VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

Office of the Chief Medical Examiner Annual Report 2018

Commonwealth of Virginia
Virginia Department of Health
Office of the Chief Medical Examiner
Compiled by Kathrin 'Rosie' Hobron, MPH
June 2020

Office of the Chief Medical Examiner

Annual Report 2018

Chief Medical Examiner: William T. Gormley, MD, PhD

CENTRAL DISTRICT

400 East Jackson Street
Richmond, VA 23219
(804) 786-3174

OCME_CENT@vdh.virginia.gov

Assistant Chief Medical Examiners[#]
Jennifer Bowers, MD
Jeffery Gofton, MD
Crystal Van Dusen, MD

NORTHERN DISTRICT

10850 Pyramid Place, Suite 121
Manassas, VA 20110
(703) 530-2600

OCME_NOVA@vdh.virginia.gov

Assistant Chief Medical Examiners
Carmen Coles, MD
Meghan Kessler, DO
Gene Maya, MD
Jocelyn Posthumus, MD

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

TIDEWATER DISTRICT

830 Southampton Ave., Suite 100
Norfolk, VA 23510
(757) 683-8366

OCME_Tide@vdh.virginia.gov

Assistant Chief Medical Examiners[*]
Wendy M. Gunther, MD
Elizabeth L. Kinnison, MD
Nicole Masian, MD
Gary Zientek, MD

WESTERN DISTRICT

6600 Northside High School Road
Roanoke, VA 24019
(540) 561-6615

OCME_West@vdh.virginia.gov

Assistant Chief Medical Examiners[§]
Sara Ohanessian, MD
Gayle Suzuki, MD
Amy Tharp, MD

[#] Lauren Huddle, MD was an Assistant Chief Medical Examiner for the Central District in 2018

[*] Michael Hays, MD was an Assistant Chief Medical Examiner for the Tidewater District in 2018

[§] Eli Goodman, MD was an Assistant Chief Medical Examiner for the Western District in 2018

INTRODUCTION

Executive Summary

The Virginia Department of Health, Office of the Chief Medical Examiner (OCME) is proud to present the 2018 Annual 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 2018 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.

Some of the important trends for 2018 include:

- Among manners of death, the most notable changes in 2018 compared to 2017 were increases among natural deaths under OCME jurisdiction, suicides, and undetermined manners of death (rates of 23.9, 14.2, and 2.0 per 100,000 persons, respectively) and decreases in homicides (rate of 5.0 per 100,000 persons). Overall, accidents in 2018 only varied slightly from 2017 numbers (rate of 41.5 per 100,000 persons)
- Accidental deaths have been increasing since 2011; however in 2018, the number of accidental deaths was nearly identical to 2017 (rates of 41.5 and 41.6 per 100,000 persons, respectively)
- Of all deaths investigated by the OCME in 2018, 47.8% (n=3,533) were accidents
- White males and Black males had the highest and nearly identical rates of accidents, all causes (63.9 and 61.9 per 100,000, respectively)

- Black males aged 0-17 years had the highest rate of accidental death compared to other demographic groups of the same age range (10.1 per 100,000)
- For the second year in a row, the number of homicides decreased from the previous year
- The number of gun-related homicides, all manners, in 2018 were nearly identical to the number in 2017 (348 and 353 deaths, respectively)
- Black males had the highest homicide rate (27.7 per 100,000) in 2018. Black males were victims of homicide at a rate 8.9 times that of White males and 7.9 times that of Hispanic males
- Richmond City had both the largest number of homicides by locality of residence and locality of injury (n=41 and n=55, respectively). Petersburg had both the highest homicide rate by locality of residence by location of injury (44.4 and 53.9 per 100,000, respectively)
- The majority (64.9%) of gun related deaths were due to suicide in 2018, similar to previous years
- In 2018, Whites committed suicide at a rate 4.2 times that of Hispanics, 3.1 times that of Asians, and 2.5 times that of Blacks
- Black males followed by White males had the highest rates of fatal motor vehicle collisions (21.4 and 16.8 per 100.000, respectively)
- The number of drug/poisoning deaths in 2018 decreased by 3.3% compared to 2017. The 2018 rate of drug/poison deaths that occurred in Virginia was 17.4 per 100,000 persons, which is down from a rate of 18.1 per 100,000 persons in 2017
- Fatal fentanyl and/or heroin overdoses surpassed prescription opioid (excluding fentanyl) overdoses in 2015 and this trend continued at a greater magnitude in 2018
- Fentanyl and/or heroin was involved in 64.7% of all drug/poison cases in Virginia in 2018
- Nearly 95% of all fatal opioid overdoses in 2018 were accidents
- Out of all opioids deaths in 2018, fentanyl (Rx, illicit, and analogs) was responsible for the largest number of deaths (66.9%)
- White males followed closely by Black males had the highest rates of fatal overdoses, all substances (28.5 and 26.6 per 100,000, respectively)

Office of the Chief Medical Examiner

Annual Report 2018

Virginia Department of Health

Commonwealth of Virginia

TABLE OF CONTENTS

INTRODUCTION 1

Executive Summary 1

TABLE OF CONTENTS 3

Introduction 15

Data Collection and Preparation 15

Statistical Summary 15

OVERVIEW – OFFICE OF THE CHIEF MEDICAL EXAMINER 16

Jurisdictional Authority 16

Medicolegal Mission 17

Public Health Mission 17

Virginia Demographics in 2018 18

Division of Death Prevention, Fatality Review and Surveillance Programs 18

Virginia Violent Death Reporting System (VVDRS) 18

The Overdose Data to Action (OD2A) 19

Domestic Violence Fatality Review 19

State Child Fatality Review Team 20

Infant and Child Mortality Surveillance 21

Regional Child Fatality Review Teams 21

Virginia's Pregnancy-Associated Mortality Surveillance System (PAMSS) and Maternal Mortality Review Team (MMRT) 21

Virginia's Sudden Death in the Young (SDY) Project 23

Adult Fatality Review 24
Local and Regional Overdose Fatality Review 24
Training and Education 26
Forensic Pathology Training Programs 26
National Association of Medical Examiners Accreditation 27
SECTION 1: TOTAL OCME CASES (N=7,389) 29
Figure 1.1 Number and Rate of OCME Cases by Year of Death, 1999-2018 29
Figure 1.2 Number of OCME Cases by Manner of Death, 1999-2018 30
Figure 1.3 Percentage of OCME Cases by Manner of Death, 2018 30
Table 1.1 Number of OCME Cases by District and Manner of Death, 2018 31
Table 1.2 Number of OCME Cases by Autopsy Status and District, 2018 31
Table 1.3 Number of OCME Cases by Manner of Death and Autopsy Status, 2018 31
Table 1.4 Number and Percentage of OCME Cases by Race/Ethnicity, 2018 32
Figure 1.4 Number of OCME Cases by Manner of Death and Race/Ethnicity, 2018 32
Figure 1.5 Number of OCME Cases by Age Group, 2018 33
Table 1.5 Number and Percentage of OCME Cases by Gender, 2018 33
Table 1.6 Number and Percentage of OCME Cases by Manner of Death and Gender, 2018 34
Figure 1.6 Number and Rate of OCME Cases by Manner of Death and Gender, 2018 34
Table 1.7 Number of OCME Cases by Manner of Death, Gender, and Age Group, 2018 35
Figure 1.7 Number of OCME Cases by Month of Death, 2018 36
Figure 1.8 Number of OCME Cases by Month and Manner of Death, 2018 36
Figure 1.9 Number of OCME Cases by Day of Death, 2018 37
Figure 1.10 Number of OCME Cases by Day and Manner of Death, 2018 37
Table 1.8 Number and Rate of OCME Cases by Manner of Death and Locality of Residence, 2018 38
Map 1.1 Number of OCME Cases by Locality of Residence, 2018 43
Map 1.2 Rates of OCME Cases by Locality of Residence, 2018 44
Table 1.9 Number and Rate of OCME Cases by Manner of Death and Locality of Injury, 2018 45
Map 1.3 Number of OCME Cases by Locality of Injury, 2018 50
Map 1.4 Rate of OCME Cases by Locality of Injury, 2018 51
Table 1.10 Number of OCME Cases by Manner of Death and Locality of Death, 2018 52

Map 1.5 Number of OCME Cases by Locality of Death, 2018 56
SECTION 2: MANNERS OF DEATH 57
ACCIDENTAL DEATHS (N=3,533) 57
Figure 2.1 Number and Rate of Accidental Deaths by Year of Death, 1999-2018 57
Figure 2.2 Number and Rate of Accidental Deaths by Age Group and Gender, 2018 58
Figure 2.3 Percentage of Accidental Deaths by Race/Ethnicity, 2018..... 58
Figure 2.4 Number and Rate of Accidental Deaths by Race/Ethnicity and Gender, 2018 59
Table 2.1 Number of Accidental Death Cases by Cause and Method of Death, 2018 60
Table 2.2 Number and Rate of the Top 5 Accidental Methods of Death by Age Group, 2018 62
Figure 2.5 Number of Accidental Deaths by Age Group and Ethanol Level (N=2,358), 2018 63
Figure 2.6 Number of Accidental Deaths by Ethanol Level and Gender (N=2,358), 2018 63
Figure 2.7 Number of the Top 5 Accidental Methods of Death by Ethanol Level, 2018..... 64
Figure 2.8 Number of Accidental Deaths by Month of Death, 2018 65
Figure 2.9 Number of Accidental Deaths by Day of Death, 2018 65
Table 2.3 Number of Accidental Deaths by Locality of Injury and Year of Death, 2006-2018..... 66
HOMICIDE DEATHS (N=429) 71
Figure 2.10 Number and Rate of Homicide Deaths by Year of Death, 1999-2018..... 71
Figure 2.11 Number and Rate of Homicide Deaths by Age Group and Gender, 2018..... 72
Figure 2.12 Percentage of Homicide Deaths by Race/Ethnicity, 2018 72
Figure 2.13 Number and Rate of Homicide Deaths by Race/Ethnicity and Gender, 2018..... 73
Table 2.4 Number of Homicide Deaths by Cause and Method of Death, 2018 74
Figure 2.14 Number of the Leading Homicide Deaths by Method, 2018..... 75
Figure 2.15 Number of Homicide Deaths by Ethanol Level and Gender (N=400), 2018..... 75
Figure 2.16 Number of Homicide Deaths by Age Group and Ethanol Level (N=400), 2018..... 76
Table 2.5 Number of Homicide Deaths by Method of Death and Ethanol Level (N=400), 2018 . 77
Figure 2.17 Number of Homicide Deaths by Month of Death, 2018..... 78
Figure 2.18 Number of Homicide Deaths by Day of Death, 2018 78
Table 2.6 Number and Rate of Homicide Deaths by Locality of Residence, 2018 79
Table 2.7 Top 10 Localities with the Largest Number of Residential Homicides, 2018 81
Table 2.8 Top 10 Localities with the Highest Rate of Residential Homicides, 2018..... 81
Map 2.1 Number of Homicides by Locality of Residence, 2018..... 82

Map 2.2 Homicide Rates by Locality of Residence, 2018 83
Table 2.9 Number and Rate of Homicide Deaths by Locality of Injury, 2018 84
Table 2.10 Top 10 Localities with the Largest Number of Homicides by Locality of Injury, 2018 86
Table 2.11 Top 10 Locations City/Counties with the Highest Rate of Homicides by Locality of Injury, 2018 86
Map 2.3 Number of Homicides by Locality of Injury, 2018 87
Map 2.4 Homicide Rates by Locality of Injury, 2018 88
Table 2.12 Number of Homicide Deaths by Locality of Death and Year of Death, 2006-2018 89
NATURAL DEATHS (N=2,036) 94
Figure 2.19 Number and Rate of Natural Deaths Investigated by the OCME by Year of Death, 1999-2018 94
Figure 2.20 Number of Natural Deaths Investigated by the OCME by Age Group and Gender, 2018 95
Table 2.13 Number of Natural Deaths Investigated by the OCME by Cause and Method of Death, 2018 96
SUICIDE DEATHS (N=1,211) 98
Figure 2.21 Number and Rate of Suicide Deaths by Year of Death, 1999-2018 98
Figure 2.22 Number and Rate of Suicide Deaths by Age Group and Gender, 2018 99
Figure 2.23 Percentage of Suicide Deaths by Race/Ethnicity, 2018 99
Figure 2.24 Number and Rate of Suicide Deaths by Race/Ethnicity and Gender, 2018 100
Table 2.14 Number of Suicide Deaths by Cause and Method of Death, 2018 101
Figure 2.25 Number of Suicide Deaths by Age Group and Ethanol Level (N=424), 2018 102
Figure 2.26 Number of Suicide Deaths by Gender and Ethanol Level (N=424), 2018 102
Table 2.15 Number of Suicide Deaths by Method of Death and Ethanol Level (N=424), 2018 . 103
Figure 2.27 Number of Suicide Deaths by Month of Death, 2018 104
Figure 2.28 Number of Suicide Deaths by Day of the Week, 2018 104
Table 2.16 Number and Rate of Suicide Deaths by Locality of Residence, 2018 105
Map 2.5 Number of Suicides by Locality of Residence, 2018 107
Map 2.6 Suicide Rates by Locality of Residence, 2018 108
Table 2.17 Number of Suicide Deaths by Locality of Injury and Year of Death, 2006-2018 109
UNDETERMINED DEATHS (N=174) 114

Figure 2.29 Number and Rate of Undetermined Deaths by Year of Death, 1999-2018 114
Figure 2.30 Number and Rate of Undetermined Deaths by Age Group and Gender, 2018 115
Figure 2.31 Percentage of Undetermined Deaths by Race/Ethnicity, 2018 115
Table 2.18 Number of Undetermined Deaths by Cause of Death, 2018 116
SECTION 3: DEATHS OF CHILDREN (N=325) 117
Figure 3.1 Number of Child Deaths by Manner, 2018 117
Figure 3.2 Number of Child Deaths by Age and Gender, 2018 118
Figure 3.3 Percentage of Child Deaths by Race/Ethnicity, 2018 118
Figure 3.4 Number and Rate of Child Deaths by Gender and Race/Ethnicity, 2018 119
Figure 3.5 Number of Child Deaths by Manner and Race/Ethnicity, 2018 119
Figure 3.6 Number of Child Deaths by Manner and Age Group, 2018 120
Table 3.1 Number of Child Deaths by Cause of Death, 2018 121
ACCIDENTAL CHILD DEATHS (N=104) 123
Figure 3.7 Number and Rate of Accidental Child Deaths by Year, 2003-2018 123
Figure 3.8 Number and Rate of Accidental Child Deaths by Age Group and Gender, 2018 124
Figure 3.9 Percentage of Accidental Child Deaths by Race/Ethnicity, 2018 124
Figure 3.10 Number and Rate of Accidental Child Deaths by Gender and Race/Ethnicity, 2018 125
Figure 3.11 Number of Accidental Child Deaths by Month of Death, 2018 126
Figure 3.12 Number of Accidental Child Deaths by Day of Week, 2018 126
Table 3.2 Number of Accidental Child Deaths by Cause and Method of Death, 2018 127
CHILD HOMICIDE DEATHS (N=38) 128
Figure 3.13 Number and Rate of Child Homicide Deaths by Year, 1999-2018 128
Figure 3.14 Number of Child Homicide Deaths by Age and Gender, 2018 129
Figure 3.15 Percentage of Child Homicide Deaths by Race/Ethnicity, 2018 129
Figure 3.16 Number and Rate of Child Homicide Deaths by Gender and Race/Ethnicity, 2018 130
Figure 3.17 Number of Child Homicide Deaths by Month of Death, 2018 131
Figure 3.18 Number of Child Homicide Deaths by Day of the Week, 2018 131
Table 3.3 Number of Child Homicide Deaths by Cause and Method of Death, 2018 132
NATURAL CHILD DEATHS (N=34) 133
Figure 3.19 Number of Natural Child Deaths by Age Group and Gender, 2018 133

Figure 3.20 Percentage of Natural Child Deaths by Race/Ethnicity, 2018 134
Figure 3.21 Number of OCME SIDS Cases by Year of Death, 2003-2018 134
Table 3.4 Number of Natural Child Deaths by Cause and Method of Death, 2018 135
CHILD SUICIDE DEATHS (N=38) 136
Figure 3.22 Number and Rate of Child Suicide Deaths by Year, 1999-2018 136
Figure 3.23 Number of Child Suicide Deaths by Age and Gender, 2018 137
Figure 3.24 Percentage of Child Suicide Deaths by Race/Ethnicity, 2018 137
Figure 3.25 Number and Rate of Child Suicide Deaths by Gender and Race/Ethnicity, 2018 ... 138
Figure 3.26 Number of Child Suicide Deaths by Month, 2018 139
Figure 3.27 Number of Child Suicide Deaths by Day of the Week, 2018 139
Table 3.5 Number of Child Suicide Deaths by Cause and Method of Death, 2018 140
UNDETERMINED CHILD DEATHS (N=111) 141
Figure 3.28 Number and Rate of Undetermined Child Deaths by Year, 2006-2018 141
Figure 3.29 Number of Undetermined Child Deaths by Age and Gender, 2018 142
Figure 3.30 Percentage of Undetermined Child Deaths by Race/Ethnicity, 2018 142
Figure 3.31 Number and Rate of Undetermined Child Deaths by Gender and Race/Ethnicity, 2018 143
Table 3.6 Number of Undetermined Child Deaths by Cause and Method of Death, 2018 144
SECTION 4: MOTOR VEHICLE FATALITIES (N=960) 145
Figure 4.1 Number and Rate of Motor Vehicle Deaths by Year, 2003-2018 145
Figure 4.2 Percentage of Motor Vehicle Deaths by Manner, 2018 146
Figure 4.3 Number and Rate of Motor Vehicle Deaths by Age Group and Gender, 2018 146
Figure 4.4 Percentage of Motor Vehicle Deaths by Race/Ethnicity, 2018 147
Figure 4.5 Number and Rate of Motor Vehicle Deaths by Race/Ethnicity and Gender, 2018 ... 147
Figure 4.6 Percentage of Motor Vehicle Deaths by Ethanol Amount (N=727), 2018 148
Figure 4.7 Number of Motor Vehicle Deaths by Age Group, Gender, and Ethanol Amount (N=727), 2018 148
Figure 4.8 Number of Motor Vehicle Deaths by Ethanol Level and Race/Ethnicity (N=727), 2018 149
Table 4.1 Number of Motor Vehicle Deaths by Age Group and Position during Collision, 2018149

Figure 4.9 Number of Motor Vehicle Deaths by Position during Collision and Ethanol Level (N=727), 2018 150

Table 4.2 Number of Motor Vehicle Deaths by Position during Collision, Vehicle Type, and Ethanol Level (N=727), 2018 151

Figure 4.10 Number of OCME Motor Vehicle Fatalities by Month of Death, 2018 153

Figure 4.11 Number of OCME Motor Vehicle Fatalities by Day of Week, 2018 153

Table 4.3 Number and Rate of Motor Vehicle Deaths by Locality of Residence, 2018 154

Map 4.1 Number of Motor Vehicle Fatalities by Locality of Residence, 2018 156

Map 4.2 Rate of Motor Vehicle Fatalities by Locality of Residence, 2018 157

Table 4.4 Number and Rate of Motor Vehicle Deaths by Locality of Injury, 2018 158

Map 4.3 Number of Motor Vehicle Fatalities by Locality of Injury, 2018 160

Map 4.4 Rate of Motor Vehicle Fatalities by Locality of Injury, 2018 161

SECTION 5: DRUG/POISON DEATHS (N=1,486) 162

ALL DRUG/POISON DEATHS (N=1,486) 162

Figure 5.1 Number and Rate of Fatal Drug/Poison Overdoses by Year of Death, 1999-2018 ... 162

Table 5.1 Number and Percentage of Fatal Drug/Poison Overdoses by OCME District, 2018 .. 163

Figure 5.2 Percentage of Fatal Drug/Poison Overdoses by Manner of Death, 2018 163

Figure 5.3 Number and Rate of Fatal Drug/Poison Overdoses by Age Group and Gender, 2018 164

Table 5.2 Number of Fatal Drug/Poison Overdoses by Age Group and Manner of Death, 2018 164

Figure 5.4 Percentage of Fatal Drug/Poison Overdoses by Race/Ethnicity, 2018 165

Figure 5.5 Number and Rate of Fatal Drug/Poison Overdoses by Race/Ethnicity and Gender, 2018 165

Table 5.3 Number of Fatal Drug/Poison Overdoses by OCME District and Cause of Death, 2018 166

Table 5.4 Number of Fatal Drug/Poison Overdoses Manner and Cause of Death, 2018 166

Figure 5.6 Number of Fatal Drug/Poison Overdoses by Drug Category and Year of Death, 1999-2018 167

Figure 5.7 Number of Fatal Drug/Poison Overdoses by Drug Category and Gender, 2018 168

Figure 5.8 Number and Rate of Fatal Drug/Poison Overdoses by Drug Category and Race/Ethnicity, 2018 169

Figure 5.9 Number of Fatal Drug/Poison Overdoses by Drug Category and Ethanol Level, 2018 170

Table 5.5 Number of Fatal Drug/Poison Overdoses by Cause of Death and Whether Alcohol Caused Death, 2018 170

Figure 5.10 Number of Fatal Drug/Poison Overdoses by Drug/Poison/Metabolites Detected, 2018 171

Table 5.6 Number and Percentage of Fatal Drug/Poison Overdoses by Drug/Poison/Metabolite Detected, 2018 171

Figure 5.11 Number of Fatal Drug/Poison Overdoses by Class of Drug/Poison/Metabolite Detected that Caused or Contributed to Death, 2018 175

Table 5.7 Number of Fatal Drug/Poison Deaths by Drug/Poison/Metabolites Detected that Caused or Contributed to Death, 2018 175

Table 5.8 Number and Rate of Fatal Drug/Poison Overdoses by Locality of Residence, 2018 .. 179

Map 5.1 Number of Fatal Drug/Poison Overdoses by Locality of Residence, 2018 181

Map 5.2 Rates of Fatal Drug/Poison Overdoses by Locality of Residence, 2018 182

Table 5.9 Number and Rate of Fatal Drug/Poison Overdoses by Locality of Injury, 2018 183

Map 5.3 Number of Fatal Drug/Poison Overdoses by Locality of Injury, 2018 185

Map 5.4 Rates of Fatal Drug/Poison Overdoses by Locality of Injury, 2018 186

PRESCRIPTION OPIOIDS EXCLUDING FENTANYL (N=477) 187

Figure 5.12 Number of All Fatal Drug Overdoses Compared to All Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Year of Death, 2007-2018 187

Figure 5.13 Number of Prescription Opioids (Excluding Fentanyl) Causing or Contributing to Death in Fatal Drug/Poison Overdoses, 2018 188

Figure 5.14 Percentage of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Manner of Death, 2018 188

Table 5.10 Number of Prescription Opioids (Excluding Fentanyl) Detected in Fatal Drug Overdoses by OCME District, 2018 189

..... 189

Figure 5.15 Number and Rate of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Age Group and Gender, 2018 189

Figure 5.16 Percentage of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Race/Ethnicity, 2018 190

Figure 5.17 Number and Rate of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Race/Ethnicity and Gender, 2018 190

Table 5.11 Number and Rate of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Locality of Residence, 2018 191

Map 5.5 Number of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Locality of Residence, 2018 193

Map 5.6 Rates of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Locality of Residence, 2018 194

Table 5.12 Number and Rate of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Locality of Injury, 2018 195

Map 5.7 Number of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Locality of Injury, 2018 197

Map 5.8 Rates of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Locality of Injury, 2018 198

FENTANYL AND/OR HEROIN DEATHS (N=961) 199

Figure 5.18 Number and Rate of Fatal Fentanyl and/or Heroin Overdoses by Year of Death, 2007-2018 199

Figure 5.19 Number of Fatal Fentanyl Analog Overdoses Quarter, 2014-2018 200

..... 200

Table 5.13 Number of Fatal Fentanyl and/or Heroin Overdoses by OCME District, 2018 201

Figure 5.20 Percentage of Fatal Fentanyl and/or Heroin Overdoses by Manner of Death, 2018 201

Figure 5.21 Number and Rate of Fatal Fentanyl and/or Heroin Overdoses by Age Group and Gender, 2018 202

Figure 5.22 Percentage of Fatal Fentanyl and/or Heroin Overdoses by Race/Ethnicity, 2018 .. 202

Figure 5.23 Number and Rate of Fatal Fentanyl and/or Heroin Overdoses by Race/Ethnicity and Gender, 2018 203

Table 5.14 Number and Percentage of Fatal Fentanyl and/or Heroin Overdoses by Whether Alcohol Caused Death, 2018 203

Table 5.15 Number and Rate of Fatal Fentanyl and/or Heroin Overdoses by Locality of Residence, 2018 204

Map 5.9 Number of Fatal Fentanyl and/or Heroin Overdoses by Locality of Residence, 2018 . 206

Map 5.10 Rates of Fatal Fentanyl and/or Heroin Overdose by Locality of Residence, 2018 207

Table 5.16 Number and Rate of Fatal Fentanyl and/or Heroin Overdoses by Locality of Injury, 2018 208
Map 5.11 Number of Fatal Fentanyl and/or Heroin Overdoses by Locality of Injury, 2018 210
Map 5.12 Rates of Fatal Fentanyl and/or Heroin Overdose by Locality of Injury, 2018 211
ALL OPIOID DEATHS (N=1,215) 212
Figure 5.24 Number and Rate of All Fatal Opioid Overdoses Year of Death, 2007-2018 212
Table 5.17 Number of All Fatal Opioid Overdoses by Combination and OCME District, 2018 .. 213
Figure 5.25 Percentage of All Fatal Opioid Overdoses by Manner of Death, 2018..... 213
Figure 5.26 Percentage of All Fatal Opioid Overdoses by Manner of Death, 2018..... 214
Figure 5.27 Number and Rate of All Fatal Opioid Overdoses by Age Group and Gender, 2018 214
Figure 5.28 Percentage of All Fatal Opioid Overdoses by Race/Ethnicity, 2018 215
Figure 5.29 Number and Rate of All Fatal Opioid Overdoses by Race/Ethnicity and Gender, 2018 215
Figure 5.30 Number of Opioids Causing or Contributing to Fatal Opioid Overdoses, 2018 216
Table 5.18 Number and Percentage of All Fatal Opioid Overdoses by Whether Alcohol Caused Death, 2018..... 216
Table 5.19 Number of All Fatal Opioid Overdoses by Locality of Residence, 2018..... 217
Map 5.13 Number of All Fatal Opioid Overdoses by Locality of Residence, 2018 219
Map 5.14 Rates of All Fatal Opioid Overdoses by Locality of Residence, 2018..... 220
Table 5.20 Number and Rate of All Fatal Opioid Overdoses by Locality of Injury, 2018 221
Map 5.15 Number of All Fatal Opioid Overdoses by Locality of Injury, 2018 223
Map 5.16 Rates of All Fatal Opioid Overdoses by Locality of Injury, 2018..... 224
SECTION 6: GUN-RELATED DEATHS (N=1,038) 225
Figure 6.1 Number and Rate of Gun-Related Deaths by Year of Death, 2007-2018..... 225
Figure 6.2 Number of Gun-Related Deaths by Year and Manner of Death, 2007-2018 226
Figure 6.3 Percentage of Gun-Related Deaths by Manner of Death, 2018..... 226
Table 6.1 Number and Rate of Gun-Related Deaths by OCME District and Manner of Death, 2018 227
Table 6.2 Number of Gun-Related Deaths by Gun Type and Manner of Death, 2018..... 227
Figure 6.4 Percentage of Gun-Related Deaths by Gender, 2018 228
Figure 6.5 Number and Rate of Gun-Related Deaths by Age Group and Gender, 2018..... 228

Figure 6.6 Percentage of Gun-Related Deaths by Race/Ethnicity, 2018 229
Figure 6.7 Number and Rate of Gun-Related Deaths by Race/Ethnicity and Gender, 2018 229
Figure 6.8 Percentage of Gun-Related Deaths by Ethanol Level (N=484), 2018 230
Figure 6.9 Number of Gun-Related Deaths by Alcohol Level and Manner of Death (N=484), 2018 230
Figure 6.10 Number of Gun-Related Deaths by Month of Death, 2018 231
Figure 6.11 Number of Gun-Related Deaths by Day of Week, 2018 231
Table 6.3 Number and Rate of Gun-Related Deaths by Locality of Residence, 2018 232
Map 6.1 Number of Gun-Related Deaths by Locality of Residence, 2018 234
Map 6.2 Rates of Gun-Related Death by Locality of Residence, 2018 235
Table 6.4 Number and Rate of Gun-Related Deaths by Locality of Injury, 2018 236
Map 6.3 Number of Gun-Related Deaths by Locality of Injury, 2018 238
Map 6.4 Number of Gun-Related Deaths by Locality of Injury, 2018 239
SECTION 7: IN-CUSTODY (PRISONER) DEATHS (N=171) 240
Figure 7.1 Number of In-Custody Deaths by Manner and Year of Death, 2007-2018 240
Figure 7.2 Percentage of In-Custody Deaths by Manner of Death, 2018 241
Figure 7.3 Percentage of In-Custody Deaths by Race/Ethnicity, 2018 241
Figure 7.4 Number of In-Custody Deaths by Age Group and Gender, 2018 242
Figure 7.5 Number of In-Custody Deaths by Manner and Race/Ethnicity, 2018 243
Table 7.1 Number of In-Custody Deaths by Cause and Method of Death, 2018 244
SECTION 8: STATE MENTAL HEALTH DEATHS (N=59) 246
Figure 8.1 Percentage of State Mental Health Deaths by Manner, 2018 246
Figure 8.2 Percentage of State Mental Health Deaths by Race/Ethnicity, 2018 247
Figure 8.3 Number of State Mental Health Deaths by Age Group and Gender, 2018 247
Figure 8.4 Percentage of State Mental Health Deaths Race/Ethnicity, 2018 248
Table 8.1 Number of State Mental Health Deaths by Cause and Method of Death, 2018 249
SECTION 9: RETROSPECTIVE CASES (N=147) 250
Figure 9.1 Percentage of Retrospective Deaths by Manner of Death, 2018 250
Table 9.1 Number and Percentage of Retrospective Deaths by OCME District, 2018 251
Figure 9.2 Percentage of Retrospective Deaths by Race/Ethnicity, 2018 251
Figure 9.3 Number of Retrospective Deaths by Age Group and Gender, 2018 252

Table 9.2 Number of Retrospective Deaths by Cause and Method of Death, 2018 253

GLOSSARY..... 255

Introduction

This report represents the deaths investigated by the Virginia Department of Health, Office of the Chief Medical Examiner in 2018.

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 2018 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 (CDC). 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 (based on information provided from next of kin on decedent's death certificate)
    - 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 or Black, Asian, or Native American race with Hispanic ethnicity
- 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 office within the Virginia Department of Health. The OCME is comprised of four district offices, each 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

The OCME receives death reports in each of the four offices, takes custody of deaths that fall under OCME jurisdiction as outlined by the Code of Virginia, and conducts medicolegal death investigations into those fatalities. In Virginia, this is performed by a statewide medical examiner system comprised of a chief medical examiner, several assistant chief medical examiners, and medicolegal death investigators in four district offices, as well as local medical examiners in communities across the state. Medicolegal death investigators receive initial notification of death and determine, under the supervision and review of assistant chief medical examiners, if the death is under the jurisdiction of the OCME. After determining that a death is under OCME jurisdiction, medicolegal death investigators and/or local medical examiners may attend the death scene to document and review circumstances surrounding death. In 2018, approximately 140 local medical examiners worked with the OCME to examine decedents, collect toxicology samples, and sign certificates of death. Using professionally established guidelines, and under the direction of assistance chief medical examiners 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 assistant chief medical examiners who are 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 responsible for the overall operations of Virginia's medical examiner system.

The Virginia OCME is a model medical examiner system with two separate mission elements that form the core of OCME staff members' efforts.

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 assistant chief medical examiners 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 2018

In 2018, the estimated population of the Commonwealth was 8,517,685 persons. The average age of Virginia residents was 37.5 years and females represented 50.8% of the population. Whites constituted 62.7% of the population, Blacks 20.0%, Hispanics 9.6%, Asians 7.4%, and Native Americans 0.3% of Virginia's people.

Division of Death Prevention, 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 Virginia Violent Death Reporting System (VVDRS), the Overdose Data to Action (OD2A) grant, the Sudden Death in the Young Case Registry (SDY), and the Pregnancy-Associated Mortality Surveillance System (PAMSS). Fatality review is performed on child and maternal deaths at the state level and at the local and regional level on adult, child, overdose, and domestic violence related deaths.

Surveillance projects and fatality review teams examine various types of preventable deaths to provide a better understanding of factors contributing to the death so that legislators, policy makers, and other stakeholders can make informed decisions for injury and violence prevention. Fatality review and surveillance is retrospective examination, with most programs being approximately 1-3 years behind the current year. The data collection and review process requires a "deep dive" into a decedent's medical, mental, social, educational, and criminal background, which takes time, as records must be requested, collected, collated, reviewed, and summarized.

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 all 50 states and two territories.

The VVDRS collects information about deaths of Virginians who die in Virginia 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.

The Overdose Data to Action (OD2A) grant was implemented in 2019 as part of a collaborative effort between multiple offices, throughout the Virginia Department of Health, including The Office of Family Health Services, Office of Emergency Preparedness, Office of the Chief Medical Examiner, Office of Epidemiology, and the Office of Emergency Medical Services. The multi-arm project strives to collect and understand fatal and non-fatal accidental overdose events and then use that data to inform policy and programs to prevent such events. Data is collected using the aforementioned NVDRS and other surveillance systems. The Department of Forensic Science also receives funding as part of this award to implement quantification programs to quantify opioid derivatives for use in toxicology testing and monitoring.

The OCME's arm, the State Unintentional Drug Overdose Reporting System (SUDORS), goal is to prevent accidental death through the collection of surveillance data to create public health strategies to address opioid addiction. SUDORS captures information on accidental and undetermined overdose deaths in Virginia. While much of this data is also collected through the VVDRS, the SUDORS collects additional information such as descriptions of paraphernalia found at the scene, prescription monitoring reports, naloxone administration, and any history of substance abuse, treatment, or relapse.

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.

Information on Virginia's domestic violence fatality review effort including local and regional team reports, can be found at http://www.vdh.virginia.gov/medical-examiner/fatality-review-surveillance-programs-reports/domestic-violence-fatality-review/.

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, the need for policy and education to prevent child drownings, 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, and motor vehicle collision, child deaths from heat-related motor vehicle entrapment, non-caretaker homicide, drownings, and sleep-related infant death. The team is currently reviewing teen suicide deaths.

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

Infant and Child Mortality Surveillance was created 2015. The team implemented the Infant and Child Mortality Surveillance Systems, one for those under the age of 1 years old and another for children aged 1-17 years in an effort to guide and better inform discussions, planning and legislative action that effects the health and well-being of children and families in the Commonwealth. This project seeks to provide reports detailing the circumstances and characteristics of both infant and child deaths occurring in Virginia.

Regional Child Fatality Review Teams were established in all five Virginia Department of Social Services (DSS) 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 Health Services with Title V funds from the U.S. Department of Health and Human Services, Maternal and Child Health Bureau.

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 includes not only surveillance data,

but also data collected from the MMRT process. Current PAMMS data indicates pregnancy-associated maternal death in Virginia remains a significant public health problem.

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 2002 as a partnership between the Office of Family Health Services and the OCME. The team was codified during the 2019 General Assembly session via House Bill 2546 effective July 1, 2019 with the OCME continuing to provide coordination for the team. Codifying the team allows for more comprehensive record collection, which enhances the review process and provides protections to the team, that creates a safe environment for more open dialogue amount the team members. 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 performed to 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.

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. In 2018, three additional cities and three counties were added to the project. Those additions include the cities of Chesapeake, Suffolk, and Portsmouth and the counties of Accomack, Northampton, and York. 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.

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. The information gathered from the death investigation 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, cardiologist, a social worker, OB/GYN, 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 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.

Adult Fatality Review was established for Virginia localities effective July 1, 2015. Currently, there are two local and regional teams (Richmond Metro and Northern Virginia) 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. Currently there is no funding for a State Adult Fatality Review Team and efforts to solicit grant funds have not been successful or funds have not been available for this work. At this time, the Adult Fatality Review remains an unfunded mandate.

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

Local and Regional Overdose Fatality Review was established for Virginia localities effective July 1, 2018. Currently, there are no formal teams, but interest is growing. Similar to child, adult, and domestic violence death review efforts, local communities may now convene such teams to examine deaths of any persons who died of an overdose related death. Localities may establish a team under this statute (Code of Virginia §32.1-283.7) for the purpose of: (1) conducting contemporaneous reviews of local overdose deaths, (2) promoting cooperation and coordination among agencies involved in investigations of overdose deaths or in providing services to surviving family members, (3) developing an understanding of the causes and incidence of overdose deaths in the locality, (4) developing plans for and recommending changes within the agencies represented on the local team to prevent overdose deaths, and (5) advising the Department and other relevant state agencies on changes to law, policy, or practice to prevent overdose deaths. The goal of this process is to identify at risk populations in their communities, opportunities for improved response to overdoses, and best practices for preventing further overdose related deaths.

In Virginia, information learned from fatality review efforts supports the development of recommendations and information sharing with critical stakeholders to reduce injury and death. The Division of Death Prevention is dedicated to providing data and technical assistance to those in our community. Data can be requested from any of our projects, by reaching out to Division Director or the Project Manager for the particular program of interest. More information and who to contact can be found at: http://www.vdh.virginia.gov/medical-examiner/fatality-review-surveillance-programs-reports/

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 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. The Department of Legal Medicine Faculty also participate as attending physicians for the forensic pathology fellowship.

The forensic pathology training program is designed to provide training and experience to pathologists pursuing 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 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 the subspecialty of Forensic Pathology. Upon completion, the trainee will be ready to accept a position in all types of Medical Examiner/Coroner systems. All district OCME offices are approved to host and train physicians for the fellowship. During the last academic year, 2018-2019, the OCME trained one fellow. The fellowship continues to interview multiple candidates for 2020-2021 and 2021-2022.

The OCME offers forensic rotations to residents, medical students, and pathology assistant students. Medical students from VCU and EVMS typically rotate for a 2-4 week elective to learn autopsy techniques and death certification. Pathology assistant students from EVMS rotate for 8 weeks to learn autopsy techniques and procedures at the Tidewater and Central Offices. The OCME also offers month long rotations for resident physicians from VCU, University of Virginia, Walter Reed Hospital, and National Institute of Health who desire exposure to forensic pathology as part of their anatomical pathology training. Residents from other in state or out of state programs may be accepted for training.

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 2018 death investigations:

	Central	Northern	Tidewater	Western	Total
TOTAL DEATHS STATEWIDE					
Total Deaths Reported to OCME	5327	3071	2647	4149	**15194**
OCME Cases by Examination Type					
Complete examinations (autopsy)	772	609	626	668	**2675**
External examination	1505	925	972	1140	**4542**
Partial examination	5	88	16	63	**172**
TOTAL CASES ACCEPTED BY THE OCME	**2282**	**1622**	**1614**	**1871**	**7389**
OCME Cases by Manner of Death					
Accident	1168	757	745	863	**3533**
Homicide	137	50	146	96	**429**
Natural	590	486	434	526	**2036**
Suicide	335	291	240	345	**1211**
Undetermined	50	36	48	40	**174**
Undefined for Fetal Death*	2	2	1	1	**6**
TOTAL CASES ACCEPTED BY THE OCME	**2282**	**1622**	**1614**	**1871**	**7389**

* Fetal deaths are omitted from manner of death classifications. This is because fetal deaths are not given a certification of live birth in Virginia and thus, do not receive a death certificate. In 2018, the OCME accepted six fetal deaths under OCME jurisdiction of the 4,261 total fetal deaths reported to Vital Records

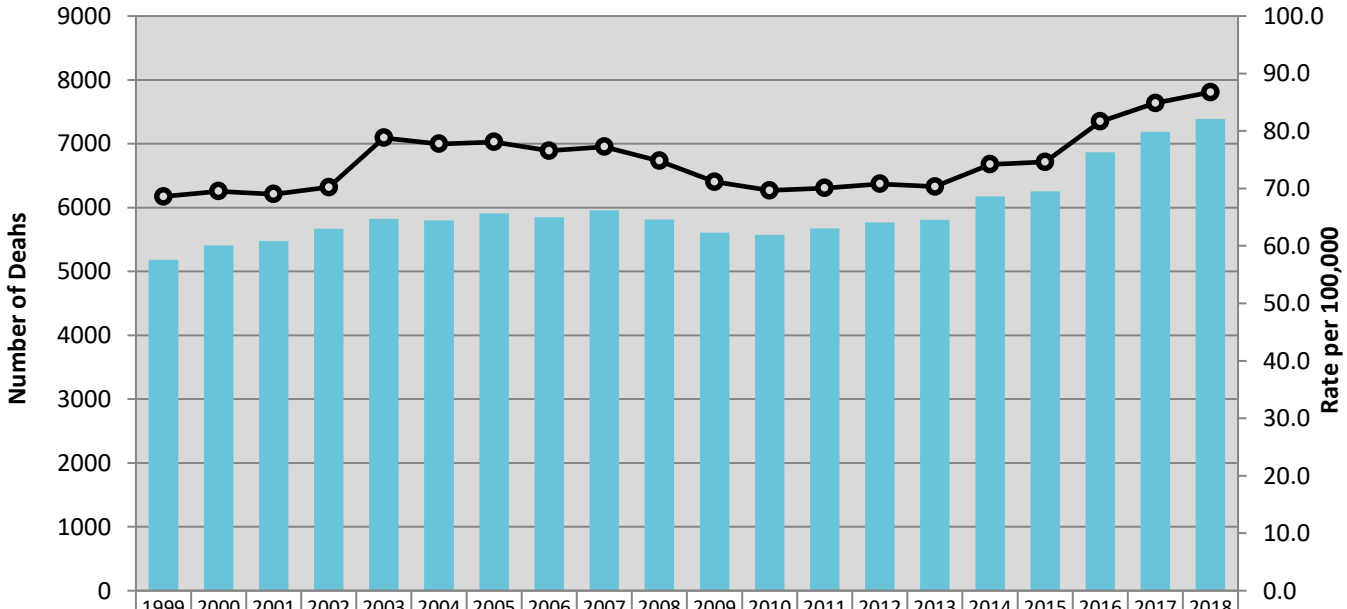
	Central	Northern	Tidewater	Western	Total
Bodies transported by office	2282	1622	1614	1871	**7389**
Bodies transported to office	1327	939	893	1089	**4248**
Cases with toxicology (including retro cases)	1273	1048	978	888	**4187**
Exhumations	0	0	0	0	**0**
Eye donations on OCME cases	33	56	110	22	**221**
Hospital autopsies under OCME jurisdiction	0	0	0	0	**0**
Organ and tissue donations on OCME cases	30	110	22	14	**176**
Retrospective cases (cases handled separately)	39	31	25	52	**147**
Scene visits	562	217	555	221	**1555**
Unclaimed bodies	81	40	41	47	**209**
Unidentified bodies after examination (long term)	0	1	2	0	**3**

SECTION 1: TOTAL OCME CASES (N=7,389)

In 2018, 15,194 deaths were reported to the Office of the Chief Medical Examiner (OCME), which accounted for 22.2% of the estimated total deaths in Virginia. The OCME accepted 7,389 or 48.6% of these investigated 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 2018, they may not necessarily have occurred in 2018]. The caseload for 2018 represented a 2.8% increase from 2017. Of the deaths investigated by the OCME in 2018:

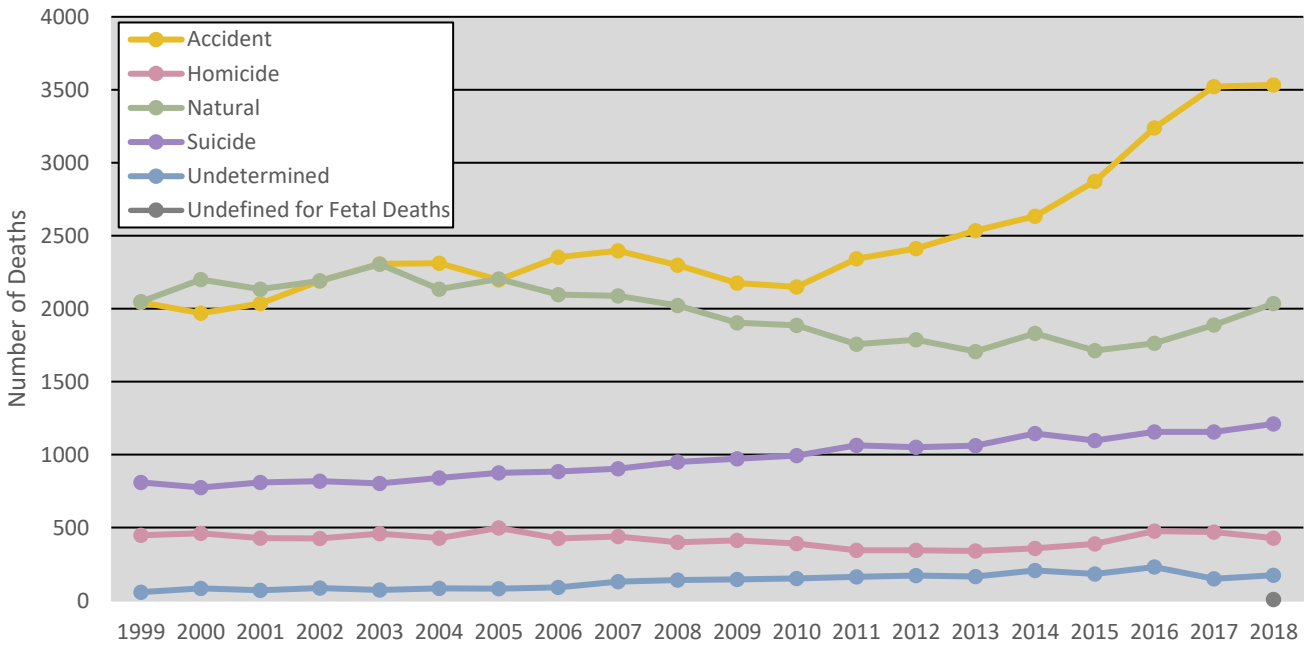
- Among manners of death, the most notable changes in 2018 compared to 2017 were increases among natural deaths under OCME jurisdiction, suicides, and undetermined manners of death and decreases in homicides. Overall, accidents in 2018 only varied slightly from 2017 numbers
- Black males continue to have disproportionate number 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 (69.2%) than females
- The 55-64 year old age group had the greatest number of OCME deaths, representing 17.8% of OCME cases
- Fairfax County had the largest number of both residential deaths (n=494) and deaths by injury locality (n=521). Greensville County had the highest rate of death by residential locality (292.4 per 100,000) and Highland County had the highest rate of death by injury locality (226.2 per 100,000)

Figure 1.1 Number and Rate of OCME Cases by Year of Death, 1999-2018



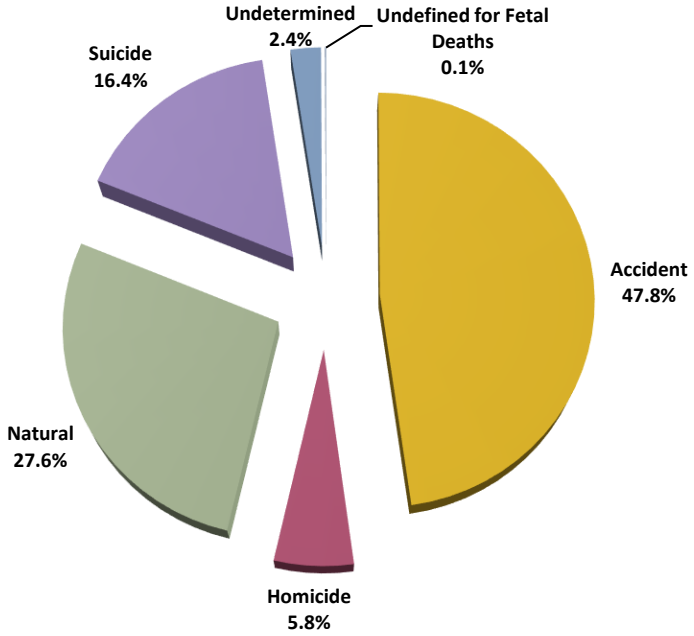
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Deaths	5184	5408	5478	5666	5821	5799	5908	5851	5958	5811	5608	5573	5672	5767	5809	6176	6253	6868	7187	7389
Mortality Rate	68.6	69.5	69.0	70.2	78.8	77.7	78.1	76.6	77.3	74.8	71.1	69.7	70.1	70.8	70.3	74.2	74.6	81.6	84.9	86.7

Figure 1.2 Number of OCME Cases by Manner of Death, 1999-2018



* Fetal deaths are omitted from manner of death classifications. This is because fetal deaths are not given a certification of live birth in Virginia and thus, do not receive a death certificate. In 2018, the OCME accepted six fetal deaths under OCME jurisdiction of the 4,261 total fetal deaths reported to Vital Records

Figure 1.3 Percentage of OCME Cases by Manner of Death, 2018



* Fetal deaths are omitted from manner of death classifications. This is because fetal deaths are not given a certification of live birth in Virginia and thus, do not receive a death certificate. In 2018, the OCME accepted six fetal deaths under OCME jurisdiction of the 4,261 total fetal deaths reported to Vital Records

Table 1.1 Number of OCME Cases by District and Manner of Death, 2018

	OCME District				
Manner	**Central**	**Northern**	**Tidewater**	**Western**	**Total**
Accident	1168	757	745	863	**3533**
Homicide	137	50	146	96	**429**
Natural	590	486	434	526	**2036**
Suicide	335	291	240	345	**1211**
Undetermined	50	36	48	40	**174**
Undefined for Fetal Deaths	2	2	1	1	**6**
TOTAL	**2282**	**1622**	**1614**	**1871**	**7389**

* Fetal deaths are omitted from manner of death classifications. This is because fetal deaths are not given a certification of live birth in Virginia and thus, do not receive a death certificate. In 2018, the OCME accepted six fetal deaths under OCME jurisdiction of the 4,261 total fetal deaths reported to Vital Records

Table 1.2 Number of OCME Cases by Autopsy Status and District, 2018

	Autopsy Performed		
OCME District	**Yes**	**No**	**Total**
Central	777	1505	**2282**
Northern	697	925	**1622**
Tidewater	642	972	**1614**
Western	731	1140	**1871**
TOTAL	**2847**	**4542**	**7389**

Table 1.3 Number of OCME Cases by Manner of Death and Autopsy Status, 2018

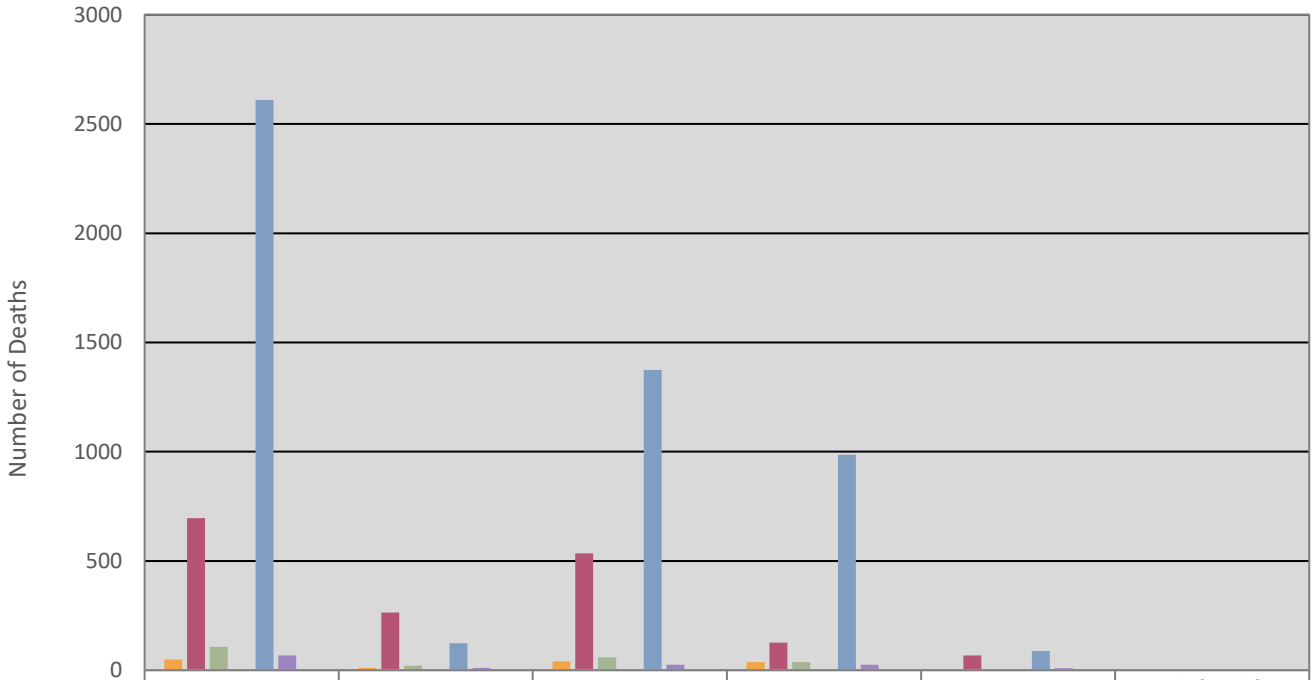
	Autopsy Performed			
OCME District	**Yes**	**No**	**% Yes**	**Total**
Accident	904	2629	25.6%	**3533**
Homicide	426	3	99.3%	**429**
Natural	527	1509	25.9%	**2036**
Suicide	815	396	67.3%	**1211**
Undetermined	170	4	97.7%	**174**
Undefined for Fetal Deaths	5	1	83.3%	**6**
TOTAL	**2847**	**4542**	**38.5%**	**7389**

* Fetal deaths are omitted from manner of death classifications. This is because fetal deaths are not given a certification of live birth in Virginia and thus, do not receive a death certificate. In 2018, the OCME accepted six fetal deaths under OCME jurisdiction of the 4,261 total fetal deaths reported to Vital Records

Table 1.4 Number and Percentage of OCME Cases by Race/Ethnicity, 2018

Race/Ethnicity	Cases	Percent
Asian	139	1.9%
Black	1689	22.9%
Hispanic	228	3.1%
Native American	9	0.1%
White	5186	70.2%
Other	136	1.8%
Unknown	2	0.0%
TOTAL	**7389**	**100.0%**

Figure 1.4 Number of OCME Cases by Manner of Death and Race/Ethnicity, 2018



	Accident	Homicide	Natural	Suicide	Undetermined	Undefined for Fetal Deaths
Asian	49	11	39	37	3	0
Black	696	264	535	126	67	1
Hispanic	107	21	58	36	5	1
Native American	3	0	5	1	0	0
White	2611	123	1374	986	88	4
Other	67	10	25	25	9	0
Unknown	0	0	0	0	2	0

* Fetal deaths are omitted from manner of death classifications. This is because fetal deaths are not given a certification of live birth in Virginia and thus, do not receive a death certificate. In 2018, the OCME accepted six fetal deaths under OCME jurisdiction of the 4,261 total fetal deaths reported to Vital Records

Figure 1.5 Number of OCME Cases by Age Group, 2018

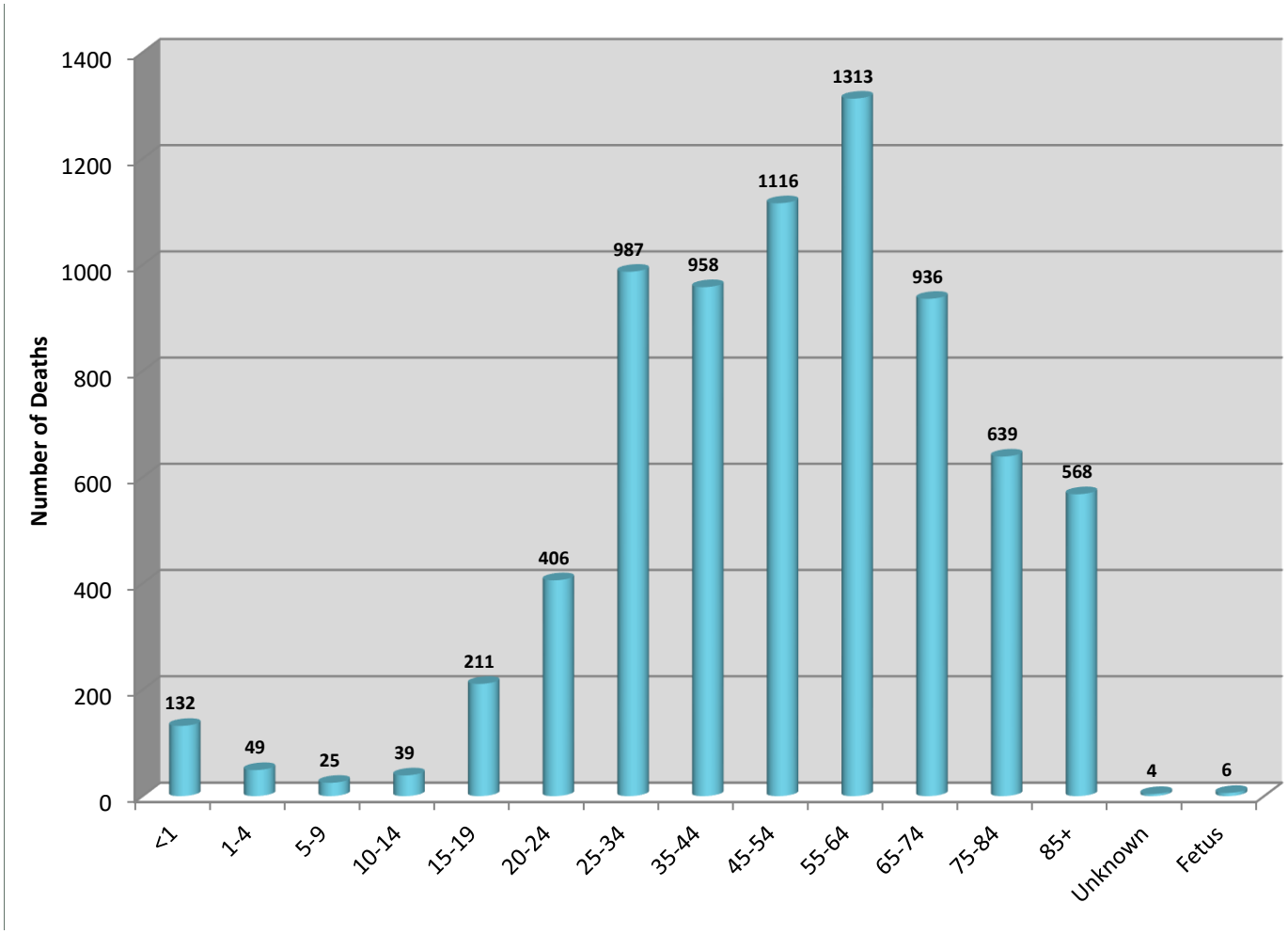


Table 1.5 Number and Percentage of OCME Cases by Gender, 2018

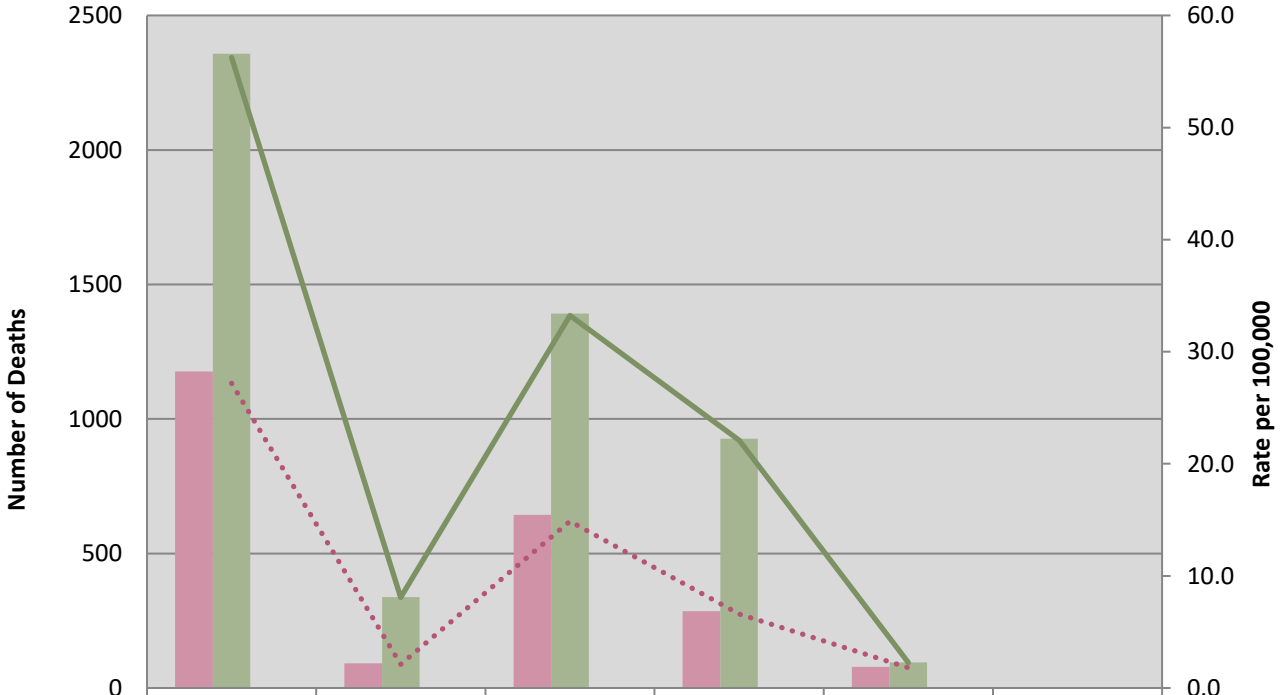
Gender	Cases	Percent
Female	2277	30.8%
Male	5111	69.2%
Unknown	1	0.0%
TOTAL	**7389**	**100.0%**

Table 1.6 Number and Percentage of OCME Cases by Manner of Death and Gender, 2018

Manner of Death	Female		Male		Unknown		Total	
	N	%	N	%	N	%	N	%
Accident	1176	15.9%	2357	31.9%	0	0.0%	**3533**	**47.8%**
Homicide	91	1.2%	338	4.6%	0	0.0%	**429**	**5.8%**
Natural	644	8.7%	1392	18.8%	0	0.0%	**2036**	**27.6%**
Suicide	285	3.9%	926	12.5%	0	0.0%	**1211**	**16.4%**
Undetermined	78	1.1%	95	1.3%	1	0.0%	**174**	**2.4%**
Undefined for Fetal Deaths	3	0.0%	3	0.0%	0	0.0%	**6**	**0.1%**
Total	**2277**	**30.8%**	**5111**	**69.2%**	**1**	**0.0%**	**7389**	**100.0%**

* Fetal deaths are omitted from manner of death classifications. This is because fetal deaths are not given a certification of live birth in Virginia and thus, do not receive a death certificate. In 2018, the OCME accepted six fetal deaths under OCME jurisdiction of the 4,261 total fetal deaths reported to Vital Records

Figure 1.6 Number and Rate of OCME Cases by Manner of Death and Gender, 2018



	Accident	Homicide	Natural	Suicide	Undetermined	Undefined for Fetal Deaths
Female	1176	91	644	285	78	3
Male	2357	338	1392	926	95	3
Unknown	0	0	1	0	0	0
Female Rate	27.2	2.1	14.9	6.6	1.8	*
Male Rate	56.2	8.1	33.2	22.1	2.3	*

* No denominator for which to calculate rate

** Fetal deaths are omitted from manner of death classifications. This is because fetal deaths are not given a certification of live birth in Virginia and thus, do not receive a death certificate. In 2018, the OCME accepted six fetal deaths under OCME jurisdiction of the 4,261 total fetal deaths reported to Vital Records

Table 1.7 Number of OCME Cases by Manner of Death, Gender, and Age Group, 2018

Gender	Age Group	Accident	Homicide	Natural	Suicide	Undetermined	Undefined for Fetal Deaths	Total
FEMALE	<1	8	2	7	0	49	0	66
	1-4	5	1	2	0	6	0	14
	5-9	5	2	2	0	1	0	10
	10-14	8	2	1	4	0	0	15
	15-19	31	10	4	19	1	0	65
	20-24	41	15	9	13	3	0	81
	25-34	152	12	40	34	8	0	246
	35-44	142	15	57	49	3	0	266
	45-54	129	10	113	60	3	0	315
	55-64	119	8	143	64	3	0	337
	65-74	148	10	116	28	1	0	303
	75-84	141	3	79	9	0	0	232
	85+	247	1	71	5	0	0	324
	Fetus	0	0	0	0	0	3	3
	Subtotal	1176	91	644	285	78	3	2277
MALE	<1	13	2	5	0	46	0	66
	1-4	15	5	7	0	8	0	35
	5-9	12	2	1	0	0	0	15
	10-14	6	6	4	7	1	0	24
	15-19	47	37	7	54	1	0	146
	20-24	140	67	15	100	3	0	325
	25-34	449	100	65	123	4	0	741
	35-44	367	51	115	154	5	0	692
	45-54	365	34	253	140	9	0	801
	55-64	357	19	422	171	7	0	976
	65-74	208	8	323	89	5	0	633
	75-84	202	7	127	67	4	0	407
	85+	176	0	47	21	0	0	244
	Unknown	0	0	1	0	2	0	3
	Fetus	0	0	0	0	0	3	3
	Subtotal	2357	338	1392	926	95	3	5111
UNKNOWN	*Unknown*	0	0	0	0	1	0	1
	Subtotal	0	0	0	0	1	0	1
TOTAL		3533	429	2036	1211	174	6	7389

* Fetal deaths are omitted from manner of death classifications. This is because fetal deaths are not given a certification of live birth in Virginia and thus, do not receive a death certificate. In 2018, the OCME accepted six fetal deaths under OCME jurisdiction of the 4,261 total fetal deaths reported to Vital Records

Figure 1.7 Number of OCME Cases by Month of Death, 2018

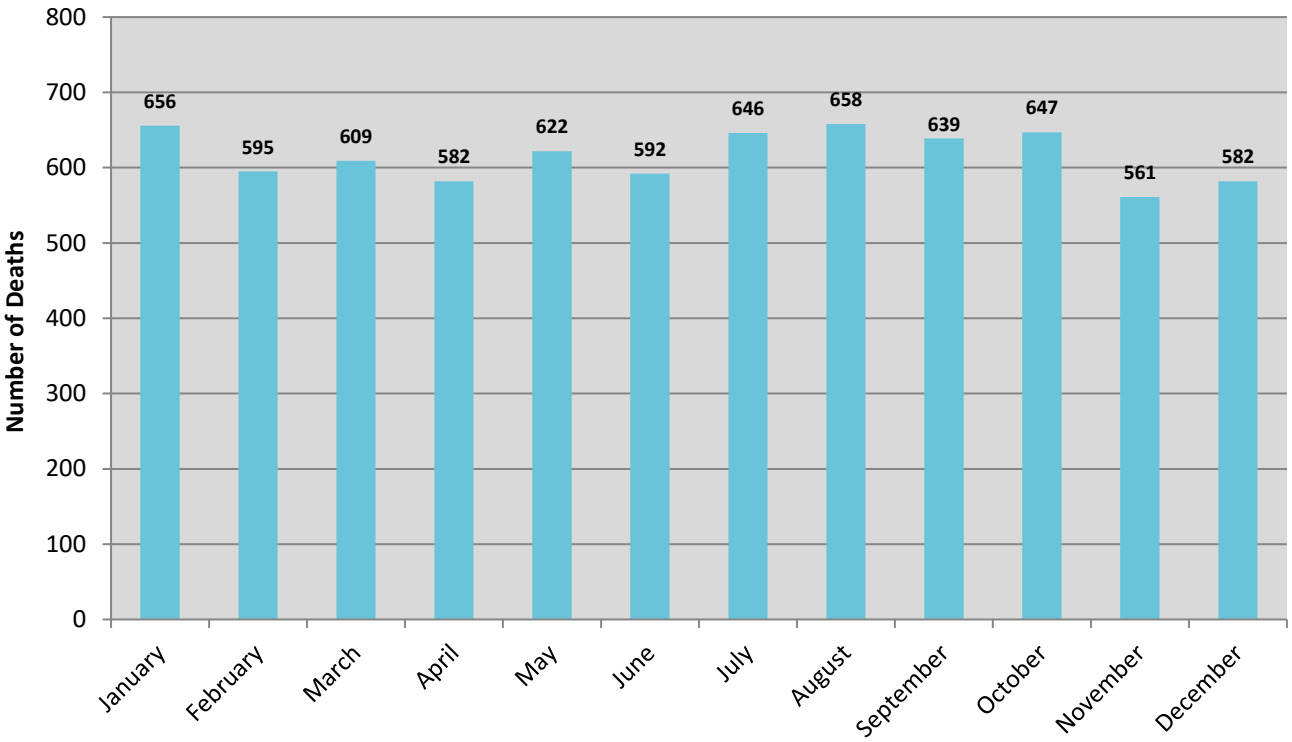
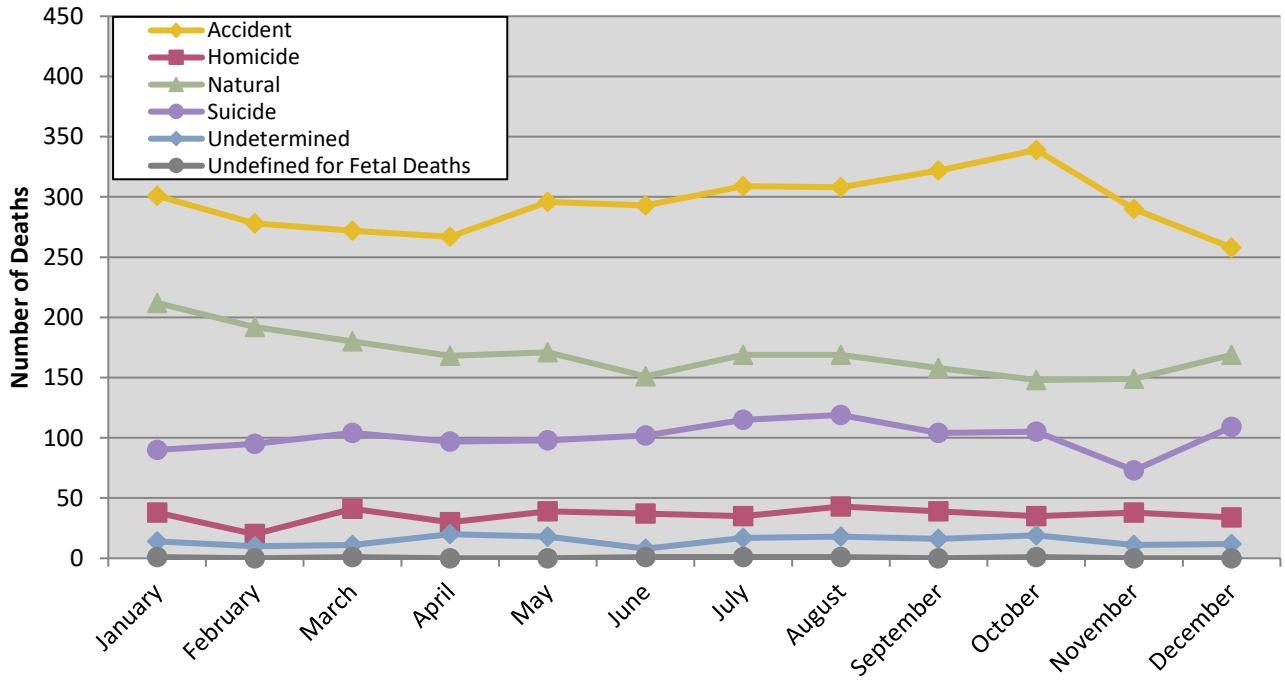


Figure 1.8 Number of OCME Cases by Month and Manner of Death, 2018



* Fetal deaths are omitted from manner of death classifications. This is because fetal deaths are not given a certification of live birth in Virginia and thus, do not receive a death certificate. In 2018, the OCME accepted six fetal deaths under OCME jurisdiction of the 4,261 total fetal deaths reported to Vital Records

Figure 1.9 Number of OCME Cases by Day of Death, 2018

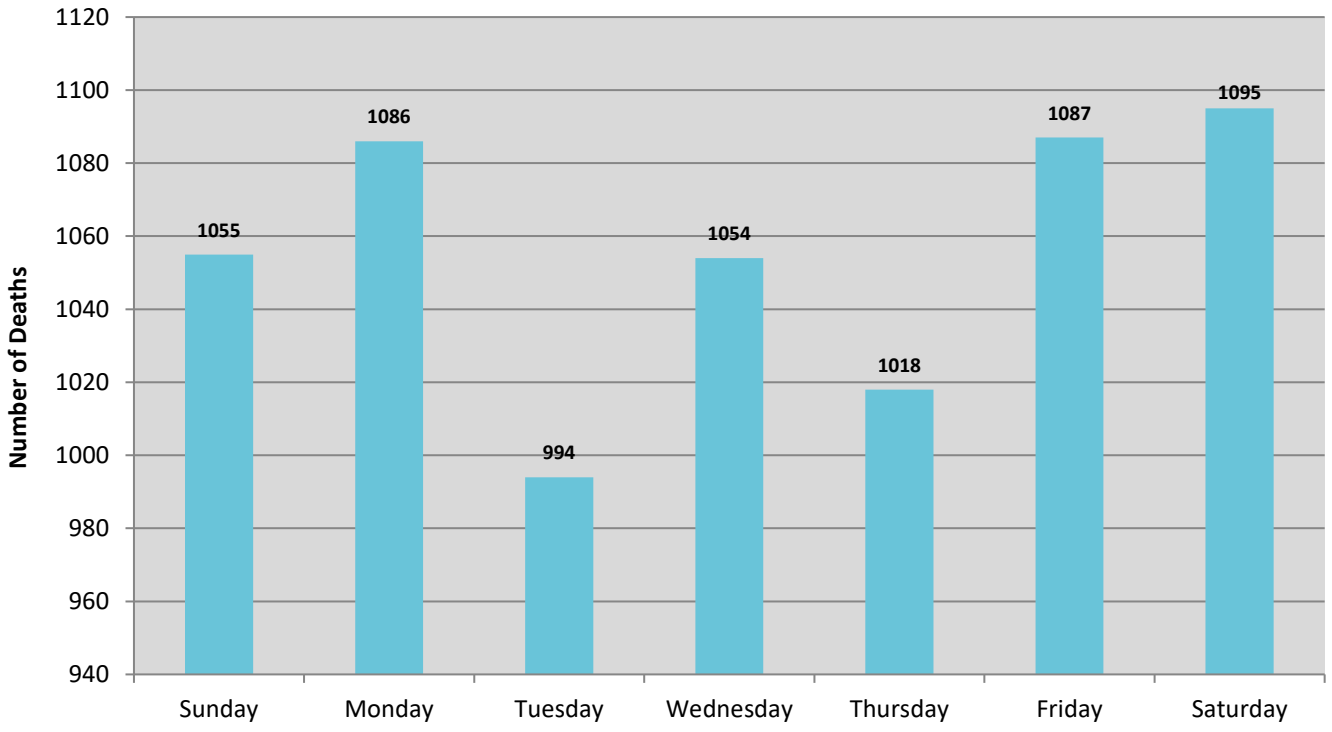
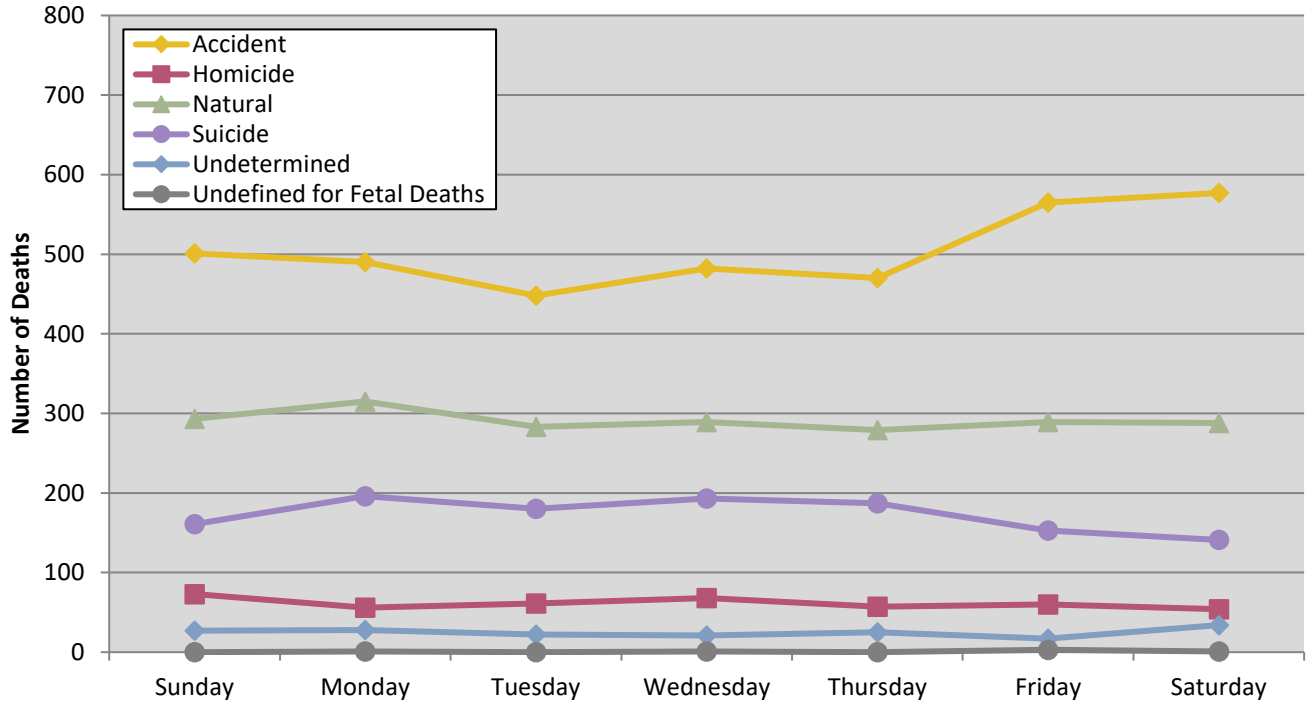


Figure 1.10 Number of OCME Cases by Day and Manner of Death, 2018



* Fetal deaths are omitted from manner of death classifications. This is because fetal deaths are not given a certification of live birth in Virginia and thus, do not receive a death certificate. In 2018, the OCME accepted six fetal deaths under OCME jurisdiction of the 4,261 total fetal deaths reported to Vital Records

Table 1.8 Number and Rate of OCME Cases by Manner of Death and Locality of Residence, 2018

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	17	52.4	0	0.0	15	46.3	4	12.3	2	6.2	**38**	**117.2**
Albemarle County	37	34.0	1	0.9	12	11.0	14	12.9	3	2.8	**67**	**61.6**
Alexandria City	18	11.2	3	1.9	23	14.3	10	6.2	2	1.2	**56**	**34.9**
Alleghany County	5	33.5	1	6.7	9	60.4	4	26.8	1	6.7	**20**	**134.1**
Amelia County	10	76.8	0	0.0	5	38.4	2	15.4	0	0.0	**17**	**130.6**
Amherst County	19	60.0	0	0.0	11	34.7	8	25.3	1	3.2	**39**	**123.2**
Appomattox County	11	69.4	2	12.6	5	31.6	5	31.6	1	6.3	**24**	**151.5**
Arlington County	25	10.5	3	1.3	42	17.7	10	4.2	3	1.3	**83**	**34.9**
Augusta County	37	49.0	1	1.3	12	15.9	20	26.5	2	2.7	**72**	**95.4**
Bath County	1	23.3	0	0.0	1	23.3	4	93.2	0	0.0	**6**	**139.8**
Bedford County	38	48.3	3	3.8	21	26.7	16	20.3	0	0.0	**78**	**99.1**
Bland County	2	31.8	0	0.0	0	0.0	1	15.9	0	0.0	**3**	**47.7**
Botetourt County	19	57.1	2	6.0	7	21.0	3	9.0	0	0.0	**31**	**93.2**
Bristol City	5	30.3	3	18.2	9	54.6	2	12.1	0	0.0	**19**	**115.3**
Brunswick County	9	54.9	0	0.0	7	42.7	3	18.3	0	0.0	**19**	**116.0**
Buchanan County	16	75.4	0	0.0	12	56.5	7	33.0	0	0.0	**35**	**164.9**
Buckingham County	10	58.8	0	0.0	4	23.5	4	23.5	0	0.0	**18**	**105.9**
Buena Vista City	1	16.0	0	0.0	1	16.0	0	0.0	1	16.0	**3**	**48.1**
Campbell County	30	54.6	2	3.6	13	23.6	12	21.8	0	0.0	**57**	**103.7**
Caroline County	27	87.7	0	0.0	6	19.5	4	13.0	1	3.2	**38**	**123.5**
Carroll County	6	20.2	0	0.0	9	30.4	4	13.5	0	0.0	**19**	**64.1**
Charles City County	5	72.0	0	0.0	0	0.0	1	14.4	0	0.0	**6**	**86.4**
Charlotte County	9	75.4	1	8.4	6	50.3	2	16.8	0	0.0	**18**	**150.8**
Charlottesville City	17	35.3	0	0.0	7	14.5	5	10.4	2	4.2	**31**	**64.4**
Chesapeake City	83	34.2	12	4.9	45	18.5	32	13.2	6	2.5	**178**	**73.4**
Chesterfield County	166	47.6	10	2.9	52	14.9	50	14.3	6	1.7	**284**	**81.5**
Clarke County	7	48.2	0	0.0	0	0.0	3	20.7	0	0.0	**10**	**68.9**
Colonial Heights City	12	67.3	0	0.0	6	33.6	5	28.0	1	5.6	**24**	**134.6**
Covington City	4	73.3	0	0.0	3	54.9	2	36.6	0	0.0	**9**	**164.8**
Craig County	2	39.5	0	0.0	2	39.5	1	19.7	0	0.0	**5**	**98.7**

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
Culpeper County	30	57.8	1	1.9	11	21.2	14	27.0	2	3.9	**58**	**111.8**
Cumberland County	4	40.8	0	0.0	3	30.6	6	61.2	0	0.0	**13**	**132.5**
Danville City	25	61.4	12	29.5	15	36.9	7	17.2	3	7.4	**62**	**152.4**
Dickenson County	12	82.6	0	0.0	3	20.7	4	27.5	0	0.0	**19**	**130.8**
Dinwiddie County	10	35.1	1	3.5	16	56.1	2	7.0	1	3.5	**30**	**105.2**
Emporia City	1	19.5	1	19.5	3	58.6	1	19.5	1	19.5	**7**	**136.7**
Essex County	3	27.5	0	0.0	3	27.5	1	9.2	1	9.2	**8**	**73.3**
Fairfax City	11	44.8	1	4.1	3	12.2	2	8.1	0	0.0	**17**	**69.2**
Fairfax County	233	20.2	13	1.1	142	12.3	98	8.5	8	0.7	**494**	**42.9**
Falls Church City	1	6.8	0	0.0	0	0.0	3	20.3	0	0.0	**4**	**27.1**
Fauquier County	39	55.2	4	5.7	18	25.5	7	9.9	2	2.8	**70**	**99.0**
Floyd County	10	63.3	0	0.0	7	44.3	8	50.6	0	0.0	**25**	**158.3**
Fluvanna County	16	59.7	1	3.7	5	18.7	5	18.7	1	3.7	**28**	**104.5**
Franklin City	5	62.4	3	37.4	3	37.4	0	0.0	2	25.0	**13**	**162.2**
Franklin County	37	65.8	3	5.3	17	30.3	5	8.9	2	3.6	**64**	**113.9**
Frederick County	42	47.5	0	0.0	16	18.1	13	14.7	0	0.0	**71**	**80.4**
Fredericksburg City	20	68.6	3	10.3	6	20.6	4	13.7	1	3.4	**34**	**116.7**
Galax City	0	0.0	0	0.0	1	15.6	1	15.6	0	0.0	**2**	**31.1**
Giles County	4	23.7	1	5.9	4	23.7	3	17.8	0	0.0	**12**	**71.2**
Gloucester County	21	56.2	0	0.0	11	29.5	8	21.4	0	0.0	**40**	**107.1**
Goochland County	6	25.8	0	0.0	14	60.2	4	17.2	0	0.0	**24**	**103.3**
Grayson County	3	19.2	0	0.0	4	25.6	5	32.0	0	0.0	**12**	**76.8**
Greene County	9	45.5	0	0.0	2	10.1	3	15.2	0	0.0	**14**	**70.8**
Greensville County	11	94.6	0	0.0	20	172.0	3	25.8	0	0.0	**34**	**292.4**
Halifax County	15	44.0	4	11.7	10	29.3	5	14.7	1	2.9	**35**	**102.6**
Hampton City	65	48.4	21	15.6	41	30.5	14	10.4	4	3.0	**145**	**108.0**
Hanover County	44	41.0	3	2.8	10	9.3	18	16.8	1	0.9	**76**	**70.9**
Harrisonburg City	11	20.4	4	7.4	7	13.0	5	9.3	0	0.0	**27**	**50.0**
Henrico County	131	39.8	17	5.2	62	18.8	27	8.2	6	1.8	**243**	**73.8**
Henry County	30	58.9	3	5.9	13	25.5	11	21.6	1	2.0	**58**	**113.8**

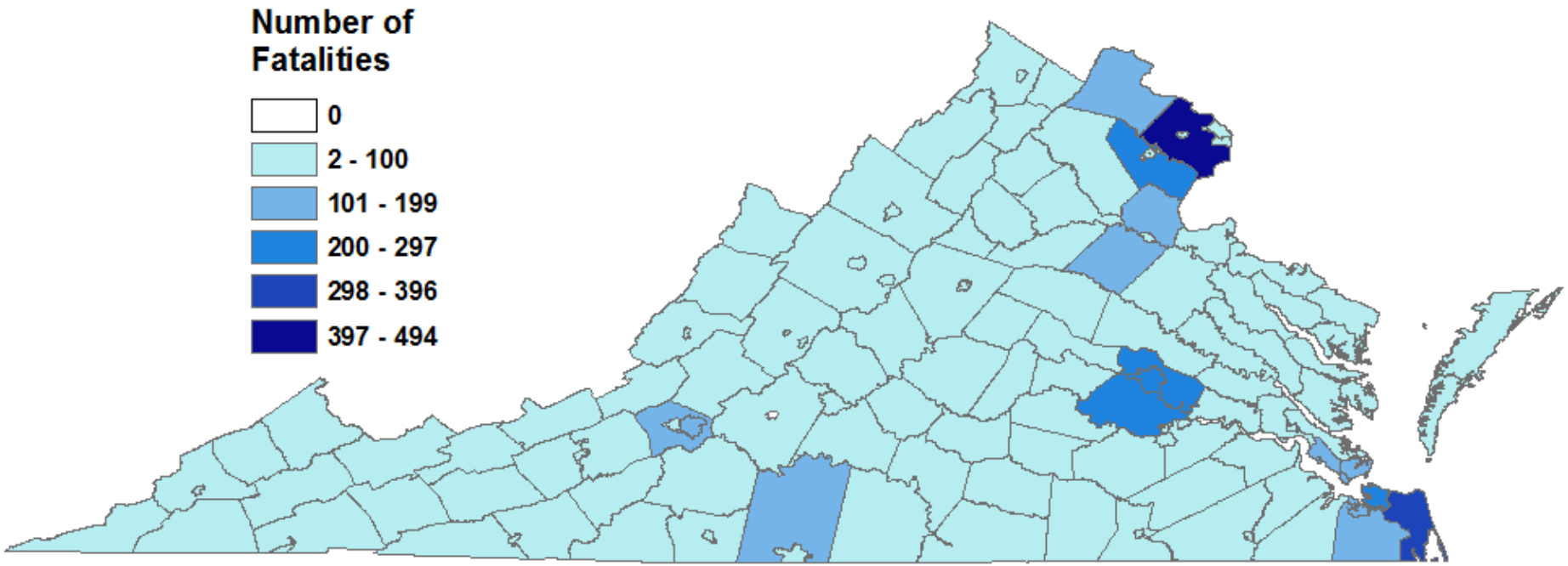
Locality of Residence	Accident Total	Accident Rate	Homicide Total	Homicide Rate	Natural Total	Natural Rate	Suicide Total	Suicide Rate	Undet. Total	Undet. Rate	Total	Total Rate
Highland County	4	181.0	0	0.0	0	0.0	0	0.0	0	0.0	**4**	**181.0**
Hopewell City	17	75.2	8	35.4	11	48.7	3	13.3	1	4.4	**40**	**177.0**
Isle of Wight County	12	32.5	1	2.7	7	18.9	6	16.2	1	2.7	**27**	**73.1**
James City County	37	48.4	2	2.6	13	17.0	11	14.4	0	0.0	**63**	**82.5**
King and Queen County	4	56.8	1	14.2	3	42.6	3	42.6	0	0.0	**11**	**156.2**
King George County	13	48.9	1	3.8	5	18.8	8	30.1	2	7.5	**29**	**109.1**
King William County	11	64.9	0	0.0	1	5.9	1	5.9	0	0.0	**13**	**76.7**
Lancaster County	12	111.3	0	0.0	2	18.5	1	9.3	0	0.0	**16**	**148.4**
Lee County	11	46.7	3	12.7	6	25.5	6	25.5	0	0.0	**26**	**110.4**
Lexington City	2	28.0	0	0.0	0	0.0	1	14.0	0	0.0	**3**	**42.0**
Loudoun County	60	14.7	6	1.5	37	9.1	40	9.8	2	0.5	**145**	**35.6**
Louisa County	22	59.8	2	5.4	4	10.9	6	16.3	0	0.0	**34**	**92.4**
Lunenburg County	8	66.2	1	8.3	7	57.9	1	8.3	1	8.3	**18**	**148.9**
Lynchburg City	40	48.7	6	7.3	20	24.4	16	19.5	1	1.2	**83**	**101.1**
Madison County	10	75.2	0	0.0	11	82.7	2	15.0	1	7.5	**24**	**180.5**
Manassas City	10	24.0	1	2.4	7	16.8	1	2.4	1	2.4	**20**	**48.0**
Manassas Park City	2	11.6	2	11.6	2	11.6	0	0.0	0	0.0	**6**	**34.7**
Martinsville City	18	139.5	2	15.5	7	54.3	3	23.3	1	7.8	**31**	**240.3**
Mathews County	2	22.7	1	11.4	3	34.1	2	22.7	1	11.4	**9**	**102.2**
Mecklenburg County	20	65.3	2	6.5	7	22.8	8	26.1	1	3.3	**38**	**124.0**
Middlesex County	5	46.4	1	9.3	2	18.6	2	18.6	0	0.0	**10**	**92.9**
Montgomery County	27	27.3	2	2.0	16	16.2	12	12.1	1	1.0	**58**	**58.6**
Nelson County	14	94.4	1	6.7	2	13.5	2	13.5	0	0.0	**19**	**128.1**
New Kent County	9	40.2	1	4.5	0	0.0	5	22.3	0	0.0	**15**	**67.0**
Newport News City	88	49.3	20	11.2	48	26.9	22	12.3	5	2.8	**183**	**102.4**
Norfolk City	112	45.9	37	15.2	87	35.6	32	13.1	5	2.0	**273**	**111.9**
Northampton County	5	42.6	1	8.5	4	34.1	1	8.5	0	0.0	**11**	**93.7**
Northumberland County	6	49.4	0	0.0	7	57.6	0	0.0	0	0.0	**13**	**107.0**
Norton City	2	50.4	0	0.0	1	25.2	2	50.4	0	0.0	**5**	**126.0**
Nottoway County	4	25.9	1	6.5	10	64.9	2	13.0	1	6.5	**18**	**116.7**

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
Orange County	22	60.0	3	8.2	8	21.8	3	8.2	1	2.7	**37**	**101.0**
Page County	18	75.2	0	0.0	6	25.1	4	16.7	1	4.2	**30**	**125.3**
Patrick County	12	67.9	3	17.0	9	50.9	3	17.0	0	0.0	**27**	**152.8**
Petersburg City	18	57.0	14	44.4	26	82.4	1	3.2	3	9.5	**62**	**196.4**
Pittsylvania County	39	64.0	3	4.9	38	62.3	22	36.1	2	3.3	**105**	**172.3**
Poquoson City	2	16.4	0	0.0	0	0.0	2	16.4	0	0.0	**4**	**32.8**
Portsmouth City	63	66.6	19	20.1	34	35.9	15	15.9	5	5.3	**137**	**144.8**
Powhatan County	6	20.6	0	0.0	10	34.3	1	3.4	0	0.0	**17**	**58.2**
Prince Edward County	5	21.8	1	4.4	8	34.9	5	21.8	0	0.0	**19**	**82.8**
Prince George County	12	31.5	2	5.3	4	10.5	9	23.6	0	0.0	**27**	**70.9**
Prince William County	111	23.7	6	1.3	64	13.7	49	10.5	6	1.3	**237**	**50.6**
Pulaski County	24	70.5	0	0.0	15	44.0	7	20.5	2	5.9	**48**	**140.9**
Radford City	2	10.9	0	0.0	0	0.0	2	10.9	0	0.0	**4**	**21.8**
Rappahannock County	1	13.8	0	0.0	2	27.6	1	13.8	0	0.0	**4**	**55.2**
Richmond City	126	55.1	41	17.9	81	35.4	28	12.2	5	2.2	**281**	**122.8**
Richmond County	1	11.1	1	11.1	4	44.3	4	44.3	1	11.1	**11**	**121.7**
Roanoke City	76	76.1	10	10.0	49	49.0	27	27.0	3	3.0	**165**	**165.1**
Roanoke County	58	61.7	6	6.4	22	23.4	23	24.4	1	1.1	**110**	**116.9**
Rockbridge County	10	44.0	0	0.0	9	39.6	5	22.0	0	0.0	**24**	**105.5**
Rockingham County	36	44.3	2	2.5	17	20.9	11	13.5	0	0.0	**67**	**82.5**
Russell County	5	18.7	1	3.7	12	44.9	1	3.7	2	7.5	**21**	**78.5**
Salem City	19	74.1	3	11.7	6	23.4	4	15.6	1	3.9	**33**	**128.7**
Scott County	3	13.9	2	9.3	7	32.5	5	23.2	1	4.6	**18**	**83.6**
Shenandoah County	18	41.4	0	0.0	12	27.6	6	13.8	0	0.0	**36**	**82.8**
Smyth County	12	39.4	1	3.3	14	45.9	6	19.7	0	0.0	**33**	**108.3**
Southampton County	9	51.2	0	0.0	15	85.3	3	17.1	0	0.0	**27**	**153.5**
Spotsylvania County	73	54.4	1	0.7	23	17.1	17	12.7	4	3.0	**118**	**87.9**
Stafford County	44	29.3	5	3.3	29	19.3	27	18.0	3	2.0	**108**	**72.0**
Staunton City	10	40.1	2	8.0	7	28.1	0	0.0	1	4.0	**20**	**80.3**
Suffolk City	22	24.1	3	3.3	20	21.9	12	13.2	2	2.2	**59**	**64.7**

