.2
Chesterfield County	15	4.4
Clarke County	0	0.0
Colonial Heights City	0	0.0
Covington City	0	0.0
Craig County	0	0.0
Culpeper County	3	6.0
Cumberland County	0	0.0
Danville City	4	9.5
Dickenson County	6	40.1
Dinwiddie County	1	3.6
Emporia City	0	0.0
Essex County	1	9.0
Fairfax City	1	4.1
Fairfax County	34	3.0
Falls Church City	0	0.0

Locality of Injury	Deaths	Rate
Fauquier County	9	13.0
Floyd County	0	0.0
Fluvanna County	1	3.8
Franklin City	0	0.0
Franklin County	8	14.3
Frederick County	10	11.8
Fredericksburg City	3	10.6
Galax City	0	0.0
Giles County	2	11.9
Gloucester County	2	5.4
Goochland County	1	4.4
Grayson County	1	6.6
Greene County	0	0.0
Greensville County	0	0.0
Halifax County	2	5.7
Hampton City	9	6.6
Hanover County	2	1.9
Harrisonburg City	2	3.8
Henrico County	11	3.4
Henry County	4	7.8
Highland County	0	0.0
Hopewell City	2	8.8
Isle of Wight County	4	10.9
James City County	1	1.3
King and Queen County	0	0.0
King George County	2	7.7
King William County	2	12.2
Lancaster County	0	0.0
Lee County	2	8.3
Lexington City	1	14.2
Loudoun County	8	2.1
Louisa County	0	0.0
Lunenburg County	0	0.0
Lynchburg City	2	2.5
Madison County	0	0.0
Manassas City	4	9.6
Manassas Park City	0	0.0
Martinsville City	0	0.0
Mathews County	0	0.0
Mecklenburg County	2	6.5

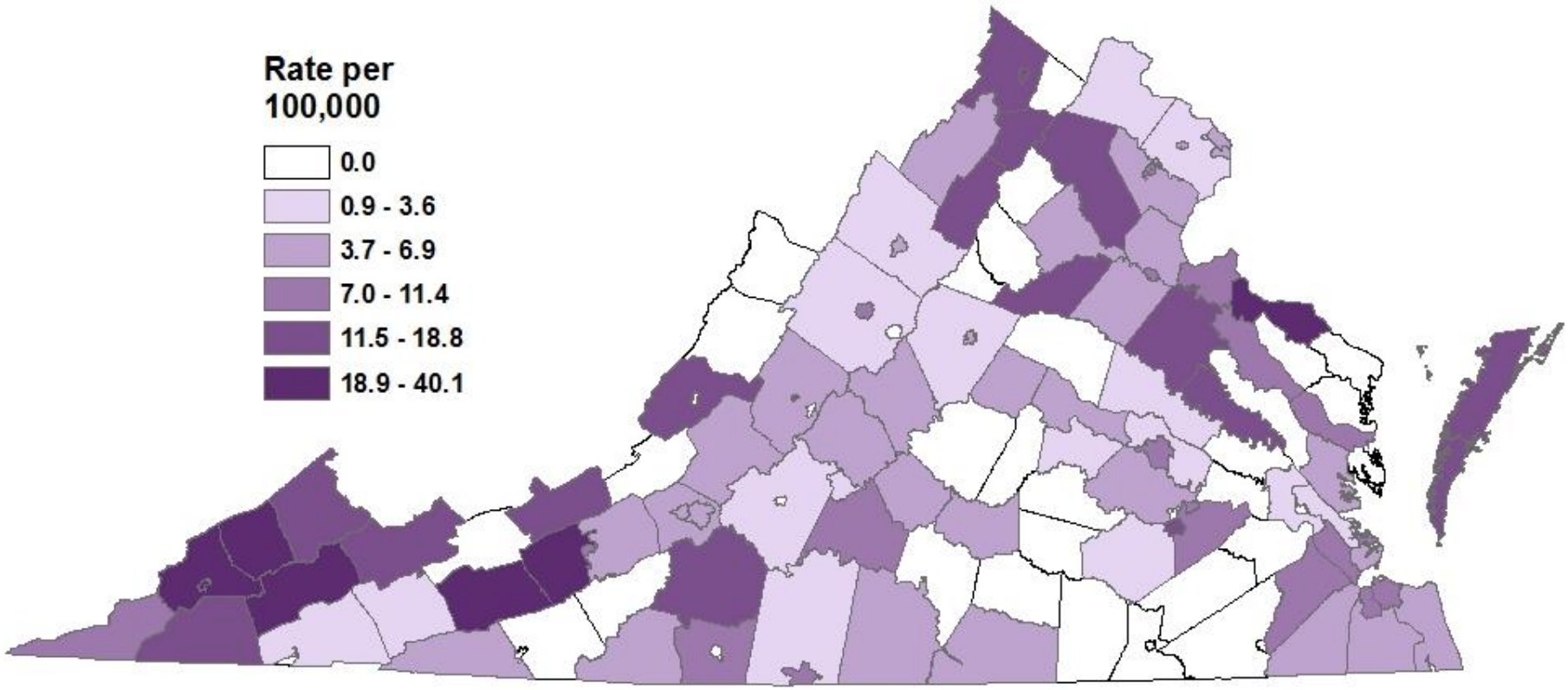
Locality of Injury	Deaths	Rate
Middlesex County	1	9.3
Montgomery County	5	5.1
Nelson County	1	6.7
New Kent County	0	0.0
Newport News City	20	11.0
Norfolk City	22	9.0
Northampton County	2	16.5
Northumberland County	0	0.0
Norton City	1	25.9
Nottoway County	0	0.0
Orange County	5	14.1
Page County	3	12.7
Patrick County	1	5.6
Petersburg City	6	18.8
Pittsylvania County	1	1.6
Poquoson City	1	8.3
Portsmouth City	8	8.4
Powhatan County	1	3.5
Prince Edward County	1	4.3
Prince George County	3	7.9
Prince William County	22	4.8
Pulaski County	8	23.4
Radford City	2	11.4
Rappahannock County	0	0.0
Richmond City	21	9.4
Richmond County	0	0.0
Roanoke City	4	4.0
Roanoke County	4	4.3
Rockbridge County	1	4.5
Rockingham County	1	1.3
Russell County	6	21.9
Salem City	1	3.9
Scott County	3	13.7
Shenandoah County	3	6.9
Smyth County	1	3.2
Southampton County	0	0.0
Spotsylvania County	7	5.3
Stafford County	8	5.5
Staunton City	2	8.2
Suffolk City	4	4.5
Surry County	0	0.0
Sussex County	0	0.0
Tazewell County	5	11.9
Virginia Beach City	29	6.4
Warren County	7	17.9
Washington County	1	1.8
Waynesboro City	0	0.0
Westmoreland County	4	22.7
Williamsburg City	0	0.0
Winchester City	4	14.5
Wise County	8	20.4
Wythe County	6	20.7
York County	1	1.5
Subtotal (in-state)	466	5.5
Out of State	5	ND
Unknown	1	ND
Subtotal (out-of-state)	6	ND
TOTAL	**472**	**5.6**

Note: No denominator is represented by ND

Map 5.7 Number of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Locality of Injury, 2016



Map 5.8 Rates of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Locality of Injury, 2016

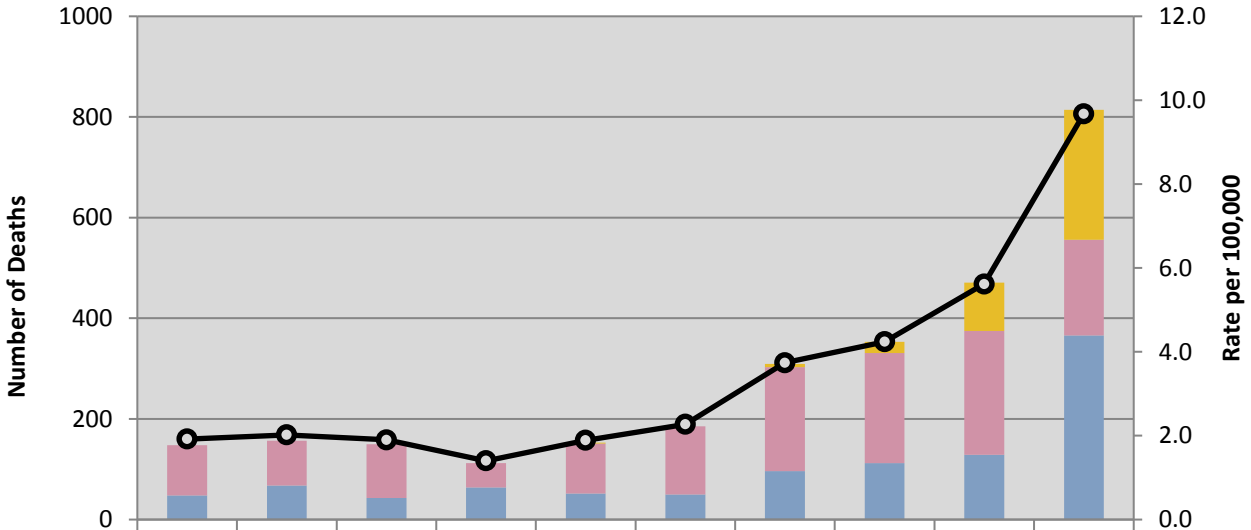


FENTANYL AND/OR HEROIN DEATHS (N=814)

The number of fatal fentanyl and/or heroin overdoses has significantly increased each year since 2010. Illicitly produced fentanyl began appearing in Virginia in 2013/2014 and is often mixed in with heroin or sold disguised as heroin, often unbeknownst to the user. In 2016, Virginia began seeing a spike in fentanyl analogs; drugs similar to fentanyl, but slightly different in their chemical structure which alters potency. Illicitly produced fentanyl, but not the various fentanyl analogs, is indistinguishable from pharmaceutical fentanyl in toxicology and therefore, fentanyl and/or heroin fatalities are analyzed together.

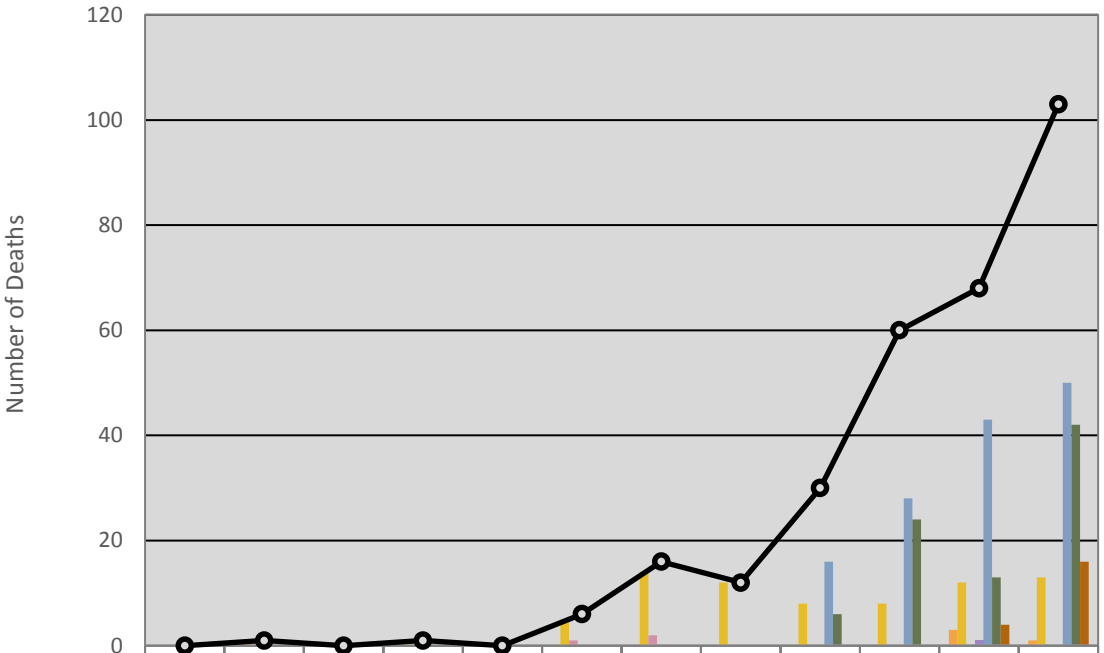
- Fatal fentanyl and/or heroin overdoses in 2016 increased by 72.8% when compared to 2015
- Over 98% of fatal fentanyl and/or heroin overdoses were accidents
- Males 25-34 years of age had the highest rate of death (36.4 deaths per 100,000 persons)
- Fentanyl and/or heroin was involved in 57.0% of all drug/poison cases in Virginia in 2016
- Of all fentanyl and/or heroin overdoses in 2016, only 7.7% occurred in the Western OCME region

Figure 5.18 Number and Rate of Fatal Fentanyl and/or Heroin Overdoses by Year of Death, 2007-2016



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Fentanyl and Heroin	0	0	0	0	2	0	6	22	96	258
Heroin	100	89	107	48	99	135	207	219	246	190
Fentanyl	48	68	43	64	52	50	96	112	129	366
Mortality Rate	1.9	2.0	1.9	1.4	1.9	2.3	3.7	4.2	5.6	9.7

Figure 5.19 Number of Fatal Fentanyl Analog Overdoses Quarter, 2014-2016



	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	2014				2015				2016			
3-Methyl Fentanyl	0	0	0	0	0	0	0	0	0	0	3	1
Acetyl Fentanyl	0	1	0	1	0	5	14	12	8	8	12	13
Butyryl Fentanyl	0	0	0	0	0	1	2	0	0	0	0	0
Carfentanil	0	0	0	0	0	0	0	0	0	0	1	0
Despropionyl Fentanyl**	0	0	0	0	0	0	0	0	16	28	43	50
Furanyl Fentanyl	0	0	0	0	0	0	0	0	6	24	13	42
Para-Fluoroisobutyryl Fentanyl***	0	0	0	0	0	0	0	0	0	0	4	16
Total Fentanyl Analog Fatalities	0	1	0	1	0	6	16	12	30	60	68	103

** Despropionyl fentanyl is a major metabolite of furanyl fentanyl. Therefore, numbers presented in the 'despropionyl fentanyl' category control for furanyl fentanyl (despropionyl deaths without furanyl fentanyl).

***In certain cases, specialized testing through an outside laboratory is needed for toxicology testing. In this laboratory, their testing for para-fluoroisobutyryl fentanyl and para-fluorobutyryl fentanyl cannot distinguish between the two analogs and therefore in this analysis, the two drugs are grouped together under 'para-fluoroisobutyryl fentanyl'

Table 5.13 Number of Fatal Fentanyl and/or Heroin Overdoses by OCME District, 2016

OCME District	Fentanyl	Heroin	Fentanyl and Heroin	Total
Central	105	84	95	**284**
Northern	108	37	78	**223**
Tidewater	121	47	76	**244**
Western	32	22	9	**63**
Total	**366**	**190**	**258**	**814**

Figure 5.20 Percentage of Fatal Fentanyl and/or Heroin Overdoses by Manner of Death, 2016

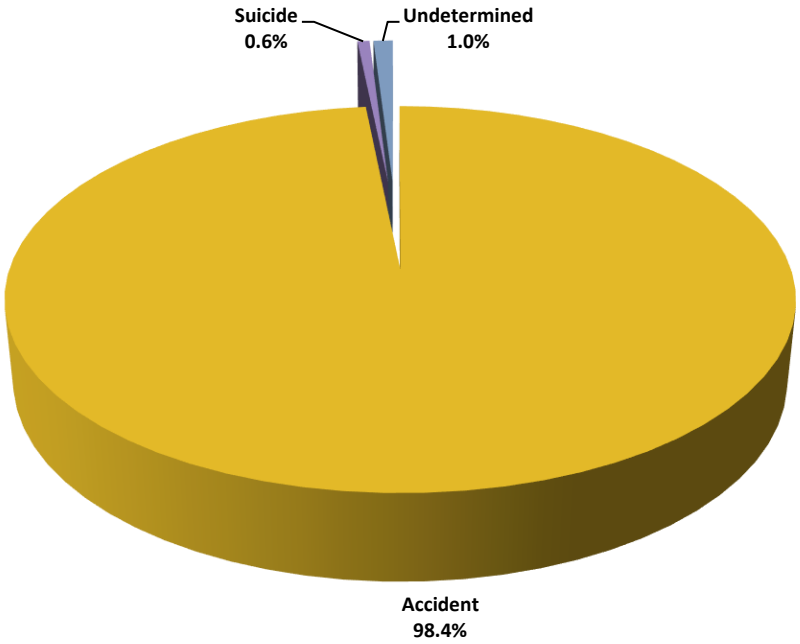
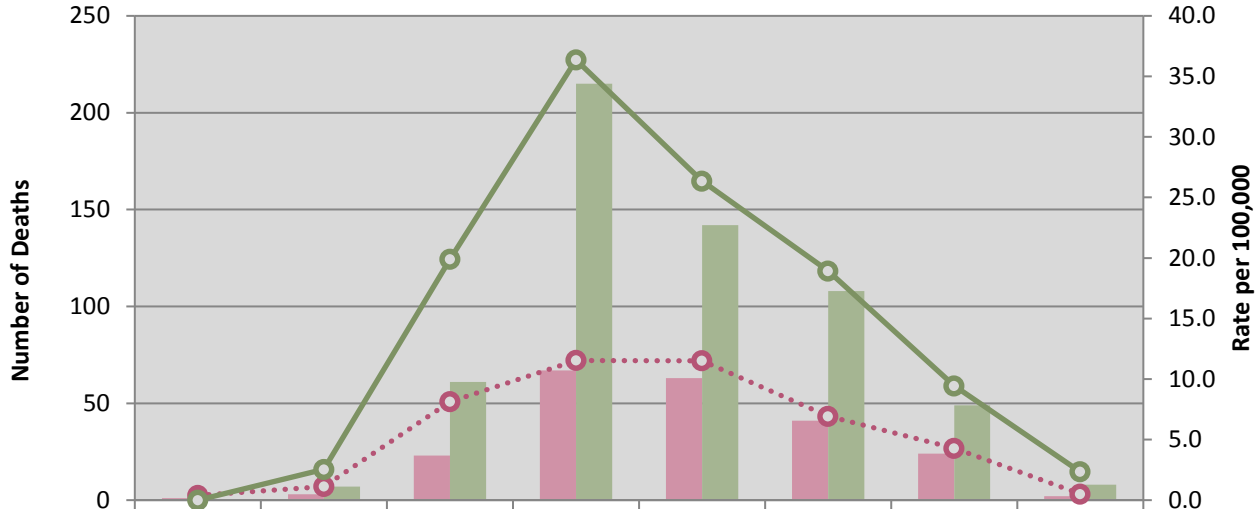


Figure 5.21 Number and Rate of Fatal Fentanyl and/or Heroin Overdoses by Age Group and Gender, 2016



	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74
Female	1	3	23	67	63	41	24	2
Male	0	7	61	215	142	108	49	8
Female Rate	0.4	1.1	8.1	11.5	11.5	6.9	4.3	0.5
Male Rate	0.0	2.5	19.9	36.4	26.4	18.9	9.4	2.3

Figure 5.22 Percentage of Fatal Fentanyl and/or Heroin Overdoses by Race/Ethnicity, 2016

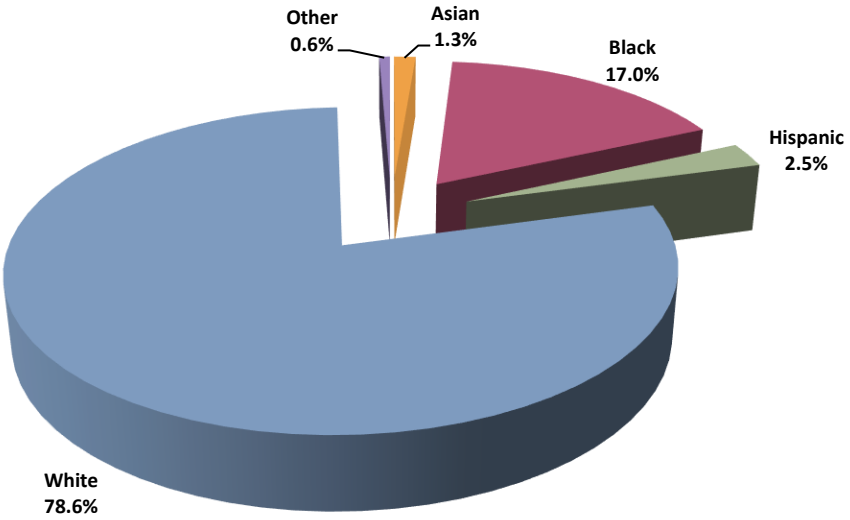
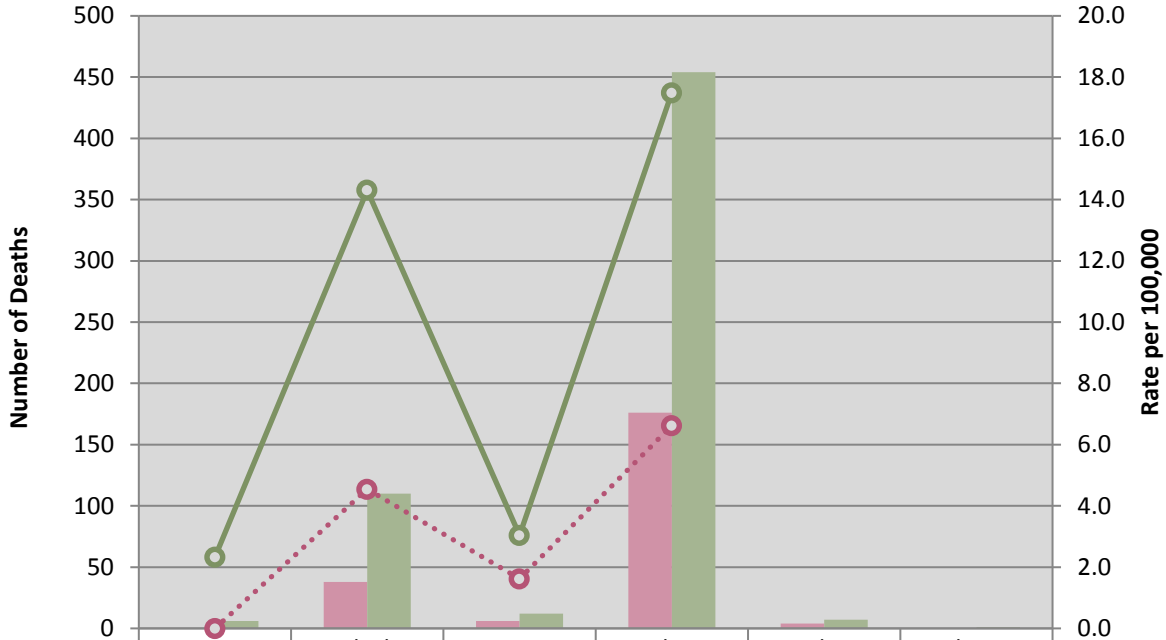


Figure 5.23 Number and Rate of Fatal Fentanyl and/or Heroin Overdoses by Race/Ethnicity and Gender, 2016



	Asian	Black	Hispanic	White	Other	Unknown
Female	0	38	6	176	4	0
Male	6	110	12	454	7	1
Female Rate	0.0	4.5	1.6	6.6	*	*
Male Rate	2.3	14.3	3.0	17.5	*	*

*No rate can be calculated

Table 5.14 Number and Percentage of Fatal Fentanyl and/or Heroin Overdoses by Whether Alcohol Caused Death, 2016

Whether Alcohol Played a Role in Death	Deaths	Percentage
Yes	131	16.1%
Contributed	34	4.2%
No	649	79.7%
TOTAL	**814**	**100.0%**

