

Macomb County Medical Examiner 2014 Annual Report



DANIEL J. SPITZ, M.D.
Chief Medical Examiner



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MACOMB COUNTY HEALTH DEPARTMENT
Medical Examiner's Office
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Phone: 586-469-5214 ♦ Fax: 586-469-6636
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William J. Ridella, M.P.H., M.B.A.
Director/Health Officer

Daniel J. Spitz, M.D.
Chief Medical Examiner

To the Macomb County Executive and Citizens of Macomb County:

The Medical Examiner's duty is to investigate deaths to determine the cause and manner of death for cases that fall under the Medical Examiner's jurisdiction.

In 2014 the Medical Examiner's Office conducted more death investigations than in any previous year. The total number of death investigations increased by 8.9% when compared to 2013. The number of cremation permits issued by the office increased for the 11th year in a row and showed a 5.8% increase from 2013. As has been the trend over the past several years, it is anticipated that the workload will continue to rise for the foreseeable future.

In 2014, the Medical Examiner's Office investigated 2338 deaths, performed 649 forensic examinations and issued 3,806 cremation permits. Additionally, 2,136 hospice deaths were reported to the Medical Examiner's Office. In 2014, there was a 9.7% increase in the number of deaths related to natural disease, a 2.7% decrease in the total number of suicides, a 4.5% increase in the total number of accidents and a 7.7% increase in the total number of homicides.

Drug related deaths have been at an all-time high for the past few years. Abuse of prescription medications along with heroin and cocaine abuse continue to be major concerns in Macomb County. In 2014 there were 107 deaths related to heroin (heroin alone or heroin in combination with other drugs). This represents an 11.2% increase in heroin related deaths from 2013.

We are pleased to announce that on July 30, 2014, after a comprehensive review of our policies and procedures together with a site visit with evaluation of our office and staff, the Macomb County Medical Examiner's Office was granted full accreditation by the National Association of Medical Examiners.

We would like to thank the Macomb County Executive for his continued support, which enables the Medical Examiner staff to provide this valuable and necessary service to the citizens of Macomb County.

We are pleased to present you with the Macomb County Medical Examiner's 2014 Annual Report.

Respectfully Submitted,

Daniel J. Spitz, M.D.
Chief Medical Examiner

William J. Ridella, M.P.H, M.B.A
Director/Health Officer

Organization of the Medical Examiner's Office

Macomb County Health Department

Director/Health Officer

William J. Ridella, M.P.H., M.B.A.

Medical Director

Kevin P. Lokar, M.D., M.P.H.

Deputy Health Officer

Krista Willette, R.N., M.S.A.

Medical Examiner's Office

Chief Medical Examiner

Daniel J. Spitz, M.D.

Deputy Medical Examiner

Mary E. Pietrangelo, M.D.

Manager of Operations

Patricia Roland, B.S.N., D-ABMDI

Forensic Investigations Specialist

Gretchen Terebesi, D-ABMDI

Morgue Specialist

Brittney Hella, BSMS

Duane Loxton

Veronica Stout

Forensic Investigator

Melissa Bogoevski, D-ABMDI

Jason Booms

David Holfelder

Sean Monticciolo D-ABMDI

Mary Palmateer F-ABMDI

Jennifer Skridulis, D-ABMDI

Robert Wiley, D-ABMDI

Typist Clerk III

Denise Calhoun

Board Certification

The American Board of Medicolegal Death Investigators (ABMDI) sets quality and process standards for death investigators. Investigators who pass the certification requirements of the ABMDI are designated as Registered Diplomats (D-ABMDI). Investigators who meet further requirements and pass an additional test are designated as Certified Fellows (F-ABMDI).



Accreditation

The Macomb County Medical Examiner's Office is an accredited office of the [National Association of Medical Examiners \(NAME\)](#). NAME accredited offices represent the highest quality of death investigation systems demonstrated by the hard work, dedication, and leadership made by the staff of the Medical Examiner's Office.



The Macomb County Medical Examiner's Office is one of five NAME accredited Medical Examiner offices in Michigan.

Macomb County Medical Examiner's Office Location

Location:

43585 Elizabeth Road
Mount Clemens, Michigan 48043
Phone: (586) 469-5214, Fax (586) 469-6636

Office Hours:

Monday through Friday,
except for official holidays
8:30 a.m. - 5:00 p.m.



Mission Statement

The mission of the Macomb County Medical Examiner's Office is to provide medicolegal investigations into all deaths requiring a public inquiry to determine and record the cause and manner of death for all decedents' families and the legal and medical communities in accordance with the highest level of professionalism, compassion and efficiency.

Laws Governing the Medical Examiner's Office

Act 181 of 1953, MCL Section 52.201-52.216, requires every county in Michigan to appoint a county Medical Examiner - a physician licensed by the State of Michigan, to carry out the duties and functions specified in the Act, including "being in charge of the office of the county medical examiner and promulgating rules relative to the conduct of his office".

The primary role of a county medical examiner is to determine and certify the cause of death and the manner of death in cases where death has occurred violently, accidentally, unexpectedly, or without medical attendance, and to ascertain the identity of the decedent in order to notify the next of kin. The cause of death is the disease or injury responsible for initiating the events that directly lead to a death. The manner of death is how the cause of death came into being. The county Medical Examiner has broad powers and specific responsibilities to act under the aforementioned section of State law to carry out that mission.

Activities of the Medical Examiner's Office

Macomb County residents are well served by the standards achieved through accreditation by the National Association of Medical Examiners (NAME), a national body that sets and certifies adherence to high standards for medical examiners. Accreditation from NAME shows that the office meets professional standards and provides assurance to the community that a Medical Examiner's office is committed to excellence.

- **Autopsy and Investigations:** As part of the duties of the Medical Examiner's Office, autopsy and investigative reports are prepared and maintained on all cases. The work performed by the office includes but is not limited to death scene investigations as well as external examination of bodies, autopsies, and medical chart reviews conducted by forensic pathologists.
- **Legal Assistance:** The Macomb County Medical Examiner's Office fulfills legal obligations by testifying in criminal and civil proceedings relating to the cause and manner of death.
- **Public Health Emergencies:** Public health emergencies can take on many forms ranging from naturally occurring events (storms, floods, fires) to manmade events including delivery of weapons of mass destruction (bomb/blast, chemical, nuclear, or biological). In partnership with other county services, the Medical Examiner's Office developed the Macomb County Mass Fatality Plan, which addresses mortuary surge capacity events and methods to respond and mitigate such issues.
- **Macomb County Child Death Review Team:** As part of its greater role in promoting a safe and viable community, Medical Examiners serve on the Macomb County Child Death Review Team (MCCDRT). The MCCDRT is composed of various countywide agencies that review and discuss comprehensive information regarding specific child death cases. The team reviews the circumstances involved in the death and documents the investigative actions, services provided or needed, key risk factors with recommendations and/or actions taken by the MCCDRT team to improve coordination and effectiveness of child protection, investigation and legal processes. Since 2001, over 300 child death cases have been reviewed.
- **Education:** Teaching has always been an integral portion of the Medical Examiner's Office duties. Such academic endeavors include forensic pathology lectures and presentations at Wayne State University. Teaching rotations at the Medical Examiner facility include Wayne State University Forensic Investigation internship, Macomb Community College EMT and surgical tech students, Baker College EMT, Macomb County Sheriff cadets and individual autopsy observations for law enforcement personnel, nurses and medical students. The Medical Examiner's Office is also involved in community projects; drinking and driving campaigns for local high schools, and lectures for community groups and health care providers including the Macomb County drug court.
- **Organ and Tissue Donation Referral:** The Medical Examiner's Office continues to collaborate with local organ and tissue procurement agencies and Eversight Michigan to refer tissue and cornea donors.

Medical Examiner's Office Facility

The Medical Examiner's Office was built in 2007 and has over 6,000 square feet of space, which is divided into office/administrative space and the autopsy suite. The autopsy suite has a walk-in cooler, four autopsy stations, digital X-ray equipment and a special dissection room for decomposed/infectious cases.



Macomb County Medical Examiner's Office

2014 Budget

Revenues	Expenses
\$ 1,468,600.00	\$ 1,468,600.00

Macomb County Demographics



Macomb County is located in southeastern Michigan and is one of three counties that comprise the Detroit Metropolitan area (one of the top 10 metro areas in the U.S.). Macomb County is the ninth smallest of Michigan's 83 counties with 479 square miles, yet it ranks third in population with 860,112 residents (2014 U.S. Census Estimate), an increase in population of 2.3% since 2010 (840,978).

Among the County's 27 municipalities are three of the ten largest cities in Michigan: Warren (3rd), Sterling Heights (4th), and Clinton Township (8th).

