



2023

Annual Report

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Knox County Regional Forensic Center

Mission Statement

The Knox County Regional Forensic Center seeks to:

- Provide accurate, timely, compassionate, and professional death investigative services for the citizens of Knox County and other counties it serves.
- Identify and develop an understanding of sudden, unexpected, and unnatural deaths, and then educate the public about those frequently preventable deaths.
- Assist law enforcement agencies with investigations.
- Consult for medical professionals and attorneys.
- Render unbiased opinions and testimony in court.
- Extend research support for local and national medical, legal, academic, and law enforcement organizations.

History

The Knox County Medical Examiner's Office has been in existence since the early 1950s when it operated out of a small, one-room morgue in the basement of the former University of Tennessee Hospital. In 1998, the Regional Forensic Center (RFC) moved to a new ground floor facility as the University of Tennessee Medical Center expanded. In 2014, Knox County, with financial support from the State of Tennessee, built an 18,000-square-foot facility on Sullins Street in Knoxville, Tennessee, and officially began service as the Knox County Regional Forensic Center.



Overview

The Knox County Regional Forensic Center is a department under the purview of the Knox County Mayor's Office. It serves as the Office for the Chief Medical Examiner for Knox and Anderson counties and provides autopsy and consultative services for 21 other counties in Middle and East Tennessee. The facility operates 24-hours a day, seven days a week, all year long. At least one autopsy technician is always at the facility, a Medical Examiner/Forensic Pathologist is always on duty or on-call, and a Medicolegal Death Investigator is always available to respond to death scene investigations.

Legal Jurisdiction

There are three areas of the Tennessee Code that dictate how deaths and decedents are reported in the State of Tennessee.

Tennessee Code Annotated §38-7-104 – County Medical Examiner

A county medical examiner shall be appointed by the county mayor, subject to confirmation by the county legislative body, based on a recommendation from a convention of physician residents in the county. A county medical examiner shall be a physician who is either a graduate of an accredited

medical school authorized to confer upon graduates the degree of doctor of medicine (M.D.) and who is duly licensed in Tennessee, or is a graduate of a recognized osteopathic college authorized to confer the degree of doctor of osteopathy (D.O.) and who is licensed to practice osteopathic medicine in Tennessee, and shall be elected from a list of a maximum of two (2) doctors of medicine or osteopathy nominated by convention of the physicians, medical or osteopathic, residents in the county, the convention to be called for this purpose by the county mayor.

Tennessee Code Annotated §38-7-104 – Medicolegal death investigators

A medical investigator shall be a licensed emergency medical technician (EMT), paramedic, registered nurse, physician's assistant or a person registered by or a diplomat of the American Board of Medicolegal death investigators and approved by the county medical examiner as qualified to serve as medical investigator...The county medical investigator may conduct investigations when a death is reported, as provided in §38-7-108, under the supervision of the county medical examiner. The county medical investigator may make pronouncements of death and may recommend to the county medical examiner that an autopsy be ordered. However, the county medical investigator shall not be empowered to sign a death certificate. The county medical examiner may delegate to the county medical investigator the authority to order an autopsy.

Tennessee Code Annotated §38-7-108 – Death under suspicious, unusual, or unnatural circumstances

Any physician, undertaker, law enforcement officer, or other person having knowledge of the death of any person from violence or trauma of any type, suddenly when in apparent health, sudden unexpected death of infants and children, deaths of prisoners or persons in state custody, deaths on the job or related to employment, deaths believed to represent a threat to public health, deaths where neglect or abuse of extended care residents are suspected or confirmed, deaths where the identity of the person is unknown or unclear, deaths in any suspicious/unusual/unnatural manner, found dead, or where the body is to be cremated, shall immediately notify the county medical examiner or the district attorney general, the local police or the county sheriff, who in turn shall notify the county medical examiner.

Function

The Knox County Regional Forensic Center serves citizens by investigating deaths that are unnatural and/or unexpected and determining the cause and manner of death; recognizing and collecting evidence needed for adjudication; defining public health and product safety risks; and providing compassionate services to families.

Cause of death refers to a disease, injury, drug toxicity, or combination of factors that causes a physiological derangement severe enough to result in death.

Manner of death refers to the circumstances surrounding how a death occurred and has five possible classifications including natural, accidental, suicide, homicide, or undetermined.

These investigations begin with the careful review of the scene of death and initial physical examination and are supplemented, when appropriate, by a more detailed physical examination, autopsy, toxicologic testing, and other ancillary studies.

The Center is responsible for the investigation and certification of cause and manner of death of all sudden, unexpected, violent, suspicious, and/or unnatural deaths or deaths without medical attendance that occur inside its jurisdictional counties.

The Knox County RFC also provides autopsy and consultative services for similar deaths occurring in 21 additional Middle and East Tennessee counties at the written request of local authorities. Knox and Anderson Counties are the RFC jurisdiction; the 21 other counties are not.

National Missing and Unidentified Persons System (NamUs)

As part of Tennessee Code Annotated §38-6-1, Regional Forensic Centers are also charged with taking control of an unidentified body and coordinating efforts with law enforcement and NamUs to identify the decedent. The RFC serves as a regional resource for East Tennessee counties with a need to identify a decedent or assist in finding a missing person and partners with NamUs to work cases to identify missing and unidentified persons.

Opioid Information

Knox County Drug Related Death Task Force

The RFC partners with the Office of the District Attorney in the Sixth Judicial District, Knox County Government, Knoxville Police Department, Knox County Sheriff's Office, Drug Enforcement TBI, and the Appalachia High-Intensity Drug Trafficking Area as part of the Knox County Drug Overdose Task Force.

The force was formed to address the growing drug abuse issues and number of drug deaths in Knox County. The goals of the Task Force are:

- Identifying drug categories of interest, prosecutable street-level sources of illegal opioids and other drugs, and strategies to lower drug-related deaths, overdoses, and arrests.
- Developing best practices and a uniform data collection tool for local and regional use and a drug-related death data reference resource for medical and service professionals.
- Creating a confidential and secure system (behind the Drug Related Death Task Force firewall) to collect law enforcement and medically sensitive information for quantification in order to analyze the information and data for use in redacted reports in collaboration with community partner agencies.

The RFC partners with the Drug Enforcement Administration (DEA) and participates in its DEA360 program and enhanced toxicology testing through collaboration with toxicology labs at the University of California, San Francisco. The focus of is coordinating education and community action for drug issues in Knox County locally and detection of novel substances flooding the illegal drug market regionally.

Drug Related Deaths

In late 2020, the Knox County Regional Forensic Center began a partnership with DEA Tox, the UCSF Mt. Zion Cancer Research lab dedicated to serving the DEA. Through this partnership, drugs new in our region have been detected and quantified. This process has saved thousands of local taxpayer dollars by providing these services at no charge.

The RFC produces an annual Drug Related Death Report for Knox and Anderson counties, where Dr. Darinka Mileusnic-Polchan serves as Chief Medical Examiner. This report is inclusive of only jurisdictional counties because the RFC feels more able to perform a thorough investigation of these

possible drug related deaths which ensures a greater confidence that the decedents were properly examined.

The Drug-Related Death Report provides data on the number of drug deaths, demographic details about decedents, the location of injury and/or death, and the drugs involved therein. It also provides an overview of emerging drug trends.

For a copy of the most recent report, visit the Knox County Regional Forensic Center [website](#).

Community Involvement and Educational Activities

The RFC prides itself on regular interaction with the local community and tries to ensure staff is well integrated in service communities.

In 2023, the RFC completed the following community service activities:

- Hosted pathology residents from the University of Tennessee Graduate School of Medicine and forensic dentistry fellows from Lincoln Memorial University's College of Dental Medicine.
- Held numerous virtual and in person conferences with high school and college students interested in the field of forensic pathology and medicolegal death investigations.
- Spoke to Criminal Justice Classes at Anderson County High School.
- Held presentations about medicolegal death investigation at educational conferences for regional medical examiners, medicolegal death investigators, law enforcement, emergency response personnel, others involved in death investigation, and emergency medical services.
- Hosted conferences in conjunction with the National Forensics Academy that focus on providing training to law enforcement on death scene investigation, autopsy techniques, and fingerprinting decedents.
- Hosted new Knoxville Police Department recruits for a tour of the facility and lectures on medicolegal death investigation and forensic pathology topics.
- Served on the Knox County Child/Infant Fatality Death Review Team, the Anderson County Child/Infant Fatality Death Review Team, the Elder Abuse Coordinated Community Response Committee, the Metro Drug Coalition, and the Overdose Fatality Review Team.
- Consulted for the East Tennessee District's Child/Infant Fatality Death Review Teams and the State of Tennessee Medical Examiner Advisory Council, and other regional infant death review teams.
- Shared lectures about RFC operations and death investigation processes with groups that include Knox County Emergency Management Agency, funeral home director groups, and others.
- Participated on committees with multiple state and regional government and non-government agencies focused on emergency preparedness and community development.
- Served with the 17-County Knox/East Tennessee Healthcare Coalition that includes hospitals, emergency management agencies, public health agencies, and healthcare organizations to address emergency medical management and healthcare planning within the region by holding tabletop and full-scale emergency preparedness exercises and training opportunities as well as working to seek grant opportunities for funding of regional and organizational needs.

Community Care

Meeting with family members to review autopsy findings is one of the most important interactions Medical Examiners/ Pathologists perform, as it is often, a sensitive part of a family’s grieving process. Staff is also available to consult with local physicians and hospitals, as needed, to discuss autopsy findings.

Coverage

In 2023, RFC staff provided services—including personally requested private autopsies—to its two jurisdictional counties (Knox and Anderson) and 21 non-jurisdictional counties that include: Blount, Bradley, Campbell, Claiborne, Cocke, Cumberland, Fentress, Grainger, Hamblen, Jefferson, Loudon, McMinn, Meigs, Monroe, Morgan, Polk, Rhea, Roane, Scott, Sevier, and Union.

Jurisdictional counties (green on the map below) are those where Dr. Darinka Mileusnic-Polchan is the Chief Medical Examiner, and the RFC provides medicolegal death investigation. Non-jurisdictional counties (blue on the map below) are those where there is an appointed medical examiner—not Dr. Mileusnic-Polchan or one of the other RFC Deputy/Assistant Medical Examiners—who is a Tennessee-licensed physician responsible for conducting medicolegal investigative activities. These medical examiners may or may not also have Medicolegal Death Investigators working for them in their respective counties.



It is important to note that many cases come to Knox County from non-jurisdictional counties because of the Level 1 and 2 Trauma Center and referral hospitals located in the community. When this happens, the Knox County RFC coordinates activities with the Medical Examiner from the county where the incident occurred due to their primary involvement in the incident investigation.

Staffing

There are 37 full-time staff at the Regional Forensic Center including the Chief Medical Examiner, the Deputy Chief Medical Examiner, four Assistant Medical Examiners/Forensic Pathologists, the Chief Administrative Officer, two Forensic Clerks, a Medicolegal Death Investigations Manager, an Autopsy Technician Manager, three Night Morgue Attendants, a Physicians Administrative Assistant, two Executive Administrative Assistants, and a part-time Forensic Intern. A Forensic Anthropologist, Forensic odontologist, and one Forensic Pathologist is contracted as locum tenens.

Medical Examiners/Forensic Pathologist

All five Medical Examiners/Forensic Pathologist and the Locum Tenens Forensic Pathologist are board-certified by the American Board of Pathology in Anatomic, Clinical, and Forensic Pathology.

They hold appointments as either Clinical Associate or Assistant Professors with the University of Tennessee and an affiliation with the board-certified Forensic Odontology group. They also assist with student education at Lincoln Memorial University's Graduate School of Forensic Dentistry.

These staff members are responsible for the professional medicolegal death investigation and determining the cause and manner of death for cases handled at the RFC. They are experts in the evaluation of sudden unexpected natural deaths and unnatural deaths including those caused by firearms, and sharp and blunt force trauma. They are frequently called to testify in court about cause of death and share their medical findings and interpretations, particularly in homicide cases. These individuals may consult neuropathologist, odontologist, anthropologist, toxicologist, and/or other disciplines to assist in their evaluations of cases.

Forensic Pathologists complete death certificates for cases in Knox and Anderson counties. At the request of the County Medical Examiners, they also complete death certificates for certain cases sent to the RFC from other counties. When physicians in Knox and Anderson counties refuse to sign Death Certificates for their patient, especially in unattended deaths, as defined by State Code, Forensic Pathologists will complete them, in order to ensure that the final act of patient/decedent care is completed to assist with all administrative needs to settle final affairs.