Table 5.15 Number and Rate of Fatal Fentanyl and/or Heroin Overdoses by Locality of Residence, 2016

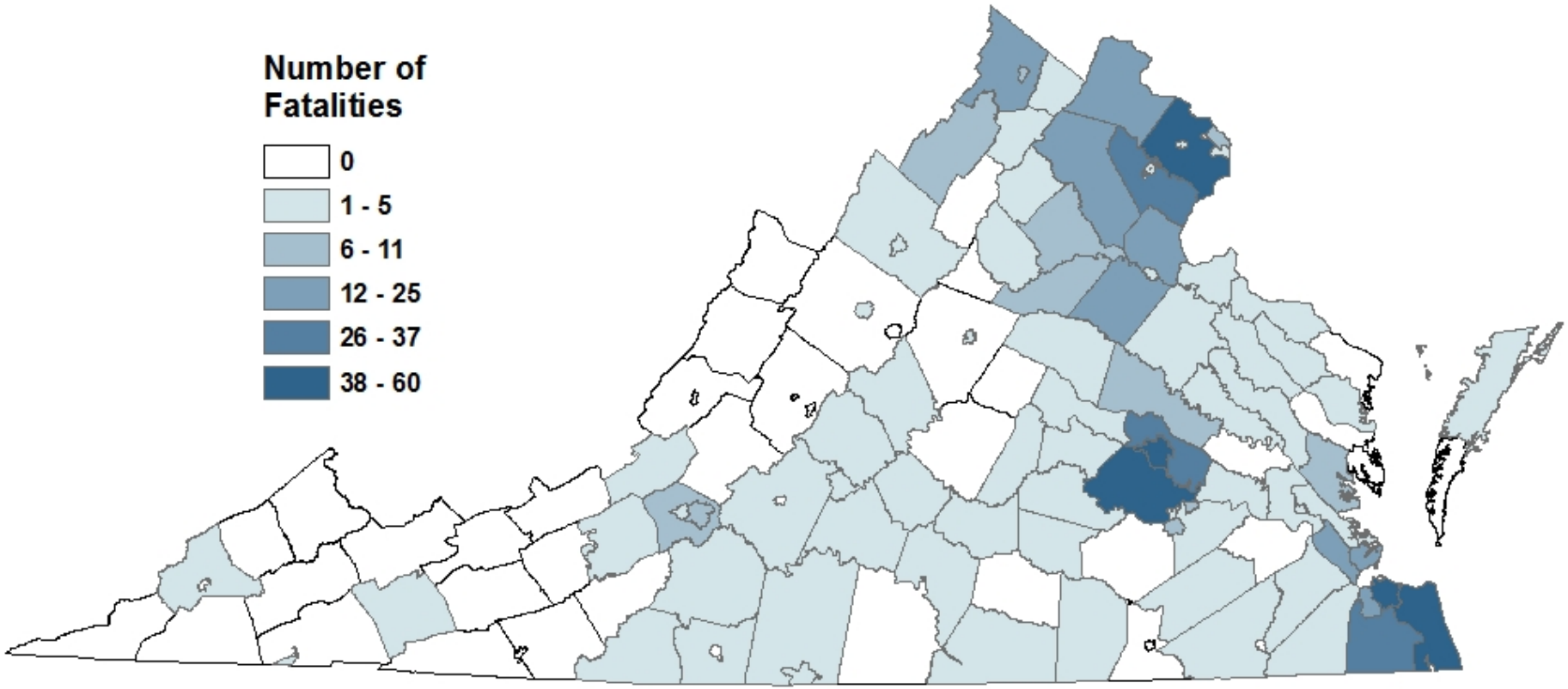
Locality of Residence	Deaths	Rate
Accomack County	3	9.1
Albemarle County	0	0.0
Alexandria City	2	1.3
Alleghany County	0	0.0
Amelia County	1	7.7
Amherst County	1	3.2
Appomattox County	1	6.5
Arlington County	9	3.9
Augusta County	0	0.0
Bath County	0	0.0
Bedford County	1	1.3
Bland County	0	0.0
Botetourt County	0	0.0
Bristol City	1	5.9
Brunswick County	2	12.3
Buchanan County	0	0.0
Buckingham County	0	0.0
Buena Vista City	0	0.0
Campbell County	2	3.6
Caroline County	4	13.3
Carroll County	0	0.0
Charles City County	1	14.1
Charlotte County	1	8.2
Charlottesville City	4	8.5
Chesapeake City	36	15.1
Chesterfield County	52	15.3
Clarke County	2	13.9
Colonial Heights City	4	22.5
Covington City	0	0.0
Craig County	1	19.4
Culpeper County	11	22.0
Cumberland County	1	10.4
Danville City	2	4.8
Dickenson County	0	0.0
Dinwiddie County	0	0.0
Emporia City	0	0.0
Essex County	1	9.0
Fairfax City	2	8.3
Fairfax County	58	5.1

Locality of Residence	Deaths	Rate
Falls Church City	0	0.0
Fauquier County	19	27.5
Floyd County	0	0.0
Fluvanna County	0	0.0
Franklin City	0	0.0
Franklin County	3	5.4
Frederick County	16	19.0
Fredericksburg City	5	17.7
Galax City	0	0.0
Giles County	0	0.0
Gloucester County	9	24.2
Goochland County	1	4.4
Grayson County	0	0.0
Greene County	0	0.0
Greensville County	0	0.0
Halifax County	0	0.0
Hampton City	25	18.5
Hanover County	8	7.7
Harrisonburg City	2	3.8
Henrico County	37	11.3
Henry County	1	1.9
Highland County	0	0.0
Hopewell City	6	26.4
Isle of Wight County	4	10.9
James City County	4	5.4
King and Queen County	2	27.9
King George County	5	19.2
King William County	3	18.4
Lancaster County	1	9.1
Lee County	0	0.0
Lexington City	0	0.0
Loudoun County	21	5.4
Louisa County	3	8.5
Lunenburg County	0	0.0
Lynchburg City	3	3.7
Madison County	2	15.3
Manassas City	3	7.2
Manassas Park City	1	6.3
Martinsville City	0	0.0

Locality of Residence	Deaths	Rate
Mathews County	0	0.0
Mecklenburg County	1	3.2
Middlesex County	0	0.0
Montgomery County	5	5.1
Nelson County	3	20.2
New Kent County	0	0.0
Newport News City	23	12.6
Norfolk City	51	20.8
Northampton County	0	0.0
Northumberland County	0	0.0
Norton City	0	0.0
Nottoway County	1	6.4
Orange County	11	31.0
Page County	0	0.0
Patrick County	1	5.6
Petersburg City	9	28.2
Pittsylvania County	2	3.2
Poquoson City	5	41.6
Portsmouth City	20	21.0
Powhatan County	1	3.5
Prince Edward County	4	17.3
Prince George County	2	5.3
Prince William County	33	7.2
Pulaski County	0	0.0
Radford City	1	5.7
Rappahannock County	2	27.1
Richmond City	50	22.4
Richmond County	1	11.4
Roanoke City	6	6.0
Roanoke County	10	10.6
Rockbridge County	0	0.0
Rockingham County	1	1.3
Russell County	0	0.0
Salem City	3	11.7
Scott County	0	0.0
Shenandoah County	6	13.9
Smyth County	2	6.4
Southampton County	1	5.5
Spotsylvania County	22	16.7
Stafford County	16	11.1
Staunton City	1	4.1
Suffolk City	4	4.5
Surry County	0	0.0
Sussex County	1	8.7
Tazewell County	0	0.0
Virginia Beach City	60	13.3
Warren County	3	7.7
Washington County	0	0.0
Waynesboro City	0	0.0
Westmoreland County	4	22.7
Williamsburg City	1	6.6
Winchester City	8	29.1
Wise County	2	5.1
Wythe County	0	0.0
York County	2	2.9
Subtotal (in-state)	766	9.1
Out of State	45	ND
Unknown	3	ND
Subtotal (out-of-state)	48	ND
TOTAL	**814**	**9.7**

Note: No denominator is represented by ND.

Map 5.9 Number of Fatal Fentanyl and/or Heroin Overdoses by Locality of Residence, 2016



Map 5.10 Rates of Fatal Fentanyl and/or Heroin Overdose by Locality of Residence, 2016

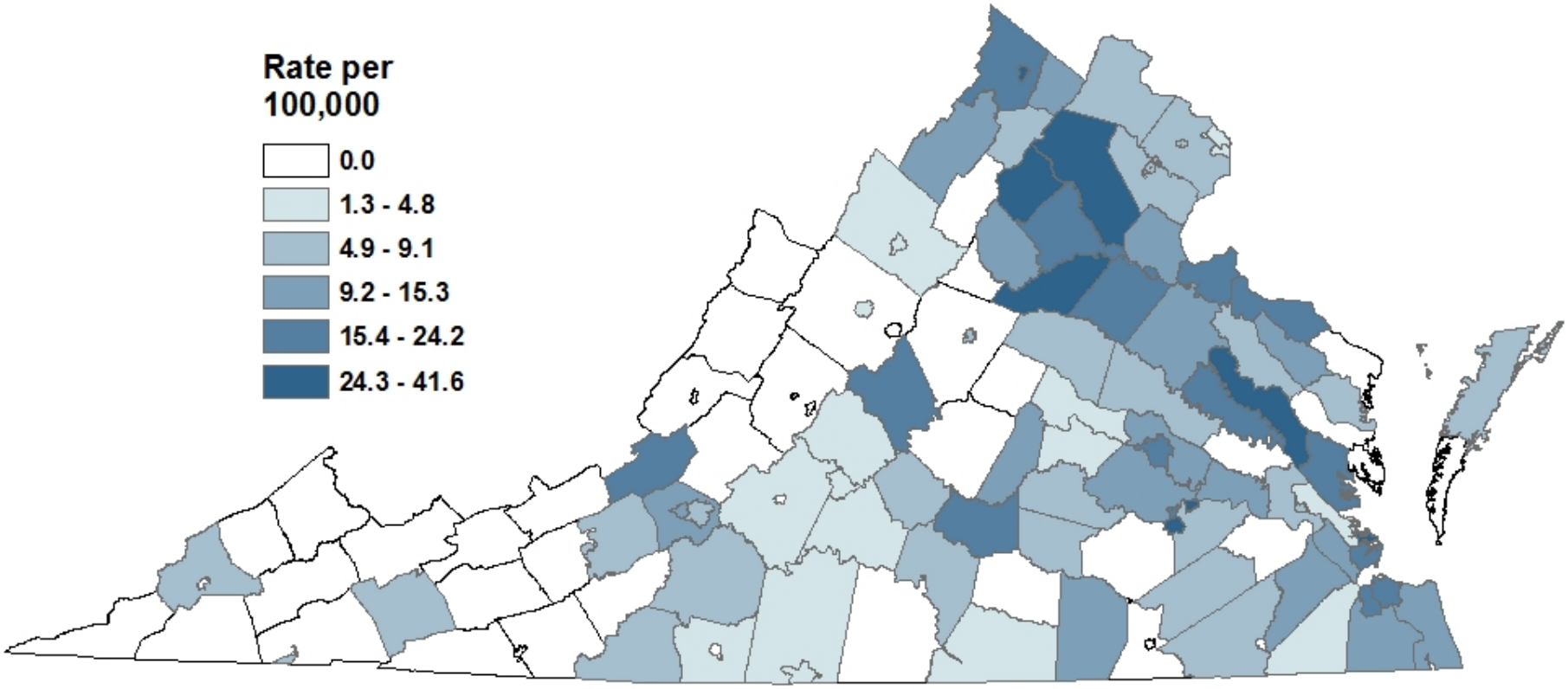


Table 5.16 Number and Rate of Fatal Fentanyl and/or Heroin Overdoses by Locality of Injury, 2016

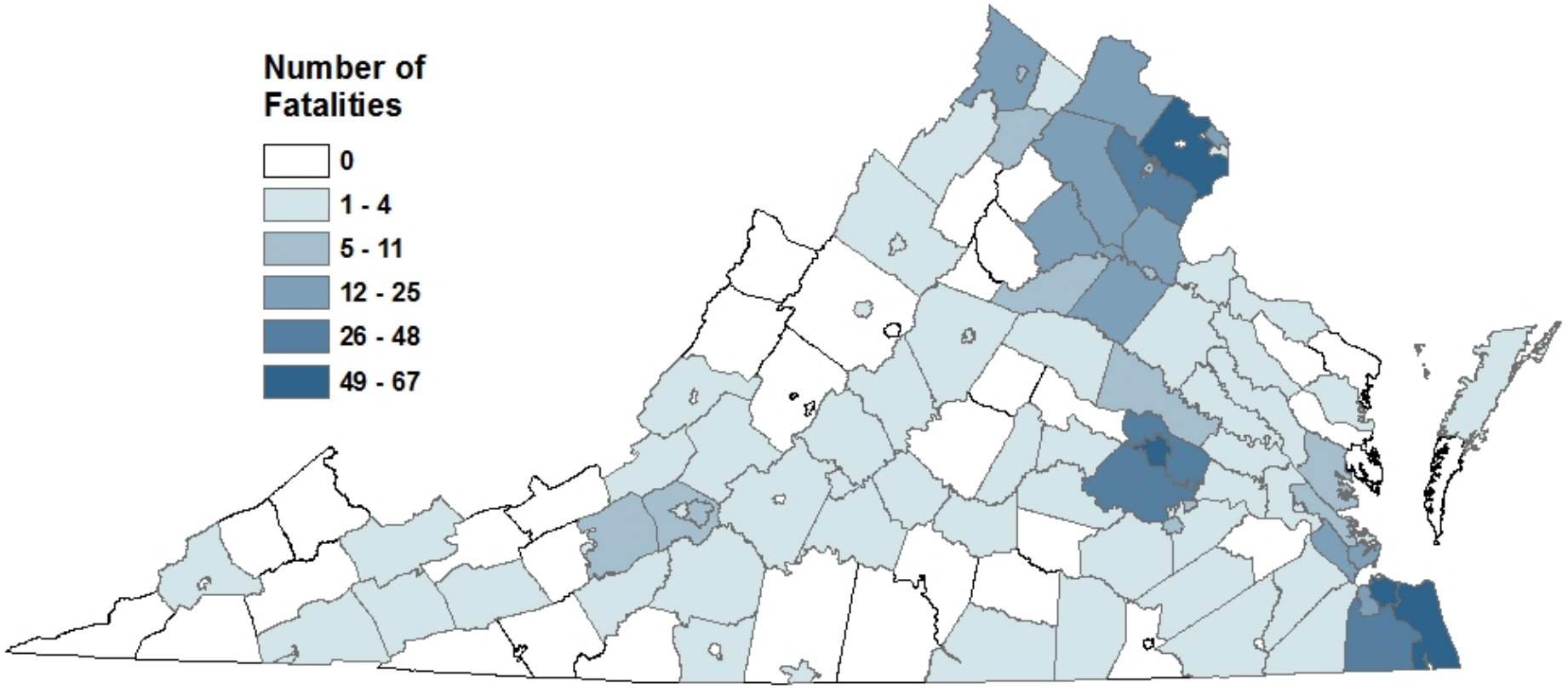
Locality of Injury	Deaths	Rate
Accomack County	4	12.1
Albemarle County	1	0.9
Alexandria City	1	0.6
Alleghany County	1	6.4
Amelia County	1	7.7
Amherst County	1	3.2
Appomattox County	2	12.9
Arlington County	14	6.1
Augusta County	0	0.0
Bath County	0	0.0
Bedford County	1	1.3
Bland County	0	0.0
Botetourt County	1	3.0
Bristol City	1	5.9
Brunswick County	1	6.2
Buchanan County	0	0.0
Buckingham County	0	0.0
Buena Vista City	0	0.0
Campbell County	2	3.6
Caroline County	4	13.3
Carroll County	0	0.0
Charles City County	1	14.1
Charlotte County	0	0.0
Charlottesville City	4	8.5
Chesapeake City	35	14.7
Chesterfield County	48	14.2
Clarke County	3	20.9
Colonial Heights City	2	11.3
Covington City	0	0.0
Craig County	1	19.4
Culpeper County	14	28.0
Cumberland County	1	10.4
Danville City	3	7.2
Dickenson County	0	0.0
Dinwiddie County	2	7.1
Emporia City	0	0.0
Essex County	1	9.0
Fairfax City	0	0.0
Fairfax County	63	5.5
Falls Church City	0	0.0

Locality of Injury	Deaths	Rate
Fauquier County	18	26.1
Floyd County	1	6.4
Fluvanna County	0	0.0
Franklin City	0	0.0
Franklin County	2	3.6
Frederick County	15	17.8
Fredericksburg City	8	28.3
Galax City	0	0.0
Giles County	0	0.0
Gloucester County	7	18.8
Goochland County	0	0.0
Grayson County	0	0.0
Greene County	0	0.0
Greensville County	0	0.0
Halifax County	0	0.0
Hampton City	20	14.8
Hanover County	8	7.7
Harrisonburg City	3	5.7
Henrico County	35	10.7
Henry County	1	1.9
Highland County	0	0.0
Hopewell City	7	30.8
Isle of Wight County	3	8.2
James City County	2	2.7
King and Queen County	1	14.0
King George County	4	15.4
King William County	3	18.4
Lancaster County	1	9.1
Lee County	0	0.0
Lexington City	0	0.0
Loudoun County	23	6.0
Louisa County	3	8.5
Lunenburg County	0	0.0
Lynchburg City	4	5.0
Madison County	0	0.0
Manassas City	6	14.5
Manassas Park City	1	6.3
Martinsville City	0	0.0
Mathews County	0	0.0
Mecklenburg County	2	6.5

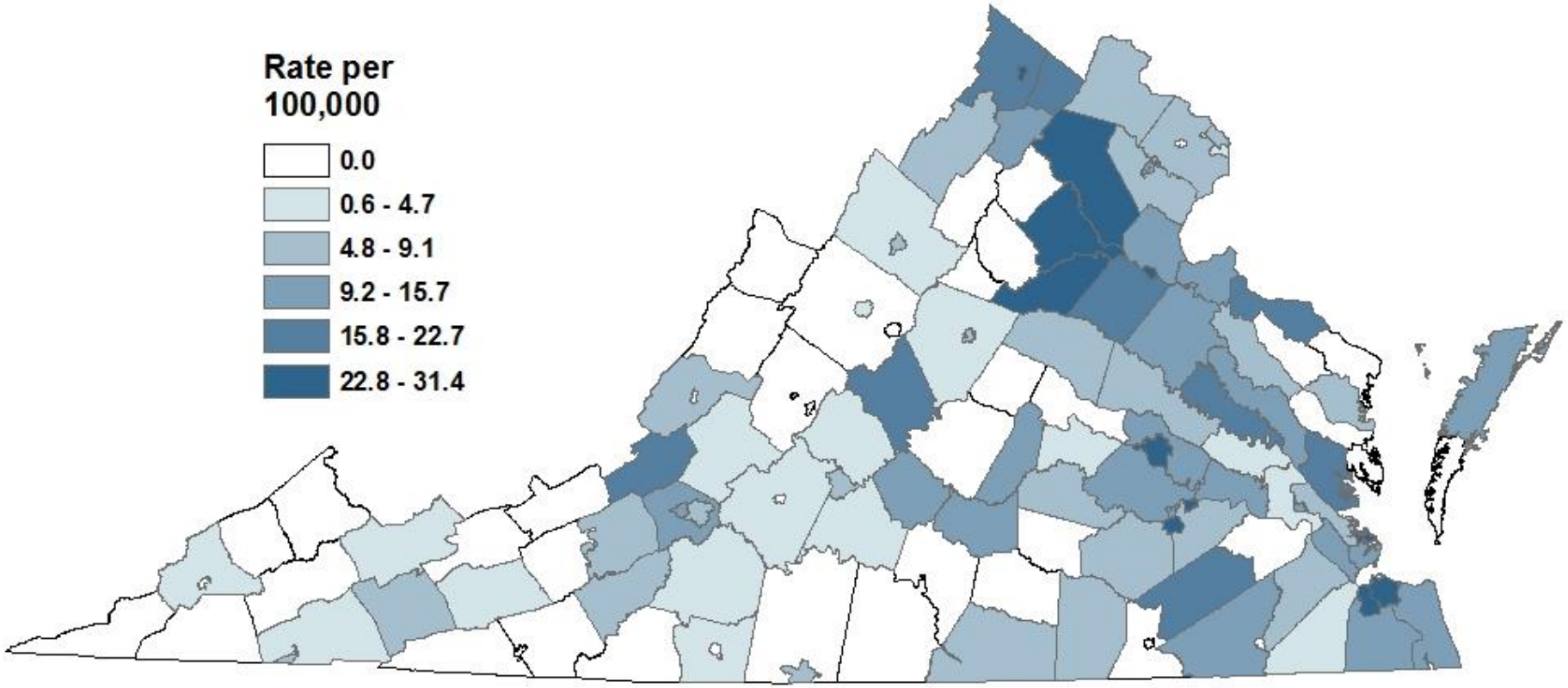
Locality of Injury	Deaths	Rate
Middlesex County	0	0.0
Montgomery County	6	6.1
Nelson County	3	20.2
New Kent County	1	4.7
Newport News City	24	13.2
Norfolk City	59	24.1
Northampton County	0	0.0
Northumberland County	0	0.0
Norton City	0	0.0
Nottoway County	0	0.0
Orange County	10	28.1
Page County	0	0.0
Patrick County	0	0.0
Petersburg City	10	31.4
Pittsylvania County	0	0.0
Poquoson City	3	25.0
Portsmouth City	25	26.2
Powhatan County	1	3.5
Prince Edward County	3	13.0
Prince George County	3	7.9
Prince William County	37	8.1
Pulaski County	0	0.0
Radford City	1	5.7
Rappahannock County	0	0.0
Richmond City	67	30.0
Richmond County	0	0.0
Roanoke City	7	7.0
Roanoke County	11	11.7
Rockbridge County	0	0.0
Rockingham County	1	1.3
Russell County	0	0.0
Salem City	4	15.7
Scott County	0	0.0
Shenandoah County	3	6.9
Smyth County	2	6.4
Southampton County	2	11.1
Spotsylvania County	23	17.4
Stafford County	15	10.4
Staunton City	1	4.1
Suffolk City	4	4.5
Surry County	0	0.0
Sussex County	2	17.4
Tazewell County	1	2.4
Virginia Beach City	56	12.4
Warren County	5	12.8
Washington County	1	1.8
Waynesboro City	0	0.0
Westmoreland County	4	22.7
Williamsburg City	2	13.1
Winchester City	8	29.1
Wise County	1	2.5
Wythe County	1	3.4
York County	6	8.8
Subtotal (in-state)	804	9.6
Out of State	4	ND
Unknown	6	ND
Subtotal (out-of-state)	10	ND
TOTAL	**814**	**9.7**

Note: No denominator is represented by ND.

