



**MACOMB COUNTY MEDICAL
EXAMINER
2013 Annual Report**

**DANIEL J. SPITZ,
M.D.
CHIEF MEDICAL EXAMINER**



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MACOMB COUNTY HEALTH DEPARTMENT

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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 2013, the Medical Examiner's Office conducted more death investigations than in any previous year. The total number of death investigations increased by 10% when compared to 2012. The number of cremation permits issued by the office increased for the 10th year in a row and showed a 7% increase from 2012. 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 2013, the Medical Examiner's Office investigated 2,122 deaths, performed 648 forensic examinations and issued 3,598 cremation permits. Additionally, 2,046 home hospice deaths were reported to the Medical Examiner's Office. There was a 6% increase in the number of deaths related to natural disease, a 22% increase in the total number of suicides, a 32% increase in the total number of accidents and a 71% increase in the total number of homicides in 2013.

Drug related deaths have been at an all time high for the past few years. Abuse of prescription medications along with heroin abuse continues to be major concerns here in Macomb County. In 2013, there were 95 deaths related to heroin (heroin alone or heroin in combination with other drugs). This represents a 28% increase in heroin related deaths from 2012.

We continue to support the efforts of the Gift of Life Organ and Tissue Procurement Agency and the Michigan Eye Bank. In 2013, the Medical Examiner's Office referred 365 non-hospital deaths which resulted in 24 tissue donors. Additionally, the office made referrals to the Michigan Eye Bank which resulted in 46 cornea donors.

In January 2013, the Medical Examiner's Office initiated several administrative changes. One of the main objectives of these changes was to prepare the office for accreditation by the National Association of Medical Examiners (NAME). I am pleased to inform you that in April we submitted our accreditation documents and anticipate scheduling a site visit in the near future.

I 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.

I am pleased to present you with the Macomb County Medical Examiner's 2013 Annual Report.

Respectfully Submitted,

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

Macomb County Health Department

William J. Ridella, MPH, MBA
Director/Health Officer

Kevin P. Lokar, MD, MPH
Medical Director

Medical Examiner's Office

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Medical Examiner Personnel

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

Jason Booms
Forensic Investigator

Mary E. Pietrangelo, M.D.
Deputy Medical Examiner

Robert Wiley, D-ABMDI
Forensic Investigator

Patricia Roland, BSN, D-ABMDI
Manager of Operations

Mary Palmateer, F-ABMDI
Forensic Investigator

Gretchen Ingram, D-ABMDI
Forensic Investigations Specialist

Brittney Hella, BSMS
Morgue Specialist

Sean Monticciolo D-ABMDI
Forensic Investigator

Veronica Stout
Morgue Specialist

Jennifer Skridulis, D-ABMDI
Forensic Investigator

Duane Loxton
Morgue Specialist

Harold Bergeron
Forensic Investigator

Denise Calhoun
Typist Clerk III

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).

Laws Governing the Medical Examiner's Office

Act 1891 of 1953, MCL 52.201-52.216, requires Macomb County and every Michigan county to appoint a county medical examiner who is 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 the cause of death and the manner of death in cases where death has occurred violently, accidentally, unexpectedly, or without medical attendance, ascertaining identity of the decedent and notifying the next of kin. The county medical examiner has broad powers and specific responsibilities to act under the aforementioned section of State law to carry out that mission.

Act 181 of 1953, MCL Section 52.201 – 52.216



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.

Macomb County Medical Examiner's Office

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 discrete viewing area for families, a walk-in cooler, four autopsy stations, digital X-ray equipment and a special dissection room for decomposed/infectious cases.



Macomb County Medical Examiner Budget 2013

Budget	
Revenues	Expenses
\$ 1,475,049.70	\$ 1,475,049.70

Macomb County Demographics

Macomb County is located in southeastern Michigan and comprises the northeastern portion of the Detroit metropolitan area. Encompassing 479 square miles, Macomb County is the ninth smallest of Michigan's 83 counties, yet it ranks third in population with 840,978 residents, an increase in population of 6.7% since 2000 (788,149).

Among the County's 27 municipalities are three of the ten largest cities in Michigan: Warren (3rd), Sterling Heights (6th), and Clinton Township (10th).

CENSUS SUMMARY PROFILE	2000	2010		2000	2010	
	Numbers		% Change	Percent of Population		% Difference
White	721,882	705,693	-2.24	91.59	83.91	-7.7
Black or African American	21,151	72,053	240.66	2.68	8.57	5.9
Hispanic or Latino	12,436	19,095	53.56	1.58	2.27	0.7
American Indian and Alaska Native	2,255	2,351	4.26	0.29	0.28	-0.1
Asian	16,743	24,908	48.77	2.12	2.96	0.8
Native Hawaiian and Other Pacific Islander	157	168	7.01	0.02	0.02	0
Other Race	685	803	17.23	0.09	0.10	0.01
Two or More Races	12,841	15,907	23.88	1.63	1.89	0.26
Total Population	788,149	840,978	6.7			

Source: 2010 data from U.S. Census Bureau

Activities of the Medical Examiner's Office

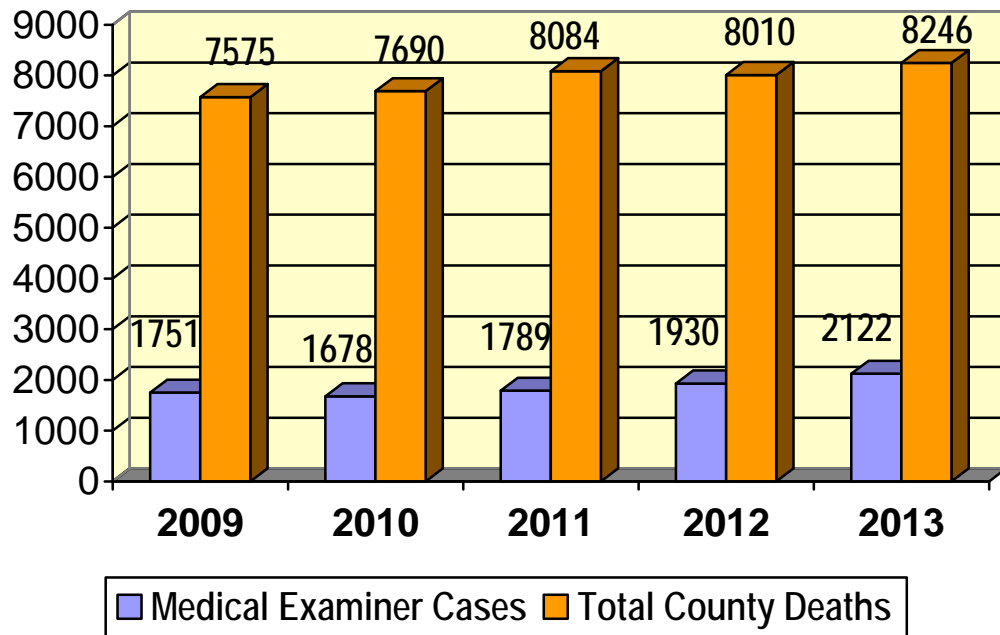
- **Autopsy and Investigations:** As part of the duties of the Medical Examiner's Office, autopsy and investigative reports are prepared and maintained on all cases.
- **Legal Assistance:** The Macomb County Medical Examiner's Office fulfills legal obligations by testifying in criminal and civil proceedings 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, a portion of the Medical Examiner's duties includes serving on the Macomb County Child Death Review Team (MCCDRT). The MCCDRT is composed of various county wide 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 involving substance abuse, forensic nursing, trauma management, etc.
- **Organ and Tissue Donation Referral:** The Medical Examiner's Office continues to work closely with the Gift of Life Organ and Tissue Procurement Agency and the Michigan Eye Bank. In 2013, the Medical Examiner's Office referred 365 non-hospital deaths which resulted in 24 tissue donors. Additionally, the Medical Examiner's Office made referrals to the Michigan Eye Bank which resulted in 46 cornea donors.