Medicolegal Death Investigators (MDI)

The Medicolegal Death Investigators are required to become certified by the American Board of Medicolegal Death Investigators. Eight of the local investigators are Diplomats with the organization and two are in the process of earning certification.

These staff members have an initial responsibility for accepting or declining jurisdiction for death cases reported to the RFC. If jurisdiction is accepted, MDIs are responsible for a variety of activities to guarantee the case is properly investigated and recorded in the electronic case management system.

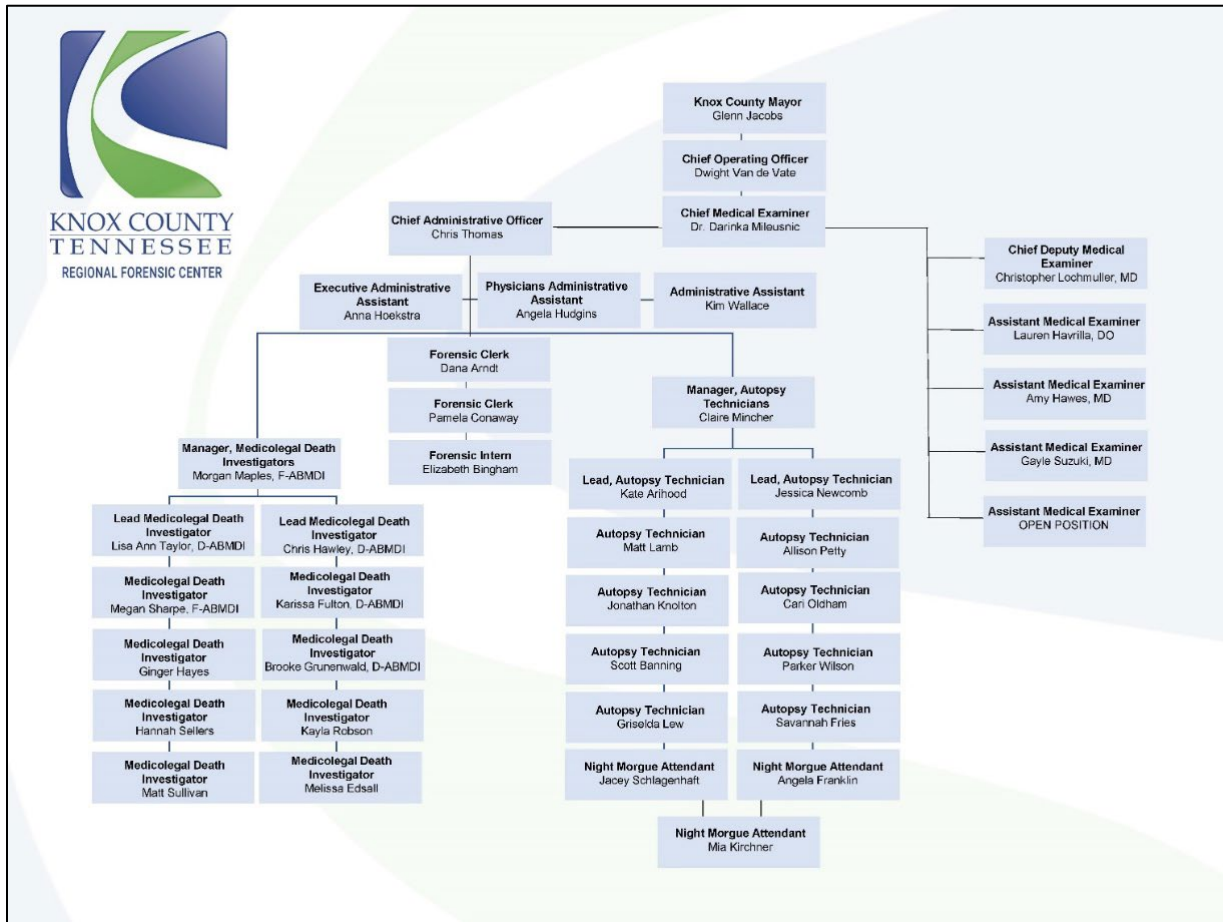
Autopsy Technicians

Autopsy Technicians are responsible for coordinating anthropology assignments, X-rays, lab testing, and other activities for the decedent, and receiving/releasing them from the RFC; assisting Forensic Pathologists in conducting autopsies and external examinations; assisting in finger printing and evidence processing for law enforcement; and working with funeral homes and families to transition the decedent for their final disposition.

Administration

Forensic Clerks and Administrative Assistants are responsible for coordinating Forensic Pathologists' schedules for depositions and court testimony, medical billing, tracking death certifications, completing open records requests, assuring proper case closure, coordinating indigent internment, and other administrative activities as assigned. They work with funeral homes, law enforcement, District Attorney offices, lawyers, families, media, and others to ensure requested information is provided in a timely manner. Forensic Clerks are also responsible for coordinating proper death certificate actions between the State of Tennessee Department of Health Vital Records, Funeral Homes, and the Regional Forensic Center.

The Center’s organizational structure is as follows:



National Association of Medical Examiners Accreditation

The National Association of Medical Examiners (NAME) is the national professional organization of forensic pathologists, physician medical examiners, medicolegal death investigators, death investigation system administrators and consultants who perform the official duties of medicolegal death investigation of deaths of public interest in the United States.

Accreditation is a rigorous process that requires a lengthy inspection by an independent Medical Examiner appointed by the NAME and includes extensive requirements and more than 360 items covering diverse points of quality ranging from how specimens are labeled to the professional qualifications/certifications of staff members.

The Knox County Regional Forensic Center achieved the accreditation from the National Association of Medical Examiners in May 2010 and has maintained accreditation since that date. The Center undergoes an annual review of accreditation standards and an on-site inspection every four years. Receiving full accreditation with no deficiencies in June 2019 marked 10 years of continuous accreditation for the RFC. The most recent on-site visit occurred in July 2020 and earned the RFC full accreditation. The next on-site visit will take place in 2024.

Below is a table outlining the essential NAME data collected in 2023. For clarification, “in jurisdiction” references Anderson and Knox counties; “non-jurisdiction” refers to the other 21 service/referral counties the RFC serves. A “full autopsy” is classified as a complete external and internal examination of a decedent. An “external examination” is one focusing on the exterior of the decedent and review of medical records with or without ancillary studies. A “limited examination” is one focused on a specific organ or region of the body and includes external examination.

Measure	2022	2023
Deaths in jurisdiction (all deaths including non ME/C cases)	10,067	8,884
Deaths reported to the office	8,068	7,781
Deaths investigated (certified)	2,777	2,659
Scenes investigated by ME/C staff	1,624	1,448
Bodies brought to the facility	2,707	2,396
Bodies transported to the facility which were paid for by or transported by the ME/C	3	10
External Examination	1,150	947
Full Autopsies performed	1,524	1,428
Partial Autopsies performed	31	11
Microscopic studies	1,052	1,035
Formal neuropathologic studies	10	1
Formal cardiac pathologic studies	1	1
Autopsies performed for outside jurisdictions	900	841
Deaths certified as homicide*	95	79
Homicides autopsied*	92	78
Deaths certified as suicide	222	213
Suicides autopsied	122	116
Drug-related accidental deaths certified	957	960
Drug-related accidental deaths autopsied	658	694
Non-MVA, non-drug related accidents certified	366	366
Non-MVA, non-drug related accidents autopsied	121	105
MVA Accidental deaths certified	192	219
MVA-Accidents autopsied	88	92
Deaths certified as natural	886	773
Naturals autopsied	388	297
Deaths certified as undetermined or unclassified	28	30
Undetermined autopsied	28	30
Infant deaths certified (age live born to 1 year)	63	43
Infants autopsied	61	42
Unidentified bodies	3	1
Unidentified bodies autopsied	3	1
Organ donations	281	125
Corneal and other tissue donations	198	204
Average number of bodies in storage at the facility per day	53	50

*Homicides reported, but not autopsied were remanded to other jurisdictions

Regional Forensic Center Cases in 2023

Based on the latest United States Census Bureau data, the approximate combined population of Knox and Anderson counties is 580,908. According to 2023 data from Tennessee Vital Statistics, 8,884 deaths occurred in the two counties, or 1.5 percent of the population; 6,880 (77.44 percent), were reported to the Medical Examiner.

Of the cases reported to the RFC, 1,720, or 25 percent, were accepted under medical examiner jurisdiction.

Analysis of the circumstances and scenes of these reported deaths and the medical history of the decedents, shows the Regional Forensic Center performed autopsies/exams on 1,504 of these reported deaths, which is 21.86 percent of all deaths within the RFC jurisdiction.

Referrals

Every referral requires a preliminary screening by the RFC Medicolegal Death Investigators to determine if the case falls within the jurisdiction of the Medical Examiner. The jurisdiction of some deaths reported to the Medical Examiner were released to another county.

Data

The graphics that follow will illustrate the number of procedures completed at the Regional Forensic Center. The data contained in the charts that follow represent a mix of jurisdictional and non-jurisdictional cases where Knox County provided autopsy or consulting services or completed work prior to a decedent’s cremation. Note that a case can have more than one activity depicted in the charts.

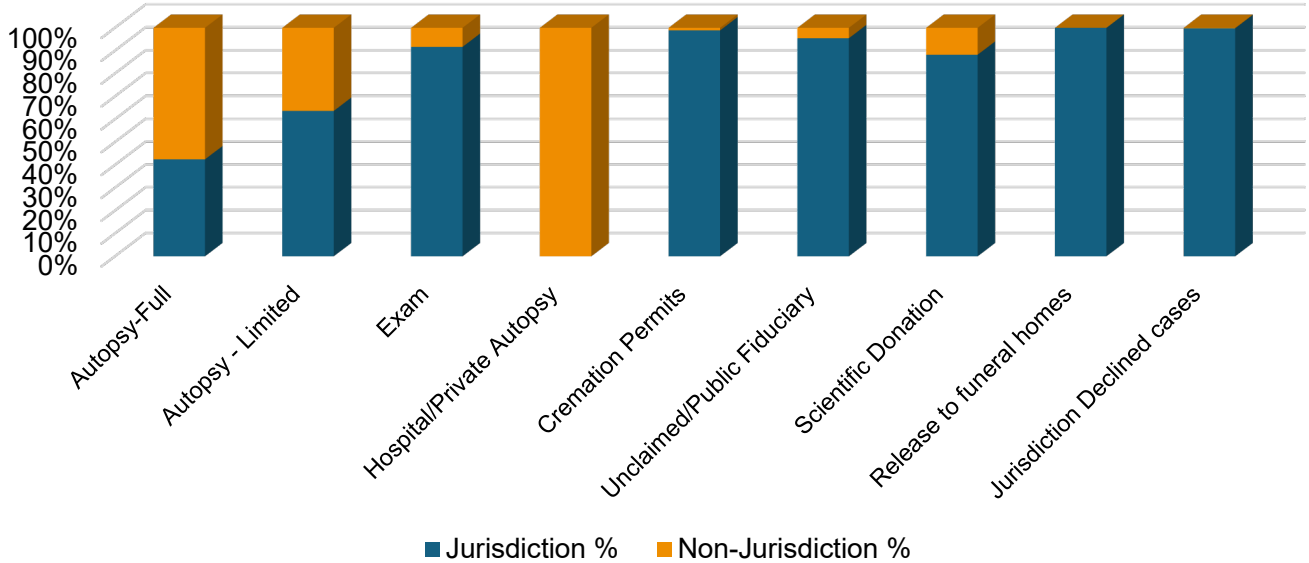
Deaths Reported and Type of Actions Completed by the RFC

The following depicts the amount/percentage and types of cases handled by the RFC in 2023 and denotes how each case was jurisdictionally classified.

