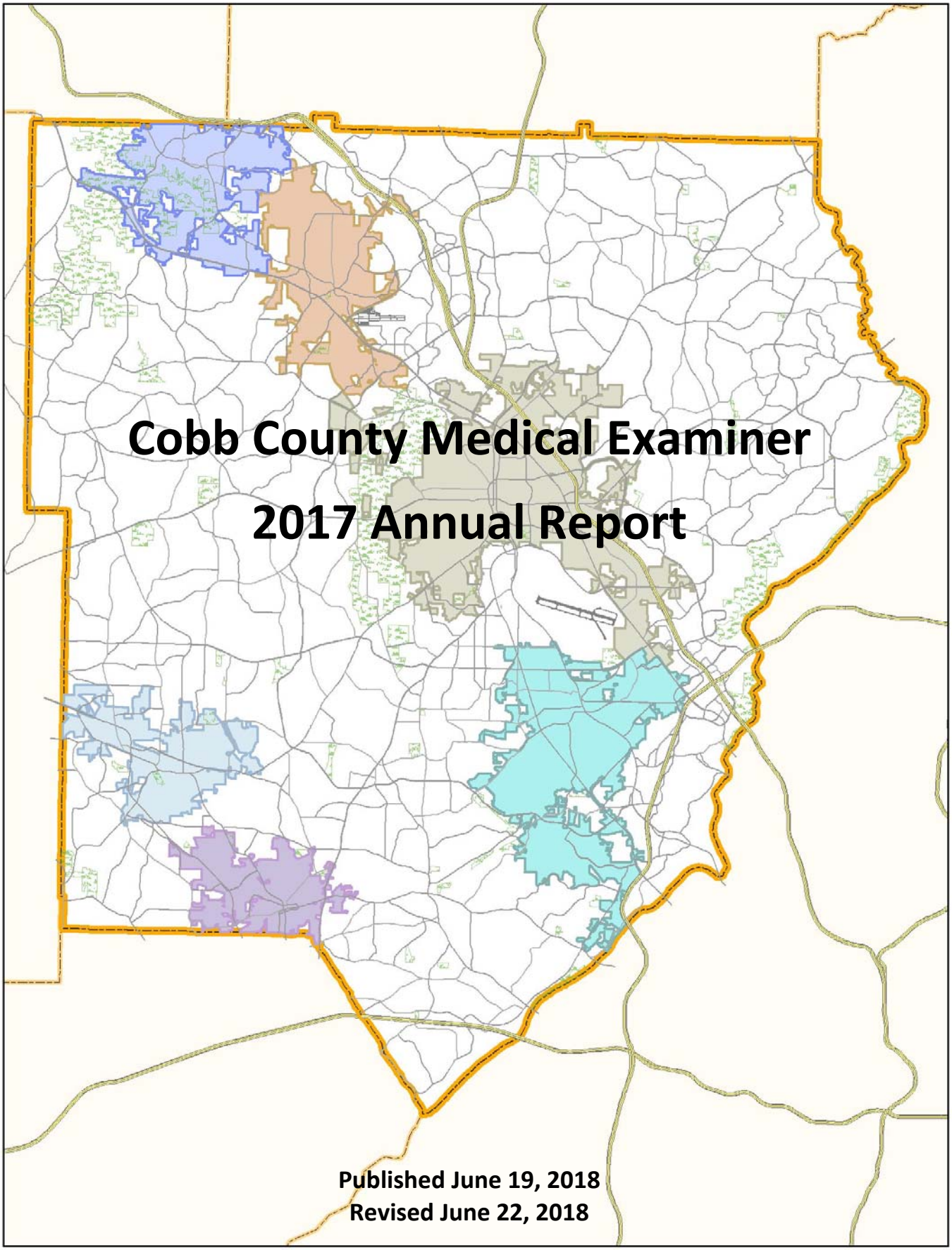

Cobb County Medical Examiner

2017 Annual Report

Published June 19, 2018
Revised June 22, 2018

Preface

This annual report is a collection of data describing the work of the employees of the Cobb County Medical Examiner's Office; although it reflects the work completed by our office in the prior year, what this report does not make evident is the dedication of the employees of this office. The staff of the Cobb County Medical Examiner's Office strives to serve Cobb County and provide its citizens with accurate and timely death investigation while showing compassion for family and friends of our patients. The employees who served in our office in the past year are:

Administrative Personnel
Michael Gerhard, D-ABMDI, Operations Manager
Becky Youngblood, Administrative Assistant

Forensic Investigators
Allison Gaines, MBS, D-ABMDI
Martin Jackson, D-ABMDI
Cara Rolfe, PhD, D-ABMDI
Holly Rymer, D-ABMDI
Temperance Stoddard, MS, D-ABMDI

Forensic Technicians
Lisa Bailey, D-ABMDI
Jada Henderson

Medical Examiners
Christopher Gulledge, MD, MS, Chief Medical Examiner
Cassie Boggs, MD, Deputy Chief Medical Examiner
Abraham Philip, MD, Medical Examiner

Without these individuals, Cobb County's Medical Examiner Office would not have been able to serve the county during 2017, and the needs of the citizens and agencies who depend on the Medical Examiner's Office would not have been met. For the dedication to your work and for regularly exceeding the expectations of your respective positions to meet the needs of the office, thank you.

A special thank you must be extended to Blossom Pugh, who joined the office in February of 2018, and Cara Rolfe, PhD as they collated much of the data in this report by hand, and without them, this annual report would not have been possible.

The role of a Medical Examiner's Office is to determine the cause and manner of deaths that occur within its jurisdiction. Although this information is most often thought of as applying to the individual whose death is being investigated, analysis of the entirety of the data collected and produced by the Medical Examiner's Office can also be of benefit to the community when it is used by the public health, public safety, and planning departments serving the community.

This report is a compilation of the data for 2017 in hopes of such service. Thus “this is the place where death delights to help the living.” –Giovanni Morgagni.

Cassie Boggs, MD
Deputy Chief Medical Examiner

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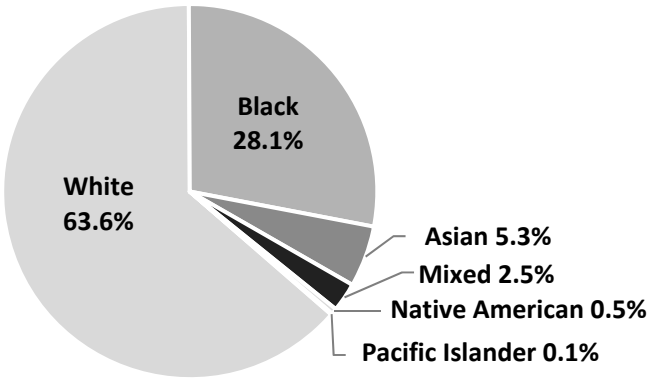
INTRODUCTION

The Cobb County Medical Examiner's Office (CCME) serves Cobb County which covers an area of 345 square miles. Cobb County has an estimated population of 748,150 as of 2016. According to the estimated 2016 census data, the demographics of the county were 63.6% White, 28.1% Black, 5.3% Asian, 0.5% Native American, 0.1% Pacific Islander, and 2.5% of mixed demographics. The 2016 census data also estimated that 12.9% of the population of the county identified as Hispanic or Latino.



Cobb County Demographics
(US Census Bureau 2016 Estimate)

The Mission of the CCME is to provide Cobb County with accurate and timely medico-legal death investigations and quality postmortem examinations, where the causation of death occurred within the geographic boundaries of Cobb County and was the result of a homicide, suicide, accident, or death where the cause and manner were not apparent. The deaths that fall under the jurisdiction of the CCME are defined by § 45-16-24 (The Georgia Death Investigation Act) as deaths that occur:

(1) As a result of violence;
(2) By suicide or casualty;
(3) Suddenly when in apparent good health;
(4) When unattended by a physician;[1]
(5) In any suspicious or unusual manner, with particular attention to those persons 16 years of age and under;
(6) After birth but before seven years of age if the death is unexpected or unexplained;
(7) As a result of an execution carried out pursuant to the imposition of the death penalty under Article 2 of Chapter 10 of Title 17;

[1] § 45-16-21. Definitions. "Unattended death," "died unattended," or "died unattended by a physician" means a death where a person dies of apparently natural causes and has no physician who can certify the death as being due to natural causes. If the suspected cause of death directly involves any trauma or complication of such trauma, the death must be reported to the coroner or county medical examiner.

(8) When an inmate of a state hospital or a state, county, or city penal institution;
(9) After having been admitted to a hospital in an unconscious state and without regaining consciousness within 24 hours of admission; or
(10) As a result of an apparent drug overdose.

Although the deaths that fall under the jurisdiction of the CCME are defined by law, the extent of examination, if any, required for these deaths is at the discretion of the Medical Examiner.

The municipalities served by the office include Marietta, Kennesaw, Smyrna, Acworth, Powder Springs, and Austell. The CCME additionally covers two federal parks and the unincorporated areas of Cobb County. Deaths occurring within Cobb County fall under the jurisdiction of the CCME with some exceptions such as those deaths occurring on state property and are thus investigated by the Georgia Bureau of Investigation and military personnel who die on Dobbins Air Reserve Base and fall under the jurisdiction of the Armed Forces Medical Examiner System. Additionally, deaths that occur outside of Cobb County, but resulted from an injury that occurred within Cobb County, also fall under CCME jurisdiction.

Upon the reporting of a death to the CCME, jurisdiction of the case is either declined or accepted. Cases are declined because the case belongs to another jurisdiction for investigation or the case need not have been reported to the CCME and a treating physician of the decedent should sign the death certificate. Cases accepted for jurisdiction by the CCME means that the death certificate will be signed by the Medical Examiner.

Depending upon the circumstances of the death, the Medical Examiner may sign the death certificate based upon the review of medical records, perform an external examination, or perform an autopsy which may be limited in the dissection depending upon the details of the case. To meet the mission of the CCME, the Medical Examiner makes determinations of cause and manner of death based on investigative information and any necessary examination of the deceased.

The findings of the Medical Examiner are available to the judicial system for criminal cases, law enforcement agencies for assistance in investigations, the health department for community health surveillance, local hospitals for quality control and education, family members of the deceased for understanding of medical history and cause of death, and the general public under the rules of the Open Records Act.

Operations
Deaths are reported to the CCME via Forensic Investigators who are responsible for assigning a sequential case number and collecting information about the death and the circumstances surrounding the death. Based on this information, and as needed in consultation with the Medical Examiner, the Investigator establishes whether the case falls within the jurisdiction of the CCME, if any scene investigation is required, and, if necessary, has the body transported to the CCME facility. The Medical Examiner then determines the extent of examination that is

required, the ancillary testing that is needed to determine the cause and manner of death, and if further identification of the body is needed. After completion of the examination, the body is released as per the request of the legal next of kin. The written autopsy report is completed once all additional investigation and testing results are available.

The Medical Examiners for the CCME are physicians licensed to practice medicine in the state of Georgia and continue to meet the annual requirements for continuing medical education for maintenance of licensure. Additionally, the current Medical Examiners have completed training in anatomic pathology and clinical pathology as well as subspecialty training in forensic pathology. The current Medical Examiners are certified by the American Board of Pathology (ABP) in anatomic, clinical, and forensic pathology and continue to meet the annual requirements for maintenance of certification set forth by the ABP.

The investigative staff of the CCME are all certified as diplomates of the American Board of Medicolegal Death Investigators (ABMDI), which is an organization that sets the guidelines for the performance of Death Investigators in the United States. Each Investigator working at the CCME continues to meet the ongoing requirement for continuing education as set forth by the ABMDI.

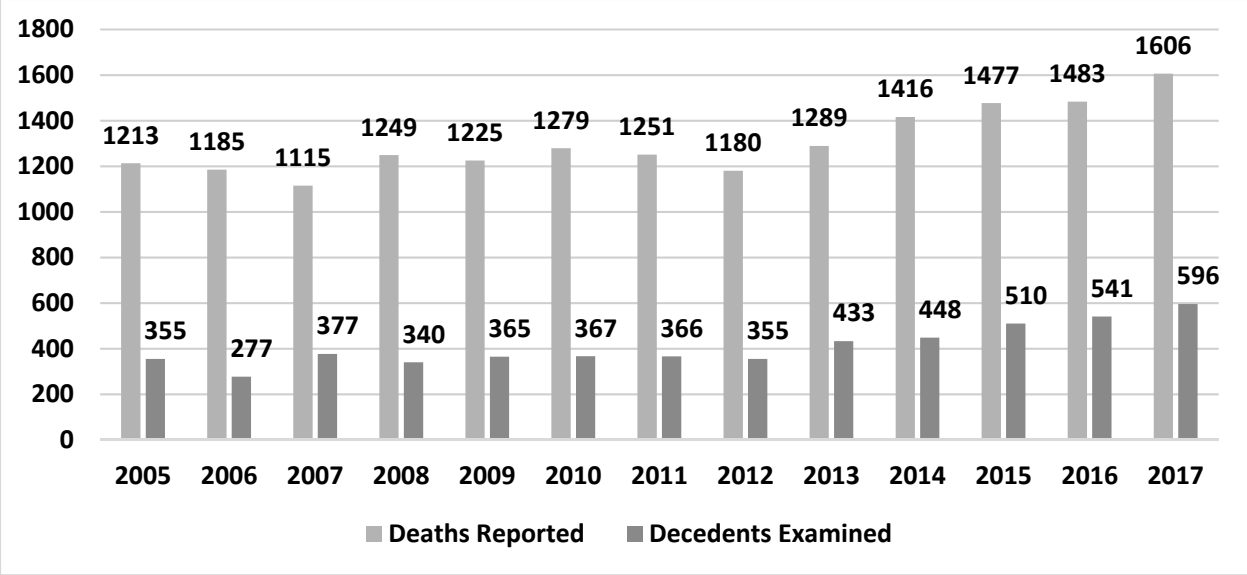
Data

The data within this report were compiled from the CCME database MEDEX and other documentation within our office to include tracking spreadsheets and, when necessary, the case files. Much of the data was hand collected and analyzed from more than one source within our office, and as such, discrepancies in the data are likely due to human error in the documentation and data entry processes. The CCME is currently in the process of establishing a new database for the office, and the database selected has the ability to compile the data for future annual reports using the database rather than depending on man-hours of office staff.