Census Summary Profile

	2010 U.S. Census 840,978 Population		2013 Estimate 854,997 Population	% Change
White	717,973	85.4%	83.6%	-1.8%
Black or African American	72,723	8.6%	10.5%	+1.9%
American Indian and Alaska Native	2,646	0.3%	0.3%	0%
Asian	25,063	3.0%	3.4%	+0.4%
Native Hawaiian and Other Pacific Islander	179	0.0%	0.0%	0%
Hispanic or Latino	19,095	2.3%	2.4%	+0.1%

Source: U.S. Census Bureau

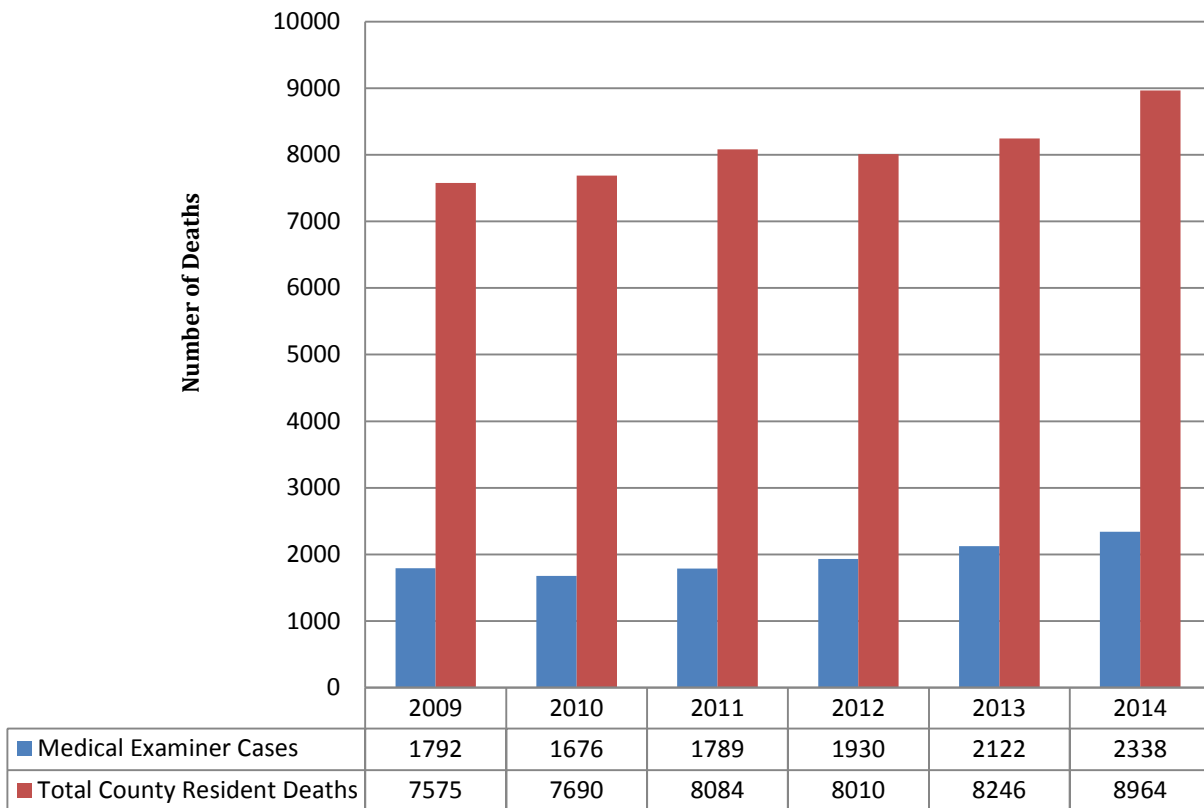
OVERVIEW OF CASES FOR 2014

Macomb County Population	860,112
Number of Resident Deaths in Macomb County	8,964
Macomb County Medical Examiner Cases	2,338
Forensic Examinations	649

Local deaths (those that occur within the boundaries of Macomb County) that fall under the jurisdiction of the Medical Examiner are transported by a contract body transport company to the Macomb County Medical Examiner’s Office (MCMEO) for examination. In most cases, a forensic investigator attends the death scene and performs an investigation and examination of the body. The Medical Examiner and investigative staff are on-call and available 24 hours/day, 365 days/year.

In 2014, the Macomb County Medical Examiner’s Office investigated 26% (2,338/8,964) of all deaths that occurred in Macomb County. An additional ten cases were unspecified non-human bones/unknown tissue.

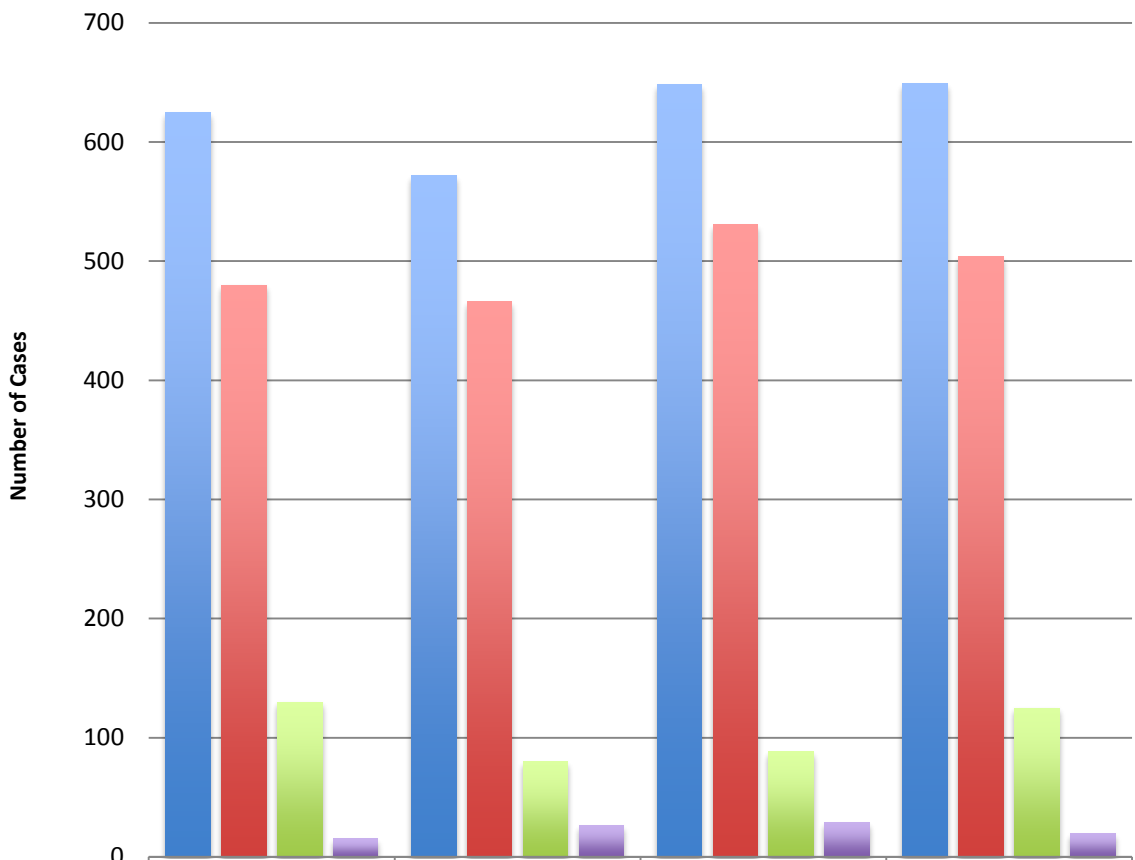
**Medical Examiner Cases and County Deaths,
2009-2014**



FORENSIC EXAMINATIONS

The total number of forensic examinations includes complete autopsies, limited autopsies and external examinations. In 2014, the Medical Examiner’s Office investigated 2,338 deaths, of which 649 were brought to the office for a forensic examination by a forensic pathologist. Of the 649 forensic examinations, 504 were complete autopsies, 125 were external examinations and 20 were limited autopsies.

**Forensic Examinations
2011-2014**



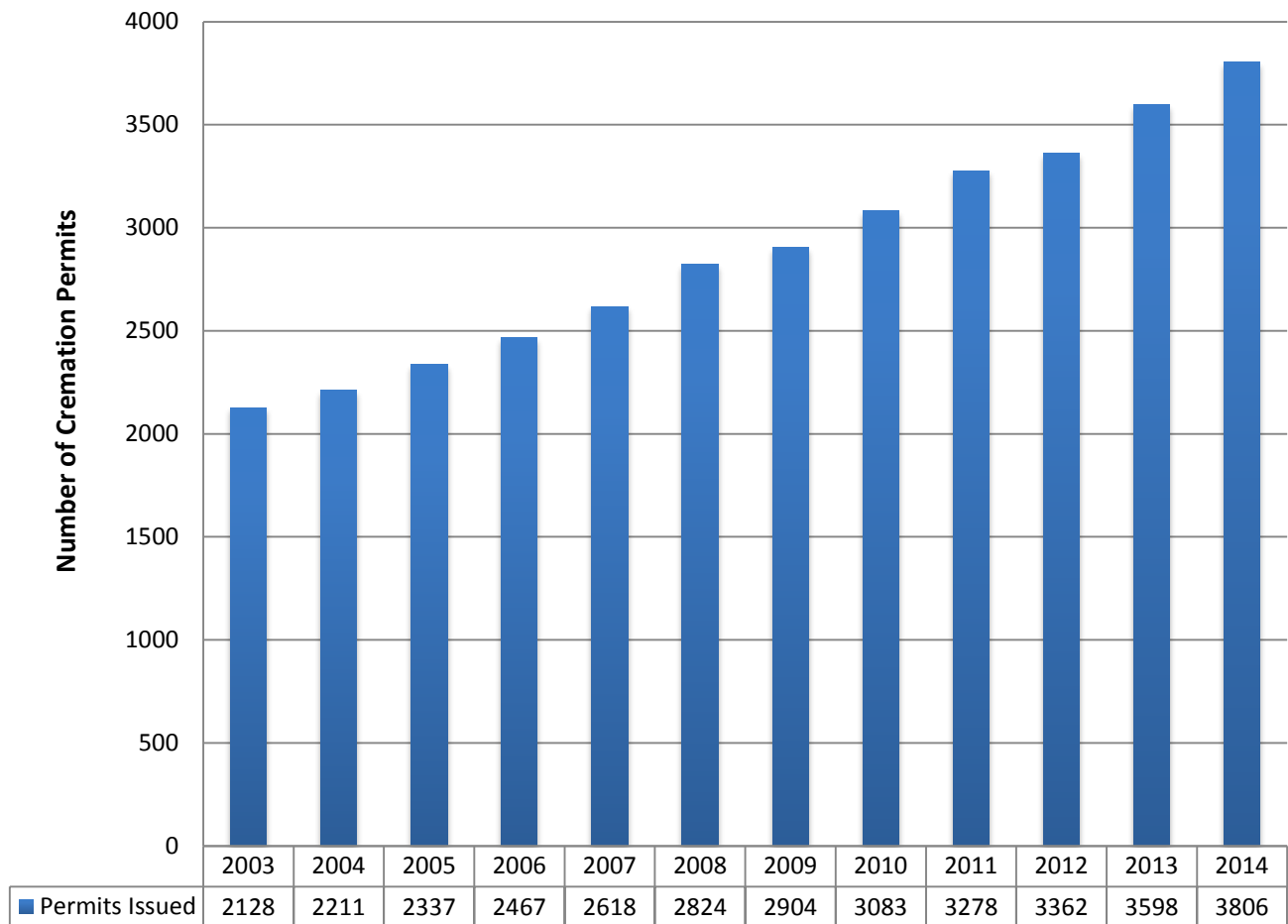
	2011	2012	2013	2014
Total Forensic Examinations	625	572	648	649
Complete Autopsies	480	466	531	504
External Examinations	130	80	88	125
Limited Autopsies	15	26	29	20

