

# Kent County Medical Examiner



## 2015 Annual Report

Office of the Medical Examiner  
700 Fuller N.E.  
Grand Rapids, Michigan 49503

## **2015 Kent County Medical Examiner Annual Report**

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To the Kent County Board of Commissioners  
and to the Citizens of Kent County:

I am pleased to present our 2015 Annual Medical Examiner's Report. Some of the highlights are as follows:

The Kent County Medical Examiner's Office collaborates extensively with the Gift of Life Michigan organ and tissue donation organization as well as the Eversight cornea donation organization. For 2015 we had a 27% increase in the number of referrals, a 37% increase in the number of tissue donors, and a 17% increase in the number of eye donors over the previous years. More tissue donors were referred by Kent County in 2015 than any other county in Michigan. I am proud that our medical examiner's office does so much to directly help the living.

A second accomplishment is achieving accreditation by the National Association of Medical Examiners (NAME) after a long and arduous inspection process. We are one of six accredited offices in Michigan and one of 88 accredited medical examiner offices in the country.

Financially, the Medical Examiner's Office is a bargain for Kent County. The national recommended per capita expenditures for a medical examiner system are \$3.79 while Kent County's expenditure is about \$2.00 per person. Our accepted medical examiner cases have increased approximately 15% in the last 10 years while our staff has remained the same. John Connolly retired as a Medical Examiner Investigator after over 30 years of service in this position. He was replaced by Judy Chamberlain who has continued John's legacy of excellent work in death investigation.

Our percent of cases autopsied has leveled off at approximately 30% over the last five years, which is consistent with the national average. Patients 65 years and over represent about half of our total cases. Although few of these are autopsied, as many of these are natural deaths occurring at home, or result from witnessed falls causing injuries that are well documented in the hospital and do not require autopsy.

The biggest scourge in Kent County is drug overdoses. The percent of our total cases from drug overdose has risen to 9.3 over the years. Among younger patients, drug overdoses have surpassed motor vehicle crashes as the most common cause of death. Drug overdoses have spiked up 45% over 2014 (from 75 to 109 deaths). Of our overdose deaths, heroin has continued to increase, accounting for nearly 30% of all of these deaths. Fentanyl has accounted for numerous deaths, either alone, in combination with heroin, or in the form of fentanyl analogs (designer drugs). Unfortunately, in some of our deaths that by history and scene investigation appear to be drug overdoses, the autopsy and toxicology screening have been negative. It is likely that many of these deaths are due to fentanyl analogs which, if our laboratory is not provided with the exact drug used, can result in failure to identify that drug since these designer drugs are significantly, chemically different enough from the parent compound that they will not be identified on a routine drug screen.

In an attempt to improve child health, the Kent County Medical Examiner's Office participates in the multidisciplinary Child Death Reviews. Most of the deaths are accidental and are due to unsafe sleeping positions. Parents should increase their efforts to place babies in a safe sleeping position.

Respectfully submitted,



Stephen D. Cohle, MD  
Kent County Chief Medical Examiner

# Office of the Kent County Medical Examiner

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Medical Examiner Exchange (616) 588-4500

## Medical Examiner Personnel

Stephen D. Cohle, MD  
Chief Medical Examiner and  
Forensic Pathologist

David A. Start, MD  
Deputy Chief Medical Examiner and  
Forensic Pathologist

Elizabeth L. Brown  
Medical Examiner Investigator

Judy A. Chamberlain  
Medical Examiner Investigator

John T. Connolly (Retired 11/27/15)  
Medical Examiner Investigator

Paul R. Davison, F-ABMDI  
Medical Examiner Investigator

Cynthia L. Debiak, RN  
Medical Examiner Investigator

Peter J. Noble  
Medical Examiner Investigator

Theodore E. Oostendorp  
Medical Examiner Investigator

Daniel Hopkins  
Kent County Conveyance Specialist

Carmen D. Marrero-Perez  
Office Administrator and  
Child Death Review Coordinator

Dolly M. Olthoff  
Medical Examiner Support Staff

## Board Certification

The American Board of Medicolegal Death Investigators (ABMDI) sets quality and process standards for death investigators. Medical examiners who pass the certification requirements of the ABMDI are designated as registered Diplomats (D-ABMDI). Medical examiners with continued time in investigation and who pass required tests are designated as certified Fellows (F-ABMDI).

## Medical Examiner Program Expenditures, 2014 and 2015

	2014		2015	
	<u>Amount</u>	<u>Percentage</u>	<u>Amount</u>	<u>Percentage</u>
Medical examiner (compensation)	\$ 188,314	15.0%	\$ 179,584	13.0%
Autopsies	877,266	70.0%	1,001,575	72.7%
Body transport	73,411	5.9%	87,924	6.4%
Support services	53,795	4.3%	47,503	3.5%
Administration	60,000	4.8%	60,000	4.4%
<b>Total</b>	<b>\$1,252,786</b>	<b>100.0%</b>	<b>\$1,376,586</b>	<b>100.0%</b>

Average cost per case investigated

\$1,129

\$1,173

## Medical Examiner Reportable Deaths and Autopsy

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The Michigan County Medical Examiners Law, P.A. 181 of 1953, as amended, and the Michigan Public Health Code, P.A. 368 of 1978, as amended, mandates that specific types of deaths (listed below, left) be referred to the medical examiner for investigation. Medical examiner investigation of a death may also be ordered by the county's prosecuting attorney, the Michigan Attorney General or, upon the filing of a petition, signed by six (6) electors of a county. Not all deaths referred to the medical examiner for investigation necessarily result in an autopsy; however, an autopsy is generally ordered in certain circumstances (listed below, right), to determine more accurately the cause and manner of death.

### Types of Deaths Reportable to the Medical Examiner, P.A. 368 of 1978

1. Sudden deaths and unexpected deaths (all deaths occurring in operating room, in recovery room, anesthesia related, natural death but not expected, occupational related deaths, subdural hematoma, intracerebral hemorrhage, etc.)\*
2. Accidental deaths (motor vehicle, burns, drowning, falls, broken bones, drug overdose, drug toxicity, subdural hematoma, recent or past trauma, etc.)
3. Violent deaths (homicide, gunshot, stabbing, suicide, subdural hematoma, etc.)\*
4. Suspicious circumstances surrounding a death.\*
5. Deaths occurring as a result of an abortion.
6. Upon written order of the prosecuting attorney or the attorney general or upon the filing of a petition signed by six (6) electors of a county.
7. Death of a prisoner in any county or city jail who dies while so imprisoned.
8. If a fetal death occurs without medical attendance at or after the delivery.