Types of Activities	Jurisdiction	Non-Jurisdiction	Total
Autopsy-Full	589	799	1,388
Autopsy - Limited	7	4	11
Exam	868	79	947
Hospital/Private Autopsy	0	40	40
Cremation Permits	4,773	54	4,827
Unclaimed/Public Fiduciary	42	2	44
Scientific Donation	15	2	17
Release to funeral homes*	443	0	443
Jurisdiction Declined cases	2,665	1	2,666
Total	9,402	981	10,383

*After an examination by an MDI at the scene

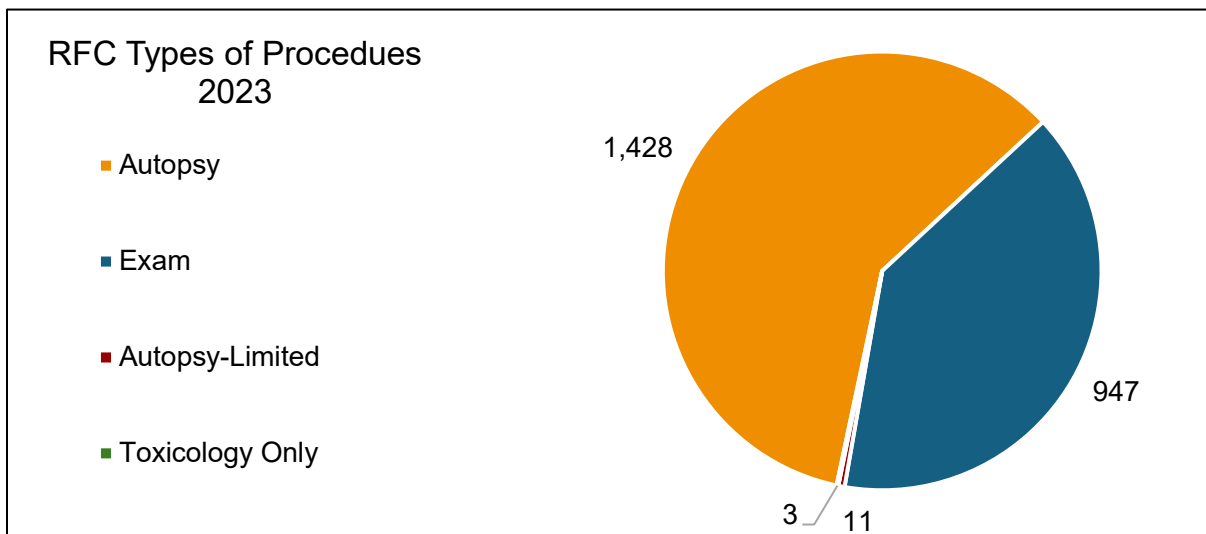
Percentage of Types of Activities by Jurisdiction 2023

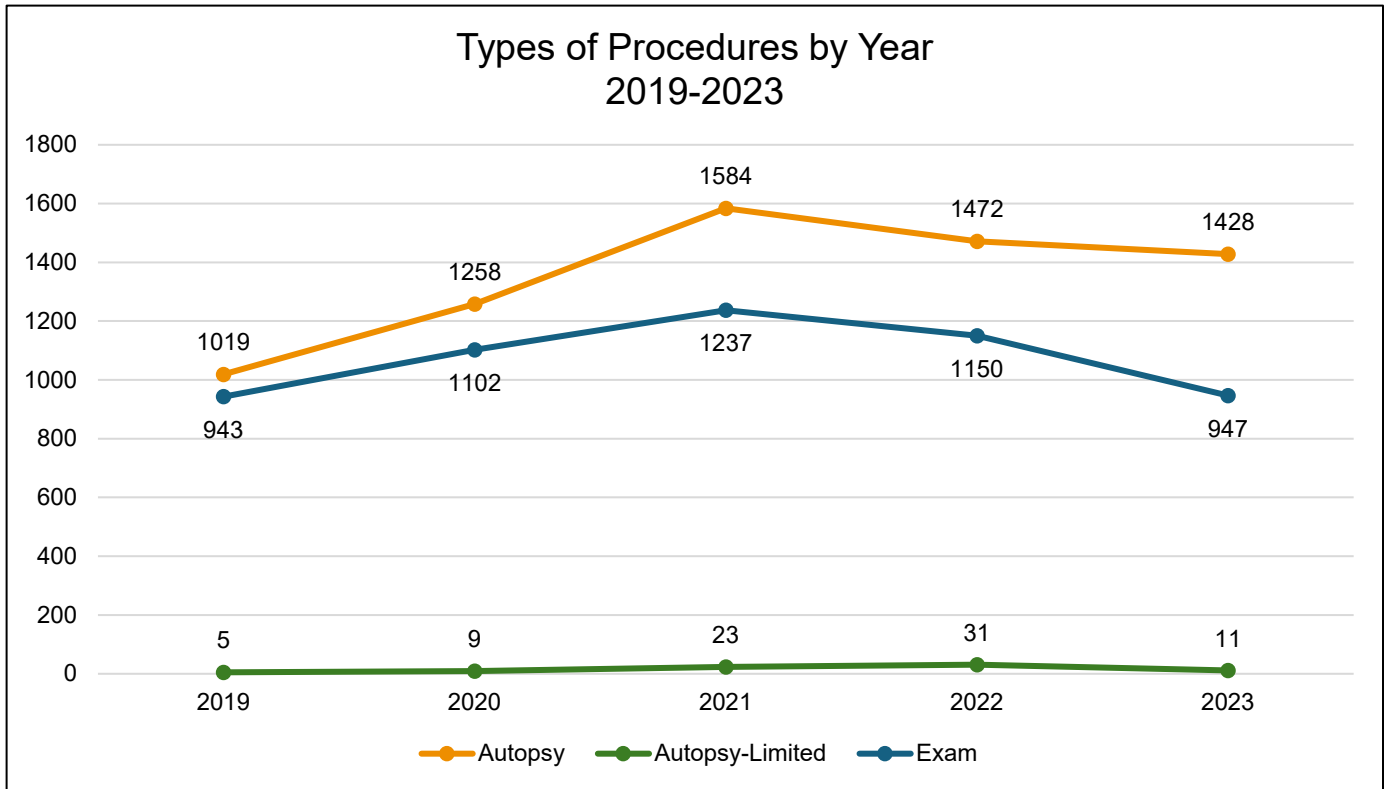


Exam Types

The types of procedures completed by RFC Medical Examiners/Pathologists in 2023 are depicted below.

Procedure Type				
Procedure	Knox	Anderson	Non-Jurisdiction	Total
Autopsy-Full	512	77	838	1,428
Autopsy – Limited	4	1	6	11
Exam	767	101	80	947
Toxicology Only	2	0	1	3
Total	1,285	179	925	2,389





Manner of Death Classification for Reported Cases

The charts that follow illustrates how the RFC classified Manner of Death for cases in 2023.

RFC Manner of Death All Cases 2019-2023					
Manner of Death	2019	2020	2021	2022	2023
Accident	967	1,225	1,597	1,516	1,543
Suicide	200	203	210	223	213
Homicide	73	97	111	94	79
Natural	751	833	913	886	773
Undetermined	44	44	47	51	47
Total	2,035	2,402	2,878	2,770	2,655

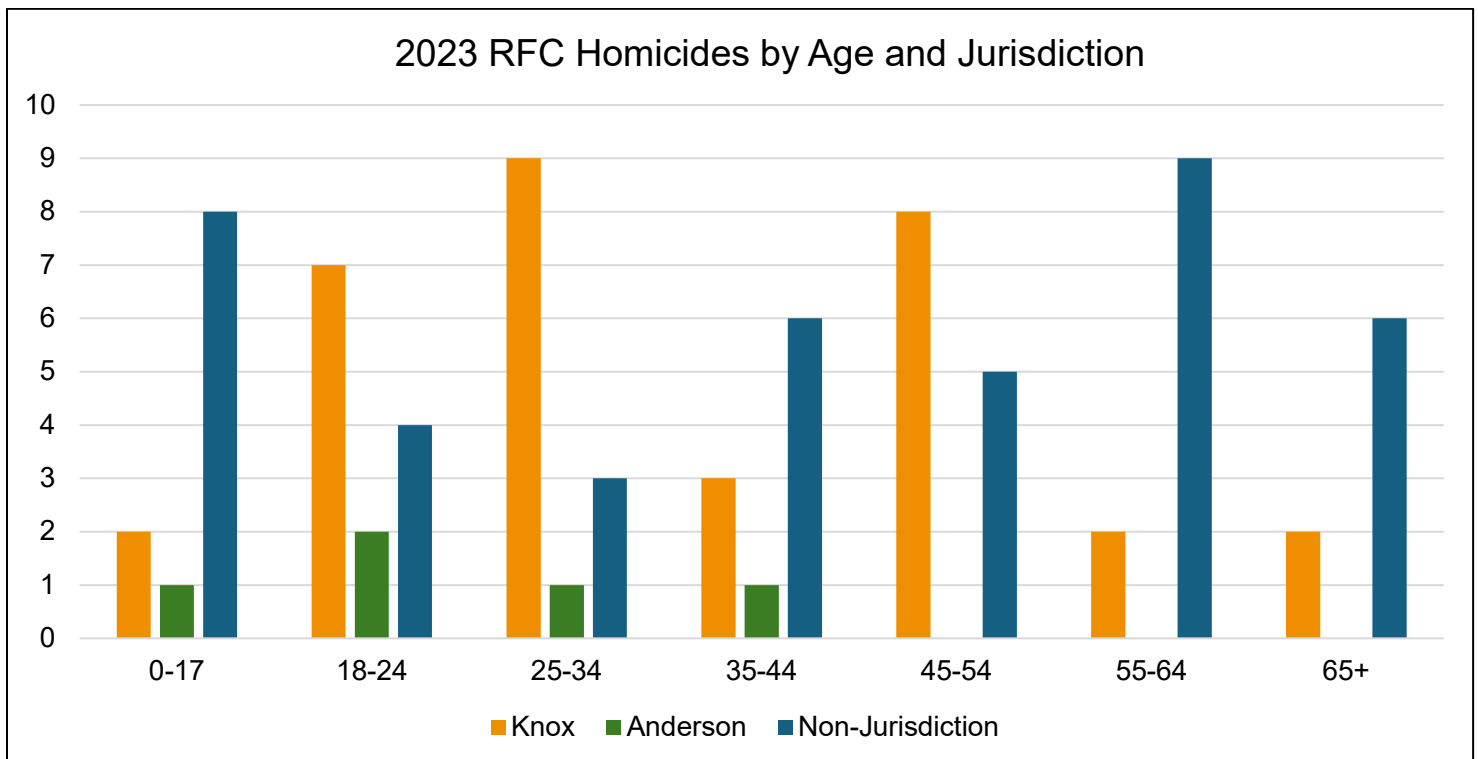
2023 Manner of Death Summary for All Counties by Jurisdiction				
Manner of Death	Knox	Anderson	Non-Jurisdiction	Total
Accident	905	101	537	1,543
Suicide	90	19	104	213
Homicide	33	5	41	79
Natural	536	77	160	773
Undetermined	12	2	33	47
Total	1,576	204	875	2,655

Homicides

Homicides in 2023 in Knox County decreased by 25 percent from 2022. Anderson County increased 150 percent in homicides.

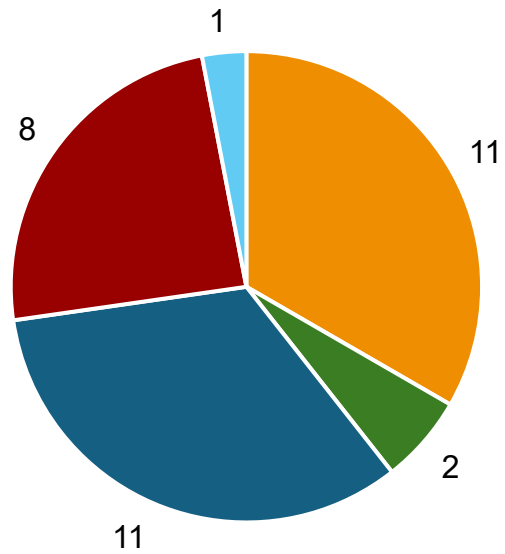
RFC Homicides Jurisdiction and Non-Jurisdiction 2019 – 2023					
	2019	2020	2021	2022	2023
Knox	29	50	53	44	33
Anderson	2	3	0	2	5
Non-Jurisdiction	42	44	58	48	41
Total	73	97	111	94	79

2023 Homicides by Method and Jurisdiction				
Cause of Death	Knox	Anderson	Non-Jurisdiction	Total
Asphyxia	0	0	2	2
Blunt Force	4	1	3	8
Carbon Monoxide	0	0	1	1
Gun	26	4	27	57
Neglect	0	0	1	1
Sharp Instrument	3	0	7	10
Total	33	5	41	79



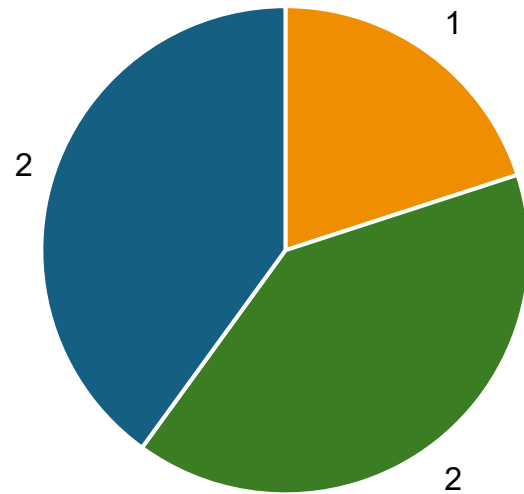
2023 Knox County Homicides by Race and Sex