Data Trends

Given the lack of detailed annual reports on deaths in Cobb County in the prior years, analysis of trends in the data is limited at this time; however, as data continues to be collected and analyzed in future years, identification and analysis in trends will be possible and will be used to improve the health and safety of the citizens of Cobb County. If historical data is available concerning reportable aspects for deaths occurring in Cobb County, it is embedded within the body of the report.

ALL REPORTED DEATHS



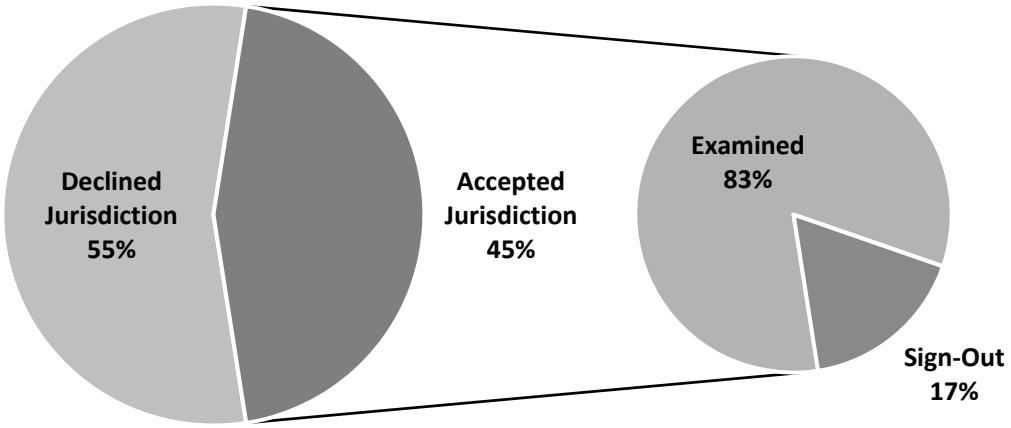
Deaths Reported and Decedents Examined, 2005 to 2017

The number of deaths reported to the Medical Examiner's Office and the number of cases accepted for examination by a Medical Examiner have steadily increased since 2012. The number of accepted jurisdiction cases examined by a Medical Examiner increased by 13.8% from 2014 to 2015, 6% from 2015 to 2016, and 10% from 2016 to 2017.

Total deaths reported by jurisdiction status and manner of death

Jurisdiction	Manner of Death	Frequency	Percent
Accepted	Accident	294	40.5%
	Homicide	35	4.8%
	Natural	271	37.3%
	Suicide	96	13.2%
	Undetermined	21	1.3%
	Pending*	1	0.1%
	Not Applicable**	8	1.1%
	Total =	**726**	**100%**
Declined		880	55%
Accepted		726	45%
	Total =	**1606**	**100%**

*A Death Certificate Investigation. **Five cases were identified as animal bones and three cases were fetuses. Fetal deaths follow a different reporting system in the state of Georgia where manner of death is not reported.



Declined vs. Accepted Jurisdiction with Examined vs. Sign-Out

Investigation into the death determines if jurisdiction is initially accepted. However, acceptance of jurisdiction by the CCME solely means that a Medical Examiner will sign the death certificate. Acceptance of jurisdiction does not always necessitate a postmortem examination; sign-out cases are those which the Medical Examiner issues the death certificate without having examined the body. These cases include:

1) Deaths that occurred after hospitalization with documentation of injuries in accidental and suicidal manners of death where the treating physicians had determined the cause of death but could not sign the death certificate because the manner was not natural. In Georgia, a Medical Examiner must sign the death certificate per state law if the manner of death is not natural.

2) Non-natural deaths that were not reported to the CCME at the time of death and the remains were no longer available for examination. These deaths are most often detected by funeral homes or the Office of Vital Records, who notifies the CCME to initiate a death certificate investigation.

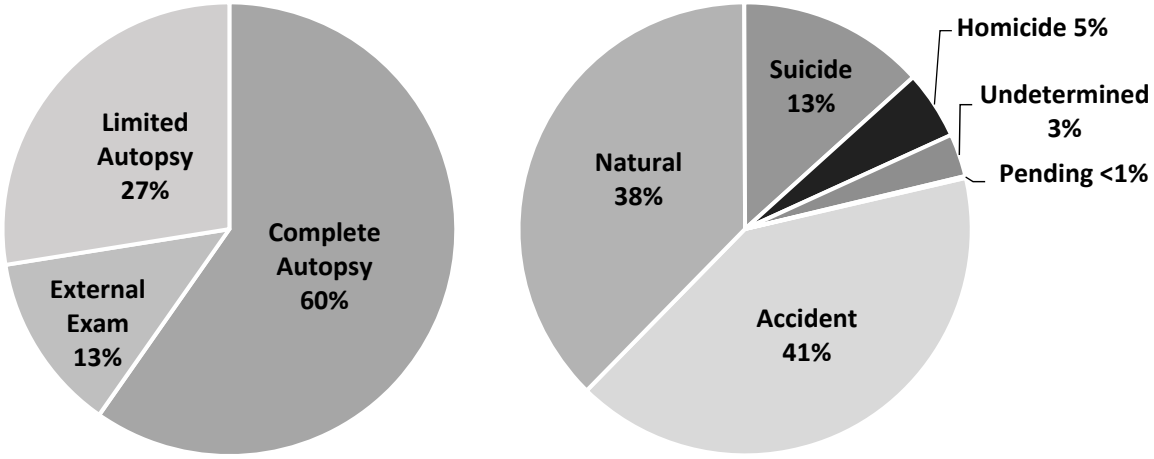
3) Natural deaths where an attending physician existed and was known at the time of death, and the death does not fall under the jurisdiction of the CCME, but upon notification to the physician of the death, the physician refuses to sign the death certificate. As a service to the family, in these cases, the CCME will subpoena required medical records and issue a death certificate.

ALL ACCEPTED JURISDICTION DEATHS

Accepted jurisdiction cases by manner of death and procedure performed

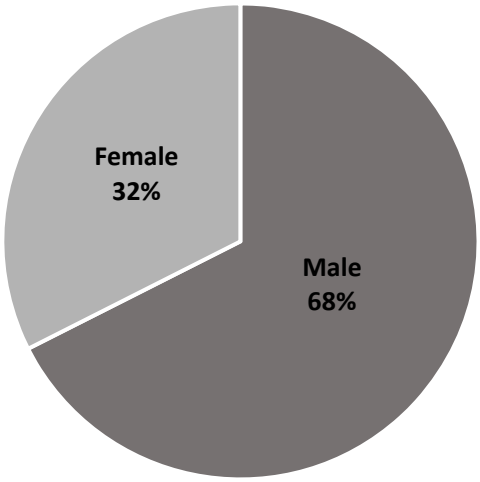
Manner of Death	Procedure Performed				Total	Percentage
	Autopsy	Limited Autopsy	External Exam	Sign-Out		
Accident	162	47	10	75	**294**	**41%**
Homicide	35	-	-	-	**35**	**5%**
Natural	125	45	59	42	**271**	**38%**
Suicide	17	71	6	2	**96**	**13%**
Undetermined	17	1	1	2	**21**	**3%**
Pending	-	-	-	1	**1**	**<1%**
Total =	**356**	**164**	**76**	**122**	**718**	**100%**

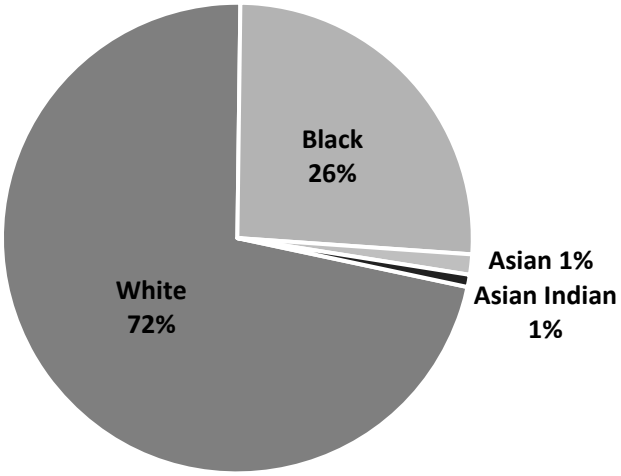
Of the 726 cases of accepted jurisdiction, 122 deaths were handled as sign-outs, and therefore, the body was released without examination or was not available for examination at the time the death was reported to the CCME. 604 cases were examined by a Medical Examiner at the CCME office. Five of the reported deaths were not human but were animal bones. Three fetuses were examined. The result of this is 596 deaths examined as to cause and manner.

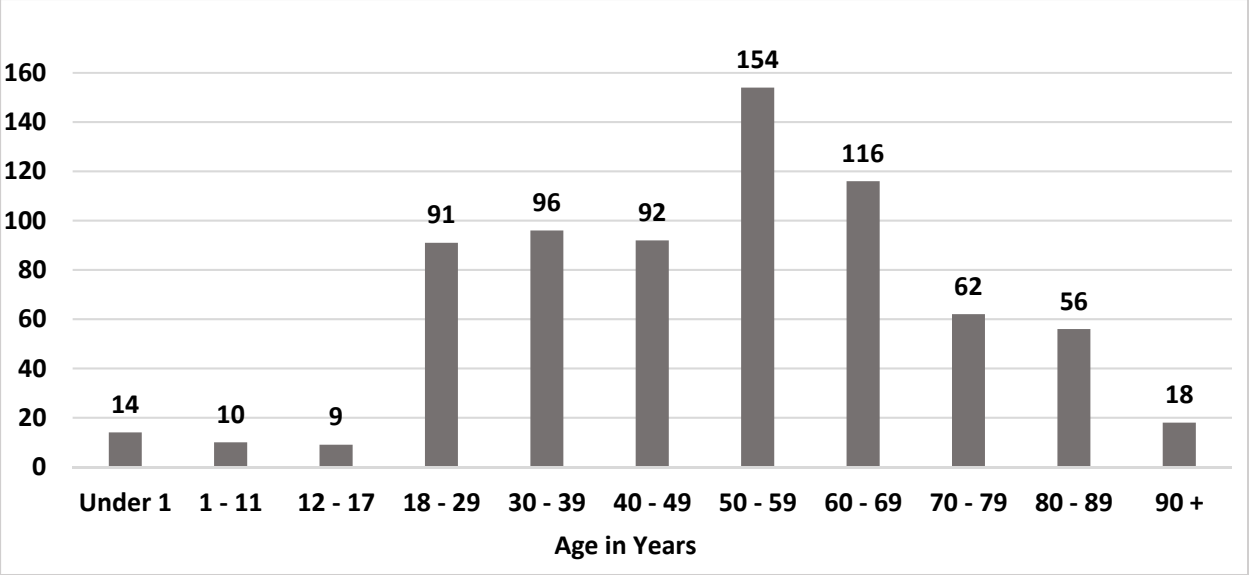


Type of Autopsy Performed and Manner of Death

The extent of the examination that is required for a particular case is determined by the Medical Examiner based upon the information known, and sometimes unknown, about the case at the time of the examination. In certain types of cases, such as homicides, even if the cause and manner of death are known at the time of autopsy, due to the needs of the community and the judicial system, a complete autopsy is performed. When possible, the Medical Examiner will honor family wishes about the extent of the examination performed within the bounds of the Georgia Death Investigation Act and best practices within the field of forensic pathology.







Accepted Jurisdiction by Sex, Race and Age

Comments:

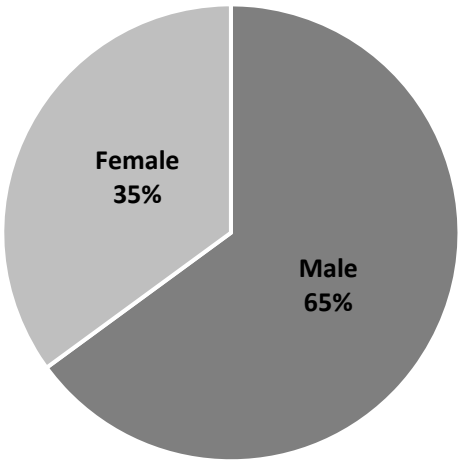
- Our database has no consistent method for tracking ethnicity of a decedent; therefore, only race can be reported.