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
Surry County	0	0.0	0	0.0	1	15.4	2	30.9	0	0.0	**3**	**46.3**
Sussex County	10	89.0	4	35.6	7	62.3	3	26.7	0	0.0	**24**	**213.6**
Tazewell County	18	44.1	1	2.4	19	46.5	10	24.5	1	2.4	**49**	**119.9**
Virginia Beach City	150	33.3	19	4.2	84	18.7	69	15.3	10	2.2	**332**	**73.7**
Warren County	21	52.5	0	0.0	13	32.5	7	17.5	0	0.0	**41**	**102.5**
Washington County	14	25.7	3	5.5	11	20.2	8	14.7	1	1.8	**37**	**68.0**
Waynesboro City	5	22.1	1	4.4	9	39.8	9	39.8	1	4.4	**25**	**110.5**
Westmoreland County	11	61.7	0	0.0	7	39.3	3	16.8	2	11.2	**23**	**129.0**
Williamsburg City	1	6.7	0	0.0	1	6.7	3	20.1	0	0.0	**5**	**33.6**
Winchester City	15	53.4	1	3.6	12	42.7	6	21.3	2	7.1	**36**	**128.1**
Wise County	18	47.4	2	5.3	9	23.7	7	18.4	2	5.3	**38**	**100.0**
Wythe County	10	34.8	1	3.5	7	24.3	9	31.3	2	7.0	**29**	**100.9**
York County	24	35.4	3	4.4	4	5.9	10	14.7	0	0.0	**41**	**60.4**
Subtotal (in-state)	**3238**	**38.0**	**407**	**4.8**	**1880**	**22.1**	**1173**	**13.8**	**159**	**1.9**	**6863**	**69.0**
Out of State	281	ND	19	ND	140	ND	36	ND	11	ND	**487**	**ND**
Unknown	14	ND	3	ND	16	ND	2	ND	4	ND	**39**	**ND**
Subtotal (out-of-state)	**295**	**ND**	**22**	**ND**	**156**	**ND**	**38**	**ND**	**15**	**ND**	**526**	**ND**
TOTAL	**3533**	**41.5**	**429**	**5.0**	**2036**	**23.9**	**1211**	**14.2**	**174**	**2.0**	**7389**	**86.7**

* 'ND' represents no denominator for which to calculate rate
** Fatalities certified as 'undefined for fetal deaths' manner of death are omitted by counts and rates by locality because of small case counts, but are included in the summed total

Map 1.1 Number of OCME Cases by Locality of Residence, 2018



Map 1.2 Rates of OCME Cases by Locality of Residence, 2018

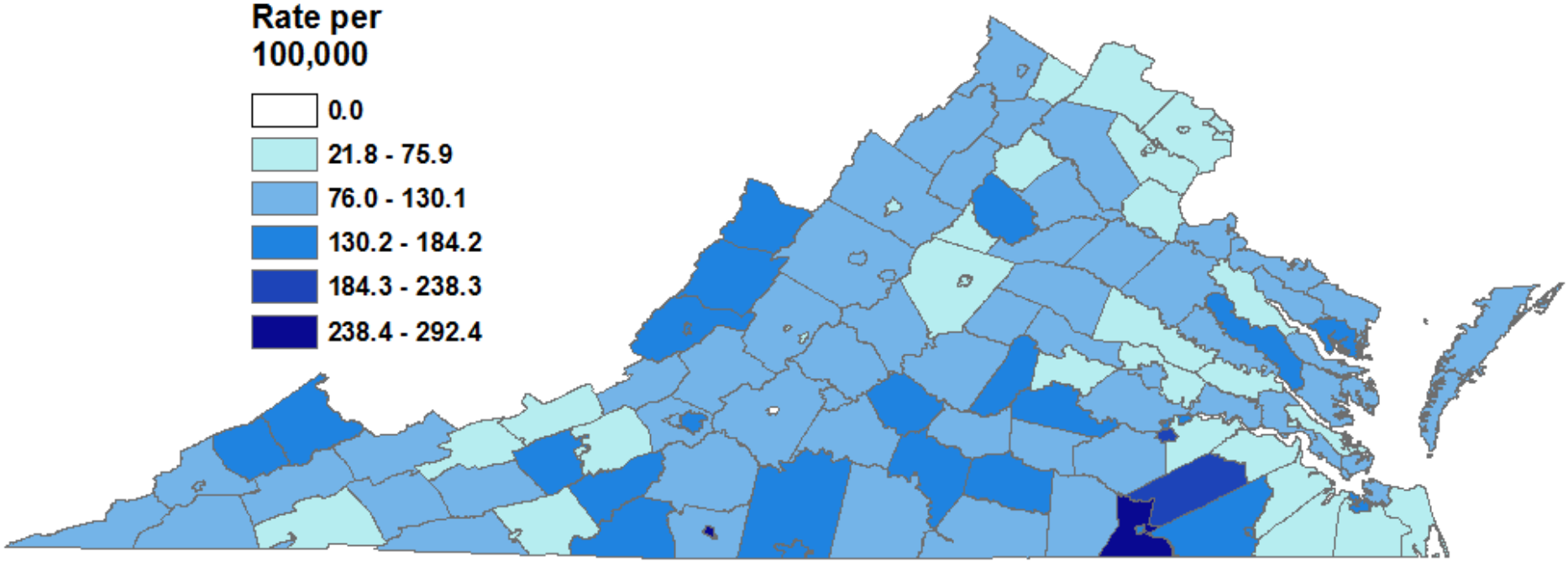


Table 1.9 Number and Rate of OCME Cases by Manner of Death and Locality of Injury, 2018

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	17	52.4	1	3.1	14	43.2	4	12.3	3	9.3	**39**	**120.3**
Albemarle County	41	37.7	1	0.9	9	8.3	14	12.9	0	0.0	**65**	**59.8**
Alexandria City	16	10.0	3	1.9	35	21.8	10	6.2	2	1.2	**66**	**41.1**
Alleghany County	6	40.2	0	0.0	11	73.8	3	20.1	1	6.7	**21**	**140.8**
Amelia County	9	69.2	0	0.0	4	30.7	2	15.4	0	0.0	**15**	**115.3**
Amherst County	17	53.7	0	0.0	12	37.9	10	31.6	1	3.2	**40**	**126.3**
Appomattox County	7	44.2	0	0.0	5	31.6	3	18.9	0	0.0	**15**	**94.7**
Arlington County	35	14.7	3	1.3	46	19.4	10	4.2	2	0.8	**96**	**40.4**
Augusta County	36	47.7	2	2.7	12	15.9	16	21.2	2	2.7	**68**	**90.1**
Bath County	3	69.9	0	0.0	1	23.3	4	93.2	0	0.0	**8**	**186.4**
Bedford County	42	53.3	3	3.8	18	22.9	15	19.0	0	0.0	**78**	**99.1**
Bland County	1	15.9	0	0.0	1	15.9	1	15.9	0	0.0	**3**	**47.7**
Botetourt County	18	54.1	0	0.0	12	36.1	6	18.0	0	0.0	**36**	**108.2**
Bristol City	5	30.3	3	18.2	10	60.7	2	12.1	0	0.0	**20**	**121.3**
Brunswick County	13	79.3	1	6.1	4	24.4	4	24.4	0	0.0	**22**	**134.3**
Buchanan County	17	80.1	0	0.0	11	51.8	7	33.0	0	0.0	**35**	**164.9**
Buckingham County	8	47.1	0	0.0	2	11.8	3	17.6	0	0.0	**13**	**76.5**
Buena Vista City	1	16.0	0	0.0	1	16.0	0	0.0	1	16.0	**3**	**48.1**
Campbell County	27	49.1	2	3.6	15	27.3	12	21.8	0	0.0	**56**	**101.9**
Caroline County	29	94.2	0	0.0	5	16.2	6	19.5	0	0.0	**40**	**130.0**
Carroll County	8	27.0	0	0.0	10	33.7	4	13.5	0	0.0	**22**	**74.2**
Charles City County	3	43.2	0	0.0	0	0.0	1	14.4	0	0.0	**4**	**57.6**
Charlotte County	7	58.6	1	8.4	3	25.1	4	33.5	0	0.0	**15**	**125.6**
Charlottesville City	27	56.1	1	2.1	3	6.2	9	18.7	2	4.2	**42**	**87.3**
Chesapeake City	80	33.0	11	4.5	45	18.5	31	12.8	6	2.5	**173**	**71.3**
Chesterfield County	144	41.3	5	1.4	24	6.9	48	13.8	6	1.7	**227**	**65.1**
Clarke County	15	103.3	0	0.0	0	0.0	4	27.5	0	0.0	**19**	**130.8**
Colonial Heights City	9	50.5	0	0.0	3	16.8	4	22.4	0	0.0	**16**	**89.7**
Covington City	3	54.9	0	0.0	3	54.9	2	36.6	0	0.0	**8**	**146.5**
Craig County	3	59.2	1	19.7	2	39.5	1	19.7	0	0.0	**7**	**138.2**

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
Culpeper County	30	57.8	1	1.9	11	21.2	11	21.2	2	3.9	**55**	**106.1**
Cumberland County	4	40.8	0	0.0	0	0.0	3	30.6	0	0.0	**7**	**71.4**
Danville City	18	44.2	13	31.9	14	34.4	8	19.7	3	7.4	**56**	**137.6**
Dickenson County	8	55.1	0	0.0	5	34.4	5	34.4	1	6.9	**19**	**130.8**
Dinwiddie County	12	42.1	2	7.0	9	31.5	3	10.5	0	0.0	**26**	**91.1**
Emporia City	4	78.1	1	19.5	2	39.1	2	39.1	1	19.5	**10**	**195.3**
Essex County	4	36.6	0	0.0	2	18.3	1	9.2	1	9.2	**8**	**73.3**
Fairfax City	12	48.8	0	0.0	4	16.3	2	8.1	0	0.0	**18**	**73.2**
Fairfax County	245	21.3	14	1.2	152	13.2	103	9.0	7	0.6	**521**	**45.3**
Falls Church City	1	6.8	0	0.0	1	6.8	3	20.3	0	0.0	**5**	**33.8**
Fauquier County	54	76.4	4	5.7	17	24.1	6	8.5	1	1.4	**82**	**116.0**
Floyd County	12	76.0	0	0.0	4	25.3	8	50.6	0	0.0	**24**	**151.9**
Fluvanna County	13	48.5	0	0.0	2	7.5	3	11.2	1	3.7	**19**	**70.9**
Franklin City	3	37.4	0	0.0	5	62.4	0	0.0	2	25.0	**10**	**124.8**
Franklin County	42	74.7	1	1.8	15	26.7	5	8.9	2	3.6	**65**	**115.7**
Frederick County	38	43.0	1	1.1	15	17.0	12	13.6	1	1.1	**67**	**75.8**
Fredericksburg City	23	78.9	2	6.9	5	17.2	5	17.2	1	3.4	**36**	**123.5**
Galax City	0	0.0	0	0.0	0	0.0	1	15.6	0	0.0	**1**	**15.6**
Giles County	7	41.6	1	5.9	3	17.8	4	23.7	0	0.0	**15**	**89.1**
Gloucester County	20	53.5	0	0.0	8	21.4	8	21.4	0	0.0	**36**	**96.4**
Goochland County	13	55.9	0	0.0	5	21.5	3	12.9	1	4.3	**22**	**94.6**
Grayson County	4	25.6	0	0.0	4	25.6	5	32.0	0	0.0	**13**	**83.2**
Greene County	8	40.4	0	0.0	1	5.1	4	20.2	1	5.1	**14**	**70.8**
Greensville County	3	25.8	0	0.0	9	77.4	5	43.0	0	0.0	**17**	**146.2**
Halifax County	19	55.7	4	11.7	9	26.4	5	14.7	1	2.9	**38**	**111.4**
Hampton City	65	48.4	16	11.9	40	29.8	11	8.2	4	3.0	**136**	**101.3**
Hanover County	48	44.8	3	2.8	8	7.5	18	16.8	0	0.0	**77**	**71.8**
Harrisonburg City	14	25.9	3	5.6	8	14.8	6	11.1	0	0.0	**31**	**57.4**
Henrico County	131	39.8	10	3.0	34	10.3	32	9.7	4	1.2	**211**	**64.1**
Henry County	31	60.8	3	5.9	15	29.4	11	21.6	2	3.9	**62**	**121.7**

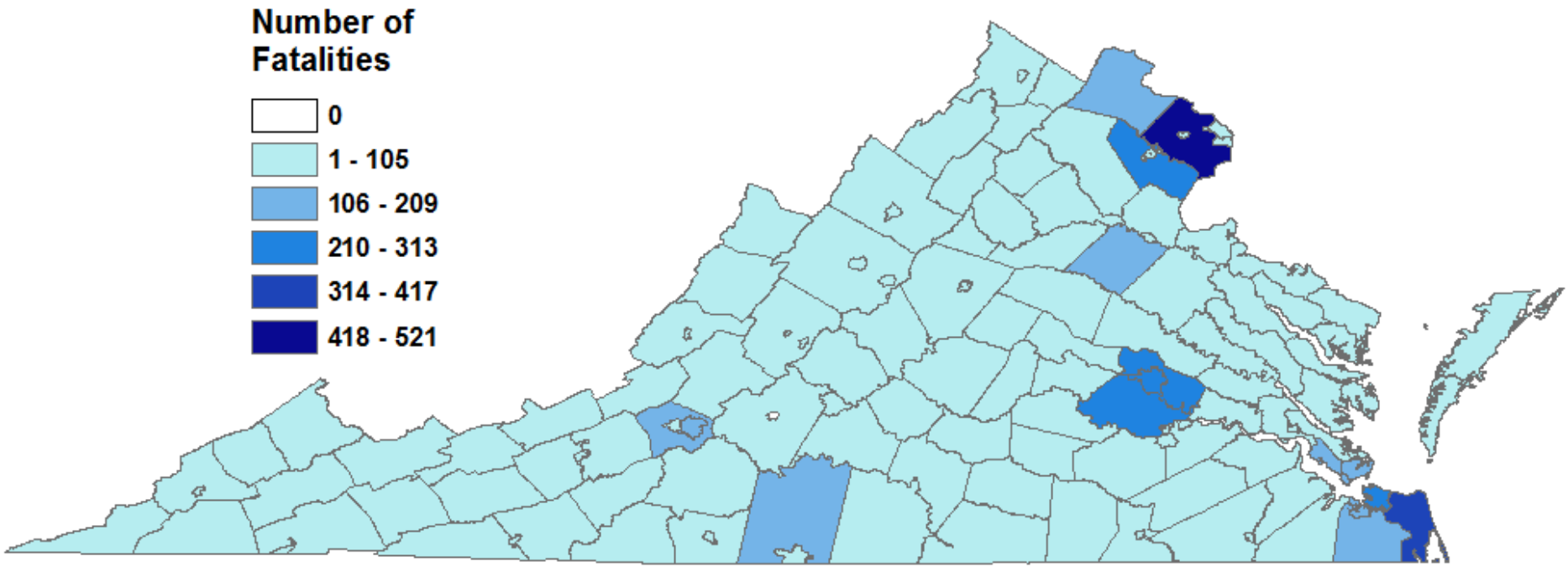
Locality of Injury	Accident Total	Accident Rate	Homicide Total	Homicide Rate	Natural Total	Natural Rate	Suicide Total	Suicide Rate	Undet. Total	Undet. Rate	Total	Total Rate
Highland County	5	226.2	0	0.0	0	0.0	0	0.0	0	0.0	**5**	**226.2**
Hopewell City	16	70.8	7	31.0	6	26.6	5	22.1	0	0.0	**34**	**150.5**
Isle of Wight County	13	35.2	1	2.7	7	18.9	8	21.6	0	0.0	**29**	**78.5**
James City County	34	44.5	1	1.3	19	24.9	11	14.4	0	0.0	**65**	**85.1**
King and Queen County	6	85.2	1	14.2	2	28.4	3	42.6	0	0.0	**12**	**170.4**
King George County	14	52.7	0	0.0	3	11.3	8	30.1	0	0.0	**25**	**94.1**
King William County	8	47.2	0	0.0	0	0.0	1	5.9	0	0.0	**9**	**53.1**
Lancaster County	12	111.3	0	0.0	1	9.3	1	9.3	0	0.0	**15**	**139.1**
Lee County	13	55.2	3	12.7	7	29.7	6	25.5	0	0.0	**29**	**123.2**
Lexington City	1	14.0	0	0.0	0	0.0	1	14.0	0	0.0	**2**	**28.0**
Loudoun County	63	15.5	5	1.2	42	10.3	36	8.8	4	1.0	**150**	**36.9**
Louisa County	23	62.5	1	2.7	1	2.7	8	21.8	0	0.0	**33**	**89.7**
Lunenburg County	5	41.4	1	8.3	0	0.0	0	0.0	1	8.3	**7**	**57.9**
Lynchburg City	41	49.9	7	8.5	16	19.5	16	19.5	3	3.7	**83**	**101.1**
Madison County	9	67.7	0	0.0	10	75.2	5	37.6	0	0.0	**24**	**180.5**
Manassas City	11	26.4	1	2.4	7	16.8	2	4.8	1	2.4	**22**	**52.8**
Manassas Park City	3	17.3	2	11.6	2	11.6	0	0.0	0	0.0	**7**	**40.4**
Martinsville City	16	124.0	2	15.5	6	46.5	2	15.5	1	7.8	**27**	**209.3**
Mathews County	1	11.4	1	11.4	2	22.7	2	22.7	0	0.0	**6**	**68.2**
Mecklenburg County	25	81.6	2	6.5	5	16.3	7	22.8	0	0.0	**39**	**127.2**
Middlesex County	7	65.0	1	9.3	1	9.3	2	18.6	0	0.0	**11**	**102.1**
Montgomery County	32	32.3	1	1.0	18	18.2	14	14.1	1	1.0	**66**	**66.7**
Nelson County	14	94.4	1	6.7	2	13.5	1	6.7	0	0.0	**18**	**121.3**
New Kent County	9	40.2	0	0.0	3	13.4	4	17.9	0	0.0	**16**	**71.5**
Newport News City	91	50.9	25	14.0	49	27.4	25	14.0	5	2.8	**195**	**109.2**
Norfolk City	115	47.1	37	15.2	87	35.6	35	14.3	7	2.9	**281**	**115.1**
Northampton County	9	76.7	0	0.0	7	59.7	1	8.5	0	0.0	**17**	**144.9**
Northumberland County	8	65.9	0	0.0	2	16.5	1	8.2	0	0.0	**11**	**90.6**
Norton City	1	25.2	0	0.0	1	25.2	2	50.4	0	0.0	**4**	**100.8**
Nottoway County	4	25.9	1	6.5	7	45.4	3	19.5	2	13.0	**17**	**110.2**

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
Orange County	20	54.6	2	5.5	6	16.4	4	10.9	2	5.5	**34**	**92.8**
Page County	18	75.2	0	0.0	9	37.6	4	16.7	0	0.0	**32**	**133.7**
Patrick County	14	79.2	3	17.0	9	50.9	4	22.6	0	0.0	**30**	**169.8**
Petersburg City	21	66.5	17	53.9	18	57.0	1	3.2	0	0.0	**57**	**180.6**
Pittsylvania County	45	73.8	3	4.9	36	59.1	20	32.8	2	3.3	**107**	**175.6**
Poquoson City	1	8.2	0	0.0	0	0.0	2	16.4	0	0.0	**3**	**24.6**
Portsmouth City	70	74.0	20	21.1	34	35.9	16	16.9	5	5.3	**146**	**154.3**
Powhatan County	8	27.4	0	0.0	8	27.4	2	6.9	0	0.0	**18**	**61.7**
Prince Edward County	7	30.5	1	4.4	5	21.8	5	21.8	0	0.0	**18**	**78.4**
Prince George County	12	31.5	2	5.3	4	10.5	7	18.4	0	0.0	**25**	**65.6**
Prince William County	102	21.8	8	1.7	71	15.2	50	10.7	6	1.3	**238**	**50.9**
Pulaski County	23	67.5	0	0.0	17	49.9	7	20.5	2	5.9	**49**	**143.8**
Radford City	1	5.5	0	0.0	0	0.0	2	10.9	0	0.0	**3**	**16.4**
Rappahannock County	0	0.0	0	0.0	2	27.6	1	13.8	0	0.0	**3**	**41.4**
Richmond City	144	62.9	55	24.0	51	22.3	31	13.5	5	2.2	**286**	**125.0**
Richmond County	2	22.1	1	11.1	1	11.1	2	22.1	1	11.1	**7**	**77.5**
Roanoke City	85	85.1	16	16.0	49	49.0	28	28.0	2	2.0	**180**	**180.1**
Roanoke County	55	58.5	7	7.4	29	30.8	24	25.5	1	1.1	**116**	**123.3**
Rockbridge County	16	70.3	1	4.4	12	52.7	5	22.0	0	0.0	**34**	**149.4**
Rockingham County	34	41.8	1	1.2	18	22.2	11	13.5	1	1.2	**66**	**81.2**
Russell County	4	15.0	0	0.0	10	37.4	1	3.7	2	7.5	**17**	**63.6**
Salem City	15	58.5	1	3.9	4	15.6	3	11.7	1	3.9	**24**	**93.6**
Scott County	5	23.2	2	9.3	8	37.2	6	27.9	1	4.6	**22**	**102.2**
Shenandoah County	16	36.8	1	2.3	11	25.3	6	13.8	1	2.3	**35**	**80.5**
Smyth County	11	36.1	1	3.3	16	52.5	7	23.0	1	3.3	**36**	**118.1**
Southampton County	14	79.6	2	11.4	15	85.3	3	17.1	0	0.0	**34**	**193.3**
Spotsylvania County	71	52.9	3	2.2	15	11.2	17	12.7	1	0.7	**107**	**79.7**
Stafford County	46	30.7	4	2.7	25	16.7	27	18.0	2	1.3	**104**	**69.4**
Staunton City	7	28.1	1	4.0	9	36.1	3	12.0	1	4.0	**21**	**84.3**
Suffolk City	30	32.9	2	2.2	17	18.6	12	13.2	1	1.1	**62**	**68.0**

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
Surry County	0	0.0	0	0.0	0	0.0	1	15.4	0	0.0	**1**	**15.4**
Sussex County	9	80.1	2	17.8	2	17.8	3	26.7	0	0.0	**16**	**142.4**
Tazewell County	20	49.0	0	0.0	19	46.5	8	19.6	0	0.0	**47**	**115.0**
Virginia Beach City	149	33.1	19	4.2	86	19.1	70	15.5	11	2.4	**335**	**74.4**
Warren County	20	50.0	0	0.0	15	37.5	8	20.0	0	0.0	**43**	**107.5**
Washington County	19	34.9	4	7.4	14	25.7	8	14.7	2	3.7	**47**	**86.4**
Waynesboro City	6	26.5	1	4.4	8	35.4	9	39.8	1	4.4	**25**	**110.5**
Westmoreland County	9	50.5	0	0.0	2	11.2	3	16.8	1	5.6	**15**	**84.1**
Williamsburg City	4	26.9	0	0.0	5	33.6	4	26.9	0	0.0	**13**	**87.3**
Winchester City	17	60.5	1	3.6	13	46.3	8	28.5	1	3.6	**40**	**142.3**
Wise County	22	57.9	3	7.9	8	21.0	8	21.0	1	2.6	**42**	**110.5**
Wythe County	8	27.8	2	7.0	7	24.3	10	34.8	0	0.0	**27**	**93.9**
York County	29	42.7	4	5.9	3	4.4	8	11.8	0	0.0	**44**	**64.9**
Subtotal (in-state)	**3351**	**39.3**	**408**	**4.8**	**1732**	**20.3**	**1202**	**14.1**	**142**	**1.7**	**6841**	**80.3**
Out of State	73	ND	8	ND	11	ND	2	ND	4	ND	**98**	**ND**
Unknown	109	ND	13	ND	293	ND	7	ND	28	ND	**450**	**ND**
Subtotal (out-of-state)	**182**	**ND**	**21**	**ND**	**304**	**ND**	**9**	**ND**	**32**	**ND**	**548**	**ND**
TOTAL	**3533**	**41.5**	**429**	**5.0**	**2036**	**23.9**	**1211**	**14.2**	**174**	**2.0**	**7389**	**86.7**

* 'ND' represents no denominator for which to calculate rate
** Fatalities certified as 'undefined for fetal deaths' manner of death are omitted by counts and rates by locality because of small case counts, but are included in the summed total

Map 1.3 Number of OCME Cases by Locality of Injury, 2018



Map 1.4 Rate of OCME Cases by Locality of Injury, 2018

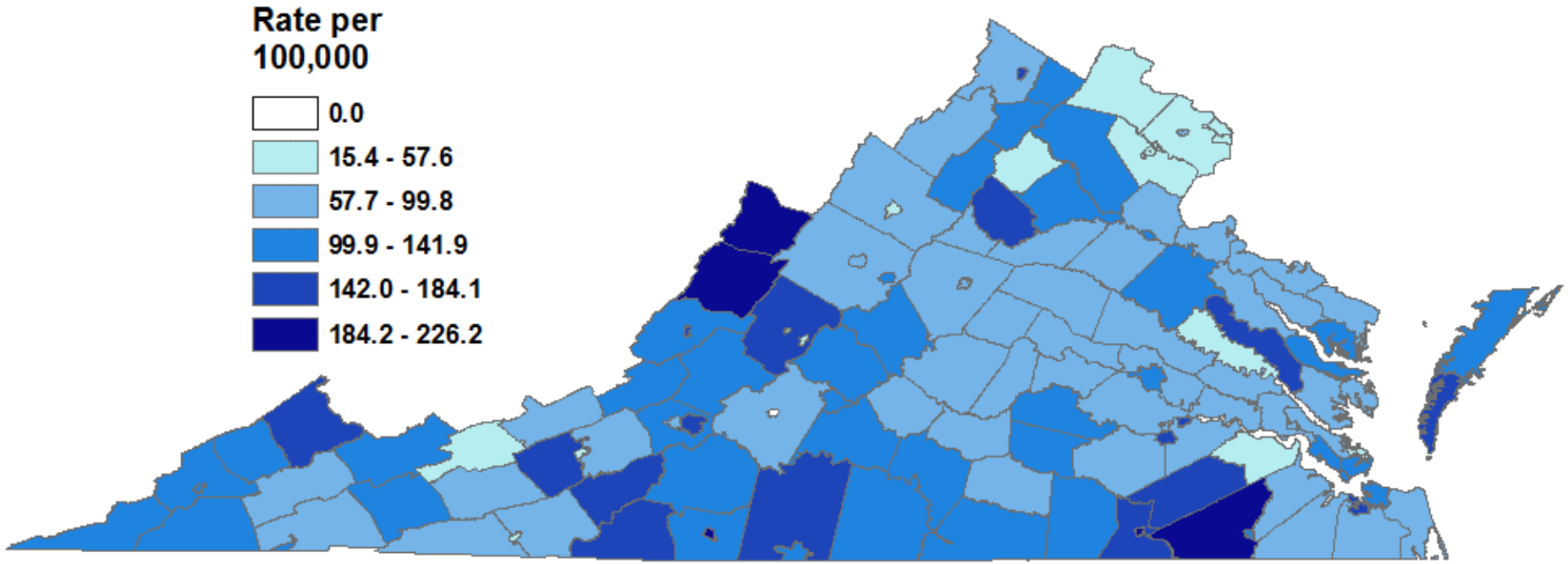


Table 1.10 Number of OCME Cases by Manner of Death and Locality of Death, 2018

Locality of Death	Accident Total	Homicide Total	Natural Total	Suicide Total	Undet. Total	Total
Accomack County	19	1	14	4	3	41
Albemarle County	36	1	14	17	0	68
Alexandria City	18	3	36	9	4	70
Alleghany County	7	0	13	3	1	24
Amelia County	6	0	4	1	0	11
Amherst County	4	0	9	8	0	21
Appomattox County	2	0	3	3	0	8
Arlington County	47	3	48	11	2	111
Augusta County	36	2	15	16	2	71
Bath County	1	0	1	4	0	6
Bedford County	24	3	15	14	0	56
Bland County	1	0	0	1	0	2
Botetourt County	11	0	10	5	0	26
Bristol City	6	2	10	2	0	20
Brunswick County	12	0	7	3	0	22
Buchanan County	17	0	11	7	0	35
Buckingham County	4	0	3	1	0	8
Buena Vista City	0	0	1	0	0	1
Campbell County	13	3	14	12	0	42
Caroline County	19	0	8	5	0	32
Carroll County	6	0	10	4	0	20
Charles City County	4	0	0	1	0	5
Charlotte County	4	1	4	2	0	11
Charlottesville City	92	5	13	16	7	134
Chesapeake City	62	6	44	30	3	145
Chesterfield County	101	2	56	46	4	209
Clarke County	12	0	0	4	0	16
Colonial Heights City	5	0	4	3	0	12
Covington City	0	0	1	1	0	2
Craig County	3	1	2	1	0	7
Culpeper County	29	1	10	7	2	49
Cumberland County	2	0	3	2	0	7
Danville City	21	13	19	9	5	67
Dickenson County	11	0	6	6	0	23
Dinwiddie County	9	1	10	2	0	22
Emporia City	4	1	6	1	1	13
Essex County	4	0	6	0	1	11
Fairfax City	8	0	3	1	0	12
Fairfax County	311	20	155	112	12	610
Falls Church City	2	0	0	2	0	4
Fauquier County	38	4	19	5	1	67
Floyd County	5	0	4	8	0	17

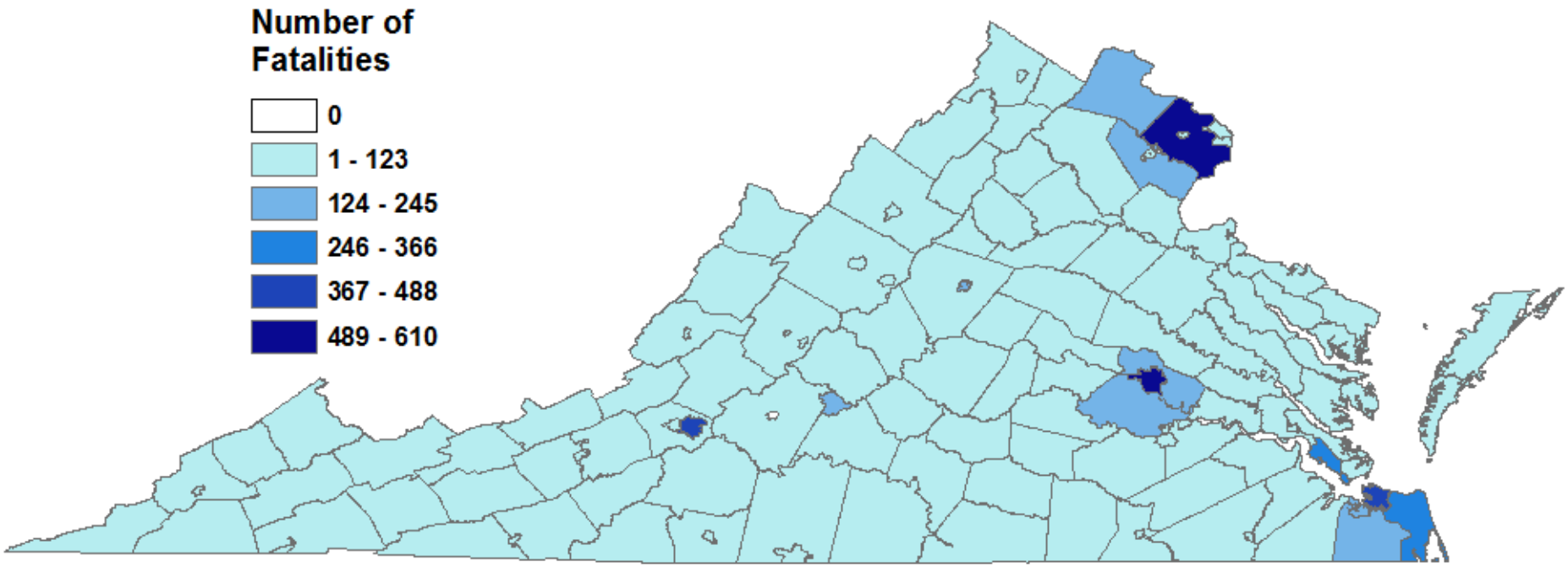
Locality of Death	Accident Total	Homicide Total	Natural Total	Suicide Total	Undet. Total	Total
Fluvanna County	12	0	5	3	1	21
Franklin City	4	1	5	0	1	11
Franklin County	27	1	15	4	2	49
Frederick County	21	1	11	10	0	43
Fredericksburg City	68	4	13	15	2	102
Galax City	2	0	0	1	0	3
Giles County	6	1	3	4	0	14
Gloucester County	21	1	10	6	0	38
Goochland County	10	0	7	3	0	20
Grayson County	4	0	4	5	0	13
Greene County	7	0	1	4	0	12
Greensville County	1	0	15	3	0	19
Halifax County	17	4	13	5	1	40
Hampton City	50	11	40	10	5	116
Hanover County	44	3	12	15	0	74
Harrisonburg City	12	1	8	6	0	27
Henrico County	117	7	57	31	5	217
Henry County	15	3	11	10	1	40
Highland County	3	0	0	0	0	3
Hopewell City	21	6	12	4	1	44
Isle of Wight County	10	0	7	6	0	23
James City County	21	0	15	9	0	45
King and Queen County	3	1	4	3	0	11
King George County	11	1	6	7	0	25
King William County	4	0	1	1	0	6
Lancaster County	9	0	1	1	0	12
Lee County	9	1	6	6	0	22
Lexington City	2	0	0	1	0	3
Loudoun County	45	4	42	34	3	128
Louisa County	17	0	5	7	0	29
Lunenburg County	5	0	5	0	0	10
Lynchburg City	85	7	26	18	3	139
Madison County	9	0	10	5	0	24
Manassas City	11	2	9	2	1	25
Manassas Park City	0	0	0	0	0	0
Martinsville City	25	1	8	1	1	36
Mathews County	3	0	3	1	1	8
Mecklenburg County	18	2	10	8	2	40
Middlesex County	2	1	2	2	0	7
Montgomery County	29	1	17	12	1	60
Nelson County	10	1	3	0	0	14
New Kent County	5	0	2	4	0	11

Locality of Death	Accident Total	Homicide Total	Natural Total	Suicide Total	Undet. Total	Total
Newport News City	130	34	50	30	4	248
Norfolk City	199	51	93	41	13	397
Northampton County	6	0	7	1	0	14
Northumberland County	4	0	7	1	0	12
Norton City	3	0	1	2	1	7
Nottoway County	3	1	5	2	2	13
Orange County	11	2	5	4	2	24
Page County	13	0	8	4	0	25
Patrick County	10	3	9	4	0	26
Petersburg City	32	14	46	2	5	99
Pittsylvania County	28	3	30	18	0	80
Poquoson City	1	0	0	2	0	3
Portsmouth City	62	17	35	16	7	138
Powhatan County	5	0	10	2	0	17
Prince Edward County	6	0	14	8	0	28
Prince George County	8	1	5	7	1	22
Prince William County	90	8	69	49	6	223
Pulaski County	18	0	16	6	2	42
Radford City	1	0	0	1	0	2
Rappahannock County	0	0	1	1	0	2
Richmond City	322	72	118	48	11	571
Richmond County	1	1	1	2	1	6
Roanoke City	238	21	73	46	7	385
Roanoke County	20	6	21	18	0	65
Rockbridge County	12	1	11	5	0	29
Rockingham County	32	2	19	10	1	64
Russell County	5	0	10	1	1	17
Salem City	14	0	6	3	1	24
Scott County	5	2	7	5	1	20
Shenandoah County	12	2	11	6	1	32
Smyth County	10	1	11	6	2	30
Southampton County	11	1	14	3	1	30
Spotsylvania County	51	1	25	13	3	93
Stafford County	31	3	28	21	3	86
Staunton City	3	0	7	3	1	14
Suffolk City	24	2	17	12	1	56
Surry County	1	0	1	1	0	3
Sussex County	5	4	6	3	0	18
Tazewell County	16	0	15	10	1	42
Virginia Beach City	135	20	85	68	9	317
Warren County	15	0	13	8	0	37
Washington County	20	3	20	7	2	52

Locality of Death	Accident Total	Homicide Total	Natural Total	Suicide Total	Undet. Total	Total
Waynesboro City	1	1	7	6	1	16
Westmoreland County	3	0	8	3	0	14
Williamsburg City	4	0	3	4	0	11
Winchester City	49	1	22	11	2	85
Wise County	23	4	8	7	1	43
Wythe County	5	2	7	10	0	24
York County	20	3	11	10	0	44
Subtotal (in-state)	**3529**	**426**	**2031**	**1207**	**173**	**7372**
Out of State	3	3	3	3	1	13
Unknown	1	0	2	1	0	4
Subtotal (out-of-state)	**4**	**3**	**5**	**4**	**1**	**17**
TOTAL	3533	429	2036	1211	174	7389

* Fatalities certified as 'undefined for fetal deaths' manner of death are omitted by counts and rates by locality because of small case counts, but are included in the summed total

Map 1.5 Number of OCME Cases by Locality of Death, 2018



Virginia Department of Health

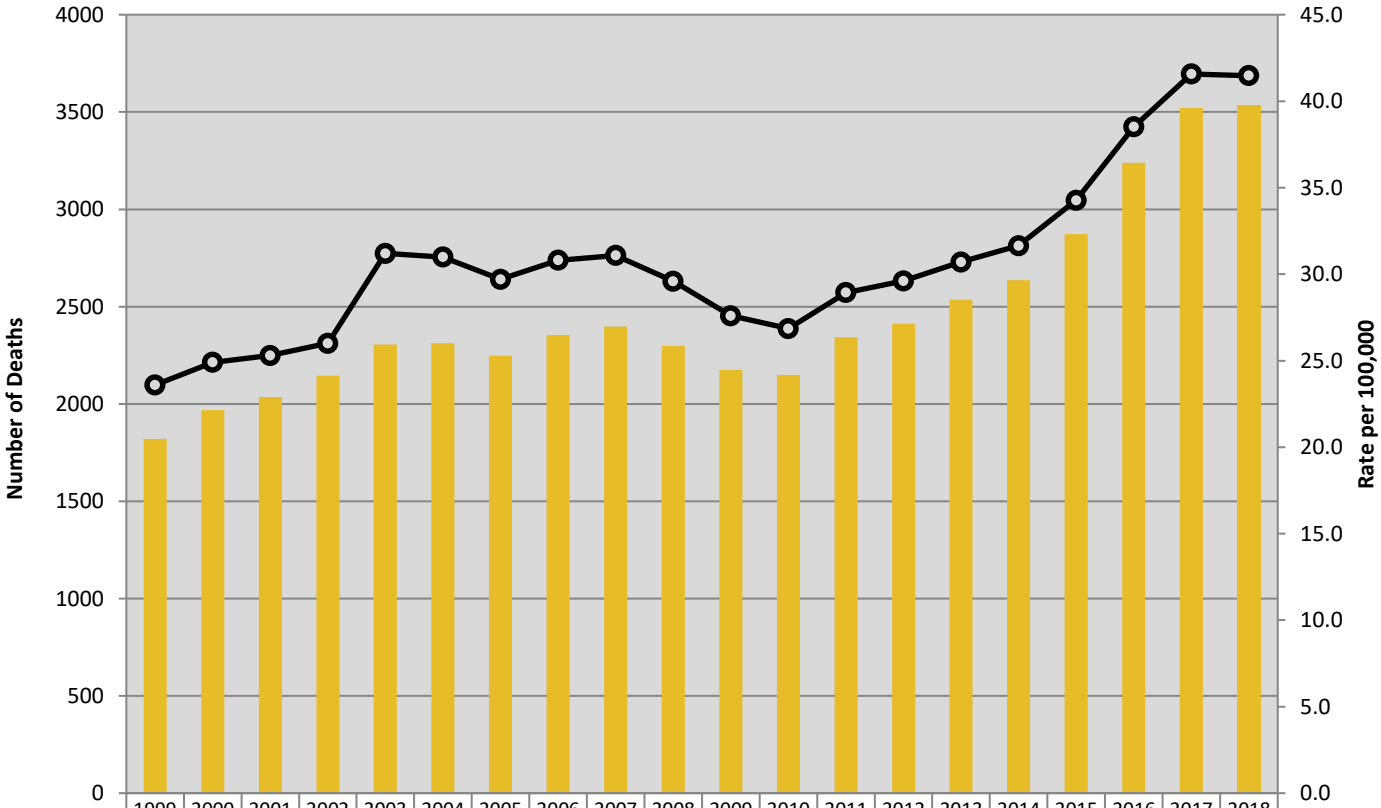
SECTION 2: MANNERS OF DEATH

ACCIDENTAL DEATHS (N=3,533)

Accidents accounted for 47.8% of the deaths investigated by the OCME in 2018, which is the greatest proportion of deaths by any manner.

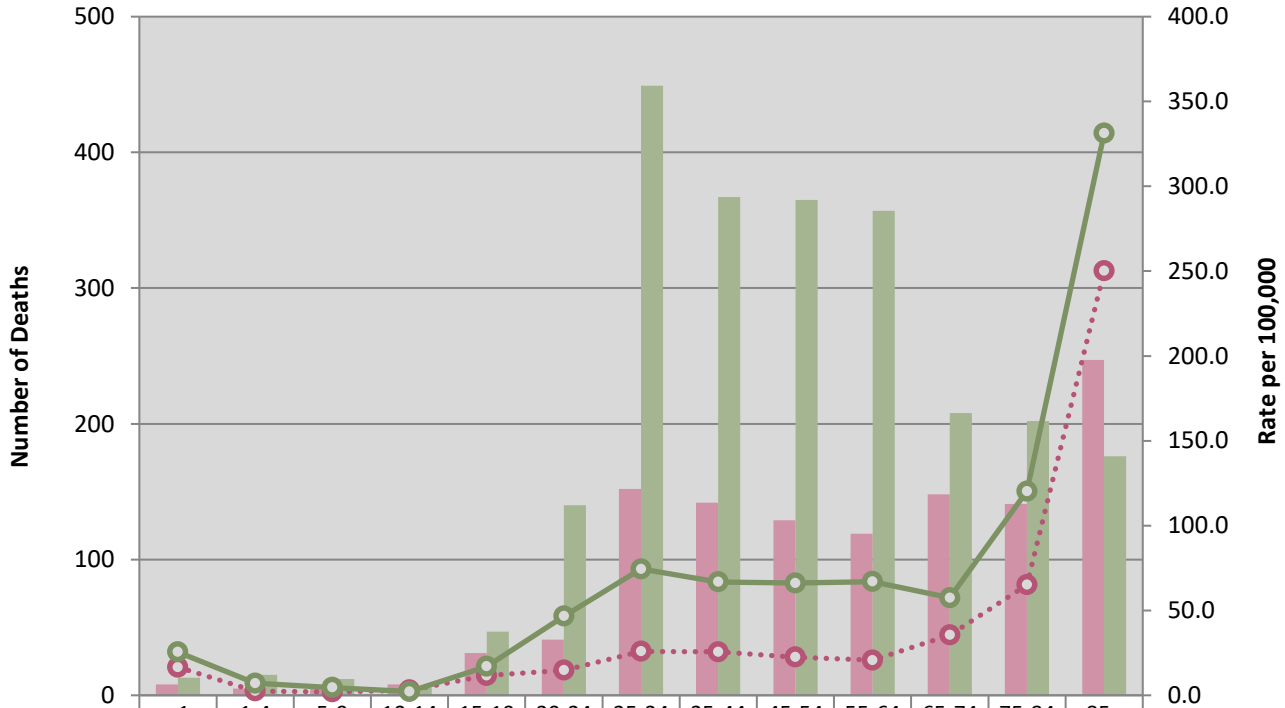
- The total number of accidental deaths in 2018 were nearly identical to 2017
- For the fourth year in a row, fatal drug overdoses were the most common cause of accidental death (37.7%), followed by accidental motor vehicle deaths (26.7%)
- Seniors 85 years and older had the highest mortality rate due to falls (235.0 per 100,000 persons)
- Of the 2,358 (66.7%) of decedents of accidental death that were tested for ethanol, 716 (30.4%) had ethanol detected through toxicology. Of those tested, 455 (19.3%) 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, 1999-2018



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Deaths	1820	1969	2035	2145	2305	2312	2248	2354	2397	2299	2175	2149	2343	2412	2536	2635	2873	3240	3521	3533
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	41.6	41.5

Figure 2.2 Number and Rate of Accidental Deaths by Age Group and Gender, 2018



	<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	8	5	5	8	31	41	152	142	129	119	148	141	247
Male	13	15	12	6	47	140	449	367	365	357	208	202	176
Female Rate	16.5	2.5	2.0	3.1	11.6	14.7	25.9	25.6	22.5	20.7	35.5	65.1	250.1
Male Rate	25.6	7.1	4.6	2.2	17.1	46.6	74.4	66.8	66.1	67.0	57.5	120.3	331.2

Figure 2.3 Percentage of Accidental Deaths by Race/Ethnicity, 2018

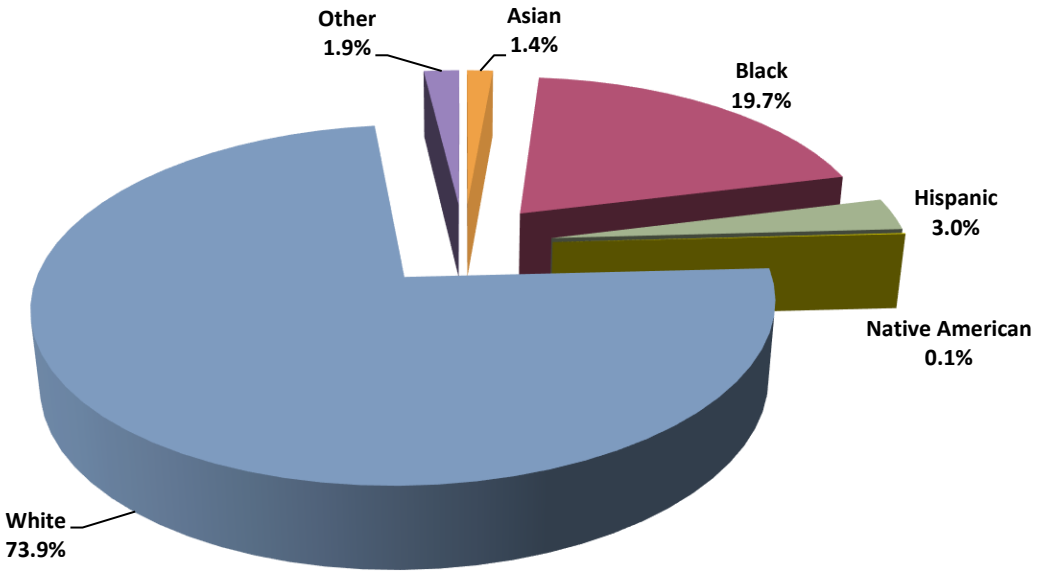
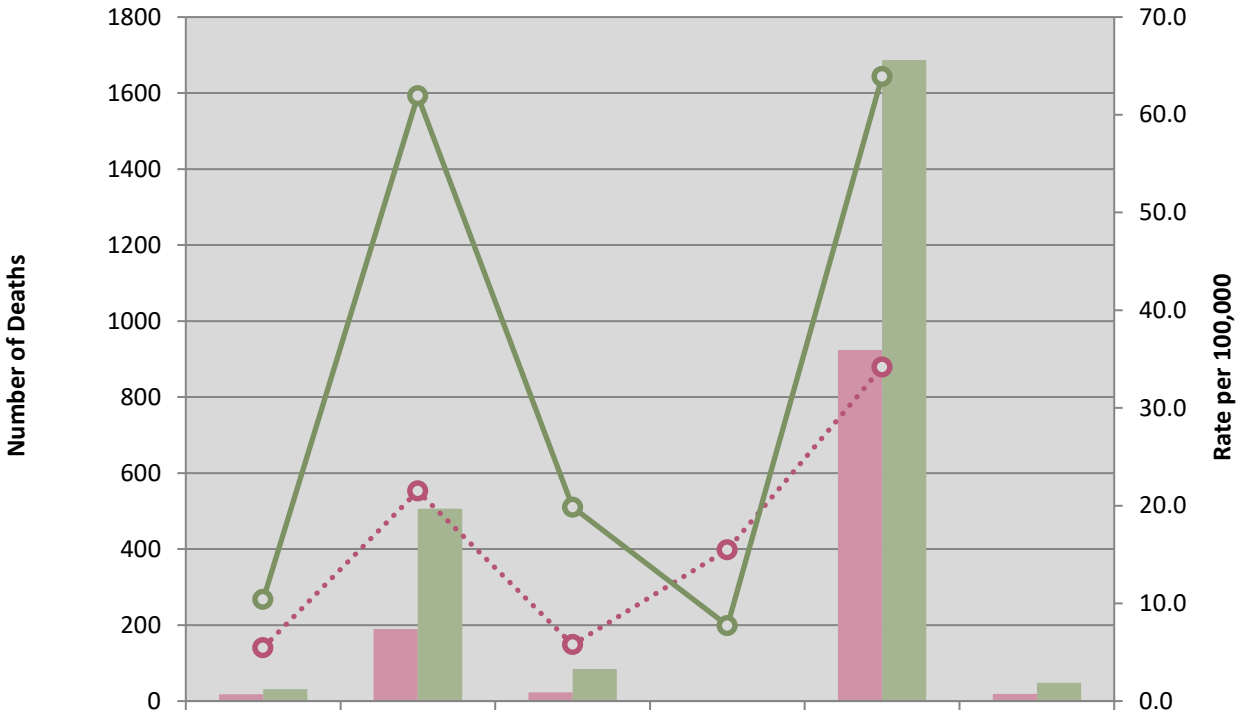


Figure 2.4 Number and Rate of Accidental Deaths by Race/Ethnicity and Gender, 2018



	Asian	Black	Hispanic	Native American	White	Other
Female	18	190	23	2	924	19
Male	31	506	84	1	1687	48
Female Rate	5.5	21.5	5.8	15.5	34.2	*
Male Rate	10.4	61.9	19.9	7.7	63.9	*

*No rate can be calculated

Note: 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, 2018

Method of Death		Autopsied	Total Cases
Animal/Insect			
	Bit, stung, or kicked by an animal/insect	1	**3**
Asphyxia			
	Choked on food/foreign object	6	**50**
	Drowned	69	**104**
	Hanged	0	**2**
	Inhaled toxic agent (carbon monoxide)	4	**9**
	Mechanical/Positional asphyxia	8	**16**
	Oxygen depletion/replacement	0	**1**
	Other asphyxia	3	**4**
	Suffocated/Smothered	15	**15**
Drug Poisoning			
	Ingested and/or injected ethanol, illicit, prescription, and/or other type of drug	553	**1333**
Electrical			
	Contacted electrical current	6	**6**
Exposure			
	Exposed to cold	16	**31**
	Exposed to heat	6	**11**
Fall/Jump			
	Fell/Jumped from any height	47	**857**
Fire			
	Thermal burns and/or inhalation of combustion products	39	**67**
Motor Vehicle Collision			
	Aircraft	6	**6**
	All terrain vehicle	0	**14**
	Bicycle	2	**14**
	Boat	0	**1**
	Bus	1	**3**
	Car	35	**422**
	Construction equipment	1	**3**
	Dirt bike	0	**1**
	Dump truck	2	**2**
	Farm equipment	0	**9**
	Golf cart	1	**2**
	Lawnmower	0	**5**
	Mo-ped	1	**10**
	Motorcycle	9	**102**
	Multiple	0	**2**
	Pickup truck	4	**78**

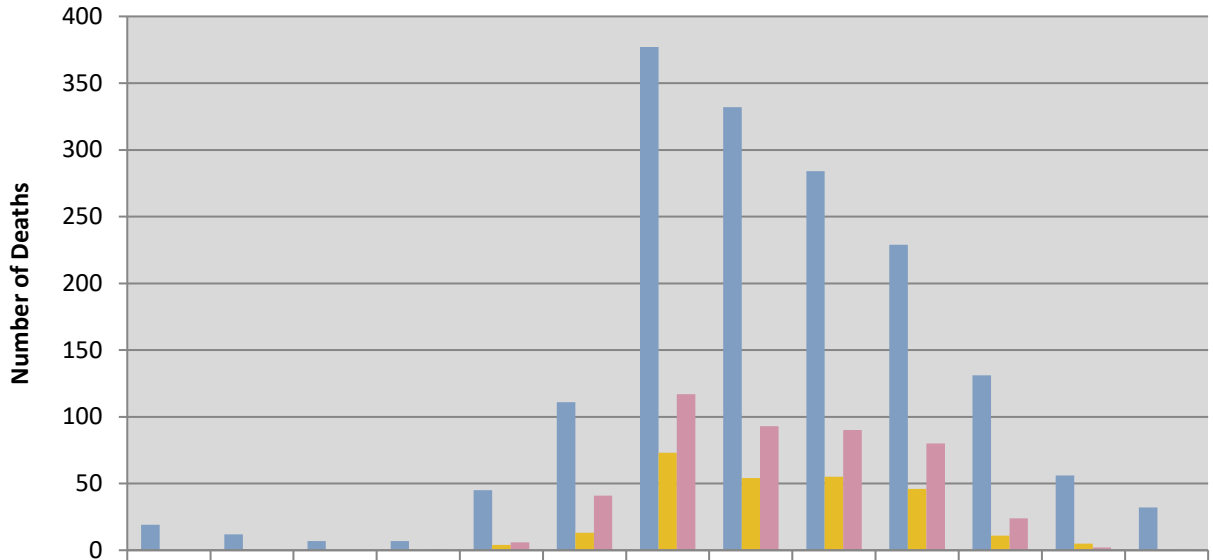
Method of Death	Autopsied	Total Cases
School bus	1	**1**
Snow plow	1	**1**
Sport utility vehicle	13	**138**
Tractor trailer	7	**22**
Train	1	**7**
Truck (other)	6	**16**
Van	5	**30**
Wheelchair	0	**1**
Unspecified/Unknown	9	**54**
Traumatic Injury		
Accidental discharge of firearm		
Handgun	4	**4**
Rifle	1	**1**
Shotgun	1	**1**
Hit/Crushed by falling object	7	**23**
Sharp force injury	3	**6**
Other traumatic injury	6	10
Other/Undetermined		
Excited delirium	1	**1**
Other	3	**33**
Undetermined	0	**1**
TOTAL ACCIDENTAL DEATHS	**904**	**3533**

Table 2.2 Number and Rate of the Top 5 Accidental Methods of Death by Age Group, 2018

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	1	1.0	0	0.0	0	0.0	2	2.0	**3**
1-4	7	1.7	1	0.2	2	0.5	0	0.0	6	1.5	**16**
5-9	4	0.8	1	0.2	0	0.0	0	0.0	9	1.7	**14**
10-14	2	0.4	1	0.2	0	0.0	0	0.0	8	1.5	**11**
15-19	3	0.6	18	3.3	0	0.0	1	0.2	55	10.1	**77**
20-24	7	1.2	76	13.1	2	0.3	1	0.2	90	15.5	**176**
25-34	16	1.3	376	31.6	8	0.7	6	0.5	170	14.3	**576**
35-44	12	1.1	351	31.8	13	1.2	6	0.5	109	9.9	**491**
45-54	11	1.0	279	24.8	27	2.4	5	0.4	138	12.3	**460**
55-64	18	1.6	183	16.5	72	6.5	16	1.4	149	13.5	**438**
65-74	13	1.7	45	5.8	147	18.9	18	2.3	97	12.5	**320**
75-84	7	1.8	1	0.3	229	59.6	8	2.1	69	17.9	**314**
85+	4	2.6	0	0.0	357	235.0	6	4.0	42	27.7	**409**
TOTAL	**104**	**1.2**	**1333**	**15.6**	**857**	**10.1**	**67**	**0.8**	**944**	**11.1**	**3305**

Note: Highlighted pink cells indicate the highest rate among the method of death within the corresponding age group; rates are per 100,000

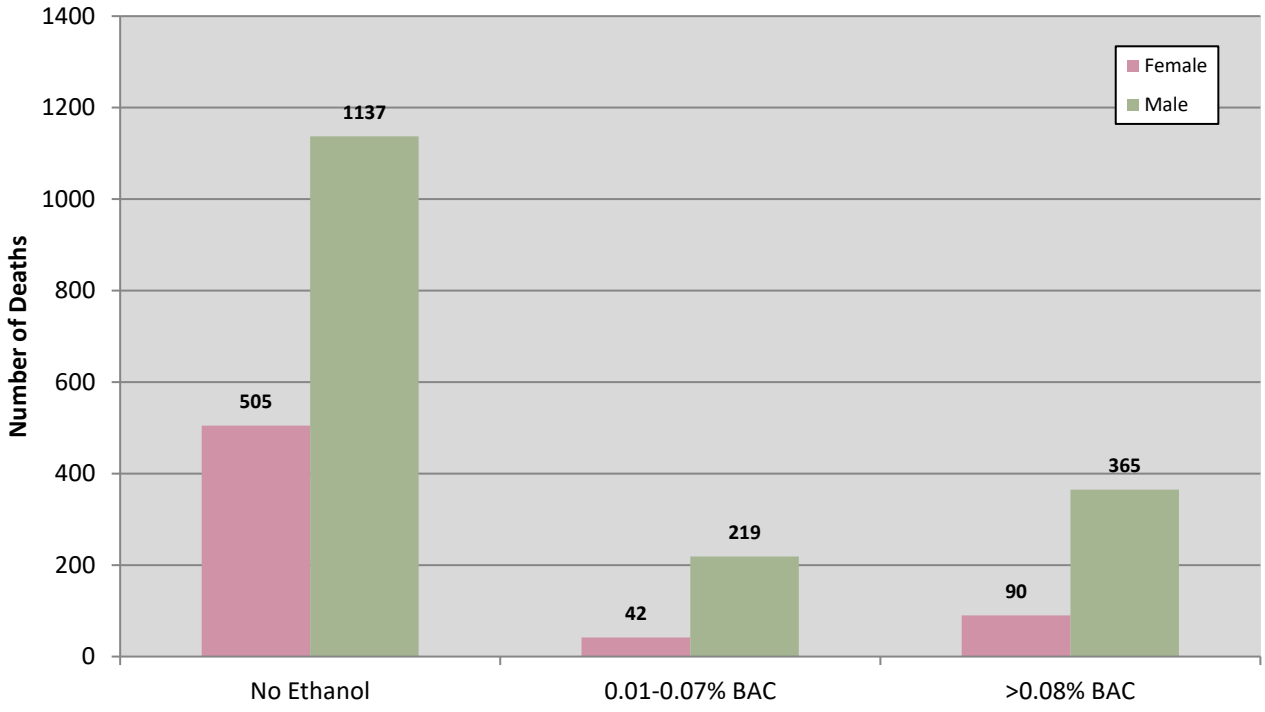
Figure 2.5 Number of Accidental Deaths by Age Group and Ethanol Level (N=2,358), 2018



	<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	19	12	7	7	45	111	377	332	284	229	131	56	32
0.01-0.07% BAC	0	0	0	0	4	13	73	54	55	46	11	5	0
>0.08% BAC	0	0	0	1	6	41	117	93	90	80	24	2	1

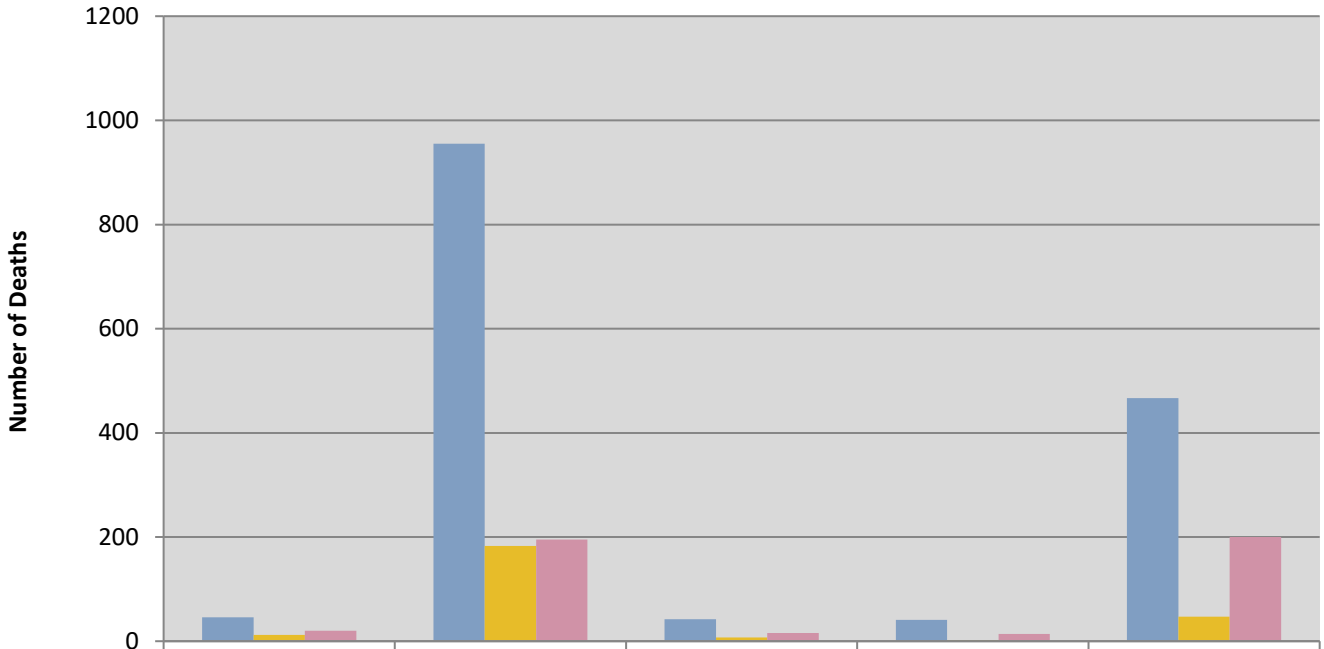
Note: Of the 3,533 accidental deaths, 33.3% (n=1,175) did not receive toxicology testing

Figure 2.6 Number of Accidental Deaths by Ethanol Level and Gender (N=2,358), 2018



Note: Of the 3,533 accidental deaths, 33.3% (n=1,175) did not receive toxicology testing

Figure 2.7 Number of the Top 5 Accidental Methods of Death by Ethanol Level, 2018



	Drowning (n=78)	Drug Use (n=1333)	Fall (n=65)	Fire/Smoke (n=57)	Motor Vehicle (n=714)
No Ethanol	46	955	42	41	467
0.01-0.07% BAC	12	183	7	2	47
>0.08% BAC	20	195	16	14	200

Figure 2.8 Number of Accidental Deaths by Month of Death, 2018

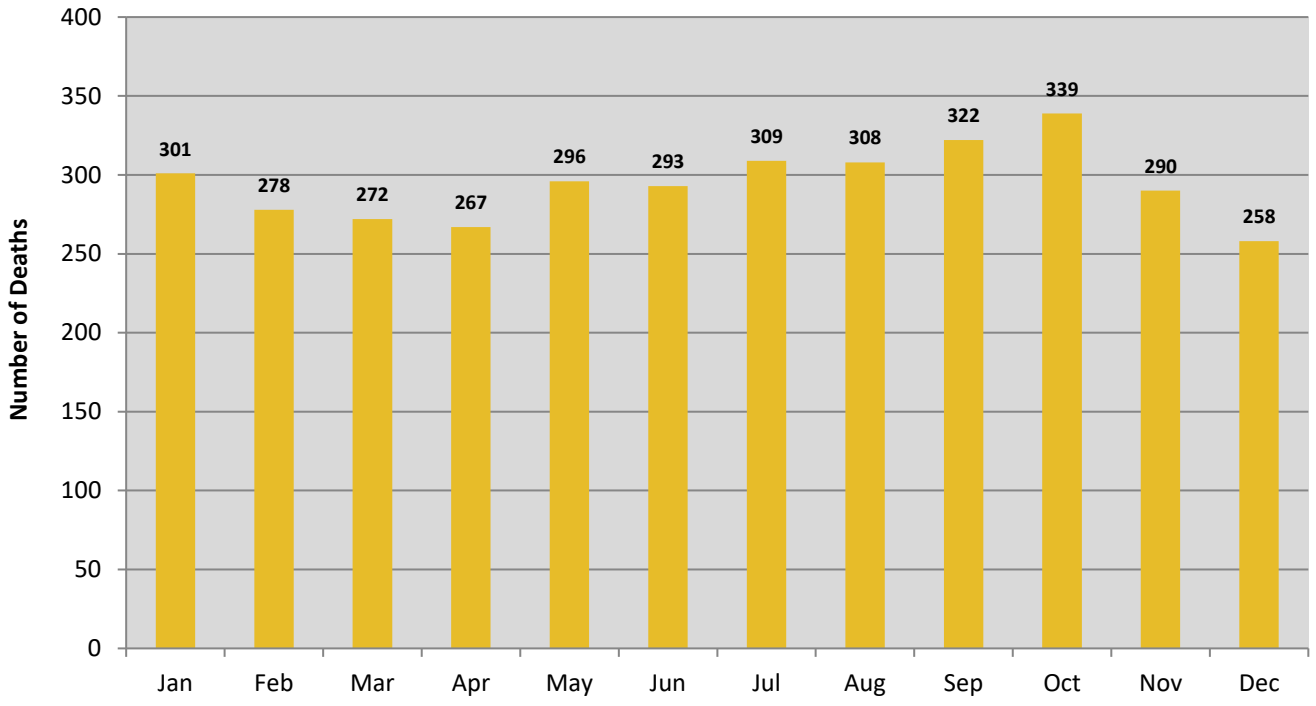


Figure 2.9 Number of Accidental Deaths by Day of Death, 2018

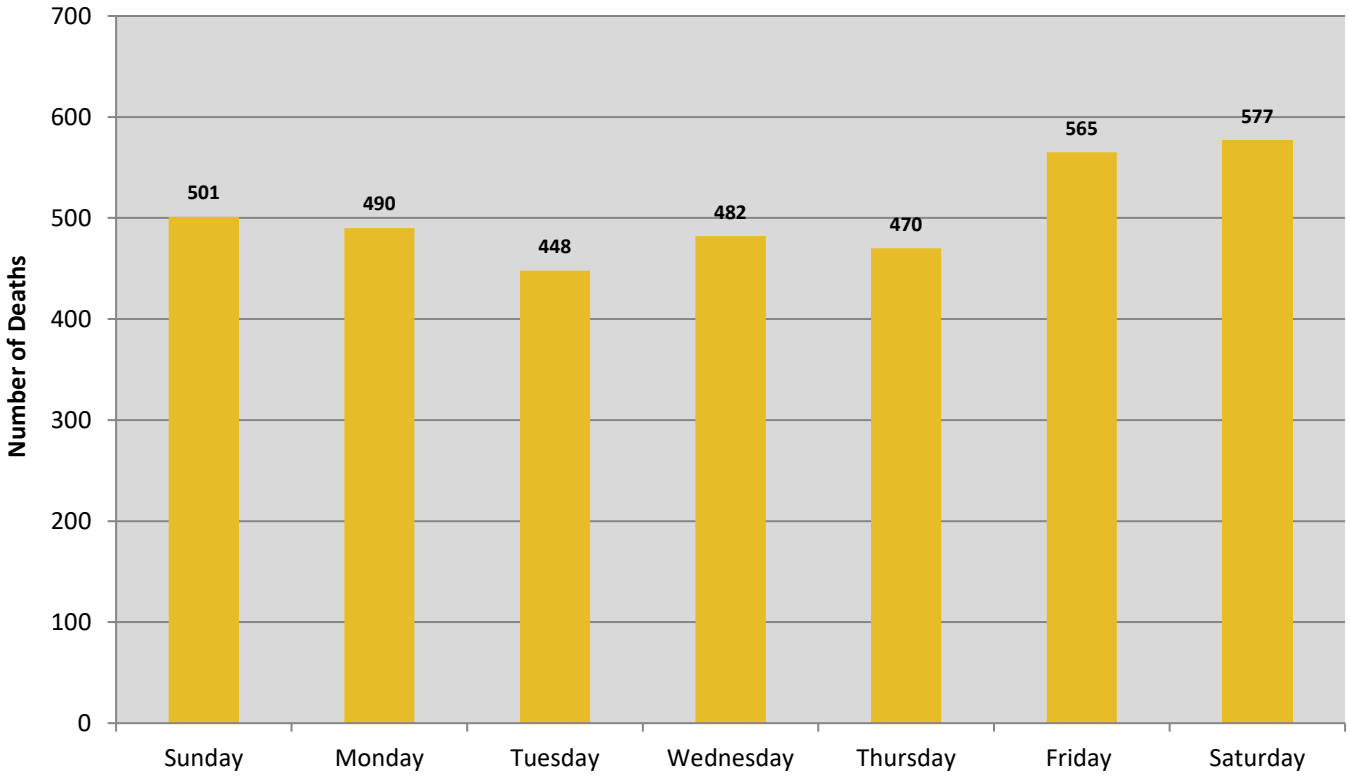


Table 2.3 Number of Accidental Deaths by Locality of Injury and Year of Death, 2006-2018

Locality of Injury	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
Accomack County	22	20	11	19	18	16	15	12	15	10	16	13	17	**204**
Albemarle County	17	20	33	25	28	34	28	32	44	40	35	51	41	**428**
Alexandria City	21	21	21	22	14	22	16	21	21	31	25	34	16	**285**
Alleghany County	10	14	8	5	6	4	7	8	10	7	13	8	6	**106**
Amelia County	4	7	11	9	4	8	9	5	7	6	9	10	9	**98**
Amherst County	11	8	16	9	5	18	19	12	12	9	17	12	17	**165**
Appomattox County	2	6	7	4	3	5	4	4	8	4	8	3	7	**65**
Arlington County	18	19	30	34	27	24	34	32	31	34	30	35	35	**383**
Augusta County	26	34	38	33	31	27	33	32	29	23	36	37	36	**415**
Bath County	2	3	1	4	3	3	6	2	1	1	3	2	3	**34**
Bedford City	3	5	5	4	4	2	0	2	*	*	*	*	*	**25**
Bedford County	22	27	16	30	31	24	40	32	24	31	38	45	42	**402**
Bland County	0	6	2	7	4	7	2	2	3	3	2	4	1	**43**
Botetourt County	12	12	13	11	11	19	15	12	14	20	15	20	18	**192**
Bristol City	6	10	3	3	7	5	7	1	6	2	1	3	5	**59**
Brunswick County	16	7	6	8	13	8	14	15	11	12	11	9	13	**143**
Buchanan County	21	18	19	11	23	18	20	13	15	15	9	18	17	**217**
Buckingham County	3	9	6	3	5	5	7	5	15	3	12	12	8	**93**
Buena Vista City	0	0	1	2	0	1	2	0	1	2	0	3	1	**13**
Campbell County	32	16	31	12	17	14	25	21	20	23	24	27	27	**289**
Caroline County	9	14	8	9	13	14	10	17	7	19	29	13	29	**191**
Carroll County	17	15	19	11	7	13	14	15	19	14	10	13	8	**175**
Charles City County	4	8	7	7	7	6	5	3	5	4	8	1	3	**68**
Charlotte County	4	6	6	5	6	9	5	6	4	7	9	4	7	**78**
Charlottesville City	21	28	11	16	12	9	8	11	13	18	19	12	27	**205**
Chesapeake City	55	60	48	53	43	58	57	67	59	86	101	81	80	**848**
Chesterfield County	56	68	92	68	70	74	82	78	89	96	124	141	144	**1182**
Clarke County	5	6	5	8	10	4	8	5	8	6	17	9	15	**106**
Colonial Heights City	6	3	4	2	2	3	3	5	6	3	15	5	9	**66**
Covington City	4	0	2	2	0	1	0	1	3	1	3	4	3	**24**
Craig County	7	2	2	4	2	2	1	4	3	2	3	2	3	**37**

Virginia Department of Health

Locality of Injury	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
Culpeper County	16	24	12	12	14	15	20	23	27	19	24	34	30	**270**
Cumberland County	1	2	4	3	2	3	4	9	2	6	3	6	4	**49**
Danville City	16	13	22	20	20	19	16	20	20	17	22	18	18	**241**
Dickenson County	11	16	13	5	11	13	10	8	10	11	14	6	8	**136**
Dinwiddie County	12	14	20	12	10	8	9	15	6	12	18	18	12	**166**
Emporia City	2	8	2	1	3	3	3	4	1	2	3	1	4	**37**
Essex County	4	7	4	7	5	8	3	2	5	5	7	8	4	**69**
Fairfax City	3	4	5	11	5	7	11	11	11	6	10	9	12	**105**
Fairfax County	221	156	144	148	152	195	184	197	210	243	253	226	245	**2574**
Falls Church City	2	1	0	2	1	6	0	2	4	0	1	2	1	**22**
Fauquier County	21	31	26	33	32	33	27	30	28	50	53	30	54	**448**
Floyd County	13	10	5	8	5	10	5	10	8	10	8	7	12	**111**
Fluvanna County	9	7	14	7	6	5	7	5	6	13	3	9	13	**104**
Franklin City	2	2	1	1	2	0	1	2	3	4	3	6	3	**30**
Franklin County	27	22	23	26	21	33	38	17	23	19	42	37	42	**370**
Frederick County	24	24	26	31	27	29	25	36	36	40	40	47	38	**423**
Fredericksburg City	22	14	15	6	11	12	21	14	8	22	24	29	23	**221**
Galax City	0	3	0	0	0	3	4	2	2	2	1	2	0	**19**
Giles County	9	5	9	9	10	3	10	12	14	10	12	12	7	**122**
Gloucester County	21	10	16	10	20	15	12	16	13	11	24	25	20	**213**
Goochland County	6	15	10	14	8	8	13	5	6	12	5	9	13	**124**
Grayson County	13	5	2	6	5	5	6	7	5	5	8	2	4	**73**
Greene County	4	14	5	4	7	2	9	5	7	5	4	9	8	**83**
Greensville County	10	3	2	5	6	2	5	3	9	5	7	8	3	**68**
Halifax County	15	22	27	14	20	16	9	9	23	15	20	12	19	**221**
Hampton City	31	27	28	25	35	38	24	38	29	35	58	50	65	**483**
Hanover County	21	27	26	13	18	30	26	36	42	32	30	46	48	**395**
Harrisonburg City	11	1	3	5	4	8	6	10	10	9	13	13	14	**107**
Henrico County	89	65	77	73	70	58	72	95	88	109	121	136	131	**1184**
Henry County	34	15	34	22	26	31	31	23	28	24	30	32	31	**361**
Highland County	1	2	2	2	2	1	0	1	2	2	1	0	5	**21**

Locality of Injury	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
Hopewell City	5	7	6	7	7	6	6	3	7	7	13	14	16	**104**
Isle of Wight County	16	16	14	12	13	7	11	11	15	11	15	16	13	**170**
James City County	17	9	24	16	13	19	11	27	16	27	26	29	34	**268**
King and Queen County	5	7	5	8	2	1	3	4	4	4	3	6	6	**58**
King George County	5	7	8	10	2	8	10	13	16	8	13	23	14	**137**
King William County	3	6	5	9	2	6	6	8	5	7	12	7	8	**84**
Lancaster County	9	9	6	2	2	8	2	6	2	5	11	7	12	**81**
Lee County	11	16	10	13	8	15	11	11	7	6	10	7	13	**138**
Lexington City	3	2	1	2	4	1	2	2	1	2	1	7	1	**29**
Loudoun County	23	36	27	29	32	36	52	55	64	50	69	90	63	**626**
Louisa County	16	24	17	21	14	11	13	17	7	11	28	13	23	**215**
Lunenburg County	6	11	9	5	2	1	6	7	5	5	4	8	5	**74**
Lynchburg City	13	24	24	16	25	21	34	25	26	28	26	28	41	**331**
Madison County	3	9	6	3	5	4	6	5	5	7	3	12	9	**77**
Manassas	8	8	5	11	4	6	15	3	9	12	7	22	11	**121**
Manassas Park	Unknown	1	1	2	3	4	1	1	5	1	1	6	3	**29**
Martinsville City	8	3	8	6	7	7	6	10	8	8	4	9	16	**100**
Mathews County	8	4	1	4	2	2	3	6	3	6	4	3	1	**47**
Mecklenburg County	18	17	11	16	10	13	13	15	16	15	18	26	25	**213**
Middlesex County	3	7	6	6	6	1	4	4	6	7	8	8	7	**73**
Montgomery County	15	24	27	24	30	28	23	26	23	21	28	37	32	**338**
Nelson County	6	11	6	11	6	9	9	9	11	9	8	12	14	**121**
New Kent County	15	7	7	8	12	11	9	6	11	15	9	6	9	**125**
Newport News City	52	35	36	53	40	45	33	43	54	64	75	68	91	**689**
Norfolk City	59	79	59	67	49	73	71	89	68	86	126	119	115	**1060**
Northampton County	6	7	10	9	5	3	2	5	12	4	15	8	9	**95**
Northumberland County	2	3	8	4	6	9	8	7	7	6	3	5	8	**76**
Norton City	3	0	1	1	2	0	1	2	0	1	1	0	1	**13**
Nottoway County	6	7	3	14	6	7	5	7	8	9	9	6	4	**91**
Orange County	6	14	13	10	14	16	9	19	25	16	27	27	20	**216**
Page County	4	10	4	7	8	14	12	10	7	6	13	8	18	**121**

Locality of Injury	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
Patrick County	5	7	11	8	8	5	9	12	9	10	6	8	14	**112**
Petersburg City	16	22	14	14	13	3	11	10	12	8	25	25	21	**194**
Pittsylvania County	28	30	37	29	25	27	34	22	30	33	21	35	45	**396**
Poquoson City	5	1	1	3	1	2	0	2	1	4	3	5	1	**29**
Portsmouth City	29	20	18	29	23	28	19	33	30	45	52	59	70	**455**
Powhatan County	14	6	7	5	3	7	12	12	9	7	3	15	8	**108**
Prince Edward County	9	14	5	14	11	4	9	10	5	13	14	11	7	**126**
Prince George County	9	12	12	10	12	11	11	13	13	16	7	22	12	**160**
Prince William County	69	56	65	63	72	78	92	79	88	65	108	117	102	**1054**
Pulaski County	16	23	19	15	19	19	14	18	25	18	21	21	23	**251**
Radford City	2	5	9	3	8	3	8	2	6	4	4	7	1	**62**
Rappahannock County	0	4	2	3	6	4	5	4	2	1	1	6	0	**38**
Richmond City	127	134	85	69	67	88	77	79	89	105	146	167	144	**1377**
Richmond County	2	2	6	2	4	4	5	3	5	2	6	8	2	**51**
Roanoke City	37	30	32	41	36	39	40	57	49	54	48	88	85	**636**
Roanoke County	27	22	23	19	17	26	27	28	36	41	44	54	55	**419**
Rockbridge County	12	14	10	13	7	10	14	7	13	16	13	12	16	**157**
Rockingham County	30	21	19	16	18	16	25	22	37	37	25	27	34	**327**
Russell County	19	19	15	11	16	20	14	12	9	14	16	11	4	**180**
Salem City	13	7	8	8	8	4	12	12	12	8	10	13	15	**130**
Scott County	6	8	11	9	5	8	9	10	7	6	9	9	5	**102**
Shenandoah County	14	5	24	13	12	15	17	15	23	32	20	19	16	**225**
Smyth County	13	10	11	7	12	10	9	12	10	14	11	10	11	**140**
Southampton County	10	15	10	10	11	6	8	17	9	11	7	10	14	**138**
Spotsylvania County	29	39	31	29	43	36	34	39	38	53	67	51	71	**560**
Stafford County	18	44	25	24	21	23	33	33	26	48	45	35	46	**421**
Staunton City	7	6	8	7	5	8	3	4	10	7	5	13	7	**90**
Suffolk City	16	37	26	17	30	25	25	30	27	34	25	38	30	**360**
Surry County	2	7	4	1	6	2	1	4	2	3	3	3	0	**38**
Sussex County	13	15	17	11	12	5	2	3	8	6	16	23	9	**140**
Tazewell County	36	11	16	19	25	30	23	14	20	17	14	20	20	**265**

Locality of Injury	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
Virginia Beach City	101	106	102	110	77	112	111	119	116	126	130	184	149	**1543**
Warren County	6	12	17	9	25	23	15	20	20	20	21	35	20	**243**
Washington County	18	20	22	14	21	28	16	10	21	23	14	17	19	**243**
Waynesboro City	7	2	7	6	7	3	13	8	5	10	7	10	6	**91**
Westmoreland County	13	9	11	6	11	10	7	7	5	13	15	12	9	**128**
Williamsburg City	6	5	3	6	2	9	5	6	6	1	7	9	4	**69**
Winchester City	15	2	4	10	7	7	16	17	19	19	14	18	17	**165**
Wise County	31	28	15	22	22	23	19	23	14	17	19	25	22	**280**
Wythe County	11	14	24	12	13	9	17	14	21	25	18	19	8	**205**
York County	14	17	14	7	15	17	8	16	18	16	18	21	29	**210**
Subtotal (in-state)	***2316***	***2322***	***2227***	***2105***	***2081***	***2275***	***2333***	***2456***	***2547***	***2753***	***3152***	***3409***	***3351***	***33327***
Out of State	29	51	46	52	54	54	59	62	62	81	65	77	73	**765**
Unknown	8	24	26	18	14	14	20	18	26	39	23	35	109	**374**
Subtotal (out-of-state)	***37***	***75***	***72***	***70***	***68***	***68***	***79***	***80***	***88***	***120***	***88***	***112***	***182***	***1139***
TOTAL	**2353**	**2397**	**2299**	**2175**	**2149**	**2343**	**2412**	**2536**	**2635**	**2873**	**3240**	**3521**	**3533**	**34466**

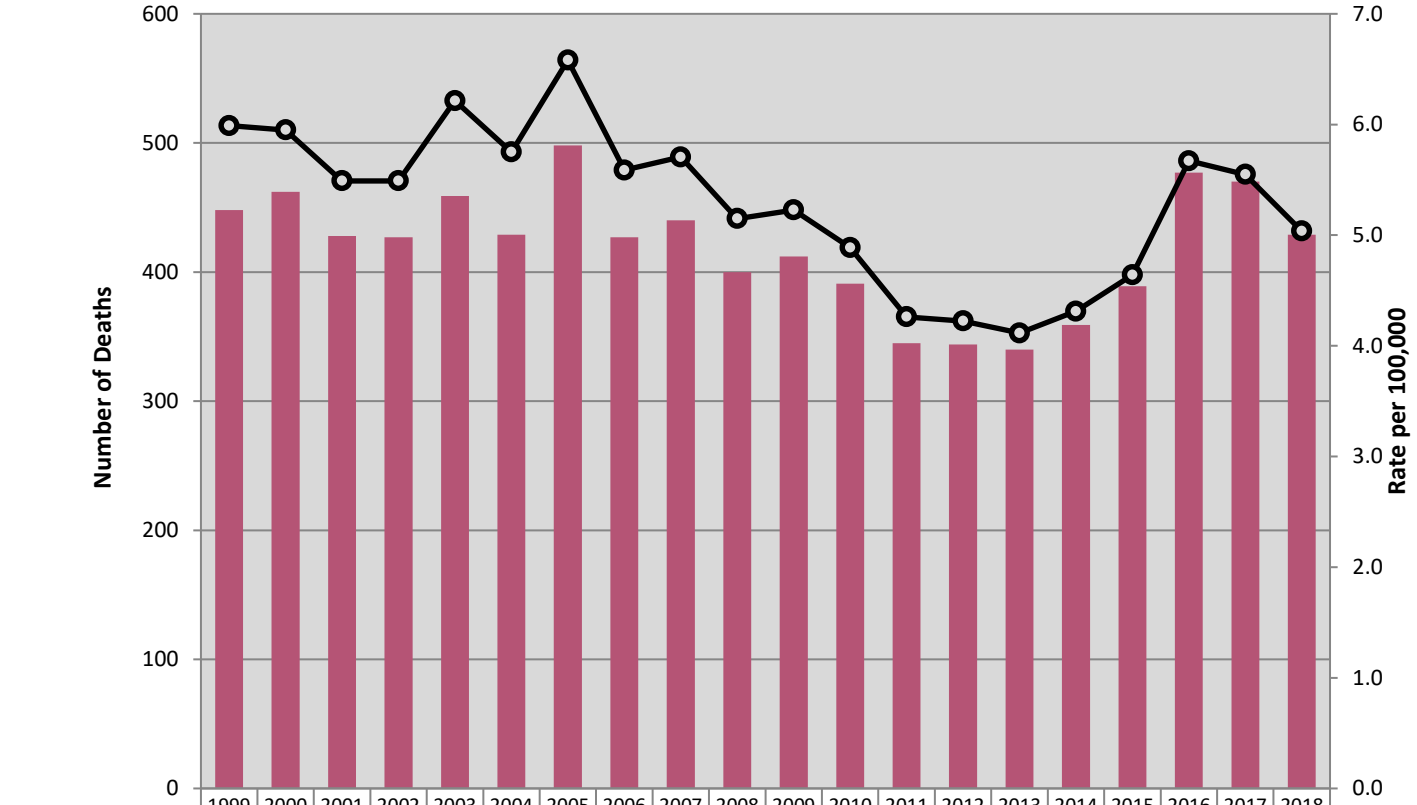
* Bedford City was incorporated into Bedford County in 2014 and therefore numbers are combined from there forward

HOMICIDE DEATHS (N=429)

The number of homicides in 2018 decreased significantly compared to 2017 (8.7%). As previous years have shown, homicides most frequently occurred among males (78.8%) and among Blacks (61.5%). Males aged 20-24 years demonstrate the highest homicide rate with 22.3 deaths per 100,000 persons.

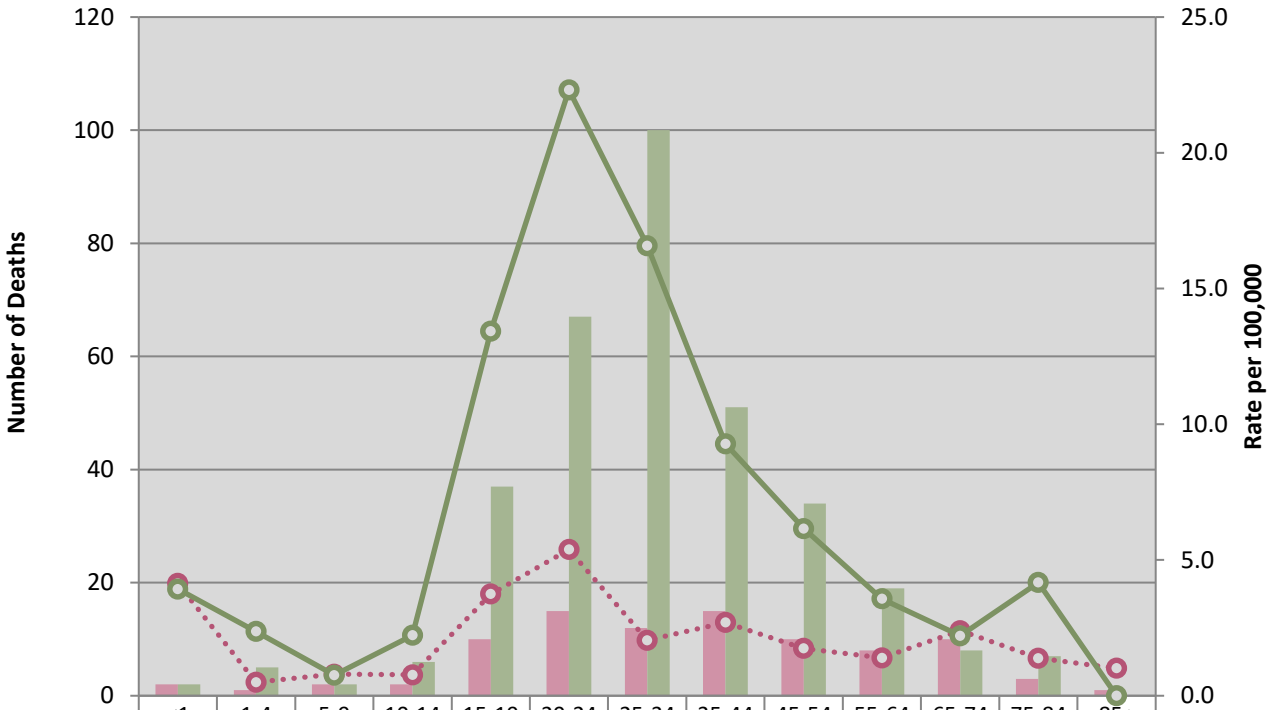
- Over eighty-one percent of all homicides were committed using a firearm, with handguns (the most common type) used in 78.4% of all firearm-related homicides
- Over 63% of all homicides in the Commonwealth were committed using a handgun
- Of the 93.2% of homicide victims tested for ethanol, 32.3% had ethanol present. Furthermore, 19.5% 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=41 and n=55, respectively). Petersburg had both the highest homicide rate by locality of residence by location of injury (44.4 and 53.9 per 100,000, respectively).

