

#### **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
Lisa Miller, Administrative Assistant

Death Investigators
Temperance Hunton, MS, D-ABMDI
Martin Jackson, D-ABMDI
Mark Lathan, D-ABMDI
Holly Rymer, D-ABMDI

Forensic Technicians Eric Bailey Cara Tyers, PhD

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

Associate Medical Examiners
(Part time, temporary appointments during 2015)
Steven Atkinson, MD
Lora Darrisaw, MD
Stacey Desamours, MD
Jonathan Eisenstat, MD
Keith Lehman, MD
Jacqueline Martin, MD
Sandra Thomas, MD

Without these individuals, Cobb County's Medical Examiner Office would not have been able to serve the County during 2015, 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 Cara Tyers, PhD who collated much of the data in this report by hand, and without her, 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 their 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 2015 in hopes of such service. Thus "this is the place where death delights to help the living." —Giovanni Morgagni.

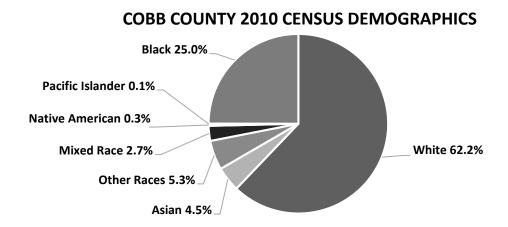
Cassie Boggs, MD Deputy Chief Medical Examiner

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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 741,334 as of 2015. According to the 2010 census data, the demographics of the county were 62.2% White, 25.0% Black, 4.5% Asian, 0.3% Native American, 0.1% Pacific Islander, 5.3% other races, and 2.7% of mixed demographics. The 2010 census data also showed that 12.3% of the population of the county identified as Hispanic or Latino.



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 are 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;<sup>1</sup>
- (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

<sup>1</sup> § 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. An unattended death also occurs when a person is admitted in an unresponsive state to a hospital and dies within 24 hours of admission.

under Article 2 of Chapter 10 of Title 17;

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

Although the deaths that fall under the jurisdiction of the CCME are defined by law, the extent of examination, if any, required for these death 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 the 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 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, transports the body to the CCME facility. The Medical Examiner then determines the extent of examination that is required, the ancillary testing that will be 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 Medical Examiners have completed training in anatomic pathology and clinical pathology as well as subspecialty training in forensic pathology. The 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 have all been certified as diplomates of the American Board of Medicolegal Death Investigators (ABMDI), which is an organization that sets the guidelines for the training of Death Investigators in the United States. Each Investigator working at the CCME continues to meet the ongoing requirement for continuing education as set by the ABMDI.

#### Data

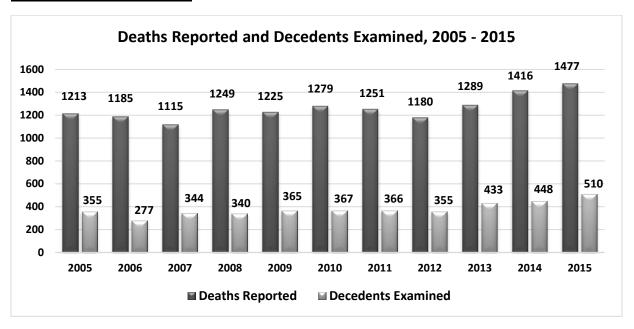
The data within this report were compiled from the CCME database MEDEX and other documentation within our office to include tracking spreadsheets and, when necessary, the case files. Much of the data was hand collected and analyzed from more than one source within our office, and as such, discrepancies in the data are likely due to human error in the documentation and data entry processes. The CCME is currently in the process of selecting and establishing a new database for the office, and one requirement for any such database will be 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 recent 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**



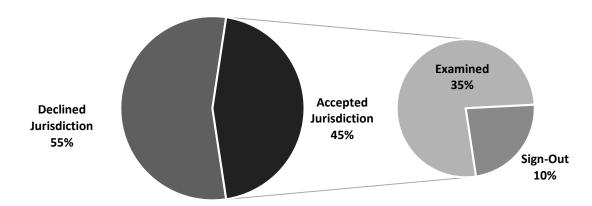
The number of deaths reported to the Medical Examiner's Office and the number of cases accepted for examination by a Medical Examiner have steadily increased since 2012. The number of deaths reported increased an average of 8.7% for 2013 and 2014 and 4.1% in 2015 relative to the respective prior year. The number of accepted jurisdiction cases examined by a Medical Examiner increased by 12% from 2014 to 2015.