TOTAL CASES FOR 2013

Macomb County Population	840,978
Number of Deaths in Macomb County	8,246
Macomb County Medical Examiner Cases	2,122
Forensic Examinations	648

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 MCMEO investigator attends the scene in person and performs an investigation of the scene and examination of the body. The Medical Examiner and investigative staff are on call and available 24 hours/day, 365 days/year.

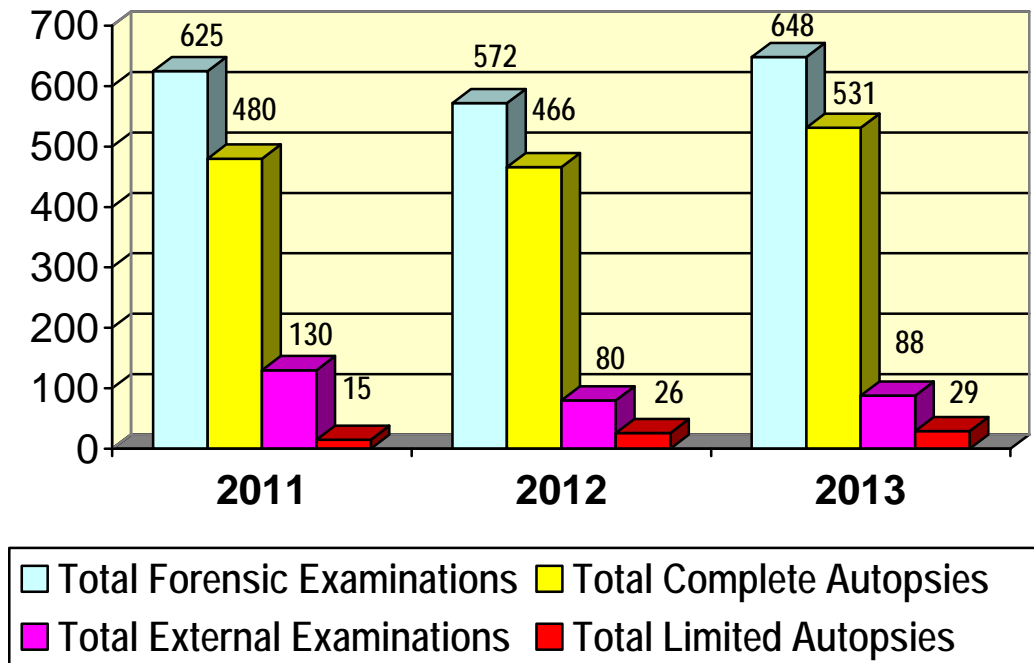
Not all bodies transported to the MCMEO for examination are autopsied. The Medical Examiner may choose to either perform an autopsy or an external examination. In most autopsies and external examinations, blood, urine and vitreous fluid specimens are collected for toxicological analysis.



FORENSIC EXAMINATIONS

The total number of forensic examinations includes complete autopsies, limited autopsies and external examinations. In 2013, the Medical Examiner's Office investigated 2,122 deaths, of which 648 were brought to the office for a forensic examination by a forensic pathologist. Of the 648 forensic examinations, 531 were complete autopsies, 88 were external examinations and 29 were limited autopsies.

2011 - 2013

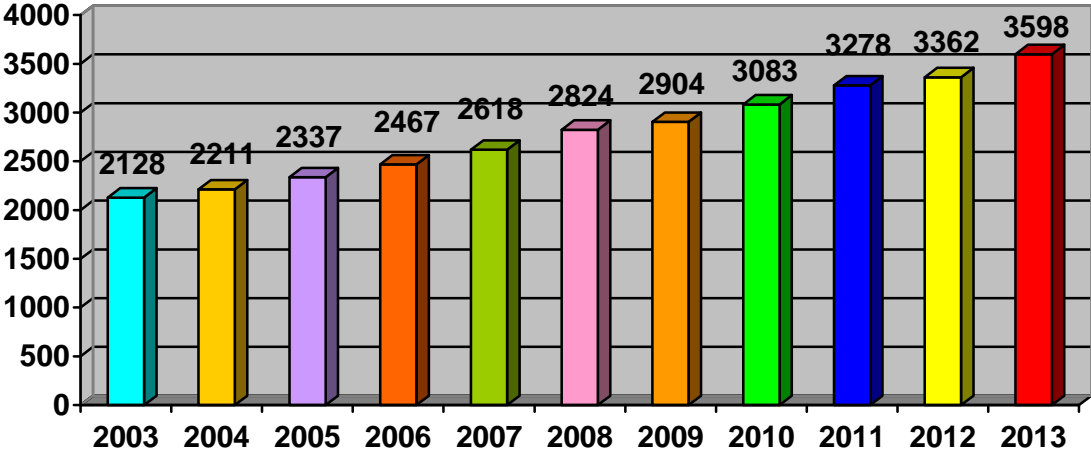


CREMATION PERMITS

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 2013 showed a 7% increase from 2012. This resulted in total revenue of \$269,850.00 for an overall increase of \$17,924.00 from 2012.

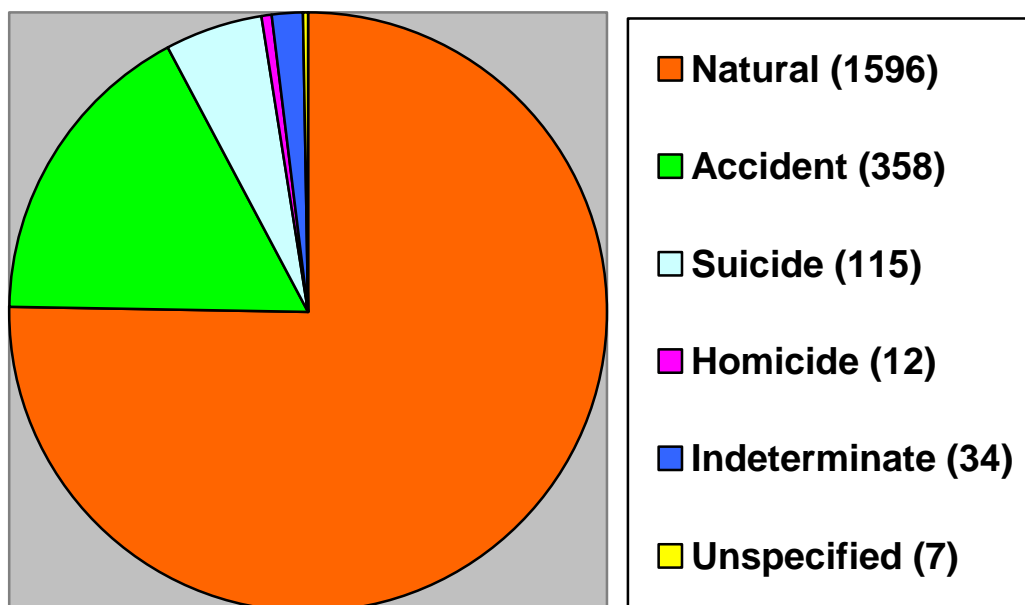
CREMATION PERMIT AUTHORIZATIONS BY YEAR 2003 – 2013



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.

