

Macomb County Medical Examiner 2015 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 2015 the Medical Examiner's Office conducted more death investigations than in any previous year. The total number of death investigations increased by 8.3% when compared to 2014. The number of cremation permits issued by the office increased for the 12th year in a row and showed a 4.5% increase from 2014. 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 2015, the Medical Examiner's Office investigated 2,532 deaths, performed 642 forensic examinations and issued 3,977 cremation permits. Additionally, 2,158 hospice deaths were reported to the Medical Examiner's Office. In 2015, there was a 7.4% increase in the number of deaths related to natural disease, a 18.75% increase in the total number of suicides, a 10.6% increase in the total number of accidents, a 76.9% increase in the total number of homicides, and a 3.3% increase in total number of drug deaths compared to 2014.

Drug related deaths have been at an all-time high for the past few years, reaching 280 in 2015. Abuse of prescription medications along with heroin and cocaine abuse continue to be major concerns in Macomb County. In 2015 there were 114 deaths related to heroin (heroin alone or heroin in combination with other drugs). This represents a 6.5% increase in heroin related deaths from 2014.

There was a noticeable increase in fentanyl related deaths over previous years. In 2015 there were 24 fentanyl deaths (excluding heroin) accounting for 8.6% of total drug related deaths and 51 fentanyl related deaths accounting for 18.2% of total drug related deaths.

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 2015 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., R.N., F-ABMDI

Forensic Investigations Specialist

Gretchen Terebesi, D-ABMDI

Morgue Specialist

Amanda Coleman

Brittney Hella, BSMS

Veronica Stout

Forensic Investigator

Anjanette Beaver

Melissa Bogoevski, D-ABMDI

Kiara Brooks

Kristen Marshall, BSN

Sean Monticciolo D-ABMDI

Jennifer Skridulis, 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

2015 Budget

Revenues	Expenses
\$ 1,535,088.00	\$ 1,535,088.00

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 864,840 residents (2015 U.S. Census Estimate), an increase in population of 2.82% since 2010 (841,126).

Among the County's 27 municipalities are three of the ten largest cities in Michigan: Warren (3rd), Sterling Heights (4th), and Clinton Township (10th).

Census Summary Profile

	2010 U.S. Census 841,126 Population		2015 Estimate 864,840 Population		Population Growth	Percent Change
White	715,853	85.11%	709,097	81.99%	-0.94%	-3.66%
Black or African American	74,275	8.83%	96,470	11.15%	+29.88%	+26.32%
American Indian and Alaska Native	2,716	0.32%	2,696	0.31%	-0.74%	-3.46%
Asian	25,870	3.08%	32,188	3.72%	+24.42%	+21.01%
Native Hawaiian and Other Pacific Islander	195	0.02%	175	0.02%	-10.26%	-12.72%
Some other race	5,423	0.64%	3,773	0.44%	-30.43%	-32.33%
Two or More Races	16,794	2.00%	20,441	2.36%	21.72%	18.38%
Hispanic or Latino	19,276	2.29%	21,865	2.53%	+13.43%	+10.32%

Source: U.S. Census Bureau, 2010 B02001, 2010 B03003, 2015 B02001, 2015 B03003

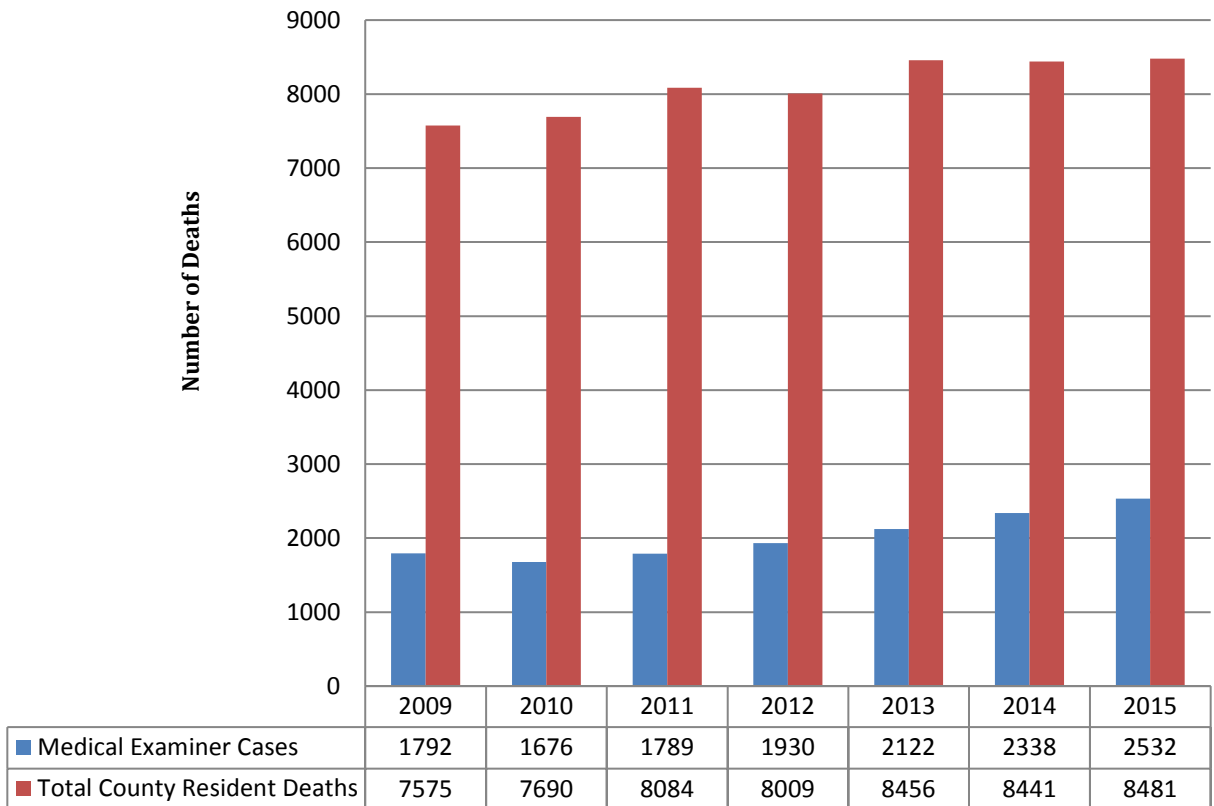
OVERVIEW OF CASES FOR 2015

Macomb County Population	864,840
Number of Resident Deaths in Macomb County	8481*
Macomb County Medical Examiner Cases	2532
Forensic Examinations	642

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 2015, the Macomb County Medical Examiner’s Office investigated 29.85% (2532/8481) of all deaths that occurred in Macomb County.

