Sparrow

Office of the Medical Examiner

2016 Annual Report

Executive Summary

Barry County Eaton County Ingham County Ionia County
Isabella County Livingston County Montcalm County Shiawassee County

We are pleased to present our 2016 Annual Report. This report reflects the work of the Medical Examiner's Office during the 2016 calendar year. Only those deaths that fall within the geographical jurisdiction of the Medical Examiner, which is based on the county in which death was pronounced, are included.

We pride ourselves on providing outstanding service to the communities we serve. Our commitment to excellence was recognized in 2009, when our office was granted full accreditation by the National Association of Medical Examiners (NAME), and that full accreditation status was renewed by NAME in 2014. We have developed a regional system that delivers consistency and standardization. Thanks to leadership provided by Sparrow Forensic Pathology, there is an expected process which ensures quality, compassionate care when people need it most.

It would not be possible for the Medical Examiner's Office to operate efficiently without our dedicated staff. Additionally, our investigators are essential to our success and we are grateful for their service. The investigators are listed by county in the text of this report.

Sparrow

Sparrow Forensic Pathology

Office of the Medical Examiner
2016 Staff

Michael A. Markey, M.D.—Medical Director
John A. Bechinski, D.O.
Philip R. Croft, M.D., J.D.
Stephanie A. Dean, M.D.
Patrick A. Hansma, D.O.

Luke R. Vogelsberg, D-ABMDI - Supervisor, Chief Investigator, Pathology Assistant
Elizabeth Reust - Supervisor & Chief Investigator
Holly Marsh - Administrative Assistant
Debra Parsons - Team Advisor & Autopsy Assistant
Haley Scott - Autopsy Assistant
Bradley Phelps - Autopsy Assistant & Investigator
Samantha Schaeffer - Autopsy Assistant
Alyssa Nielsen - Autopsy Assistant
Krystin Smith - Autopsy Assistant

Sparrow

Medical Examiner Services

Investigation of Deaths

As the Medical Examiner's Office for eight counties in Michigan, we perform autopsies and other postmortem examinations as an important part of the death investigation process. Each county in Michigan has a licensed Physician, appointed by the county commissioners, who is responsible for investigating deaths as defined by the Michigan Compiled Laws.

In general, the deaths investigated by our office include those that are thought to result from injury or poisoning (such as homicide, suicide, and accidental deaths), and those deaths that are sudden, unexpected, and not readily explainable at the time of death. Because deaths occur around the clock, the Medical Examiner's Office is staffed 24 hours a day, 365 days a year.

The typical sequence of events that occurs following a death is:

- A death is reported to the on-call Medical Examiner Investigator (MEI).
- The MEI assesses whether we have legal authority and duty to investigate the death.
- The death scene is visited and investigated, if indicated.
- Investigative information is obtained about the decedent's medical and social history, as well as other information surrounding the events that were associated with the death.
- If an examination is indicated, the body is transported to the forensic pathology laboratory at Sparrow Hospital in Lansing, MI.

- If the investigator believes the death may not require a postmortem investigation, the on-call Medical Examiner is contacted and the case is discussed before the body is released to the funeral home.
- An investigative report is written by the MEI.
- When applicable, the decedent's primary care physician is contacted and notified of the death, and medical history is confirmed.
- A death certificate is generated by either the decedent's personal physician, the attending physician in the medical facility, or the assigned Medical Examiner.
- If a postmortem examination is performed, following receipt of all appropriate test results, a postmortem examination report is written.
- Permanent records are maintained for future use, as needed, and distributed to those who have requested a copy of the report and are authorized to receive the report.

Occasionally, some deaths require follow-up investigations, which are conducted by our In-House Investigators based at Sparrow Hospital. For 2016, these investigators were Brad Phelps, Luke Vogelsberg, Lynne Mark, and Mary Stevens.

Death Certification

The main focus of our investigation is to determine the cause and manner of death, and to clarify circumstances surrounding the death. The cause of death is related to the underlying disease or injury that resulted in the individual's death. The manner of death, in the state of Michigan, is limited to these possibilities: natural, accident, suicide, homicide, or indeterminate. In addition, information gathered during the investigation of event(s) before death and/or evidence collected may be critical for future legal proceedings.

Case Management Approach

A board-certified Forensic Pathologist is assigned to each death and determines the level of medical investigation required. Cases are handled by one of the following approaches:

Direct Release - The body is released directly from the scene to the funeral director. The MEI is at the scene and views the body. Based upon scene and medical history information provided by the MEI to the on-call Medical Examiner, a decision may be made to release a body directly to the funeral home chosen by the family.

View - A cursory examination is performed to further evaluate the case and to rule out trauma or the need for further in-depth examination.

Limited or External Examination – A limited examination generally is within an anatomic boundary (such as a brain only examination) to recover a foreign body, hardware or to answer specific questions. These examinations may include toxicology testing. An external examination includes a detailed record of observations, possible laboratory/toxicology testing and a written report.

Complete Autopsy - A complete examination includes external and internal examinations, with toxicology.

Decision to Autopsy

The Medical Examiners and Deputy Medical Examiners use standards established by the National Association of Medical Examiners (NAME) to determine whether an autopsy is indicated. The standards, most recently revised in September 2016, state:
The Forensic Pathologist shall perform a forensic autopsy when:

- The death is known or suspected to have been caused by apparent criminal violence.
- The death is unexpected and unexplained in an infant or child.
- The death is associated with police action.
- The death is apparently non-natural and in custody of a local, state, or federal institution.
- The death is due to acute workplace injury.*
- The death is caused by apparent electrocution.*
- The death is by apparent intoxication by alcohol, drugs, or poison, unless a significant interval has passed, and the medical findings and absence of trauma are well documented.
- The death is caused by unwitnessed or suspected drowning.*
- The body is unidentified and the autopsy may aid in identification.
- The body is skeletonized.
- The body is charred.
- The forensic pathologist deems a forensic autopsy is necessary to determine cause or manner of death, or document injuries/disease, or collect evidence.
- The deceased is involved in a motor vehicle incident and an autopsy is necessary to document injuries and/or determine the cause of death.

* unless sufficient antemortem medical evaluation has adequately documented findings and issues of concern that would otherwise have required autopsy performance

Accreditation

All of the Medical Examiners' offices that contract for services from Sparrow Forensic Pathology Services have been accredited by the National Association of Medical Examiners (NAME). In 2014, Ingham, Ionia, Isabella and Montcalm counties received accreditation for the first time. Barry, Eaton, Livingston and Shiawassee counties' NAME accreditations were renewed.

Only three percent of offices that conduct death investigations and autopsies in the U.S. are accredited by NAME. Of the 17 NAME-accredited county medical examiners' offices in Michigan, eight are served by Sparrow Forensic Pathology.

Manner of Death

Guidelines for classifying the manner of death include:

- Natural deaths are due solely or nearly totally to disease and/or the aging process.
- Accident applies when an injury or poisoning (including drug overdoses) causes death and there is little or no evidence that the 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 committed to do self-harm or cause the death of one's self.
- Homicide occurs when the 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 as a homicide. It has to be emphasized that the classification of homicide for the purpose of death certification is a "neutral" term and neither indicates nor implies criminal intent, which remains a determination within the province of legal processes.

- Indeterminate is a classification used when the information pointing to one manner of death is no more compelling than one or more other competing matters of death, in thorough consideration of all available information.

In general, when death involves a combination of natural processes and external factors, such as injury or poisoning, preference is given to the non-natural manner of death.

Cremation Permit Authorizations

Michigan law requires funeral directors to obtain a signed cremation permit from the Medical Examiner. Our office reviews thousands of cremation permit requests each year. We review the death certificates to ensure that deaths that should have been reported to our office were in fact reported. Deaths that were not properly reported are investigated before cremation is authorized.

Testimony at Trials

The Medical Examiners and Deputy Medical Examiners are often called upon to provide testimony in criminal and civil matters. They meet regularly with members of law enforcement, prosecutors, defense attorneys and civil litigators.

Public Health and Safety Issues

Although the major purpose of the Medical Examiner's Office is to conduct death investigations, the information obtained from individual death investigations may also be studied collectively to gather information that may be used to address public health and safety issues. Our office participates with the Michigan Child Death Review process in all counties, providing significant information regarding how children died, with the goal of preventing future deaths. Our offices anticipate increased involvement with elder death review teams in future years.

Education

We have a strong affiliation with Michigan State University. Our staff teaches pathology and provides regular lectures to forensic science students. We routinely have medical students who rotate through our office to gain experience and exposure to forensic pathology. Additionally, we participate in many programs designed to teach youth about careers in forensic pathology.

Comment on Methods and Terms

This annual report reflects the activities of our medical examiner offices during a given calendar year. With rare exception (e.g., deaths reported to the wrong medical examiner office), the data include only those cases over which the county's medical examiner can exercise jurisdiction. Jurisdiction is determined by where the individual was pronounced dead rather than the county of residence or the county in which the incident leading to death might have occurred. Furthermore, the data reflect the calendar year in which the deaths were reported to the respective medical examiner offices, regardless of the year in which the death actually occurred. The category "Total Deaths in the County" is based upon numbers provided by that county's Clerk's Office. Occasionally, these numbers may change after the time of publication of this report.

The category "Referrals to Gift of Life" does not include in-hospital deaths reported to the medical examiner, which are referred to Gift of Life by hospital staff rather than the medical examiner office. For "Accidental Deaths," the subcategory "Vehicle" consists of deaths that were classified as transportation-related fatalities, and include all forms of transport; drivers/operators, passengers, and pedestrians; this category does not include types of death that might otherwise fall into a different subclassification, such as vehicle fires and traumatic asphyxia.

Barry County

Medical Examiner

Philip R. Croft, M.D., J.D.

Deputy Medical Examiners

John A. Bechinski, D.O.
Stephanie A. Dean, M.D.
Michael A. Markey, M.D.
Patrick A. Hansma, D.O.

Medical Examiner Investigators

Dustin MacKellar
Tina Smelker
Joseph Huebner
Pattrick Jansens
Kim Tolan
Philip Clinton
Chad Klutman
William Rentz, D-ABMDI
Jerry Sarver, D-ABMDI
William Warren
Mitch Tolan

Administrative Assistant

Ann Wilson

Barry County
Summary of Cases

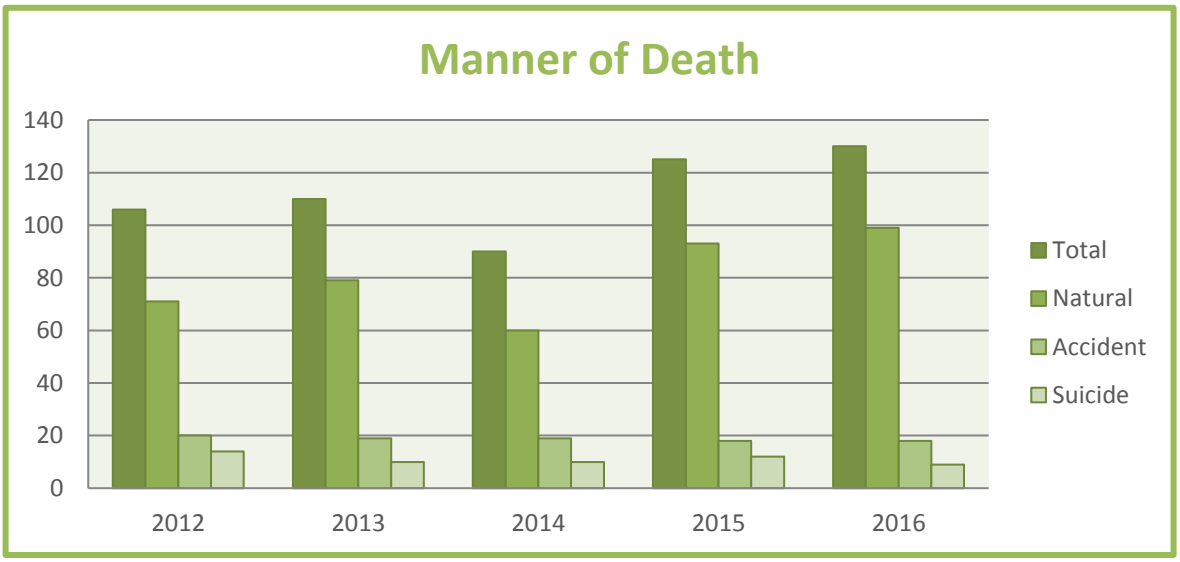
	2012	2013	2014	2015	2016
TOTAL DEATHS IN THE COUNTY	360	380	351	416	399
DEATHS REPORTED TO THE ME	106	111	90	125	130
CASES ACCEPTED FOR INVESTIGATION[1]	103	106	87	118	124
MEI SCENE INVESTIGATIONS	96	95	84	112	120
DEATH CERTIFICATES SIGNED BY ME	50	54	47	53	57
BODIES TRANSPORTED TO SPARROW	38	44	43	43	47
COMPLETE AUTOPSY	24	36	32	35	37
LIMITED AUTOPSY	3	1	1	1	0
EXTERNAL EXAMINATION	9	5	8	6	8
STORAGE ONLY	2	1	2	1	2
UNCLAIMED BODIES	1	0	0	1	0
REFERRALS TO GIFT OF LIFE	21	24	28	40	48
TISSUE/CORNEA DONORS	0	5	9	6	17
CREMATION PERMITS REVIEWED	208	217	185	238	257

[1] Not every case that is reported to the Medical Examiner's office falls within our jurisdiction. We accept cases for investigation based on the circumstances surrounding the death and the law that governs the Medical Examiner's authority (MCL 52.202). We declined jurisdiction in 6 cases that were reported to us in 2016.