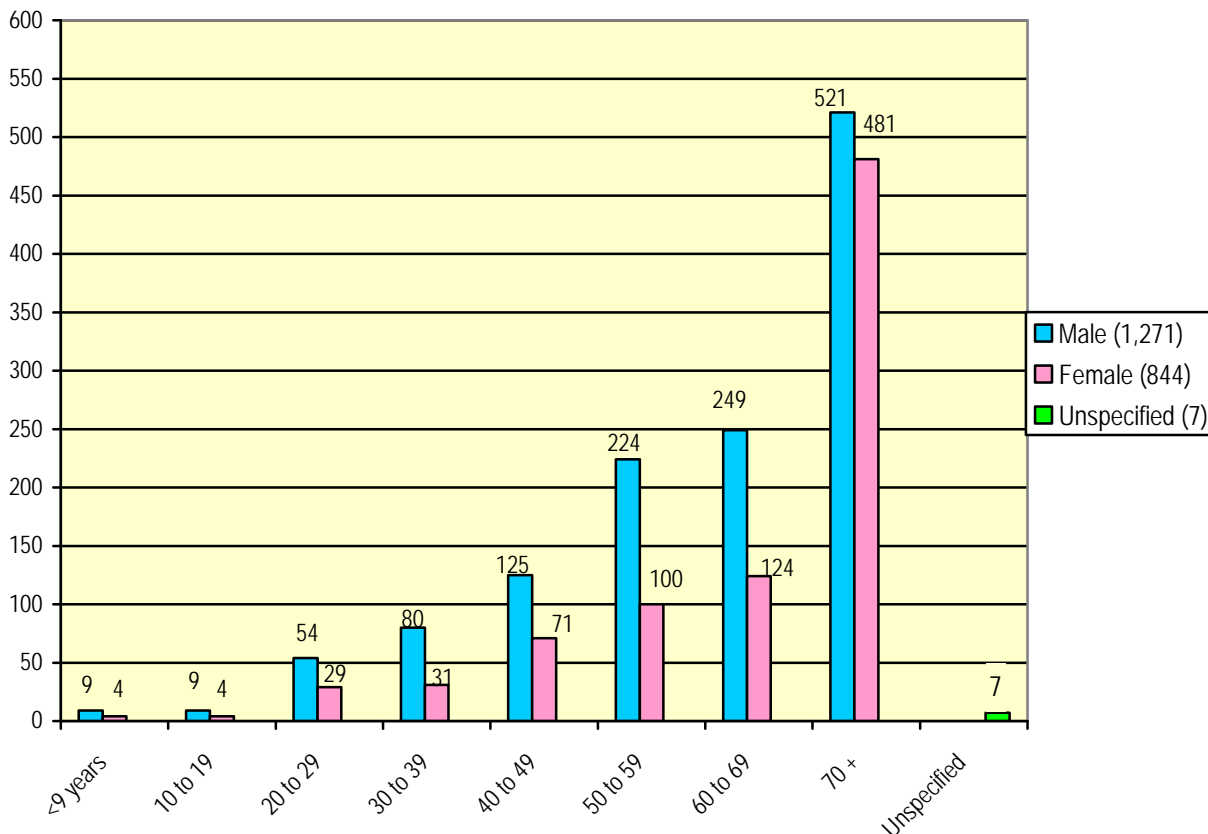
<u>Cases by Manner of Death</u>	<u>Number</u>	<u>Percent</u>
Natural	1,596	75.21%
Accident	358	16.87%
Suicide	115	5.42%
Homicide	12	0.57%
Indeterminate	34	1.60%
Unspecified (non-human bones, etc.)	<u>7</u>	0.33%
Total:	2,122	



MANNER OF DEATH

Manner of Death Cases by Age and Gender

There were a total of 2,122 forensic investigations preformed in 2013; of these 1,271 (59.9%) were males; 844 (39.8%) were females and 7 (0.3%) cases were unknown tissue/ non human bones.

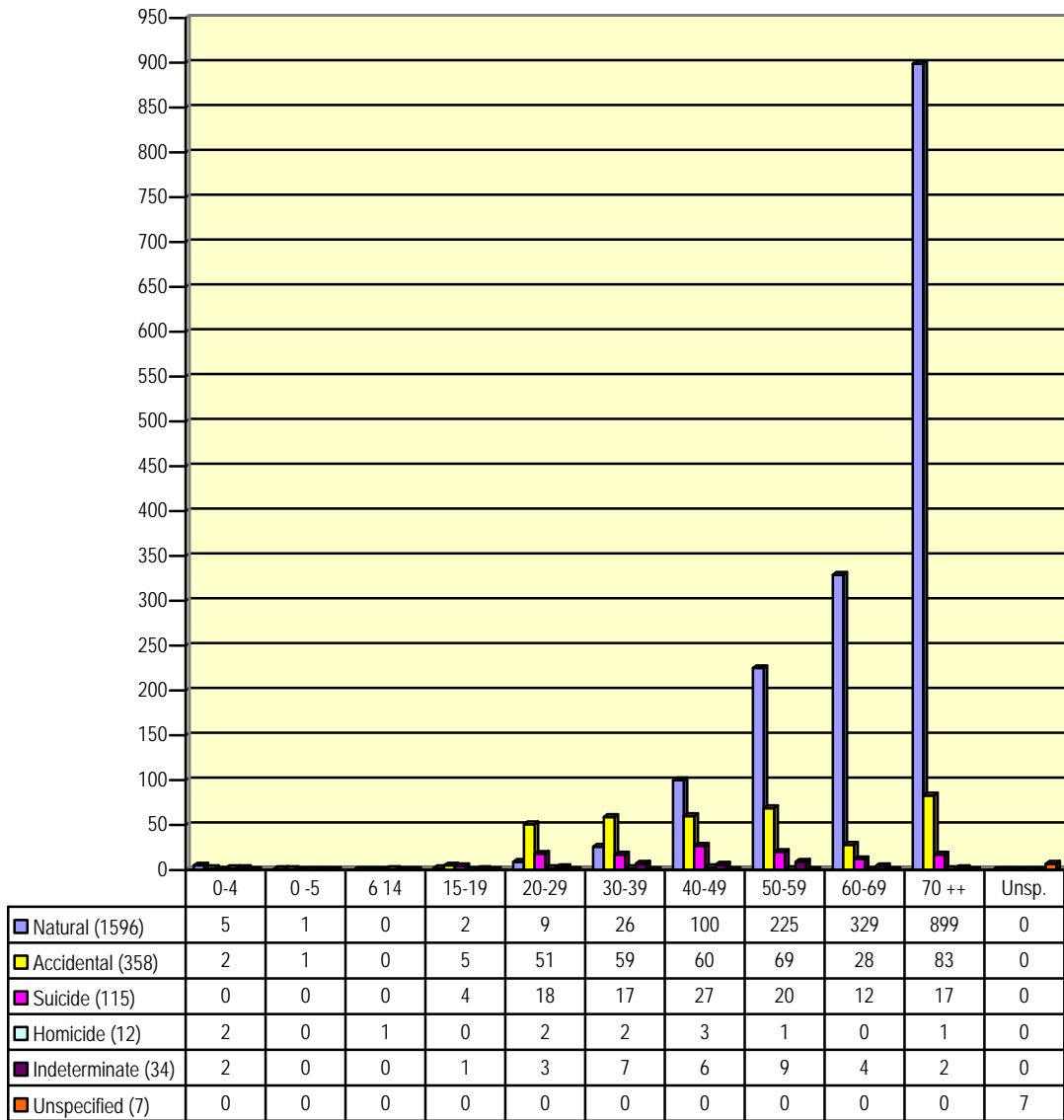


Age Group	Male	Female	Bones/Unspecified	Total
0 – 19 Years	18	8	0	26
20 Years and Older	1,253	836	0	2,089
Unspecified	0	0	7	7
Total	1,271	844	7	2,122

Randy Hanzlick, M.D., et al. A Guide for Manner of Death Classifications: Basic, General “rules” for classifying manner of death (National Association of Medical Examiners, 2005)

MANNER OF DEATH

Cases by Age and Means



Manner of Death Cases by Race and Gender

Race	Male	Female	Total
White	1,164	751	1,915
African American	71	73	144
American Indian	0	0	0
Asian Pacific	3	4	7
Multiracial	13	7	20
Other	20	9	29
Total Cases	1,271	844	2,115*

*This chart does not include 7 unspecified cases (non human bones etc.)