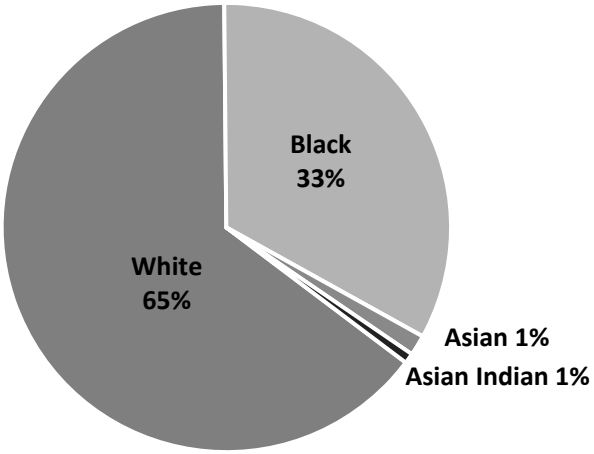
DEATHS BY MANNER

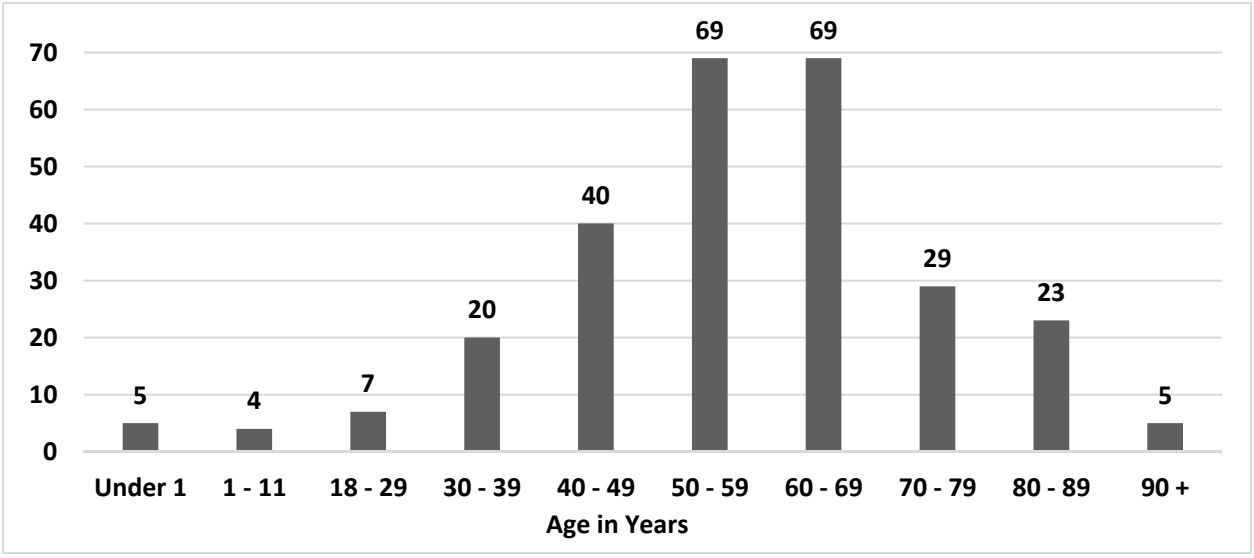
NATURAL

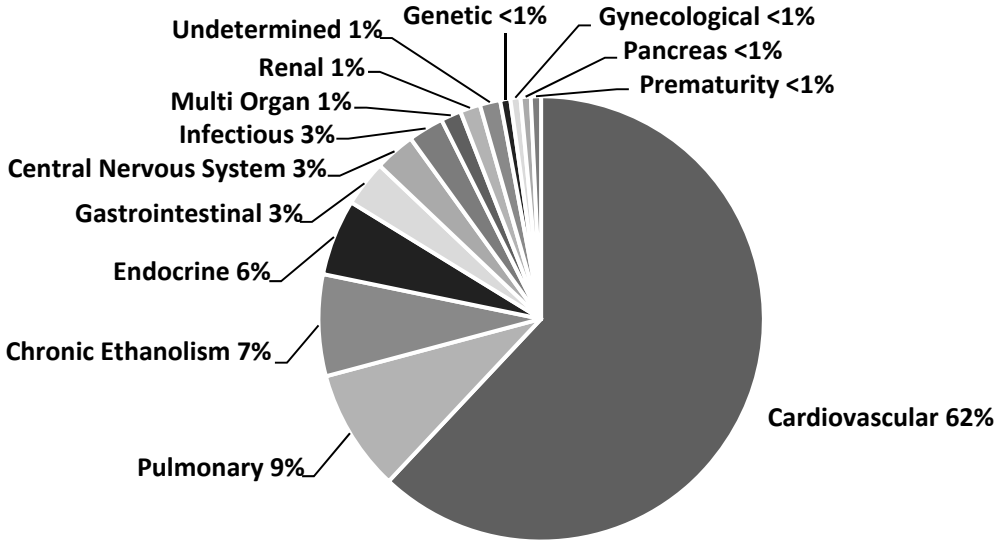
Accepted jurisdiction cases of natural deaths by major organ system / cause of death

CARDIOVASCULAR (168)	
ISCHEMIC	86
HYPERTENSIVE	70
AORTIC	6
Other	6
CENTRAL NERVOUS SYSTEM (8)	
RUPTURED CEREBRAL SACCULAR-BERRY-ANEURYSM	3
DEMENTIA	2
SEIZURE DISORDER	2
HEMORRHAGIC CEREBRAL INFARCT	1
ENDOCRINE (15)	
DIABETES	14
ADDISON'S DISEASE	1
CHRONIC ETHANOLISM	20
GASTROINTESTINAL (9)	
ADENOCARCINOMA OF COLON	3
HEMORRHAGE	3
NECROSIS	1
INGUINAL HERNIA	1
SMALL BOWEL OBSTRUCTION	1
GENETIC (2)	
ACHONDROPLASIA	1
PARTIAL DELETION OF CHROMOSOME 15	1
GYNECOLOGICAL (2)	
BREAST CARCINOMA	1
OVARIAN CARCINOMA	1
INFECTIOUS (7)	
PNEUMONIA	5
PERITONITIS	1
MENINGITIS AND SEPSIS	1
MULTI ORGAN (4)	
MORBID OBESITY	3
LUPUS ERYTHEMATOSUS	1
PANCREAS - ACUTE PANCREATITIS	2
PREMATURITY	2
PULMONARY (24)	
PULMONARY THROMBOEMBOLI	16
CHRONIC OBSTRUCTIVE PULMONARY DISEASE	5
BRONCHIAL ASTHMA	2
LUNG CARCINOMA	1
RENAL (4)	
END STAGE RENAL DISEASE	2
GITELMAN SYNDROME	1
RENAL CELL CARCINOMA	1
UNDETERMINED	4









Natural Deaths by Sex, Race, Age and Cause of Death

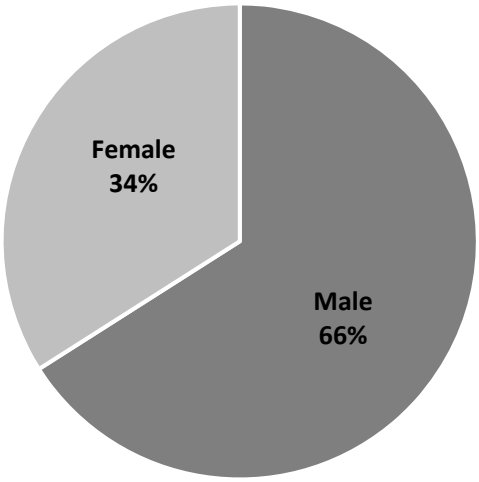
Comments:

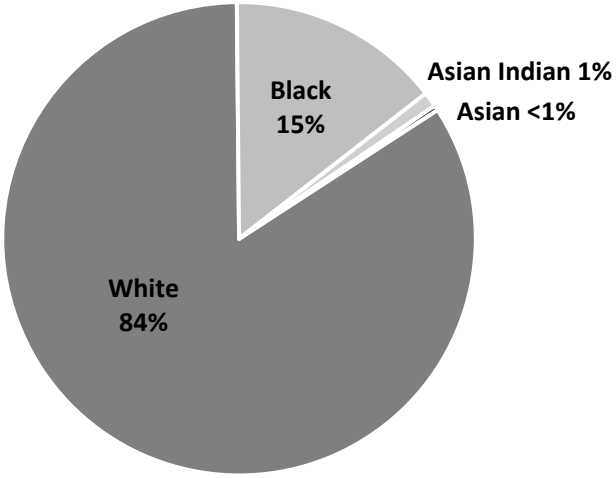
- In keeping with national trends, the organ system most commonly causing death in Cobb County is the cardiovascular system with ischemic cardiovascular disease processes being the most common.
- Chronic ethanol abuse results in pathological changes in multiple organs including the liver and heart. Deaths due to chronic ethanolism can be the direct result of cardiomyopathy caused by the myocardial toxic effects of ethanol, gastrointestinal hemorrhage, or liver failure resulting in encephalopathy or body cavity effusions. Chronic ethanol abuse deaths are considered separately from acute alcohol intoxication deaths, which are considered drug related and thus accidental in manner.

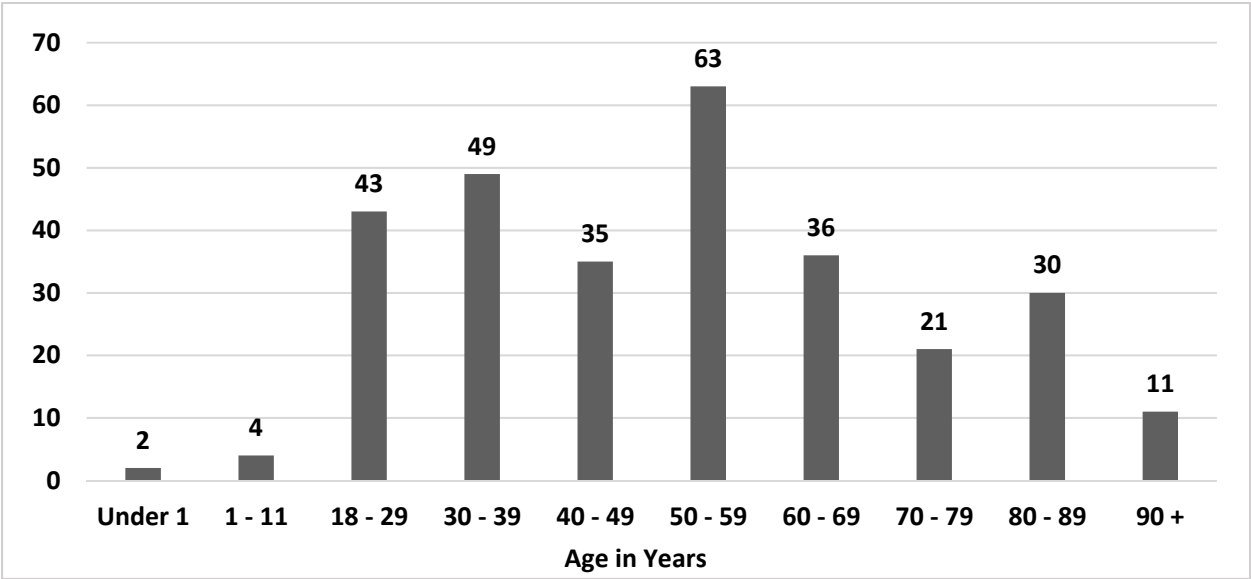
ACCIDENT

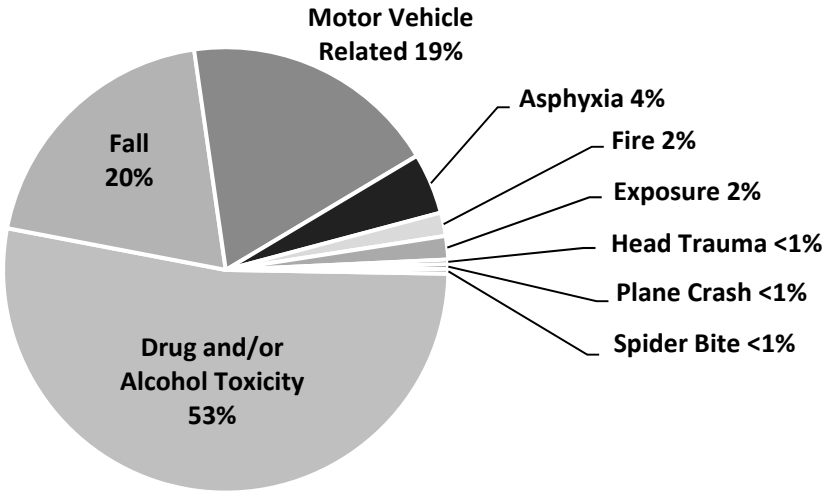
Accepted jurisdiction cases of accidental deaths by sex, race, age and cause of death

		Asphyxia					Drug and/or Alcohol Toxicity	Fall	Head Trauma	Fire	Exposure	Spider Bite	Motor Vehicle			Plane Crash	Total
		Choking	Drowning	Mechanical	Suffocation	Suffocation / Unsafe Sleep Conditions							Blunt Force	Fire	Cardiac Arrhythmia		
SEX	Female	1	5	-	-	1	47	28	-	3	2	-	11	1	1	-	**100**
	Male	1	2	1	1	1	108	30	1	2	3	1	41	1	-	1	**194**
RACE	Asian	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	**1**
	Black	-	3	-	-	2	14	5	-	-	1	-	18	-	-	-	**43**
	Asian Indian	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	**3**
	White	2	4	1	1	-	141	50	1	5	4	1	33	2	1	1	**247**
AGE	Under 1	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	**2**
	1 - 11	-	3	-	-	-	-	-	-	-	-	-	1	-	-	-	**4**
	18 - 29	-	1	-	1	-	29	1	-	1	-	-	9	1	-	-	**43**
	30 - 39	-	-	-	-	-	37	-	-	-	-	-	11	1	-	-	**49**
	40 - 49	-	-	-	-	-	26	2	1	-	-	-	6	-	-	-	**35**
	50 - 59	-	1	1	-	-	43	2	-	1	2	1	12	-	-	-	**63**
	60 - 69	-	1	-	-	-	18	9	-	1	1	-	6	-	-	-	**36**
	70 - 79	1	1	-	-	-	1	10	-	1	-	-	5	-	1	1	**21**
	80 - 89	1	-	-	-	-	1	23	-	1	2	-	2	-	-	-	**30**
	90 +	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-	**11**
Total =		**2**	**7**	**1**	**1**	**2**	**155**	**58**	**1**	**5**	**5**	**1**	**52**	**2**	**1**	**1**	**294**









Accidental Deaths by Sex, Race, Age and Cause of Death

Comments:

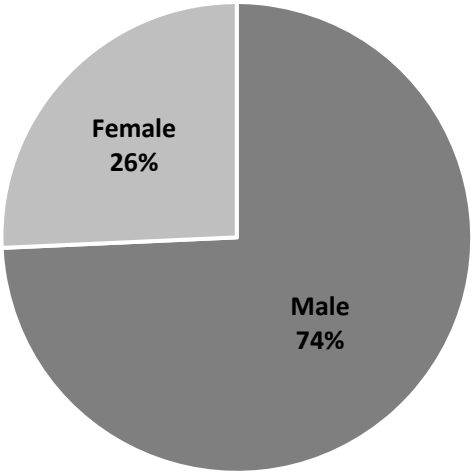
- In Cobb County, accidental drug related deaths were more than twice as common as motor vehicle related deaths in 2017.
- The 50-59 year age bracket had the highest number of motor vehicle related deaths and the highest number of drug and alcohol related deaths.
- Males were nearly twice as likely as females to die of an accidental manner of death.