Barry County
Manner of Death

The data on the following pages refers to those deaths that were reported to the Medical Examiner's Office.

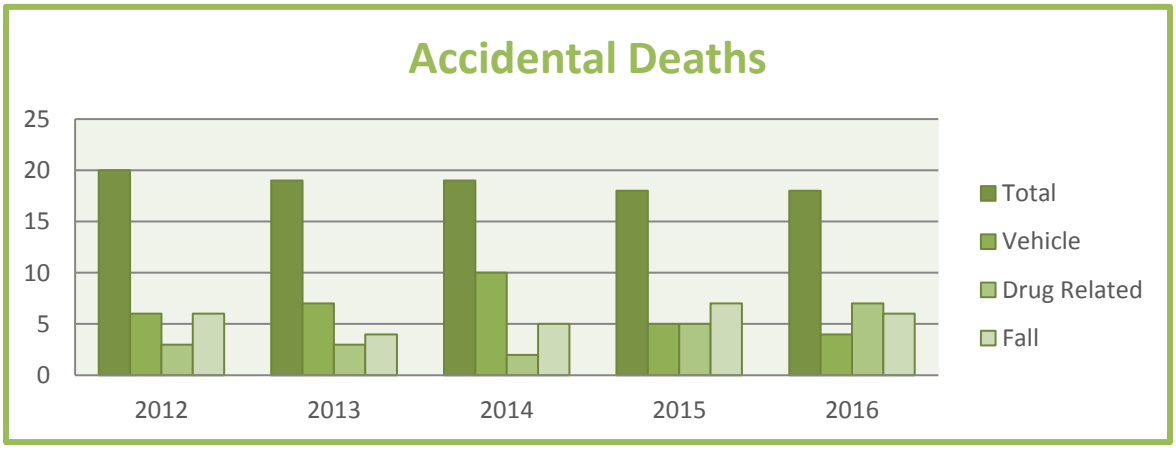
Manner of Death	*2012*	*2013*	*2014*	*2015*	*2016*
NATURAL	71	79	60	93	99
ACCIDENT	20	19	19	18	18
SUICIDE	14	10	10	12	9
HOMICIDE	0	1	0	1	2
INDETERMINATE	1	1	1	1	2[2]
TOTAL	106	110	90	125	130



[2] (1) unknown cause of death - found body with severe decomposition; (1) pedestrian struck by motor vehicle in unclear circumstances

Barry County
Accidental Deaths

	2012	2013	2014	2015	2016
VEHICLE	6	7	11	5	4
DRUG-RELATED	3	3	2	5	7
DROWNING	1	2	0	0	0
FALL	6	4	5	7	6
FIRE	0	1	0	1	0
ASPHYXIA	2	1	0	0	0
HYPOTHERMIA	1	0	0	0	0
FARM ANIMAL	0	0	1	0	0
OTHER	1[3]	1[4]	0	0	1[5]
TOTAL	20	19	19	18	18

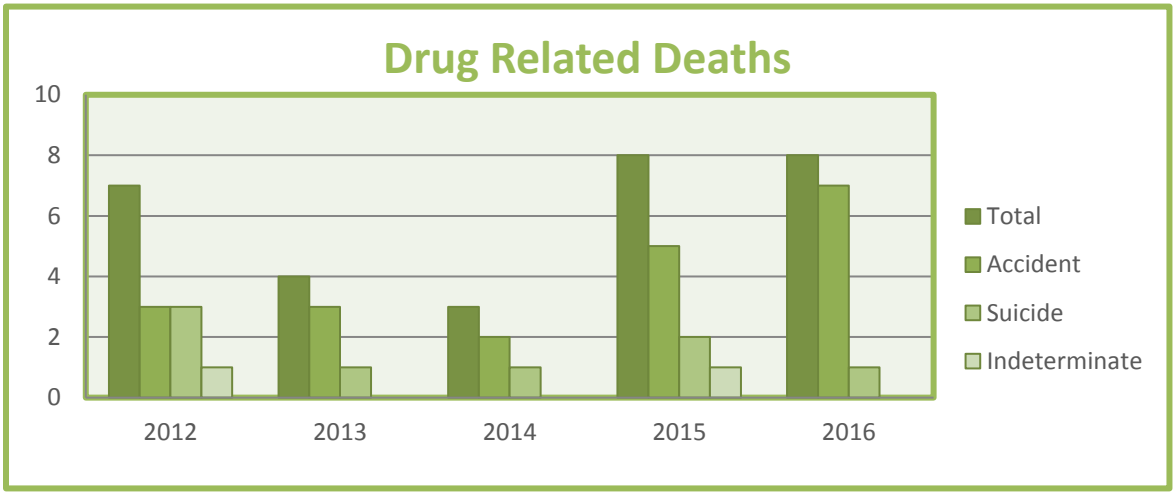


[3] Acute water intoxication
[4] Falling tree
[5] Leg injury of unclear etiology

Barry County
Drug Related Deaths

For purposes of this report, drug related fatalities are deaths in which an overdose of a combination of drugs or a single drug caused or contributed to the death. These deaths do not include situations in which intoxication might have been a factor in an incident leading to death, such as motor vehicle crashes, falls, choking while eating, or environmental exposures.

Manner of Death	*2012*	*2013*	*2014*	*2015*	*2016*
ACCIDENT	3	3	2	5	7
SUICIDE	3	1	1	2	1
INDETERMINATE	1	0	0	1	0
TOTAL	7	4	3	8	8



2016 Drug Related Deaths	
TOTAL	8 Cases
SEX	3 Female, 5 Male
RACE	8 White
AGE RANGE	32-71 years
AVERAGE AGE	52.5 years
MEDIAN AGE	50 Years
OPIOID-RELATED	7 Cases involved an opiate or opioid (87.5%)
MANNER OF DEATH	7 Accidents, 1 Suicide

Barry County Suicides

Suicide Totals by Year

2012	2013	2014	2015	2016
14	10	10	12	9

Suicide Methods

	2012	2013	2014	2015	2016
FIREARM	8	8	5	7	7
HANGING	3	1	3	3	1
DRUG INTOXICATION	3	1	1	2	1
SUFFOCATION	0	0	1	0	0

Suicides by Age

	2012	2013	2014	2015	2016
0 – 17	0	0	0	1	1
18 – 25	2	0	1	0	0
26 – 44	4	2	2	7	1
45 – 64	5	5	5	4	5
65 +	3	3	2	0	2

Barry County
Reported Deaths of Children
Reported Deaths of Children by Age

	2012	2013	2014	2015	2016
Stillborn	0	0	0	0	0
<1 year	0	0	0	0	0
1-5	0	0	0	2	0
6-10	0	0	0	0	0
11-17	2	0	0	1	1
TOTAL	2	0	0	3	1

Reported Deaths of Children by Manner of Death

Manner of Death	2012	2013	2014	2015	2016
NATURAL	0	0	0	0	0
ACCIDENT	2	0	0	2	0
SUICIDE	0	0	0	1	1
HOMICIDE	0	0	0	0	0
INDETERMINATE	0	0	0	0	0

AGE	SEX	CAUSE OF DEATH	MANNER
2016			
17 years	F	Hanging	Suicide

Eaton County

Medical Examiner

Michael A. Markey, M.D.

Deputy Medical Examiners

John A. Bechinski, D.O.
Philip R. Croft, M.D., J.D.
Stephanie A. Dean, M.D.
Patrick A. Hansma, D.O.

Medical Examiner Investigators

David Lowndes
Ruth Grant, D-ABMDI
Jessica Nicholson
Daniel Sowles, D-ABMDI

Eaton County
Summary of Cases

	2012	2013	2014	2015	2016
TOTAL DEATHS IN THE COUNTY	723	833	838	903	817
DEATHS REPORTED TO THE ME	171	162	167	183	170
CASES ACCEPTED FOR INVESTIGATION[6]	170	161	159	176	154
MEI SCENE INVESTIGATIONS	155	157	154	172	158
DEATH CERTIFICATES SIGNED BY ME	77	88	84	88	84
BODIES TRANSPORTED TO SPARROW	58	81	66[7]	69	78
COMPLETE AUTOPSY	43	53	47	55	64
LIMITED AUTOPSY	2	1	2	3	2
EXTERNAL EXAMINATION	8	16	9	9	7
STORAGE ONLY	5	11	6	2	5
UNCLAIMED BODIES	1	0	1	1	2
REFERRALS TO GIFT OF LIFE	17	43	49	68	61
TISSUE/CORNEA DONORS	4	4	7	19	16
CREMATION PERMITS REVIEWED	304	450	407	482	452

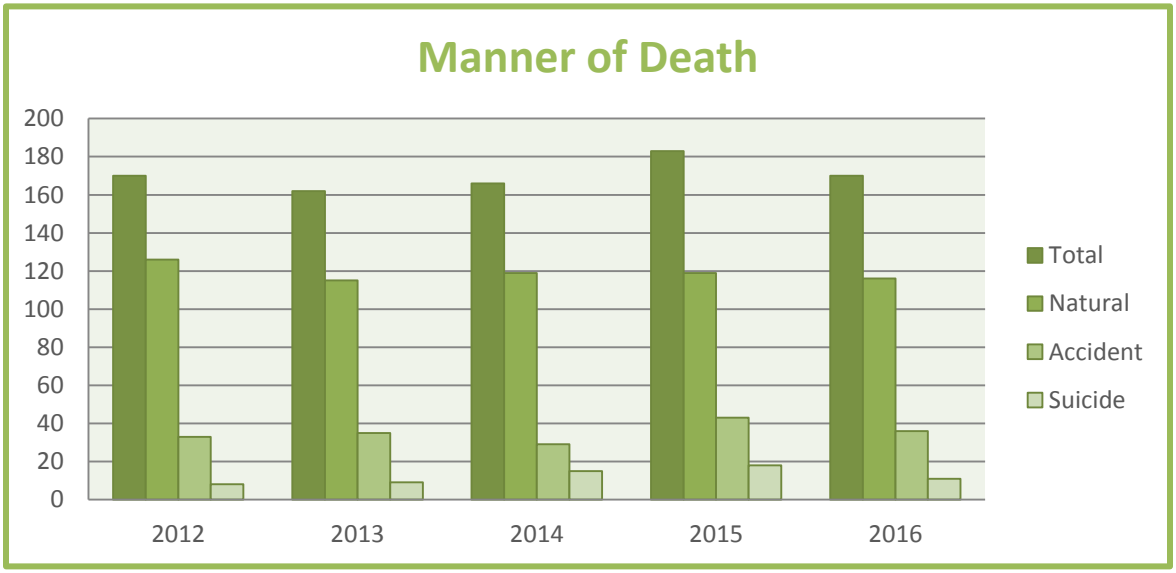
[6] Not every case that is reported to the Medical Examiner's office falls within our jurisdiction. We accept cases for investigation based on the circumstances surrounding the death and the law that governs the Medical Examiner's authority (MCL 52.202). We declined jurisdiction in 16 cases that were reported to us in 2016.

[7] Includes one non-human tissue case

Eaton County
Manner of Death

The data on the following pages refers to those deaths that were reported to the Medical Examiner's Office.