MANNER OF DEATH – Natural

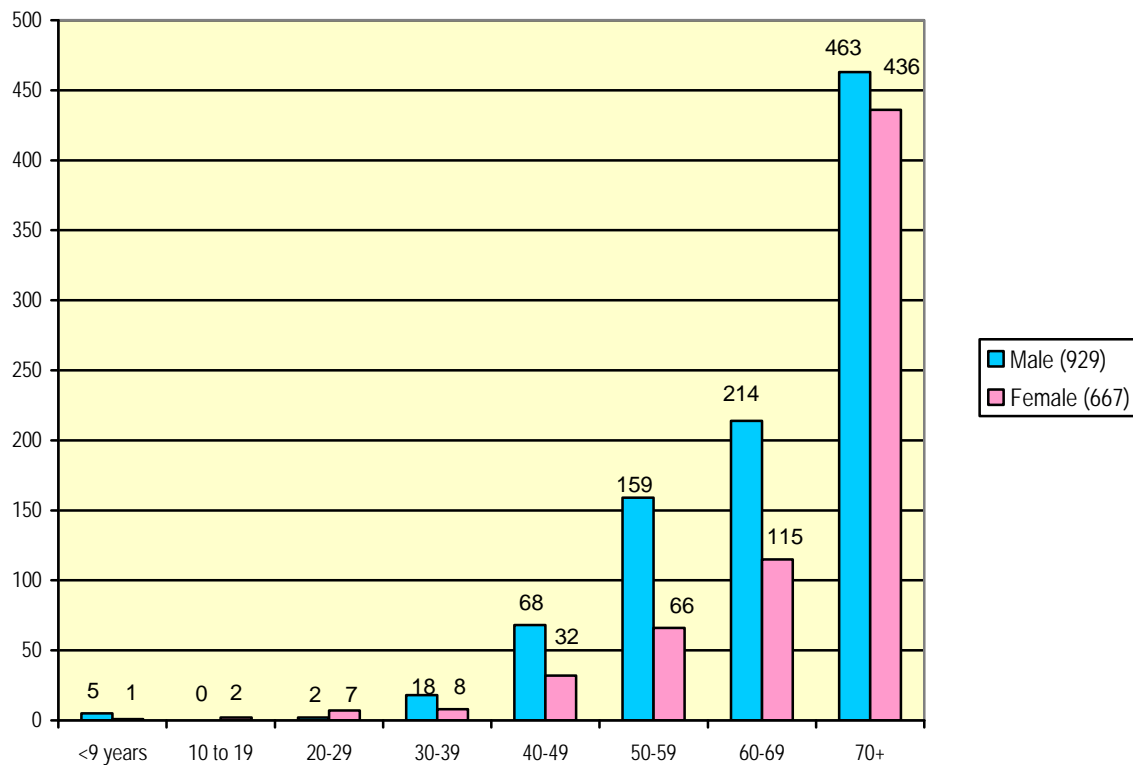
Natural Cases by Age and Gender

Natural deaths represented 75.21% (1,596/2,122) of all Medical Examiner cases.

Males accounted for 58.20% (929/1,596) of the natural deaths; females accounted for 41.80% (667/1,596) of the natural deaths.

The male 70+ age group accounted for 49.9% (463/929) of all male natural deaths, while the female 70+ age group accounted for 65.37% (436/667) of all female natural deaths.

The combined male/female 70+ age groups represented 56.3% (899/1,596) of the natural deaths.

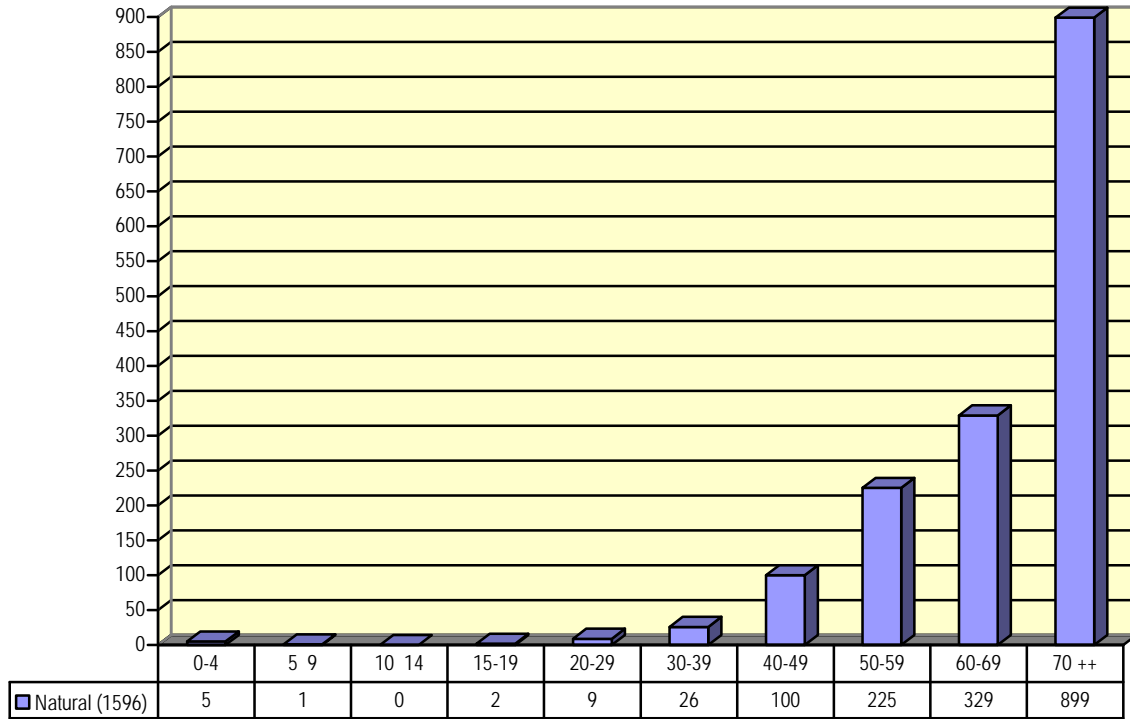


Age Group	Male	Female	Total	Percent
0-19 Years	5	3	8	0.5%
20 Years and Older	924	664	1,588	99.5%
Total Cases	929	667	1,596	100%

Randy Hanzlick, M.D., et al. A Guide for Manner of Death Classifications: Basic, General “rules” for classifying manner of death (National Association of Medical Examiners, 2005)

MANNER OF DEATH – Natural

Natural Cases by Age



Natural Cases by Race and Gender

Race	Male	Female	Total
White	855	595	1,450
African American	57	59	116
American Indian	2	3	5
Asian Pacific	2	5	7
Multiracial	7	2	9
Hispanic	5	4	9
Total	928	668	1,596