Figure 2.10 Number and Rate of Homicide Deaths by Year of Death, 1999-2018



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Deaths	448	462	428	427	459	429	498	427	440	400	412	391	345	344	340	359	389	477	470	429
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	5.5	5.0

Figure 2.11 Number and Rate of Homicide Deaths by Age Group and Gender, 2018



	<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	1	2	2	10	15	12	15	10	8	10	3	1
Male	2	5	2	6	37	67	100	51	34	19	8	7	0
Female Rate	4.1	0.5	0.8	0.8	3.7	5.4	2.0	2.7	1.7	1.4	2.4	1.4	1.0
Male Rate	3.9	2.4	0.8	2.2	13.4	22.3	16.6	9.3	6.2	3.6	2.2	4.2	0.0

Figure 2.12 Percentage of Homicide Deaths by Race/Ethnicity, 2018

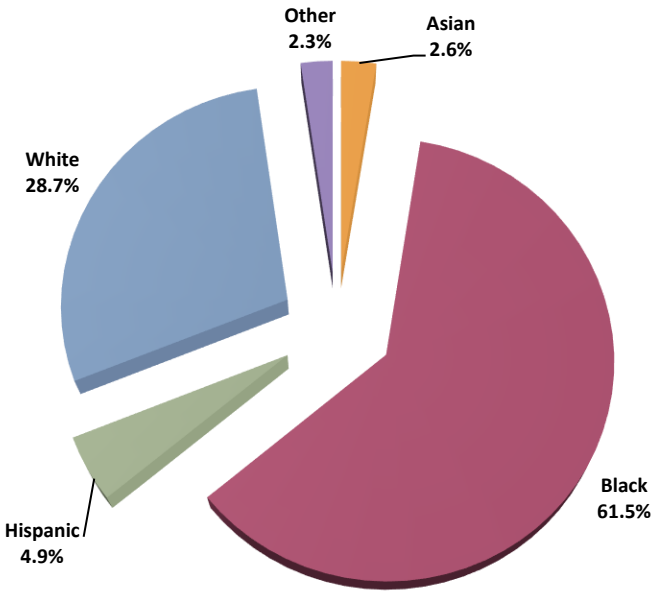
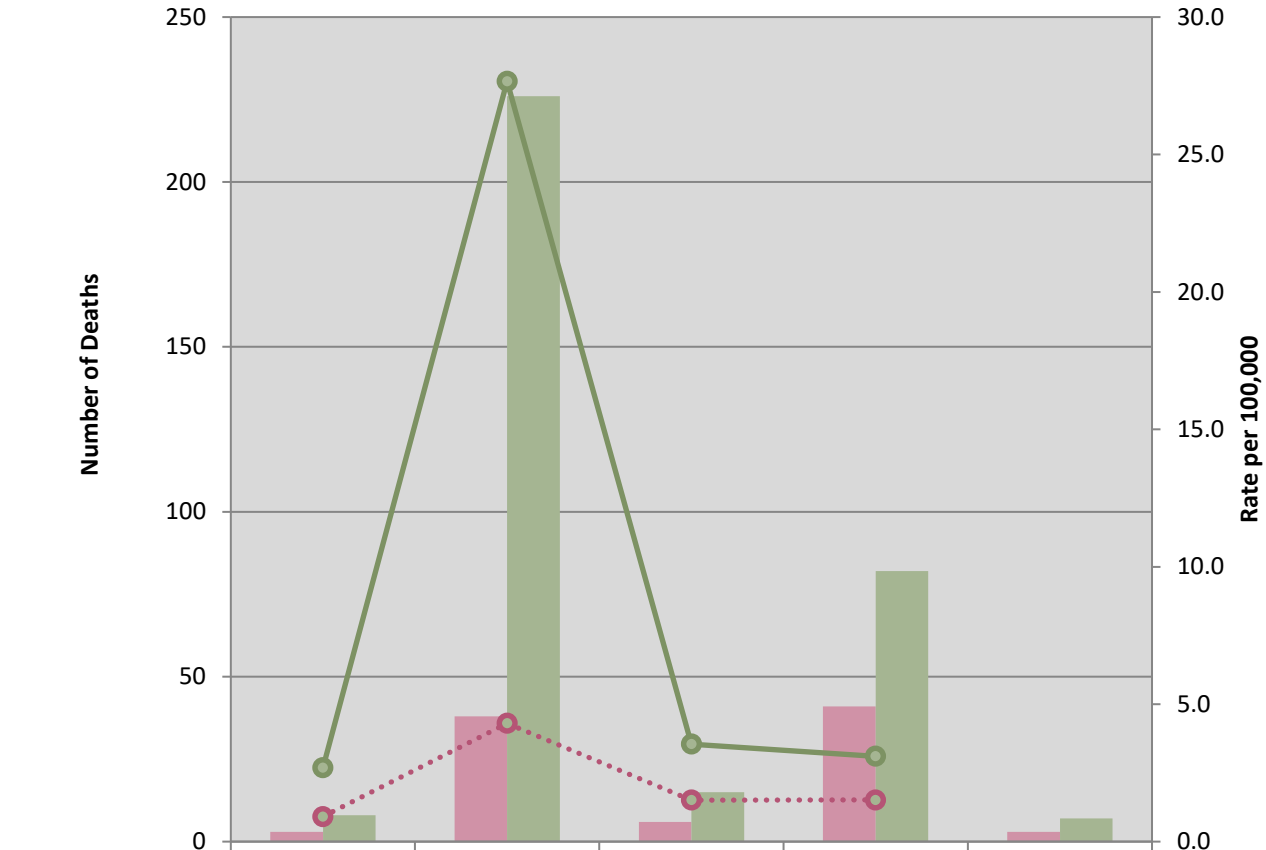


Figure 2.13 Number and Rate of Homicide Deaths by Race/Ethnicity and Gender, 2018



	Asian	Black	Hispanic	White	Other
Female	3	38	6	41	3
Male	8	226	15	82	7
Female Rate	0.9	4.3	1.5	1.5	*
Male Rate	2.7	27.7	3.5	3.1	*

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

Table 2.4 Number of Homicide Deaths by Cause and Method of Death, 2018

Method of Death	Autopsied	Total Cases
Asphyxia		
Plastic bag asphyxia	1	**1**
Strangled by assailant(s)	8	**8**
Suffocated/Smothered by assailant(s)	2	**2**
Fire		
Thermal and/or inhalational Injuries	3	**3**
Motor Vehicle Collision		
Struck by a vehicle	2	**2**
Traumatic Injury		
Beaten by assailant(s)	21	**22**
Shot by assailant(s)		
Handgun	272	**273**
Multiple	2	**2**
Rifle	16	**16**
Shotgun	8	**8**
Unspecified/Unknown	48	**49**
Stabbed by assailant(s)	36	**36**
Other/Undetermined		
Dehydration and/or starvation	1	**1**
Other/Undetermined	6	**6**
TOTAL HOMICIDE DEATHS	**426**	**429**

Figure 2.14 Number of the Leading Homicide Deaths by Method, 2018

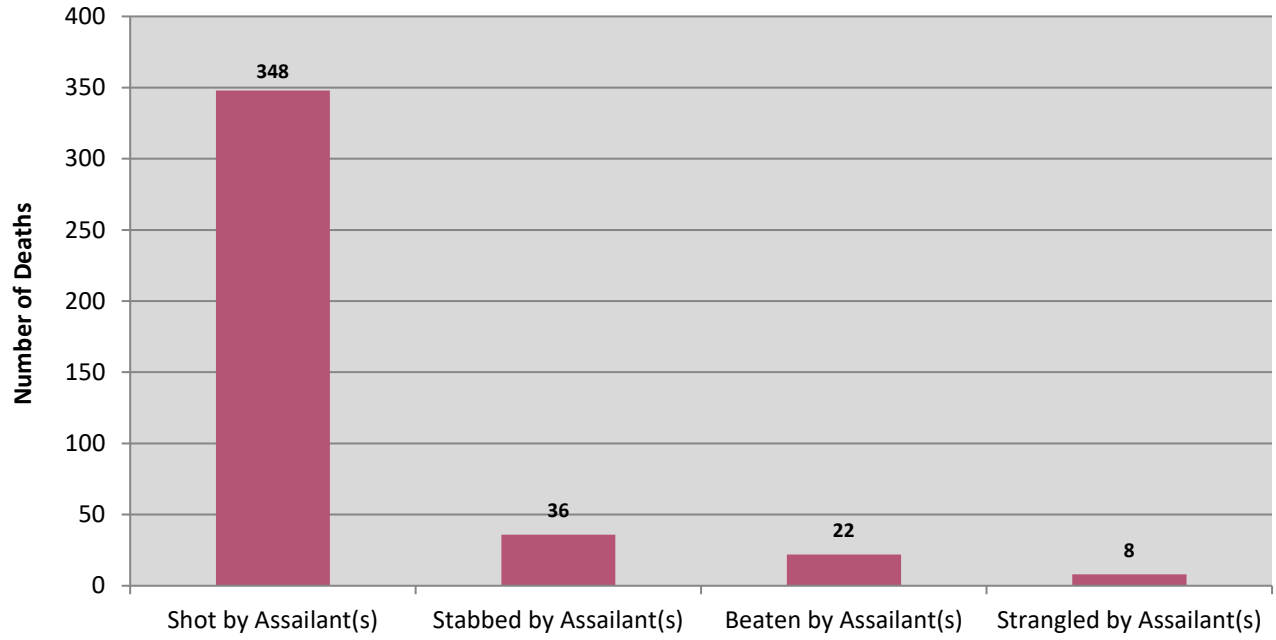
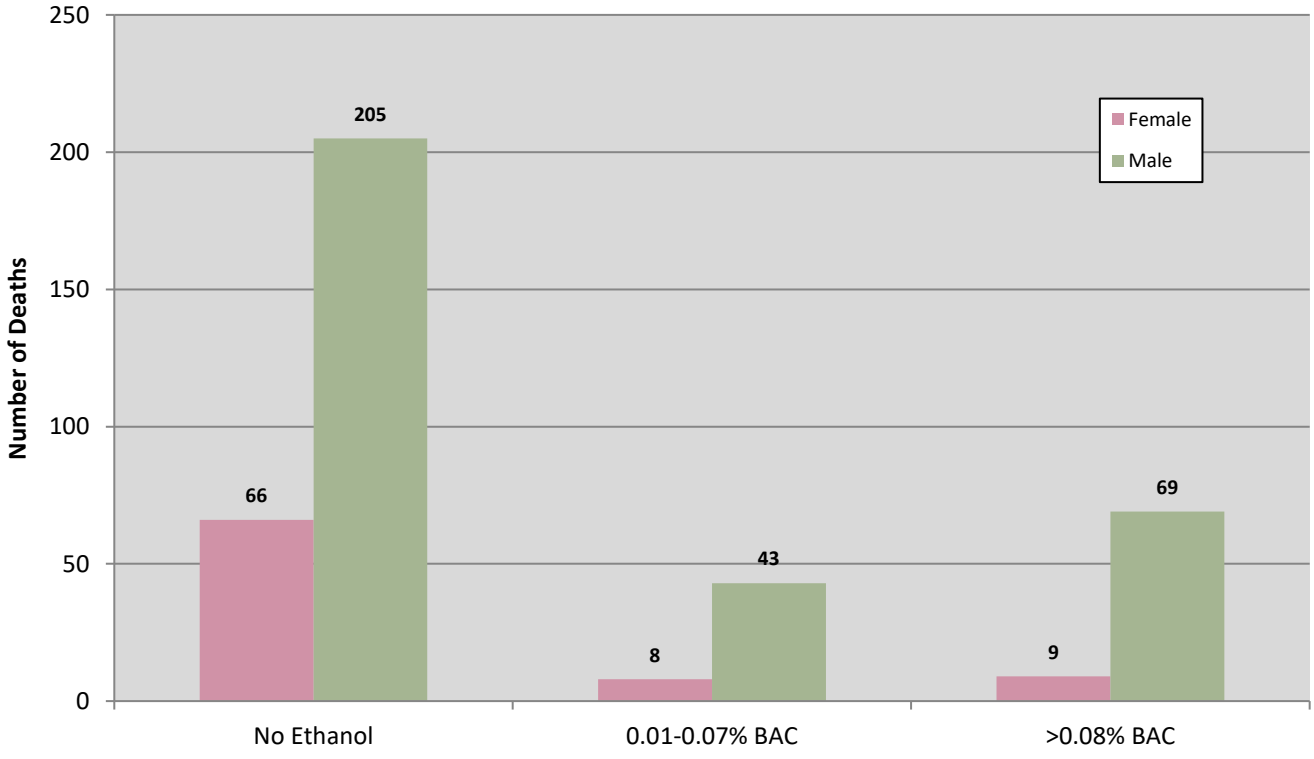
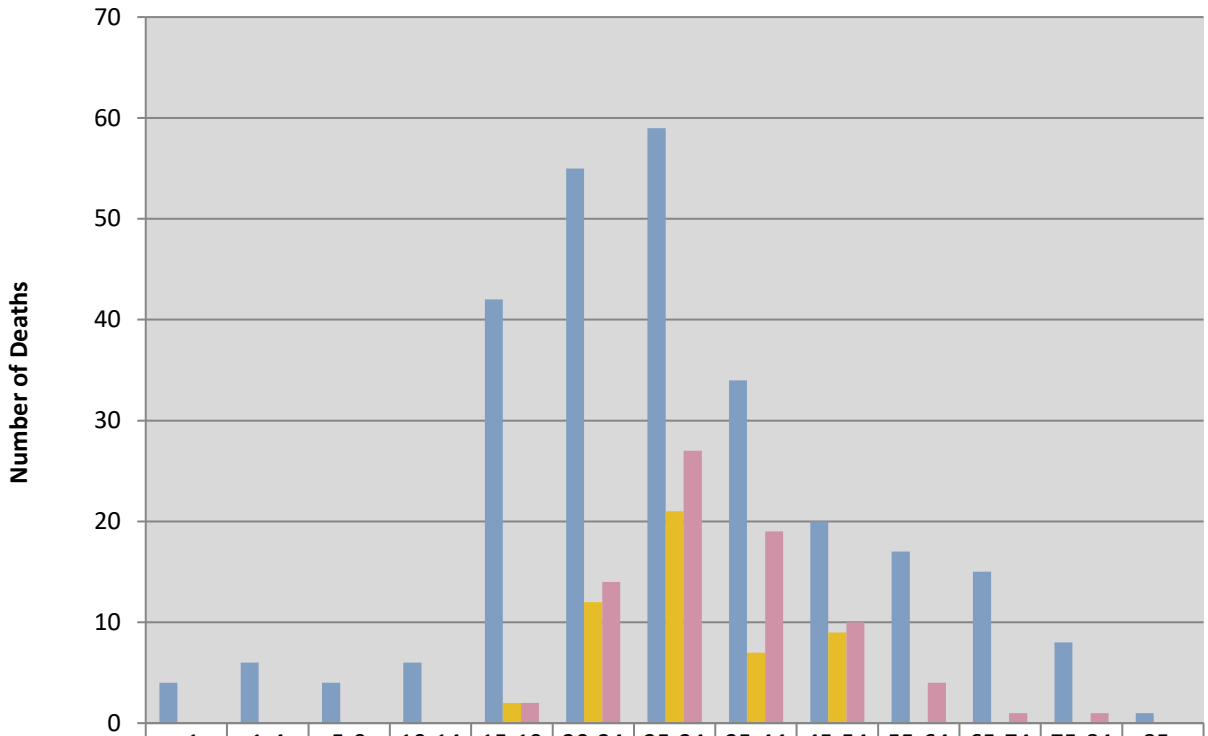


Figure 2.15 Number of Homicide Deaths by Ethanol Level and Gender (N=400), 2018



Note: Of the 429 homicide deaths, 6.8% (n=29) did not receive toxicology testing

Figure 2.16 Number of Homicide Deaths by Age Group and Ethanol Level (N=400), 2018



	<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	4	6	4	6	42	55	59	34	20	17	15	8	1
0.01-0.07% BAC	0	0	0	0	2	12	21	7	9	0	0	0	0
>0.08 BAC	0	0	0	0	2	14	27	19	10	4	1	1	0

Note: Of the 429 homicide deaths, 6.8% (n=29) did not receive toxicology testing

Table 2.5 Number of Homicide Deaths by Method of Death and Ethanol Level (N=400), 2018

Method of Death	No Ethanol	0.01-0.07% BAC	>0.08% BAC
Asphyxia			
Plastic bag asphyxia	1	0	0
Strangled by assailant(s)	3	2	3
Suffocated/Smothered by assailant(s)	1	0	1
Fire			
Thermal and/or inhalational Injuries	3	0	0
Motor Vehicle Collision			
Struck by a vehicle	2	0	0
Traumatic Injury			
Beaten by assailant(s)	16	1	3
Shot by assailant(s)			
Handgun	178	33	47
Multiple	1	1	0
Rifle	9	2	4
Shotgun	6	0	2
Unspecified/Unknown	26	8	8
Stabbed by assailant(s)	20	4	9
Other/Undetermined			
Dehydration and/or starvation	1	0	0
Other/Undetermined	4	0	1
TOTAL HOMICIDE DEATHS	**271**	**51**	**78**

Note: Of the 429 homicide deaths, 6.8% (n=29) did not receive toxicology testing

Figure 2.17 Number of Homicide Deaths by Month of Death, 2018

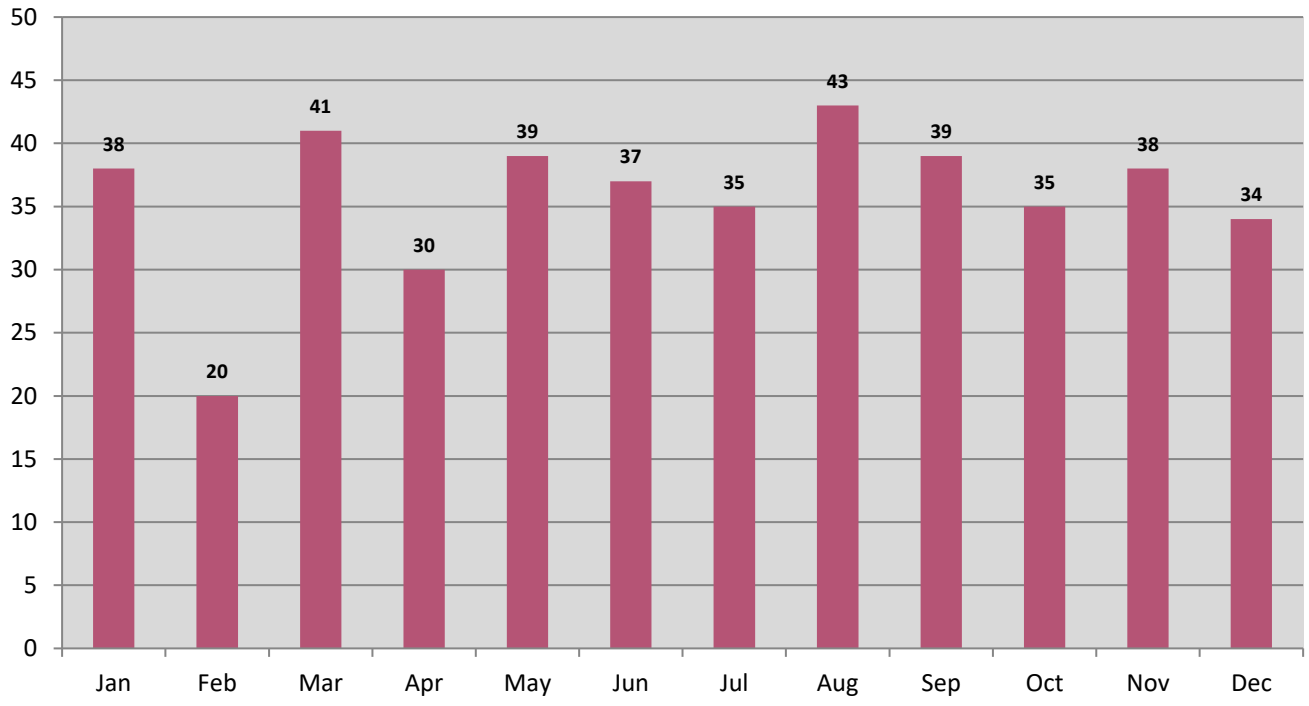


Figure 2.18 Number of Homicide Deaths by Day of Death, 2018

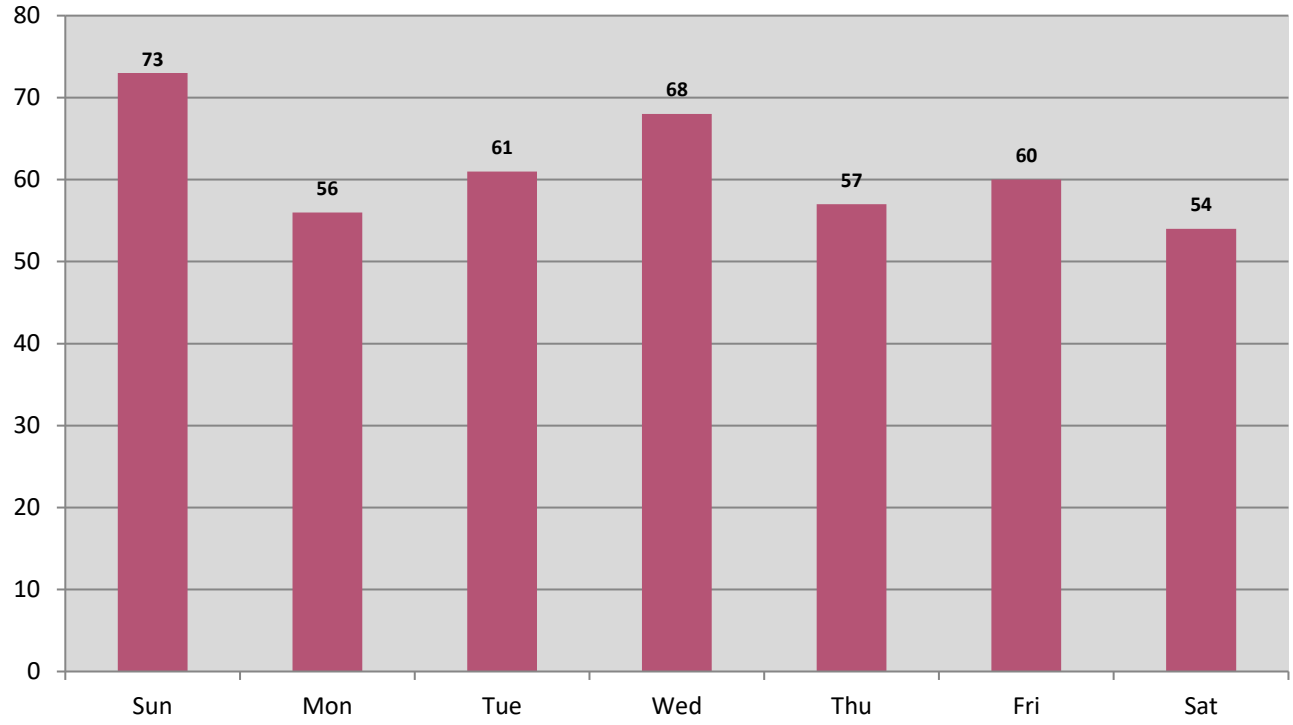


Table 2.6 Number and Rate of Homicide Deaths by Locality of Residence, 2018

Locality of Residence	Deaths	Rate
Accomack County	0	0.0
Albemarle County	1	0.9
Alexandria City	3	1.9
Alleghany County	1	6.7
Amelia County	0	0.0
Amherst County	0	0.0
Appomattox County	2	12.6
Arlington County	3	1.3
Augusta County	1	1.3
Bath County	0	0.0
Bedford County	3	3.8
Bland County	0	0.0
Botetourt County	2	6.0
Bristol City	3	18.2
Brunswick County	0	0.0
Buchanan County	0	0.0
Buckingham County	0	0.0
Buena Vista City	0	0.0
Campbell County	2	3.6
Caroline County	0	0.0
Carroll County	0	0.0
Charles City County	0	0.0
Charlotte County	1	8.4
Charlottesville City	0	0.0
Chesapeake City	12	4.9
Chesterfield County	10	2.9
Clarke County	0	0.0
Colonial Heights City	0	0.0
Covington City	0	0.0
Craig County	0	0.0
Culpeper County	1	1.9
Cumberland County	0	0.0
Danville City	12	29.5
Dickenson County	0	0.0
Dinwiddie County	1	3.5
Emporia City	1	19.5
Essex County	0	0.0
Fairfax City	1	4.1
Fairfax County	13	1.1
Falls Church City	0	0.0
Fauquier County	4	5.7
Floyd County	0	0.0
Fluvanna County	1	3.7

Locality of Residence	Deaths	Rate
Franklin City	3	37.4
Franklin County	3	5.3
Frederick County	0	0.0
Fredericksburg City	3	10.3
Galax City	0	0.0
Giles County	1	5.9
Gloucester County	0	0.0
Goochland County	0	0.0
Grayson County	0	0.0
Greene County	0	0.0
Greensville County	0	0.0
Halifax County	4	11.7
Hampton City	21	15.6
Hanover County	3	2.8
Harrisonburg City	4	7.4
Henrico County	17	5.2
Henry County	3	5.9
Highland County	0	0.0
Hopewell City	8	35.4
Isle of Wight County	1	2.7
James City County	2	2.6
King and Queen County	1	14.2
King George County	1	3.8
King William County	0	0.0
Lancaster County	0	0.0
Lee County	3	12.7
Lexington City	0	0.0
Loudoun County	6	1.5
Louisa County	2	5.4
Lunenburg County	1	8.3
Lynchburg City	6	7.3
Madison County	0	0.0
Manassas	1	2.4
Manassas Park	2	11.6
Martinsville City	2	15.5
Mathews County	1	11.4
Mecklenburg County	2	6.5
Middlesex County	1	9.3
Montgomery County	2	2.0
Nelson County	1	6.7
New Kent County	1	4.5
Newport News City	20	11.2
Norfolk City	37	15.2

Virginia Department of Health

Locality of Residence	Deaths	Rate
Northampton County	1	8.5
Northumberland County	0	0.0
Norton City	0	0.0
Nottoway County	1	6.5
Orange County	3	8.2
Page County	0	0.0
Patrick County	3	17.0
Petersburg City	14	44.4
Pittsylvania County	3	4.9
Poquoson City	0	0.0
Portsmouth City	19	20.1
Powhatan County	0	0.0
Prince Edward County	1	4.4
Prince George County	2	5.3
Prince William County	6	1.3
Pulaski County	0	0.0
Radford City	0	0.0
Rappahannock County	0	0.0
Richmond City	41	17.9
Richmond County	1	11.1
Roanoke City	10	10.0
Roanoke County	6	6.4
Rockbridge County	0	0.0
Rockingham County	2	2.5
Russell County	1	3.7
Salem City	3	11.7
Scott County	2	9.3
Shenandoah County	0	0.0
Smyth County	1	3.3
Southampton County	0	0.0
Spotsylvania County	1	0.7
Stafford County	5	3.3
Staunton City	2	8.0
Suffolk City	3	3.3
Surry County	0	0.0
Sussex County	4	35.6
Tazewell County	1	2.4
Virginia Beach City	19	4.2
Warren County	0	0.0
Washington County	3	5.5
Waynesboro City	1	4.4
Westmoreland County	0	0.0
Williamsburg City	0	0.0
Winchester City	1	3.6
Wise County	2	5.3
Wythe County	1	3.5
York County	3	4.4
Subtotal (in-state)	**407**	**4.8**
Out of State	19	ND
Unknown	3	ND
Subtotal (out-of-state)	**22**	**ND**
TOTAL	**429**	**5.0**

Note: No denominator is represented by ND.

Table 2.7 Top 10 Localities with the Largest Number of Residential Homicides, 2018

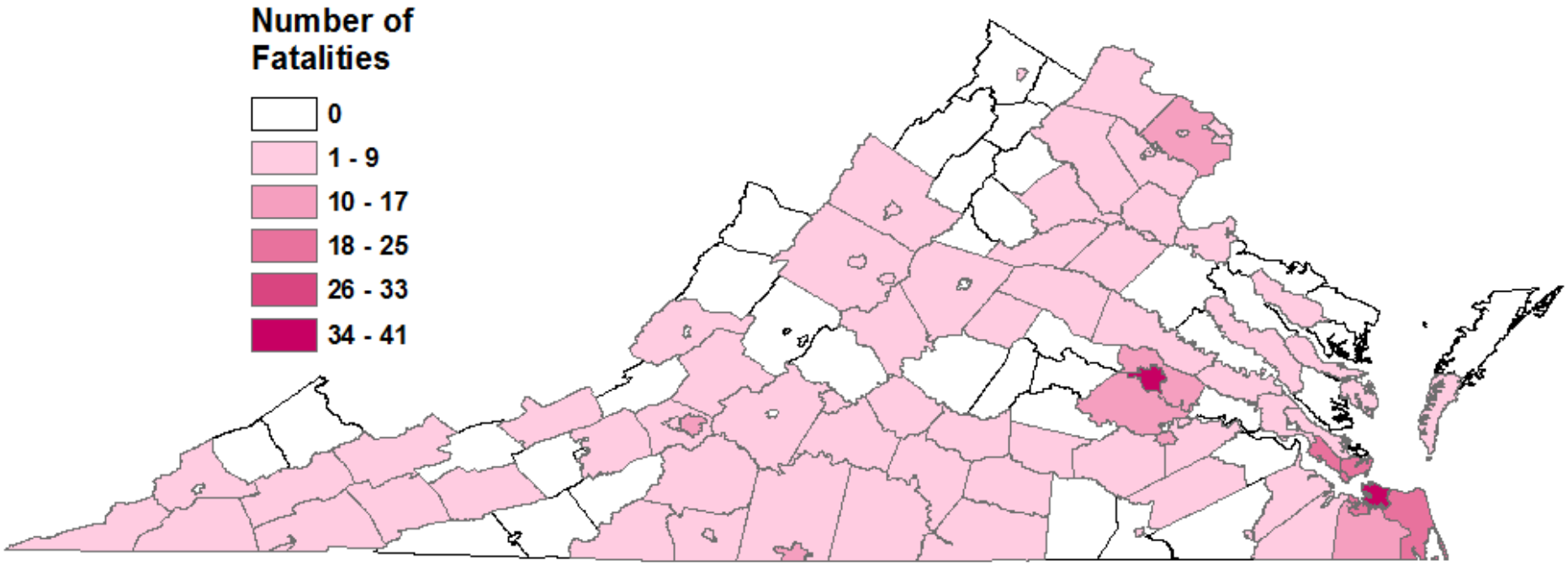
Rank #	Locality of Residence	Homicide #
1	Richmond City	41
2	Norfolk City	37
3	Hampton City	21
4	Newport News City	20
5	Portsmouth City	19
	Virginia Beach City	19
	Out of State	19
8	Henrico County	17
9	Petersburg City	14
10	Fairfax County	13

Table 2.8 Top 10 Localities with the Highest Rate of Residential Homicides, 2018

Rank #	Locality of Residence	Homicide Rate
1	Petersburg City	44.4
2	Franklin City	37.4*
3	Sussex County	35.6*
4	Hopewell City	35.4
5	Danville City	29.5
6	Portsmouth City	20.1
7	Emporia City	19.5*
8	Bristol City	18.2*
9	Richmond City	17.9
10	Patrick County	17.0*

*Unstable rate based on small sample size (<5 deaths)

Map 2.1 Number of Homicides by Locality of Residence, 2018



Virginia Department of Health

Map 2.2 Homicide Rates by Locality of Residence, 2018

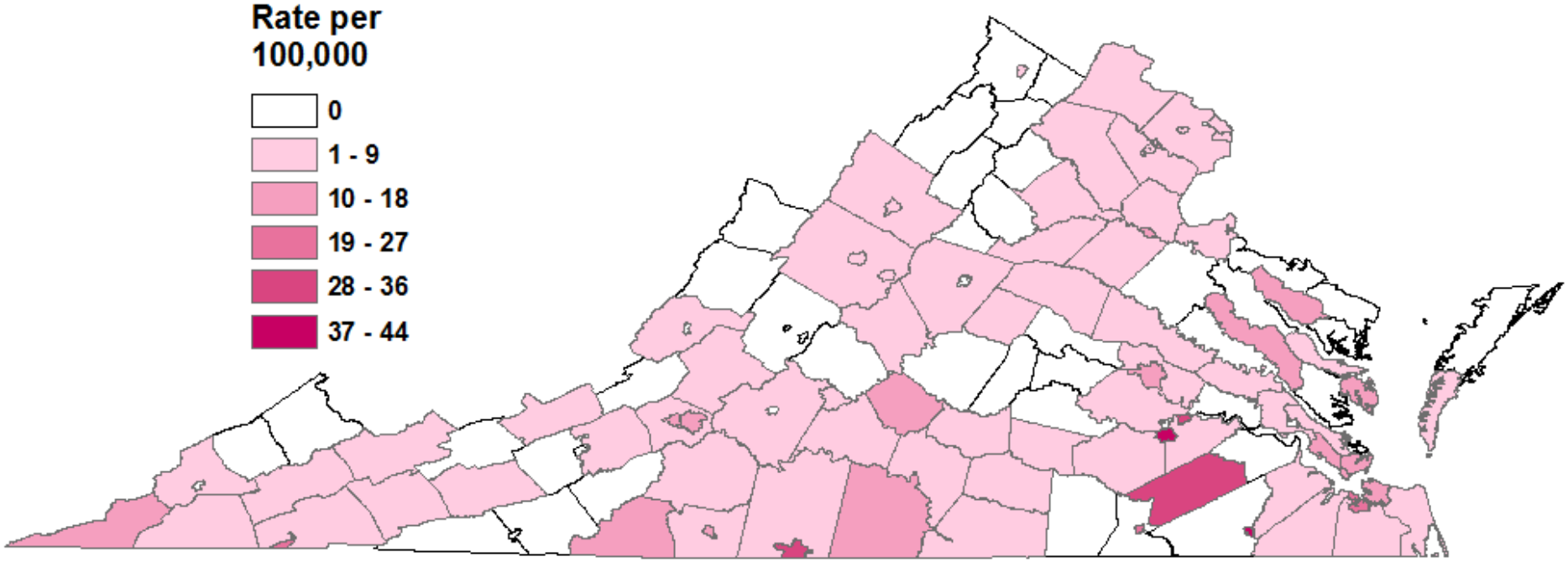


Table 2.9 Number and Rate of Homicide Deaths by Locality of Injury, 2018

Locality of Injury	Deaths	Rate
Accomack County	1	3.1
Albemarle County	1	0.9
Alexandria City	3	1.9
Alleghany County	0	0.0
Amelia County	0	0.0
Amherst County	0	0.0
Appomattox County	0	0.0
Arlington County	3	1.3
Augusta County	2	2.7
Bath County	0	0.0
Bedford County	3	3.8
Bland County	0	0.0
Botetourt County	0	0.0
Bristol City	3	18.2
Brunswick County	1	6.1
Buchanan County	0	0.0
Buckingham County	0	0.0
Buena Vista City	0	0.0
Campbell County	2	3.6
Caroline County	0	0.0
Carroll County	0	0.0
Charles City County	0	0.0
Charlotte County	1	8.4
Charlottesville City	1	2.1
Chesapeake City	11	4.5
Chesterfield County	5	1.4
Clarke County	0	0.0
Colonial Heights City	0	0.0
Covington City	0	0.0
Craig County	1	19.7
Culpeper County	1	1.9
Cumberland County	0	0.0
Danville City	13	31.9
Dickenson County	0	0.0
Dinwiddie County	2	7.0
Emporia City	1	19.5
Essex County	0	0.0
Fairfax City	0	0.0
Fairfax County	14	1.2
Falls Church City	0	0.0
Fauquier County	4	5.7
Floyd County	0	0.0

Locality of Injury	Deaths	Rate
Fluvanna County	0	0.0
Franklin City	0	0.0
Franklin County	1	1.8
Frederick County	1	1.1
Fredericksburg City	2	6.9
Galax City	0	0.0
Giles County	1	5.9
Gloucester County	0	0.0
Goochland County	0	0.0
Grayson County	0	0.0
Greene County	0	0.0
Greensville County	0	0.0
Halifax County	4	11.7
Hampton City	16	11.9
Hanover County	3	2.8
Harrisonburg City	3	5.6
Henrico County	10	3.0
Henry County	3	5.9
Highland County	0	0.0
Hopewell City	7	31.0
Isle of Wight County	1	2.7
James City County	1	1.3
King and Queen County	1	14.2
King George County	0	0.0
King William County	0	0.0
Lancaster County	0	0.0
Lee County	3	12.7
Lexington City	0	0.0
Loudoun County	5	1.2
Louisa County	1	2.7
Lunenburg County	1	8.3
Lynchburg City	7	8.5
Madison County	0	0.0
Manassas	1	2.4
Manassas Park	2	11.6
Martinsville City	2	15.5
Mathews County	1	11.4
Mecklenburg County	2	6.5
Middlesex County	1	9.3
Montgomery County	1	1.0
Nelson County	1	6.7
New Kent County	0	0.0

Locality of Injury	Deaths	Rate
Newport News City	25	14.0
Norfolk City	37	15.2
Northampton County	0	0.0
Northumberland County	0	0.0
Norton City	0	0.0
Nottoway County	1	6.5
Orange County	2	5.5
Page County	0	0.0
Patrick County	3	17.0
Petersburg City	17	53.9
Pittsylvania County	3	4.9
Poquoson City	0	0.0
Portsmouth City	20	21.1
Powhatan County	0	0.0
Prince Edward County	1	4.4
Prince George County	2	5.3
Prince William County	8	1.7
Pulaski County	0	0.0
Radford City	0	0.0
Rappahannock County	0	0.0
Richmond City	55	24.0
Richmond County	1	11.1
Roanoke City	16	16.0
Roanoke County	7	7.4
Rockbridge County	1	4.4
Rockingham County	1	1.2
Russell County	0	0.0
Salem City	1	3.9
Scott County	2	9.3
Shenandoah County	1	2.3
Smyth County	1	3.3
Southampton County	2	11.4
Spotsylvania County	3	2.2
Stafford County	4	2.7
Staunton City	1	4.0
Suffolk City	2	2.2
Surry County	0	0.0
Sussex County	2	17.8
Tazewell County	0	0.0
Virginia Beach City	19	4.2
Warren County	0	0.0
Washington County	4	7.4
Waynesboro City	1	4.4
Westmoreland County	0	0.0
Williamsburg City	0	0.0
Winchester City	1	3.6
Wise County	3	7.9
Wythe County	2	7.0
York County	4	5.9
Subtotal (in-state)	**408**	**4.8**
Out of State	8	ND
Unknown	13	ND
Subtotal (out-of-state)	**21**	**ND**
TOTAL	**429**	**5.0**

Note: No denominator is represented by ND.

Table 2.10 Top 10 Localities with the Largest Number of Homicides by Locality of Injury, 2018

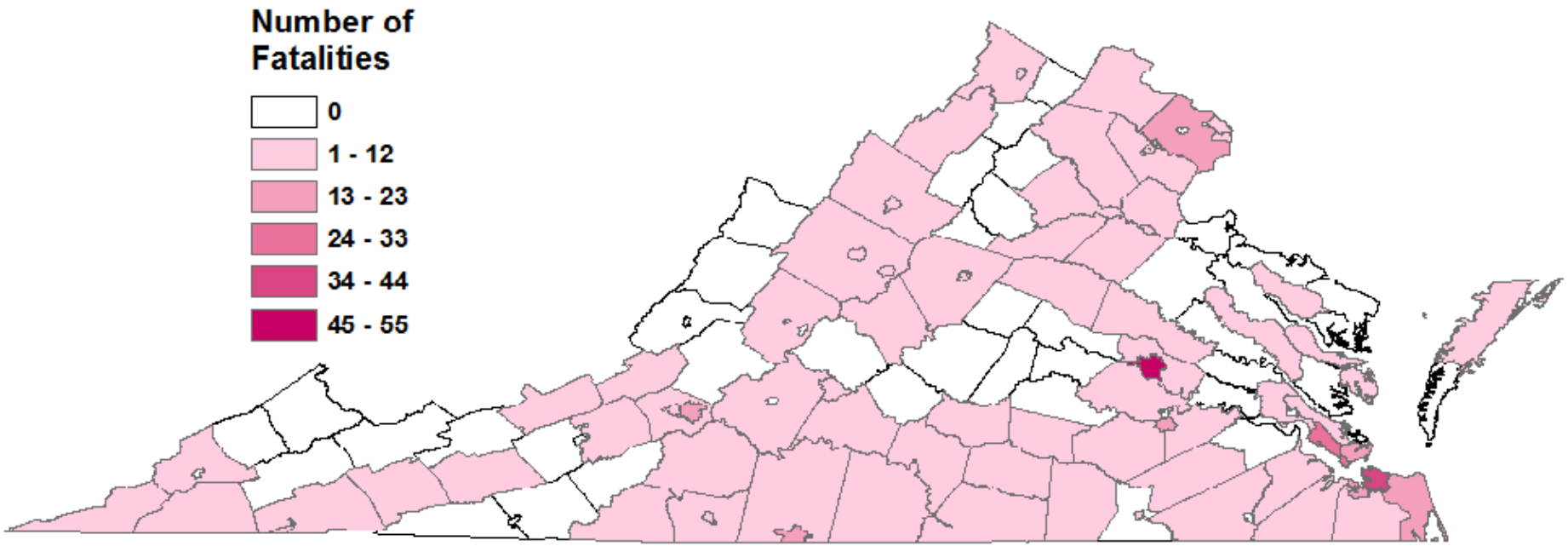
Rank #	Locality of Injury	Homicide #
1	Richmond City	55
2	Norfolk City	37
3	Newport News City	25
4	Portsmouth City	20
5	Virginia Beach City	19
6	Petersburg City	17
7	Hampton City	16
	Roanoke City	16
9	Fairfax County	14
10	Danville City	13
	Unknown	13

Table 2.11 Top 10 Locations City/Counties with the Highest Rate of Homicides by Locality of Injury, 2018

Rank #	Locality of Injury	Homicide Rate
1	Petersburg City	53.9
2	Danville City	31.9
3	Hopewell City	31.0
4	Richmond City	24.0
5	Portsmouth City	21.1
6	Craig County	19.7*
7	Emporia City	19.5*
8	Bristol City	18.2*
9	Sussex County	17.8*
10	Patrick County	17.0*

*Unstable rate based on small sample size (<5 deaths)

Map 2.3 Number of Homicides by Locality of Injury, 2018



Map 2.4 Homicide Rates by Locality of Injury, 2018

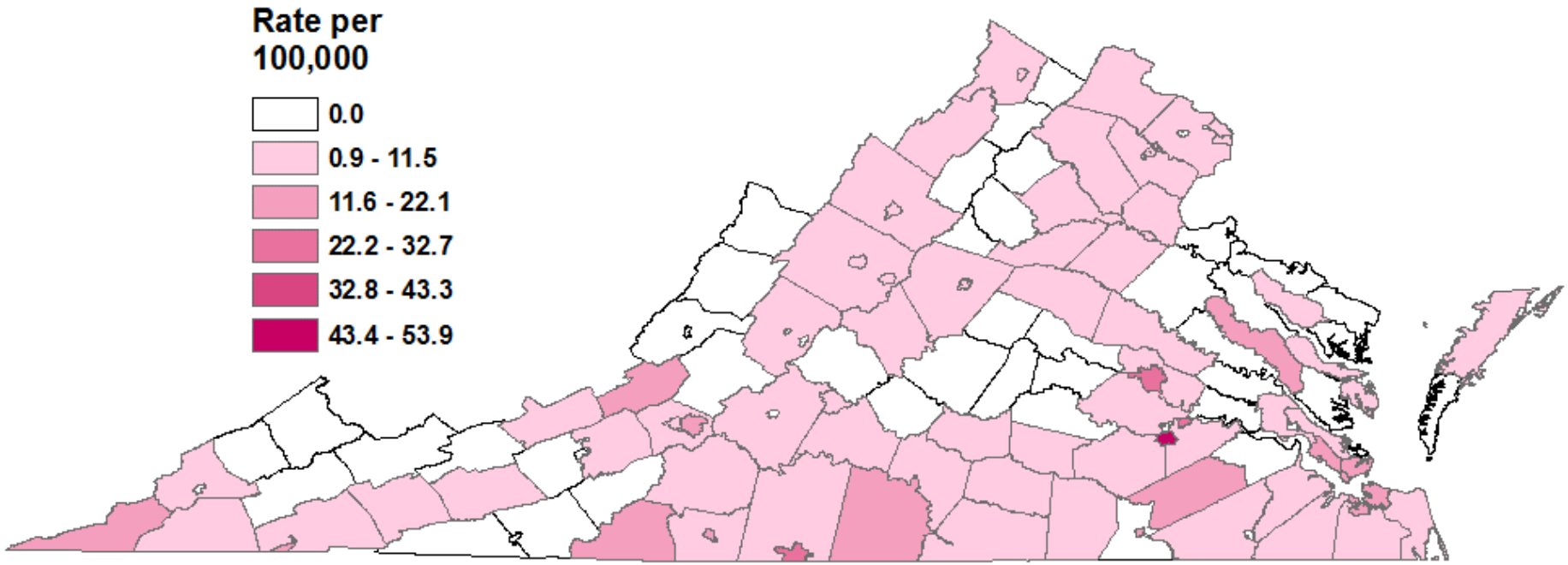


Table 2.12 Number of Homicide Deaths by Locality of Death and Year of Death, 2006-2018

Locality of Death	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
Accomack County	5	4	2	2	2	4	1	3	4	3	4	1	1	**36**
Albemarle County	1	0	1	0	3	0	3	2	2	1	0	4	1	**18**
Alexandria City	4	7	4	4	2	0	2	6	4	3	5	3	3	**47**
Alleghany County	0	3	1	0	2	2	1	2	0	0	0	0	0	**11**
Amelia County	0	0	0	0	0	0	0	0	0	0	2	1	0	**3**
Amherst County	0	1	1	1	0	1	0	1	2	0	1	0	0	**8**
Appomattox County	0	1	1	0	7	1	0	0	1	3	0	0	0	**14**
Arlington County	3	3	4	2	0	0	5	0	1	2	0	3	3	**26**
Augusta County	3	1	1	1	3	3	2	0	4	1	4	1	2	**26**
Bath County	0	0	0	2	0	0	0	0	0	0	0	1	0	**3**
Bedford City	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Bedford County	1	2	0	0	2	0	0	0	4	3	1	1	3	**17**
Bland County	0	0	0	1	1	0	0	0	0	0	0	0	0	**2**
Botetourt County	0	0	0	0	0	0	0	1	0	0	0	0	0	**1**
Bristol City	4	0	0	0	1	1	1	0	0	0	0	0	2	**9**
Brunswick County	3	1	2	0	0	0	1	0	0	0	0	0	0	**7**
Buchanan County	1	0	2	6	3	6	1	0	1	1	4	1	0	**26**
Buckingham County	1	1	0	0	0	1	0	0	2	0	1	1	0	**7**
Buena Vista City	0	0	0	0	0	0	0	1	0	0	0	0	0	**1**
Campbell County	2	2	2	5	2	1	3	3	0	0	6	2	3	**31**
Caroline County	5	4	0	0	0	0	0	0	0	1	1	1	0	**12**
Carroll County	1	4	1	1	1	0	0	3	1	0	0	0	0	**12**
Charles City County	0	0	1	0	1	0	0	0	0	0	0	0	0	**2**
Charlotte County	0	0	1	1	0	1	1	1	0	2	2	0	1	**10**
Charlottesville City	5	6	12	3	5	3	4	6	8	4	4	10	5	**75**
Chesapeake City	7	7	7	10	9	10	9	8	8	11	11	6	6	**109**
Chesterfield County	5	6	9	3	6	11	9	9	9	8	6	11	2	**94**
Clarke County	0	0	1	1	0	0	0	0	0	0	1	1	0	**4**
Colonial Heights City	0	0	0	0	0	2	0	0	1	1	0	1	0	**5**
Covington City	0	0	0	0	1	0	0	1	0	0	0	0	0	**2**
Craig County	0	0	1	0	0	0	0	0	0	0	0	0	1	**2**

Locality of Death	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
Culpeper County	1	1	0	0	0	3	1	2	6	1	4	2	1	**22**
Cumberland County	0	1	0	2	0	0	1	0	0	0	0	0	0	**4**
Danville City	5	5	8	10	7	7	5	5	3	6	15	14	13	**103**
Dickenson County	0	1	1	1	2	2	0	1	1	0	0	1	0	**10**
Dinwiddie County	5	1	1	0	2	0	3	4	0	2	2	0	1	**21**
Emporia City	1	2	2	1	2	1	1	0	1	2	0	2	1	**16**
Essex County	0	0	0	0	1	1	0	1	1	1	0	0	0	**5**
Fairfax City	1	0	1	0	0	0	0	0	0	0	0	0	0	**2**
Fairfax County	29	20	28	24	19	16	19	10	16	17	27	29	20	**274**
Falls Church City	0	0	0	1	0	0	1	1	0	0	0	0	0	**3**
Fauquier County	2	4	1	2	1	1	3	2	1	1	1	2	4	**25**
Floyd County	0	0	2	1	0	1	0	0	0	0	0	0	0	**4**
Fluvanna County	0	0	1	0	0	0	0	0	0	1	0	0	0	**2**
Franklin City	0	0	0	2	1	0	0	0	1	0	0	1	1	**6**
Franklin County	2	1	0	4	4	2	0	4	2	9	0	4	1	**33**
Frederick County	7	0	1	2	1	1	2	2	2	2	0	0	1	**21**
Fredericksburg City	0	2	3	4	3	3	3	4	1	7	4	4	4	**42**
Galax City	1	2	0	1	0	0	0	0	0	0	2	1	0	**7**
Giles County	1	0	0	0	0	0	0	0	1	0	0	0	1	**3**
Gloucester County	0	1	1	0	1	2	3	0	0	0	1	2	1	**12**
Goochland County	1	0	2	0	1	0	0	1	1	1	0	0	0	**7**
Grayson County	0	0	7	0	0	0	0	1	0	1	0	1	0	**10**
Greene County	0	1	0	0	0	3	0	0	0	0	0	0	0	**4**
Greensville County	5	0	5	4	3	2	0	2	0	1	0	3	0	**25**
Halifax County	1	3	5	0	2	2	0	0	0	1	3	2	4	**23**
Hampton City	14	6	4	7	9	3	7	20	7	11	12	13	11	**124**
Hanover County	2	0	1	0	2	2	5	0	1	3	2	2	3	**23**
Harrisonburg City	4	0	0	0	1	2	1	1	0	1	2	0	1	**13**
Henrico County	10	6	15	7	9	9	9	6	6	9	14	18	7	**125**
Henry County	7	3	3	5	6	4	5	1	3	2	2	0	3	**44**
Highland County	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**

Locality of Death	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
Hopewell City	4	2	4	2	2	1	2	2	5	3	5	2	6	**40**
Isle of Wight County	1	0	0	1	0	1	2	1	1	1	0	2	0	**10**
James City County	1	0	1	0	0	1	1	2	0	2	2	1	0	**11**
King and Queen County	0	0	0	0	0	0	1	0	0	0	1	0	1	**3**
King George County	0	0	0	1	0	0	0	0	1	1	0	0	1	**4**
King William County	0	1	0	0	0	0	0	0	0	0	1	0	0	**2**
Lancaster County	2	0	1	0	2	1	1	0	0	0	0	0	0	**7**
Lee County	0	1	2	1	4	4	0	2	0	0	0	0	1	**15**
Lexington City	0	0	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	4	4	**40**
Louisa County	0	4	1	1	3	0	1	0	1	0	3	2	0	**16**
Lunenburg County	1	1	2	1	0	0	0	1	0	0	1	1	0	**8**
Lynchburg City	2	1	5	0	4	5	3	1	8	4	3	5	7	**48**
Madison County	0	0	1	0	1	3	1	1	0	1	0	1	0	**9**
Manassas	1	2	5	2	0	3	1	1	2	0	1	2	2	**22**
Manassas Park	0	0	0	0	0	0	0	1	0	0	0	0	0	**1**
Martinsville City	0	2	3	0	4	3	1	2	2	3	1	3	1	**25**
Mathews County	0	0	0	1	0	0	0	0	0	0	1	1	0	**3**
Mecklenburg County	0	1	4	3	2	1	0	2	1	1	3	1	2	**21**
Middlesex County	1	0	0	0	0	1	0	1	2	0	0	1	1	**7**
Montgomery County	3	31	2	8	2	1	0	2	2	2	0	2	1	**56**
Nelson County	0	1	0	1	1	1	0	1	0	0	0	1	1	**7**
New Kent County	0	0	1	1	0	0	0	0	0	0	0	0	0	**2**
Newport News City	20	31	23	31	30	21	29	18	26	31	43	32	34	**369**
Norfolk City	34	75	41	63	47	40	56	38	48	48	64	50	51	**655**
Northampton County	2	3	0	0	2	1	1	4	0	3	3	0	0	**19**
Northumberland County	0	1	0	0	0	0	1	0	0	0	0	0	0	**2**
Norton City	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Nottoway County	0	1	0	0	0	0	2	0	1	0	2	0	1	**7**
Orange County	2	0	1	0	1	0	1	0	2	0	0	0	2	**9**
Page County	1	0	0	0	1	0	1	0	3	0	0	0	0	**6**

Locality of Death	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
Patrick County	0	1	0	0	0	0	0	0	1	2	0	0	3	**7**
Petersburg City	10	8	4	11	11	8	5	6	12	18	9	10	14	**126**
Pittsylvania County	2	3	3	2	4	4	1	0	2	0	3	1	3	**28**
Poquoson City	0	0	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	13	17	**169**
Powhatan County	0	0	3	1	1	3	0	0	0	1	1	1	0	**11**
Prince Edward County	0	1	1	7	1	1	1	3	0	0	0	4	0	**19**
Prince George County	0	0	0	1	2	0	0	1	1	0	0	2	1	**8**
Prince William County	12	11	10	9	9	7	1	5	4	9	15	5	8	**105**
Pulaski County	1	0	2	1	2	0	1	1	4	0	2	2	0	**16**
Radford City	1	0	0	0	1	0	1	0	0	0	0	0	0	**3**
Rappahannock County	1	0	0	0	1	0	0	0	0	0	0	0	0	**2**
Richmond City	85	76	47	58	56	50	55	56	55	55	82	97	72	**844**
Richmond County	0	0	1	0	0	0	0	0	0	0	0	0	1	**2**
Roanoke City	13	12	23	14	14	15	12	18	7	17	19	28	21	**213**
Roanoke County	1	2	0	1	4	0	1	0	1	0	2	0	6	**18**
Rockbridge County	0	1	0	0	1	1	0	0	0	1	0	3	1	**8**
Rockingham County	1	1	1	2	0	1	0	0	4	0	0	2	2	**14**
Russell County	2	0	1	1	0	2	0	2	3	0	0	1	0	**12**
Salem City	0	1	1	0	1	0	1	0	0	1	1	0	0	**6**
Scott County	0	2	1	0	1	1	1	0	0	0	2	0	2	**10**
Shenandoah County	0	0	0	1	0	0	1	1	3	0	1	0	2	**9**
Smyth County	0	0	1	0	0	2	1	0	0	0	2	2	1	**9**
Southampton County	1	3	0	2	1	0	0	0	0	0	3	0	1	**11**
Spotsylvania County	4	4	0	3	5	2	1	3	1	1	2	2	1	**29**
Stafford County	1	2	3	4	1	2	1	3	1	4	5	2	3	**32**
Staunton City	0	0	1	2	0	0	0	1	1	1	0	0	0	**6**
Suffolk City	8	2	5	5	3	3	2	6	2	2	5	1	2	**46**
Surry County	0	0	1	0	2	0	0	0	0	0	0	0	0	**3**
Sussex County	1	0	1	0	0	0	1	2	0	0	0	2	4	**11**
Tazewell County	0	3	2	5	3	0	2	0	1	1	1	1	0	**19**

Locality of Death	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
Virginia Beach City	20	16	18	16	13	14	14	17	17	18	19	13	20	**215**
Warren County	2	0	0	1	0	0	0	0	1	1	0	3	0	**8**
Washington County	0	0	2	1	2	2	1	2	4	0	0	6	3	**23**
Waynesboro City	0	1	0	0	1	0	0	0	0	0	1	0	1	**4**
Westmoreland County	2	1	1	0	0	0	1	0	0	2	0	1	0	**8**
Williamsburg City	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Winchester City	2	2	2	0	0	2	1	1	1	2	0	1	1	**15**
Wise County	0	2	0	2	0	0	4	0	2	2	2	1	4	**19**
Wythe County	1	0	2	0	0	1	0	0	0	0	0	2	2	**8**
York County	3	1	1	0	0	3	0	4	4	1	2	1	3	**23**
Subtotal (in-state)	**422**	**439**	**398**	**408**	**388**	**341**	**337**	**339**	**354**	**387**	**470**	**469**	**426**	**5178**
Out of State	1	1	2	4	3	4	7	1	4	2	7	1	3	**40**
Unknown	4	0	0	0	0	0	0	0	1	0	0	0	0	**5**
Subtotal (out-of-state)	**5**	**1**	**2**	**4**	**3**	**4**	**7**	**1**	**5**	**2**	**7**	**1**	**3**	**45**
TOTAL	**427**	**440**	**400**	**412**	**391**	**345**	**344**	**340**	**359**	**389**	**477**	**470**	**429**	**5223**

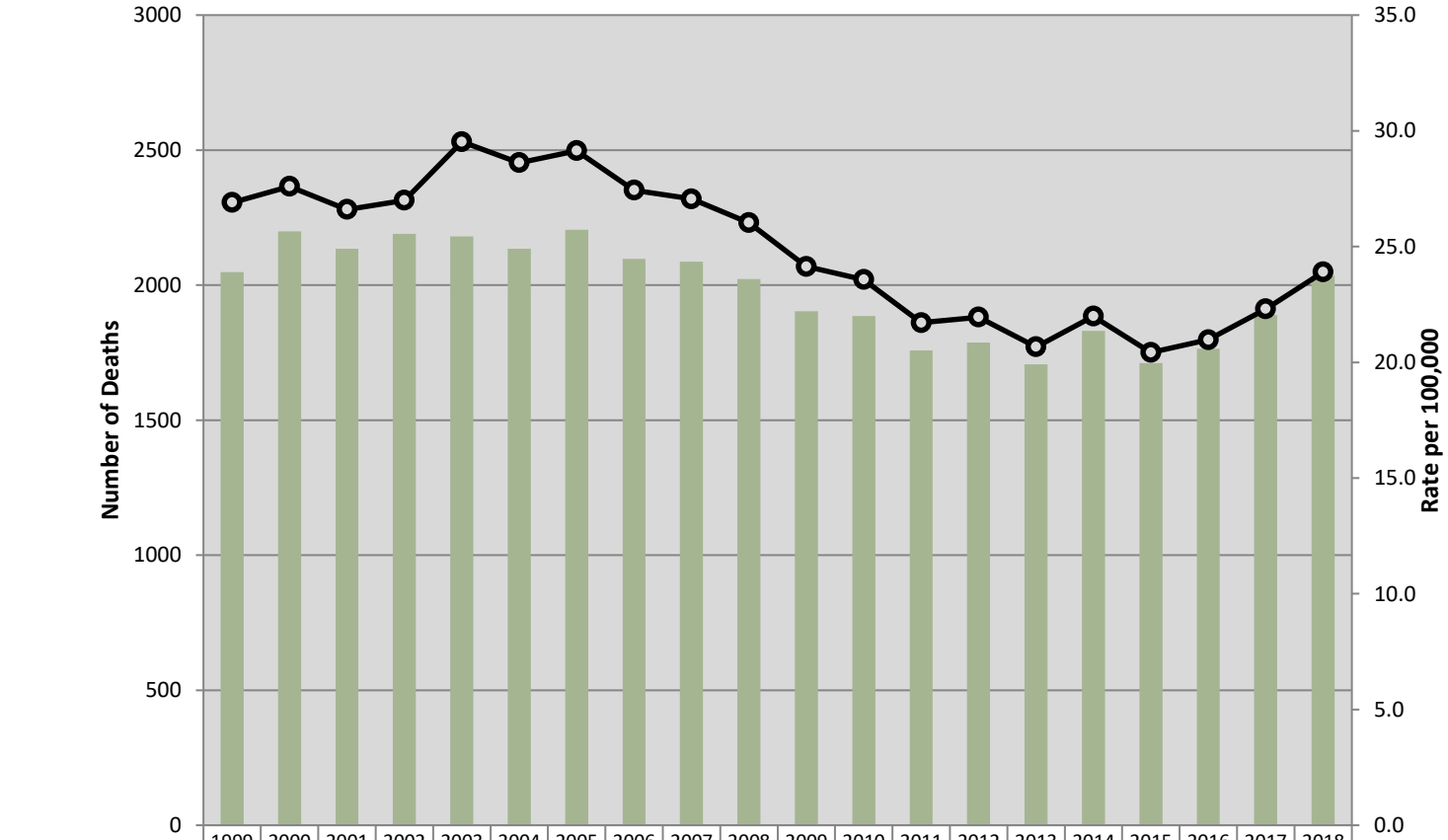
Note: Bedford City was incorporated into Bedford County in 2014 and therefore numbers are combined from there forward

NATURAL DEATHS (N=2,036)

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.

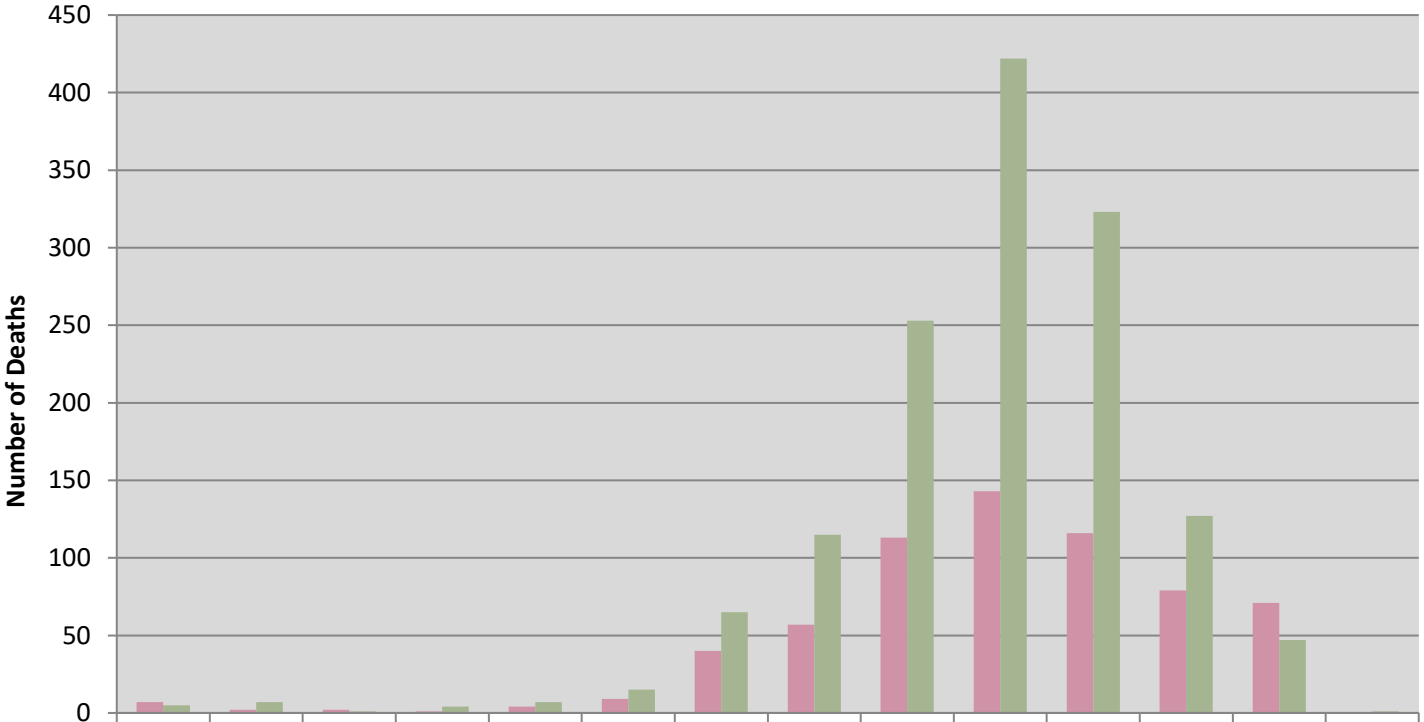
- Natural deaths accounted for 27.6% of all deaths investigated by the OCME in 2018
- The number of natural deaths accepted by OCME increased in 20178 compared with 2017 (an increase of 147 deaths or 7.8%).

Figure 2.19 Number and Rate of Natural Deaths Investigated by the OCME by Year of Death, 1999-2018



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Deaths	2048	2199	2135	2190	2181	2135	2205	2097	2087	2022	1903	1886	1758	1788	1707	1831	1712	1764	1889	2036
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	22.3	23.9

Figure 2.20 Number of Natural Deaths Investigated by the OCME by Age Group and Gender, 2018



	<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	7	2	2	1	4	9	40	57	113	143	116	79	71	0
Male	5	7	1	4	7	15	65	115	253	422	323	127	47	1

Table 2.13 Number of Natural Deaths Investigated by the OCME by Cause and Method of Death, 2018

Method and Cause of Death	Autopsied	Total Cases
Cardiovascular Diseases/Disorders		
Acute coronary insufficiency	7	**233**
Arrhythmogenic right ventricular dysplasia	1	**1**
Atherosclerosis	66	**610**
Atherosclerosis and hypertension	95	**214**
Cardiac dysrhythmia of undetermined etiology	18	**26**
Cardiomyopathy not otherwise specified	18	**21**
Congenital defect	1	**1**
Hypertension	51	**271**
Other cardiac disease/disorder	9	**19**
Valvular	3	**5**
Vascular dissection/rupture	10	**11**
Central Nervous System Diseases/Disorders		
CNS malignancy	**3**	**4**
Degenerative disease	5	**15**
Other CNS disease/disorder	10	**16**
Meningitis (bacterial or viral)	1	**1**
Seizure disorder	13	**24**
Vascular disease	11	**25**
Gastrointestinal Diseases/Disorders		
Cirrhosis	6	**24**
GI hemorrhage	3	**13**
GI malignancy	15	**32**
Hepatitis	1	**4**
Other GI disease/disorder	15	**24**
Genitourinal Diseases/Disorders		
Genitourinal malignancy	0	**7**
Other GU disease/disorder	1	**3**
Renal disease	3	**9**
Other Natural Diseases/Disorders		
Other malignancy	1	**10**
Other natural disease/disorder	5	**8**
Perinatal and Pediatric Diseases/Disorders		
Other perinatal or pediatric disorder	3	**3**
Pulmonary Disease/Disorders		
Asthma	6	**9**
COPD	4	**31**
Emboli	33	**36**
Pneumonia	23	**44**

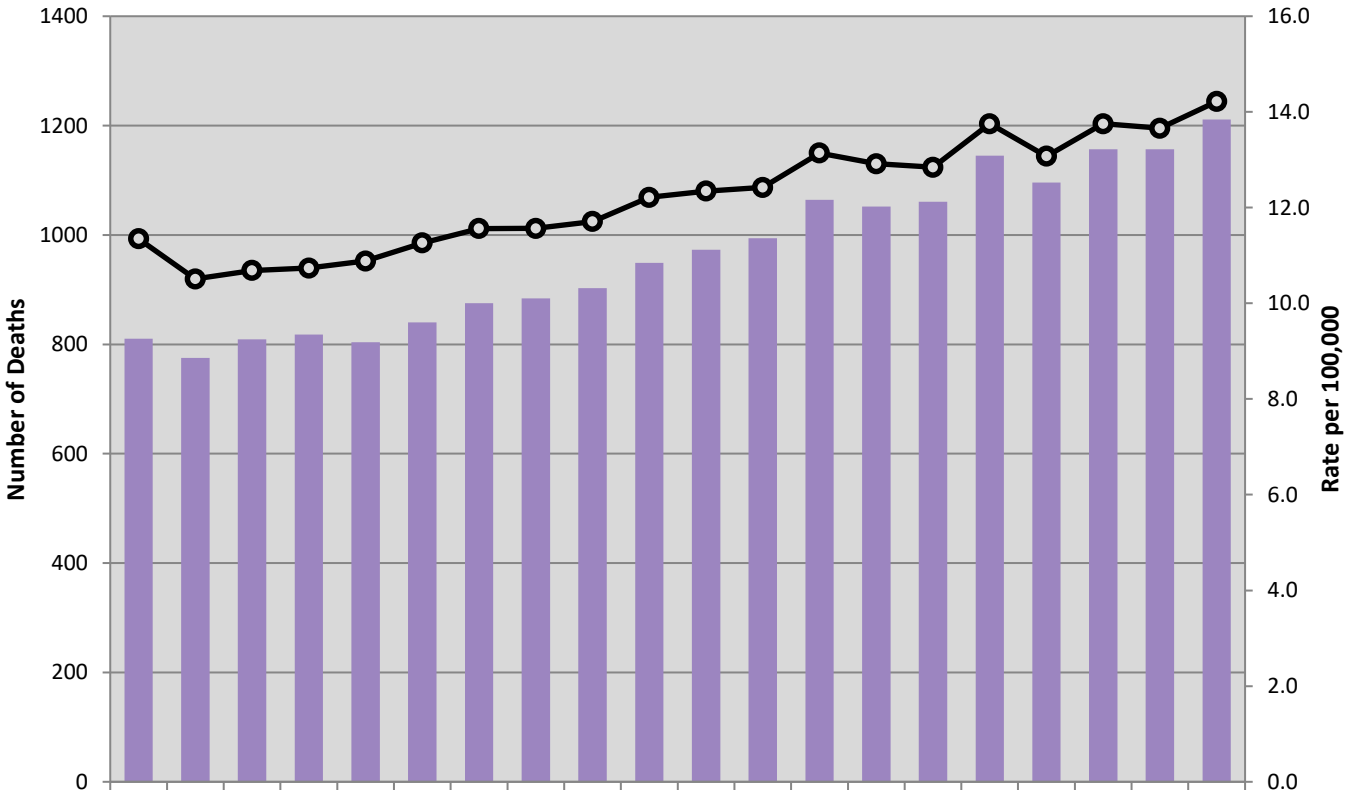
Pulmonary malignancy	4	**14**
Other pulmonary disease/disorder	1	**3**
Systemic Diseases/Disorders		
AIDS/HIV	1	**4**
Anaphylaxis	0	**1**
Blood disorders	2	**6**
Chronic alcoholism	29	**128**
Chronic drug abuse	2	**7**
Complications of dementia	1	**3**
Diabetes	21	**65**
Metastatic malignancy of unknown primary	2	**2**
Obesity	3	**14**
Other infectious disease	9	**10**
Other systemic disease/disorder	5	**18**
Sepsis	6	**7**
TOTAL NATURAL DEATHS	**527**	**2036**

SUICIDE DEATHS (N=1,211)

In general, suicide deaths have been slowly increasing since 1999. The number of suicide deaths in 2018 compared to 2017 increased 4.7%. The largest number of victims were male (76.5%), White (81.4%), and aged 55-64 years of age (19.4%). Males 75-84 years of age and older as well as white males had the highest rates of suicide compared to other groups within the total population (39.9 and 28.3 per 100,000 persons, respectively).

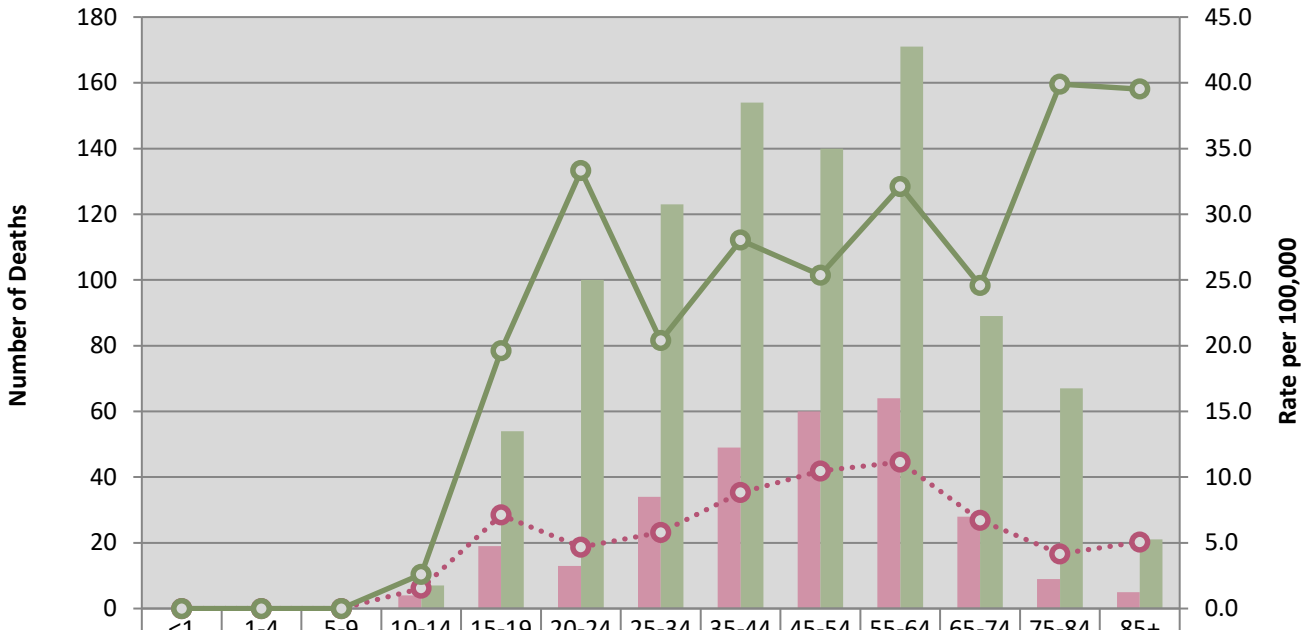
- Whites committed suicide at a rate 4.2 times that of Hispanics, 3.1 times that of Asians, and 2.5 times that of Blacks
- Males were 3.4 times more likely to commit suicide than females
- Firearms (specifically handguns), hangings, and drug use were the three most commonly used methods in suicides, with these deaths representing 55.6%, 23.5%, and 11.3% of all suicides, respectively

Figure 2.21 Number and Rate of Suicide Deaths by Year of Death, 1999-2018



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Deaths	810	775	809	818	804	840	875	884	903	949	973	994	1064	1052	1061	1145	1096	1157	1157	1211
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	13.8	13.7	14.2

Figure 2.22 Number and Rate of Suicide Deaths by Age Group and Gender, 2018



	<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	4	19	13	34	49	60	64	28	9	5
Male	0	0	0	7	54	100	123	154	140	171	89	67	21
Female Rate	0.0	0.0	0.0	1.5	7.1	4.7	5.8	8.8	10.5	11.1	6.7	4.2	5.1
Male Rate	0.0	0.0	0.0	2.6	19.6	33.3	20.4	28.0	25.4	32.1	24.6	39.9	39.5

Figure 2.23 Percentage of Suicide Deaths by Race/Ethnicity, 2018

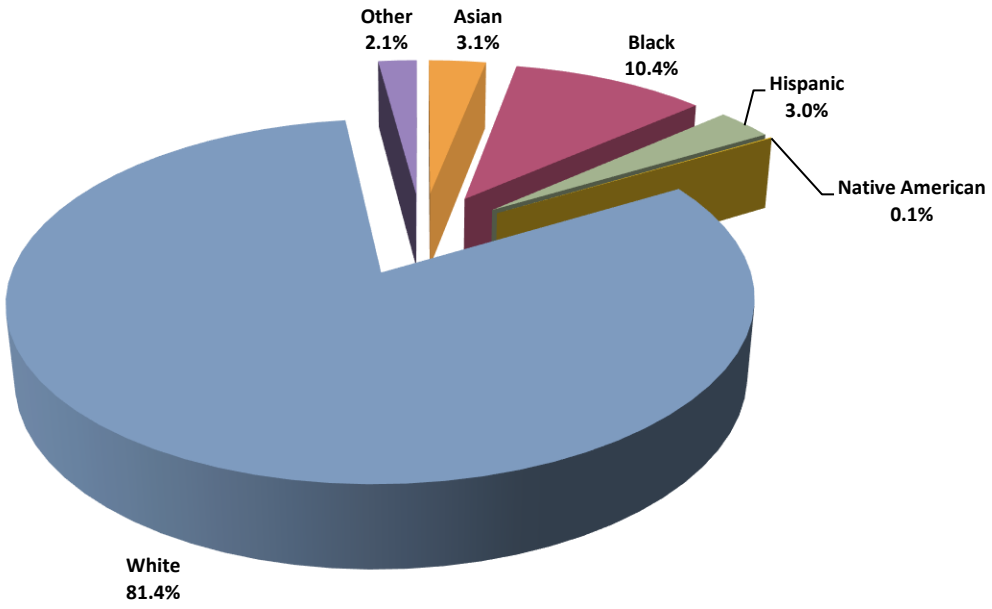
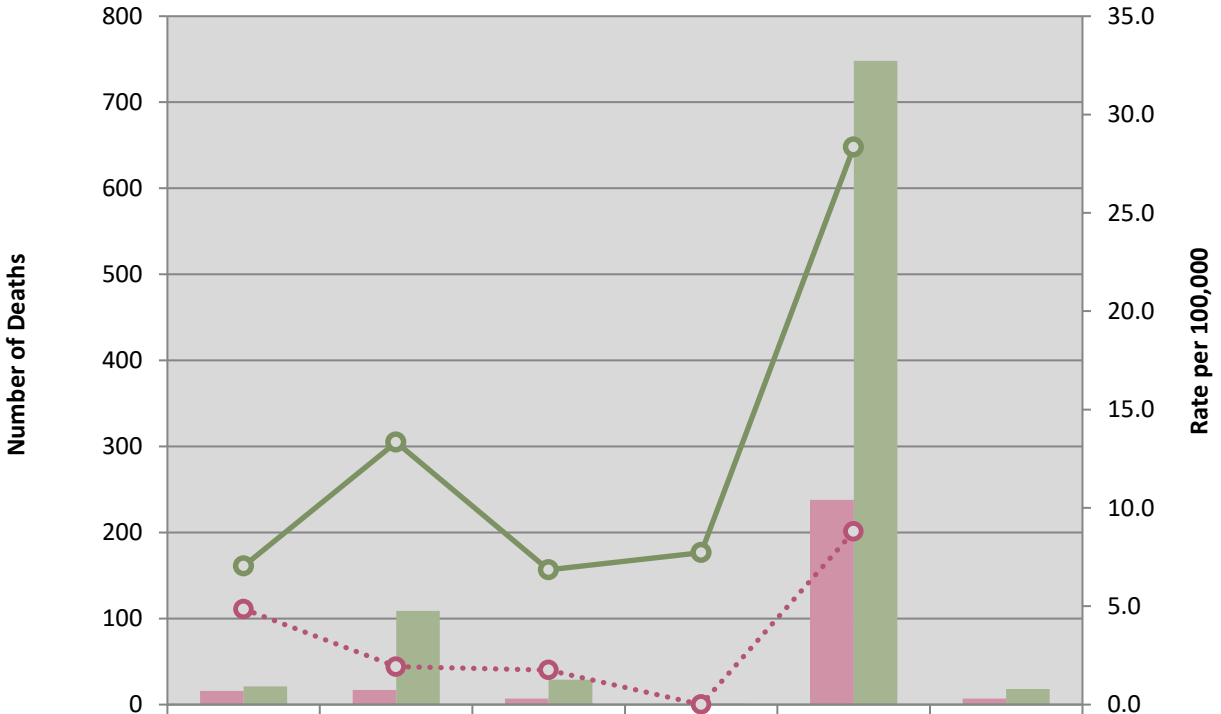


Figure 2.24 Number and Rate of Suicide Deaths by Race/Ethnicity and Gender, 2018



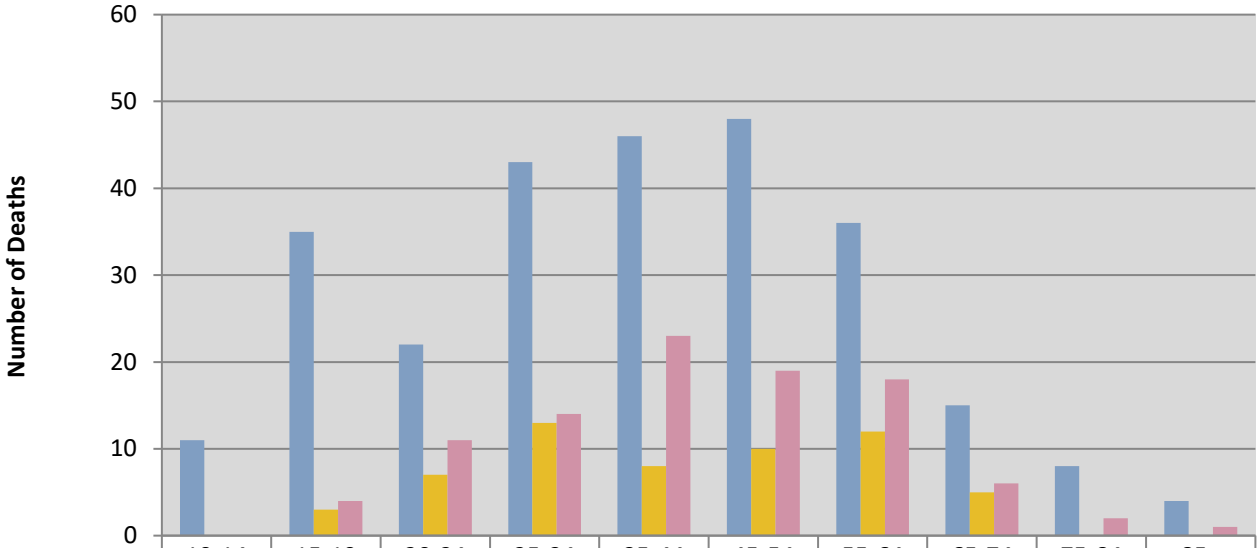
	Asian	Black	Hispanic	Native American	White	Other
Female	16	17	7	0	238	7
Male	21	109	29	1	748	18
Female Rate	4.9	1.9	1.8	0.0	8.8	*
Male Rate	7.0	13.3	6.9	7.7	28.3	*

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

Table 2.14 Number of Suicide Deaths by Cause and Method of Death, 2018

Method of Death	Autopsied	Total Cases
Asphyxia		
Carbon monoxide (CO) poisoning-motor vehicle exhaust	**0**	**8**
Carbon monoxide (CO) poisoning-other	**1**	**1**
Drowned	**11**	**15**
Hanged	**53**	**285**
Helium asphyxia	**0**	**4**
Mechanical/Positional asphyxia	**0**	**1**
Oxygen depletion or replacement	**1**	**7**
Plastic bag asphyxia	**0**	**9**
Strangled/Neck compression	**1**	**3**
Suffocated/Smothered	**0**	**1**
Other asphyxia	**0**	**1**
Drug Use		
Ingested ethylene glycol	**2**	**2**
Ingested and/or injected illicit, prescription, and/or other type of drug	**49**	**132**
Other poisoning (e.g. heavy metals, detergent suicide)	**0**	**3**
Fire		
Thermal and/or inhalational Injuries	**5**	**6**
Jump/Fall		
Jumped/Fell from height	**5**	**21**
Other		
Other	**2**	**3**
Traumatic Injury		
Cut/Stabbed self	**14**	**28**
Electrocuted	**0**	**1**
Gunshot wound		
Handgun	**556**	**558**
Other	**1**	**1**
Rifle	**41**	**41**
Shotgun	**67**	**67**
Unknown	**6**	**6**
Vehicular		
Car	**0**	**1**
Pickup truck	**0**	**1**
Sport utility vehicle	**0**	**1**
Train	**0**	**3**
Unknown	**0**	**1**
TOTAL SUICIDE DEATHS	**815**	**1211**

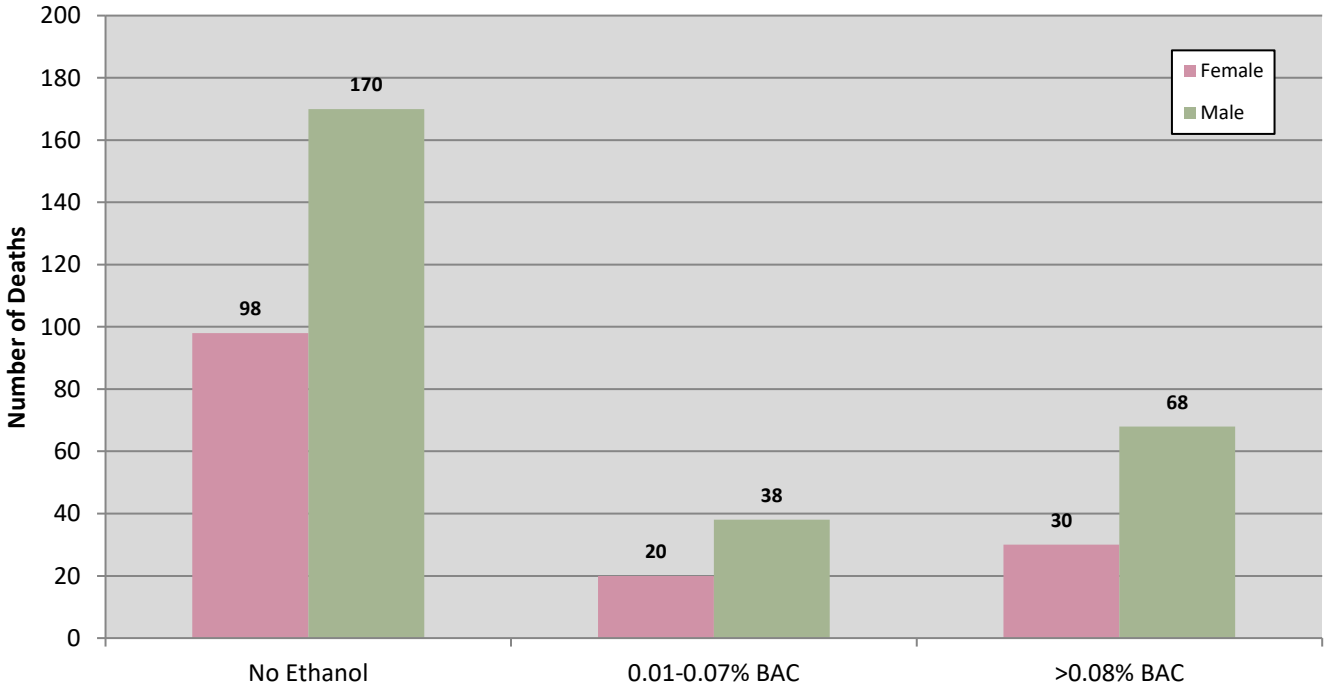
Figure 2.25 Number of Suicide Deaths by Age Group and Ethanol Level (N=424), 2018



	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
No Ethanol	11	35	22	43	46	48	36	15	8	4
0.01-0.07% BAC	0	3	7	13	8	10	12	5	0	0
>0.08% BAC	0	4	11	14	23	19	18	6	2	1

Note: Of the 1,211 suicides, 65.0% (n=787) did not receive toxicology testing

Figure 2.26 Number of Suicide Deaths by Gender and Ethanol Level (N=424), 2018



Note: Of the 1,211 suicides, 65.0% (n=787) did not receive toxicology testing

Table 2.15 Number of Suicide Deaths by Method of Death and Ethanol Level (N=424), 2018

Method of Death	No Ethanol	0.01-0.07% BAC	>0.08% BAC	TOTAL
Asphyxia				
Carbon monoxide (CO) poisoning-motor vehicle exhaust	4	2	2	8
Carbon monoxide (CO) poisoning-other	0	1	0	1
Drowned	4	2	2	8
Hanged	52	12	19	83
Helium asphyxia	1	1	0	2
Mechanical/Positional asphyxia	1	0	0	1
Oxygen depletion or replacement	1	1	0	2
Plastic bag asphyxia	4	0	1	5
Strangled/Neck compression	3	0	0	3
Suffocated/Smothered	0	0	0	0
Other asphyxia	1	0	0	1
Drug Use				
Ingested ethylene glycol	2	0	0	2
Ingested and/or injected illicit, prescription, and/or other type of drug	79	21	25	125
Other poisoning (e.g. heavy metals, detergent suicide)	2	0	0	2
Fire				
Thermal and/or inhalational Injuries	3	0	2	5
Jump/Fall				
Jumped/Fell from height	8	1	2	11
Other				
Other	2	0	0	2
Traumatic Injury				
Cut/Stabbed self	8	1	2	11
Electrocuted	1	0	0	1
Gunshot wound				
Handgun	70	13	31	114
Other	1	0	0	1
Rifle	8	2	0	10
Shotgun	10	1	8	19
Unknown	0	0	1	1
Vehicular				
Car	1	0	0	1
Pickup truck	1	0	0	1
Sport utility vehicle	0	0	1	1
Train	1	0	1	2
Unknown	0	0	1	1
TOTAL SUICIDE DEATHS	**268**	**58**	**98**	**424**

Note: Of the 1,211 suicides, 65.0% (n=787) did not receive toxicology testing

Figure 2.27 Number of Suicide Deaths by Month of Death, 2018

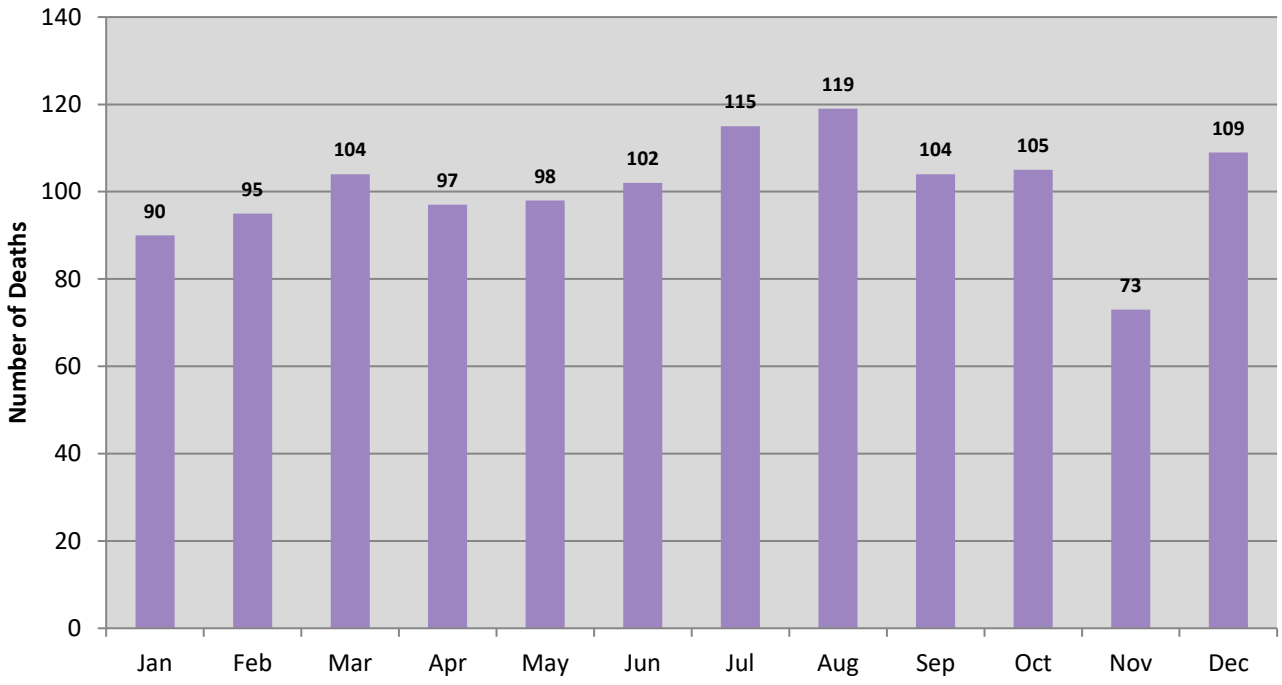


Figure 2.28 Number of Suicide Deaths by Day of the Week, 2018

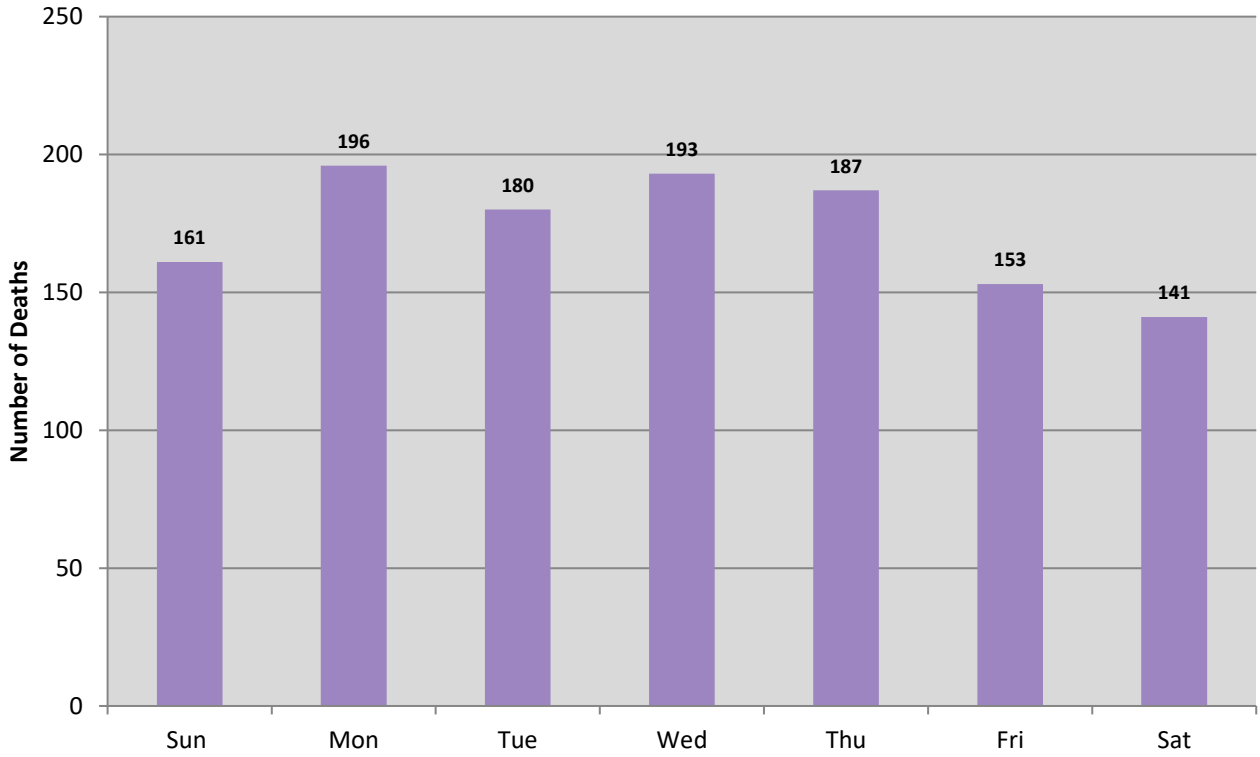


Table 2.16 Number and Rate of Suicide Deaths by Locality of Residence, 2018

Locality of Residence	Deaths	Rate
Accomack County	4	12.3
Albemarle County	14	12.9
Alexandria City	10	6.2
Alleghany County	4	26.8
Amelia County	2	15.4
Amherst County	8	25.3
Appomattox County	5	31.6
Arlington County	10	4.2
Augusta County	20	26.5
Bath County	4	93.2
Bedford County	16	20.3
Bland County	1	15.9
Botetourt County	3	9.0
Bristol City	2	12.1
Brunswick County	3	18.3
Buchanan County	7	33.0
Buckingham County	4	23.5
Buena Vista City	0	0.0
Campbell County	12	21.8
Caroline County	4	13.0
Carroll County	4	13.5
Charles City County	1	14.4
Charlotte County	2	16.8
Charlottesville City	5	10.4
Chesapeake City	32	13.2
Chesterfield County	50	14.3
Clarke County	3	20.7
Colonial Heights City	5	28.0
Covington City	2	36.6
Craig County	1	19.7
Culpeper County	14	27.0
Cumberland County	6	61.2
Danville City	7	17.2
Dickenson County	4	27.5
Dinwiddie County	2	7.0
Emporia City	1	19.5
Essex County	1	9.2
Fairfax City	2	8.1
Fairfax County	98	8.5
Falls Church City	3	20.3
Fauquier County	7	9.9
Floyd County	8	50.6
Fluvanna County	5	18.7

Locality of Residence	Deaths	Rate
Franklin City	0	0.0
Franklin County	5	8.9
Frederick County	13	14.7
Fredericksburg City	4	13.7
Galax City	1	15.6
Giles County	3	17.8
Gloucester County	8	21.4
Goochland County	4	17.2
Grayson County	5	32.0
Greene County	3	15.2
Greensville County	3	25.8
Halifax County	5	14.7
Hampton City	14	10.4
Hanover County	18	16.8
Harrisonburg City	5	9.3
Henrico County	27	8.2
Henry County	11	21.6
Highland County	0	0.0
Hopewell City	3	13.3
Isle of Wight County	6	16.2
James City County	11	14.4
King and Queen County	3	42.6
King George County	8	30.1
King William County	1	5.9
Lancaster County	1	9.3
Lee County	6	25.5
Lexington City	1	14.0
Loudoun County	40	9.8
Louisa County	6	16.3
Lunenburg County	1	8.3
Lynchburg City	16	19.5
Madison County	2	15.0
Manassas	1	2.4
Manassas Park	0	0.0
Martinsville City	3	23.3
Mathews County	2	22.7
Mecklenburg County	8	26.1
Middlesex County	2	18.6
Montgomery County	12	12.1
Nelson County	2	13.5
New Kent County	5	22.3
Newport News City	22	12.3
Norfolk City	32	13.1