In terms of a physician attendance: for the purposes of the medical examiner program, we consider that an investigation is required when:

- A. The deceased was last seen by a physician more than \*\*ten (10) days before his or her death, if the cause of death appears to be other than the illness or condition for which the deceased was being treated.
- B. The attending physician cannot accurately determine the cause of death.
- C. When the deceased has not received any medical attention during the \*\*\*48 hours prior to the hour of death unless the attending physician, if any, is able to accurately determine the cause of death.

\* All trauma related deaths no matter when the trauma occurred.

\*\* The ten (10) day requirement relates solely to physician attendance.

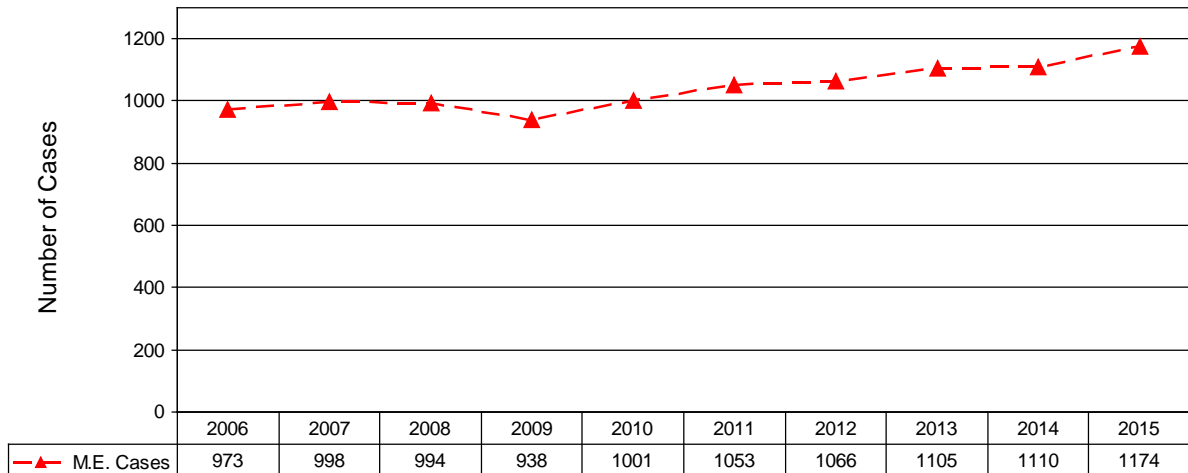
\*\*\*The 48 hour requirement triggers an investigation when there has been no medical attendance of any kind (i.e., nursing care, etc.)

### Types of Medical Examiner Cases for which Autopsy is Generally Ordered

1. Sudden deaths and unexpected deaths only when in the medical examiner's judgment, sufficient medical history is not available to determine cause and manner of death.
2. Accidental deaths such as motor vehicle, burns, drowning, etc. If an individual has been hospitalized for a length of time, it is the medical examiner's decision to order an autopsy.
3. Violent deaths such as homicide, suicide, gunshot, stabbing, etc.
4. Suspicious circumstances surrounding death, including unidentified bodies.
5. Death related to an abortion.
6. Sudden infant deaths (SIDS) and deaths of children 18 and under without significant medical history.
7. Death of a prisoner imprisoned at any county or city jail.
8. In a fetal death occurring without medical attendance at or after delivery.
9. An autopsy may be ordered at the discretion of the medical examiner if the cause of death appears to be other than the illness or condition for which the deceased was being treated, or if the attending physician cannot accurately determine the cause of death.
10. Anesthesia-related and unexpected deaths of patient in health care institutions.
11. Partial autopsies are not done because it is not best practice.
12. Views are performed in cases in which there is adequate history to explain the death, but there are external findings, such as injuries, that require direct examination to determine whether they maybe significant injuries that mandate full autopsy.

# 2015 Medical Examiner Caseload

**Figure 1: Accepted Kent County Medical Examiner Cases, 2006-2015**

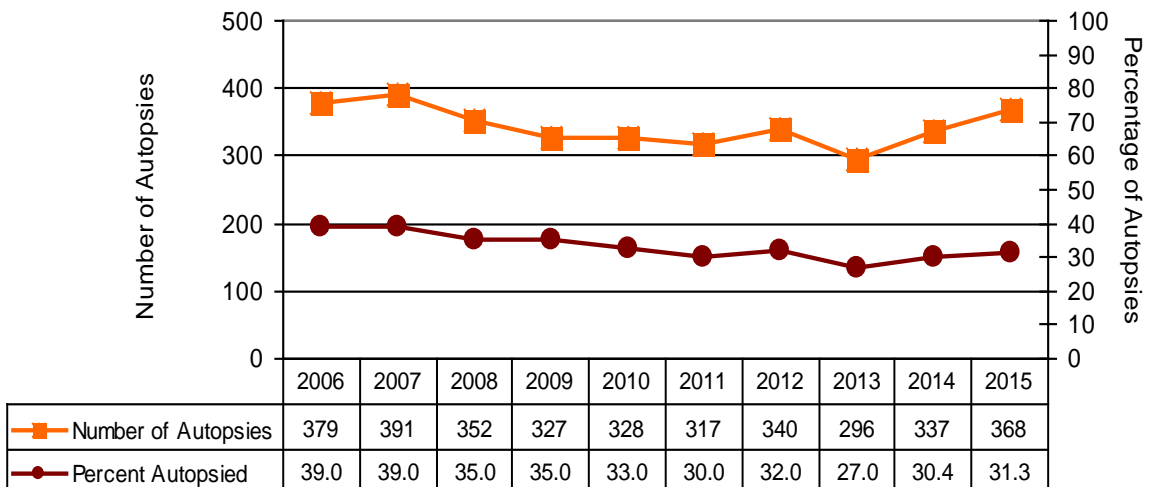


**Total Referred Medical Examiner Cases in 2015: 1,726**

Accepted	1,174	68.0%
Declined	552	32.0%

In 2015, there were 5,851 deaths in Kent County. The medical examiner was contacted regarding 1,726 of these deaths. 1,174 cases were accepted for investigation, while 552 were declined and did not fall within the requirements for investigation by the Medical Examiner's Office. There were no exhumations in 2015. In 2015, there were 140 referrals to Gift of Life and Eversight resulting in 26 tissue donors and 21 eye donors.