**Medical Examiner Cases and County Deaths,
2009-2015***

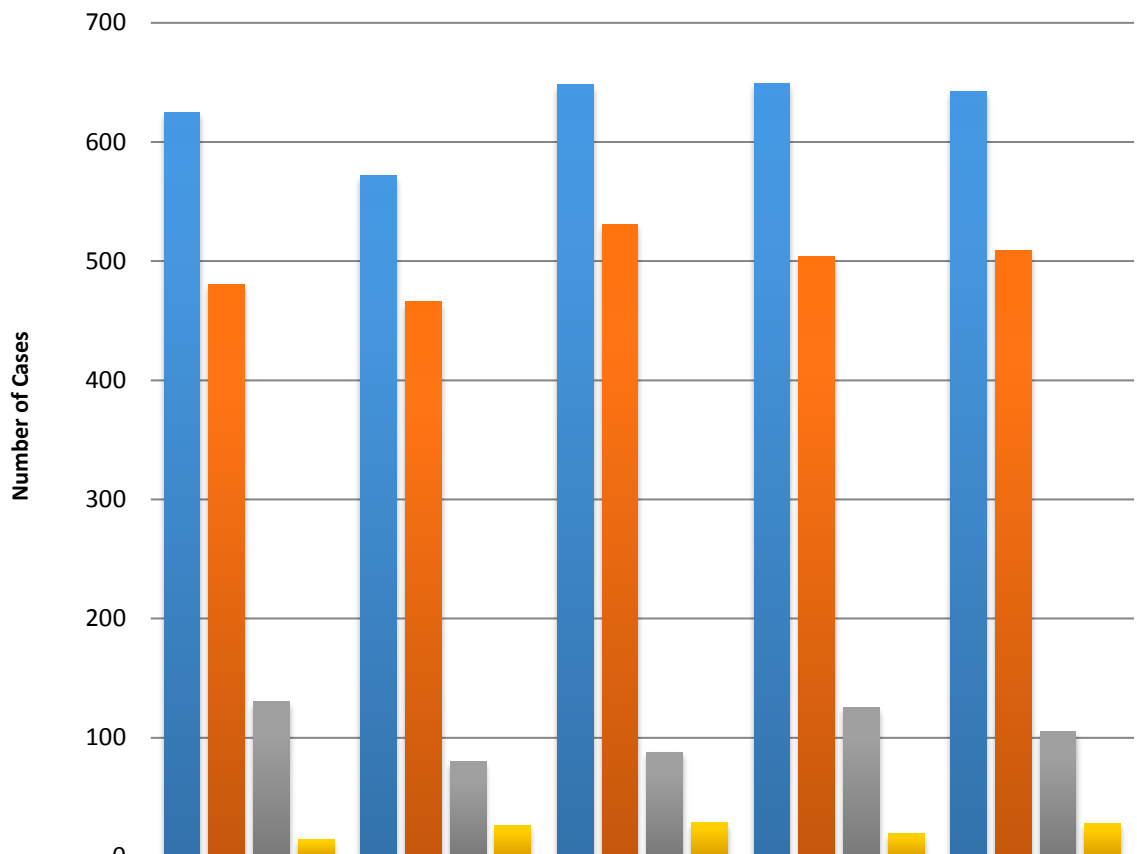


*2015 provisional data

FORENSIC EXAMINATIONS

The total number of forensic examinations includes complete autopsies, limited autopsies and external examinations. In 2015, the Medical Examiner’s Office investigated 2,532 deaths, of which 642 were brought to the office for a forensic examination by a forensic pathologist. Of the 642 forensic examinations, 509 were complete autopsies, 105 were external examinations and 28 were limited autopsies.

**Forensic Examinations
2011-2015**

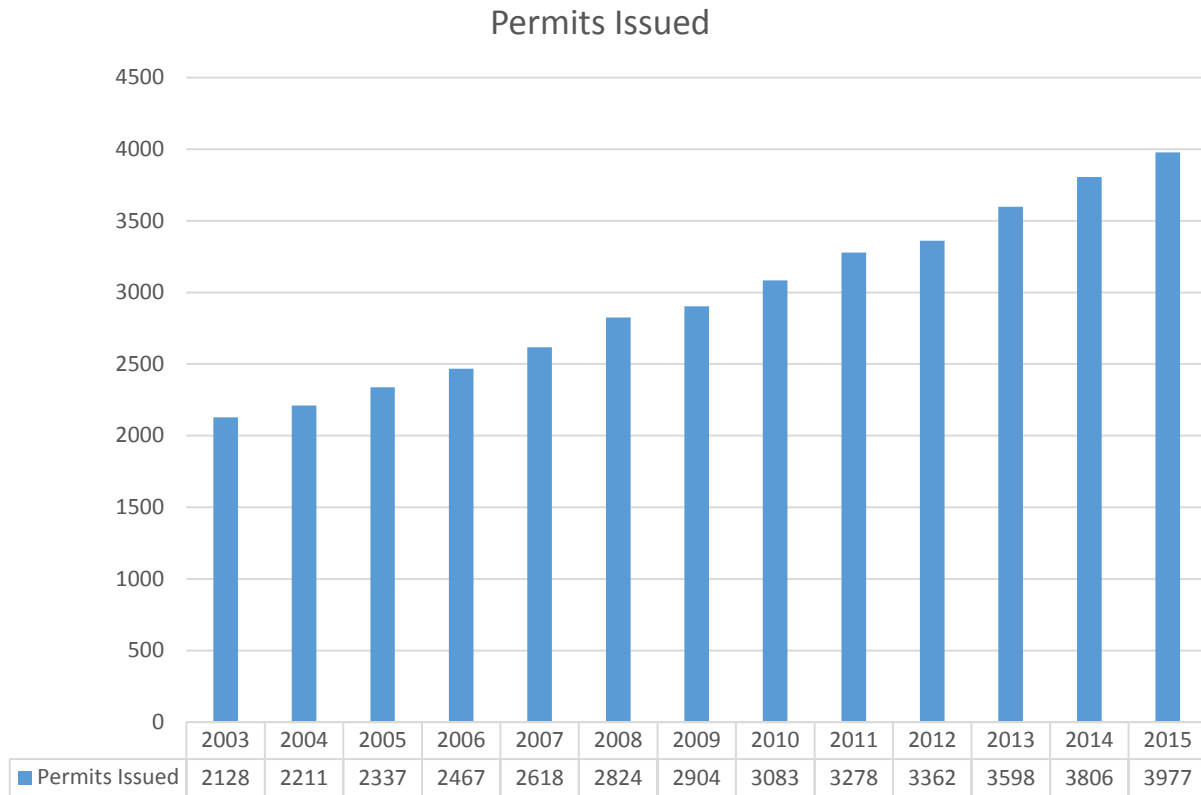


	2011	2012	2013	2014	2015
■ Total Forensic Examinations	625	572	648	649	642
■ Complete Autopsies	480	466	531	504	509
■ External Examinations	130	80	88	125	105
■ Limited Autopsies	15	26	29	20	28

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 2015 showed a 4.5% increase from 2014.



MANNER OF DEATH

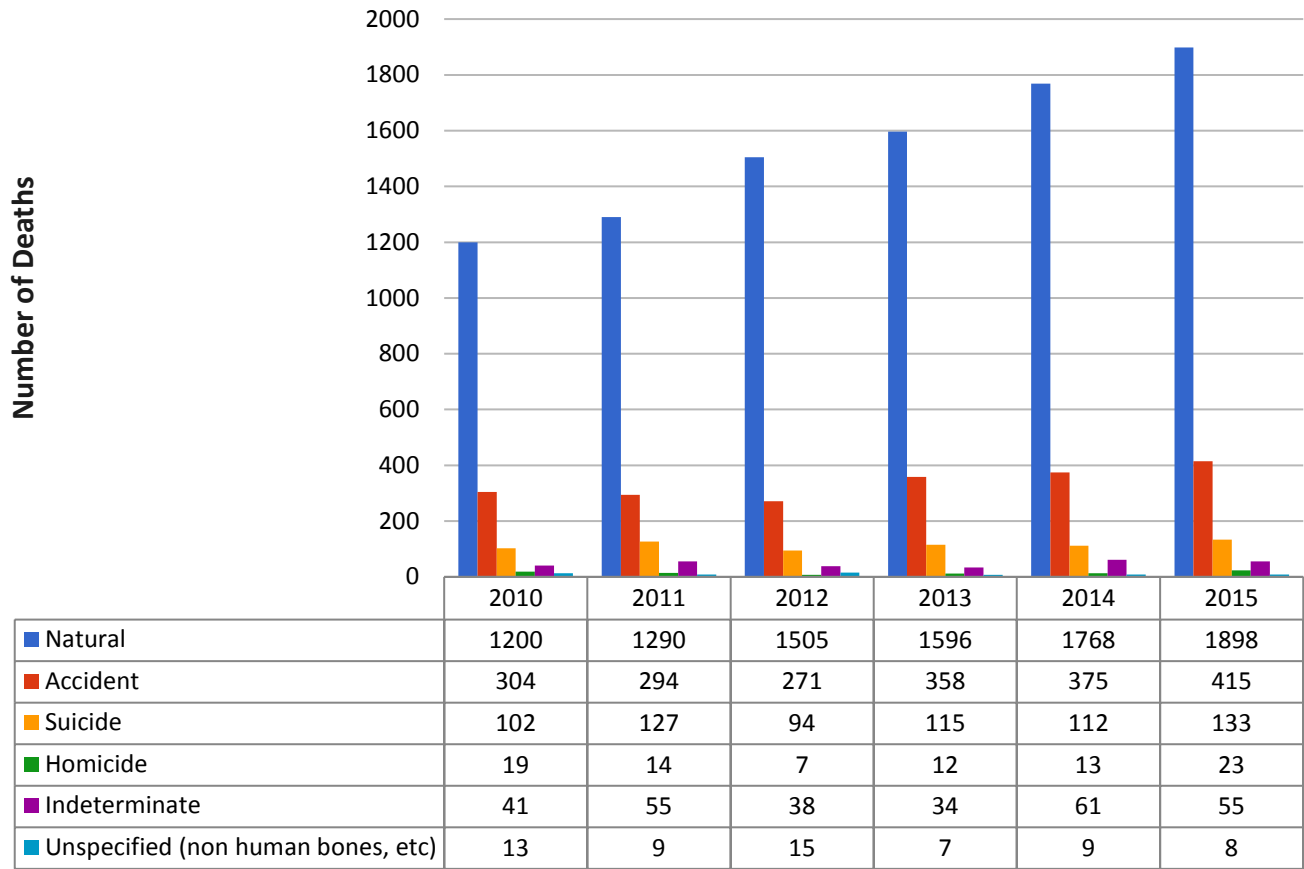
Manner of death is one of the items that must be reported on the death certificate and is a classification of death based on the circumstances, autopsy findings, toxicology results and all available information associated with the death investigation. There are five "manner" classifications: natural,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

