

Macomb County Medical Examiner's Office



2010 Annual Report

www.macombcountymi.gov/publichealth/Medical-Examiner/medicalexaminer.htm

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Steven C. Gold, M.P.H.
Director/Health Officer

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

To County Executive Hackel and the citizens of Macomb County:

The Medical Examiner's duty is to provide medicolegal investigations into all deaths requiring a public inquiry to determine and record the cause and manner of death. These investigations serve the needs of decedents' families for closure, and the needs of the legal and medical communities so they can affix responsibility and protect public health and safety. Death investigations involve an examination of the death scene, an autopsy when necessary to determine the cause and manner of death, and issuance of a death certificate.

In 2010, the Medical Examiner's Office investigated **1,678 deaths**, performed **534 Forensic Examinations** and issued **3,083 cremation permits**.

Additionally, **1,746 home hospice deaths** were reported to the Medical Examiner's Office. The total number of death investigations decreased by **6.4%** from 2009 and the total number of autopsies decreased by **8.4%** from 2009. Cremation permits issued in 2010 showed a **6.2%** increase from 2009.

Drug related deaths continue to rise in Macomb County. Abuse of prescription medications and use of illicit drugs, primarily cocaine and heroin continue to be a major concern.

The total number of drug related deaths increased by **18.2%** from 2009. Homicide deaths also increased **11.8%** in 2010 when compared to 2009.

The Medical Examiner's Office continues to work closely with the **Gift of Life Organ and Tissue Procurement Agency** and the **Michigan Eye Bank**. Due to this coordinated effort, the number of potential donors is maximized.

I would like to thank the County Executive for the continued support of the Medical Examiner's Office which enables our staff to provide a valuable and necessary service to the community.

Respectfully,

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

Laws Governing the Medical Examiner's Office

Act 181 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 decedent and notifying 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. In Macomb County the Medical Examiner's Office is under the administrative supervision of the Macomb County Health Department.

- [Act 181 of 1953, MCL Section 52.201 – 52.216](#)

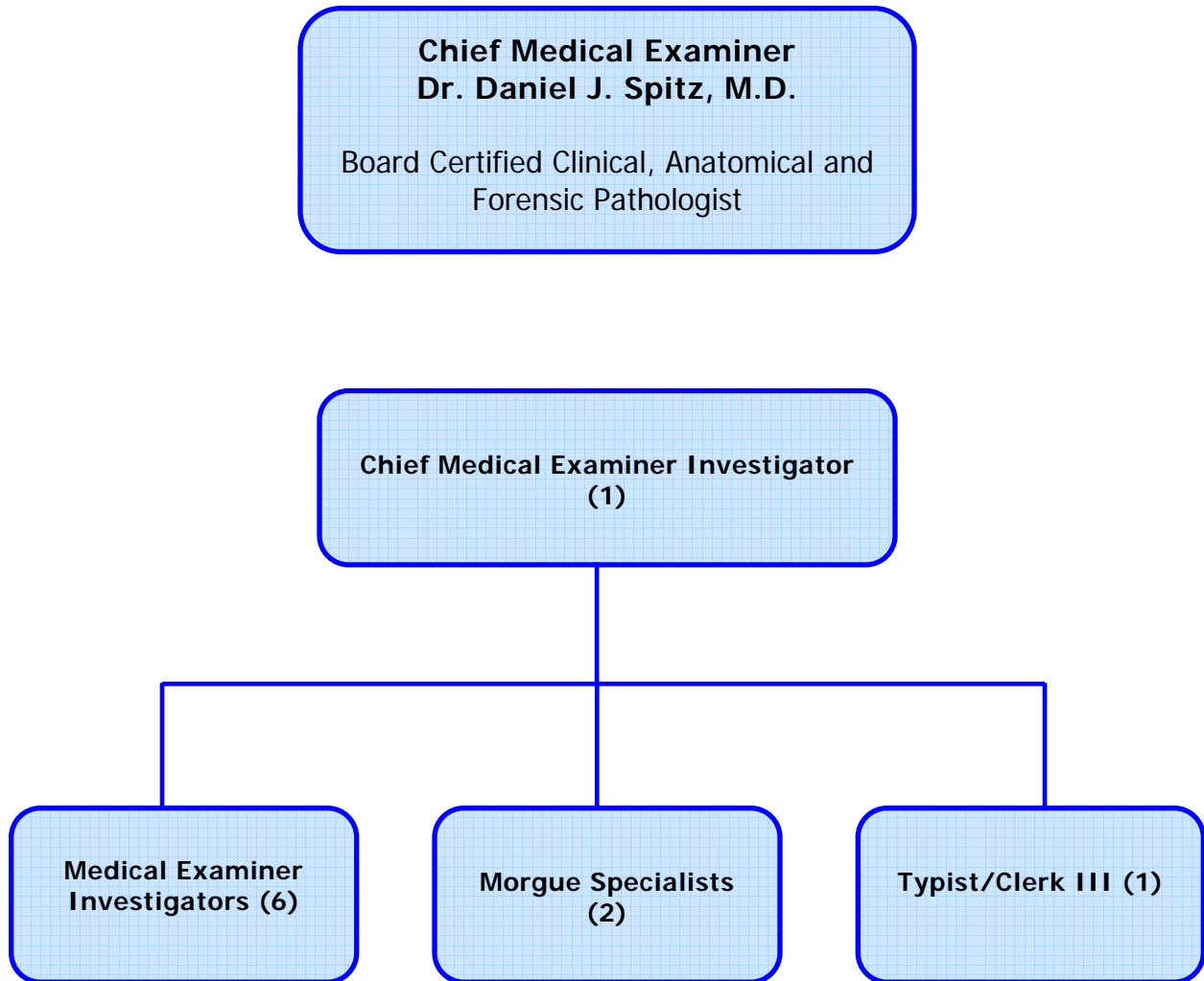
Mission Statement



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 the families of the decedent and the legal and medical community in accordance with the highest level of professionalism, compassion and efficiency.

Organizational Chart

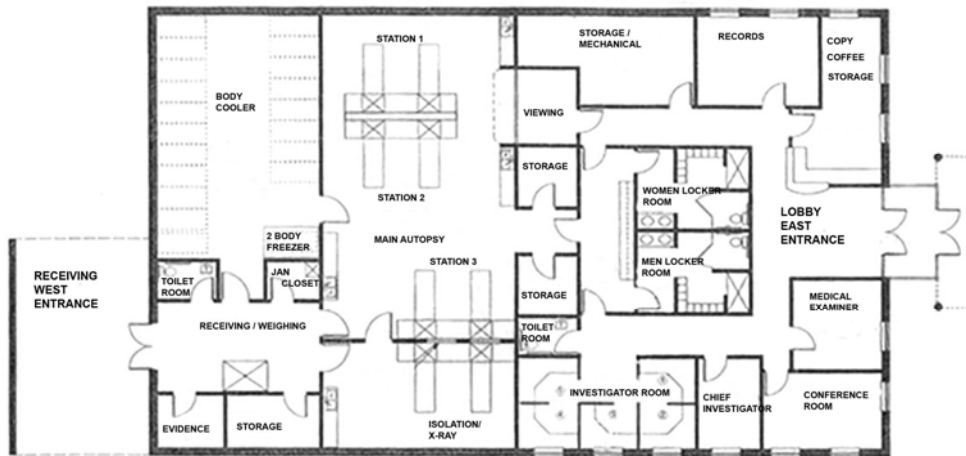
Macomb County Medical Examiner's Office



Budget 2010

Macomb County Medical Examiner's Office	
Revenues	Expenses
\$ 1,309,073.00	\$ 1,309,073.00