CREMATION PERMITS

In Macomb County, the Medical Examiner’s Office is required to sign cremation permit authorizations before a body is cremated. In order for a cremation permit to be issued, the death certificate is reviewed and in some cases a more detailed investigation is required prior to authorization.

Cremation permits issued in 2014 showed a 5.8% increase from 2013.

**Cremation Permit Authorizations,
2003-2014**



MANNER OF DEATH

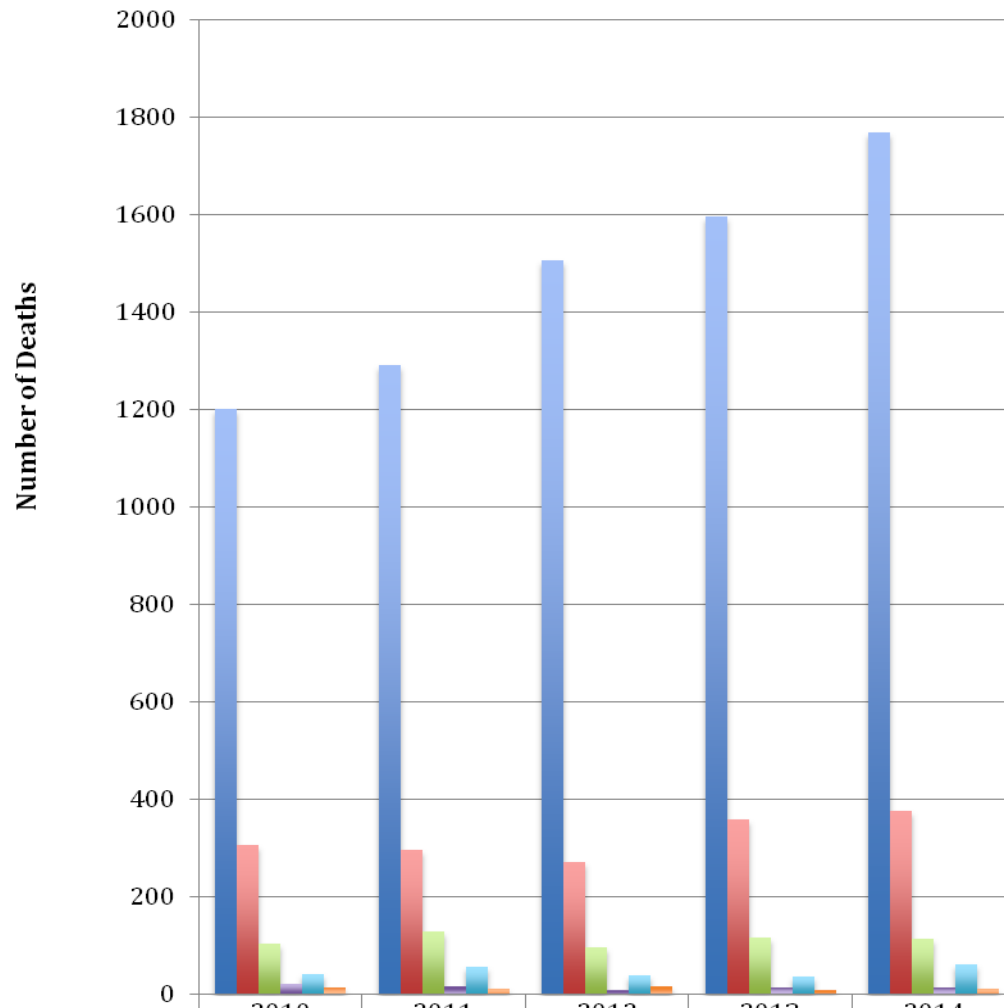
Manner of death is one of the items that must be reported on the death certificate and is a classification of death based on the circumstances, autopsy findings, toxicology results and all available information associated with the death investigation. There are five "manner" classifications: natural, accident, suicide, homicide and indeterminate:

- **Natural deaths** are due solely to disease and/or the aging process.
- **Accident** applies when an injury or poisoning causes death and there is no evidence that injury or poisoning occurred with intent to harm or cause death. In essence, the fatal outcome was unintentional.
- **Suicide** results from an injury or poisoning as a result of an intentional, self-inflicted act.
- **Homicide** occurs when death results from a volitional act committed by another person.
- **Indeterminate** is a classification used when the information pointing to one manner of death is no more compelling than one or more other competing manners of death.

Medical Examiner Cases by Manner of Death

Cases by Manner of Death, 2014	Number	Percent
Natural	1768	75.9%
Accident	375	16.0%
Suicide	112	4.8%
Homicide	13	0.6%
Indeterminate	61	2.6%
Unspecified (non-human bones, etc.)	9	0.4%
Total:	2338	

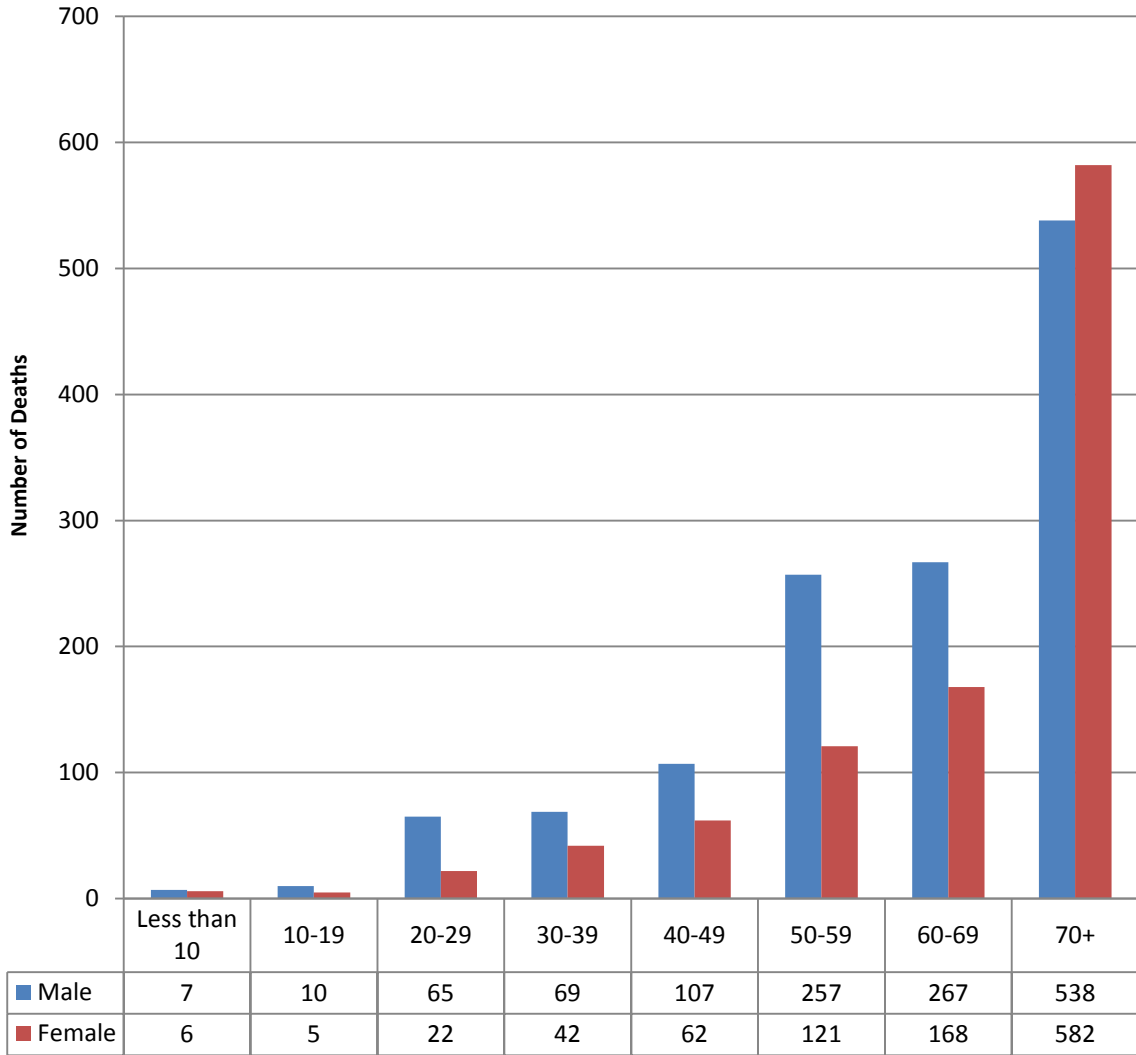
Medical Examiner Cases by Manner of Death, 2010-2014