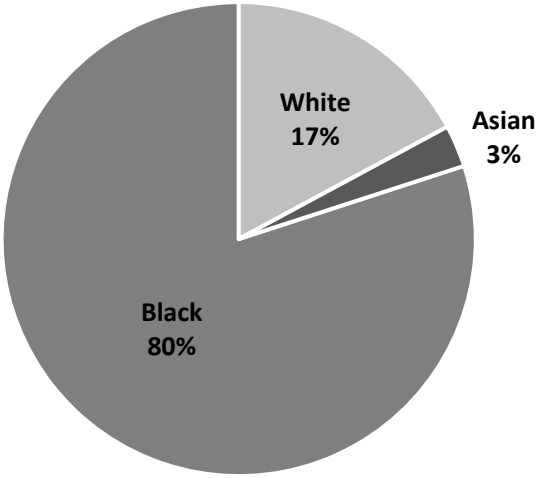
HOMICIDE

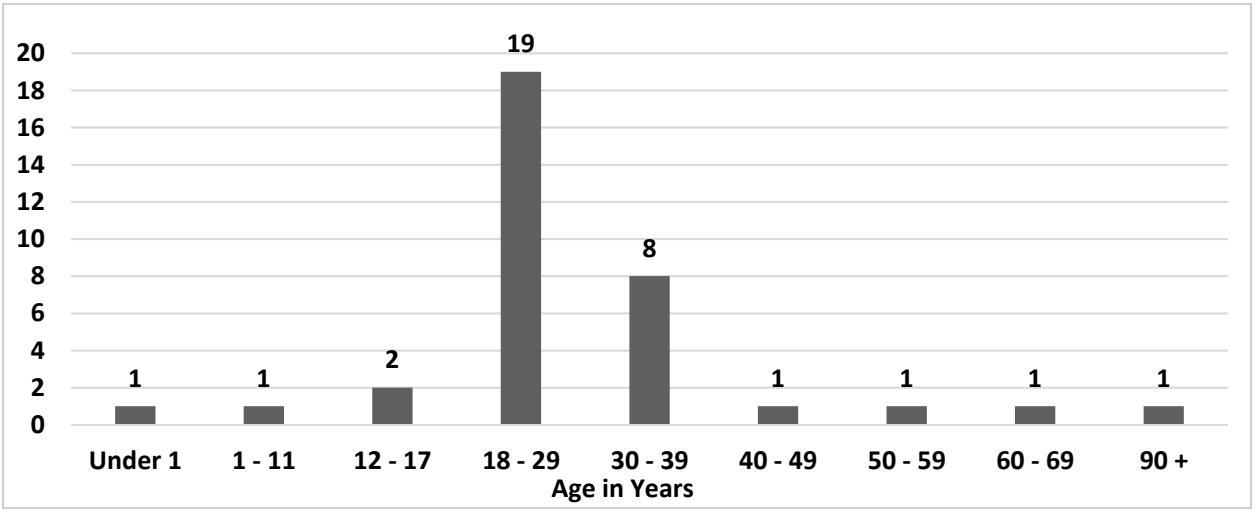
A complete autopsy is performed on all homicides occurring within the Cobb County jurisdiction, and all homicides, by definition, will have jurisdiction accepted by the Medical Examiner's Office.

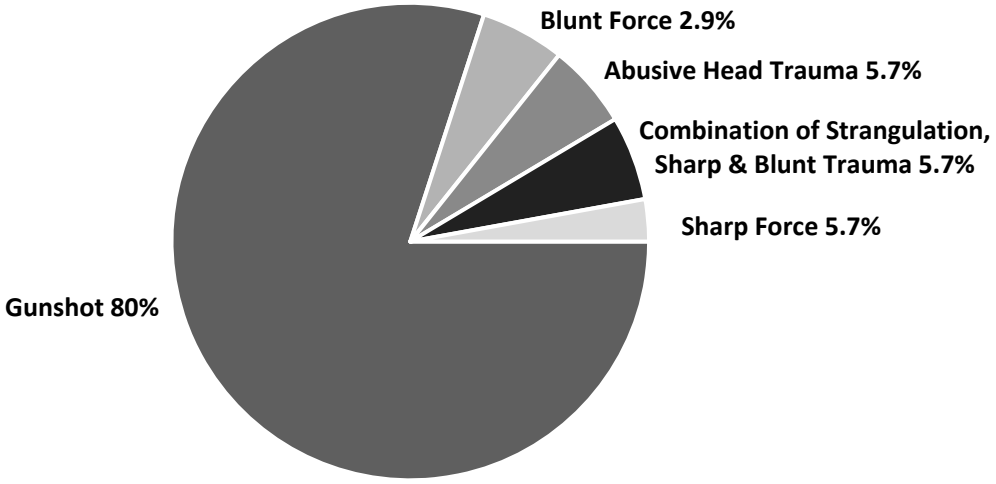
Accepted jurisdiction cases of homicide deaths by sex, race, age and cause of death

		Gunshot Wound	Sharp Force	Blunt Force Injury	Abusive Head Trauma	Combination Strangulation/Sharp /Blunt Force	Total
SEX	Female	6	1	-	1	1	**9**
	Male	22	1	1	1	1	**26**
RACE	Asian	-	-	-	-	1	**1**
	Black	24	1	-	2	1	**28**
	White	4	1	1	-	-	**6**
AGE	Under 1	-	-	-	1	-	**1**
	1 - 11	-	-	-	1	-	**1**
	12 - 17	1	1	-	-	-	**2**
	18 - 29	17	-	-	-	2	**19**
	30 - 39	8	-	-	-	-	**8**
	40 - 49	1	-	-	-	-	**1**
	50 - 59	1	-	-	-	-	**1**
	60 - 69	-	1	-	-	-	**1**
	90 +	-	-	1	-	-	**1**
Total =		**28**	**2**	**1**	**2**	**2**	**35**

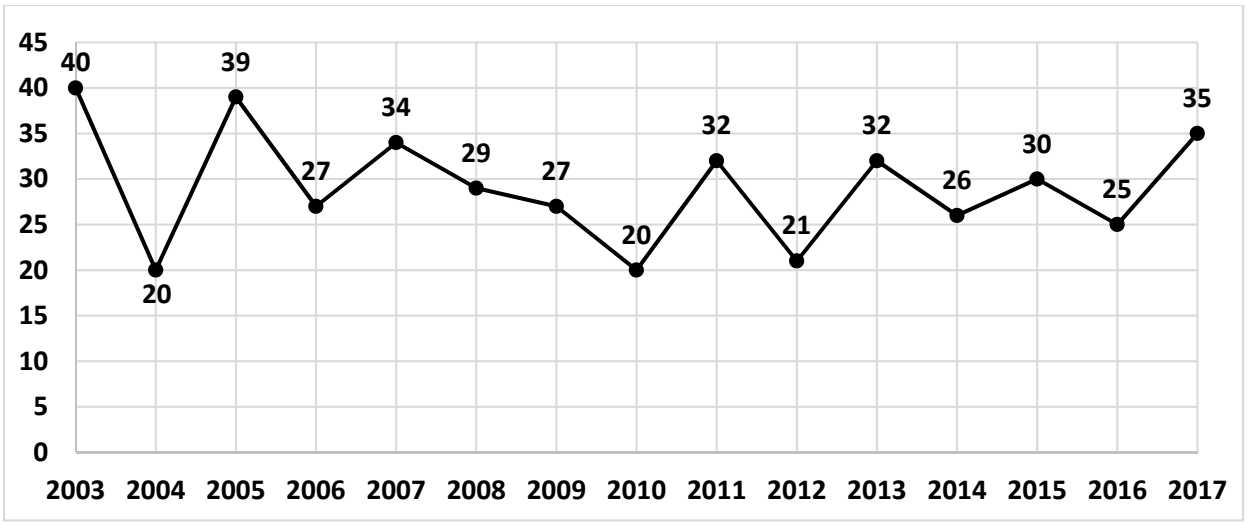




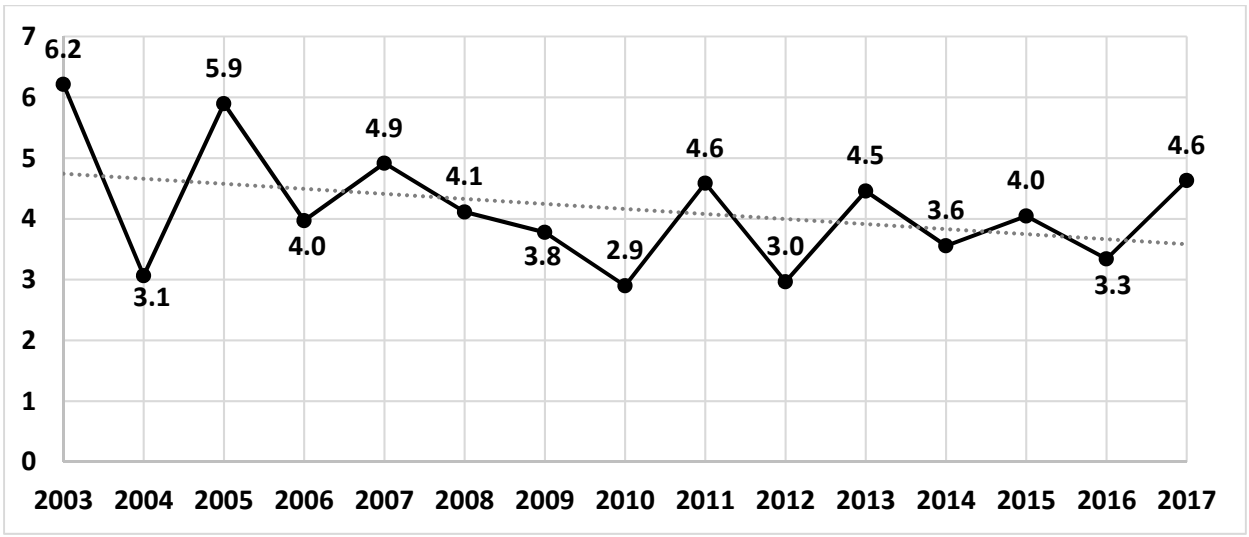




Homicide by Sex, Race, Age and Cause of Death



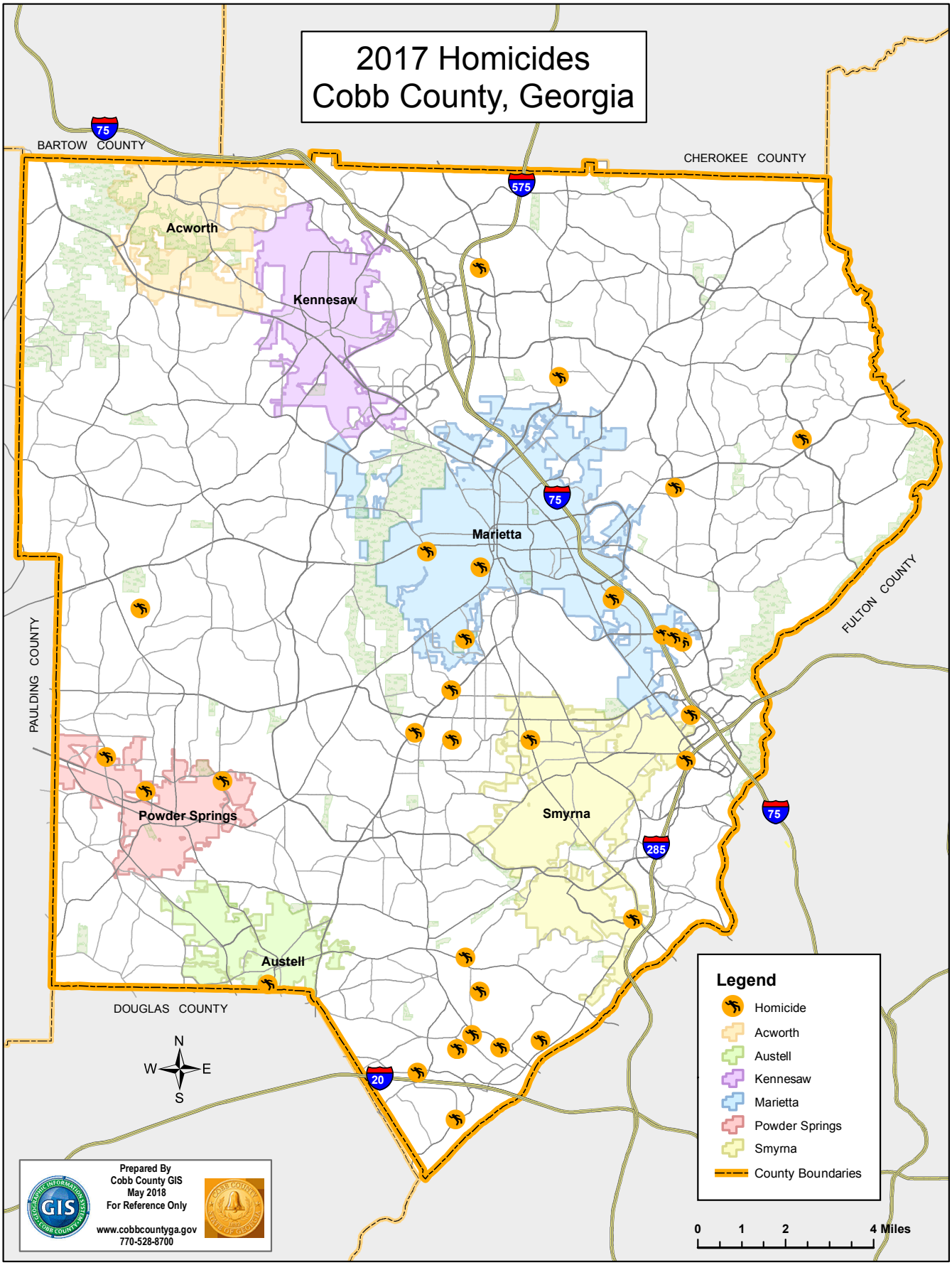
Homicide Totals, 2003-2017



Homicide Rate per 100,000 Population, 2003-2017

Comments:

- Firearms (handguns and shotguns) were involved in 80% of homicides.
- 74% of homicide victims were males.
- Four children were victims of homicide.
- The demographics to show the greatest change in number of deaths due to a homicidal manner were black persons, a population that had double the number of homicides compared to 2016, and persons between the ages of 18 and 29 years, a population that had more than double the number of homicides compared to 2016.