Total deaths reported by jurisdiction status and manner of death

Jurisdiction	Manner of Death	Frequency	Percent	
	Accident	259	38.7%	
	Homicide	30	4.4%	
	Natural	276	41.2%	
Accepted	Suicide	90	13.4%	
Accepted	Undetermined	10	1.5%	
	Pending*	1	0.01%	
	Not Applicable**	4	0.06%	
	Total =	670	100.0%	
Declined		807	55%	
Accepted		670	45%	
	Total =	1477	100%	

<sup>\*</sup> An unidentified skeletal male pending DNA confirmation.

<sup>\*\*</sup> Identification of biological material determined to be non-human.



Declined vs Accepted Jurisdiction with Examined vs Sign-Out

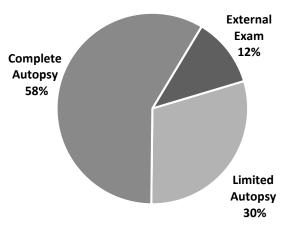
Investigation into the death determines if jurisdiction is initially accepted. However, acceptance of jurisdiction by the CCME solely means that a Medical Examiner will sign the death certificate. Acceptance of jurisdiction does not always necessitate a postmortem examination; sign-out cases are those 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 Cobb County a Medical Examiner must sign the death certificate per Georgia state law.
- 2) 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 the Office of Vital Records who notifies the CCME to initiate a death 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 subpoen required medical records and issue a death certificate.

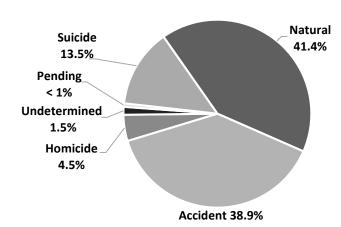
### Accepted jurisdiction cases by manner of death and procedure performed

Manner of	Procedure Performed					
Death	Autopsy	Limited Autopsy	External Exam	Sign-Out	Total	
Accident	125	49	9	76	259	
Homicide	30	-	-	-	30	
Natural	111	49	40	76	276	
Suicide	24	53	11	2	90	
Undetermined	7	1	-	2	10	
Pending	1	-	-	-	1	
Total =	298	152	60	156	666	

Of the 670 cases of accepted jurisdiction, 156 deaths were handled as sign-outs, and therefore, the body was released without examination. 514 cases were examined by a Medical Examiner at the CCME office. Four of the reported deaths were not human, but rather 3 were animal bones and 1 was a bag of fecal material. The result of this is 510 human deaths examined.



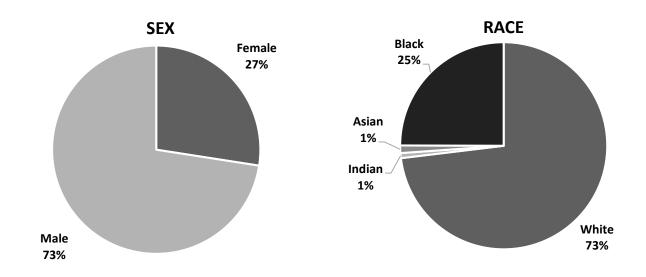
Type of Examination Performed

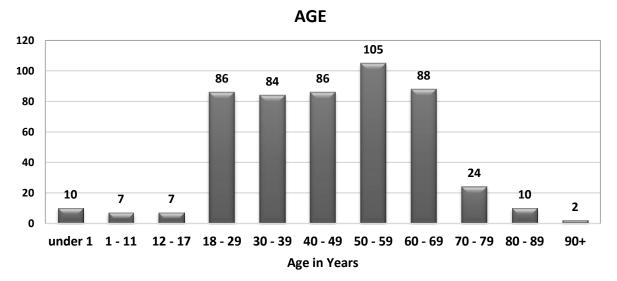


Accepted Jurisdiction Cases by Manner

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 is 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.