Macomb County Medical Examiner's Facility Completed 2007



Station 2 and Cooler Door

6,000 square foot facility

Discrete viewing area for families

40 degree walk-in cooler with a capacity to hold 20 bodies

Four autopsy stations

Digital X-ray equipment

Special dissection room for decomposed/infectious cases



Station 2 and Viewing Window (near black cart)

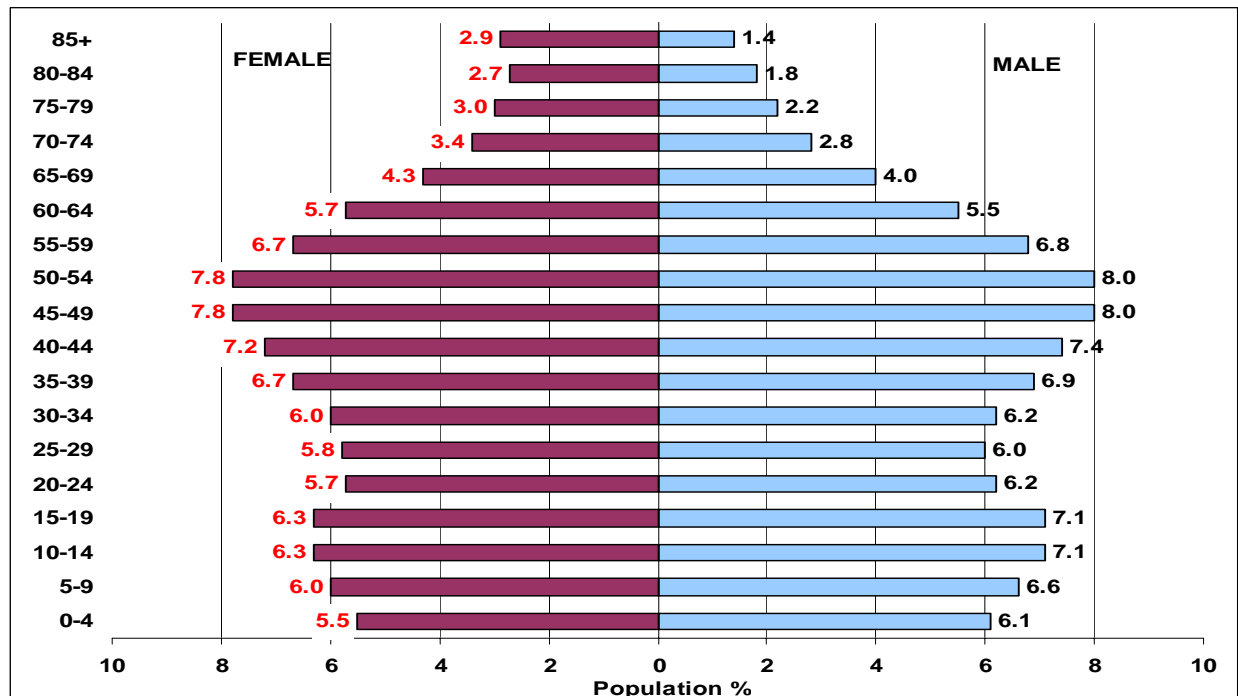
Macomb County Demographics

Macomb County is located in southeastern Michigan and comprises the northeastern portion of the Detroit metropolitan area. Macomb County is the ninth smallest of Michigan's 83 counties (with 482 square miles), 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 included three of the ten largest communities in Michigan; Warren (3rd), Sterling Heights (6th), and Clinton Township (10th).

CENSUS SUMMARY PROFILE	2000	2010	% Change	2000	2010	% Change
	Numbers			Percent		
White	721,882	705,693	-2.24	91.59	83.91	-8.38
Black or African American	21,151	72,053	240.66	2.68	8.57	219.26
Hispanic or Latino	12,435	19,095	53.56	1.58	2.27	43.91
American Indian and Alaska Native	2,255	2,351	4.26	0.29	0.28	-2.29
Asian	16,743	24,908	48.77	2.12	2.96	39.42
Native Hawaiian and Other Pacific Islander	157	168	7.01	0.02	0.02	0.28
Other Race	685	803	17.23	0.09	0.10	9.86
Two or More Races	12,841	15,907	23.88	1.63	1.89	16.09
Total Population	788,149	840,978	6.70			

Macomb County 2010 Population by Gender and Age



Source: 2010 data from U.S. Census Bureau

Activities of the Medical Examiner's Office

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 Forensic Investigation internship, Macomb Community College EMT and surgical tech students, Baker College EMT techs, Macomb County Sheriff cadets and individual autopsy observations for law enforcement personnel, nurses and medical students. In 2010, over 130 autopsy observations were conducted. 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.

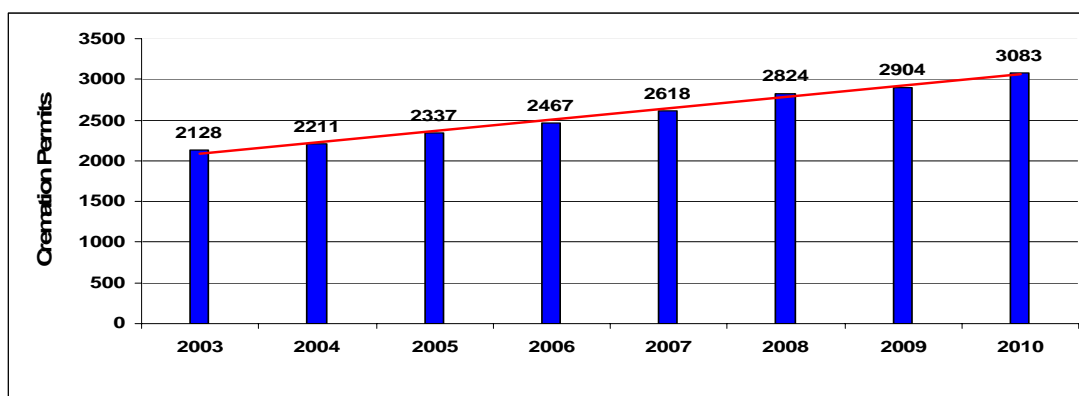
Public health emergencies can take on many forms ranging from naturally occurring events (storms, floods, fires) to manmade events including delivery of weapons of mass destruction (bomb/blast, chemical, nuclear, or biological). In partnership with other county services, the Medical Examiner's Office developed the Macomb County Mass Fatality Plan which addresses mortuary surge capacity events and methods to respond and mitigate such issues.

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 230 child death cases have been reviewed.

The Macomb County Medical Examiner's Office also fulfills legal obligations related to its function in medicolegal death investigation. The Medical Examiner's testimony is widely used both in local and out-of-county criminal testimony procedures.

In Macomb County, the Medical Examiner's Office is required to sign cremation permit authorizations before a body is cremated. Cremation permits issued in 2010 showed a 6.2% increase from 2009.