Map 5.11 Number of Fatal Fentanyl and/or Heroin Overdoses by Locality of Injury, 2016



Map 5.12 Rates of Fatal Fentanyl and/or Heroin Overdose by Locality of Injury, 2016

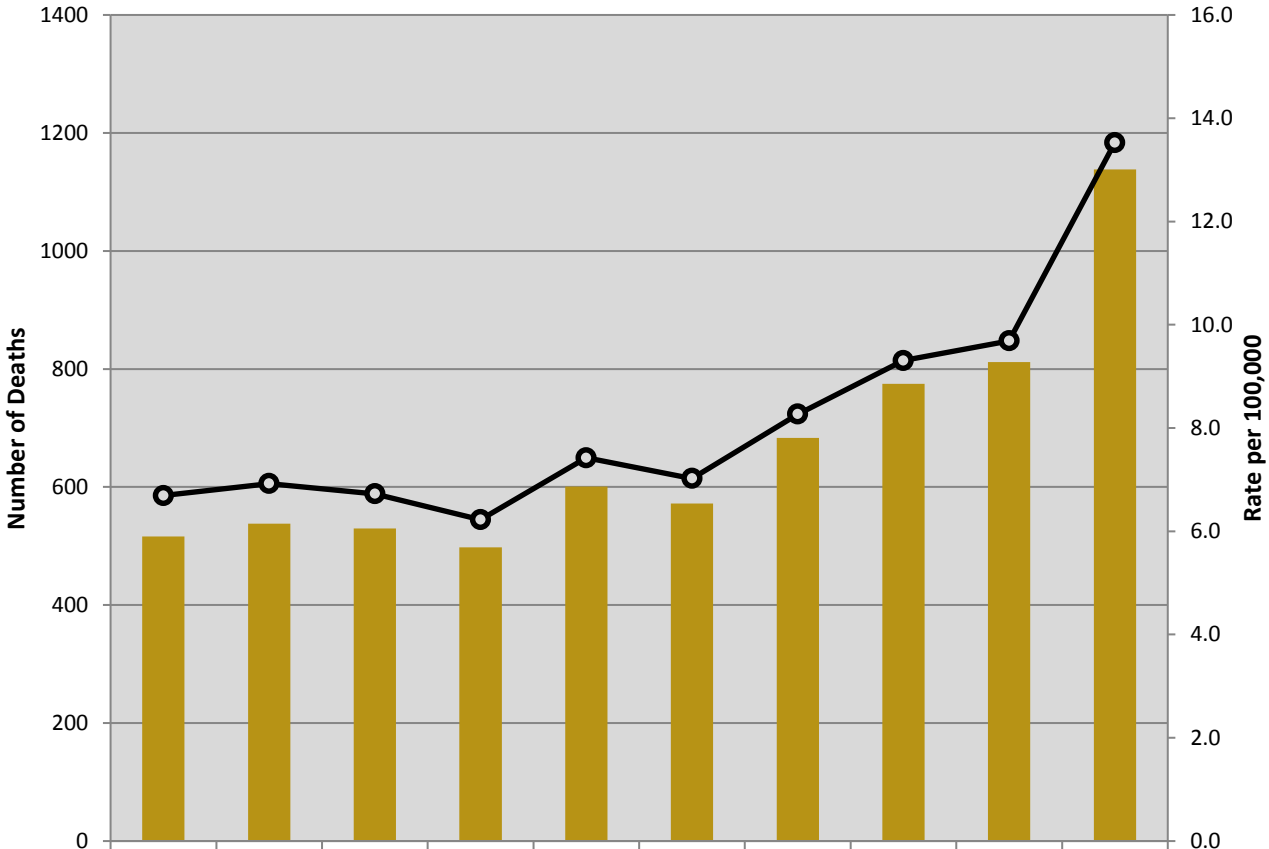


ALL OPIOID DEATHS (N=1,138)

All fatal opioid overdoses include fatal overdoses that included at least fentanyl, heroin, U-47700 (a synthetic illicit opioid), and/or one or more prescription opioids. Fatal opioid overdoses increased in 2016 when compared to 2015 (40.1%) and represented 79.7% of all fatal drug overdose cases in 2016.

- White males and males aged 25-34 years had the highest mortality rates compared to other demographic groups (23.0 and 43.6 deaths per 100,000 persons, respectively)
- Over 94% of all fatal opioid overdoses in 2016 were accidents
- Out of all opioids in 2016, fentanyl (Rx, illicit, and analogs) were responsible for the largest number of deaths

Figure 5.24 Number and Rate of All Fatal Opioid Overdoses Year of Death, 2007-2016

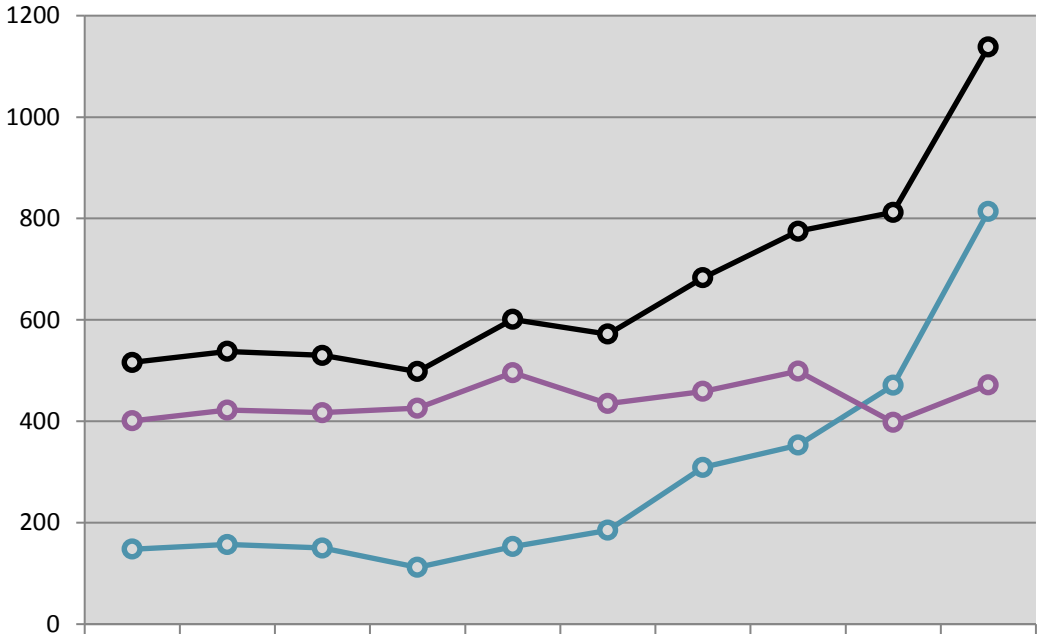


	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Deaths	516	538	530	498	601	572	683	775	812	1138
Mortality Rate	6.7	6.9	6.7	6.2	7.4	7.0	8.3	9.3	9.7	13.5

Table 5.17 Number of All Fatal Opioid Overdoses by Combination and OCME District, 2016

Drug Combination	Central	Northern	Tidewater	Western	Total
Fentanyl and/or heroin	243	160	185	52	**640**
One or more prescription opioids (excluding fentanyl)	70	69	56	102	**297**
Fentanyl and/or heroin and one more prescription opioids (excluding fentanyl)	40	63	59	11	**173**
Opioids unspecified	8	1	7	2	**18**
U-47700	2	5	1	0	**8**
One or more prescription opioids (excluding fentanyl) and U-47700	0	0	1	0	**1**
Fentanyl and/or heroin, U-47700, and one more prescription opioids (excluding fentanyl)	1	0	0	0	**1**
Total	**364**	**298**	**309**	**167**	**1138**

Figure 5.25 Percentage of All Fatal Opioid Overdoses by Manner of Death, 2016



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Fentanyl and/or Heroin	148	157	150	112	153	185	309	353	471	814
Rx Opioid (Excluding Fentanyl)	401	422	417	426	496	435	459	499	398	472
All Opioids	516	538	530	498	601	572	683	775	812	1138

Figure 5.26 Percentage of All Fatal Opioid Overdoses by Manner of Death, 2016

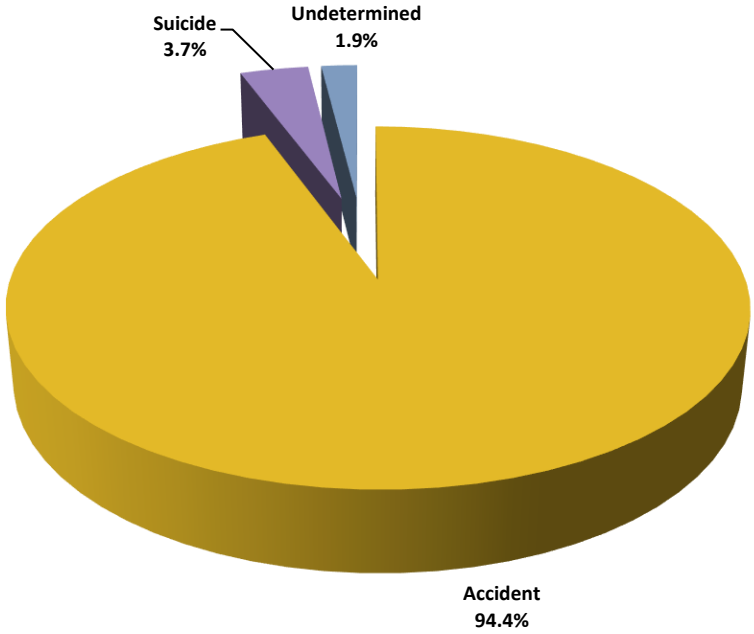
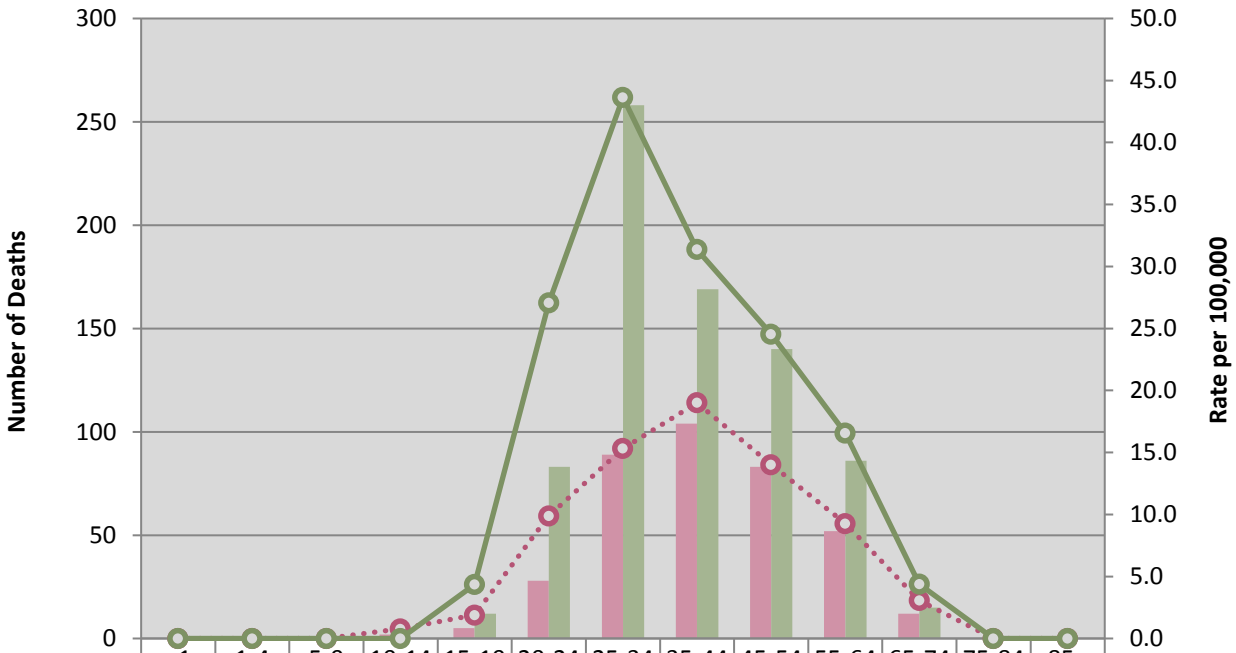


Figure 5.27 Number and Rate of All Fatal Opioid Overdoses by Age Group and Gender, 2016



	<1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Female	0	0	0	2	5	28	89	104	83	52	12	0	0
Male	0	0	0	0	12	83	258	169	140	86	15	0	0
Female Rate	0.0	0.0	0.0	0.8	1.9	9.9	15.3	19.0	14.0	9.3	3.1	0.0	0.0
Male Rate	0.0	0.0	0.0	0.0	4.4	27.1	43.6	31.4	24.5	16.6	4.4	0.0	0.0

Figure 5.28 Percentage of All Fatal Opioid Overdoses by Race/Ethnicity, 2016

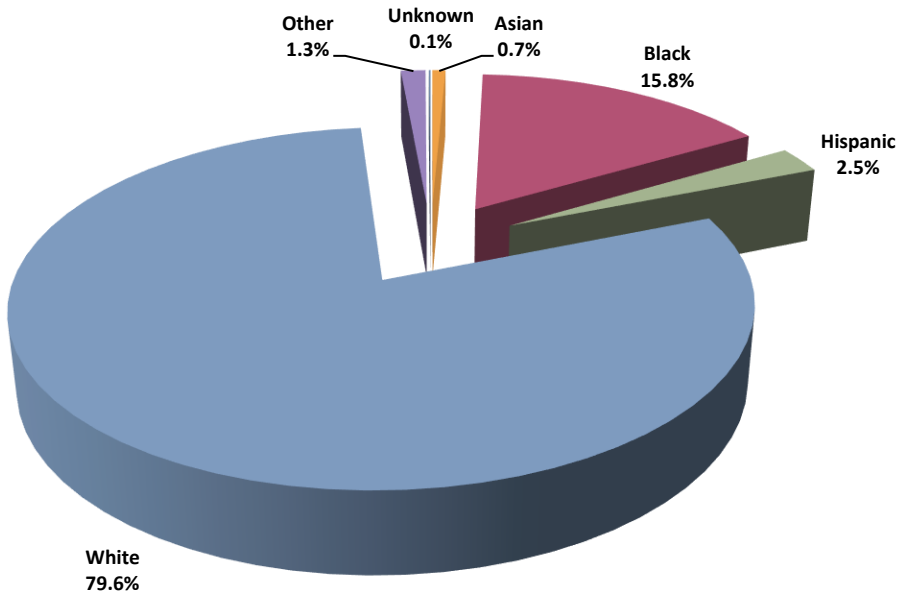
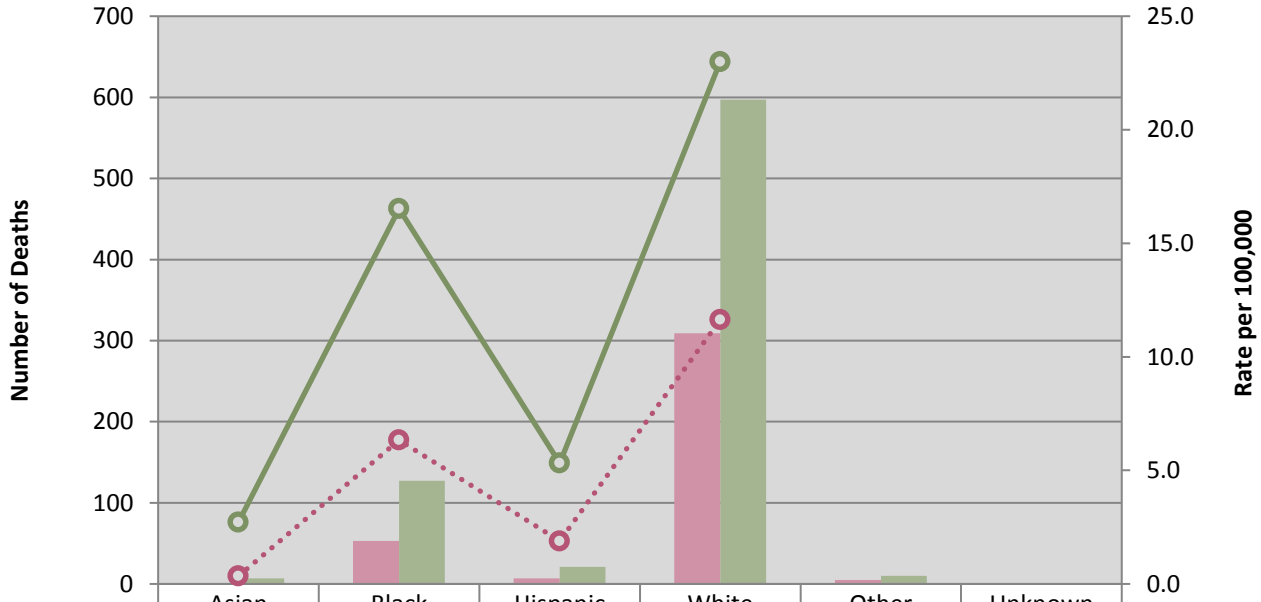


Figure 5.29 Number and Rate of All Fatal Opioid Overdoses by Race/Ethnicity and Gender, 2016



	Asian	Black	Hispanic	White	Other	Unknown
Female	1	53	7	309	5	0
Male	7	127	21	597	10	1
Female Rate	0.3	6.3	1.9	11.6	*	*
Male Rate	2.7	16.5	5.3	23.0	*	*

*No rate can be calculated

** Rates calculated from small case counts (n<5) are considered unreliable and should be interpreted with caution (Asian females)

Figure 5.30 Number of Opioids Causing or Contributing to Fatal Opioid Overdoses, 2016

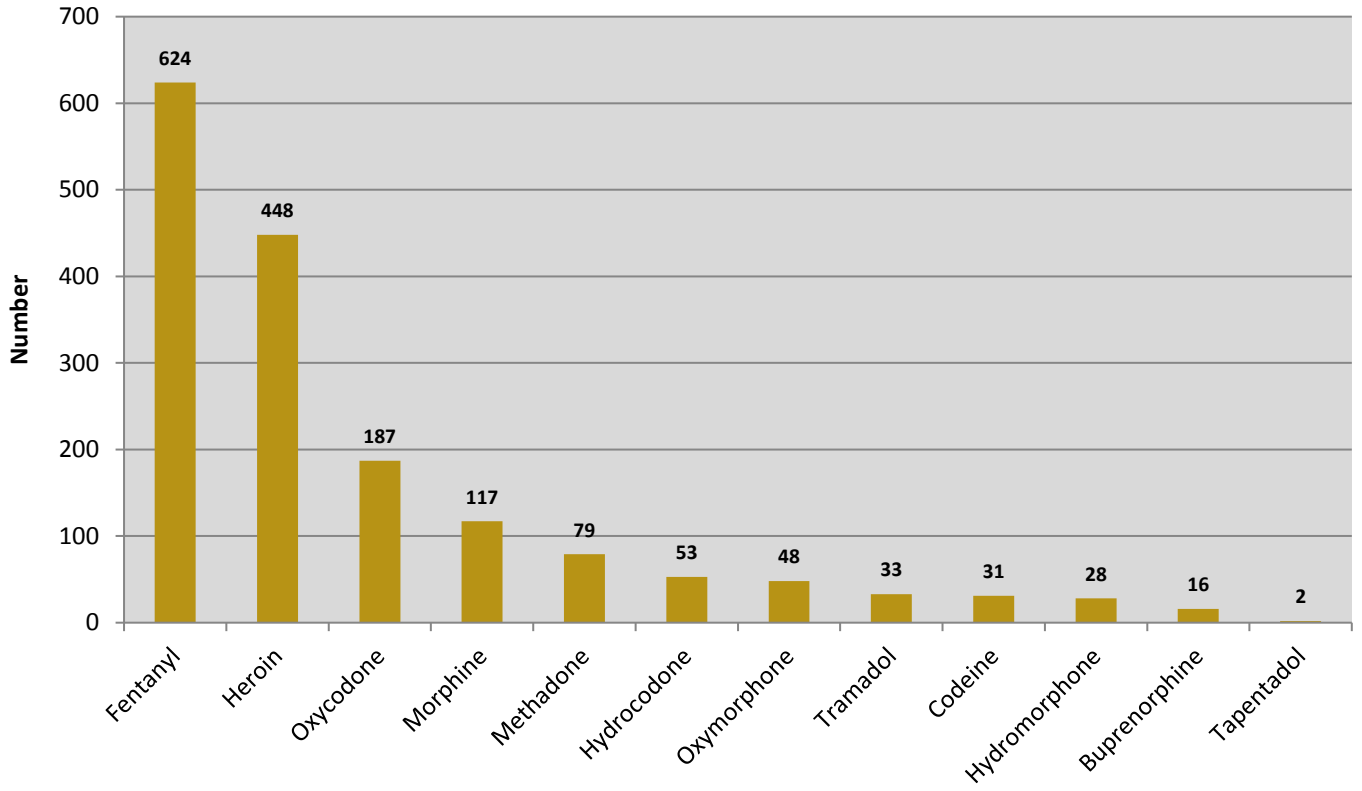


Table 5.18 Number and Percentage of All Fatal Opioid Overdoses by Whether Alcohol Caused Death, 2016

Whether Alcohol Played a Role in Death	Deaths	Percentage
Yes	160	14.1%
Contributed	43	3.8%
No	935	82.2%
TOTAL	**1138**	**100.0%**

Table 5.19 Number of All Fatal Opioid Overdoses by Locality of Residence, 2016

Locality of Residence	Deaths	Rate
Accomack County	4	12.1
Albemarle County	2	1.9
Alexandria City	9	5.8
Alleghany County	1	6.4
Amelia County	1	7.7
Amherst County	2	6.3
Appomattox County	2	12.9
Arlington County	18	7.8
Augusta County	2	2.7
Bath County	0	0.0
Bedford County	3	3.8
Bland County	0	0.0
Botetourt County	1	3.0
Bristol City	1	5.9
Brunswick County	2	12.3
Buchanan County	4	18.0
Buckingham County	0	0.0
Buena Vista City	0	0.0
Campbell County	5	9.1
Caroline County	10	33.1
Carroll County	0	0.0
Charles City County	1	14.1
Charlotte County	1	8.2
Charlottesville City	4	8.5
Chesapeake City	39	16.4
Chesterfield County	61	18.0
Clarke County	2	13.9
Colonial Heights City	4	22.5
Covington City	0	0.0
Craig County	1	19.4
Culpeper County	12	24.0
Cumberland County	1	10.4
Danville City	5	11.9
Dickenson County	5	33.4
Dinwiddie County	0	0.0
Emporia City	0	0.0
Essex County	2	18.0
Fairfax City	3	12.4
Fairfax County	70	6.1
Falls Church City	0	0.0
Fauquier County	23	33.3

