

**LEHIGH COUNTY CORONER'S OFFICE
& FORENSICS CENTER**

2023



ANNUAL REPORT

DANIEL A. BUGLIO, D-ABMDI
LEHIGH COUNTY CORONER

Dedication

To the dearly departed, whose lives we may not know, but whose deaths we are tasked with investigating; and to the friends and family of, who have lost, mourned, and grieved, we dedicate this report to you.

"Say not in grief, 'he is no more', but in thankfulness that he was"

-Rabindranath Tagore

Acknowledgements

The staff of the Lehigh County Coroner's Office & Forensics Center have always demonstrated and will continue to demonstrate compassion, professionalism, and true dedication in executing the duties of this office in service to our community, with unwavering integrity, fidelity, and devotion to duty,

24 hours per day,

7 days per week,

365 days per year.

"You could leave life right now.
Let that determine what you do and say and think"

Memento Mori

- Marcus Aurelius



LEHIGH COUNTY CORONER'S OFFICE & FORENSICS CENTER

DANIEL A. BUGLIO, D-ABMDI
LEHIGH COUNTY CORONER

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Letter from the Coroner

Everyone,

As I continue my role as the elected Coroner of Lehigh County, I cannot be any more honored to present you with the 2023 Annual Report. The Lehigh County Coroner's Office continues to move forward in an amazing and innovative direction. I am proud of the accomplishments we have achieved and exceeded together, and I plan to continue my tradition of success and innovation for years to come. 2023 was a year of progress and transition. Building on the momentum of 2023, 2024 will continue to bring many firsts to the Lehigh County Coroner's Office. Throughout this report, you will see the many new advancements brought forth to this office in 2023. These advancements not only assisted the office and the taxpayers of Lehigh County with immense monetary savings, but were implemented in a manner that never compromised the integrity of our investigations for the decedents or the families that we serve.

In 2023, we began working towards an additional accreditation for the office, one obtained by a select few coroner's offices across the country. At the time of this report, we have received a provisional accreditation, and we anticipate the full accreditation to follow later in 2024. Continuing with progressive changes, I introduced a new position to the office in 2023, with the sole purpose of assisting families who have lost a loved one. The position of Bereavement Coordinator is a one-of-a-kind position that will guide families through the grieving process with one-on-one interactions. This position is anticipated to be filled within days after the publishing of this report.

These changes are just the tip of the iceberg. On the cusp of this new year, I am eager to take my thoughts and ideas and turn them into reality. I am committed to keeping the Lehigh County Coroner's Office and Forensics Center the best in the entire commonwealth, and beyond.

I wish to convey my true gratitude and sincere appreciation to my incredible staff of investigators, morgue technicians, administrative assistants, and my command staff. I have been continually impressed by the resilience of my entire staff, and to their commendable devotion to duty. My staff and I will continue to move forward with compassion and dedication for years to come.

Respectfully,

Daniel A. Buglio, D-ABMDI
Lehigh County Coroner



Table of Contents

Mission Statement.....	1
Introduction	2-3
Statute on Coroner’s Investigation.....	4
Roles of the Coroner’s Office	5-6
Coroner’s Office Staff	7
Vehicle Fleet	8
New Technology & Innovation.....	9-11
2023 Statistics	12-31
2023 Investigation Data.....	12
Manners of Death	13
Natural Death	14-15
Accidental Death	16-17
Drug Death	18-20
Autopsy v. Toxicology	21
Suicide	22-27
Homicide.....	28-30
Other Investigations	31
Closing Remarks	32

Mission Statement

The Lehigh County Coroner's Office and Forensics Center provides services twenty-four hours a day, seven days a week. The Lehigh County Coroner's Office is staffed by diverse and highly trained personnel, whose function is to investigate the facts and circumstances surrounding a death over which the coroner has jurisdiction, and to determine the cause and manner of death.

Forensic investigative services performed include: death investigation, post mortem examination, photography, fingerprinting, entomology, anthropology, temperature analysis, child and infant death analysis, bloodstain pattern analysis, odontology and ophthalmology.

Death scene investigations include: natural deaths, accidents, suicides, homicides as well as deaths due to neglect, abuse, terrorism, fire/arson, industrial accidents and mass disasters.

The investigations and rulings of the Lehigh County Coroner's Office and Forensics Center concerning criminal acts, criminal neglect or those that affect public health and safety, are often the foundation for follow-up actions by other investigative agencies.

The six basic functions of the Lehigh County Coroner's Office are:

- Determine the cause and manner of death for individuals in a timely fashion in the process determining whether or not there is sufficient reason to believe that the death may have resulted from a criminal act or criminal neglect.
- Identify the deceased with the highest degree of certainty possible, and provide written documentation of the same.
- Proper and timely notification of death to the legal next of kin.
- Prepare, maintain, and safeguard thorough investigation reports and scene documentation.
- Account for, maintain, and safeguard personal property and evidence.
- Provide assistance to families involved in our investigations as applicable.

Introduction

The Coroner's Office is an independent investigative division of the Lehigh County Government. The citizens of Lehigh County fund the office through the Office of the Lehigh County Executive and the Board of Commissioners. The Lehigh County Coroner's Office was the first coroner's office in the Commonwealth of Pennsylvania and the second worldwide to have received accreditation from the International Association of Coroners and Medical Examiners (IACME). We have complied with recertification and continue to uphold the highest standards to maintain this accreditation. We completed our quinquennial reaccreditation in 2021, making 2023 our 16th year of being accredited.

The position of coroner is an elected position, voted upon by the citizens of Lehigh County. Coroner Daniel A. Buglio, D-ABMDI, has been with the office since the spring of 2000, serving as an Investigator and then as First Deputy Coroner/Operations Manager. He is a member of the Pennsylvania State Coroner's Association and the International Association of Coroners and Medical Examiners. Coroner Buglio serves as Co-Chair for the Lehigh County Child Death Review Team, member of the Lehigh County Suicide Task Force, the Lehigh County Elder Abuse Task Force, and the Allentown Heroin/Opioid Task Force. Under the direction of Coroner Buglio, the Coroner's Office conducts medicolegal death investigations, which can include the authorization to conduct autopsies, administrative support, as well as many other family assistance services.

Lehigh County is the most populated of four counties that comprise the Lehigh Valley region of eastern Pennsylvania and northwestern New Jersey. It is one of the fastest growing counties in Pennsylvania, with a current estimated population of 375,539, with a growth rate of 0.89% in the past year according to recent United States census data. Lehigh County's largest city, Allentown, had a population of 125,845 in 2020, a 6.6% increase in the last decade, ranking behind only Philadelphia and Pittsburgh. Lehigh County is home to the Lehigh Valley International Airport and Allentown Queen City Municipal Airport. Public bus service is also available to and from the metropolitan cities of New York City and Philadelphia. Major highways that traverse Lehigh County include Interstates 78 and 476, Routes 22, 222, and 309, and numerous smaller state routes. The Lehigh Valley has been part of a warehouse "boom" in recent years, creating a significant increase in the amount of truck traffic along the road network.

There are a total of nine hospitals in Lehigh County. The two largest health-care systems, Lehigh Valley Health Network and St. Luke's Hospital Network, both boast Level One trauma centers with helicopter access. Investigations will often stretch far outside Lehigh County and into our neighboring counties and states. In addition, Lehigh County has over twenty-five nursing home facilities within its boundaries.

The Lehigh County Coroner's Office is located in Allentown, South Whitehall Township, Pennsylvania. The complex building is shared by Cetronia Ambulance Corps, Lehigh County Special Operations, Lehigh County Emergency Management, and the Lehigh County District Attorney's Office Firearms & Tool Mark Laboratory. The Coroner's Office is comprised of approximately 6,000 square feet of office space and approximately 7,000 square feet housing the morgue operations. On the following page are photos of the main autopsy suite and decomposition autopsy room.



Main Autopsy Area

Consisting of two individual Autopsy Suites



Individual Autopsy Suite



Decomposition Autopsy Suite

Self-contained within the Morgue Area



Decomposition Autopsy Suite

Through the viewport of the Law Enforcement Observation Room

Statute on Coroner's Investigation

Section 1218-B. Coroner's investigation

(a) Duty.--The coroner having a view of the body shall investigate the facts and circumstances concerning a death that appears to have happened within the county, notwithstanding where the cause of the death may have occurred, for the purpose of determining whether or not an autopsy or inquest should be conducted in the following cases:

- (1) A sudden death not caused by a readily recognizable disease or, if the cause of death cannot be properly certified, by a physician on the basis of prior recent medical attendance.
- (2) A death occurring under suspicious circumstances, including if alcohol, a drug or another toxic substance may have had a direct bearing on the outcome.
- (3) A death occurring as a result of violence or trauma, whether apparently homicidal, suicidal or accidental, including, but not limited to, a death due to mechanical, thermal, chemical, electrical or radiational injury, drowning, cave-in or subsidence.
- (4) A death in which trauma, chemical injury, drug overdose or reaction to a drug or medication or medical treatment was a primary or secondary, direct or indirect, contributory, aggravating or precipitating cause of death.
- (5) A perioperative death in which the death is not readily explainable on the basis of prior disease.
- (6) A death in which the body is unidentified or unclaimed.
- (7) A death known or suspected to be due to contagious disease and constituting a public hazard.
- (8) A death occurring in prison or a penal institution or while in the custody of the police.
- (9) A death of an individual whose body is to be cremated, buried at sea or otherwise disposed of so as to be unavailable for examination thereafter.
- (10) A sudden and unexplained infant death.
- (11) A stillbirth.

(b) Purpose.--The purpose of an investigation under subsection (a) shall be to determine:

- (1) The cause and manner of the death.
- (2) Whether or not there is sufficient reason for the coroner to believe that the death may have resulted from a criminal act or criminal neglect of a person other than the deceased.

(c) Requirements.--As part of an investigation under subsection (a), the coroner shall determine the identity of the deceased and notify the next of kin of the deceased.

(1218-B added Oct. 24, 2018, P.L.931, No.154)

Roles of the Coroner's Office

The staff of the coroner's office hold a wide variety of roles on a daily basis to facilitate the mission of the office. This includes responding to and investigating deaths throughout the geographic boundaries of Lehigh County, regardless of location, time and weather. Investigators perform postmortem examinations, attend autopsies, obtain toxicology samples, consult with medical personnel, laboratory personnel, and review medical records. Investigators routinely interact with law enforcement agencies on the local, state and federal levels as well as district attorney's offices throughout the Commonwealth.

Staff members are well versed in communicating with families and assisting them accordingly in their time of need. Quite often, an investigator is the first person to bring the worst of news. We guide family members through the investigatory process and are available for them well after the investigation has concluded. Additional duties include, reviewing investigative and autopsy findings with the legal next of kin, and coordinating release of the deceased and any property to the funeral home of the families' choosing.

The coroner's office staff provides testimony both in court and in depositions. This can be for both civil and criminal matters.

The coroner's office is responsible for reporting deaths to numerous outside agencies. Pennsylvania Department of Labor and Industry, Occupational Safety and Health Administration, U.S. Consumer Products Safety Commission, Pennsylvania Department of Transportation, and many other government and regulatory agencies.



The coroner's office cooperates routinely and is actively involved in the local and state Child Death Reporting Systems. These agencies are comprised of members of several disciplines within the local health care systems, as well as local health bureau members, to review all deaths under the age of twenty-one. We participate in various programs and needs ranging from suicide prevention to pandemic preparedness. Additionally, the staff is routinely active in other entities, whether it is for education, guidelines or resources to assist with current trends in investigation procedures.

All of our investigators attend annual training to obtain and maintain the continuing education requirements, set forth by the Office of the Attorney General and the Pennsylvania Coroner's Education Board. Many on our staff have passed the rigorous training to become registered with the American Board of Medicolegal Death Investigators, which requirements include extensive field experience and training. Several on our staff have received additional specialized training in diagnostic imaging through the use of digital x-rays and dental x-rays.



**Portable
X-Ray
Machine**



Portable Dental X-Ray Device

The Lehigh County Coroner's Office is prepared, trained, highly educated, and motivated to meet the needs in this often-demanding field. Our desire is to bring the finest service to not only the families we serve, but to the numerous other outside agencies we work hand in hand with on a daily basis. These agencies include local and state police departments, the Federal Bureau of Investigation, Homeland Security, and the National Transportation Safety Board.



It should be noted that the Lehigh County Coroner's Office annual report does not include all deaths occurring in Lehigh County, but only the cases investigated by the Lehigh County Coroner's Office. For a total description of deaths occurring in Lehigh County please consult:

Pennsylvania Department of Health
Bureau of Vital Records
105 Nesbitt Road
New Castle, PA 16105
(724)-656-3100

Coroner's Office Staff

The staff of the Coroner's Office comes from a diverse background with considerable training and experiences that immeasurably benefit our investigations. Backgrounds include emergency medical services, law enforcement, fire / rescue services, fire investigation, toxicology, military, and funeral service. In addition, several staff members have received degrees in forensic sciences and related fields.