Cremation Permit Authorization by Year 2003 - 2010



Total Cases for 2010

Total Macomb County Medical Examiner Cases **1,679**

Total Macomb County Forensic Examinations **534**
(Complete Autopsy, Limited Autopsy and External Examinations)

Cases that fall under the jurisdiction of the Medical Examiner are transported to the Macomb County Medical Examiner's Office (MCMEO) for examination. In many cases, a MCMEO investigator attends the death scene in person and performs a preliminary examination of the body. An investigator usually attends all homicides, suicides, and accidental deaths, and select natural deaths. The Medical Examiner and investigative staff are on call and available 24 hours/day, 365 days/year.

In 2010, 534 forensic examinations were performed, which were either a complete autopsy, limited autopsy (restricted to head, chest cavity, abdominal cavity etc.) or external examination. In most autopsies and external examinations, blood and vitreous fluid specimens are collected for toxicological analysis (See page 20 Forensic Examinations).

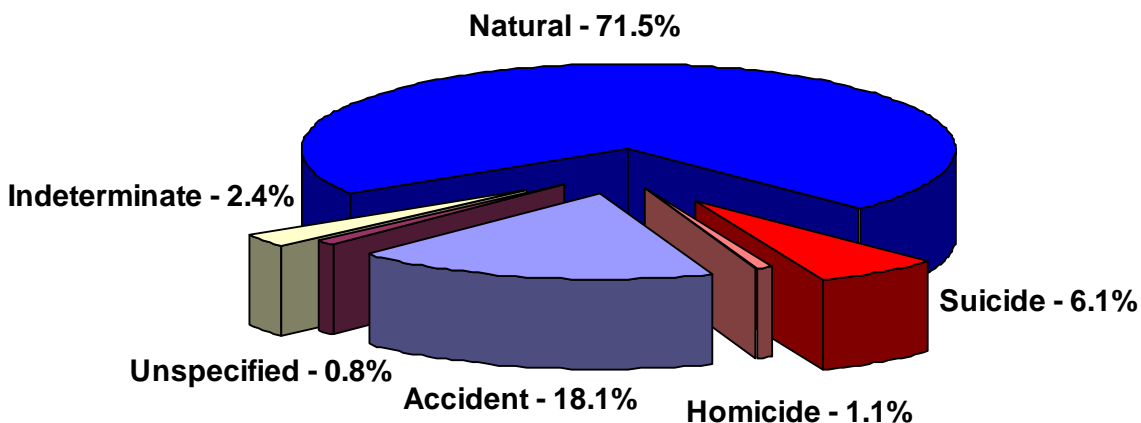
Manner of Death

The *Manner of Death* is the classification of categories (Accident, Homicide, Indeterminate, Natural and Suicide) used to define whether a death is from intentional causes, unintentional causes, natural causes, or undetermined causes.

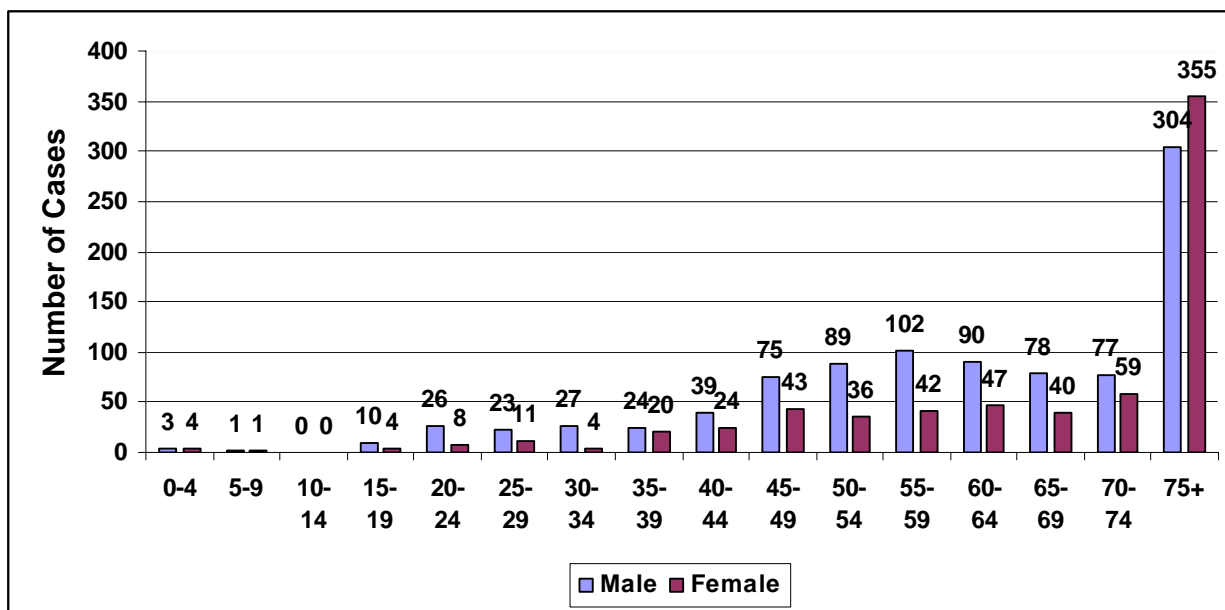
Manner of Death	Number	Percent
Accident	304	18.1
Homicide	19	1.1
Indeterminate (Could not be determined)	41	2.4
Natural	1,200	71.5
Suicide	102	6.1
Unspecified (Non-human bones)	13	0.8
Total	1,679	100

Manner of Death

Manner of Death Case Reports 2010



Death by Age and Gender



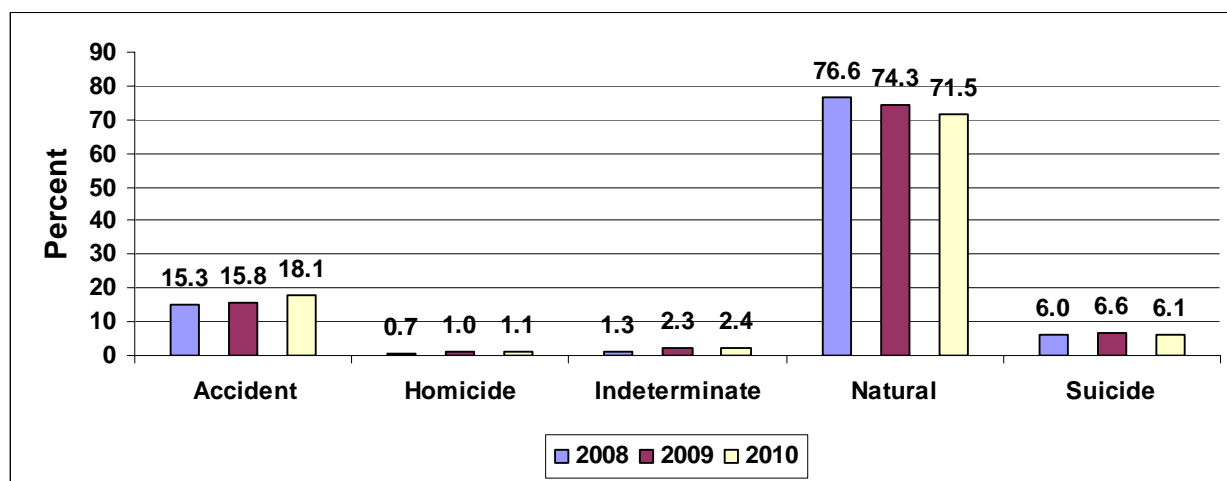
Age Group	Male	Female	Non Human Bones	Total
0 - 18 Years	12	5	0	17
19 Years and Older	956	693	0	1649
Total Cases	968	698	0	1666
Unspecified	0	0	13	13