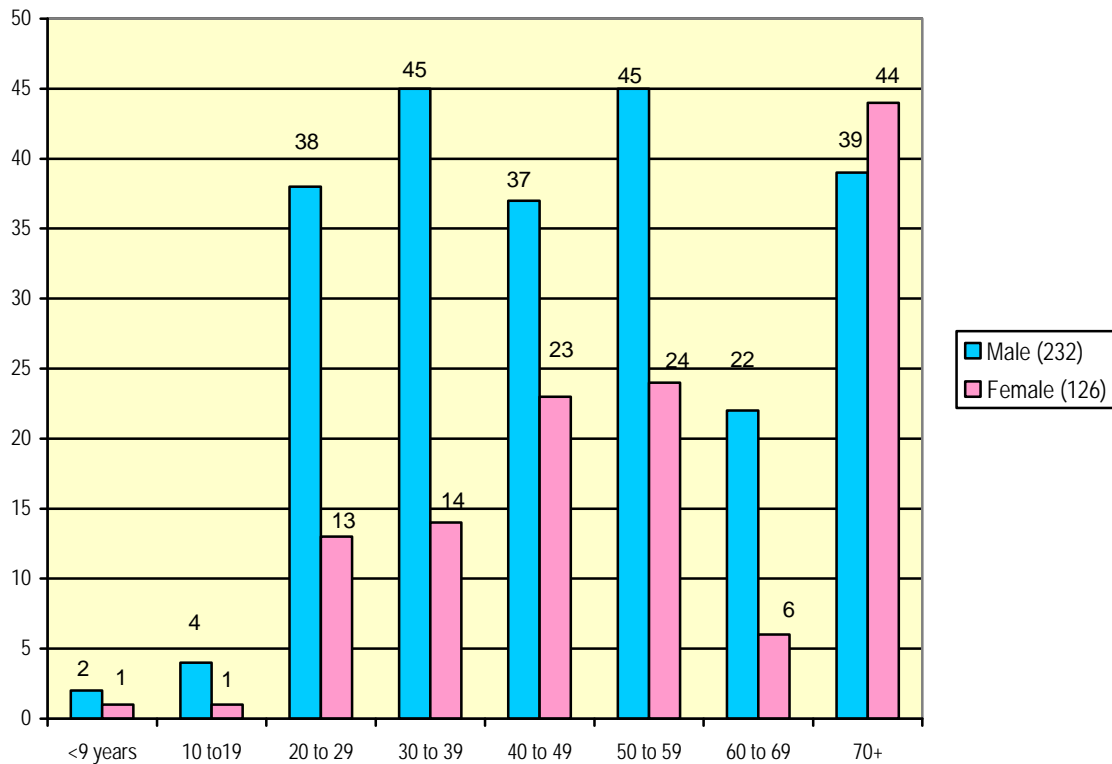
MANNER OF DEATH – Accident

Accident Cases by Age and Gender

Accidental deaths represented 16.87% (358/ 2,122) of all Medical Examiner cases.

Males accounted for 64.8% (232/358) of the total accidental death cases; females accounted for 35.2% (126/358) of the accidental death cases.

The male 30-39 age group and the 50-59 age group each accounted for 19.4% (45/232) of all male accidental deaths. The highest female age grouping was the 70+ age group accounting for 34.9% (44/126) of all female accidental deaths.

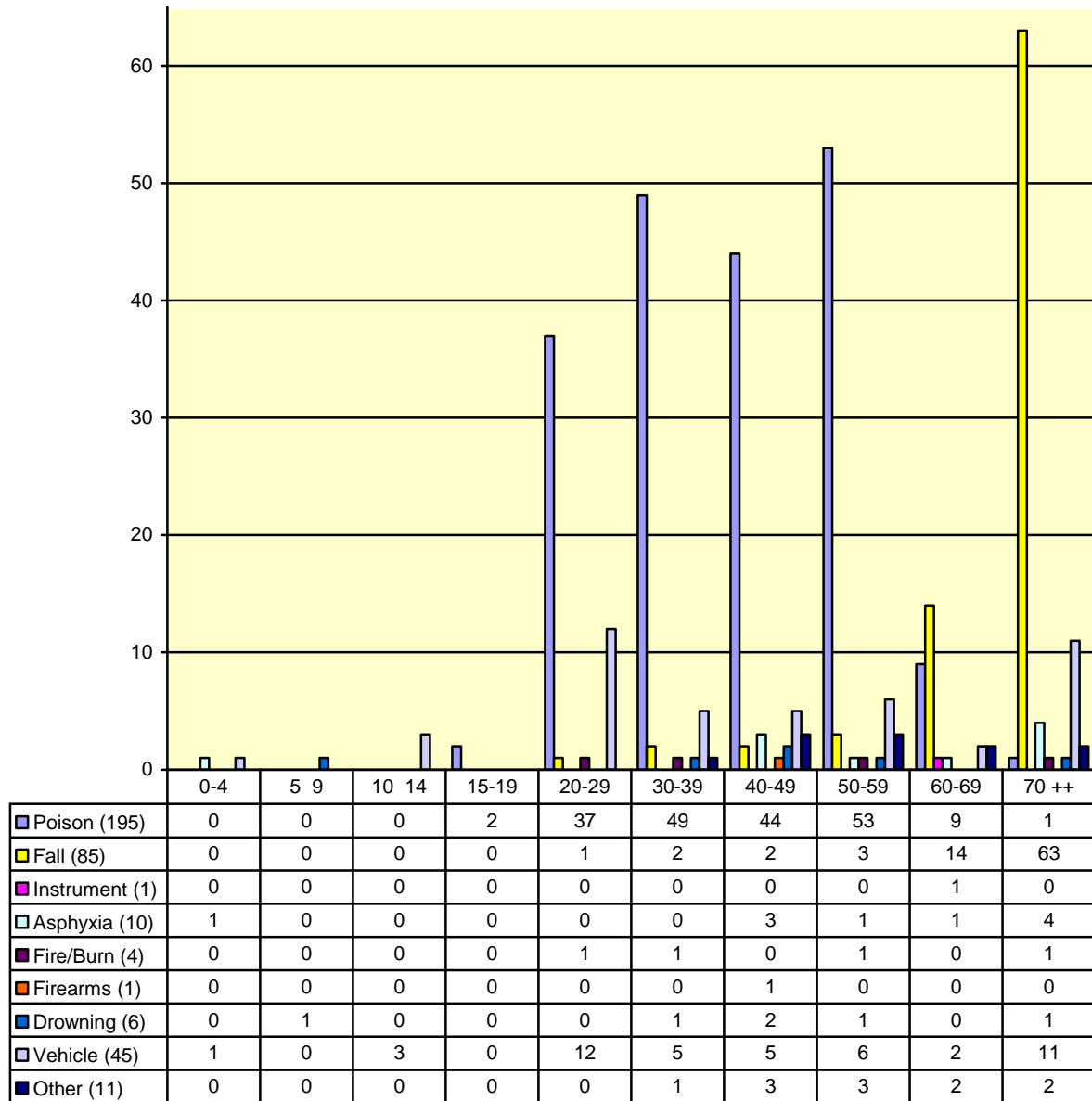


Age Group	Male	Female	Total	Percent
0-19 Years	6	2	8	2.2%
20 Years and Older	226	124	350	97.8%
Total Cases	232	126	358	100%

¹ Randy Hanzlick, M.D., et al. A Guide for Manner of Death Classifications: Basic, General "rules" for classifying manner of death (National Association of Medical Examiners, 2005) ⁵

MANNER OF DEATH – Accident

Accident Cases by Age and Means



Accidental poisoning accounted for 54.47% (195/358) 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 23.74% (85/358) with the majority of deaths occurring in the 70 year old and older age group.