2017 Homicides
Cobb County, Georgia
BARTOW COUNTY
CHEROKEE COUNTY
FULTON COUNTY
PAULDING COUNTY
DOUGLAS COUNTY
Acworth
Kennesaw
Marietta
Powder Springs
Smyrna
Austell
75
575
285
20
N
W
E
S
Legend
Homicide
Acworth
Austell
Kennesaw
Marietta
Powder Springs
Smyrna
County Boundaries
0 1 2 4 Miles
Prepared By
Cobb County GIS
May 2018
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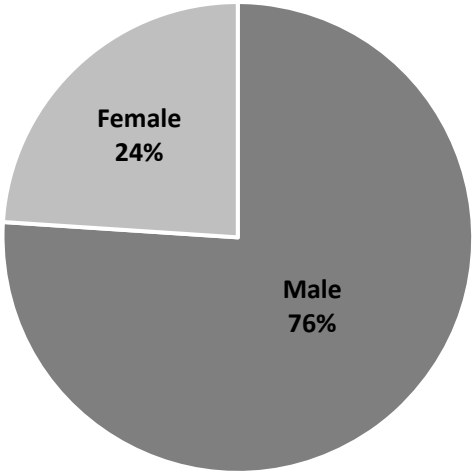
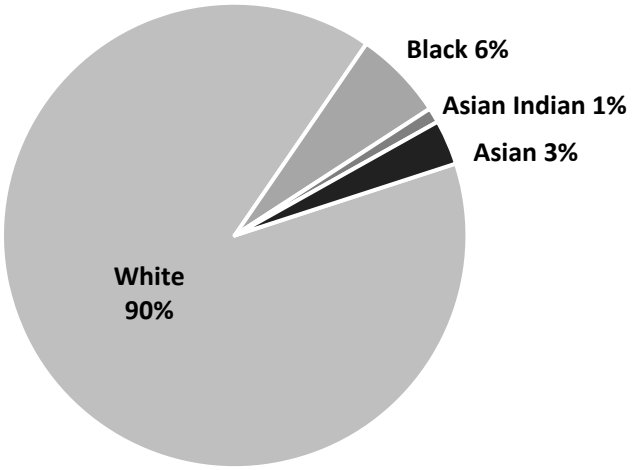
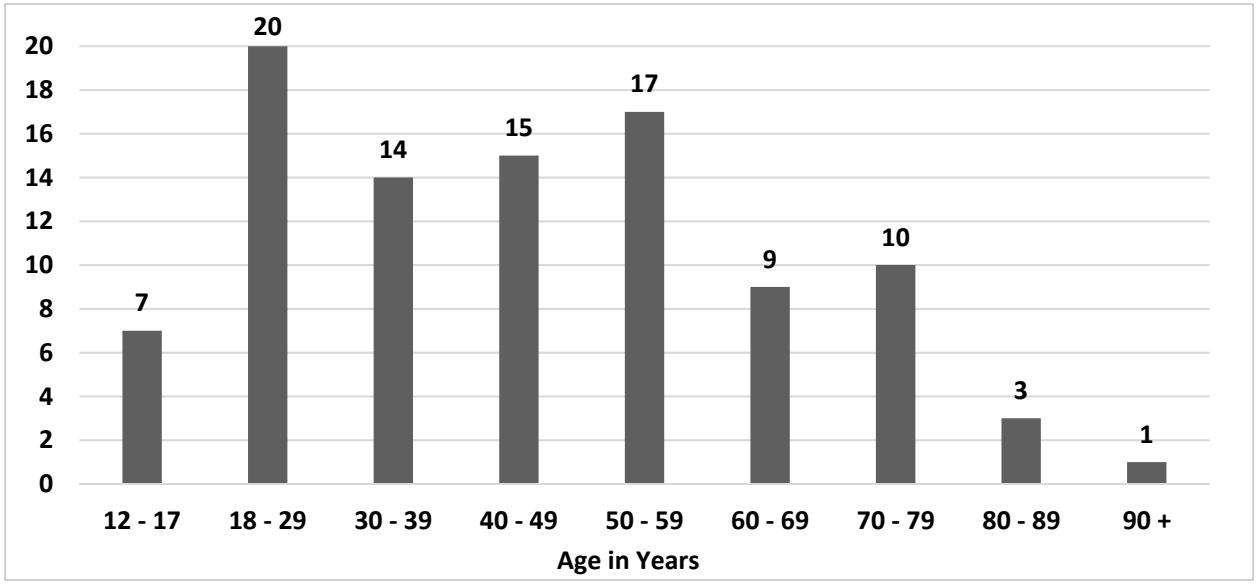
SUICIDE

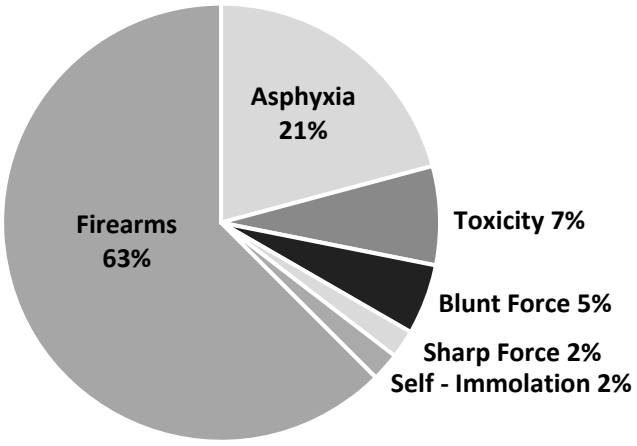
Accepted jurisdiction cases of suicide deaths by sex, race, age and cause of death

		Asphyxia					Firearm		Toxicity			Sharp Force Trauma	Blunt Force Trauma	Self-Immolation	Total
		Exhaust	Natural Gas	Hydrogen Sulfide	Plastic Bag	Hanging	Gunshot Wound	Shotgun Wound	Ethylene Glycol	OTC & Alcohol	Prescription Drugs				
SEX	**Female**	-	-	-	-	4	12	-	-	-	4	1	-	2	**23**
	Male	2	1	1	1	11	47	1	1	1	1	1	5	-	**73**
RACE	**Asian**	-	-	-	-	1	1	-	-	-	1	-	-	-	**3**
	Asian Indian	-	-	-	-	-	-	-	-	-	-	-	-	1	**1**
	Black	-	-	-	-	-	3	-	-	-	2	-	1	-	**6**
	White	2	1	1	1	14	55	1	1	1	2	2	4	1	**86**
AGE	**12 - 17**	-	-	-	-	1	5	-	-	-	-	-	1	-	**7**
	18 - 29	-	-	1	-	6	11	-	-	-	2	-	-	-	**20**
	30 - 39	-	-	-	-	4	9	-	-	-	-	-	1	-	**14**
	40 - 49	1	-	-	-	2	9	-	1	-	-	1	1	-	**15**
	50 - 59	-	1	-	-	2	9	-	-	1	2	1	-	1	**17**
	60 - 69	-	-	-	-	-	7	-	-	-	-	-	2	-	**9**
	70 - 79	1	-	-	1	-	6	1	-	-	-	-	-	1	**10**
	80 - 89	-	-	-	-	-	2	-	-	-	1	-	-	-	**3**
	90 +	-	-	-	-	-	1	-	-	-	-	-	-	-	**1**
Total =		**2**	**1**	**1**	**1**	**15**	**59**	**1**	**1**	**1**	**5**	**2**	**5**	**2**	**96**

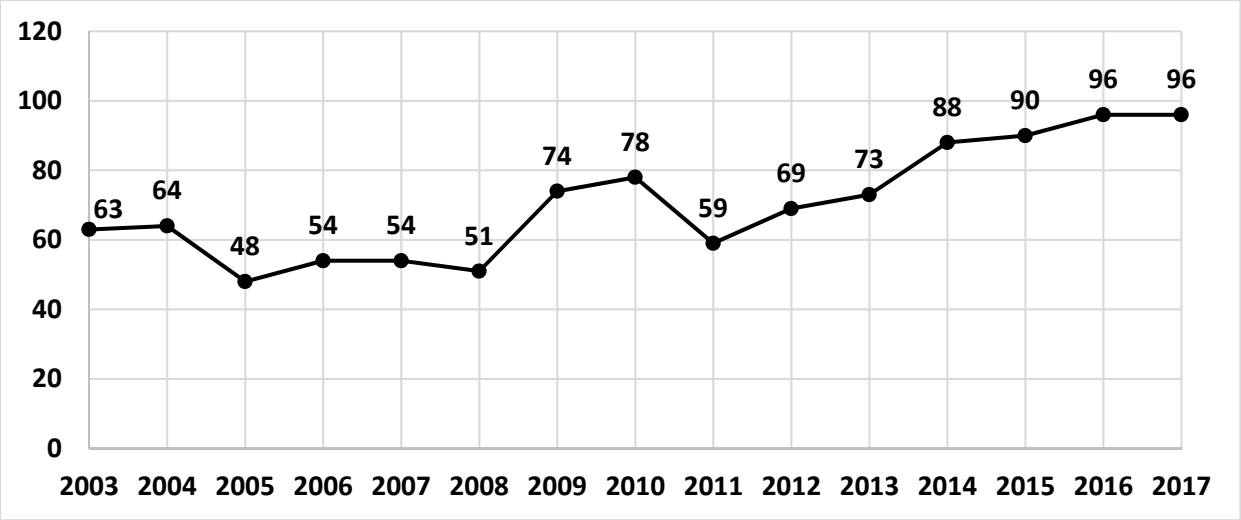




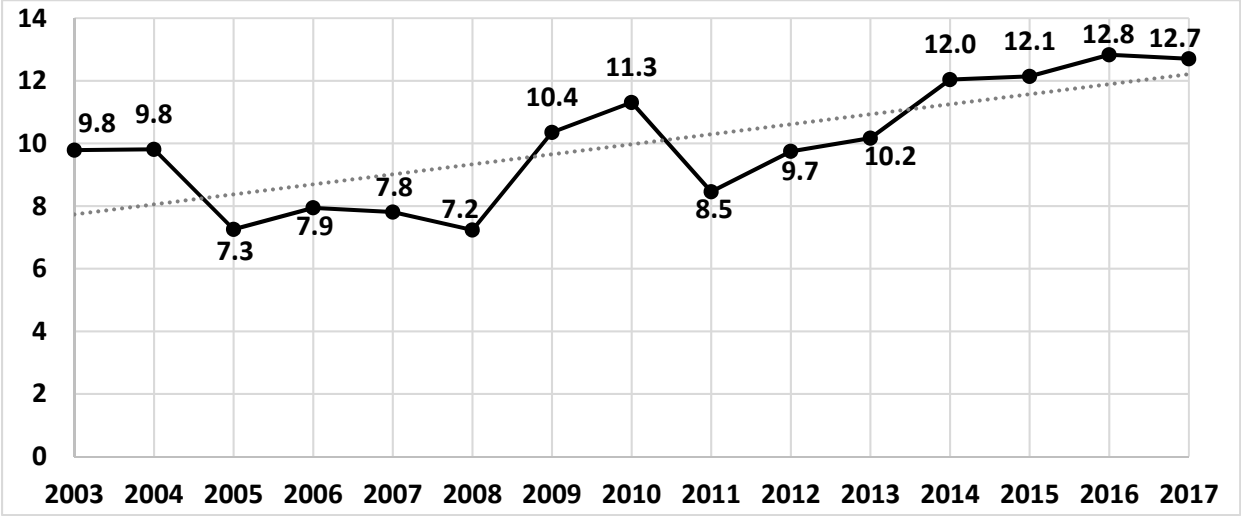




Suicides by Sex, Race, Age and Cause of Death



Suicide Totals, 2003-2017



Suicide Rate per 100,000 Population, 2003-2017

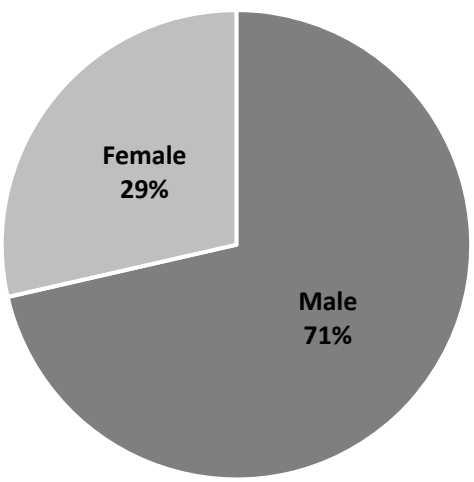
Comments:

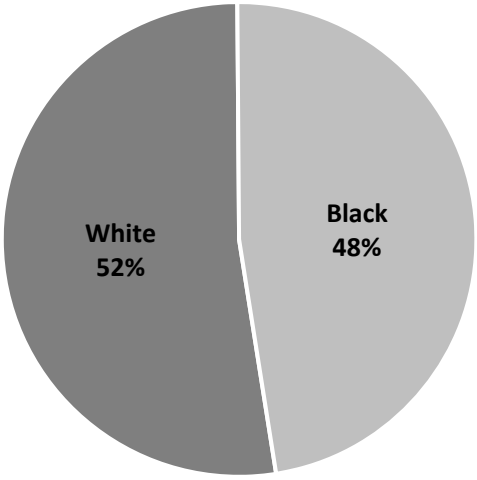
- Firearms were the most common method of suicide.
- 76% of suicide victims were male.
- Persons with a suicidal manner of death are significantly more likely to identify as white.
- The mean age of victims of suicide was 45 years old.
- The mean age for asphyxia was 38 years old; for drug toxicity was 50 years old; for gunshot/shotgun was 46 years old.
- The age bracket with the greatest number of suicides was the 18-29 year bracket whereas the lowest number of suicides occurred within the 90+ year bracket.
- The eldest suicide victim was 93 years old and the youngest were two 14 year olds.