Manner of Death

Death by Race and Gender

Race	Male	Female	Total	Percent
Hispanic	4	2	6	0.4
White	846	614	1460	87.6
African American	59	44	103	6.2
American Indian	3	0	3	0.2
Asian Pacific	7	2	9	0.5
Other	3	2	5	0.3
Multiracial	46	34	80	4.8
Total Cases	968	698	1666	100

Comparison of Manner of Death Annual Medical Examiner's Cases – 2008, 2009, 2010



Manner of Death – Accident

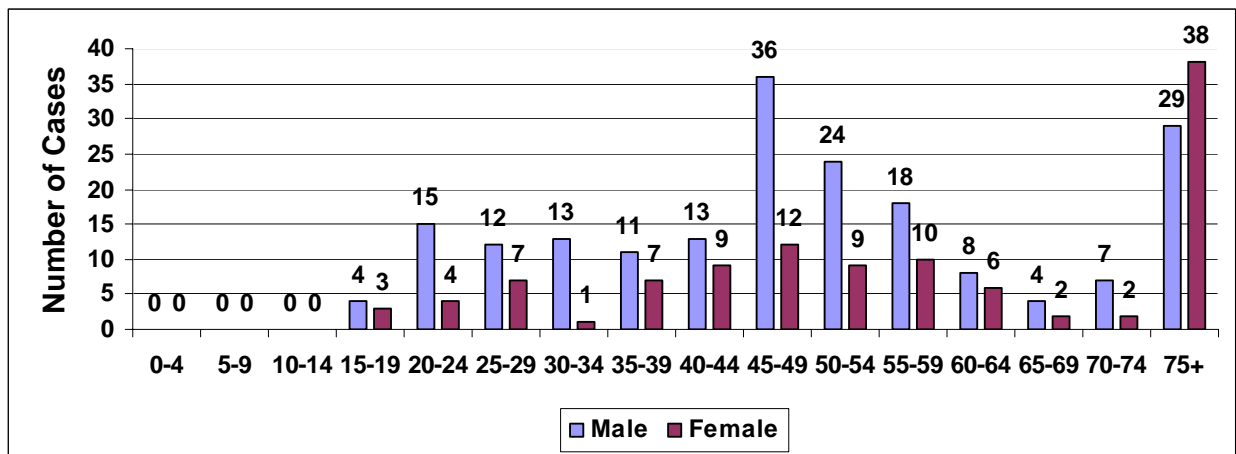
Accident applies when an injury or poisoning causes death and there is no evidence that the injury or poisoning occurred with intent to harm or cause death. In essence, the fatal outcome was unintentional.¹

Accident Cases by Age and Gender

Accidental deaths represented 18.1% (304/1666) of all cases.

Males accounted for 63.8% (194/304) of the total accidental death cases, **females** accounted for 36.2% (110/304) of the accidental death cases.

The highest proportion of male deaths classified as accidental occurred among the 45 to 49 year age group at 18.6% (36/194). The highest proportion of female deaths classified as accidental occurred among the 75+ age group at 34.5% (38/110).

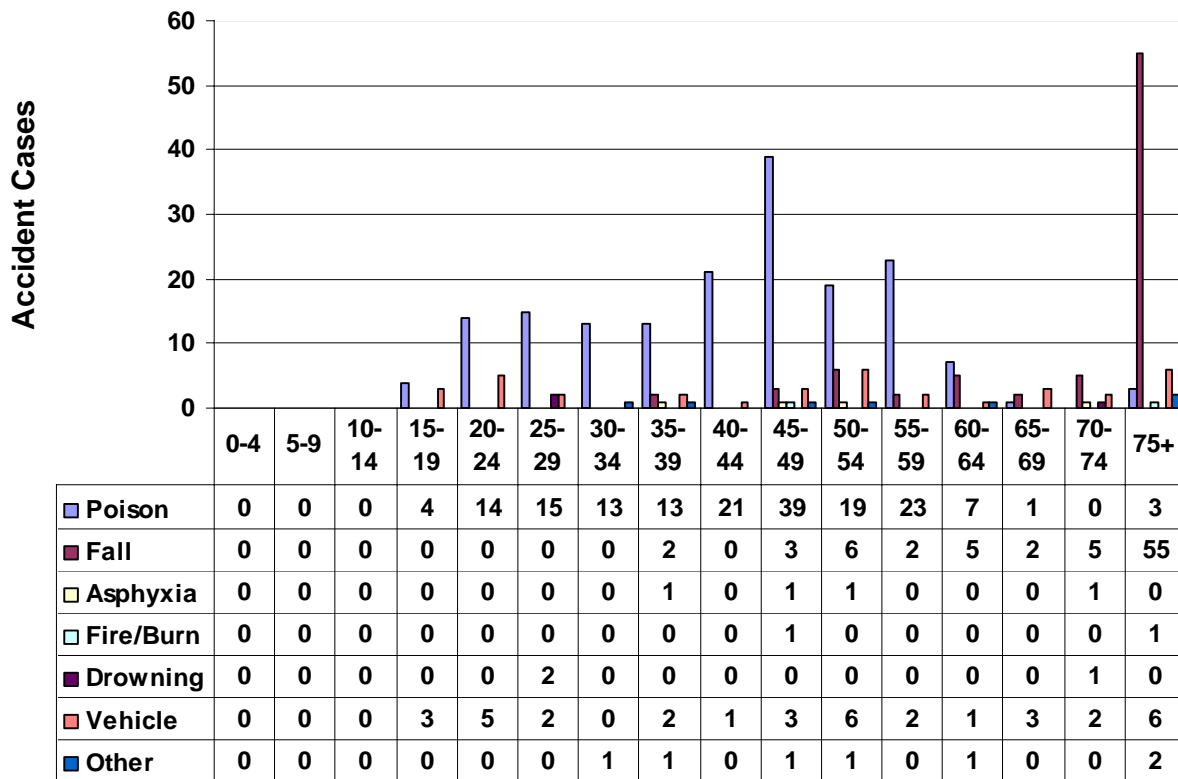


Age Group	Male	Female	Total	Percent
0 - 18 Years	2	0	2	0.7
19 Years and Older	192	110	302	99.3
Unspecified	0	0	0	0.0
Total Cases	194	110	304	100

¹ Randy Hanzlick, M.D., et al., A Guide For Manner of Death Classification: Basic, general “rules” for classifying manner of death (National Association of Medical Examiners, 2002) 5.

Manner of Death – Accident

Accident Cases by Age and Means



Accidental poisoning, the majority being prescription drug overdoses, accounted for 56.6% (172/304) of all accidental death cases with the 45-49 age group having the highest proportion 22.6% (39/172) of accidental poisoning deaths.

Falls accounted for the second highest accidental death group at 26.3% (80/304) with the majority of deaths occurring in the 75 year old and older age group at 68.7% (55/80).