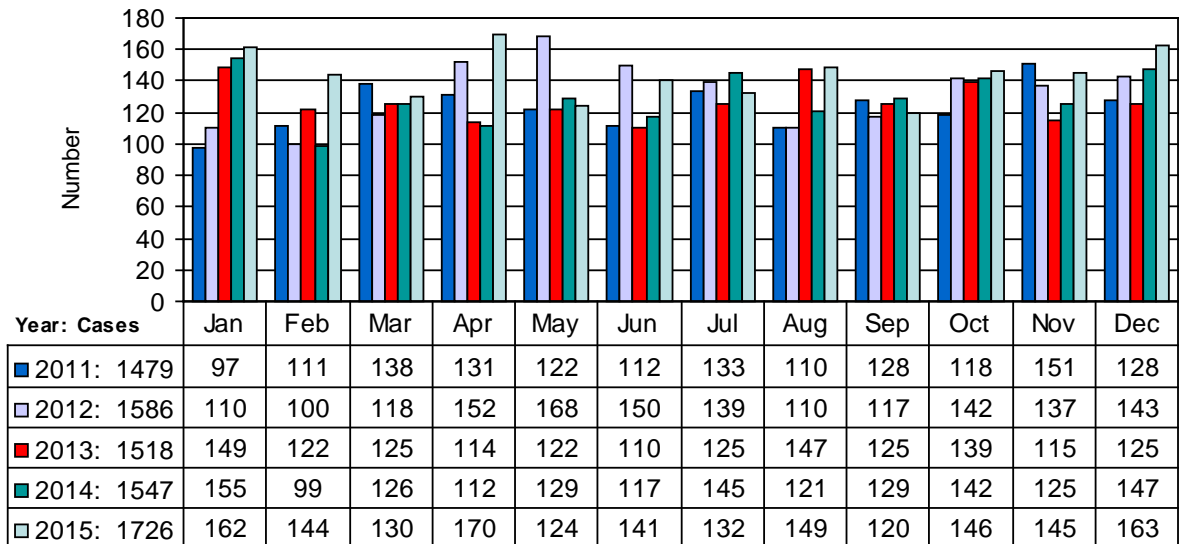
**Figure 2: Medical Examiner Cases with Autopsy, 2006-2015**



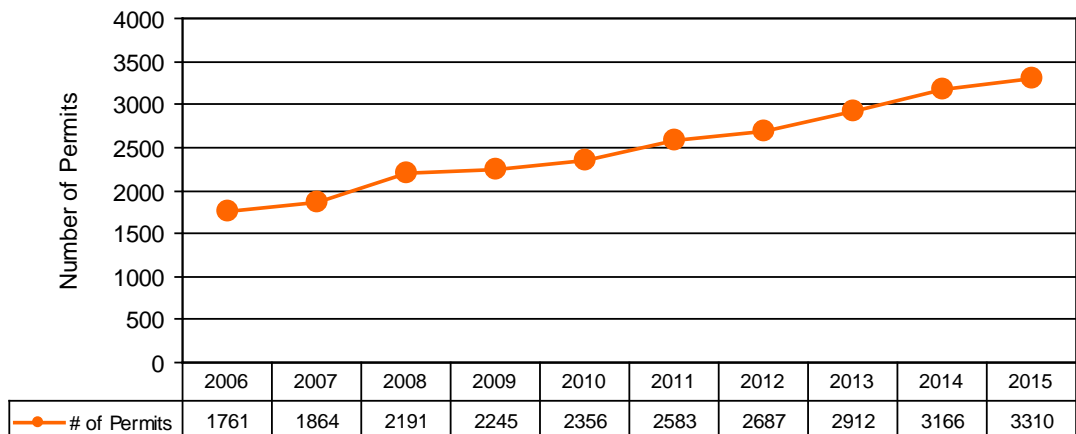
Of the 368 autopsies performed, 360 were charged to Kent County. The remaining 8 autopsies were performed at the request of other counties. Toxicology was performed on 369 cases with 12 of those being views and 6 only toxicology performed. There were no partial autopsies performed.