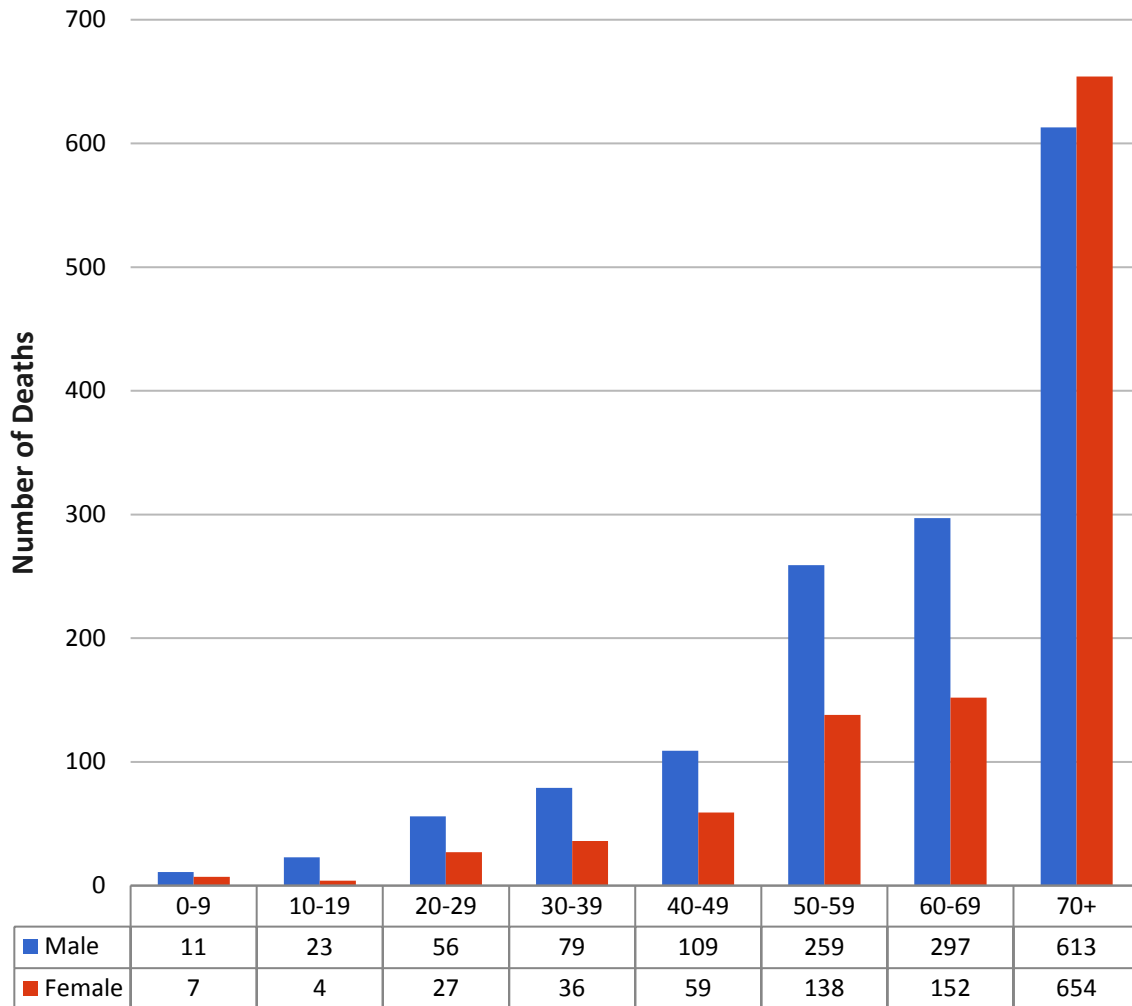
Cases by Manner of Death, 2015	Number	Percent
Natural	1898	74.96%
Accident	415	16.39%
Suicide	133	5.25%
Homicide	23	0.91%
Indeterminate	55	2.17%
Unspecified (non-human bones, etc.)	8	0.32%
Total:	2532	

Medical Examiner Cases by Manner of Death, 2010-2015



Medical Examiner Cases by Age and Gender

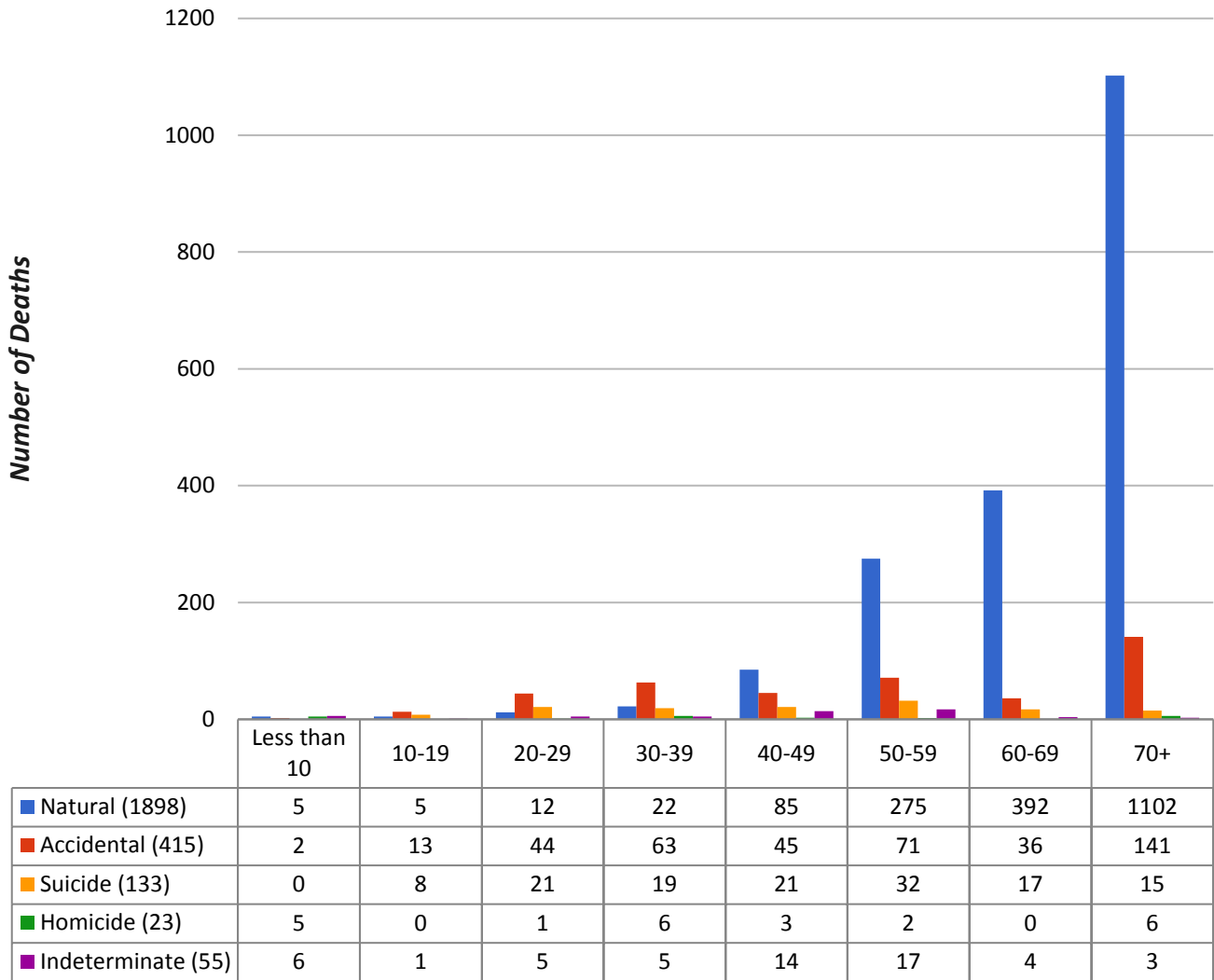
There were a total of 2,532 investigations performed in 2015; of these 1,447 (57.1%) were males; 1077 (42.5%) were females and 8 (0.32%) cases were unknown tissue/non-human bones.