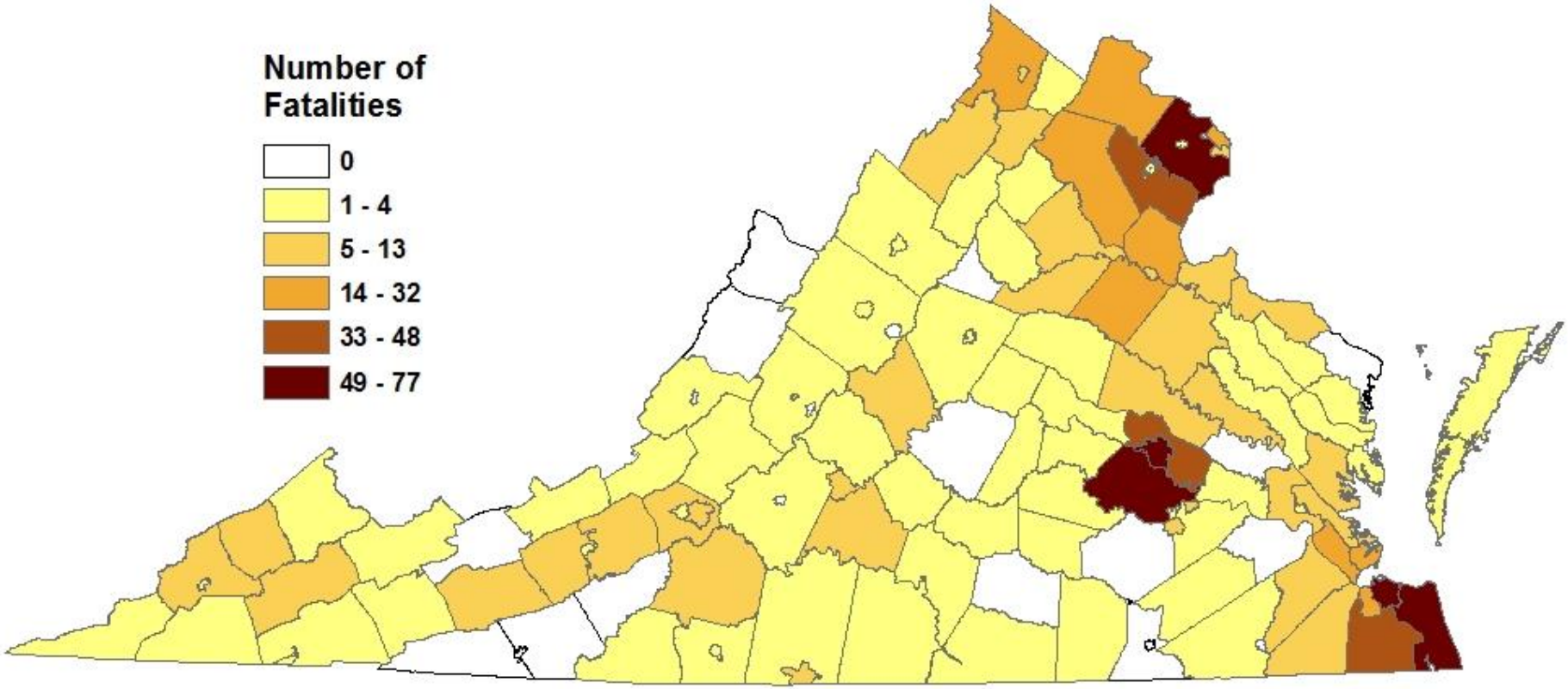
Locality of Residence	Deaths	Rate
Floyd County	0	0.0
Fluvanna County	1	3.8
Franklin City	0	0.0
Franklin County	10	17.8
Frederick County	17	20.1
Fredericksburg City	6	21.2
Galax City	0	0.0
Giles County	2	11.9
Gloucester County	11	29.6
Goochland County	2	8.8
Grayson County	0	0.0
Greene County	0	0.0
Greensville County	0	0.0
Halifax County	2	5.7
Hampton City	29	21.4
Hanover County	8	7.7
Harrisonburg City	3	5.7
Henrico County	48	14.7
Henry County	4	7.8
Highland County	0	0.0
Hopewell City	7	30.8
Isle of Wight County	6	16.4
James City County	7	9.4
King and Queen County	2	27.9
King George County	6	23.1
King William County	5	30.6
Lancaster County	1	9.1
Lee County	3	12.4
Lexington City	1	14.2
Loudoun County	29	7.5
Louisa County	3	8.5
Lunenburg County	0	0.0
Lynchburg City	5	6.2
Madison County	2	15.3
Manassas City	4	9.6
Manassas Park City	1	6.3
Martinsville City	1	7.4
Mathews County	1	11.4
Mecklenburg County	2	6.5
Middlesex County	1	9.3
Montgomery County	8	8.1

Locality of Residence	Deaths	Rate
Nelson County	5	33.6
New Kent County	0	0.0
Newport News City	32	17.6
Norfolk City	64	26.1
Northampton County	2	16.5
Northumberland County	0	0.0
Norton City	1	25.9
Nottoway County	1	6.4
Orange County	13	36.6
Page County	3	12.7
Patrick County	2	11.2
Petersburg City	13	40.8
Pittsylvania County	4	6.5
Poquoson City	5	41.6
Portsmouth City	23	24.1
Powhatan County	2	7.0
Prince Edward County	4	17.3
Prince George County	4	10.6
Prince William County	44	9.7
Pulaski County	8	23.4
Radford City	2	11.4
Rappahannock County	2	27.1
Richmond City	61	27.3
Richmond County	1	11.4
Roanoke City	10	10.0
Roanoke County	13	13.8
Rockbridge County	1	4.5
Rockingham County	2	2.5
Russell County	6	21.9

Locality of Residence	Deaths	Rate
Salem City	3	11.7
Scott County	1	4.6
Shenandoah County	7	16.2
Smyth County	3	9.7
Southampton County	2	11.1
Spotsylvania County	29	22.0
Stafford County	22	15.2
Staunton City	3	12.3
Suffolk City	6	6.7
Surry County	0	0.0
Sussex County	1	8.7
Tazewell County	4	9.5
Virginia Beach City	77	17.0
Warren County	8	20.4
Washington County	1	1.8
Waynesboro City	0	0.0
Westmoreland County	6	34.1
Williamsburg City	1	6.6
Winchester City	11	40.0
Wise County	10	25.5
Wythe County	5	17.2
York County	5	7.4
Subtotal (in-state)	1072	12.7
Out of State	63	ND
Unknown	3	ND
Subtotal (out-of-state)	66	ND
TOTAL	**1138**	**13.5**

Note: No denominator is represented by ND.

Map 5.13 Number of All Fatal Opioid Overdoses by Locality of Residence, 2016



Map 5.14 Rates of All Fatal Opioid Overdoses by Locality of Residence, 2016

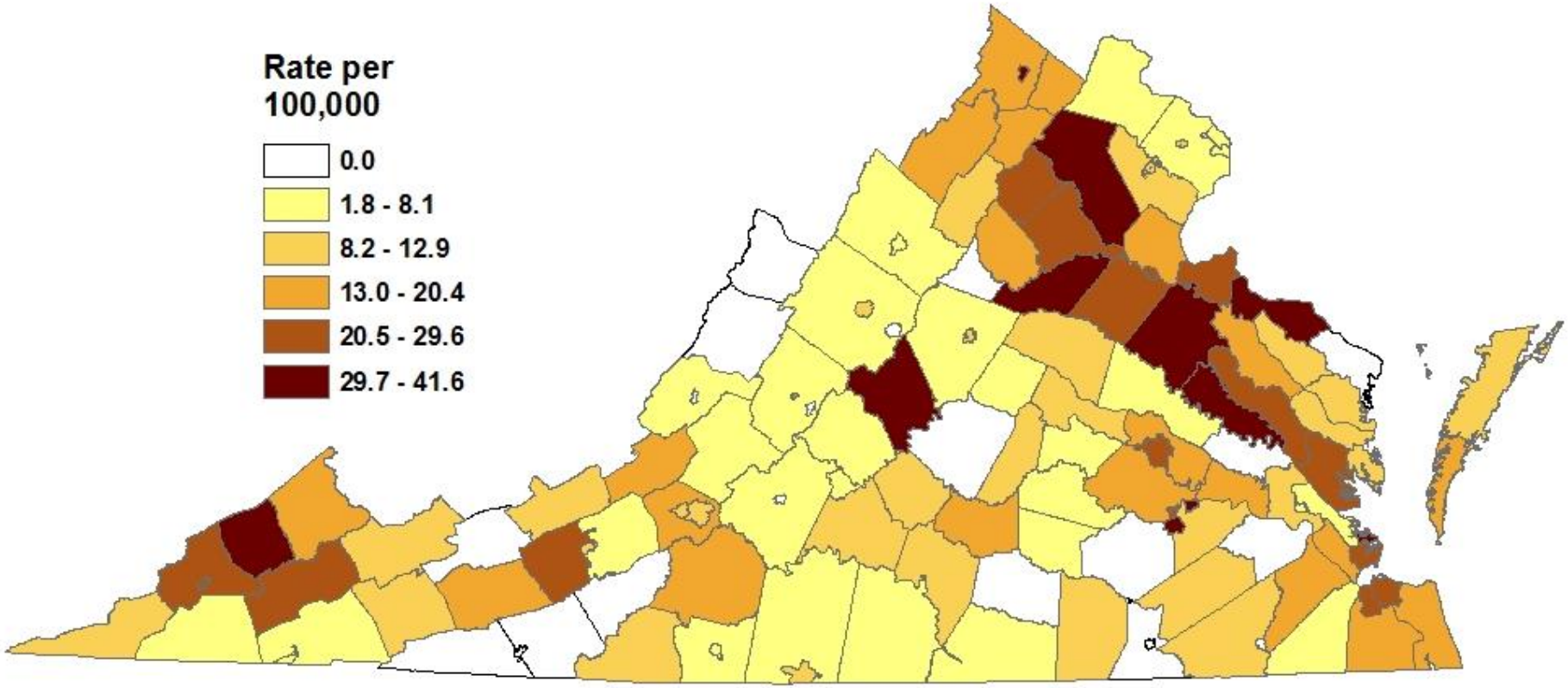


Table 5.20 Number and Rate of All Fatal Opioid Overdoses by Locality of Injury, 2016

Locality of Injury	Deaths	Rate
Accomack County	5	15.2
Albemarle County	3	2.8
Alexandria City	8	5.1
Alleghany County	2	12.8
Amelia County	1	7.7
Amherst County	3	9.5
Appomattox County	3	19.4
Arlington County	22	9.6
Augusta County	3	4.0
Bath County	0	0.0
Bedford County	3	3.8
Bland County	0	0.0
Botetourt County	3	9.0
Bristol City	1	5.9
Brunswick County	1	6.2
Buchanan County	3	13.5
Buckingham County	0	0.0
Buena Vista City	0	0.0
Campbell County	6	10.9
Caroline County	9	29.8
Carroll County	0	0.0
Charles City County	1	14.1
Charlotte County	0	0.0
Charlottesville City	5	10.7
Chesapeake City	39	16.4
Chesterfield County	56	16.5
Clarke County	3	20.9
Colonial Heights City	2	11.3
Covington City	0	0.0
Craig County	1	19.4
Culpeper County	14	28.0
Cumberland County	1	10.4
Danville City	7	16.7
Dickenson County	6	40.1
Dinwiddie County	3	10.7
Emporia City	0	0.0
Essex County	2	18.0
Fairfax City	1	4.1
Fairfax County	80	7.0
Falls Church City	0	0.0
Fauquier County	23	33.3

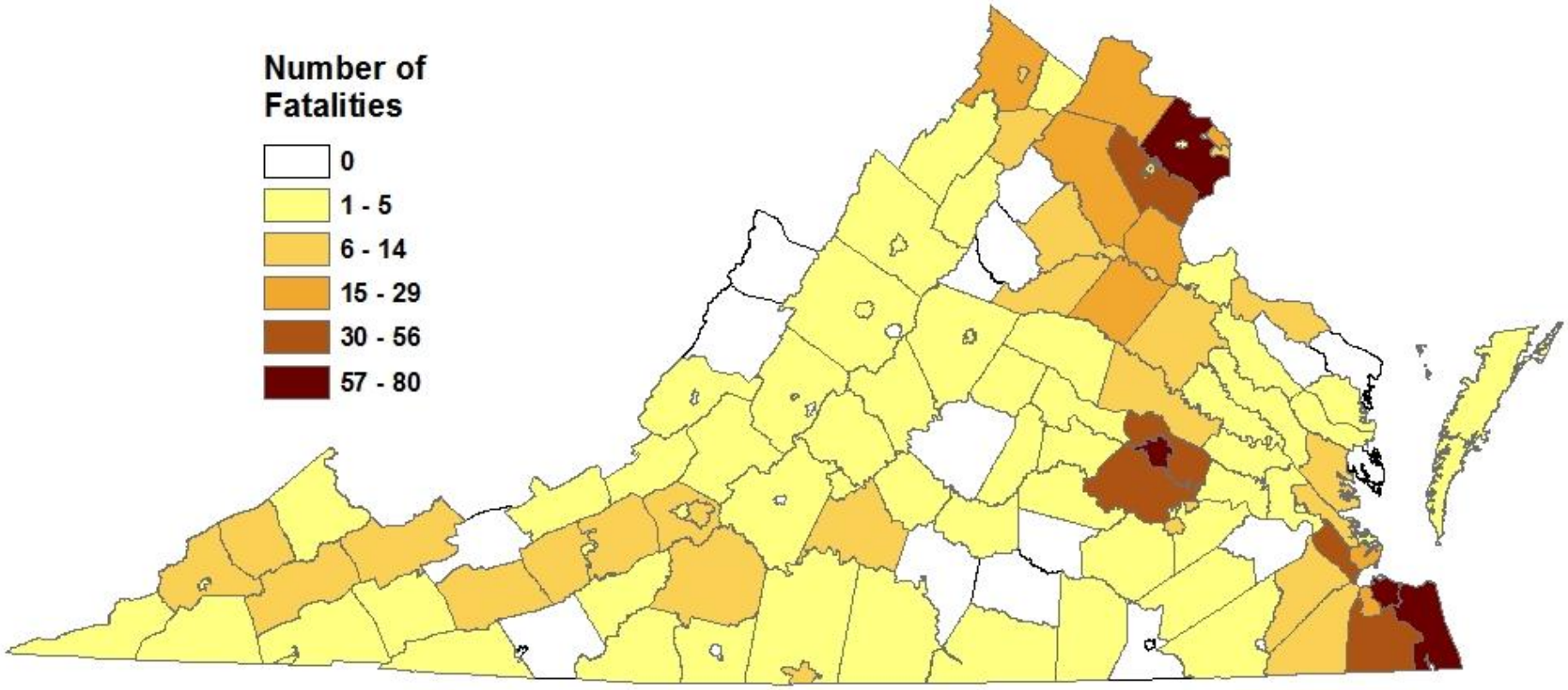
Locality of Injury	Deaths	Rate
Floyd County	1	6.4
Fluvanna County	1	3.8
Franklin City	0	0.0
Franklin County	10	17.8
Frederick County	19	22.5
Fredericksburg City	10	35.3
Galax City	0	0.0
Giles County	2	11.9
Gloucester County	9	24.2
Goochland County	1	4.4
Grayson County	1	6.6
Greene County	0	0.0
Greensville County	0	0.0
Halifax County	2	5.7
Hampton City	26	19.2
Hanover County	9	8.6
Harrisonburg City	5	9.4
Henrico County	45	13.8
Henry County	5	9.7
Highland County	0	0.0
Hopewell City	8	35.2
Isle of Wight County	6	16.4
James City County	4	5.4
King and Queen County	1	14.0
King George County	5	19.2
King William County	5	30.6
Lancaster County	1	9.1
Lee County	2	8.3
Lexington City	1	14.2
Loudoun County	29	7.5
Louisa County	3	8.5
Lunenburg County	0	0.0
Lynchburg City	5	6.2
Madison County	0	0.0
Manassas City	7	16.9
Manassas Park City	1	6.3
Martinsville City	0	0.0
Mathews County	0	0.0
Mecklenburg County	4	12.9
Middlesex County	1	9.3
Montgomery County	10	10.1

Locality of Injury	Deaths	Rate
Nelson County	4	26.9
New Kent County	1	4.7
Newport News City	36	19.8
Norfolk City	71	29.0
Northampton County	2	16.5
Northumberland County	0	0.0
Norton City	1	25.9
Nottoway County	0	0.0
Orange County	12	33.8
Page County	3	12.7
Patrick County	1	5.6
Petersburg City	13	40.8
Pittsylvania County	1	1.6
Poquoson City	3	25.0
Portsmouth City	28	29.4
Powhatan County	2	7.0
Prince Edward County	3	13.0
Prince George County	5	13.2
Prince William County	49	10.8
Pulaski County	8	23.4
Radford City	2	11.4
Rappahannock County	0	0.0
Richmond City	79	35.4
Richmond County	0	0.0
Roanoke City	10	10.0
Roanoke County	14	14.9
Rockbridge County	1	4.5
Rockingham County	2	2.5
Russell County	6	21.9

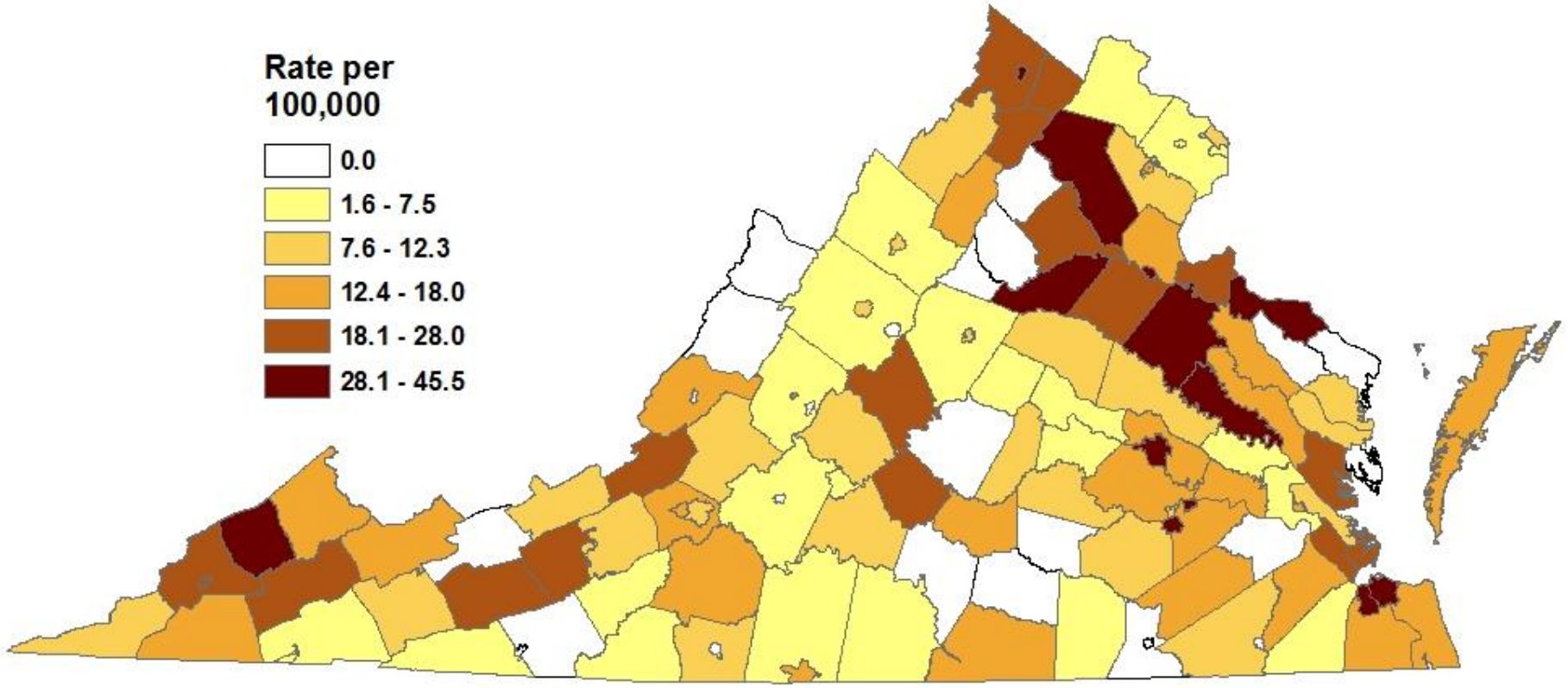
Locality of Injury	Deaths	Rate
Salem City	4	15.7
Scott County	3	13.7
Shenandoah County	5	11.6
Smyth County	3	9.7
Southampton County	2	11.1
Spotsylvania County	27	20.5
Stafford County	21	14.5
Staunton City	3	12.3
Suffolk City	6	6.7
Surry County	0	0.0
Sussex County	2	17.4
Tazewell County	6	14.2
Virginia Beach City	72	15.9
Warren County	9	23.0
Washington County	2	3.7
Waynesboro City	0	0.0
Westmoreland County	8	45.5
Williamsburg City	2	13.1
Winchester City	9	32.7
Wise County	9	22.9
Wythe County	6	20.7
York County	8	11.8
Subtotal (in-state)	1123	13.4
Out of State	8	ND
Unknown	7	ND
Subtotal (out-of-state)	15	ND
TOTAL	**1138**	**13.5**

Note: No denominator is represented by ND.

Map 5.15 Number of All Fatal Opioid Overdoses by Locality of Injury, 2016



Map 5.16 Rates of All Fatal Opioid Overdoses by Locality of Injury, 2016

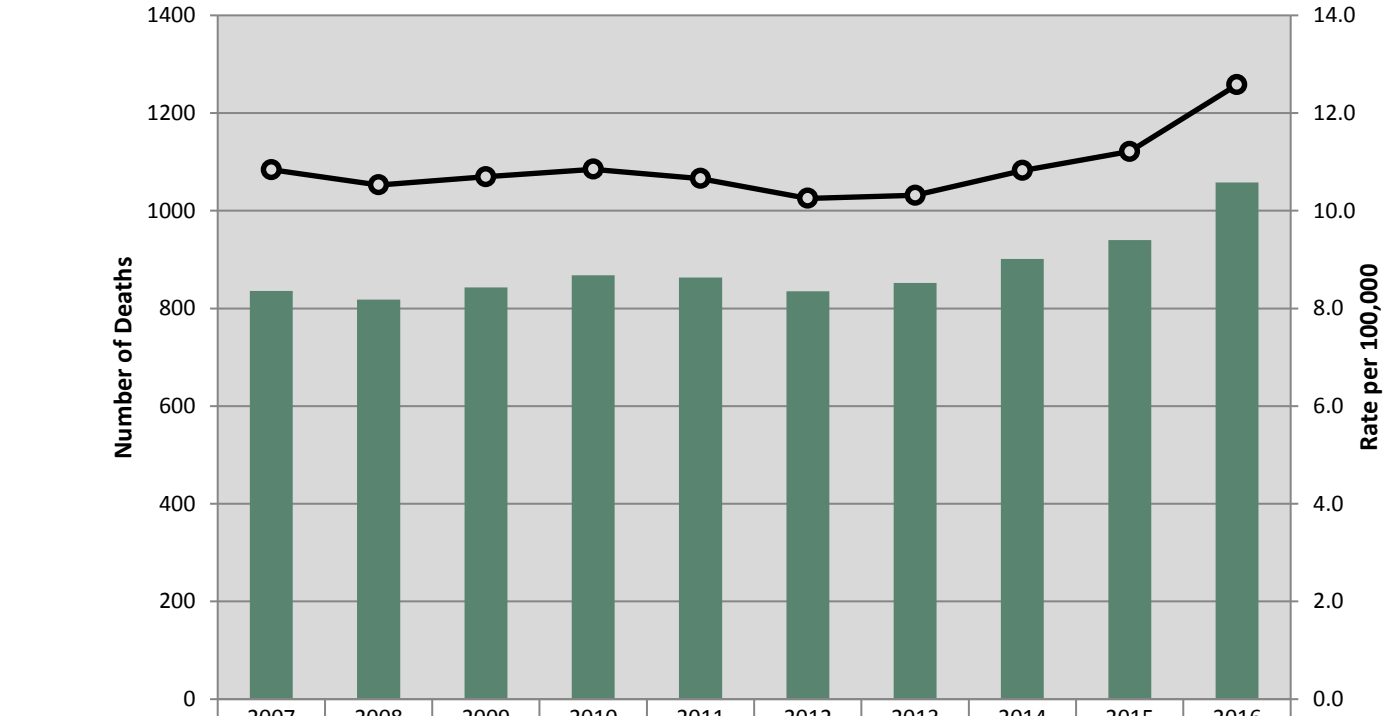


SECTION 6: GUN-RELATED DEATHS (N=1,058)

Gun-related fatalities remain as one of the top three methods of unnatural death since 2007. Generally, gun-related suicides have slowly increased each year, and since 2012, gun-related homicides have slowly begun to increase as well.