Manner of Death	*2012*	*2013*	*2014*	*2015*	*2016*
NATURAL	126	115	119	119	116
ACCIDENT	33	35	29	43	36
SUICIDE	8	9	15	18	11
HOMICIDE	0	0	1	2	2
INDETERMINATE	3	3	2	1	4[8]
TOTAL	170	162	166[9]	183	170[10]



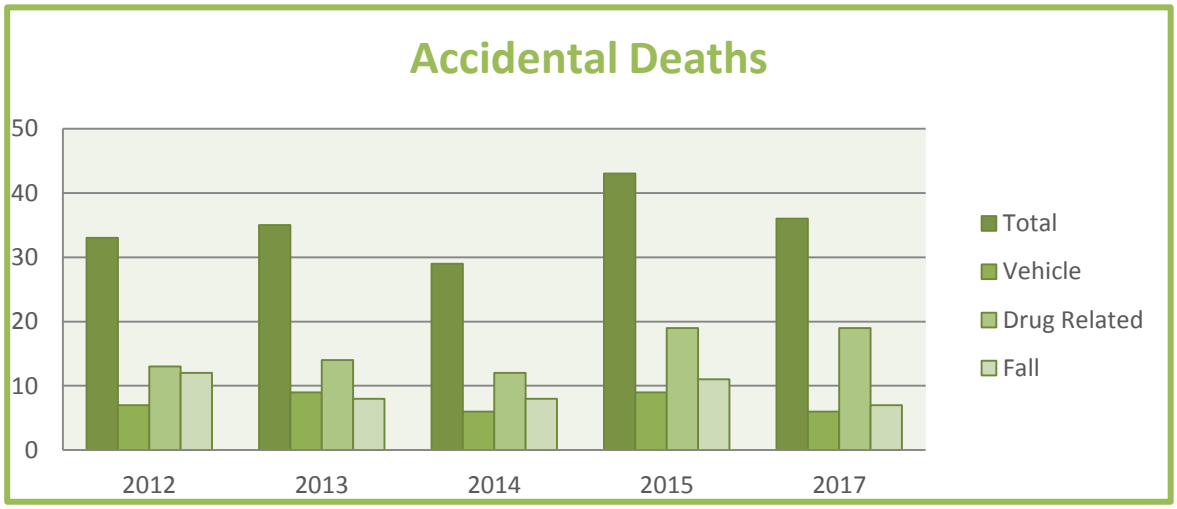
[8] (2) multiple drug intoxication, (1) multiple injuries – pedestrian struck by motor vehicle, (1) undetermined cause; severely decomposed body

[9] Cases with no manner of death: (1) non-human tissue

[10] Cases with no manner of death: (1) non-human bones

Eaton County
Accidental Deaths

	2012	2013	2014	2015	2016
VEHICLE	7	9	6	9	6
DRUG-RELATED	13	14	12	19	19
DROWNING	0	1	0	0	0
FALL	12	8	8	11	7
FIRE	0	1	1	2	0
ASPHYXIA	0	2	2	0	0
HYPOTHERMIA	1	0	0	1	2
FARM MACHINERY	0	0	0	1	0
TOTAL	33	35	29	43	36[11]

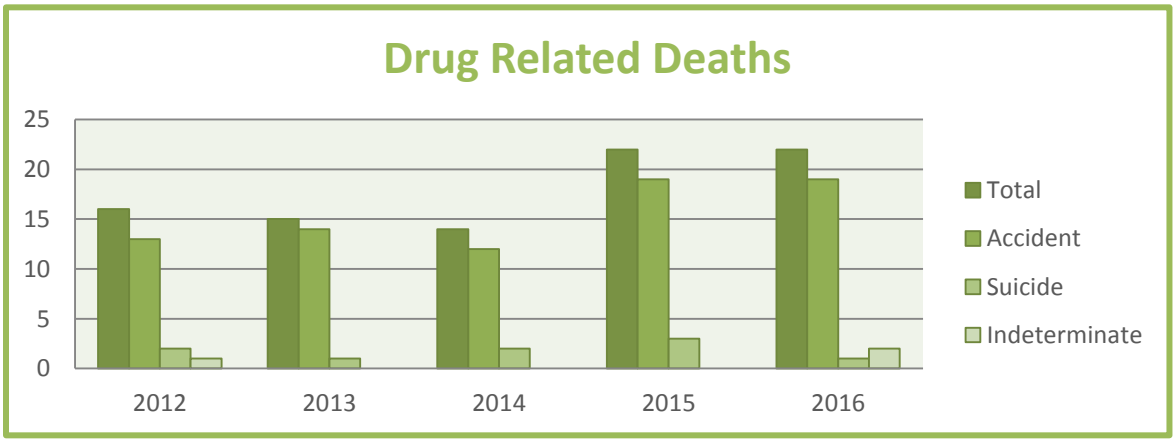


[11] Other accidental deaths: (1) rib fractures due to injury from back brace, (1) ruptured quadriceps tendon following syncopal episode

Eaton County
Drug Related Deaths

For purposes of this report, drug related fatalities are deaths in which an overdose of a combination of drugs or a single drug caused or contributed to the death. These deaths do not include situations in which intoxication might have been a factor in an incident leading to death, such as motor vehicle crashes, falls, choking while eating, or environmental exposures.

Manner of Death	*2012*	*2013*	*2014*	*2015*	*2016*
ACCIDENT	13	14	12	19	19
SUICIDE	2	1	2	3	1
INDETERMINATE	1	0	0	0	2
TOTAL	16	15	14	22	22



2016 Drug Related Deaths	
TOTAL	22 Cases
SEX	10 Female, 12 Male
RACE	20 White, 2 Black
AGE RANGE	23-69 years
AVERAGE AGE	42.1 years
MEDIAN AGE	39 Years
OPIOID-RELATED	19 Cases involved an opiate or opioid (86.4%)
MANNER OF DEATH	19 Accidents, 1 Suicide, 2 Indeterminate

Eaton County
Suicides
Suicide Totals by Year

2012	2013	2014	2015	2016
8	9	15	18	11

Suicide Methods

	2012	2013	2014	2015	2016
FIREARM	4	6	7	7	9
HANGING	1	1	5	4	1
DRUG INTOXICATION	2	1	2	3	1
SHARP FORCE INJURY	0	1	0	1	0
SUFFOCATION	0	0	1	2	0
OTHER	1[12]	0	0	1[13]	0

Suicides by Age

	2012	2013	2014	2015	2016
0 – 17	1	0	1	2	2
18 – 25	0	2	2	1	0
26 – 44	2	1	6	8	1
45 – 65	3	4	5	4	6
66 +	2	2	1	3	2

[12] Electrocution
[13] Drove in front of train

Eaton County
Reported Deaths of Children

Reported Deaths of Children by Age

	2012	2013	2014	2015	2016
Stillborn	1	0	0	0	0
<1 year	1	1	1	0	0
1-5	0	0	1	0	0
6-10	0	0	0	0	0
11-17	1	1	2	5	2
TOTAL	3	2	4	5	2

Reported Deaths of Children by Manner of Death

Manner of Death	2012	2013	2014	2015	2016
NATURAL	0	0	1	0	0
ACCIDENT	0	1	2	2	0
SUICIDE	1	0	1	2	2
HOMICIDE	0	0	0	1	0
INDETERMINATE	1	1	0	0	0

AGE	SEX	CAUSE OF DEATH	MANNER
		2015	
16 years	M	Intraoral Shotgun Wound	Suicide
17 years	M	Intraoral Gunshot Wound	Suicide

Ingham County

Medical Examiner

Michael A. Markey, M.D.

Deputy Medical Examiners

John A. Bechinski, D.O.
Philip R. Croft, M.D., J.D.
Stephanie A. Dean, M.D.
Patrick A. Hansma, D.O.

Medical Examiner Investigators

Kathleen Brooks
Joy Dempsey
Steven Gipe
Steven Dexter, R.N.
Ruth Grant, D-ABMDI
Lynne Mark
Jessica Nicholson
Bradley Phelps
Brett Ramsden
Dan Sowles, D-ABMDI
Mary Stevens
Luke Vogelsberg, D-ABMDI
Jane Wankmiller
John Whitehurst

Ingham County
Summary of Cases

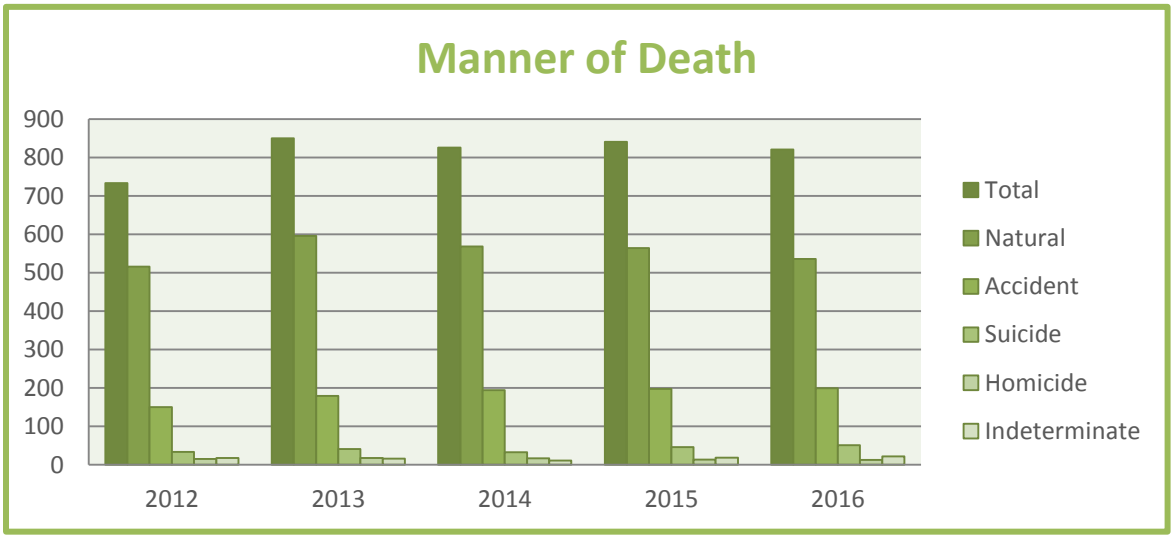
	2012	2013	2014	2015	2016
TOTAL DEATHS IN THE COUNTY	2578	2740	2763	2717	2655
DEATHS REPORTED TO THE ME	736	853	826	843	824
CASES ACCEPTED FOR INVESTIGATION[14]	634	731	704	672	660
MEI SCENE INVESTIGATIONS	589	710	634	654	677
DEATH CERTIFICATES SIGNED BY ME	394	443	452	407	424
BODIES TRANSPORTED TO SPARROW	303	349	342	328	267[15]
COMPLETE AUTOPSY	206	228	244	255	286
LIMITED AUTOPSY	7	3	4	5	9
EXTERNAL EXAMINATION	54	54	34	40	46
STORAGE ONLY	36	61	48	28	32
UNCLAIMED BODIES	9	3	24	21	20
REFERRALS TO GIFT OF LIFE	24	72	243	292	308
TISSUE/CORNEA DONORS	8	5	45	74	95
CREMATION PERMITS REVIEWED	1321	1574	1582	1717	1721

[14] Not every case that is reported to the Medical Examiner's office falls within our jurisdiction. We accept cases for investigation based on the circumstances surrounding the death and the law that governs the Medical Examiner's authority (MCL 52.202). We declined jurisdiction in 164 cases that were reported to us in 2016.

[15] In previous years, this number was listed as the sum of exams (complete, limited, external) and bodies for storage only. In 2016, this number was obtained from the contracted transport provider, and thus excludes decedents who died at Sparrow hospital and would have been transported to the Sparrow morgue by Sparrow staff irrespective of their status as a ME or non-ME case.