Accidental Cases by Race and Gender

Race	Male	Female	Total
White	218	117	335
African American	11	8	19
Multiracial	1	1	2
Asian Pacific	1	0	1
Hispanic	1	0	1
Total	232	126	358

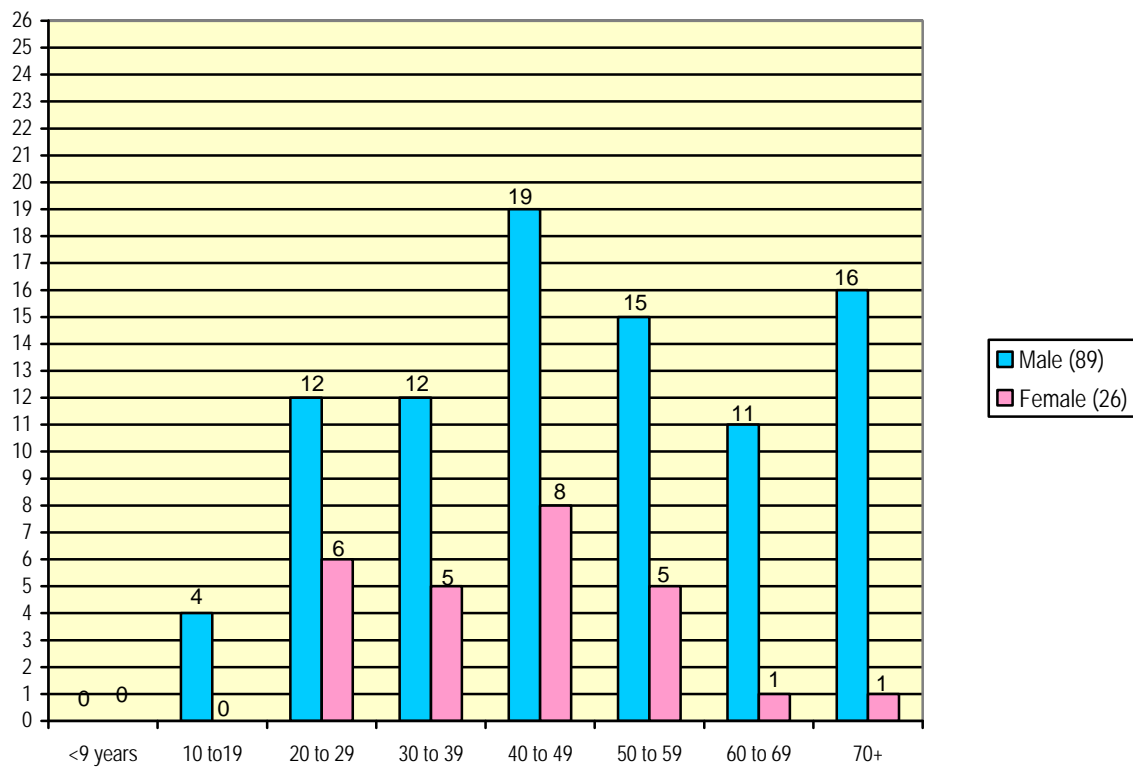
MANNER OF DEATH – Suicide

Suicide Cases by Age and Gender

Suicide deaths represented 5.42% (115/2,122) of all Medical Examiner cases.

Males accounted for 77.4% (89/115) of the total suicide death cases; **females** accounted for 22.6% (26/115) of the suicide cases.

The male 40-49 age group accounted for 21.35% (19/89) of all male suicide cases. The 40-49 age group represented 30.77% (8/26) of all female suicide cases.

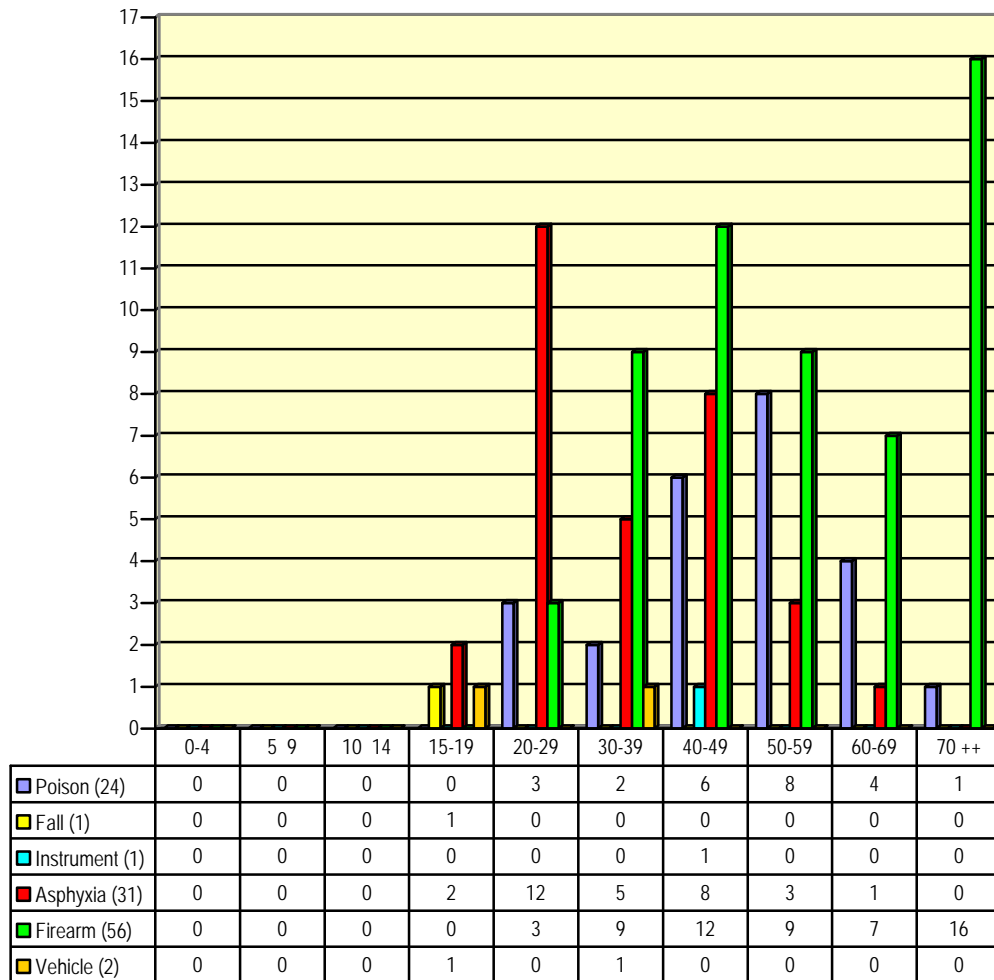


Age Group	Male	Female	Total	Percent
0-19 Years	4	0	4	3.50%
20 Years and Older	85	26	111	96.5%
Total Cases	89	26	115	100%

¹ Randy Hanzlick, M.D., et al. A Guide for Manner of Death Classifications: Basic, General "rules" for classifying manner of death (National Association of Medical Examiners, 2005) ⁵

MANNER OF DEATH – Suicide

Suicide Cases by Age and Means



Firearm suicide cases represented 48.70% (56/115) of all suicides, asphyxia accounted for 26.96% (31/115) and poisoning 20.87% (24/115).

The 70+ age group accounted for 28.5% (16/56) of firearm deaths and the 40-49 age group accounted for 21.4% (12/56) of firearm deaths. The 20-29 age group accounted for 38.7% (12/31) of asphyxia deaths.