Administration

Daniel A. Buglio, D-ABMDI
Coroner

Richard B. Pender, D-ABMDI
Chief Deputy Coroner

Cassandra L. Schiffner, D-ABMDI
Assistant Chief Deputy Coroner

Anthony M. Chirumbolo
*First Deputy Coroner /
Operations Manager*

Kelly Dickinson
Executive Secretary

Morgue Staff

Maryanne Lutz, M.A.
Morgue Technician

Heather Marth, RT(R)
Radiology Technician

Jill Gower, RT(R)
Radiology Technician

Deputy Coroners (Full Time)

Troy Adams
Investigator

Rebecca Douglas
Investigator

Craig A. Hanzl, D-ABMDI
Senior Investigator

Dywane K. Harris, D-ABMDI
Investigator

Jennifer A. Huaman
Investigator / Morgue Technician

Dylan R. Lehman
Investigator

Jason A. Nicholas, D-ABMDI
Senior Investigator

Gabrielle R. Riley, D-ABMDI
Senior Investigator

Rachel E. Tallarico-Kresge, D-ABMDI
Senior Investigator

Kelly C. Walbert
Investigator

Miles Wildey
Investigator

Deputy Coroners (Part Time)

Megan Williams
Secretary

Edward Zucal, D-ABMDI
Investigator

Outside Office Consultants

Dr. Edward Mazuchowski, MD, PhD
Chief, Forensic Pathology Associates

Dr. Michael W. Johnson, MD, PhD
Forensic Pathology Associates

Dr. Crystal Magno, MD
Forensic Pathology Associates

Dr. Robert E. Morrison, MD
Ophthalmologist

Dr. David M. Wyke, DMD
Odontologist Investigator

Vehicle Fleet

The Coroner's Office employs a fleet of vehicles that serve in a variety of capacities. Our vehicles are stocked with gear and equipment that is used on a daily basis by our investigative staff in the course of conducting a proper death investigation. Stocked gear and equipment includes but is not limited to personal protective attire such as Tyvek suits, N95 face masks, air filtration respirators, eye-protecting glasses, and shoe covers; a variety of remains removal pouches for varying scenes and needs; needles, syringes, and Vacutainers for toxicology specimen collection; digital probe thermometer for liver temperature gauging; gun shot residue testing kits; prescription drug deactivation kits; and evidence collection bags.

Our sport utility vehicle compliment includes Coroner Buglio's official use vehicle, a new **2023**

Ford Police Interceptor Utility; the on-call supervisor's vehicle, a **2022 Ford Police Interceptor Utility**; and three investigator use vehicles, a **2020 Ford Explorer** and two **2015 Ford Explorers**. The SUV compliment is pictured above, in order as described from right to left.

Our SUV fleet responds to death investigation scenes throughout the county. Scenes can range from private residences, businesses, hospitals, nursing homes, public recreational areas, and anywhere in between. Because of the sensitive nature of our investigations, our SUV fleet features subdued "ghost" graphics, so as not to draw unnecessary attention to our investigations. The staff of this office pride themselves on maintaining a clean and orderly vehicle fleet.



Our special response vehicle compliment includes a **2010 Chevy Utility Truck** (pictured in the rear) and a **2006 Chevy 2500 Pickup Truck** (pictured in front). Both vehicles are specifically equipped to handle larger than normal scale scene investigations, and outdoor scene investigations. These

vehicles will respond to death investigations that are in considerable public view, that are anticipated to have prolonged scene investigation periods, and where there may be more than one death to investigate relative to an incident.

New Technology and Innovation

In July of 2023, the Lehigh County Coroner's Office was awarded a grant for \$45,000 from Pennsylvania Commission on Crime and Delinquency (PCCD) staff and the Criminal Justice Advisory Committee, for the purchase of a Randox Toxicology Evidence MultiSTAT analyzer. Another state-of-the-art tool for the Lehigh County Coroner's Office, the Randox Toxicology Evidence MultiSTAT is an automated analyzer that enables on-site simultaneous detection of up to 29 classical, prescription and synthetic drugs from a single sample. Designed to work across a variety of matrices, this patented multi-analyte testing platform provides a complete toxicology profile within thirty-one minutes; allowing the office to provide quicker results to law enforcement, medical providers, and most of all, families.



All coroner and medical examiner offices must often make burdensome decisions on apportioning resources for timely and thorough medicolegal death investigations. Due to the current opioid crisis and a surging stream of drug related cases, many coroner and medical examiner offices, including the Lehigh County Coroner's Office, are stretched to the limits of their resources, financially and personnel wise, specifically due to nationwide shortage of forensic pathologists. With these drug related cases, a comprehensive toxicology screen plays a key role in determining the cause and manner of death. In addition to challenges of managing resources, long turnaround times for comprehensive toxicology testing delays the death certification process and the investigations of associated outside agencies.

From 2018 to 2023, the Lehigh County Coroner's Office drug related death investigations have increased 21.3%. The Lehigh County Coroner's Office researched solutions to help address the problems mentioned above, and an informed decision was made to pursue the purchase of a Randox Evidence MultiSTAT analyzer.

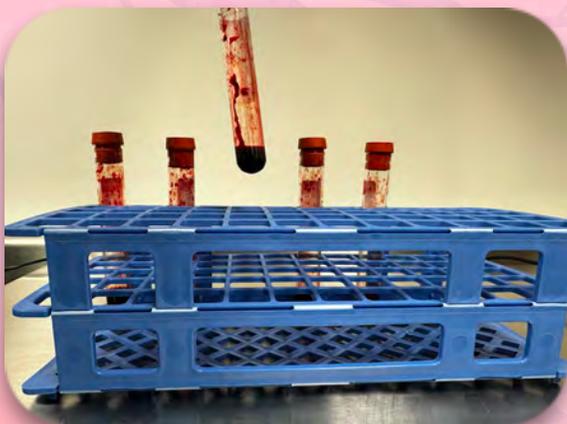
**Randox
Evidence
MultiSTAT
Analyzer**



Since obtaining the Randox Evidence MultiSTAT analyzer, the Lehigh County Coroner's Office expects to see the continuation of advancements brought forth by the analyzer. The backlog of pending investigations has been significantly reduced in cases where drug abuse is involved. Previously, the toxicology result wait time when sent to an independent forensic lab was approximately three weeks, and approximately 10 weeks for cases where an autopsy was completed. The Randox Evidence MultiSTAT analyzer reduced wait times to under thirty-five minutes for qualitative and quantitative results. This allows the coroner's office to provide timely information to families for much needed closure, assisting them in the grieving process. In addition, death certificates are issued to the families in short order, allowing them to facilitate final disposition and estate matters in more expeditious fashion. The toxicology results provided by the Randox Evidence MultiSTAT analyzer enables the coroner's office to provide timely, valuable information to our partners in law enforcement and to the many county and public advocacy groups tasked with forming strategies and solutions to combat the current opioid crisis. Those outside agencies include the Allentown Health Bureau, the Lehigh County Child Death Review Board, and the Allentown Heroin Opioid Task Force.

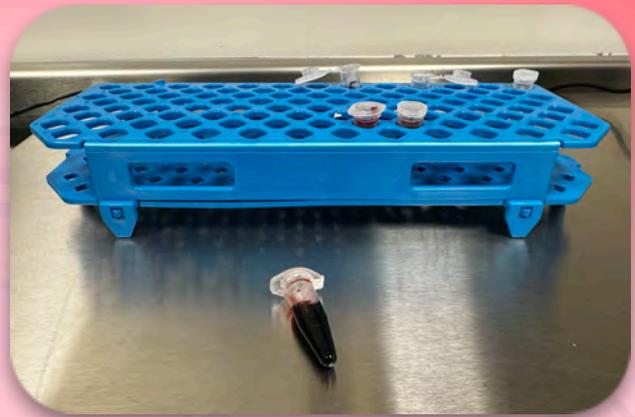
In addition, the Randox Toxicology Evidence MultiSTAT analyzer provides a significant reduction in costs. With the Randox Evidence MultiSTAT analyzer, each multiscreen test providing qualitative and quantitative results has a total cost of \$78.00. That equates to an approximate 85% savings per toxicology screen. With an anticipated rising number of drug death related investigations, the cost savings with the Randox Evidence MultiSTAT analyzer will be in the thousands of dollars, without compromising the accuracy of the toxicology results.

From the inception of its use in September 2023 to December 2023, The Lehigh County Coroner's Office has saved nearly \$6,000.00 in toxicology costs alone. The rapid turnaround time that allows for faster completion of death certificates, which in turn allows for more efficient final disposition, has been met with glowing reviews from the funeral director community. More importantly, the families of the deceased are provided with the answers they deserve in a relevant and timely manner.



Blood samples drawn from the decedent must first be diluted

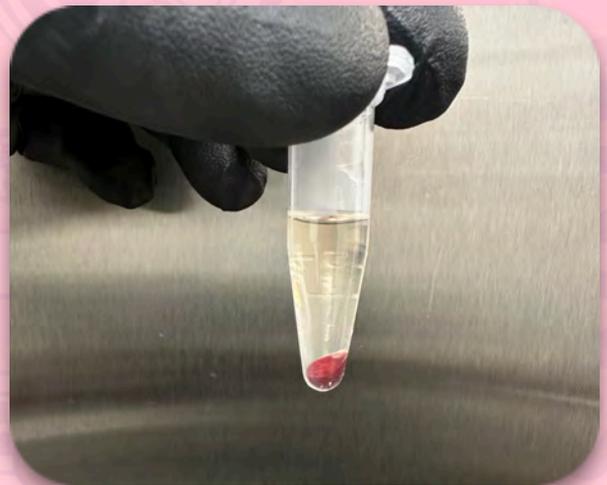




Diluted samples are then centrifuged to separate platelets from the plasma



Samples of plasma are then placed into a cartridge featuring a patented biochip



Reading the biochip, the MultiSTAT analyzer provides qualitative and semi-quantitative results of 29 drugs of abuse in approximately 31 minutes

2023 INVESTIGATION DATA

The information provided in this report was compiled from the deaths that were reported to the Lehigh County Coroner's Office during the 2023 calendar year, with reference to years past.

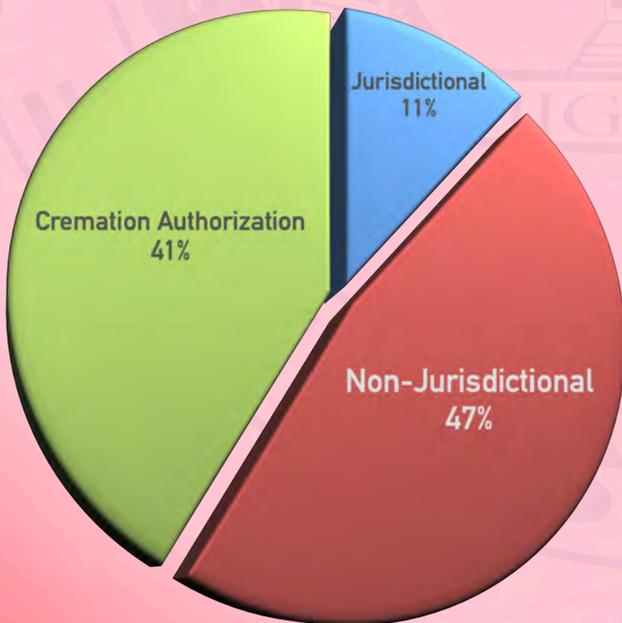
Total Investigations



In 2023, our office conducted a total of 7,742 investigations. Jurisdictional cases, which required a deputy coroner response and scene investigation accounted for 887 investigations.

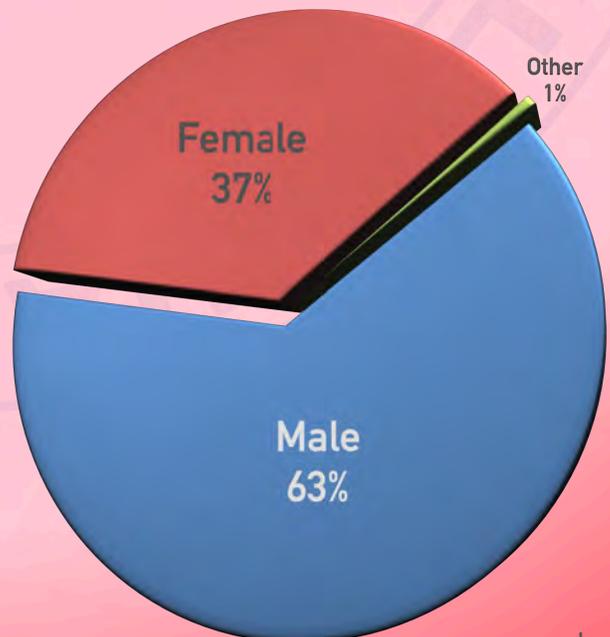
The remaining 6,855 investigations consist of Non-Jurisdictional cases, which are natural deaths that occurred under medical care but met the criteria of a reportable death (3,645) and authorizations for decedents to be cremated (3,210).

2023 Investigations by Type



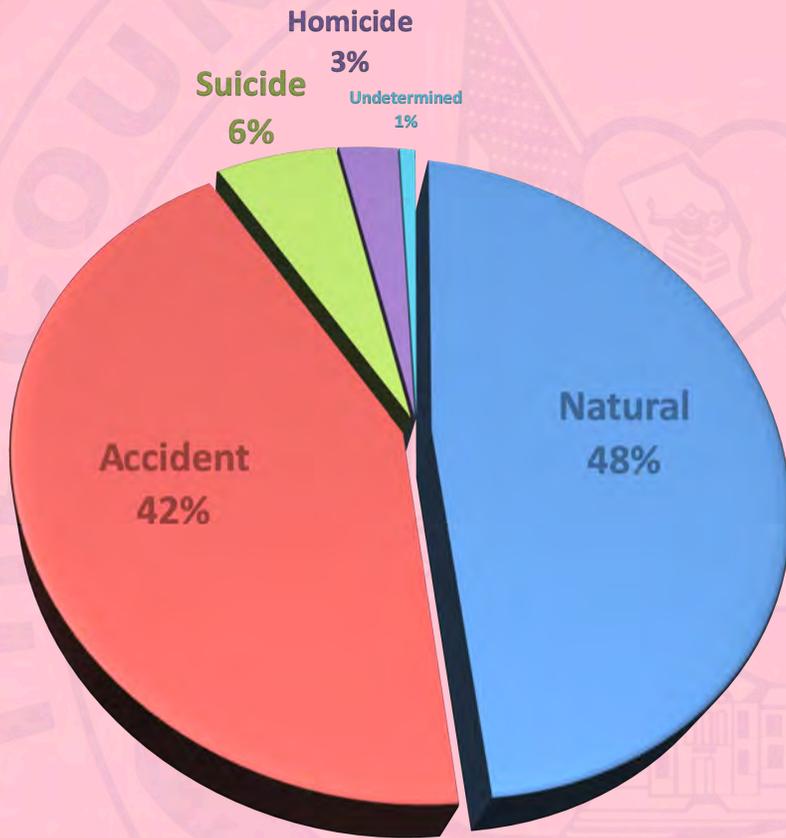
In 2023, our Jurisdictional caseload included death investigations of 558 males, 324 females, and five non-human remains. Four of the five non-human remains were determined to be animal bones.