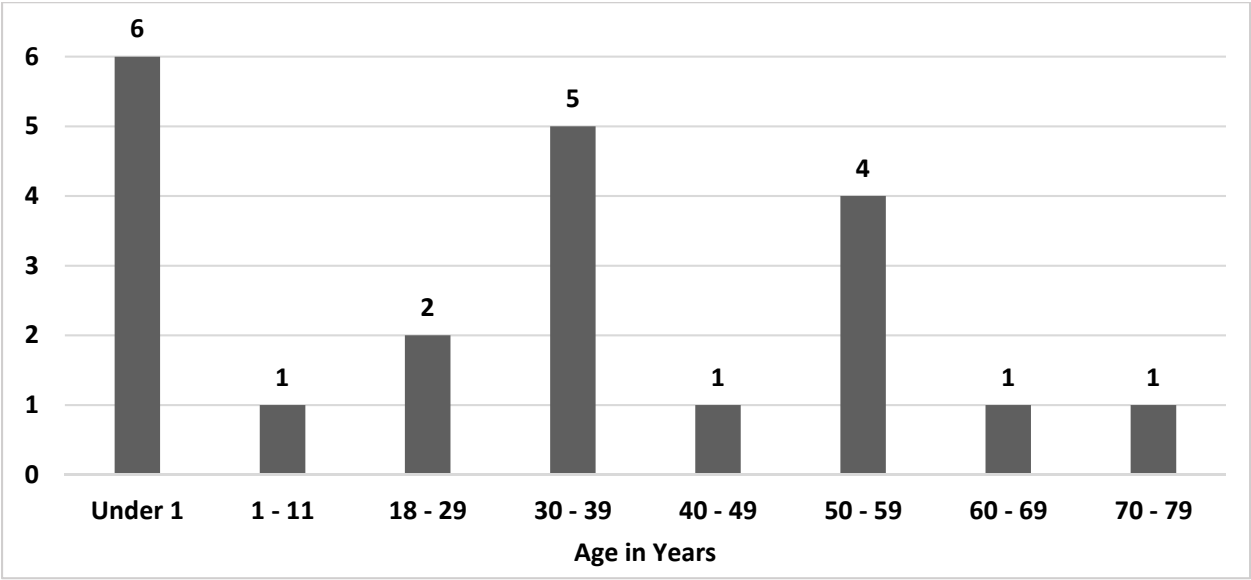
UNDETERMINED

Accepted jurisdiction cases of undetermined manner deaths by sex, race, age and cause of death

		Asphyxia (Possible Autoerotic)	Blunt Force Trauma	Excited Delirium	Drugs Present	Gunshot Wounds	Sudden Infant Death (Possible Unsafe Sleeping)	Undetermined Cause	Undetermined (Pregnant w/ Drugs Present)	Total
SEX	Female	-	-	-	2	-	1	2	1	**6**
	Male	1	1	1	1	1	5	5	-	**15**
RACE	Black	-	-	1	1	-	4	3	1	**10**
	White	1	1	-	2	1	2	4	-	**11**
AGE	under 1	-	-	-	-	-	6	-	-	**6**
	1 - 11	-	-	-	-	-	-	1	-	**1**
	18 - 29	-	-	-	-	-	-	1	1	**2**
	30 - 39	1	-	1	1	1	-	1	-	**5**
	40 - 49	-	-	-	-	-	-	1	-	**1**
	50 - 59	-	1	-	2	-	-	1	-	**4**
	60 - 69	-	-	-	-	-	-	1	-	**1**
	70 - 79	-	-	-	-	-	-	1	-	**1**
Total =		**1**	**1**	**1**	**3**	**1**	**6**	**7**	**1**	**21**







Undetermined Deaths by Sex, Race and Age

The above cases were assigned an undetermined manner of death and are different from cases where the cause of death is certified as undetermined. Cases in which the cause of death is undetermined can be certified as any manner of death. In cases where the cause of death is undetermined, no evidence of an injury or disease process could be found at autopsy usually because such cases are caused by a physiological derangement or because advanced decomposition had developed.

Of the 718 deaths certified by the CCME, 21 were certified as having an undetermined manner. An undetermined manner means that at the end of the investigation and examination, the known circumstances of the case could be explained by more than one manner or not enough information is known to determine a manner.

Six of the undetermined deaths in Cobb County in 2017 were in infants under 1 year of age and are discussed below in *Special Populations*.

Of the other 15 cases; seven had identified causes but circumstances concerning the cases could be explained by more than one manner of death, and eight of the cases could not have a cause of death determined despite complete examination and investigation.

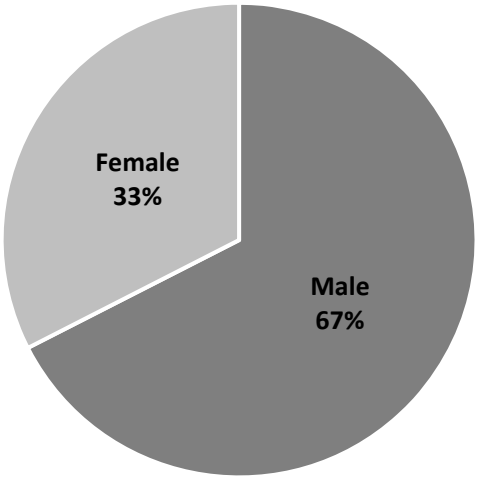
SPECIAL POPULATIONS

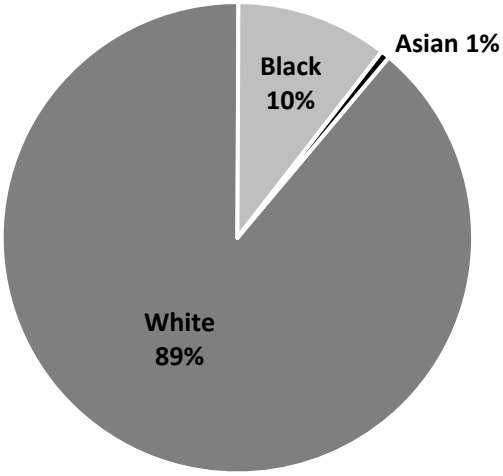
DRUG RELATED DEATHS

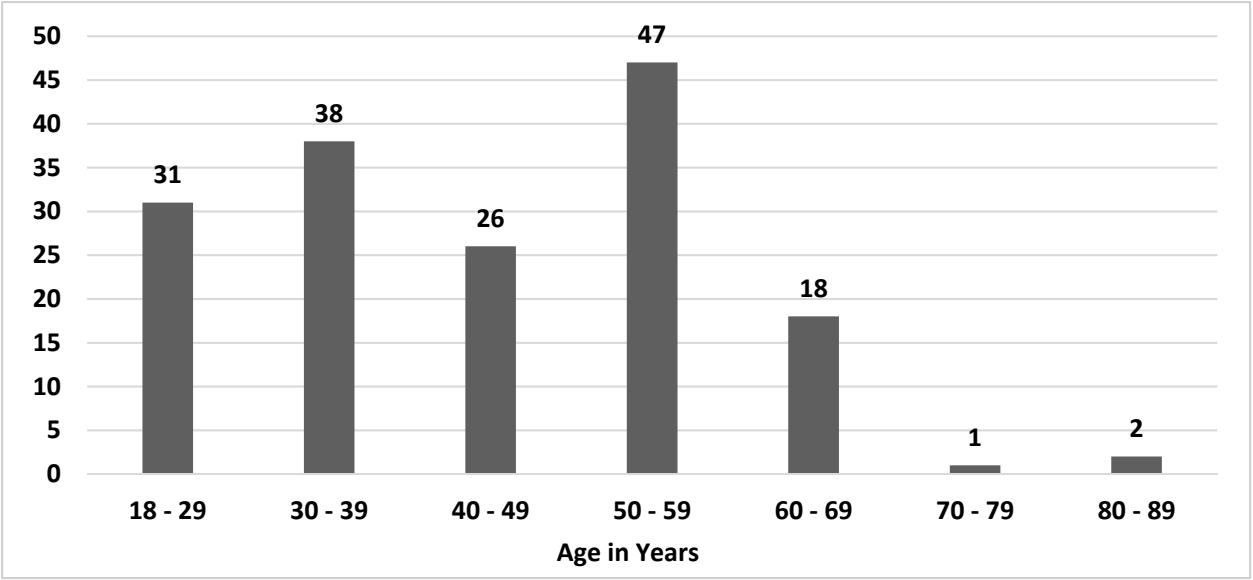
In 2017 there were 163 decedents who died of a drug and/or alcohol related death. The table below is a tallied list of all of the drugs or drug classes involved; the table does not sum to 163 because in many deaths multiple drugs are present and contribute to the death. In addition to prescription and illicit drugs, ethanol is also often present in drug related death, and depending on the drug class, can contribute to the death or occasionally may be the sole cause of death.

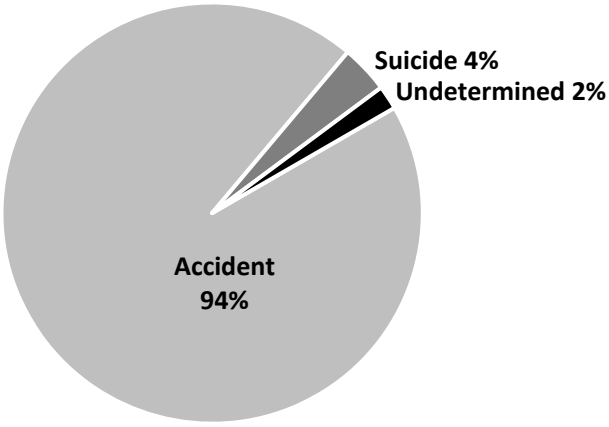
Drugs related to the cause of death

Drug or Drug Class	#
FENTANYL / DESIGNER OPIOIDS (4-ANPP, Acrylfentanyl, Butyryl fentanyl, Carfentanyl, Cyclopropylfentanyl, Fentanyl, Furanyl fentanyl, Methoxyacetyl fentanyl, Para-fluorobutyryl fentanyl/FIBF, U-47700)	62
Heroin	37
Morphine (likely includes some Heroin deaths)	23
Oxycodone	30
Hydrocodone	12
OTHER OPIOIDS (hydromorphone, methadone)	11
OTHER NARCOTICS (tramadol)	4
Alprazolam	33
OTHER BENZODIAZEPINES (chlordiazepoxide, clonazepam, diazepam, lorazepam, midazolam, nordiazepam)	12
Cocaine	37
Methamphetamine (31) / Amphetamine (3)	34
NON-NARCOTIC PAIN MEDICATION / SEDATIVES (gabapentin, pregabalin, zolpidem)	12
ANTI-DEPRESSANTS (amitriptyline, bupropion, citalopram, doxepin, fluoxetine, nortriptyline, paroxetine, trazadone)	17
MUSCLE RELAXERS (carisoprodol, cyclobenzaprine)	9
OTHER PRESCRIPTION MEDICATIONS (hydroxyzine, insulin, lamotrigine, meprobamate, metoprolol, promethazine, propranolol, quetiapine, risperidone)	12
OVER THE COUNTER MEDICATIONS (acetaminophen, dextromethorphan, diphenhydramine)	11
OTHER DRUGS OF ABUSE (mitagynine, N-Ethyl pentylone, propane, synthetic cannibinoid)	4
Ethanol	26