# **ALL EXAMINED DEATHS**





Sex, Race and Age of decedent's brought to the Medical Examiner's Office for examination

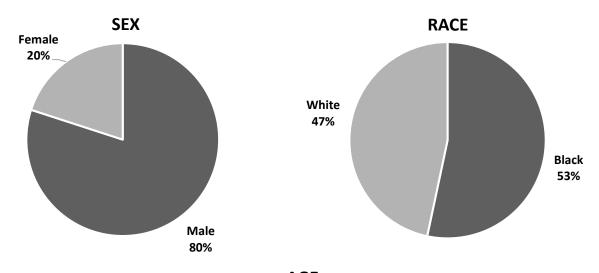
- Our database has no consistent method for tracking ethnicity of a decedent; therefore, only race can be reported.
- One Black male remains unidentified at the time of publishing; his age is unknown and not represented above.

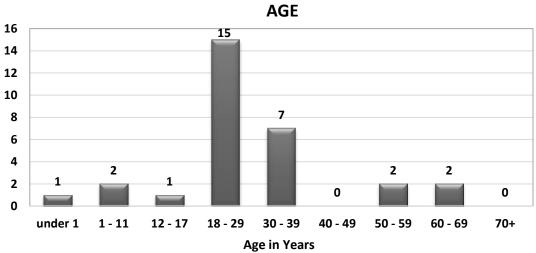
# **HOMICIDE**

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.

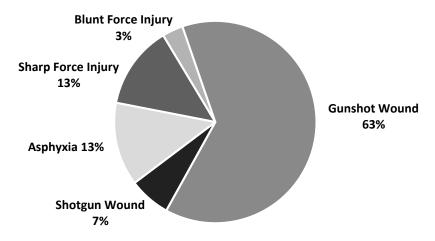
			Blunt Force	Gunshot	Shotgun	Sharp Force	
		Asphyxia	Injury	Wound	Wound	Injury	Total
SEX	Female	1	-	4	ı	1	6
SE	Male	3	1	15	2	3	24
	Asian	-	-	-	-	-	0
RACE	Black	4	-	10	-	2	16
₽	Indian	-	-	-	-	-	0
	White	-	1	9	2	2	14
	under 1	1	-	-	-	-	1
	1 - 11	2	-	-	-	-	2
	12 - 17	-	-	-	-	1	1
AGE	18 - 29	1	-	14	-	-	15
¥	30 - 39	-	1	2	2	2	7
	40 - 49	-	-	-	-	-	0
	50 - 59	-	-	1	-	1	2
	60 - 69	-	-	2	-	-	2
	Total	4*	1	19	2	4	30

<sup>\*</sup>The three youngest of these asphyxia cases were related homicides within a single family.