# 2015 Medical Examiner Caseload

**Figure 3: Referred Medical Examiner Caseload by Month, 2011-2015**

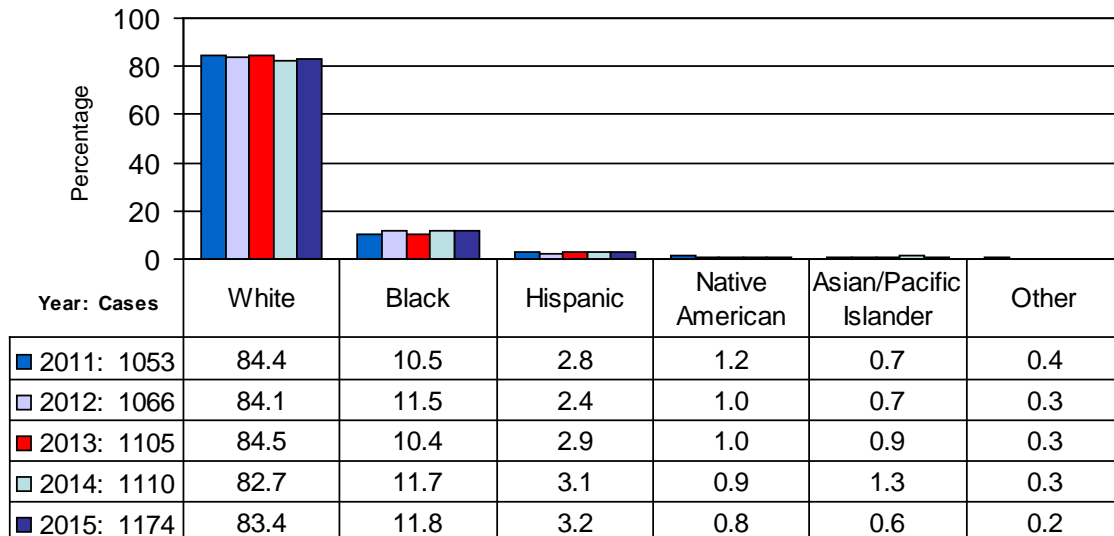


**Figure 4: Cremation Permits Issued, 2006-2015**

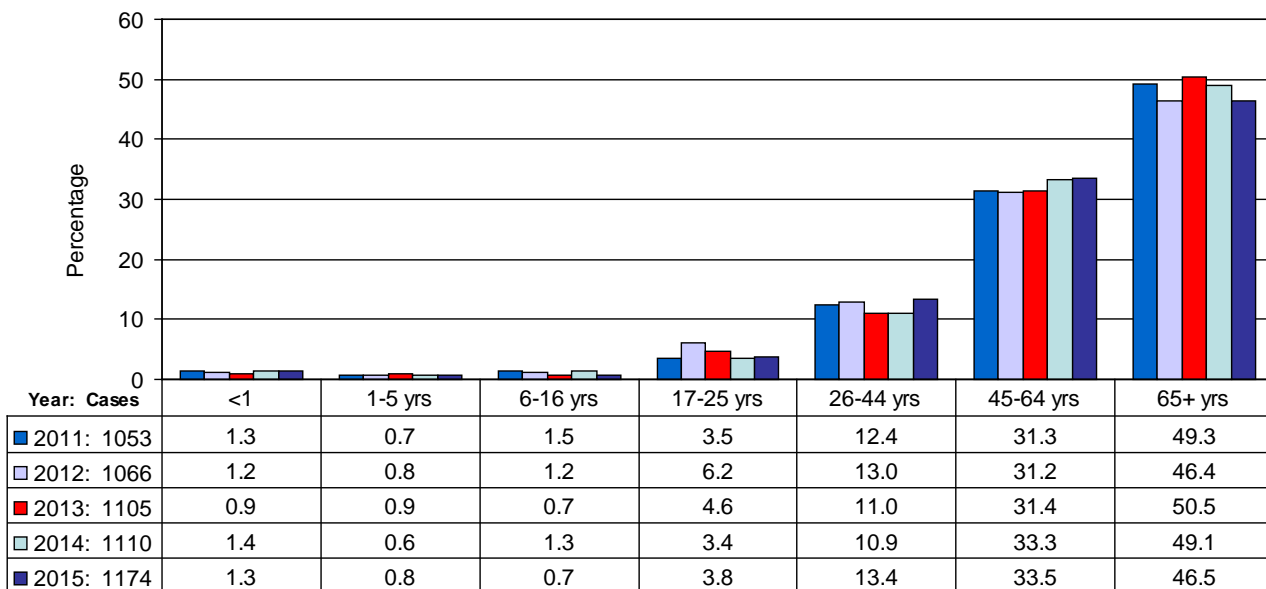


# Demographics of Medical Examiner Cases

**Figure 5: Medical Examiner Cases by Race/Ethnicity, 2011-2015**



**Figure 6: Medical Examiner Cases by Age at Death, 2011-2015**



**Table 1: Medical Examiner Cases by Gender, 2011-2015**

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Female	39.5%	35.8%	38.5%	38.8%	37.3% (438 cases)
Male	60.5%	64.2%	61.5%	61.1%	62.7% (736 cases)
Unknown				0.1% (bones)	

# Manner of Death

Figure 7: Medical Examiner Cases by Manner of Death, 2006-2015

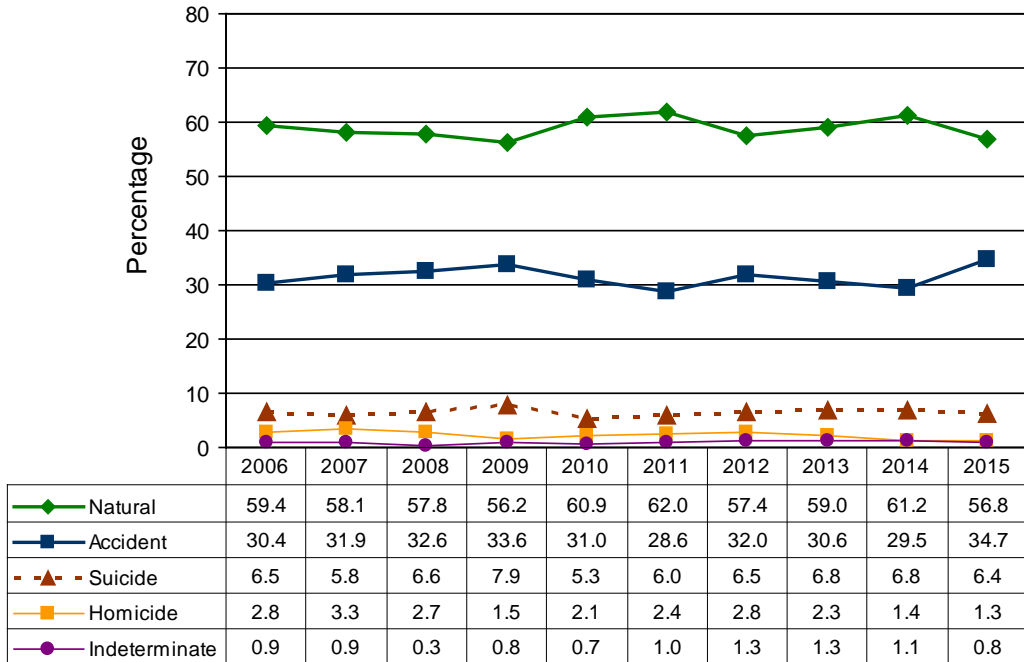
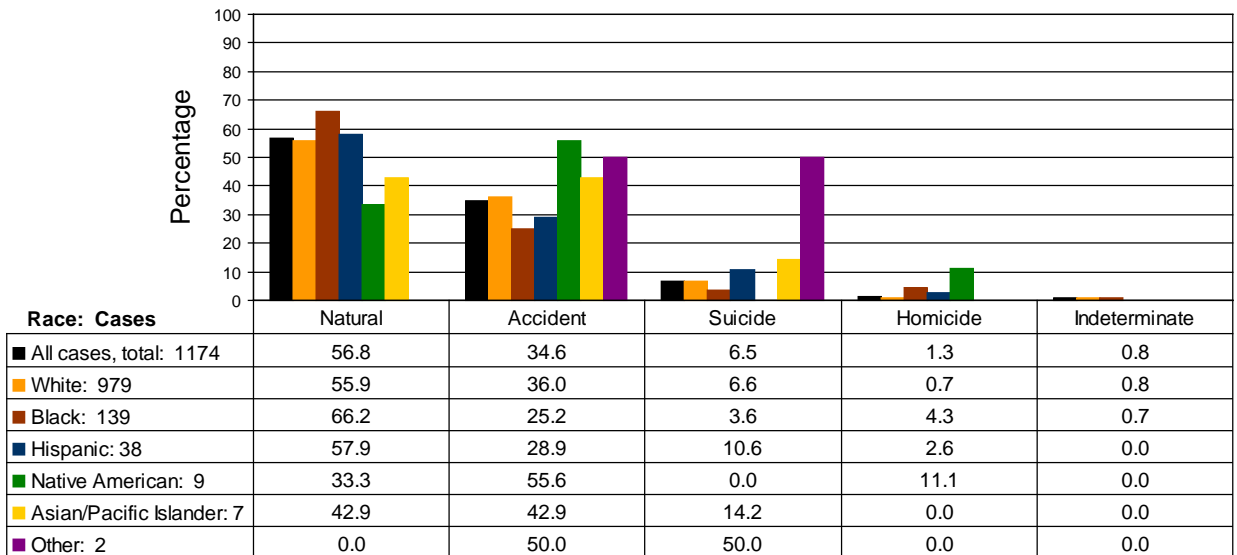