Accident Cases by Race and Gender

Race	Male	Female	Total	Percent
Hispanic	1	0	1	0.3
White	168	96	264	86.8
African American	13	5	18	5.9
American Indian	0	0	0	0.0
Asian Pacific	0	1	1	0.3
Other	0	0	0	0.0
Multiracial	12	8	20	6.6
Total Cases	194	110	304	100

Manner of Death – Homicide

Homicide occurs when death results from a volitional act committed by another person to cause fear, harm, or death. Intent to cause death is a common element but is not required for classification of homicide. It is emphasized that the classification of Homicide for the purposes of death certification is a “neutral” term and neither indicates nor implies *criminal* intent, which remains a determination within the province of legal processes.¹

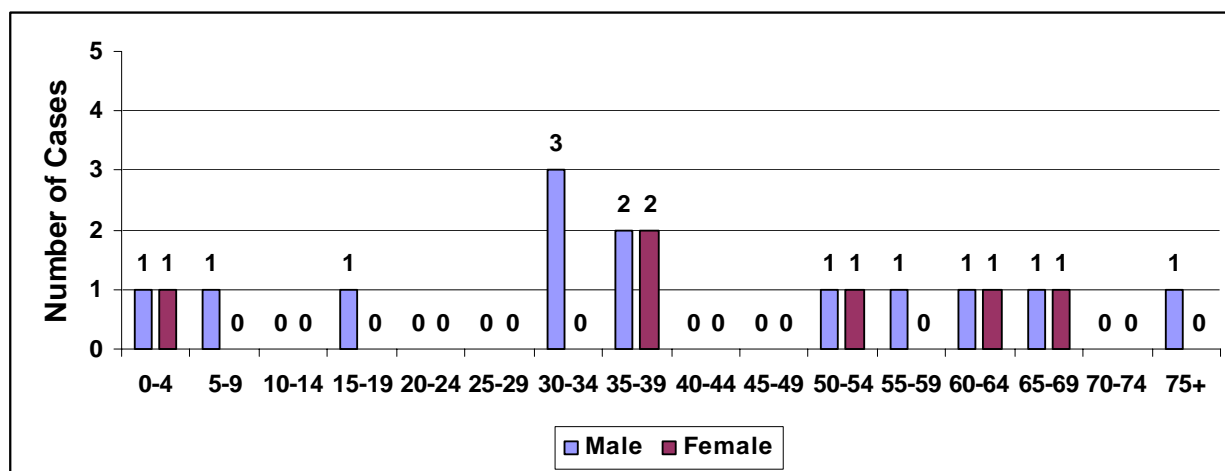
Homicide Cases by Age and Gender

Homicide deaths represented 1.1% (19/1666) of all cases.

Males accounted for 68.4% (13/19) of the total homicide death cases, **females** accounted for 31.6% (6/19) of the homicide cases.

The male 30-39 age group accounted for 38.4% (5/13) of all male homicide victims while the 50-69 female age group accounted for 50% (3/6) of the female homicide cases.

It should be noted that just over 21% (4/19) of the homicide victims were under the age of 19.

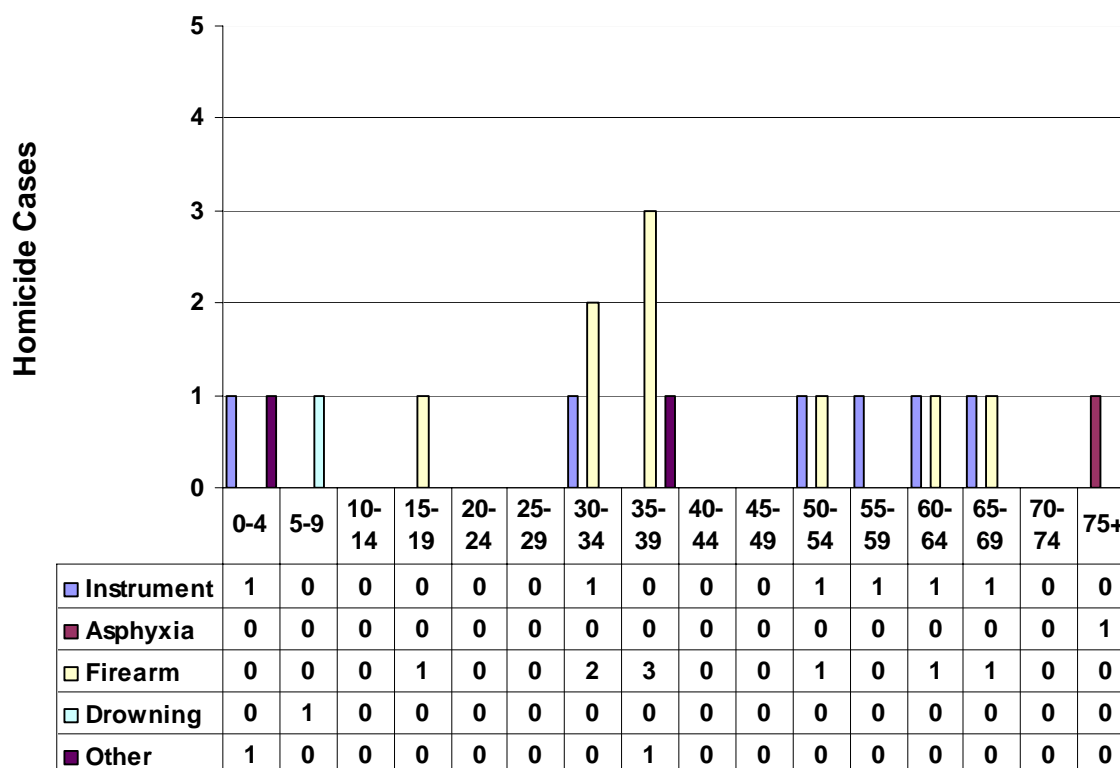


Age Group	Male	Female	Total	Percent
0 - 18 Years	3	1	4	21.1
19 Years and Older	10	5	15	78.9
Unspecified	0	0	0	0.0
Total Cases	13	6	19	100

¹ Randy Hanzlick, M.D., et al., A Guide For Manner of Death Classification: Basic, general “rules” for classifying manner of death (National Association of Medical Examiners, 2002) 5.

Manner of Death – Homicide

Homicide Cases by Age and Means



Firearm homicide cases accounted for almost half 47.3% (9/19) of all homicide cases with the 30-39 age group having the highest 55.5% (5/9) of all the firearm homicide deaths.

Instrument homicides, those deaths caused by a blunt or sharp object, such as a knife, accounted for the second highest proportion of homicide cases at 31.5% (6/19) with the majority 66.6% (4/6) of instrument deaths occurring in the 50-69 age group.

Homicide Cases by Race and Gender

Race	Male	Female	Total	Percent
Hispanic	0	0	0	0.0
White	8	3	11	57.9
African American	0	2	2	10.5
American Indian	0	0	0	0.0
Asian Pacific	0	0	0	0.0
Other	1	0	1	5.3
Multiracial	4	1	5	26.3
Total Cases	13	6	19	100