Ingham County
Manner of Death

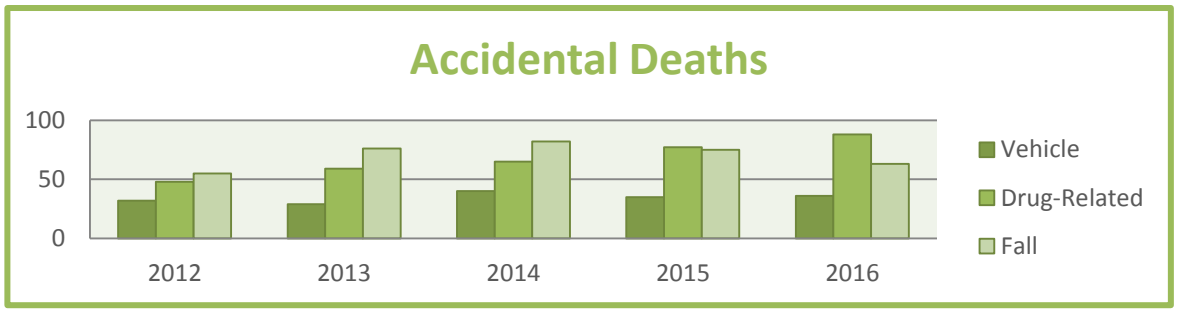
Manner of Death	*2012*	*2013*	*2014*	*2015*	*2016*
NATURAL	516	596	568	564	535
ACCIDENT	150	179	194	198	199
SUICIDE	34	41	33	46	51
HOMICIDE	15	13	17	14	13
INDETERMINATE	18	16	11	19	22
TOTAL	733[16]	845[17]	823[18]	841[19]	820[20]



[16] Cases with no manner of death: (3) stillbirths
[17] Cases with no manner of death: (3) non-human bones
[18] Cases with no manner of death: (2) stillbirths; (1) non-human bones
[19] Cases with no manner of death: (1) products of conception; (1) stillbirth
[20] Cases with no manner of death: (3) stillbirths; (1) human bone of no contemporary forensic interest

Ingham County
Accidental Deaths

	2012	2013	2014	2015	2016
VEHICLE	32	29	40	35	36
DRUG-RELATED	48	59	65	77	88
DROWNING	3	1	2	2	3
FALL	55	76	82	75	63
FIRE	0	2	1	0	1
ASPHYXIA	7	6	3	1	3
FALLING TREE	0	1	1	1	0
CARBON MONOXIDE	1	1	0	0	1
HYPOTHERMIA	0	2	0	1	2[21]
OTHER	4[22]	2[23]	0	6[24]	2[25]
TOTAL	150	179	194	198	199



[21] Both decedents also acutely intoxicated with ethanol (these cases not included in drug-related category)

[22] (1) anaphylaxis or other reaction to IV injection; (1) hemoperitoneum due to surgical injury; (2) blunt force injuries of head

[23] (1) exacerbation of chronic obstructive pulmonary disease by chemical respiratory irritant; (1) complications of dog bite

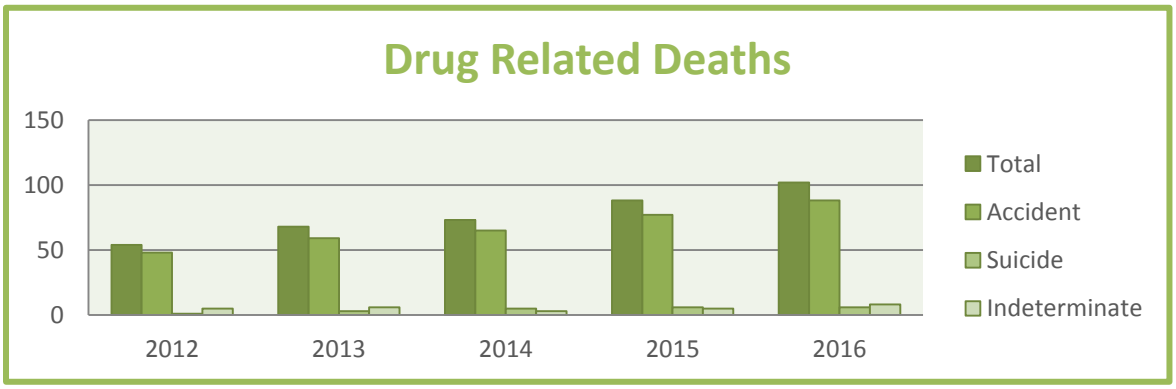
[24] (2) gunshot wound deaths; (1) struck by person falling from a ladder; (1) bowel obstruction by foreign object; (1) perforated bowel; (1) remote diving accident

[25] (1) heart disease associated with anabolic androgenic steroid use; (1) methadone therapy contributing to complications of chronic ethanol abuse

Ingham County
Drug Related Deaths

For purposes of this report, drug related fatalities are deaths in which an overdose of a combination of drugs or a single drug caused or contributed to the death. These deaths do not include situations in which intoxication might have been a factor in an incident leading to death, such as motor vehicle crashes, falls, choking while eating, or environmental exposures.

Manner of Death	*2012*	*2013*	*2014*	*2015*	*2016*
ACCIDENT	48	59	65	77	88
SUICIDE	1	3	5	6	6
INDETERMINATE	5	6	3	5	8
TOTAL	54	68	73	88	102



2016 Drug Related Deaths[26]	
TOTAL	102 Cases
SEX	33 Female, 69 Male
RACE	91 White, 9 Black, 1 Asian, 1 Native American
AGE RANGE	18-83 years
AVERAGE AGE	42.14 years
MEDIAN AGE	41.5 years
OPIOID-RELATED	87 Cases involved an opiate or opioid (85.3%)
MANNER OF DEATH	88 Accidents, 6 Suicides, 8 Indeterminate

[26] This table excludes one outlier case: 1-year-old white female who died of oxycodone intoxication with indeterminate manner of death

Ingham County
Suicides
Suicide Totals by Year

2012	2013	2014	2015	2016
34	41	33	46	51

Suicide Methods

	2012	2013	2014	2015	2016
FIREARM	11	13	16	19	26
HANGING	16	19	11	16	10
DRUG INTOXICATION	1	3	5	6	6
SUFFOCATION	1	1	0	2	3
SHARP FORCE INJURY	2	0	0	1	1
JUMP FROM HEIGHT	1	1	1	1	3
DROWNING	0	1	0	0	0
MOTOR VEHICLE CRASH	2	1	0	0	1
CARBON MONOXIDE	0	2	0	0	0
STRUCK BY TRAIN	0	0	0	1	0
OTHER	0	0	0	0	1[27]

Suicides by Age

	2012	2013	2014	2015	2016
0 – 17	2	4	1	2	3
18 – 25	6	11	3	9	9
26 – 44	14	12	10	12	21
45 – 64	9	11	16	18	7
65 +	3	3	3	5	11

[27] Penetrating head trauma – shot self with nail gun

Ingham County
Reported Deaths of Children

Sudden Unexplained Infant Death (SUID) refers to the death of an infant less than 1 year of age in which investigation, autopsy, medical history, review, and appropriate laboratory testing fails to identify a specific cause of death. SUID includes deaths that meet the definition of sudden infant death syndrome (SIDS).

Reported Deaths of Children by Age

	2012	2013	2014	2015	2016
Stillborn	3	0	5	2	3
<1 year	10	12	7	8	10
1-5	6	3	0	5	6
6-10	2	3	2	1	2
11-17	7	5	3	6	10
TOTAL	28	23	17	22	31

Reported Deaths of Children by Manner of Death

Manner of Death	2012	2013	2014	2015	2016
NATURAL	8	8	4	8	9
ACCIDENT	6	2	1	2	5
SUICIDE	2	3	1	2	3
HOMICIDE	4	3	2	1	4
INDETERMINATE	5	7	4	7	7

AGE	SEX	CAUSE OF DEATH	MANNER
		2016	
0	F	Stillborn – intrauterine fetal demise	None
0	M	Stillborn – intrauterine fetal demise	None
0	M	Stillborn – intrauterine fetal demise	None
30 days	M	Meningitis	Natural
1 month	M	Sudden unexplained infant death	Indeterminate
1 month	F	Sudden unexplained infant death	Indeterminate
1 month	M	Sudden unexplained infant death associated with unsafe sleep environment	Indeterminate
1 month	M	Sudden unexplained infant death associated with unsafe sleep environment	Indeterminate
2 months	M	Complications of caregiver neglect	Homicide
2 months	M	Diffuse alveolar damage – etiology uncertain	Indeterminate
5 months	F	Sudden unexplained infant death associated with unsafe sleep environment	Indeterminate
7 months	M	Drowning	Accident
8 months	F	Blunt force head injuries	Homicide
12 months	M	Systemic Staphylococcus aureus infection complicating acute lymphoproliferative disorder	Natural
14 months	F	Oxycodone intoxication	Indeterminate
17 months	M	Closed head injury – motor vehicle crash	Accident
2 years	M	Acute pneumonia, complications of Noonan Syndrome	Natural
3 years	M	Acute exacerbation of asthma	Natural
5 years	F	Stab Wounds of the Chest	Homicide
8 years	M	Acute and chronic asthma	Natural
10 years	F	Blunt force injuries of the head – motor vehicle crash	Accident
11 years	M	Complications of blunt force injuries of the head – pedestrian struck by motor vehicle	Accident
11 years	F	Complications of ulcerative colitis	Natural
12 years	F	Multiple blunt force injuries – motor vehicle crash	Accident
13 years	F	Complications of neuromuscular disease	Natural
13 years	M	Multiple blunt force injuries – pedestrian	Suicide
14 years	M	Complications of spastic quadriplegia	Natural
15 years	F	Hanging	Suicide
16 years	F	Complications of brain tumor	Natural
16 years	M	Stab wound of chest	Homicide
16 years	M	Multiple injuries –jumped from bridge	Suicide

Ionia County

Medical Examiner

Michael A. Markey, M.D.

Deputy Medical Examiners

John A. Bechinski, D.O.
Philip R. Croft, M.D., J.D.
Stephanie A. Dean, M.D.
Patrick A. Hansma, D.O.

Medical Examiner Investigators

Jim Buxton
Dwain Dennis
Kate Dernocoeur
James Jones
Matthew Kasper, D-ABMDI
Derek Schroeder
Timothy Thelen
Rick Vriesenga
Ann Ward
Thomas Wodarek

Ionia County
Summary of Cases

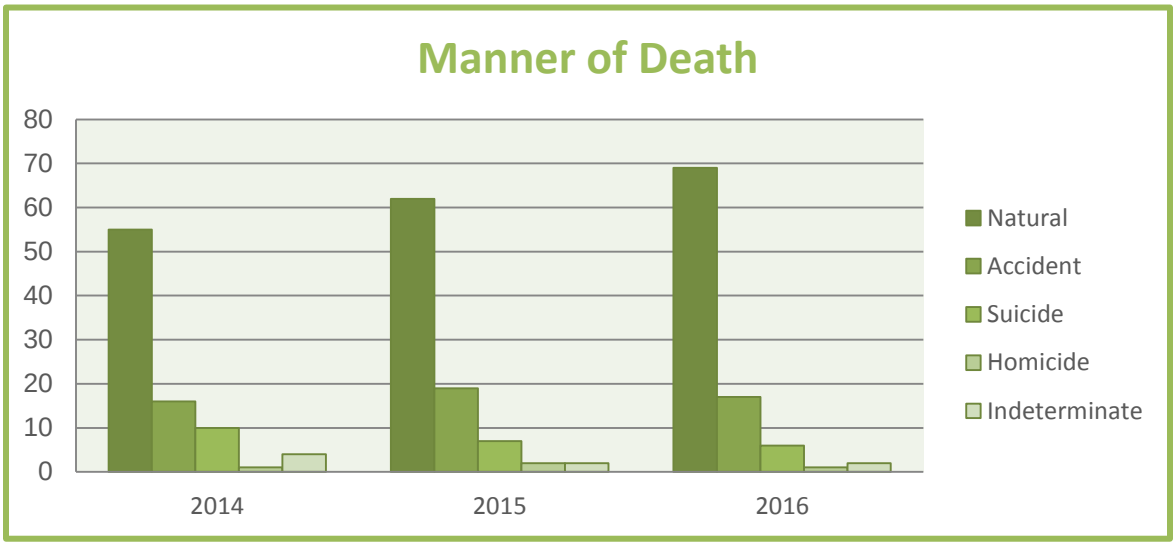
Our contract with Ionia began in mid-January, 2014. The 2014 data reflect deaths that occurred between Jan. 22, 2014, and Dec. 31, 2014.

	2014	*2015*	*2016*
TOTAL DEATHS IN THE COUNTY	316	321	324
DEATHS REPORTED TO THE ME	86	92	95
CASES ACCEPTED FOR INVESTIGATION[28]	85	91	92
MEI SCENE INVESTIGATIONS	60	69	92
DEATH CERTIFICATES SIGNED BY ME	46	48	47
BODIES TRANSPORTED TO SPARROW	45	42	38
COMPLETE AUTOPSY	36	36	33
LIMITED AUTOPSY	2	0	2
EXTERNAL EXAMINATION	3	4	2
STORAGE ONLY	3	2	1
UNCLAIMED BODIES	2	0	1
REFERRALS TO GIFT OF LIFE	34	40	34
TISSUE/CORNEA DONORS	5	9	13
CREMATION PERMITS REVIEWED	173	166	196

[28] Not every case that is reported to the Medical Examiner's office falls within our jurisdiction. We accept cases for investigation based on the circumstances surrounding the death and the law that governs the Medical Examiner's authority (MCL 52.202). We declined jurisdiction in 3 cases that were reported to us in 2016.