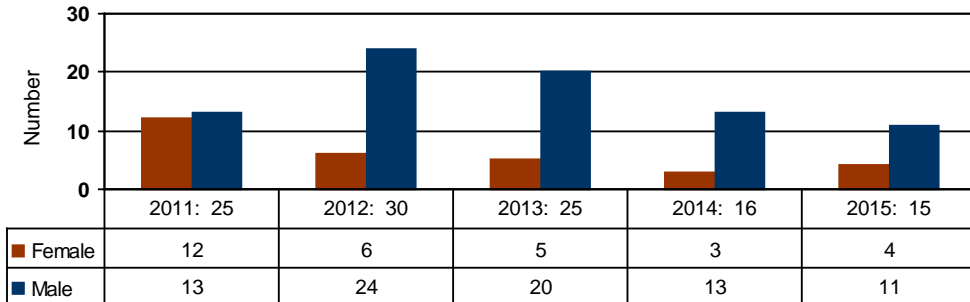
Figure 8: Manner of Death by Race/Ethnicity, 2015



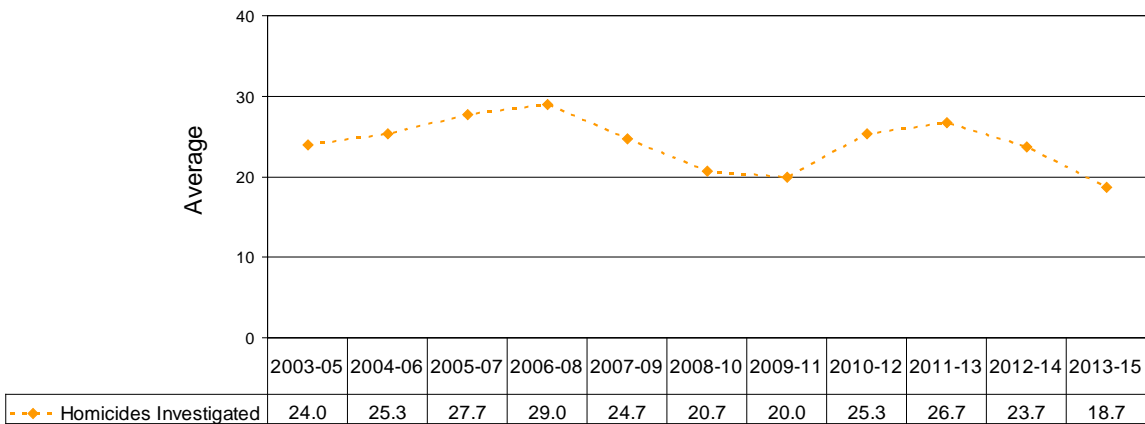


# Manner of Death

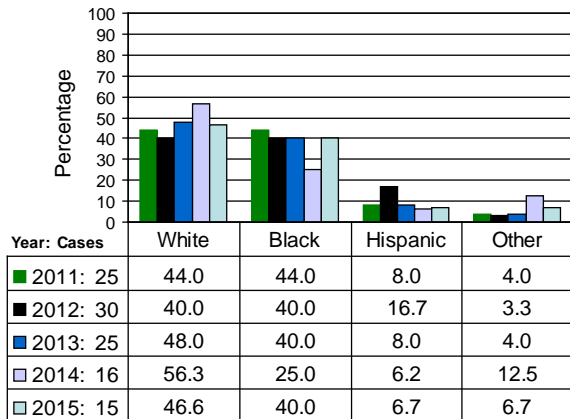
**Figure 9: Kent County Homicides by Gender, 2011-2015**



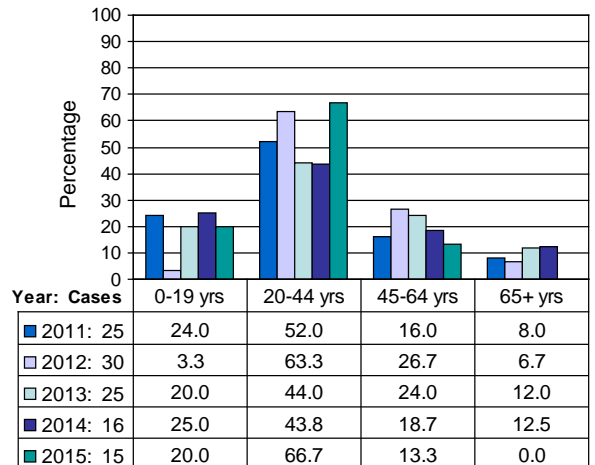
**Figure 10: Kent County Homicides, Three-Year Moving Averages, 2003-2015**