Jurisdictional Investigations by Gender



Manners of Death

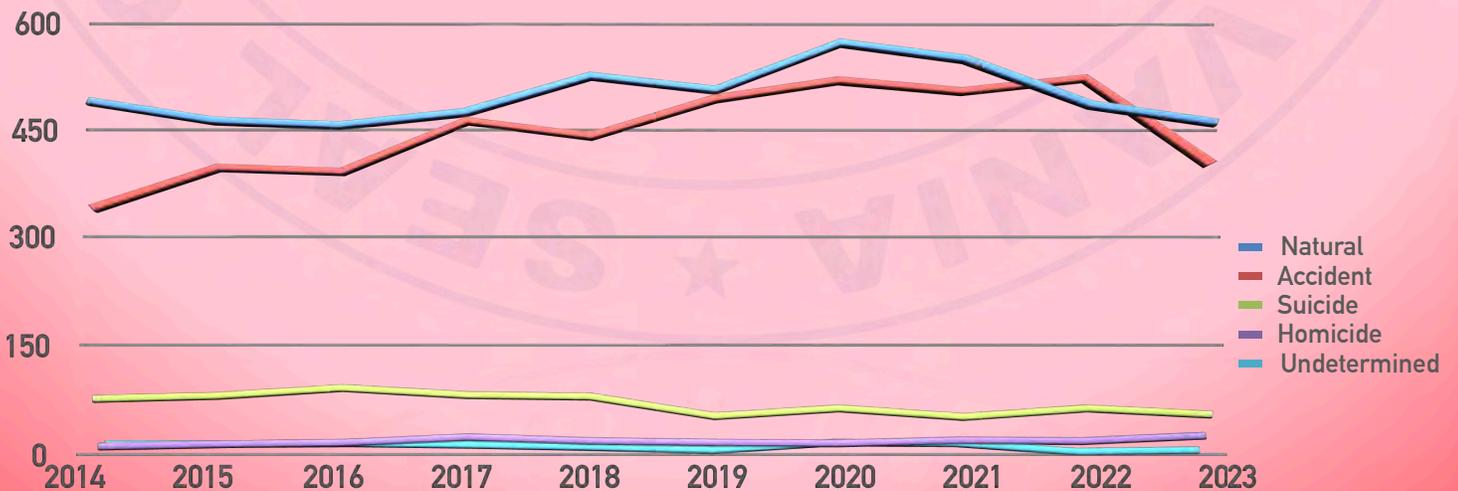
The manner of death is the determination of how the injury or disease leads to death. Manner of Death is broken up into five medicolegal classifications. The five manners of death are: Natural, Accident, Suicide, Homicide, and Undetermined. "Pending Investigation" are those cases awaiting results of further forensic testing, such as autopsy or toxicology results, before they can be ruled on. The chart below represents the manners of death in percentage, as ruled upon by the coroner's office in 2023. The statistics below exclude one case pending further investigation at the time of this report.



In 2023, the Lehigh County Coroner's Office & Forensics Center investigated:

- 422 Natural Deaths
- 373 Accidental Deaths
- 53 Suicides
- 26 Homicides
- 7 Deaths where the Manner Could not be Determined
- 5 Other remains determined to be non-human

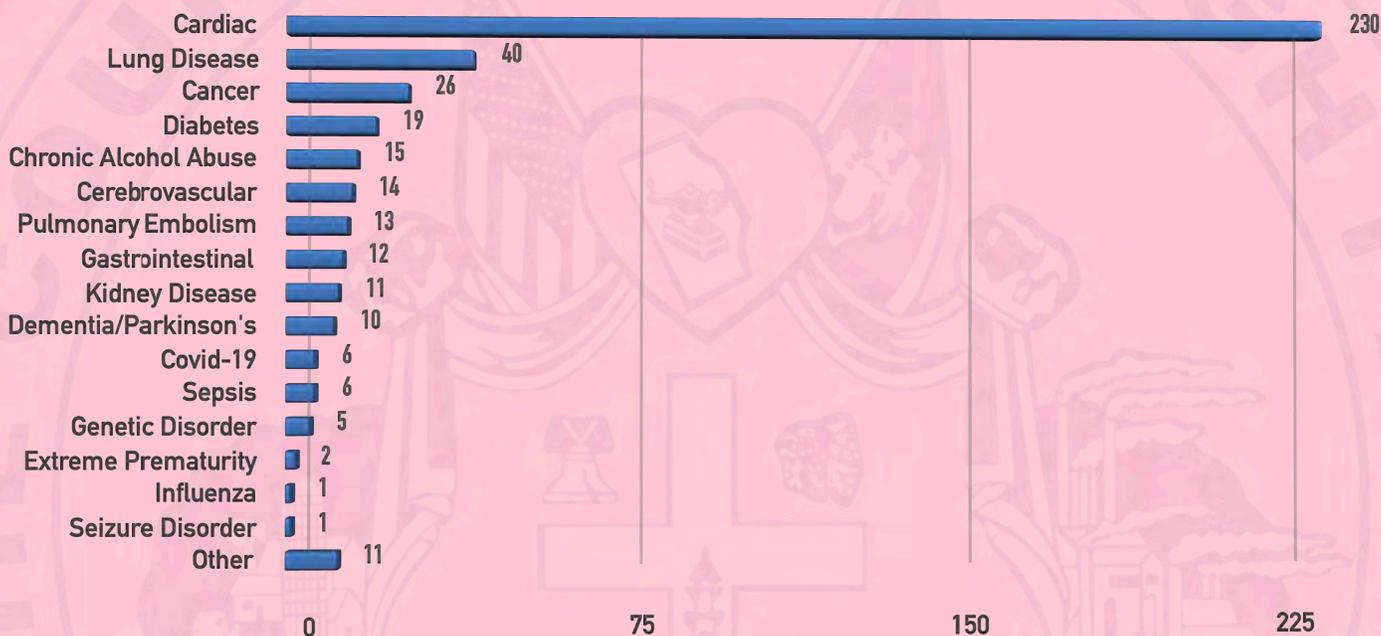
Manners of Death - 10 Year Analysis



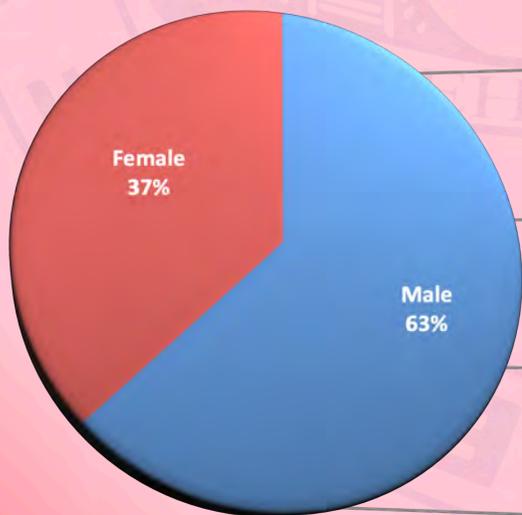
Natural Death

By definition, a natural death is death occurring in the course of nature and from natural causes (such as age or disease), as opposed to an accident or act of violence. Often, a natural death can occur suddenly, without a recognized disease process, or while the deceased is not under medical care. Of the **422 natural death** cases investigated in 2023, 39 required an autopsy to determine the cause and manner of death. The chart below represents the natural cases investigated in 2023, and the associated disease process. "Other" is comprised of natural deaths involving multiple underlying disease processes.