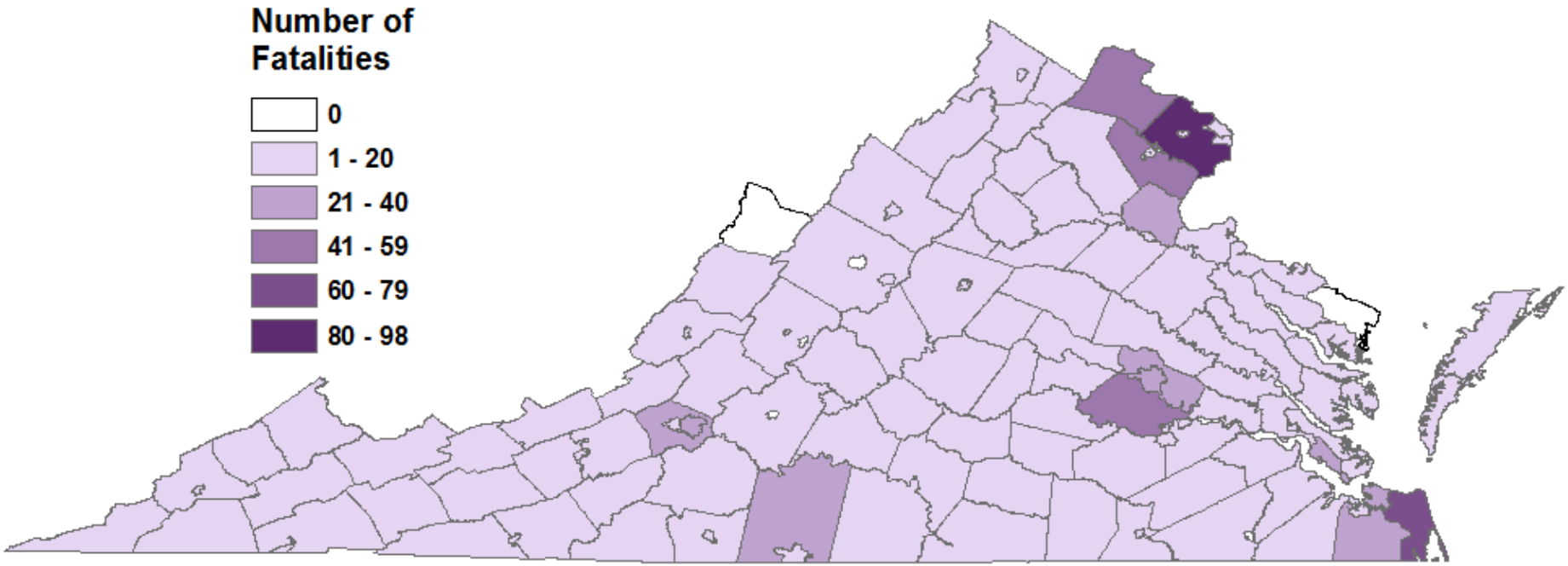
Virginia Department of Health

Locality of Residence	Deaths	Rate
Northampton County	1	8.5
Northumberland County	0	0.0
Norton City	2	50.4
Nottoway County	2	13.0
Orange County	3	8.2
Page County	4	16.7
Patrick County	3	17.0
Petersburg City	1	3.2
Pittsylvania County	22	36.1
Poquoson City	2	16.4
Portsmouth City	15	15.9
Powhatan County	1	3.4
Prince Edward County	5	21.8
Prince George County	9	23.6
Prince William County	49	10.5
Pulaski County	7	20.5
Radford City	2	10.9
Rappahannock County	1	13.8
Richmond City	28	12.2
Richmond County	4	44.3
Roanoke City	27	27.0
Roanoke County	23	24.4
Rockbridge County	5	22.0
Rockingham County	11	13.5
Russell County	1	3.7
Salem City	4	15.6

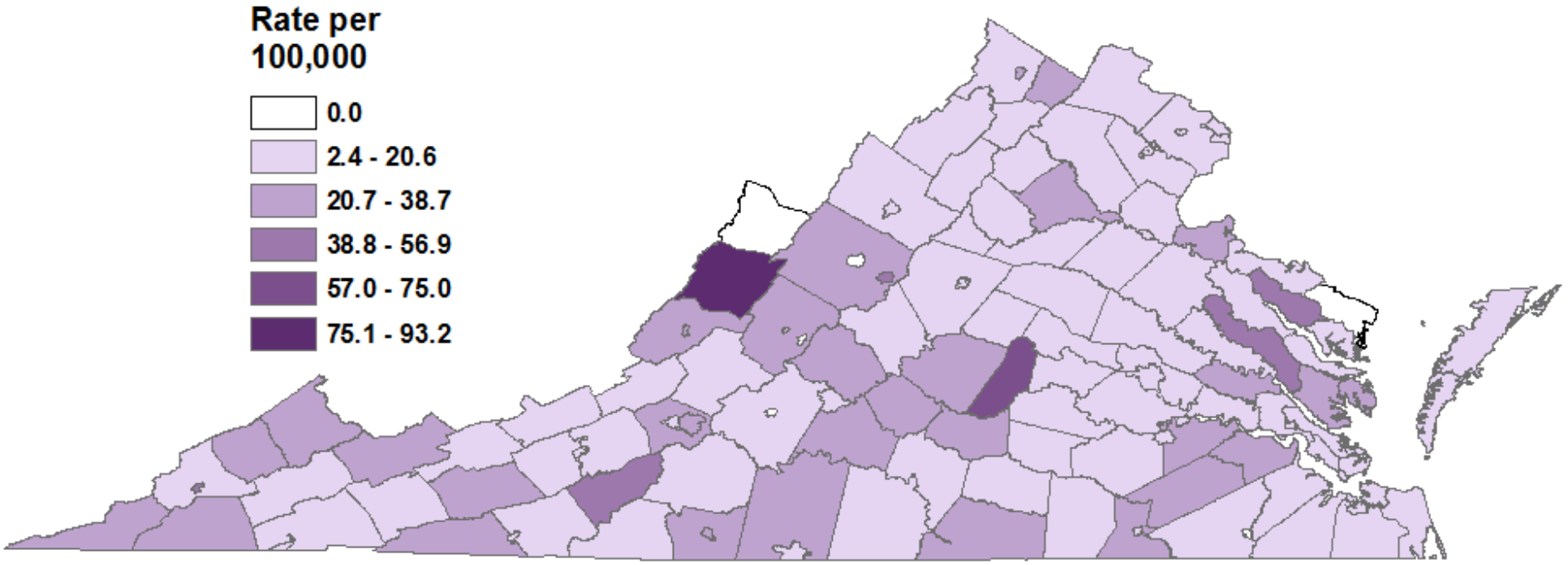
Locality of Residence	Deaths	Rate
Scott County	5	23.2
Shenandoah County	6	13.8
Smyth County	6	19.7
Southampton County	3	17.1
Spotsylvania County	17	12.7
Stafford County	27	18.0
Staunton City	0	0.0
Suffolk City	12	13.2
Surry County	2	30.9
Sussex County	3	26.7
Tazewell County	10	24.5
Virginia Beach City	69	15.3
Warren County	7	17.5
Washington County	8	14.7
Waynesboro City	9	39.8
Westmoreland County	3	16.8
Williamsburg City	3	20.1
Winchester City	6	21.3
Wise County	7	18.4
Wythe County	9	31.3
York County	10	14.7
Subtotal (in-state)	**1173**	**13.8**
Out of State	36	ND
Unknown	2	ND
Subtotal (out-of-state)	**38**	**ND**
TOTAL	**1211**	**14.2**

Note: No denominator is represented by ND

Map 2.5 Number of Suicides by Locality of Residence, 2018



Map 2.6 Suicide Rates by Locality of Residence, 2018



Virginia Department of Health

Table 2.17 Number of Suicide Deaths by Locality of Injury and Year of Death, 2006-2018

Locality of Injury	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Accomack County	4	2	1	4	6	6	1	4	4	9	4	5	4	**54**
Albemarle County	2	6	8	13	6	11	10	12	15	11	7	12	14	**127**
Alexandria City	12	11	13	14	14	14	10	16	15	10	16	18	10	**173**
Alleghany County	3	2	0	4	6	5	4	1	2	3	5	0	3	**38**
Amelia County	2	1	1	3	1	4	6	1	5	6	2	2	2	**36**
Amherst County	4	6	6	7	7	4	7	2	10	2	6	5	10	**76**
Appomattox County	2	0	0	3	3	2	2	1	2	8	2	1	3	**29**
Arlington County	14	12	28	10	21	16	16	18	18	11	18	21	10	**213**
Augusta County	12	11	13	16	11	14	16	20	20	15	15	17	16	**196**
Bath County	1	0	1	0	0	1	1	2	2	2	0	0	4	**14**
Bedford City	1	1	1	2	2	0	1	3	*	*	*	*	*	**11**
Bedford County	7	6	9	14	14	13	8	10	10	15	12	20	15	**153**
Bland County	2	1	0	3	1	1	1	1	3	2	2	1	1	**19**
Botetourt County	3	4	3	5	2	6	5	7	1	9	7	6	6	**64**
Bristol City	4	4	1	2	3	3	1	1	5	0	2	1	2	**29**
Brunswick County	2	2	1	1	3	1	1	2	2	2	3	4	4	**28**
Buchanan County	5	6	7	7	10	1	5	4	3	5	5	4	7	**69**
Buckingham County	3	3	5	1	3	2	2	4	2	2	3	2	3	**35**
Buena Vista City	0	0	1	1	1	0	0	1	0	0	0	2	0	**6**
Campbell County	6	3	7	6	6	10	9	13	8	12	7	5	12	**104**
Caroline County	3	6	3	3	5	2	2	8	12	4	6	8	6	**68**
Carroll County	6	8	6	10	9	7	6	8	6	8	5	10	4	**93**
Charles City County	0	0	2	2	2	3	7	1	2	2	2	1	1	**25**
Charlotte County	3	2	1	3	2	3	1	3	1	3	1	3	4	**30**
Charlottesville City	11	7	5	4	3	1	7	5	6	5	4	5	9	**72**
Chesapeake City	19	20	18	25	25	24	26	26	31	36	29	27	31	**337**
Chesterfield County	29	25	32	32	34	40	39	46	49	31	51	48	48	**504**
Clarke County	2	1	3	3	3	5	0	1	3	8	2	8	4	**43**
Colonial Heights City	1	2	3	1	2	1	6	2	6	4	6	6	4	**44**
Covington City	2	2	1	0	0	2	2	2	1	2	1	3	2	**20**
Craig County	0	1	2	4	0	2	1	4	0	2	4	1	1	**22**

Virginia Department of Health

Locality of Injury	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Culpeper County	6	10	2	11	5	7	9	5	9	9	5	10	11	**99**
Cumberland County	0	1	2	2	0	3	1	3	1	0	1	0	3	**17**
Danville City	7	3	4	8	7	6	4	5	9	3	9	6	8	**79**
Dickenson County	2	5	5	8	7	5	7	7	7	4	6	4	5	**72**
Dinwiddie County	3	3	1	1	7	3	2	1	3	7	4	5	3	**43**
Emporia City	3	0	2	1	1	0	0	0	0	0	0	0	2	**9**
Essex County	0	1	3	2	3	2	3	2	5	0	1	0	1	**23**
Fairfax City	2	2	1	6	4	2	2	4	3	7	1	5	2	**41**
Fairfax County	85	87	88	104	87	90	98	109	107	85	93	90	103	**1226**
Falls Church City	0	1	3	0	1	0	2	1	0	0	1	2	3	**14**
Fauquier County	7	4	8	9	14	14	13	16	9	10	9	16	6	**135**
Floyd County	2	2	1	3	4	4	5	5	6	3	0	1	8	**44**
Fluvanna County	2	3	4	2	2	3	5	6	2	1	1	5	3	**39**
Franklin City	0	0	0	0	1	0	1	1	2	0	0	2	0	**7**
Franklin County	5	8	6	7	3	10	11	12	6	10	8	9	5	**100**
Frederick County	9	7	7	8	8	14	19	12	20	14	13	17	12	**160**
Fredericksburg City	6	4	5	2	4	5	3	2	3	9	1	3	5	**52**
Galax City	1	1	2	1	3	3	1	0	1	2	0	2	1	**18**
Giles County	2	3	3	5	3	4	2	3	2	1	4	3	4	**39**
Gloucester County	7	6	9	4	8	12	9	4	4	14	10	6	8	**101**
Goochland County	2	5	2	4	2	0	1	6	4	7	8	4	3	**48**
Grayson County	3	2	5	2	2	8	5	2	4	1	4	2	5	**45**
Greene County	4	2	2	3	4	3	1	1	2	1	4	4	4	**35**
Greensville County	2	0	0	2	2	4	1	4	1	0	0	4	5	**25**
Halifax County	8	4	4	5	5	4	6	3	6	7	7	4	5	**68**
Hampton City	13	16	18	16	9	7	13	17	18	15	19	13	11	**185**
Hanover County	12	15	17	11	6	15	23	21	16	13	14	13	18	**194**
Harrisonburg City	2	4	4	6	6	2	1	4	6	5	8	6	6	**60**
Henrico County	37	25	25	39	30	42	31	41	36	36	31	45	32	**450**
Henry County	11	12	19	13	16	10	9	9	10	10	10	8	11	**148**
Highland County	0	0	0	0	1	1	1	2	1	2	2	0	0	**10**

Locality of Injury	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Hopewell City	1	2	2	3	3	2	3	4	5	4	5	4	5	**43**
Isle of Wight County	5	1	0	3	2	4	6	4	5	7	7	7	8	**59**
James City County	5	4	9	7	9	6	10	4	12	11	9	7	11	**104**
King and Queen County	2	4	2	1	1	1	3	0	1	1	2	1	3	**22**
King George County	3	2	2	3	6	3	4	8	5	3	6	3	8	**56**
King William County	1	1	1	4	0	2	7	2	3	5	5	3	1	**35**
Lancaster County	0	3	4	1	2	2	4	2	2	4	4	3	1	**32**
Lee County	5	4	7	5	2	5	9	4	5	7	3	7	6	**69**
Lexington City	0	1	0	0	0	0	1	1	1	2	4	1	1	**12**
Loudoun County	20	23	13	24	20	35	35	34	34	36	45	41	36	**396**
Louisa County	5	8	2	5	9	7	3	3	2	5	7	5	8	**69**
Lunenburg County	6	1	1	3	1	2	3	2	2	3	4	4	0	**32**
Lynchburg City	8	6	13	5	9	10	6	4	7	10	7	14	16	**115**
Madison County	2	4	3	1	3	1	4	1	4	6	4	0	5	**38**
Manassas	2	3	9	3	1	4	5	2	6	4	4	4	2	**49**
Manassas Park	Unknown	1	0	0	1	1	0	4	4	1	1	0	0	**13**
Martinsville City	0	4	0	1	1	4	1	3	2	2	0	3	2	**23**
Mathews County	1	0	2	0	1	2	1	1	3	2	3	3	2	**21**
Mecklenburg County	4	6	7	5	8	4	4	4	3	6	7	7	7	**72**
Middlesex County	0	1	1	5	1	3	3	4	0	3	1	5	2	**29**
Montgomery County	11	22	8	5	9	14	8	7	11	10	17	15	14	**151**
Nelson County	2	1	3	4	4	3	3	4	3	2	2	4	1	**36**
New Kent County	3	2	2	3	1	6	5	3	5	4	5	3	4	**46**
Newport News City	11	15	18	14	20	23	29	19	25	22	30	23	25	**274**
Norfolk City	27	33	29	22	29	28	29	30	34	23	26	35	35	**380**
Northampton County	0	4	1	0	1	5	0	2	3	3	2	3	1	**25**
Northumberland County	1	3	2	0	4	3	0	0	1	2	2	2	1	**21**
Norton City	0	0	2	1	0	1	1	0	0	0	1	1	2	**9**
Nottoway County	1	0	4	4	3	3	2	1	5	4	1	3	3	**34**
Orange County	6	4	5	2	4	5	12	6	9	10	6	7	4	**80**
Page County	6	5	7	3	4	8	4	5	11	5	6	4	4	**72**

Locality of Injury	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Patrick County	3	4	4	4	7	4	5	9	5	6	5	3	4	**63**
Petersburg City	1	4	7	3	4	3	4	2	6	5	8	4	1	**52**
Pittsylvania County	13	9	6	13	9	9	12	16	5	10	14	14	20	**150**
Poquoson City	1	1	1	0	0	0	0	2	1	0	2	2	2	**12**
Portsmouth City	8	14	10	11	16	8	20	9	13	16	16	14	16	**171**
Powhatan County	5	1	4	2	8	6	5	4	6	6	4	5	2	**58**
Prince Edward County	3	3	1	5	3	3	4	3	4	4	2	4	5	**44**
Prince George County	6	7	7	7	5	4	2	5	8	6	7	8	7	**79**
Prince William County	32	28	35	41	41	28	33	37	38	30	47	39	50	**479**
Pulaski County	11	10	2	6	9	9	6	7	1	8	12	9	7	**97**
Radford City	1	0	2	0	2	1	1	5	2	1	2	1	2	**20**
Rappahannock County	0	4	3	1	3	2	5	0	2	2	1	1	1	**25**
Richmond City	32	25	22	35	21	32	25	27	23	25	30	30	31	**358**
Richmond County	1	1	4	0	2	1	1	1	0	1	4	0	2	**18**
Roanoke City	10	15	19	13	18	19	25	16	21	16	17	22	28	**239**
Roanoke County	11	7	19	9	20	14	13	12	17	14	16	12	24	**188**
Rockbridge County	5	4	6	5	5	6	3	3	7	4	4	6	5	**63**
Rockingham County	9	10	9	4	12	10	9	10	10	21	14	14	11	**143**
Russell County	5	4	10	7	5	6	6	6	4	4	7	4	1	**69**
Salem City	4	7	5	0	2	6	6	6	9	7	7	6	3	**68**
Scott County	3	12	5	4	5	6	5	4	2	4	7	7	6	**70**
Shenandoah County	7	5	8	8	5	9	7	7	8	10	15	10	6	**105**
Smyth County	3	11	5	3	3	6	7	10	6	5	4	6	7	**76**
Southampton County	4	1	4	3	4	2	2	2	1	2	2	3	3	**33**
Spotsylvania County	13	18	17	10	22	11	13	15	14	14	26	11	17	**201**
Stafford County	6	14	15	15	5	9	13	19	11	20	18	15	27	**187**
Staunton City	4	7	1	6	4	4	1	3	3	2	3	4	3	**45**
Suffolk City	11	1	10	6	5	14	12	12	14	11	6	10	12	**124**
Surry County	0	1	0	4	1	0	2	1	0	0	0	2	1	**12**
Sussex County	1	2	1	4	4	1	1	4	0	2	3	2	3	**28**
Tazewell County	11	4	4	12	6	6	8	5	5	14	7	8	8	**98**

Locality of Injury	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Virginia Beach City	61	49	45	59	63	65	51	49	71	46	61	53	70	**743**
Warren County	3	12	8	6	5	7	8	7	8	6	10	6	8	**94**
Washington County	6	10	11	13	10	10	11	9	8	12	14	19	8	**141**
Waynesboro City	6	3	3	4	2	3	2	4	0	6	3	2	9	**47**
Westmoreland County	4	2	4	2	2	5	5	3	4	1	4	3	3	**42**
Williamsburg City	10	2	1	1	8	6	1	0	6	4	2	4	4	**49**
Winchester City	6	1	7	2	6	5	3	3	9	7	4	4	8	**65**
Wise County	9	13	8	4	5	9	3	3	8	7	5	15	8	**97**
Wythe County	4	4	8	5	2	7	4	3	5	9	7	8	10	**76**
York County	3	8	11	6	11	15	8	7	8	6	4	8	8	**103**
Subtotal (in-state)	**882**	**897**	**945**	**968**	**989**	**1055**	**1049**	**1055**	**1133**	**1086**	**1151**	**1155**	**1202**	**13567**
Out of State	2	6	3	4	4	9	3	5	9	8	4	1	2	**60**
Unknown	0	0	1	1	1	0	0	1	3	2	2	1	7	**19**
Subtotal (out-of-state)	***2***	***6***	***4***	***5***	***5***	***9***	***3***	***6***	***12***	***10***	***6***	***2***	***9***	***79***
TOTAL	**884**	**903**	**949**	**973**	**994**	**1064**	**1052**	**1061**	**1145**	**1096**	**1157**	**1157**	**1211**	**13646**

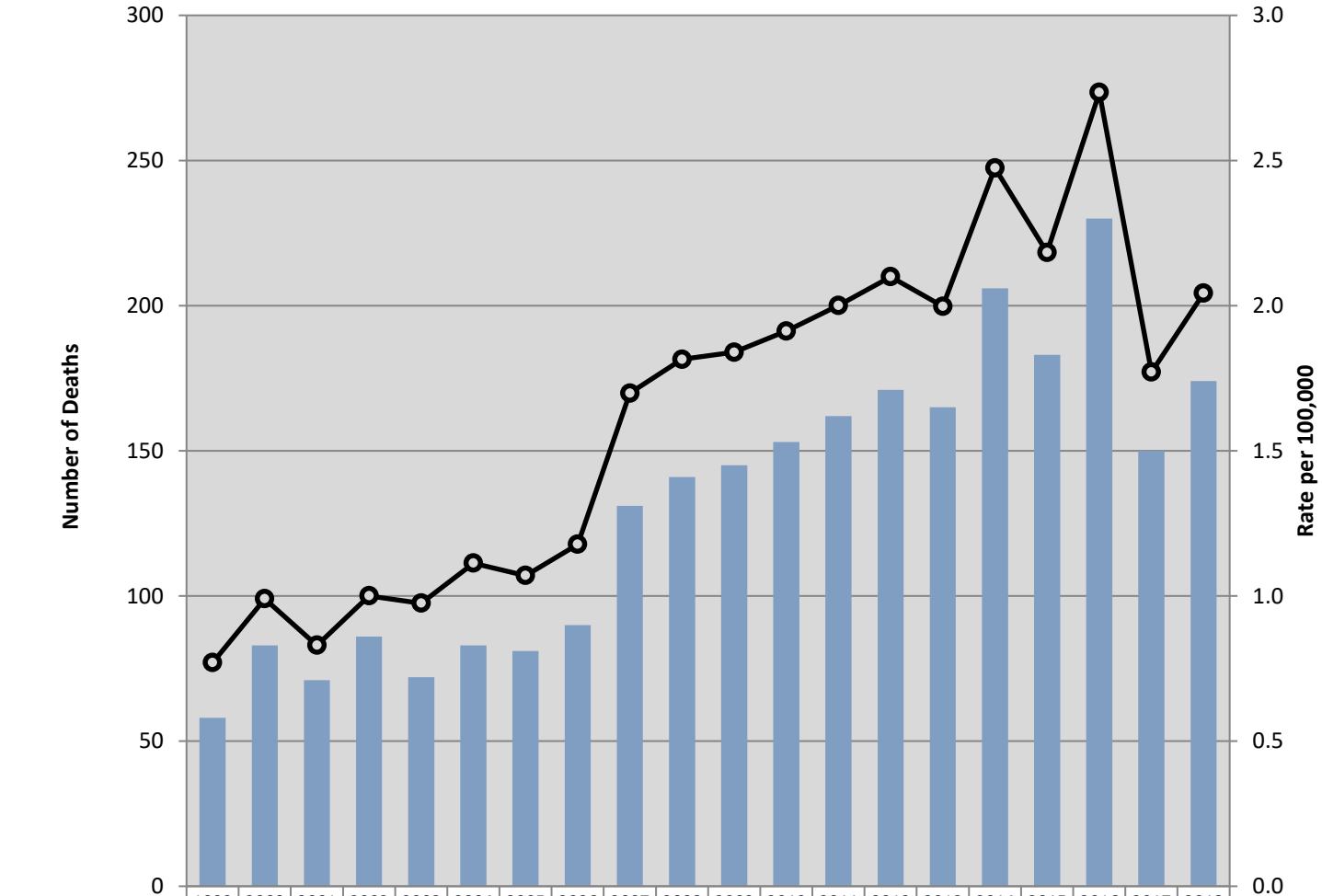
Note: Bedford City was incorporated into Bedford County in 2014 and therefore, numbers are combined from there forward

UNDETERMINED DEATHS (N=174)

Undetermined deaths are those in which after examination, two or more manners cannot be eliminated and therefore the death must be ruled undetermined. In 2018, the number of undetermined deaths increased by 16.0% compared to 2017. Generally, undetermined deaths have increased since 2006 mainly due to the transition in diagnostic criteria 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.

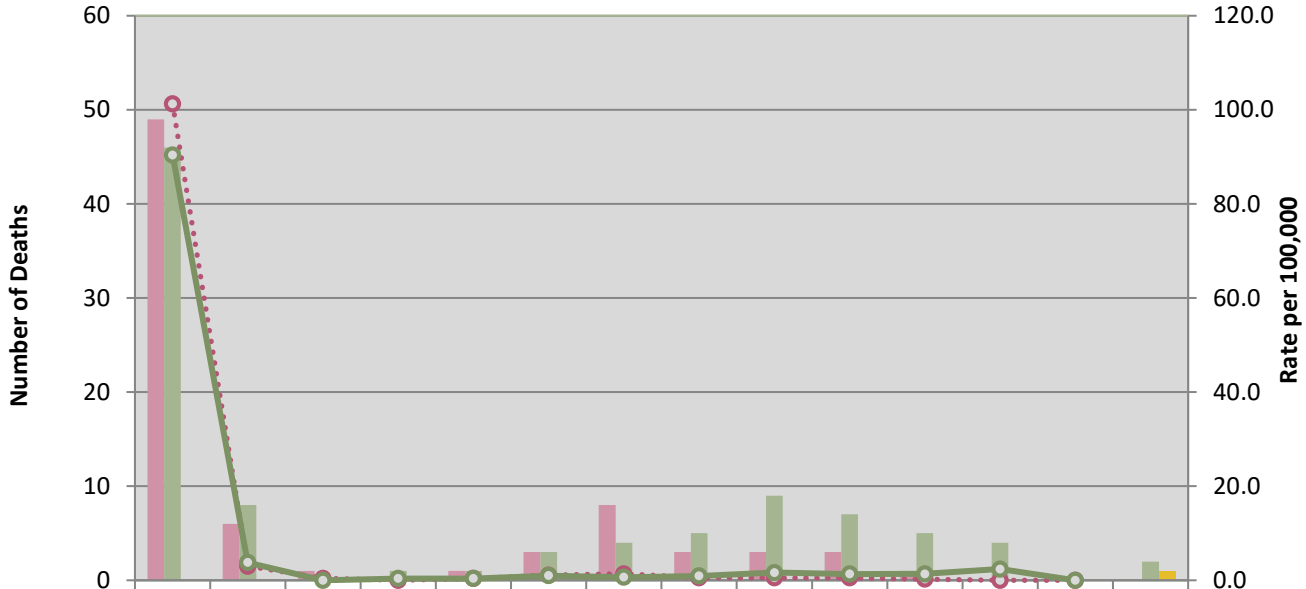
- Thirty-one percent of the cases assigned an undetermined manner had a determined cause of death
- Over 77% of deaths with an undetermined manner were among infants less than 1 year of age

Figure 2.29 Number and Rate of Undetermined Deaths by Year of Death, 1999-2018



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Deaths	58	83	71	86	72	83	81	90	131	141	145	153	162	171	165	206	183	230	150	174
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	1.8	2.0

Figure 2.30 Number and Rate of Undetermined Deaths by Age Group and Gender, 2018



	<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	49	6	1	0	1	3	8	3	3	3	1	0	0	0
Male	46	8	0	1	1	3	4	5	9	7	5	4	0	2
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Female Rate	101.3	3.0	0.4	0.0	0.4	1.1	1.4	0.5	0.5	0.5	0.2	0.0	0.0	*
Male Rate	90.4	3.8	0.0	0.4	0.4	1.0	0.7	0.9	1.6	1.3	1.4	2.4	0.0	*

*No rate can be calculated

Figure 2.31 Percentage of Undetermined Deaths by Race/Ethnicity, 2018

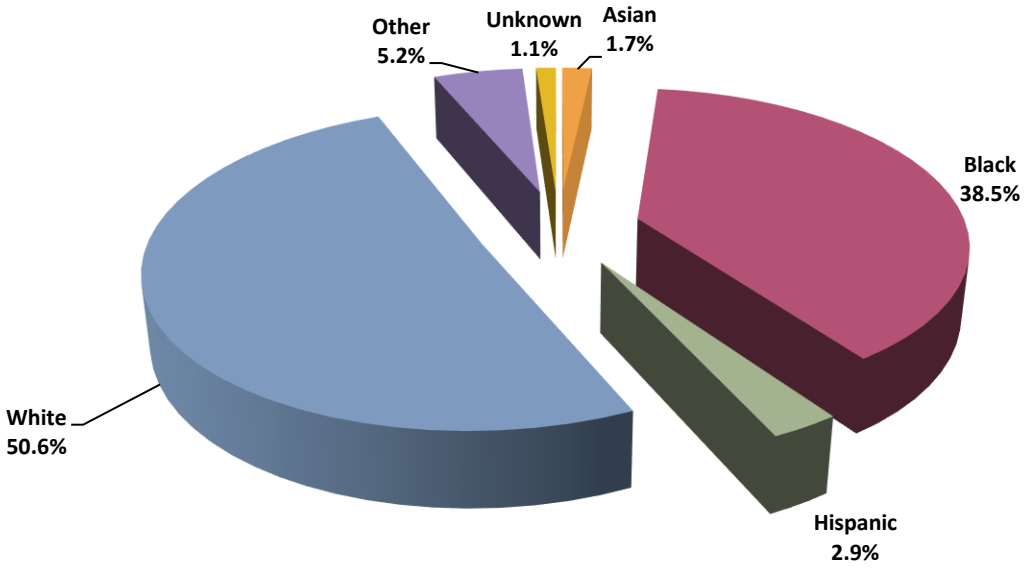


Table 2.18 Number of Undetermined Deaths by Cause of Death, 2018

Undetermined Manner of Death with Cause of Death Determined	Autopsied	Total Cases
Asphyxia		
Drowned	4	4
Drug Use		
Ingested and/or injected illicit, prescription, and/or OTC medication	14	16
Fire		
Thermal burns and/or inhalation of combustion products	0	1
Jump/Fall		
Jumped/Fell from height	2	3
Motor Vehicle		
Car	2	2
Tractor trailer	1	1
Train	1	1
Van	1	1
Traumatic Injury		
Gunshot wound		
Handgun	10	10
Other/Unknown traumatic causes	15	15
Subtotal (Undetermined Manner with Determined Cause of Death)	**50**	**54**
Undetermined Manner of Death and Undetermined Cause of Death		
Skeletal/Mummified remains	14	14
Sudden Unexpected Infant Death (SUID)	76	76
Undetermined after autopsy and/or toxicology	30	30
Subtotal (Undetermined Manner and Undetermined Cause of Death)	**120**	**120**
TOTAL UNDETERMINED DEATHS	**170**	**174**

SECTION 3: DEATHS OF CHILDREN (N=325)

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

The OCME investigated 325 deaths of children, representing 4.4% of all OCME deaths in 2018.

- Males represented 60.9% of all child cases
- Infants under one year of age had the largest percentage of child death investigations (40.6%)
- The leading causes of death for children under 18 years of age were sudden unexpected infant death (SUID) (specifically among infants under 1 year of age), gunshot wounds, and motor vehicle collisions

Figure 3.1 Number of Child Deaths by Manner, 2018

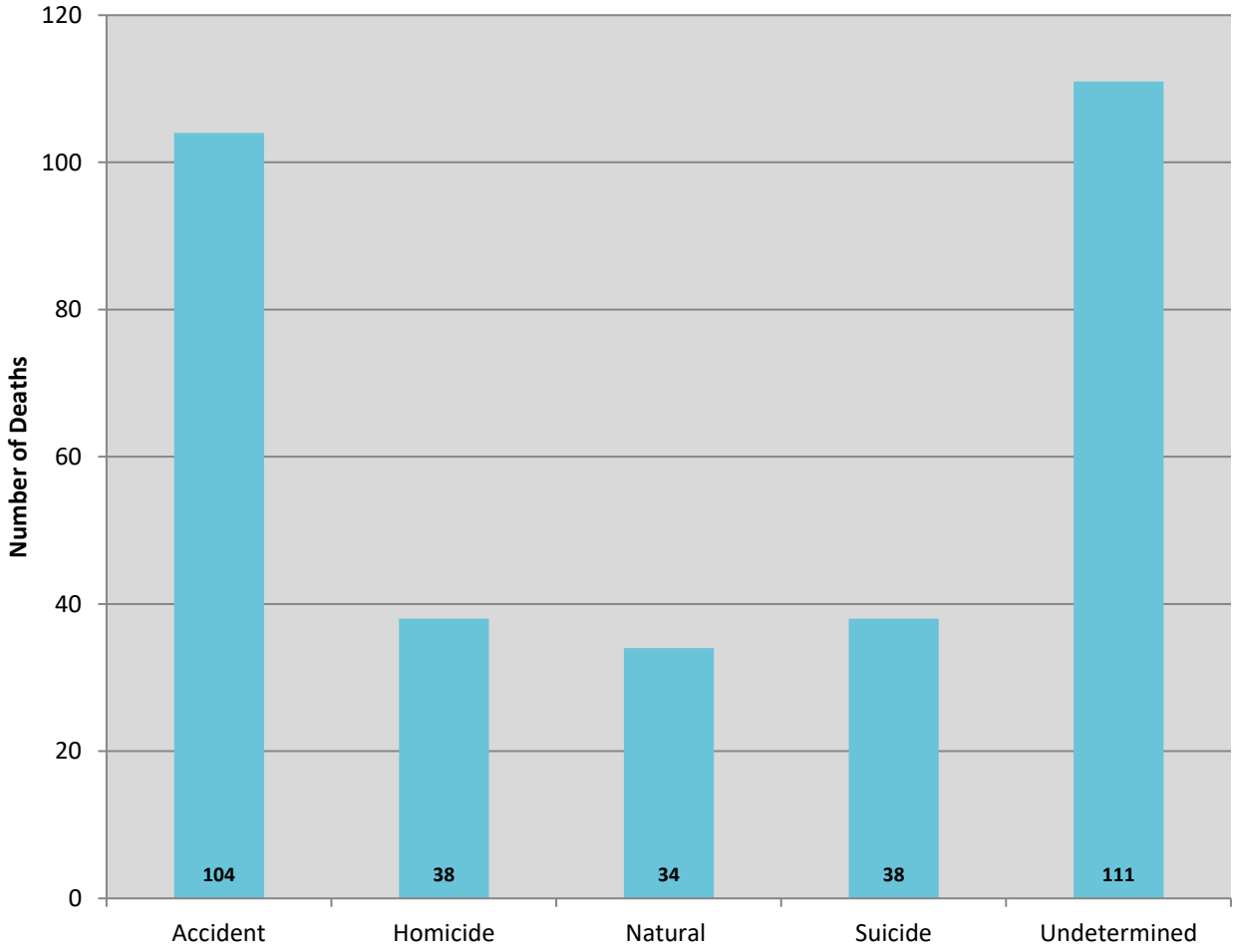
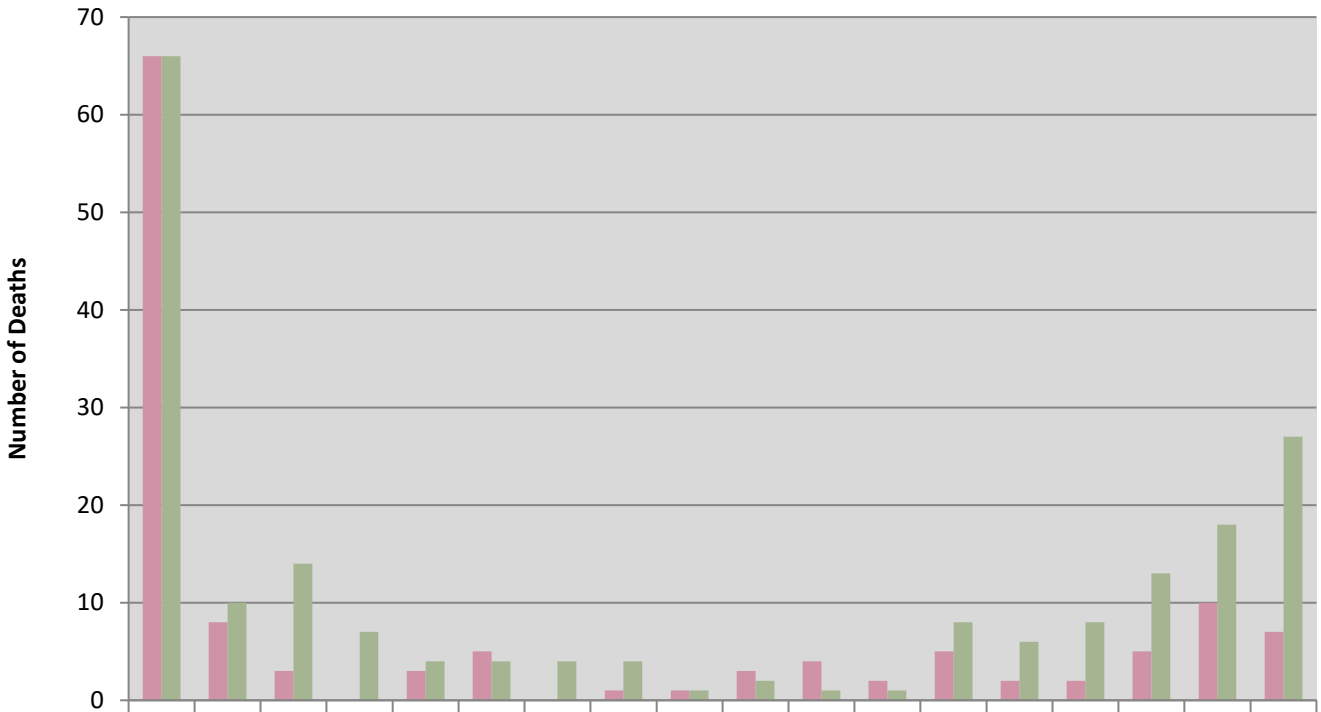


Figure 3.2 Number of Child Deaths by Age and Gender, 2018



	<1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Female	66	8	3	0	3	5	0	1	1	3	4	2	5	2	2	5	10	7
Male	66	10	14	7	4	4	4	4	1	2	1	1	8	6	8	13	18	27

Figure 3.3 Percentage of Child Deaths by Race/Ethnicity, 2018

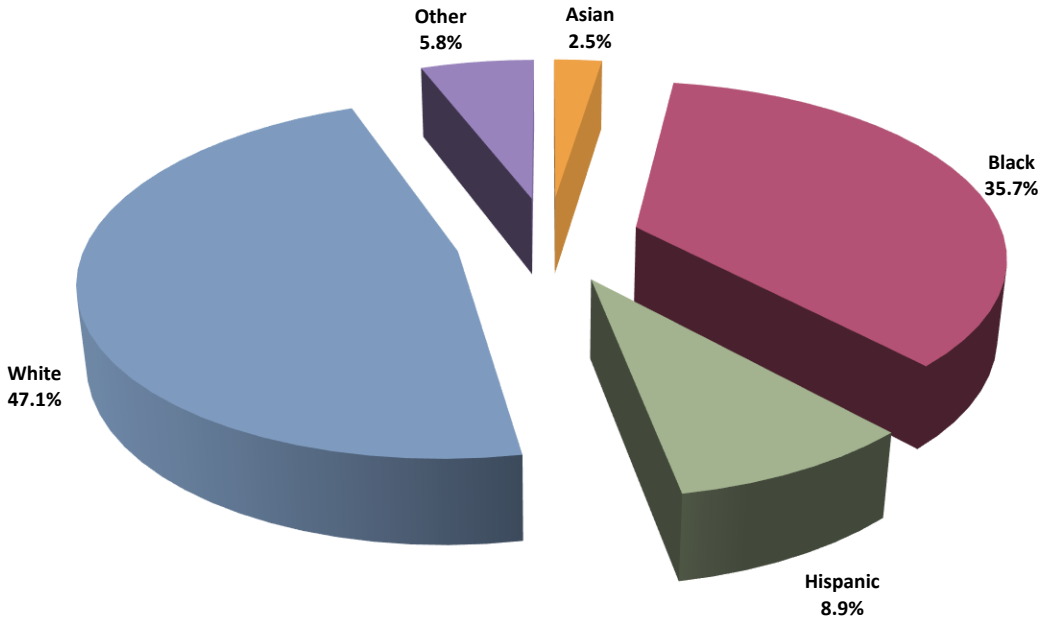
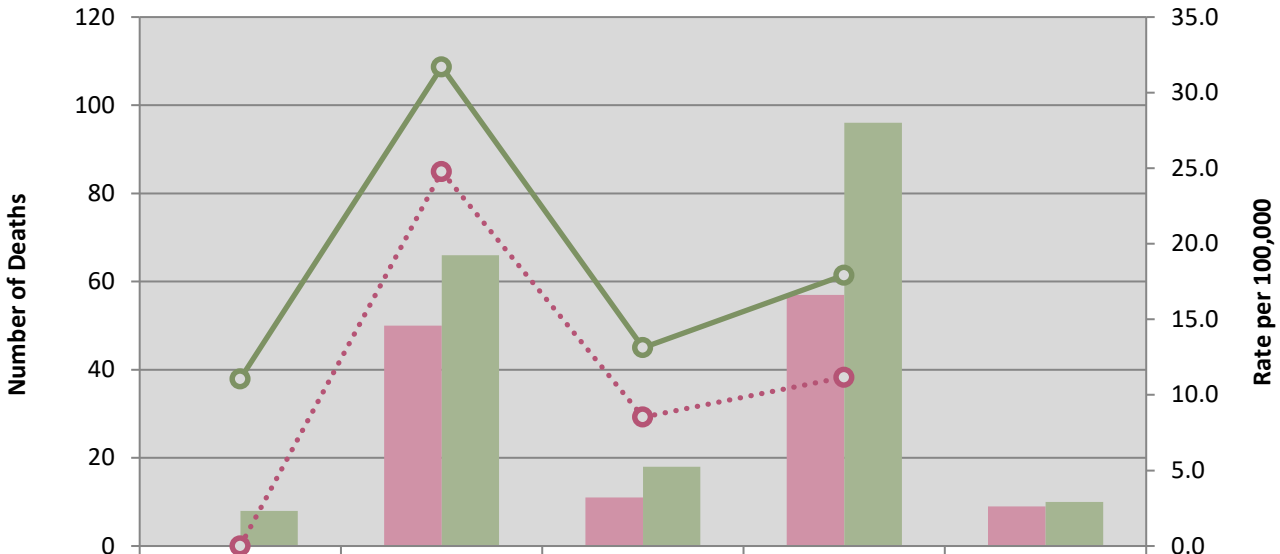


Figure 3.4 Number and Rate of Child Deaths by Gender and Race/Ethnicity, 2018



	Asian	Black	Hispanic	White	Other
Female	0	50	11	57	9
Male	8	66	18	96	10
Female Rate	0.0	24.8	8.5	11.2	*
Male Rate	11.1	31.7	13.1	17.9	*

*No rate can be calculated

Figure 3.5 Number of Child Deaths by Manner and Race/Ethnicity, 2018

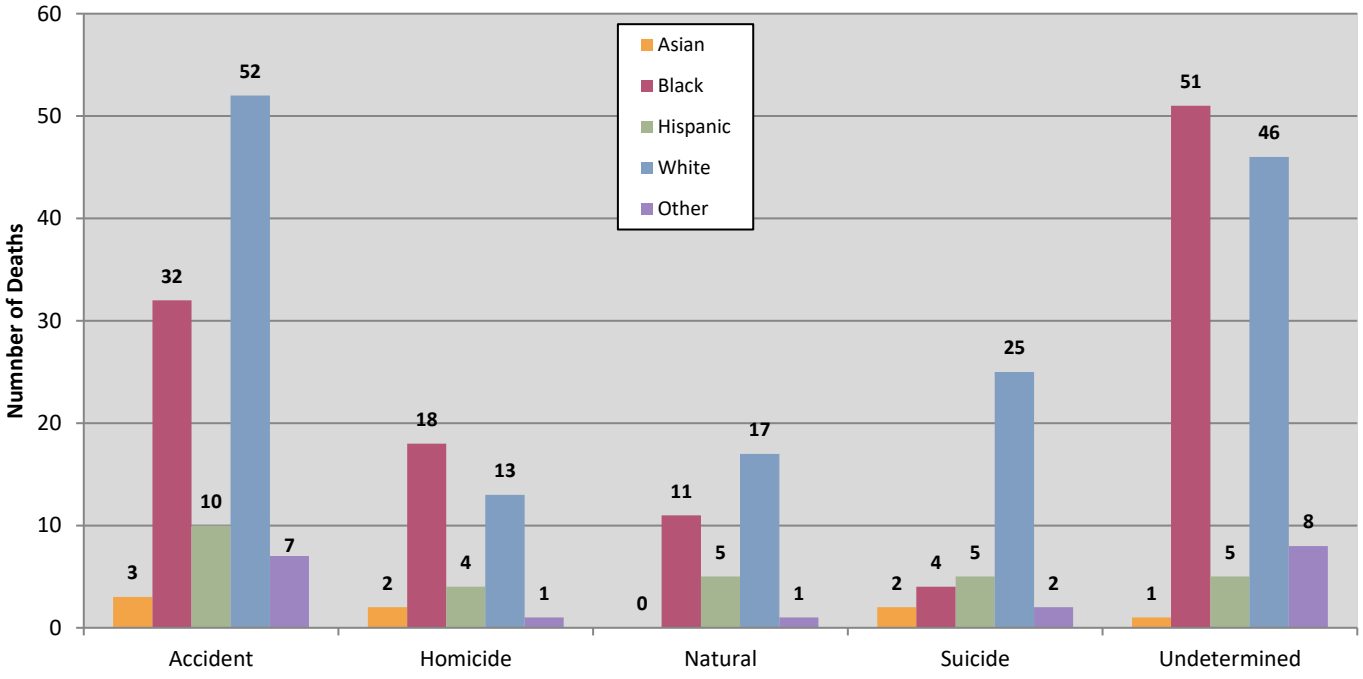
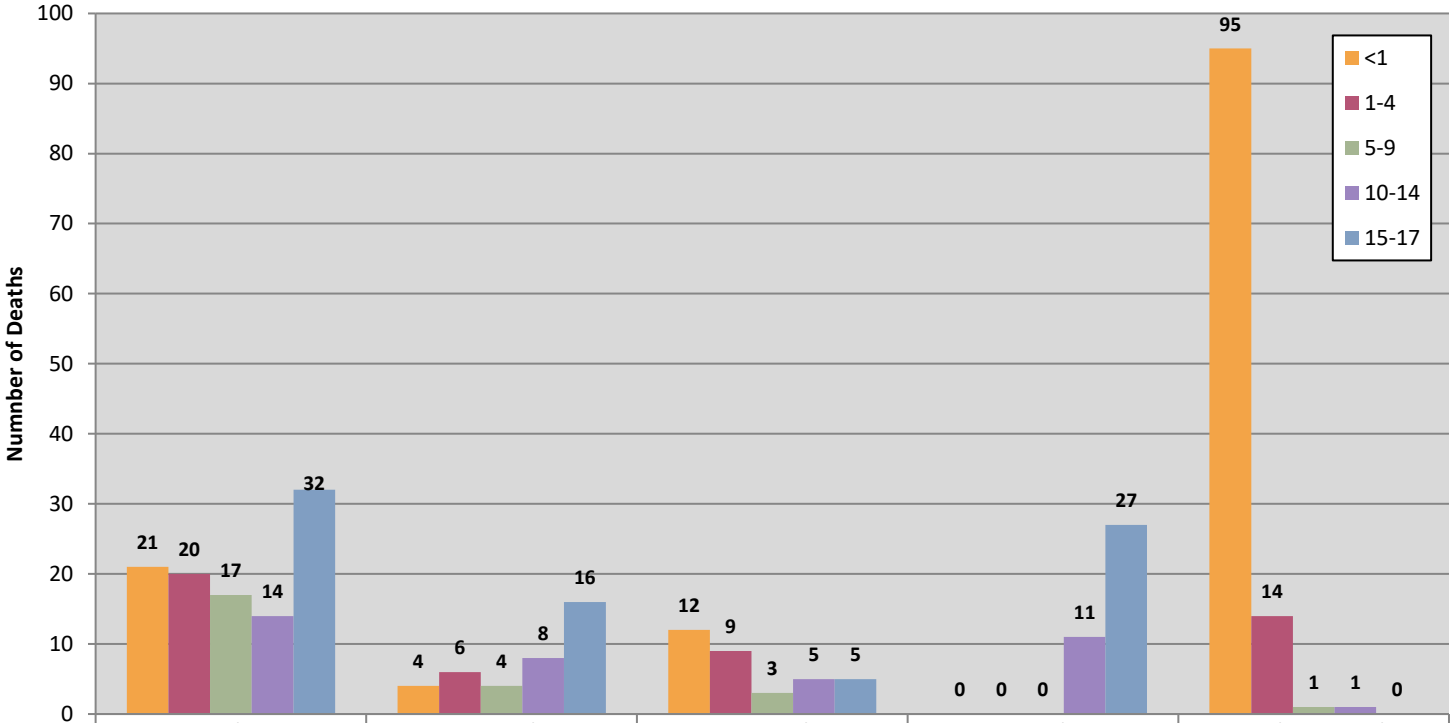


Figure 3.6 Number of Child Deaths by Manner and Age Group, 2018



	Accident	Homicide	Natural	Suicide	Undetermined
<1	21	4	12	0	95
1-4	20	6	9	0	14
5-9	17	4	3	0	1
10-14	14	8	5	11	1
15-17	32	16	5	27	0

Table 3.1 Number of Child Deaths by Cause of Death, 2018

NATURAL CHILD DEATHS	Autopsied	Total Cases
Cardiovascular Diseases/Disorders		
Cardiac arrhythmia not otherwise specified	1	**1**
Cardiomyopathy not otherwise specified	2	**2**
Congenital defect	1	**1**
Vascular dissection/rupture	1	**1**
Central Nervous System Diseases/Disorders		
Other CNS disease/disorder	2	**2**
Meningitis (bacterial or viral)	1	**1**
Seizure Disorder	5	**5**
Vascular disease	1	**1**
Gastrointestinal Diseases/Disorders		
Other gastrointestinal disease/disorder	3	**3**
Other Natural Death/Disorder		
Other natural death/disorder	1	**1**
Perinatal and Pediatric Diseases/Disorders		
Other perinatal and pediatric disease/disorder	3	**3**
Pulmonary Diseases/Disorders		
Asthma	1	**1**
Pneumonia	3	**3**
Systemic Diseases/Disorders		
Diabetes	1	**1**
Other infectious disease	3	**3**
Other systemic disease/disorder	2	**3**
Sepsis	2	**2**
Subtotal of Natural Child Deaths	**33**	**34**
UNNATURAL CHILD DEATHS	**Autopsied**	**Total Cases**
Asphyxia		
Drowned	9	**15**
Hanged	12	**14**
Mechanical/Positional asphyxia	3	**4**
Plastic bag asphyxia	1	**1**
Other asphyxia	1	**1**
Suffocated/Smothered	15	**15**
Drug Use		
Ingested and/or injected illicit, prescription, and/or other type of drug	13	**14**
Environmental Exposure		
Exposure to heat	4	**5**
Fall/Jump		
Fall/Jump from height	3	**4**

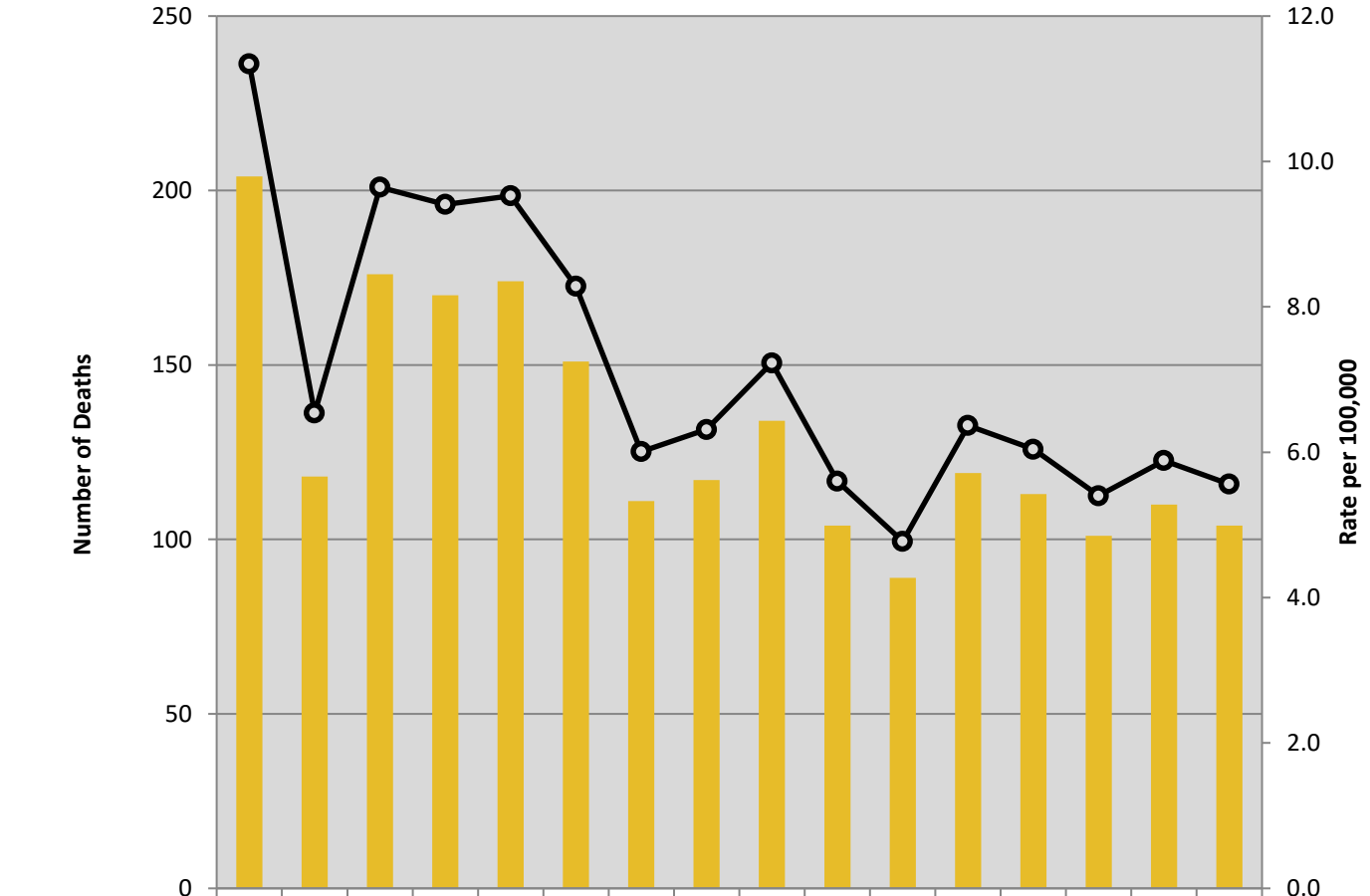
Fire Injuries		
Thermal burns and/or inhalation of combustion products	2	**2**
Gunshot Wound		
Handgun	42	**42**
Rifle	4	**4**
Shotgun	1	**1**
Unknown	2	**2**
Motor Vehicle		
All terrain vehicle	0	**2**
Bicycle	0	**1**
Car	3	**24**
Farm equipment	0	**2**
Golf cart	1	**1**
Mo-ped	0	**2**
Motorcycle	0	**1**
Pickup truck	0	**4**
Sport utility vehicle	0	**5**
Train	0	**1**
Truck (other)	0	**2**
Van	1	**1**
Unknown	0	**1**
Traumatic Injury		
Beatings	7	**7**
Falling object	0	**2**
Other Unnatural Deaths		
Other	8	**11**
Subtotal of Unnatural Child Deaths	**132**	**191**
UNDETERMINED CHILD DEATHS	**Autopsied**	**Total Cases**
Undetermined After Autopsy and/or Investigation		
Sudden unexpected infant death (SUID)	76	**76**
Undetermined after autopsy and/or toxicology	23	**24**
Subtotal of Undetermined Child Deaths	**99**	**100**
TOTAL CHILD DEATHS	**264**	**325**

ACCIDENTAL CHILD DEATHS (N=104)

The number of accidental child deaths decreased by 5.5% in 2018 compared to 2017.

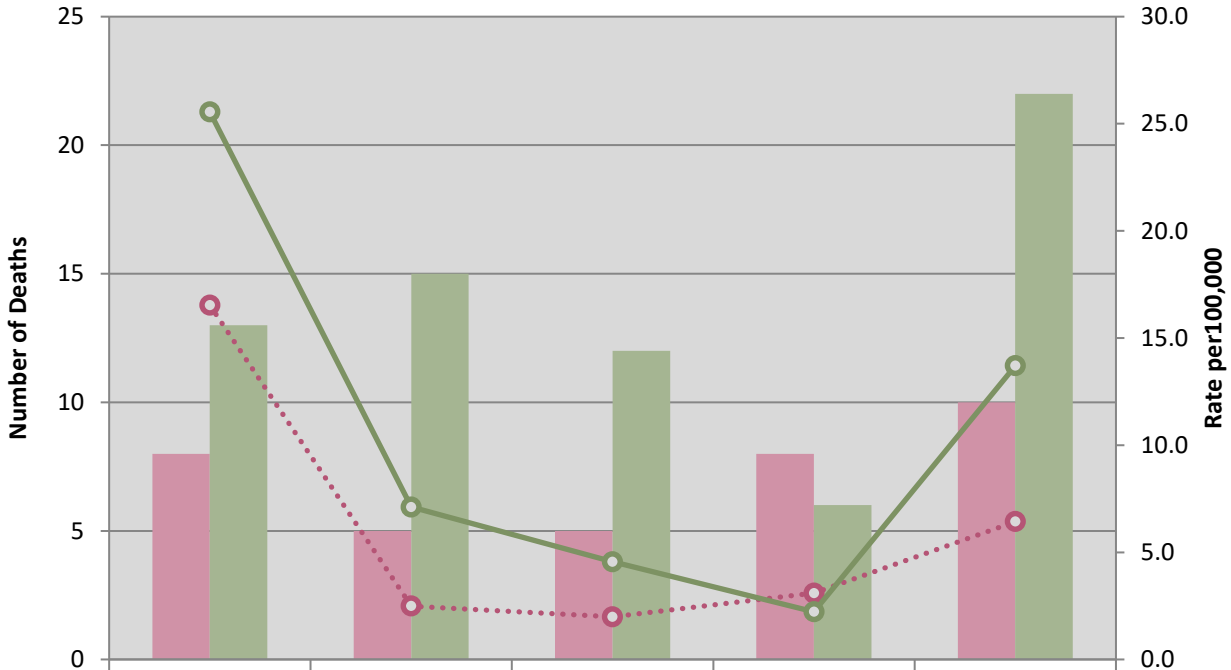
- The largest number of accidental deaths occurred among males (65.4%), Whites (50.0%), and children aged 15-17 years of age (30.8%)
- Black males had the highest rate of accidental death (10.1 deaths per 100,000 persons aged 0-17 years), followed by White males (6.0 deaths per 100,000 persons aged 0-17 years)
- Motor vehicle accidents were the leading method of death (45.2%), followed by accidental drownings (14.4%) and accidental suffocation/smothering (13.5%)

Figure 3.7 Number and Rate of Accidental Child Deaths by Year, 2003-2018



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Deaths	204	118	176	170	174	151	111	117	134	104	89	119	113	101	110	104
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	5.9	5.6

Figure 3.8 Number and Rate of Accidental Child Deaths by Age Group and Gender, 2018



	<1	1-4	5-9	10-14	15-17
Female	8	5	5	8	10
Male	13	15	12	6	22
Female Rate	16.5	2.5	2.0	3.1	6.4
Male Rate	25.6	7.1	4.6	2.2	13.7

Figure 3.9 Percentage of Accidental Child Deaths by Race/Ethnicity, 2018

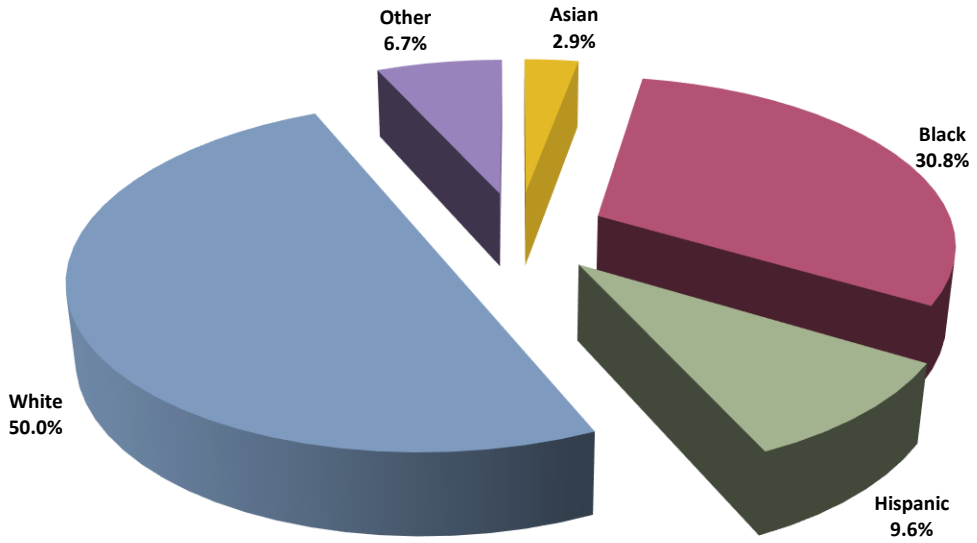
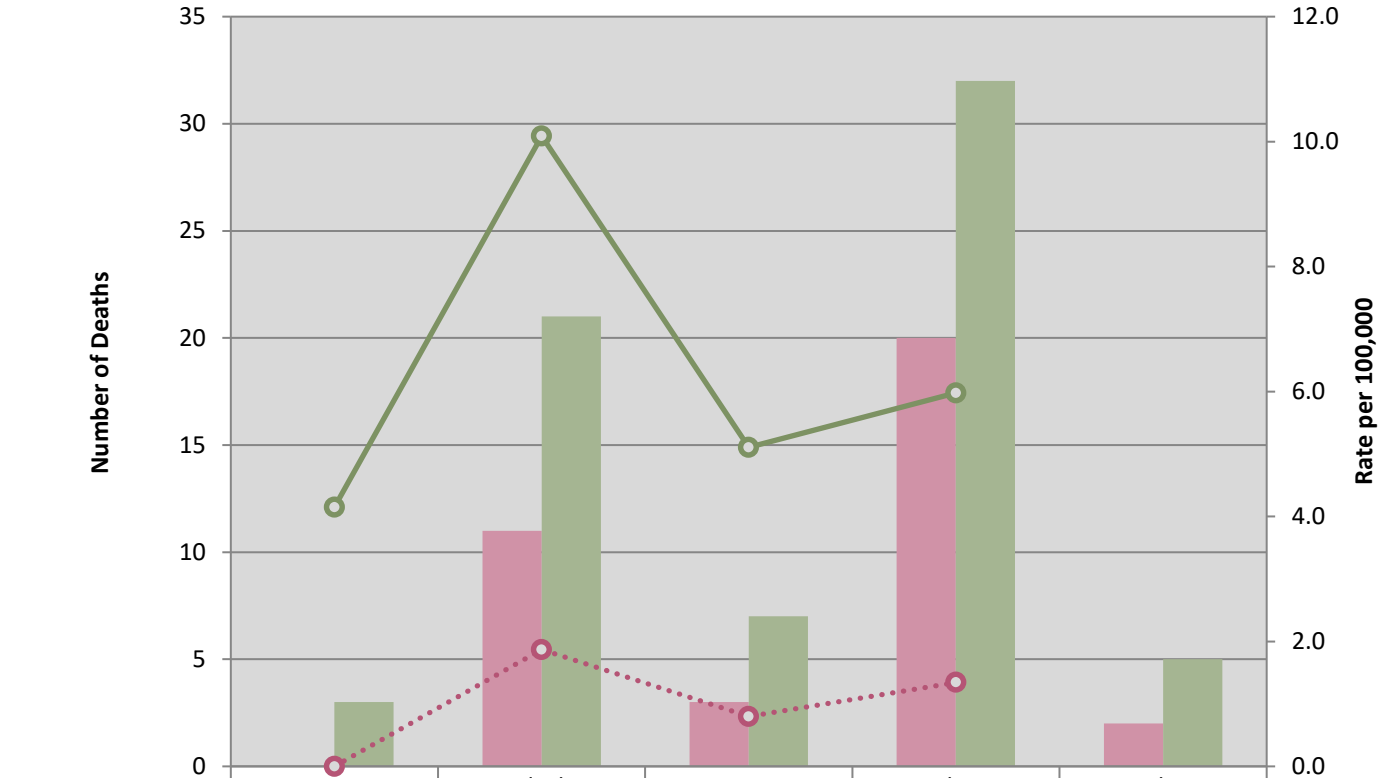


Figure 3.10 Number and Rate of Accidental Child Deaths by Gender and Race/Ethnicity, 2018



	Asian	Black	Hispanic	White	Other
Female	0	11	3	20	2
Male	3	21	7	32	5
Female Rate	0.0	5.5	2.3	3.9	*
Male Rate	4.1	10.1	5.1	6.0	*

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

Figure 3.11 Number of Accidental Child Deaths by Month of Death, 2018

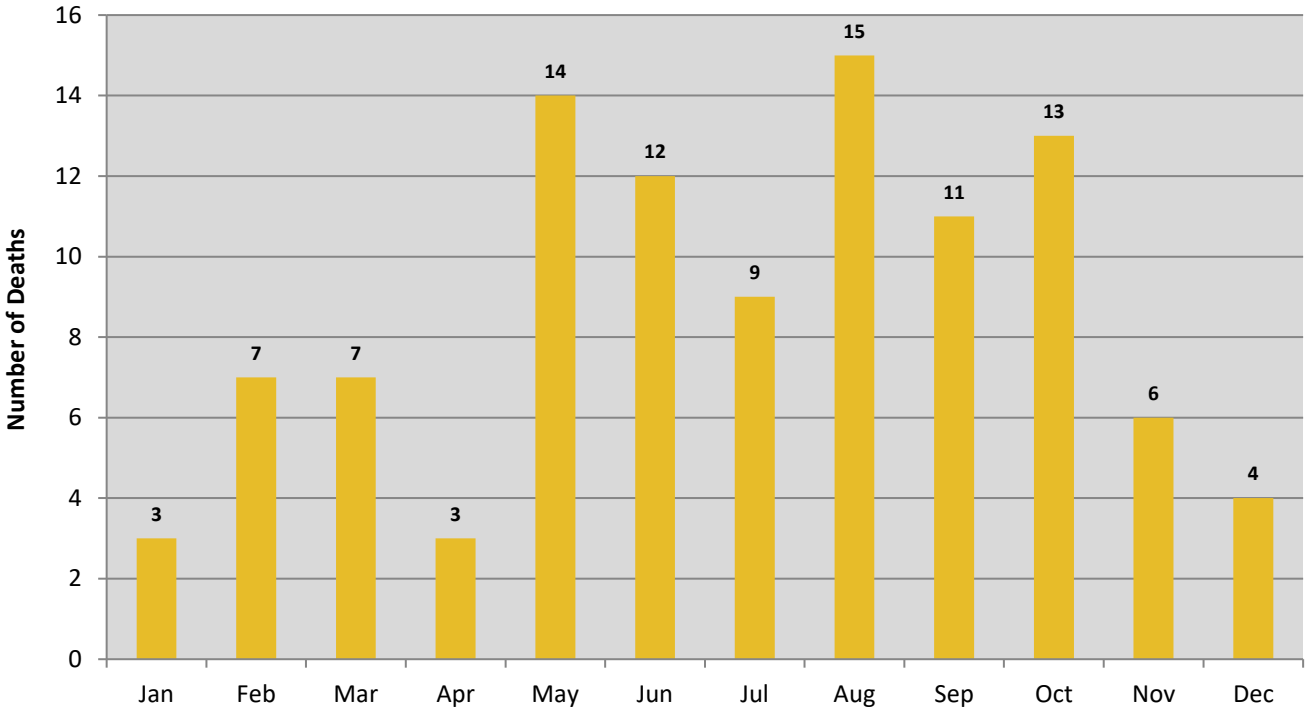


Figure 3.12 Number of Accidental Child Deaths by Day of Week, 2018

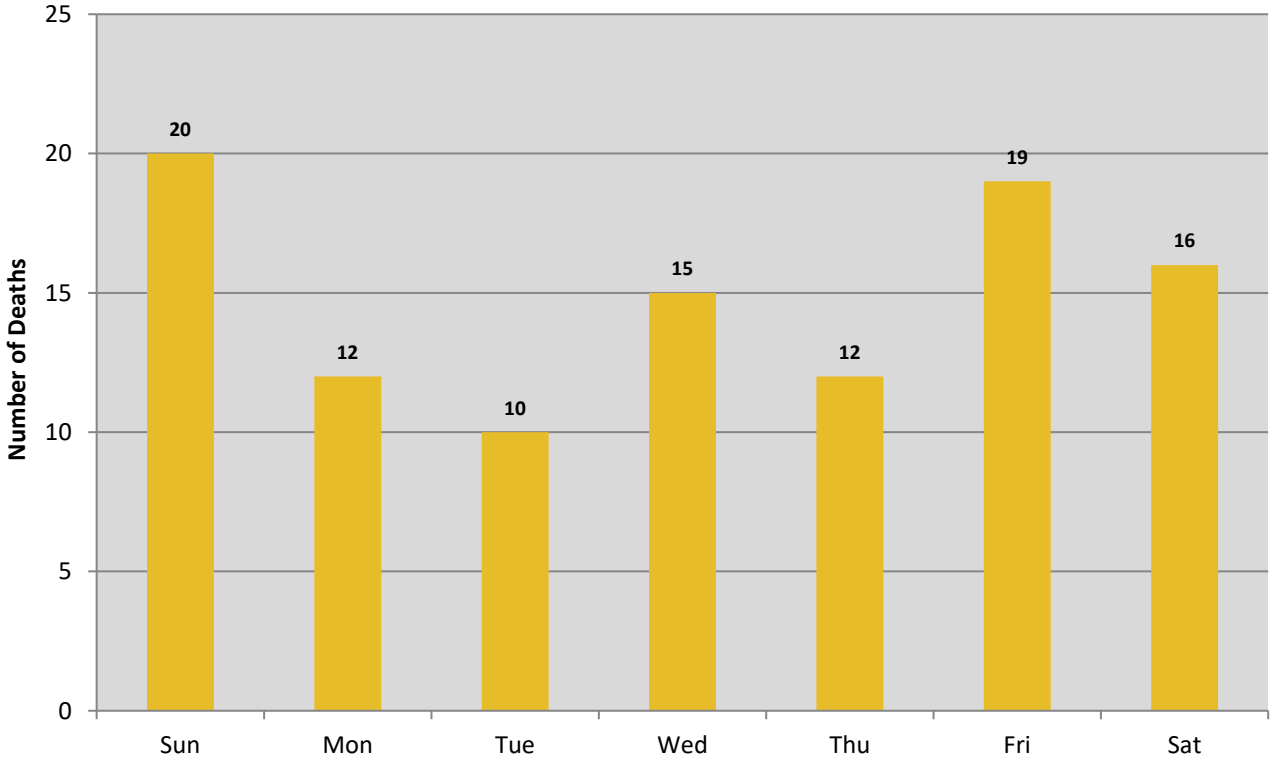


Table 3.2 Number of Accidental Child Deaths by Cause and Method of Death, 2018

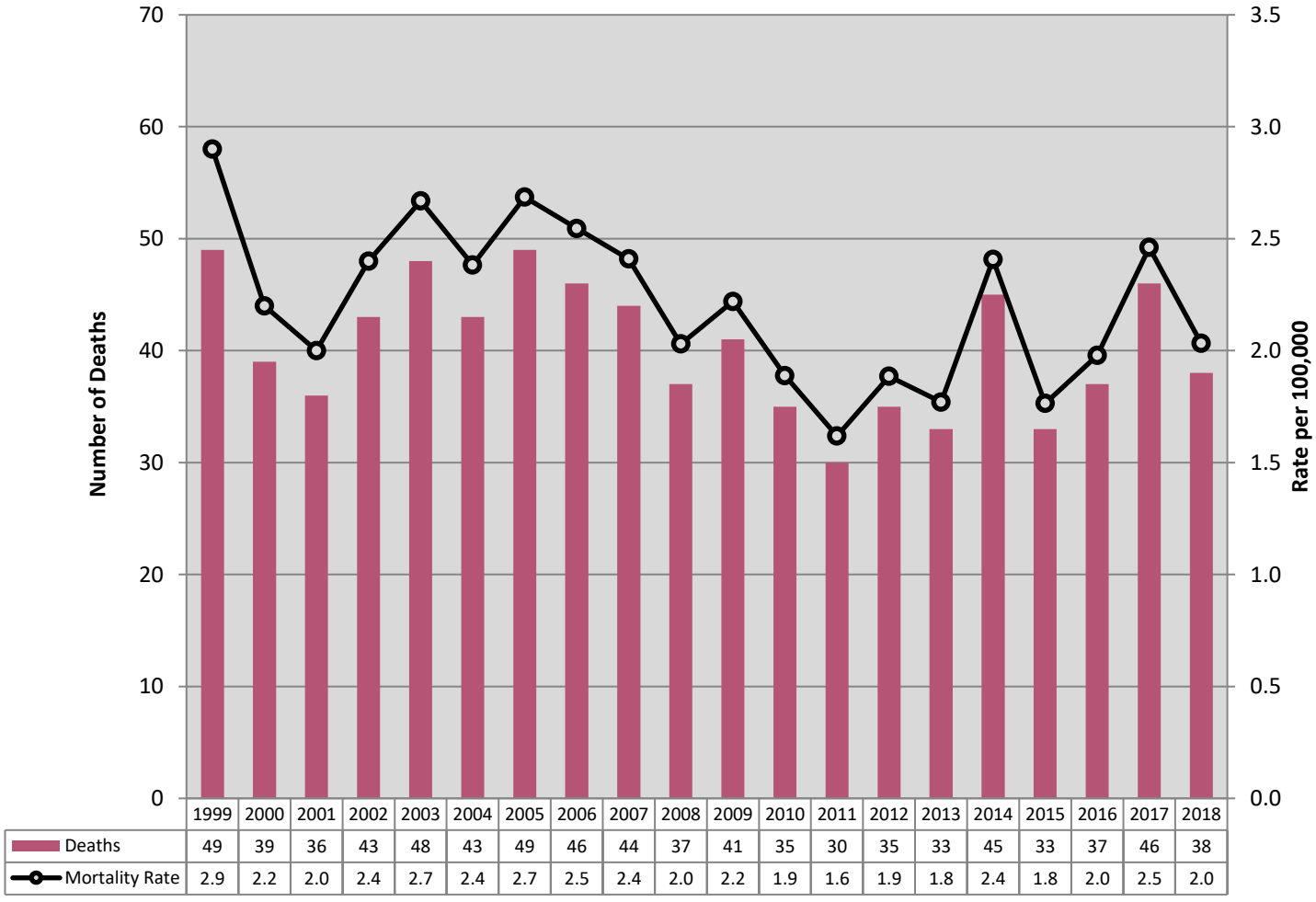
Method of Death	Autopsied	Total Cases
Asphyxia		
Drowned	9	**15**
Hanged	0	**1**
Mechanical/Positional asphyxia	3	**4**
Other asphyxia	1	**1**
Suffocated/Smothered	14	**14**
Drug Use		
Ingested and/or injected illicit, prescription, and/or other type of drug	7	**8**
Environmental Exposure		
Exposure to heat	4	**5**
Fall/Jump		
Fall/Jump from height	1	**2**
Motor Vehicle		
All terrain vehicle	0	**2**
Bicycle	0	**1**
Car	3	**24**
Farm equipment	0	**2**
Golf cart	1	**1**
Mo-ped	0	**2**
Motorcycle	0	**1**
Pickup truck	0	**4**
Sport utility vehicle	0	**5**
Train	0	**1**
Truck (other)	0	**2**
Van	1	**1**
Unknown	0	**1**
Traumatic Injury		
Falling object	0	**2**
Other Unnatural Deaths		
Other	1	**5**
TOTAL ACCIDENTAL CHILD DEATHS	**45**	**104**

CHILD HOMICIDE DEATHS (N=38)

The number of child homicide deaths in 2018 decreased by 17.4% when compared to 2017. Homicides represented 11.7% of all child deaths.

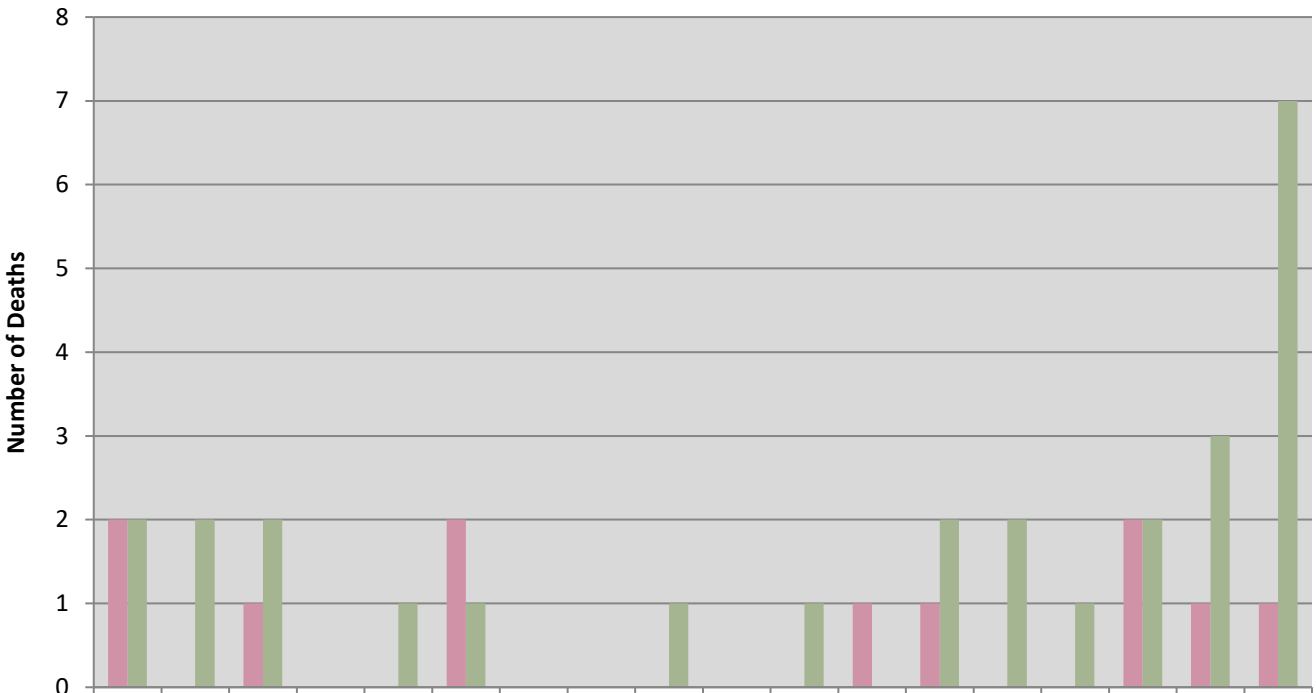
- Homicides in children occurred most frequently among males (65.8%) and among Blacks (47.4%)
- Black males had the highest rate of child homicides with 5.8 deaths per 100,000 persons aged 0-17 years
- Gunshot wounds (63.2%) were the most common method of child homicide in 2018, followed by beatings (18.4%)

Figure 3.13 Number and Rate of Child Homicide Deaths by Year, 1999-2018



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Deaths	49	39	36	43	48	43	49	46	44	37	41	35	30	35	33	45	33	37	46	38
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	2.5	2.0

Figure 3.14 Number of Child Homicide Deaths by Age and Gender, 2018



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

Figure 3.15 Percentage of Child Homicide Deaths by Race/Ethnicity, 2018

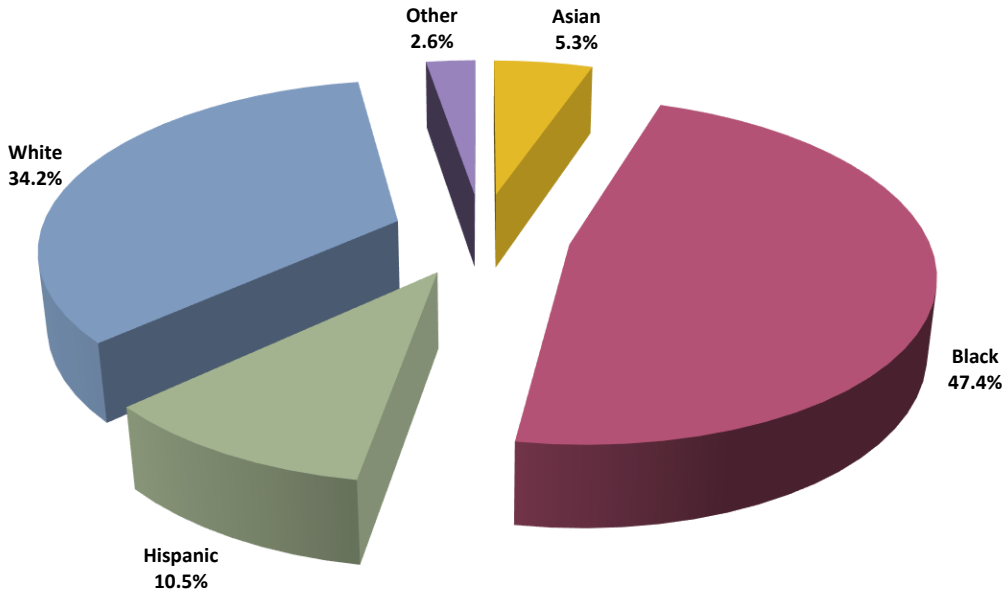
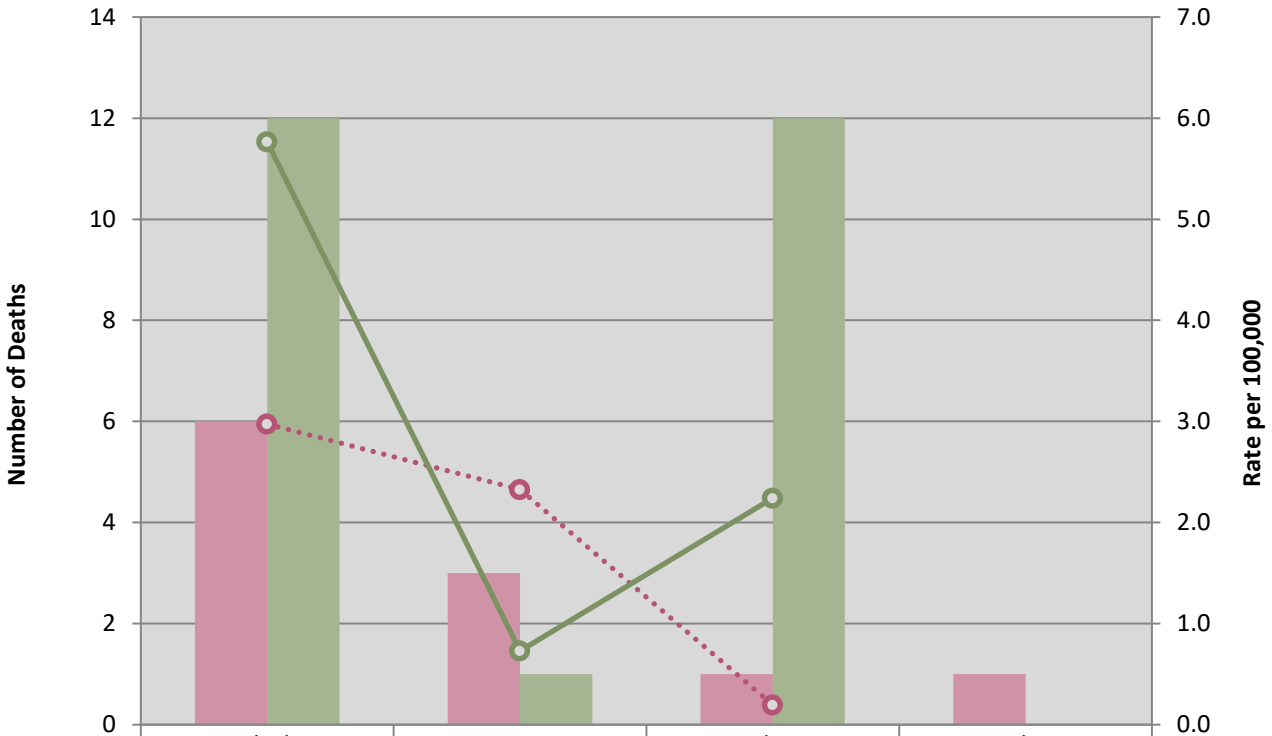


Figure 3.16 Number and Rate of Child Homicide Deaths by Gender and Race/Ethnicity, 2018



	Black	Hispanic	White	Other
Female	6	3	1	1
Male	12	1	12	0
Female Rate	3.0	2.3	0.2	*
Male Rate	5.8	0.7	2.2	*

*No rate can be calculated

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

Figure 3.17 Number of Child Homicide Deaths by Month of Death, 2018

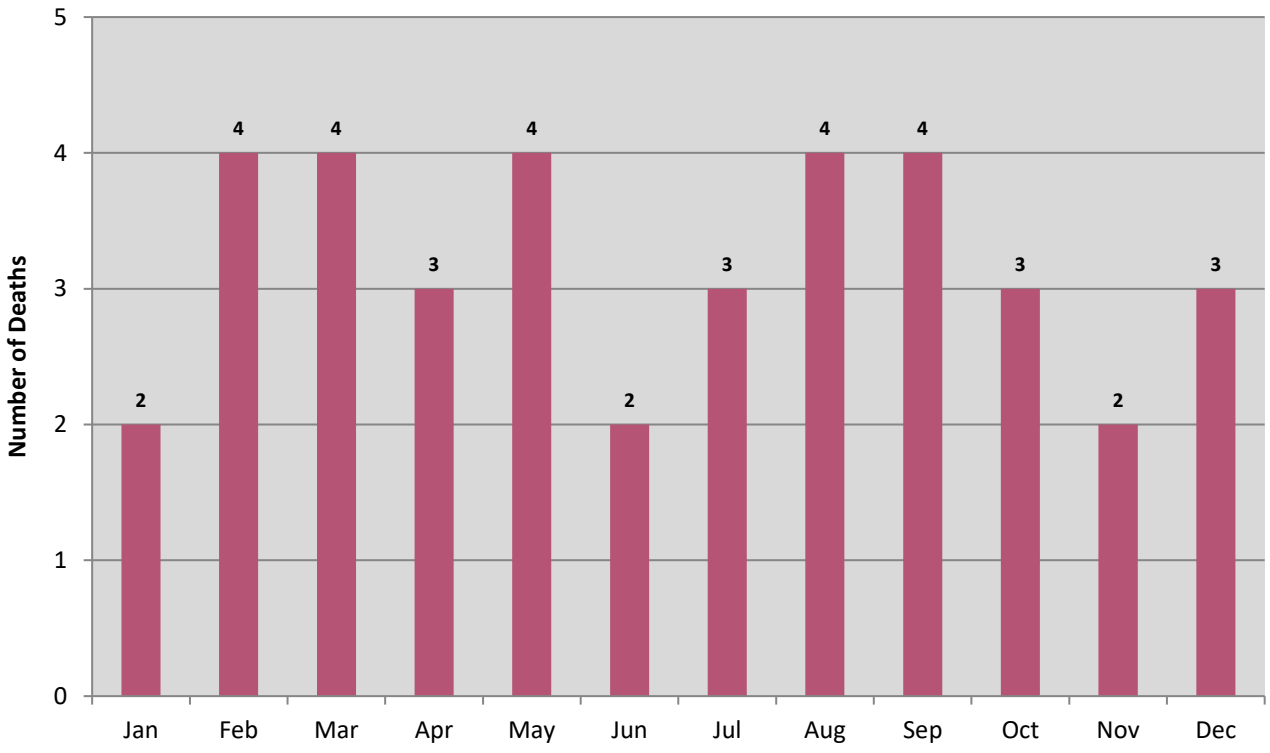


Figure 3.18 Number of Child Homicide Deaths by Day of the Week, 2018

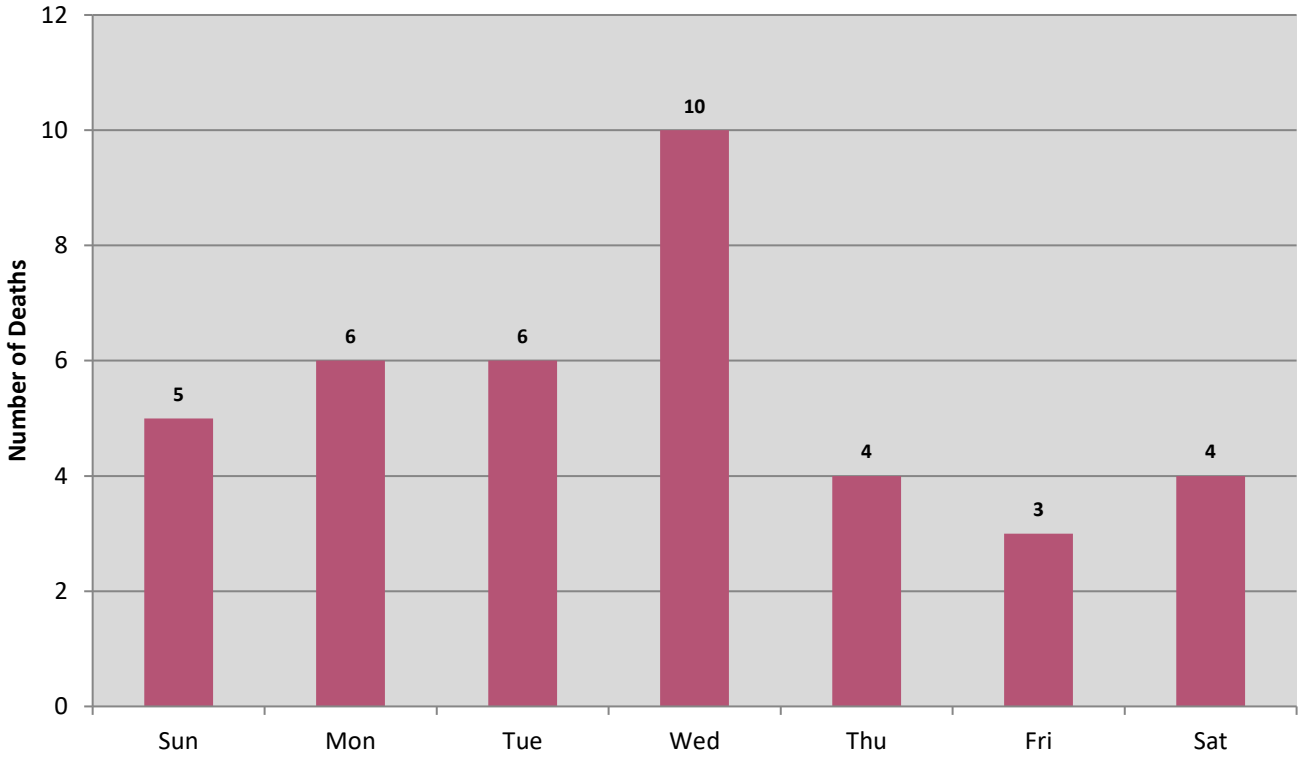


Table 3.3 Number of Child Homicide Deaths by Cause and Method of Death, 2018

Method of Death	Autopsied	Total Cases
Asphyxia		
Plastic bag asphyxia	1	**1**
Suffocated/Smothered	1	**1**
Fire Injuries		
Thermal burns and/or inhalation of combustion products	2	**2**
Traumatic Injury		
Beaten by assailant(s)	7	**7**
Sharp force injuries		
Shot by assailant(s) with firearm		
Handgun	19	19
Rifle	3	3
Unknown	2	2
Other/Undetermined	3	3
TOTAL CHILD HOMICIDE DEATHS	**38**	**38**

NATURAL CHILD DEATHS (N=34)

Infants made up the largest proportion of natural child deaths (35.3%) that fell under the OCME's jurisdiction.