- Black Male
- Black Female
- White Male
- White Female
- Other Male



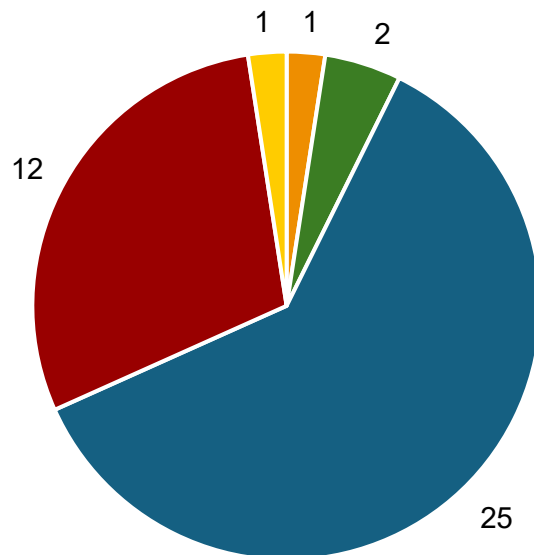
2023 Anderson County County Homicides by Race and Sex

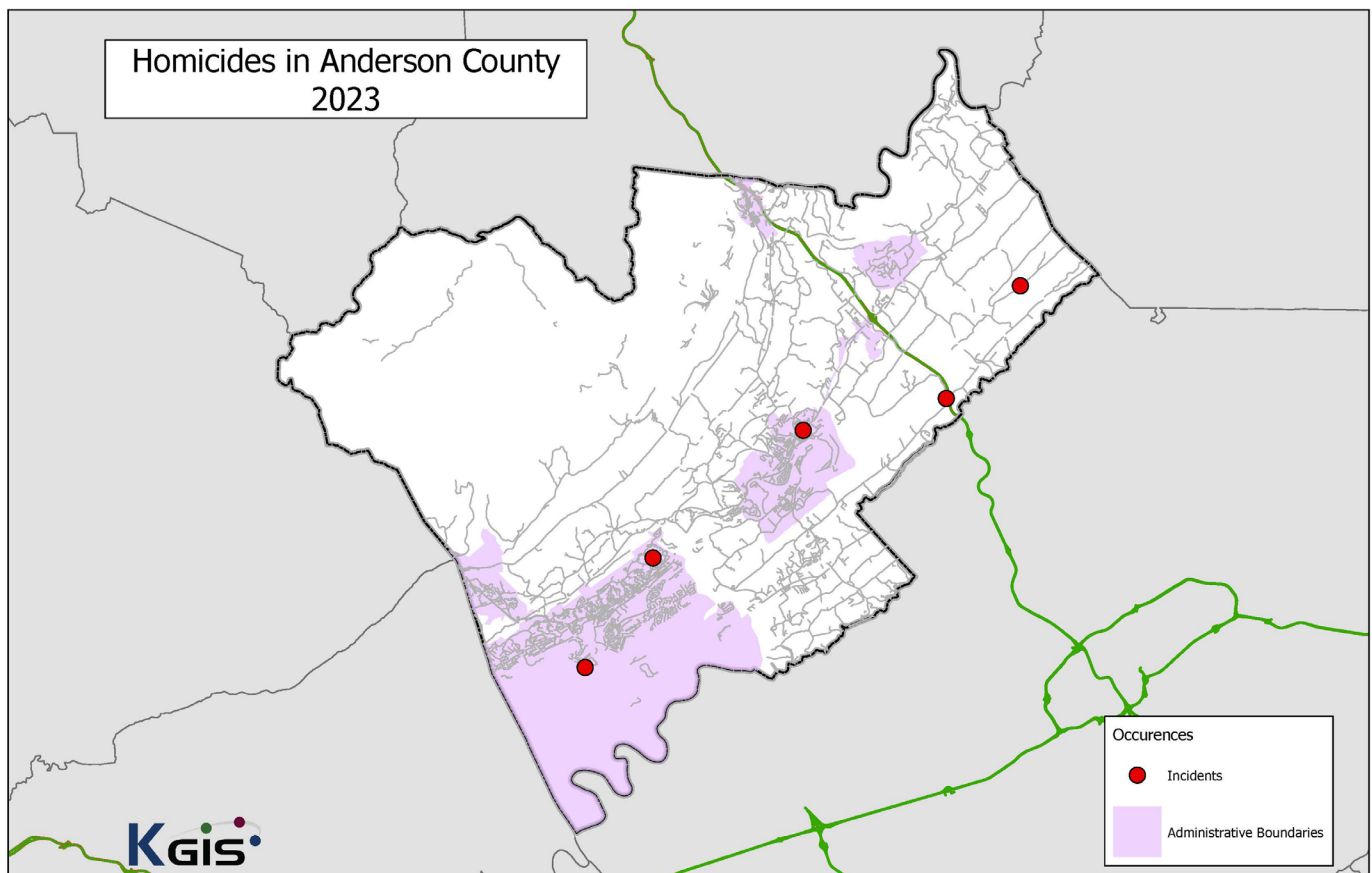
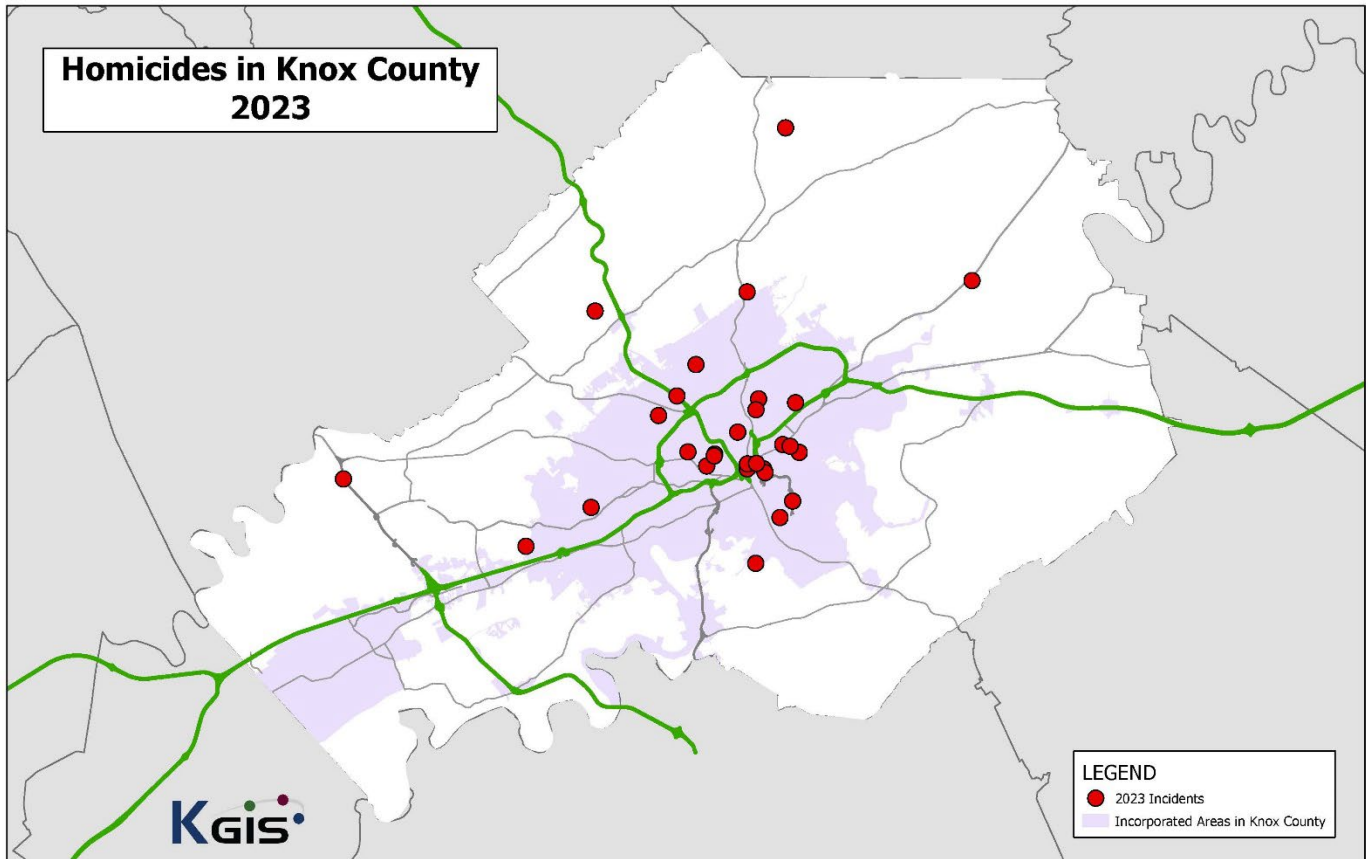
- Black Male
- White Female
- White Male



2023 Non-Jurisdiction Homicides by Race and Sex

- Black Male
- Black Female
- White Male
- White Female
- Other Male





Suicides

In Knox County suicides decreased by 21 percent in 2023. Suicides in Anderson County increased by 5 percent.

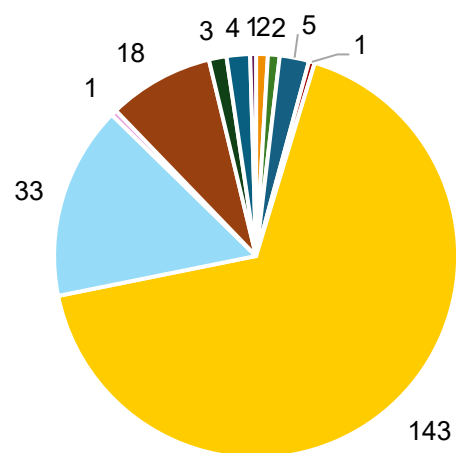
RFC Suicides Jurisdiction and Non-Jurisdiction 2019-2023					
	2019	2020	2021	2022	2023
Knox	83	95	88	114	90
Anderson	24	11	19	18	19
Non-Jurisdiction*	93	97	103	91	104
Total	200	203	210	223	213