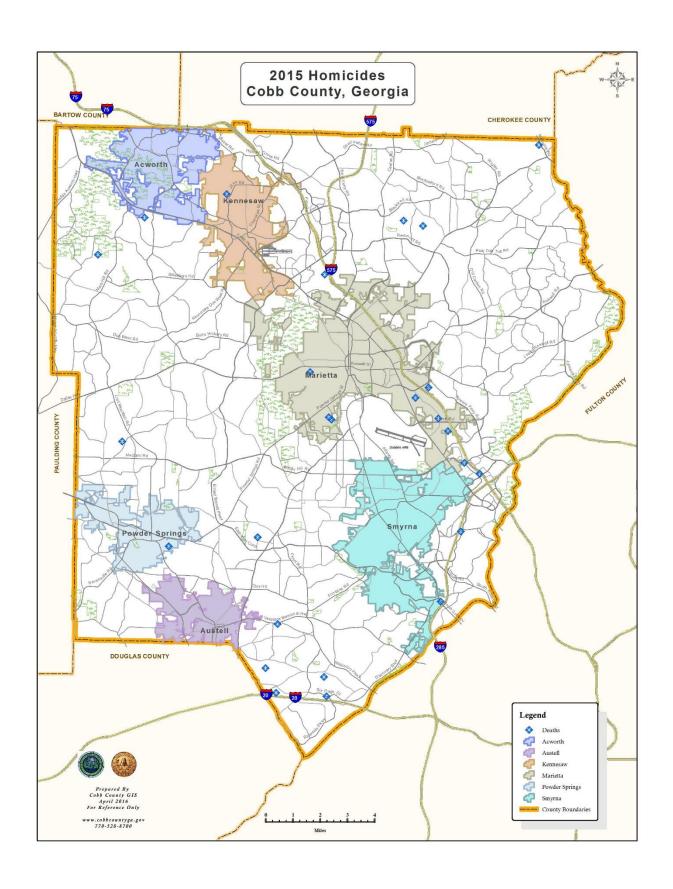






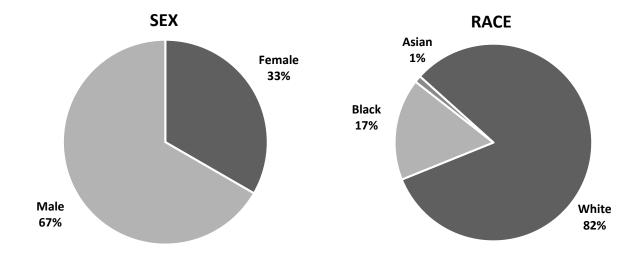
Homicides by Sex, Race, Age and Cause of Death

- Firearms (handguns and shotguns) were involved in 70% of homicides.
- 80% of homicide victims were males of which 58% were black males and all of which were under the age of 40 and 64% of which were 18-30 years of age.
- Three of the four homicide victims under the age of 17 were from a single family and were killed during a single event.
- There has been no significant fluctuation in the number of homicides in Cobb County in recent years with 32 homicides occurring in 2013 and 26 occurring in 2014.

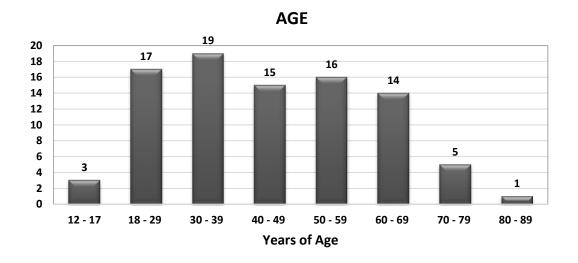


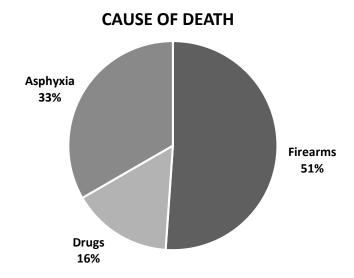
# **SUICIDE**

			Asph	ıyxia		Fire	arm	Dru	ug		
			Helium	Plastic Bag	Chemical	Hanging	Gunshot Wound	Shotgun Wound	Drowning / Drugs	Drug Toxicity	Total
SEX	Female		-	2	-	6	14	1	-	7	30
SE	Male		2	ı	5	15	29	2	1	6	60
	Asian		1	ı	ı	-	1	ı	ı	ı	1
RACE	Black		1	ı	1	5	8	ı	ı	1	15
Æ	Indian		ı	ı	ı	-	ı	ı	ı	ı	0
	White		2	2	4	16	34	3	1	12	74
	12 - 17		1	ı	ı	1	1	ı	ı	1	3
	18 - 29		1	1	1	3	10	ı	1	1	17
	30 - 39		1	ı	1	6	8	ı	ı	4	19
AGE	40 - 49		1	1	-	4	8	-	-	2	15
Α	50 - 59		1	1	2	1	6	2	_	3	16
	60 - 69		-	-	1	5	5	1	_	2	14
	70 - 79		-	-	-	1	4	-	-	-	5
	80 - 89		-	ı	ı	-	1	-	_	ı	1
		Total	2	2	5	21	43	3	1	13	90