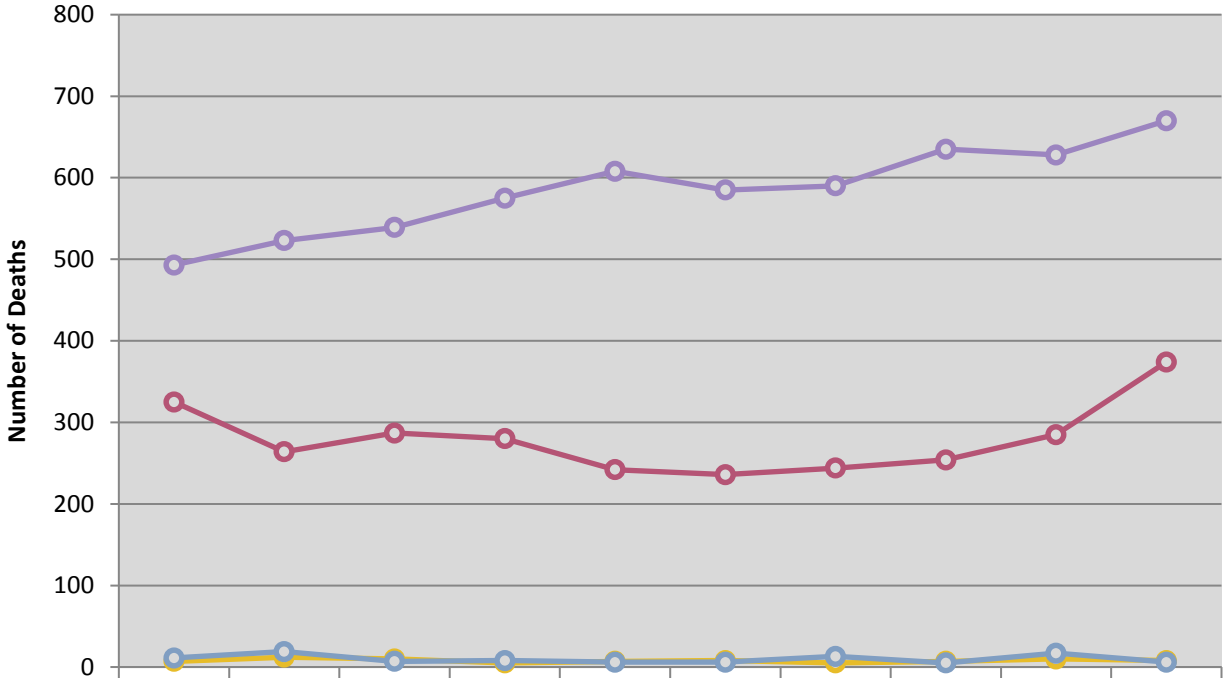
- Gun-related homicides increased 31.2% in 2016 compared to 2015
- The majority (63.3%) of gun related deaths were due to suicide in 2016
- The Northern OCME region had the lowest number and the lowest rate of gun-related death of all manners (6.1 deaths per 100,000 persons), compared to all other OCME district offices
- Males (84.3%), 25-34 year olds (19.4%), and whites (63.4%) had the largest number of gun-related deaths; however black males and males aged 85+ years had the highest rate of gun-related death (39.5 deaths and 62.7 deaths per 100,000 persons, respectively)

Figure 6.1 Number and Rate of Gun-Related Deaths by Year of Death, 2007-2016



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Deaths	836	818	843	868	863	835	852	901	940	1058
Mortality Rate	10.8	10.5	10.7	10.8	10.7	10.3	10.3	10.8	11.2	12.6

Figure 6.2 Number of Gun-Related Deaths by Year and Manner of Death, 2007-2016



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Accident	7	12	10	5	7	8	5	7	10	8
Homicide	325	264	287	280	242	236	244	254	285	374
Suicide	493	523	539	575	608	585	590	635	628	670
Undetermined	11	19	7	8	6	6	13	5	17	6

Figure 6.3 Percentage of Gun-Related Deaths by Manner of Death, 2016

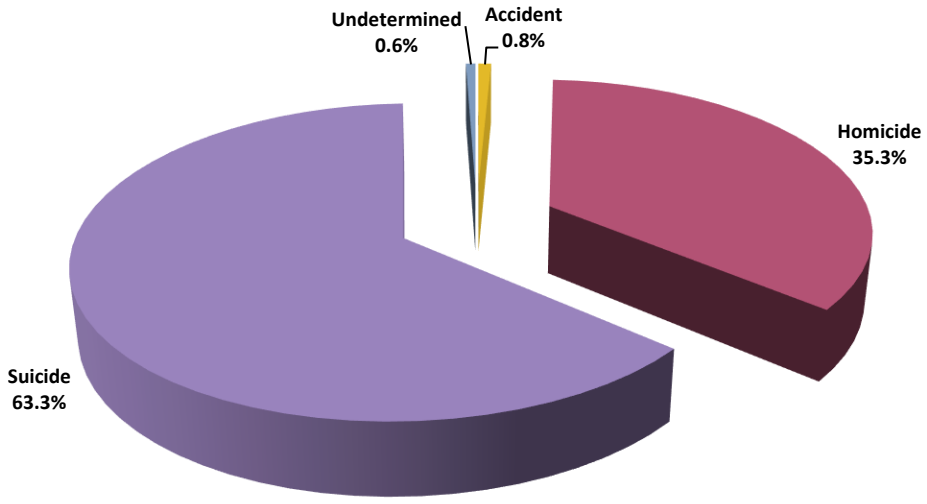


Table 6.1 Number and Rate of Gun-Related Deaths by OCME District and Manner of Death, 2016

Manner of Death	Central		Northern		Tidewater		Western		TOTAL	
	n	rate	n	rate	n	rate	n	rate	n	rate
Accident	4	0.2	0	0.0	2	0.1	2	0.1	**8**	**0.1**
Homicide	132	5.8	36	1.3	154	9.5	52	3.2	**374**	**4.4**
Suicide	213	9.4	138	4.8	136	8.4	183	11.1	**670**	**8.0**
Undetermined	0	0.0	2	0.1	2	0.1	2	0.1	**6**	**0.1**
TOTAL	**349**	**15.4**	**176**	**6.1**	**294**	**18.1**	**239**	**14.5**	**1058**	**12.6**

Table 6.2 Number of Gun-Related Deaths by Gun Type and Manner of Death, 2016

Manner of Death	Handgun	Multiple*	Rifle	Shotgun	Other	Unknown	Total
Accident	5	0	1	2	0	0	**8**
Homicide	303	3	11	11	1	45	**374**
Suicide	546	0	54	68	0	2	**670**
Undetermined	6	0	0	0	0	0	**6**
Total	**860**	**3**	**66**	**81**	**1**	**47**	**1058**

* 'Multiple' indicates the decedent died of more than one gun; either more than one gun type (e.g. a handgun and a shotgun) or same gun type but multiple weapons (e.g. two handguns)

Figure 6.4 Percentage of Gun-Related Deaths by Gender, 2016

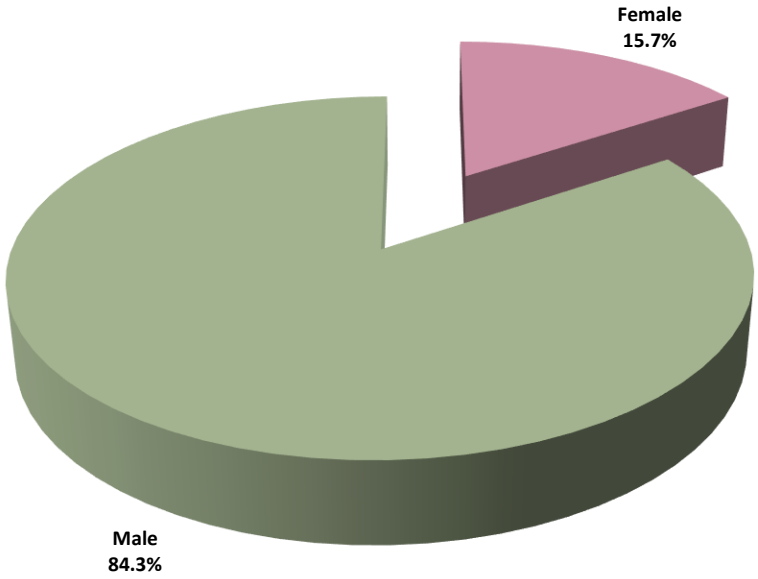
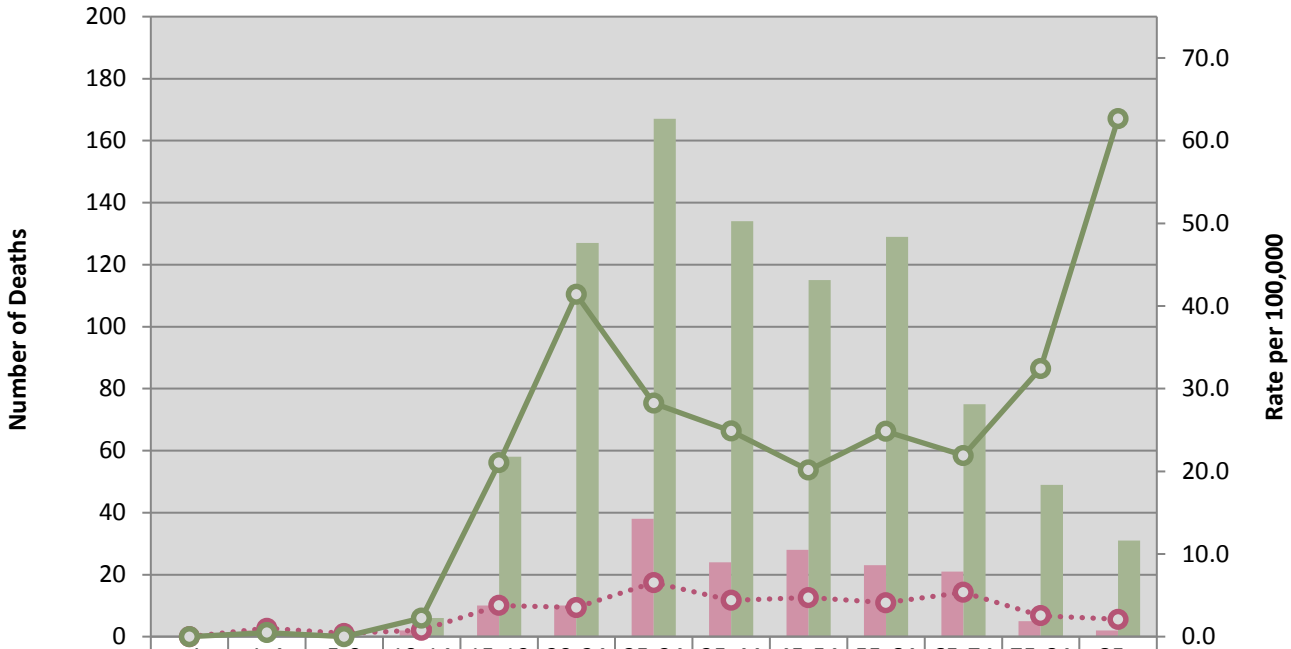


Figure 6.5 Number and Rate of Gun-Related Deaths by Age Group and Gender, 2016



	<1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Female	0	2	1	2	10	10	38	24	28	23	21	5	2
Male	0	1	0	6	58	127	167	134	115	129	75	49	31
Female Rate	0.0	1.0	0.4	0.8	3.8	3.5	6.5	4.4	4.7	4.1	5.4	2.5	2.1
Male Rate	0.0	0.5	0.0	2.3	21.0	41.4	28.2	24.9	20.2	24.8	21.9	32.4	62.7

Figure 6.6 Percentage of Gun-Related Deaths by Race/Ethnicity, 2016

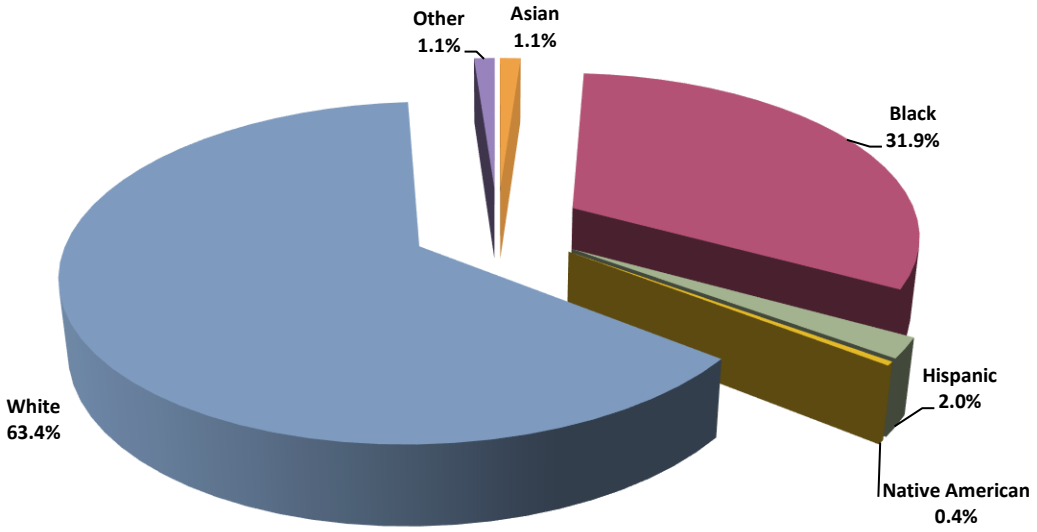
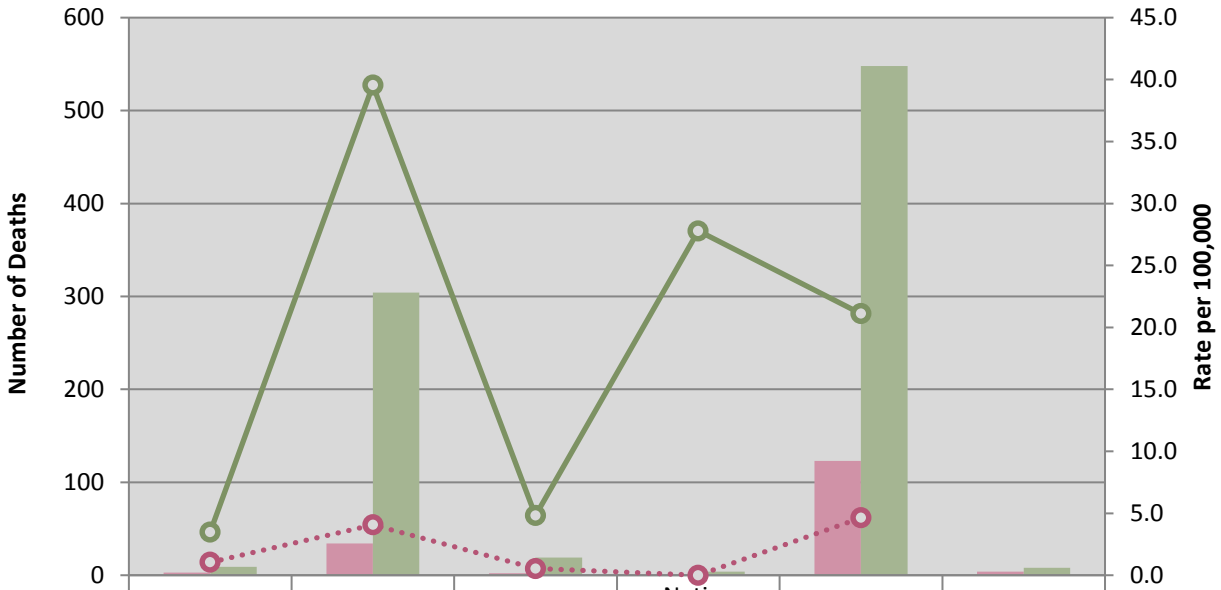


Figure 6.7 Number and Rate of Gun-Related Deaths by Race/Ethnicity and Gender, 2016

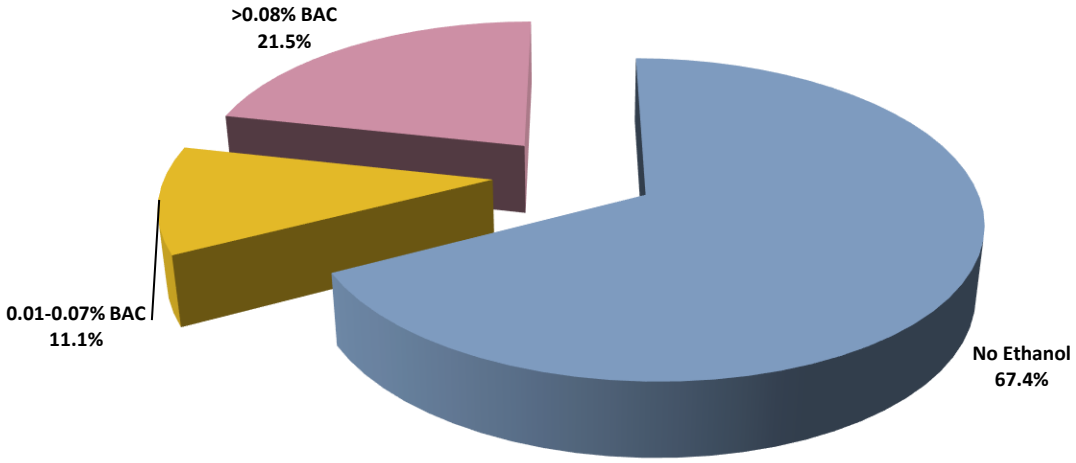


	Asian	Black	Hispanic	Native American	White	Other
Female	3	34	2	0	123	4
Male	9	304	19	4	548	8
Female Rate	1.0	4.1	0.5	0.0	4.6	*
Male Rate	3.5	39.5	4.8	27.8	21.1	*

*No rate can be calculated

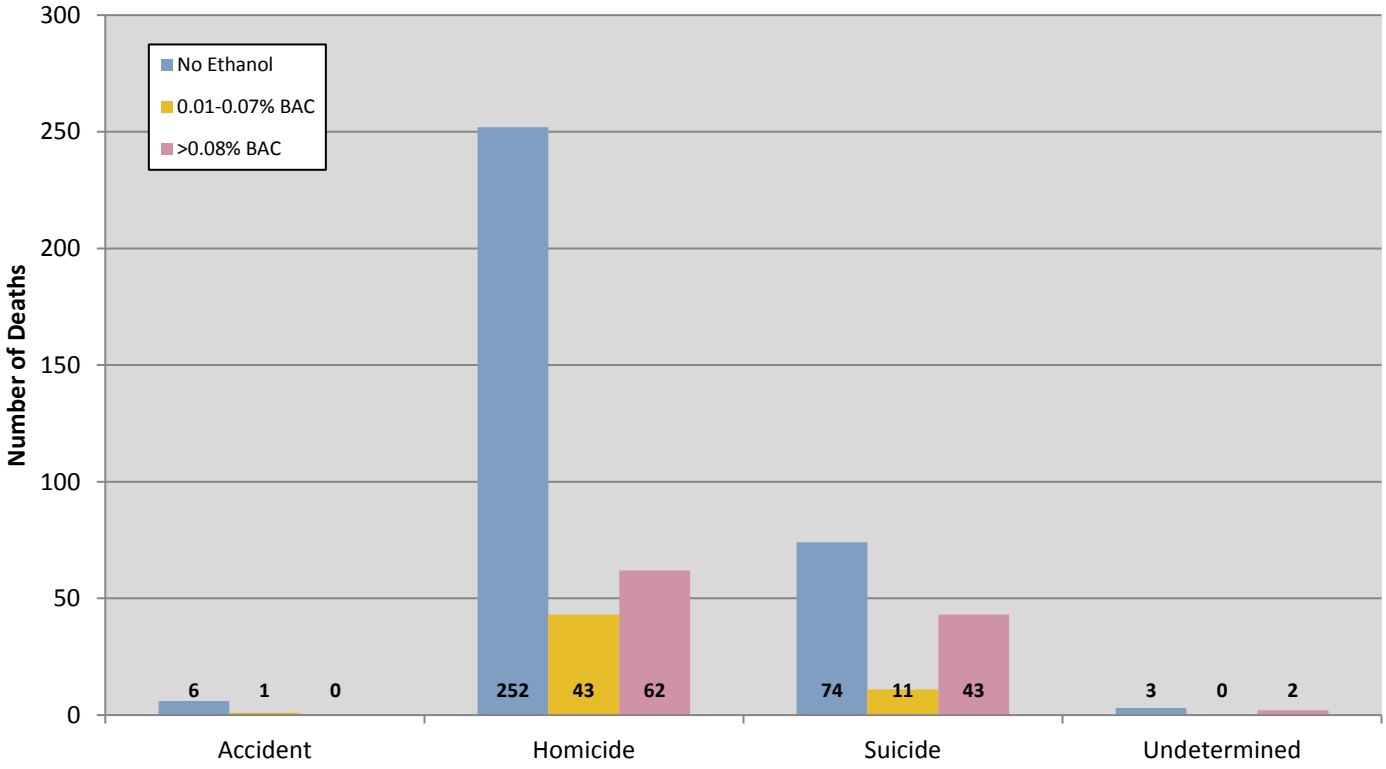
** Rates calculated from small case counts (n<5) are considered unreliable and should be interpreted with caution (Asians, Hispanics, and Native Americans)

Figure 6.8 Percentage of Gun-Related Deaths by Ethanol Level (N=497), 2016



Note: Of the 1,058 gun related fatalities, 53.0% (n=561) did not receive alcohol testing.

Figure 6.9 Number of Gun-Related Deaths by Alcohol Level and Manner of Death (N=497), 2016



Note: Of the 1,058 gun related fatalities, 53.0% (n=561) did not receive alcohol testing.