Age Group	Male	Female	Other	Bones	Total
0-18 Years	30	11	2	0	43
19 Years and Older	1417	1066	0	0	2483
Unreported	0	0	0	6	6
Total	1447	1077	2	6	2532

Medical Examiner Cases by Manner of Death and Age

Medical Examiner Cases by Manner of Death and Age



Medical Examiner Cases by Race and Gender

Race	Male	Female	Total
White	1311	979	2290
African American	117	79	196
American Indian	0	1	1
Asian Pacific	7	10	17
Hispanic	7	3	10
Multiracial	4	3	7
Other	1	2	3
Total Cases	1447	1077	2524

*This chart does not include 8 unspecified cases (bones/tissue)

MANNER OF DEATH – Natural

Natural Cases by Age and Gender

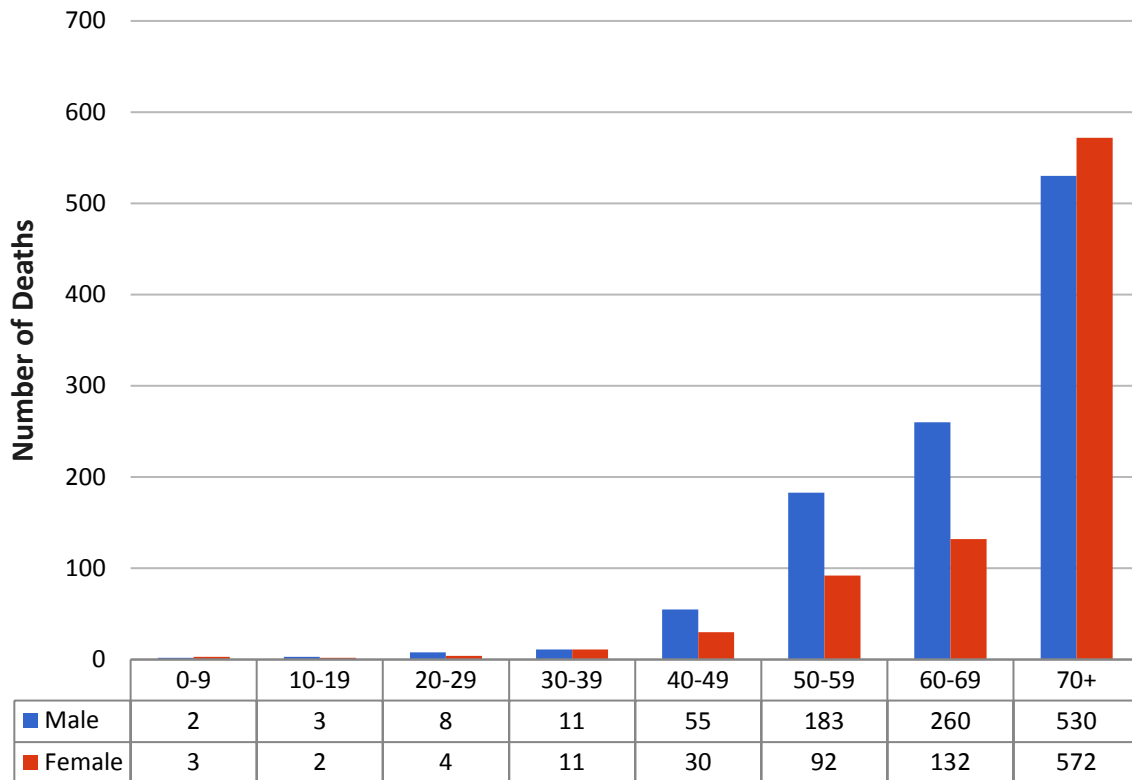
Natural deaths represented 74.9% (1,898/2,532) of all Medical Examiner cases.

Males accounted for 55.4% (1052/1,898) of the natural deaths; **females** accounted for 44.6% (846/1,898) of the natural deaths.

The male 70+ age group accounted for 50.38% (530/1052) of all male natural deaths, while the female 70+ age group accounted for 67.61% (572/846) of all female natural deaths.

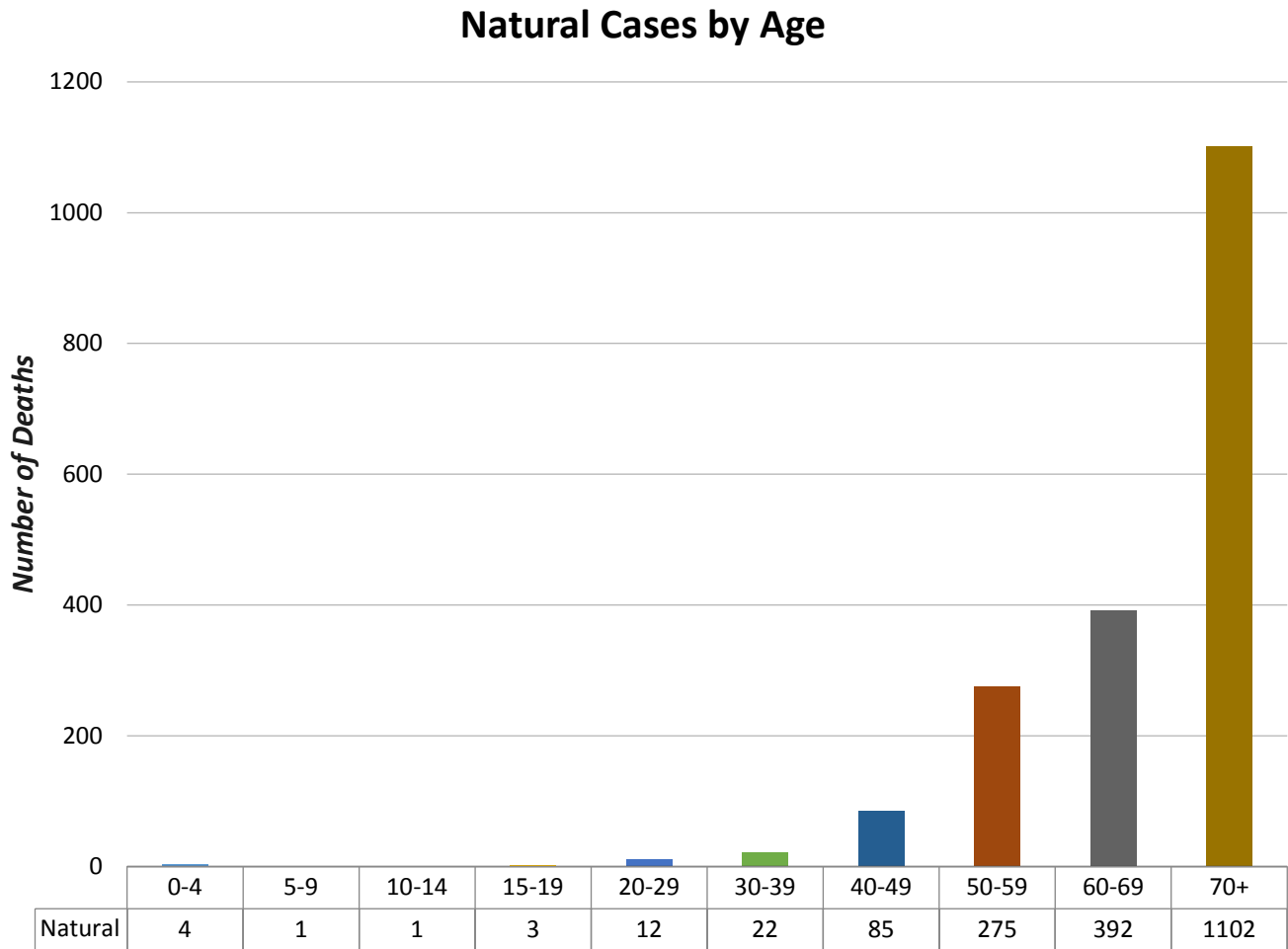
The combined male/female 70+ age groups represented 58.06% (1102/1898) of the natural deaths.