Suicides by Sex and Race



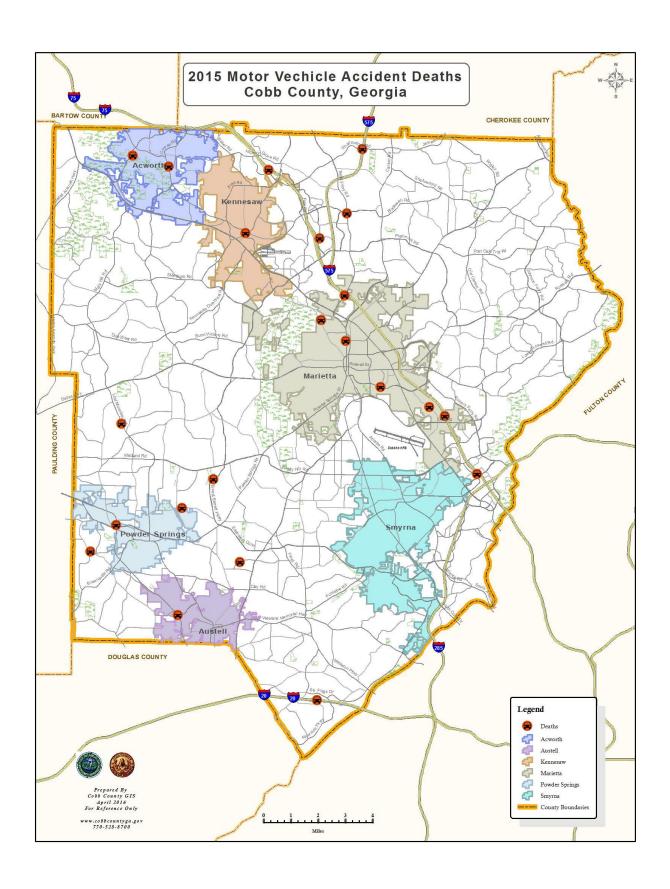


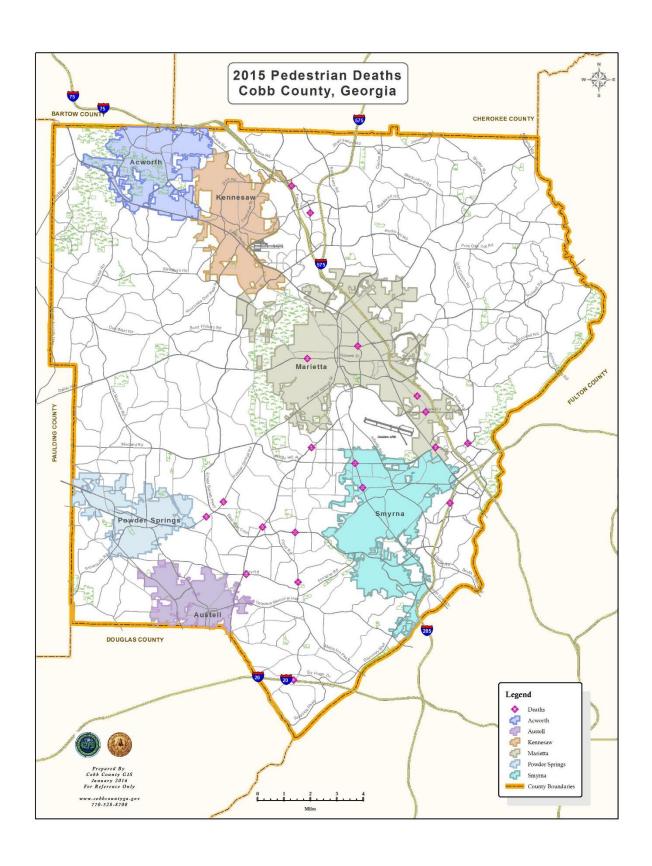
Suicides by Age and Cause of Death

- 67% of suicide victims were male of which 78% were white males of which 68% were over the age of 40.
- 24% of suicides were in persons under 30 years of age.
- 3% of suicides were in persons under the age of 17 years (all 3 suicide deaths in this age group were 15 years of age).