**Figure 11: Homicides by Race, 2011-2015**

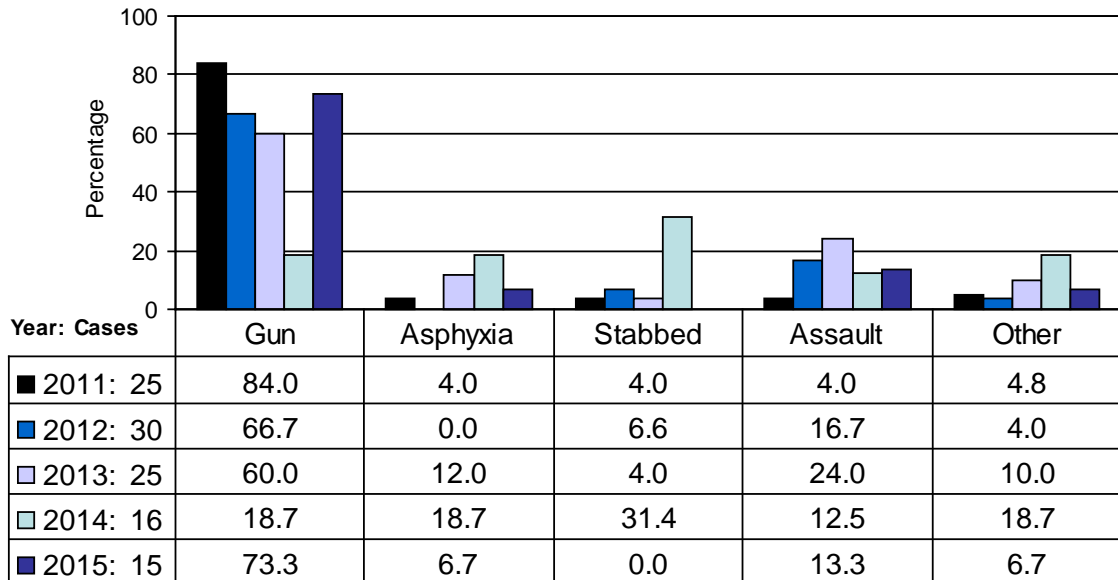


**Figure 12: Homicides by Age, 2011-2015**



# Manner of Death

**Figure 13: Homicide Cases by Method Used, 2011-2015**



**Table 2: Gun Homicides by Age, 2011-2015**

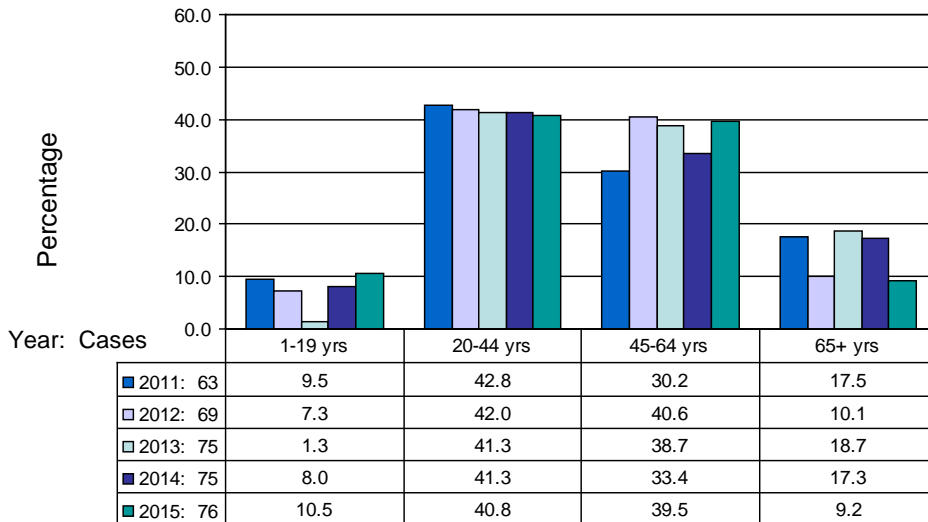
Year: Cases	AGE			
	0-19 yrs	20-29 yrs	30-39 yrs	40+ yrs
2011: 21	5	9	3	4
2012: 20	1	11	3	5
2013: 15	4	5	1	5
2014: 3	1	1	1	0
2015: 11	1	3	5	2

**Table 3: Suicide Cases by Race, 2011-2015**

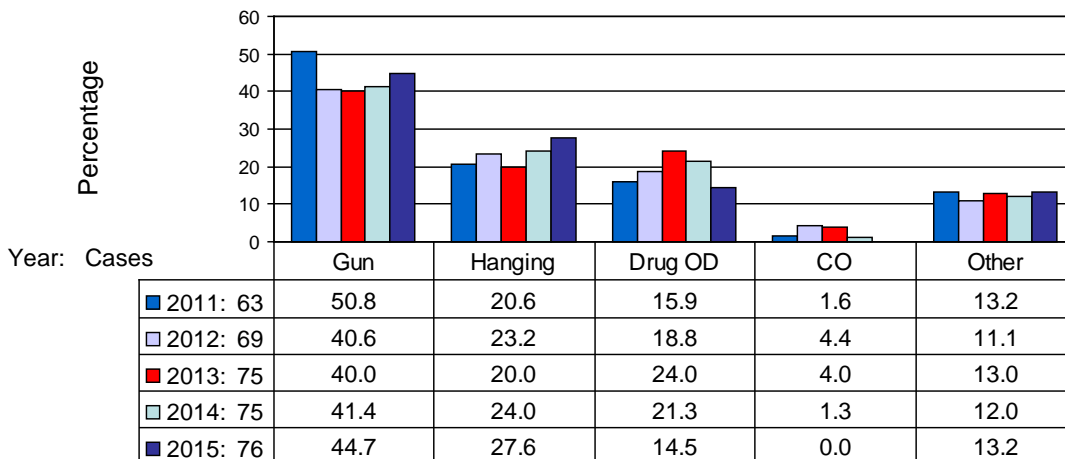
	<u>White</u>	<u>Black</u>	<u>Hispanic</u>	<u>Native American</u>	<u>Asian</u>
2011: 63	88.9%	6.3%	3.2%	1.6%	0.0%
2012: 69	89.9%	5.8%	2.9%	0.0%	1.4%
2013: 75	90.7%	1.3%	6.7%	0.0%	1.3%
2014: 75	90.7%	8.0%	0.0%	0.0%	1.3%
2015: 76	85.5%	7.9%	5.3%	0.0%	1.3%