Natural Cases by Age and Gender



Age Group	Male	Female	Unspecified	Total	Percent
0 - 18 Years	5	5	0	10	0.53%
19 Years and Older	1047	841	0	1888	99.47%
Total	1052	846	0	1898	100.0%

Natural Cases by Age



Natural Cases by Race and Gender

Race	Male	Female	Total
White	957	762	1719
African American	86	70	155
American Indian	0	1	1
Asian Pacific	6	7	13
Hispanic	3	2	5
Multiracial	1	2	3
Other	0	2	2
Total	1052	846	1898

MANNER OF DEATH - Accident

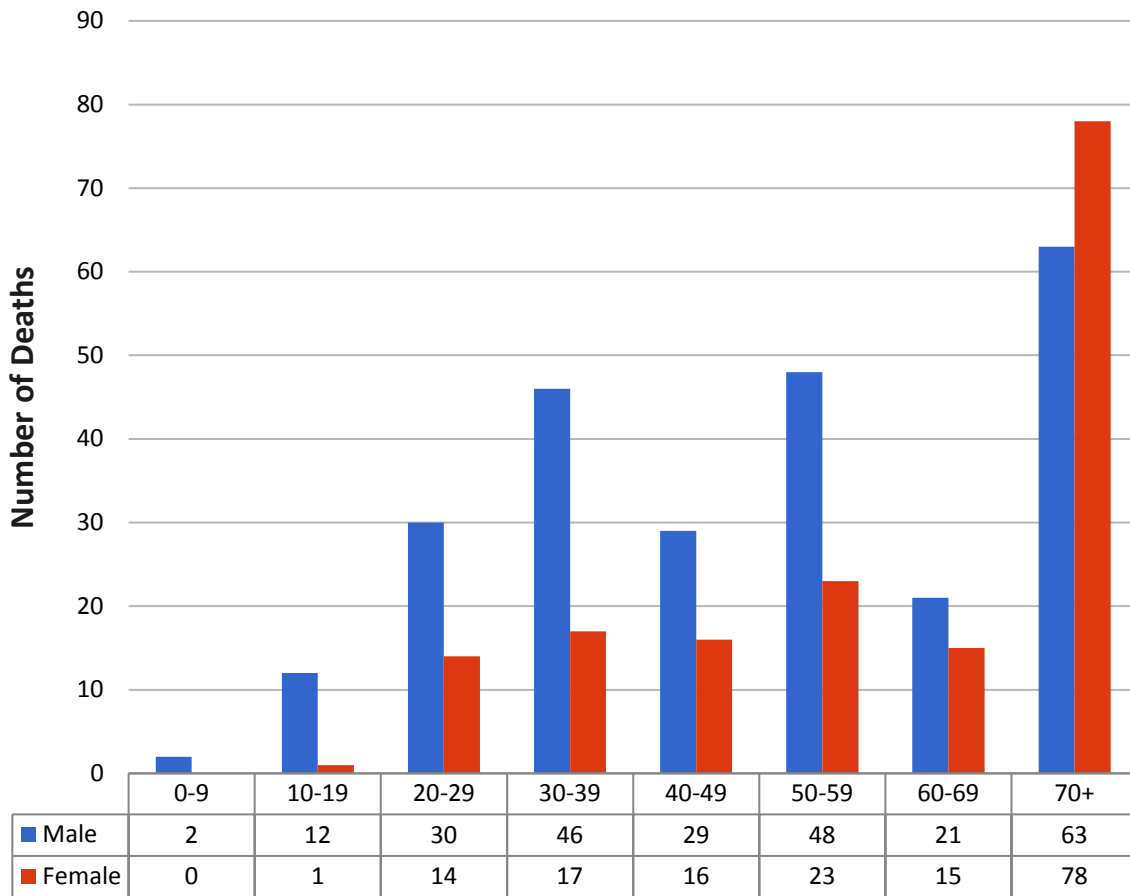
Accident Cases by Age and Gender

Accidental deaths represented 16.4% (415/ 2,532) of all Medical Examiner cases.

Males accounted for 60.5% (251/415) of the total accidental death cases; **females** accounted for 39.5% (164/415) of the accidental death cases.

The male 70+ age group accounted for 25.1% (63/251) of all male accidental deaths. The highest female age grouping was the 70+ age group accounting for 47.56% (78/164) of all female accidental deaths.

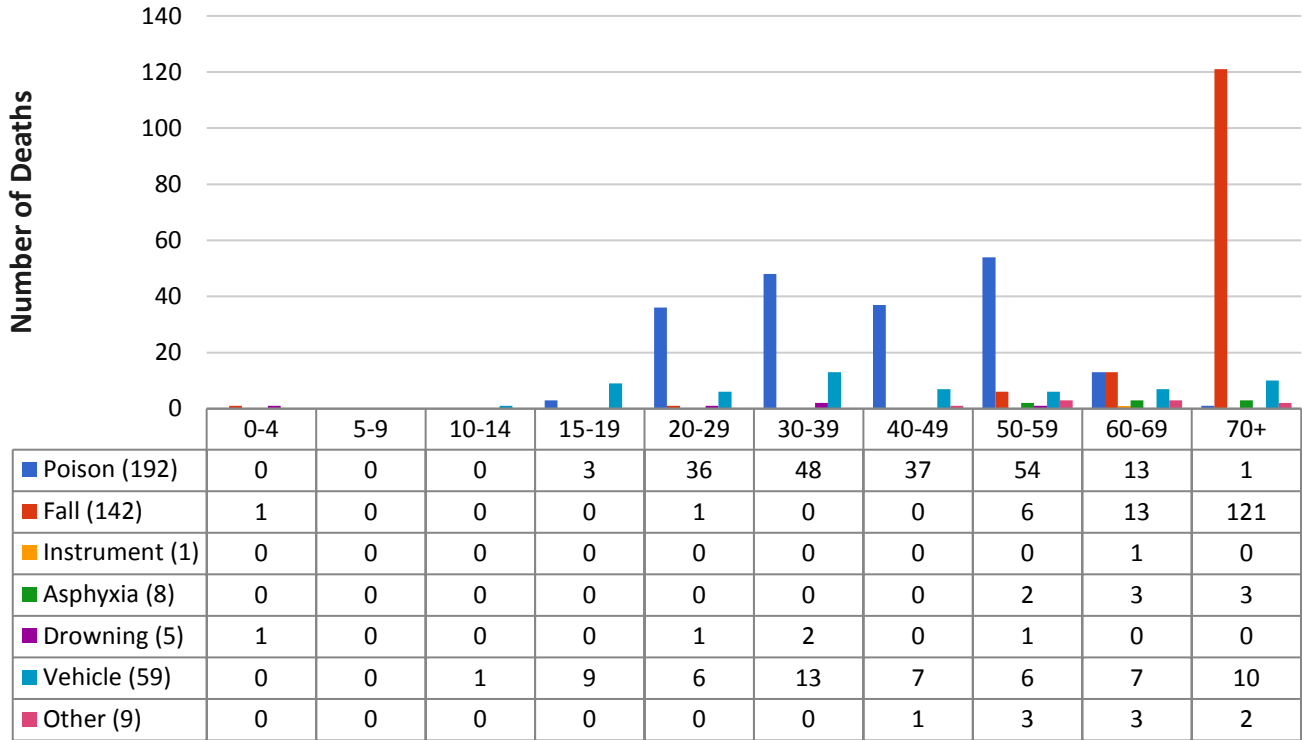
Accident Cases by Age and Gender



Age Group	Male	Female	Total	Percent
0-19 Years	14	1	15	3.61%
20 Years and Older	237	163	400	96.39%
Total Cases	251	164	415	100%

Accident Cases by Age and Means

Accident Cases by Age and Means



Accidental poisoning accounted for 46.3% (192/415) 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 34.2% (142/415) with the majority of deaths occurring in the 70 year old and older age group (85.2%).