Figure 6.10 Number of Gun-Related Deaths by Month of Death, 2016

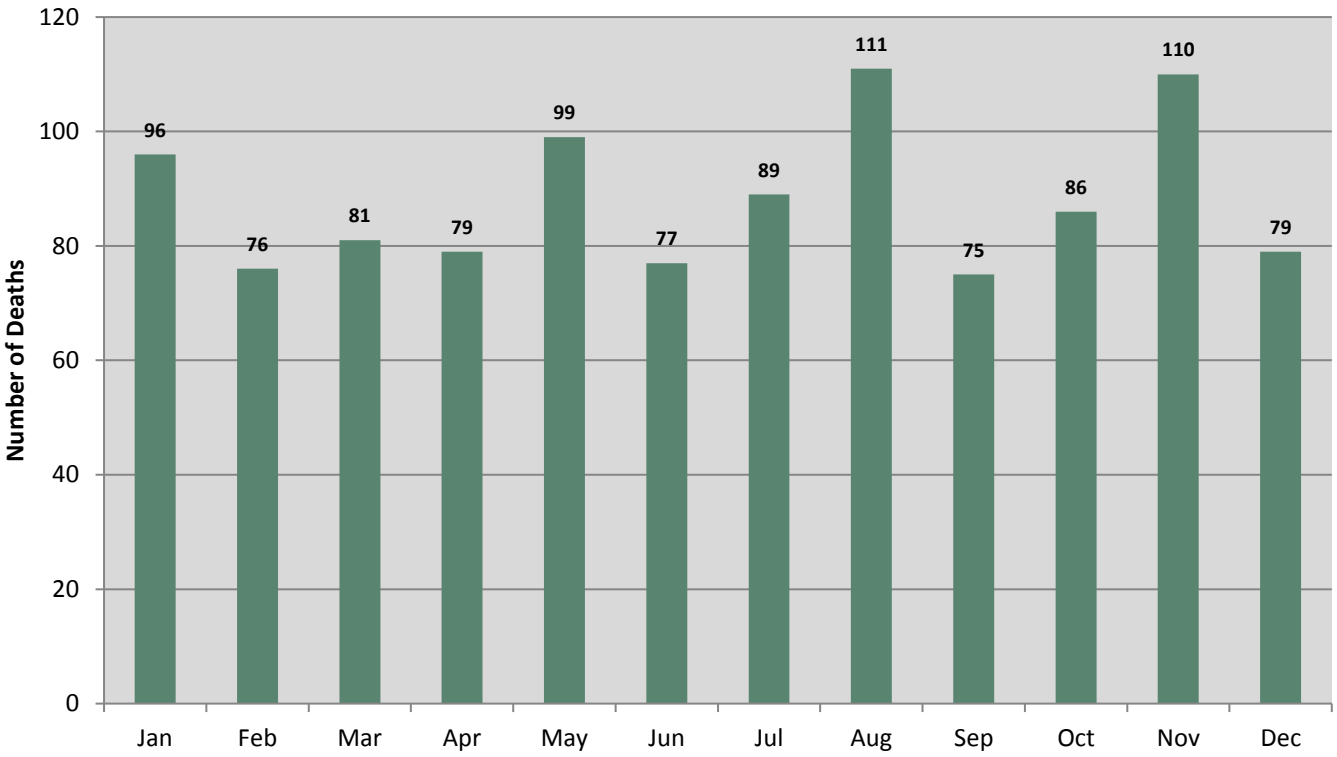


Figure 6.11 Number of Gun-Related Deaths by Day of Week, 2016

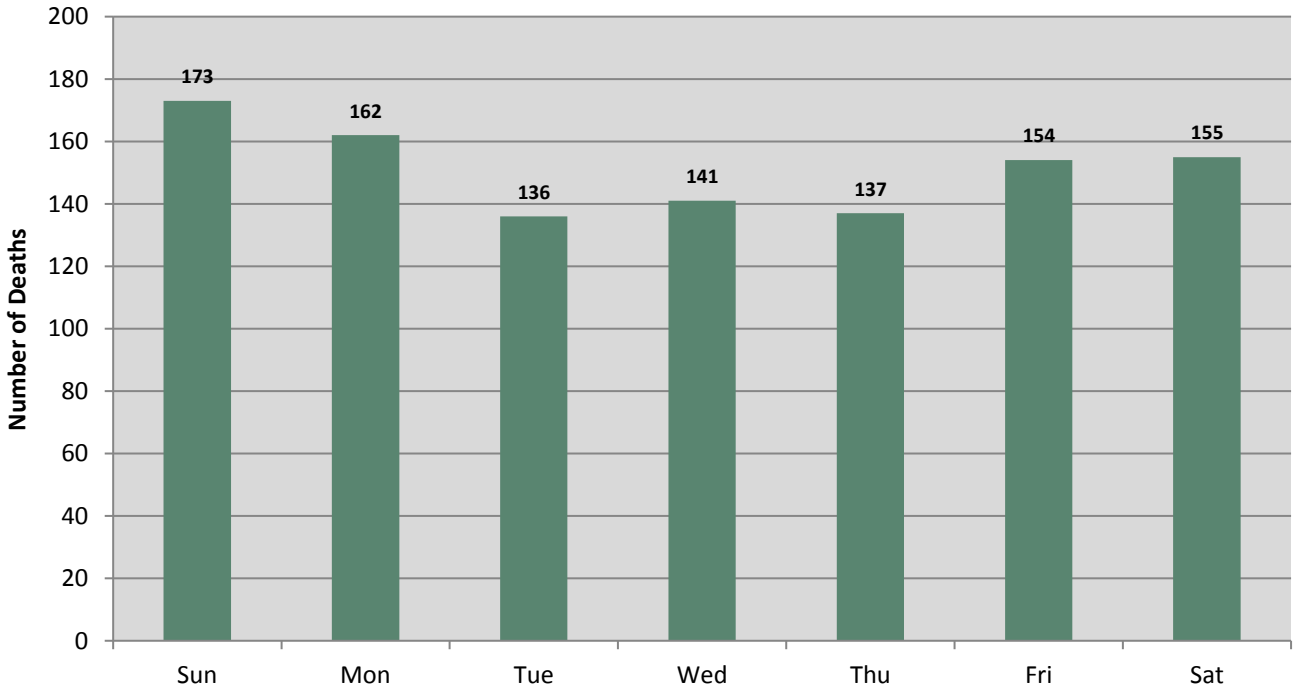


Table 6.3 Number and Rate of Gun-Related Deaths by Locality of Residence, 2016

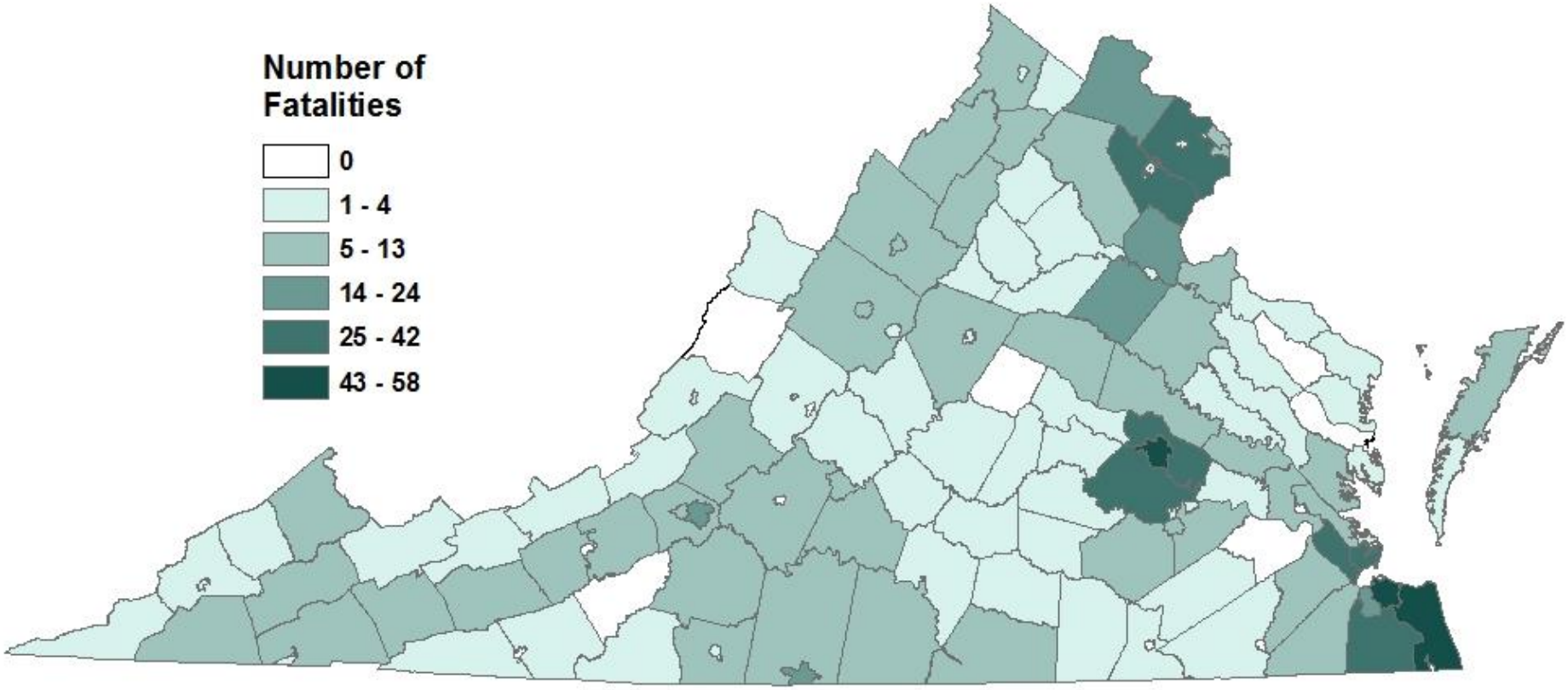
Locality of Residence	Deaths	Rate
Accomack County	7	21.2
Albemarle County	5	4.7
Alexandria City	8	5.1
Alleghany County	1	6.4
Amelia County	4	31.0
Amherst County	3	9.5
Appomattox County	2	12.9
Arlington County	8	3.5
Augusta County	9	12.0
Bath County	0	0.0
Bedford County	6	7.7
Bland County	2	30.7
Botetourt County	8	24.1
Bristol City	2	11.8
Brunswick County	1	6.2
Buchanan County	7	31.6
Buckingham County	2	11.7
Buena Vista City	0	0.0
Campbell County	9	16.4
Caroline County	8	26.5
Carroll County	3	10.2
Charles City County	2	28.3
Charlotte County	4	33.0
Charlottesville City	3	6.4
Chesapeake City	35	14.7
Chesterfield County	42	12.4
Clarke County	3	20.9
Colonial Heights City	4	22.5
Covington City	2	36.2
Craig County	3	58.2
Culpeper County	3	6.0
Cumberland County	1	10.4
Danville City	20	47.7
Dickenson County	2	13.4
Dinwiddie County	5	17.8
Emporia City	0	0.0
Essex County	1	9.0
Fairfax City	1	4.1
Fairfax County	42	3.7
Falls Church City	0	0.0
Fauquier County	6	8.7

Locality of Residence	Deaths	Rate
Floyd County	0	0.0
Fluvanna County	0	0.0
Franklin City	0	0.0
Franklin County	5	8.9
Frederick County	7	8.3
Fredericksburg City	1	3.5
Galax City	0	0.0
Giles County	3	17.8
Gloucester County	8	21.5
Goochland County	3	13.2
Grayson County	3	19.9
Greene County	3	15.5
Greensville County	1	8.5
Halifax County	5	14.3
Hampton City	30	22.2
Hanover County	10	9.6
Harrisonburg City	6	11.3
Henrico County	42	12.9
Henry County	11	21.4
Highland County	1	45.1
Hopewell City	3	13.2
Isle of Wight County	7	19.1
James City County	7	9.4
King and Queen County	3	41.9
King George County	6	23.1
King William County	4	24.5
Lancaster County	2	18.2
Lee County	2	8.3
Lexington City	1	14.2
Loudoun County	24	6.2
Louisa County	9	25.5
Lunenburg County	3	24.4
Lynchburg City	7	8.7
Madison County	4	30.6
Manassas City	3	7.2
Manassas Park City	0	0.0
Martinsville City	1	7.4
Mathews County	1	11.4
Mecklenburg County	6	19.4
Middlesex County	0	0.0
Montgomery County	7	7.1

Locality of Residence	Deaths	Rate
Nelson County	2	13.5
New Kent County	5	23.6
Newport News City	41	22.5
Norfolk City	55	22.4
Northampton County	4	33.0
Northumberland County	1	8.2
Norton City	1	25.9
Nottoway County	1	6.4
Orange County	3	8.4
Page County	5	21.1
Patrick County	3	16.7
Petersburg City	10	31.4
Pittsylvania County	13	21.1
Poquoson City	2	16.6
Portsmouth City	23	24.1
Powhatan County	3	10.5
Prince Edward County	3	13.0
Prince George County	5	13.2
Prince William County	35	7.7
Pulaski County	6	17.5
Radford City	0	0.0
Rappahannock County	1	13.5
Richmond City	58	26.0
Richmond County	0	0.0
Roanoke City	17	17.1
Roanoke County	11	11.7
Rockbridge County	1	4.5
Rockingham County	7	8.8
Russell County	5	18.3
Salem City	6	23.5
Scott County	6	27.4
Shenandoah County	11	25.5
Smyth County	5	16.1
Southampton County	3	16.6
Spotsylvania County	20	15.2
Stafford County	16	11.1
Staunton City	5	20.5
Suffolk City	9	10.1
Surry County	0	0.0
Sussex County	1	8.7
Tazewell County	4	9.5
Virginia Beach City	54	11.9
Warren County	6	15.3
Washington County	11	20.3
Waynesboro City	2	9.1
Westmoreland County	3	17.1
Williamsburg City	0	0.0
Winchester City	2	7.3
Wise County	4	10.2
Wythe County	5	17.2
York County	6	8.8
Subtotal (in-state)	1013	12.0
Out of State	40	ND
Unknown	5	ND
Subtotal (out-of-state)	45	ND
TOTAL	**1058**	**12.6**

Note: No denominator is represented by ND

Map 6.1 Number of Gun-Related Deaths by Locality of Residence, 2016



Map 6.2 Rates of Gun-Related Death by Locality of Residence, 2016

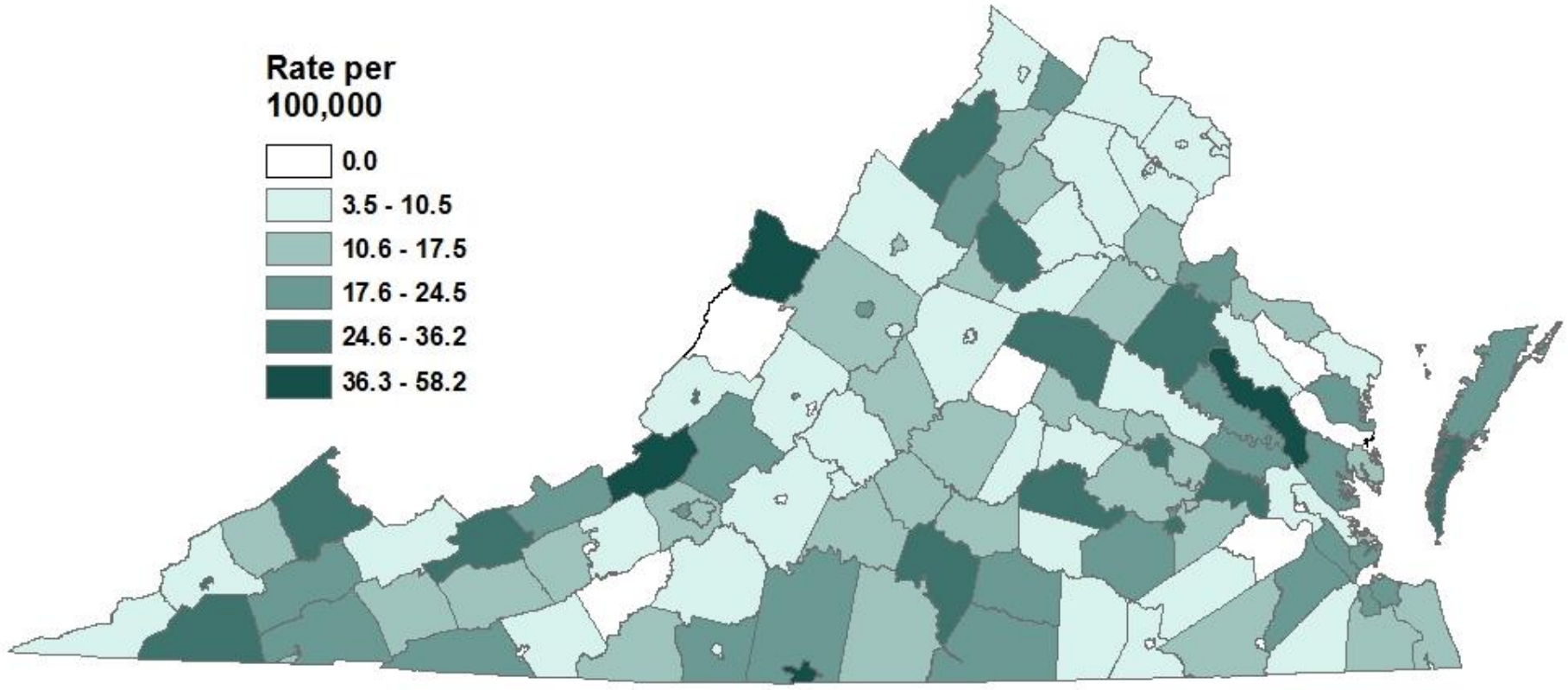


Table 6.4 Number and Rate of Gun-Related Deaths by Locality of Injury, 2016

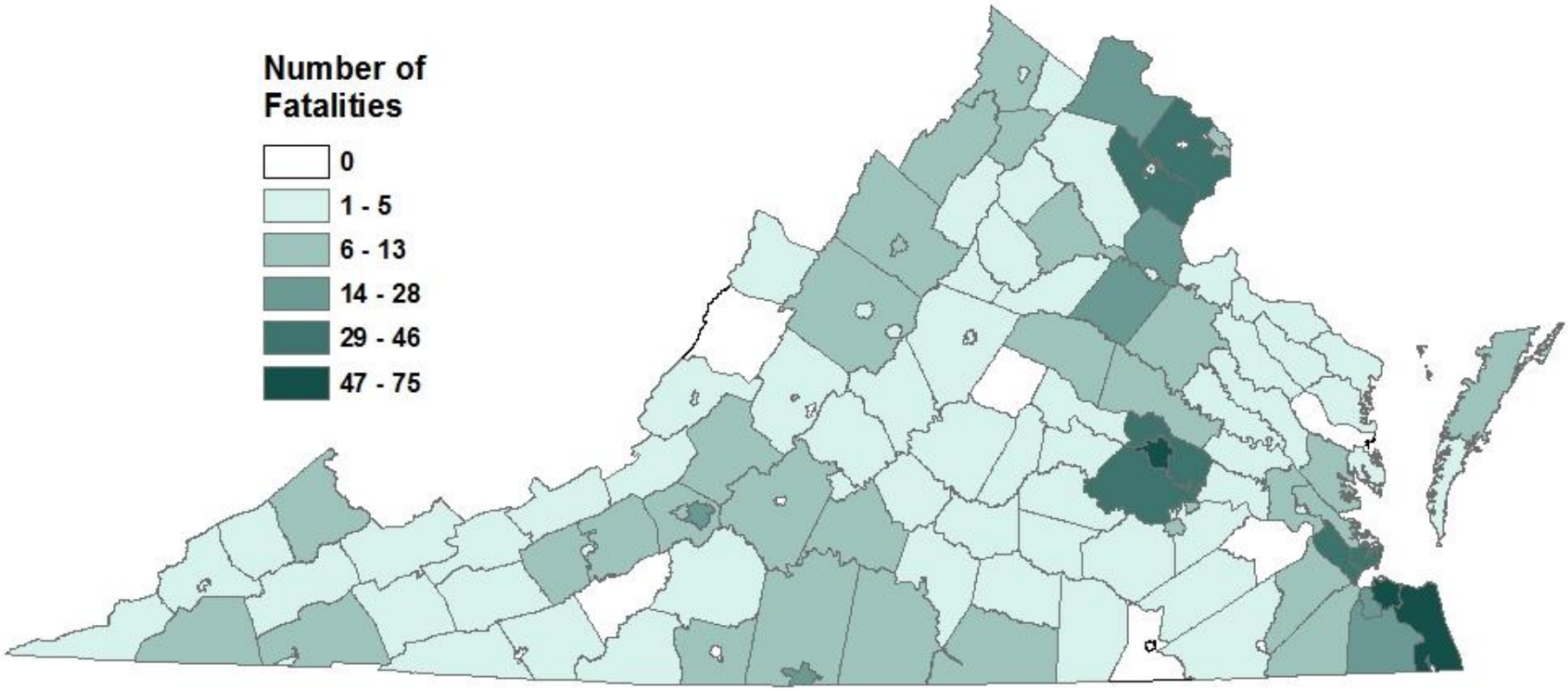
Locality of Injury	Deaths	Rate
Accomack County	7	21.2
Albemarle County	5	4.7
Alexandria City	10	6.4
Alleghany County	1	6.4
Amelia County	2	15.5
Amherst County	3	9.5
Appomattox County	2	12.9
Arlington County	7	3.0
Augusta County	10	13.3
Bath County	0	0.0
Bedford County	7	9.0
Bland County	2	30.7
Botetourt County	7	21.1
Bristol City	1	5.9
Brunswick County	2	12.3
Buchanan County	7	31.6
Buckingham County	2	11.7
Buena Vista City	0	0.0
Campbell County	9	16.4
Caroline County	6	19.9
Carroll County	3	10.2
Charles City County	2	28.3
Charlotte County	3	24.7
Charlottesville City	3	6.4
Chesapeake City	28	11.8
Chesterfield County	33	9.7
Clarke County	3	20.9
Colonial Heights City	4	22.5
Covington City	1	18.1
Craig County	3	58.2
Culpeper County	6	12.0
Cumberland County	1	10.4
Danville City	21	50.1
Dickenson County	3	20.0
Dinwiddie County	4	14.2
Emporia City	0	0.0
Essex County	1	9.0
Fairfax City	0	0.0
Fairfax County	46	4.0
Falls Church City	0	0.0
Fauquier County	5	7.2

Locality of Injury	Deaths	Rate
Floyd County	0	0.0
Fluvanna County	0	0.0
Franklin City	0	0.0
Franklin County	4	7.1
Frederick County	7	8.3
Fredericksburg City	4	14.1
Galax City	0	0.0
Giles County	3	17.8
Gloucester County	8	21.5
Goochland County	5	22.1
Grayson County	3	19.9
Greene County	3	15.5
Greensville County	0	0.0
Halifax County	7	20.0
Hampton City	34	25.1
Hanover County	10	9.6
Harrisonburg City	6	11.3
Henrico County	34	10.4
Henry County	10	19.4
Highland County	2	90.3
Hopewell City	6	26.4
Isle of Wight County	7	19.1
James City County	6	8.1
King and Queen County	3	41.9
King George County	5	19.2
King William County	4	24.5
Lancaster County	2	18.2
Lee County	2	8.3
Lexington City	1	14.2
Loudoun County	24	6.2
Louisa County	10	28.4
Lunenburg County	4	32.6
Lynchburg City	5	6.2
Madison County	3	22.9
Manassas City	3	7.2
Manassas Park City	0	0.0
Martinsville City	0	0.0
Mathews County	1	11.4
Mecklenburg County	7	22.7
Middlesex County	0	0.0
Montgomery County	9	9.1