	2010	2011	2012	2013	2014
■ Natural	1200	1290	1505	1596	1768
■ Accident	304	294	271	358	375
■ Suicide	102	127	94	115	112
■ Homicide	19	14	7	12	13
■ Indeterminate	41	55	38	34	61
■ Unspecified (non-human bones, etc)	13	9	15	7	9

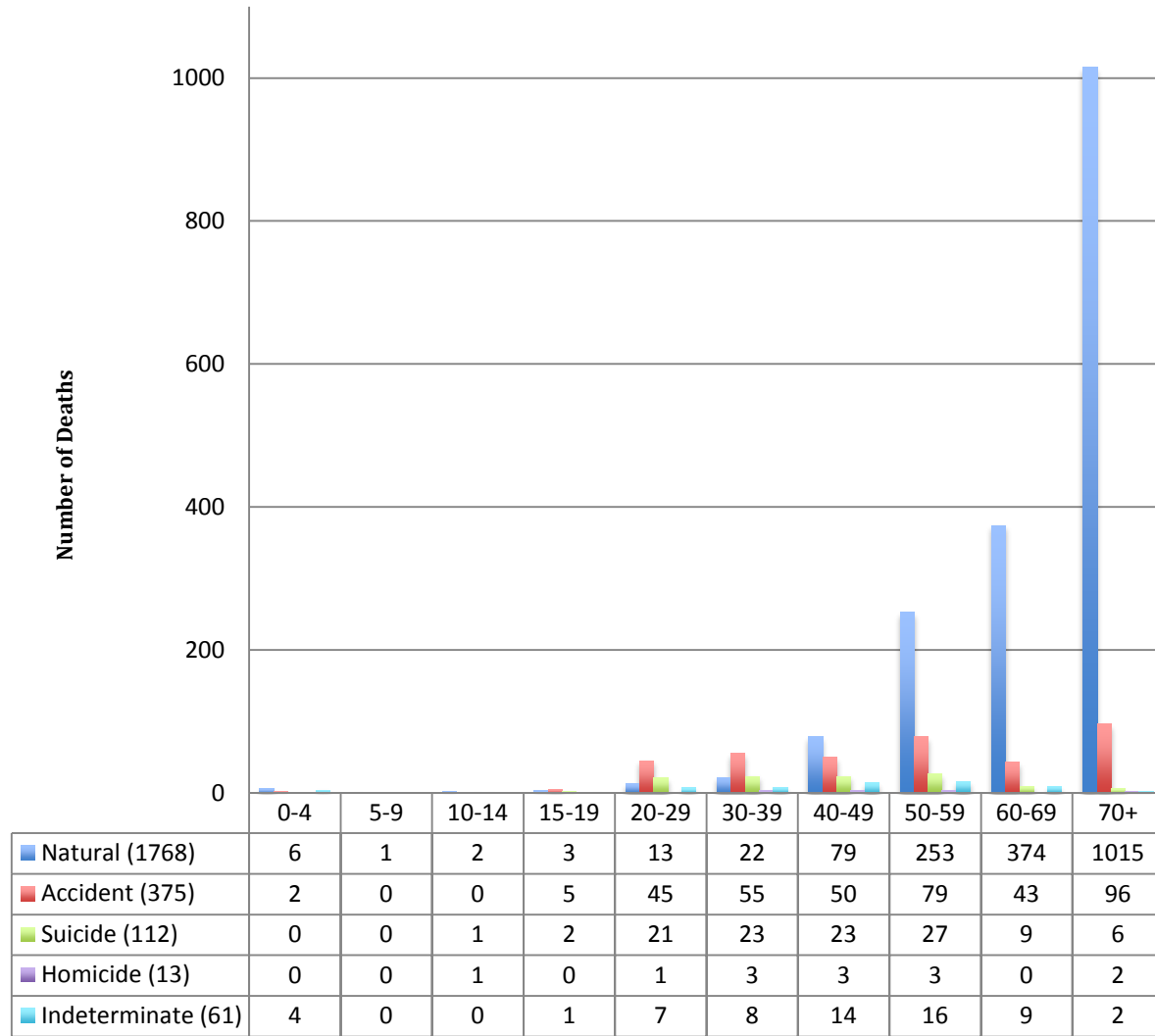
Medical Examiner Cases by Age and Gender

There were a total of 2,338 forensic investigations performed in 2014; of these 1,320 (56.4%) were males; 1008 (43.1%) were females and 9 (0.3%) cases were unknown tissue/non-human bones.



Age Group	Male	Female	Other	Total
0-19 Years	17	11	1	29
20 Years and Older	1303	997	1	2301
Unreported	0	0	7	7
Total	1320	1008	9	2338

Medical Examiner Cases by Manner of Death and Age



Medical Examiner Cases by Race and Gender

Race	Male	Female	Total
White	1237	906	2143
African American	69	88	157
American Indian	0	1	1
Asian Pacific	5	7	12
Hispanic	6	3	9
Multiracial	2	2	4
Other	1	0	1
Unknown	0	1	1
Total Cases	1320	1008	2328*

*This chart does not include 10 unspecified cases (bones/tissue)

MANNER OF DEATH – Natural

Natural Cases by Age and Gender

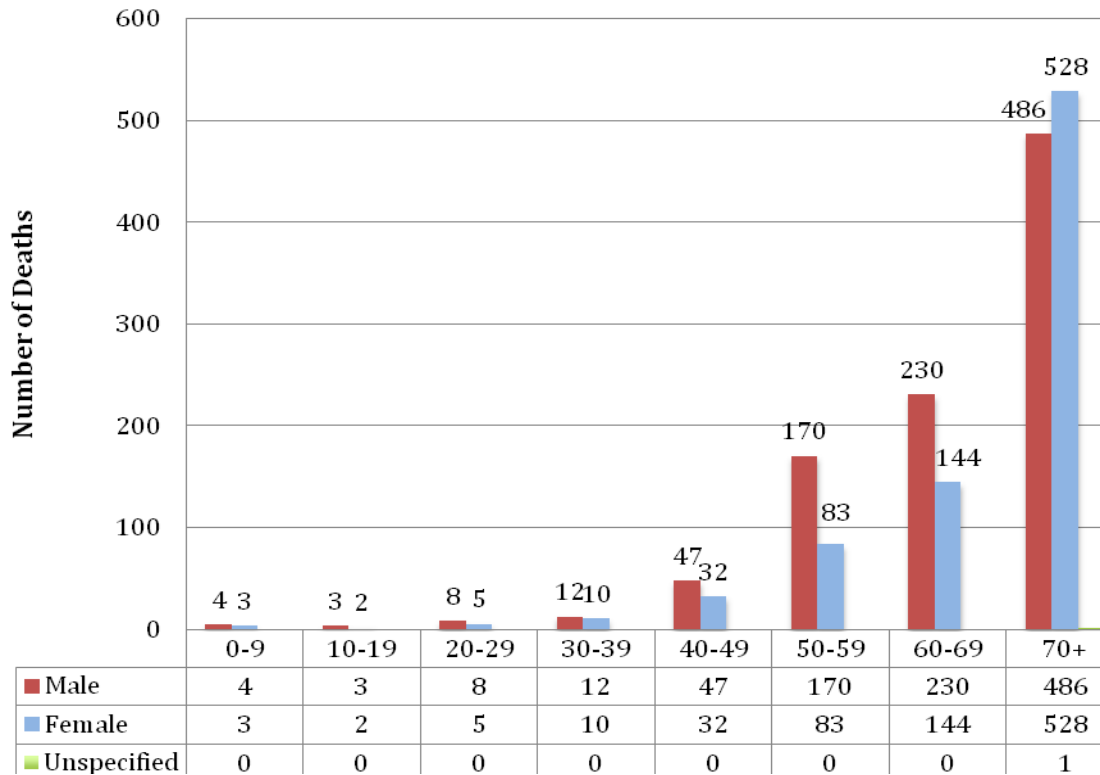
Natural deaths represented 75.9% (1,768/2,328) of all Medical Examiner cases.

Males accounted for 54.3% (960/1,768) of the natural deaths; **females** accounted for 45.6% (807/1,768) of the natural deaths.

The male 70+ age group accounted for 50.6% (486/960) of all male natural deaths, while the female 70+ age group accounted for 65.4% (528/807) of all female natural deaths.