# **ACCIDENTS**

Given the limitations of the CCME's current database and staffing changes, the data for accidental deaths within the Cobb County jurisdiction could only be evaluated to a limited extent. The location of motor vehicle collisions resulting in death, including pedestrians struck, were mapped throughout Cobb County as shown below. Once a more robust database is in use, all accidental deaths will be evaluated in the annual report. Drug-related deaths are discussed in a separate section.





# **UNDETERMINED**

Of the 510 human deaths examined by the CCME, 10 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 2015 were in infants under 1 year of age and are discussed below in *Special Populations*.

#### Of the other 4 cases:

- Details of a case were delayed in being reported to the CCME and thus the body was not available for examination, and review of the available records could not determine if the death was related to a relatively recent injury or natural disease.
- Two cases were intoxication deaths with complex circumstances that precluded definitive determination of manner.
- One case was a set of skeletal remains.

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.

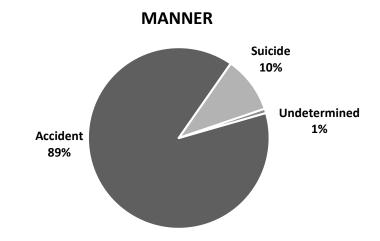
# **SPECIAL POPULATIONS:**

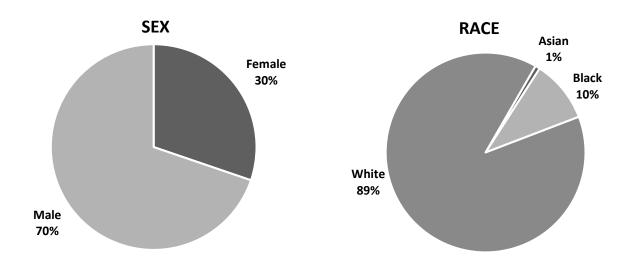
# **DRUG-RELATED DEATHS**

128 decedents died of a drug related death. The numbers below do not sum to 128 because it is a tallied list of all of the drugs or drug classes involved and 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, and occasionally may be the sole cause of death.

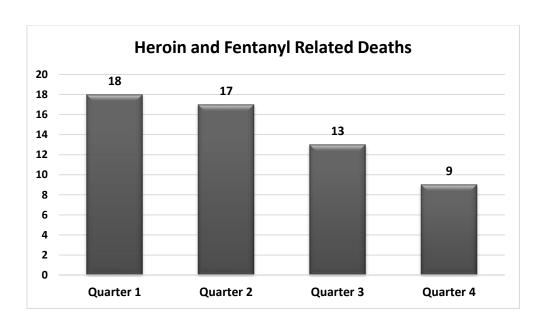
DDUC DDUC CLACCEC	Number
DRUG or DRUG CLASSES	of Cases
Ethanol	13
Cocaine	14
Methamphetamine	22
Heroin	41
Morphine	26
Fentanyl	33
Alprazolam	21
Oxycodone	22
OTHER BENZODIAZEPINES (Includes diazepam, lorazepam, clonazepam)	5
OTHER NARCOTICS (Includes buprenorphine and tramadol)	3
NON-NARCOTIC PAIN MEDICATION	5
ANTIDEPRESSANTS (Includes buspiron, venlafaxine, trazodone,	
amitryptyline, bupropion, sertraline, fluoxetine)	11
OVER THE COUNTER MEDICATIONS	5
OTHER (Includes 1-1 Difluoroethane, isopropyl alcohol, ethylene glycol,	
lamotrigine, verapamil, quetiapine, unknown*)	10

<sup>\*</sup>One drug death presented with history and symptoms consistent with a drug toxicity death, but the substance consumed was not known and no lethal drug was detected despite expanded toxicology testing.