Accident Cases by Race and Gender

Race	Male	Female	Total
White	225	156	381
African American	20	6	26
American Indian	0	0	0
Asian Pacific	1	1	2
Hispanic	3	1	4
Multiracial	1	0	1
Other	1	0	1
Total	251	164	415

MANNER OF DEATH – Suicide

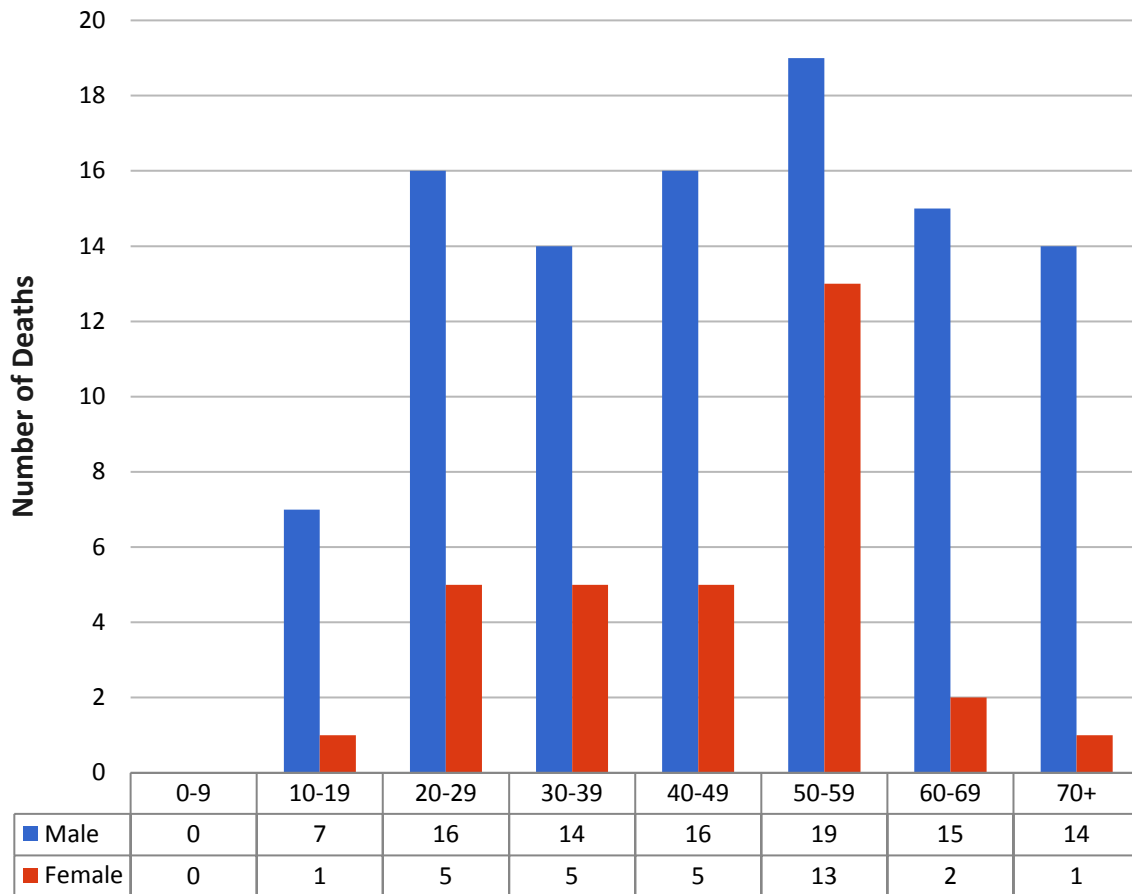
Suicide Cases by Age and Gender

Suicide deaths represented 5.25% (133/2532) of all Medical Examiner cases.

Males accounted for 75.9% (101/133) of the total suicide death cases; **females** accounted for 24.1% (32/133) of the suicide cases.

The male 50-59 age group accounted for 18.8% (19/101) of all male suicide cases. The female 50-59 age group accounted for 40.6% (13/32) of all female suicide cases.

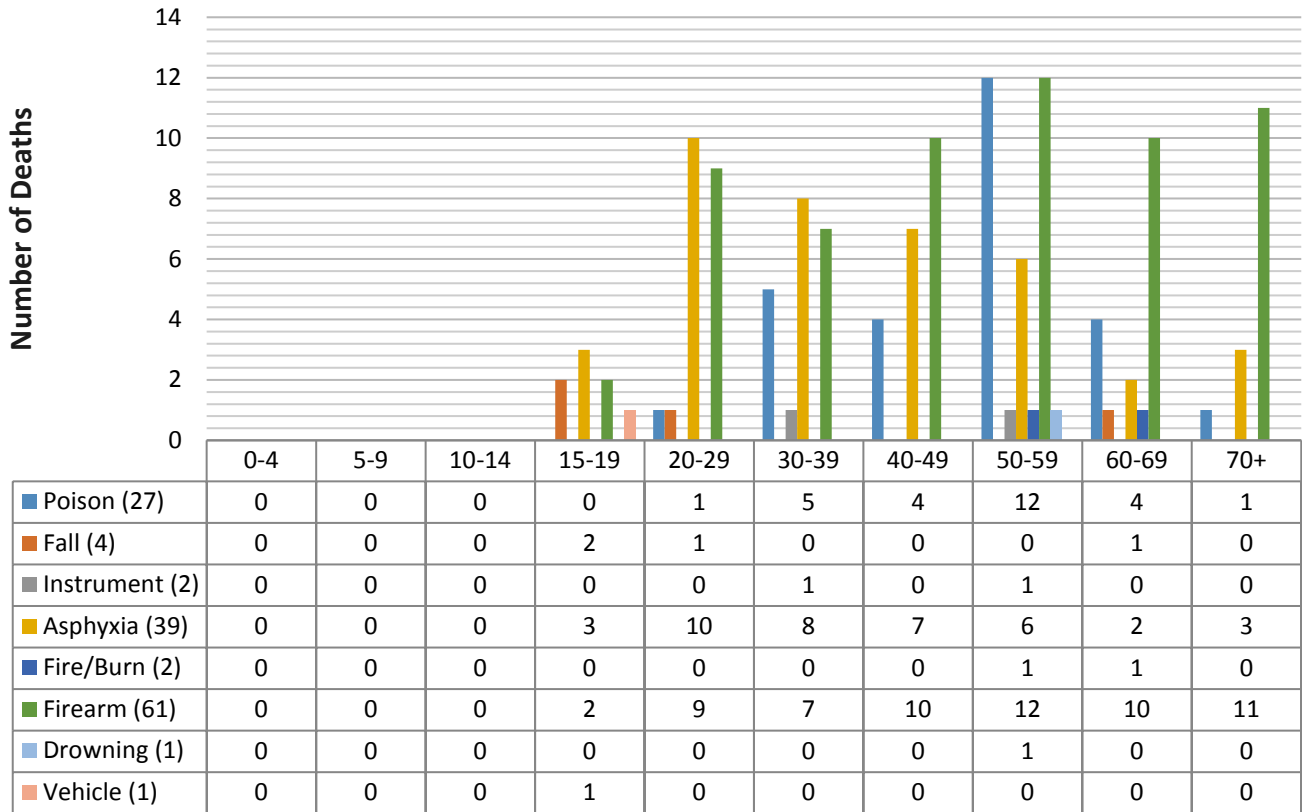
Suicide Cases by Age and Gender



Age Group	Male	Female	Total	Percent
0-19	7	1	8	6.02%
20 Years and Older	94	31	125	93.98%
Total Cases	101	32	133	100%

Suicide Cases by Age and Means

Suicide Cases by Age and Means



Firearm suicide cases represented 45.86% (61/133) of all suicides, asphyxia accounted for 29.3% (39/133) and poisoning 20.3% (27/133).

The 50-59 age group accounted for 19.7% (12/61) of firearm deaths, the 20-29 age group accounted for 25.6% (10/39) of asphyxia deaths and the 50-59 age group accounted for 44.4% (12/27) poisoning deaths.

Suicide Cases by Race and Gender

Race	Male	Female	Total
White	92	29	121
African American	7	1	8
American Indian	0	0	0
Asian Pacific	0	2	2
Hispanic	1	0	1
Multiracial	1	0	1
Other	0	0	0
Total	101	32	133