Manner of Death – Indeterminate

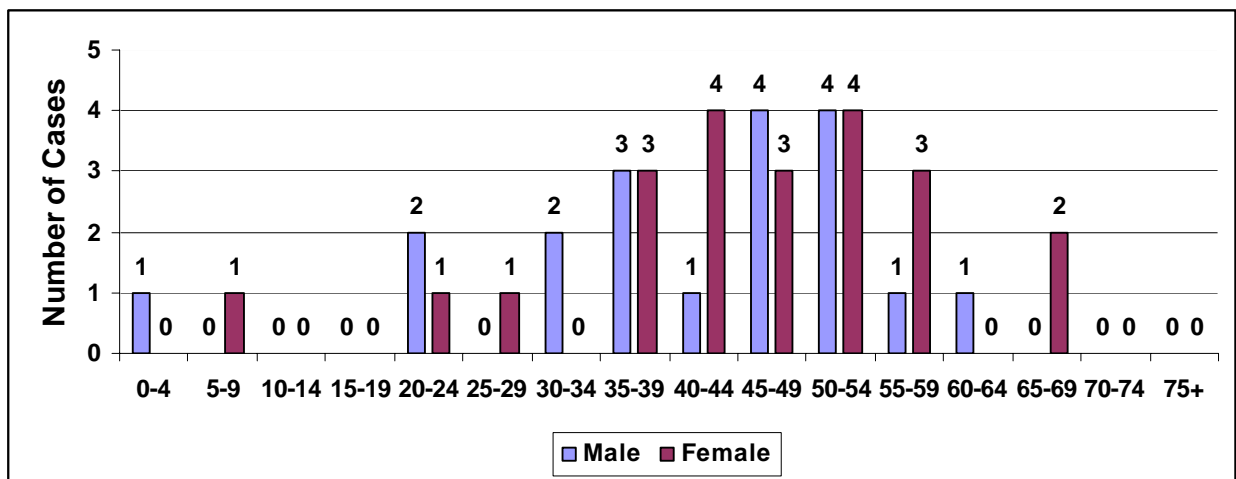
Undetermined or “could not be determined” is a classification used when the information pointing to one manner of death is no more compelling than one or more other competing manners of death in thorough consideration of all available information.¹

Indeterminate Cases by Age and Gender

Indeterminate deaths represented 2.4% (41/1666) of all cases.

Males accounted for 46.3% (19/41) of the total indeterminate death cases, **females** accounted for 53.7% (22/41).

The 35-54 age group represented the largest proportion for both male 29.2% (12/41) and female 34.1% (14/41) indeterminate cases.

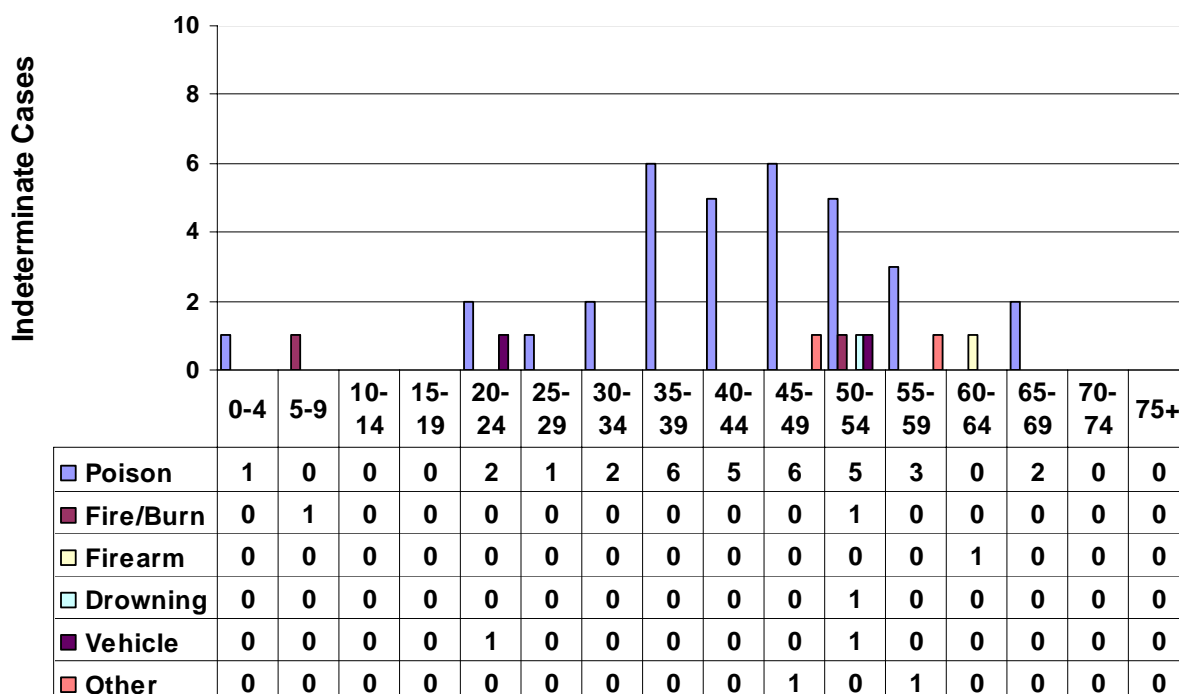


Age Group	Male	Female	Total	Percent
0 - 18 Years	1	1	2	4.9
19 Years and Older	18	21	39	95.1
Unspecified	0	0	0	0.0
Total Cases	19	22	41	100

¹ Randy Hanzlick, M.D., et al., A Guide For Manner of Death Classification: Basic, general “rules” for classifying manner of death (National Association of Medical Examiners, 2002) 5.

Manner of Death – Indeterminate

Indeterminate Cases by Age and Means



Poisoning accounted for 80.5% (33/41) of all indeterminate death cases with the 35–54 age group having the highest proportion 66.6% (22/33) of all indeterminate poisoning deaths.

Fire/burn, Firearm, Drowning, Vehicle, and Other cases represented 19.5% (8/41) of the remaining indeterminate case deaths.

Indeterminate Cases by Race and Gender

Race	Male	Female	Total	Percent
Hispanic	0	0	0	0.0
White	16	20	36	87.8
African American	1	1	2	4.9
American Indian	1	0	1	2.4
Asian Pacific	0	0	0	0.0
Other	0	0	0	0.0
Multiracial	1	1	2	4.9
Total Cases	19	22	41	100

Manner of Death – Natural

Natural deaths are due solely to disease and/or the aging process.¹

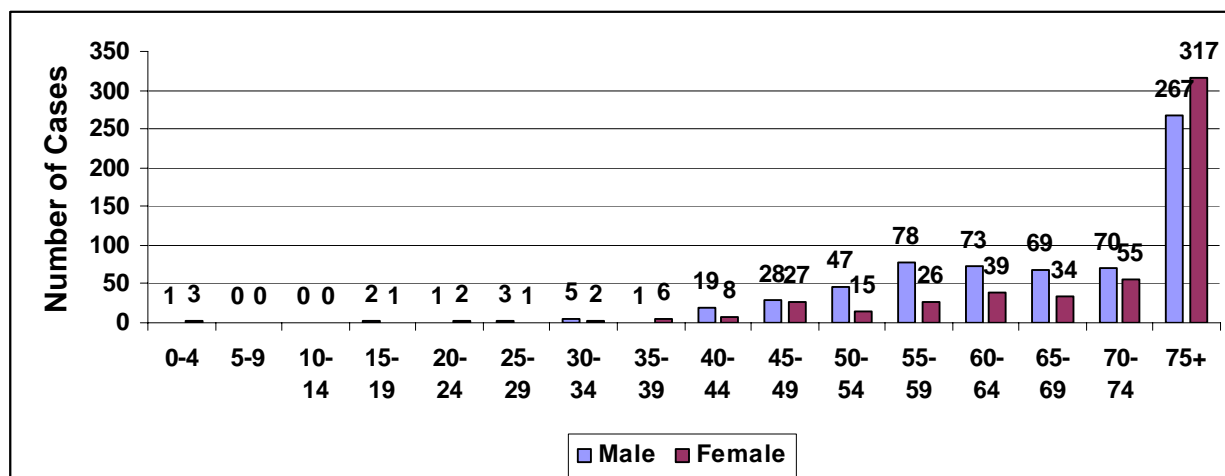
Natural Cases by Age and Gender

Natural deaths represented 71.5% (1200/1666) of all cases.