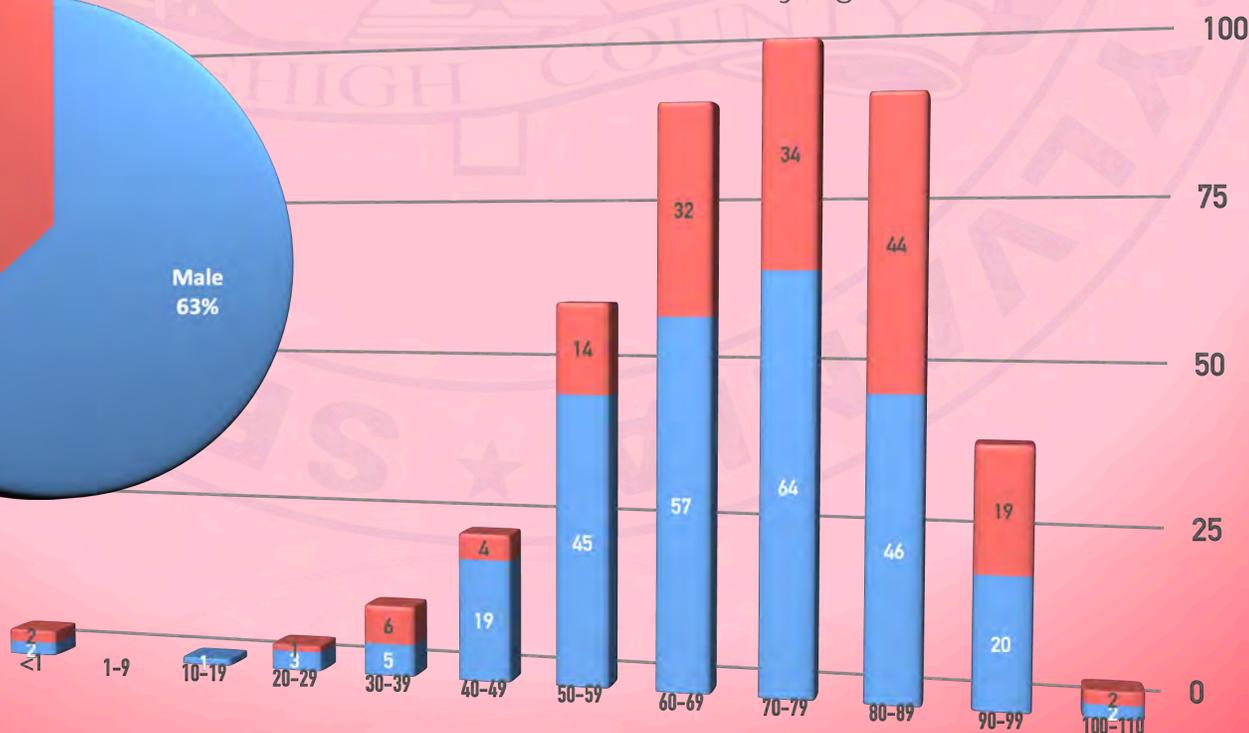
Natural Death Investigations



Natural Deaths by Gender

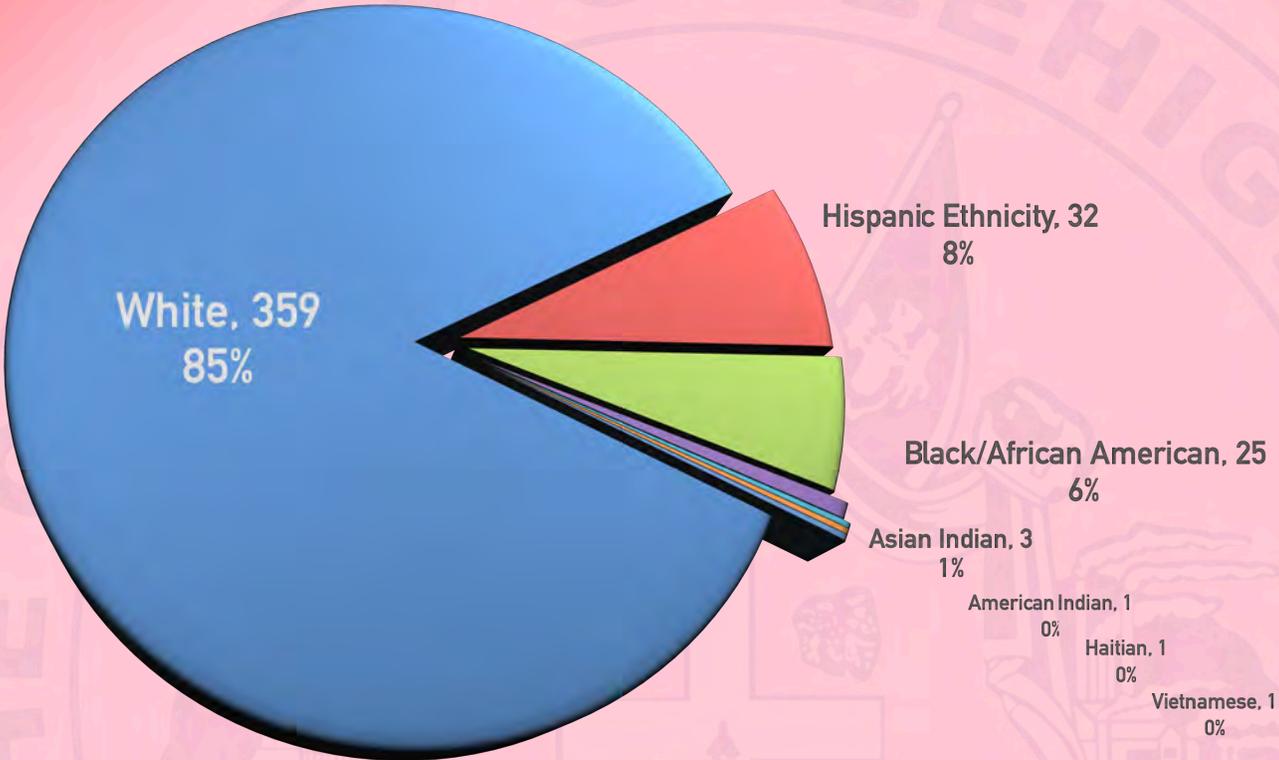


Natural Deaths by Age and Gender



Natural Death

Natural Deaths by Race



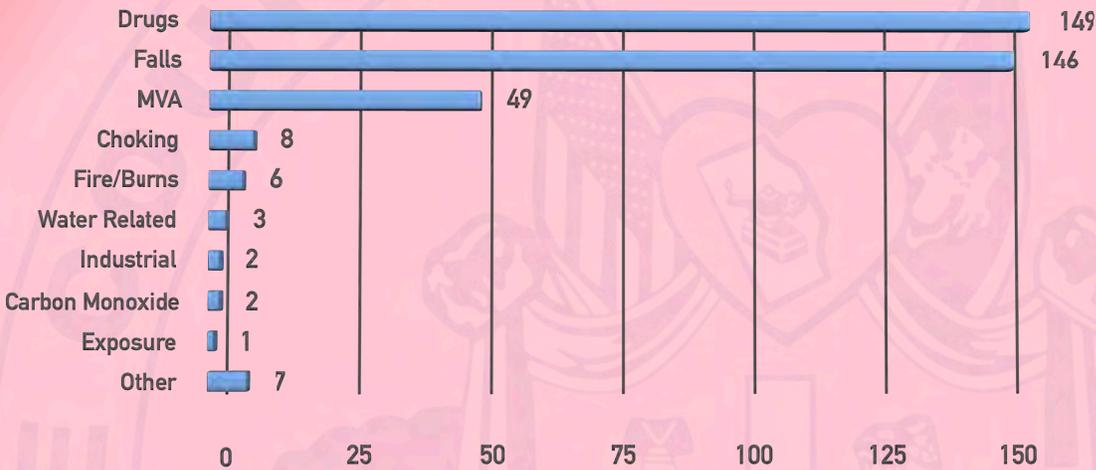
Natural Deaths - 10 Year Analysis



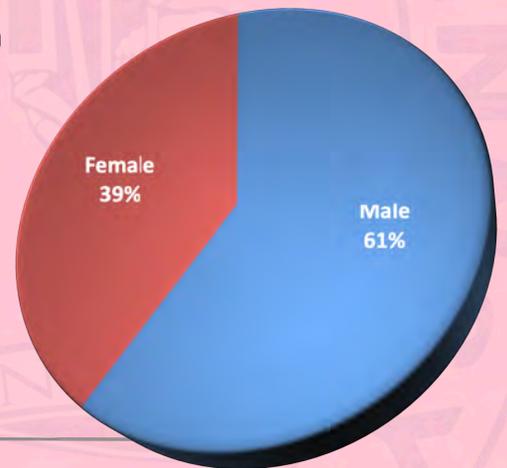
Accidental Death

Accidental deaths were the second highest category of investigations in 2023. The chart on the left represents the **373 accidental deaths** with modality, investigated by the Lehigh County Coroner's Office which were accident in manner. The chart on the right represents the percentage of deaths between male and females.

Accidental Deaths by Modality



Accidental Deaths by Gender

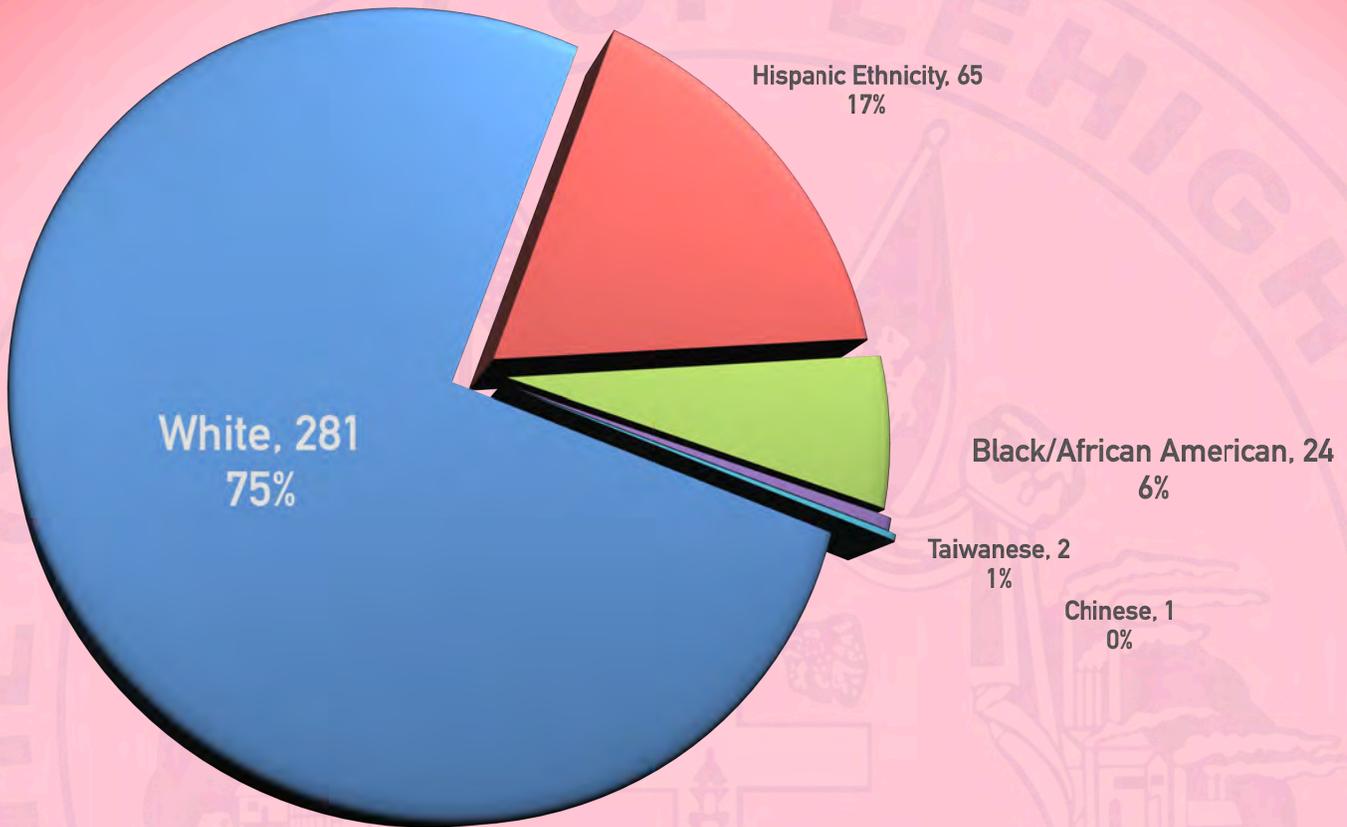


Accidental Deaths by Age and Gender



Accidental Death

Accidental Deaths by Race



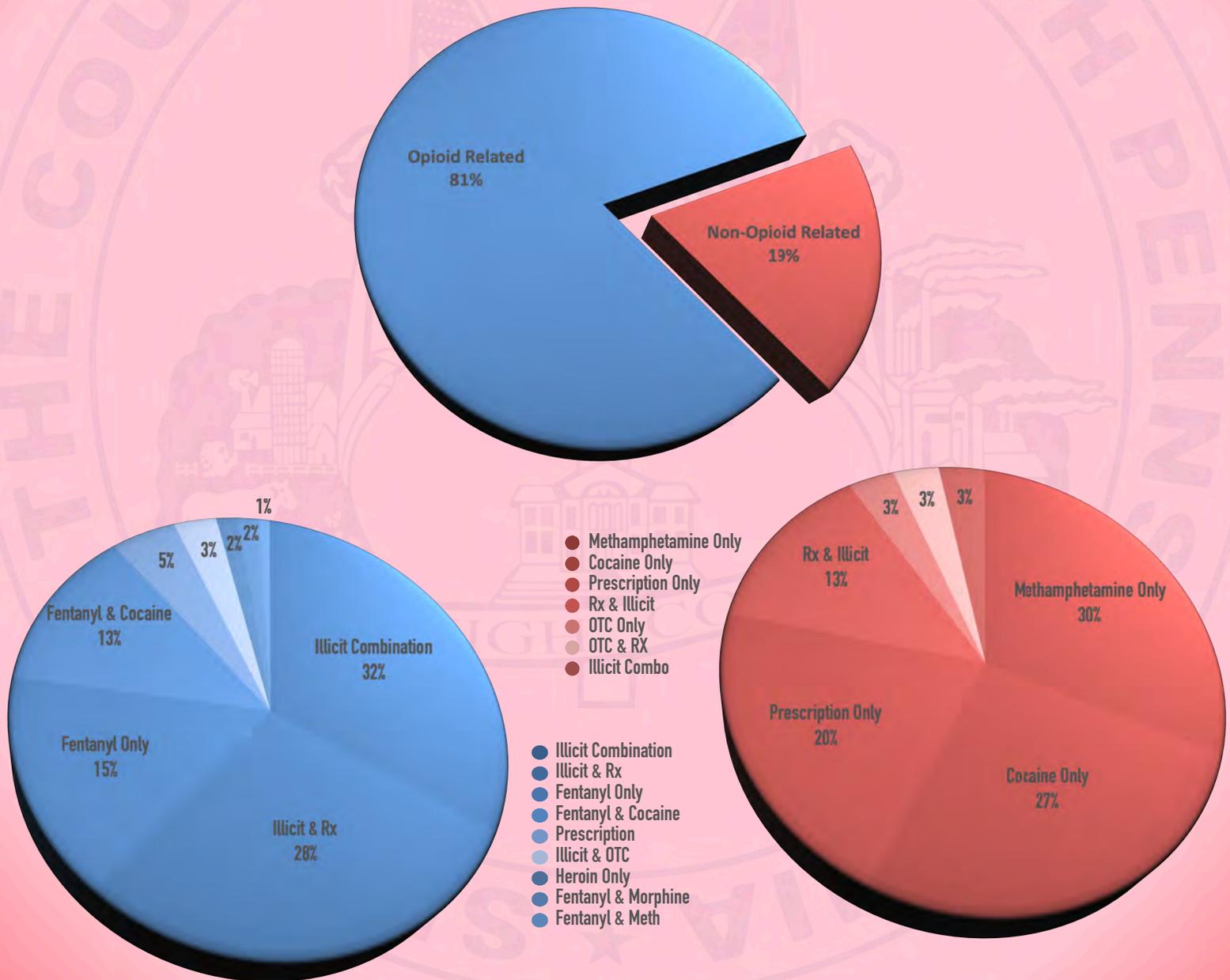
Accidental Deaths - 10 Year Analysis



Drug Death

Next to fall related deaths, drug related deaths are one of the most common investigations handled by the Lehigh County Coroner's Office. National statistics continue to rise, and that is no different here in Lehigh County. The Lehigh County Coroner's Office partners with the Allentown Health Bureau Opioid Task Force, Lehigh County Drug and Alcohol, Lehigh County District Attorney's Office, and multiple law enforcement agencies in a continued effort to make a positive impact on the opioid crisis. A chart on the following page represents the number of drug deaths investigated by the Lehigh County Coroner's Office over the last ten years. The number reflects drug involvement (illicit, prescription, or over-the counter) in two manners of death; Accident (149) and Suicide (8).

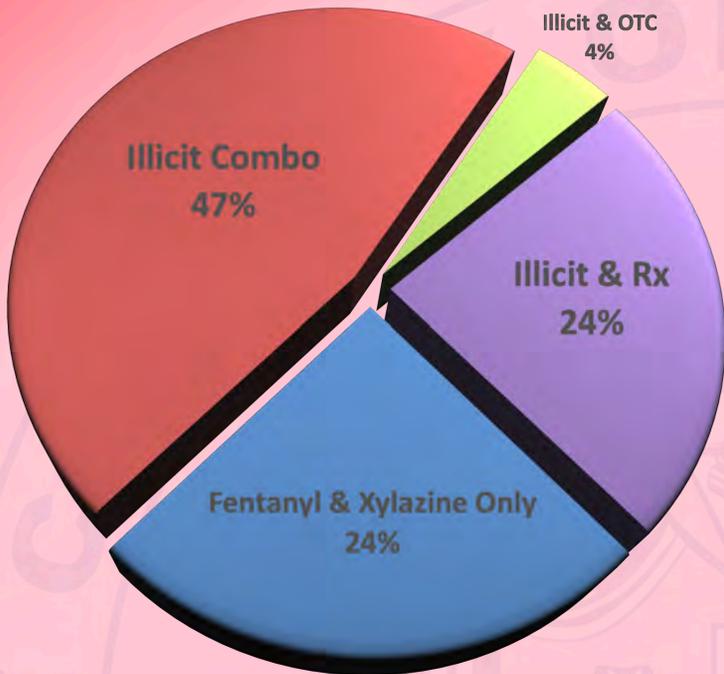
Drug Death Investigations by Opioid Involvement



As illustrated in the chart to the left, deaths related to opioids such as heroin and the synthetic opioid fentanyl, have reached crisis levels. 81% of all drug deaths investigated by the Lehigh County Coroner's Office in 2023 had an opioid present, either exclusively or in combination with cocaine, methamphetamine, prescription medications, or over-the-counter medications.