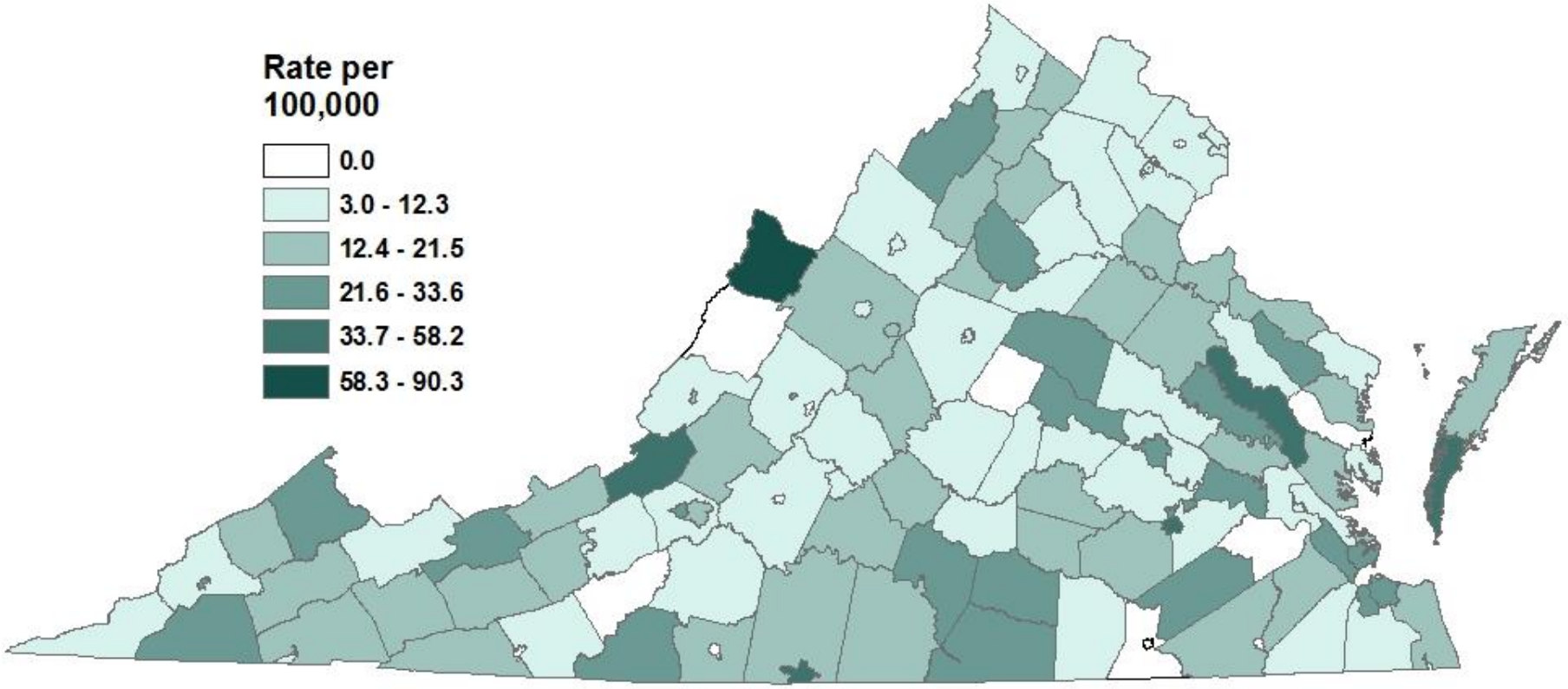
Locality of Injury	Deaths	Rate
Nelson County	2	13.5
New Kent County	3	14.2
Newport News City	44	24.2
Norfolk City	66	26.9
Northampton County	5	41.2
Northumberland County	1	8.2
Norton City	1	25.9
Nottoway County	2	12.8
Orange County	3	8.4
Page County	4	16.9
Patrick County	4	22.3
Petersburg City	12	37.6
Pittsylvania County	13	21.1
Poquoson City	2	16.6
Portsmouth City	23	24.1
Powhatan County	3	10.5
Prince Edward County	2	8.6
Prince George County	3	7.9
Prince William County	36	7.9
Pulaski County	6	17.5
Radford City	1	5.7
Rappahannock County	1	13.5
Richmond City	75	33.6
Richmond County	2	22.8
Roanoke City	18	18.1
Roanoke County	11	11.7
Rockbridge County	2	8.9
Rockingham County	7	8.8
Russell County	5	18.3
Salem City	6	23.5
Scott County	7	31.9
Shenandoah County	13	30.1
Smyth County	5	16.1
Southampton County	3	16.6
Spotsylvania County	19	14.4
Stafford County	20	13.9
Staunton City	2	8.2
Suffolk City	6	6.7
Surry County	0	0.0
Sussex County	3	26.1
Tazewell County	4	9.5
Virginia Beach City	58	12.8
Warren County	7	17.9
Washington County	11	20.3
Waynesboro City	3	13.7
Westmoreland County	3	17.1
Williamsburg City	1	6.6
Winchester City	3	10.9
Wise County	4	10.2
Wythe County	5	17.2
York County	7	10.3
Subtotal (in-state)	1049	12.5
Out of State	6	ND
Unknown	3	ND
Subtotal (out-of-state)	9	ND
TOTAL	**1058**	**12.6**

Note: No denominator is represented by ND

Map 6.3 Number of Gun-Related Deaths by Locality of Injury, 2016



Map 6.4 Number of Gun-Related Deaths by Locality of Injury, 2016



SECTION 7: IN-CUSTODY (PRISONER) DEATHS (N=144)

Pursuant to § 32.1-283 of the Code of Virginia, the OCME investigates deaths of all persons in jail, prison, or other correctional institution, or in police custody. The OCME took jurisdiction of 144 in-custody deaths in 2016.

- The majority (75.0%) of in-custody deaths were natural deaths
- The vast majority of deaths were male (91.7%) and white (60.4%)

Figure 7.1 Percentage of In-Custody Deaths by Manner of Death, 2016

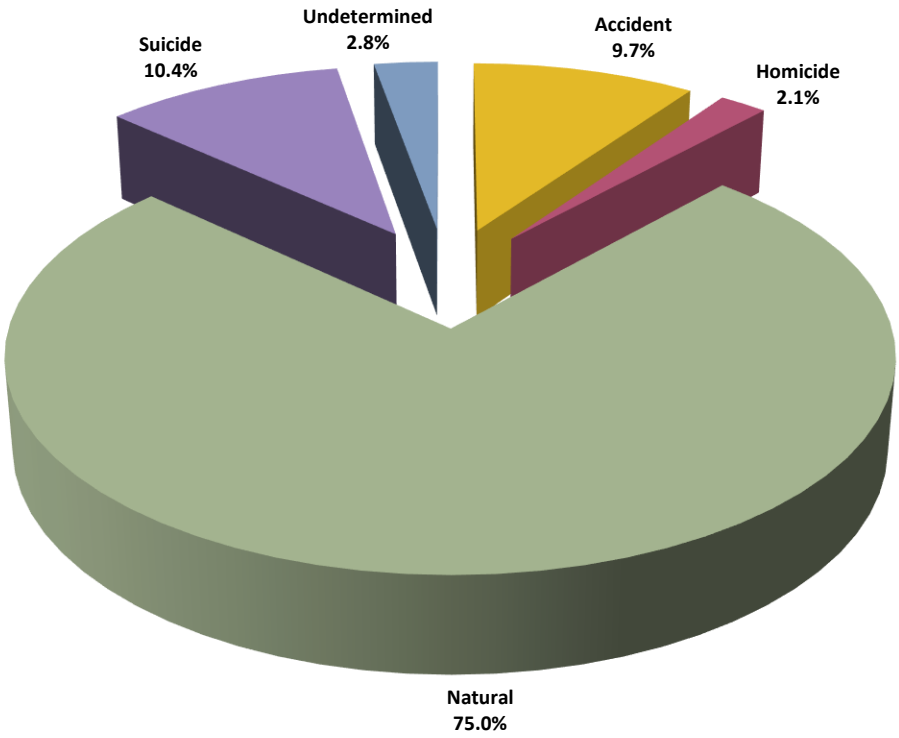


Figure 7.2 Percentage of In-Custody Deaths by Race/Ethnicity, 2016

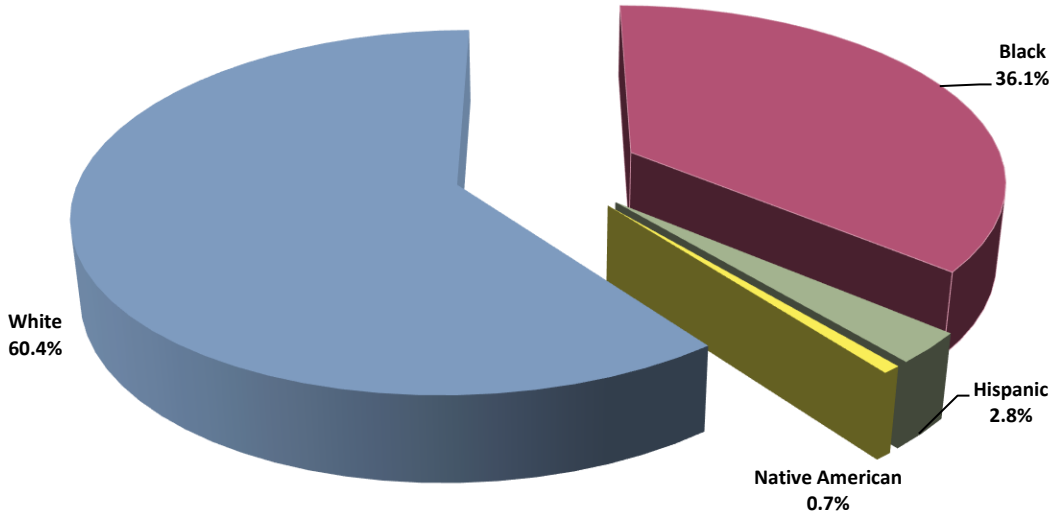
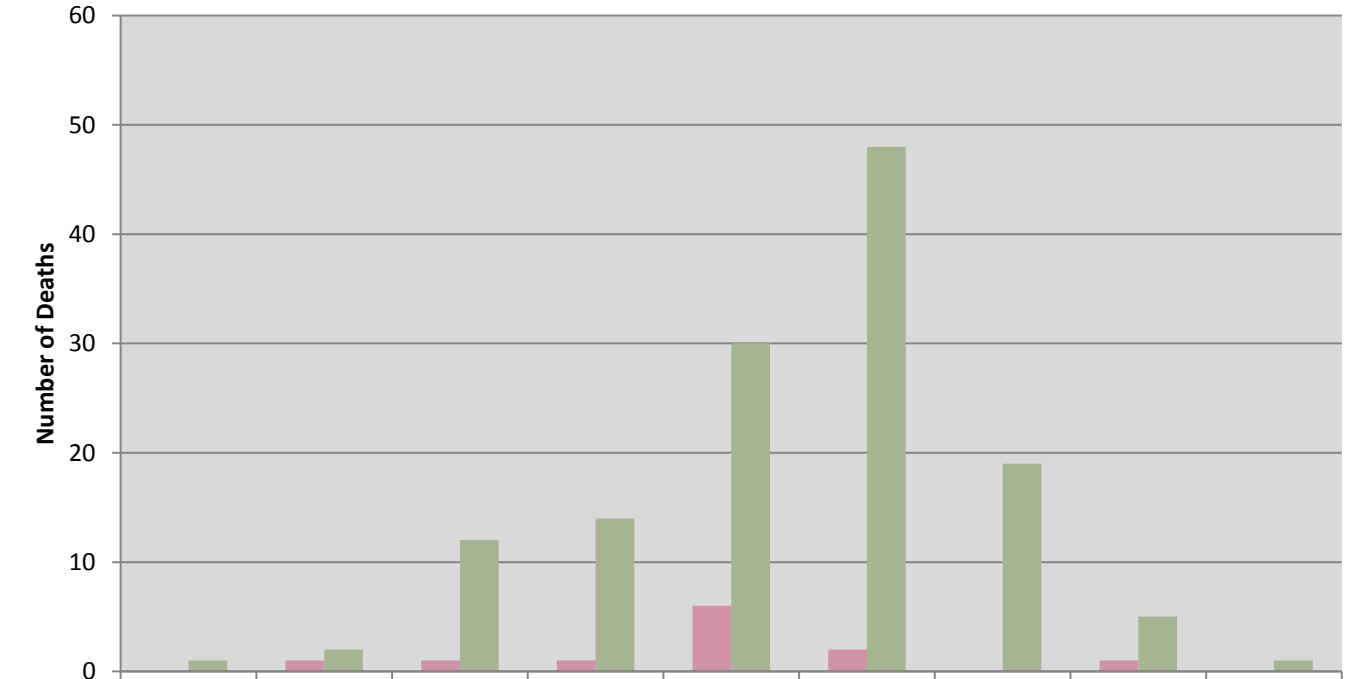
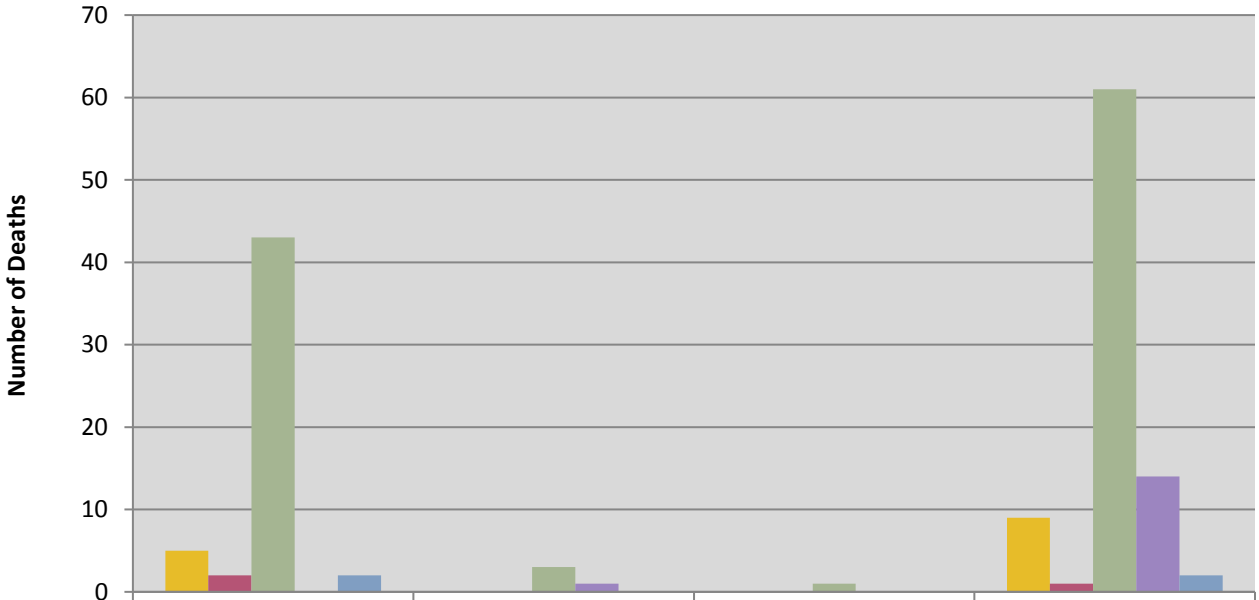


Figure 7.3 Number of In-Custody Deaths by Age Group and Gender, 2016



	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Female	0	1	1	1	6	2	0	1	0
Male	1	2	12	14	30	48	19	5	1

Figure 7.4 Number of In-Custody Deaths by Manner and Race/Ethnicity, 2016



	Black	Hispanic	Native American	White
Accident	5	0	0	9
Homicide	2	0	0	1
Natural	43	3	1	61
Suicide	0	1	0	14
Undetermined	2	0	0	2

Table 7.1 Number of In-Custody Deaths by Cause and Method of Death, 2016

NATURAL DEATHS	Autopsied	Total Cases
Cardiovascular Diseases/Disorders		
Acute coronary insufficiency	0	1
Atherosclerosis	4	6
Atherosclerosis and hypertension	20	22
Cardiac arrhythmia (not specified)	1	1
Hypertension	8	9
Other cardiac disease/disorder	2	3
Central Nervous System Diseases/Disorders		
Vascular disease	4	7
Gastrointestinal Diseases/Disorders		
Cirrhosis	5	10
GI Malignancy	9	13
Hepatitis	0	2
Other GI disease/disorder	6	10
Genitourinal Diseases/Disorders		
Malignancy	2	3
Pulmonary Disease/Disorders		
Emboli	2	2
Pneumonia	0	2
Other pulmonary disease/disorder	3	8
Systemic Diseases/Disorders		
Chronic drug abuse	1	1
Blood disorders	0	3
Diabetes	0	1
Metastatic malignancy of unknown primary	0	3
Sepsis	2	3
Other systemic disease/disorder	1	1
Other Natural Death/Disorder		
Other malignancy	0	1
Natural Death Subtotal	***70***	***112***
UNDETERMINED DEATHS		
Undetermined After Autopsy and/or Investigation		
Other undetermined	1	1
Undetermined Death Subtotal	***1***	***1***
UNNATURAL DEATHS		
Asphyxia		
Hanged	11	13
Strangled/Neck Compression	1	1
Drug Use		

Ingested and/or injected ethanol, illicit, prescription, and/or other type of drug	8	10
Traumatic Injury		
Blunt force trauma	1	1
Fall/jump from height	0	4
Gunshot wound	1	1
Sharp force injury	1	1
Unnatural Death Subtotal	***23***	***31***
TOTAL OCME DEATHS	94	144

SECTION 8: STATE MENTAL HEALTH DEATHS (N=57)

Pursuant to § 32.1-283 of the Code of Virginia, the OCME investigates the death of any patient or resident of a state mental health facility. The OCME took jurisdiction of 57 state mental health resident deaths in 2016.

- The majority of state mental health deaths were natural (89.5 %), white (77.2%) and male (57.9%)

Figure 8.1 Percentage of State Mental Health Deaths by Manner, 2016

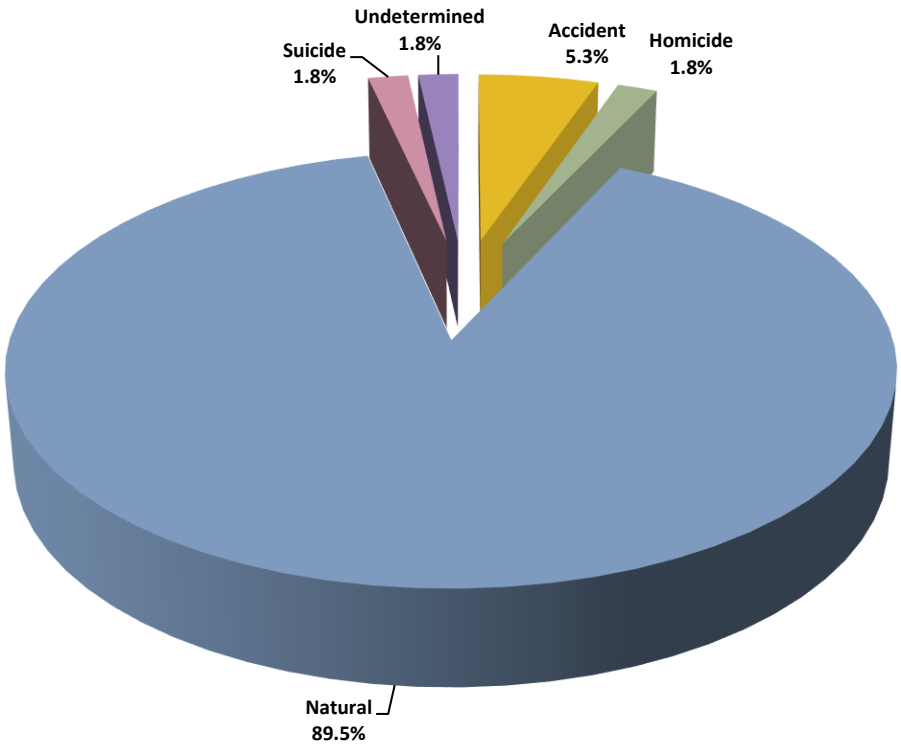


Figure 8.2 Percentage of State Mental Health Deaths by Race/Ethnicity, 2016

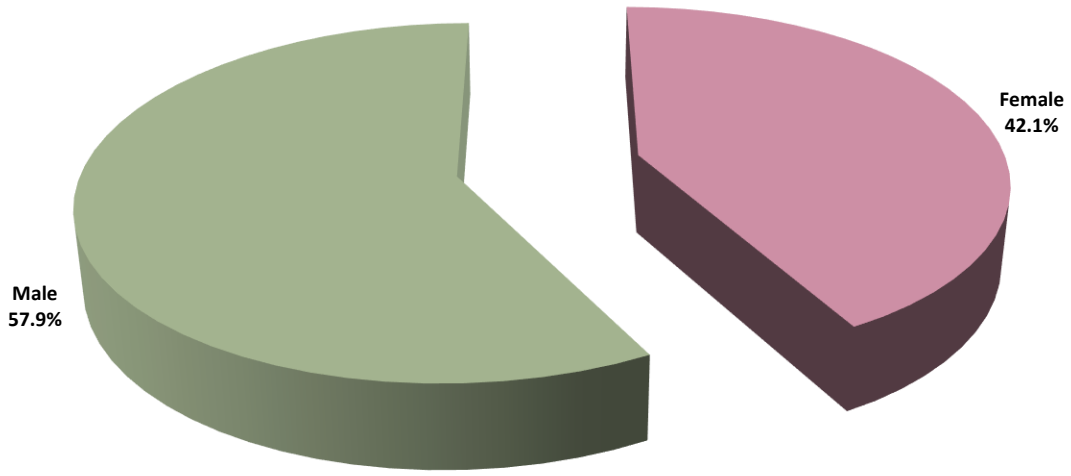


Figure 8.3 Number of State Mental Health Deaths by Age Group and Gender, 2016

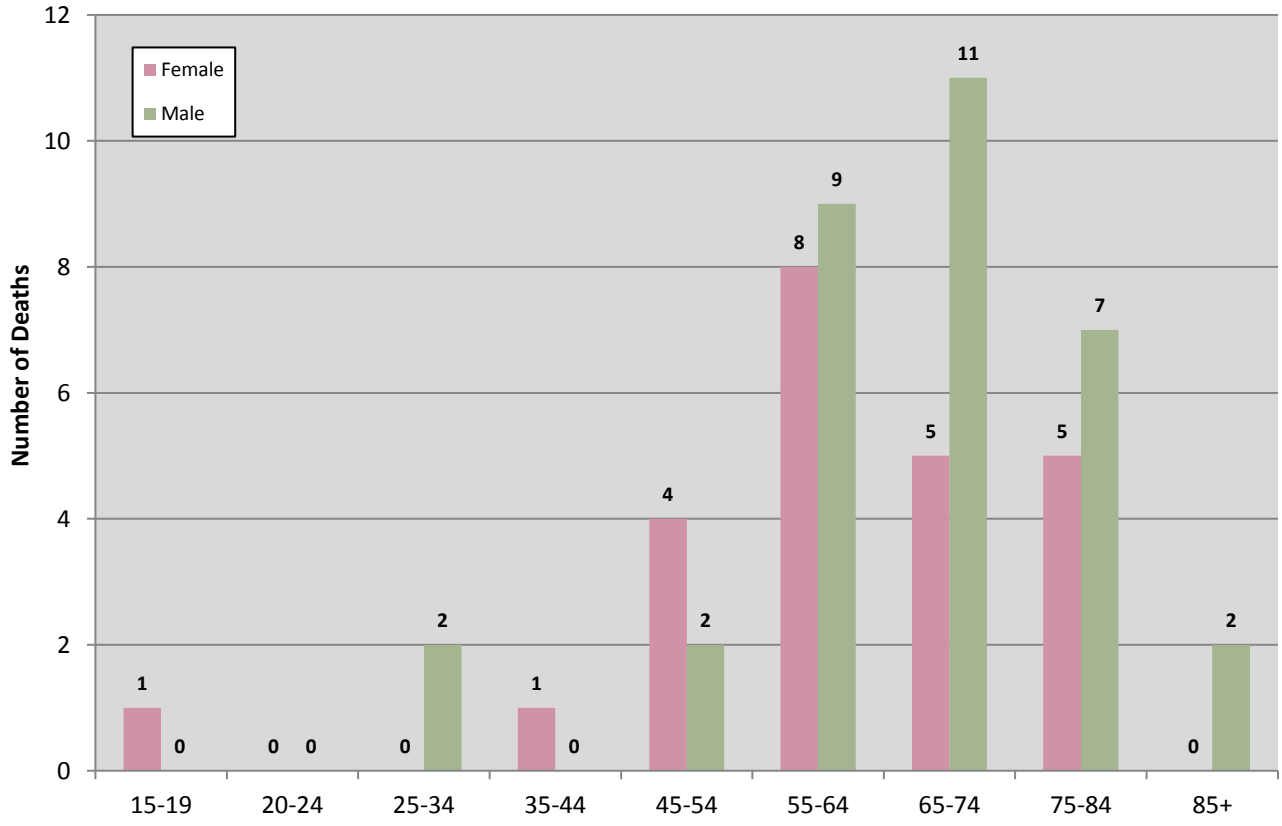


Figure 8.4 Percentage of State Mental Health Deaths Race/Ethnicity, 2016

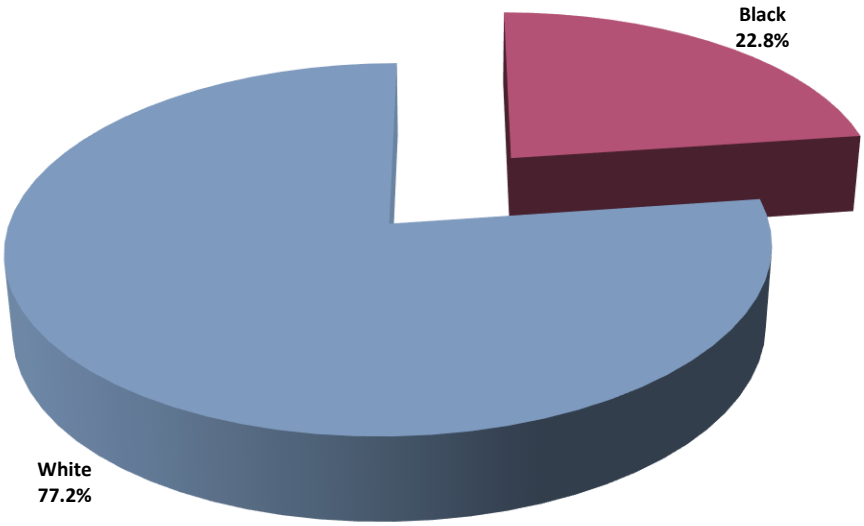


Table 8.1 Number of State Mental Health Deaths by Cause and Method of Death, 2016

Natural Deaths	Autopsied	Total Cases
Cardiovascular Diseases/Disorders		
Atherosclerosis	1	3
Atherosclerosis and hypertension	4	5
Hypertension	0	2
Valvular	0	1
Central Nervous System Diseases/Disorders		
Degenerative disease	1	3
Malignancy	1	1
Seizure disorder	1	2
Other central nervous system disease/disorder	1	2
Gastrointestinal Diseases/Disorders		
GI malignancy	2	2
Other GI disease/disorder	0	1
Genitourinal Diseases/Disorders		
Other genitourinal disease/disorder	0	1
Perinatal and Pediatric Diseases/Disorders		
Other perinatal diseases/disorders	1	1
Pulmonary Disease/Disorders		

Emboli	1	1
Pneumonia	8	18
Pulmonary malignancy	1	2
Other pulmonary disease/disorder	0	1
Systemic Disease/Disorders		
Blood disorders	1	1
Sepsis	0	4
Other systemic disease/disorder	0	1
Other Natural Disease/Disorder		
Other natural disease/disorder	1	1
Natural Death Subtotal	**24**	**53**
Undetermined Deaths	**Autopsied**	**Total Cases**
Undetermined After Autopsy and/or Investigation		
Other undetermined	1	1
Natural Death Subtotal	**1**	**1**
Unnatural Deaths	**Autopsied**	**Total Cases**
Fall/Jump		
Fall/Jump from height	0	1
Gunshot Wound		
Gunshot wound	2	2
Unnatural Death Subtotal	**2**	**3**
TOTAL OCME DEATHS	**27**	**57**

SECTION 9: RETROSPECTIVE CASES (N=170)

Retrospective cases are deaths that are unreported to the OCME at the time of death, but are discovered upon later review and are therefore investigated by the OCME retrospectively. At times, medical care providers or death reporters misunderstand what type of case falls under the jurisdiction of the OCME and do not refer a case to the OCME. The OCME typically learns about these cases from VDH's Division of Vital Records, funeral homes, or local medical examiners.