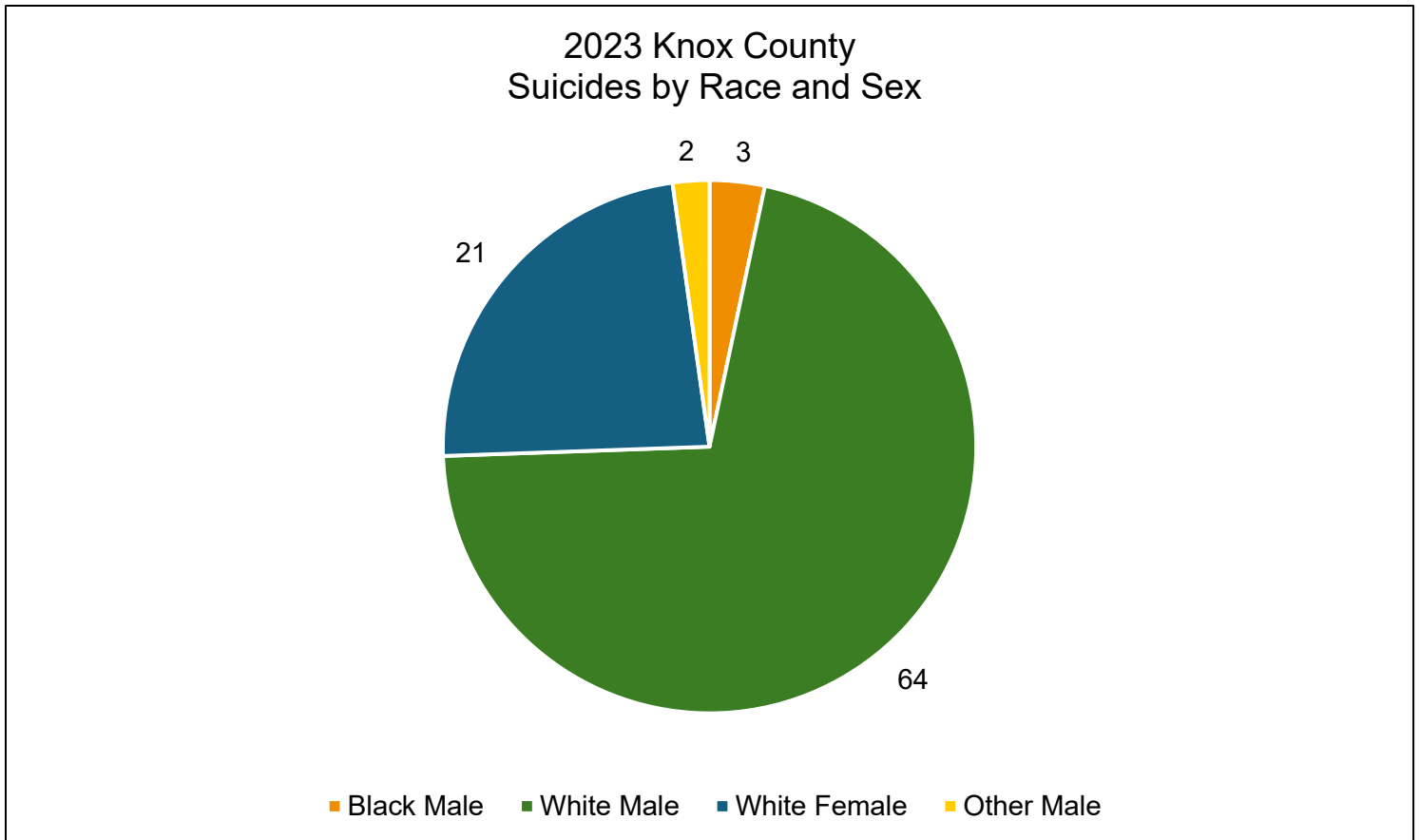
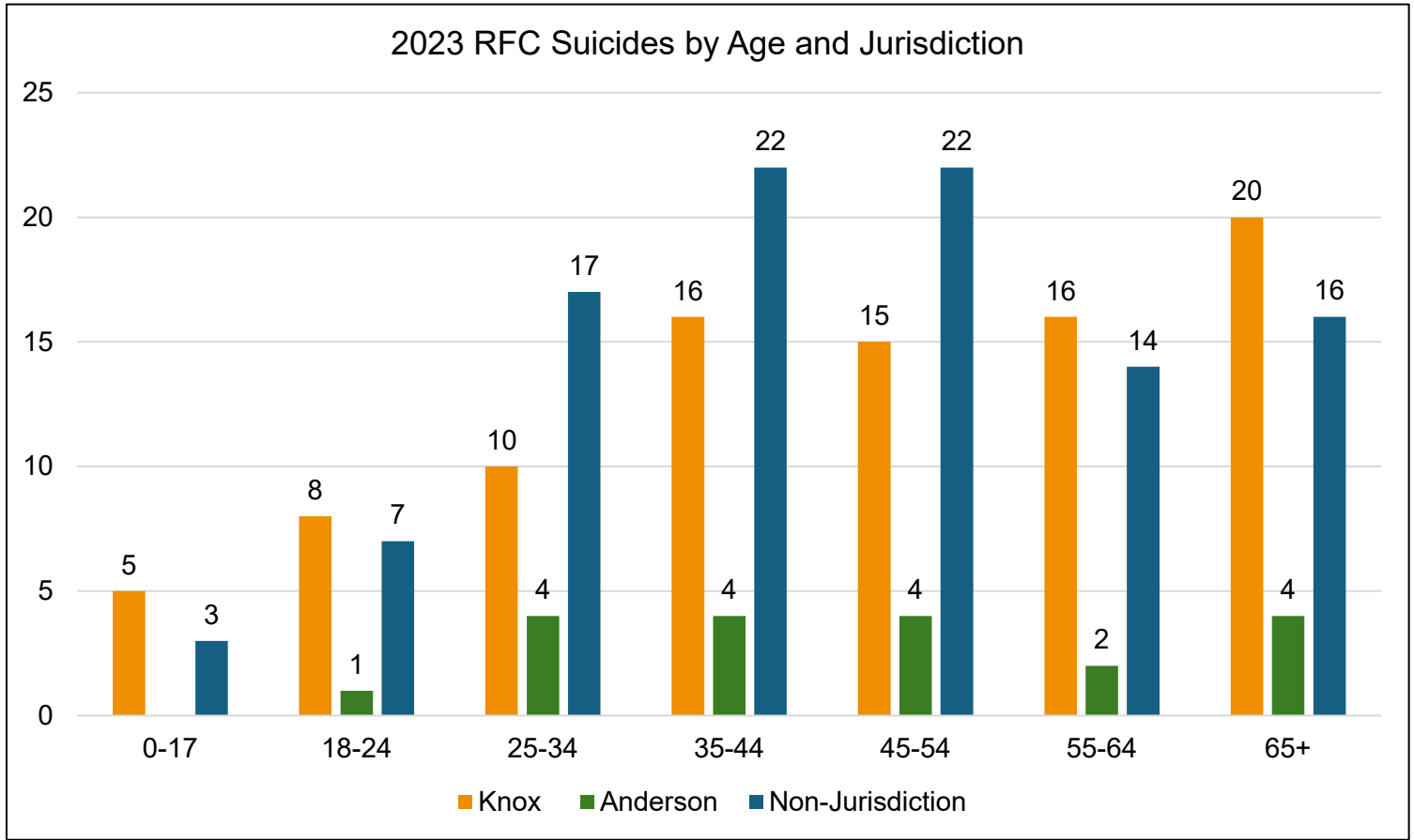
* This data is not reflective of all suicides in non-jurisdiction areas, only those that were sent for autopsy.

2023 Suicides by Method and Jurisdiction				
Cause of Death	Knox	Anderson	Non-Jurisdiction	Total
Carbon Monoxide	1	0	1	2
Drowning	2	0	0	2
Fall/Jump	4	0	1	5
Fire	1	0	0	1
Gun	51	16	76	143
Hanging	18	2	13	33
MVC	0	0	1	1
Overdose	8	1	9	18
Sharp Instrument	3	0	0	3
Suffocation	1	0	3	4
Train	1	0	0	1
Total	90	19	104	213

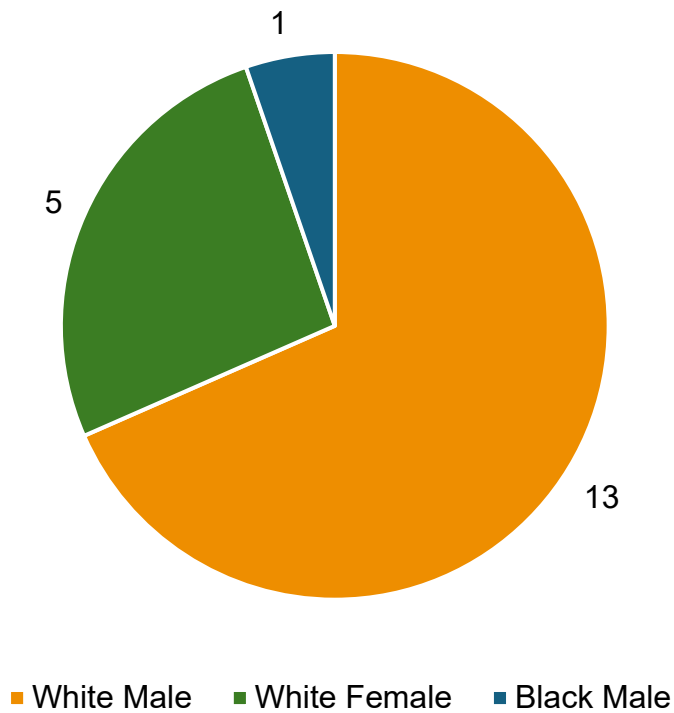
2023 Suicides by Method

- Carbon Monoxide
- Drowning
- Fall/Jump
- Fire
- Gun
- Hanging
- MVC
- Overdose
- Sharp Instrument
- Suffocation
- Train

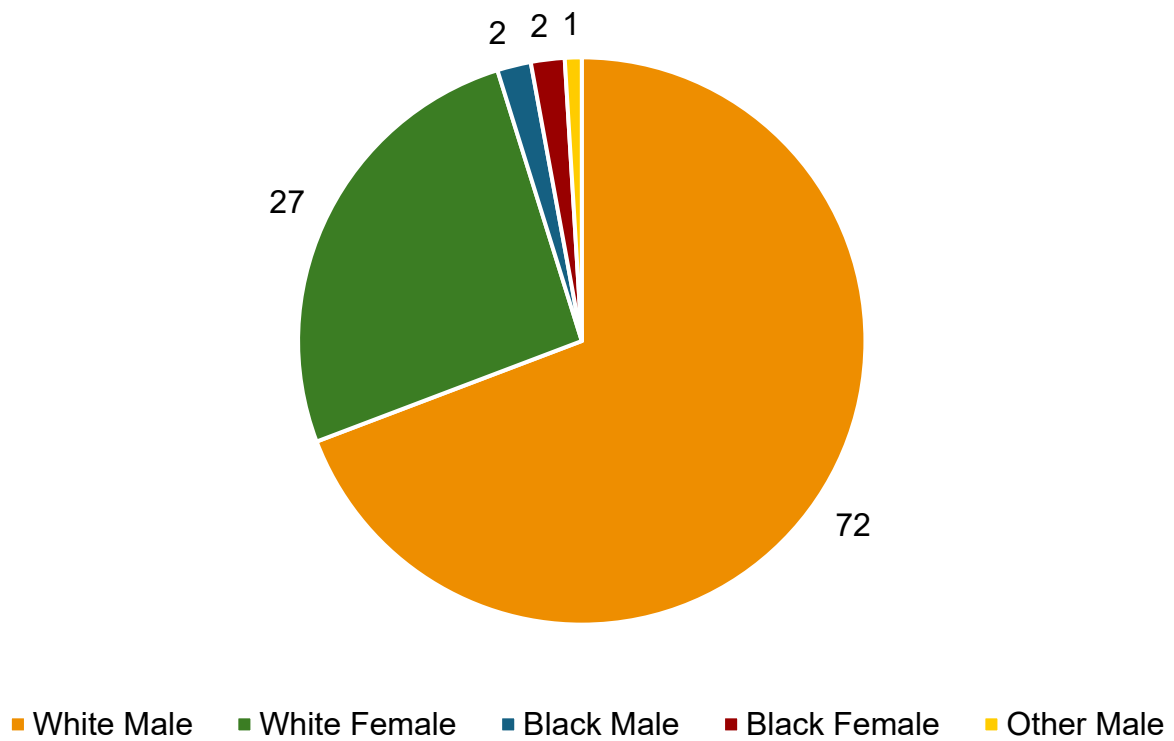




2023 Anderson County
Suicides by Race and Sex



2023 Non-Jurisdiction
Suicides by Race and Sex



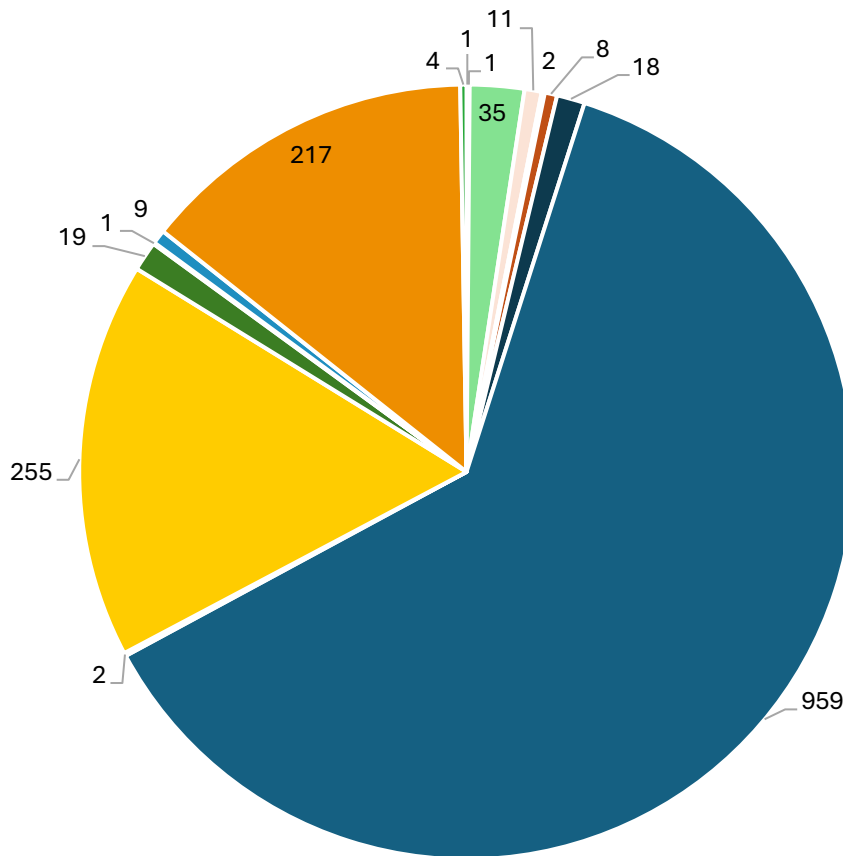
Accidental Deaths

Accidental deaths in Knox County increased by 2.84 percent. Anderson County accidental deaths decreased by 0.98 percent.