- Seizure disorder 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 3.19 Number of Natural Child Deaths by Age Group and Gender, 2018

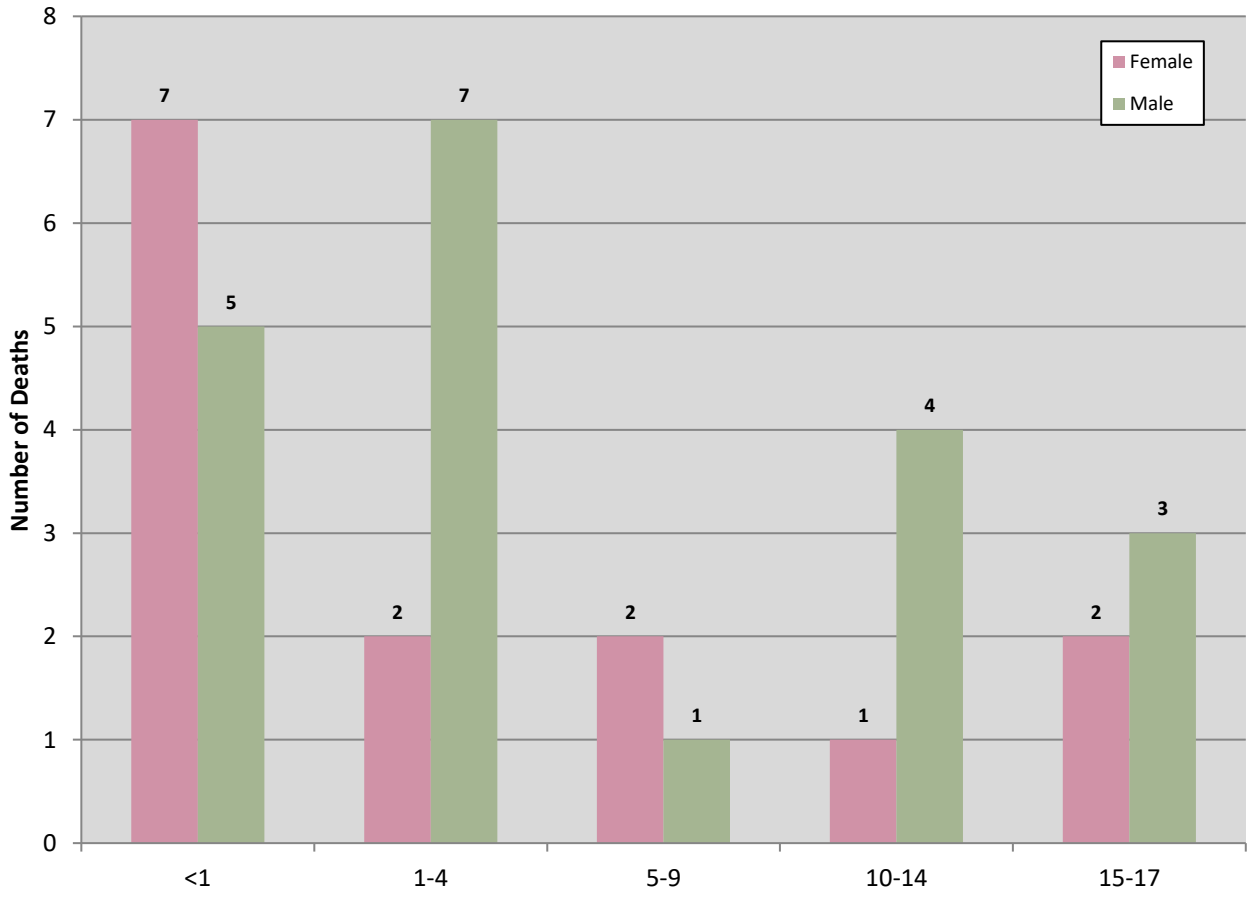


Figure 3.20 Percentage of Natural Child Deaths by Race/Ethnicity, 2018

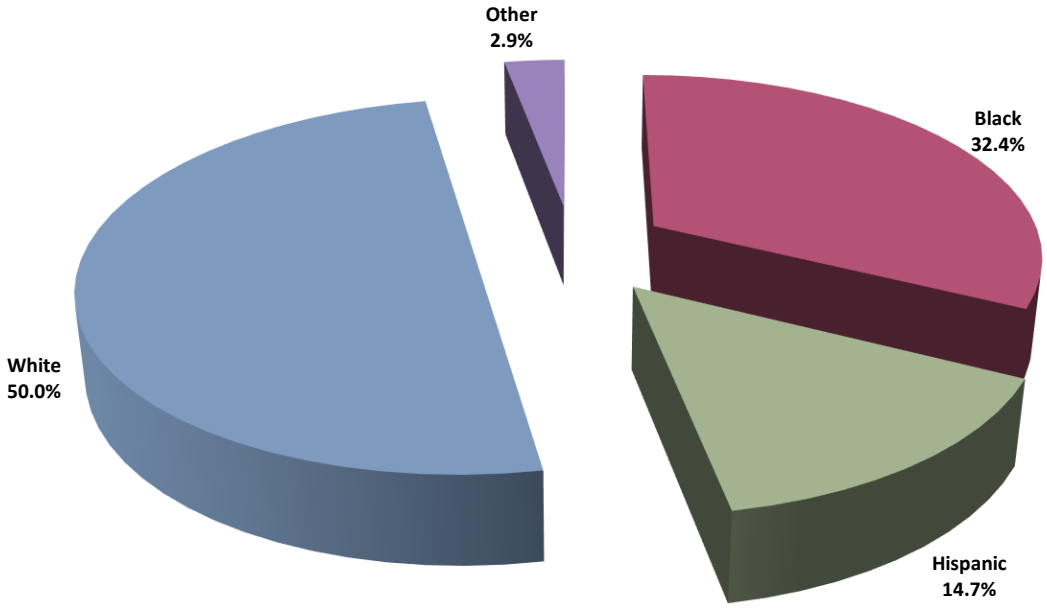


Figure 3.21 Number of OCME SIDS Cases by Year of Death, 2003-2018

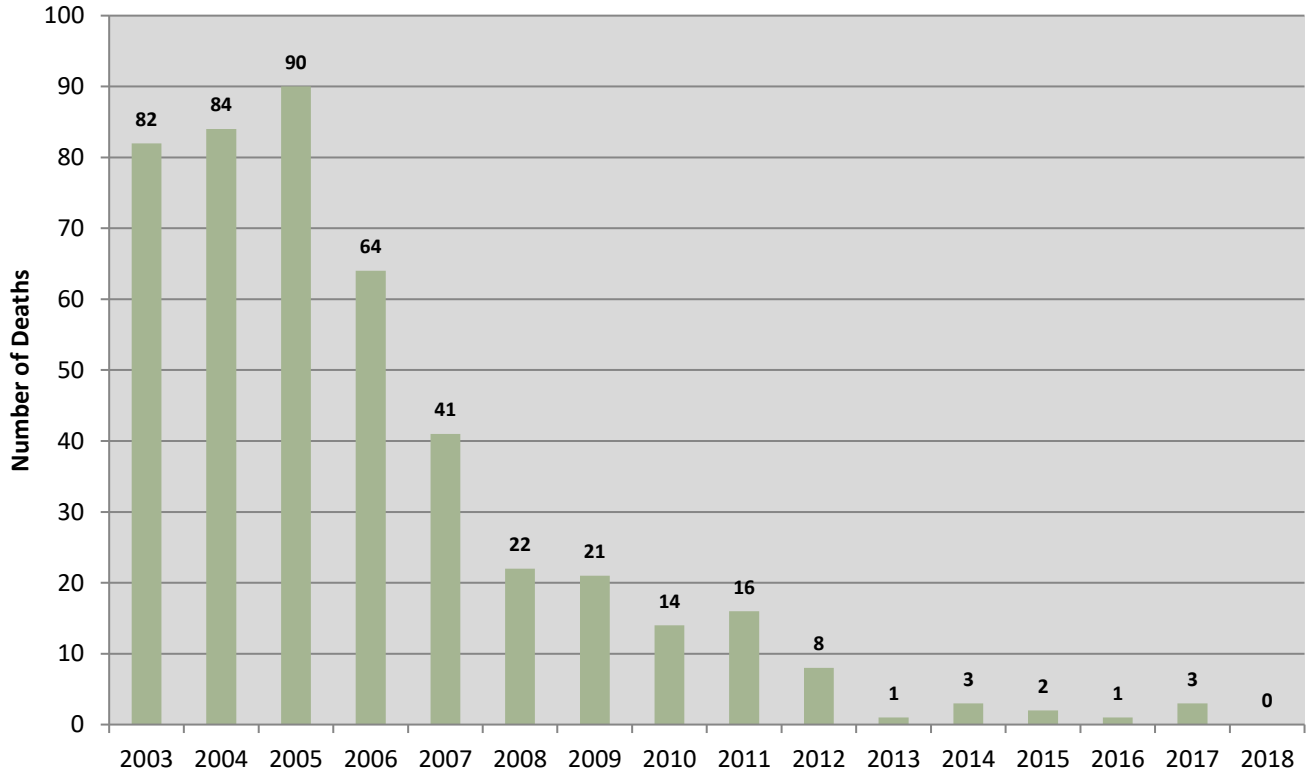


Table 3.4 Number of Natural Child Deaths by Cause and Method of Death, 2018

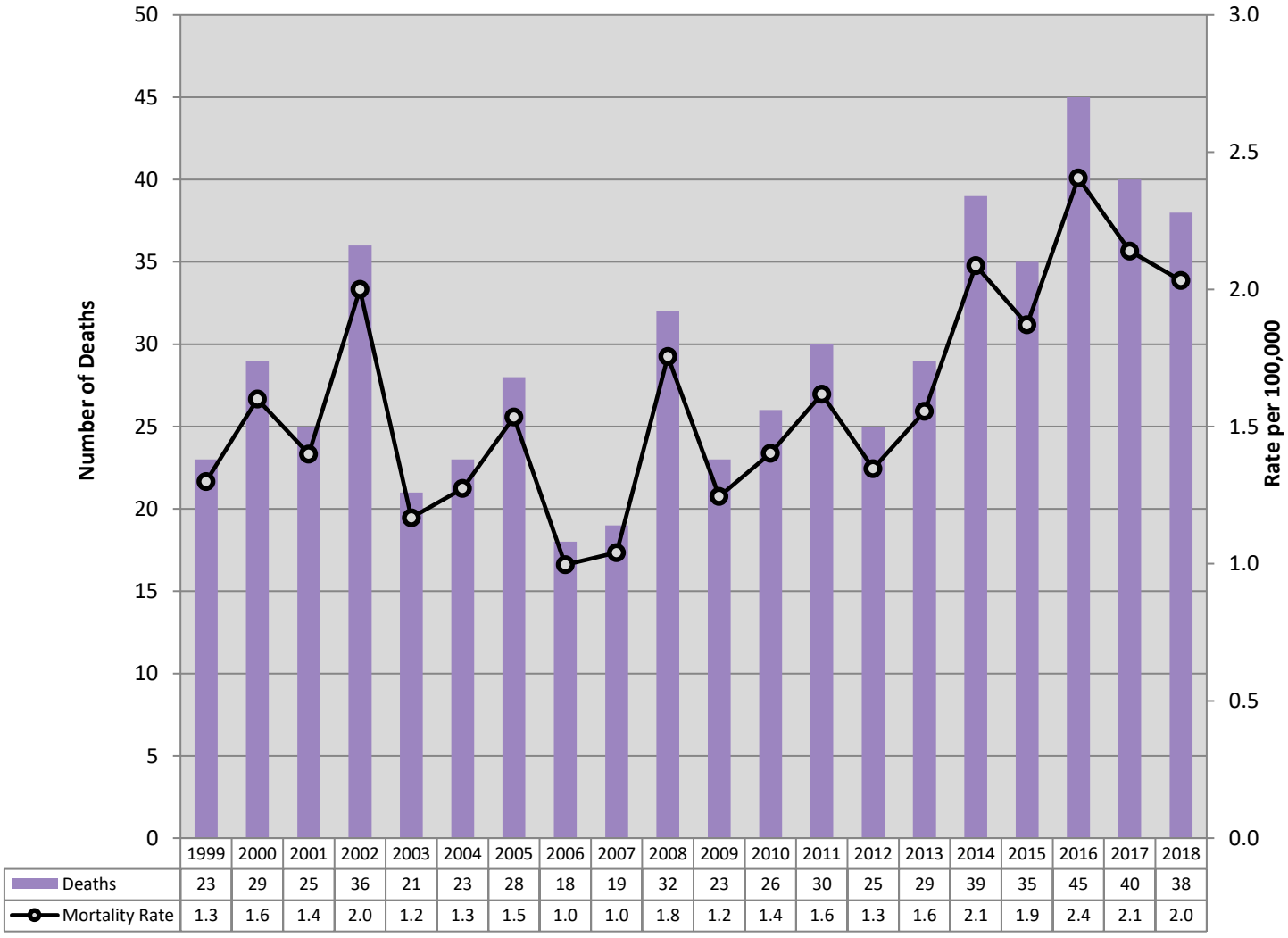
NATURAL CHILD DEATHS	Autopsied	Total Cases
Cardiovascular Diseases/Disorders		
Cardiomyopathy no otherwise specified	2	**2**
Cardiac arrhythmia not otherwise specified	1	**1**
Congenital heart defect	1	**1**
Vascular dissection/rupture	1	**1**
Central Nervous System Diseases/Disorders		
Meningitis (bacterial or viral)	1	**1**
Seizure disorder	5	**5**
Vascular disease	1	**1**
Other central nervous system disease/disorder	2	**2**
Gastrointestinal Disease/Disorder		
Other gastrointestinal disease/disorder	3	**3**
Other Natural Death/Disorder		
Other natural disease/disorder	1	**1**
Perinatal and Pediatric Diseases/Disorders		
Other perinatal or pediatric disease/disorder	3	**3**
Pulmonary Diseases/Disorders		
Asthma	1	**1**
Pneumonia	3	**3**
Systemic Diseases/Disorders		
Diabetes	1	**1**
Other infectious disease	3	**3**
Sepsis	2	**2**
Other systemic disease/disorder	2	**3**
TOTAL NATURAL CHILD DEATHS	**33**	**34**

CHILD SUICIDE DEATHS (N=38)

The number of child suicide deaths in 2018 decreased by 5.0% when compared to 2017.

- Child suicides are very similar to adult suicides as they occur more frequently in males (73.7%) and Whites (65.8%)
- The most common methods of child suicides were gunshot wounds (57.9%) and hangings (34.2%)

Figure 3.22 Number and Rate of Child Suicide Deaths by Year, 1999-2018



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Deaths	23	29	25	36	21	23	28	18	19	32	23	26	30	25	29	39	35	45	40	38
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	2.1	2.0

Figure 3.23 Number of Child Suicide Deaths by Age and Gender, 2018

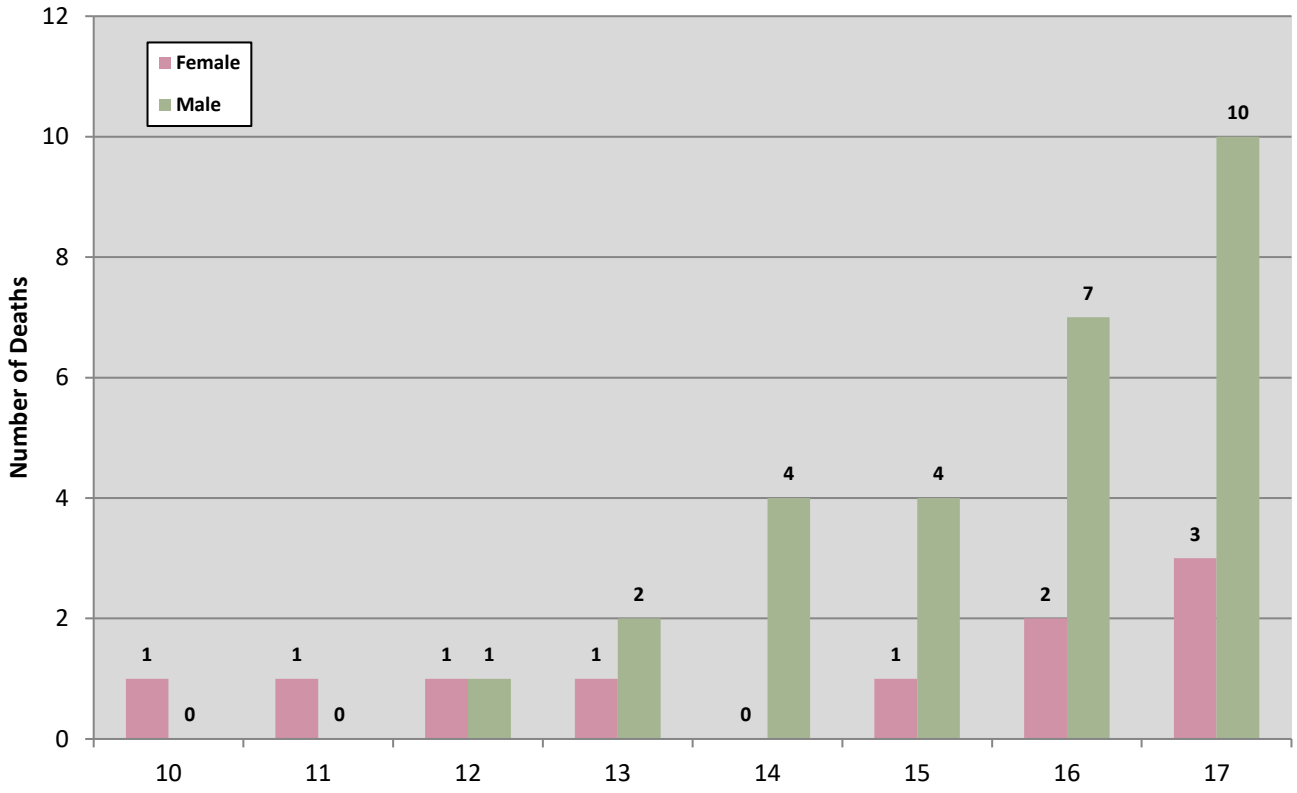


Figure 3.24 Percentage of Child Suicide Deaths by Race/Ethnicity, 2018

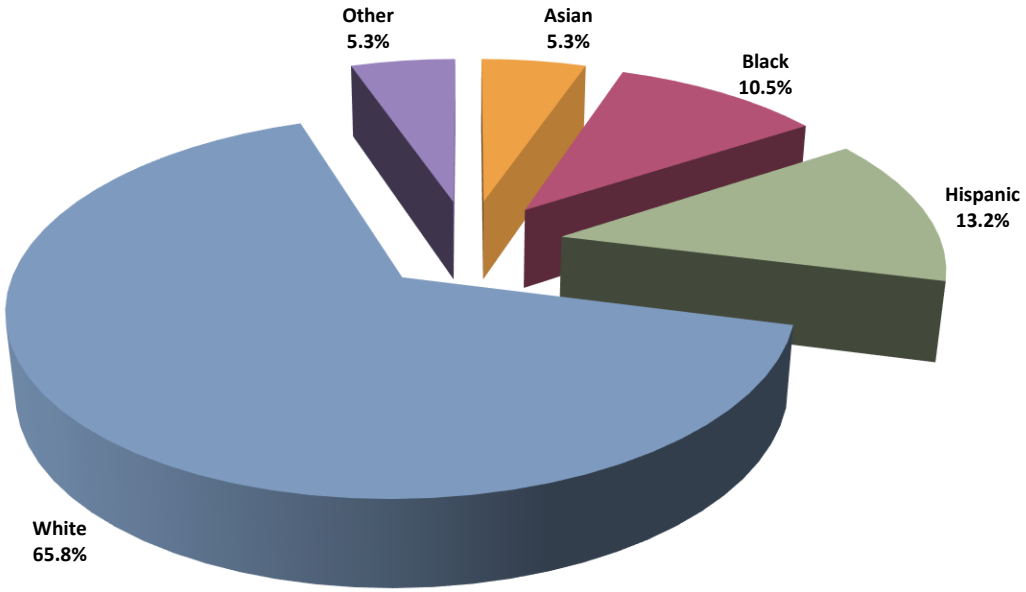
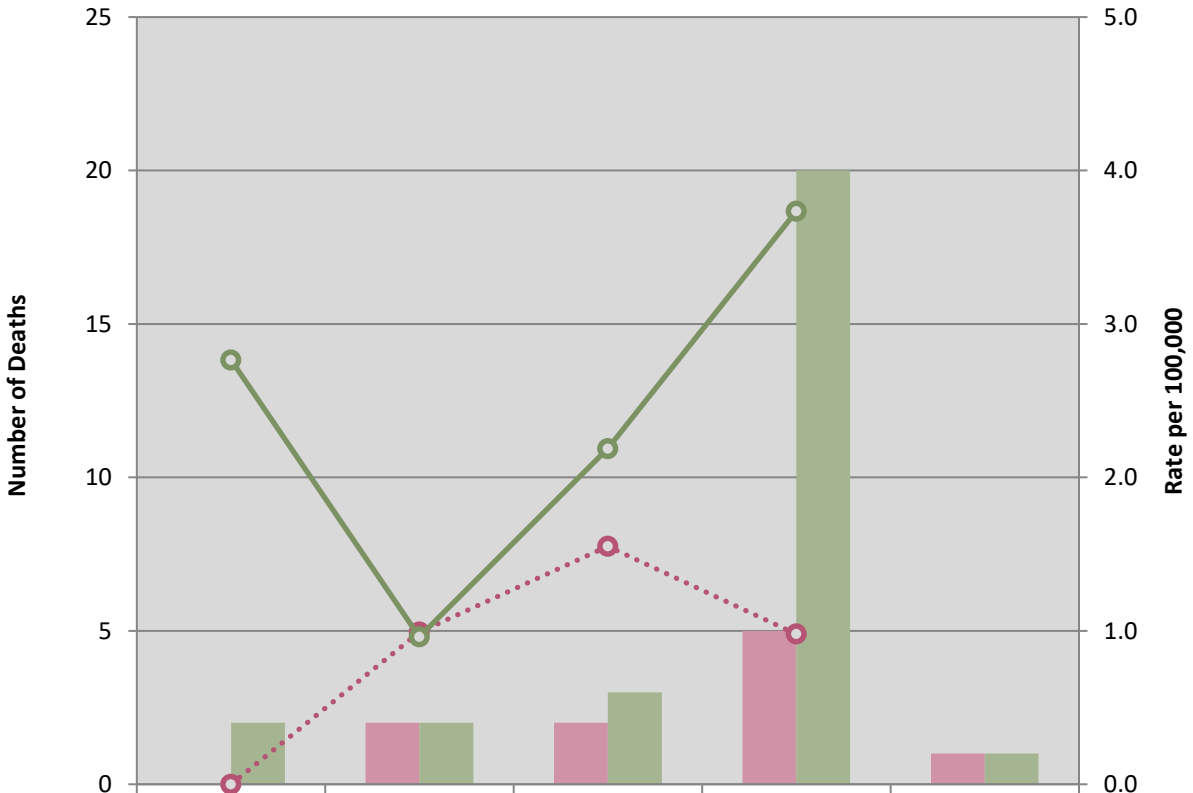


Figure 3.25 Number and Rate of Child Suicide Deaths by Gender and Race/Ethnicity, 2018



	Asian	Black	Hispanic	White	Other
Female	0	2	2	5	1
Male	2	2	3	20	1
Female Rate	0.0	1.0	1.6	1.0	*
Male Rate	2.8	1.0	2.2	3.7	*

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

Figure 3.26 Number of Child Suicide Deaths by Month, 2018

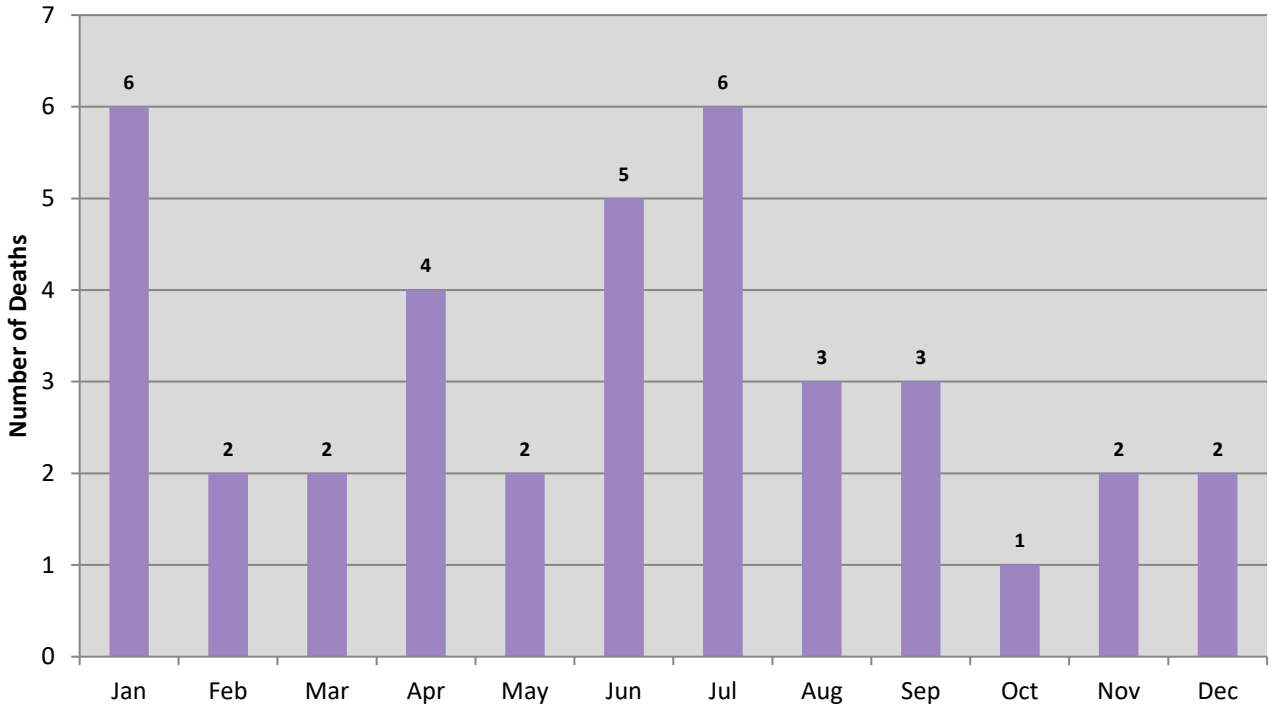


Figure 3.27 Number of Child Suicide Deaths by Day of the Week, 2018

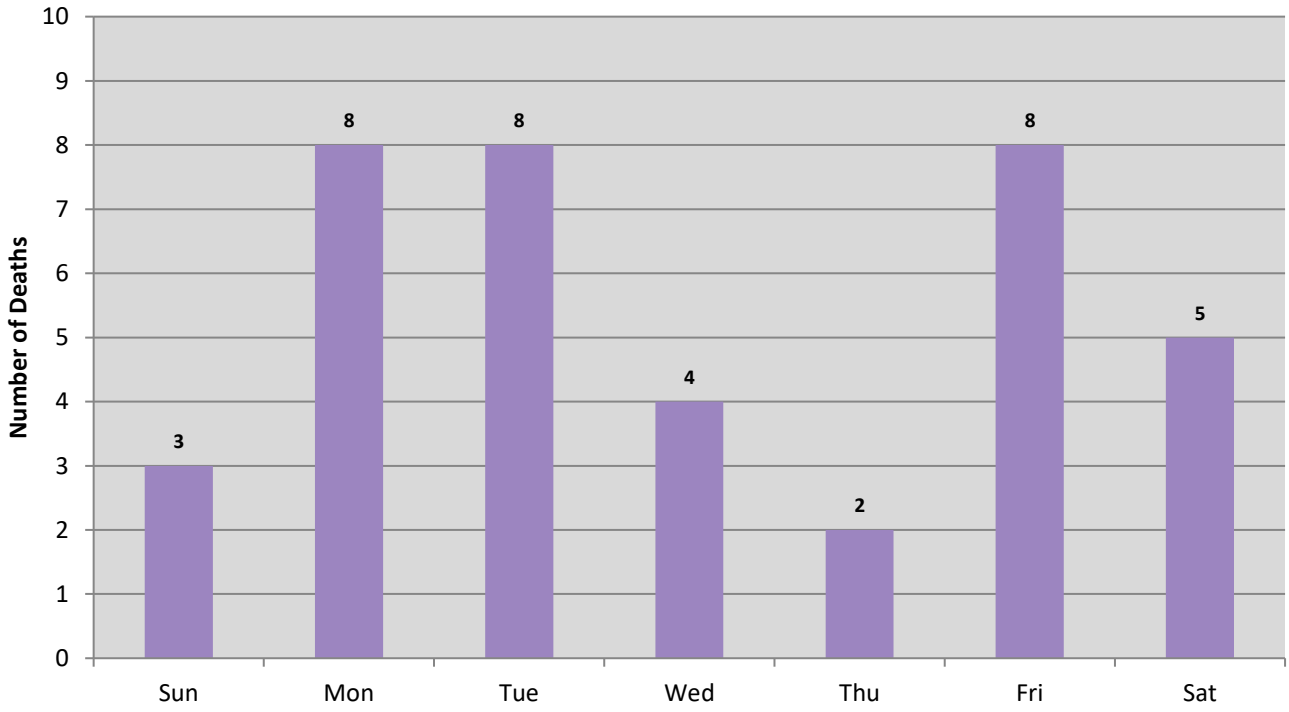


Table 3.5 Number of Child Suicide Deaths by Cause and Method of Death, 2018

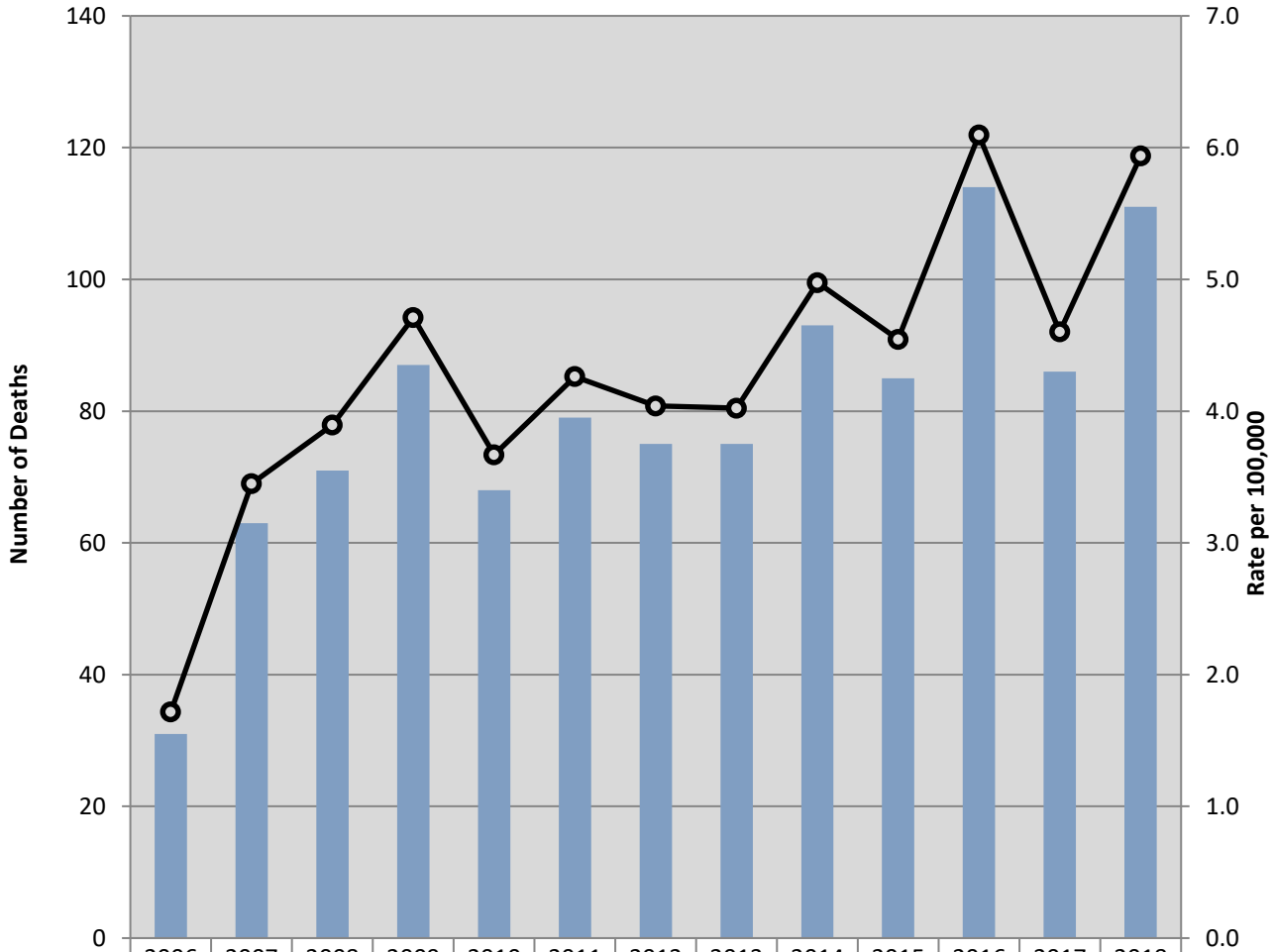
Method of Death	Autopsied	Total Cases
Asphyxia		
Hanged	12	**13**
Drug Use		
Ingested and/or injected illicit, prescription, and/or other type of drug	2	**2**
Jump/Fall		
Jump/Fall from height	1	**1**
Traumatic Injury		
Gunshot Wound		
Handgun	20	20
Rifle	1	1
Shotgun	1	1
TOTAL CHILD SUICIDE DEATHS	**37**	**38**

UNDETERMINED CHILD DEATHS (N=111)

One hundred and eleven undetermined deaths of children occurred in 2018; an increase of 29.1% compared to 2017, and representing 34.2% of all child deaths that occurred in 2018.

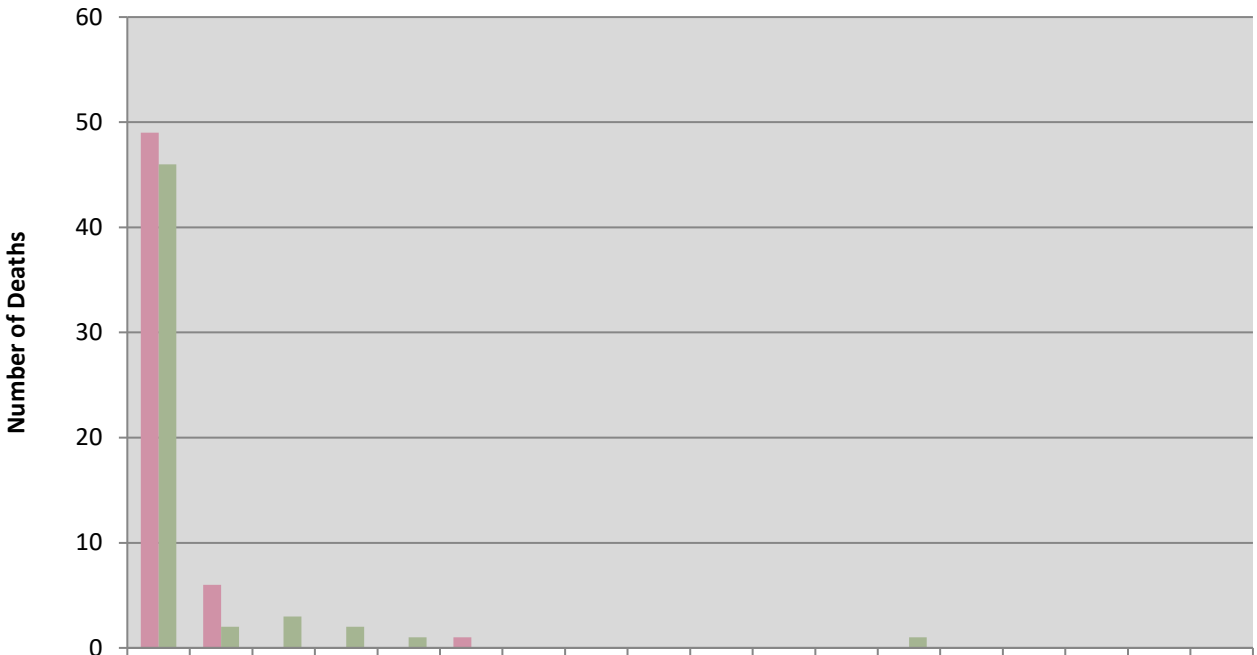
- Infants accounted for 85.6% of undetermined deaths
- Sudden unexpected infant death (SUID) deaths of infants <1 year of age represented 68.5% of all undetermined child deaths

Figure 3.28 Number and Rate of Undetermined Child Deaths by Year, 2006-2018



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Deaths	31	63	71	87	68	79	75	75	93	85	114	86	111
Mortality Rate	1.7	3.4	3.9	4.7	3.7	4.3	4.0	4.0	5.0	4.5	6.1	4.6	5.9

Figure 3.29 Number of Undetermined Child Deaths by Age and Gender, 2018



	<1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Female	49	6	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Male	46	2	3	2	1	0	0	0	0	0	0	0	1	0	0	0	0	0

Figure 3.30 Percentage of Undetermined Child Deaths by Race/Ethnicity, 2018

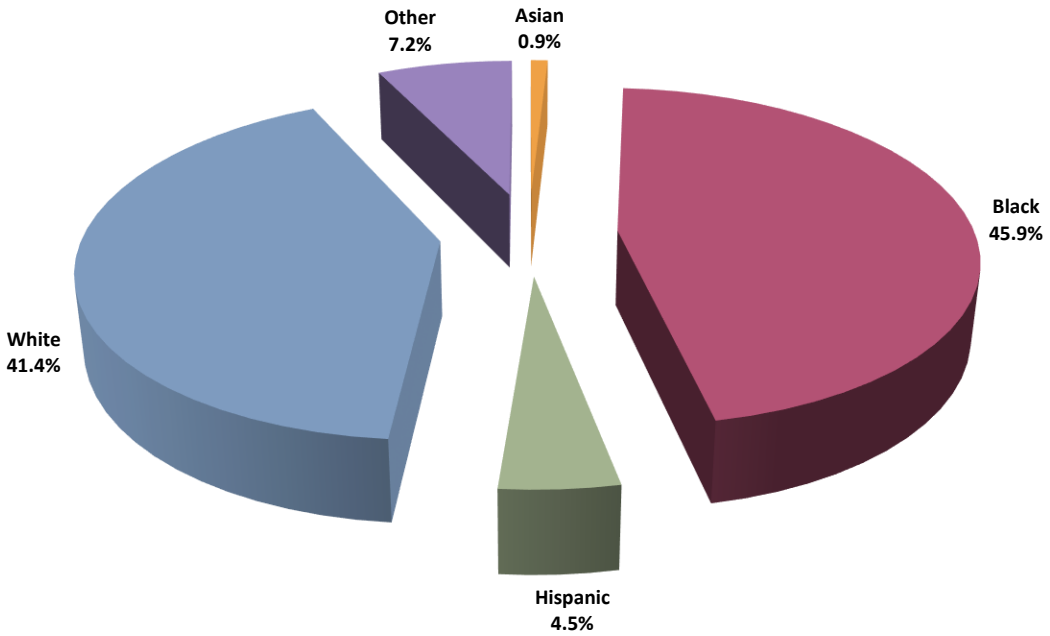
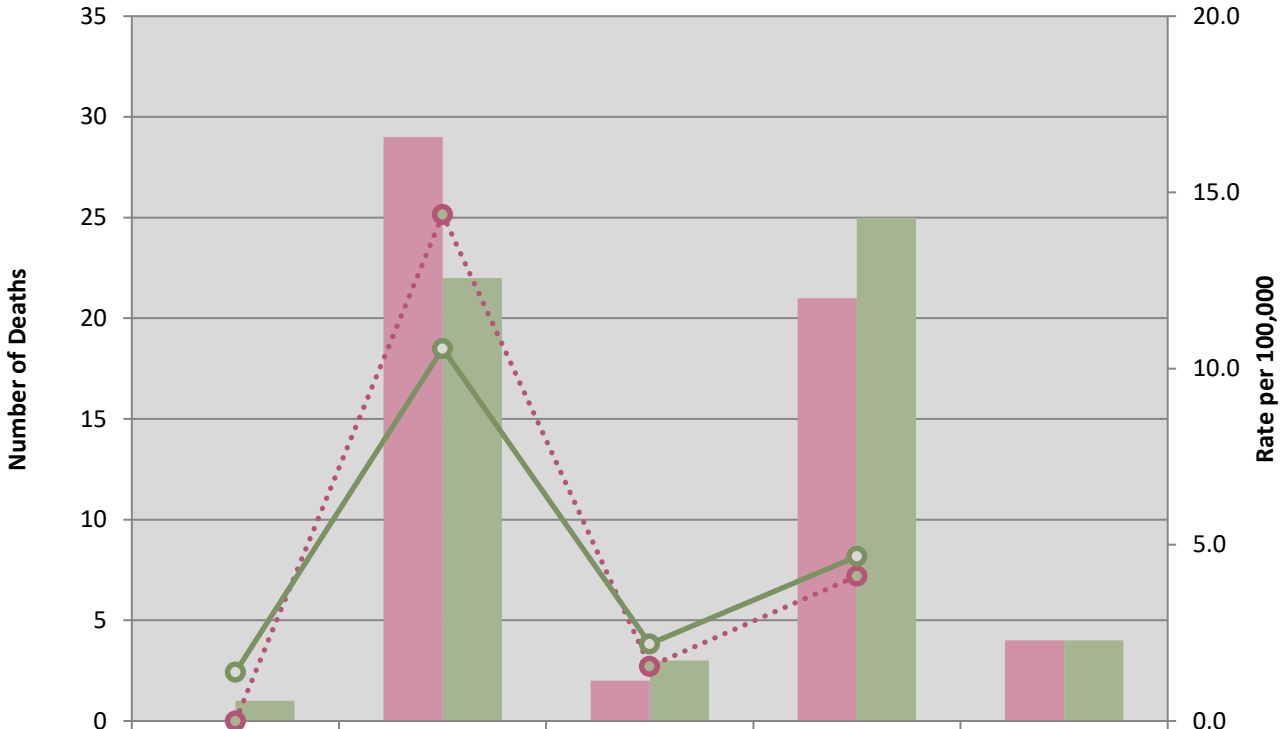


Figure 3.31 Number and Rate of Undetermined Child Deaths by Gender and Race/Ethnicity, 2018



	Asian	Black	Hispanic	White	Other
Female	0	29	2	21	4
Male	1	22	3	25	4
Female Rate	0.0	14.4	1.6	4.1	*
Male Rate	1.4	10.6	2.2	4.7	*

*No rate can be calculated

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

Table 3.6 Number of Undetermined Child Deaths by Cause and Method of Death, 2018

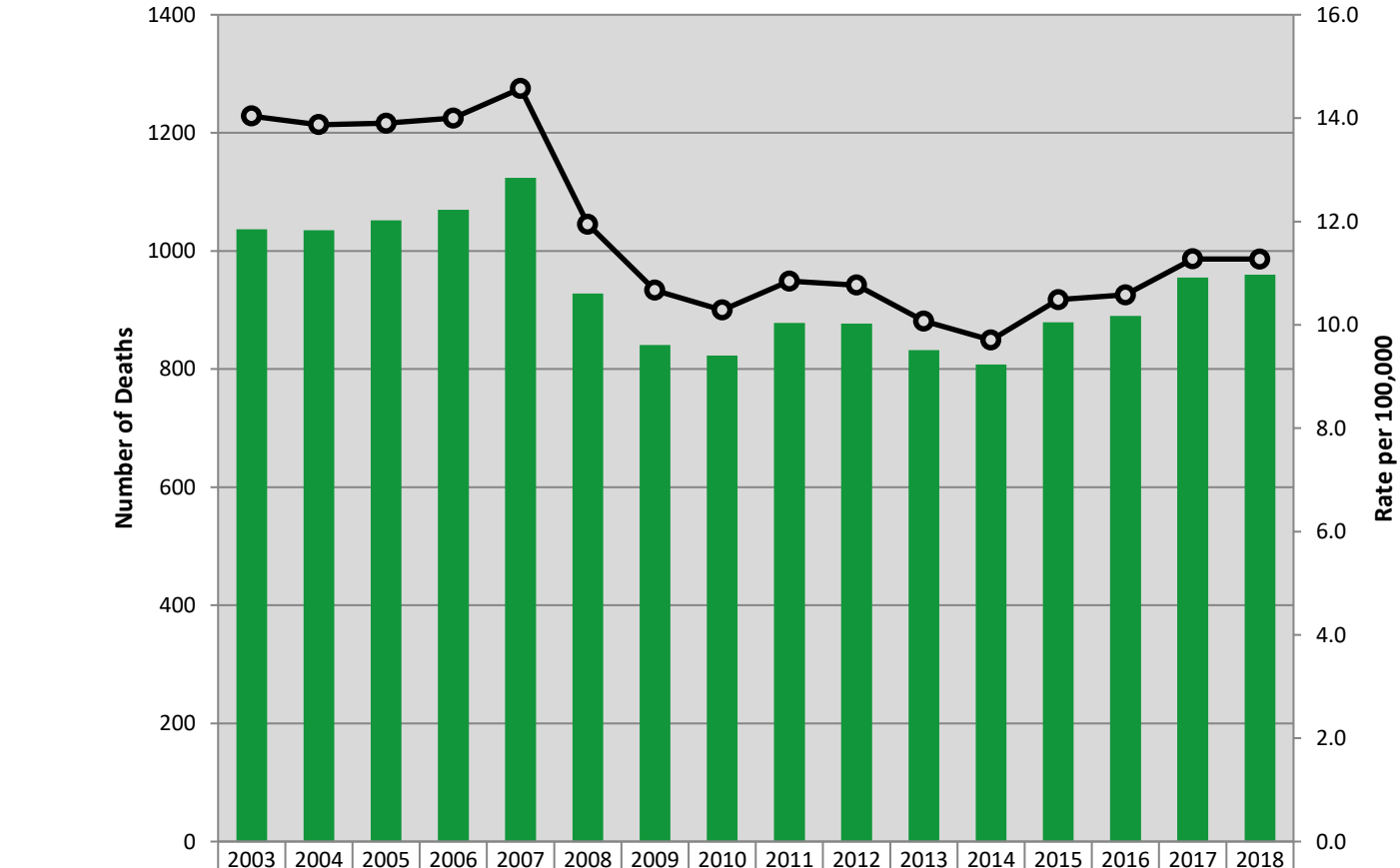
Determined Cause and Method of Death	Autopsied	Total Cases
Drug Use		
Ingested and/or injected illicit, prescription, and/or other type of drug	4	4
Fall/Jump		
Fall/Jump from height	1	1
Gunshot		
Handgun	3	3
Other Unnatural		
Other	4	4
Subtotal for Determined Cause and Method of Death	**12**	**12**
Undetermined Cause and Method of Death	**Autopsied**	**Total Cases**
Undetermined Manner and Cause of Death		
Sudden Unexpected Infant Death (SUID)	76	76
Other or undetermined after autopsy and/or toxicology	23	23
Subtotal for Undetermined Manner and Cause of Death	99	99
TOTAL UNDETERMINED CHILD DEATHS	**111**	**111**

SECTION 4: MOTOR VEHICLE FATALITIES (N=960)

The OCME investigated 960 motor vehicle collision-related deaths in 2018, which was nearly identical compared to 2017.

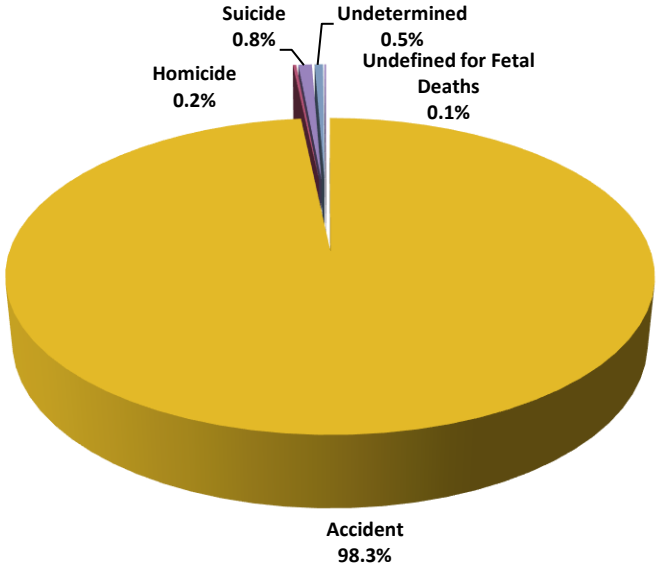
- The vast majority of cases were accidents (98.3%) and victims were most often male (70.3%)
- Of the 727 (75.7%) motor vehicle fatalities tested for ethanol, 28.3% (n=206) had a blood alcohol content greater than or equal to 0.08% BAC; of those 206 decedents who were at or above the legal limit of alcohol, 72.3% were drivers
- Persons aged 25-34 years old had more deaths (18.0%) due to motor vehicle incidents than any other age group, but males 85+ years had the highest rate of death (45.2 deaths per 100,000)
- Twenty-five 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, 2003-2018



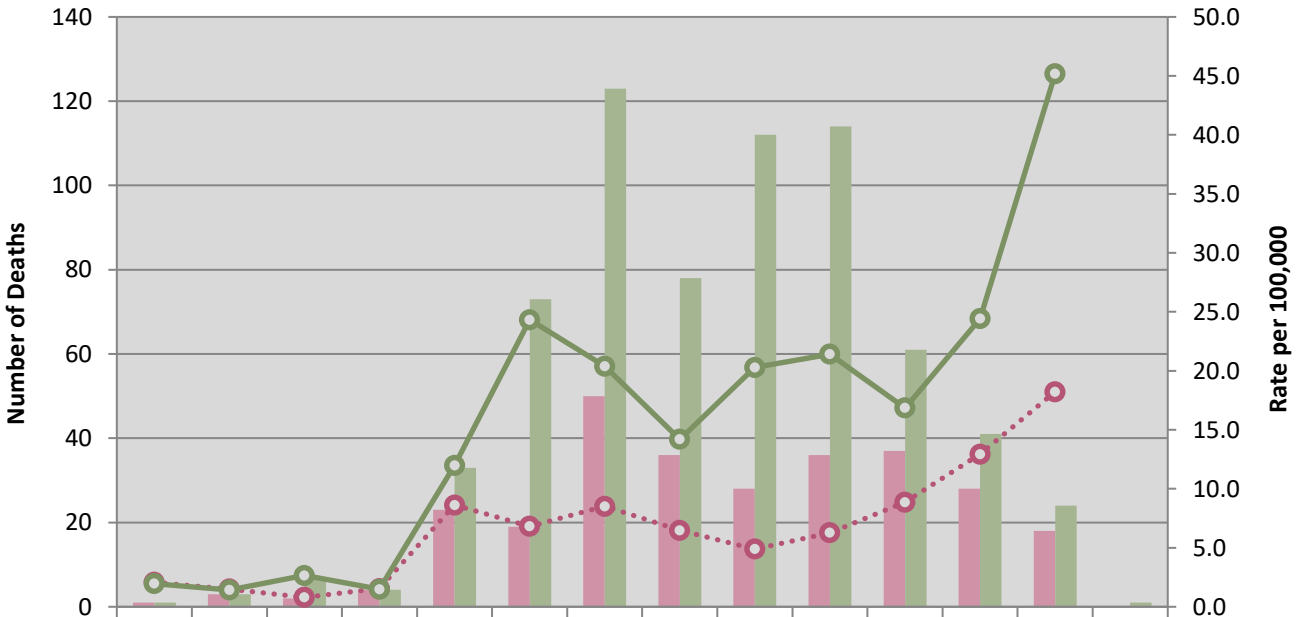
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Deaths	1037	1035	1052	1070	1124	928	841	823	878	877	832	808	879	890	955	960
Mortality Rate	14.0	13.9	13.9	14.0	14.6	11.9	10.7	10.3	10.8	10.8	10.1	9.7	10.5	10.6	11.3	11.3

Figure 4.2 Percentage of Motor Vehicle Deaths by Manner, 2018



* Fetal deaths are omitted from manner of death classifications. This is because fetal deaths are not given a certification of live birth in Virginia and thus, do not receive a death certificate. In 2018, the OCME accepted six fetal deaths under OCME jurisdiction of the 4,261 total fetal deaths reported to Vital Records

Figure 4.3 Number and Rate of Motor Vehicle Deaths by Age Group and Gender, 2018



	<1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Fetus
Female	1	3	2	4	23	19	50	36	28	36	37	28	18	0
Male	1	3	7	4	33	73	123	78	112	114	61	41	24	1
Female Rate	2.1	1.5	0.8	1.5	8.6	6.8	8.5	6.5	4.9	6.3	8.9	12.9	18.2	*
Male Rate	2.0	1.4	2.7	1.5	12.0	24.3	20.4	14.2	20.3	21.4	16.9	24.4	45.2	*

* No rate can be calculated

* * Fetal deaths are omitted from manner of death classifications. This is because fetal deaths are not given a certification of live birth in Virginia and thus, do not receive a death certificate. In 2018, the OCME accepted six fetal deaths under OCME jurisdiction of the 4,261 total fetal deaths reported to Vital Records

Figure 4.4 Percentage of Motor Vehicle Deaths by Race/Ethnicity, 2018

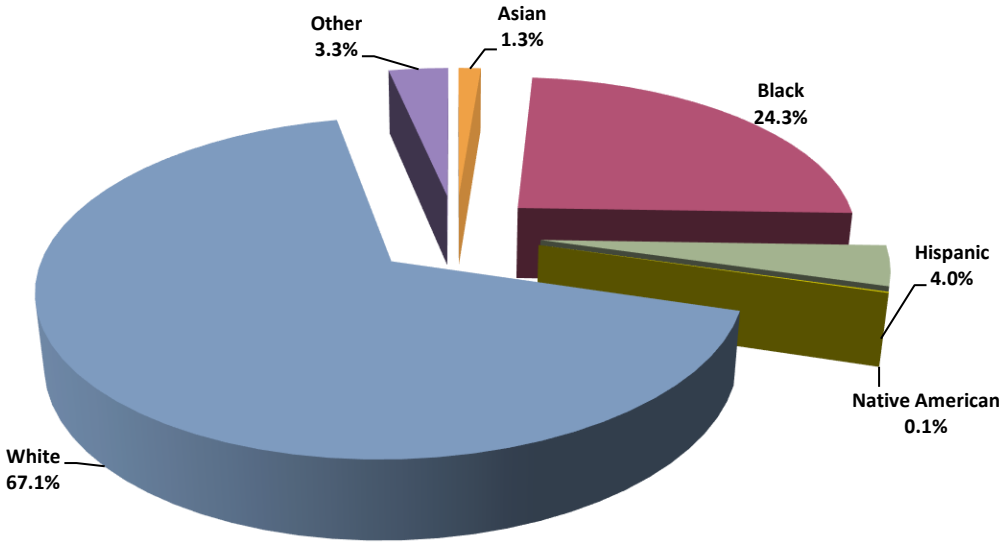
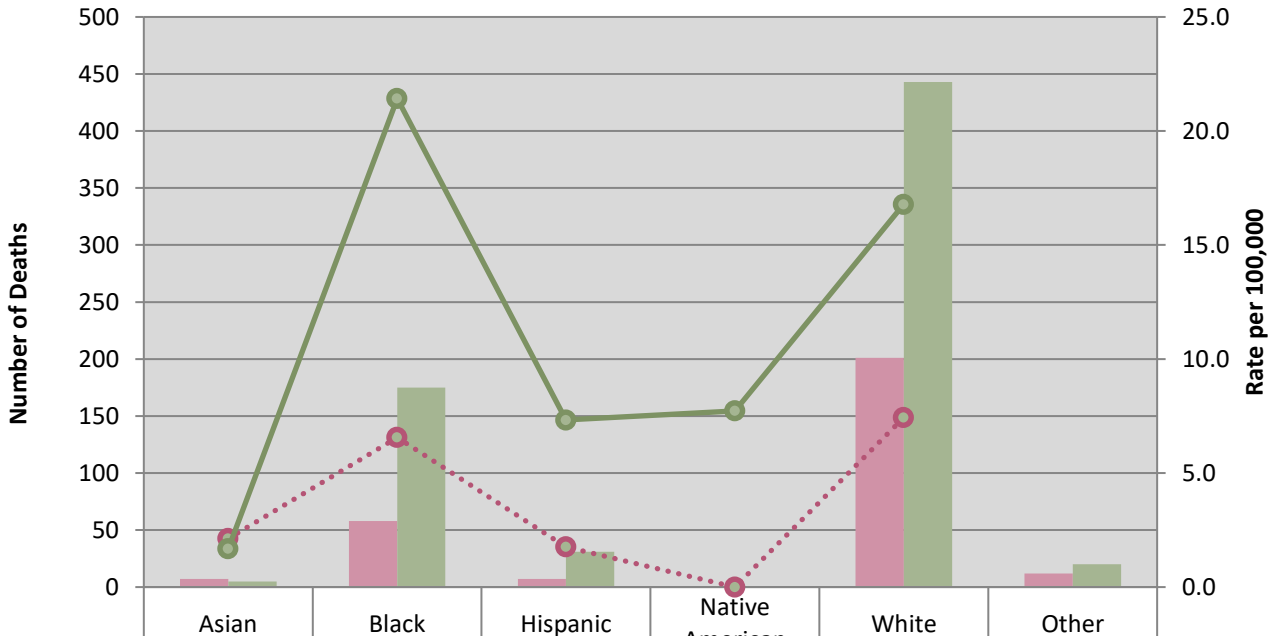


Figure 4.5 Number and Rate of Motor Vehicle Deaths by Race/Ethnicity and Gender, 2018

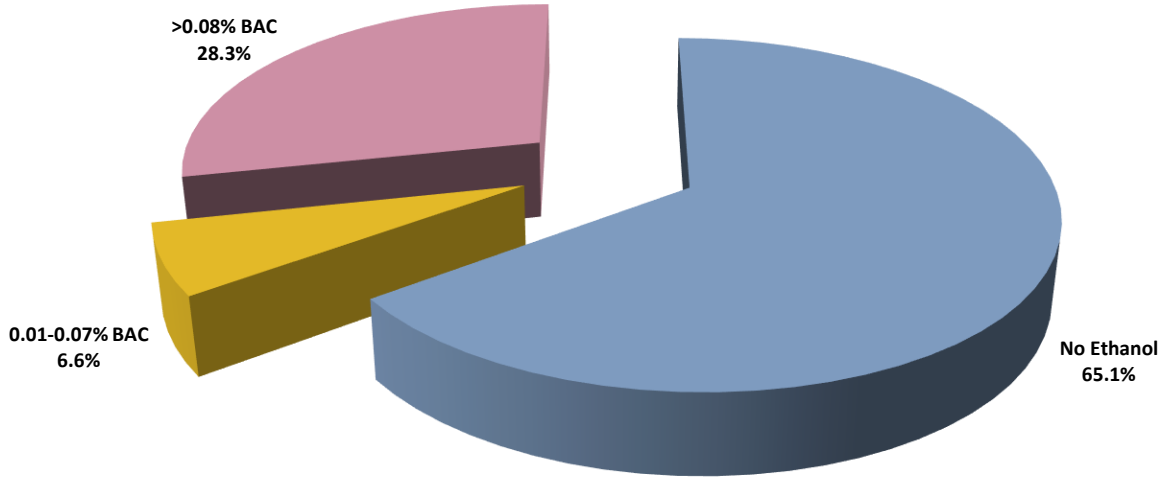


	Asian	Black	Hispanic	Native American	White	Other
Female	7	58	7	0	201	12
Male	5	175	31	1	443	20
Female Rate	2.1	6.6	1.8	0.0	7.4	*
Male Rate	1.7	21.4	7.3	7.7	16.8	*

*No rate can be calculated

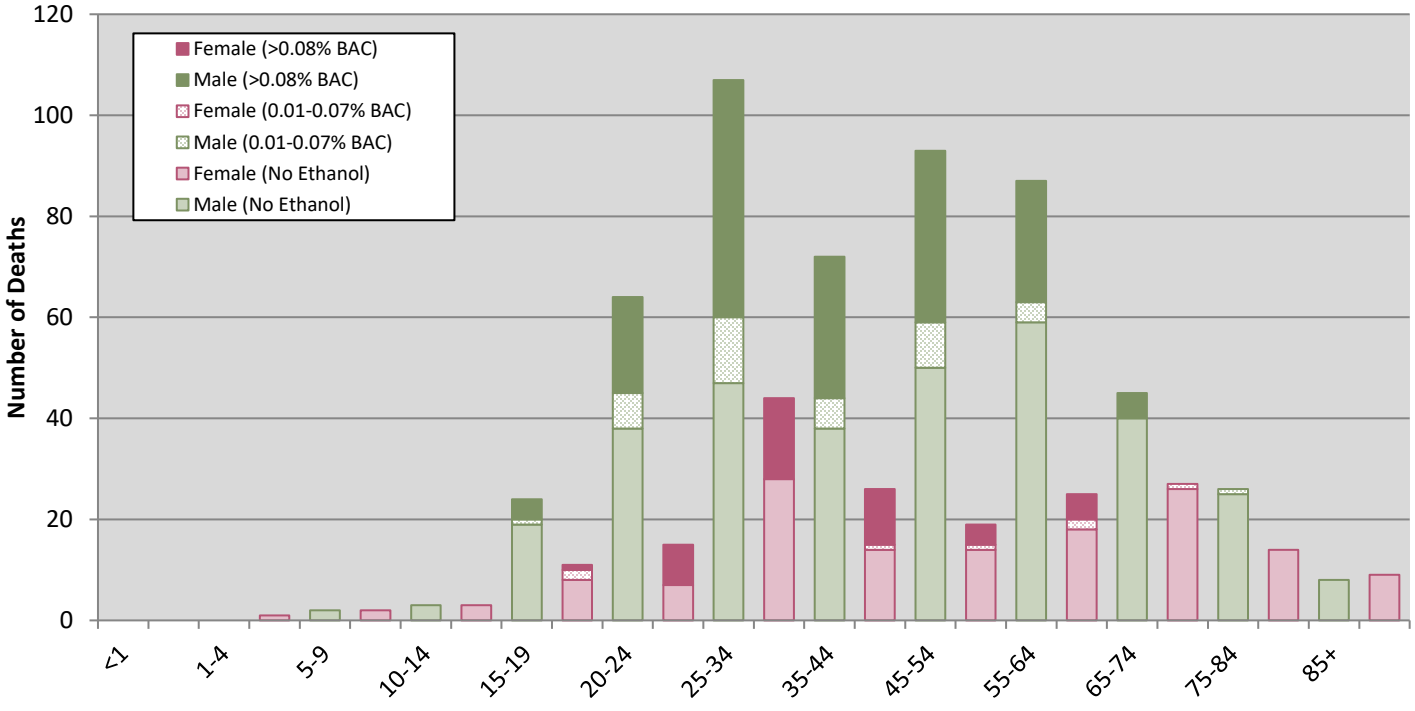
Note: Rates calculated from small case counts (n<5) are considered unreliable and should be interpreted with caution (Native Americans)

Figure 4.6 Percentage of Motor Vehicle Deaths by Ethanol Amount (N=727), 2018



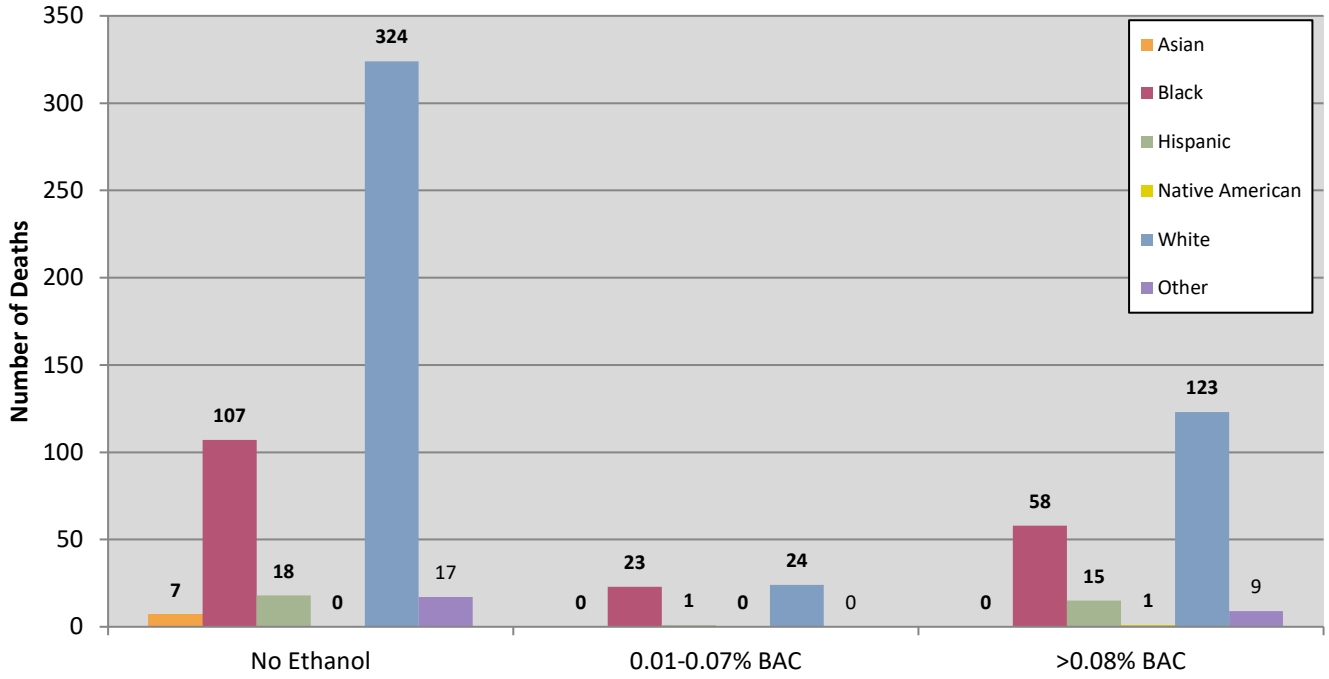
Note: Of the 960 motor vehicle deaths, 24.3% (n=233) did not receive toxicology testing

Figure 4.7 Number of Motor Vehicle Deaths by Age Group, Gender, and Ethanol Amount (N=727), 2018



Note: Of the 960 motor vehicle deaths, 24.3% (n=233) did not receive toxicology testing

Figure 4.8 Number of Motor Vehicle Deaths by Ethanol Level and Race/Ethnicity (N=727), 2018



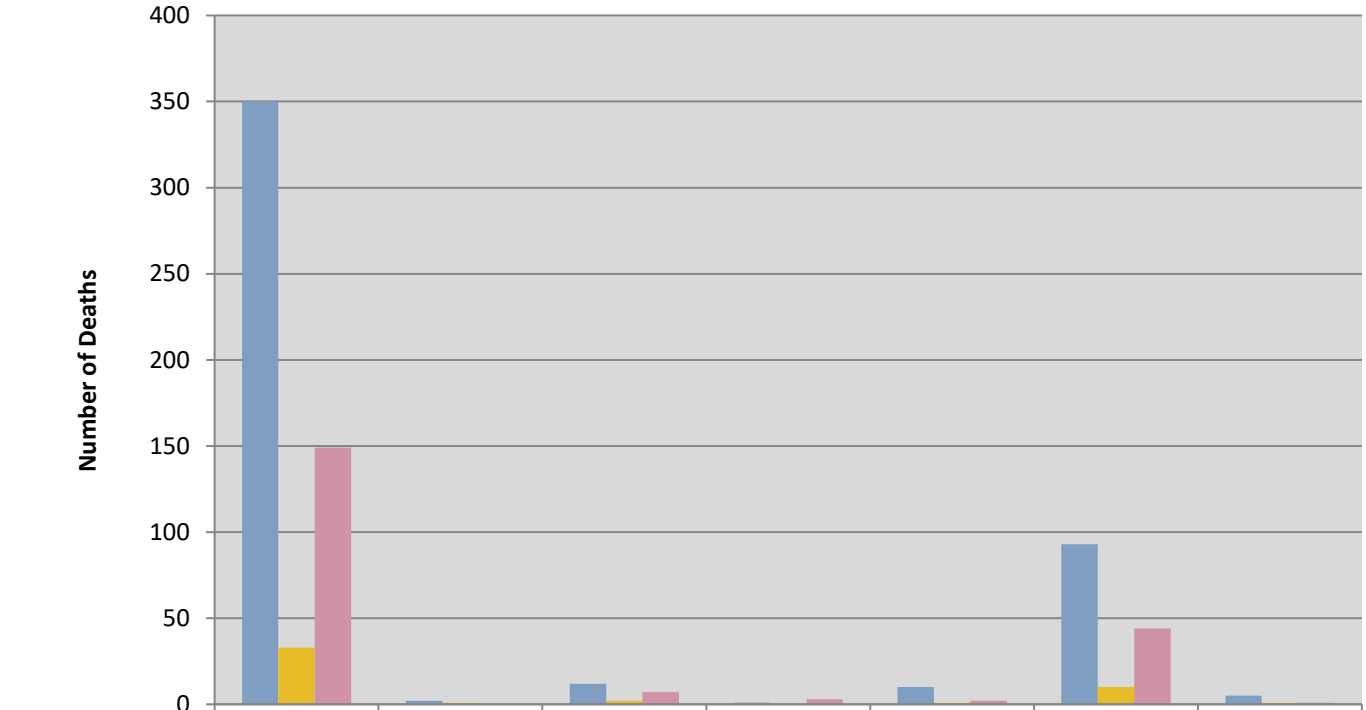
Note: Of the 960 motor vehicle deaths, 24.3% (n=233) did not receive toxicology testing

Table 4.1 Number of Motor Vehicle Deaths by Age Group and Position during Collision, 2018

Age Group (years)	Driver	Passenger Cargo	Passenger Front	Passenger Other	Passenger Rear	Pedestrian	Unknown	TOTAL
<1	0	0	1	0	0	0	1	**2**
1-4	0	0	0	3	2	1	0	**6**
5-9	1	0	1	0	3	4	0	**9**
10-14	2	0	1	0	2	3	0	**8**
15-19	27	0	11	1	11	5	1	**56**
20-24	60	1	15	1	2	13	0	**92**
25-34	122	1	13	2	5	28	2	**173**
35-44	74	0	15	1	2	19	3	**114**
45-54	92	0	5	0	4	38	1	**140**
55-64	96	1	8	0	3	31	11	**150**
65-74	70	0	6	1	3	15	3	**98**
75-84	39	0	13	0	2	13	2	**69**
85+	34	0	3	0	2	3	0	**42**
Fetus	0	0	1	0	0	0	0	**1**
TOTAL	**617**	**3**	**93**	**9**	**41**	**173**	**24**	**960**

* Fetal deaths are omitted from manner of death classifications. This is because fetal deaths are not given a certification of live birth in Virginia and thus, do not receive a death certificate. In 2018, the OCME accepted six fetal deaths under OCME jurisdiction of the 4,261 total fetal deaths reported to Vital Records

Figure 4.9 Number of Motor Vehicle Deaths by Position during Collision and Ethanol Level (N=727), 2018



	Driver	Passenger Cargo	Passenger Front	Passenger Other	Passenger Rear	Pedestrain	Unknown
No Ethanol	350	2	12	1	10	93	5
0.01-0.07% BAC	33	1	2	0	1	10	1
>0.08% BAC	149	0	7	3	2	44	1

Note: Of the 960 motor vehicle deaths, 24.3% (n=233) did not receive toxicology testing

Table 4.2 Number of Motor Vehicle Deaths by Position during Collision, Vehicle Type, and Ethanol Level (N=727), 2018

Position During Collision	Vehicle Type	No Ethanol	0.01-0.07% BAC	>0.08% BAC	Total
Driver	Aircraft	4	0	0	**4**
	All Terrain Vehicle	3	1	5	**9**
	Bicycle	3	2	3	**8**
	Bus	0	0	1	**1**
	Car	156	14	70	**240**
	Dirt Bike	1	0	0	**1**
	Dump Truck	2	0	0	**2**
	Farm Equipment	2	0	0	**2**
	Lawnmower	2	0	0	**2**
	Mo-ped	6	0	3	**9**
	Motorcycle	51	11	20	**82**
	Pickup Truck	40	2	12	**54**
	Sport Utility Vehicle	52	3	28	**83**
	Tractor Trailer	8	0	1	**9**
	Train	1	0	0	**1**
	Truck Other	3	0	0	**3**
	Unknown	2	0	2	**4**
	Van	14	0	4	**18**
	Subtotal	**350**	**33**	**149**	**532**
Passenger Cargo	Car	1	0	0	**1**
	Motorcycle	1	0	0	**1**
	Pickup Truck	0	1	0	**1**
	Subtotal	**2**	**1**	**0**	**3**
Passenger Front	Car	9	2	5	**16**
	Sport Utility Vehicle	0	0	1	**1**
	Train	1	0	0	**1**
	Truck Other	1	0	0	**1**
	Unknown	1	0	1	**2**
	Subtotal	**12**	**2**	**7**	**21**
Passenger Other	Bus	0	0	1	**1**
	Car	1	0	0	**1**
	Pickup Truck	0	0	2	**2**
	Subtotal	**1**	**0**	**3**	**4**
Passenger Rear	Car	7	0	1	**8**
	Golf Cart	0	1	0	**1**
	Pickup Truck	1	0	0	**1**

	Sport Utility Vehicle	0	0	1	**1**
	Truck Other	1	0	0	**1**
	Unknown	1	0	0	**1**
	Subtotal	**10**	**1**	**2**	**13**
Pedestrian	Bicycle	6	0	0	**6**
	Bus	0	1	0	**1**
	Car	37	3	21	**61**
	Construction Heavy Equipment	3	0	0	**3**
	Farm Equipment	1	0	0	**1**
	Motorcycle	1	0	0	**1**
	Multiple	2	0	0	**2**
	Pickup Truck	4	0	4	**8**
	School Bus	1	0	0	**1**
	Snow Plow	1	0	0	**1**
	Sport Utility Vehicle	11	0	7	**18**
	Tractor Trailer	7	1	2	**10**
	Train	5	0	2	**7**
	Truck Other	7	1	2	**10**
	Unknown	6	3	3	**12**
	Van	1	1	3	**5**
	Subtotal	**93**	**10**	**44**	**147**
Unknown	Boat	0	0	1	**1**
	Car	1	0	0	**1**
	Unknown	4	1	0	**5**
	Subtotal	**5**	**1**	**1**	**7**

Note: Of the 960 motor vehicle deaths, 24.3% (n=233) did not receive toxicology testing

Figure 4.10 Number of OCME Motor Vehicle Fatalities by Month of Death, 2018

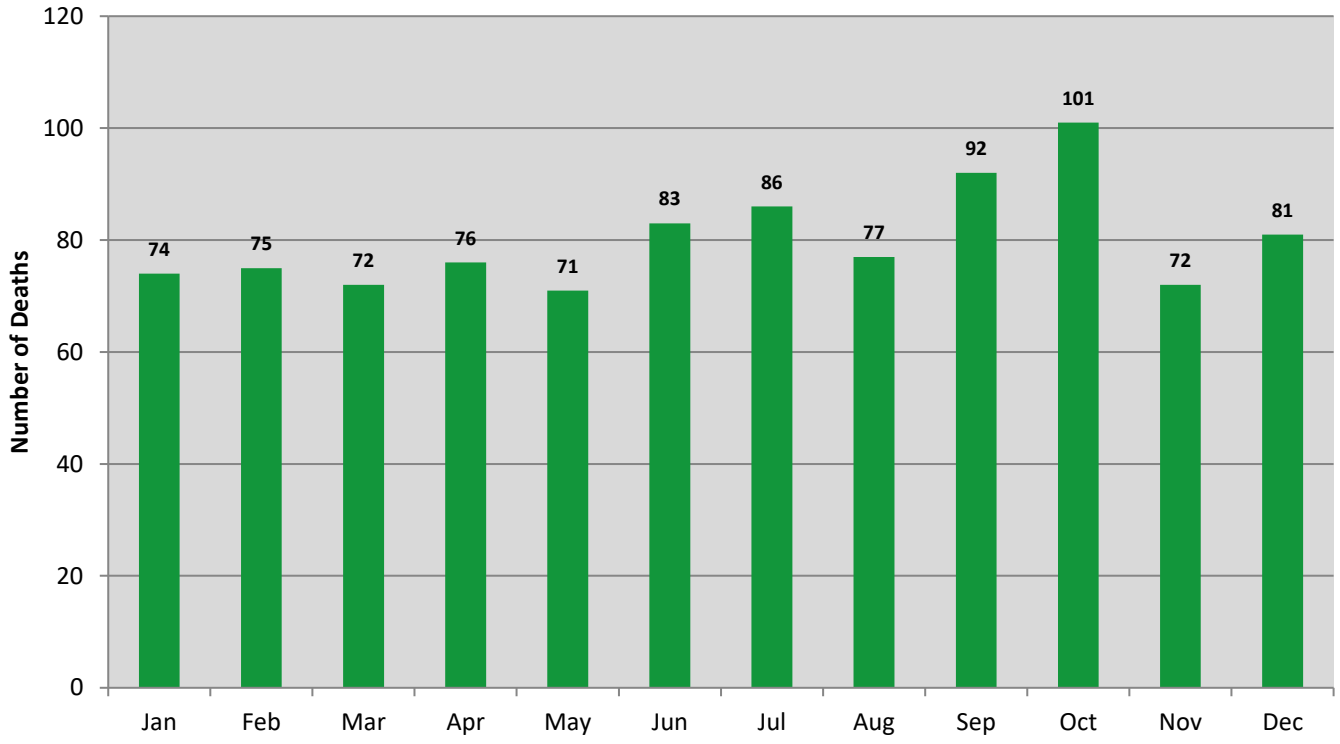


Figure 4.11 Number of OCME Motor Vehicle Fatalities by Day of Week, 2018

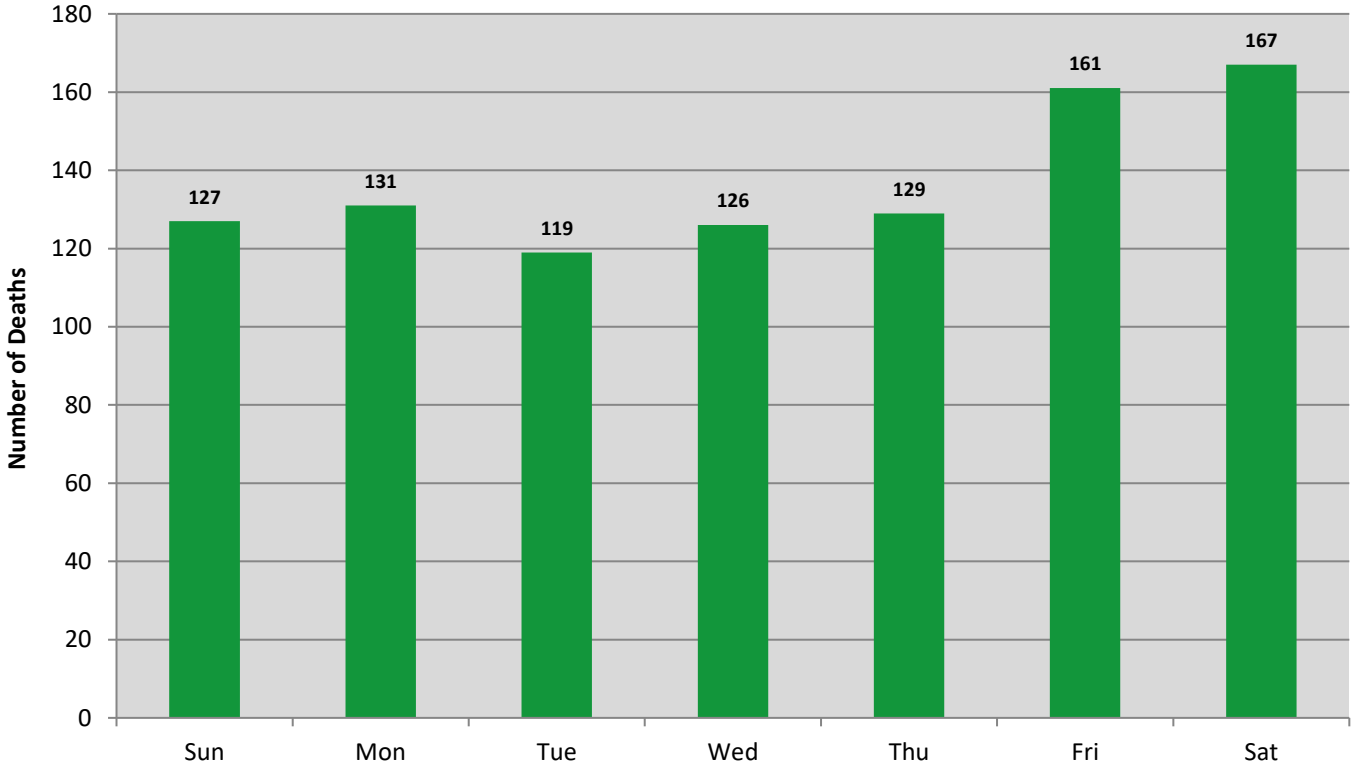


Table 4.3 Number and Rate of Motor Vehicle Deaths by Locality of Residence, 2018

Locality of Residence	Deaths	Rate
Accomack County	8	24.7
Albemarle County	5	4.6
Alexandria City	2	1.2
Alleghany County	2	13.4
Amelia County	5	38.4
Amherst County	7	22.1
Appomattox County	5	31.6
Arlington County	1	0.4
Augusta County	15	19.9
Bath County	0	0.0
Bedford County	13	16.5
Bland County	1	15.9
Botetourt County	4	12.0
Bristol City	0	0.0
Brunswick County	2	12.2
Buchanan County	2	9.4
Buckingham County	5	29.4
Buena Vista City	0	0.0
Campbell County	8	14.6
Caroline County	11	35.7
Carroll County	3	10.1
Charles City County	2	28.8
Charlotte County	5	41.9
Charlottesville City	5	10.4
Chesapeake City	25	10.3
Chesterfield County	38	10.9
Clarke County	2	13.8
Colonial Heights City	1	5.6
Covington City	1	18.3
Craig County	2	39.5
Culpeper County	10	19.3
Cumberland County	0	0.0
Danville City	10	24.6
Dickenson County	4	27.5
Dinwiddie County	1	3.5
Emporia City	0	0.0
Essex County	0	0.0
Fairfax City	4	16.3
Fairfax County	40	3.5

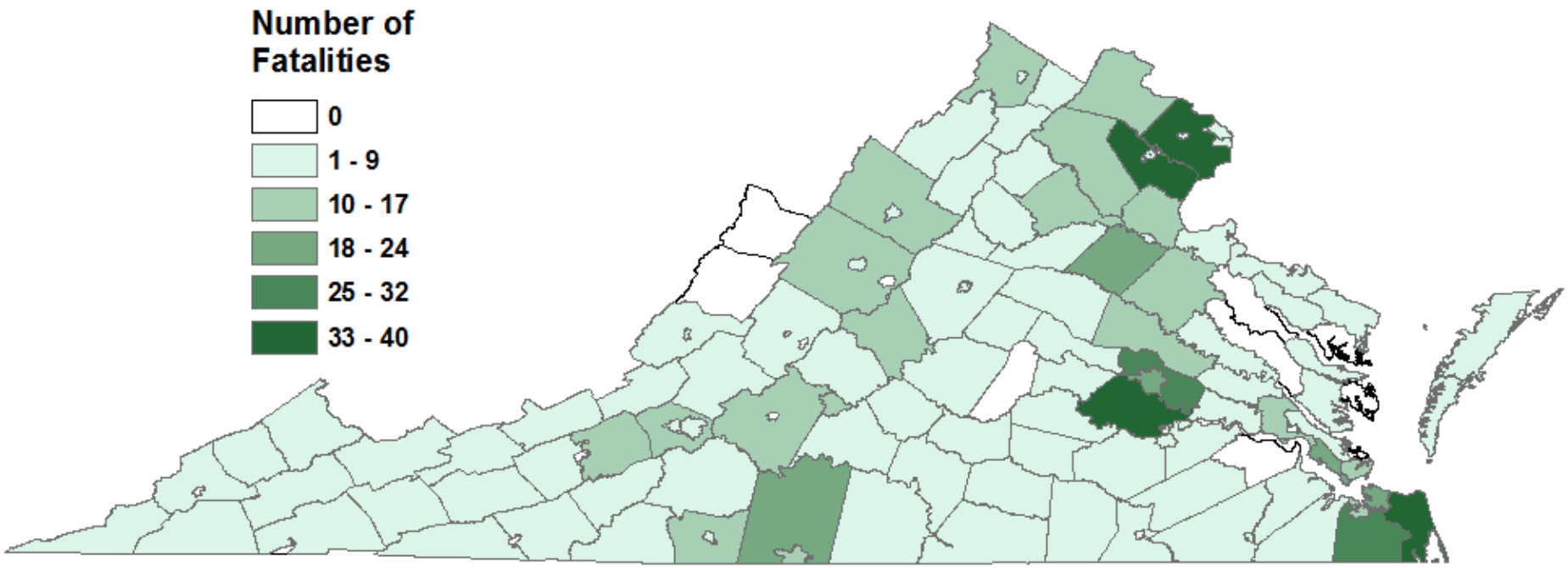
Locality of Residence	Deaths	Rate
Falls Church City	0	0.0
Fauquier County	16	22.6
Floyd County	3	19.0
Fluvanna County	6	22.4
Franklin City	2	25.0
Franklin County	4	7.1
Frederick County	13	14.7
Fredericksburg City	6	20.6
Galax City	0	0.0
Giles County	1	5.9
Gloucester County	6	16.1
Goochland County	4	17.2
Grayson County	2	12.8
Greene County	4	20.2
Greensville County	3	25.8
Halifax County	5	14.7
Hampton City	14	10.4
Hanover County	14	13.1
Harrisonburg City	2	3.7
Henrico County	28	8.5
Henry County	9	17.7
Highland County	0	0.0
Hopewell City	2	8.9
Isle of Wight County	1	2.7
James City County	9	11.8
King and Queen County	0	0.0
King George County	5	18.8
King William County	7	41.3
Lancaster County	0	0.0
Lee County	4	17.0
Lexington City	0	0.0
Loudoun County	16	3.9
Louisa County	8	21.8
Lunenburg County	2	16.5
Lynchburg City	14	17.0
Madison County	6	45.1
Manassas City	3	7.2
Manassas Park City	0	0.0
Martinsville City	4	31.0

Locality of Residence	Deaths	Rate
Mathews County	0	0.0
Mecklenburg County	6	19.6
Middlesex County	2	18.6
Montgomery County	9	9.1
Nelson County	9	60.7
New Kent County	1	4.5
Newport News City	19	10.6
Norfolk City	24	9.8
Northampton County	2	17.0
Northumberland County	1	8.2
Norton City	0	0.0
Nottoway County	1	6.5
Orange County	5	13.6
Page County	7	29.2
Patrick County	2	11.3
Petersburg City	5	15.8
Pittsylvania County	17	27.9
Poquoson City	0	0.0
Portsmouth City	10	10.6
Powhatan County	2	6.9
Prince Edward County	3	13.1
Prince George County	3	7.9
Prince William County	36	7.7
Pulaski County	8	23.5
Radford City	0	0.0
Rappahannock County	1	13.8
Richmond City	20	8.7
Richmond County	1	11.1
Roanoke City	5	5.0
Roanoke County	13	13.8
Rockbridge County	6	26.4
Rockingham County	10	12.3
Russell County	3	11.2
Salem City	2	7.8
Scott County	1	4.6
Shenandoah County	6	13.8
Smyth County	7	23.0
Southampton County	5	28.4
Spotsylvania County	19	14.2
Stafford County	12	8.0
Staunton City	3	12.0

Locality of Residence	Deaths	Rate
Suffolk City	4	4.4
Surry County	0	0.0
Sussex County	6	53.4
Tazewell County	6	14.7
Virginia Beach City	36	8.0
Warren County	3	7.5
Washington County	5	9.2
Waynesboro City	0	0.0
Westmoreland County	4	22.4
Williamsburg City	0	0.0
Winchester City	4	14.2
Wise County	4	10.5
Wythe County	3	10.4
York County	3	4.4
Subtotal (in-state)	**836**	**9.8**
Out of State	122	ND
Unknown	2	ND
Subtotal (out-of-state)	**124**	**ND**
TOTAL	**960**	**11.3**

Note: No denominator is represented by ND

Map 4.1 Number of Motor Vehicle Fatalities by Locality of Residence, 2018



Map 4.2 Rate of Motor Vehicle Fatalities by Locality of Residence, 2018

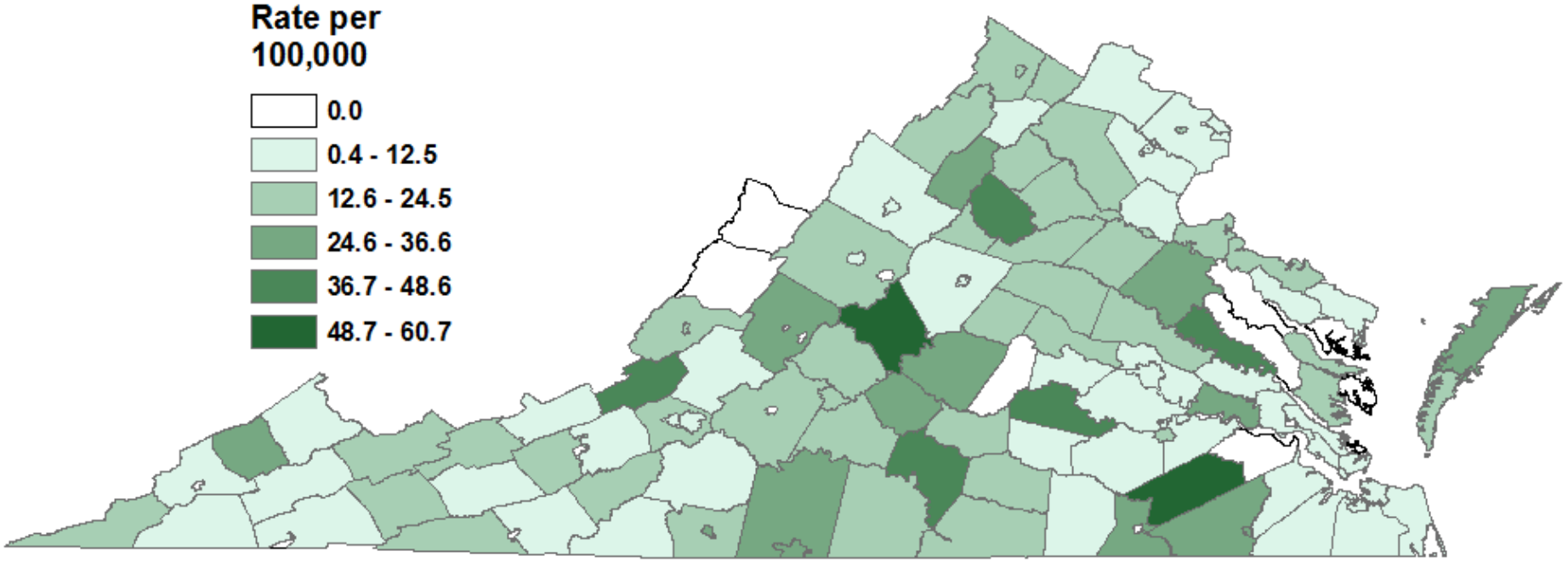


Table 4.4 Number and Rate of Motor Vehicle Deaths by Locality of Injury, 2018

Locality of Injury	Deaths	Rate
Accomack County	6	18.5
Albemarle County	13	12.0
Alexandria City	3	1.9
Alleghany County	3	20.1
Amelia County	4	30.7
Amherst County	6	18.9
Appomattox County	2	12.6
Arlington County	2	0.8
Augusta County	14	18.6
Bath County	2	46.6
Bedford County	16	20.3
Bland County	1	15.9
Botetourt County	8	24.0
Bristol City	1	6.1
Brunswick County	5	30.5
Buchanan County	3	14.1
Buckingham County	4	23.5
Buena Vista City	0	0.0
Campbell County	8	14.6
Caroline County	15	48.7
Carroll County	3	10.1
Charles City County	1	14.4
Charlotte County	2	16.8
Charlottesville City	4	8.3
Chesapeake City	24	9.9
Chesterfield County	31	8.9
Clarke County	6	41.3
Colonial Heights City	0	0.0
Covington City	0	0.0
Craig County	3	59.2
Culpeper County	12	23.1
Cumberland County	1	10.2
Danville City	4	9.8
Dickenson County	2	13.8
Dinwiddie County	6	21.0
Emporia City	1	19.5
Essex County	2	18.3
Fairfax City	2	8.1
Fairfax County	53	4.6
Falls Church City	0	0.0
Fauquier County	22	31.1
Floyd County	2	12.7
Fluvanna County	5	18.7

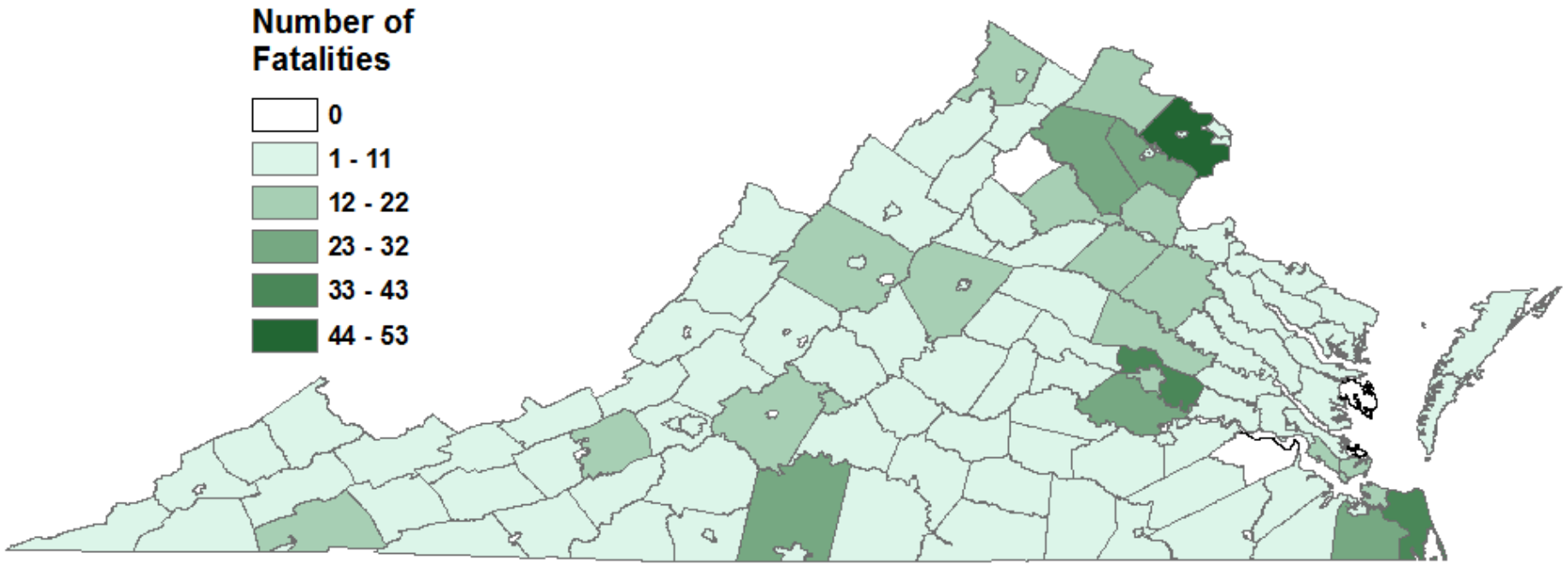
Locality of Injury	Deaths	Rate
Franklin City	0	0.0
Franklin County	10	17.8
Frederick County	14	15.8
Fredericksburg City	1	3.4
Galax City	0	0.0
Giles County	2	11.9
Gloucester County	5	13.4
Goochland County	10	43.0
Grayson County	2	12.8
Greene County	3	15.2
Greensville County	2	17.2
Halifax County	9	26.4
Hampton City	13	9.7
Hanover County	19	17.7
Harrisonburg City	3	5.6
Henrico County	33	10.0
Henry County	10	19.6
Highland County	1	45.2
Hopewell City	1	4.4
Isle of Wight County	3	8.1
James City County	4	5.2
King and Queen County	2	28.4
King George County	5	18.8
King William County	4	23.6
Lancaster County	1	9.3
Lee County	6	25.5
Lexington City	0	0.0
Loudoun County	12	2.9
Louisa County	11	29.9
Lunenburg County	1	8.3
Lynchburg City	14	17.0
Madison County	5	37.6
Manassas City	3	7.2
Manassas Park City	0	0.0
Martinsville City	2	15.5
Mathews County	0	0.0
Mecklenburg County	9	29.4
Middlesex County	2	18.6
Montgomery County	14	14.1
Nelson County	10	67.4
New Kent County	3	13.4
Newport News City	20	11.2
Norfolk City	17	7.0

Virginia Department of Health

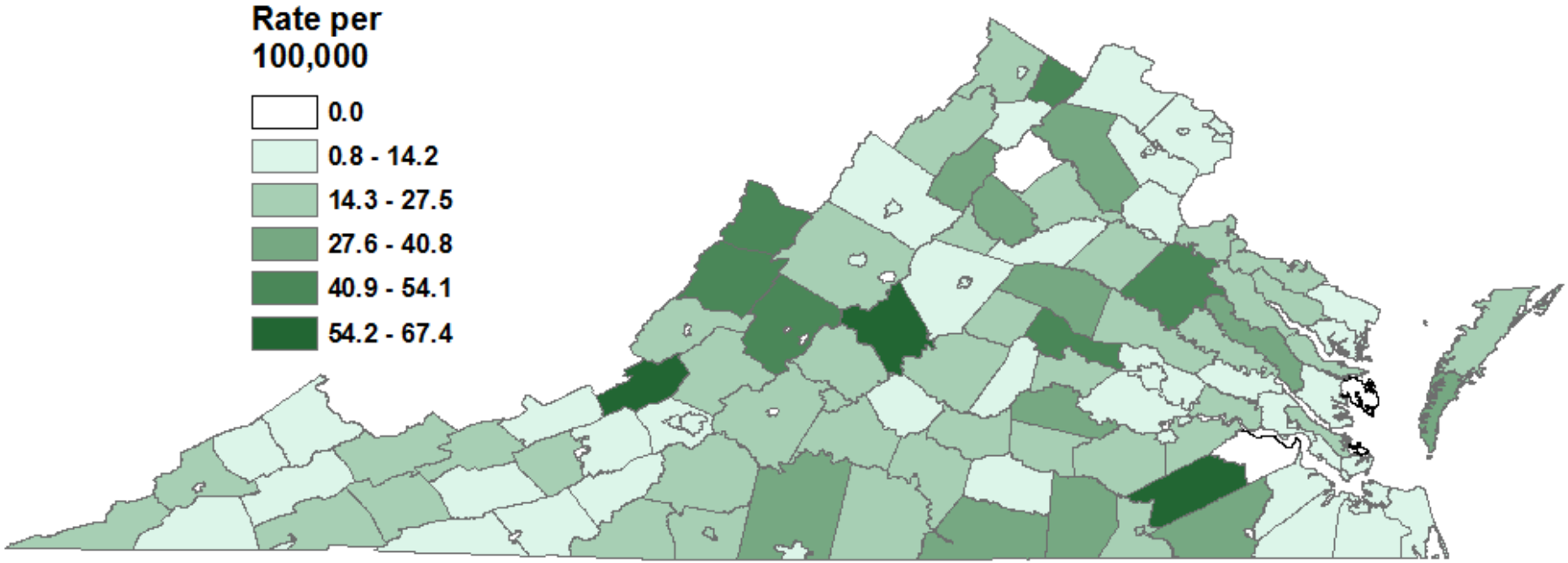
Locality of Injury	Deaths	Rate
Northampton County	4	34.1
Northumberland County	1	8.2
Norton City	0	0.0
Nottoway County	3	19.5
Orange County	5	13.6
Page County	7	29.2
Patrick County	4	22.6
Petersburg City	2	6.3
Pittsylvania County	22	36.1
Poquoson City	0	0.0
Portsmouth City	11	11.6
Powhatan County	5	17.1
Prince Edward County	4	17.4
Prince George County	6	15.8
Prince William County	27	5.8
Pulaski County	7	20.5
Radford City	0	0.0
Rappahannock County	0	0.0
Richmond City	17	7.4
Richmond County	2	22.1
Roanoke City	6	6.0
Roanoke County	7	7.4
Rockbridge County	10	44.0
Rockingham County	11	13.5
Russell County	2	7.5
Salem City	3	11.7
Scott County	3	13.9
Shenandoah County	7	16.1
Smyth County	6	19.7
Southampton County	6	34.1
Spotsylvania County	21	15.6
Stafford County	16	10.7
Staunton City	2	8.0
Suffolk City	7	7.7
Surry County	0	0.0
Sussex County	7	62.3
Tazewell County	7	17.1
Virginia Beach City	40	8.9
Warren County	3	7.5
Washington County	12	22.1
Waynesboro City	0	0.0
Westmoreland County	3	16.8
Williamsburg City	2	13.4
Winchester City	2	7.1
Wise County	6	15.8
Wythe County	3	10.4
York County	11	16.2
Subtotal (in-state)	**918**	**10.8**
Out of State	33	ND
Unknown	9	ND
Subtotal (out-of-state)	**42**	**ND**
TOTAL	**960**	**11.3**

Note: No denominator is represented by ND

Map 4.3 Number of Motor Vehicle Fatalities by Locality of Injury, 2018



Map 4.4 Rate of Motor Vehicle Fatalities by Locality of Injury, 2018



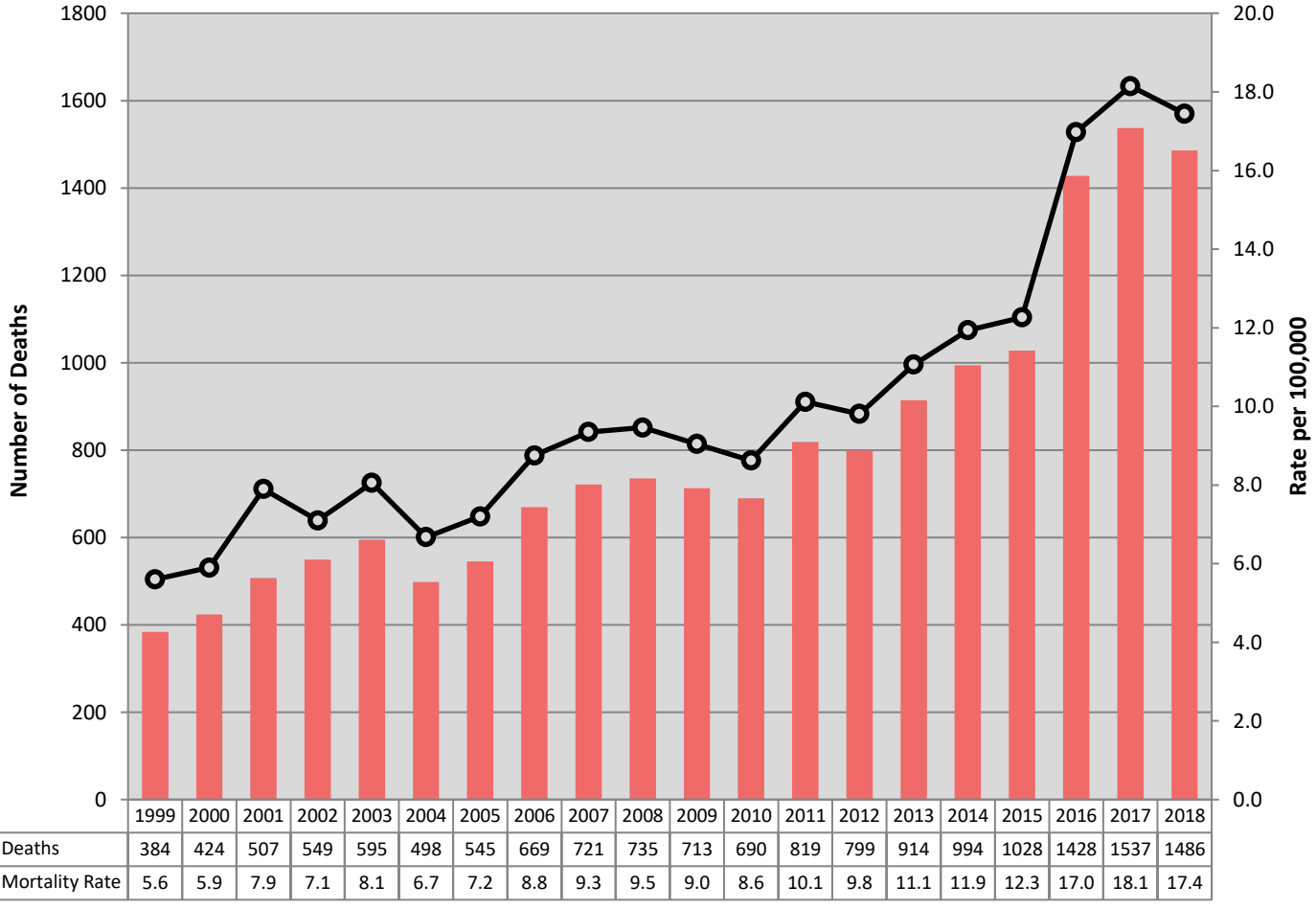
SECTION 5: DRUG/POISON DEATHS (N=1,486)

ALL DRUG/POISON DEATHS (N=1,486)

For the first time since 2012, the number of drug/poisoning deaths decreased (3.3%) in 2018 when compared to 2017.