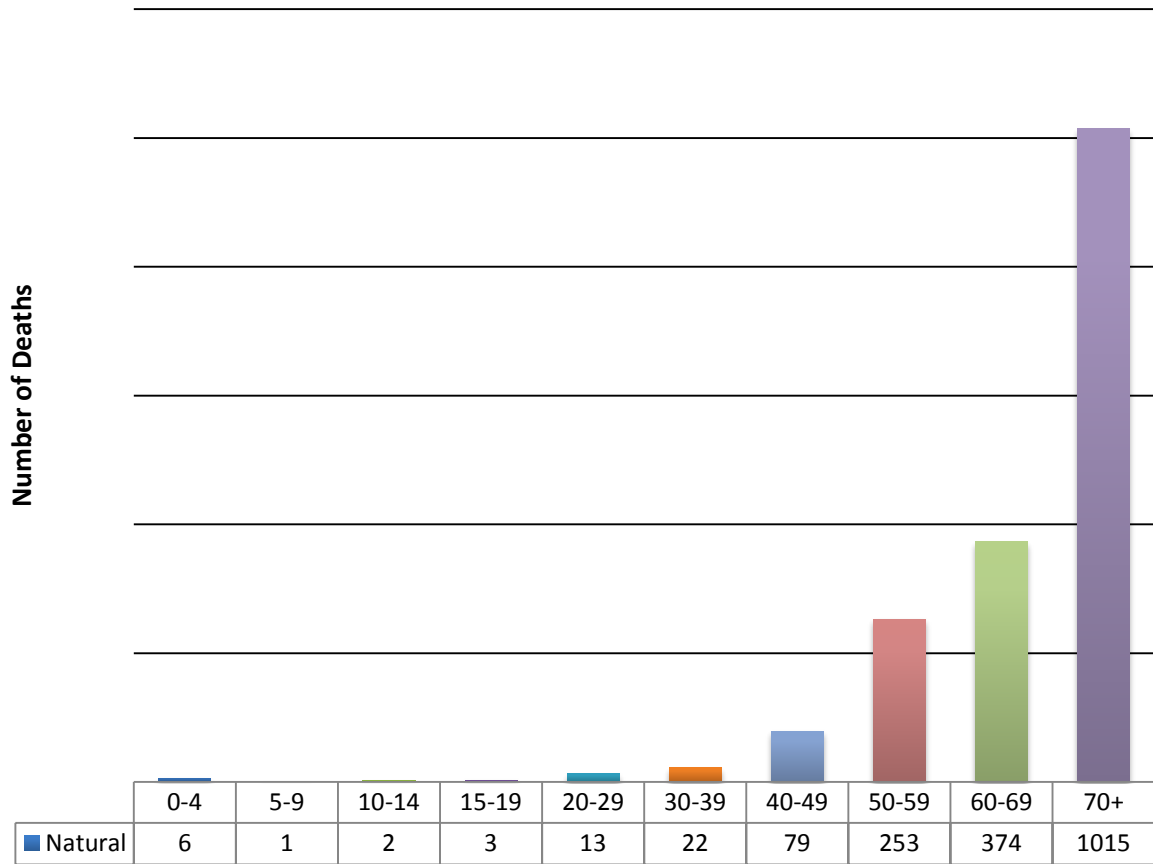
The combined male/female 70+ age groups represented 57.4% (1015/1768) of the natural deaths.

Natural Cases by Age and Gender



Age Group	Male	Female	Unspecified	Total	Percent
0 - 19 Years	7	5	0	12	0.7%
20 Years and Older	953	802	1	1756	99.3%
Total	960	807	1	1768	100.0%

Natural Cases by Age



Natural Cases by Race and Gender

Race	Male	Female	Total
White	901	717	1619
African American	51	79	130
American Indian	0	1	1
Asian Pacific	4	6	10
Hispanic	2	2	4
Multiracial	2	1	3
Other	0	0	0
Unknown	0	1	1
Total	960	807	1768

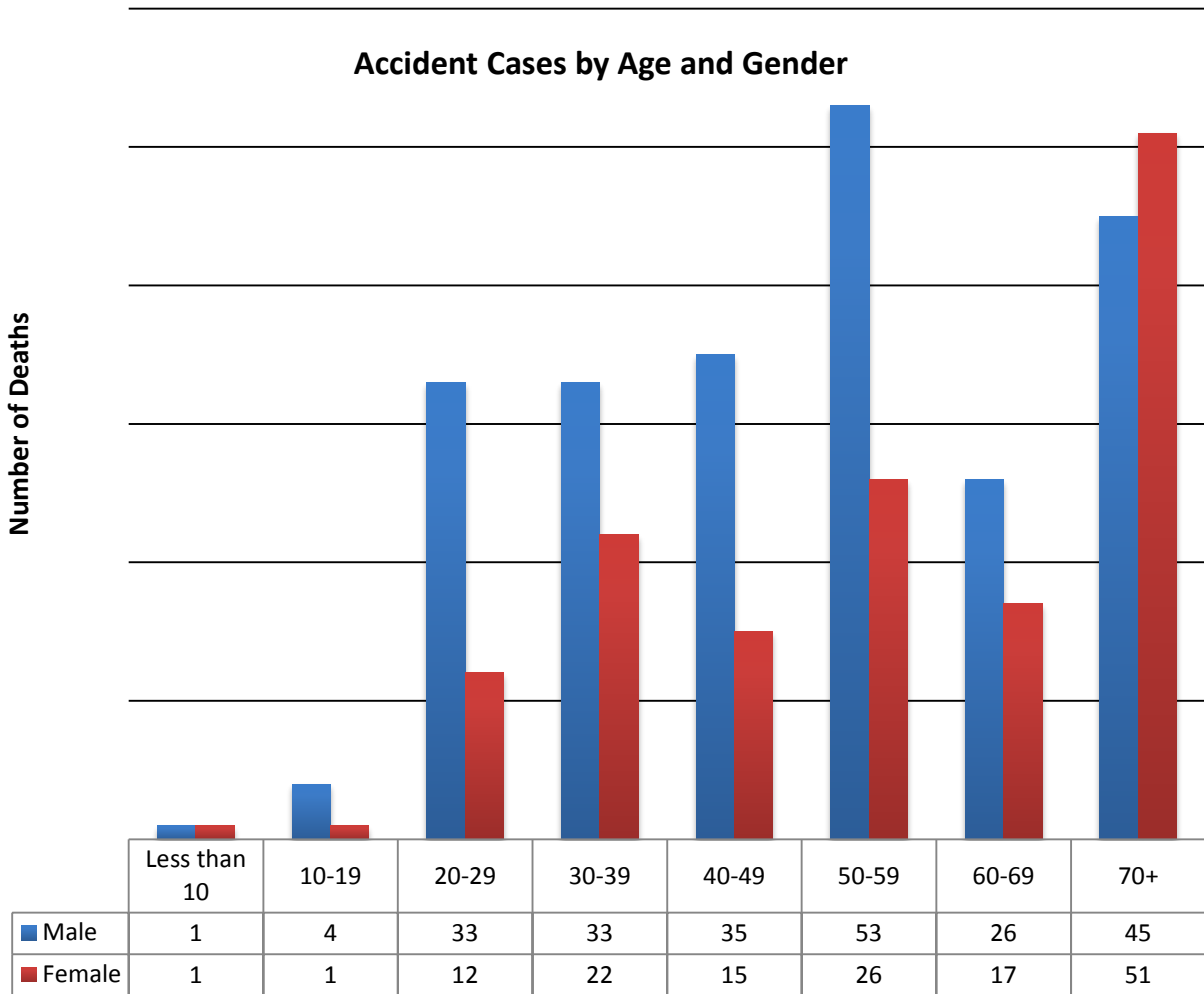
MANNER OF DEATH - Accident

Accident Cases by Age and Gender

Accidental deaths represented 16.1% (375/ 2,328) of all Medical Examiner cases.

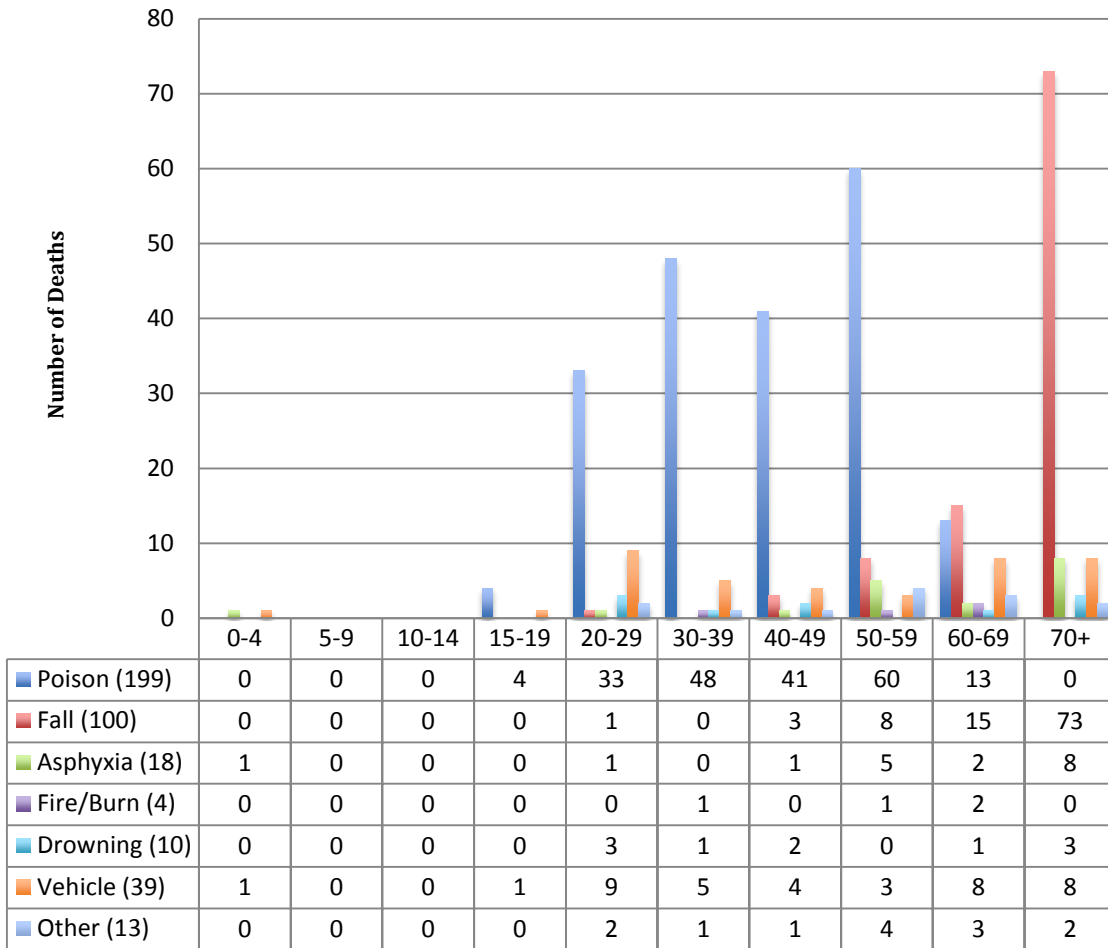
Males accounted for 61.3% (230/375) of the total accidental death cases; **females** accounted for 38.9% (145/375) of the accidental death cases.