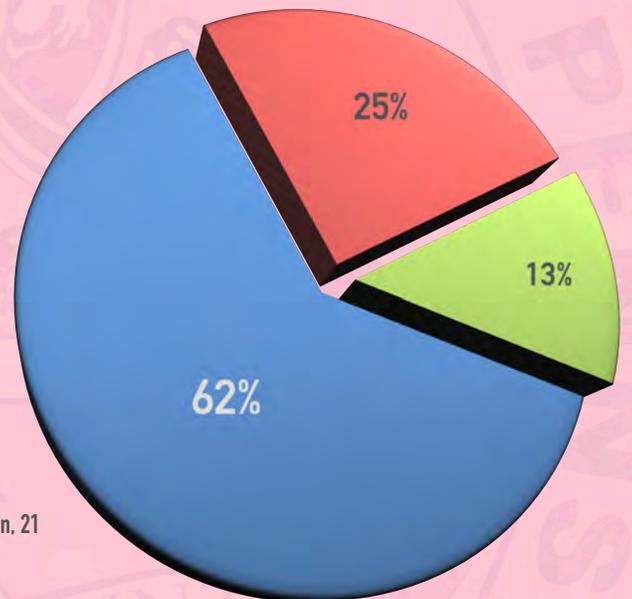
Drug Death

Xylazine Deaths



Of the 157 Drug Deaths in 2023, 45 involved Xylazine. Xylazine is a non-opioid sedative/tranquilizer, approved for use in veterinary practice on large, non-human mammals. Xylazine has been increasingly found in combination with other illicit substances in the illicit drug market. Most commonly, Xylazine is found in combination with Fentanyl.

Drug Deaths by Race



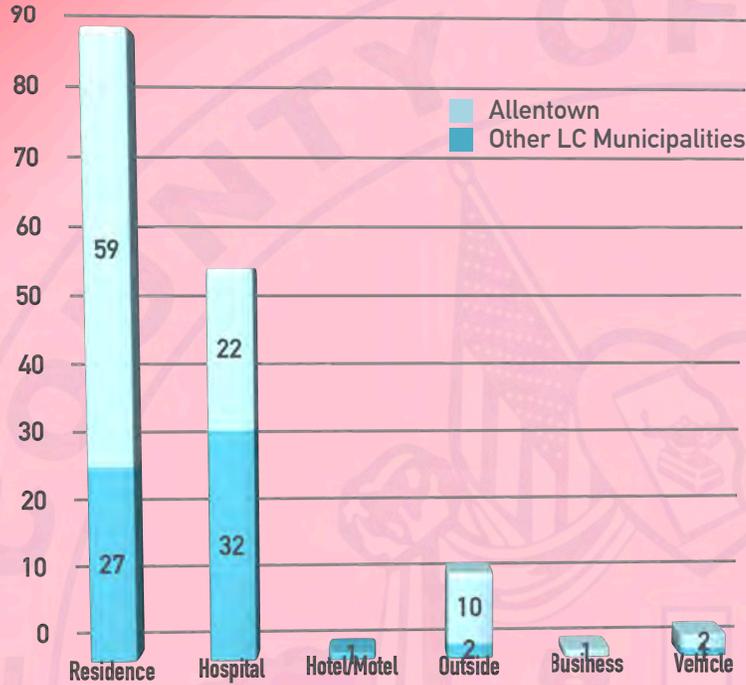
- White, 97
- Hispanic Ethnicity, 39
- Black/African American, 21

Drug Deaths - 10 Year Analysis

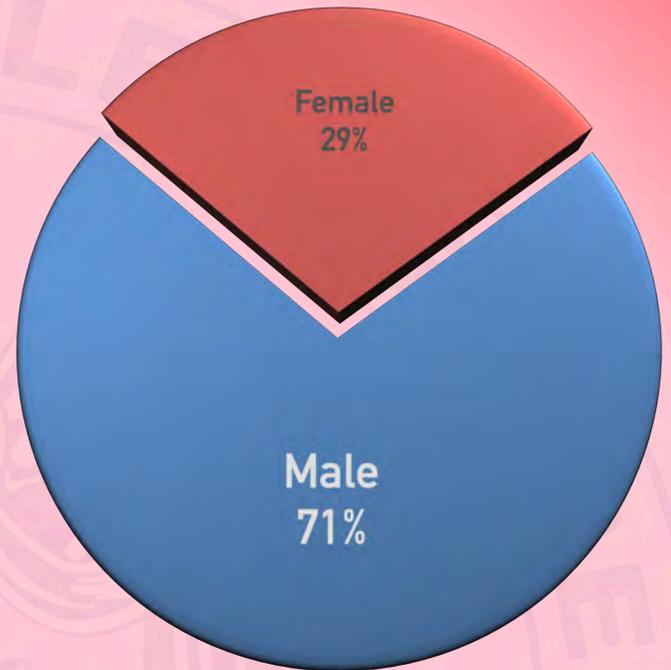


Drug Death

Drug Deaths by Place of Death



Drug Deaths by Gender

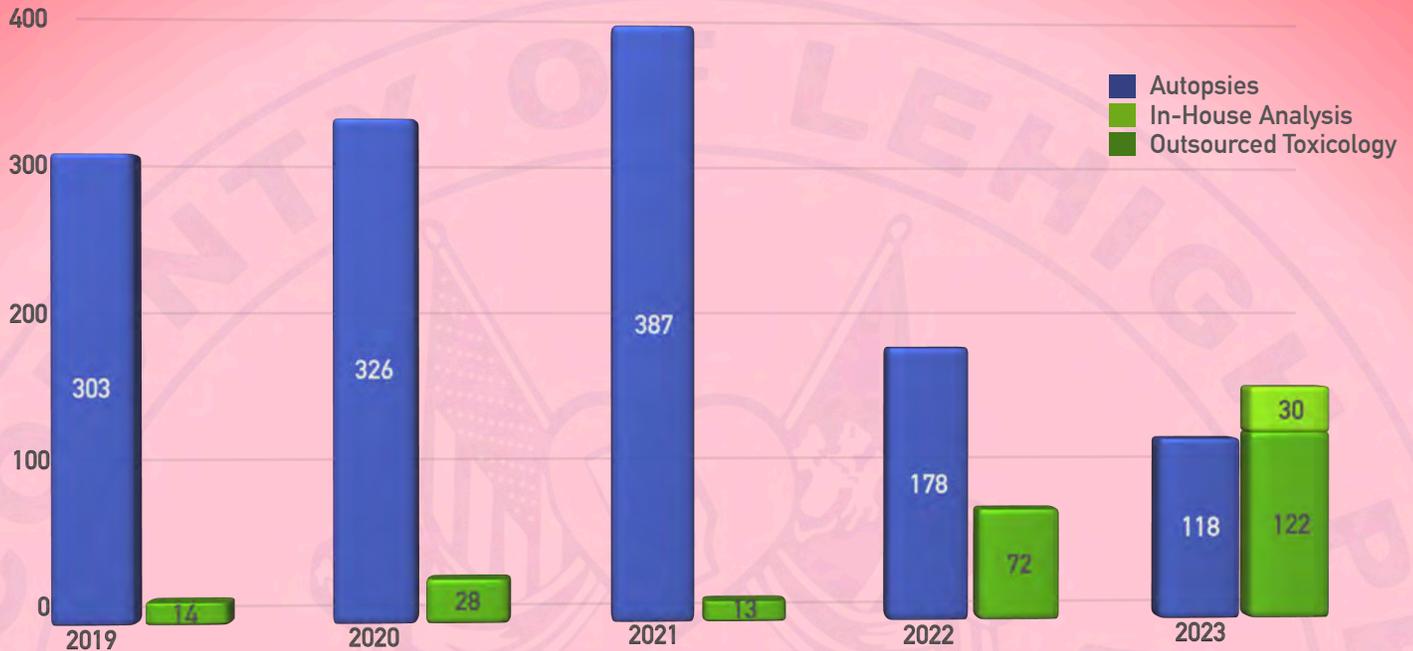


The above chart on the left breaks down Lehigh County drug deaths by the place of death, and whether that place of death was within the City of Allentown or another Lehigh County municipality. The above chart on the right breaks down drug deaths by gender. The chart below breaks down drug deaths by age, and gender within the age brackets.

Drug Deaths by Age and Gender



Autopsy v. Toxicology



Prior to Coroner Buglio’s appointment in 2022, full autopsies were conducted on all suspected illicit and/or prescription drug overdose cases. Full autopsies include a full toxicology screening. In June of 2022, Coroner Buglio implemented a policy that allowed for toxicology testing alone to be conducted in place of a full autopsy, for all cases where investigation revealed sufficient evidence of illicit and/or prescription drug abuse. This new policy yielded accurate results that allowed for a Cause of Death to be positively ruled on, at approximately 10% of the cost of an autopsy.

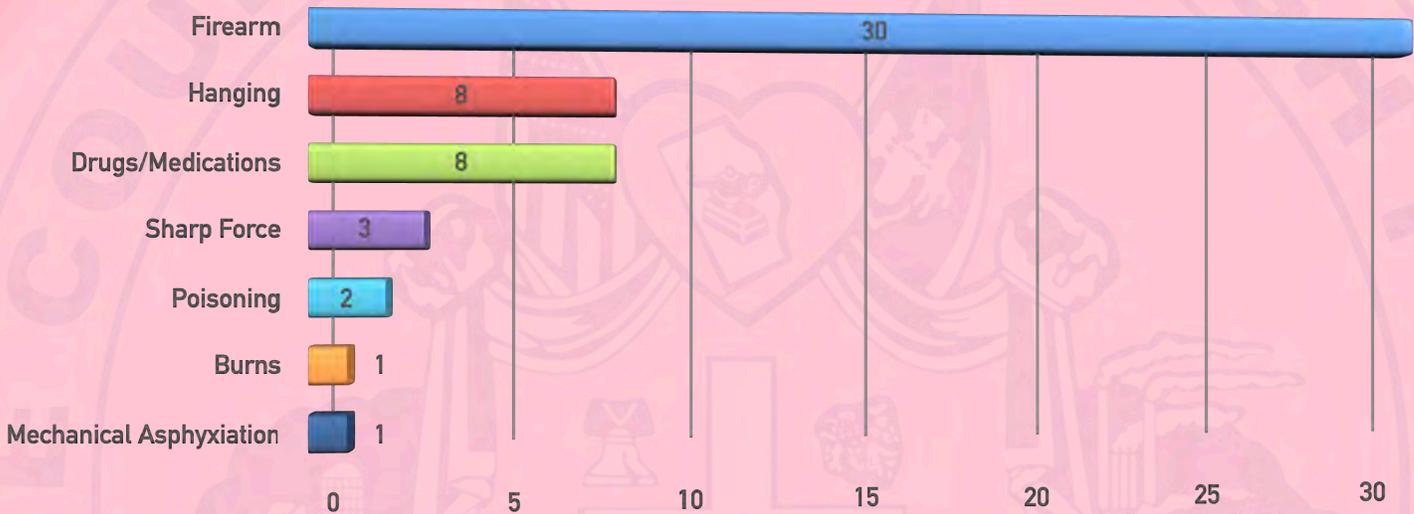
In July of 2023, the Coroner’s Office received and began training on our Radox Evidence MultiSTAT analyzer, detailed in pages 9-11 of this report. In September of 2023, the analyzer was put into practical use, allowing the Coroner’s Office to test blood samples against 29 known illicit and prescription substances of abuse. The analyzer provides semi-quantitative results, which allows for the positive ruling on a Cause of Death where results are found to be in excess of a therapeutic range, or in toxic combination with other recognized substances. In-house analysis is able to be conducted at approximately 15% - 30% of the cost of full toxicology testing, or approximately 1.5% - 3% of the cost of an autopsy. The fluctuation is dependent on the number of blood samples being analyzed at a time.

Of greater purpose than taxpayer savings, in-house analysis is able to be completed in as little as one hour after a decedent arrives at the Lehigh County Coroner’s Office and Forensics Center from a scene. With these real-time results, supervisors of the Coroner’s Office are able to determine if a Cause of Death can positively be ruled on, or if further toxicology testing and/or an autopsy may be required to make a positive ruling. In a vast majority of cases where the analyzer has been utilized, a Cause of Death was able to be positively determined from the results of the analyzer, and families of those decedents were given that closure weeks, if not months, earlier than full toxicology testing would have been able to.

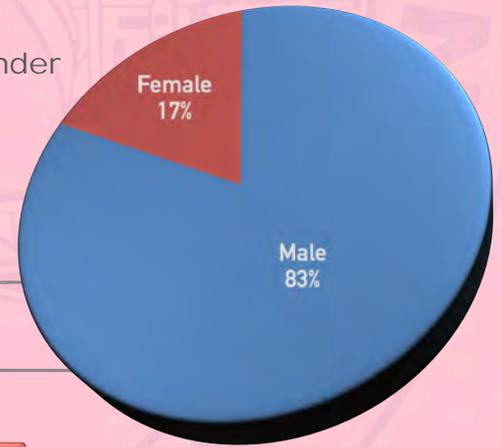
Suicide

Suicide is death caused by injuring oneself with the intent to die. Every suicide is a tragedy and to some degree a mystery. Depression is a key risk factor for suicide; others include psychiatric disorders, substance use, chronic pain and a family history of suicide. The Lehigh County Coroner's Office partners with the Suicide Prevention Coalition of the Allentown Health Bureau; providing valuable insight into the awareness and prevention of suicide. The following charts below provide additional information on the **53 suicide deaths** investigated by the Lehigh County Coroner's Office in 2023.