Ionia County
Manner of Death

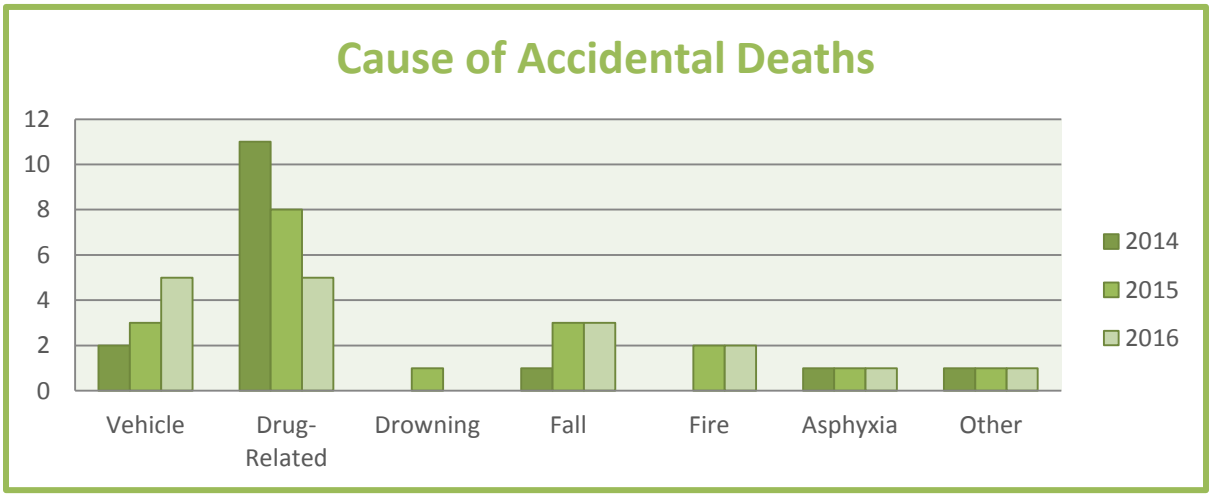
Manner of Death	*2014*	*2015*	*2016*
NATURAL	55	62	69
ACCIDENT	16	19	17
SUICIDE	10	7	6
HOMICIDE	1	2	1
INDETERMINATE	4	2	2[29]
TOTAL	86	92	95



[29] (2) multiple drug intoxication deaths

Ionia County
Accidental Deaths

	2014	2015	2016
VEHICLE	2	3	5
DRUG-RELATED	11	8	5
DROWNING	0	1	0
FALL	1	3	3
FIRE	0	2	2
ASPHYXIA	1	1	1
WATER INTOXICATION	1	0	0
HYPOTHERMIA	0	0	1
INDUSTRIAL ACCIDENT	0	1	0
TOTAL	16	19	17



Ionia County
Drug Related Deaths

For purposes of this report, drug related fatalities are deaths in which an overdose of a combination of drugs or a single drug caused or contributed to the death. These deaths do not include situations in which intoxication might have been a factor in an incident leading to death, such as motor vehicle crashes, falls, choking while eating, or environmental exposures.

	2014	*2015*	*2016*
ACCIDENT	11	8	5
SUICIDE	2	0	2
INDETERMINATE	0	1	2

2016 Drug Related Deaths	
TOTAL	9 Cases
SEX	4 Female, 5 Male
RACE	9 White
AGE RANGE	29-77 years
AVERAGE AGE	45.3 years
MEDIAN AGE	34 years
OPIOD-RELATED	5 Cases involved an opiate or opioid (55.6%)
MANNER OF DEATH	5 Accidents, 2 Suicides, 2 Indeterminate

Ionia County
Suicides

Suicide Totals by Year

2014	2015	2016
10	7	6

Suicide Methods

	2014	2015	2016
FIREARM	5	2	4
HANGING	3	3	0
DRUG INTOXICATION	2	0	2
CARBON MONOXIDE	0	1	0
MOTOR VEHICLE CRASH	0	1	0

Suicides by Age

Age	2014	2015	2016
0 – 17	1	0	0
18 – 25	3	1	0
26 – 44	3	4	4
45 – 64	1	2	0
65+	2	0	2

Ionia County
Reported Deaths of Children

Sudden Unexplained Infant Death (SUID) refers to the death of an infant less than 1 year of age in which investigation, autopsy, medical history, review, and appropriate laboratory testing fails to identify a specific cause of death. SUID includes deaths that meet the definition of sudden infant death syndrome (SIDS).

AGE	*SEX*	*CAUSE OF DEATH*	*MANNER*
		2016	

None

Isabella County

Medical Examiner

Michael A. Markey, M.D.

Deputy Medical Examiners

John A. Bechinski, D.O.
Philip R. Croft, M.D., J.D.
Stephanie A. Dean, M.D.
Patrick A. Hansma, D.O.

Medical Examiner Investigators

Matthew Drake
Kari Duman
Christy Mead
Michael Rohn
Richard Clark
Philip Nartker

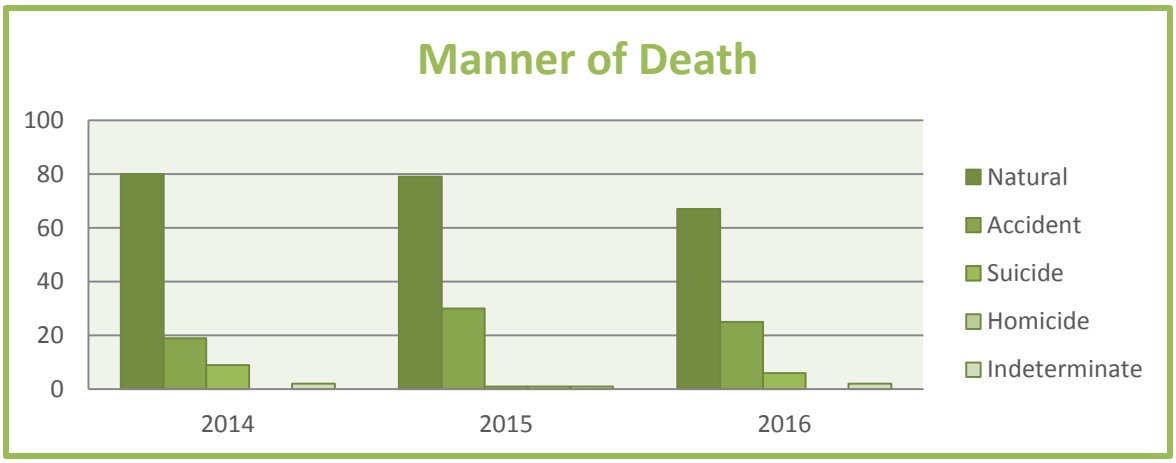
Isabella County
Summary of Cases

	2014	2015	2016
TOTAL DEATHS IN THE COUNTY	475	485	507
DEATHS REPORTED TO THE ME	110	113	100
CASES ACCEPTED FOR INVESTIGATION[30]	106	104	91
MEI SCENE INVESTIGATIONS	65	100	93
DEATH CERTIFICATES SIGNED BY ME	59	54	48
BODIES TRANSPORTED TO SPARROW	39	46	41
COMPLETE AUTOPSY	30	44	35
LIMITED AUTOPSY	0	1	1
EXTERNAL EXAMINATION	9	1	3
STORAGE ONLY	0	0	2
UNCLAIMED BODIES	0	4	2
REFERRALS TO GIFT OF LIFE	33	53	40
TISSUE/CORNEA DONORS	2	6	8
CREMATION PERMITS REVIEWED	269	277	267

[30] Not every case that is reported to the Medical Examiner's office falls within our jurisdiction. We accept cases for investigation based on the circumstances surrounding the death and the law that governs the Medical Examiner's authority (MCL 52.202). We declined jurisdiction in 9 cases that were reported to us in 2016.

Isabella County
Manner of Death

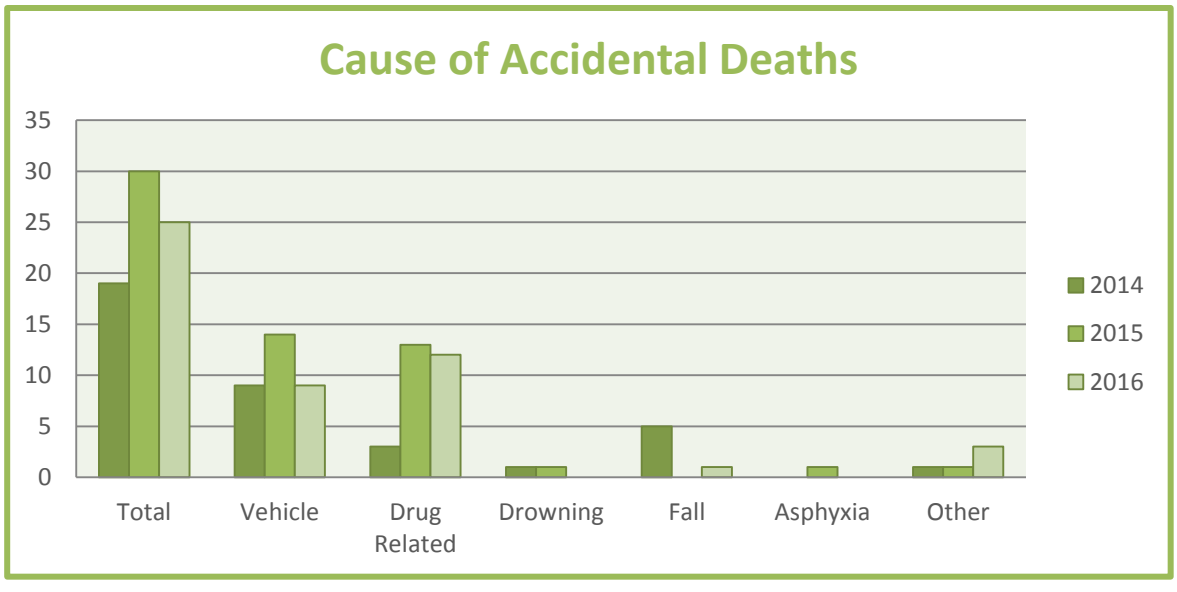
Manner of Death	*2014*	*2015*	*2016*
NATURAL	80	79	66
ACCIDENT	19	30	25
SUICIDE	9	1	6
HOMICIDE	0	1	0
INDETERMINATE	2	1	2
TOTAL	110	112[31]	100[32]



[31] Case with no manner of death: Stillborn following motor vehicle crash
[32] Case with no manner of death: stillbirth

Isabella County
Accidental Deaths

	2014	2015	2016
VEHICLE	9	14	9
DRUG-RELATED	3	13	12
DROWNING	1	1	0
FALL	5	0	1
ASPHYXIA	0	1	0
HYPOTHERMIA	0	1	1
ANIMAL	1	0	0
FALLING TREE	0	0	1
PINNED IN MACHINERY	0	0	1
TOTAL	19	30	25



Isabella County
Drug Related Deaths

For purposes of this report, drug related fatalities are deaths in which an overdose of a combination of drugs or a single drug caused or contributed to the death. These deaths do not include situations in which intoxication might have been a factor in an incident leading to death, such as motor vehicle crashes, falls, choking while eating, or environmental exposures.

Manner of Death	*2014*	*2015*	*2016*
ACCIDENT	3	13	12
SUICIDE	1	0	1
INDETERMINATE	0	1	2

2016 Drug Related Deaths	
TOTAL	15 Cases
SEX	6 Female, 9 Male
RACE	11 White, 4 Native American
AGE RANGE	21 - 56 years
AVERAGE AGE	37.1 years
MEDIAN AGE	33 years
OPIOD-RELATED	9 Cases involved an opiate or opioid (60%)
MANNER OF DEATH	12 Accidents, 1 Suicide, 2 Indeterminate

Isabella County
Suicides

Suicide Totals by Year

2014	2015	2016
9	1	6

Suicide Methods

	2014	2015	2016
FIREARM	5	1	3
HANGING	3	0	1
ASPHYXIA	0	0	1
DRUG INTOXICATION	1	0	2

Suicides by Age

Age	2014	2015	2016
0 – 17	0	0	0
18 – 25	4	0	1
26 – 44	2	0	3
45 – 64	1	0	2
65+	2	1	0

Isabella County
Reported Deaths of Children

AGE	SEX	CAUSE OF DEATH	MANNER
		2014	
1 year	F	Blunt Force Trauma (Struck by a horse)	Accident
		2015	
0	M	Stillborn	None
4 months	M	Asphyxia associated with unsafe sleep environment	Accident
		2016	
0	M	Stillborn	None

Livingston County

Medical Examiner

Michael A. Markey, M.D.

Deputy Medical Examiners

John A. Bechinski, D.O.
Philip R. Croft, M.D., J.D.
Stephanie A. Dean, M.D.
Patrick Hansma, D.O.