The male 50-59 age group accounted for 23.0% (53/230) of all male accidental deaths. The highest female age grouping was the 70+ age group accounting for 33.2% (51/145) of all female accidental deaths.



Age Group	Male	Female	Total	Percent
0-19 Years	5	2	7	1.87%
20 Years and Older	225	143	368	98.13%
Total Cases	230	145	375	100%

Accident Cases by Age and Means



Accidental poisoning accounted for 52.0% (199/383) of all accidental death cases with the 50-59 age group having the highest percent of all accidental poisoning deaths.

Falls accounted for the second highest accidental death cases or 26.1% (100/383) with the majority of deaths occurring in the 70 year old and older age group.

Accident Cases by Race and Gender

Race	Male	Female	Total
White	214	136	350
African American	13	7	20
American Indian	0	0	0
Asian Pacific	0	1	1
Hispanic	2	1	3
Multiracial	0	0	0
Other	1	0	1
Unknown	0	0	0
Total	230	145	375

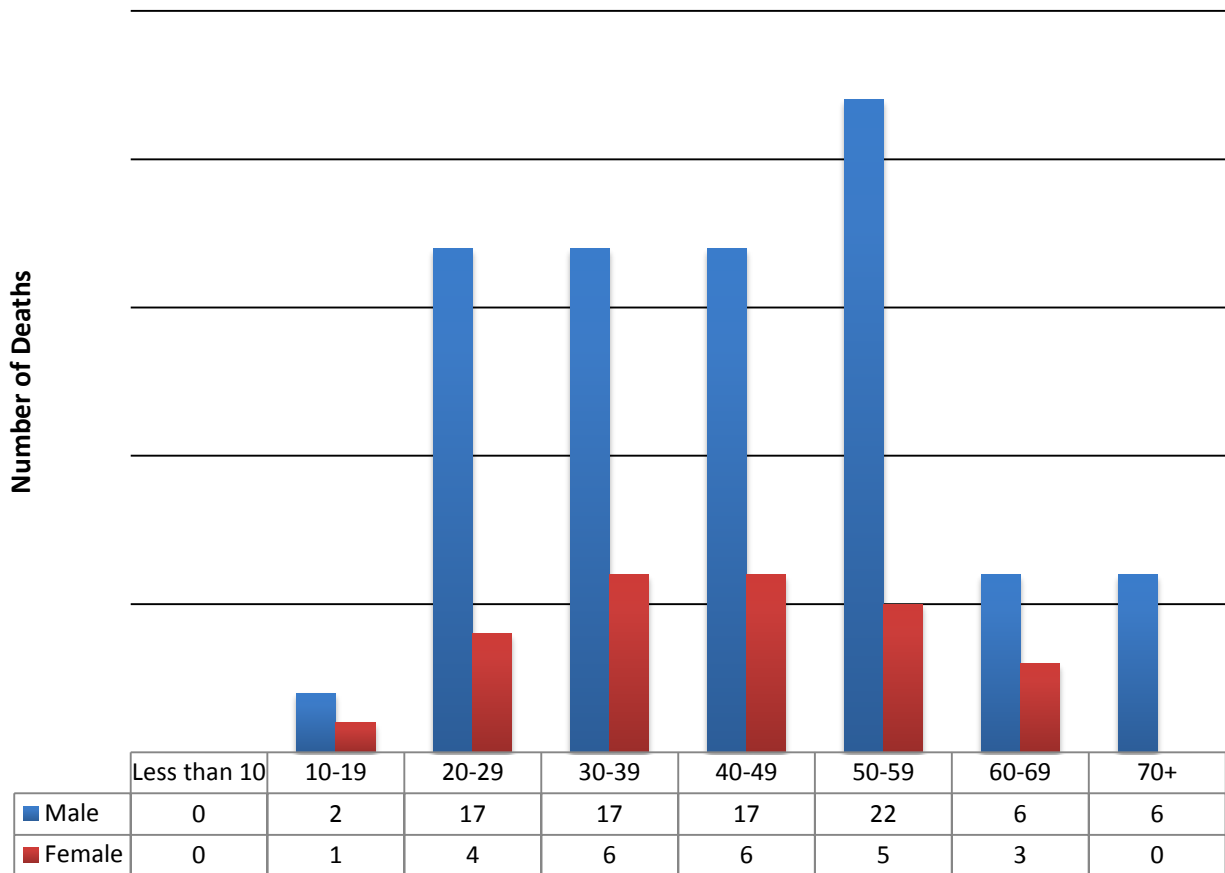
MANNER OF DEATH – Suicide

Suicide Cases by Age and Gender

Suicide deaths represented 4.8% (112/2328) of all Medical Examiner cases.

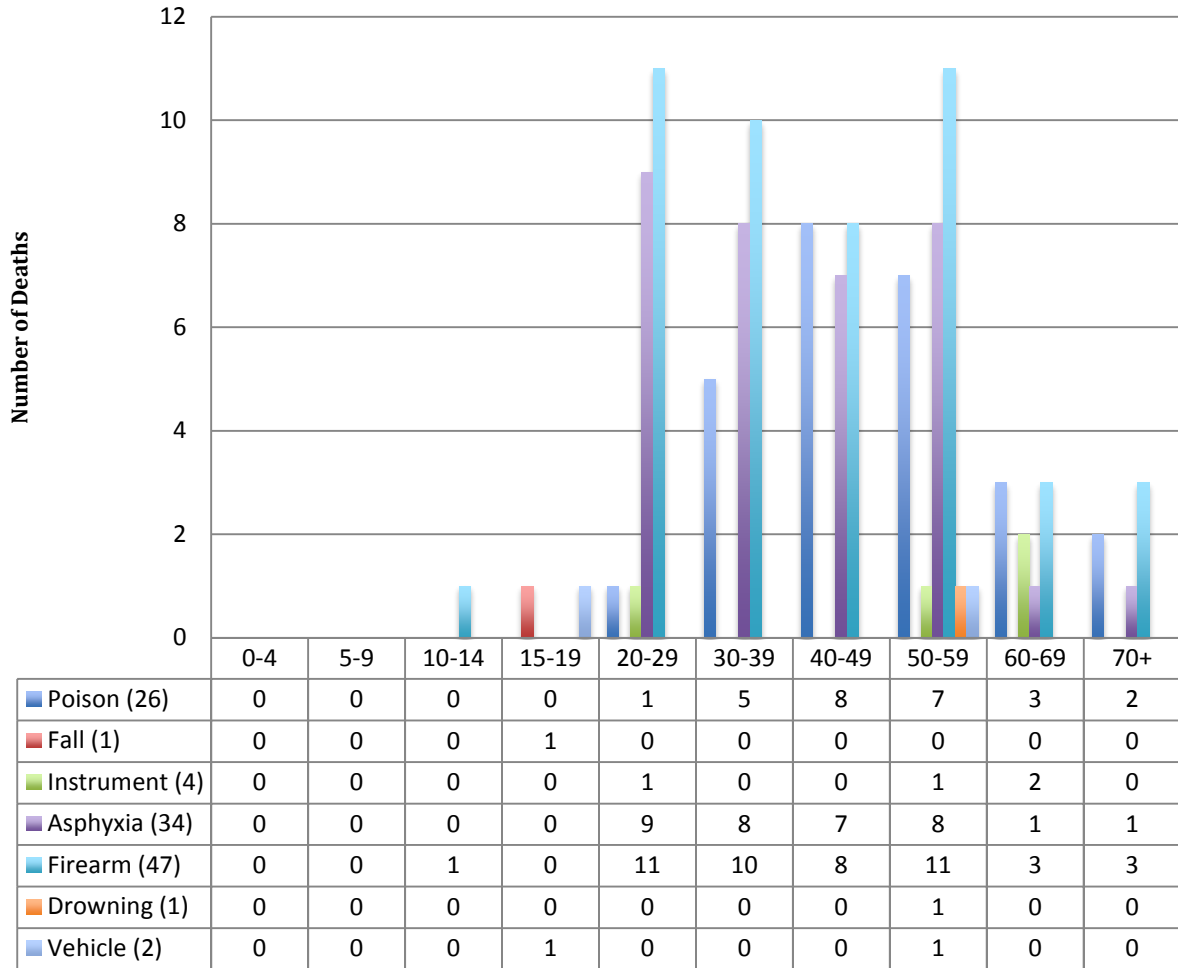
Males accounted for 77.7% (87/112) of the total suicide death cases; **females** accounted for 22.3% (25/112) of the suicide cases.

The male 50-59 age group accounted for 25.3% (22/87) of all male suicide cases. The 30-39 and 40-49 age group each represented 24.0% (6/25) of all female suicide cases.



Age Group	Male	Female	Total	Percent
0-19	2	1	3	2.68%
20 Years and Older	85	24	109	97.32%
Total Cases	87	25	112	100%

Suicide Cases by Age and Means



Firearm suicide cases represented 40.9% (47/115) of all suicides, asphyxia accounted for 29.6% (34/115) and poisoning 22.6% (26/115).

The 20-29 and 50-59 age groups each accounted for 23.4% (11/47) of firearm deaths, the 20-29 age group accounted for 26.5% (9/34) of asphyxia deaths and the 40-49 age group accounted for 30.8% (8/26) poisoning deaths.