Suicides by Modality



Suicides by Gender

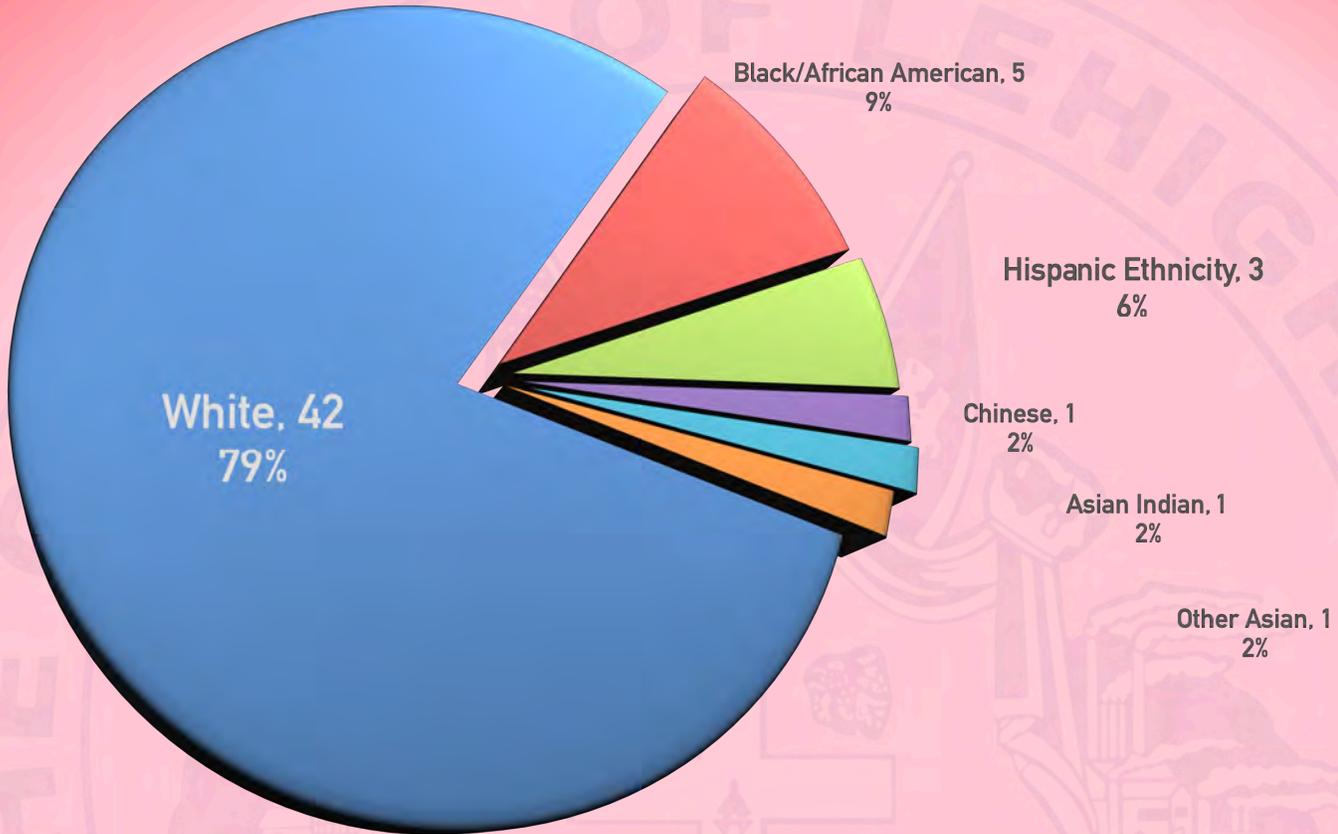


Suicides by Age and Gender



Suicide

Suicide by Race

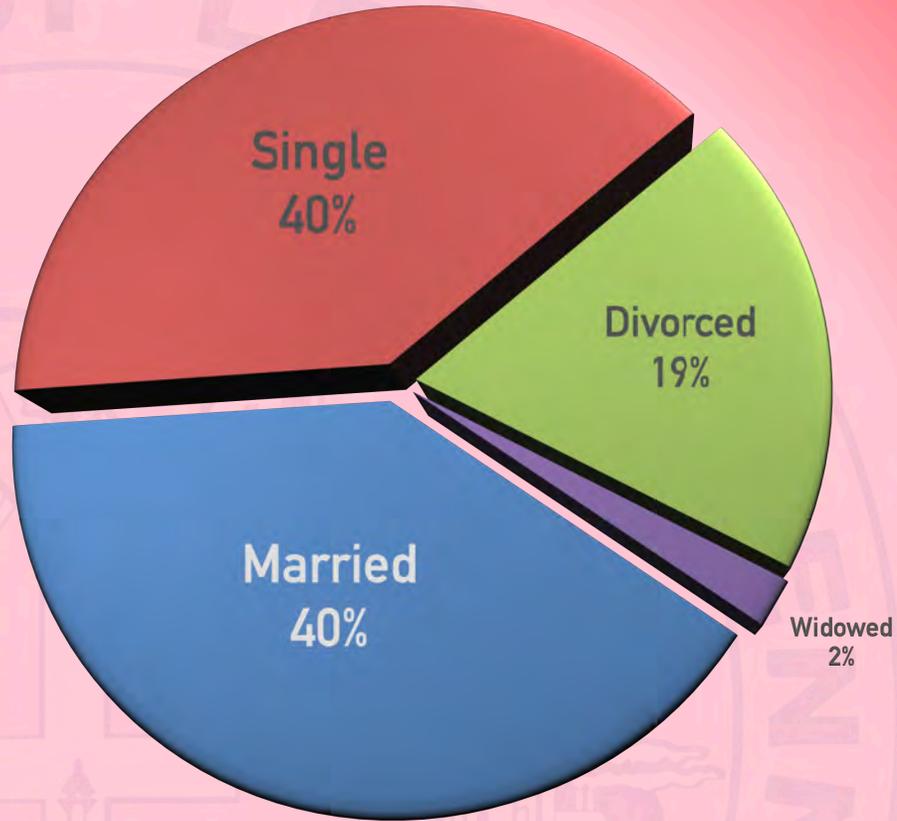


Suicide - 10 Year Analysis



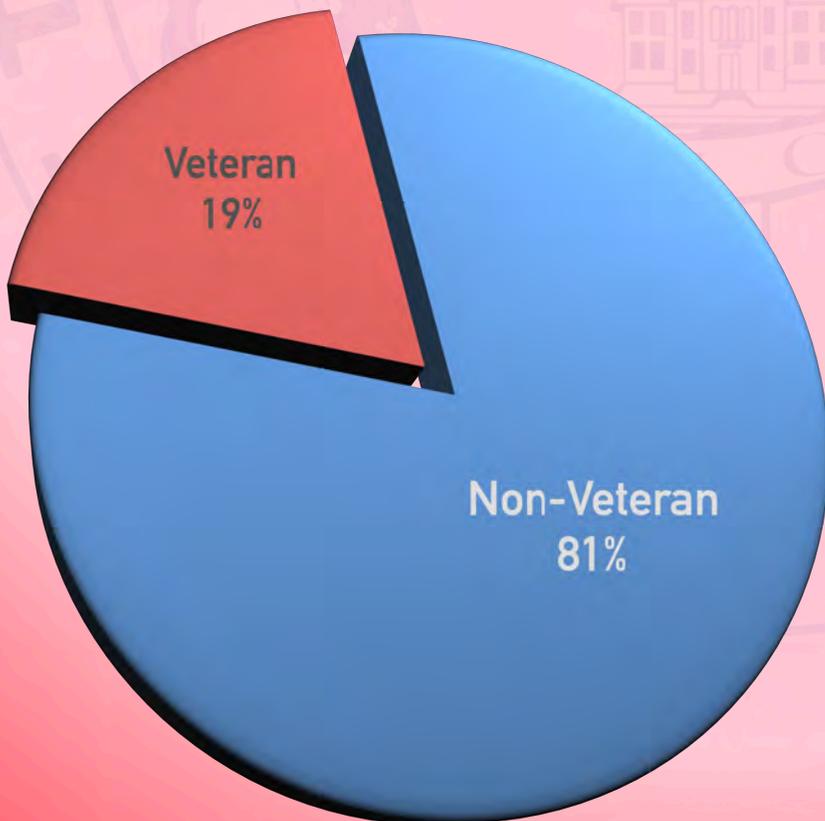
Suicide

Suicides by Marital Status



The chart on the right breaks down Lehigh County suicide deaths by marital status. The Lehigh County Coroner’s Office tracks the listed marital statuses, as well as “Separated”, which is often listed as “Married” by legal standing. In 2023, 21 victims of suicide were married, 21 were single, 10 were divorced, and one was widowed.

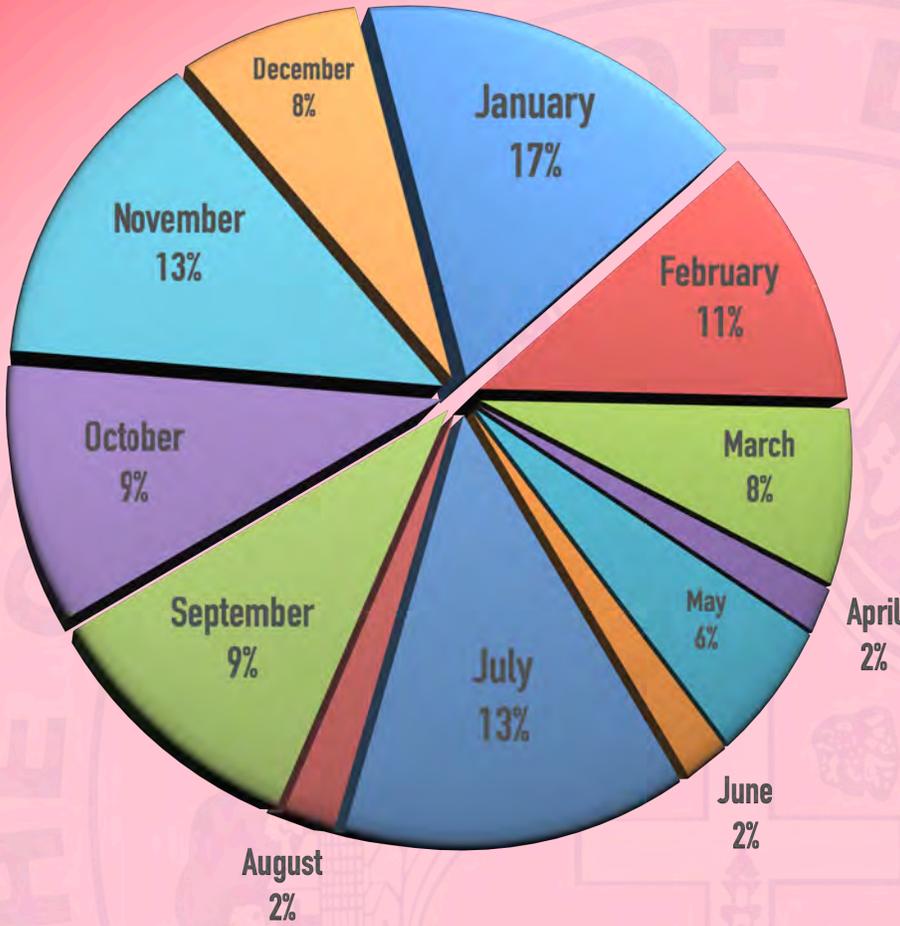
Suicides by Veteran Status



The chart on the left breaks down Lehigh County suicide deaths by veteran status. In 2023, 10 victims of suicide were documented United States Armed Forces Veterans, 43 were not.

Suicide

Suicides by Incident Month



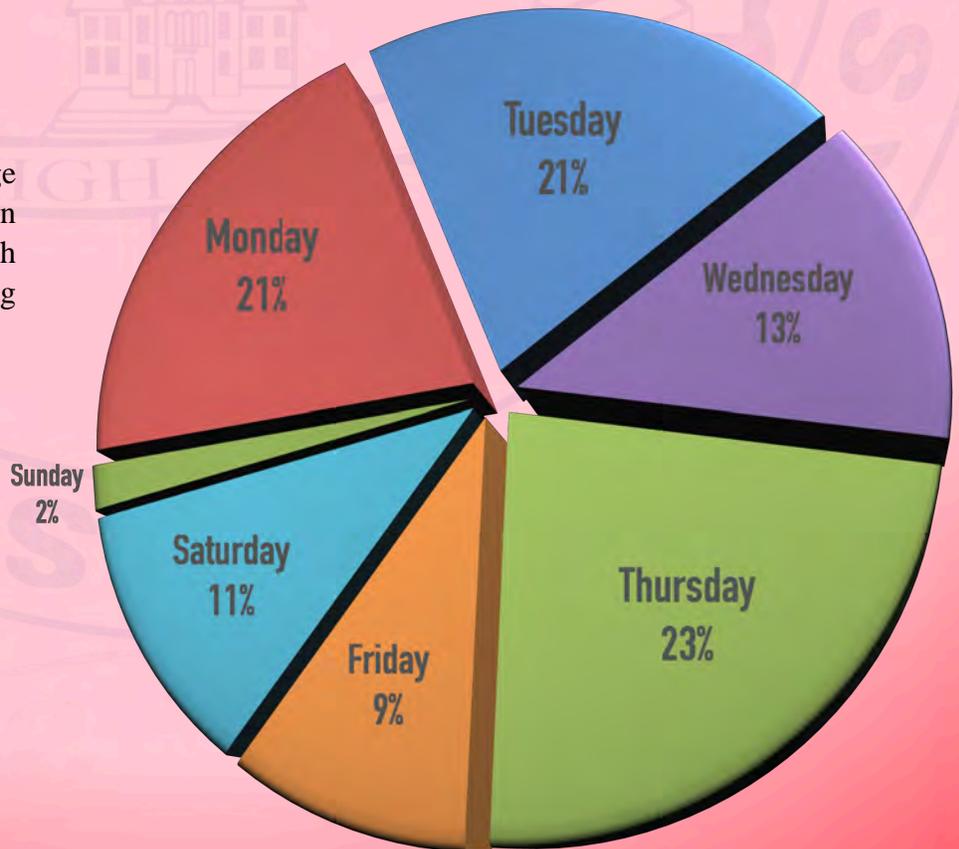
The chart to the left depicts the percentage of suicide deaths by the month in which the injury that resulted in the death did occur. The total suicide-resulting injuries per month are as follows:

- January 9
- February 6
- March 4
- April 1
- May 3
- June 1
- July 7
- August 1
- September 5
- October 5
- November 7
- December 4

Suicides by Incident Day

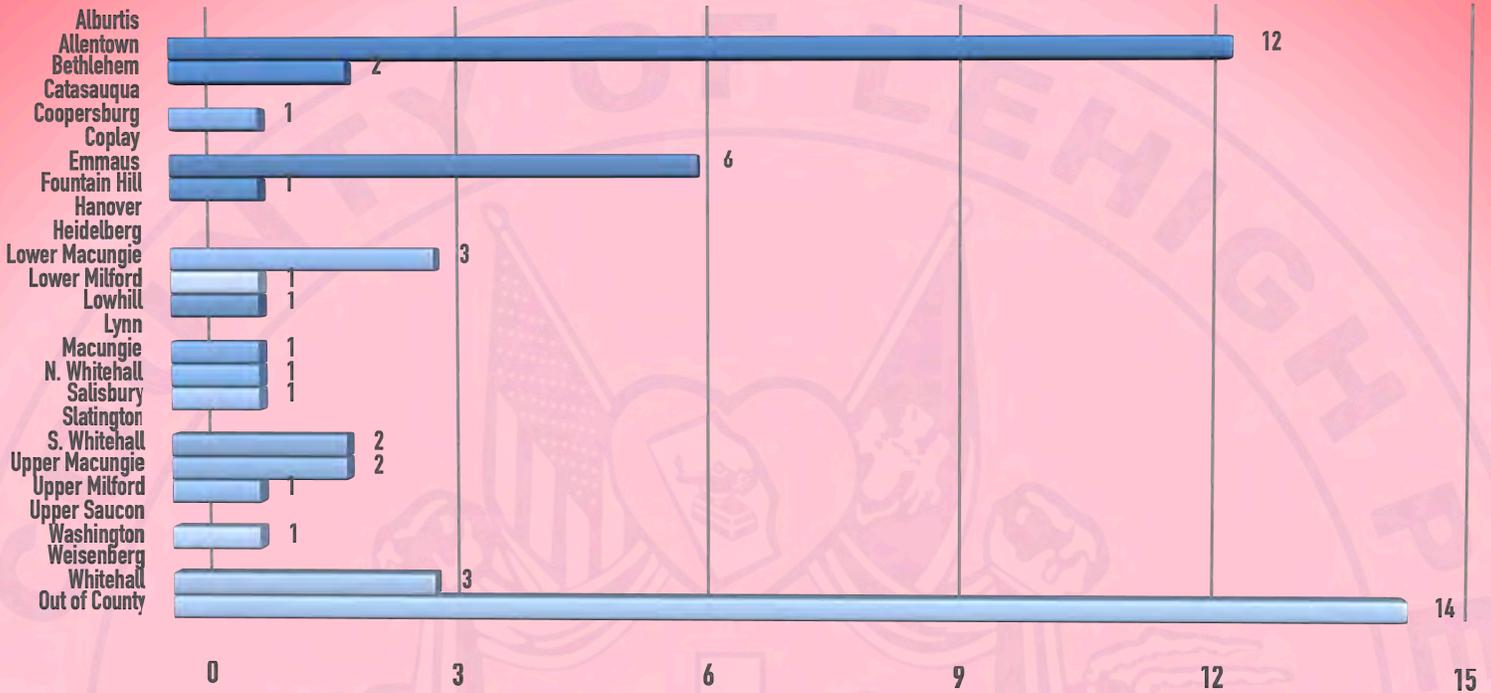
The chart to the left depicts the percentage of suicide deaths by the day of the week in which the injury that resulted in the death did occur. The total suicide-resulting injuries per day of week are as follows:

- Monday 1
- Tuesday 11
- Wednesday 11
- Thursday 7
- Friday 12
- Saturday 5
- Sunday 6



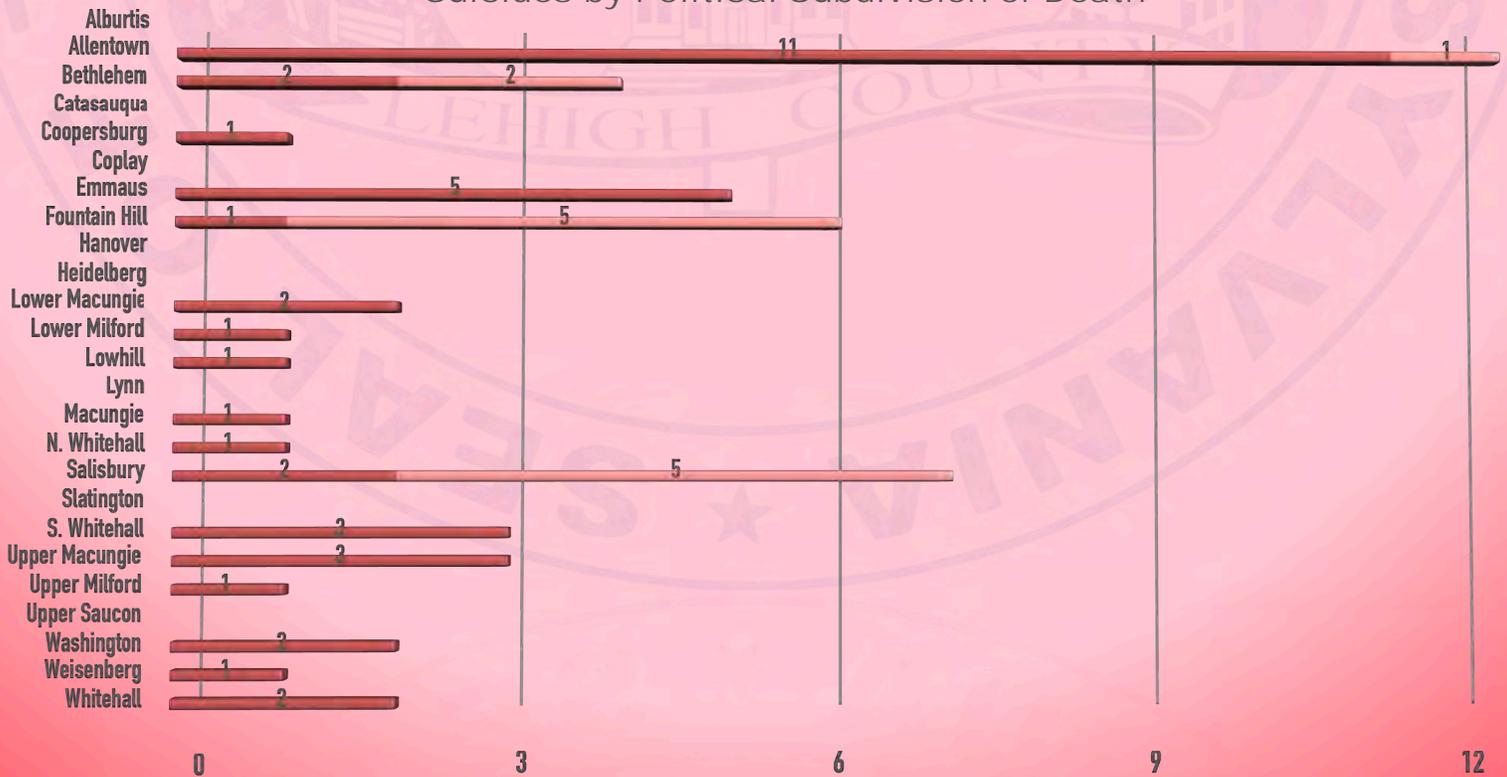
Suicide

Suicides by Political Subdivision of Residency



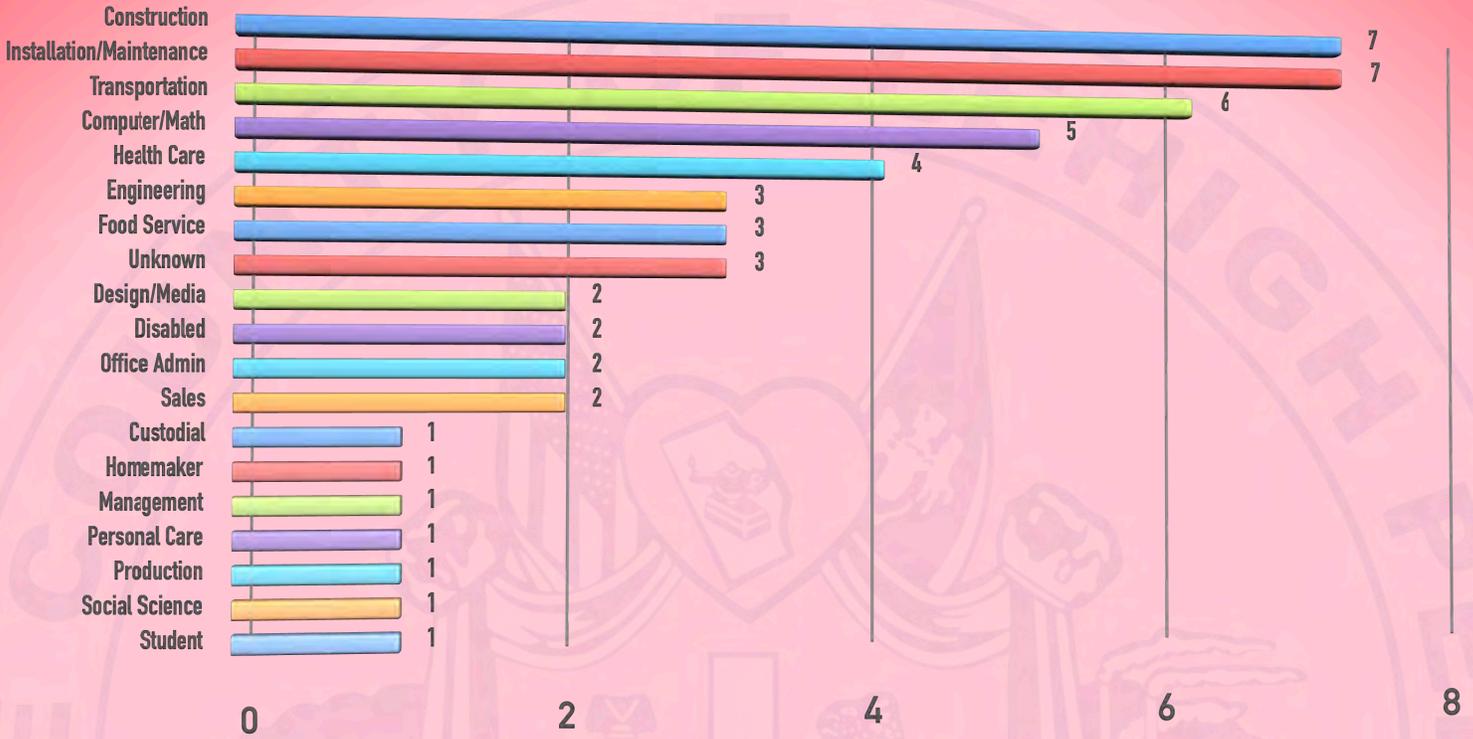
The chart above depicts the breakdown of suicide deaths in Lehigh County by the municipality in which the deceased person did reside. The chart below depicts the breakdown of suicide deaths in Lehigh County by the municipality in which the death was pronounced. Municipalities that host a hospital are broken down by deaths within the hospital (the lighter red), and deaths otherwise within the municipality (the darker red).