Medical Examiner Investigators

Richard Cruz, D-ABMDI
Jonathon Black
Bill Hough, D-ABMDI
Edwin Moore, D-ABMDI

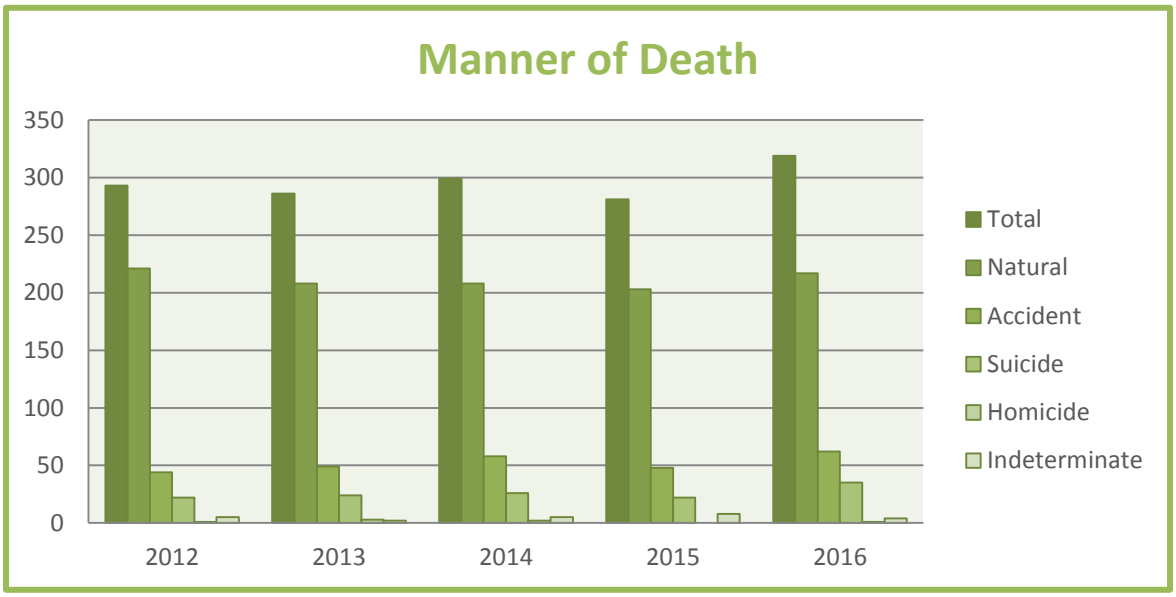
Livingston County
Summary of Cases

	2012	2013	2014	2015	2016
TOTAL DEATHS IN THE COUNTY	935	948	1113	1025	1401
DEATHS REPORTED TO THE ME	294	288	299	281	319
CASES ACCEPTED FOR INVESTIGATION[33]	270	279	282	262	277
MEI SCENE INVESTIGATIONS	258	272	276	263	292
DEATH CERTIFICATES SIGNED BY ME	116	136	139	117	156
BODIES TRANSPORTED TO SPARROW	96	120	111	95	136
COMPLETE AUTOPSY	71	89	94	75	107
LIMITED AUTOPSY	4	4	4	7	8
EXTERNAL EXAMINATION	15	14	12	12	13
STORAGE ONLY	6	12	0	1	8
REFERRALS TO GIFT OF LIFE	37	32	41	87	84
TISSUE/CORNEA DONORS	9	6	5	31	34
UNCLAIMED BODIES	1	0	3	2	0
CREMATION PERMITS REVIEWED	510	592	619	659	637

[33] Not every case that is reported to the Medical Examiner's office falls within our jurisdiction. We accept cases for investigation based on the circumstances surrounding the death and the law that governs the Medical Examiner's authority (MCL 52.202). We declined jurisdiction in 42 cases that were reported to us in 2016.

Livingston County
Manner of Death

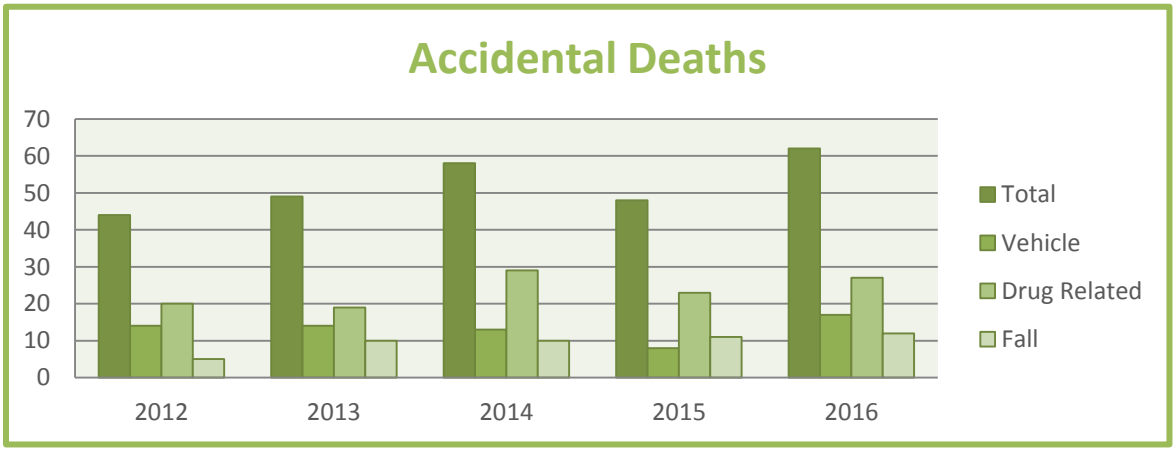
Manner of Death	*2012*	*2013*	*2014*	*2015*	*2016*
NATURAL	221	208	208	203	217
ACCIDENT	44	49	58	48	62
SUICIDE	22	24	26	22	35
HOMICIDE	1	3	2	0	1
INDETERMINATE	5	2	5	8	4
TOTAL	293[34]	286[35]	299	281	319



[34] Cases with no manner of death: (1) non-human bones
[35] Cases with no manner of death: (1) perinatal death, unsure if born alive; (1) non-human bones

Livingston County
Accidental Deaths

	2012	2013	2014	2015	2016
VEHICLE	14	14	13	8	17
DRUG-RELATED	20	19	29	23	27
DROWNING	2	1	0	0	1
FALL	5	10	10	11	12
FIRE	0	1	2	1	2
ASPHYXIA	2	1	1	3	2
HYPOTHERMIA	0	2	2	0	0
FALLING TREE	0	1	0	1	0
OTHER	1[36]	0	1[37]	1[38]	1[39]
TOTAL	44	49	58	48	62

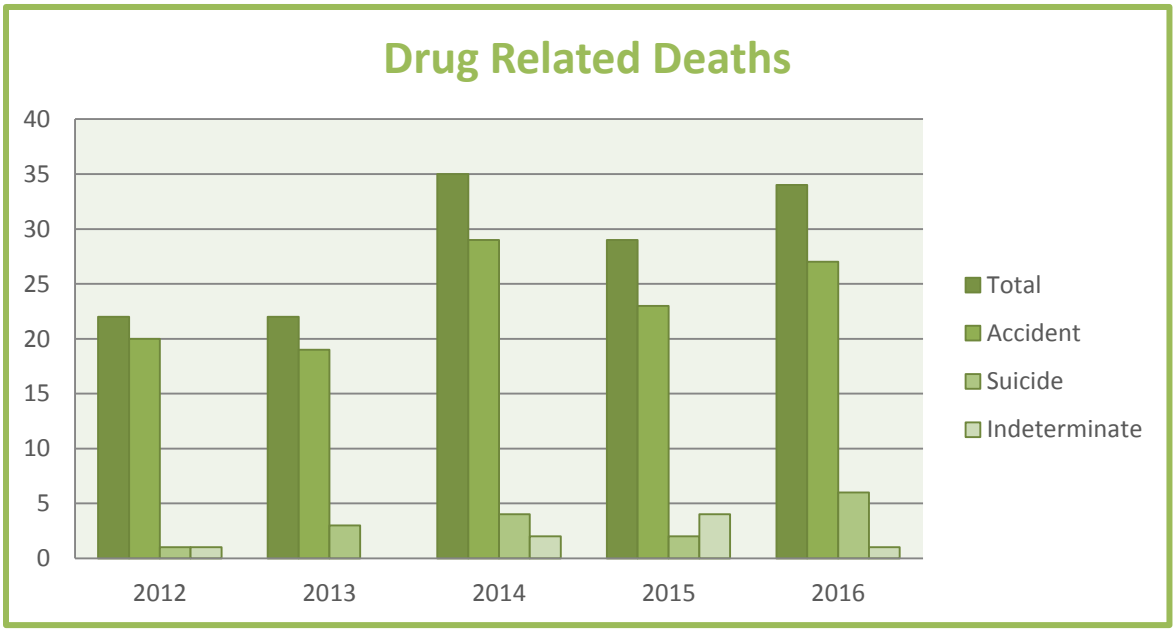


[36] Multiple injuries--decedent working on tractor when it rolled over decedent
[37] Inhalation of carbon monoxide from a generator
[38] Head injury of unknown origin
[39] Anaphylaxis due to insect stings

Livingston County
Drug Related Deaths

For purposes of this report, drug related fatalities are deaths in which an overdose of a combination of drugs or a single drug caused or contributed to the death. These deaths do not include situations in which intoxication might have been a factor in an incident leading to death, such as motor vehicle crashes, falls, choking while eating, or environmental exposures.

Manner of Death	*2012*	*2013*	*2014*	*2015*	*2016*
ACCIDENT	20	19	29	23	27
SUICIDE	1	3	4	2	6
INDETERMINATE	1	0	2	4	1
TOTAL	22	22	35	29	34



2016 Drug Related Deaths	
TOTAL	34 Cases
SEX	12 Female, 22 Male
RACE	33 White, 1 Black
AGE RANGE	23 – 67 years
AVERAGE AGE	40.9 years
MEDIAN AGE	37.5 years
OPIOD-RELATED	28 Cases involved an opiate or opioid (82.4%)
MANNER OF DEATH	27 Accidents, 6 Suicides, 1 Indeterminate

Livingston County
Suicides
Suicide Totals by Year

2012	2013	2014	2015	2016
22	24	26	22	35

Suicide Methods

	2012	2013	2014	2015	2016
FIREARM	11	11	13	11	22
HANGING	6	5	6	7	5
DRUG INTOXICATION	1	3	4	2	6
CARBON MONOXIDE	1	1	2	1	1
SHARP FORCE INJURY	1	1	1	0	1
SUFFOCATION	0	1	0	1	0
OTHER	2[40]	2[41]	0	0	0

Suicides by Age

Age	2012	2013	2014	2015	2016
0 – 17	2	1	2	1	2
18 – 25	2	4	2	2	5
26 – 44	4	6	9	6	8
45 – 64	10	10	10	10	13
65+	4	3	3	3	7

[40] (1) drowning; (1) self-inflicted cross-bow wound
[41] (1) jumped from height; (1) house fire

Livingston County
Reported Deaths of Children
Reported Deaths of Children by Age

	2012	2013	2014	2015	2016
Stillborn	0	0	1	0	0
<1 year	2	1	2	1	0
1-5	2	0	0	1	1
6-10	1	0	0	0	0
11-17	1	1	4	1	4
TOTAL	6	2	7	3	5

Reported Deaths of Children by Manner of Death

Manner of Death	2012	2013	2014	2015	2016
NATURAL	0	2	2	1	1
ACCIDENT	2	0	0	0	1
SUICIDE	0	1	2	1	2
HOMICIDE	0	1	0	0	0
INDETERMINATE	0	1	2	1	1

AGE	SEX	CAUSE OF DEATH	MANNER
		2016	
5 years	M	Complications of Menkes disease	Natural
13 years	M	Head and neck injuries – off-road vehicle crash	Accident
14 years	F	Undetermined cause of death	Indeterminate
15 years	M	Hanging	Suicide
17 years	M	Gunshot wound of head	Suicide

Montcalm County

Medical Examiner

Michael A. Markey, M.D.

Deputy Medical Examiners

John A. Bechinski, D.O.
Philip R. Croft, M.D., J.D.
Stephanie A. Dean, M.D.
Patrick A. Hansma, D.O.