MANNER OF DEATH – Homicide

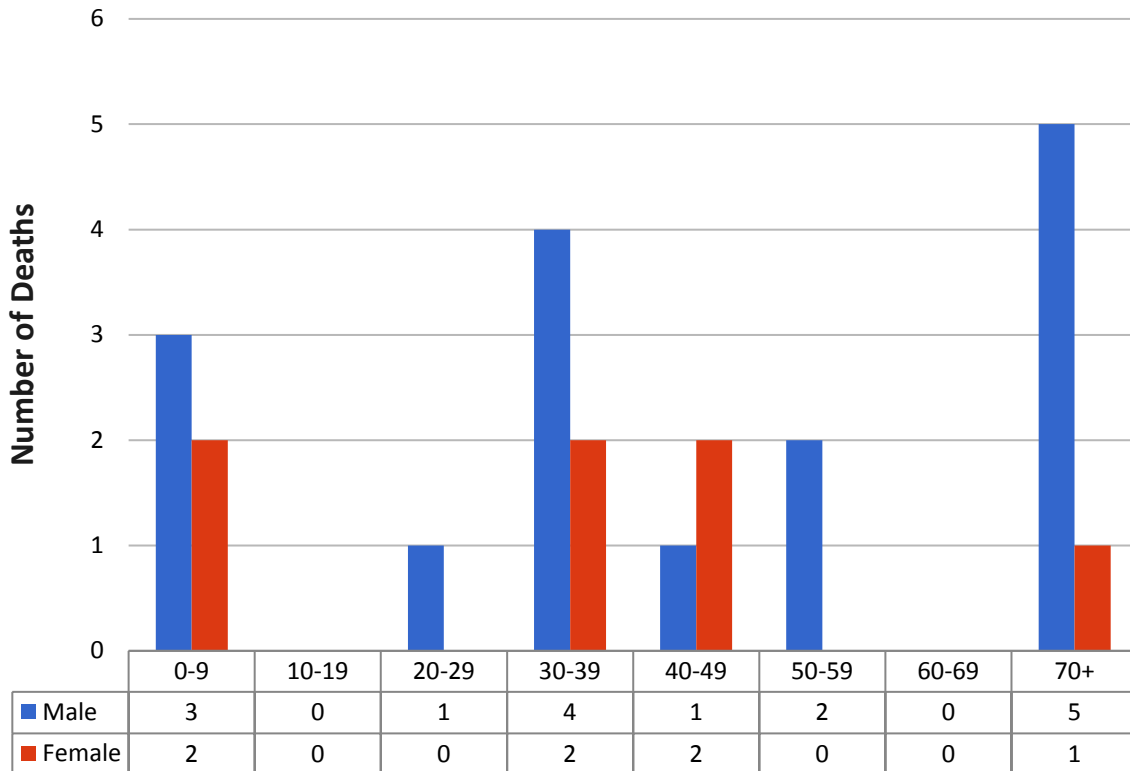
Homicide Cases by Age and Gender

Homicide deaths represented 0.6% (23/2532) of all Medical Examiner cases.

Males accounted for 69.6% (13/23) of the total homicide cases; **females** accounted for 30.4% (7/23) of the homicide cases.

The 70+ age group accounted for 31.3% (5/16) of the male homicide cases. The 0-9, 30-39 and 40-49 age groups each accounted for 28.6% (2/7) of female homicide cases.

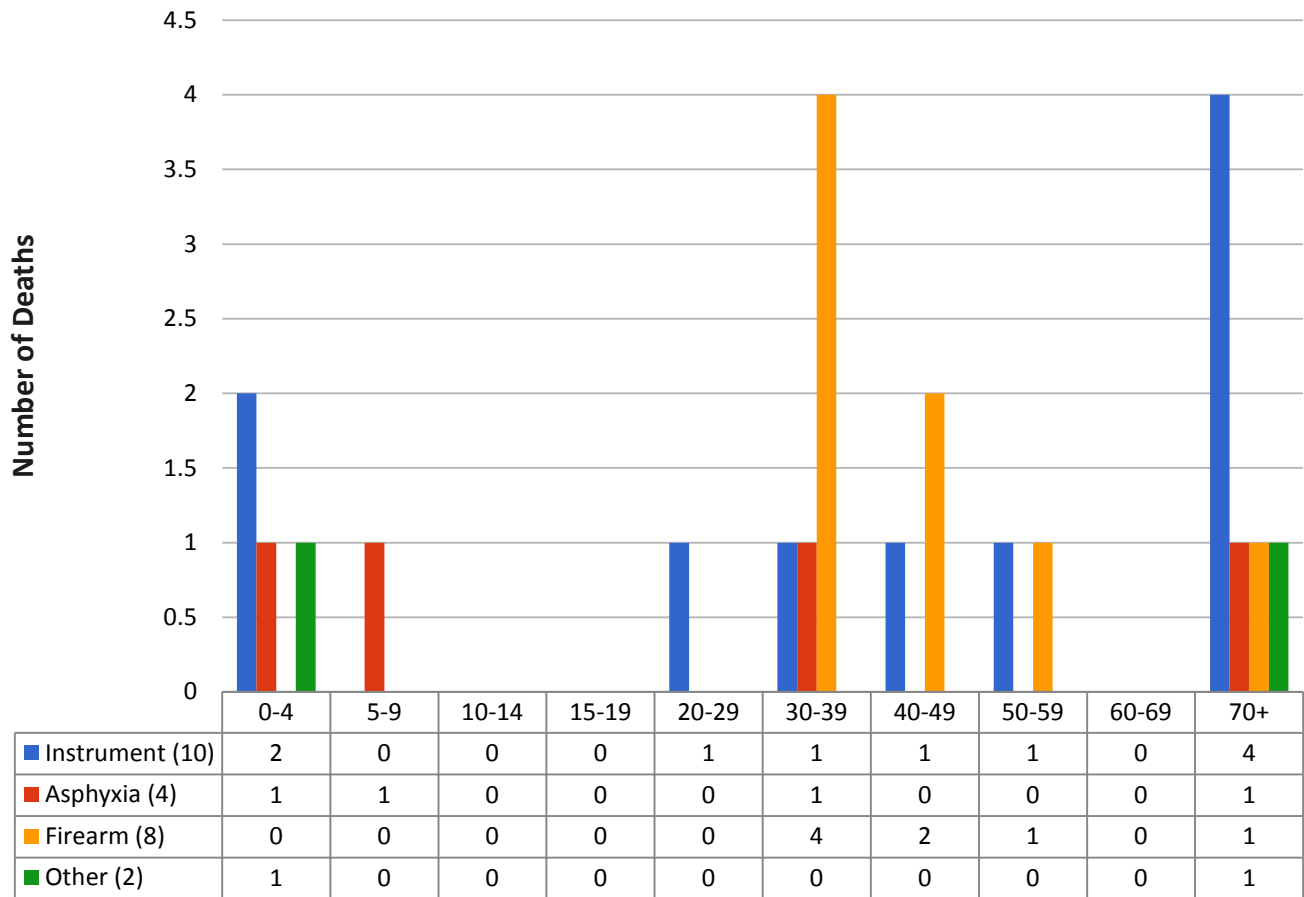
Homicide Cases by Age and Gender



Age Group	Male	Female	Total	Percent
0-19 Years	3	2	5	21.74%
20 Years and Older	13	5	18	78.26%
Total	16	7	23	100%

Homicide Cases by Age and Means

Homicide Cases by Age and Means



Homicide by instrument accounted for 38.5% (10/23) of all homicide cases with 70+ age group having the highest rate at 40% (4/10) of all homicides by instrument. Homicide by firearm accounted for 32.8% (8/23) of all homicide cases.

Homicide Cases by Race and Gender

Race	Male	Female	Total
White	12	6	16
African American	4	0	4
American Indian	0	0	0
Asian Pacific	0	0	0
Hispanic	0	0	0
Multiracial	0	1	1
Other	0	0	0
Total	16	7	23

MANNER OF DEATH - Indeterminate

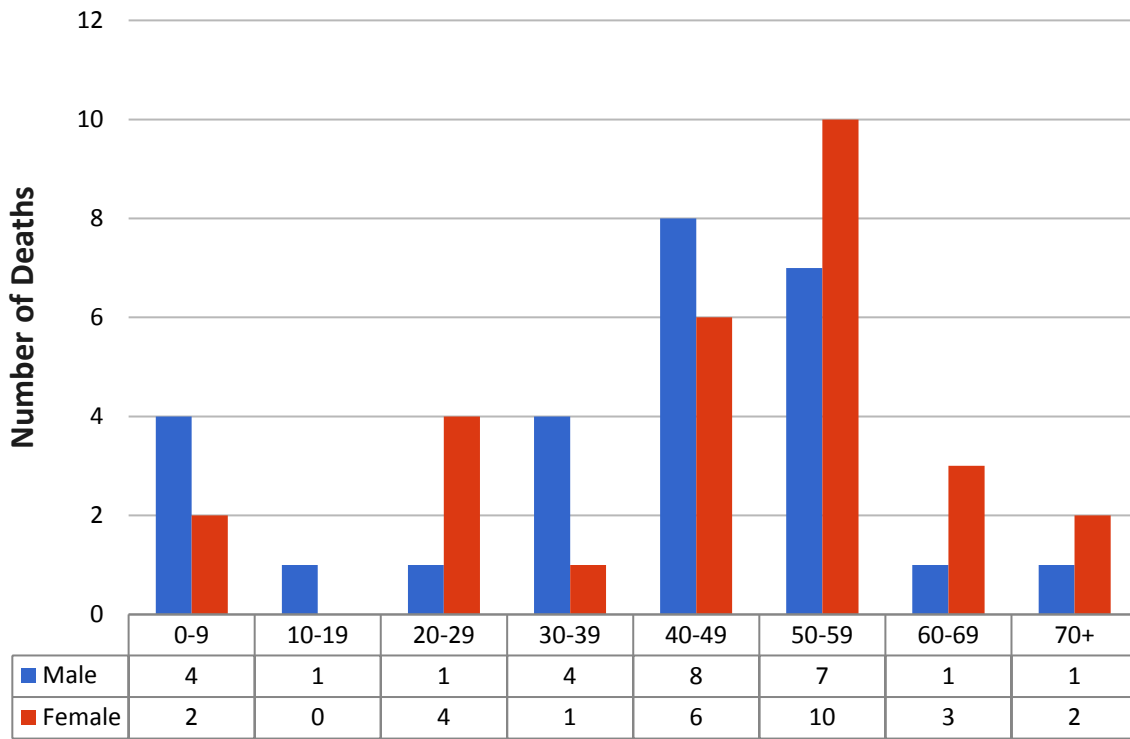
Indeterminate Cases by Age and Gender

Indeterminate deaths represented 2.2% (55/2,532) of all Medical Examiner cases.