Suicide Cases by Race and Gender

Race	Male	Female	Total
White	84	23	107
African American	2	2	4
American Indian	0	0	0
Asian Pacific	1	0	1
Hispanic	0	0	0
Multiracial	0	0	0
Other	0	0	0
Unknown	0	0	0
Total	87	25	112

MANNER OF DEATH – Homicide

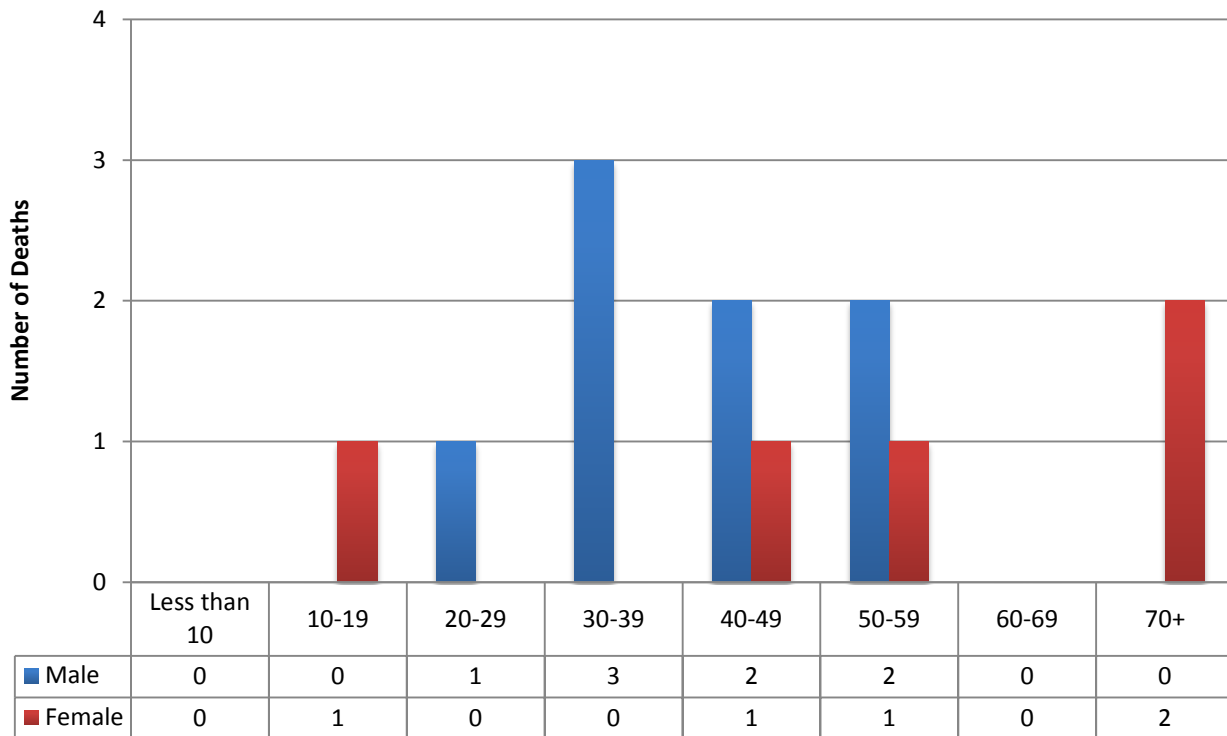
Homicide Cases by Age and Gender

Homicide deaths represented 0.6% (13/2,328) of all Medical Examiner cases.

Males accounted for 61.5% (8/13) of the total homicide cases; females accounted for 38.5% (5/13) of the homicide cases.

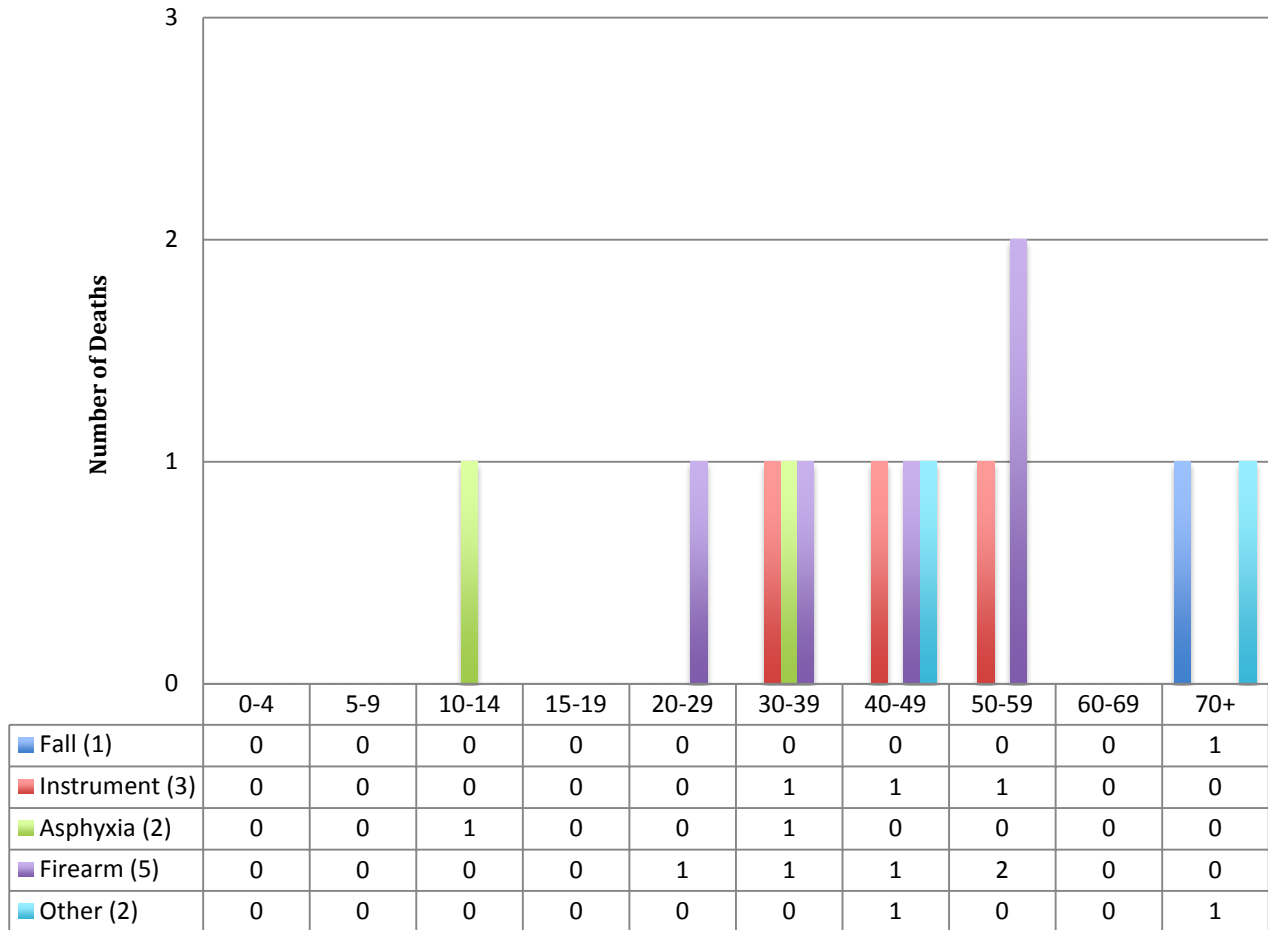
The 30-39 age group accounted for 37.5% (3/8) of the male homicide cases. The 70+ age group account for 40.0% (2/5) of female homicide cases.

Homicide Cases by Age and Gender



Age Group	Male	Female	Total	Percent
0-19 Years	0	1	1	7.7%
20 Years and Older	8	4	12	92.3%
Total	8	5	13	100%

Homicide Cases by Age and Means



Deaths by firearm accounted for 38.5% (5/13) of all homicide cases with 50-59 age group having the highest rate at 40% (2/5) of all homicides by firearm. Homicide by instrument accounted for 23.1% (3/13) of all homicide cases.

Homicide Cases by Race and Gender

Race	Male	Female	Total
White	6	5	11
African American	2	0	2
American Indian	0	0	0
Asian Pacific	0	0	0
Hispanic	0	0	0
Multiracial	0	0	0
Other	0	0	0
Unknown	0	0	0
Total	8	5	13