Suicide Cases by Race and Gender

Race	Male	Female	Total
White	85	24	109
African American	4	2	6
Total	89	26	115

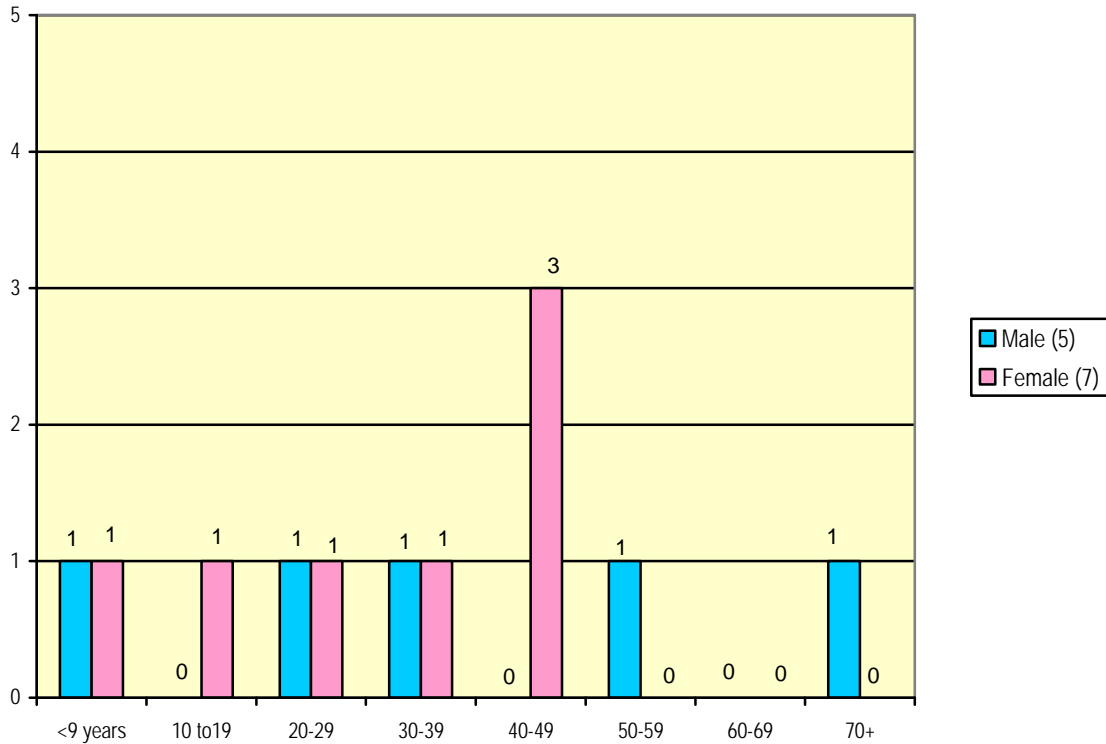
MANNER OF DEATH – Homicide

Homicide Cases by Age and Gender

Homicide deaths represented 0.57% (12/ 2,122) of all Medical Examiner cases.

Males accounted for 41.67% (5/12) of the total homicide cases; **females** accounted for 58.33% (7/12) of the homicide cases.

The male age groups: less than 9, 20-29, 30-39, 50-59 and 70+ accounted for 100% (5/5) of the male homicide cases, with one in each age category. The 40-49 age group accounted for 3 of the 7 female homicide cases (43%).

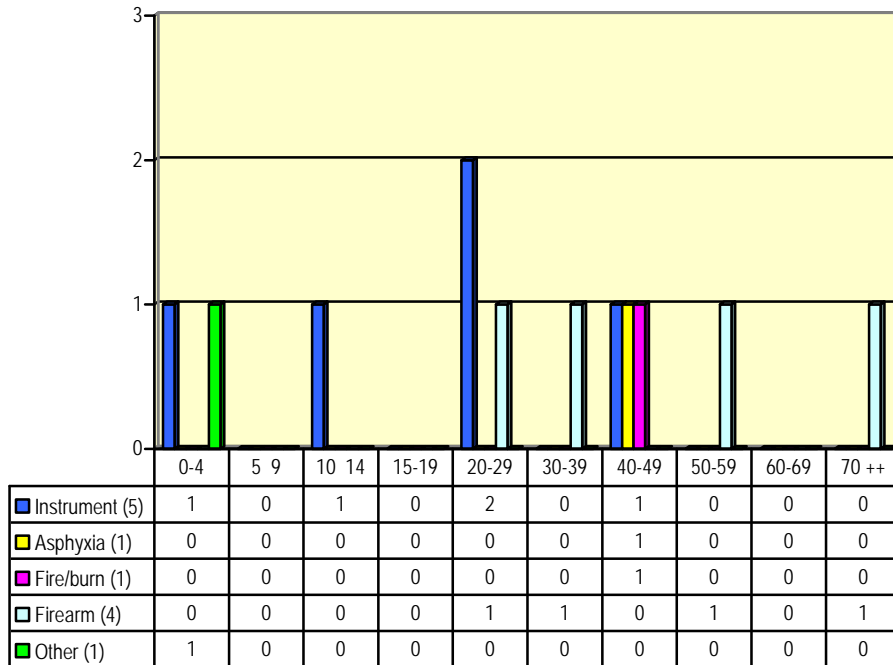


Age Group	Male	Female	Total	Percent
0-19 Years	1	2	3	25%
20 Years and Older	4	5	9	75%
Total Cases	5	7	12	100%

¹ Randy Hanzlick, M.D., et al. A Guide for Manner of Death Classifications: Basic, General “rules” for classifying manner of death (National Association of Medical Examiners, 2005) ⁵

MANNER OF DEATH – Homicide

Homicide Cases by Age and Means



Deaths by instruments accounted for 41.67% (5/12) of all homicide cases with the 20-29 age group having the highest rate or 16.67% (2/12) of all the homicides by instruments. Homicides by firearms accounted for the 33.33% (4/12) of all homicide cases.

Homicide Cases by Race and Gender

Race	Male	Female	Total
White	2	4	6
African American	3	3	6
Total	5	7	12

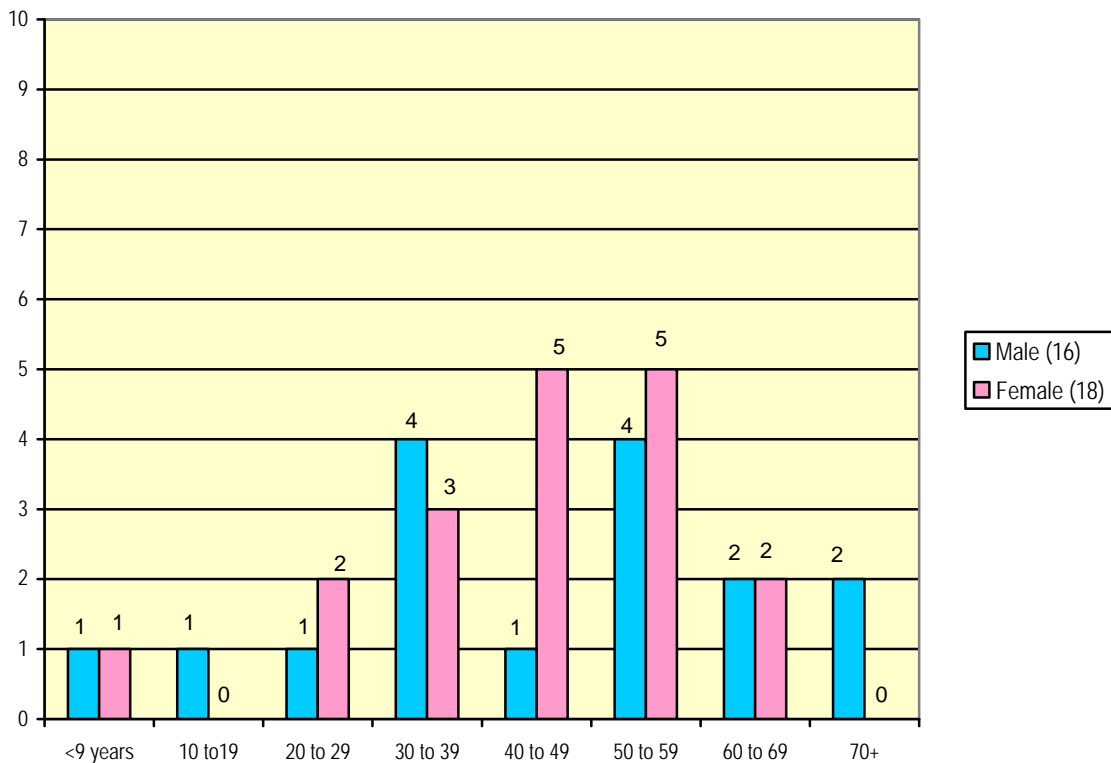
MANNER OF DEATH – Indeterminate

Indeterminate Cases by Age and Gender

Indeterminate deaths represented 1.6% (34/2,122) of all Medical Examiner cases.