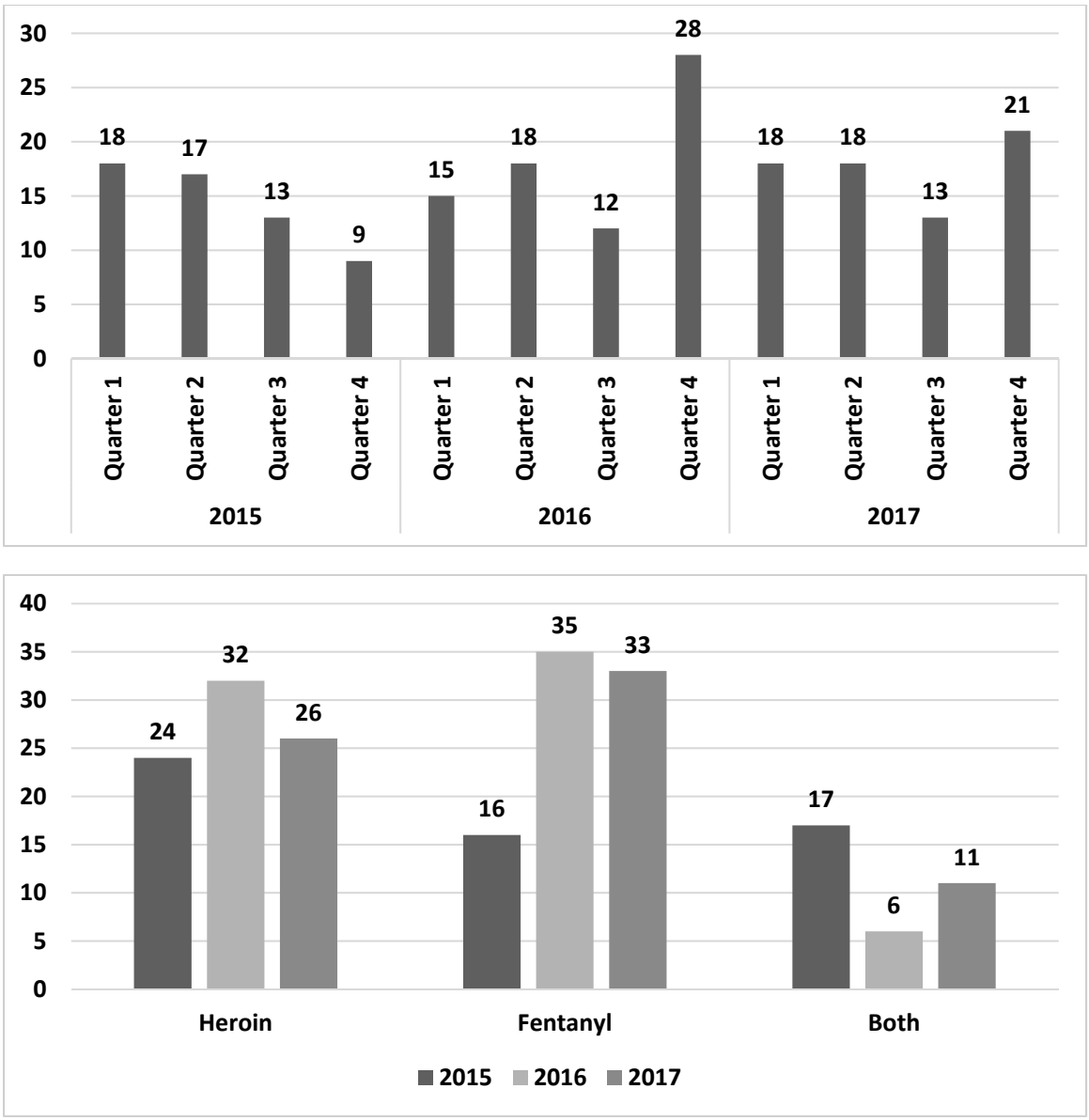




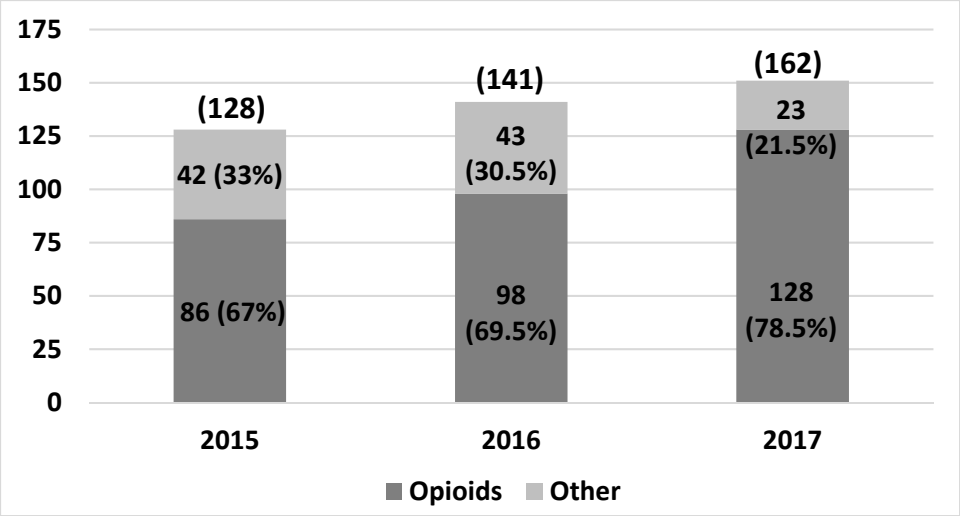




Drug Related Deaths by Sex, Race, Age and Manner of Death



Heroin and/or Fentanyl Related Deaths by Quarter and Year



All Accidental Drug Related Deaths, 2015 – 2017

Comments:

- Deaths due to overdose of opioid drugs continues to increase (128 opioid deaths in 2017 versus 98 in 2016); however, the specific drugs that are found in overdose deaths have varied even in the past three years.
- Longitudinal monitoring of the deaths caused by heroin and fentanyl and its analogs demonstrates waxing and waning in the number of these deaths when examined quarterly; however, the total number of these deaths in 2016 and 2017 were nearly equal.
- The number of deaths related to heroin and fentanyl in Cobb County was at a record high in 2016 with over 50% of the drug-related deaths across all manners of death in Cobb County in 2016 involving heroin, fentanyl, or both. In 2017, 43% of drug related deaths in Cobb County involved heroin, fentanyl, or both; however, whether this change is due to random variation or the beginning of a downward trend cannot yet be determined.
    - Postmortem toxicology testing cannot always confirm the use of heroin, so some heroin deaths were certified as morphine deaths (morphine is the primary blood metabolite of heroin and lethal at high concentrations in its own right). For this reason, morphine deaths are included in the bar graph if history of use and scene investigation supported the use of illicit drugs.
- Of the 128 opioid deaths in 2017, 70 (54%) were due to fentanyl and/or heroin with other opioid drugs causing the additional 58 deaths. By contrast, in 2016 73 of 98 (74%) opioid deaths were due to fentanyl and/or heroin.
- Certain drugs, such as cocaine, heroin, and methamphetamine, are by definition illicit; however, diversion of drugs such as oxycodone and alprazolam allows persons to obtain these prescription medications via illicit means. Whether a person whose death is

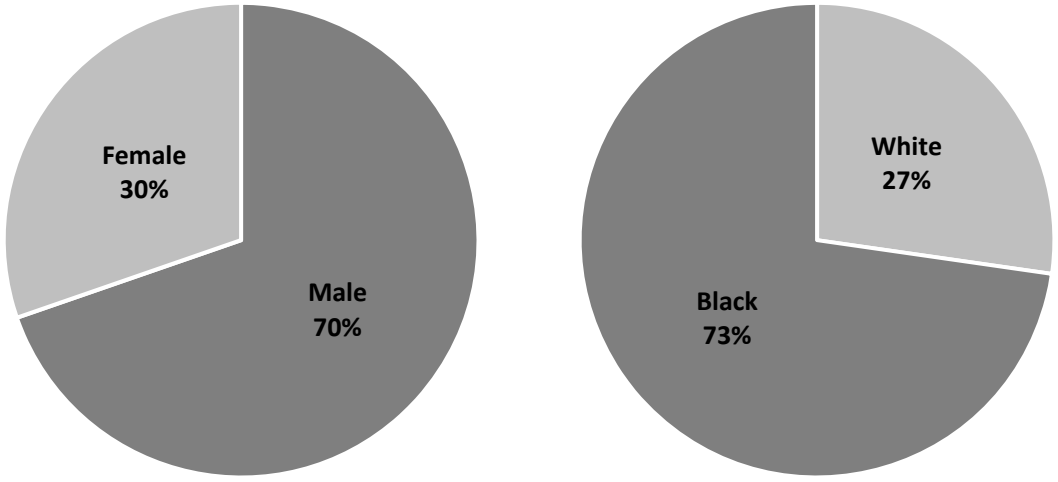
caused by prescribed or diverted sources of these drugs often cannot be determined. Fentanyl has the added complication that sophisticated clandestine laboratories are capable of manufacturing it, so fentanyl deaths can be related to prescribed sources, diverted prescription sources, or illicit production.

CHILDREN (defined as 17 years and younger)

All children and infant deaths occurring in Georgia are required to be reported to the local Medical Examiner or Coroner according to the Georgia Death Investigation Act. Although all deaths in children must be reported to the CCME, not all of the deaths in this population require an examination. Certain fetal demise cases may fall under the jurisdiction of the Medical Examiner depending on the circumstances of the case, but these are the exception rather than the rule for such deaths. Additionally, deaths in children due to documented complications of prematurity and diagnosed terminal diseases such as childhood cancers would not require a medicolegal investigation nor acceptance of jurisdiction by the Medical Examiner.

Accepted jurisdiction cases of children by sex, race, age and manner of death

		Accident	Homicide	Natural	Suicide	Undetermined	Total
SEX	Female	3	1	4	1	1	**10**
	Male	3	3	5	6	6	**23**
RACE	Black	5	4	8	3	4	**24**
	White	1	-	1	4	3	**9**
AGE	Under 1	2	1	5	-	6	**14**
	1 - 11	4	1	4	-	1	**10**
	12 - 17	-	2	-	7	-	**9**
Total =		**6**	**4**	**9**	**7**	**7**	**33**



Children (17 and younger) by Sex and Race

Comment:

- No manner of death was preponderant within the ≤ 17 age population.

1 -17 YEARS OLD

Accepted jurisdiction cases of children aged 1 - 17 years by sex, race, manner and cause of death

		Manner													
		Accident		Homicide			Natural				Suicide			Undetermined	Total
Cause of Death		Blunt Force Injuries (Motor Vehicle)	Drowning	Abusive Head Trauma	Sharp Force Injuries	Gunshot Wound	Complications of Achondroplasia	Cardiomyopathy	Acute Bronchopneumonia	Dravet Syndrome	Asphyxia (Hanging)	Blunt Force (Jump)	Gunshot Wound		
SEX	Female	-	2	-	-	-	-	-	1	-	-	-	2	-	**5**
	Male	1	1	1	1	1	1	1	-	1	1	1	3	1	**14**
RACE	Black	1	2	1	1	1	1	1	1	1	-	-	3	-	**13**
	White	-	1	-	-	-	-	-	-	-	1	1	2	1	**6**
Total =		**1**	**3**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**5**	**1**	**19**

Comment:

- The most common manner of death among the 1 to 17 year old population was suicide, with a total of seven (of 19) total deaths.

INFANTS (defined as less than 1 year of age)

The use of the different terms of Sudden Infant Death Syndrome (SIDS) and Sudden Unexplained Infant Death (SUID/SUDI) is intentional as these terms are not synonymous. SIDS deaths meet specific criteria which rule out the risk of an asphyxial component of the death; whereas SUID/SUDI deaths have a risk of an asphyxial component found during investigation or examination that could have contributed to the death. An infant found dead or near death in an unsafe sleeping environment, which includes bed-sharing with an adult or inappropriate bedding, would not meet the criteria for SIDS and, as such, would be classified as SUID/SUDI. In following these criteria, deaths which show physical evidence of asphyxia are certified with a cause of death based on the findings of the case, and the manner of death is determined by the details of the circumstances of the death.

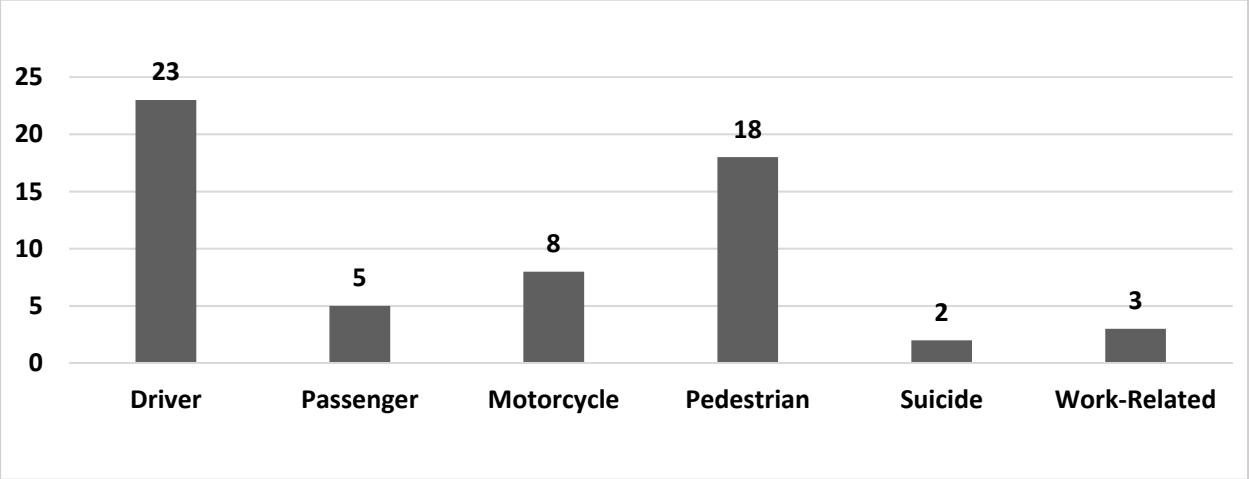
Accepted jurisdiction cases of infants by sex, race, manner, and cause of death

		Manner								Total
		Accident	Homicide	Natural				Undetermined		
Cause of Death		Asphyxia Unsafe Sleep Environment	Abusive Head Trauma	Acute Bronchiolitis & Pneumonia	Chromosomal Abnormality	Prematurity	Undetermined	Sudden Unexplained Infant Death Unsafe Sleep Environment	Undetermined Neonatal Abstinence Syndrome	
SEX	Female	1	1	-	1	1	1	1	-	**6**
	Male	1	-	1	-	1	-	4	1	**8**
RACE	Black	2	1	1	-	2	1	3	1	**11**
	White	-	-	-	1	-	-	2	-	**3**
Total =		**2**	**1**	**1**	**1**	**2**	**1**	**5**	**1**	**14**

Comments:

- The most common manner of death for infants (defined as <1 year of age) is "undetermined". This classification of infant deaths is in following with national trends and recommendations due to the nature of infant deaths. In the infant population, the risk of an accidental asphyxial component (such as in overlay or inappropriate bedding) contributing to the death is great enough that it is the national standard to certify such deaths as an undetermined manner unless a definitive cause of death is found.