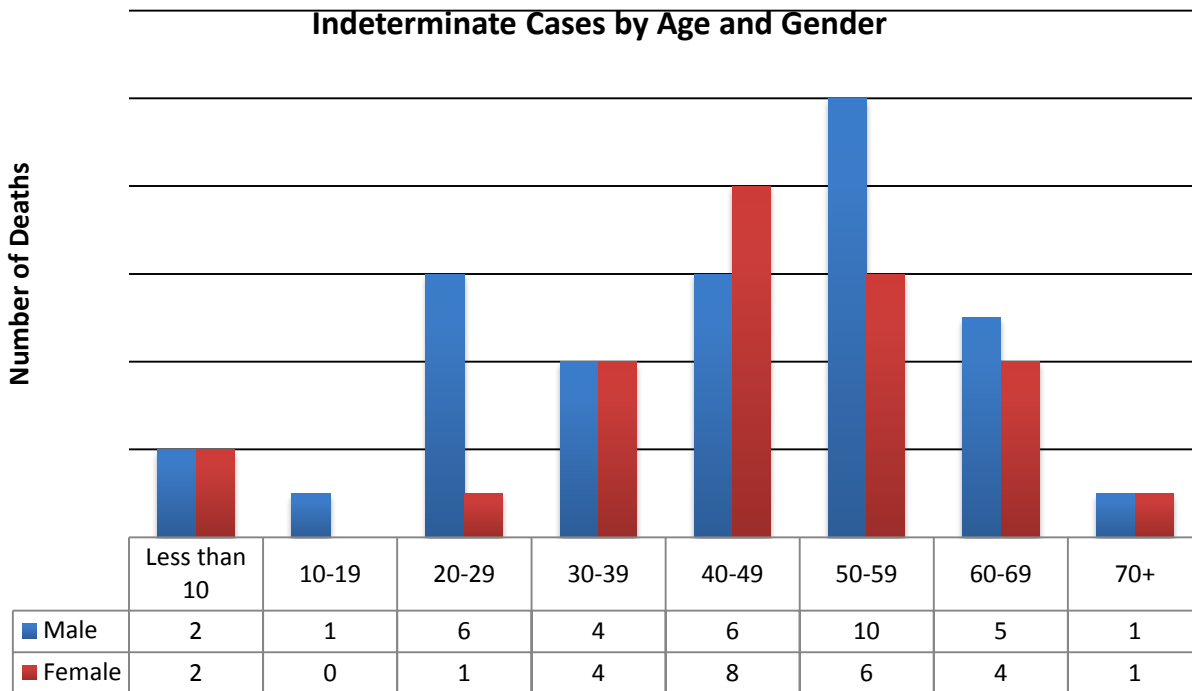
MANNER OF DEATH - Indeterminate

Indeterminate Cases by Age and Gender

Indeterminate deaths represented 2.6% (61/2,328) of all Medical Examiner cases.

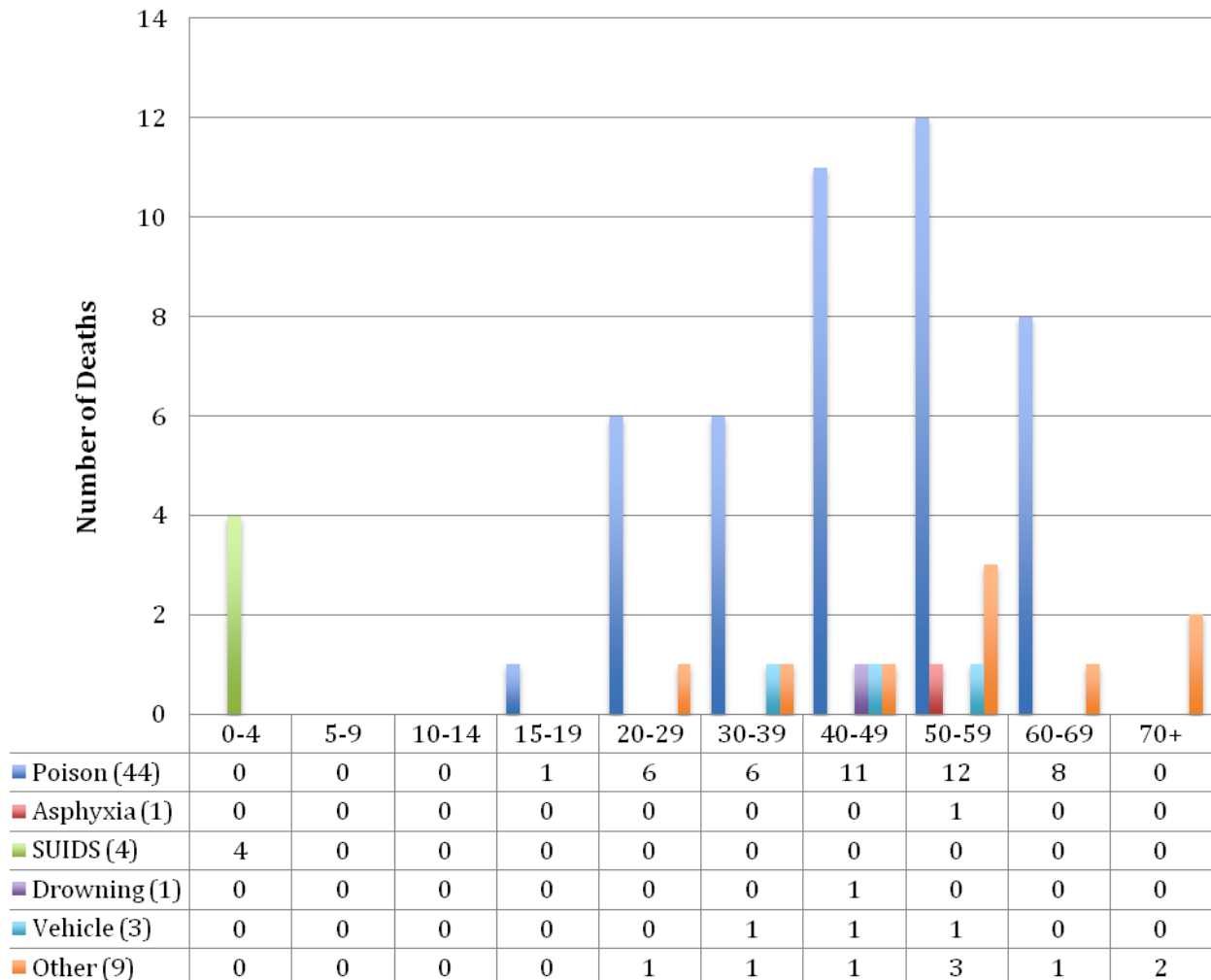
Males accounted for 57.4% (35/61) of the indeterminate deaths and **females** accounted for 42.6% (26/61) of the indeterminate death cases.

The 50-59 age group accounted for 28.6% (10/35) of the male indeterminate deaths, while the 40-49 age group accounted for 30.8% (8/26) of the female indeterminate deaths.



Age Group	Male	Female	Total	Percent
0-19 Years	3	2	5	8.2%
20 Years and Older	32	24	56	91.8%
Total Cases	35	26	61	100%

Indeterminate Cases by Age and Means



Poisoning accounted for 72.0% (44/61) of all indeterminate death cases with the 50-59 age group having the highest, or 27.3% (12/44) of all indeterminate poisoning deaths.

Indeterminate Cases by Race and Gender

Race	Male	Female	Total
White	32	25	57
African American	1	0	1
American Indian	0	0	0
Asian Pacific	0	0	0
Hispanic	2	0	2
Multiracial	0	1	1
Other	0	0	0
Unknown	0	0	0
Total	35	26	61

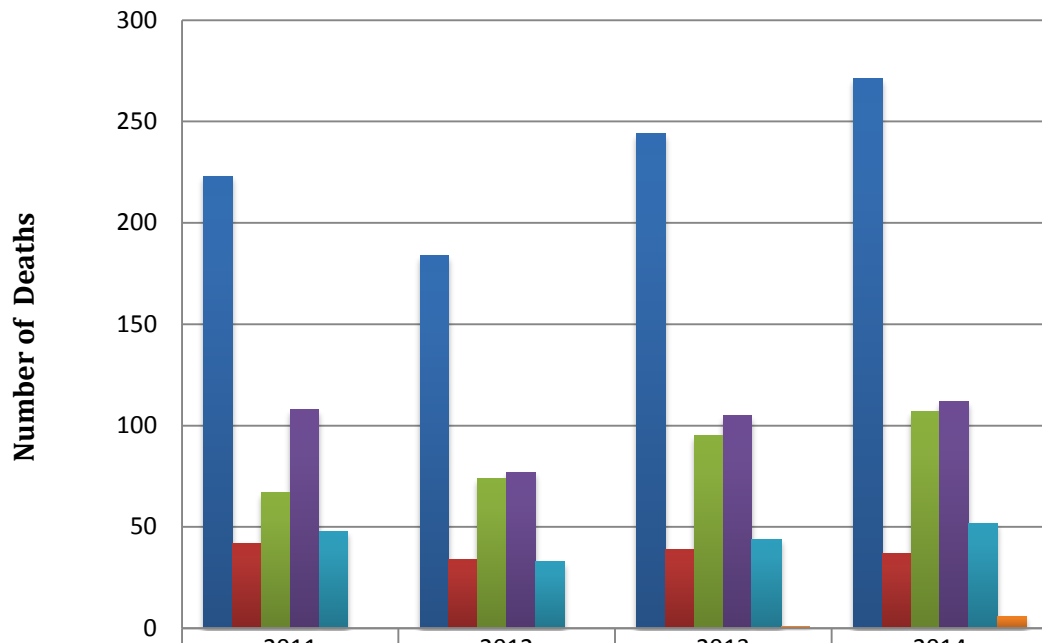
DRUG RELATED DEATHS

Toxicology analysis using various body fluids continues to be a very important aspect of death investigations occurring under the Macomb County Medical Examiner’s jurisdiction.

There is concern with regard to the rise in the number of drug related deaths, particularly heroin and controlled prescription drug abuse deaths involving drugs like Morphine, OxyContin, Vicodin, Valium and Xanax which can be detected with toxicological analysis. Alcohol in combination with drugs can also be a contributory factor.

In 2014, total drug-related deaths increased by 11%, compared to 2013, while heroin-related deaths increased by 13%.

Drug Related Deaths, 2011-2014



	2011	2012	2013	2014
Total Drug Related Deaths	223	184	244	271
Total Heroin Deaths	42	34	39	37
Total Heroin Related Deaths**	67	74	95	107
Prescription Medication Deaths	108	77	105	112
Other++	48	33	44	52
Heroin and Fentanyl	0	0	1	6

** Total “heroin related deaths” are deaths due to either heroin alone or heroin in combination with other drugs or alcohol.

++ The “other” category are deaths due to illicit drugs (excluding heroin), prescription drugs in combination with other drugs or alcohol (excluding heroin), and other ingested, injected or inhaled substances.