Some of these 170 retrospective deaths may have been deaths that occurred in other years, but the OCME investigation began in 2016.

- The majority of the OCME's retrospective deaths are accidents (90.6%).
- Most common unreported type of death is due to a jump/fall (74.1%) among elder persons

Figure 9.1 Percentage of Retrospective Deaths by Manner of Death, 2016

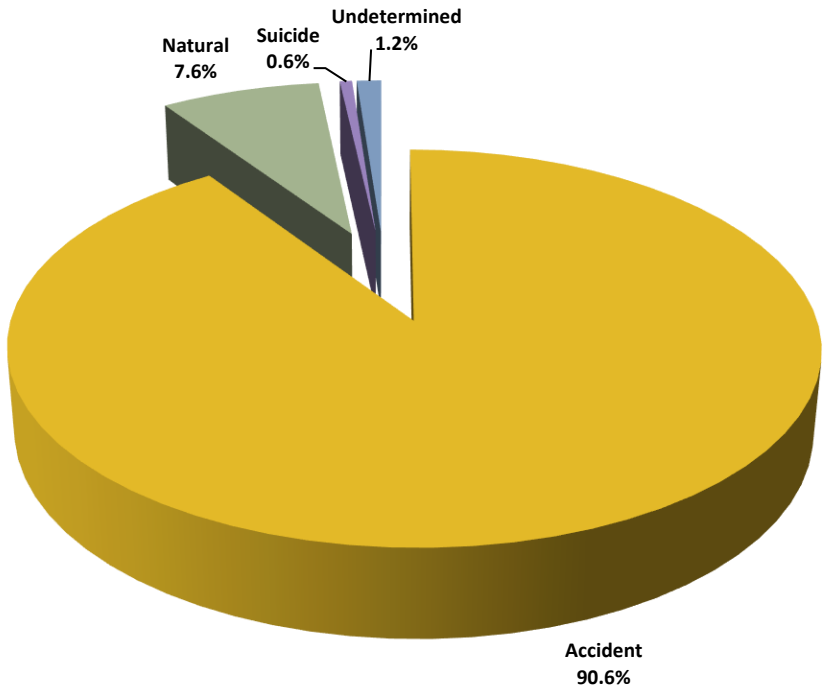


Table 9.1 Number and Percentage of Retrospective Deaths by OCME District, 2016

OCME District	Number	Percent
Central	44	25.9%
Northern	37	21.8%
Tidewater	23	13.5%
Western	66	38.8%
Total	**170**	**100.0%**

Figure 9.2 Percentage of Retrospective Deaths by Race/Ethnicity, 2016

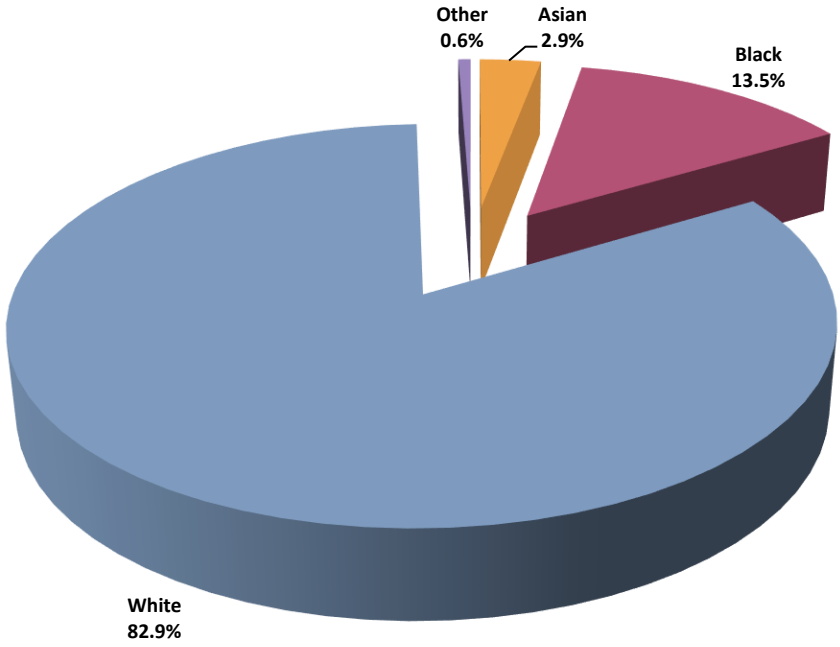


Figure 9.3 Number of Retrospective Deaths by Age Group and Gender, 2016

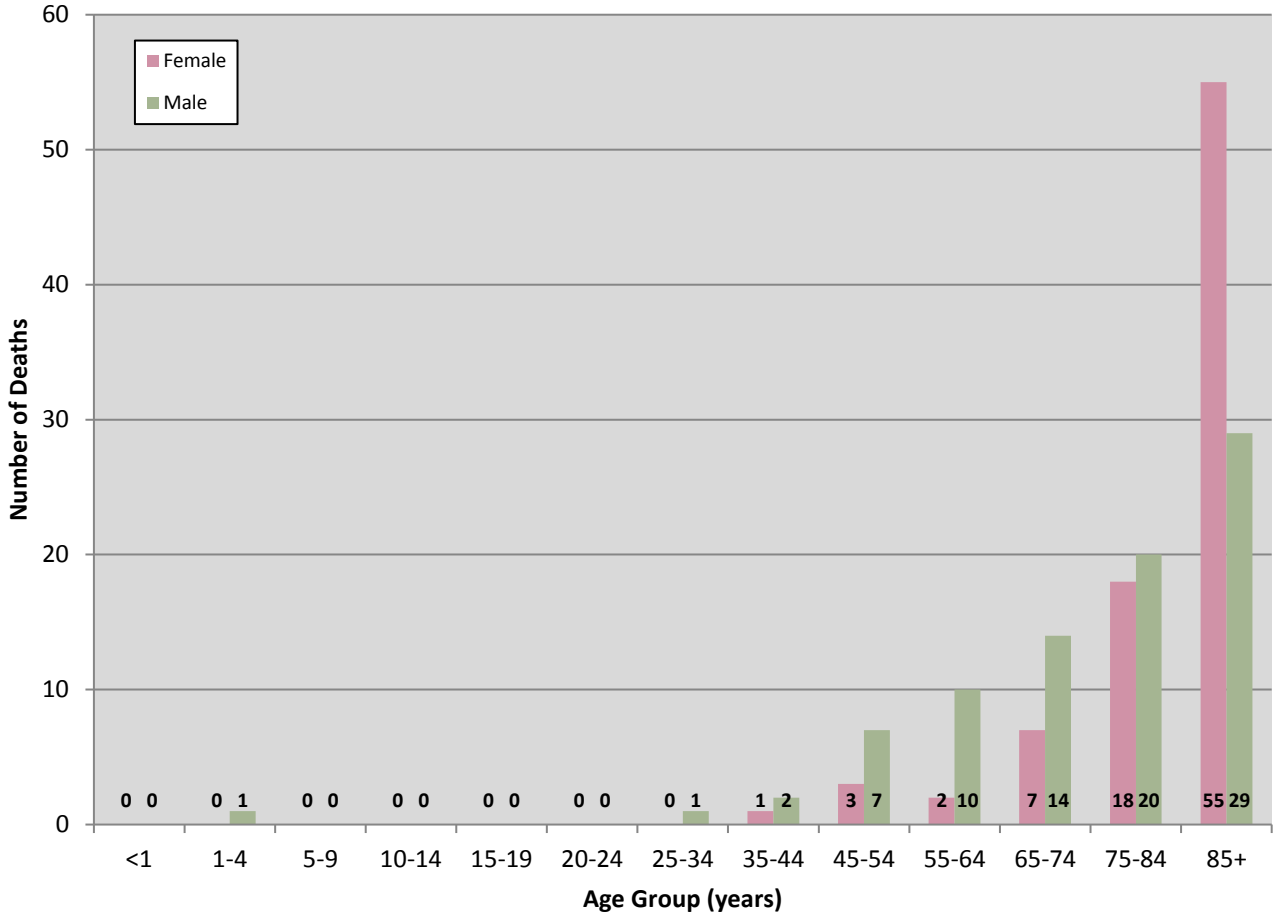


Table 9.2 Number of Retrospective Deaths by Cause and Method of Death, 2016

Natural Deaths	Total Cases
Cardiovascular Diseases/Disorders	
Acute coronary insufficiency	3
Atherosclerosis	4
Atherosclerosis and hypertension	2
Hypertension	5
Central Nervous System Diseases/Disorders	
Degenerative disease	2
Vascular disease	1
Pulmonary Diseases/Disorders	
Emboli	1
Pneumonia	1
Pulmonary malignancy	1
Natural Death Subtotal	**20**
Undetermined Deaths	**Total Cases**
Undetermined Deaths After Autopsy and/or Investigation	
Other Undetermined	2
Undetermined Death Subtotal	**2**
Unnatural Deaths	**Total Cases**
Asphyxia	
Choked (aspiration food or foreign object)	3
Environmental Exposure	
Exposed to cold	1
Fall/Jump	
Fell or jumped from height	126
Motor Vehicle	
Bicycle	1
Car	1
Dirt bike	1
Mo-ped	2
Sport utility vehicle	1
Unknown	2
Substance Abuse	
Ingested and/or injected ethanol, illicit, prescription, and/or other type of drug	10
Unnatural Death Subtotal	**148**
TOTAL OCME DEATHS	**170**

Note: the OCME cannot perform an autopsy on retrospective cases because the remains have already been processed and the final disposition has already been completed

GLOSSARY

Accident – The *manner of death* used when there is no evidence of intent; an unintentional, sudden, and unexpected death.

Assistant Chief Medical Examiner – A forensic pathologist who has the duty of performing autopsies and investigating deaths that fall under the *jurisdiction* of the *Office of the Chief Medical Examiner*, and determining *cause* and *manner of death*.

Autopsy – A detailed postmortem external and internal examination of a body to determine cause and manner of death, collect evidence, and determine the presence or absence of injury.

Cause of Death – The disease, injury, or poison that results in a physiological derangement or biochemical disturbance that is incompatible with life. The result of post-mortem examination, including autopsy and toxicological findings, combined with information about the medical history of the decedent, serves to establish the *cause of death*.

Chief Medical Examiner – The head of the *Office of the Chief Medical Examiner*. The Chief Medical Examiner must be a forensic pathologist licensed to practice medicine in Virginia and may appoint *Assistant Chief Medical Examiners* who are forensic pathologists, and *Local Medical Examiners*.

Children – Individuals 17 years of age and younger.

Drug Caused Death – A death caused by a drug or combination of drugs.

Ethanol – An alcohol, which is the principal intoxicant in beer, liquor, and wine. A person with an alcohol concentration in blood of 0.08 percent by weight by volume (0.08%) is legally intoxicated in Virginia.

Ethanol Present – Deaths in which toxicological tests reveal a reportable level of *ethanol* (0.01% W/V or greater) at the time of death.

Homicide – The *manner of death* in which death results from the intentional harm of one person by another.

Jurisdiction – Pursuant to the Code of Virginia § 32.1-283, the code details the extent of the Office of the Chief Medical Examiner's authority over deaths:

> '*Upon the death of any person from trauma, injury, violence, poisoning, accident, suicide or homicide, or suddenly when in apparent good health, or when unattended by a physician, or in jail, prison, other correctional institution or in police custody, or who is an individual receiving services in a state hospital or training center operated by the Department of Behavioral Health and Developmental Services, or suddenly as an apparent result of fire, or in any suspicious, unusual or unnatural manner, or the sudden death of any infant less than 18 months of age whose death is suspected to be attributable to Sudden*

Infant Death Syndrome (SIDS), the medical examiner of the county or city in which death occurs shall be notified by the physician in attendance, hospital, law-enforcement officer, funeral director or any other person having knowledge of such death.'

Local Medical Examiner – A physician, nurse practitioner, or physician assistant appointed by the *Chief Medical Examiner* for a city or county to assist in the investigation of deaths and determine *jurisdiction* and disposition of cases reported; additionally, to perform external examinations when required. There is a local medical examiner in most counties in Virginia.

Locality of Death – The county/city where the death occurred. The county/city where the decedent legally resided, the county/city where the decedent was fatally injured, and the county/city where the decedent died may be the same or different.

Locality of Event – The county/city where a person sustained the injury result eventually resulting in death.

Locality of Residence – The county/city where a person legally resides. If not a resident of Virginia, the decedent is listed as "out of state"

Manner of Death – The general category of the circumstances of the event which causes the death. The categories are *accident, homicide, natural, suicide,* and *undetermined*.

Method of Death – The means, fatal agency or item causing death, present at the time of injury or death.

Motor Vehicle Collision Related Death – A death involving a motor vehicle. Motor vehicles include automobiles, vans, motorcycles, trucks, aircraft, and trains. The decedent is usually a driver of, a passenger in, or a pedestrian who is struck by a motor vehicle. The death of a bicyclist that is struck by a motor vehicle is considered to be a motor vehicle related death.

Natural – The *manner of death* used when a disease alone causes death. If death is hastened by an injury, the *manner of death* is not considered natural.

Office of the Chief Medical Examiner – The Office of the Chief Medical Examiner (OCME) lies within the Virginia Department of Health and is responsible for the investigation of sudden, violent, or unexpected death.

Opiate – A class of drugs derived from the opium poppy plant (*Papaver somniferum*). "Opioid" is often used interchangeably with opiates, and describes chemical/pharmaceutical narcotics that bind to the opiate receptors of the brain and work very similarly to opiates.

Stimulant – A class of drugs, including cocaine and oral amphetamines, whose principal action is the stimulation of the central nervous system.

Sudden and Unexpected Infant Death – A diagnosis designated for infants (children under the age of 1 year). Sudden and Unexpected Infant Death (SUID) is a diagnosis made in cases in which autopsy does not reveal a definitive medical or traumatic cause of death and the circumstances surrounding the death suggest that there is an associated risk factor for dying, such as unsafe bedding or co-sleep, or some other external factor, but the contribution of this factor cannot be determined with certainty. The diagnosis may also be used in the situation where a medical disease is identified, but it is uncertain that this disease caused death.

Sudden Infant Death Syndrome –Sudden Infant Death Syndrome (SIDS) is defined as the sudden death of an infant that cannot be explained after a thorough investigation is conducted, including a complete autopsy, examination of the death scene which includes no external risk factors, and review of the clinical history.

Suicide – The *manner of death* in which death results from the purposeful attempt to end one's life.

Undetermined – The *manner of death* for deaths in which there is insufficient information to assign another manner. An undetermined death may have an undetermined cause of death and an unknown manner, an undetermined cause of death and a known manner, or a determined cause of death and an unknown manner.

View- A detailed postmortem external examination of the decedent's body, clothing, and injuries that may have caused or contributed to their death

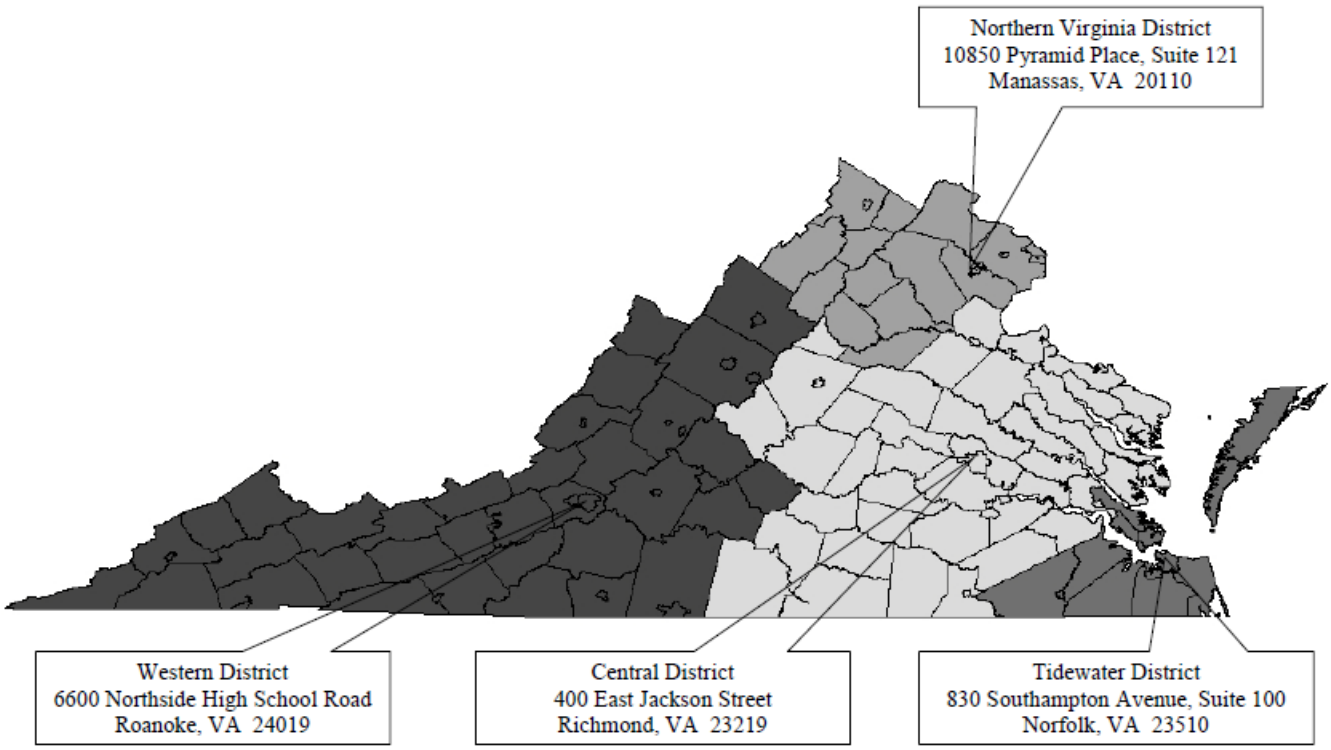
MEDICAL EXAMINER DISTRICTS

CENTRAL *Counties* of Albemarle, Amelia, Brunswick, Buckingham, Caroline, Charles City, Charlotte, Chesterfield, Cumberland, Dinwiddie, Essex, Fluvanna, Gloucester, Goochland, Greene, Greensville, Halifax, Hanover, Henrico, James City, King and Queen, King George, King William, Lancaster, Louisa, Lunenburg, Mathews, Mecklenburg, Middlesex, Nelson, New Kent, Northumberland, Nottoway, Powhatan, Prince Edward, Prince George, Spotsylvania, Stafford, Surry, Sussex, Richmond, and Westmoreland. *Cities* of Charlottesville, Colonial Heights, Emporia, Fredericksburg, Hopewell, Petersburg, Richmond, and Williamsburg.

NORTHERN *Counties* of Arlington, Clarke, Culpeper, Fairfax, Fauquier, Frederick, Loudoun, Madison, Orange, Page, Prince William, Rappahannock, Shenandoah, and Warren. *Cities* of Alexandria, Fairfax, Falls Church, Manassas, Manassas Park, and Winchester.

TIDEWATER *Counties* of Accomack, Isle of Wight, Northampton, Southampton, and York. *Cities* of Chesapeake, Franklin, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, and Virginia Beach.

WESTERN *Counties* of Alleghany, Amherst, Appomattox, Augusta, Bath, Bedford, Bland, Botetourt, Buchanan, Campbell, Carroll, Craig, Dickenson, Floyd, Franklin, Giles, Grayson, Henry, Highland, Lee, Montgomery, Patrick, Pittsylvania, Pulaski, Roanoke, Rockbridge, Rockingham, Russell, Scott, Smyth, Tazewell, Washington, Wise, and Wythe. *Cities* of Bristol, Buena Vista, Covington, Danville, Galax, Harrisonburg, Lexington, Lynchburg, Martinsville, Norton, Radford, Roanoke, Salem, Staunton, and Waynesboro.



OCME Annual Reports from 2004 to 2016 are available online at:

http://www.vdh.virginia.gov/medical-examiner/annual-reports/

Or by contacting:

Commonwealth of Virginia
Virginia Department of Heath
Office of the Chief Medical Examiner
400 E. Jackson Street
Richmond, VA 23219
(804) 786-3174

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