- The 2018 rate of drug/poison deaths that occurred in Virginia was 17.4 per 100,000 persons
- The majority were accidents (89.7%), male (68.7%), Whites (75.4%), and 25-34 year olds (26.6%)
- 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, 1999-2018



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Deaths	384	424	507	549	595	498	545	669	721	735	713	690	819	799	914	994	1028	1428	1537	1486
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	18.1	17.4

Table 5.1 Number and Percentage of Fatal Drug/Poison Overdoses by OCME District, 2018

OCME District	Number	Percentage
Central	517	34.8%
Northern	344	23.1%
Tidewater	321	21.6%
Western	304	20.5%
TOTAL	1486	100.0%

Figure 5.2 Percentage of Fatal Drug/Poison Overdoses by Manner of Death, 2018

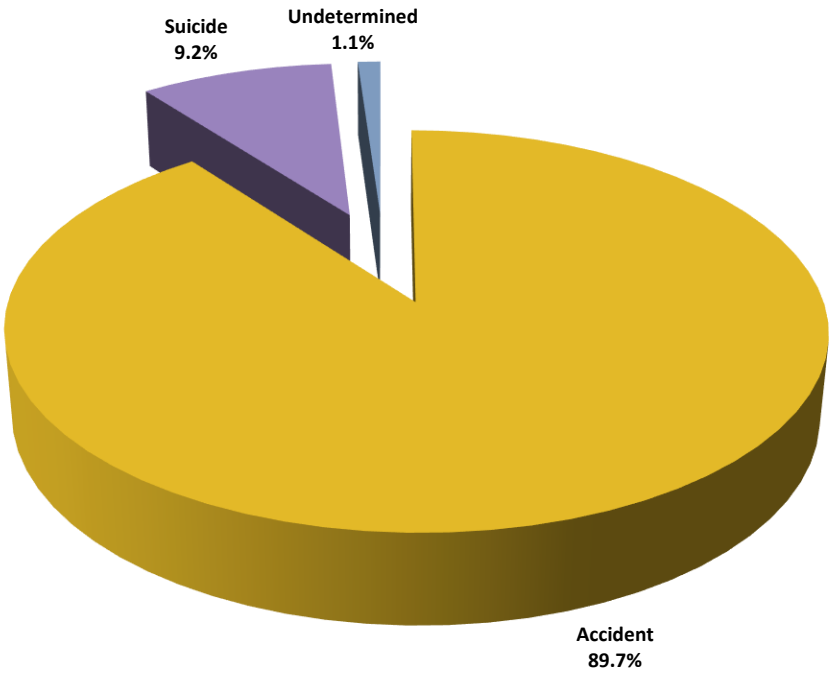
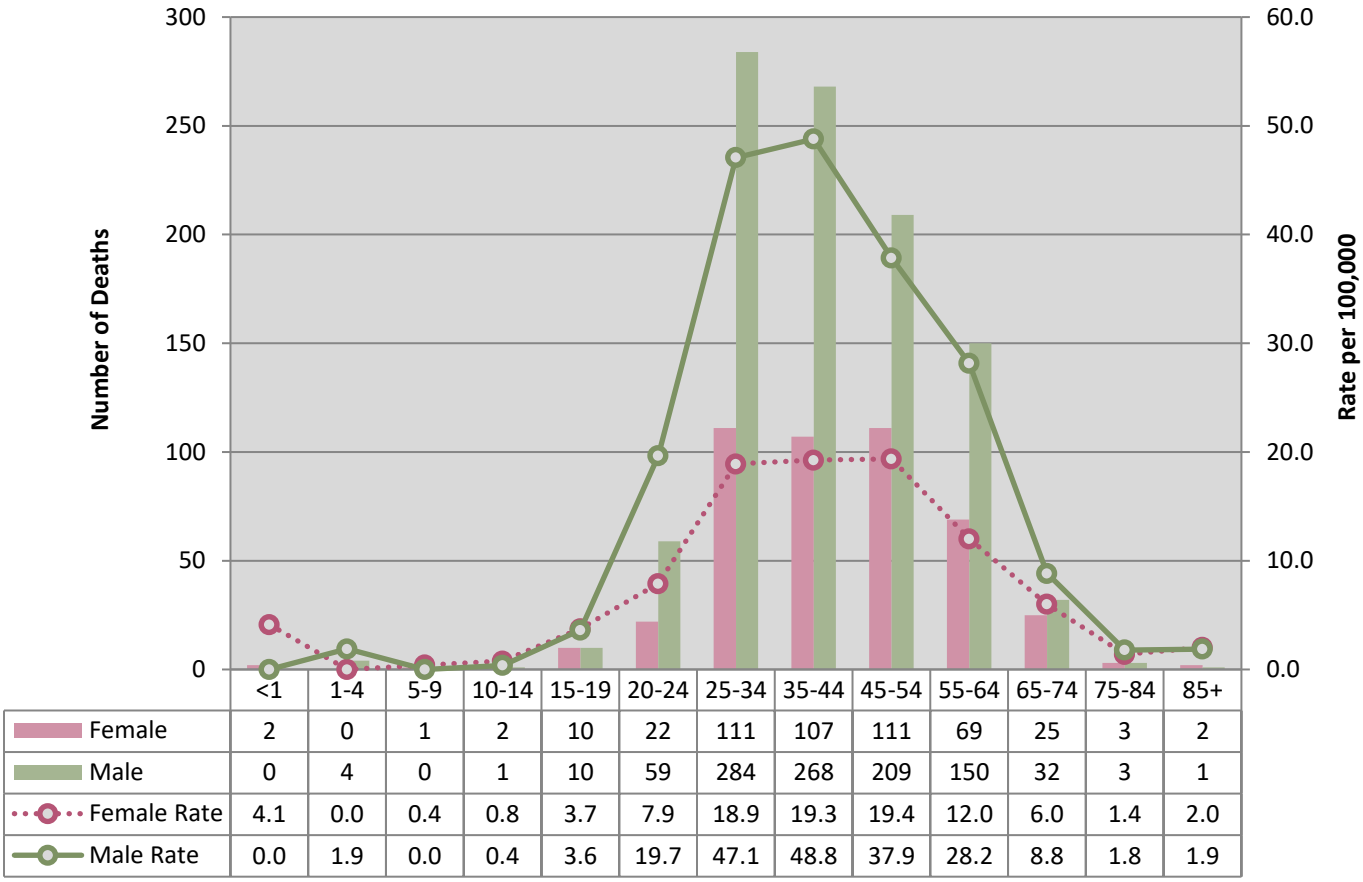


Figure 5.3 Number and Rate of Fatal Drug/Poison Overdoses by Age Group and Gender, 2018



	<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	0	1	2	10	22	111	107	111	69	25	3	2
Male	0	4	0	1	10	59	284	268	209	150	32	3	1
Female Rate	4.1	0.0	0.4	0.8	3.7	7.9	18.9	19.3	19.4	12.0	6.0	1.4	2.0
Male Rate	0.0	1.9	0.0	0.4	3.6	19.7	47.1	48.8	37.9	28.2	8.8	1.8	1.9

Table 5.2 Number of Fatal Drug/Poison Overdoses by Age Group and Manner of Death, 2018

Age Group (years)	Accident	Suicide	Undetermined	Total
<1	1	0	1	2
1-4	1	0	3	4
5-9	1	0	0	1
10-14	1	2	0	3
15-19	18	1	1	20
20-24	76	3	2	81
25-34	376	16	3	395
35-44	351	24	0	375
45-54	279	38	3	320
55-64	183	34	2	219
65-74	45	11	1	57
75-84	1	5	0	6
85+	0	3	0	3
Total	**1333**	**137**	**16**	**1486**

Figure 5.4 Percentage of Fatal Drug/Poison Overdoses by Race/Ethnicity, 2018

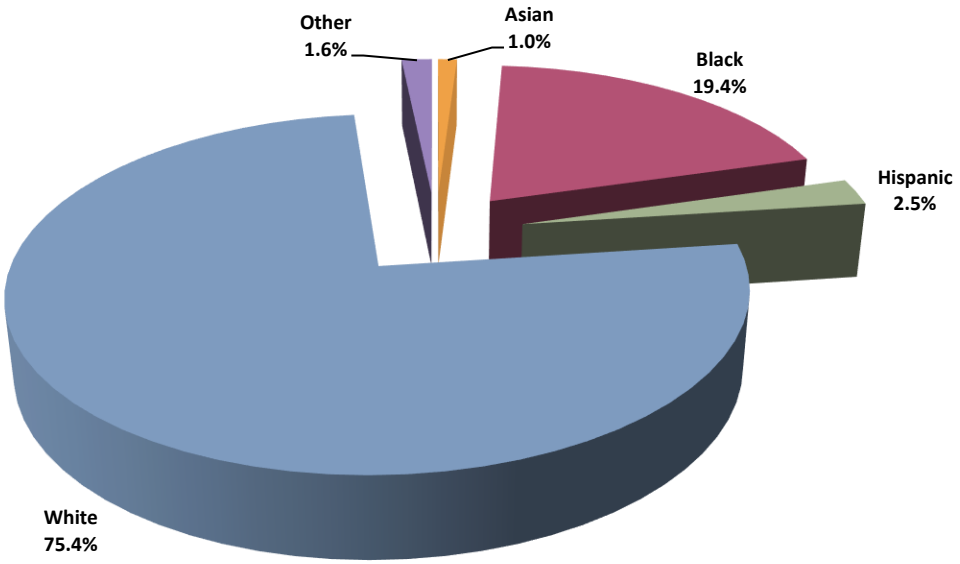
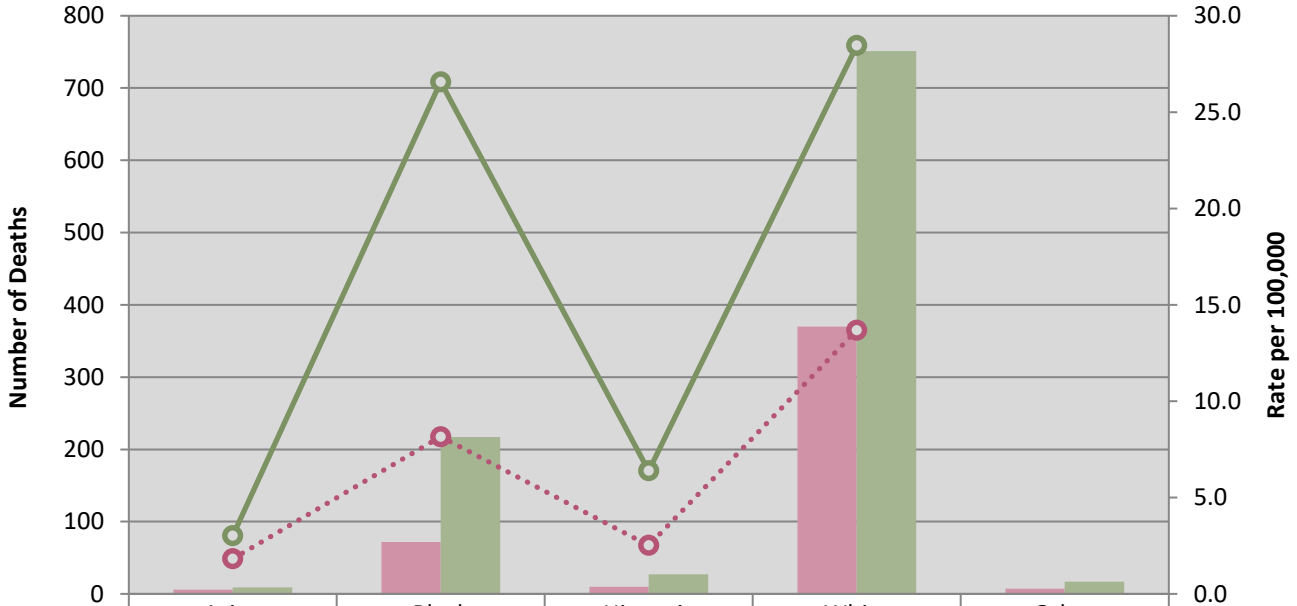


Figure 5.5 Number and Rate of Fatal Drug/Poison Overdoses by Race/Ethnicity and Gender, 2018



	Asian	Black	Hispanic	White	Other
Female	6	72	10	370	7
Male	9	217	27	751	17
Female Rate	1.8	8.2	2.5	13.7	*
Male Rate	3.0	26.6	6.4	28.5	*

*No rate can be calculated

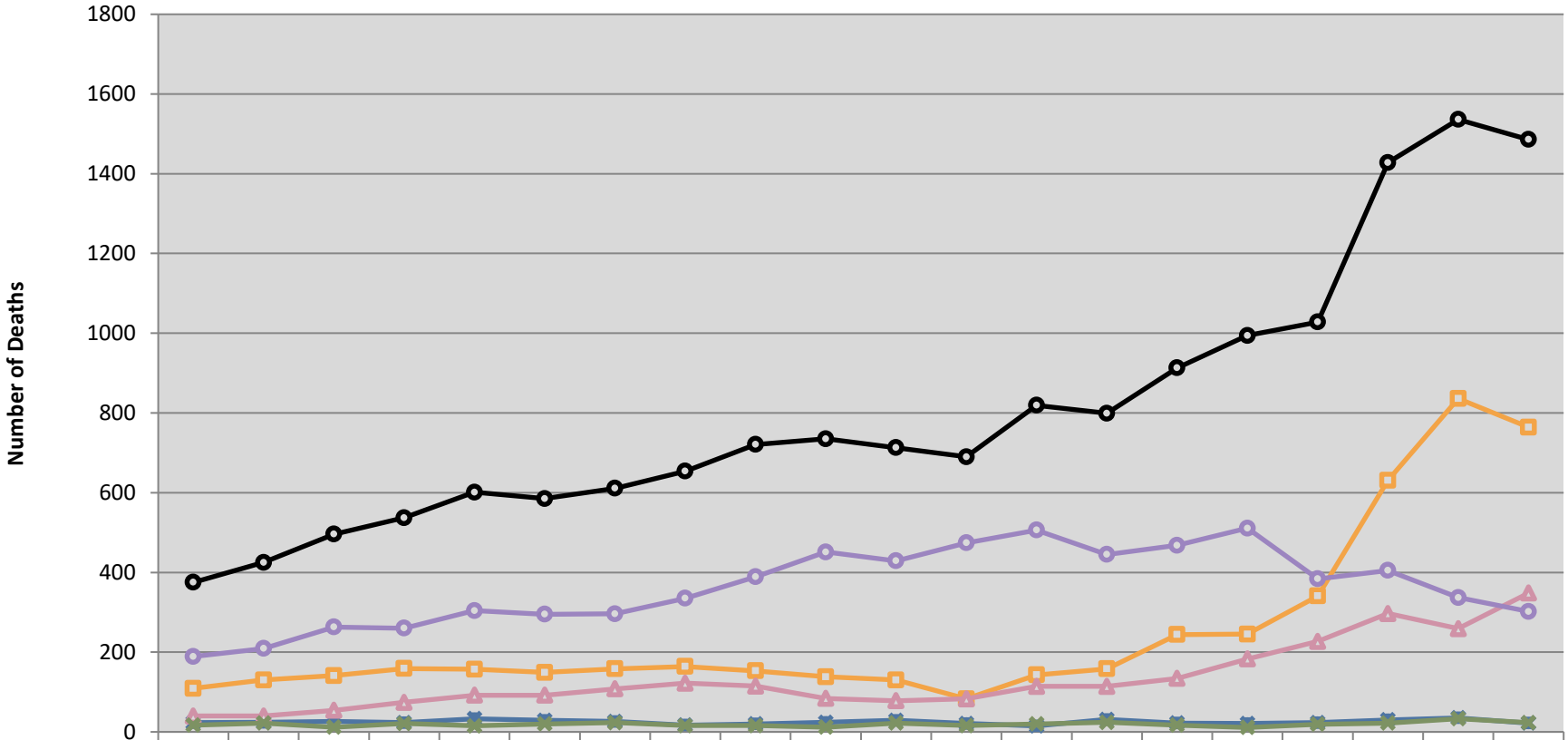
Table 5.3 Number of Fatal Drug/Poison Overdoses by OCME District and Cause of Death, 2018

Cause of Death	Central	Northern	Tidewater	Western	Total
Illegal (street) drug poisoning	284	188	154	138	**764**
Mixed drug category	130	94	76	48	**348**
Prescription drug poisoning	76	42	75	109	**302**
Over the counter drug poisoning	7	6	6	4	**23**
Ethanol poisoning	11	7	2	2	**22**
Inhalant poisoning	4	5	1	2	**12**
Drug type not specified	1	2	6	0	**9**
Other poisons (heavy metals, etc.)	3	0	0	1	**4**
Ethylene glycol poisoning	1	0	1	0	**2**
Total	**517**	**344**	**321**	**304**	**1486**

Table 5.4 Number of Fatal Drug/Poison Overdoses Manner and Cause of Death, 2018

Cause of Death	Accident	Suicide	Undetermined	Total
Illegal (street) drug poisoning	759	1	4	**764**
Mixed drug category	319	26	3	**348**
Prescription drug poisoning	205	90	7	**302**
Over the counter drug poisoning	10	12	1	**23**
Ethanol poisoning	22	0	0	**22**
Inhalant poisoning	12	0	0	**12**
Drug type not specified	5	3	1	**9**
Other poisons (heavy metals, etc.)	1	3	0	**4**
Ethylene glycol poisoning	0	2	0	**2**
Total	**1333**	**137**	**16**	**1486**

Figure 5.6 Number of Fatal Drug/Poison Overdoses by Drug Category and Year of Death, 1999-2018



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Ethanol	23	24	26	23	33	29	26	17	20	24	29	21	15	31	22	21	23	30	35	22
Illegal	109	130	141	159	157	149	158	164	153	138	130	83	143	158	244	245	341	631	836	764
Mixed	40	40	54	74	92	92	108	122	115	84	78	83	114	114	134	183	227	297	259	348
OTC	17	22	12	21	15	20	23	16	16	12	22	16	20	24	17	11	19	22	33	23
Prescription	189	209	263	260	304	295	296	335	389	451	429	474	506	445	468	511	384	405	337	302
All Drug Deaths	375	425	496	537	601	585	611	654	721	735	713	690	819	799	913	994	1028	1428	1536	1486

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, 2018

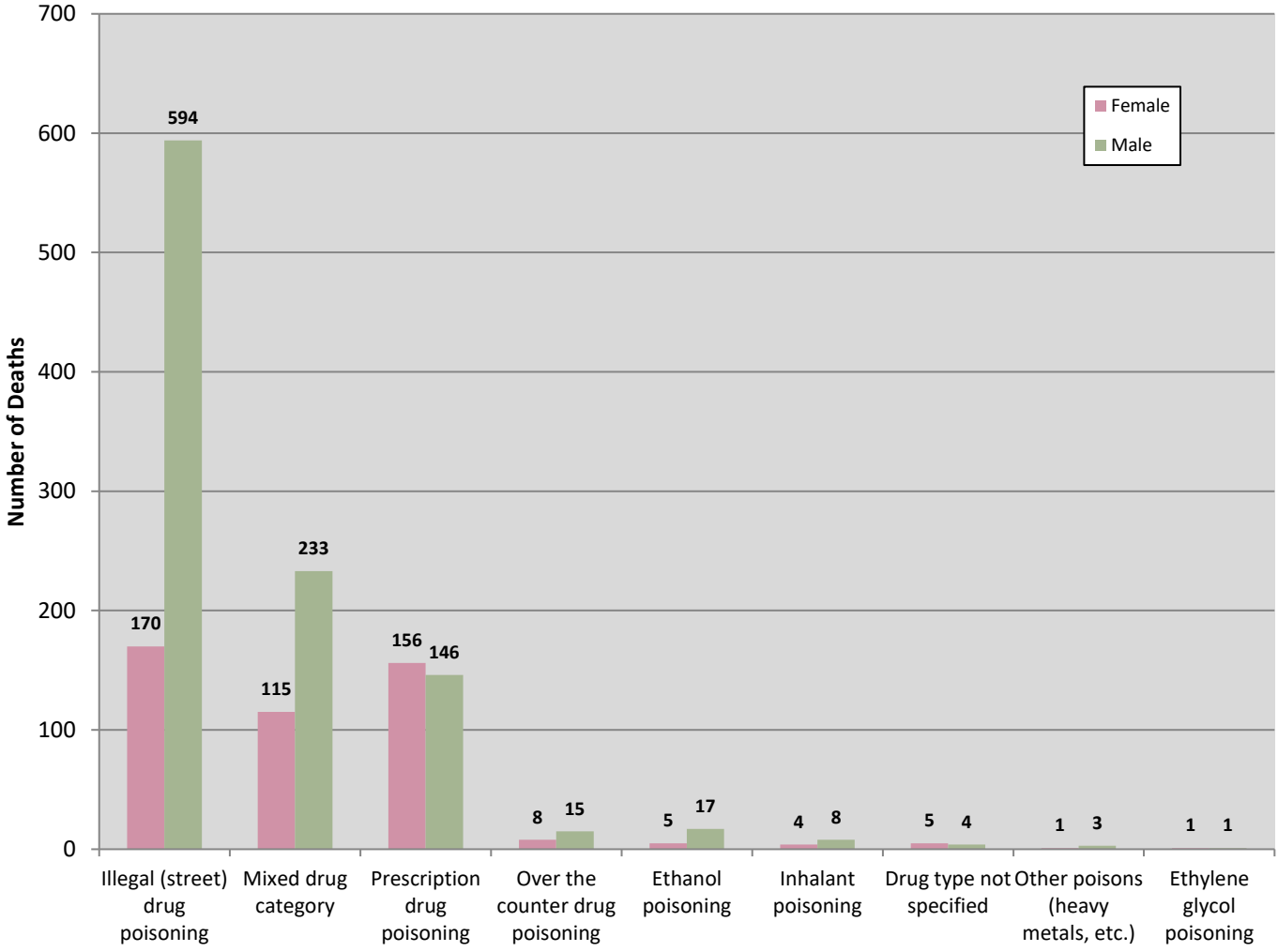
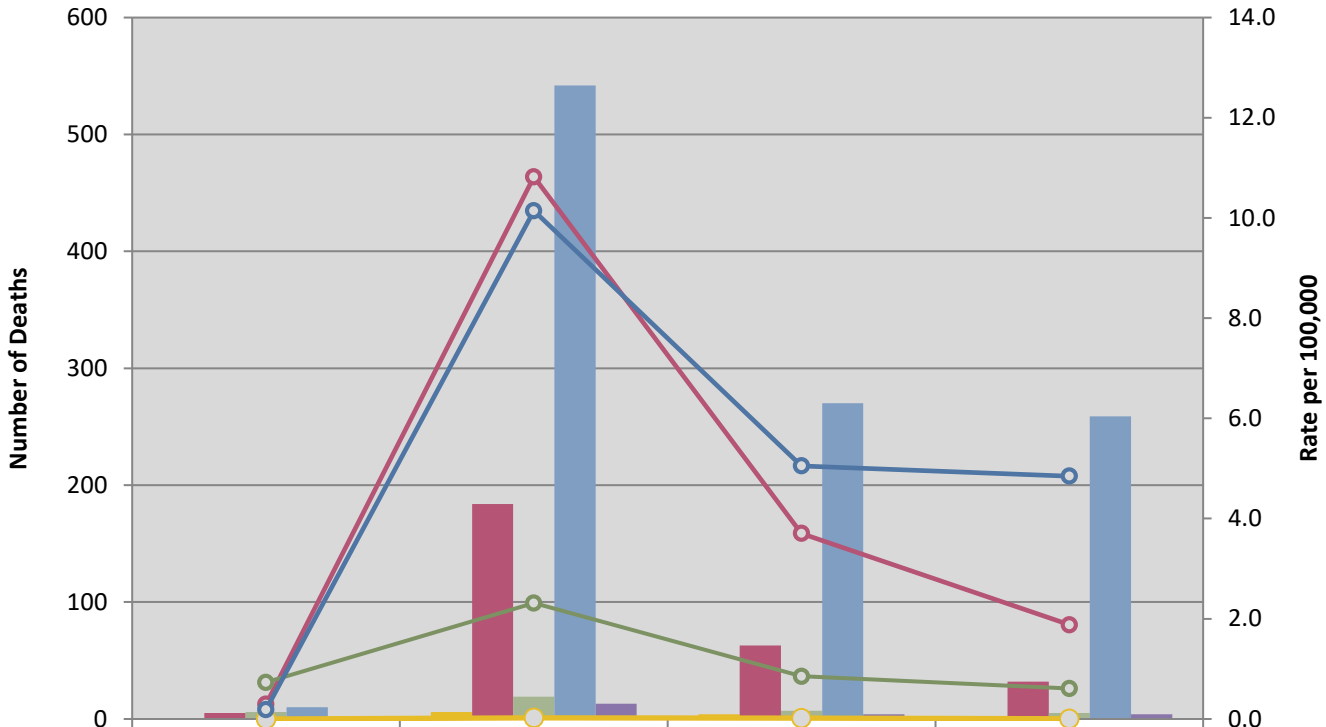
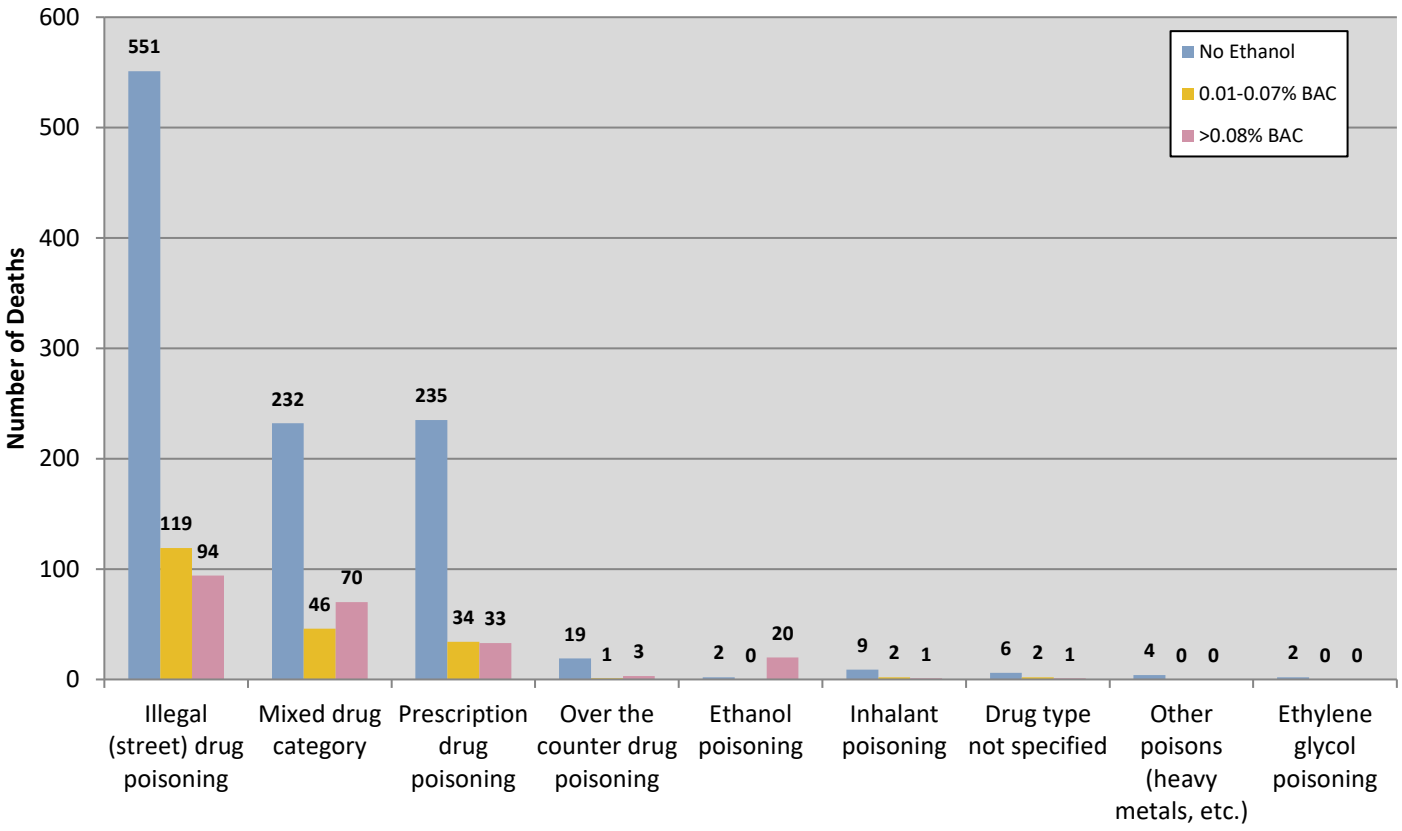


Figure 5.8 Number and Rate of Fatal Drug/Poison Overdoses by Drug Category and Race/Ethnicity, 2018



	Ethanol Poisoning	Illegal Drug Poisoning	Mixed Drug Category Poisoning	Prescription Drug Poisoning
Asian	0	6	4	2
Black	5	184	63	32
Hispanic	6	19	7	5
White	10	542	270	259
Other	1	13	4	4
Asian Rate	0.0	1.0	0.6	0.3
Black Rate	0.3	10.8	3.7	1.9
Hispanic Rate	0.7	2.3	0.9	0.6
White Rate	0.2	10.1	5.1	4.8

Figure 5.9 Number of Fatal Drug/Poison Overdoses by Drug Category and Ethanol Level, 2018



Note: 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, 2018

Cause of Death	Caused Death	Contributed to Death	Did Not Cause Death	Total
Illegal (street) drug poisoning	83	41	640	764
Mixed drug category	68	11	269	348
Prescription drug poisoning	33	10	259	302
Over the counter drug poisoning	2	0	21	23
Ethanol poisoning	22	0	0	22
Inhalant poisoning	0	2	10	12
Drug type not specified	0	1	8	9
Other poisons (heavy metals, etc.)	0	0	4	4
Ethylene glycol poisoning	0	0	2	2
Total	**208**	**65**	**1213**	**1486**

Figure 5.10 Number of Fatal Drug/Poison Overdoses by Drug/Poison/Metabolites Detected, 2018

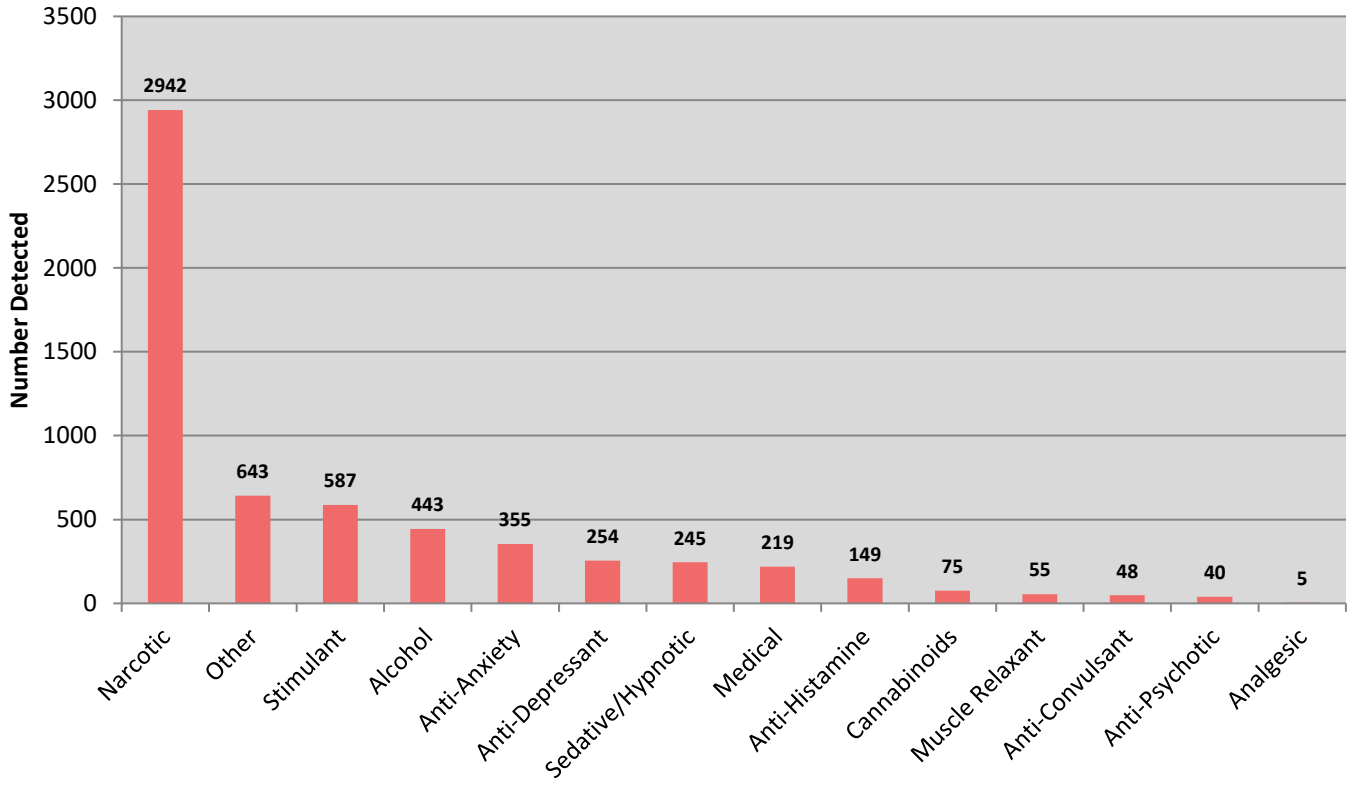


Table 5.6 Number and Percentage of Fatal Drug/Poison Overdoses by Drug/Poison/Metabolite Detected, 2018

Class	Drug/Poison/Active Metabolite	Number Detected	Percentage of Cases
Alcohol			**7.3%**
	Acetone	7	0.1%
	Ethanol	428	7.1%
	Isopropanol	5	0.1%
	Methanol	3	0.0%
Analgesic			**0.1%**
	Acetaminophen	5	0.1%
Anti-Anxiety			**5.9%**
	Alprazolam	181	3.0%
	Diazepam	76	1.3%
	Etizolam	3	0.0%
	Flubromazepam	1	0.0%
	Meprobamate	4	0.1%
	Nordiazepam (Diazepam Metabolite)	90	1.5%
Anti-Convulsant			**0.8%**
	Carbamazepine	7	0.1%

Lacosamide	3	0.0%
Lamotrigine	13	0.2%
Levetiracetam	10	0.2%
Oxcarbazepine	2	0.0%
Phenytoin	1	0.0%
Topiramate	11	0.2%
Zonisamide	1	0.0%
Anti-Depressant		**4.2%**
Amitriptyline	43	0.7%
Bupropion	34	0.6%
Citalopram	34	0.6%
Clomipramine	1	0.0%
Desipramine	1	0.0%
Doxepin	10	0.2%
Fluoxetine	36	0.6%
Fluvoxamine	1	0.0%
Imipramine	1	0.0%
Mirtazapine	11	0.2%
Nortriptyline	42	0.7%
Paroxetine	12	0.2%
Sertraline	20	0.3%
Venlafaxine	8	0.1%
Anti-Histamine		**2.5%**
Chlorpheniramine	3	0.0%
Diphenhydramine	111	1.8%
Doxylamine	11	0.2%
Hyrdoxyzine	7	0.1%
Meclizine	1	0.0%
Promethazine	16	0.3%
Anti-Psychotic		**0.7%**
Clozapine	1	0.0%
Haloperidol	1	0.0%
Olanzapine	8	0.1%
Quetiapine	30	0.5%
Cannabinoids		**1.2%**
Tetrahydrocannabinol Carboxylic Acid (THC)-various compounds	75	1.2%
Medical		**3.6%**
Amlodipine	1	0.0%
Benztropine	3	0.0%
Bupivacaine	1	0.0%
Butalbital	6	0.1%
Dextromethorphan	35	0.6%

Dicyclomine	5	0.1%
Diltiazem	5	0.1%
Ephedrine/Pseudoephedrine	7	0.1%
Etomidate	1	0.0%
Furisemide	2	0.0%
Gabapentin	106	1.7%
Lebetalol	1	0.0%
Levamisole/Tetramisole	4	0.1%
Loperamide	9	0.1%
Metformin	4	0.1%
Metoclopramide	2	0.0%
Metoprolol	6	0.1%
Naloxone	11	0.2%
Phentermine	4	0.1%
Pregabalin	2	0.0%
Propranolol	2	0.0%
Verapamil	2	0.0%
Muscle Relaxant		**0.9%**
Carisoprodol	3	0.0%
Cyclobenzaprine	47	0.8%
Metaxalone	1	0.0%
Methocarbamol	1	0.0%
Orphenadrine	1	0.0%
Tizanidine	2	0.0%
Narcotic		**48.5%**
3-Methyl Fentanyl	2	0.0%
6-Acetylmorphine (Heroin Metabolite)	467	7.7%
Acetyl Fentanyl	139	2.3%
Buprenorphine	57	0.9%
Butyryl Fentanyl	2	0.0%
Carfentanil	6	0.1%
Codeine	11	0.2%
Cyclopropyl Fentanyl	15	0.2%
Despropiony Fentanyl	159	2.6%
Fentanyl	747	12.3%
Hydrocodone	76	1.3%
Hydromorphone	124	2.0%
Methadone	103	1.7%
Methoxyacetyl Fentanyl	4	0.1%
Morphine	599	9.9%
Norbuprenorphine (Buprenorphine Metabolite)	58	1.0%
Oxycocone	148	2.4%
Oxymorphone	117	1.9%

Para/Meta-Fluoroisobutyryl Fentanyl	39	0.6%
Phenylfentanyl	1	0.0%
Tapentadol	1	0.0%
Tramadol	63	1.0%
Valeryfentanyl	4	0.1%
Other		**10.6%**
5F-ADB	1	0.0%
ADB-FUBINACA	1	0.0%
Benzoylecgonine (Cocainel Metabolite)	457	7.5%
Carboxyhemoglobin	3	0.0%
Chloroethane	1	0.0%
Cocaethylene (Cocaine and Ethanol Metabolite)	131	2.2%
Continine	1	0.0%
Difluoroethane	11	0.2%
Ethylene Glycol	4	0.1%
Ketamine	5	0.1%
Lidocaine	13	0.2%
Mitragynine	4	0.1%
Phencyclidine	10	0.2%
Yohimbine	1	0.0%
Sedative/Hypnotic		**4.0%**
Chlordiazepoxide	3	0.0%
Clonazepam	90	1.5%
Midazolam	16	0.3%
Oxazepam	29	0.5%
Pentobarbital	1	0.0%
Phenobarbital	1	0.0%
Temazepam	36	0.6%
Trazodone	38	0.6%
Zolpidem	27	0.4%
Zopiclone	4	0.1%
Stimulant		**9.7%**
Amphetamine	119	2.0%
Caffeine	3	0.0%
Cocaine	340	5.6%
Ethylpentylone	1	0.0%
MDMA/MDA/MDFA (Mixed Compounds)	4	0.1%
Methamphetamine	113	1.9%
Methylphenidate	1	0.0%
N-Ethyl Pentylone	6	0.1%
TOTAL DRUG/POISON/ACTIVE METABOLITES DETECTED	**6060**	**100.0%**

Figure 5.11 Number of Fatal Drug/Poison Overdoses by Class of Drug/Poison/Metabolite Detected that Caused or Contributed to Death, 2018

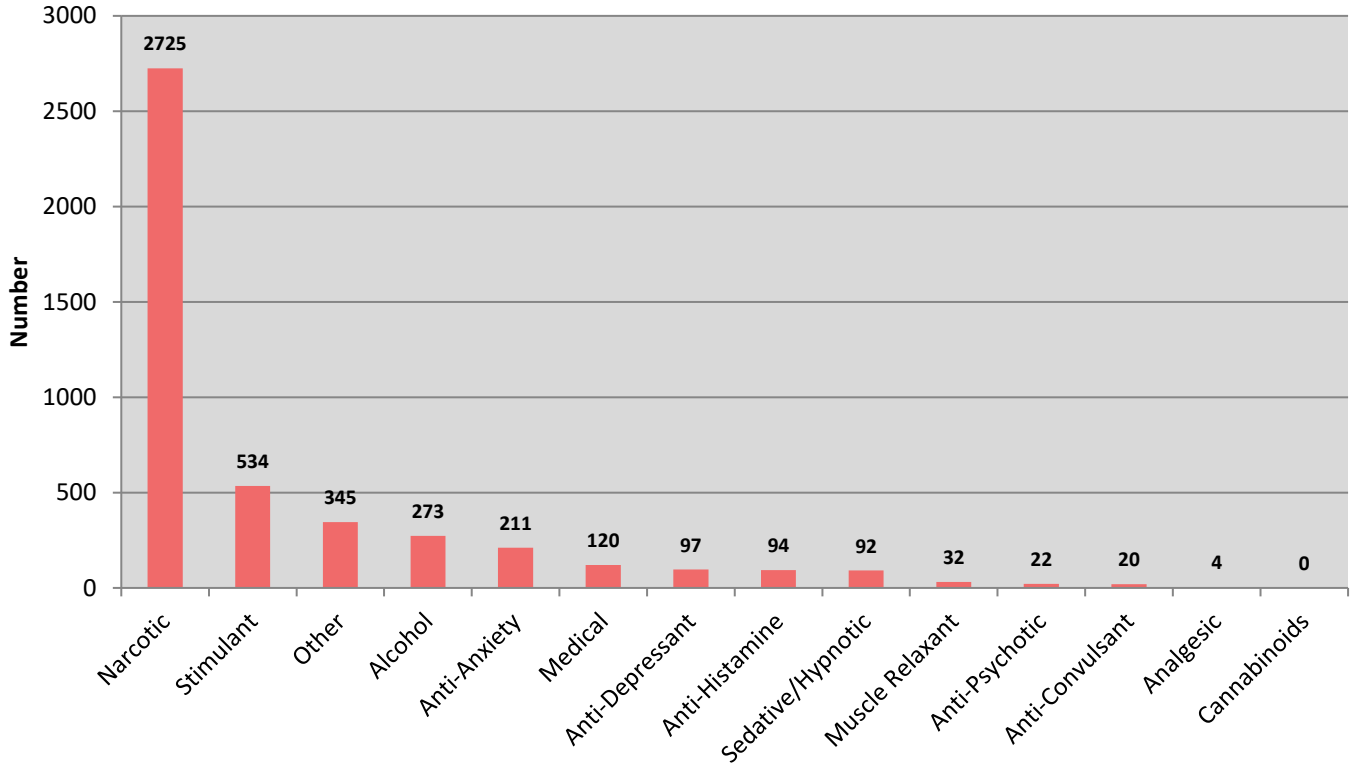


Table 5.7 Number of Fatal Drug/Poison Deaths by Drug/Poison/Metabolites Detected that Caused or Contributed to Death, 2018

Class	Drug/Poison/Active Metabolite	Number Detected	Percentage of Cases
Alcohol			**6.0%**
	Acetone	0	0.0%
	Ethanol	273	6.0%
	Isopropanol	0	0.0%
	Methanol	0	0.0%
Analgesic			**0.1%**
	Acetaminophen	4	0.1%
Anti-Anxiety			**4.6%**
	Alprazolam	122	2.7%
	Diazepam	46	1.0%
	Etizolam	2	0.0%
	Flubromazepam	1	0.0%
	Meprobamate	2	0.0%
	Nordiazepam (Diazepam Metabolite)	38	0.8%

Anti-Convulsant		**0.4%**
Carbamazepine	0	0.0%
Lacosamide	2	0.0%
Lamotrigine	6	0.1%
Levetiracetam	2	0.0%
Oxcarbazepine	2	0.0%
Phenytoin	0	0.0%
Topiramate	8	0.2%
Zonisamide	0	0.0%
Anti-Depressant		**2.1%**
Amitriptyline	21	0.5%
Bupropion	18	0.4%
Citalopram	12	0.3%
Clomipramine	1	0.0%
Desipramine	0	0.0%
Doxepin	6	0.1%
Fluoxetine	18	0.4%
Fluvoxamine	1	0.0%
Imipramine	0	0.0%
Mirtazapine	2	0.0%
Nortriptyline	0	0.0%
Paroxetine	8	0.2%
Sertraline	6	0.1%
Venlafaxine	4	0.1%
Anti-Histamine		**2.1%**
Chlorpheniramine	1	0.0%
Diphenhydramine	74	1.6%
Doxylamine	9	0.2%
Hyrdoxyzine	5	0.1%
Meclizine	1	0.0%
Promethazine	4	0.1%
Anti-Psychotic		**0.5%**
Clozapine	0	0.0%
Haloperidol	0	0.0%
Olanzapine	3	0.1%
Quetiapine	19	0.4%
Cannabinoids		**0.0%**
Tetrahydrocannabinol Carboxylic Acid (THC)-various compounds	0	0.0%
Medical		**2.6%**
Amlodipine	1	0.0%
Benztropine	1	0.0%
Bupivacaine	0	0.0%

Butalbital	2	0.0%
Dextromethorphan	13	0.3%
Dicyclomine	1	0.0%
Diltiazem	2	0.0%
Ephedrine/Pseudoephedrine	5	0.1%
Etomidate	0	0.0%
Furisemide	2	0.0%
Gabapentin	70	1.5%
Lebetalol	1	0.0%
Levamisole/Tetramisole	0	0.0%
Loperamide	7	0.2%
Metformin	2	0.0%
Metoclopramide	0	0.0%
Metoprolol	6	0.1%
Naloxone	0	0.0%
Phentermine	2	0.0%
Pregabalin	1	0.0%
Propranolol	2	0.0%
Verapamil	2	0.0%
Muscle Relaxant		**0.7%**
Carisoprodol	3	0.1%
Cyclobenzaprine	25	0.5%
Metaxalone	1	0.0%
Methocarbamol	1	0.0%
Orphenadrine	0	0.0%
Tizanidine	2	0.0%
Narcotic		**59.6%**
3-Methyl Fentanyl	2	0.0%
6-Acetylmorphine (Heroin Metabolite)	443	9.7%
Acetyl Fentanyl	136	3.0%
Buprenorphine	46	1.0%
Butyryl Fentanyl	2	0.0%
Carfentanil	6	0.1%
Codeine	96	2.1%
Cyclopropyl Fentanyl	15	0.3%
Despropiony Fentanyl	157	3.4%
Fentanyl	731	16.0%
Hydrocodone	53	1.2%
Hydromorphone	65	1.4%
Methadone	92	2.0%
Methoxyacetyl Fentanyl	4	0.1%
Morphine	576	12.6%
Norbuprenorphine (Buprenorphine Metabolite)	31	0.7%

Oxycocone	113	2.5%
Oxymorphone	78	1.7%
Para/Meta-Fluoroisobutyryl Fentanyl	37	0.8%
Phenylfentanyl	1	0.0%
Tapentadol	1	0.0%
Tramadol	37	0.8%
Valeryfentanyl	3	0.1%
Other		**7.6%**
5F-ADB	1	0.0%
ADB-FUBINACA	1	0.0%
Benzoylecgonine (Cocainel Metabolite)	193	4.2%
Carboxyhemoglobin	0	0.0%
Chloroethane	1	0.0%
Cocaethylene (Cocaine and Ethanol Metabolite)	116	2.5%
Continine	0	0.0%
Difluoroethane	11	0.2%
Ethylene Glycol	4	0.1%
Ketamine	4	0.1%
Lidocaine	1	0.0%
Mitragynine	4	0.1%
Phencyclidine	9	0.2%
Yohimbine	0	0.0%
Sedative/Hypnotic		**2.0%**
Chlordiazepoxide	2	0.0%
Clonazepam	15	0.3%
Midazolam	0	0.0%
Oxazepam	14	0.3%
Pentobarbital	1	0.0%
Phenobarbital	3	0.1%
Temazepam	20	0.4%
Trazodone	19	0.4%
Zolpidem	17	0.4%
Zopiclone	1	0.0%
Stimulant		**11.7%**
Amphetamine	89	1.9%
Caffeine	0	0.0%
Cocaine	324	7.1%
Ethylpentylone	1	0.0%
MDMA/MDA/MDFA (Mixed Compounds)	3	0.1%
Methamphetamine	110	2.4%
Methylphenidate	1	0.0%
N-Ethyl Pentylone	6	0.1%
TOTAL DRUG/POISON/ACTIVE METABOLITES DETECTED	**4569**	**100.0%**

Table 5.8 Number and Rate of Fatal Drug/Poison Overdoses by Locality of Residence, 2018

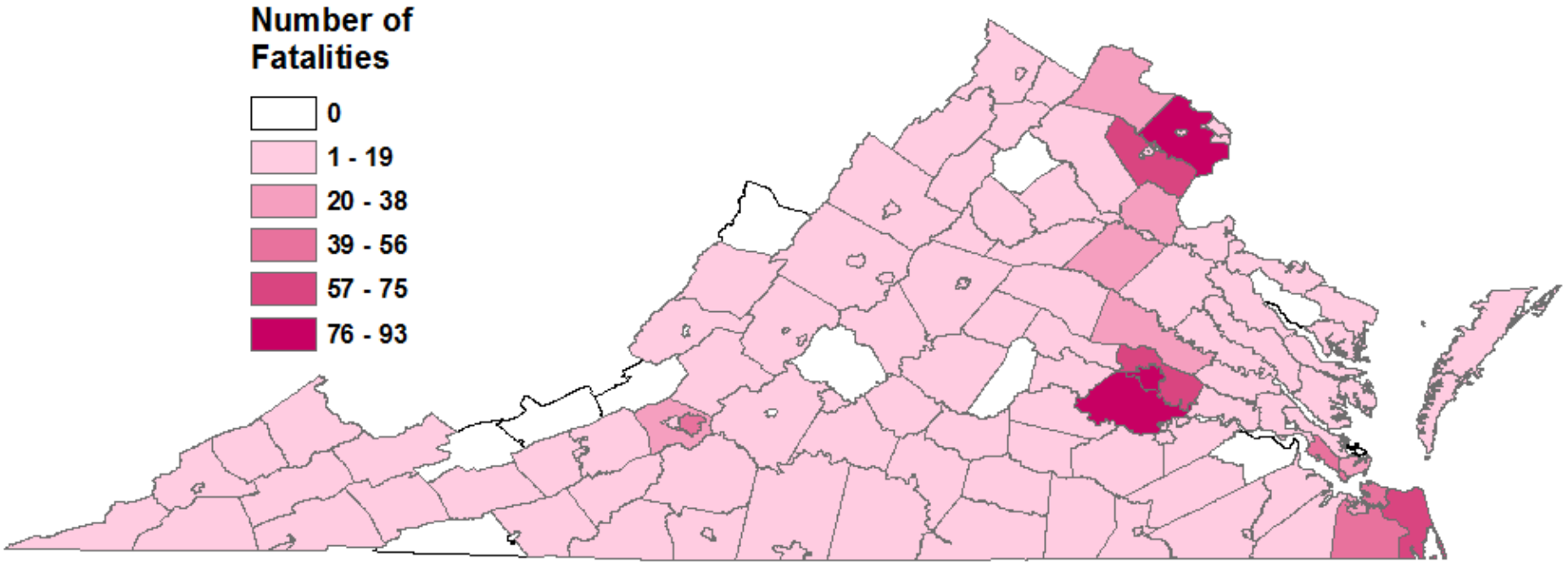
Locality of Residence	Deaths	Rate
Accomack County	5	15.4
Albemarle County	6	5.5
Alexandria City	12	7.5
Alleghany County	1	6.7
Amelia County	1	7.7
Amherst County	0	0.0
Appomattox County	1	6.3
Arlington County	12	5.1
Augusta County	10	13.3
Bath County	1	23.3
Bedford County	7	8.9
Bland County	0	0.0
Botetourt County	8	24.0
Bristol City	3	18.2
Brunswick County	3	18.3
Buchanan County	9	42.4
Buckingham County	1	5.9
Buena Vista City	1	16.0
Campbell County	9	16.4
Caroline County	11	35.7
Carroll County	1	3.4
Charles City County	2	28.8
Charlotte County	1	8.4
Charlottesville City	6	12.5
Chesapeake City	43	17.7
Chesterfield County	92	26.4
Clarke County	2	13.8
Colonial Heights City	9	50.5
Covington City	0	0.0
Craig County	0	0.0
Culpeper County	15	28.9
Cumberland County	0	0.0
Danville City	9	22.1
Dickenson County	5	34.4
Dinwiddie County	6	21.0
Emporia City	1	19.5
Essex County	2	18.3
Fairfax City	4	16.3
Fairfax County	93	8.1
Falls Church City	2	13.5
Fauquier County	13	18.4

Locality of Residence	Deaths	Rate
Floyd County	1	6.3
Fluvanna County	7	26.1
Franklin City	1	12.5
Franklin County	18	32.0
Frederick County	16	18.1
Fredericksburg City	11	37.7
Galax City	0	0.0
Giles County	0	0.0
Gloucester County	9	24.1
Goochland County	2	8.6
Grayson County	0	0.0
Greene County	3	15.2
Greensville County	3	25.8
Halifax County	6	17.6
Hampton City	31	23.1
Hanover County	20	18.6
Harrisonburg City	4	7.4
Henrico County	63	19.1
Henry County	14	27.5
Highland County	0	0.0
Hopewell City	11	48.7
Isle of Wight County	7	18.9
James City County	9	11.8
King and Queen County	5	71.0
King George County	9	33.9
King William County	3	17.7
Lancaster County	5	46.4
Lee County	5	21.2
Lexington City	1	14.0
Loudoun County	31	7.6
Louisa County	7	19.0
Lunenburg County	1	8.3
Lynchburg City	12	14.6
Madison County	3	22.6
Manassas City	8	19.2
Manassas Park City	0	0.0
Martinsville City	6	46.5
Mathews County	1	11.4
Mecklenburg County	8	26.1
Middlesex County	2	18.6
Montgomery County	10	10.1

Locality of Residence	Deaths	Rate
Nelson County	3	20.2
New Kent County	5	22.3
Newport News City	42	23.5
Norfolk City	54	22.1
Northampton County	2	17.0
Northumberland County	2	16.5
Norton City	2	50.4
Nottoway County	3	19.5
Orange County	13	35.5
Page County	3	12.5
Patrick County	2	11.3
Petersburg City	10	31.7
Pittsylvania County	9	14.8
Poquoson City	0	0.0
Portsmouth City	29	30.6
Powhatan County	3	10.3
Prince Edward County	1	4.4
Prince George County	7	18.4
Prince William County	57	12.2
Pulaski County	7	20.5
Radford City	2	10.9
Rappahannock County	0	0.0
Richmond City	82	35.8
Richmond County	0	0.0
Roanoke City	54	54.0
Roanoke County	22	23.4
Rockbridge County	2	8.8
Rockingham County	6	7.4
Russell County	1	3.7
Salem City	6	23.4
Scott County	3	13.9
Shenandoah County	5	11.5
Smyth County	3	9.8
Southampton County	2	11.4
Spotsylvania County	35	26.1
Stafford County	24	16.0
Staunton City	4	16.1
Suffolk City	10	11.0
Surry County	0	0.0
Sussex County	2	17.8
Tazewell County	8	19.6
Virginia Beach City	61	13.5
Warren County	13	32.5
Washington County	7	12.9
Waynesboro City	4	17.7
Westmoreland County	3	16.8
Williamsburg City	0	0.0
Winchester City	6	21.3
Wise County	11	28.9
Wythe County	2	7.0
York County	9	13.3
Subtotal (in-state)	**1401**	**16.4**
Out of State	80	ND
Unknown	5	ND
Subtotal (out-of-state)	**85**	**ND**
TOTAL	**1486**	**17.4**

Note: No denominator is represented by ND

Map 5.1 Number of Fatal Drug/Poison Overdoses by Locality of Residence, 2018



Map 5.2 Rates of Fatal Drug/Poison Overdoses by Locality of Residence, 2018

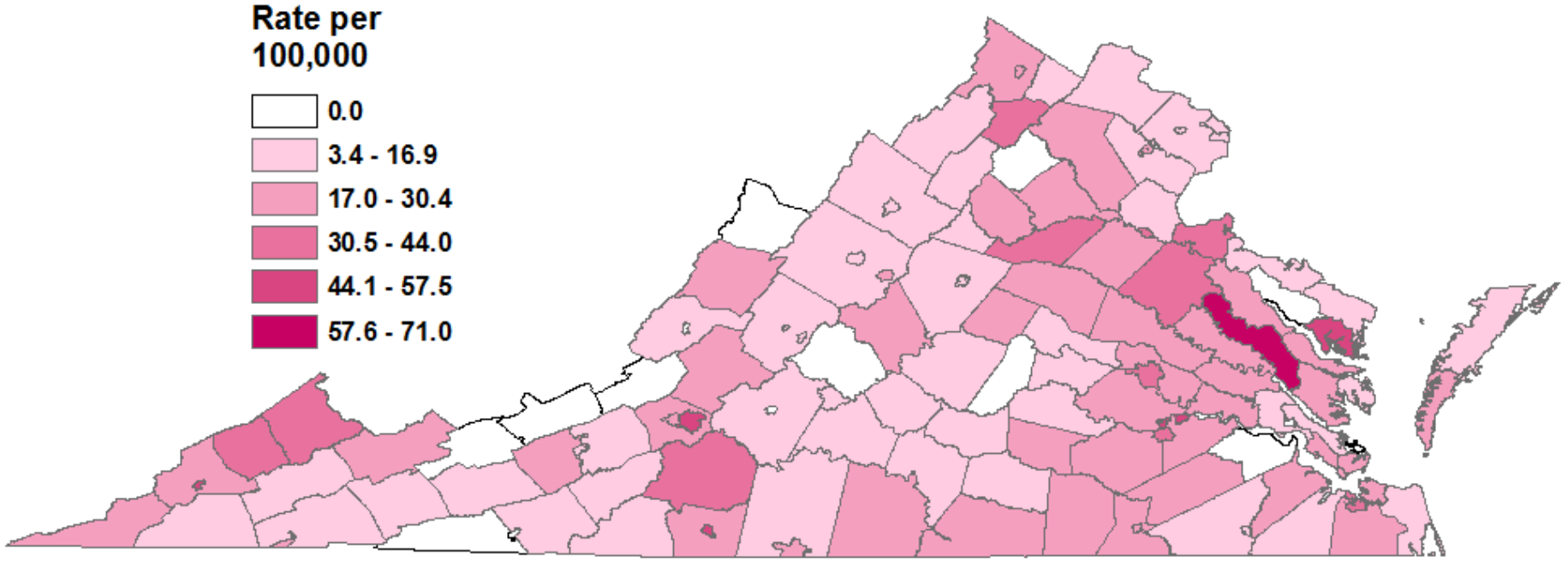


Table 5.9 Number and Rate of Fatal Drug/Poison Overdoses by Locality of Injury, 2018

Locality of Injury	Deaths	Rate
Accomack County	6	18.5
Albemarle County	7	6.4
Alexandria City	12	7.5
Alleghany County	1	6.7
Amelia County	1	7.7
Amherst County	0	0.0
Appomattox County	1	6.3
Arlington County	19	8.0
Augusta County	8	10.6
Bath County	1	23.3
Bedford County	8	10.2
Bland County	0	0.0
Botetourt County	7	21.0
Bristol City	2	12.1
Brunswick County	4	24.4
Buchanan County	10	47.1
Buckingham County	1	5.9
Buena Vista City	1	16.0
Campbell County	7	12.7
Caroline County	9	29.2
Carroll County	3	10.1
Charles City County	2	28.8
Charlotte County	1	8.4
Charlottesville City	8	16.6
Chesapeake City	39	16.1
Chesterfield County	75	21.5
Clarke County	5	34.4
Colonial Heights City	8	44.9
Covington City	0	0.0
Craig County	0	0.0
Culpeper County	14	27.0
Cumberland County	0	0.0
Danville City	8	19.7
Dickenson County	3	20.7
Dinwiddie County	4	14.0
Emporia City	3	58.6
Essex County	1	9.2
Fairfax City	4	16.3
Fairfax County	97	8.4
Falls Church City	2	13.5
Fauquier County	20	28.3
Floyd County	1	6.3
Fluvanna County	6	22.4

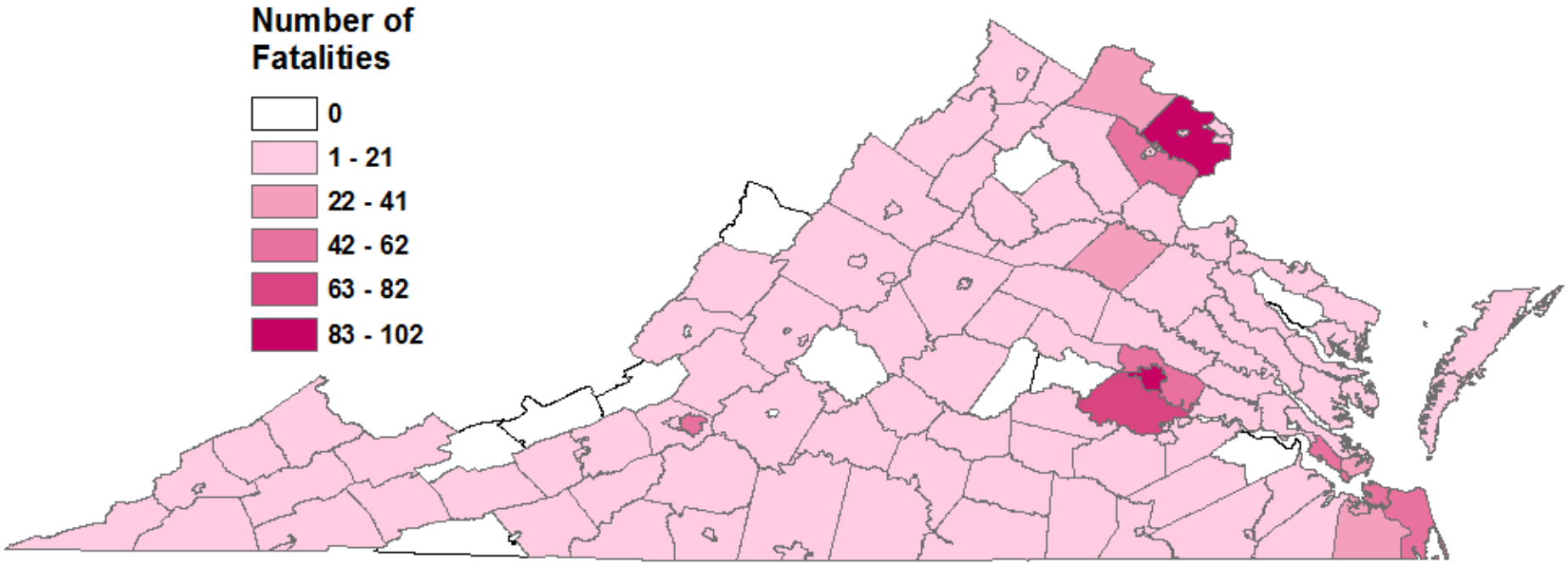
Locality of Injury	Deaths	Rate
Franklin City	1	12.5
Franklin County	17	30.3
Frederick County	15	17.0
Fredericksburg City	17	58.3
Galax City	0	0.0
Giles County	0	0.0
Gloucester County	10	26.8
Goochland County	3	12.9
Grayson County	0	0.0
Greene County	3	15.2
Greensville County	1	8.6
Halifax County	7	20.5
Hampton City	31	23.1
Hanover County	20	18.6
Harrisonburg City	6	11.1
Henrico County	59	17.9
Henry County	13	25.5
Highland County	0	0.0
Hopewell City	10	44.3
Isle of Wight County	4	10.8
James City County	7	9.2
King and Queen County	4	56.8
King George County	8	30.1
King William County	3	17.7
Lancaster County	3	27.8
Lee County	6	25.5
Lexington City	1	14.0
Loudoun County	31	7.6
Louisa County	7	19.0
Lunenburg County	1	8.3
Lynchburg City	12	14.6
Madison County	4	30.1
Manassas City	8	19.2
Manassas Park City	2	11.6
Martinsville City	9	69.8
Mathews County	1	11.4
Mecklenburg County	8	26.1
Middlesex County	2	18.6
Montgomery County	9	9.1
Nelson County	2	13.5
New Kent County	4	17.9
Newport News City	47	26.3
Norfolk City	60	24.6

Virginia Department of Health

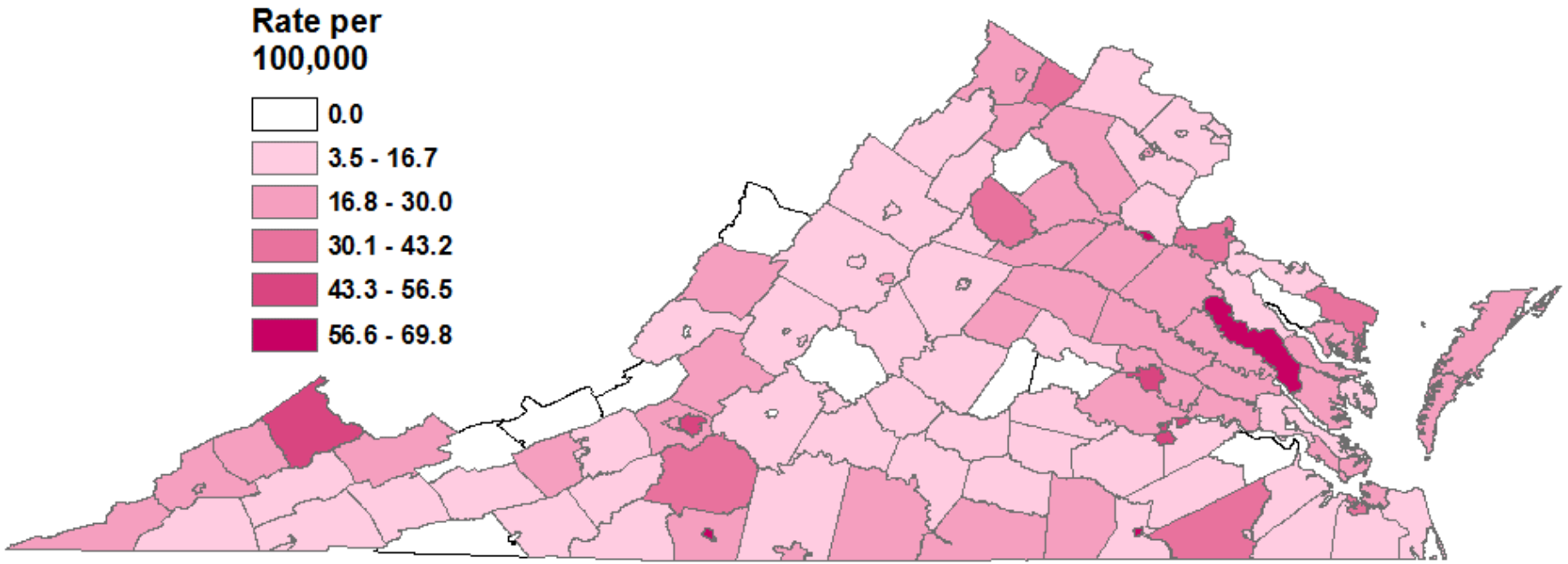
Locality of Injury	Deaths	Rate
Northampton County	3	25.6
Northumberland County	4	32.9
Norton City	1	25.2
Nottoway County	2	13.0
Orange County	9	24.6
Page County	2	8.4
Patrick County	2	11.3
Petersburg City	15	47.5
Pittsylvania County	10	16.4
Poquoson City	1	8.2
Portsmouth City	34	35.9
Powhatan County	0	0.0
Prince Edward County	1	4.4
Prince George County	5	13.1
Prince William County	60	12.8
Pulaski County	7	20.5
Radford City	1	5.5
Rappahannock County	0	0.0
Richmond City	102	44.6
Richmond County	0	0.0
Roanoke City	56	56.0
Roanoke County	21	22.3
Rockbridge County	3	13.2
Rockingham County	7	8.6
Russell County	1	3.7
Salem City	5	19.5
Scott County	3	13.9
Shenandoah County	5	11.5
Smyth County	4	13.1
Southampton County	6	34.1
Spotsylvania County	32	23.8
Stafford County	20	13.3
Staunton City	4	16.1
Suffolk City	13	14.3
Surry County	0	0.0
Sussex County	1	8.9
Tazewell County	9	22.0
Virginia Beach City	57	12.7
Warren County	10	25.0
Washington County	7	12.9
Waynesboro City	4	17.7
Westmoreland County	1	5.6
Williamsburg City	0	0.0
Winchester City	7	24.9
Wise County	11	28.9
Wythe County	1	3.5
York County	5	7.4
Subtotal (in-state)	**1417**	**16.6**
Out of State	9	ND
Unknown	60	ND
Subtotal (out-of-state)	**69**	**ND**
TOTAL	**1486**	**17.4**

Note: No denominator is represented by ND

Map 5.3 Number of Fatal Drug/Poison Overdoses by Locality of Injury, 2018



Map 5.4 Rates of Fatal Drug/Poison Overdoses by Locality of Injury, 2018

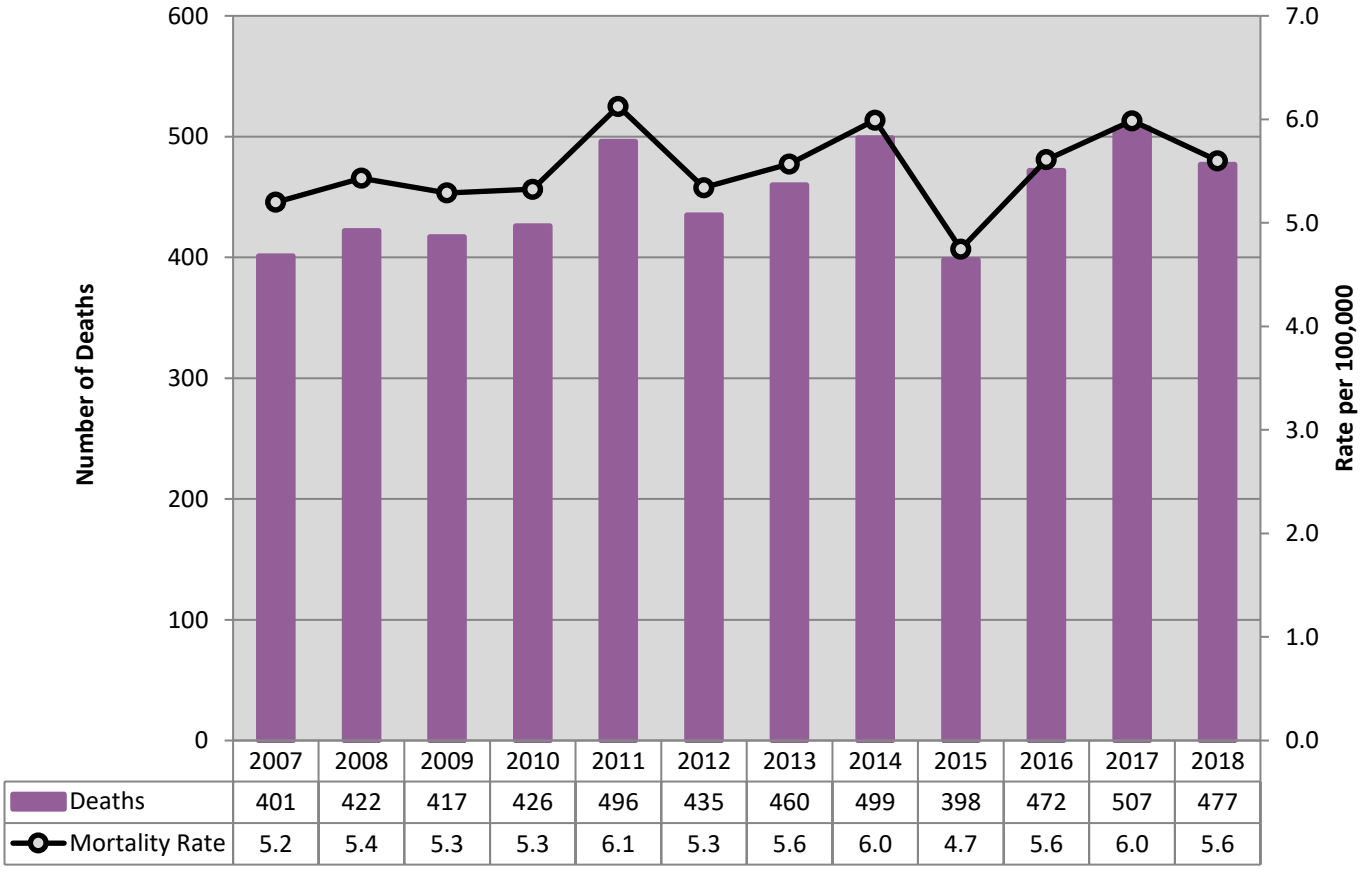


PRESCRIPTION OPIOIDS EXCLUDING FENTANYL (N=477)

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 32.1% of all fatal drug overdoses in 2018.