Males accounted for 47.06% (16/34) of the indeterminate deaths and females accounted for 52.94% (18/34) of the indeterminate death cases.

The 30-39 age group and 50-59 age group each accounted for 25% (4/16) of the male indeterminate deaths, while the 40-49 age group and 50-59 age group each accounted for 27.8% (5/18) of the female indeterminate deaths.

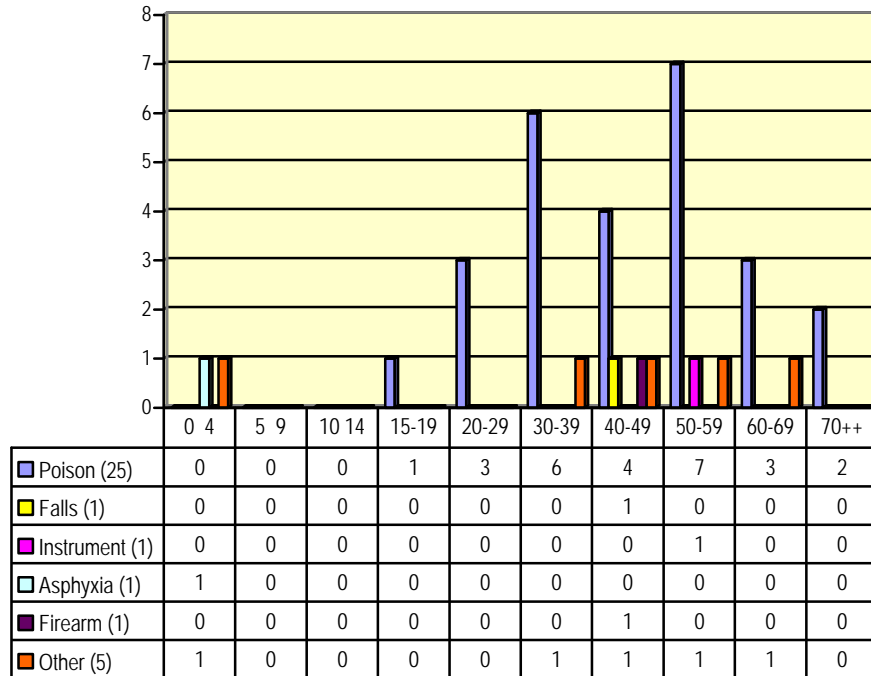


Age Group	Male	Female	Total	Percent
0-19 Years	2	1	3	8.82%
20 Years and Older	14	17	31	91.18%
Total Cases	16	18	34	100%

¹ Randy Hanzlick, M.D., et al. A Guide for Manner of Death Classifications: Basic, General "rules" for classifying manner of death (National Association of Medical Examiners, 2005) ⁵

MANNER OF DEATH – Indeterminate

Indeterminate Cases by Age and Means



Poisoning accounted for 70.59% (25/34) of all indeterminate death cases with the 50-59 age group having the highest, or 20.59% (7/34) of all indeterminate poisoning deaths.

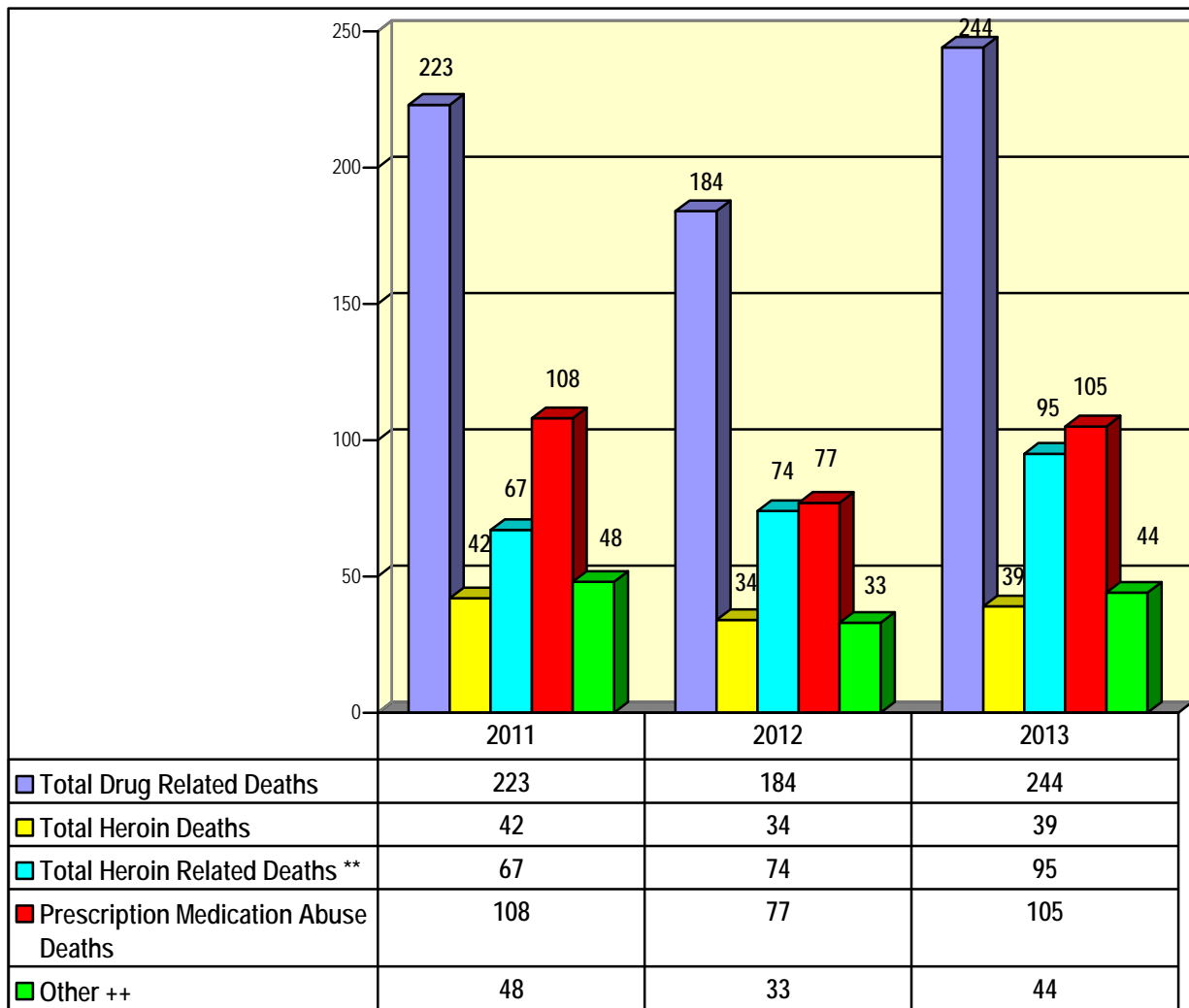
Indeterminate Cases by Race and Gender

Race	Male	Female	Total
White	16	17	33
African American	0	1	1
Total	16	18	34

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.



** 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.