Drug Related Deaths by Manner, Sex and Race



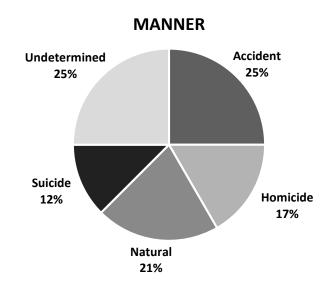
- During the end of 2014 and the beginning of 2015 there was an increase in deaths
  caused by heroin and fentanyl. This trend was in parallel with deaths throughout many
  regions of the state. However, as demonstrated in the above graph, the number of
  these deaths decreased during the 3<sup>rd</sup> and 4<sup>th</sup> quarters of the year in Cobb County.
  These deaths will continue to be monitored into next year to see if this trend worsens or
  resolves.
  - 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 drug use.
- 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.
- Within the ethanol cases, 4 were deaths solely attributed to ethanol and the remaining
   9 were in conjunction with another drug.

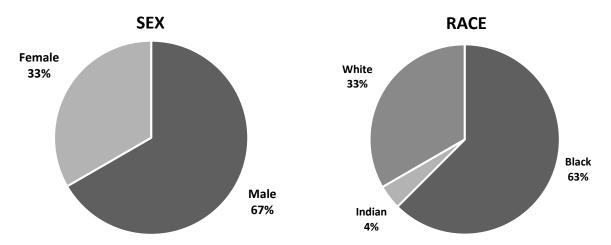
# **CHILDREN (defined as 17 years and younger)**

All children and infant deaths occurring in Georgia should be reported to the local Medical Examiner or Coroner according to the Georgia Death Investigation Act. Given the current limitations of our database, fetal deaths cannot be separated from the infant deaths easily; hence, the number of deaths for Infant (defined as <1 year of age) deaths reported also includes all fetal deaths that are reported to the CCME. Although all deaths in children must be reported to the CCME, not all of the deaths in this population require an autopsy. 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 medical-legal investigation nor acceptance of jurisdiction by the Medical Examiner.

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

		Accident	Homicide	Natural	Suicide	Undetermined	Total
SEX	Male	5	2	4	1	4	16
SE	Female	1	2	1	2	2	8
	Asian	-	-	-	-	-	0
RACE	Black	4	3	3	-	5	15
RA A	Indian	-	-	1	-	-	1
	White	2	1	1	3	1	8
	< 1 year	1	1	2	-	6	10
AGE	1 - 11 years	2	2	3	-	-	7
	12 - 17 years	3	1	-	3	-	7
	Total	6	4	5	3	6	24





Children (17 years and younger) Deaths by Manner, Sex and Race

## Comments:

No manner of death was preponderant within the ≤ 17 age population. However, all
cases with an undetermined manner of death in the 17 and younger population were
less than 1 year of age.

# **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) 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 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. In following with these criteria, deaths which show physical evidence of asphyxia are certified with a cause of death of probable asphyxia or asphyxia, depending upon the details of the case, and the manner of death is determined by the details of the circumstances of the death.

### **Accepted jurisdiction cases of infants**

			MANNER								
		Undete	ermined	Accident	Homicide	Natı	ural	Total			
	CAUSE OF DEATH	Sudden Unexplained Infant Death (unsafe sleep environment)	Undetermined	Probable Asphyxia	Asphyxia Suffocation	Viral Pneumonia	Sudden Infant Death Syndrome				
SEX	Female	2	-	1	1	-	-	4			
SE	Male	3	1	-	-	1	1	6			
RACE	Black	4	1	1	1	1	-	8			
RA	White	1	-	-	-	-	1	2			
	Total	5	1	1	1	1	1	10			

- The most common manner of death for infants (defined as <1 year of age) is "undetermined" which comprised 60% of the deaths of this population. 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.
- The one infant death with an undetermined cause and an undetermined manner of death was the second child in a family to die during infancy, was in an unsafe sleep environment, and had an anatomical finding that can be associated with death but is

not a definitive cause of death. Thus, in following with the recommendations within the field of forensic pathology, the death was certified with an undetermined cause of death and an undetermined manner of death.

• There was no significant change in the number of deaths reported or accepted in the Children and Infant populations relative to 2014:

Child deaths: 2014: 69 reported, 19 accepted jurisdiction

2015: 83 reported, 24 accepted jurisdiction

Infant and fetal deaths: 2014: 50 reported, 13 accepted

2015: 61 reported, 10 accepted