Suicides by Political Subdivision of Death



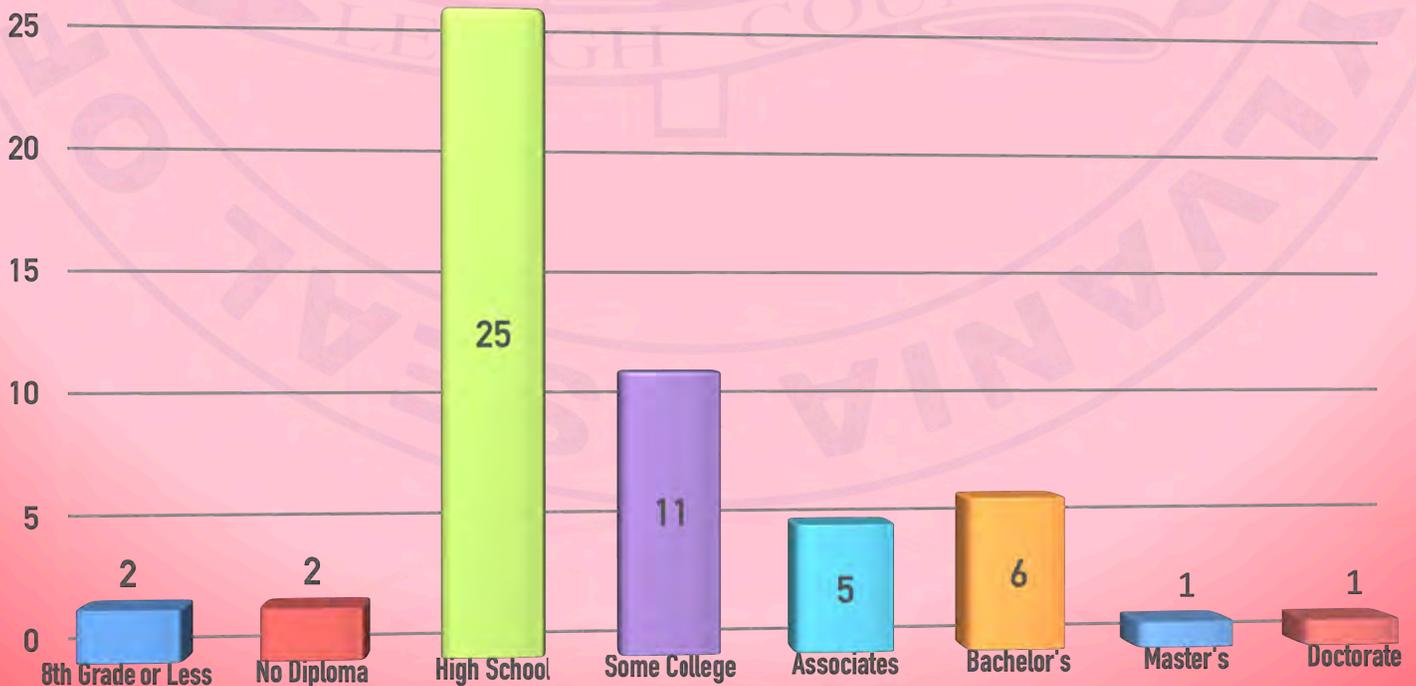
Suicide

Suicides by Employment Type



The Lehigh County Coroner's Office investigates suicide deaths of individuals that come from a large variety of backgrounds. Amongst the many demographics tracked by this office, employment and education are a few that are uniquely relevant in the review of suicide deaths for the purposes of suicide prevention efforts. The graph above breaks down 2023 suicide deaths in Lehigh County by employment type. The graph below breaks down the same by highest education level obtained.

Suicides by Education



Homicide

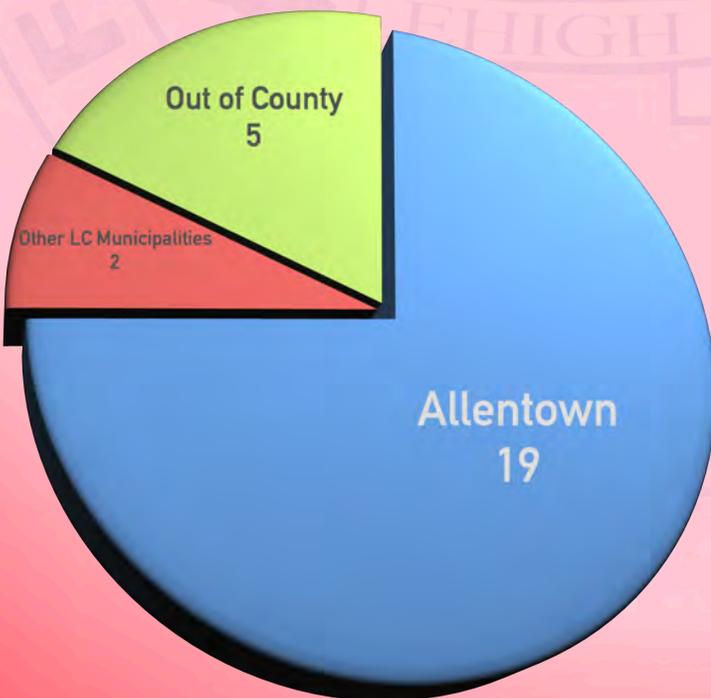
Homicide is defined as death at the hands of another. In medicolegal terminology, homicide may refer to a noncriminal act, as well as the criminal act of murder.

The Lehigh County Coroner's Office works closely with all involved law enforcement agencies and District Attorney's offices in investigating all cases with the potential for criminal charges, most notably when a death may have been at the hands of another. While a cause of death is often readily known in the early stages of a homicide investigation, an autopsy is always performed in order to document a full extent of injuries and collect additional evidence.

Homicides by Modality



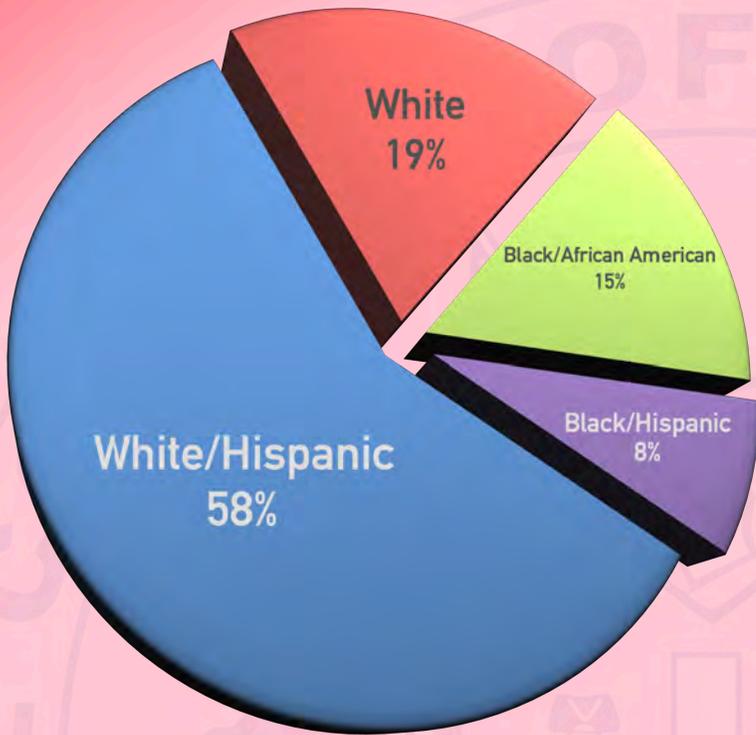
Homicides by Incident Location



In 2023, 26 individuals died as the result of a homicide in Lehigh County. In 21 cases, the incident and death occurred within the County of Lehigh, 19 of those occurred within the City of Allentown. Out of county sustained injuries requiring treatment and leading to death in Lehigh County accounted for the remaining five homicide investigations.

Homicide

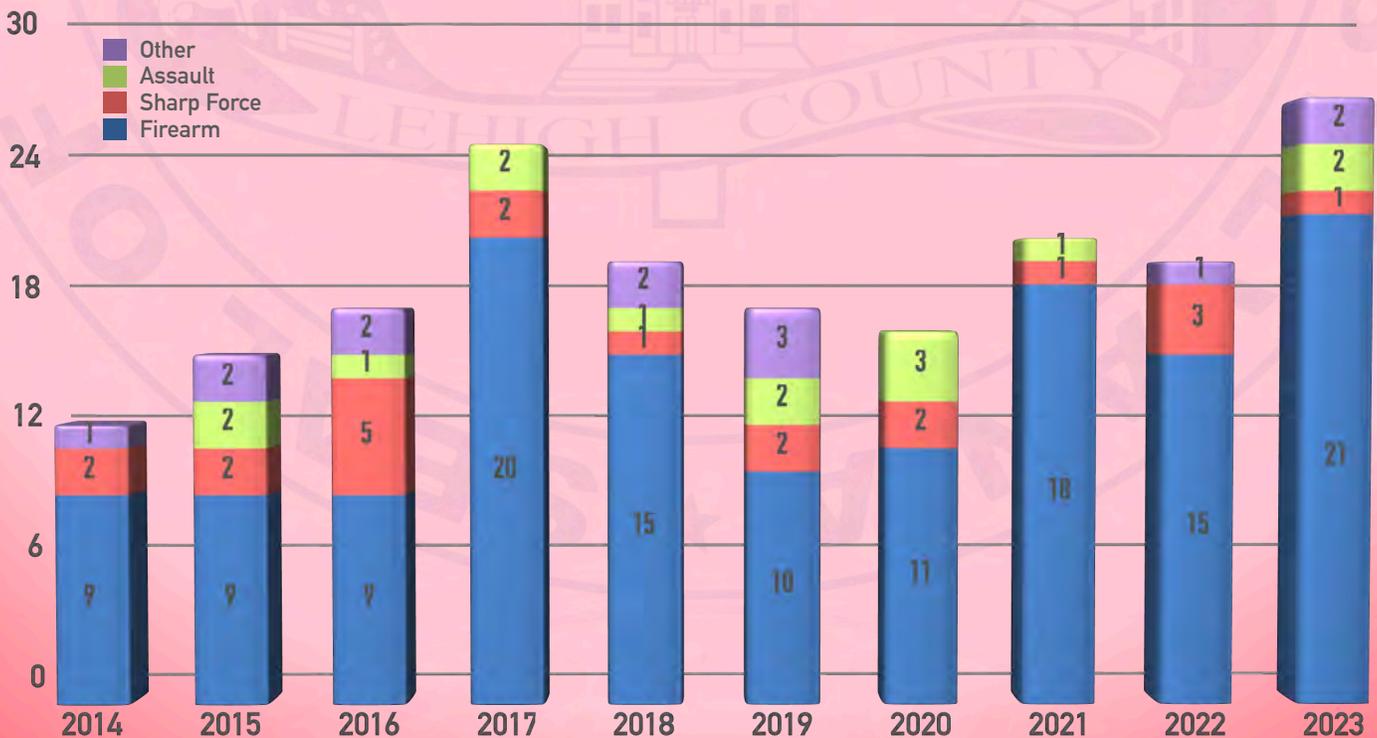
Homicide by Race



The graph to the right depicts the breakdown of homicide victims who died within the County of Lehigh, by race. 15 of those victims were White with Hispanic Ethnicity, such as people of Puerto Rican descent; five victims were White without ethnic background; four victims were Black/African American; and two victims were Black with Hispanic Ethnicity, such as people of Dominican descent.

The chart below is a 10-year analysis of homicide investigations conducted by the Lehigh County Coroner's Office, from 2014 through 2023, broken down by the modality of the injury resulting in death. A majority of homicide deaths in Lehigh County are the result of gunshot wounds inflicted by firearm. Other modalities include sharp force injuries, assault, and "other", which can include intentional motor vehicle collisions, poisoning, and infant assaults.

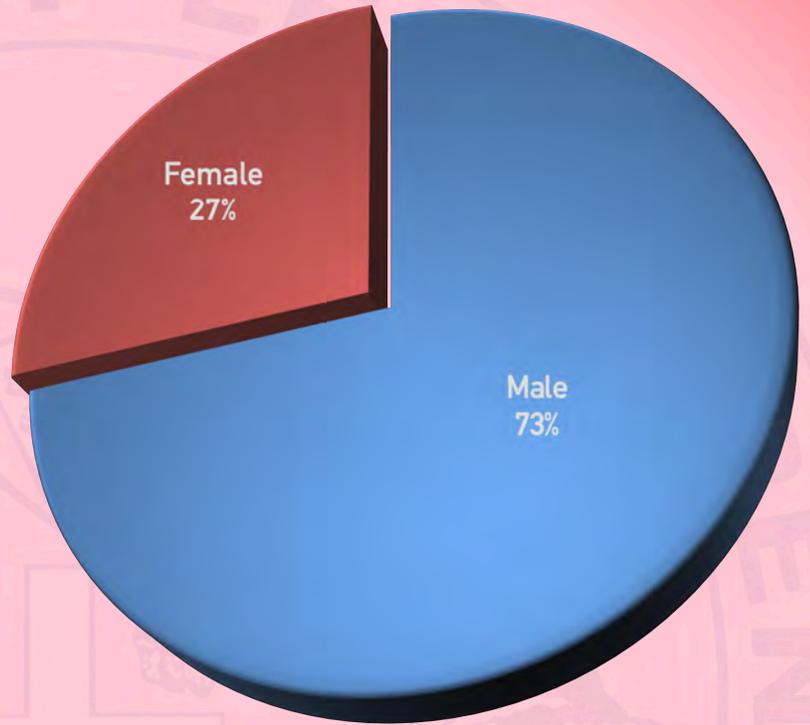
Homicide - 10 Year Analysis with Modality Breakdown



Homicide

Homicides by Gender

The graph to the left depicts a breakdown of the victims of 2023 Lehigh County Coroner's Office homicide investigations by gender. In 2023, 19 victims of homicide investigated by the Lehigh County Coroner's Office were male, and seven were female.



The chart below depicts a breakdown of the same by age and gender. In 2023, a majority of the victims of homicide investigated by this office were between the ages of 20 and 29.

Homicides by Age and Gender



Other Investigations

In 2023, the Lehigh County Coroner's Office investigated four bone discoveries and one unknown biological specimen. In all four of the bone investigations, the bones were determined to be non-human. The biological specimen was initially reported to be a potential miscarried fetus, and was later determined to contain no human tissue, and was only coagulated blood.



SUMMARY

In closing, I want to thank everyone. To the Board of Commissioners and Administration, your support and trust in me is both welcoming and humbling. Most importantly, from the bottom of my heart, I want to thank everyone who believed in me and continues to allow me to serve as your Lehigh County Coroner. I and my staff look forward to 2024 with a continued pursuit of excellence, not only to the families we serve, but to the Lehigh County Administration as well.

If there is any part of this report that you have questions about, or would like more information about, please do not hesitate to contact me at any time.

This report is provided to:

- County of Lehigh – Administration
- County of Lehigh – Board of Commissioners
- County of Lehigh – Judiciary
- County of Lehigh – Row Officers
- Various boards and committees

This report is also available on the website of the Office of the Coroner;
www.lehighcounty.org/Departments/Coroner

This report has been provided in electronic format. If you require a printed format, please do not hesitate to contact my office.

Respectfully,



Daniel A. Buglio, D-ABMDI
Lehigh County Coroner