Males accounted for 49.1% (27/55) of the indeterminate deaths and **females** accounted for 50.9% (28/55) of the indeterminate death cases.

The 40-49 age group accounted for 29.6% (8/27) of the male indeterminate deaths, while the 50-59 age group accounted for 35.7% (10/28) of the female indeterminate deaths.

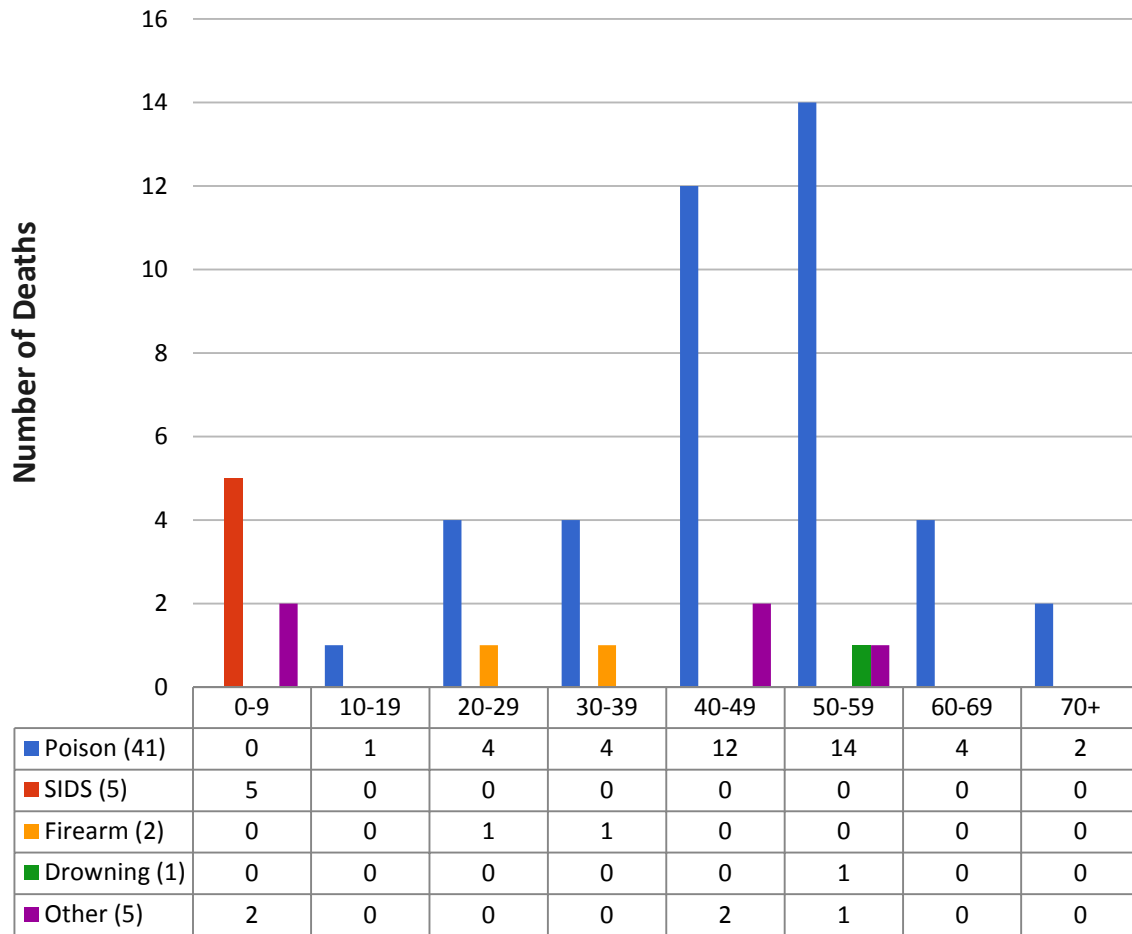
Indeterminate Cases by Age and Gender



Age Group	Male	Female	Total	Percent
0-19 Years	5	2	7	12.7%
20 Years and Older	22	26	48	87.3%
Total Cases	27	28	55	100%

Indeterminate Cases by Age and Means

Indeterminate Cases by Age and Means



Poisoning accounted for 74.5% (41/55) of all indeterminate death cases with the 50-59 age group having the highest, or 34.1% (14/41) of all indeterminate poisoning deaths.

Indeterminate Cases by Race and Gender

Race	Male	Female	Total
White	25	26	51
African American	1	2	3
American Indian	0	0	0
Asian Pacific	0	0	0
Hispanic	0	0	0
Multiracial	1	1	1
Other	0	0	0
Total	27	28	55

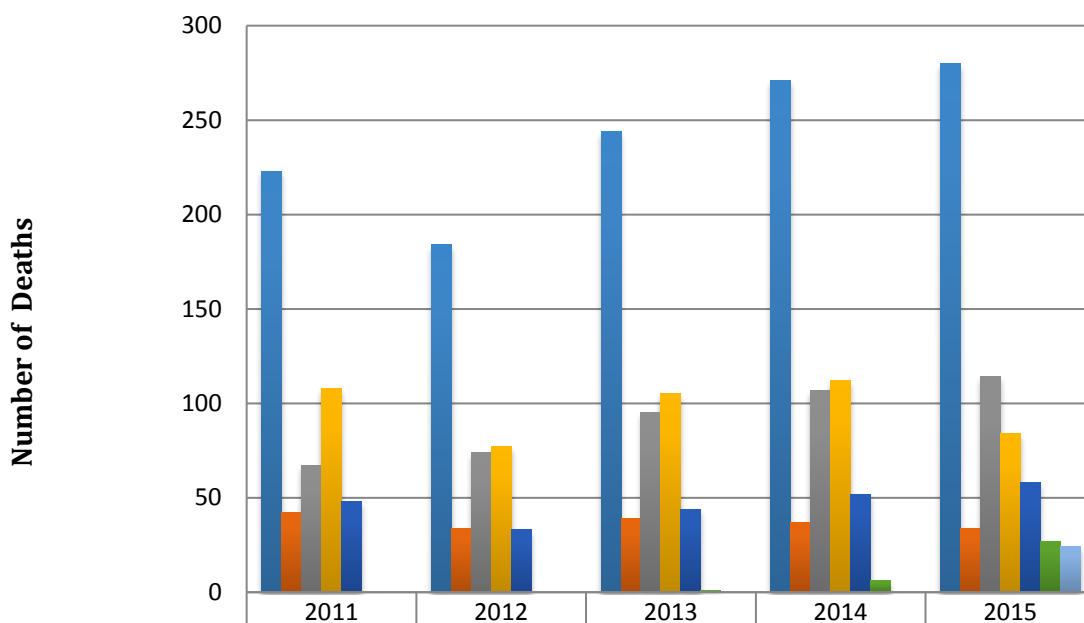
DRUG RELATED DEATHS

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 Methadone, Oxycodone, Fentanyl, Hydrocodone, Valium and Xanax which can be detected with toxicological analysis. Alcohol in combination with drugs can also be a contributory factor.

In 2015, total drug-related deaths increased by 3.3%, compared to 2014, while heroin-related deaths increased by 6.5%.

Drug Related Deaths, 2011-2015



	2011	2012	2013	2014	2015
Total Drug Related Deaths	223	184	244	271	280
Total Heroin Deaths	42	34	39	37	34
Total Heroin Related Deaths*	67	74	95	107	114
Prescription Medication Deaths	108	77	105	112	84
Other**	48	33	44	52	58
Heroin and Fentanyl	0	0	1	6	27
Fentanyl Deaths (excluding Heroin)***					24

* 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.

*** From 2011-2014 Fentanyl Deaths were included in Prescription Medication Deaths.