RFC Accidental Deaths Jurisdiction and Non-Jurisdiction 2019-2023					
	2019	2020	2021	2022	2023
Knox	597	706	897	880	905
Anderson	60	74	136	102	101
Non-Jurisdiction*	309	436	564	534	536
Total	966	1,216	1,597	1,516	1,542

2023 Accidental Deaths by Method and Jurisdiction				
Cause of Death	Knox	Anderson	Non-Jurisdiction	Total
Aircraft	0	0	1	1
Animal	1	0	0	1
Asphyxia	13	4	18	35
Blunt Force/Crushed	6	0	5	11
Boating Accident	0	0	2	2
Carbon Monoxide	2	0	6	8
Drowning	5	2	11	18
Drugs	509	60	391	960
Electrical	0	0	2	2
Fall Under 65	25	1	11	37
Fall 65+	199	16	3	218
Fire	5	3	11	19
Gun	0	0	1	1
Hypothermia/Hyperthermia	4	0	5	9
MVA	135	15	67	217
Train	1	0	3	4
Total	905	101	536	1,542

2023 Accidental Deaths by Cause



- Aircraft
- Animal
- Asphyxia
- Blunt Force/Crushed
- Boating Accident
- Carbon Monoxide
- Drowning
- Drugs
- Electrical
- Fall
- Fire
- Gun
- Hypothermia/Hyperthermia
- MVA
- Train

Motor Vehicle Deaths

Motor vehicle deaths increased in Knox County by 35 percent in 2023. In Anderson County motor vehicle deaths decreased by 16 percent.

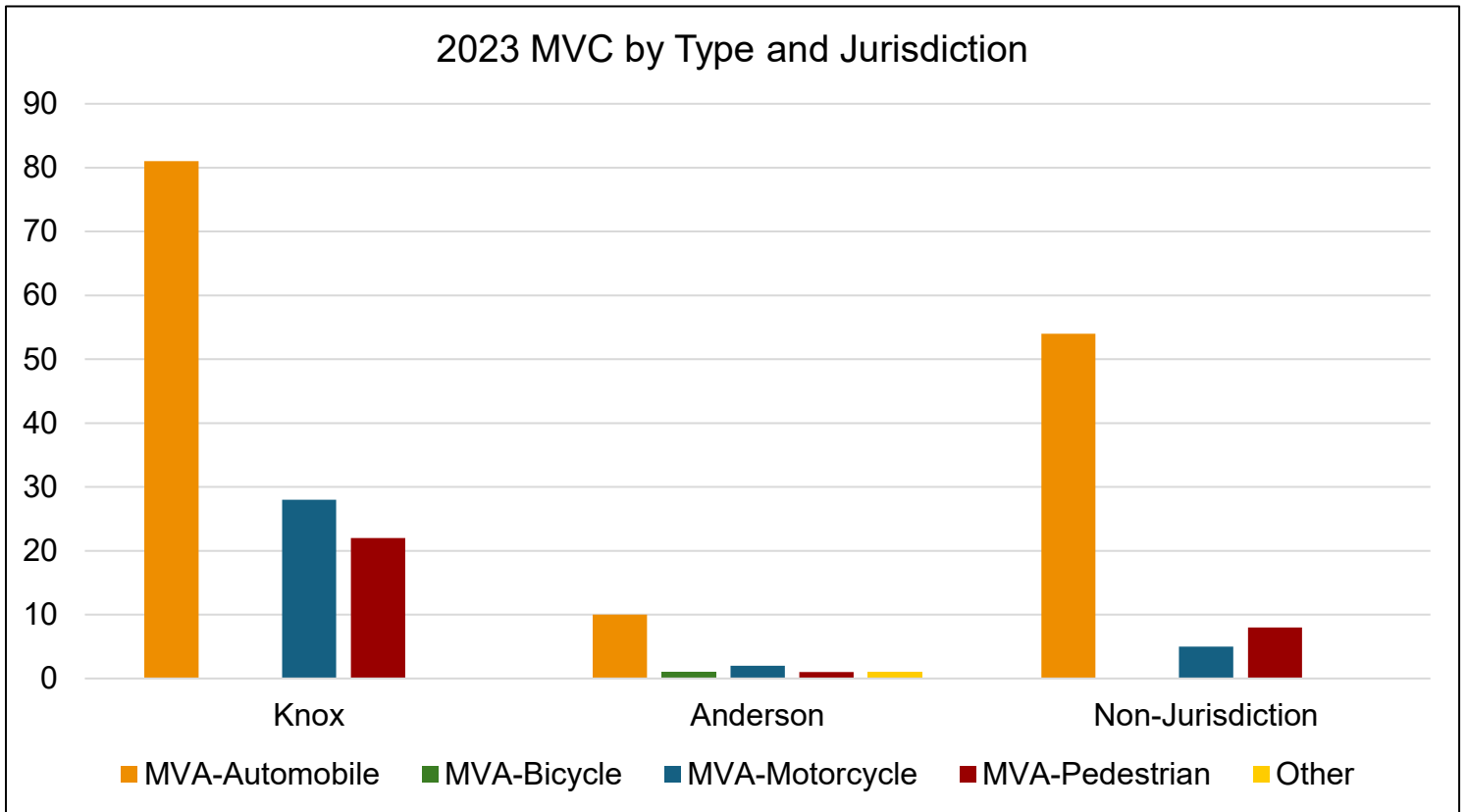
RFC Motor Vehicle Deaths Jurisdiction and Non-Jurisdiction 2019-2023					
	2019	2020	2021	2022	2023
Knox	104	99	129	100	135
Anderson	10	13	17	18	15
Non-Jurisdiction*	53	71	72	77	69
Total	167	183	218	195	219

* This data is not reflective of all accidental deaths in non-jurisdiction areas, only those that were sent for autopsy.

2023 Motor Vehicle Related Deaths by Decedent Location and Jurisdiction

	Knox	Anderson	Non-Jurisdiction	Total
MVC-Driver	66	5	36	107
MVC-Occupant	15	5	18	38
MVC-Motorcyclist Driver	27	2	5	34
MVC-Motorcyclist Rider	2	0	0	2
MVC-ATV/Offroad	3	1	2	6
MVC-Bicyclist	0	1	0	1
MVC-Pedestrian	22	1	8	31
Total	135	15	69	219