Males accounted for 55.3% (664/1200) of the total natural death cases, **females** accounted for 44.7% (536/1200) of the natural death cases.

The male 75+ age group accounted for 40.2% (267/664) of all male natural cases while the female 75+ age group accounted for 59.1% (317/536) of the female natural death cases.

Both the combined male/female 75+ age groups represented 48.6% (584/1200) of all the natural death cases.

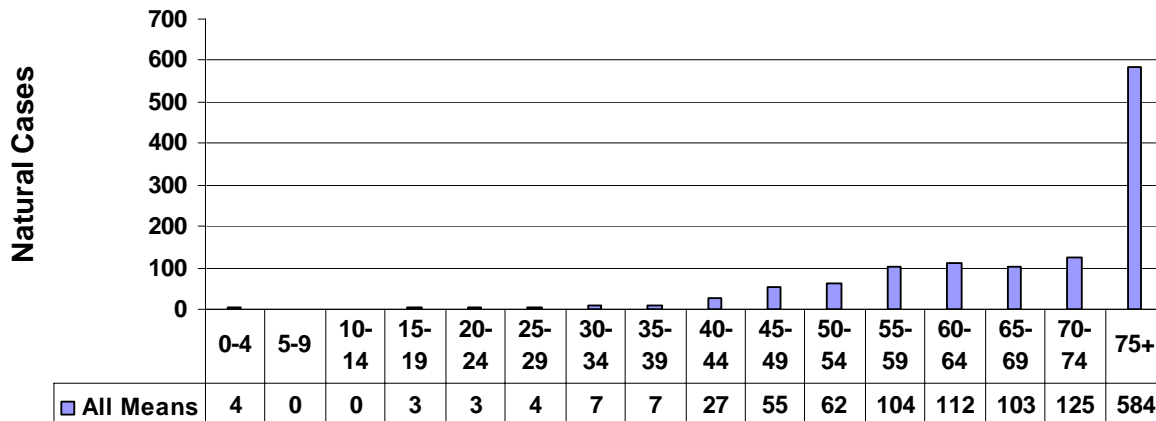


Age Group	Male	Female	Total	Percent
0 - 18 Years	3	3	6	0.5
19 Years and Older	661	533	1194	99.5
Unspecified	0	0	0	0.0
Total Cases	664	536	1200	100

¹ Randy Hanzlick, M.D., et al., A Guide For Manner of Death Classification: Basic, general “rules” for classifying manner of death (National Association of Medical Examiners, 2002) 5.

Manner of Death – Natural

Natural Cases by Age and Means



Natural Cases by Race and Gender

Race	Male	Female	Total	Percent
Hispanic	3	1	4	0.3
White	584	475	1059	88.3
African American	43	36	79	6.6
American Indian	2	0	2	0.2
Asian Pacific	6	1	7	0.6
Other	1	2	3	0.3
Multiracial	25	21	46	3.8
Total Cases	664	536	1200	100

Manner of Death – Suicide

Suicide results from an injury or poisoning as a result of an intentional, self-inflicted act committed to do self harm or cause the death of one’s self.¹

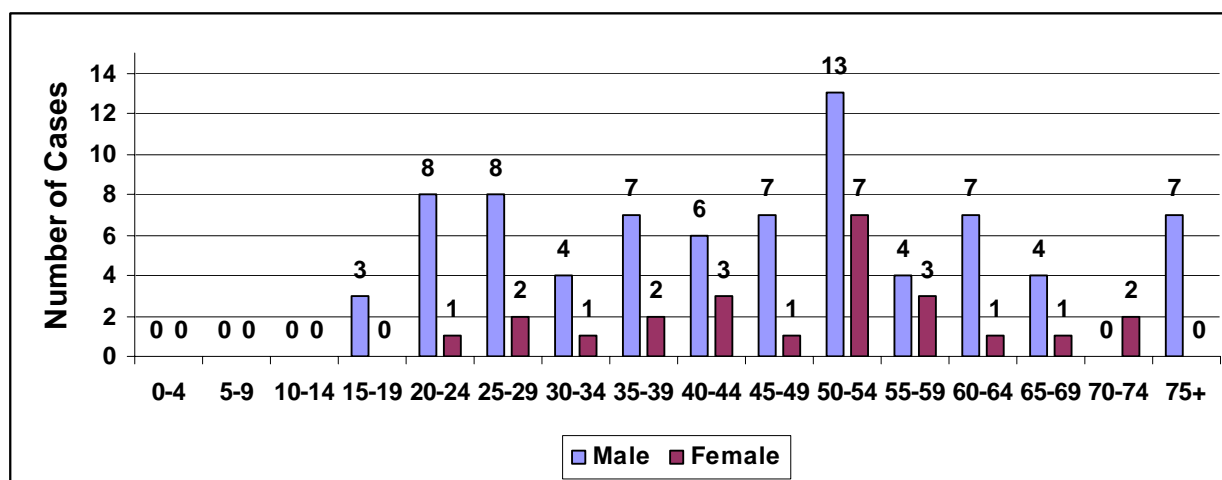
Suicide Cases by Age and Gender

Suicide deaths represented 6.2% (102/1666) of all cases.

Males accounted for 76.5% (78/102) of the total suicide death cases, **females** accounted for 23.5% (24/102) of the suicide cases.

The male 20-29 age group accounted for 20.5% (16/78) while the male 35–54 age group accounted for 42.3% (33/78) of all male suicide age groups. The 50–59 female age group represented 41.6% (10/24) of all female suicide cases.

The highest proportion of suicide deaths occurred among the 50-54 age group for both the male 16.6% (13/78) and female 29.1% (7/24) groups.