# Manner of Death

**Figure 14: Suicide Cases by Age, 2011-2015**



**Figure 15: Suicide Cases by Method Used, 2011-2015**

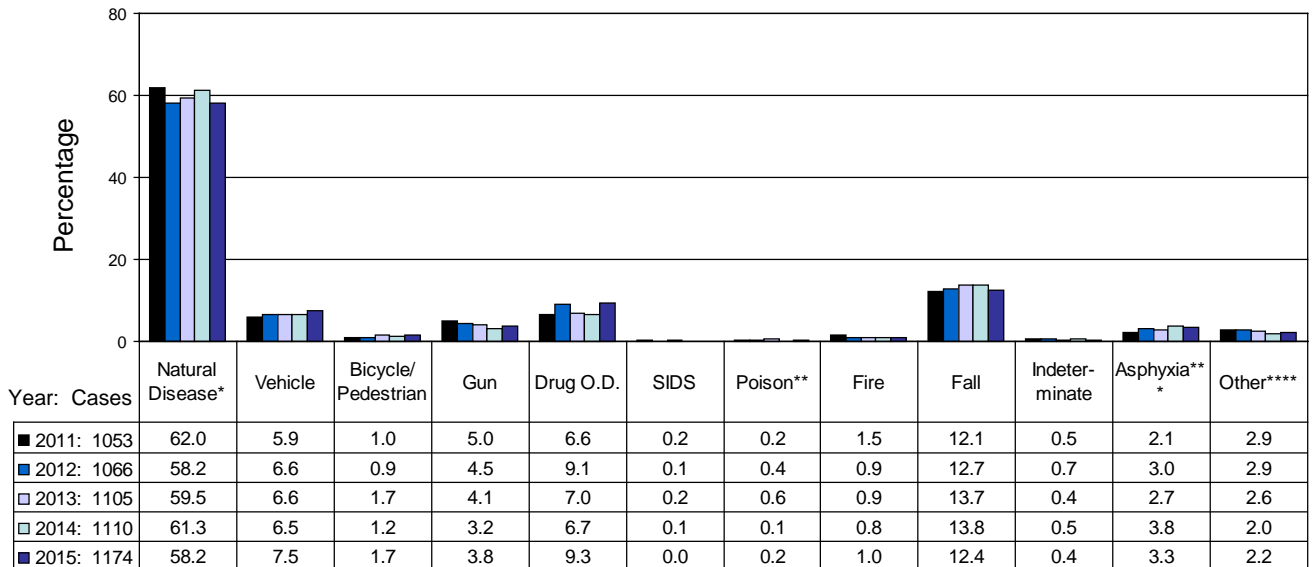


In 2015, CO is carbon monoxide poisoning, while Other consists of asphyxia (2), vehicle (2), drowning (3), fire (1), hypothermia (1), and pedestrian (1).

Of the 76 suicide deaths for 2015, females accounted for 20 (26.3%) deaths, while males accounted for 56 (73.7%).

# Cause of Death

**Figure 16: Medical Examiner Cases by Cause of Death, 2011-2015**



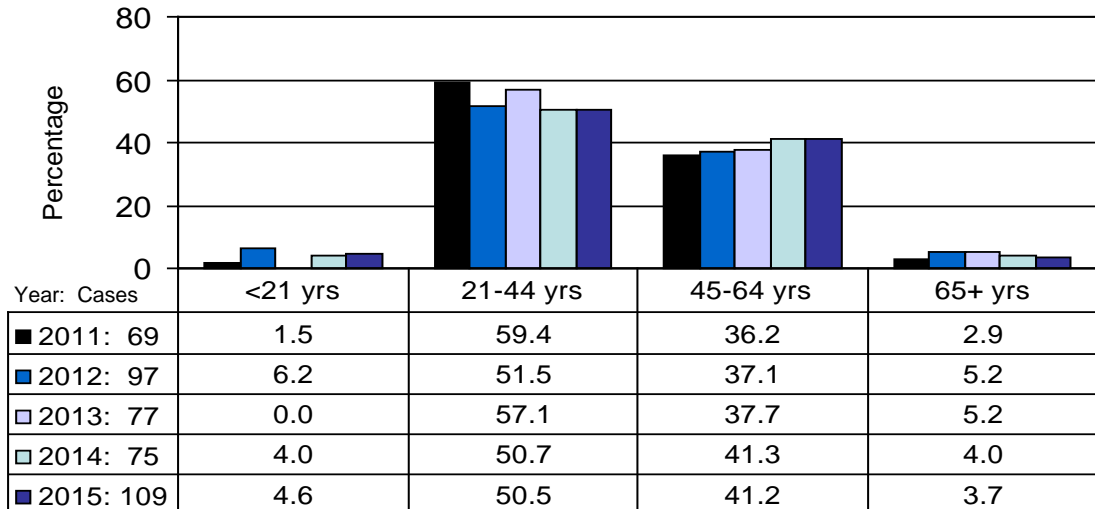
\*Natural: cardiovascular (491; 71.9%), respiratory (45; 6.6%), cancer (27; 3.9%), CNS (27; 3.9% & Other (93; 13.7%)

\*\*Poison includes carbon monoxide poisoning (1; 50.0%) and laundry detergent ingestion (1; 50.0%).

\*\*\*Asphyxia includes deaths from hanging (21; 53.8%), choking on food (4; 10.3%), suffocation, (1; 2.6%), positional asphyxia (7; 17.9%), choking on foreign object (1; 2.6%), smothering by bedding (2; 5.1%), crushed by object (1; 2.6%), and strangulation (2; 5.1%).

\*\*\*\*Other includes deaths from assault-physical abuse (2; 7.7%), head trauma (5; 19.3%), hypothermia (1; 3.8%), drowning (11; 42.3%), sepsis d/t abdominal trauma (1; 3.8%), electrocution (1; 3.8%), anaphylactic reaction to medication/food (2; 7.9%), blunt force injury (1; 3.8%), anoxic encephalopathy d/t choking on food (1; 3.8%), and struck by bull (1; 3.8%).