MOTOR VEHICLE RELATED DEATHS



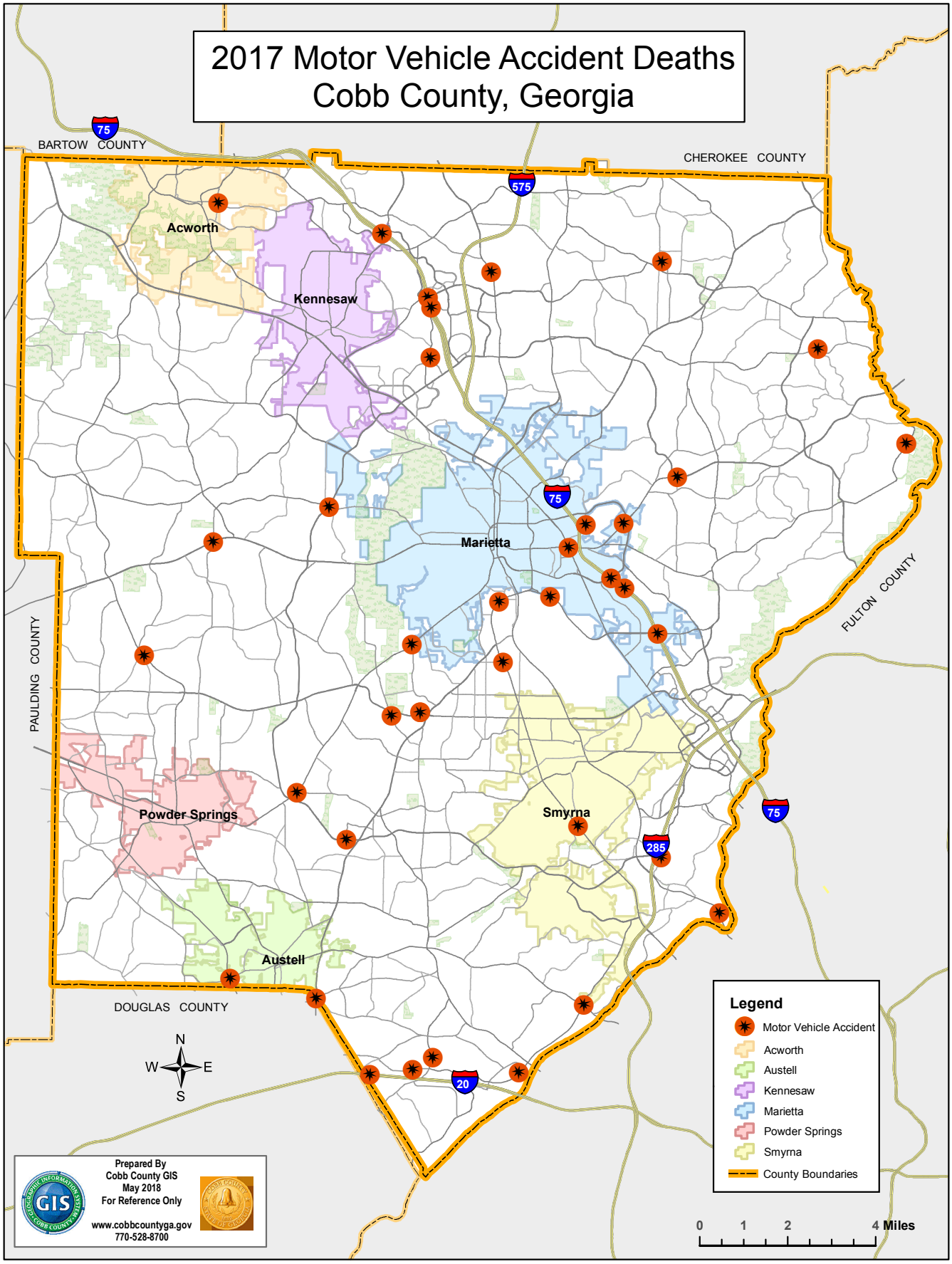
Motor Vehicle Related Deaths by Role of Decedent

Comments:

- There were a total of 59 motor vehicle related deaths including pedestrians struck by a motor vehicle.

Alcohol-Related Motor Vehicle Accidents:

- Whether alcohol was involved is known in all 59 motor vehicle related deaths.
- Alcohol was involved in 21 of 59 of the accidents.
- Nine (of 18) pedestrians tested above the legal limit for alcohol.
- Five (of 23) deceased drivers of motor vehicles tested above the legal limit for alcohol.
- Three (of 8) motorcycle operators tested above the legal limit for alcohol.
- Four of the accidents involved a surviving driver who was shown to have tested above the legal limit for alcohol.


2017 Motor Vehicle Accident Deaths
Cobb County, Georgia
BARTOW COUNTY
CHEROKEE COUNTY
FULTON COUNTY
PAULDING COUNTY
DOUGLAS COUNTY
Acworth
Kennesaw
Marietta
Powder Springs
Smyrna
Austell
75
575
285
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N
W
E
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County Boundaries
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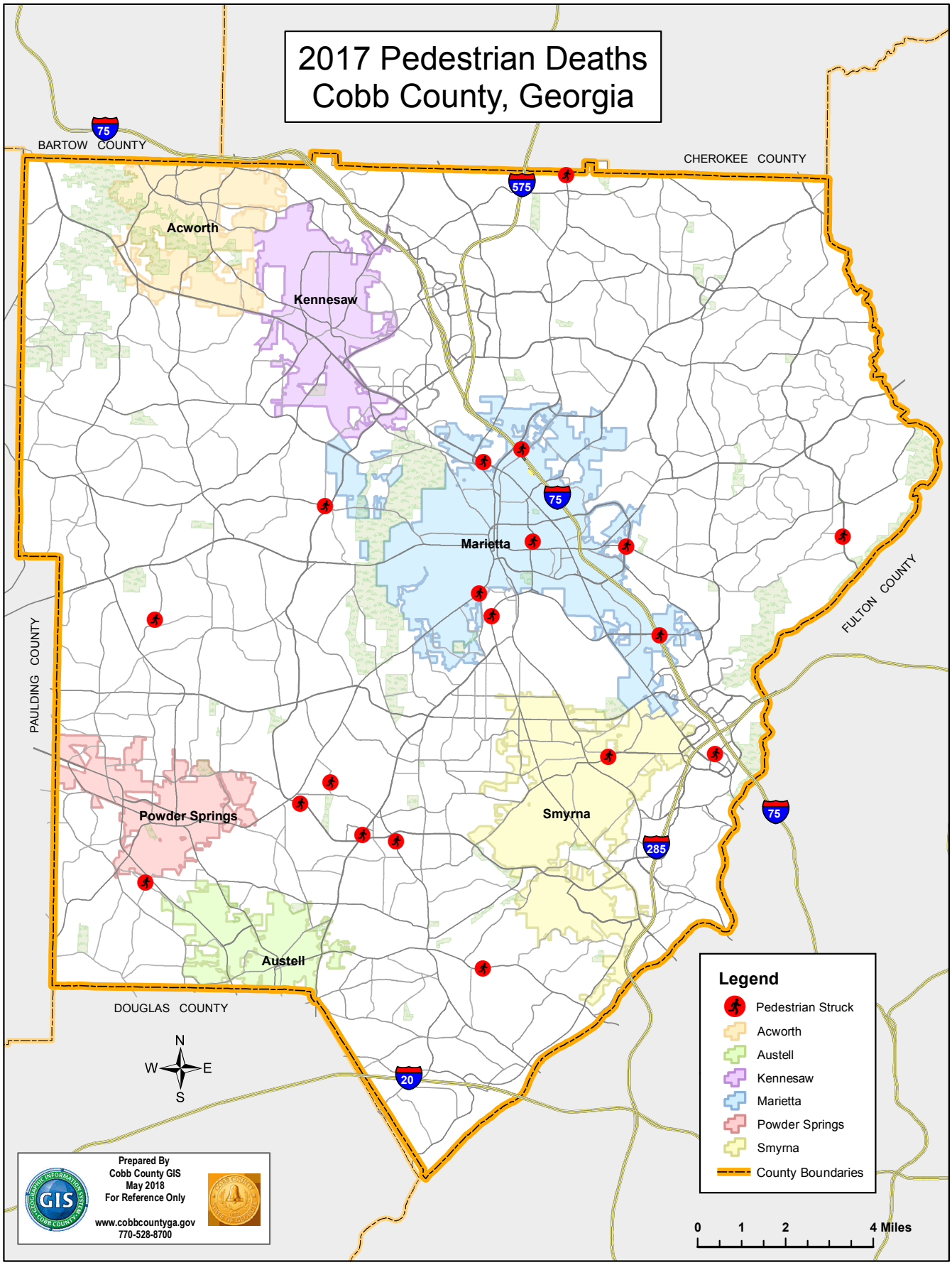
2017 Pedestrian Deaths
Cobb County, Georgia
BARTOW COUNTY
CHEROKEE COUNTY
PAULDING COUNTY
FULTON COUNTY
DOUGLAS COUNTY
Acworth
Kennesaw
Marietta
Powder Springs
Smyrna
Austell
75
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Pedestrian Struck
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Kennesaw
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Powder Springs
Smyrna
County Boundaries
0 1 2 4 Miles
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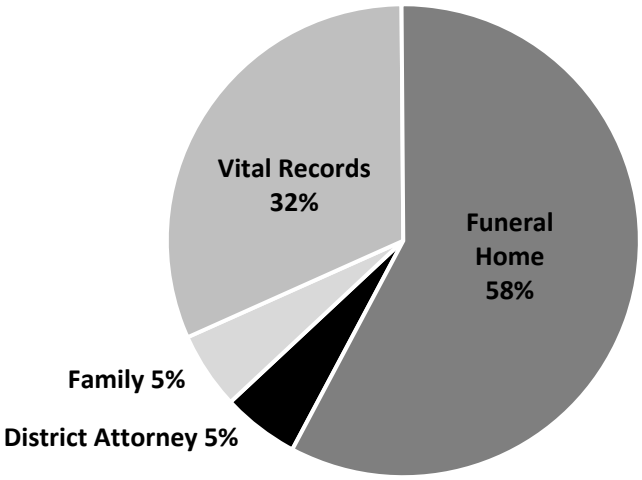
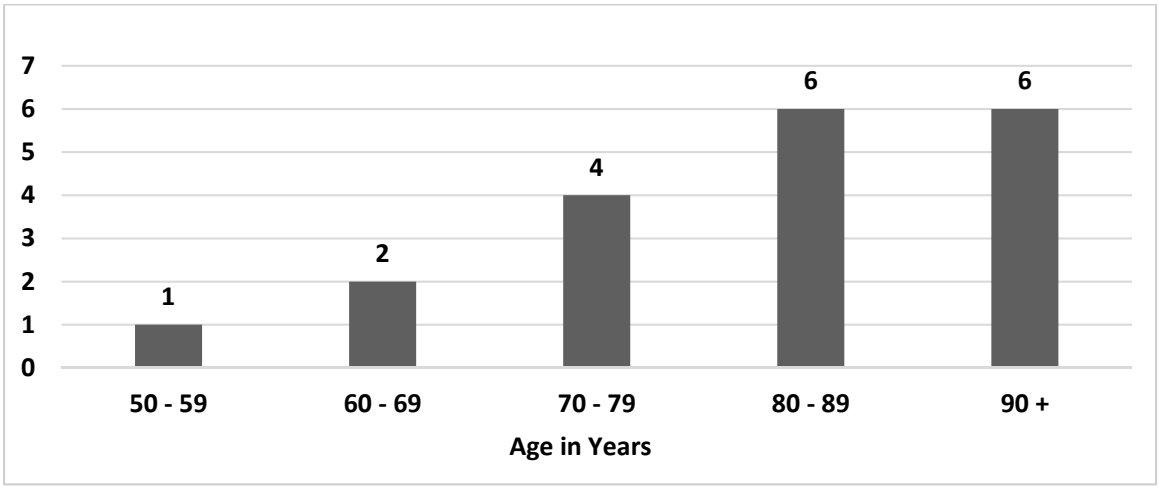
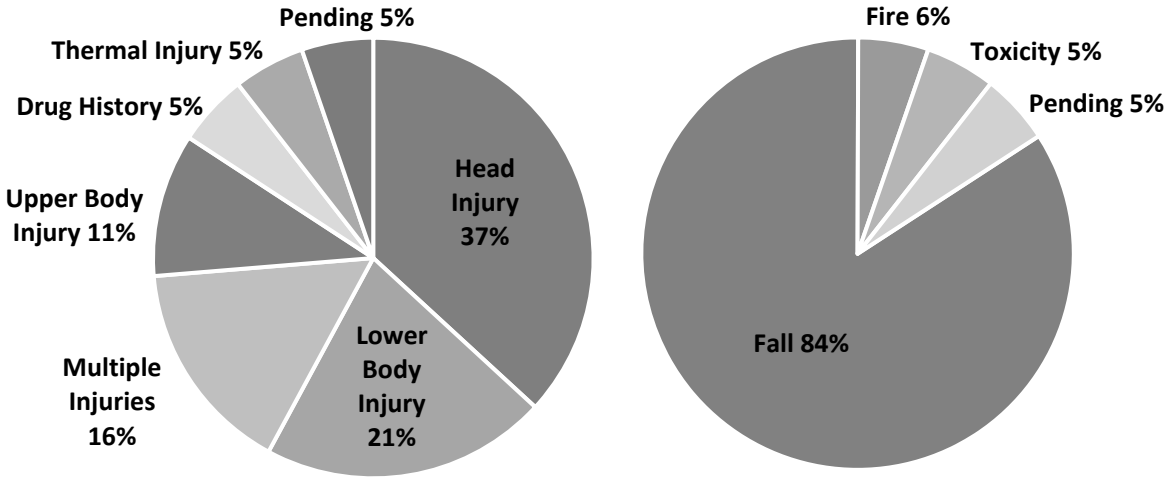
DEATH CERTIFICATE INVESTIGATION







Death Certificate Investigation by Source, Age, Type of Injury and How Injury Occurred

When the reporting of a death to the CCME is delayed for any reason, there is the possibility that the body will not be available for examination to determine the cause and manner of death. These deaths are reported to the CCME by external agencies that are involved in the circumstances and events surrounding a death, such as Vital Records, the organization that reviews all death certificates, or funeral homes. When these deaths are reported to our office, the available records are reviewed to determined cause and manner. When deaths are not reported in a timely fashion, the body is routinely not examined because often the disposition of the remains (burial or cremation) has already occurred. No exhumations were required in 2017.

Death certificate investigations are evaluated separately from other sign-out work because these are cases that fall under the Medical Examiner jurisdiction and thus should have been reported to the CCME. Two types of deaths are routinely represented in the death certificate investigations: non-natural elder deaths, such as those due to complications of falls and delayed deaths, such as when a person overdoses on illicit drugs but death occurs days to weeks later because of complications of the injuries despite hospitalization. There is currently no system in place to consistently screen for these deaths, so the extent of how many such deaths actually occur versus how many are reported to our office is unknown.