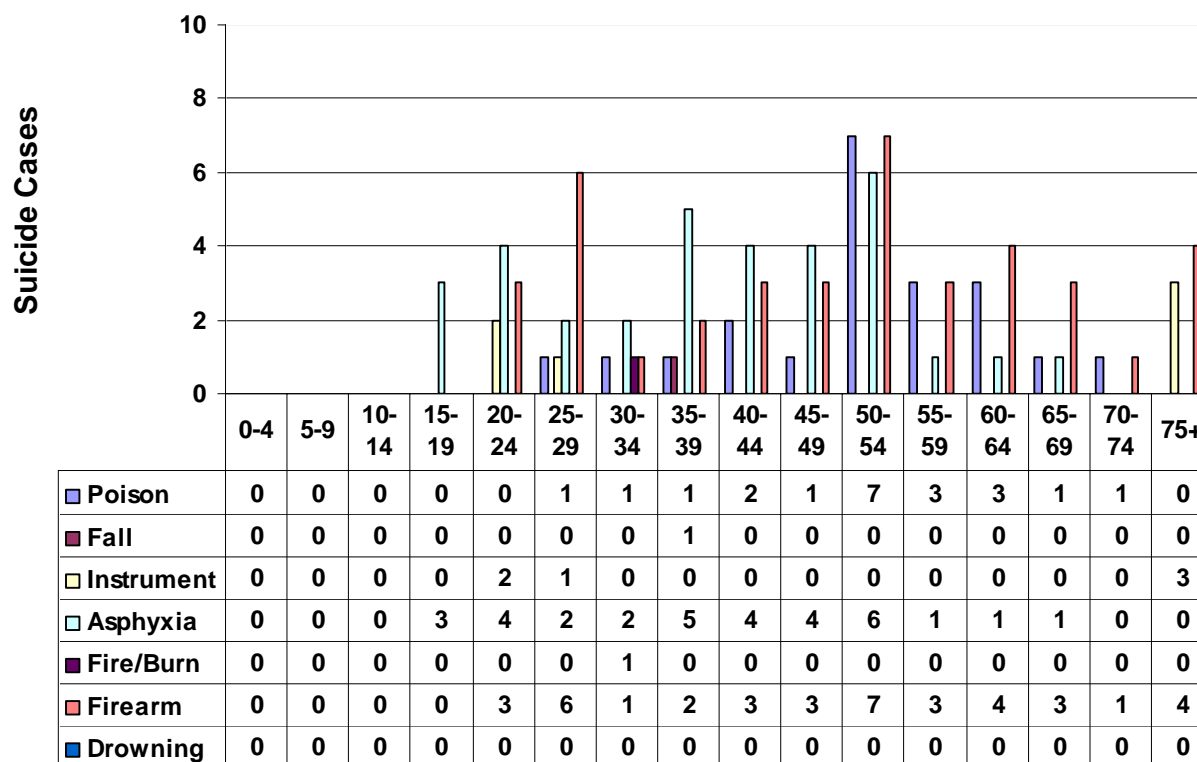


Age Group	Male	Female	Total	Percent
0 - 18 Years	3	0	3	2.9
19 Years and Older	75	24	99	97.1
Unspecified	0	0	0	0.0
Total Cases	78	24	102	100

¹ Randy Hanzlick, M.D., et al., A Guide For Manner of Death Classification: Basic, general “rules” for classifying manner of death (National Association of Medical Examiners, 2002) 5.

Manner of Death – Suicide

Suicide Cases by Age and Means



Firearm suicide cases represented 39.2% (40/102) of all suicides. Asphyxia, those deaths typically caused by hanging or suffocation accounted for 32.3% (33/102) and poisoning third with 20.5% (21/102).

The 50-54 age group had the highest proportion of deaths for poisoning 6.8% (7/102), asphyxia 5.9% (6/102) and firearms 6.8% (7/102).

Suicide Cases by Race and Gender

Race	Male	Female	Total	Percent
Hispanic	0	1	1	1.0
White	70	20	90	88.2
African American	2	0	2	2.0
American Indian	0	0	0	0.0
Asian Pacific	1	0	1	1.0
Other	1	0	1	1.0
Multiracial	4	3	7	6.8
Total Cases	78	24	102	100

Forensic Examinations

Forensic Examinations by Full Autopsy, Limited Autopsy and External Exams

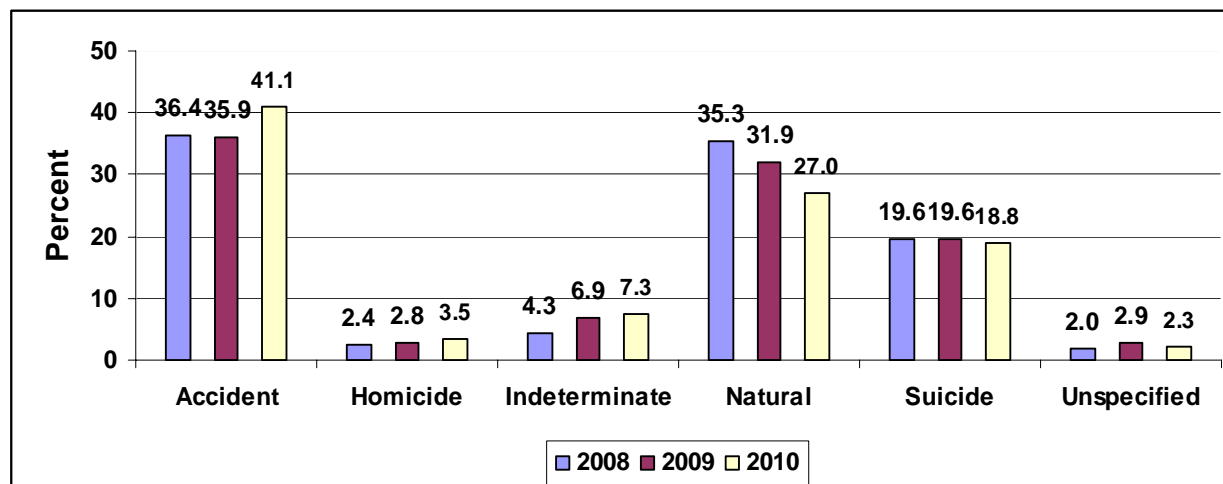
Total Forensic Examinations = 534

2010	Full		Limited		External	
	Autopsy	Percent	Autopsy	Percent	Exam	Percent
Accident	203	55.0	0	0.0	17	10.5
Homicide	19	5.0	0	0.0	0	0.0
Indeterminate	31	8.0	0	0.0	8	5.0
Natural	87	24.0	1	25.0	55	34.0
Suicide	28	8.0	3	75.0	69	42.5
Pending	0	0.0	0	0.0	0	0.0
Unspecified	0	0.0	0	0.0	13	8.0
Total	368	100	4	100	162	100

Forensic Examinations by Age and Gender

Age Group	Male	Female	Total	Percent
0 - 18 Years	11	3	14	2.6
19 Years and Older	345	162	507	95.0
Unspecified	0	0	13	2.4
Total Cases	356	165	534	100

Comparison of Forensic Examination Cases by Manner of Death for 2008, 2009, 2010



Toxicology

Laboratory procedures that include toxicology analysis, blood alcohol determinations, preparation of microscopic slides for histological examinations and various other chemical analysis of different types of body fluids, continue to be a very important aspect of investigation of deaths occurring under the Macomb County Medical Examiner's Office (MCMEO) jurisdiction.

There is concern with regard to the rise in the number of drug related deaths particularly controlled prescription drug abuse deaths involving opioids like OxyContin and Vicodin, depressants like Valium and Xanax, and stimulants like Ritalin and Adderall which can be detected with toxicological analysis. In 2010, the MCMEO ordered 502 toxicology procedures.

Toxicology Procedures by Age and Gender

Age Group	Male	Female	Total	Percent
0 - 18 Years	12	2	14	2.8
19 Years and Older	330	158	488	97.2
Unspecified	0	0	0	0.0
Total Cases	342	160	502	100

Unidentified Bodies

Occasionally people who die have no identification on them, and it is either unknown or uncertain as to the identity of the person. The MCMEO along with law enforcement agencies, work together using various techniques (dental & body x-rays, fingerprints, and DNA) to scientifically identify these decedents. In 2010, the MCMEO were able to identify all decedents.

Indigent/Unclaimed

In 2010, there were 17 indigent/unclaimed cases that were assigned to a County Public Administrator for burial or cremation processing. Three additional cases received State Emergency Relief (SER) payments to assist families with burials or cremations equaling a total of 20 indigent or unclaimed bodies.

Forensic Exhumations

Forensic exhumation is the legally sanctioned act or process of disinterring or digging up a previously lawfully buried human body for law enforcement associated forensic purposes. This form of exhumation may be undertaken at the direction of a court order, or in some cases, may result from consent by those persons with standing to give such sanctions. A forensic exhumation is normally conducted at the grave site within a cemetery or mausoleum under the auspices of law enforcement. In 2010, there were no forensic exhumations performed in Macomb County.