Medical Examiner Investigators

Darin Dood, Lead Medical Examiner Investigator
Amy Ederer
Mark Crawfis
Ed Lingeman
Bill Simpson, Sr.
Mark Walters
Trinda Martin

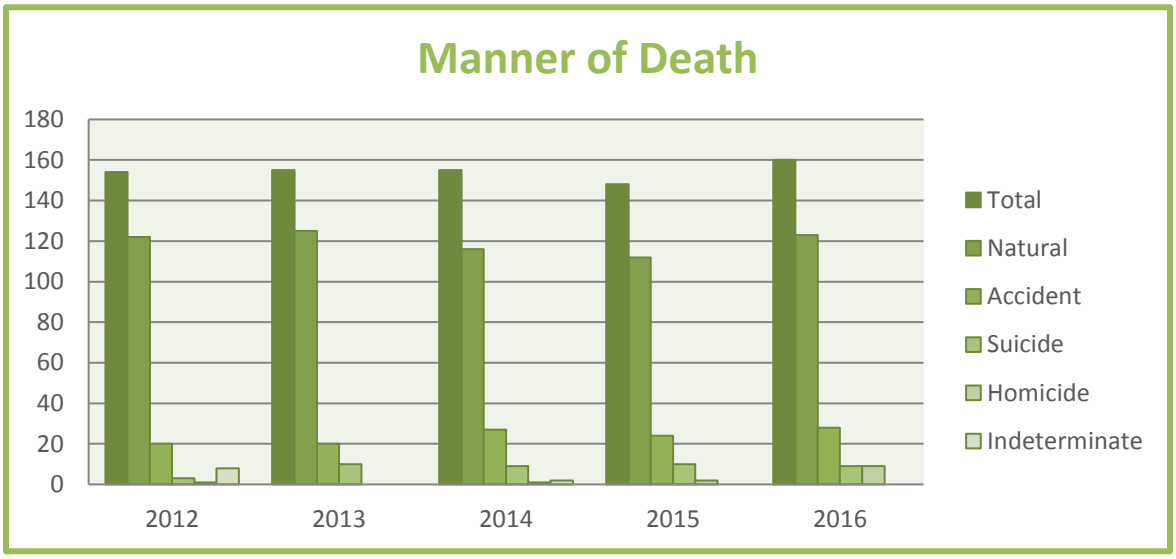
Montcalm County
Summary of Cases

	2012	2013	2014	2015	2016
TOTAL DEATHS IN THE COUNTY	461	498	506	454	485
DEATHS REPORTED TO THE ME	154	156	156	149	160
CASES ACCEPTED FOR INVESTIGATION[42]	128	129	141	132	145
MEI SCENE INVESTIGATIONS	123	122	123	126	152
DEATH CERTIFICATES SIGNED BY ME	69	62	77	63	57
BODIES TRANSPORTED TO SPARROW	40	39	53	49	49
COMPLETE AUTOPSY	36	34	42	37	39
LIMITED AUTOPSY	0	2	4	2	3
EXTERNAL EXAMINATION	2	2	7	9	5
STORAGE ONLY	2	1	0	1	2
REFERRALS TO GIFT OF LIFE	13	18	58	53	47
TISSUE/CORNEA DONORS	0	0	11	11	9
UNCLAIMED BODIES	0	0	1	0	0
CREMATION PERMITS REVIEWED	240	276	308	311	291

[42] Not every case that is reported to the Medical Examiner's office falls within our jurisdiction. We accept cases for investigation based on the circumstances surrounding the death and the law that governs the Medical Examiner's authority (MCL 52.202). We declined jurisdiction in 15 cases that were reported to us in 2016.

Montcalm County
Manner of Death

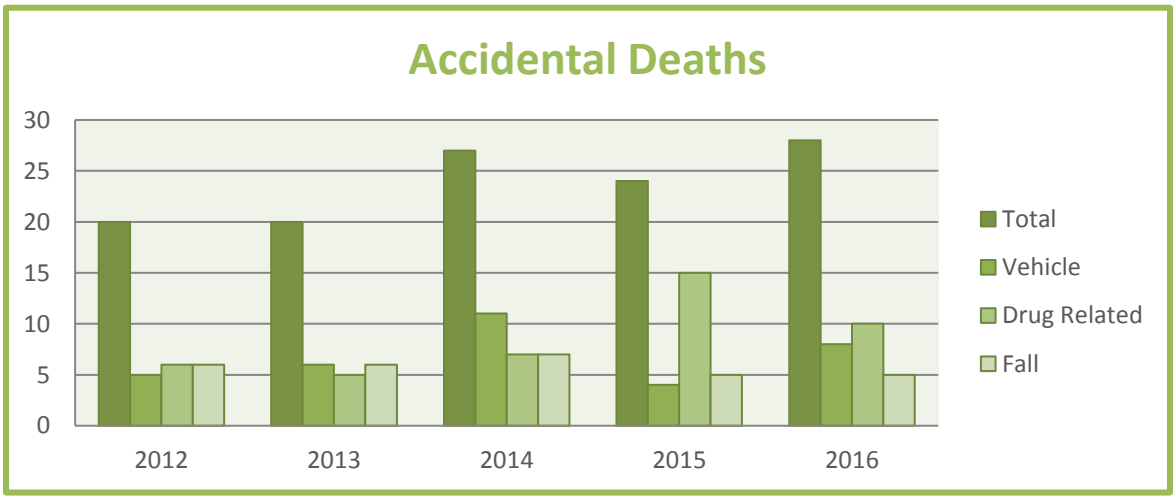
Manner of Death	*2012*	*2013*	*2014*	*2015*	*2016*
NATURAL	122	125	116	112	123
ACCIDENT	20	20	27	24	28
SUICIDE	3	10	9	10	9
HOMICIDE	1	0	1	2	0
INDETERMINATE	8	0	2	0	0
TOTAL	154	155[43]	155[44]	148[45]	160



[43] Case with no manner of death: non-human bone
[44] Case with no manner of death: non-human bone
[45] Case with no manner of death: human bone of no contemporary forensic interest

Montcalm County
Accidental Deaths

	2012	2013	2014	2015	2016
VEHICLE	5	6	11[46]	4	8
DRUG-RELATED	6	5	7	15	10
DROWNING	2	2	0	0	3
FALL	6	6	7	5	5
ASPHYXIA	0	1	1	0	2
CARBON MONOXIDE	1	0	0	0	0
OTHER	0	0	1[47]	0	1[48]
TOTAL	20	20	27	24	28[49]

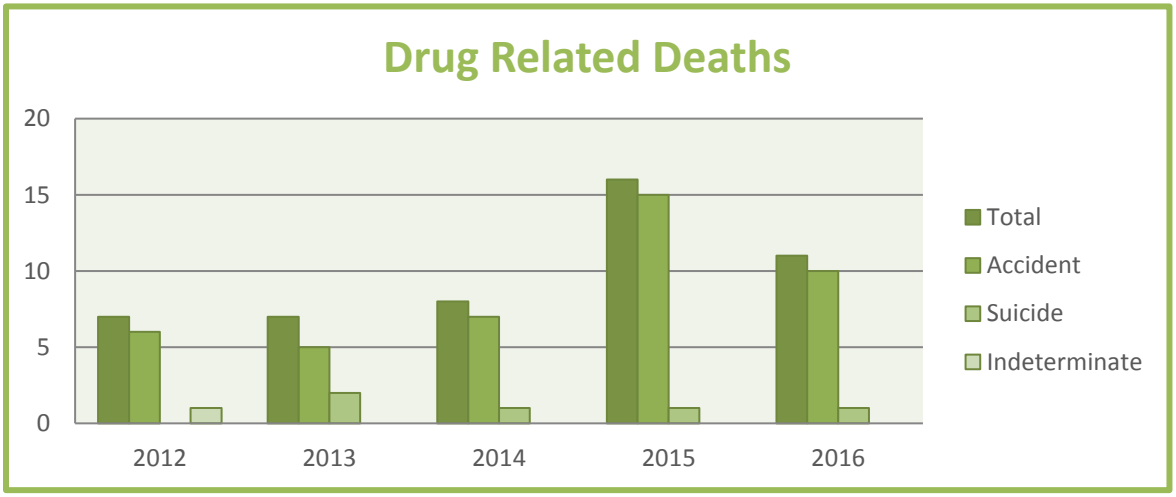


[46] Includes one death related to complication of a motor vehicle crash in 2008
[47] Carbon monoxide
[48] Entangled in farm equipment
[49] One death falls into categories DRUG-RELATED and FALL: complications of quadriplegia due to neck injury (from fall) complicated by tramadol intoxication

Montcalm County
Drug Related Deaths

For purposes of this report, drug related fatalities are deaths in which an overdose of a combination of drugs or a single drug caused or contributed to the death. These deaths do not include situations in which intoxication might have been a factor in an incident leading to death, such as motor vehicle crashes, falls, choking while eating, or environmental exposures.

Manner of Death	*2012*	*2013*	*2014*	*2015*	*2016*
ACCIDENT	6	5	7	15	10
SUICIDE	0	2	1	1	1
INDETERMINATE	1	0	0	0	0
TOTAL	7	7	8	16	11



2016 Drug Related Deaths	
TOTAL	11 Cases
SEX	5 Female, 6 Male
RACE	11 White
AGE RANGE	17 - 65 years
AVERAGE AGE	35.9 years
MEDIAN AGE	32 years
OPIOD-RELATED	10 Cases involved an opiate or opioid (90.9%)
MANNER OF DEATH	10 Accidents, 1 Suicide

Montcalm County Suicides

Suicide Totals by Year

2012	2013	2014	2015	2016
3	10	9	10	9

Suicide Methods

	2012	2013	2014	2015	2016
FIREARM	3	6	6	6	5
HANGING	0	2	1	3	2
DRUG INTOXICATION	0	2	1	1	1
Other	1	1	1[50]	0	1[51]

Suicides by Age

Age	2012	2013	2014	2015	2016
0 – 17	0	0	0	0	0
18 – 25	0	0	0	3	1
26 – 44	2	6	0	2	2
45 – 64	1	4	6	3	5
65+	0	0	3	2	1

[50] Drowning after driving vehicle into a body of water
[51] Carbon monoxide intoxication

Montcalm County
Reported Deaths of Children
Reported Deaths of Children by Age

	2012	2013	2014	2015	2016
Stillborn	0	0	0	0	0
<1 year	2	0	1	0	1
1-5	0	1	0	2	0
6-10	0	0	0	0	0
11-17	3	0	1	0	2
TOTAL	5	1	2	2	3

Reported Deaths of Children by Manner of Death

Manner of Death	2012	2013	2014	2015	2016
NATURAL	0	1	0	1	0
ACCIDENT	2	0	1	1	3
SUICIDE	0	0	0	0	0
HOMICIDE	0	0	0	0	0
INDETERMINATE	3	0	1	0	0

AGE	SEX	CAUSE OF DEATH	MANNER
		2015	
1 month	M	Smothering	Accident
12 years	M	Multiple injuries – off-road vehicle crash	Accident
17 years	M	Multiple drug intoxication	Accident

Shiawassee County

Medical Examiner

Michael A. Markey, M.D.

Deputy Medical Examiners

John A. Bechinski, D.O.
Philip R. Croft, M.D., J.D.
Stephanie A. Dean, M.D.
Patrick A. Hansma, D.O.

Medical Examiner Investigators

Mark Pendergraff – D-ABMDI, Lead Medical Examiner Investigator
Shane Grinnell
Lawrence Goff
Jessica Nicholson
Nicholas Stratton
Dennis Campbell
MaryLynn Jordan

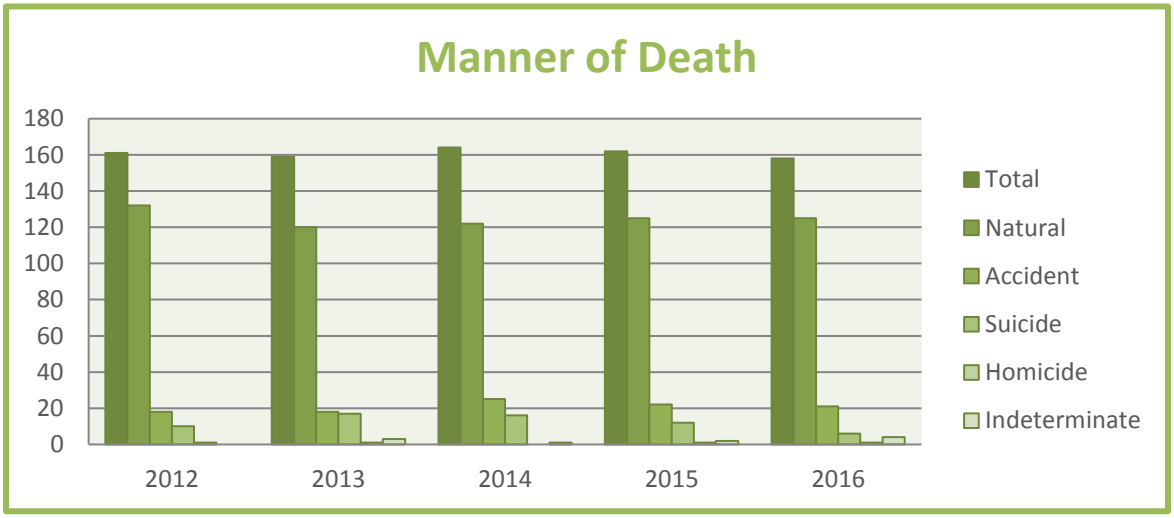
Shiawassee County
Summary of Cases

	2012	2013	2014	2015	2016
TOTAL DEATHS IN THE COUNTY	533	587	651	600	629
DEATHS REPORTED TO THE ME	164	159	164	162	158
CASES ACCEPTED FOR INVESTIGATION[52]	143	145	145	142	130
MEI SCENE INVESTIGATIONS	139	138	137	138	133
DEATH CERTIFICATES SIGNED BY ME	70	71	81	72	64
BODIES TRANSPORTED TO SPARROW	44	54	54	52	48
COMPLETE AUTOPSY	31	32	39	45	44
LIMITED AUTOPSY	2	5	4	1	1
EXTERNAL EXAMINATION	7	15	11	5	2
STORAGE ONLY	4	2	0	1	1
REFERRALS TO GIFT OF LIFE	16	16	31	28	43
TISSUE/CORNEA DONORS	4	2	2	7	15
UNCLAIMED BODIES	0	0	1	0	1
CREMATION PERMITS REVIEWED	243	265	308	298	375

[52] Not every case that is reported to the Medical Examiner's office falls within our jurisdiction. We accept cases for investigation based on the circumstances surrounding the death and the law that governs the Medical Examiner's authority (MCL 52.202). We declined jurisdiction in 28 cases that were reported to us in 2016.