2023 MVC by Type and Jurisdiction

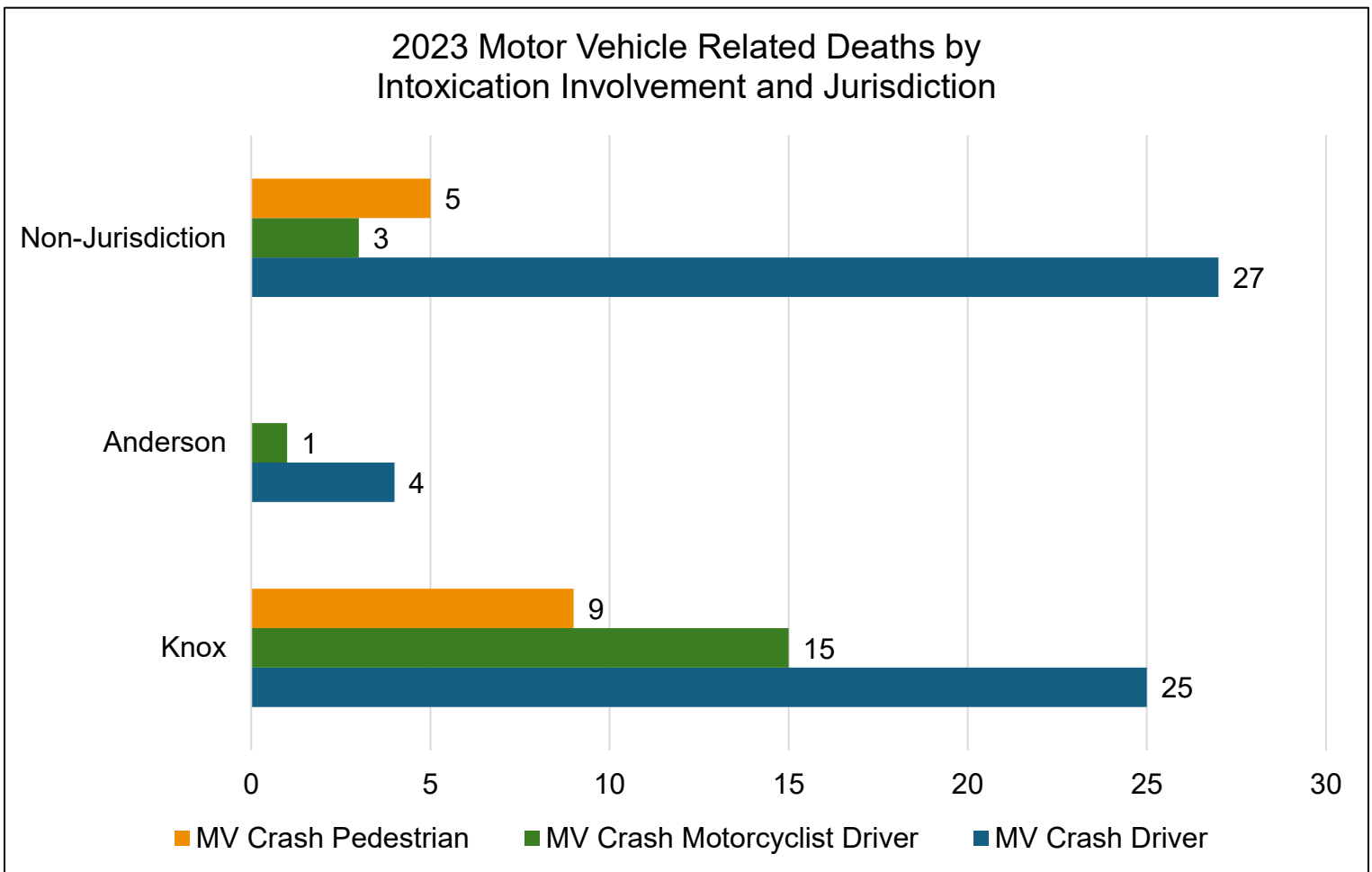


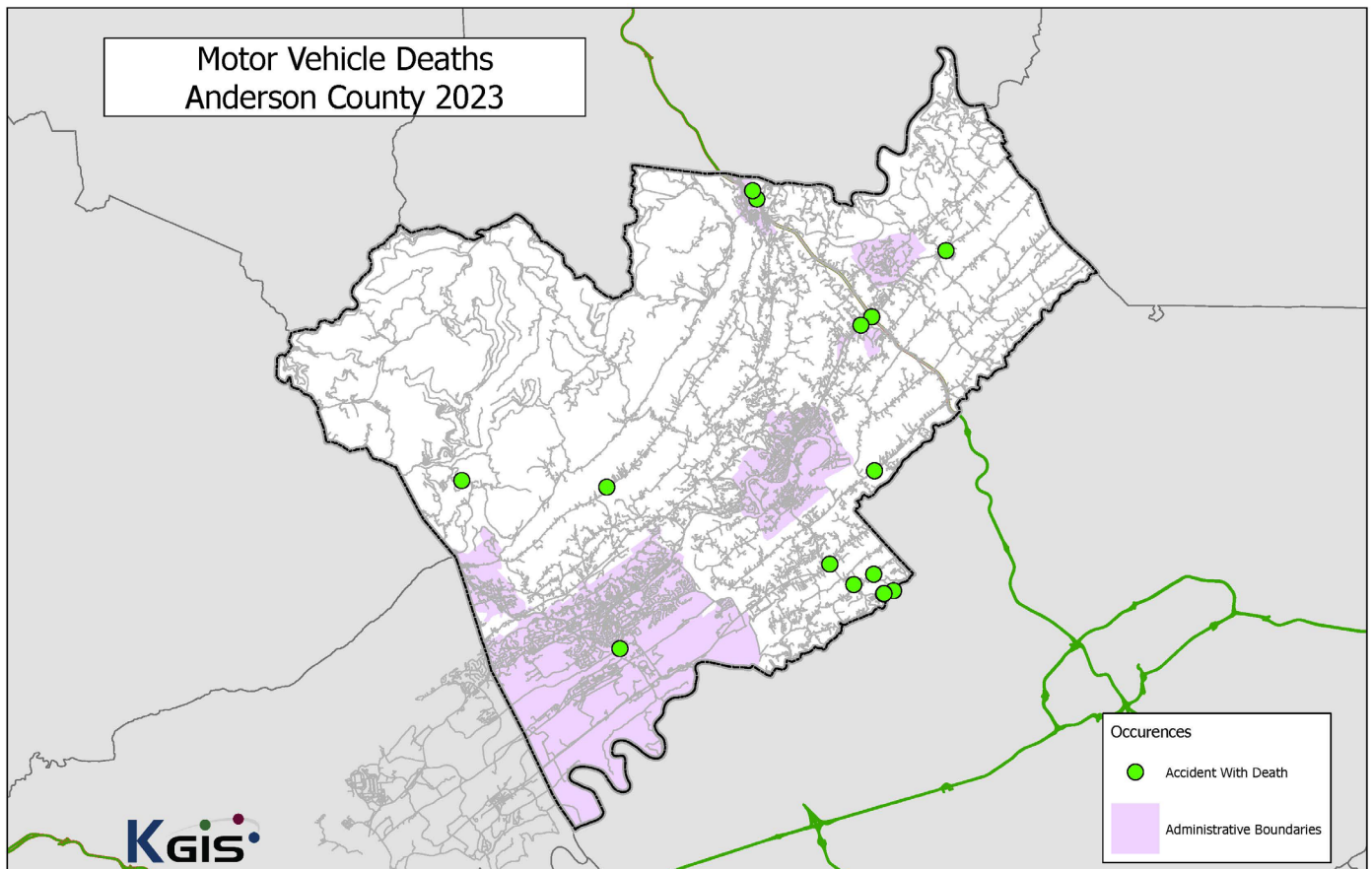
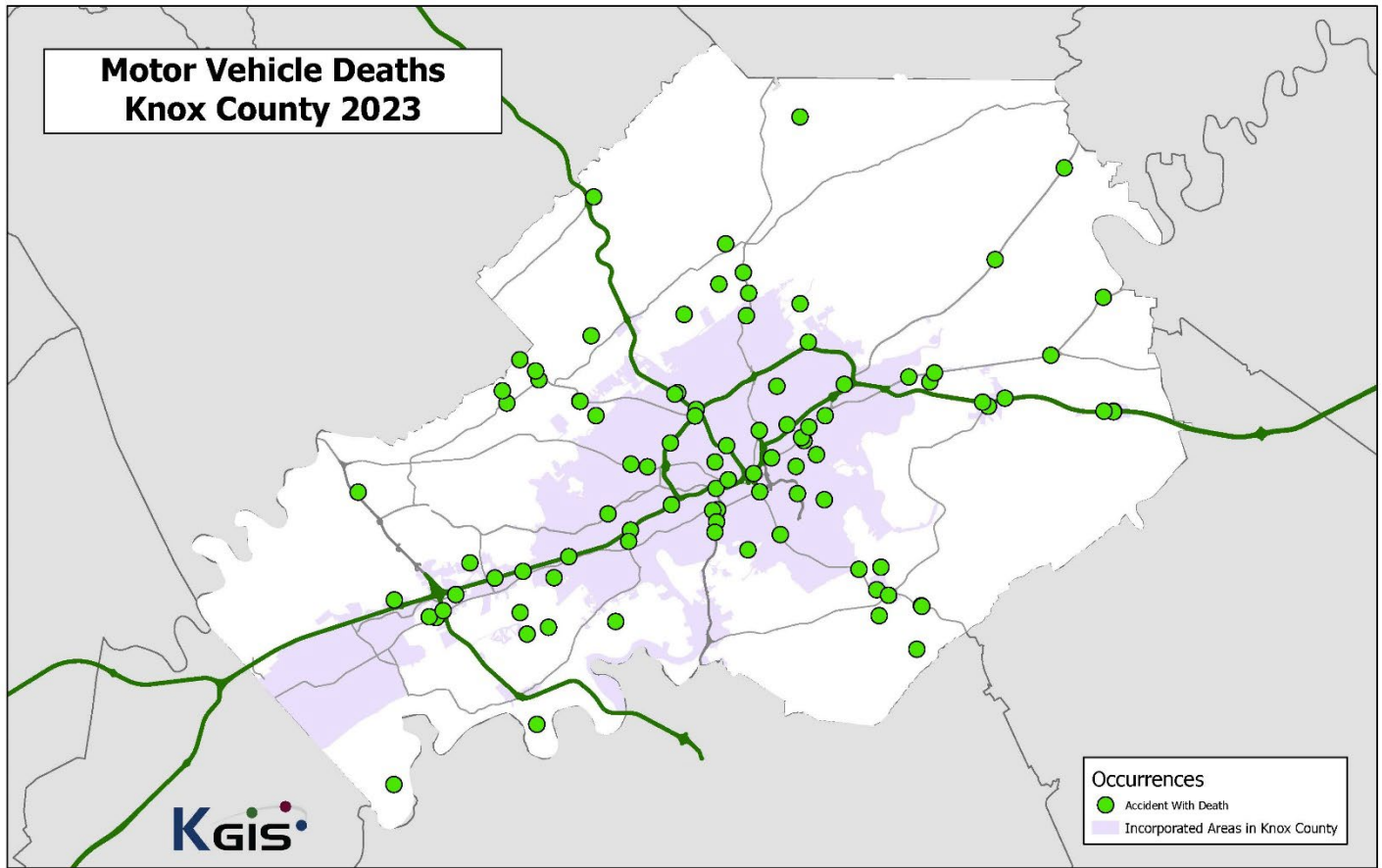
2022 Motor Vehicle Deaths by Manner of Death and Jurisdiction

Manner of Death	Knox	Anderson	Non-Jurisdiction	Total
Accident	135	15	67	217
Suicide	0	0	1	1
Undetermined	0	0	1	1
Total	135	15	69	219

The graphs below show the motor vehicle related deaths where toxicology was sent and the operator or pedestrian had positive toxicology results for drugs, alcohol, or both.

2023 Percentage of Motor Vehicle Deaths Involving Intoxication by Decedent Location and Jurisdiction			
Decedent Location	Knox	Anderson	Non-Jurisdiction
MVC- Driver	64%	80%	79%
MVC-Motorcyclist Driver	75%	50%	60%
MVC-Pedestrian	69%	0%	71%





Undetermined Manner of Death

Deaths labeled undetermined are when the Forensic Pathologist is unable to determine a specific manner of death, which can be caused by number of circumstances. In 2023, undetermined deaths decreased in Knox County by 20 percent and remained the same in Anderson County.

RFC Undetermined Manner of Deaths Jurisdiction and Non-Jurisdiction					
2019-2023					
	2019	2020	2021	2022	2023
Knox	14	15	20	15	12
Anderson	1	4	3	2	2
Non-Jurisdiction	30	25	24	34	33
Total	45	44	47	51	47

In some cases, when the manner of death is undetermined, a pathologist is still able to determine the cause of death for a decedent. In these cases, there is a clear cause of death, but whether the death was intentional or unintentional cannot be determined.

2023 Undetermined Deaths by Cause of Death				
Cause of Death	Knox	Anderson	Non-Jurisdiction	Total
Blunt Force	0	0	2	2
Drowning	0	0	2	2
Drug Death-Acute Intoxication	1	0	1	2
Fall	0	0	1	1
Fire	1	0	2	3
Gun	1	1	1	3
Liver Failure	0	0	1	1
MVC-Pedestrian	0	0	1	1
Seizure	0	0	1	1
Sharp Instrument	0	0	1	1
SUIDI	0	0	1	1
Undetermined/Other	9	1	19	29
Total	12	2	33	47

Natural Deaths

Natural deaths that were certified by an RFC Forensic Pathologist fell by 8 percent in Knox County in 2023. In Anderson County, natural deaths fell by 21 percent. This data is only reflective of deaths examined by the forensic center and is not reflective of all natural deaths in or outside of our jurisdiction.

RFC Natural Deaths Jurisdiction and Non-Jurisdiction 2019-2023					
	2019	2020	2021	2022	2023
Knox	496	595	611	585	536
Anderson	74	88	94	96	77
Non-Jurisdiction	174	153	208	205	160
Total	744	836	913	886	773

Note: These numbers only reflect natural deaths that were certified by an RFC forensic pathologist.

2023 Natural Deaths by Cause of Death

Cause of Death	Knox	Anderson	Non-Jurisdiction	Total
Anaphylaxis	1	0	1	2
Aneurysm	2	0	0	2
Autoimmune Disease	0	0	1	1
Cardiac	313	55	92	460
Chronic Alcoholism	47	4	16	67
Cirrhosis	5	0	3	8
Dementia/Alzheimer's	6	3	0	9
Diabetes	23	1	7	31
Drug Death-Chronic Abuse	3	0	0	3
Gastrointestinal	7	0	4	11
Genetic	1	0	0	1
Hematologic Disorder	3	0	0	3
Hepatic/Liver Failure	1	0	0	1
Infection	25	1	13	39
Infection-COVID-19	5	0	0	5
Infection-HIV-AIDS	1	0	0	1
Multi System Disease	1	0	0	1
Neoplasm	21	1	1	23
Nervous System	26	1	4	31
Nonspecific Natural	1	1	1	3
Obesity	10	0	2	12
Pancreatitis	1	0	0	1
Pulmonary	16	7	6	29
Renal Disease	3	1	0	4
Seizure Disorder	6	1	5	12
Stillbirth	1	0	1	2
Thromboembolism	5	1	3	9
Treatment Complication	1	0	0	1
Undetermined	1	0	0	1
Total	536	77	160	773

Infant Deaths

The charts below depict the Knox, Anderson, and Non-Jurisdictional counties' infant deaths in 2023. An infant death is a death that occurs from live birth to one year in age.

2023 Jurisdiction and Non-Jurisdiction Infant Deaths by Procedure

	Autopsy	Exam	Jurisdiction Declined	Total
Knox	12	0	71	83
Anderson	5	1	2	8
Non-Jurisdiction	25	0	0	25
Total	42	1	73	116

2023 Infant Deaths by Manner of Death

	Accident	Homicide	Natural	Undetermined	Total
Knox	6	0	3	1	10
Anderson	3	1	0	1	5
Non-Jurisdiction	11	0	4	9	24
Total	20	1	7	11	39

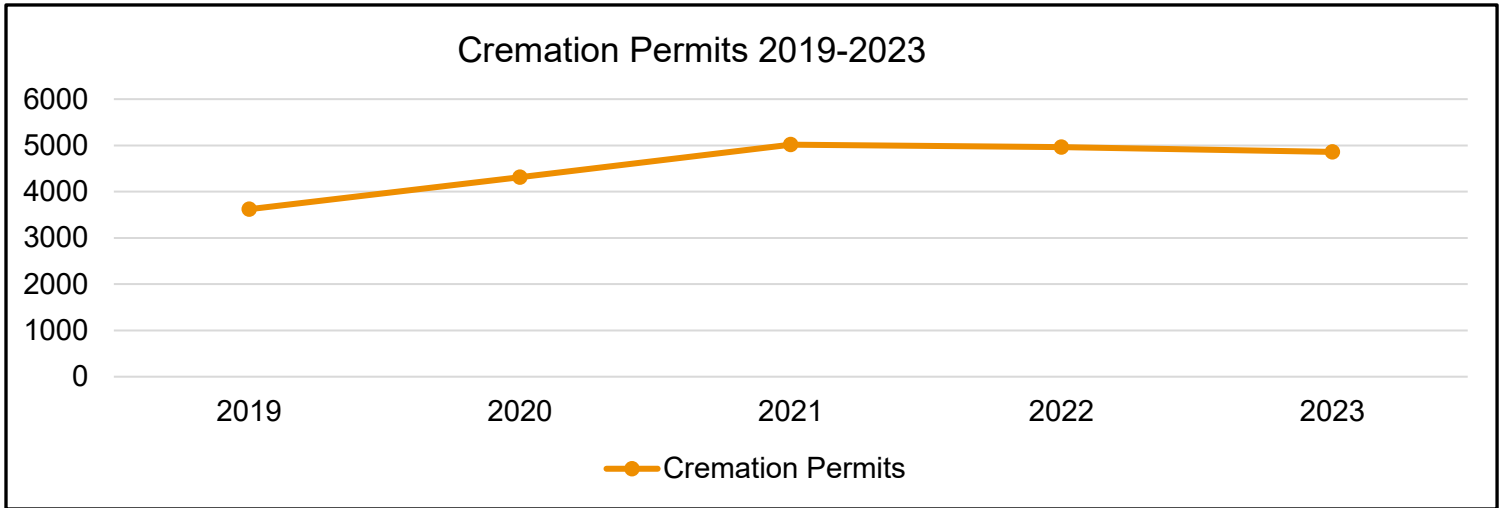
2023 Infant Deaths by Cause of Death

Cause	Knox	Anderson	Non-Jurisdictional	Total
Asphyxia	4	3	11	18
Blunt Force	0	1	0	1
Drug Related	2	0	0	2
Hematologic	1	0	0	1
Hepatic	0	0	1	1
Infection	1	0	2	3
Nervous System	0	0	1	1
Pregnancy Complication	0	0	1	1
Still Birth	3	1	1	5
Undetermined	1	1	8	10
Total	12	6	25	43

Cremation Authorizations in 2023

The Medical Examiner has statutory responsibility to review and sign all cremation authorizations prior to a decedent being cremated, which includes the review of the cremation authorization forms, sometimes medical records regardless of medical examiner jurisdiction, and death certificates of each decedent by a Medical Examiner.