- Oxycodone continued to be the most common prescription opioid causing or contributing to death
- Whites made up 83.2% of the fatal prescription opioid (excluding fentanyl) overdoses in 2018
- Males aged 35-44 years and White males had the highest rates of fatal prescription opioid (excluding fentanyl) overdose in 2017 (14.6 deaths and 9.0 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, 2007-2018



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Deaths	401	422	417	426	496	435	460	499	398	472	507	477
Mortality Rate	5.2	5.4	5.3	5.3	6.1	5.3	5.6	6.0	4.7	5.6	6.0	5.6

Figure 5.13 Number of Prescription Opioids (Excluding Fentanyl) Causing or Contributing to Death in Fatal Drug/Poison Overdoses, 2018

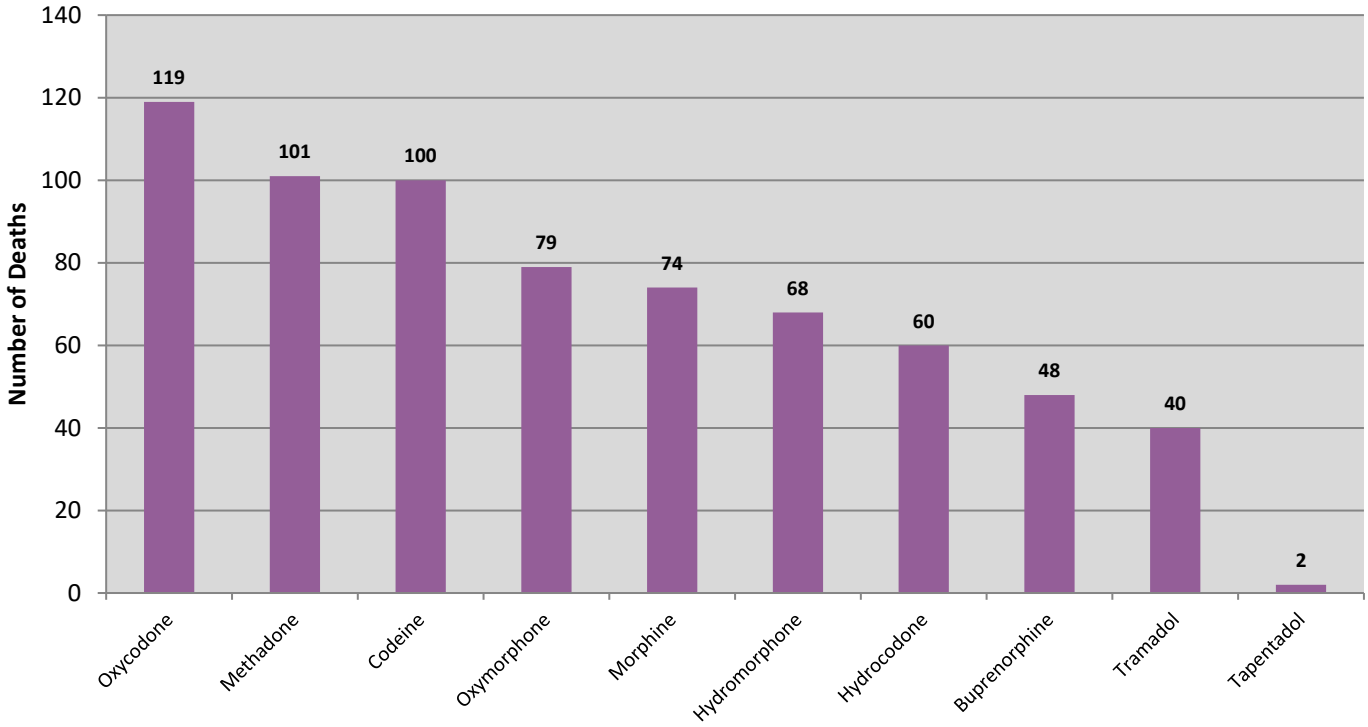


Figure 5.14 Percentage of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Manner of Death, 2018

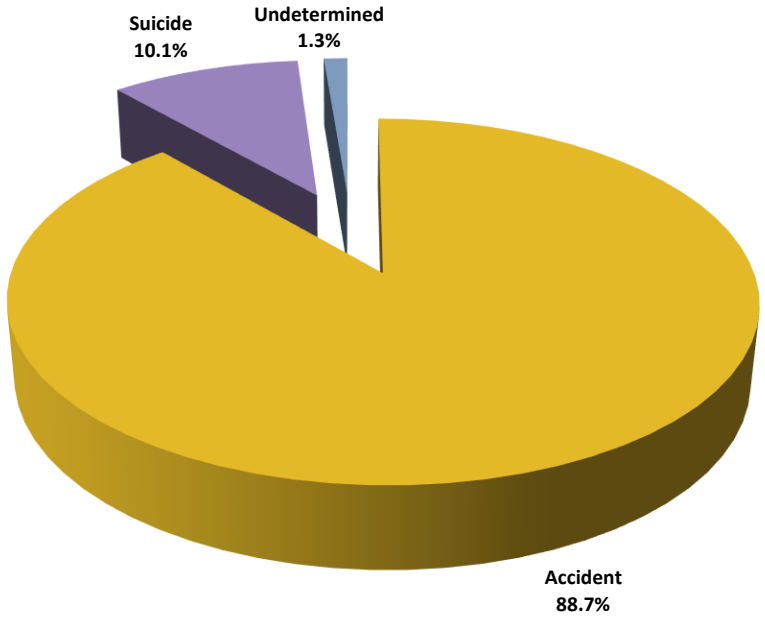
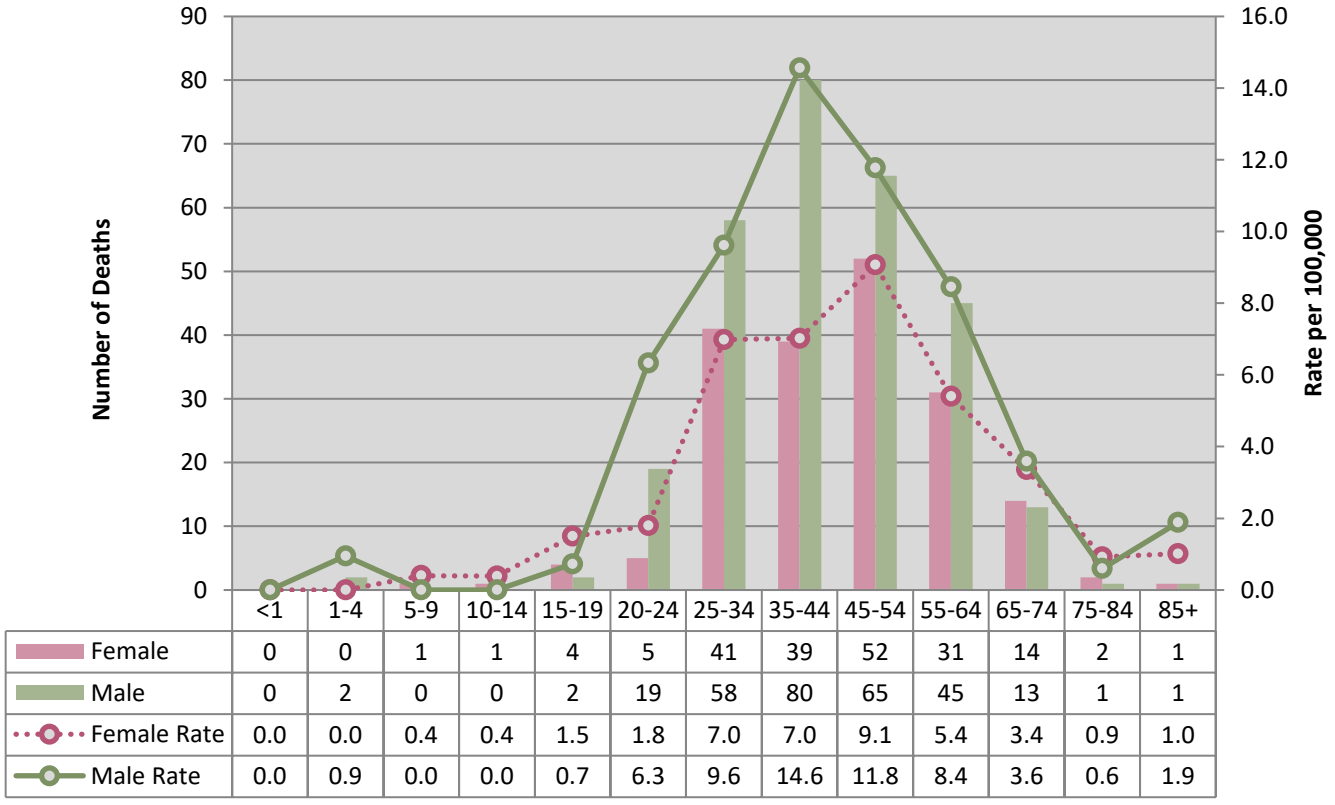


Table 5.10 Number of Prescription Opioids (Excluding Fentanyl) Detected in Fatal Drug Overdoses by OCME District, 2018

Prescription Opioid	Central	Northern	Tidewater	Western	TOTAL
Oxycodone	23	25	26	45	**119**
Methadone	30	21	24	26	**101**
Codeine	6	24	37	33	**100**
Oxymorphone	15	15	19	30	**79**
Morphine	15	35	12	12	**74**
Hydromorphone	11	17	12	28	**68**
Hydrocodone	9	7	9	35	**60**
Buprenorphine	7	16	2	23	**48**
Tramadol	7	19	5	9	**40**
Tapentadol	0	1	1	0	**2**
TOTAL	**123**	**180**	**147**	**241**	**691**

Note: Summing the subtotals will surpass the total because the groups are not mutually exclusive as often, more than one drug causes death

Figure 5.15 Number and Rate of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Age Group and Gender, 2018



	<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	1	1	4	5	41	39	52	31	14	2	1
Male	0	2	0	0	2	19	58	80	65	45	13	1	1
Female Rate	0.0	0.0	0.4	0.4	1.5	1.8	7.0	7.0	9.1	5.4	3.4	0.9	1.0
Male Rate	0.0	0.9	0.0	0.0	0.7	6.3	9.6	14.6	11.8	8.4	3.6	0.6	1.9

Figure 5.16 Percentage of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Race/Ethnicity, 2018

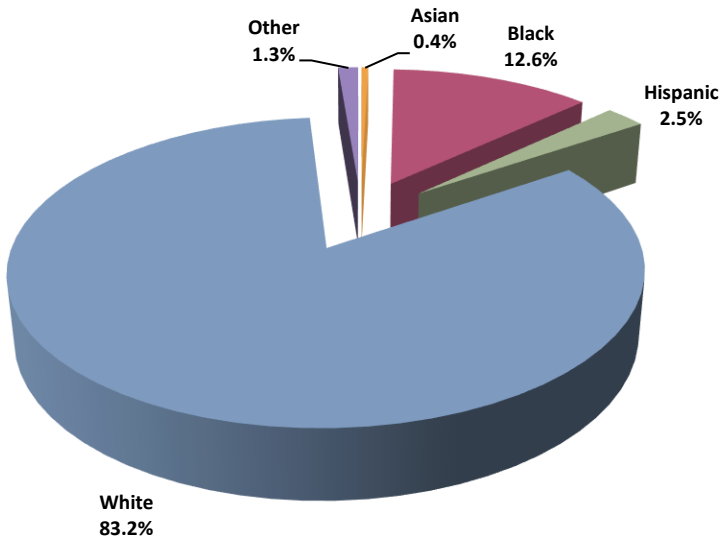
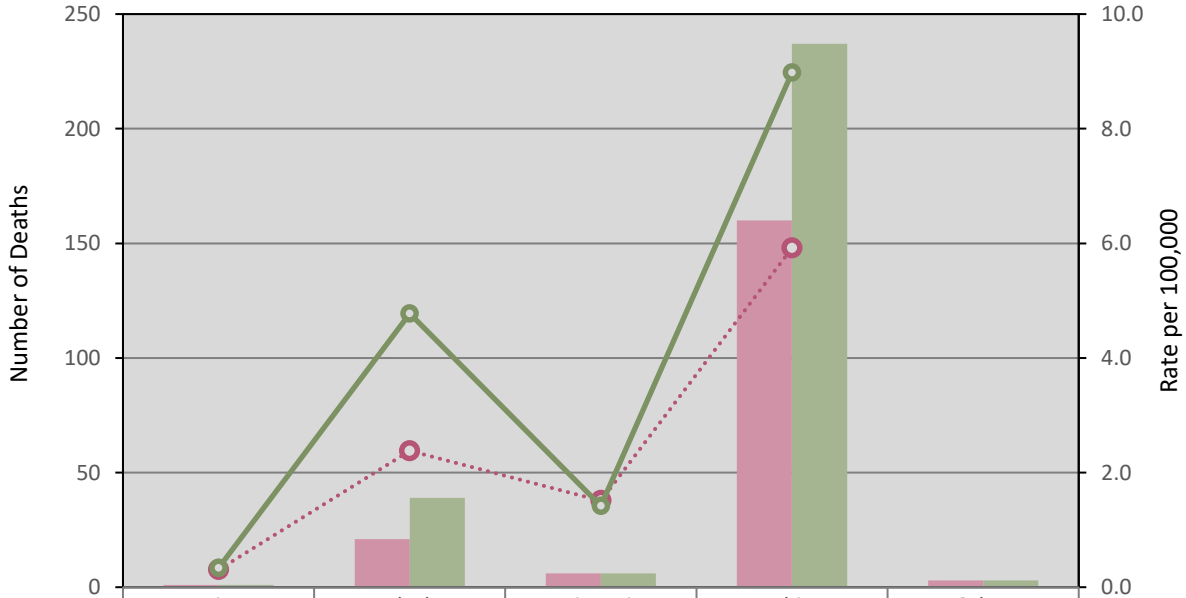


Figure 5.17 Number and Rate of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Race/Ethnicity and Gender, 2018



	Asian	Black	Hispanic	White	Other
Female	1	21	6	160	3
Male	1	39	6	237	3
Female Rate	0.3	2.4	1.5	5.9	*
Male Rate	0.3	4.8	1.4	9.0	*

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

Table 5.11 Number and Rate of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Locality of Residence, 2018

Locality of Residence	Deaths	Rate
Accomack County	3	9.3
Albemarle County	2	1.8
Alexandria City	2	1.2
Alleghany County	1	6.7
Amelia County	1	7.7
Amherst County	0	0.0
Appomattox County	1	6.3
Arlington County	3	1.3
Augusta County	8	10.6
Bath County	1	23.3
Bedford County	0	0.0
Bland County	0	0.0
Botetourt County	5	15.0
Bristol City	2	12.1
Brunswick County	0	0.0
Buchanan County	9	42.4
Buckingham County	0	0.0
Buena Vista City	0	0.0
Campbell County	2	3.6
Caroline County	2	6.5
Carroll County	1	3.4
Charles City County	0	0.0
Charlotte County	0	0.0
Charlottesville City	1	2.1
Chesapeake City	10	4.1
Chesterfield County	15	4.3
Clarke County	2	13.8
Colonial Heights City	3	16.8
Covington City	0	0.0
Craig County	0	0.0
Culpeper County	7	13.5
Cumberland County	0	0.0
Danville City	2	4.9
Dickenson County	4	27.5
Dinwiddie County	0	0.0
Emporia City	1	19.5
Essex County	0	0.0
Fairfax City	0	0.0
Fairfax County	32	2.8

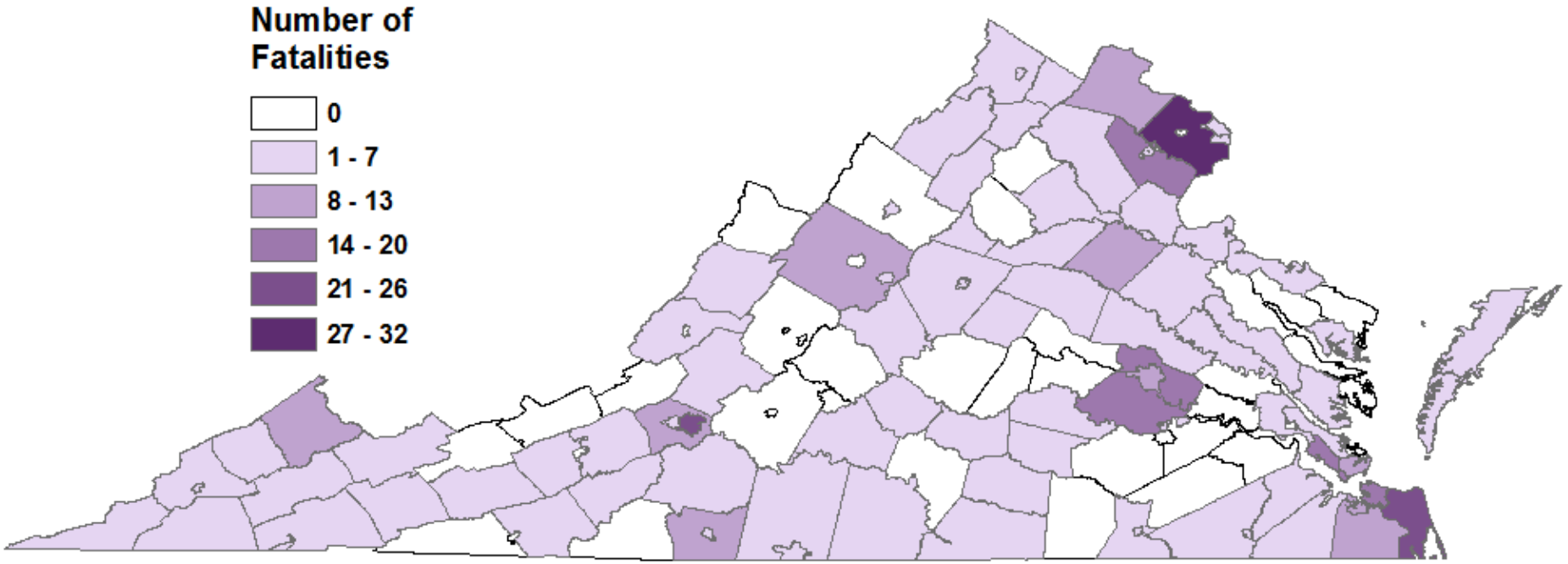
Locality of Residence	Deaths	Rate
Falls Church City	2	13.5
Fauquier County	5	7.1
Floyd County	1	6.3
Fluvanna County	1	3.7
Franklin City	1	12.5
Franklin County	5	8.9
Frederick County	7	7.9
Fredericksburg City	4	13.7
Galax City	0	0.0
Giles County	0	0.0
Gloucester County	3	8.0
Goochland County	0	0.0
Grayson County	0	0.0
Greene County	2	10.1
Greensville County	1	8.6
Halifax County	1	2.9
Hampton City	8	6.0
Hanover County	5	4.7
Harrisonburg City	1	1.9
Henrico County	16	4.9
Henry County	9	17.7
Highland County	0	0.0
Hopewell City	1	4.4
Isle of Wight County	1	2.7
James City County	2	2.6
King and Queen County	1	14.2
King George County	3	11.3
King William County	1	5.9
Lancaster County	1	9.3
Lee County	3	12.7
Lexington City	0	0.0
Loudoun County	13	3.2
Louisa County	1	2.7
Lunenburg County	5	41.4
Lynchburg City	0	0.0
Madison County	0	0.0
Manassas City	4	9.6
Manassas Park City	0	0.0
Martinsville City	2	15.5

Locality of Residence	Deaths	Rate
Mathews County	0	0.0
Mecklenburg County	2	6.5
Middlesex County	0	0.0
Montgomery County	6	6.1
Nelson County	1	6.7
New Kent County	0	0.0
Newport News City	15	8.4
Norfolk City	17	7.0
Northampton County	1	8.5
Northumberland County	0	0.0
Norton City	1	25.2
Nottoway County	1	6.5
Orange County	5	13.6
Page County	2	8.4
Patrick County	0	0.0
Petersburg City	0	0.0
Pittsylvania County	5	8.2
Poquoson City	0	0.0
Portsmouth City	9	9.5
Powhatan County	0	0.0
Prince Edward County	1	4.4
Prince George County	0	0.0
Prince William County	17	3.6
Pulaski County	6	17.6
Radford City	0	0.0
Rappahannock County	0	0.0
Richmond City	13	5.7
Richmond County	0	0.0
Roanoke City	25	25.0
Roanoke County	10	10.6

Locality of Residence	Deaths	Rate
Rockbridge County	0	0.0
Rockingham County	0	0.0
Russell County	1	3.7
Salem City	2	7.8
Scott County	2	9.3
Shenandoah County	3	6.9
Smyth County	2	6.6
Southampton County	1	5.7
Spotsylvania County	12	8.9
Stafford County	4	2.7
Staunton City	0	0.0
Suffolk City	6	6.6
Surry County	0	0.0
Sussex County	0	0.0
Tazewell County	5	12.2
Virginia Beach City	21	4.7
Warren County	7	17.5
Washington County	2	3.7
Waynesboro City	3	13.3
Westmoreland County	1	5.6
Williamsburg City	0	0.0
Winchester City	2	7.1
Wise County	7	18.4
Wythe County	1	3.5
York County	3	4.4
Subtotal (in-state)	**452**	**5.3**
Out of State	23	ND
Unknown	2	ND
Subtotal (out-of-state)	**25**	**ND**
TOTAL	**477**	**5.6**

Note: No denominator is represented by ND

Map 5.5 Number of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Locality of Residence, 2018



Virginia Department of Health

Map 5.6 Rates of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Locality of Residence, 2018

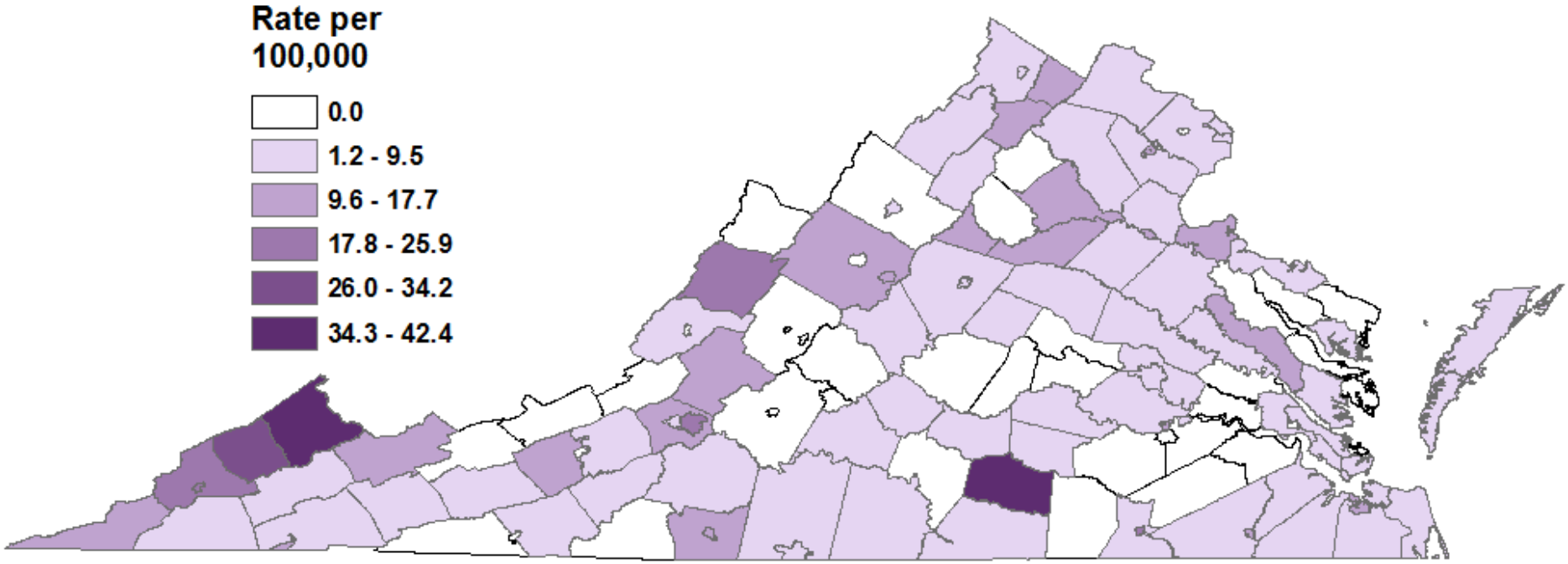


Table 5.12 Number and Rate of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Locality of Injury, 2018

Locality of Injury	Deaths	Rate
Accomack County	4	12.3
Albemarle County	1	0.9
Alexandria City	2	1.2
Alleghany County	1	6.7
Amelia County	1	7.7
Amherst County	0	0.0
Appomattox County	1	6.3
Arlington County	4	1.7
Augusta County	4	5.3
Bath County	1	23.3
Bedford County	1	1.3
Bland County	0	0.0
Botetourt County	4	12.0
Bristol City	1	6.1
Brunswick County	1	6.1
Buchanan County	10	47.1
Buckingham County	0	0.0
Buena Vista City	0	0.0
Campbell County	2	3.6
Caroline County	2	6.5
Carroll County	2	6.7
Charles City County	0	0.0
Charlotte County	0	0.0
Charlottesville City	0	0.0
Chesapeake City	12	4.9
Chesterfield County	14	4.0
Clarke County	3	20.7
Colonial Heights City	2	11.2
Covington City	0	0.0
Craig County	0	0.0
Culpeper County	7	13.5
Cumberland County	0	0.0
Danville City	2	4.9
Dickenson County	2	13.8
Dinwiddie County	0	0.0
Emporia City	1	19.5
Essex County	0	0.0
Fairfax City	0	0.0
Fairfax County	33	2.9
Falls Church City	2	13.5
Fauquier County	6	8.5
Floyd County	0	0.0

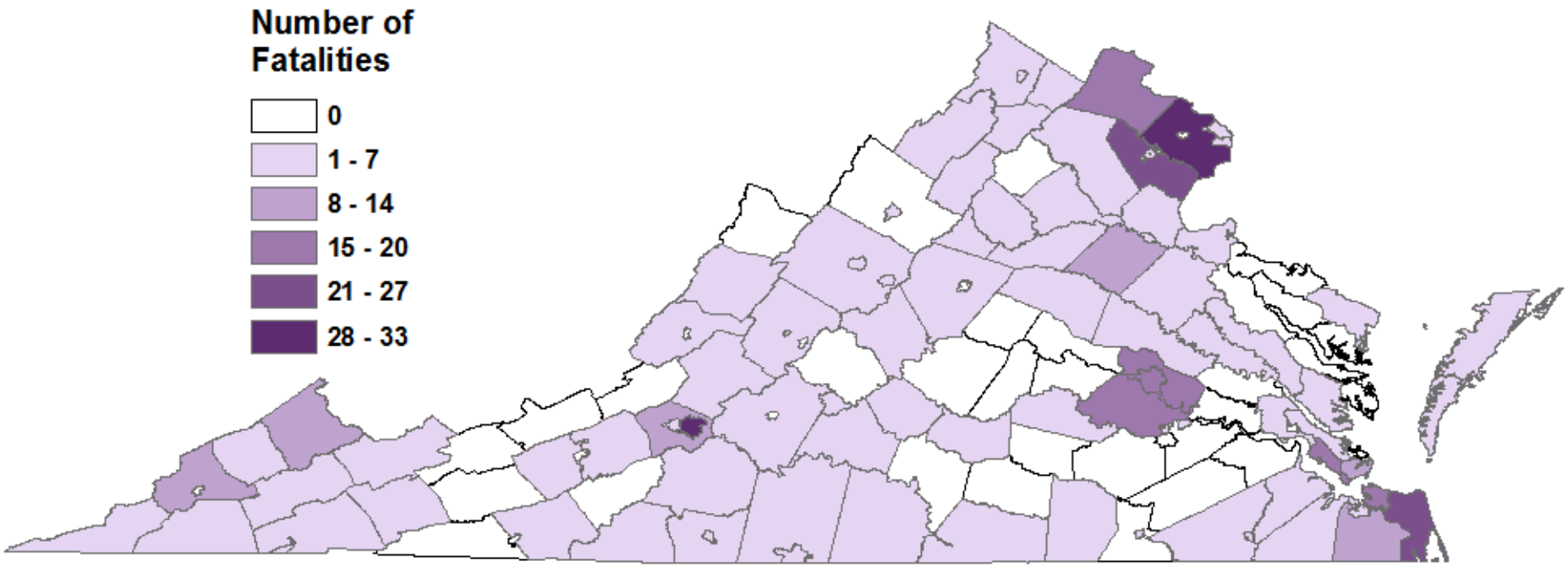
Locality of Injury	Deaths	Rate
Fluvanna County	0	0.0
Franklin City	1	12.5
Franklin County	5	8.9
Frederick County	6	6.8
Fredericksburg City	4	13.7
Galax City	0	0.0
Giles County	0	0.0
Gloucester County	2	5.4
Goochland County	0	0.0
Grayson County	0	0.0
Greene County	3	15.2
Greensville County	0	0.0
Halifax County	1	2.9
Hampton City	8	6.0
Hanover County	4	3.7
Harrisonburg City	2	3.7
Henrico County	14	4.3
Henry County	7	13.7
Highland County	0	0.0
Hopewell City	1	4.4
Isle of Wight County	1	2.7
James City County	2	2.6
King and Queen County	1	14.2
King George County	3	11.3
King William County	1	5.9
Lancaster County	0	0.0
Lee County	4	17.0
Lexington City	0	0.0
Loudoun County	17	4.2
Louisa County	1	2.7
Lunenburg County	0	0.0
Lynchburg City	6	7.3
Madison County	2	15.0
Manassas City	4	9.6
Manassas Park City	0	0.0
Martinsville City	4	31.0
Mathews County	0	0.0
Mecklenburg County	2	6.5
Middlesex County	0	0.0
Montgomery County	5	5.1
Nelson County	1	6.7
New Kent County	0	0.0

Virginia Department of Health

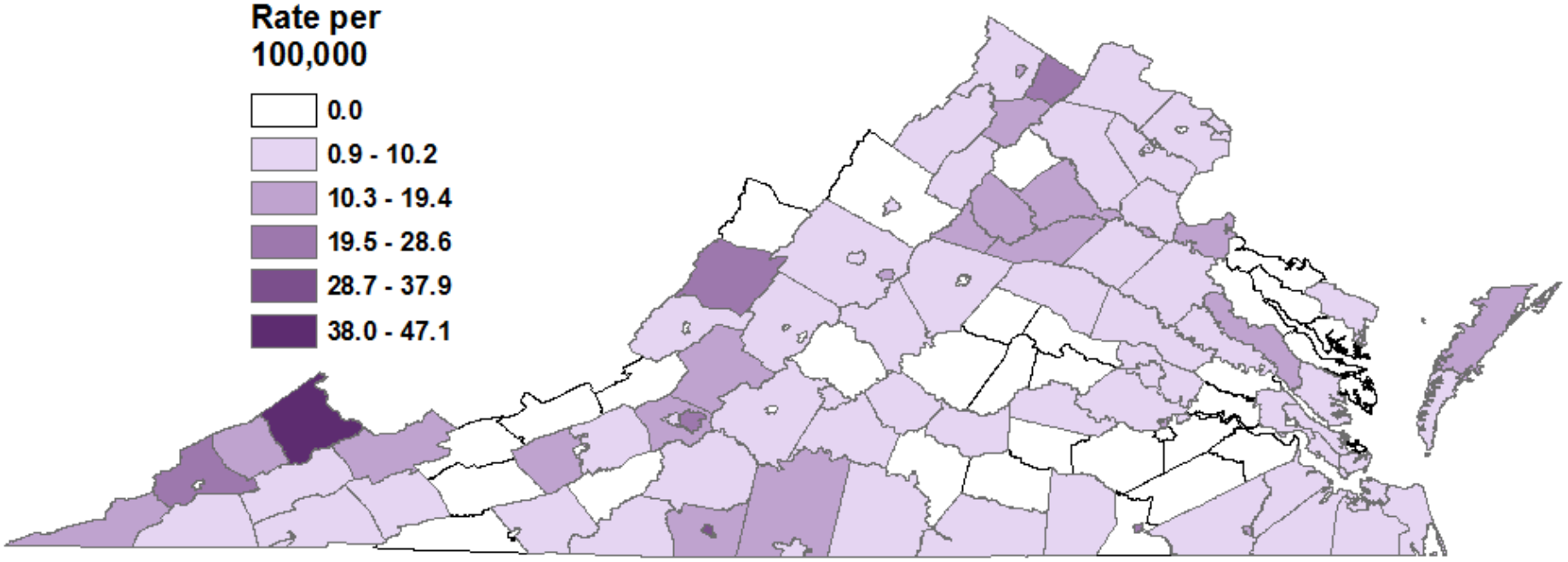
Locality of Injury	Deaths	Rate
Newport News City	18	10.1
Norfolk City	16	6.6
Northampton County	1	8.5
Northumberland County	1	8.2
Norton City	0	0.0
Nottoway County	0	0.0
Orange County	6	16.4
Page County	2	8.4
Patrick County	1	5.7
Petersburg City	0	0.0
Pittsylvania County	7	11.5
Poquoson City	0	0.0
Portsmouth City	7	7.4
Powhatan County	0	0.0
Prince Edward County	1	4.4
Prince George County	0	0.0
Prince William County	23	4.9
Pulaski County	6	17.6
Radford City	0	0.0
Rappahannock County	0	0.0
Richmond City	15	6.6
Richmond County	0	0.0
Roanoke City	27	27.0
Roanoke County	12	12.8
Rockbridge County	1	4.4
Rockingham County	0	0.0
Russell County	1	3.7
Salem City	1	3.9
Scott County	2	9.3
Shenandoah County	3	6.9
Smyth County	2	6.6
Southampton County	1	5.7
Spotsylvania County	10	7.4
Stafford County	3	2.0
Staunton City	1	4.0
Suffolk City	7	7.7
Surry County	0	0.0
Sussex County	0	0.0
Tazewell County	6	14.7
Virginia Beach City	21	4.7
Warren County	6	15.0
Washington County	2	3.7
Waynesboro City	3	13.3
Westmoreland County	0	0.0
Williamsburg City	0	0.0
Winchester City	3	10.7
Wise County	8	21.0
Wythe County	0	0.0
York County	3	4.4
Subtotal (in-state)	**465**	**5.5**
Out of State	4	ND
Unknown	8	ND
Subtotal (out-of-state)	**12**	**ND**
TOTAL	**477**	**5.6**

Note: No denominator is represented by ND

Map 5.7 Number of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Locality of Injury, 2018



Map 5.8 Rates of Fatal Prescription Opioid (Excluding Fentanyl) Overdoses by Locality of Injury, 2018

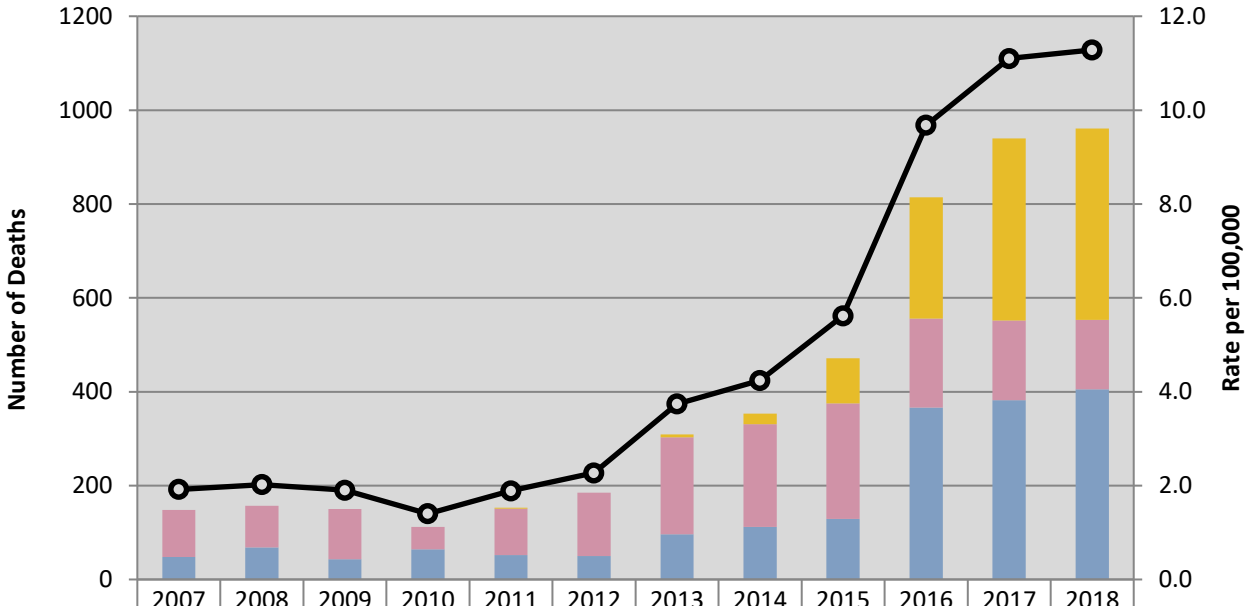


FENTANYL AND/OR HEROIN DEATHS (N=961)

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.

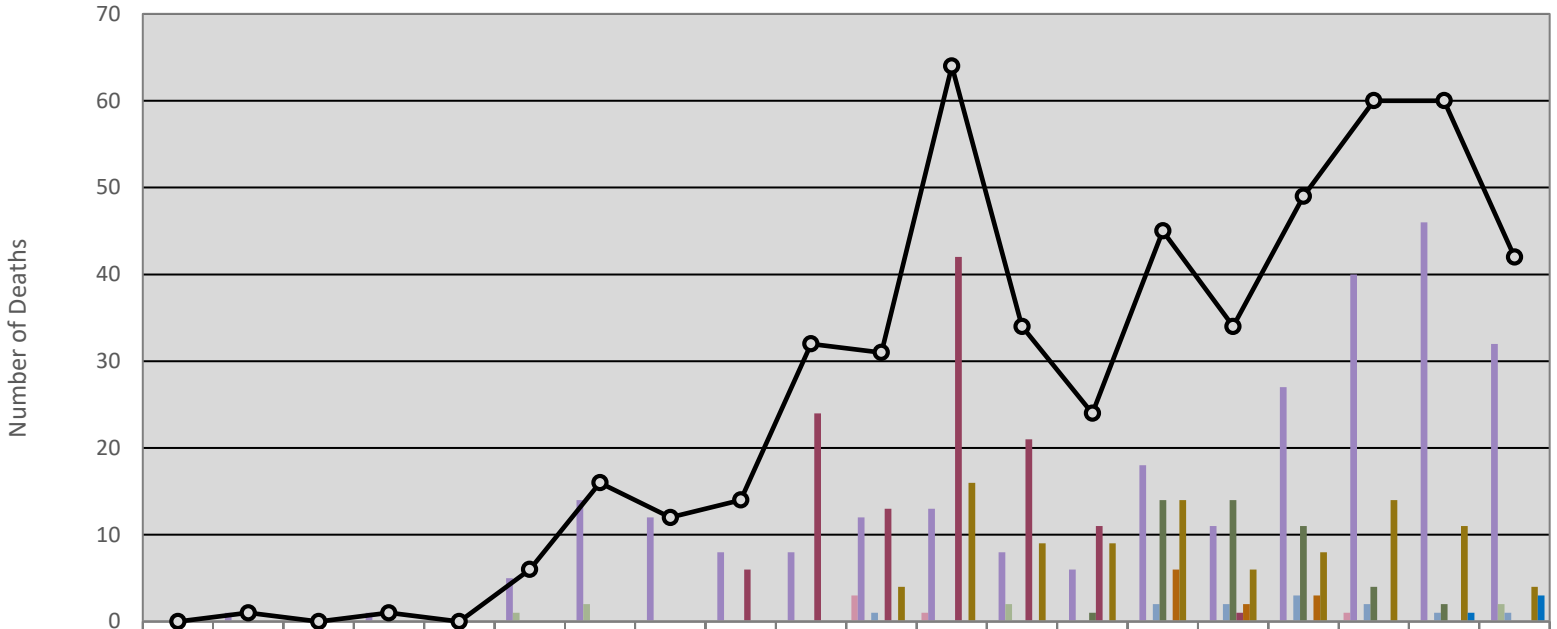
- Fatal fentanyl and/or heroin overdoses in 2018 increased by 2.2% when compared to 2017
- Over 98% of fatal fentanyl and/or heroin overdoses in 2018 were accidents
- In 2018, males 25-34 years of age had the highest rate of death (39.6 deaths per 100,000 persons)
- Fentanyl and/or heroin was involved in 64.7% of all drug/poison cases in Virginia in 2018
- Of all fentanyl and/or heroin overdoses in 2018, only 12.9% occurred in the Western OCME region

Figure 5.18 Number and Rate of Fatal Fentanyl and/or Heroin Overdoses by Year of Death, 2007-2018



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fentanyl and Heroin	0	0	0	0	2	0	6	22	96	258	388	408
Heroin	100	89	107	48	99	135	207	219	246	190	170	148
Fentanyl	48	68	43	64	52	50	96	112	129	366	382	405
Mortality Rate	1.9	2.0	1.9	1.4	1.9	2.3	3.7	4.2	5.6	9.7	11.1	11.3

Figure 5.19 Number of Fatal Fentanyl Analog Overdoses Quarter, 2014-2018



	2014				2015				2016				2017				2018			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
3-Methyl Fentanyl	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	1	0	0
Acetyl Fentanyl	0	1	0	1	0	5	14	12	8	8	12	13	8	6	18	11	27	40	46	32
Butyryl Fentanyl	0	0	0	0	0	1	2	0	0	0	0	0	2	0	0	0	0	0	0	2
Carfentanil	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	2	3	2	1	1
Cyclopropyl Fentanyl	0	0	0	0	0	0	0	0	0	0	0	0	0	1	14	14	11	4	2	0
Furanyl Fentanyl	0	0	0	0	0	0	0	0	6	24	13	42	21	11	0	1	0	0	0	0
Methoxyacetyl Fentanyl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	2	3	0	0	0
Para-Fluoroisobutyryl Fentanyl***	0	0	0	0	0	0	0	0	0	0	4	16	9	9	14	6	8	14	11	4
Valerylfentanyl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
Total Fentanyl Analog Fatalities	0	1	0	1	0	6	16	12	14	32	31	64	34	24	45	34	49	60	60	42

** Each fentanyl analog is tallied by each time it caused or contributed to death (analyzed from either toxicology or the cause of death statement) and therefore the total number of analogs will exceed the actual number of fatalities

Table 5.13 Number of Fatal Fentanyl and/or Heroin Overdoses by OCME District, 2018

OCME District	Fentanyl	Heroin	Fentanyl and Heroin	Total
Central	124	61	203	**388**
Northern	150	17	67	**234**
Tidewater	78	42	95	**215**
Western	53	28	43	**124**
Total	**405**	**148**	**408**	**961**

Figure 5.20 Percentage of Fatal Fentanyl and/or Heroin Overdoses by Manner of Death, 2018

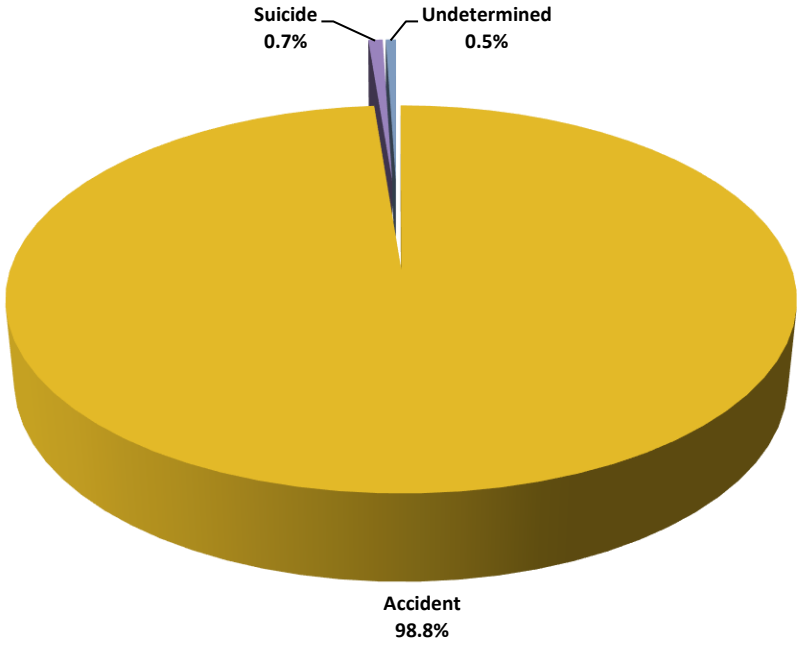
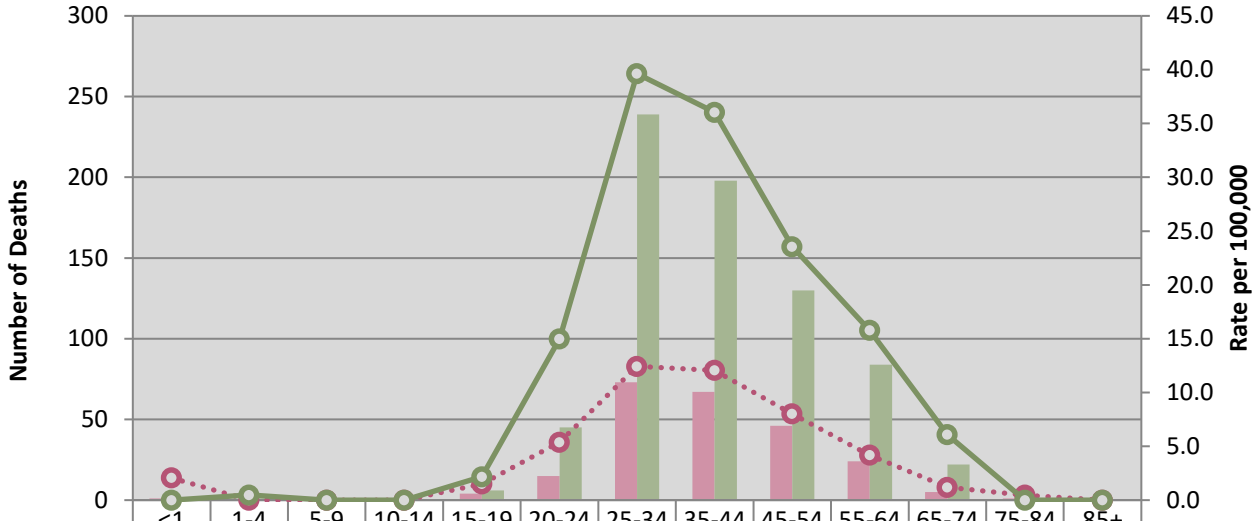


Figure 5.21 Number and Rate of Fatal Fentanyl and/or Heroin Overdoses by Age Group and Gender, 2018



	<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	1	0	0	0	4	15	73	67	46	24	5	1	0
Male	0	1	0	0	6	45	239	198	130	84	22	0	0
Female Rate	2.1	0.0	0.0	0.0	1.5	5.4	12.4	12.1	8.0	4.2	1.2	0.5	0.0
Male Rate	0.0	0.5	0.0	0.0	2.2	15.0	39.6	36.0	23.5	15.8	6.1	0.0	0.0

Figure 5.22 Percentage of Fatal Fentanyl and/or Heroin Overdoses by Race/Ethnicity, 2018

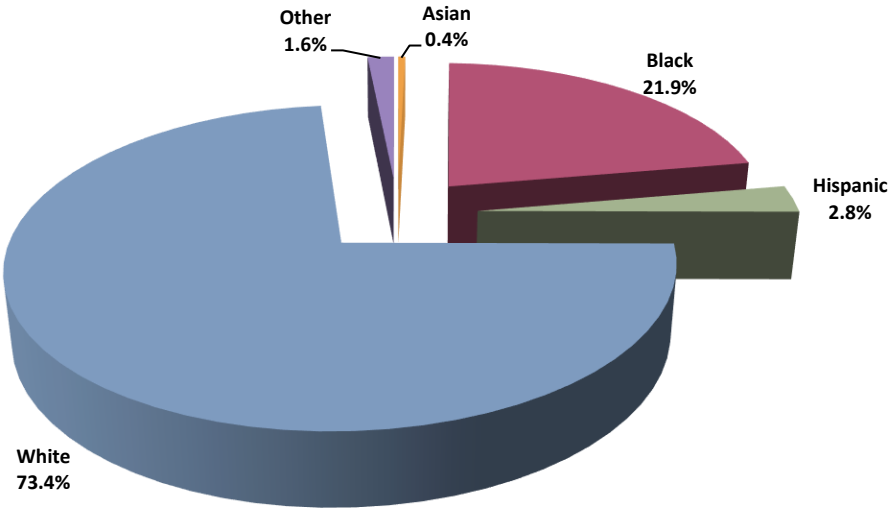
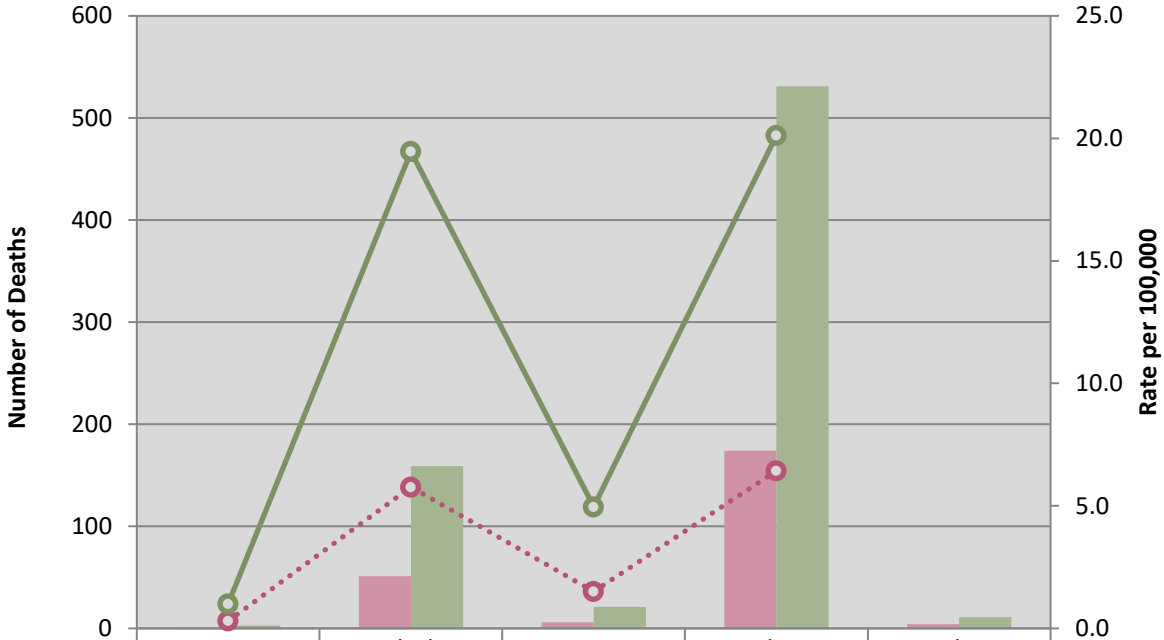


Figure 5.23 Number and Rate of Fatal Fentanyl and/or Heroin Overdoses by Race/Ethnicity and Gender, 2018



	Asian	Black	Hispanic	White	Other
Female	1	51	6	174	4
Male	3	159	21	531	11
Female Rate	0.3	5.8	1.5	6.4	*
Male Rate	1.0	19.5	5.0	20.1	*

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

Table 5.14 Number and Percentage of Fatal Fentanyl and/or Heroin Overdoses by Whether Alcohol Caused Death, 2018

Whether Alcohol Played a Role in Death	Deaths	Percentage
Yes	125	13.0%
Contributed	39	4.1%
No	797	82.9%
TOTAL	**961**	**100.0%**

Table 5.15 Number and Rate of Fatal Fentanyl and/or Heroin Overdoses by Locality of Residence, 2018

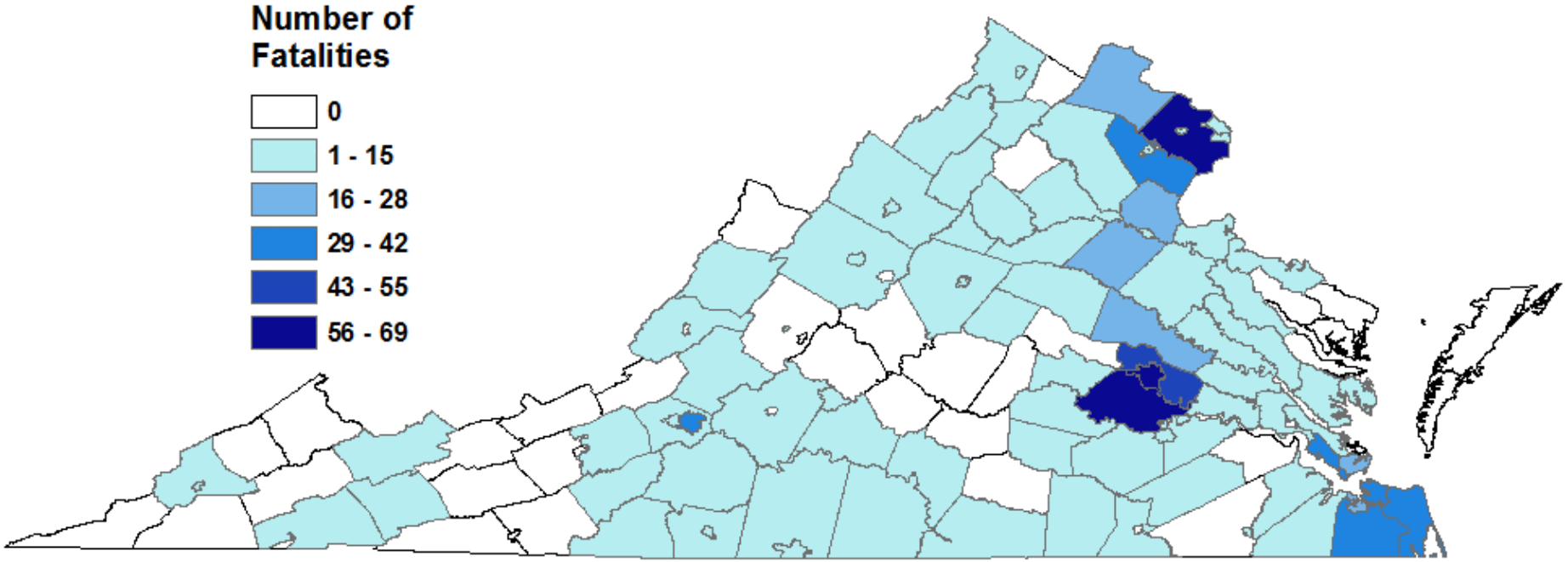
Locality of Residence	Deaths	Rate
Accomack County	0	0.0
Albemarle County	5	4.6
Alexandria City	9	5.6
Alleghany County	1	6.7
Amelia County	1	7.7
Amherst County	0	0.0
Appomattox County	0	0.0
Arlington County	7	2.9
Augusta County	4	5.3
Bath County	1	23.3
Bedford County	4	5.1
Bland County	0	0.0
Botetourt County	3	9.0
Bristol City	0	0.0
Brunswick County	2	12.2
Buchanan County	0	0.0
Buckingham County	0	0.0
Buena Vista City	0	0.0
Campbell County	4	7.3
Caroline County	10	32.5
Carroll County	0	0.0
Charles City County	1	14.4
Charlotte County	1	8.4
Charlottesville City	2	4.2
Chesapeake City	29	12.0
Chesterfield County	69	19.8
Clarke County	0	0.0
Colonial Heights City	7	39.3
Covington City	0	0.0
Craig County	0	0.0
Culpeper County	9	17.4
Cumberland County	0	0.0
Danville City	5	12.3
Dickenson County	0	0.0
Dinwiddie County	4	14.0
Emporia City	0	0.0
Essex County	1	9.2
Fairfax City	3	12.2
Fairfax County	61	5.3

Locality of Residence	Deaths	Rate
Falls Church City	1	6.8
Fauquier County	13	18.4
Floyd County	1	6.3
Fluvanna County	6	22.4
Franklin City	1	12.5
Franklin County	9	16.0
Frederick County	14	15.8
Fredericksburg City	7	24.0
Galax City	0	0.0
Giles County	0	0.0
Gloucester County	7	18.7
Goochland County	0	0.0
Grayson County	0	0.0
Greene County	1	5.1
Greensville County	1	8.6
Halifax County	5	14.7
Hampton City	20	14.9
Hanover County	17	15.9
Harrisonburg City	3	5.6
Henrico County	47	14.3
Henry County	7	13.7
Highland County	0	0.0
Hopewell City	10	44.3
Isle of Wight County	5	13.5
James City County	4	5.2
King and Queen County	3	42.6
King George County	7	26.3
King William County	2	11.8
Lancaster County	0	0.0
Lee County	0	0.0
Lexington City	1	14.0
Loudoun County	16	3.9
Louisa County	5	13.6
Lunenburg County	0	0.0
Lynchburg City	3	3.7
Madison County	3	22.6
Manassas City	4	9.6
Manassas Park City	0	0.0
Martinsville City	4	31.0

Locality of Residence	Deaths	Rate
Mathews County	1	11.4
Mecklenburg County	5	16.3
Middlesex County	0	0.0
Montgomery County	2	2.0
Nelson County	0	0.0
New Kent County	4	17.9
Newport News City	31	17.4
Norfolk City	39	16.0
Northampton County	0	0.0
Northumberland County	0	0.0
Norton City	1	25.2
Nottoway County	2	13.0
Orange County	9	24.6
Page County	3	12.5
Patrick County	1	5.7
Petersburg City	9	28.5
Pittsylvania County	5	8.2
Poquoson City	0	0.0
Portsmouth City	26	27.5
Powhatan County	2	6.9
Prince Edward County	0	0.0
Prince George County	7	18.4
Prince William County	41	8.8
Pulaski County	0	0.0
Radford City	0	0.0
Rappahannock County	0	0.0
Richmond City	69	30.2
Richmond County	0	0.0
Roanoke City	32	32.0
Roanoke County	10	10.6
Rockbridge County	0	0.0
Rockingham County	3	3.7
Russell County	0	0.0
Salem City	4	15.6
Scott County	0	0.0
Shenandoah County	4	9.2
Smyth County	1	3.3
Southampton County	0	0.0
Spotsylvania County	28	20.9
Stafford County	16	10.7
Staunton City	3	12.0
Suffolk City	5	5.5
Surry County	0	0.0
Sussex County	1	8.9
Tazewell County	1	2.4
Virginia Beach City	37	8.2
Warren County	8	20.0
Washington County	1	1.8
Waynesboro City	0	0.0
Westmoreland County	3	16.8
Williamsburg City	0	0.0
Winchester City	4	14.2
Wise County	2	5.3
Wythe County	0	0.0
York County	9	13.3
Subtotal (in-state)	**899**	**10.6**
Out of State	58	ND
Unknown	4	ND
Subtotal (out-of-state)	**62**	**ND**
TOTAL	**961**	**11.3**

Note: No denominator is represented by ND.

Map 5.9 Number of Fatal Fentanyl and/or Heroin Overdoses by Locality of Residence, 2018



Map 5.10 Rates of Fatal Fentanyl and/or Heroin Overdose by Locality of Residence, 2018

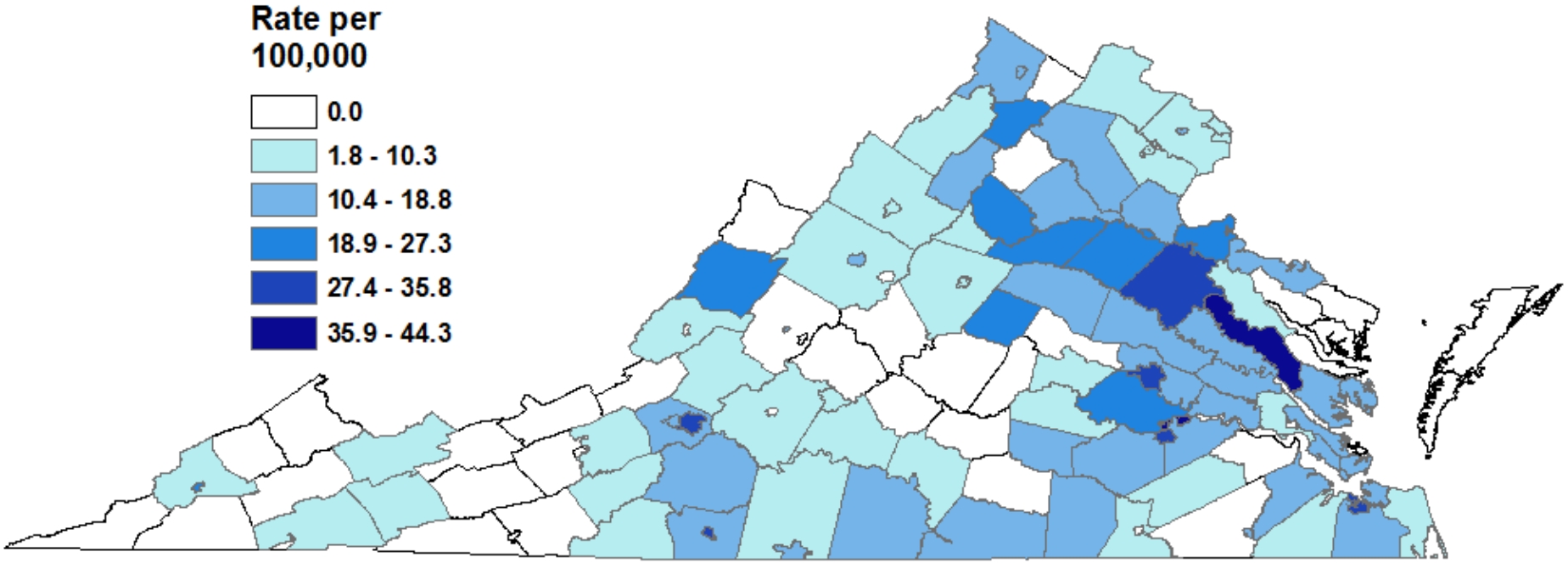


Table 5.16 Number and Rate of Fatal Fentanyl and/or Heroin Overdoses by Locality of Injury, 2018

Locality of Injury	Deaths	Rate
Accomack County	0	0.0
Albemarle County	4	3.7
Alexandria City	8	5.0
Alleghany County	1	6.7
Amelia County	1	7.7
Amherst County	0	0.0
Appomattox County	0	0.0
Arlington County	13	5.5
Augusta County	3	4.0
Bath County	1	23.3
Bedford County	4	5.1
Bland County	0	0.0
Botetourt County	4	12.0
Bristol City	0	0.0
Brunswick County	2	12.2
Buchanan County	0	0.0
Buckingham County	0	0.0
Buena Vista City	0	0.0
Campbell County	3	5.5
Caroline County	8	26.0
Carroll County	2	6.7
Charles City County	1	14.4
Charlotte County	1	8.4
Charlottesville City	5	10.4
Chesapeake City	29	12.0
Chesterfield County	55	15.8
Clarke County	2	13.8
Colonial Heights City	7	39.3
Covington City	0	0.0
Craig County	0	0.0
Culpeper County	9	17.4
Cumberland County	0	0.0
Danville City	5	12.3
Dickenson County	0	0.0
Dinwiddie County	2	7.0
Emporia City	0	0.0
Essex County	0	0.0
Fairfax City	3	12.2
Fairfax County	66	5.7
Falls Church City	1	6.8
Fauquier County	20	28.3
Floyd County	0	0.0

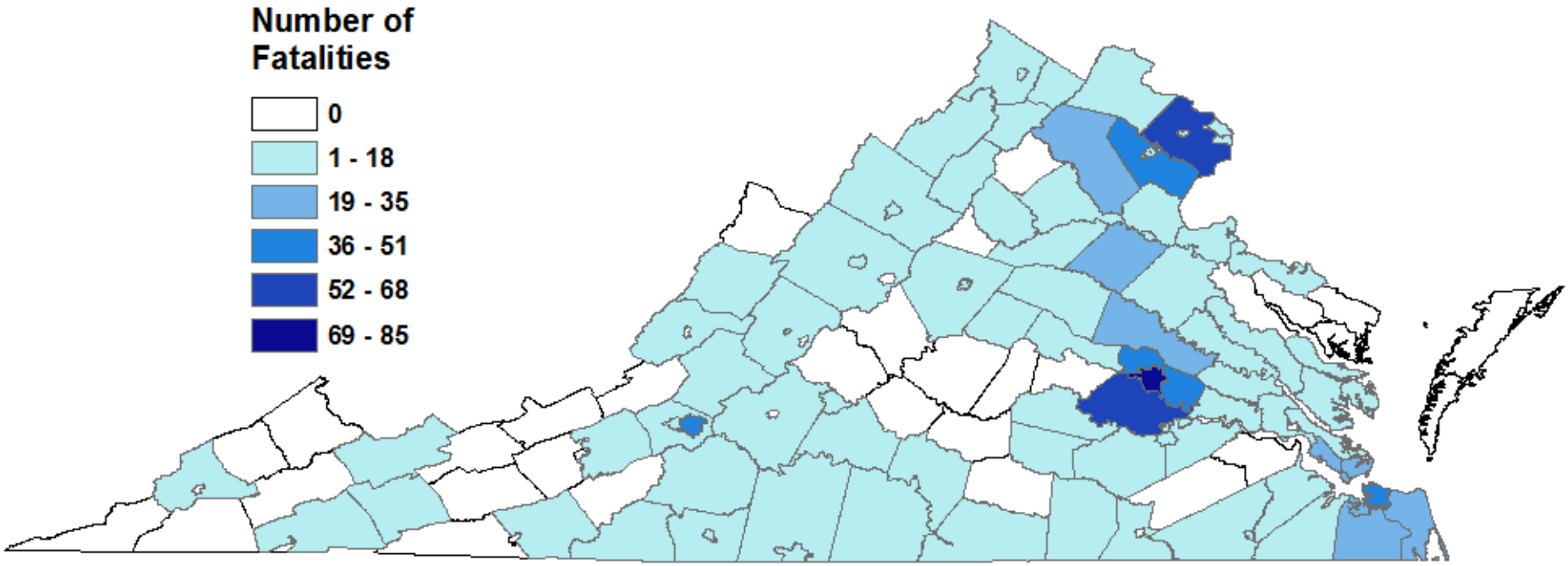
Locality of Injury	Deaths	Rate
Fluvanna County	4	14.9
Franklin City	1	12.5
Franklin County	9	16.0
Frederick County	13	14.7
Fredericksburg City	11	37.7
Galax City	0	0.0
Giles County	0	0.0
Gloucester County	7	18.7
Goochland County	1	4.3
Grayson County	0	0.0
Greene County	0	0.0
Greensville County	1	8.6
Halifax County	5	14.7
Hampton City	20	14.9
Hanover County	18	16.8
Harrisonburg City	5	9.3
Henrico County	47	14.3
Henry County	7	13.7
Highland County	0	0.0
Hopewell City	9	39.8
Isle of Wight County	2	5.4
James City County	2	2.6
King and Queen County	2	28.4
King George County	6	22.6
King William County	2	11.8
Lancaster County	0	0.0
Lee County	0	0.0
Lexington City	1	14.0
Loudoun County	13	3.2
Louisa County	5	13.6
Lunenburg County	0	0.0
Lynchburg City	2	2.4
Madison County	3	22.6
Manassas City	5	12.0
Manassas Park City	1	5.8
Martinsville City	6	46.5
Mathews County	1	11.4
Mecklenburg County	4	13.1
Middlesex County	1	9.3
Montgomery County	1	1.0
Nelson County	0	0.0
New Kent County	3	13.4

Virginia Department of Health

Locality of Injury	Deaths	Rate
Newport News City	34	19.0
Norfolk City	44	18.0
Northampton County	0	0.0
Northumberland County	0	0.0
Norton City	0	0.0
Nottoway County	1	6.5
Orange County	4	10.9
Page County	2	8.4
Patrick County	1	5.7
Petersburg City	14	44.4
Pittsylvania County	6	9.8
Poquoson City	1	8.2
Portsmouth City	31	32.8
Powhatan County	0	0.0
Prince Edward County	0	0.0
Prince George County	5	13.1
Prince William County	44	9.4
Pulaski County	0	0.0
Radford City	0	0.0
Rappahannock County	0	0.0
Richmond City	85	37.2
Richmond County	0	0.0
Roanoke City	37	37.0
Roanoke County	7	7.4
Rockbridge County	1	4.4
Rockingham County	4	4.9
Russell County	0	0.0
Salem City	3	11.7
Scott County	0	0.0
Shenandoah County	4	9.2
Smyth County	1	3.3
Southampton County	2	11.4
Spotsylvania County	26	19.4
Stafford County	14	9.3
Staunton City	2	8.0
Suffolk City	7	7.7
Surry County	0	0.0
Sussex County	0	0.0
Tazewell County	1	2.4
Virginia Beach City	34	7.6
Warren County	5	12.5
Washington County	1	1.8
Waynesboro City	0	0.0
Westmoreland County	1	5.6
Williamsburg City	0	0.0
Winchester City	5	17.8
Wise County	2	5.3
Wythe County	0	0.0
York County	5	7.4
Subtotal (in-state)	**912**	**10.7**
Out of State	3	ND
Unknown	46	ND
Subtotal (out-of-state)	**49**	**ND**
TOTAL	**961**	**11.3**

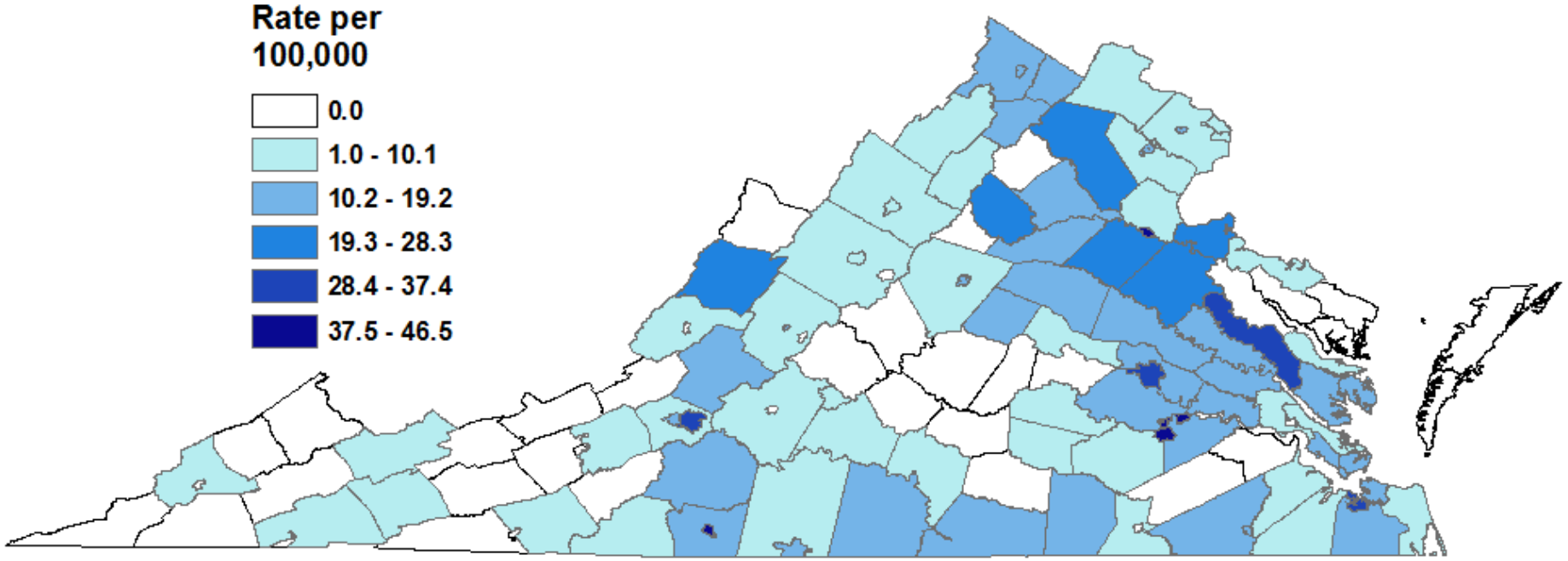
Note: No denominator is represented by ND.

Map 5.11 Number of Fatal Fentanyl and/or Heroin Overdoses by Locality of Injury, 2018



Virginia Department of Health

Map 5.12 Rates of Fatal Fentanyl and/or Heroin Overdose by Locality of Injury, 2018

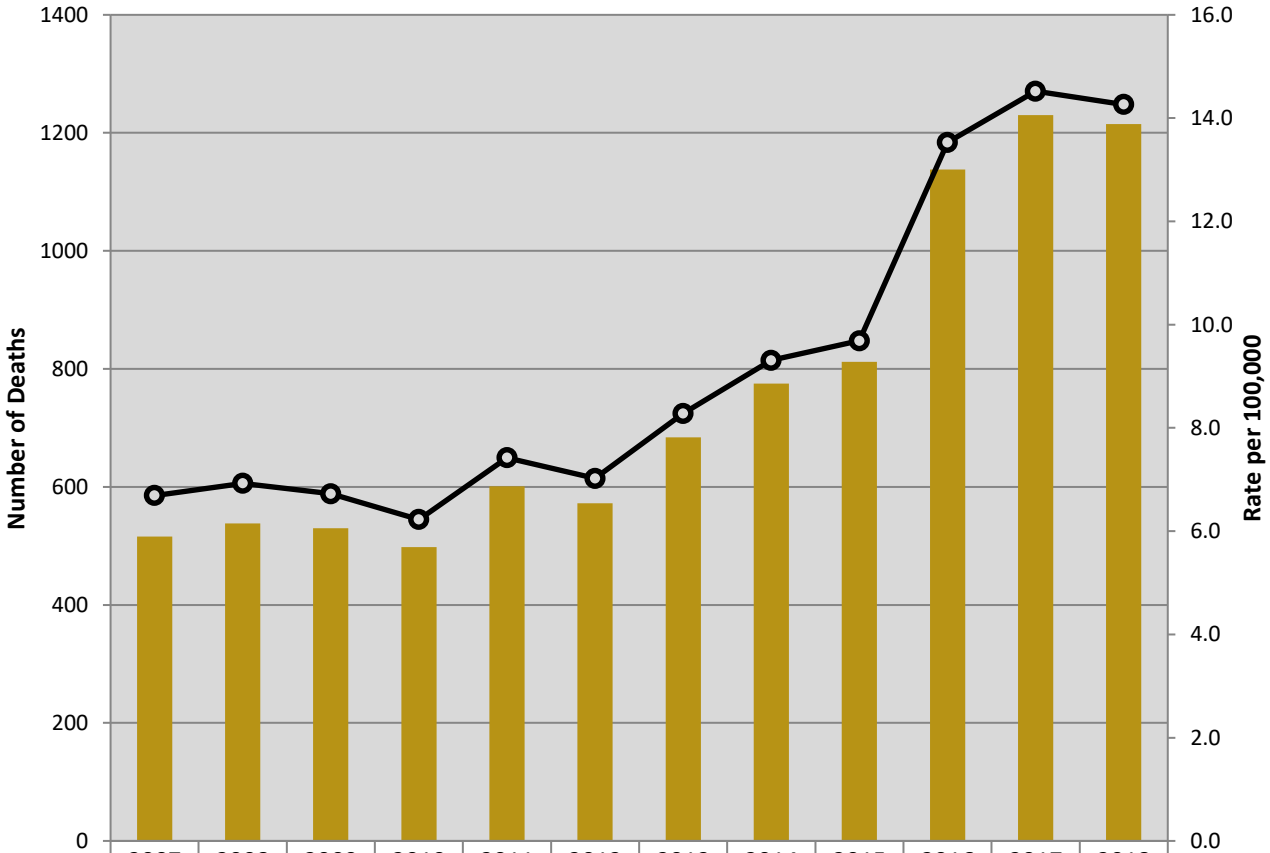


ALL OPIOID DEATHS (N=1,215)

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 decreased slightly in 2018 when compared to 2017 (1.2%) and represented 81.8% of all fatal drug overdose cases in 2018.

- White males and males aged 35-44 years had the highest mortality rates compared to other demographic groups (24.2 and 41.9 deaths per 100,000 persons, respectively)
- Nearly 95% of all fatal opioid overdoses in 2018 were accidents
- Out of all opioids in 2018, fentanyl (Rx, illicit, and analogs) were responsible for the largest number of deaths (66.9%)

Figure 5.24 Number and Rate of All Fatal Opioid Overdoses Year of Death, 2007-2018

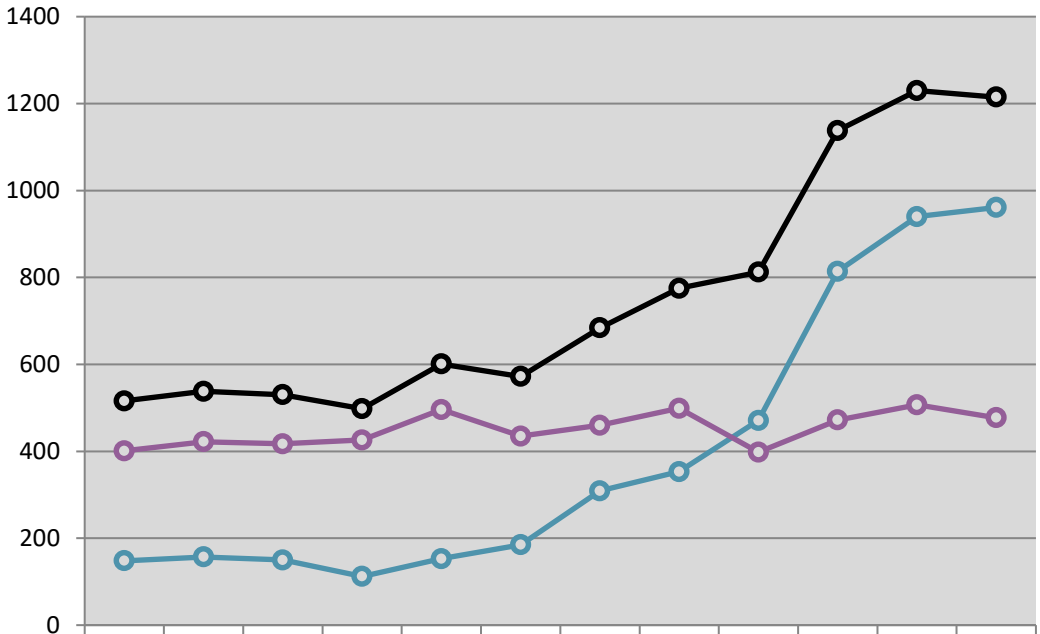


	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Deaths	516	538	530	498	601	572	684	775	812	1138	1230	1215
Mortality Rate	6.7	6.9	6.7	6.2	7.4	7.0	8.3	9.3	9.7	13.5	14.5	14.3

Table 5.17 Number of All Fatal Opioid Overdoses by Combination and OCME District, 2018

Drug Combination	Central	Northern	Tidewater	Western	Total
Fentanyl and/or heroin	346	146	156	75	**723**
One or more prescription opioids (excluding fentanyl)	52	44	46	97	**239**
Fentanyl and/or heroin and one more prescription opioids (excluding fentanyl)	42	88	59	49	**238**
Opioids unspecified	4	4	4	3	**15**
Total	**444**	**282**	**265**	**224**	**1215**

Figure 5.25 Percentage of All Fatal Opioid Overdoses by Manner of Death, 2018



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fentanyl and/or Heroin	148	157	150	112	153	185	309	353	471	814	940	961
Rx Opioid (Excluding Fentanyl)	401	422	417	426	496	435	460	499	398	472	507	477
All Opioids	516	538	530	498	601	572	684	775	812	1138	1230	1215

Figure 5.26 Percentage of All Fatal Opioid Overdoses by Manner of Death, 2018

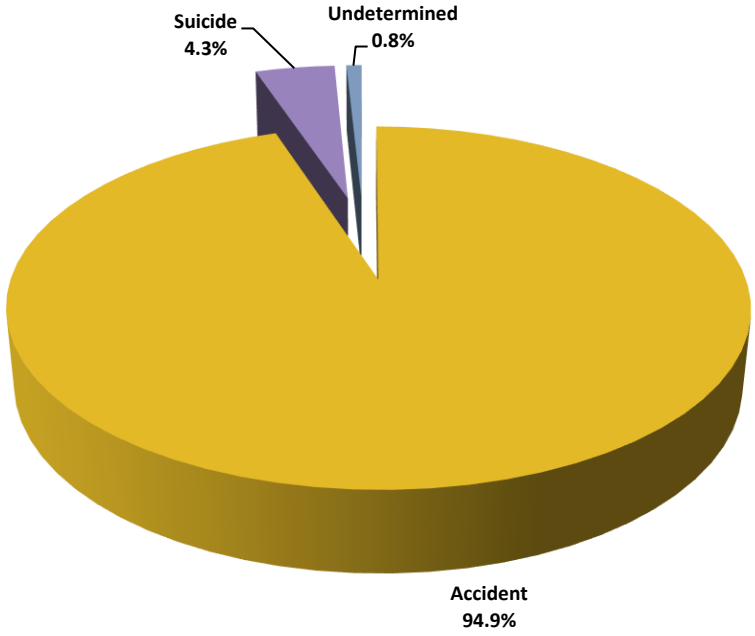
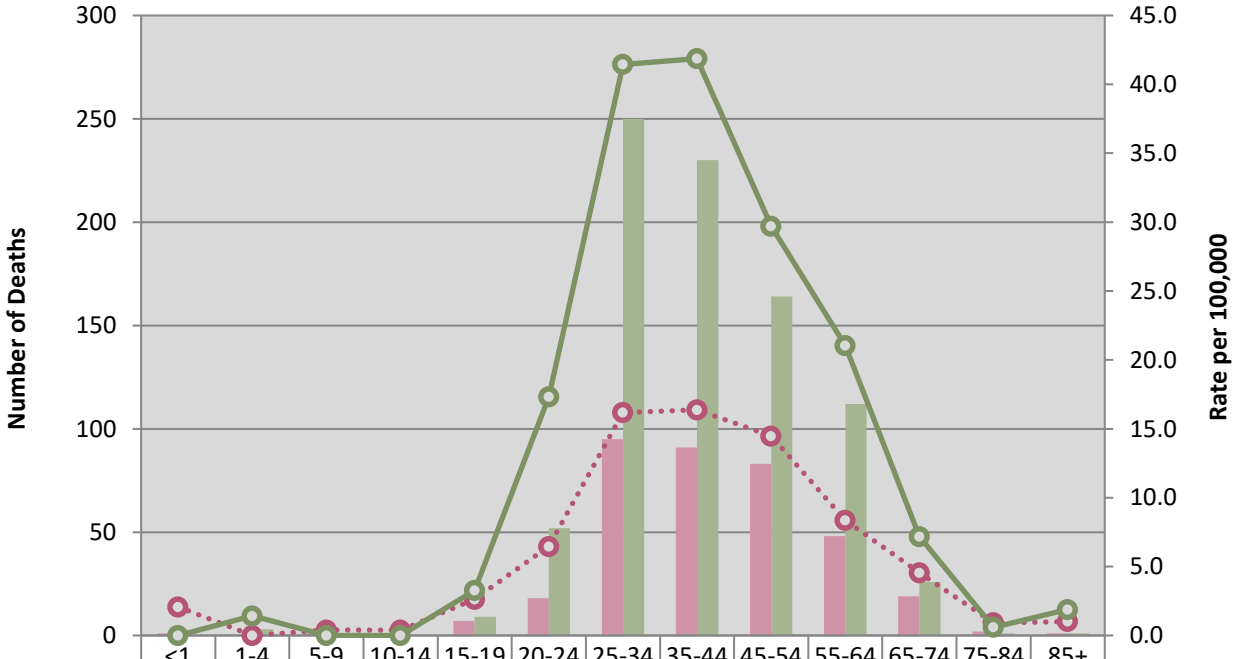


Figure 5.27 Number and Rate of All Fatal Opioid Overdoses by Age Group and Gender, 2018



	<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	1	0	1	1	7	18	95	91	83	48	19	2	1
Male	0	3	0	0	9	52	250	230	164	112	26	1	1
Female Rate	2.1	0.0	0.4	0.4	2.6	6.5	16.2	16.4	14.5	8.4	4.6	0.9	1.0
Male Rate	0.0	1.4	0.0	0.0	3.3	17.3	41.4	41.9	29.7	21.0	7.2	0.6	1.9

Figure 5.28 Percentage of All Fatal Opioid Overdoses by Race/Ethnicity, 2018

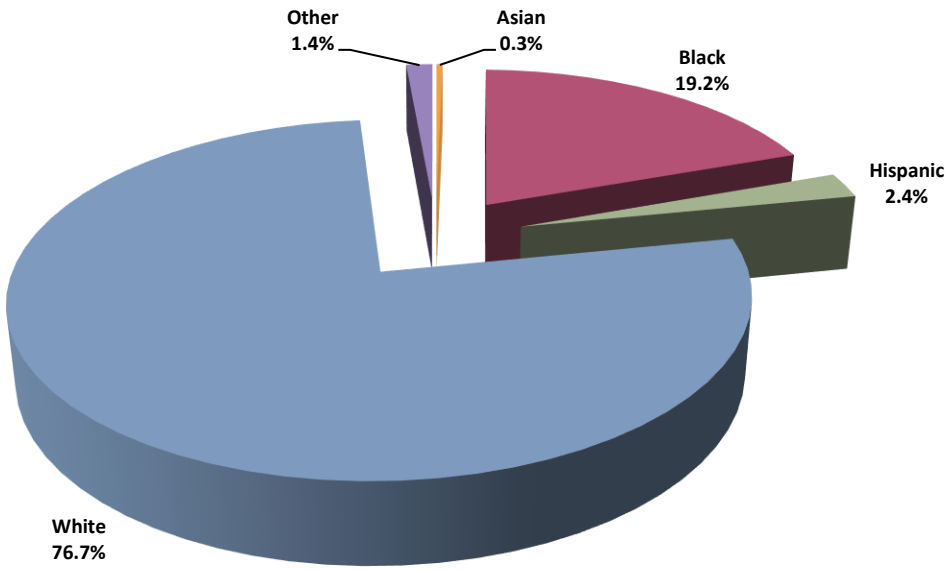
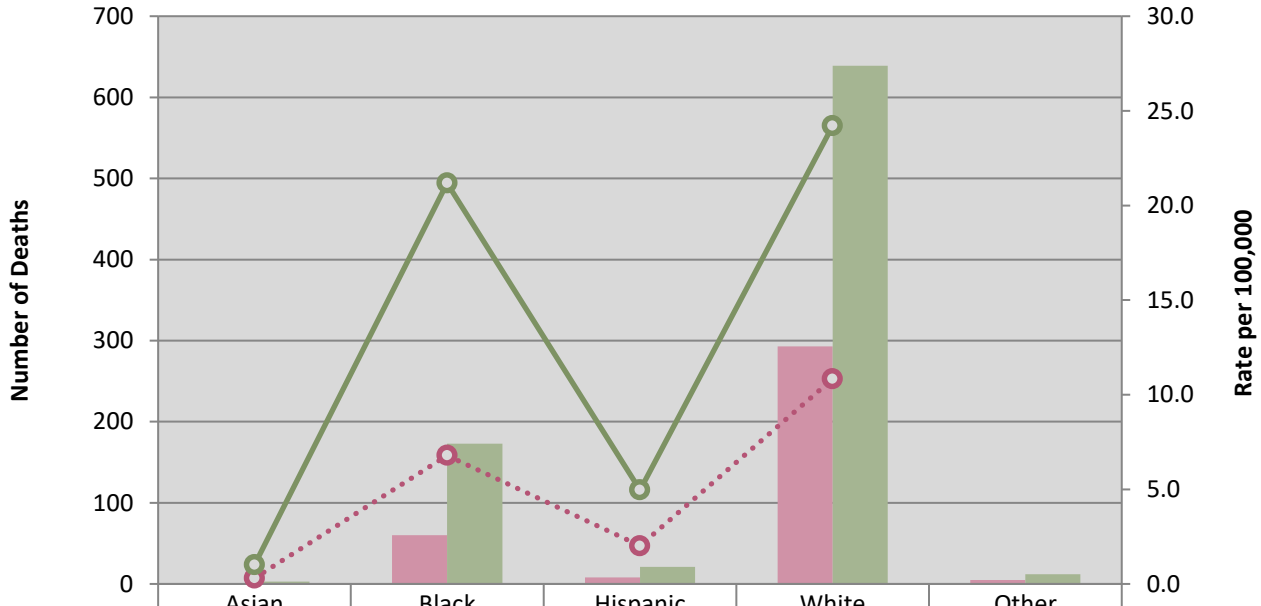


Figure 5.29 Number and Rate of All Fatal Opioid Overdoses by Race/Ethnicity and Gender, 2018



	Asian	Black	Hispanic	White	Other
Female	1	60	8	293	5
Male	3	173	21	639	12
Female Rate	0.3	6.8	2.0	10.8	*
Male Rate	1.0	21.2	5.0	24.2	*

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

Figure 5.30 Number of Opioids Causing or Contributing to Fatal Opioid Overdoses, 2018

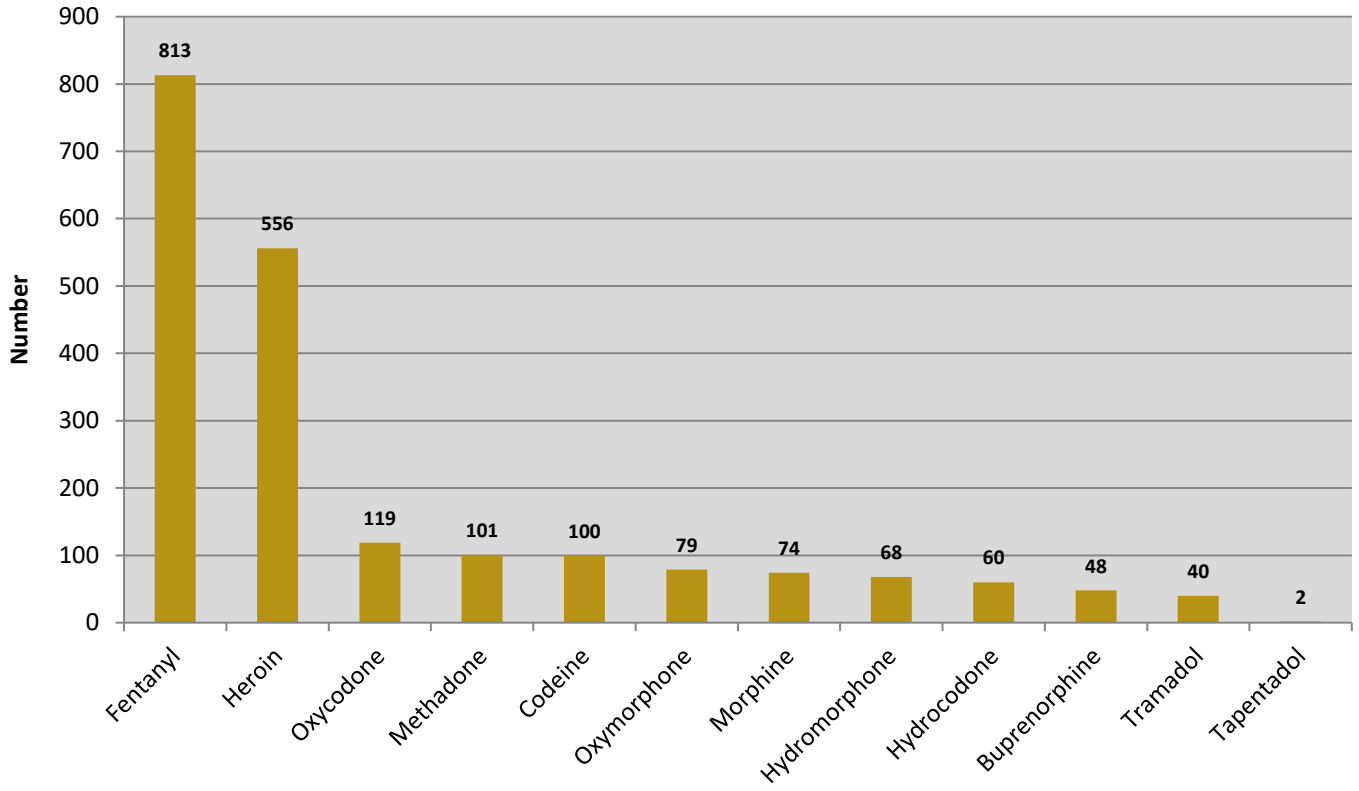


Table 5.18 Number and Percentage of All Fatal Opioid Overdoses by Whether Alcohol Caused Death, 2018

Whether Alcohol Played a Role in Death	Deaths	Percentage
Yes	152	12.5%
Contributed	54	4.4%
No	1009	83.0%
TOTAL	**1215**	**100.0%**

Table 5.19 Number of All Fatal Opioid Overdoses by Locality of Residence, 2018

Locality of Residence	Deaths	Rate
Accomack County	3	9.3
Albemarle County	6	5.5
Alexandria City	10	6.2
Alleghany County	1	6.7
Amelia County	1	7.7
Amherst County	0	0.0
Appomattox County	1	6.3
Arlington County	8	3.4
Augusta County	8	10.6
Bath County	1	23.3
Bedford County	4	5.1
Bland County	0	0.0
Botetourt County	6	18.0
Bristol City	2	12.1
Brunswick County	2	12.2
Buchanan County	9	42.4
Buckingham County	0	0.0
Buena Vista City	0	0.0
Campbell County	4	7.3
Caroline County	11	35.7
Carroll County	1	3.4
Charles City County	1	14.4
Charlotte County	1	8.4
Charlottesville City	2	4.2
Chesapeake City	31	12.8
Chesterfield County	79	22.7
Clarke County	2	13.8
Colonial Heights City	9	50.5
Covington City	0	0.0
Craig County	0	0.0
Culpeper County	13	25.1
Cumberland County	0	0.0
Danville City	5	12.3
Dickenson County	4	27.5
Dinwiddie County	5	17.5
Emporia City	1	19.5
Essex County	1	9.2
Fairfax City	3	12.2
Fairfax County	75	6.5
Falls Church City	2	13.5
Fauquier County	13	18.4
Floyd County	1	6.3
Fluvanna County	6	22.4

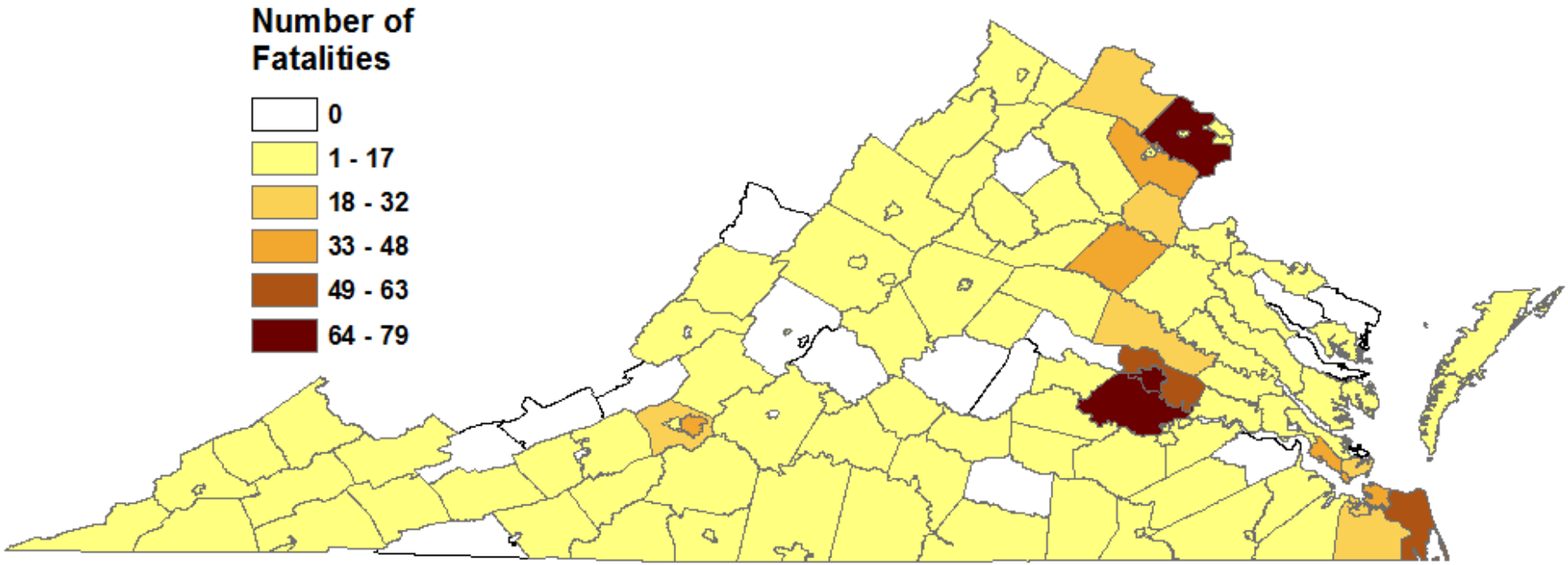
Locality of Residence	Deaths	Rate
Franklin City	1	12.5
Franklin County	13	23.1
Frederick County	14	15.8
Fredericksburg City	10	34.3
Galax City	0	0.0
Giles County	0	0.0
Gloucester County	8	21.4
Goochland County	0	0.0
Grayson County	0	0.0
Greene County	3	15.2
Greensville County	2	17.2
Halifax County	5	14.7
Hampton City	23	17.1
Hanover County	20	18.6
Harrisonburg City	3	5.6
Henrico County	54	16.4
Henry County	11	21.6
Highland County	0	0.0
Hopewell City	10	44.3
Isle of Wight County	6	16.2
James City County	6	7.9
King and Queen County	3	42.6
King George County	9	33.9
King William County	3	17.7
Lancaster County	1	9.3
Lee County	3	12.7
Lexington City	1	14.0
Loudoun County	22	5.4
Louisa County	5	13.6
Lunenburg County	0	0.0
Lynchburg City	7	8.5
Madison County	3	22.6
Manassas City	6	14.4
Manassas Park City	0	0.0
Martinsville City	5	38.8
Mathews County	1	11.4
Mecklenburg County	6	19.6
Middlesex County	0	0.0
Montgomery County	6	6.1
Nelson County	1	6.7
New Kent County	4	17.9
Newport News City	36	20.2
Norfolk City	47	19.3

Virginia Department of Health

Locality of Residence	Deaths	Rate
Northampton County	1	8.5
Northumberland County	0	0.0
Norton City	1	25.2
Nottoway County	2	13.0
Orange County	11	30.0
Page County	3	12.5
Patrick County	1	5.7
Petersburg City	9	28.5
Pittsylvania County	8	13.1
Poquoson City	0	0.0
Portsmouth City	28	29.6
Powhatan County	3	10.3
Prince Edward County	1	4.4
Prince George County	7	18.4
Prince William County	46	9.8
Pulaski County	6	17.6
Radford City	0	0.0
Rappahannock County	0	0.0
Richmond City	74	32.3
Richmond County	0	0.0
Roanoke City	47	47.0
Roanoke County	17	18.1
Rockbridge County	0	0.0
Rockingham County	3	3.7
Russell County	1	3.7
Salem City	5	19.5
Scott County	2	9.3
Shenandoah County	5	11.5
Smyth County	2	6.6
Southampton County	1	5.7
Spotsylvania County	34	25.3
Stafford County	19	12.7
Staunton City	3	12.0
Suffolk City	9	9.9
Surry County	0	0.0
Sussex County	1	8.9
Tazewell County	6	14.7
Virginia Beach City	50	11.1
Warren County	12	30.0
Washington County	3	5.5
Waynesboro City	3	13.3
Westmoreland County	3	16.8
Williamsburg City	0	0.0
Winchester City	4	14.2
Wise County	8	21.0
Wythe County	1	3.5
York County	9	13.3
Subtotal (in-state)	**1139**	**13.4**
Out of State	4	ND
Unknown	72	ND
Subtotal (out-of-state)	**76**	**ND**
TOTAL	**1215**	**14.3**

Note: No denominator is represented by ND.

Map 5.13 Number of All Fatal Opioid Overdoses by Locality of Residence, 2018



Virginia Department of Health

Map 5.14 Rates of All Fatal Opioid Overdoses by Locality of Residence, 2018

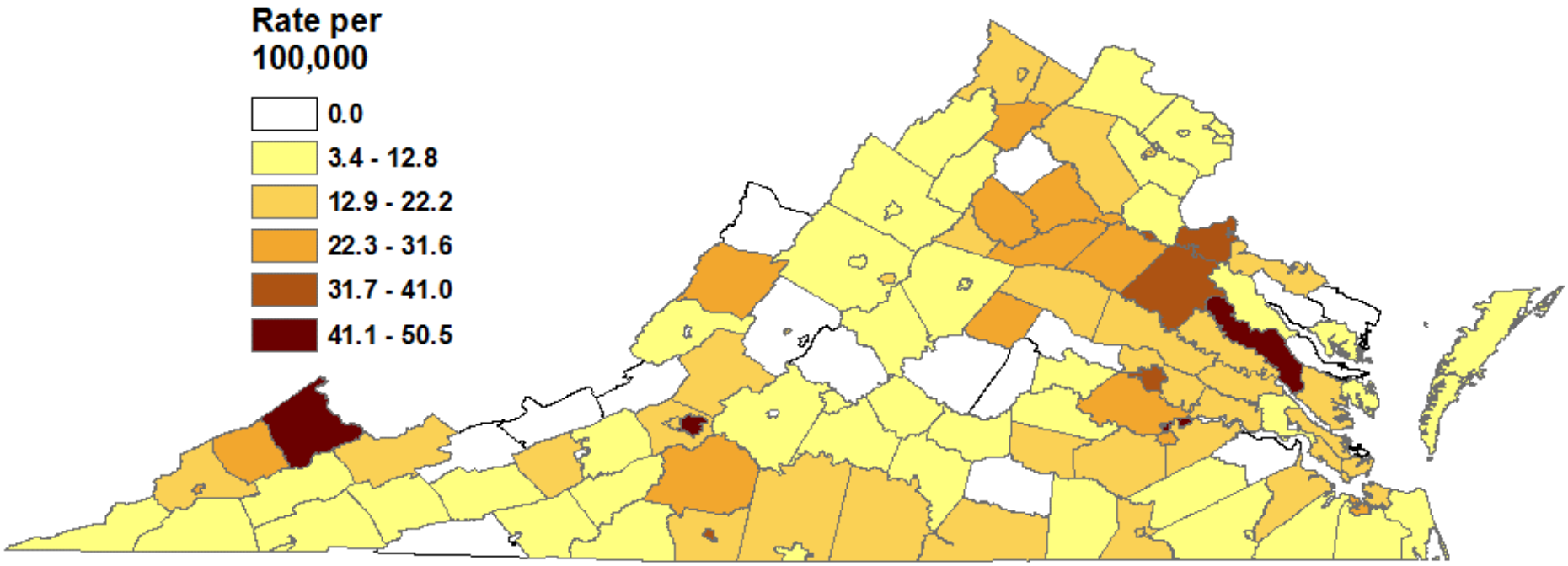


Table 5.20 Number and Rate of All Fatal Opioid Overdoses by Locality of Injury, 2018

Locality of Injury	Deaths	Rate
Accomack County	4	12.3
Albemarle County	4	3.7
Alexandria City	9	5.6
Alleghany County	1	6.7
Amelia County	1	7.7
Amherst County	0	0.0
Appomattox County	1	6.3
Arlington County	14	5.9
Augusta County	5	6.6
Bath County	1	23.3
Bedford County	5	6.3
Bland County	0	0.0
Botetourt County	6	18.0
Bristol City	1	6.1
Brunswick County	3	18.3
Buchanan County	10	47.1
Buckingham County	0	0.0
Buena Vista City	0	0.0
Campbell County	3	5.5
Caroline County	9	29.2
Carroll County	3	10.1
Charles City County	1	14.4
Charlotte County	1	8.4
Charlottesville City	5	10.4
Chesapeake City	32	13.2
Chesterfield County	65	18.6
Clarke County	4	27.5
Colonial Heights City	8	44.9
Covington City	0	0.0
Craig County	0	0.0
Culpeper County	12	23.1
Cumberland County	0	0.0
Danville City	5	12.3
Dickenson County	2	13.8
Dinwiddie County	3	10.5
Emporia City	1	19.5
Essex County	0	0.0
Fairfax City	3	12.2
Fairfax County	78	6.8
Falls Church City	2	13.5
Fauquier County	20	28.3
Floyd County	0	0.0
Fluvanna County	4	14.9

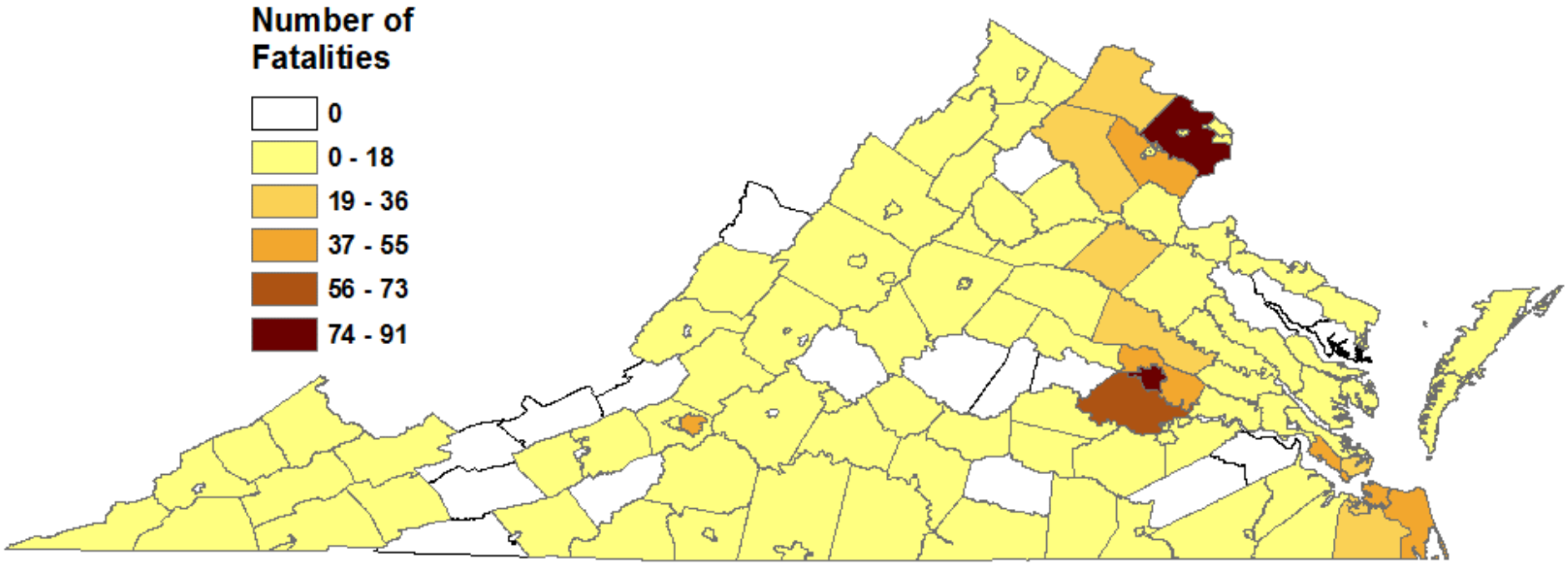
Locality of Injury	Deaths	Rate
Franklin City	1	12.5
Franklin County	13	23.1
Frederick County	13	14.7
Fredericksburg City	15	51.5
Galax City	0	0.0
Giles County	0	0.0
Gloucester County	8	21.4
Goochland County	1	4.3
Grayson County	0	0.0
Greene County	3	15.2
Greensville County	1	8.6
Halifax County	5	14.7
Hampton City	23	17.1
Hanover County	20	18.6
Harrisonburg City	5	9.3
Henrico County	54	16.4
Henry County	10	19.6
Highland County	0	0.0
Hopewell City	9	39.8
Isle of Wight County	3	8.1
James City County	4	5.2
King and Queen County	2	28.4
King George County	8	30.1
King William County	3	17.7
Lancaster County	0	0.0
Lee County	4	17.0
Lexington City	1	14.0
Loudoun County	22	5.4
Louisa County	5	13.6
Lunenburg County	0	0.0
Lynchburg City	7	8.5
Madison County	4	30.1
Manassas City	7	16.8
Manassas Park City	2	11.6
Martinsville City	8	62.0
Mathews County	1	11.4
Mecklenburg County	6	19.6
Middlesex County	1	9.3
Montgomery County	5	5.1
Nelson County	1	6.7
New Kent County	3	13.4
Newport News City	40	22.4
Norfolk City	52	21.3

Virginia Department of Health

Locality of Injury	Deaths	Rate
Northampton County	1	8.5
Northumberland County	1	8.2
Norton City	0	0.0
Nottoway County	1	6.5
Orange County	7	19.1
Page County	2	8.4
Patrick County	1	5.7
Petersburg City	14	44.4
Pittsylvania County	9	14.8
Poquoson City	1	8.2
Portsmouth City	32	33.8
Powhatan County	0	0.0
Prince Edward County	1	4.4
Prince George County	5	13.1
Prince William County	50	10.7
Pulaski County	6	17.6
Radford City	0	0.0
Rappahannock County	0	0.0
Richmond City	91	39.8
Richmond County	0	0.0
Roanoke City	51	51.0
Roanoke County	16	17.0
Rockbridge County	1	4.4
Rockingham County	4	4.9
Russell County	1	3.7
Salem City	4	15.6
Scott County	2	9.3
Shenandoah County	5	11.5
Smyth County	2	6.6
Southampton County	3	17.1
Spotsylvania County	32	23.8
Stafford County	17	11.3
Staunton City	3	12.0
Suffolk City	12	13.2
Surry County	0	0.0
Sussex County	0	0.0
Tazewell County	7	17.1
Virginia Beach City	47	10.4
Warren County	9	22.5
Washington County	3	5.5
Waynesboro City	3	13.3
Westmoreland County	1	5.6
Williamsburg City	0	0.0
Winchester City	5	17.8
Wise County	9	23.7
Wythe County	0	0.0
York County	5	7.4
Subtotal (in-state)	**1160**	**13.6**
Out of State	6	ND
Unknown	49	ND
Subtotal (out-of-state)	**55**	**ND**
TOTAL	**1215**	**14.3**

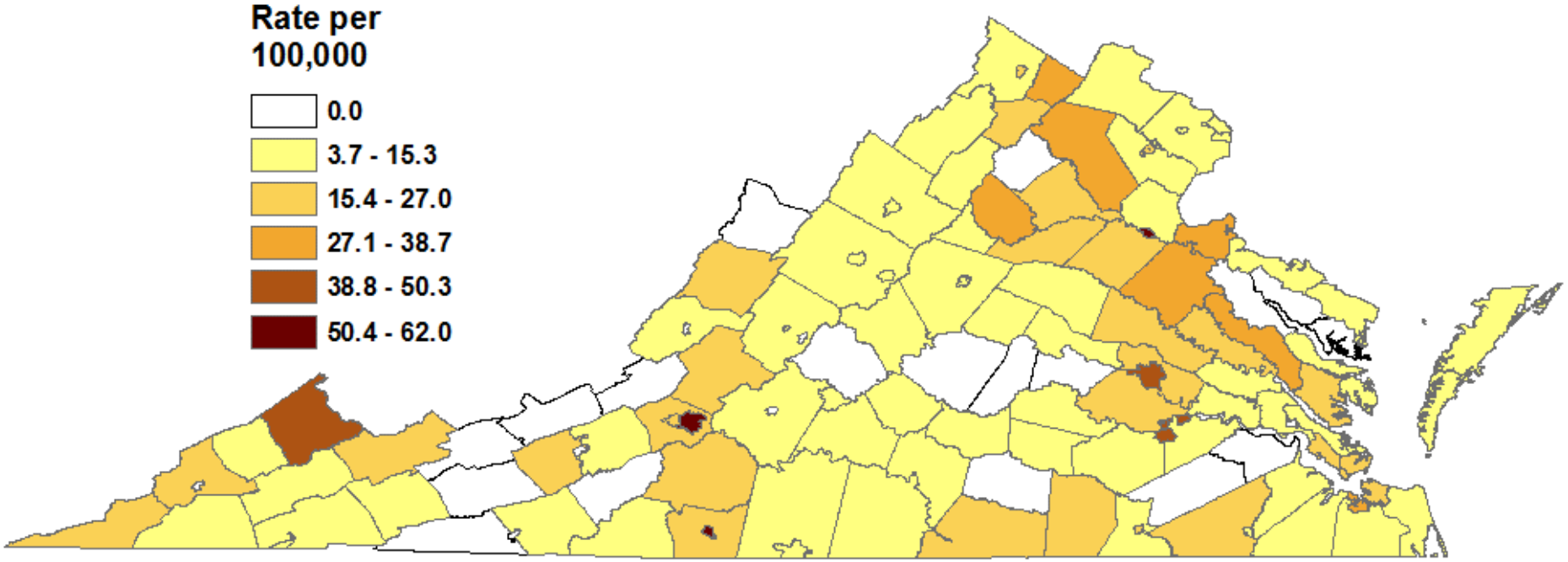
Note: No denominator is represented by ND.