Shiawassee County
Manner of Death

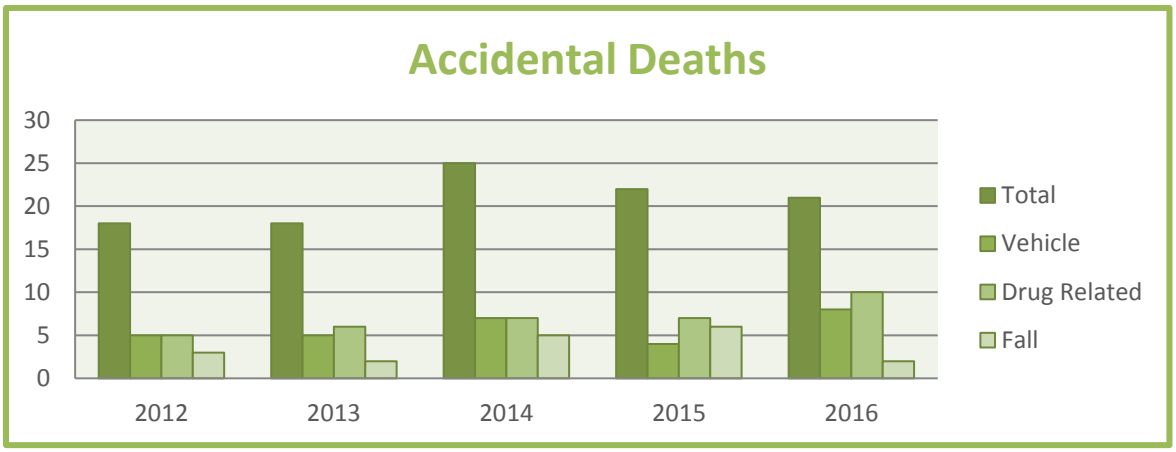
Manner of Death	*2012*	*2013*	*2014*	*2015*	*2016*
NATURAL	132	120	122	125	125
ACCIDENT	18	18	25	22	21
SUICIDE	10	17	16	12	6
HOMICIDE	1	1	0	1	1
INDETERMINATE	0	3	1	2	4
TOTAL	161[53]	159	164	162	158[54]



[53] Cases with no manner of death: (2) stillbirths; (1) non-human material
[54] Cases with no manner of death: stillbirth

Shiawassee County
Accidental Deaths

	2012	2013	2014	2015	2016
VEHICLE	5	5	7	4	8
DRUG-RELATED	5	6	7	7	10
DROWNING	2	0	0	0	0
FALL	3	2	5	6	2
FIRE	0	1	2	0	1
ASPHYXIA	3	2	3	1	0
INSECT STING(S)	0	0	0	2	0
HYPOTHERMIA	0	0	1	0	0
OTHER	0	2[55]	0	2[56]	0
TOTAL	18	18	25	22	21

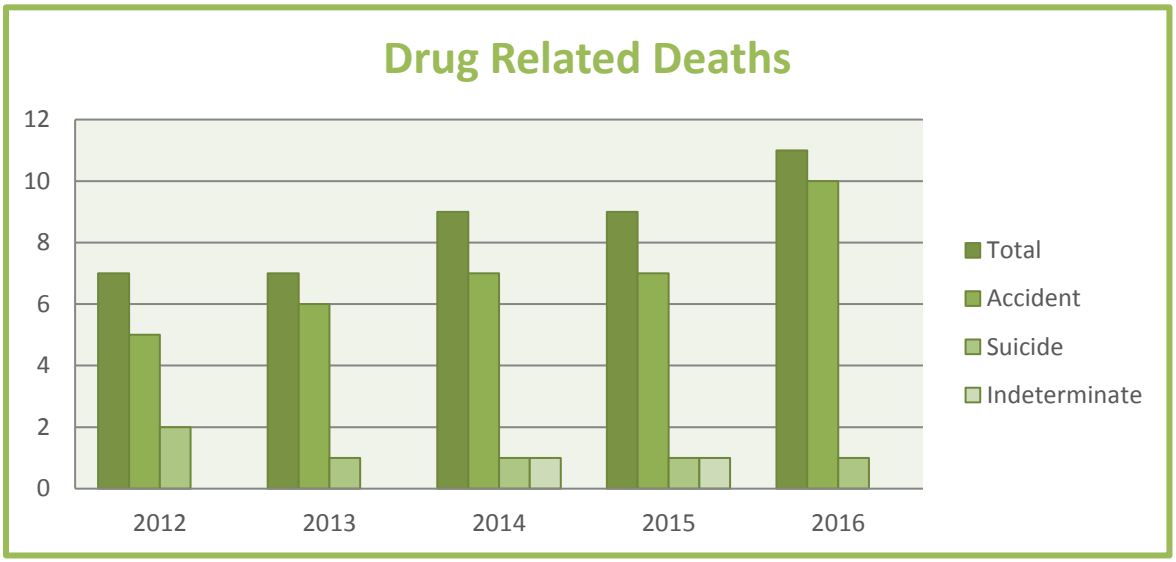


[55] (1) carbon monoxide toxicity; (1) electrocution
[56] (1) perforated artery during attempt at catheter placement; (1) compressed by machinery

Shiawassee County
Drug Related Deaths

For purposes of this report, drug related fatalities are deaths in which an overdose of a combination of drugs or a single drug caused or contributed to the death. These deaths do not include situations in which intoxication might have been a factor in an incident leading to death, such as motor vehicle crashes, falls, choking while eating, or environmental exposures.

Manner of Death	*2012*	*2013*	*2014*	*2015*	*2016*
ACCIDENT	5	6	7	7	10
SUICIDE	2	1	1	1	1
INDETERMINATE	0	0	1	1	0
TOTAL	7	7	9	9	11



2016 Drug Related Deaths	
TOTAL	11 Cases
SEX	4 Female, 7 Male
RACE	11 White
AGE RANGE	27 - 59 years
AVERAGE AGE	42.3 years
MEDIAN AGE	43 years
OPIOID-RELATED	10 Cases involved an opiate or opioid (90.9%)
MANNER OF DEATH	10 Accidents, 1 Suicide

Shiawassee County Suicides

Suicide Totals by Year

2012	2013	2014	2015	2016
10	17	16	12	6

Suicide Methods

	2012	2013	2014	2015	2016
FIREARM	6	10	7	4	3
HANGING	1	5	7	6	1
DRUG INTOXICATION	2	1	1	1	1
CARBON MONOXIDE	1	0	1	0	0
MOTOR VEHICLE CRASH	0	0	0	0	0
STRUCK BY TRAIN	0	1	0	1	1[57]

Suicides by Age

Age	2012	2013	2014	2015	2016
0 – 17	1	0	1	0	0
18 – 25	0	4	2	1	0
26 – 44	2	3	7	6	1
45 – 64	3	8	4	3	5
65+	4	2	2	2	0

[57] Motor vehicle parked on train trucks – struck by train in motor vehicle

Shiawassee County
Reported Deaths of Children
Reported Deaths of Children by Age

	2012	2013	2014	2015	2016
Stillborn	2	1	1	0	1
<1 year	1	2	1	1	2
1-5	0	0	0	0	0
6-10	0	0	0	0	1
11-17	2	2	1	0	0
TOTAL	5	5	3	1	4

Reported Deaths of Children by Manner of Death

Manner of Death	2012	2013	2014	2015	2016
NATURAL	0	0	0	0	0
ACCIDENT	2	2	1	0	1
SUICIDE	1	0	1	0	0
HOMICIDE	0	1	0	0	1
INDETERMINATE	0	1	0	1	1

AGE	SEX	CAUSE OF DEATH 2015	MANNER
0	F	Stillbirth – intrauterine fetal demise	None
4 months	F	Complications of neglect	Homicide
5 months	M	Sudden unexplained infant death	Indeterminate
10 years	M	Multiple injuries – motor vehicle crash	Accident

Comparisons Across Counties

	Barry	*Eaton*	*Ingham*	*Ionia*	*Isabella*	*Livingston*	*Montcalm*	*Shiawassee*
POPULATION	59,314	108,801	286,085	64,223	70,698	187,316	62,945	68,619
TOTAL DEATHS	399	817	2655	324	507	1401	485	629
DEATHS REPORTED TO THE ME (% OF TOTAL DEATHS)	130 (33%)	170 (20%)	824 (31%)	95 (29%)	100 (20%)	319 (23%)	160 (33%)	158 (25%)
CASES ACCEPTED FOR INVESTIGATION	124	154	660	92	91	277	145	130
MEI SCENE INVESTIGATION	120	158	677	92	93	292	152	133
DEATH CERTIFICATES SIGNED BY ME	57	84	424	47	48	156	57	64
TOTAL EXAMS (% OF CASES ACCEPTED)	45 (36%)	73 (47%)	341 (52%)	37 (40%)	39 (43%)	128 (46%)	47 (32%)	47 (36%)
NATURAL DEATHS (% OF DEATHS REPORTED)	99 (76%)	116 (68%)	535 (65%)	69 (73%)	66 (66%)	217 (68%)	123 (77%)	125 (79%)
ACCIDENTAL DEATHS (% OF DEATHS REPORTED)	18 (14%)	36 (21%)	199 (24%)	17 (18%)	25 (25%)	62 (19%)	28 (18%)	21 (13%)

	Barry	*Eaton*	*Ingham*	*Ionia*	*Isabella*	*Livingston*	*Montcalm*	*Shiawassee*
SUICIDES(% OF DEATHS REPORTED)	9 (7%)	11 (6%)	51 (6%)	6 (6%)	6 (6%)	35 (11%)	9 (6%)	6 (4%)
HOMICIDES(% OF DEATHS REPORTED)	2 (1%)	2 (1%)	13 (2%)	1 (1%)	0 (0%)	1 (0.3%)	0 (0%)	1 (0.6%)
INDETERMINATE (% OF DEATHS REPORTED)	2 (1%)	4 (2%)	22 (3%)	2 (2%)	2 (2%)	4 (1%)	0 (0%)	4 (3%)
DRUG-RELATED DEATHS (% OF DEATHS REPORTED)	8 (6%)	22 (13%)	103 (13%)	9 (9%)	15 (15%)	34 (11%)	11 (7%)	11 (7%)
REFERRALS TO GIFT OF LIFE	48	61	308	34	40	84	47	43
TISSUE/CORNEA DONORS	17	16	95	13	8	34	9	15
UNCLAIMED BODIES	0	2	20	1	2	0	0	1

Additional Information

In the eight counties for which Sparrow Forensic Pathology served as the Office of the Medical Examiner in 2016:

- Zero bodies were exhumed for examination
- Zero bodies remained unidentified at the time a final disposition for the remains was determined
- Toxicology testing was performed in 734 of the 757 examinations performed[58]

[58] Toxicology testing is performed in nearly all cases in which an examination is performed. Exceptions to this may include (but are not limited to): cases sent in for identification purposes only, apparent natural deaths sent in for external examination to rule out trauma, and cases for which adequate toxicology specimens cannot be obtained (due to prolonged stay in hospital following initial event, or decomposition).