In 2023, RFC Medical Examiners authorized 4,828 cremations. The following chart depicts the 5-year history of cremation authorizations completed.

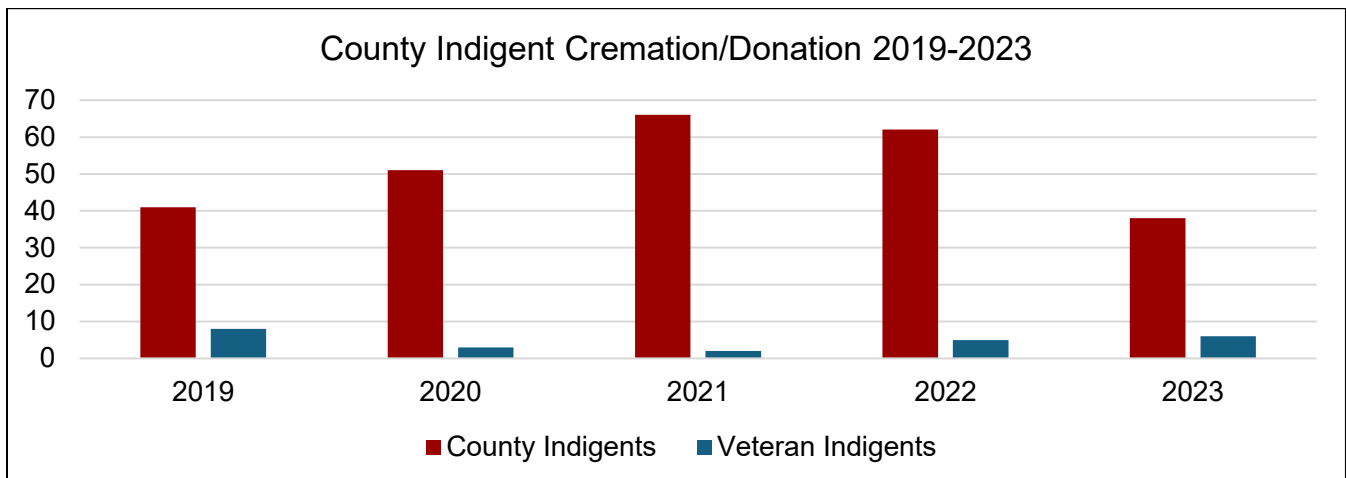


Indigent Cremation/Donation

When a decedent from the Medical Examiner’s jurisdiction goes unclaimed, the decedent is declared indigent. In these circumstances, the RFC will either cremate and intern the unclaimed decedent in Knox County’s mausoleum or authorize the scientific donation of the decedent (this is done only for Medical Examiner’s cases). All unidentified individuals are defleshed and permanently retained until identified.

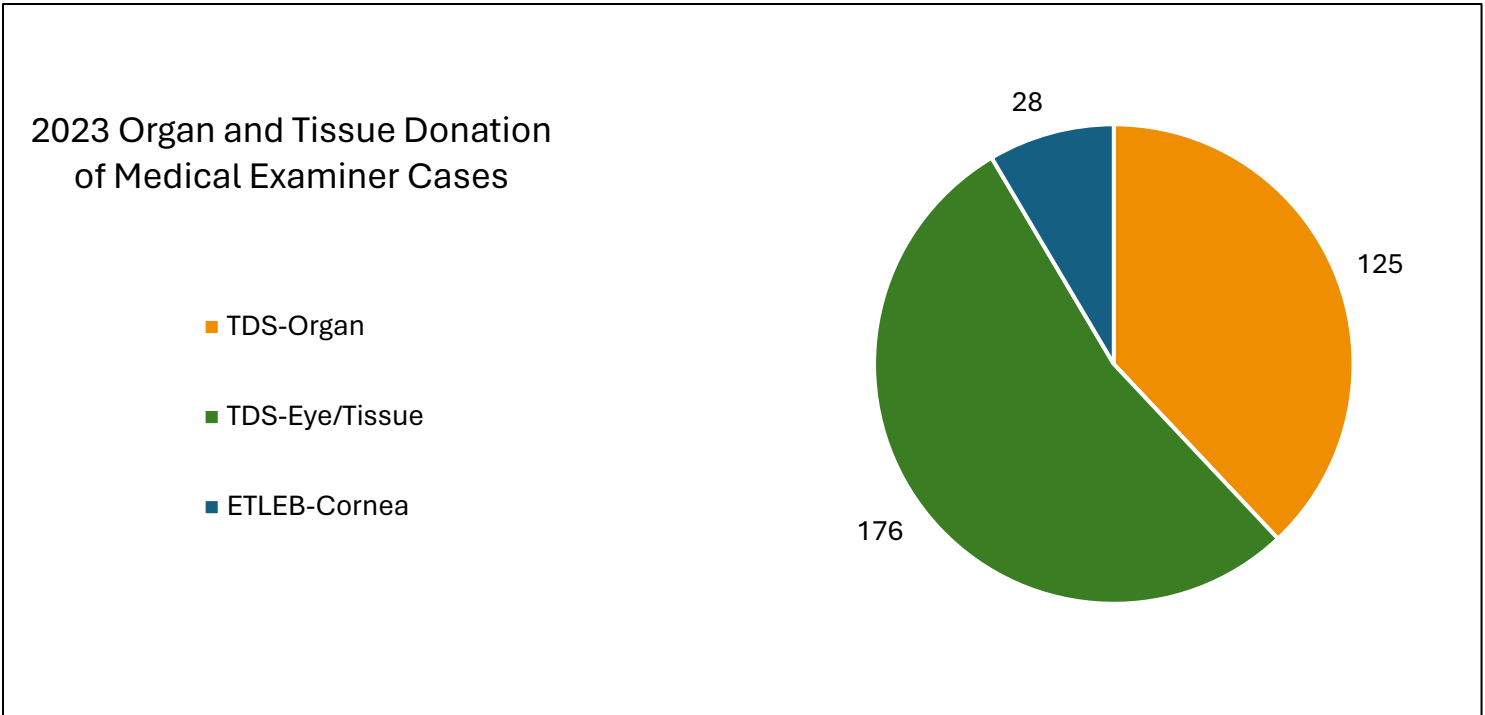
Before moving forward with indigent cremation and internment, the RFC also completes a check for veteran’s status. If the individual is determined to have veteran’s status, the RFC works with the local Homeless Veteran’s Burial Program to provide a proper military burial.

The following chart demonstrates the 5-year history of indigents processed by the RFC.



Organ and Tissue Donations

The Knox County RFC has statutory responsibility to review accepted jurisdiction cases for tissue and organ donation prior to donation; it must also coordinate with organ and tissue donation groups within the Medical Examiner’s jurisdiction. The chart below includes data provided by Tennessee Donor Services and East Tennessee Lion’s Eye Bank and depicts the number of tissue and organ donations completed in 2023.



Staff-Specific Data

Forensic Pathologists

The tables below illustrate the average case completion time by each physician in 2023 as well as case completion rate by days, number of cases, and percentage of complete cases.

2023	#	%
Incomplete	0	0%
Cases over 90 Days	453	18.99%
Cases Over 60 Days	473	19.82%
Cases Between 30-60 Days	694	29.09%
Cases Under 30 Days	766	32.10%
	2,386	100%

Pathologist Activities Preformed								
Pathologist	Exams	Autopsies	Hospital	Limited	Declined Cases	Releases	Cremation Permits	Total
Dr. Havrilla	221	247	8	4	519	84	673	1,756
Dr. Hawes	53	130	0	0	224	43	81	531
Dr. Lochmuller	184	288	13	0	523	84	743	1,835
Dr. Mileusnic	123	159	1	3	321	56	1,596	2,259
Dr. Oliver**	95	124	0	0	251	41	58	569
Dr. Rollins*	198	187	6	2	333	49	310	995
Dr. Suzuki	164	256	8	2	495	86	1,366	2,377
Total	1,038	1,391	36	11	2,666	443	4,827	10,322

*Left the RFC **Locum Tenens Pathologist

2023 Pathologist Average Turn Around Time in Days					
Pathologist	Exams	Autopsies	Hospital	Limited	Average
Dr. Havrilla	16	89	135	0	55
Dr. Hawes	34	53	0	0	47
Dr. Lochmuller	32	95	128	0	73
Dr. Mileusnic	30	122	19	52	81
Dr. Oliver**	39	49	0	0	45
Dr. Rollins*	35	72	109	42	60
Dr. Suzuki	21	36	43	25	30
Average	27	75	128	23	56

*Left the RFC **Locum Tenens Pathologist

Pathologist	Autopsy Equivalent
Dr. Havrilla	312
Dr. Hawes	143
Dr. Lochmuller	347
Dr. Mileusnic	192
Dr. Oliver**	148
Dr. Rollins*	221
Dr. Suzuki	306
Total	1,670
Average Equivalent per Pathologist	278

* Left the RFC **Locum Tenens Pathologist

Medicolegal Death Investigations (MDI)

The charts below depict the types of actions completed by MDIs in 2023.

Case by Disposition Category in 2023

Investigator	Jurisdiction Declined- Autopsy	Jurisdiction Declined - No Autopsy	Cremation Permit Only	Released to Funeral Home	Sent to Autopsy Facility	Total
Morgan Maples (Manager)	2	77	19	3	53	154
Christine Hawley	3	160	39	43	126	371
Megan Sharpe	6	288	58	49	286	687
Karissa Fulton	2	268	125	68	297	760
Lisa Taylor	7	298	135	59	257	756
Laura Leonard	7	367	39	27	289	729
Brooke Grunenwald	3	276	19	42	213	553
Ashley Taylor	5	372	63	39	202	681
Ginger Hayes	3	264	17	51	235	570
Lisa Sadler*	0	14	2	4	17	37
Kayla Robson	3	135	12	29	142	321
Matthew Miles*	1	136	9	28	122	296
Hannah Sellers	0	11	4	1	5	21
Other	0	0	1,734	0	110	1,844
Total by Disposition	42	2,666	2,275	443	2,354	7,780

*Left the RFC

2023 On-Scene Investigator Visits	
Investigator	Number
Morgan Maples (Manager)	13
Christine Hawley	99
Megan Sharpe	193
Karissa Fulton	273
Lisa Taylor	174
Brooke Grunenwald	141
Laura Leonard	122
Ashley Taylor	121
Ginger Hayes	173
Lisa Sadler*	9
Kayla Robson	96
Matthew Miles*	98
Hannah Sellers	0
Total	1,448

* Left the RFC

Autopsy Technicians

The chart below reports the types of actions completed by the Autopsy Technicians and how quickly autopsy or external examinations were completed once the decedent arrived at the RFC—which impacts how quickly the RFC can release the decedent to a funeral home for final disposition.

2023 Days and Percentage of Cases Where an Autopsy/Exam was Performed from Time of Arrival at RFC		
Within 48 Hours	2,347	98.36%
Within 72 Hours	2,374	99.49%
Over 72 Hours	12	0.02%
Total	2,386	

Histology was ordered on a total of 1,035 cases, X-Rays were taken on a total of 1,326 decedents, and 231 tests were ordered through LabCorp in 2023.

The chart that follows shows how many toxicology tests were performed at the Regional Forensic Center and where they were sent for testing.

2023 Toxicology Locations		
Location Sent	Number	%
NMS	2,054	85.9%
DEA Tox	113	7.72%
St. Louis University	92	3.84%
Total	2,259	

*Toxicology can be sent to multiple testing facilities for one case.