Map 5.15 Number of All Fatal Opioid Overdoses by Locality of Injury, 2018



Virginia Department of Health

Map 5.16 Rates of All Fatal Opioid Overdoses by Locality of Injury, 2018

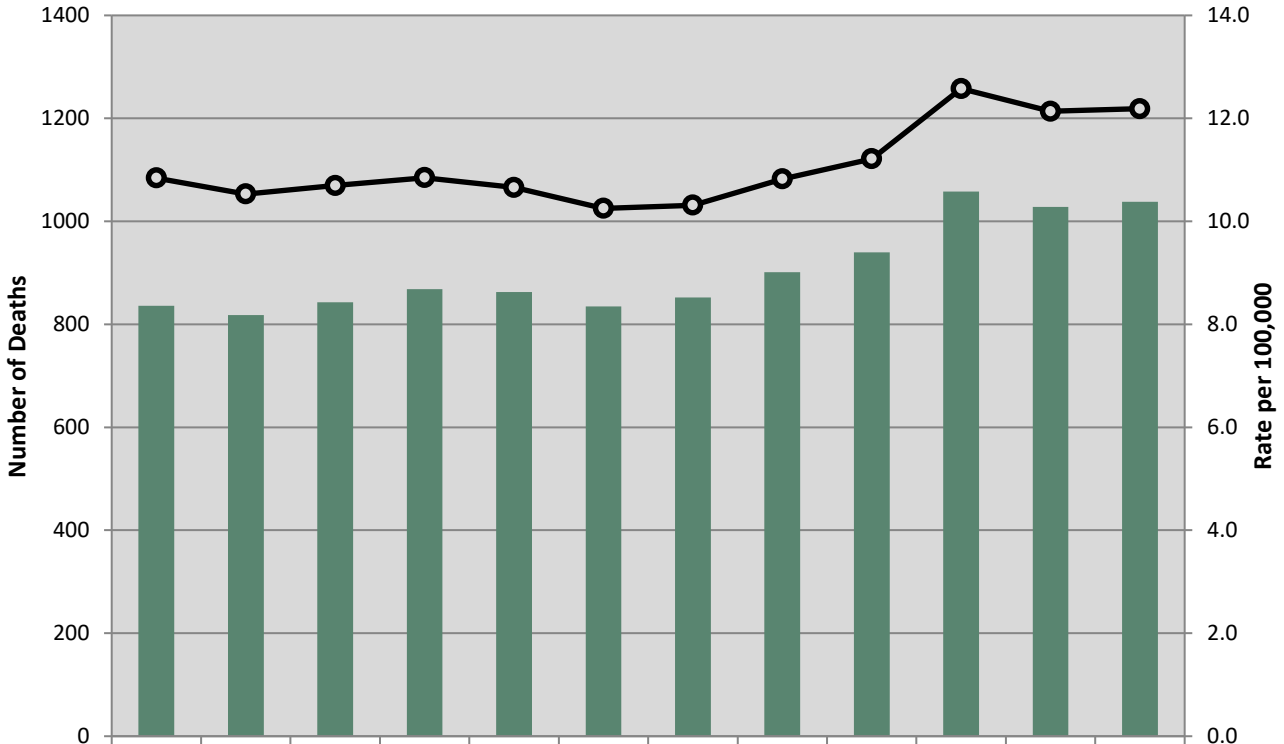


SECTION 6: GUN-RELATED DEATHS (N=1,038)

Gun-related fatalities continue to be one of the top three methods of unnatural death in Virginia since 2007. Generally, the number of gun-related suicides slowly increase each year, and since 2012, gun-related homicides slowly increased. In 2018, gun-related deaths of all manners were nearly identical to those of 2017 (increase of 1.0%).

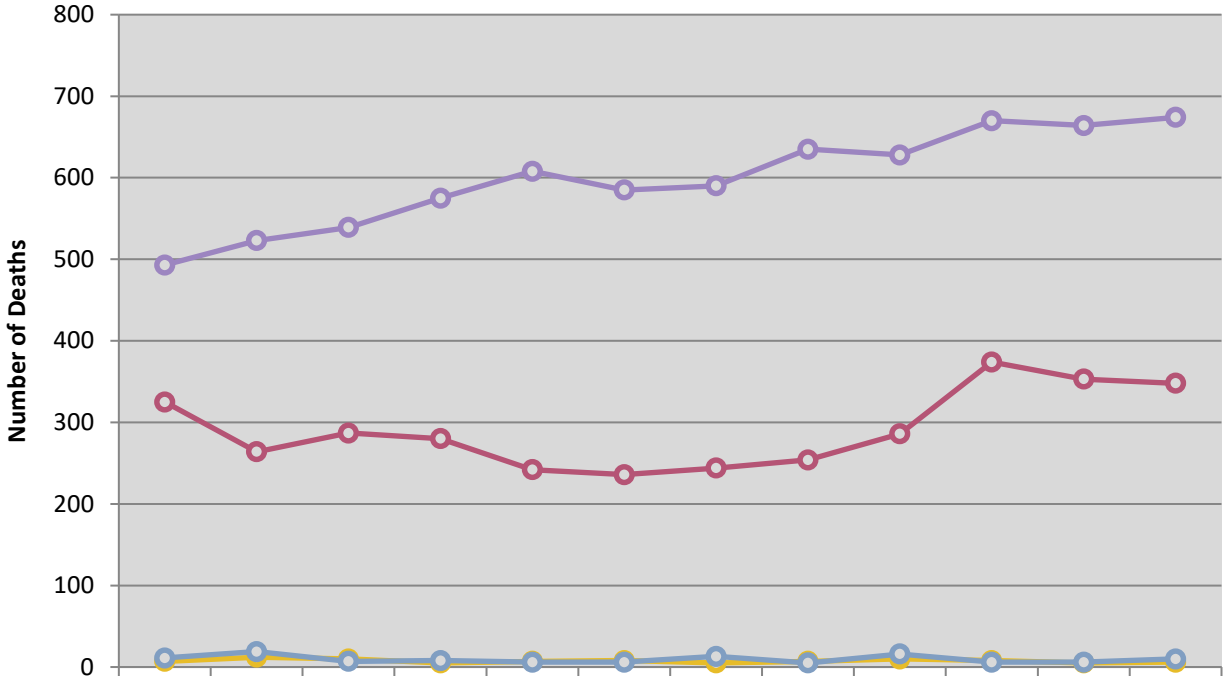
- The majority (64.9%) of gun related deaths were due to suicide
- The Northern OCME region had the lowest number and the lowest rate of gun-related death of all manners (5.7 deaths per 100,000 persons) compared to all other OCME district offices
- Males (83.1%), 25-34 year olds (17.3%), and Whites (63.4%) had the largest number of gun-related deaths; however, males aged 20-24 years of age and Black males had the highest rate of gun-related death (42.0 and 34.2 deaths per 100,000 persons, respectively)

Figure 6.1 Number and Rate of Gun-Related Deaths by Year of Death, 2007-2018



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Deaths	836	818	843	868	863	835	852	901	940	1058	1028	1038
Mortality Rate	10.8	10.5	10.7	10.8	10.7	10.3	10.3	10.8	11.2	12.6	12.1	12.2

Figure 6.2 Number of Gun-Related Deaths by Year and Manner of Death, 2007-2018



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Accident	7	12	10	5	7	8	5	7	10	8	5	6
Homicide	325	264	287	280	242	236	244	254	286	374	353	348
Suicide	493	523	539	575	608	585	590	635	628	670	664	674
Undetermined	11	19	7	8	6	6	13	5	16	6	6	10

Figure 6.3 Percentage of Gun-Related Deaths by Manner of Death, 2018

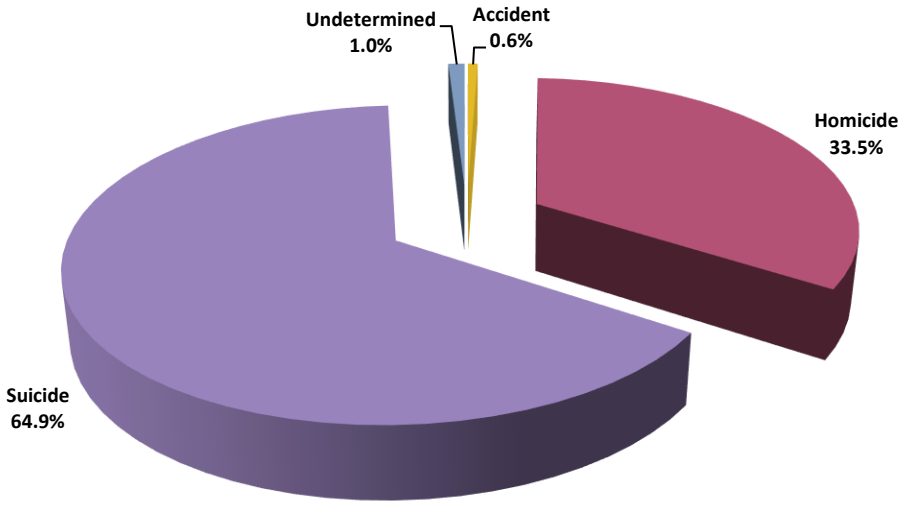


Table 6.1 Number and Rate of Gun-Related Deaths by OCME District and Manner of Death, 2018

Manner of Death	Central		Northern		Tidewater		Western		TOTAL	
	n	rate	n	rate	n	rate	n	rate	n	rate
Accident	1	0.0	0	0.0	2	0.1	3	0.2	**6**	**0.1**
Homicide	114	4.9	32	1.1	123	7.6	79	4.8	**348**	**4.1**
Suicide	185	8.0	133	4.5	137	8.4	219	13.3	**674**	**7.9**
Undetermined	2	0.1	3	0.1	2	0.1	3	0.2	**10**	**0.1**
TOTAL	**302**	**13.1**	**168**	**5.7**	**264**	**16.3**	**304**	**18.5**	**1038**	**12.2**

Table 6.2 Number of Gun-Related Deaths by Gun Type and Manner of Death, 2018

Manner of Death	Handgun	Multiple*	Rifle	Shotgun	Other	Unknown	Total
Accident	4	0	1	1	0	0	6
Homicide	273	2	16	8	0	49	348
Suicide	558	0	41	68	1	6	674
Undetermined	10	0	0	0	0	0	10
Total	**845**	**2**	**58**	**77**	**1**	**55**	**1038**

Note: '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, 2018

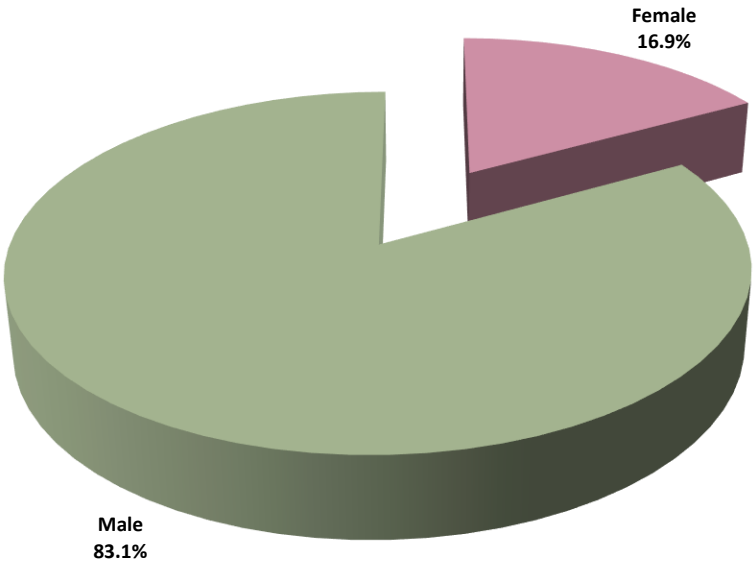
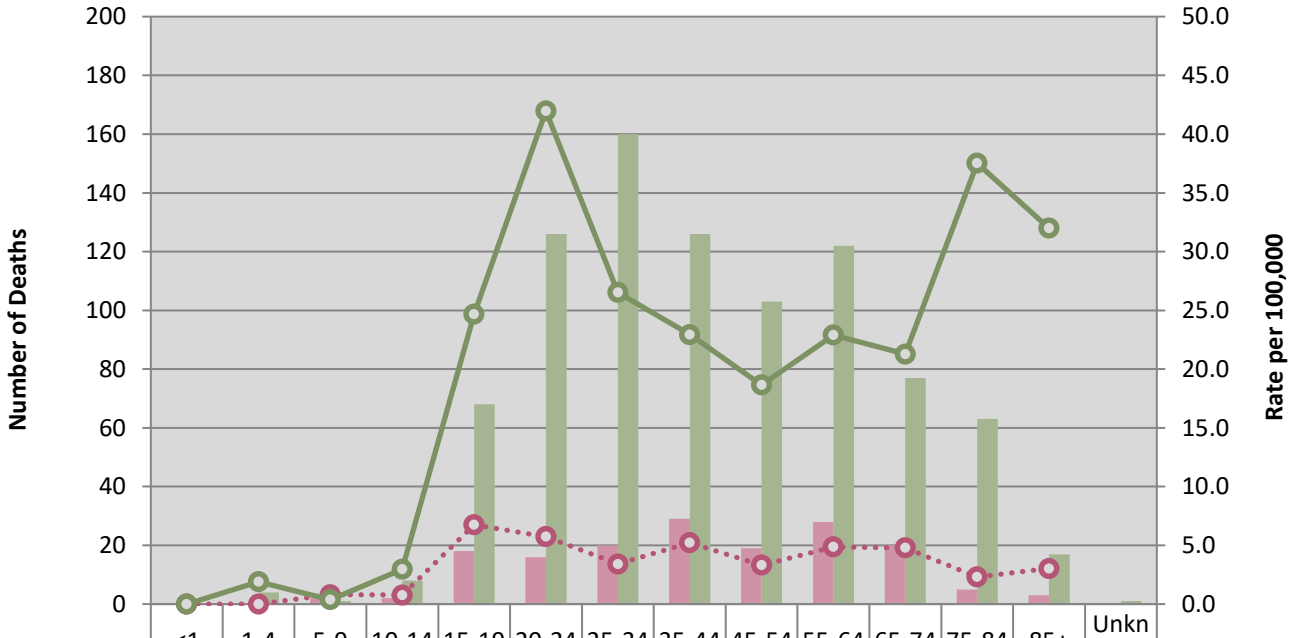


Figure 6.5 Number and Rate of Gun-Related Deaths by Age Group and Gender, 2018



	<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	0	0	2	2	18	16	20	29	19	28	20	5	3	0
Male	0	4	1	8	68	126	160	126	103	122	77	63	17	1
Female Rate	0.0	0.0	0.8	0.8	6.7	5.7	3.4	5.2	3.3	4.9	4.8	2.3	3.0	*
Male Rate	0.0	1.9	0.4	3.0	24.7	42.0	26.5	22.9	18.7	22.9	21.3	37.5	32.0	*

* No denominator to calculate rate

Figure 6.6 Percentage of Gun-Related Deaths by Race/Ethnicity, 2018

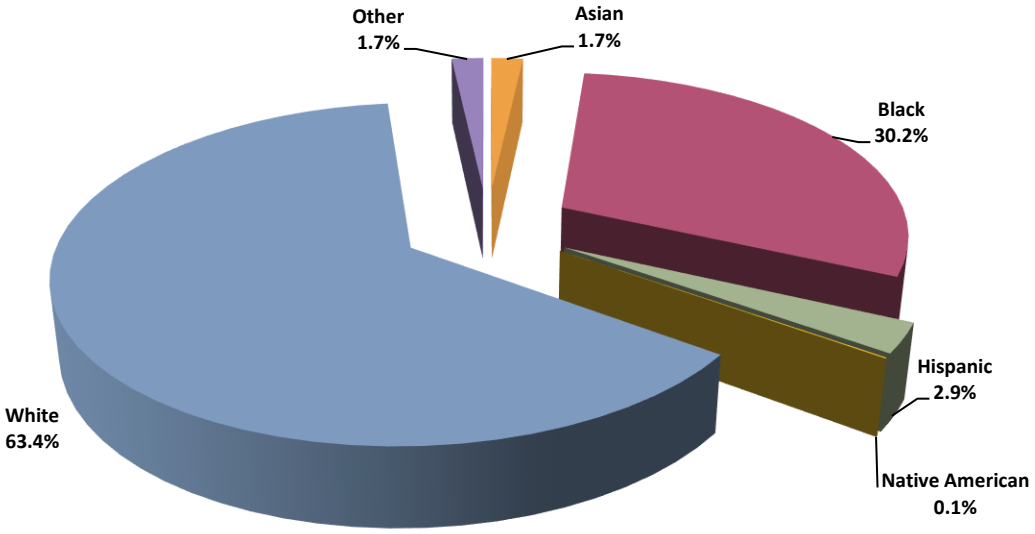
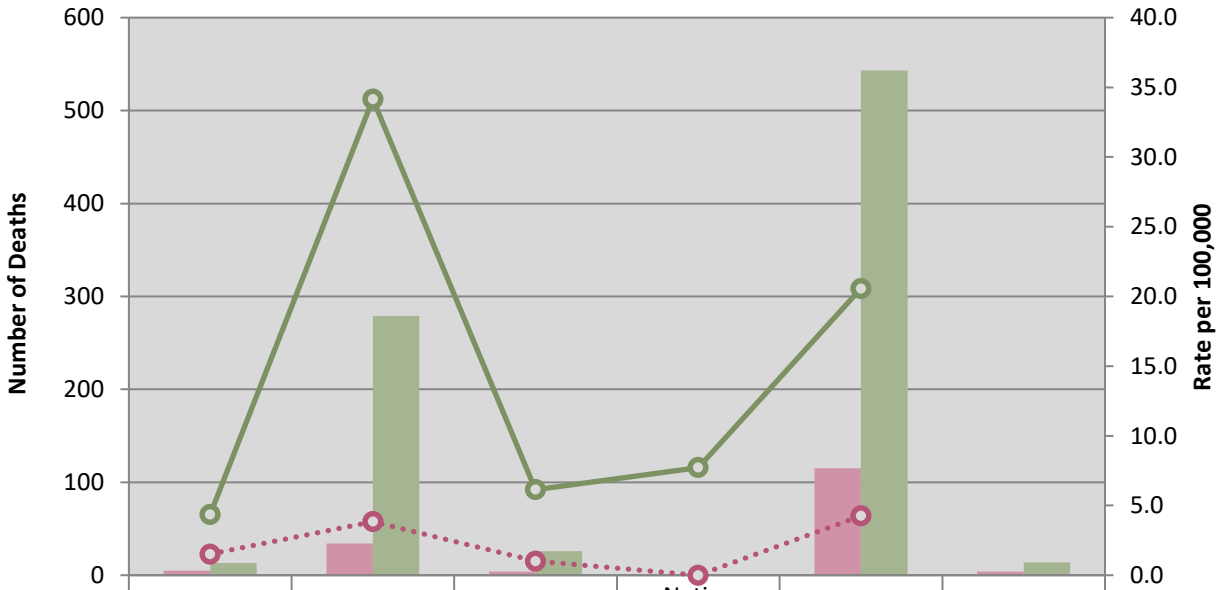


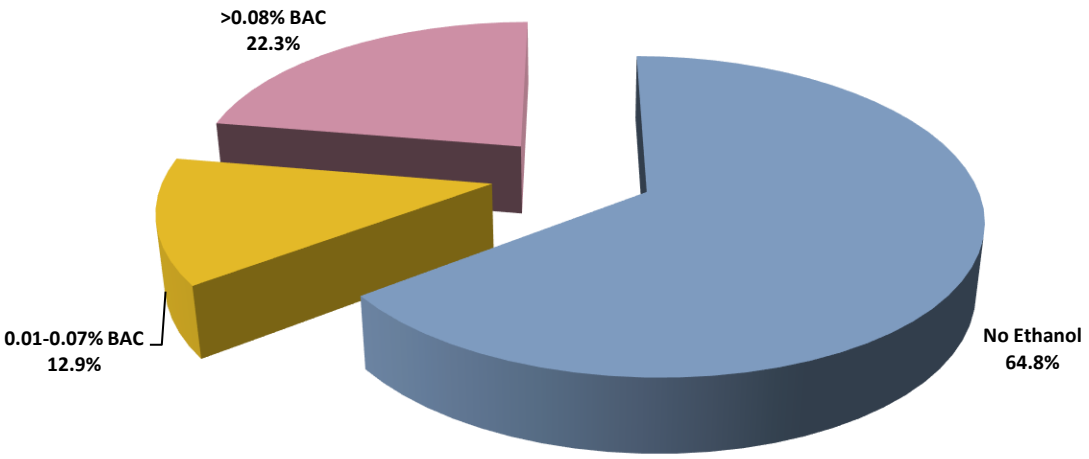
Figure 6.7 Number and Rate of Gun-Related Deaths by Race/Ethnicity and Gender, 2018



	Asian	Black	Hispanic	Native American	White	Other
Female	5	34	4	0	115	4
Male	13	279	26	1	543	14
Female Rate	1.5	3.8	1.0	0.0	4.3	*
Male Rate	4.4	34.2	6.1	7.7	20.6	*

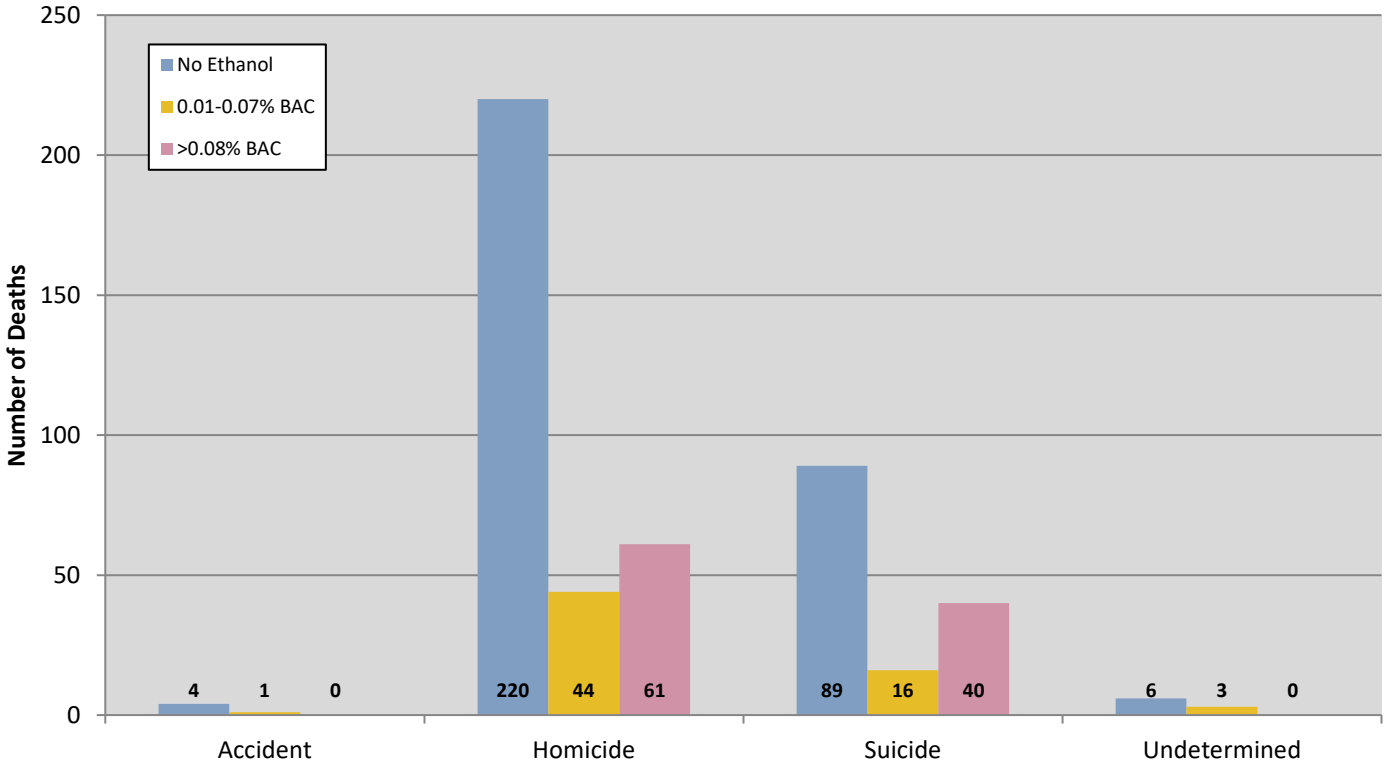
*No rate can be calculated
Note: Rates calculated from small case counts (n<5) are considered unreliable and should be interpreted with caution (Hispanics and Native Americans)

Figure 6.8 Percentage of Gun-Related Deaths by Ethanol Level (N=484), 2018



Note: Of the 1,038 gun related fatalities, 53.4% (n=554) did not receive alcohol testing

Figure 6.9 Number of Gun-Related Deaths by Alcohol Level and Manner of Death (N=484), 2018



Note: Of the 1,038 gun related fatalities, 53.4% (n=554) did not receive alcohol testing

Figure 6.10 Number of Gun-Related Deaths by Month of Death, 2018

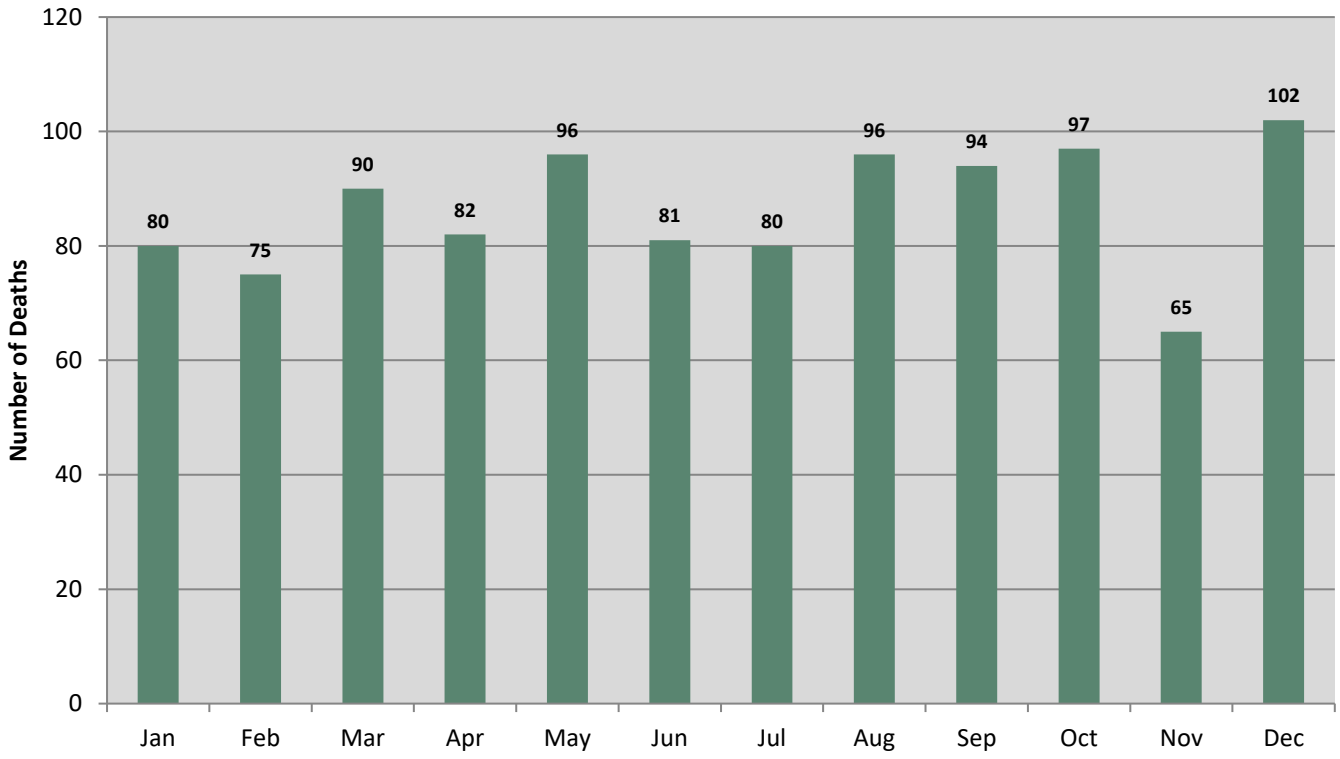


Figure 6.11 Number of Gun-Related Deaths by Day of Week, 2018

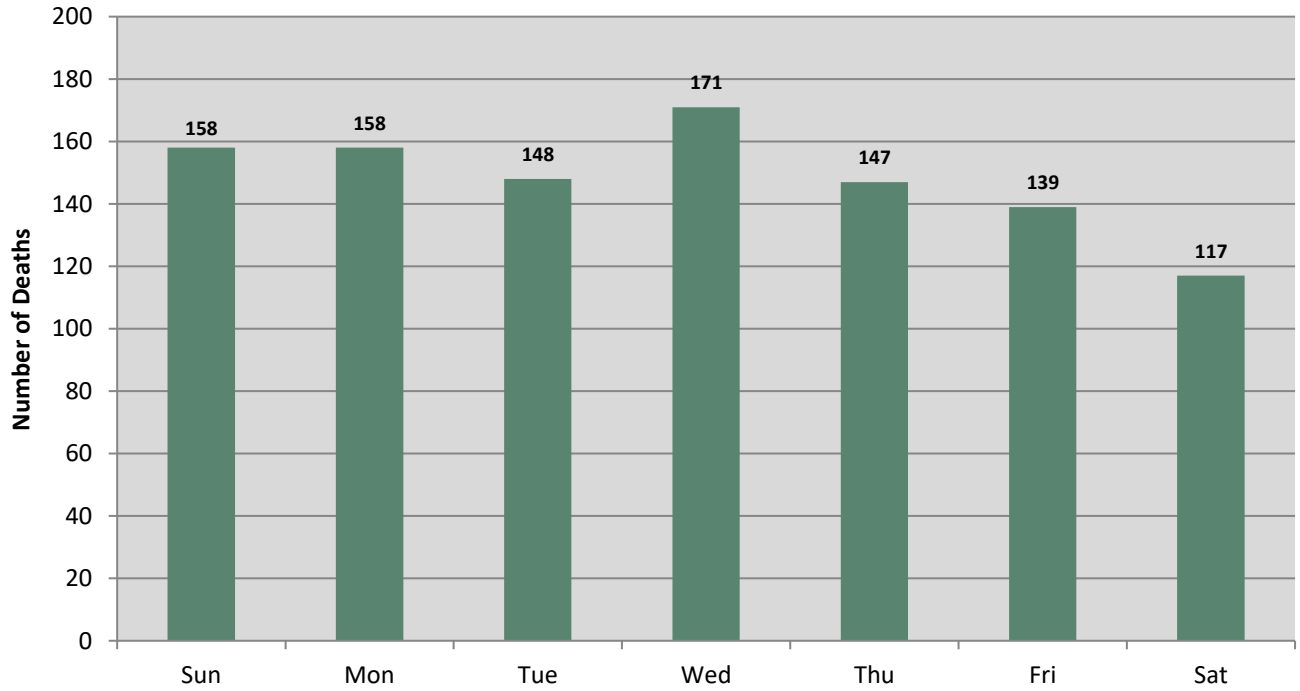


Table 6.3 Number and Rate of Gun-Related Deaths by Locality of Residence, 2018

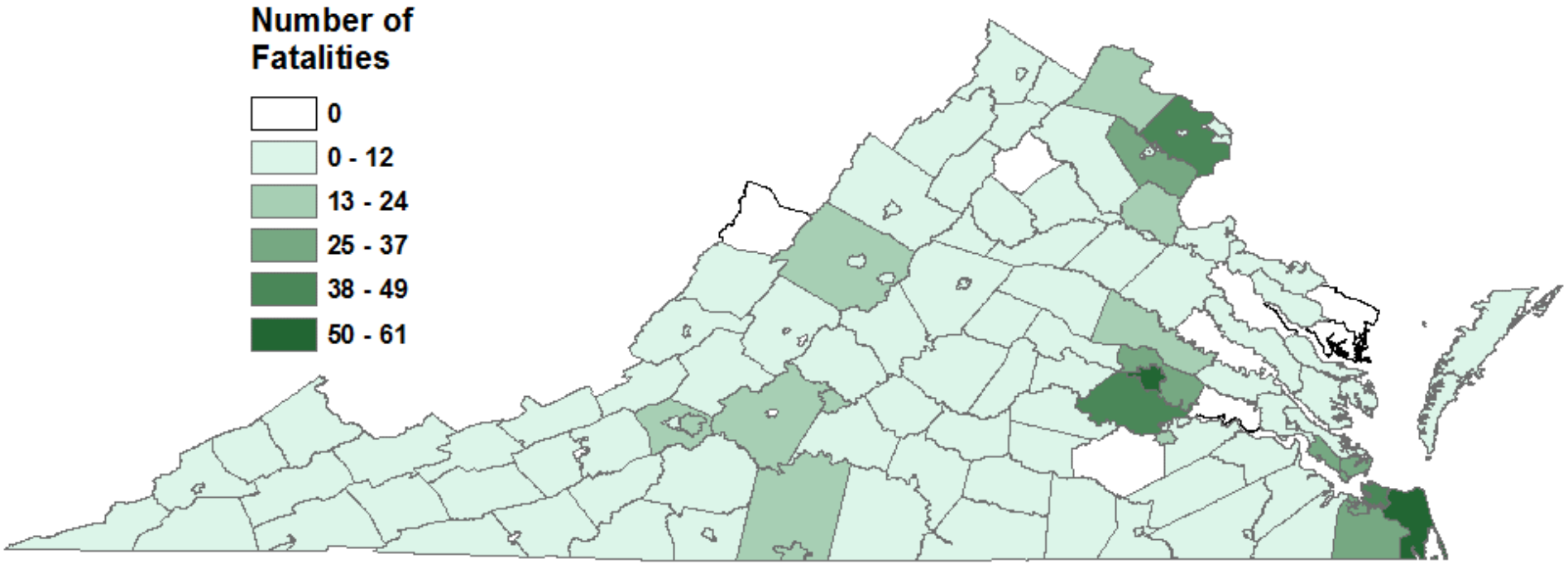
Locality of Residence	Deaths	Rate
Accomack County	2	6.2
Albemarle County	9	8.3
Alexandria City	4	2.5
Alleghany County	5	33.5
Amelia County	2	15.4
Amherst County	7	22.1
Appomattox County	5	31.6
Arlington County	2	0.8
Augusta County	14	18.6
Bath County	3	69.9
Bedford County	16	20.3
Bland County	1	15.9
Botetourt County	3	9.0
Bristol City	3	18.2
Brunswick County	2	12.2
Buchanan County	5	23.6
Buckingham County	1	5.9
Buena Vista City	0	0.0
Campbell County	11	20.0
Caroline County	3	9.7
Carroll County	3	10.1
Charles City County	0	0.0
Charlotte County	1	8.4
Charlottesville City	1	2.1
Chesapeake City	28	11.5
Chesterfield County	37	10.6
Clarke County	3	20.7
Colonial Heights City	3	16.8
Covington City	1	18.3
Craig County	1	19.7
Culpeper County	9	17.4
Cumberland County	5	51.0
Danville City	13	31.9
Dickenson County	4	27.5
Dinwiddie County	0	0.0
Emporia City	2	39.1
Essex County	0	0.0
Fairfax City	1	4.1
Fairfax County	48	4.2
Falls Church City	0	0.0
Fauquier County	7	9.9

Locality of Residence	Deaths	Rate
Floyd County	5	31.7
Fluvanna County	5	18.7
Franklin City	2	25.0
Franklin County	5	8.9
Frederick County	7	7.9
Fredericksburg City	4	13.7
Galax City	0	0.0
Giles County	4	23.7
Gloucester County	7	18.7
Goochland County	2	8.6
Grayson County	5	32.0
Greene County	2	10.1
Greensville County	1	8.6
Halifax County	7	20.5
Hampton City	27	20.1
Hanover County	15	14.0
Harrisonburg City	6	11.1
Henrico County	36	10.9
Henry County	10	19.6
Highland County	0	0.0
Hopewell City	9	39.8
Isle of Wight County	6	16.2
James City County	7	9.2
King and Queen County	2	28.4
King George County	3	11.3
King William County	0	0.0
Lancaster County	0	0.0
Lee County	5	21.2
Lexington City	0	0.0
Loudoun County	22	5.4
Louisa County	7	19.0
Lunenburg County	2	16.5
Lynchburg City	15	18.3
Madison County	2	15.0
Manassas City	1	2.4
Manassas Park City	1	5.8
Martinsville City	3	23.3
Mathews County	2	22.7
Mecklenburg County	7	22.8
Middlesex County	1	9.3
Montgomery County	9	9.1

Locality of Residence	Deaths	Rate
Nelson County	2	13.5
New Kent County	3	13.4
Newport News City	28	15.7
Norfolk City	46	18.8
Northampton County	1	8.5
Northumberland County	0	0.0
Norton City	1	25.2
Nottoway County	1	6.5
Orange County	3	8.2
Page County	4	16.7
Patrick County	5	28.3
Petersburg City	14	44.4
Pittsylvania County	15	24.6
Poquoson City	1	8.2
Portsmouth City	29	30.6
Powhatan County	1	3.4
Prince Edward County	3	13.1
Prince George County	5	13.1
Prince William County	29	6.2
Pulaski County	5	14.7
Radford City	0	0.0
Rappahannock County	0	0.0
Richmond City	53	23.2
Richmond County	3	33.2
Roanoke City	20	20.0
Roanoke County	20	21.3
Rockbridge County	4	17.6
Rockingham County	5	6.2
Russell County	3	11.2
Salem City	6	23.4
Scott County	5	23.2
Shenandoah County	6	13.8
Smyth County	5	16.4
Southampton County	1	5.7
Spotsylvania County	10	7.4
Stafford County	16	10.7
Staunton City	2	8.0
Suffolk City	6	6.6
Surry County	1	15.4
Sussex County	3	26.7
Tazewell County	10	24.5
Virginia Beach City	61	13.5
Warren County	4	10.0
Washington County	6	11.0
Waynesboro City	6	26.5
Westmoreland County	1	5.6
Williamsburg City	1	6.7
Winchester City	4	14.2
Wise County	5	13.2
Wythe County	6	20.9
York County	8	11.8
Subtotal (in-state)	**996**	**11.7**
Out of State	38	ND
Unknown	4	ND
Subtotal (out-of-state)	**42**	**ND**
TOTAL	**1038**	**12.2**

Note: No denominator is represented by ND

Map 6.1 Number of Gun-Related Deaths by Locality of Residence, 2018



Virginia Department of Health

Map 6.2 Rates of Gun-Related Death by Locality of Residence, 2018

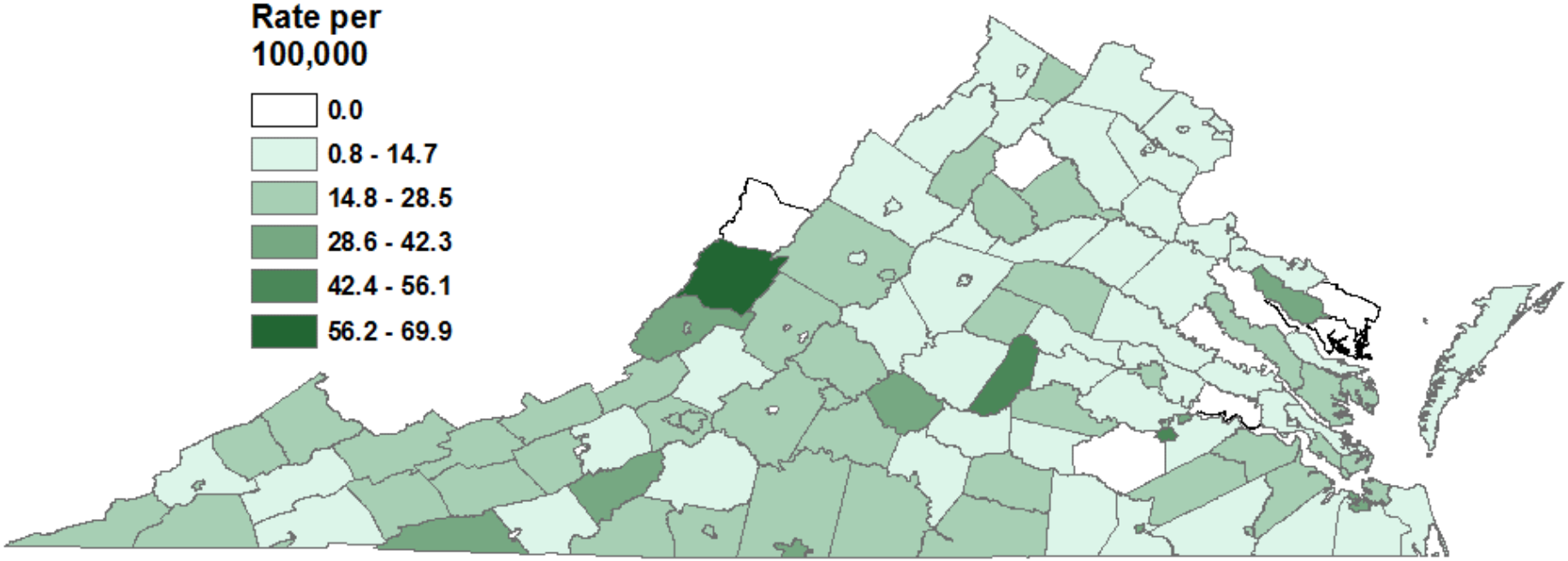


Table 6.4 Number and Rate of Gun-Related Deaths by Locality of Injury, 2018

Locality of Injury	Deaths	Rate
Accomack County	3	9.3
Albemarle County	10	9.2
Alexandria City	5	3.1
Alleghany County	3	20.1
Amelia County	2	15.4
Amherst County	9	28.4
Appomattox County	1	6.3
Arlington County	1	0.4
Augusta County	13	17.2
Bath County	3	69.9
Bedford County	15	19.0
Bland County	1	15.9
Botetourt County	4	12.0
Bristol City	3	18.2
Brunswick County	2	12.2
Buchanan County	5	23.6
Buckingham County	1	5.9
Buena Vista City	0	0.0
Campbell County	11	20.0
Caroline County	5	16.2
Carroll County	3	10.1
Charles City County	0	0.0
Charlotte County	3	25.1
Charlottesville City	2	4.2
Chesapeake City	27	11.1
Chesterfield County	33	9.5
Clarke County	3	20.7
Colonial Heights City	2	11.2
Covington City	1	18.3
Craig County	2	39.5
Culpeper County	8	15.4
Cumberland County	2	20.4
Danville City	14	34.4
Dickenson County	5	34.4
Dinwiddie County	2	7.0
Emporia City	2	39.1
Essex County	0	0.0
Fairfax City	0	0.0
Fairfax County	52	4.5
Falls Church City	0	0.0
Fauquier County	7	9.9
Floyd County	5	31.7
Fluvanna County	2	7.5

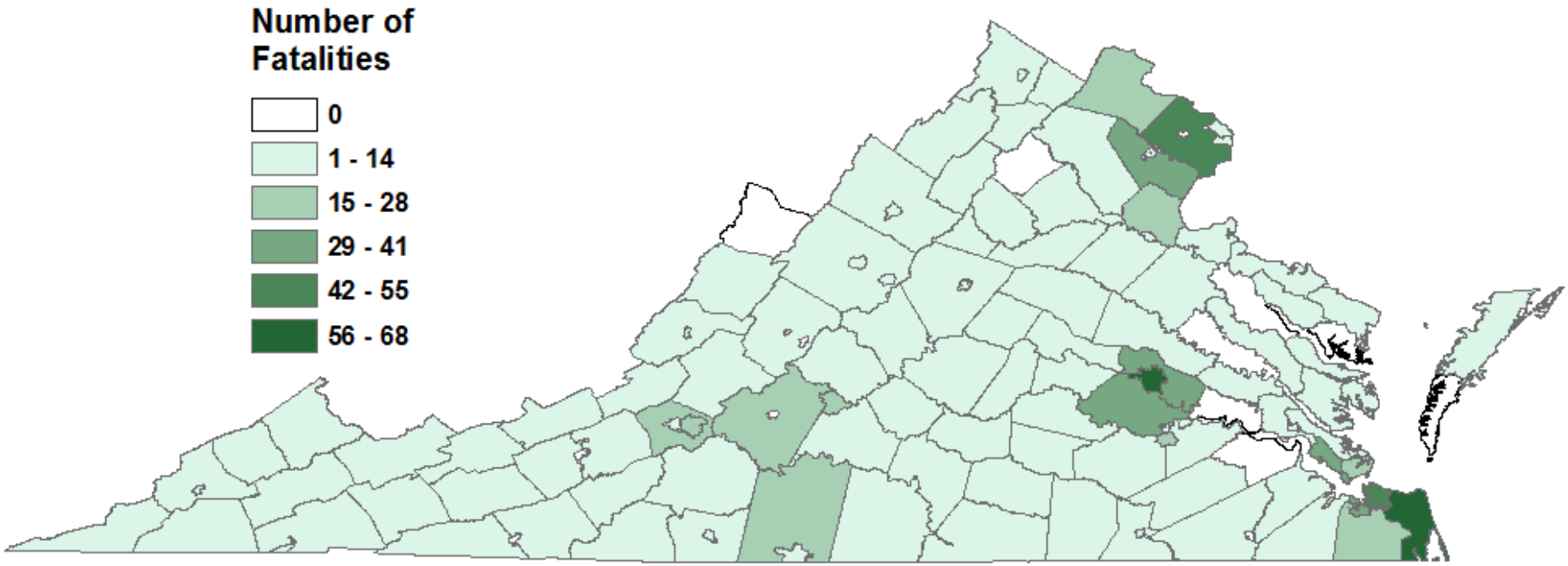
Locality of Injury	Deaths	Rate
Franklin City	0	0.0
Franklin County	4	7.1
Frederick County	8	9.1
Fredericksburg City	2	6.9
Galax City	0	0.0
Giles County	5	29.7
Gloucester County	7	18.7
Goochland County	2	8.6
Grayson County	5	32.0
Greene County	2	10.1
Greensville County	2	17.2
Halifax County	7	20.5
Hampton City	20	14.9
Hanover County	13	12.1
Harrisonburg City	6	11.1
Henrico County	31	9.4
Henry County	9	17.7
Highland County	0	0.0
Hopewell City	8	35.4
Isle of Wight County	6	16.2
James City County	7	9.2
King and Queen County	2	28.4
King George County	2	7.5
King William County	0	0.0
Lancaster County	0	0.0
Lee County	5	21.2
Lexington City	0	0.0
Loudoun County	20	4.9
Louisa County	8	21.8
Lunenburg County	1	8.3
Lynchburg City	17	20.7
Madison County	3	22.6
Manassas City	1	2.4
Manassas Park City	0	0.0
Martinsville City	2	15.5
Mathews County	2	22.7
Mecklenburg County	7	22.8
Middlesex County	1	9.3
Montgomery County	11	11.1
Nelson County	2	13.5
New Kent County	1	4.5
Newport News City	35	19.6
Norfolk City	47	19.3

Virginia Department of Health

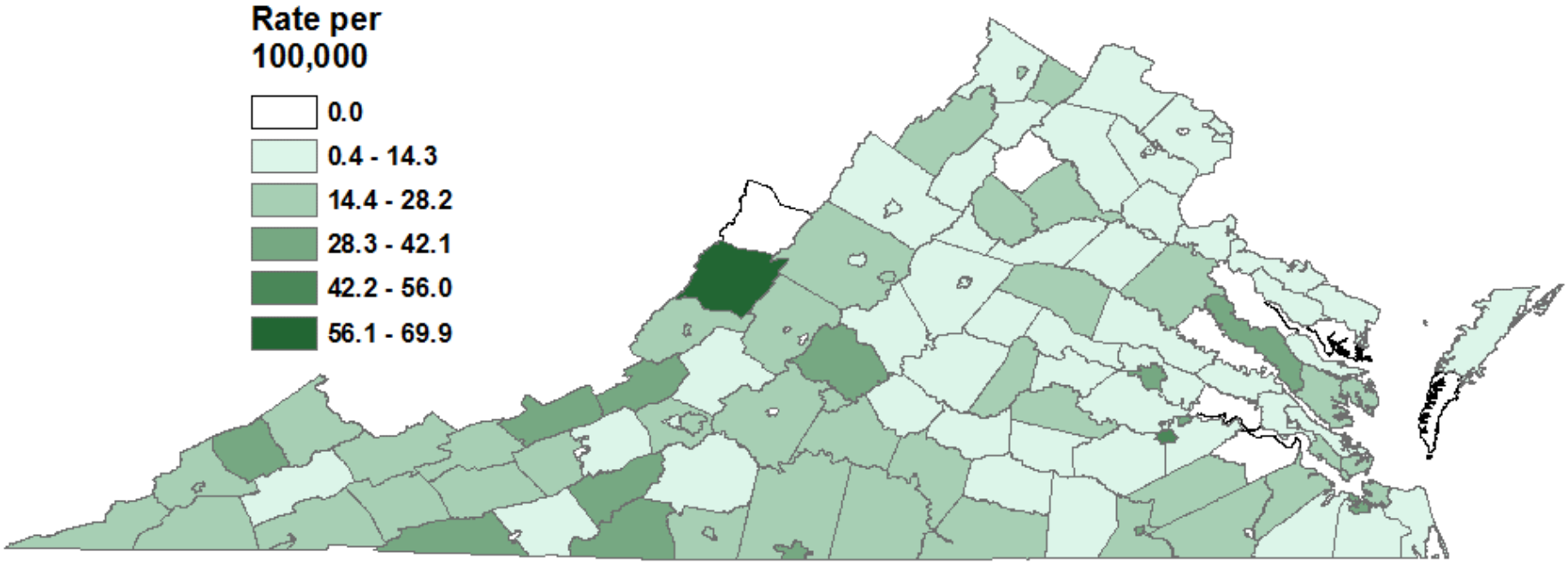
Locality of Injury	Deaths	Rate
Northampton County	0	0.0
Northumberland County	1	8.2
Norton City	1	25.2
Nottoway County	2	13.0
Orange County	3	8.2
Page County	3	12.5
Patrick County	5	28.3
Petersburg City	17	53.9
Pittsylvania County	17	27.9
Poquoson City	1	8.2
Portsmouth City	30	31.7
Powhatan County	2	6.9
Prince Edward County	3	13.1
Prince George County	4	10.5
Prince William County	31	6.6
Pulaski County	5	14.7
Radford City	0	0.0
Rappahannock County	0	0.0
Richmond City	68	29.7
Richmond County	1	11.1
Roanoke City	24	24.0
Roanoke County	22	23.4
Rockbridge County	5	22.0
Rockingham County	4	4.9
Russell County	2	7.5
Salem City	3	11.7
Scott County	5	23.2
Shenandoah County	7	16.1
Smyth County	5	16.4
Southampton County	4	22.7
Spotsylvania County	11	8.2
Stafford County	16	10.7
Staunton City	2	8.0
Suffolk City	6	6.6
Surry County	0	0.0
Sussex County	2	17.8
Tazewell County	8	19.6
Virginia Beach City	64	14.2
Warren County	5	12.5
Washington County	8	14.7
Waynesboro City	6	26.5
Westmoreland County	2	11.2
Williamsburg City	1	6.7
Winchester City	5	17.8
Wise County	6	15.8
Wythe County	8	27.8
York County	8	11.8
Subtotal (in-state)	**1016**	**11.9**
Out of State	9	ND
Unknown	13	ND
Subtotal (out-of-state)	**22**	**ND**
TOTAL	**1038**	**12.2**

Note: No denominator is represented by ND

Map 6.3 Number of Gun-Related Deaths by Locality of Injury, 2018



Map 6.4 Number of Gun-Related Deaths by Locality of Injury, 2018

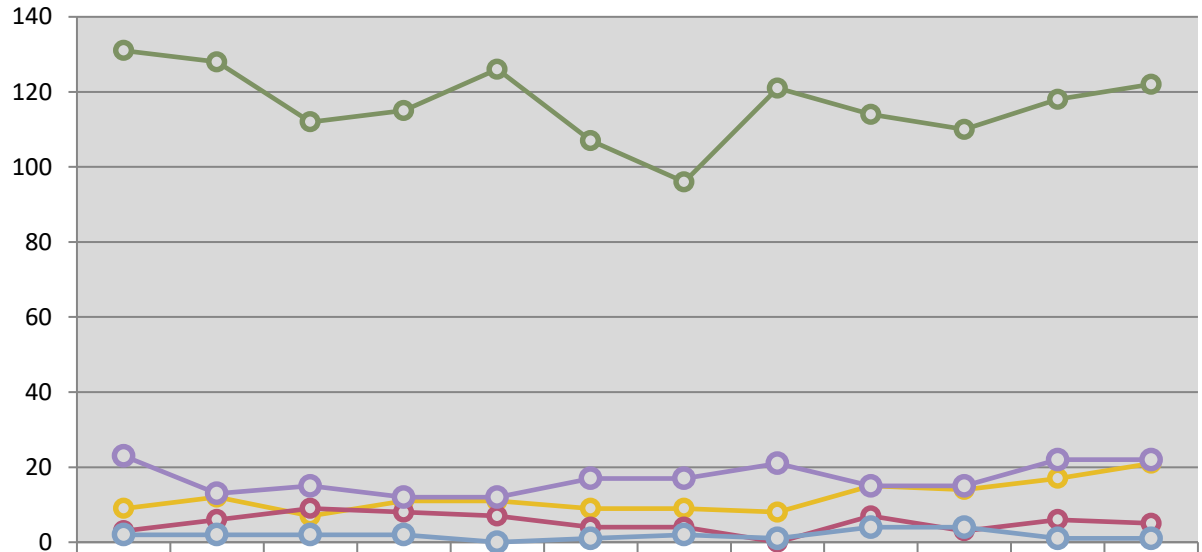


SECTION 7: IN-CUSTODY (PRISONER) DEATHS (N=171)

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 171 in-custody deaths in 2018.

- The majority (71.3%) of in-custody deaths were natural deaths
- The vast majority of deaths were male (91.2%) and white (62.6%)

Figure 7.1 Number of In-Custody Deaths by Manner and Year of Death, 2007-2018



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Accident	9	12	7	11	11	9	9	8	15	14	17	21
Homicide	3	6	9	8	7	4	4	0	7	3	6	5
Natural	131	128	112	115	126	107	96	121	114	110	118	122
Suicide	23	13	15	12	12	17	17	21	15	15	22	22
Undetermined	2	2	2	2	0	1	2	1	4	4	1	1

Figure 7.2 Percentage of In-Custody Deaths by Manner of Death, 2018

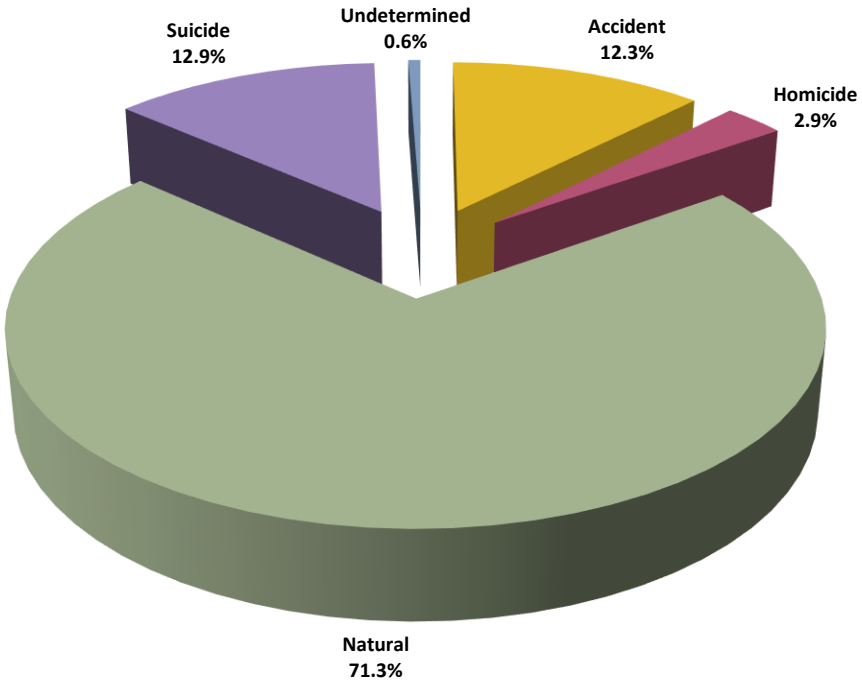


Figure 7.3 Percentage of In-Custody Deaths by Race/Ethnicity, 2018

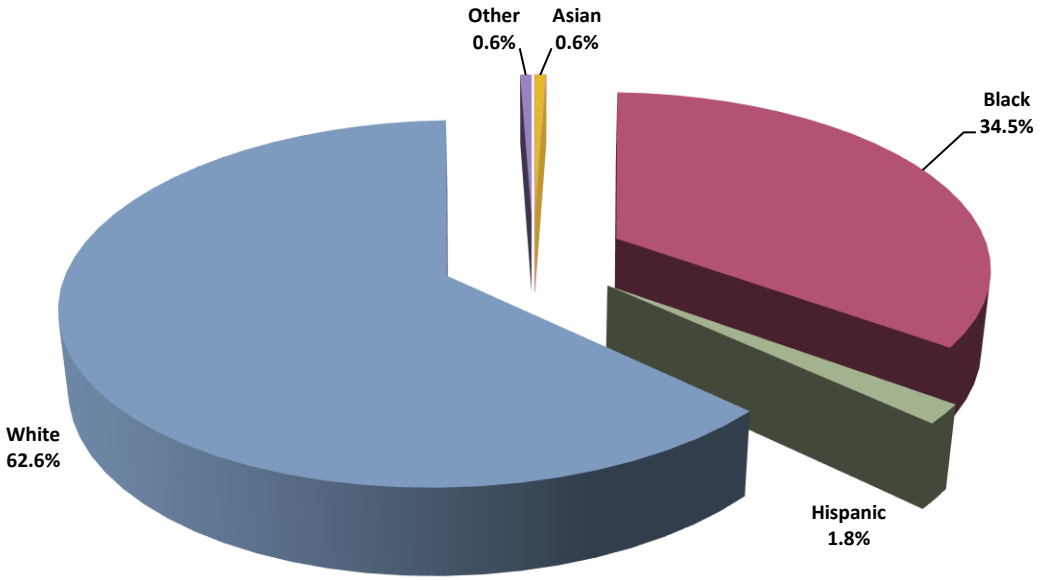
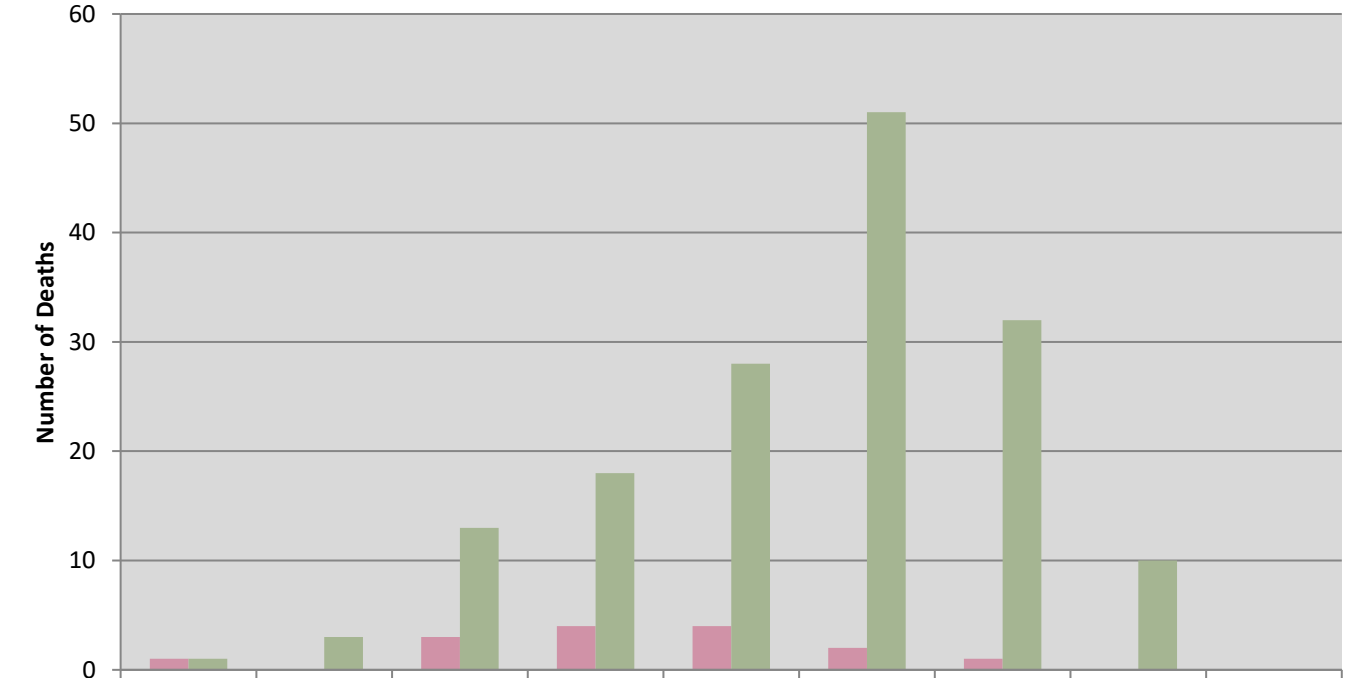
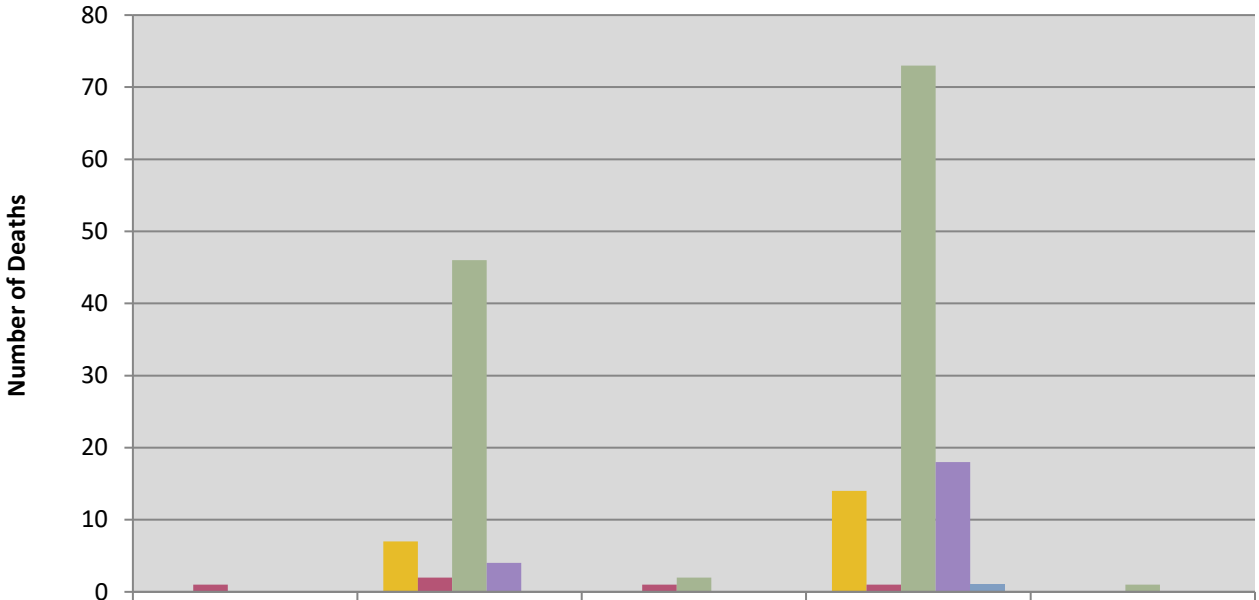


Figure 7.4 Number of In-Custody Deaths by Age Group and Gender, 2018



	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Female	1	0	3	4	4	2	1	0	0
Male	1	3	13	18	28	51	32	10	0

Figure 7.5 Number of In-Custody Deaths by Manner and Race/Ethnicity, 2018



	Asian	Black	Hispanic	White	Other
Accident	0	7	0	14	0
Homicide	1	2	1	1	0
Natural	0	46	2	73	1
Suicide	0	4	0	18	0
Undetermined	0	0	0	1	0

Table 7.1 Number of In-Custody Deaths by Cause and Method of Death, 2018

NATURAL DEATHS	Autopsied	Total Cases
Cardiovascular Diseases/Disorders		
Atherosclerosis	4	9
Atherosclerosis and hypertension	22	24
Cardiomyopathy	1	2
Hypertension	1	2
Vascular dissection/rupture	1	1
Other cardiac disease/disorder	1	1
Central Nervous System Diseases/Disorders		
Central nervous system malignancy	1	2
Seizure disorder	0	1
Vascular disease	0	1
Other CNS disease/disorder	0	1
Gastrointestinal Diseases/Disorders		
Cirrhosis	1	5
GI Malignancy	12	22
Hepatitis	1	1
Other GI disease/disorder	2	6
Genitourinal Diseases/Disorders		
Genitourinal malignancy	0	4
Renal disease	0	2
Other genitourinal disease/disorder	0	1
Pulmonary Disease/Disorders		
COPD	0	2
Emboli	4	5
Pneumonia	1	6
Pulmonary malignancy	2	4
Other pulmonary disease/disorder	1	3
Systemic Diseases/Disorders		
Blood disorders	0	1
Chronic alcoholism	1	1
Diabetes	2	3
Metastatic malignancy of unknown primary	2	2
Sepsis	1	1
Obesity	2	2
Other infectious disease	1	1
Other systemic disease/disorder	1	3
Other Natural Death/Disorder		
Other malignancy	0	5
Other natural disease/disorder	1	1
Natural Death Subtotal	***66***	***125***
UNNATURAL DEATHS		
Asphyxia		

Choked (aspiration of food or foreign object)	0	1
Hanged	15	18
Strangled/Neck Compression	2	2
Other asphyxia	1	1
Drug Use		
Ingested and/or injected ethanol, illicit, prescription, and/or other type of drug	12	14
Traumatic Injury		
Beatings	1	1
Fall/jump from height	0	2
Gunshot wound	3	3
Motor vehicle	1	1
Sharp force injury	3	3
Unnatural Death Subtotal	***38***	***46***
TOTAL OCME DEATHS	**104**	**171**

SECTION 8: STATE MENTAL HEALTH DEATHS (N=59)

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 59 state mental health resident deaths in 2018.

- The majority of state mental health deaths were natural (89.8%), white (67.8%) and male (66.1%)

Figure 8.1 Percentage of State Mental Health Deaths by Manner, 2018

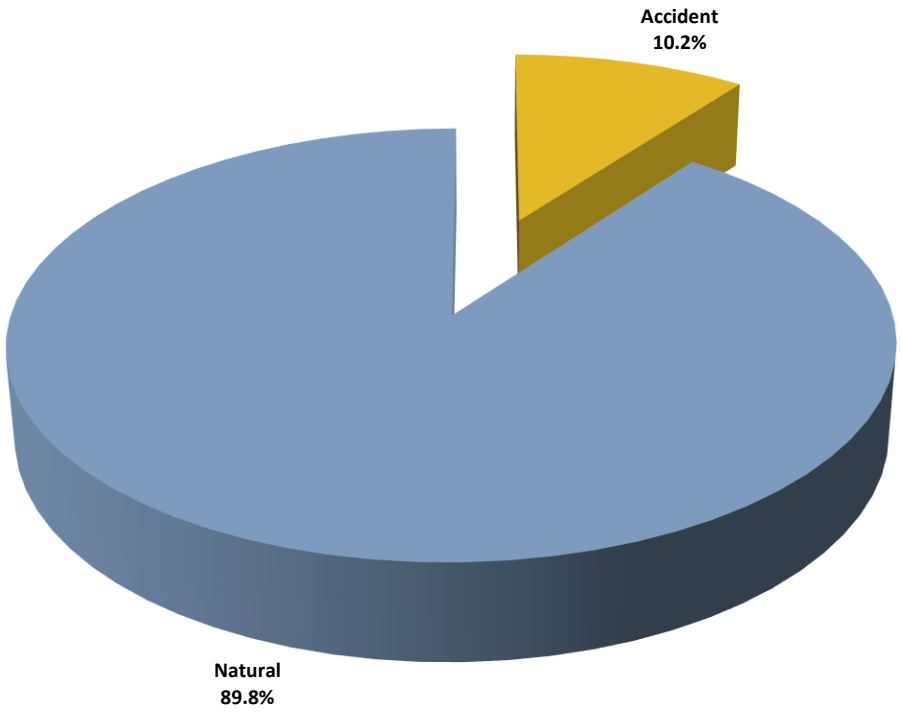


Figure 8.2 Percentage of State Mental Health Deaths by Race/Ethnicity, 2018

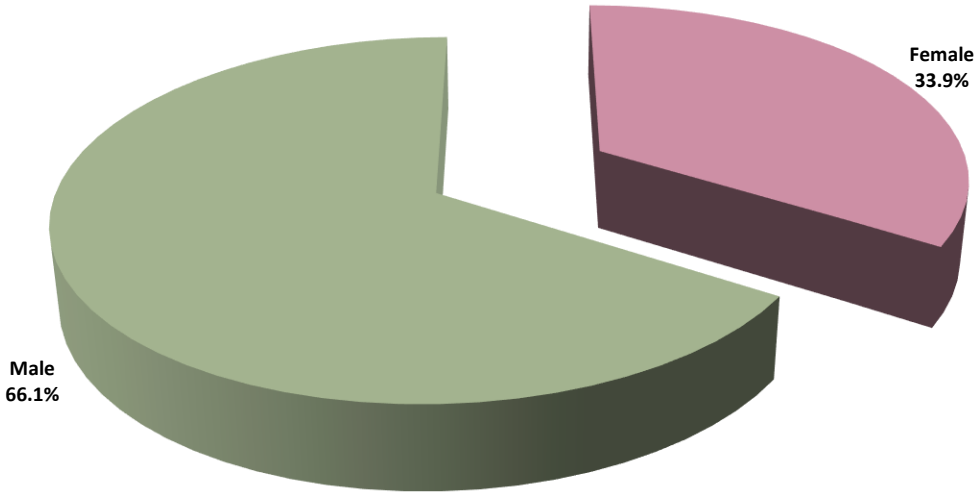


Figure 8.3 Number of State Mental Health Deaths by Age Group and Gender, 2018

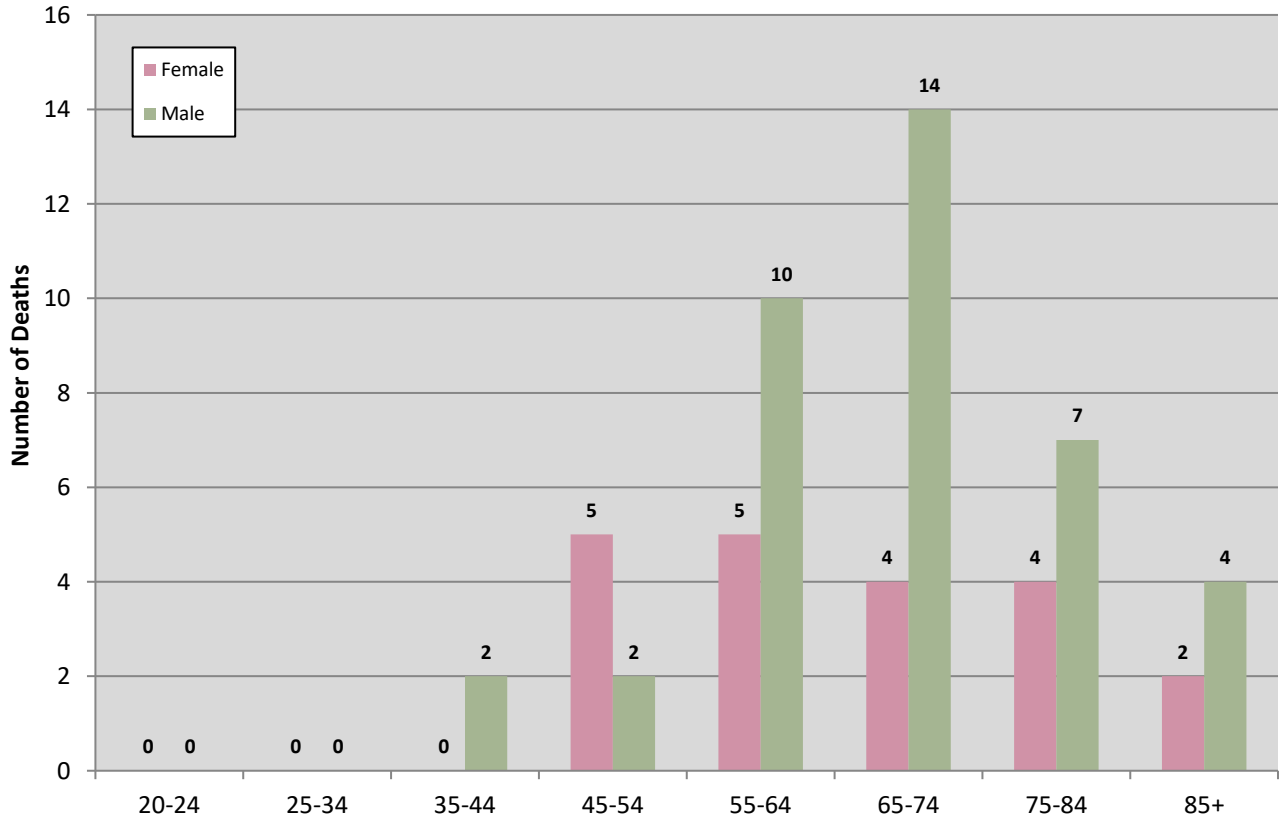


Figure 8.4 Percentage of State Mental Health Deaths Race/Ethnicity, 2018

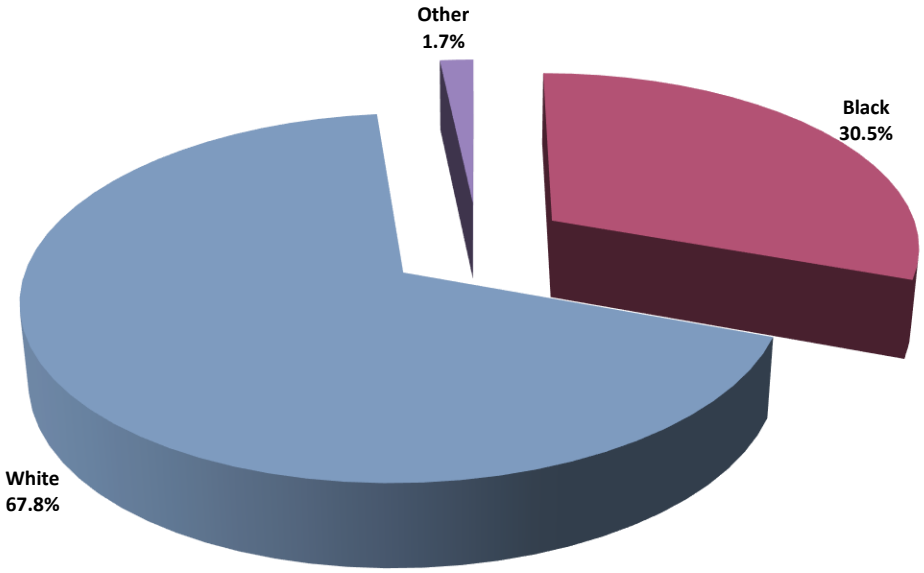


Table 8.1 Number of State Mental Health Deaths by Cause and Method of Death, 2018

Natural Deaths	Autopsied	Total Cases
Cardiovascular Diseases/Disorders		
Acute coronary insuffucuency	0	1
Atherosclerosis	0	1
Atherosclerosis and hypertension	3	3
Hypertension	5	8
Central Nervous System Diseases/Disorders		
Degenerative disease	2	4
Seizure disorder	0	2
Other central nervous system disease/disorder	2	3
Gastrointestinal Diseases/Disorders		
Cirrhosis	1	1
GI hemorrhage	0	1
GI malignancy	1	2
Other GI disease/disorder	1	1
Genitourinal Diseases/Disorders		
Renal disease	2	2
Pulmonary Disease/Disorders		
COPD	2	2
Emboli	4	4
Pneumonia	7	16
Systemic Disease/Disorders		
Blood disorders	1	1
Complications of dementia (including inanition)	1	2
Natural Death Subtotal	**32**	**54**
Unnatural Deaths	**Autopsied**	**Total Cases**
Asphyxia		
Choked (foreign object)	2	4
Fall/Jump		
Fall/Jump	0	1
Unnatural Death Subtotal	**2**	**5**
TOTAL OCME DEATHS	**34**	**59**

SECTION 9: RETROSPECTIVE CASES (N=147)

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 147 retrospective deaths may have been deaths that occurred in prior years, but the OCME investigation began in 2018.

- The majority of the OCME's retrospective deaths were accidents (81.6%)
- Falls were the most common unreported type of death (64.6%), nearly all occurring among elder persons

Figure 9.1 Percentage of Retrospective Deaths by Manner of Death, 2018

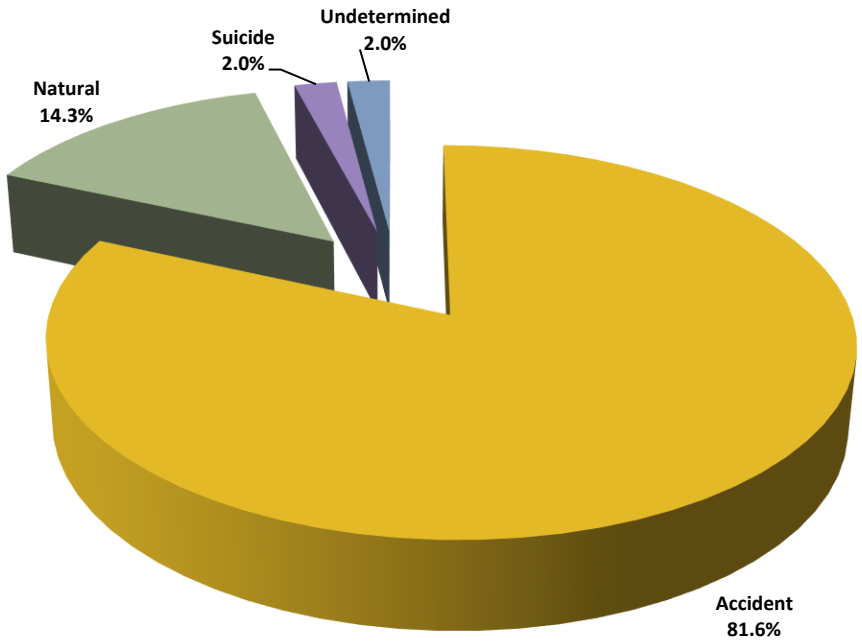


Table 9.1 Number and Percentage of Retrospective Deaths by OCME District, 2018

OCME District	Number	Percent
Central	39	26.5%
Northern	31	21.1%
Tidewater	25	17.0%
Western	52	35.4%
Total	**147**	**100.0%**

Figure 9.2 Percentage of Retrospective Deaths by Race/Ethnicity, 2018

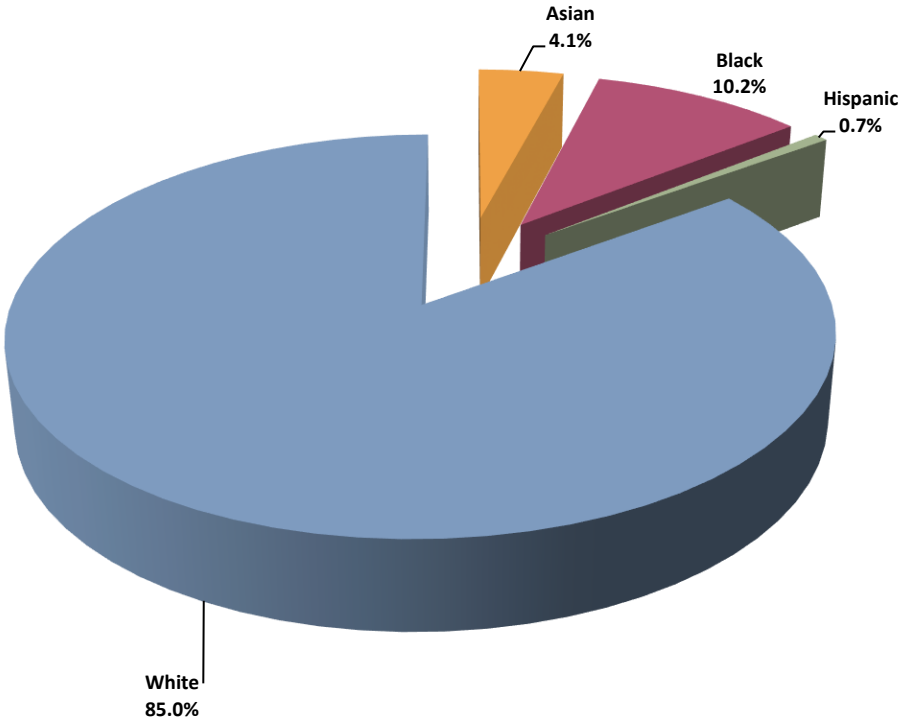


Figure 9.3 Number of Retrospective Deaths by Age Group and Gender, 2018

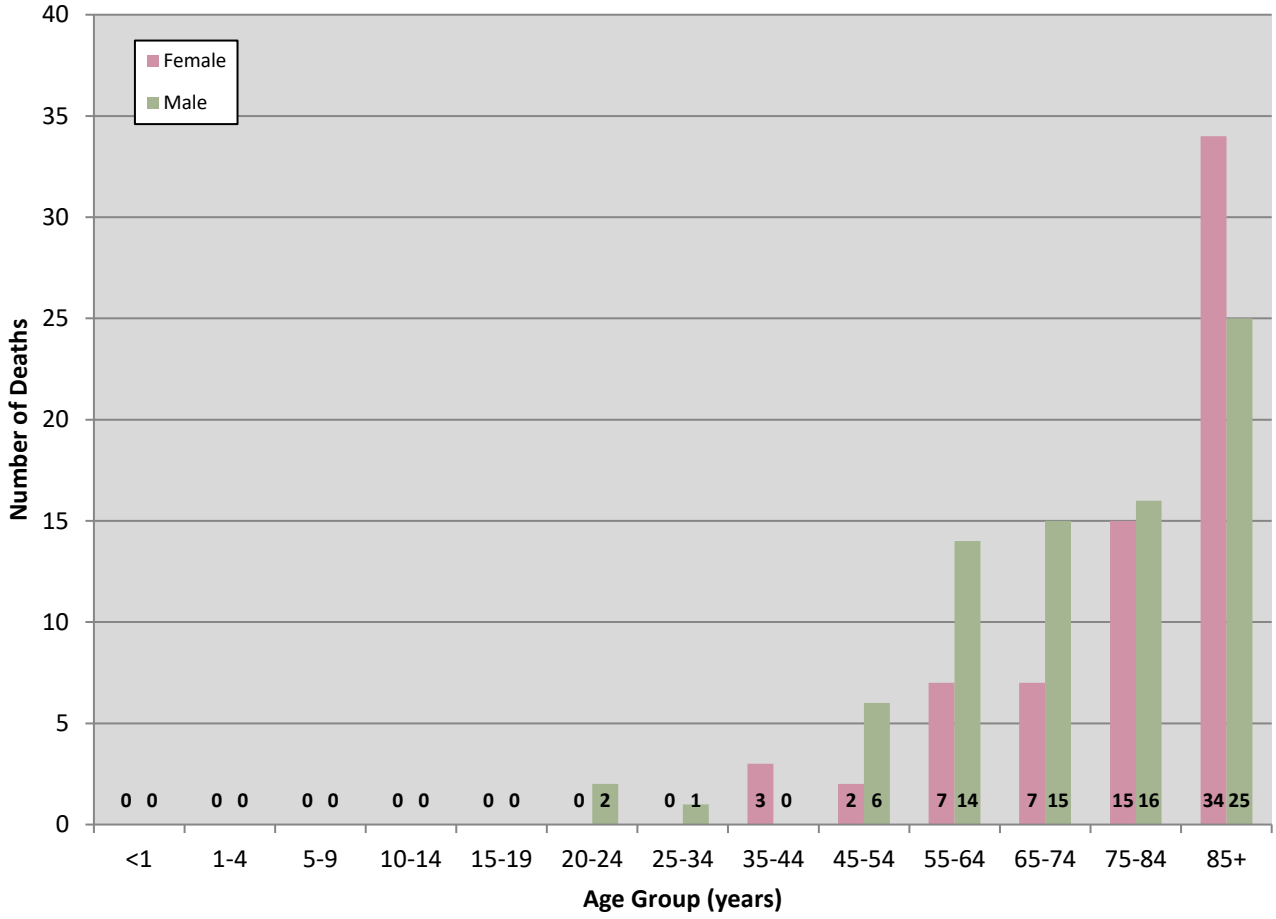


Table 9.2 Number of Retrospective Deaths by Cause and Method of Death, 2018

Natural Deaths	Total Cases
Cardiovascular Diseases/Disorders	
Atherosclerosis	2
Atherosclerosis and hypertension	3
Cardiomyopathy not specified	1
Hypertension	7
Central Nervous System Diseases/Disorders	
Degenerative disease	3
Vascular disease	1
Gastrointestinal Diseases/Disorders	
Cirrhosis	1
GI hemorrhage	1
Genitourinal Diseases/Disorders	
Renal disease	1
Pulmonary Diseases/Disorders	
COPD	1
Emboli	2
Pneumonia	2
Systemic Diseases/Disorders	
Complications of dementia (including inanition)	1
Diabetes	1
Other Natural Death/Disorder	
Other malignancy	1
Other natural disease/disorder	1
Natural Death Subtotal	**29**
Undetermined Deaths	**Total Cases**
Undetermined Deaths After Autopsy and/or Investigation	
Other Undetermined	1
Undetermined Death Subtotal	**1**
Unnatural Deaths	**Total Cases**
Asphyxia	
Choked (aspiration food or foreign object)	4
Hanged	1
Helium asphyxia	1
Drug Use	
Ingested and/or injected ethanol, illicit, prescription, and/or other type of drug	3
Fall/Jump	
Fall from standing	95
Motor Vehicle	
Motor vehicle collision	10

Other Trauma	
Trauma from animal attack	1
Other trauma	2
Unnatural Death Subtotal	**117**
TOTAL OCME DEATHS	**147**

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% BAC 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

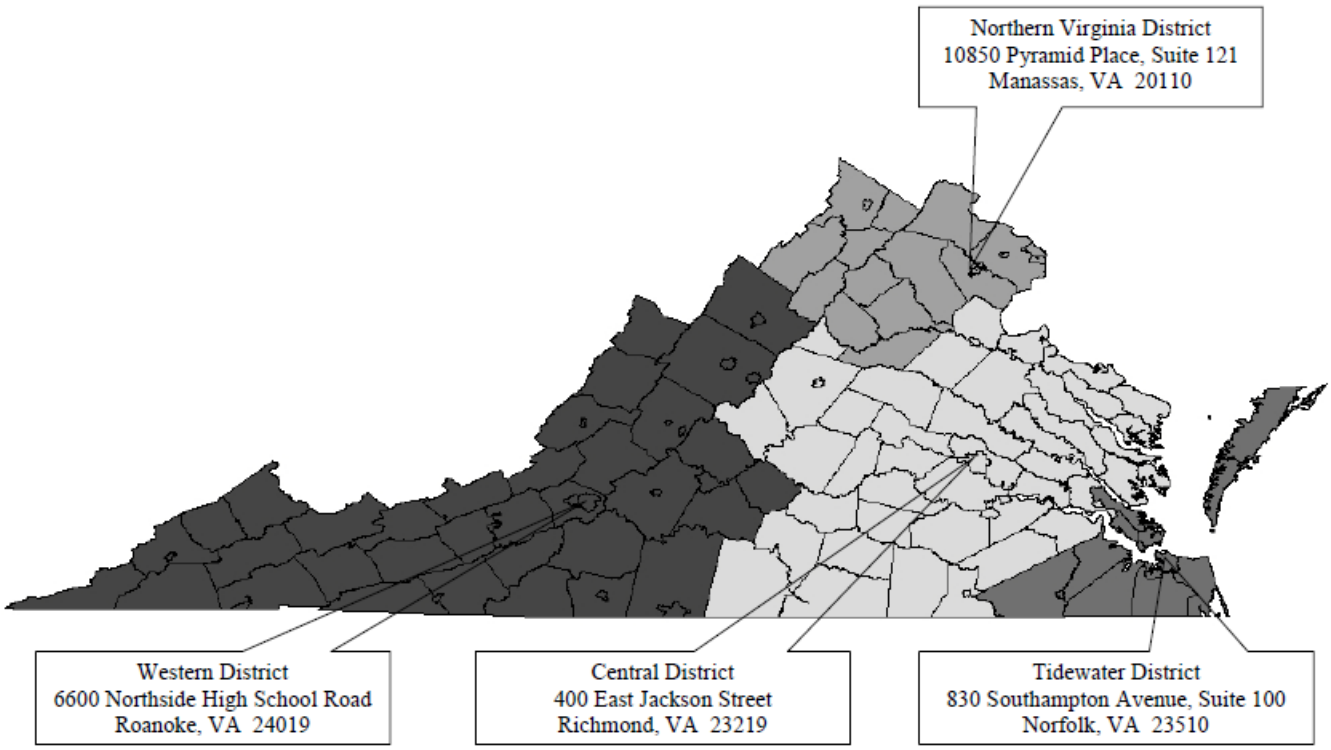
MEDICAL EXAMINER DISTRICTS

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 2017 are available online at:

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

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

VDH VIRGINIA DEPARTMENT OF HEALTH

Protecting You and Your Environment