**Figure 17: Drug Deaths by Age, 2011-2015**

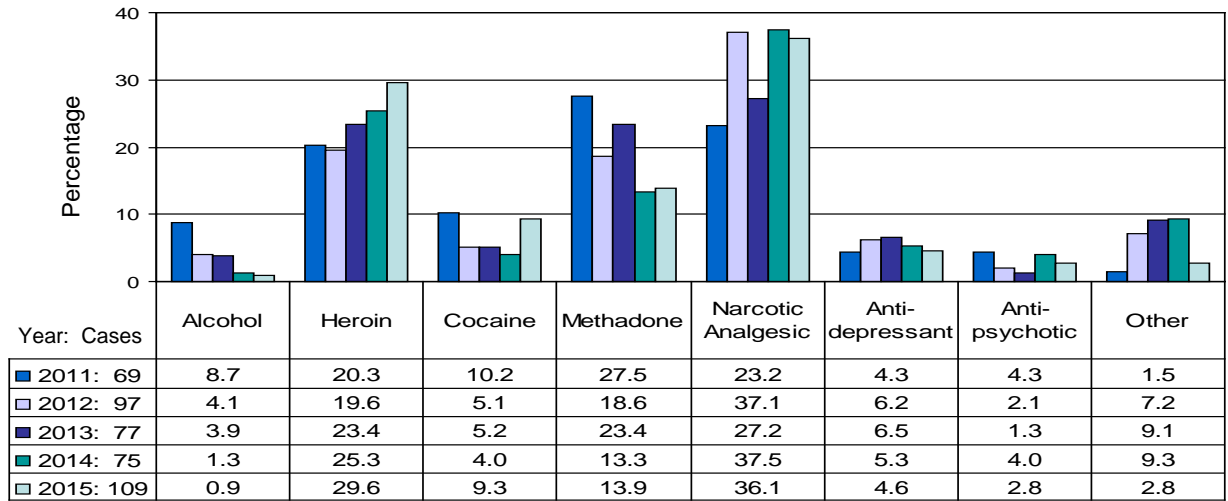


**Table 4: Drug Deaths by Gender, 2015**

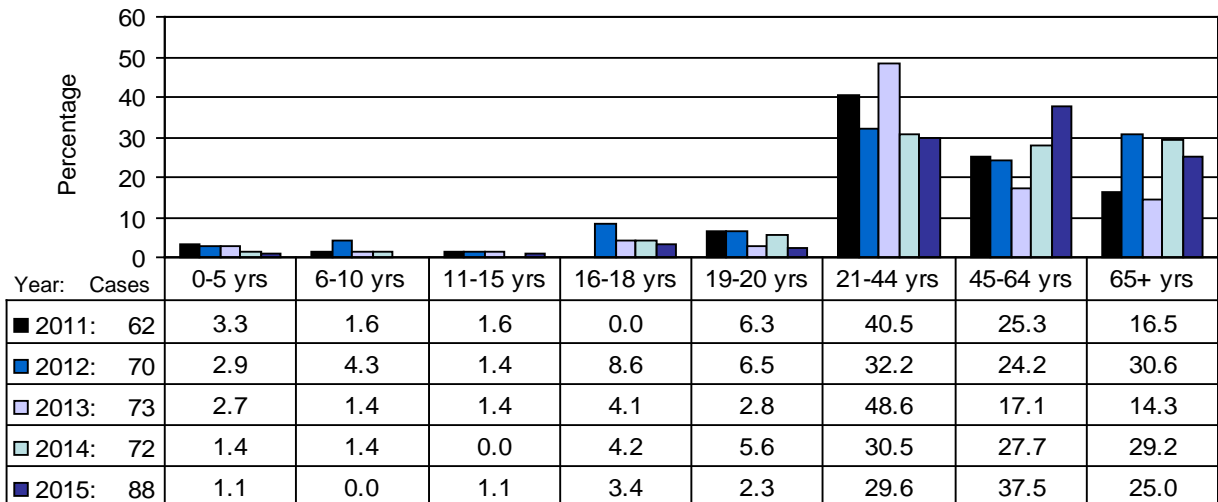
	Female (44)	Male (65)
Accident	33	63
Suicide	9	2
Indeterminate	2	0

# Cause of Death

**Figure 18: Drug Deaths by Drug of First Mention, 2011-2015**



**Figure 19: Vehicular Deaths by Age, 2011-2015**



**Table 5: Vehicular Deaths by Gender, 2011-2015**

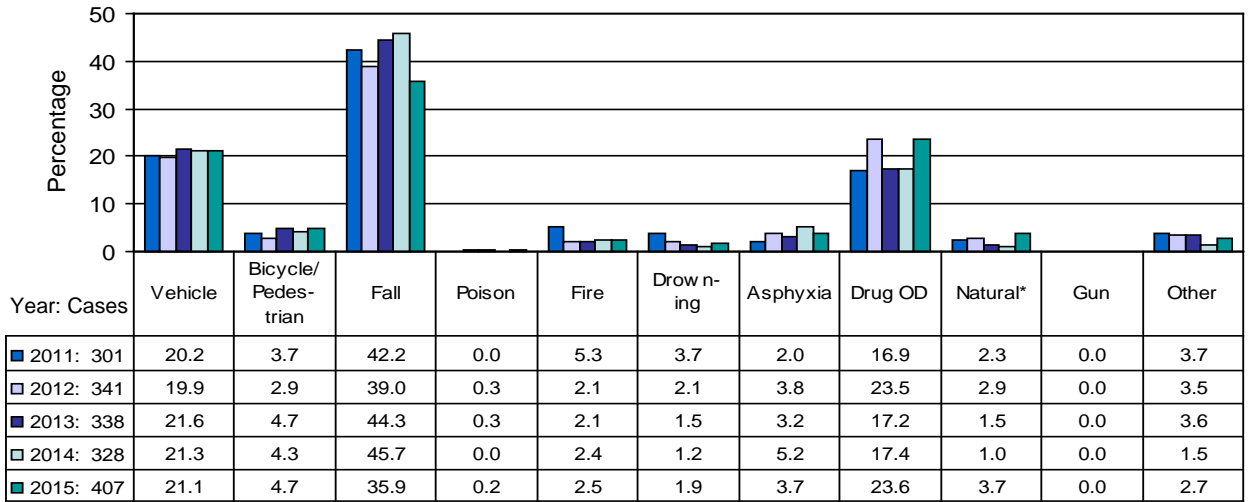
	Female	Male
2011: 62	32.3% (20)	67.7% (42)
2012: 70	30.0% (21)	70.0% (49)
2013: 73	28.8% (21)	71.2% (52)
2014: 72	38.9% (28)	61.1% (44)
2015: 88	26.1% (23)	73.9% (65)

**Table 6: Bicycle/Pedestrian Deaths by Age, 2011-2015**

	<21 yrs	21-44 yrs	45-64 yrs	65+ yrs
2011: 11	2	3	5	1
2012: 10	6	2	1	1
2013: 16	2	3	8	3
2014: 14	2	4	8	0
2015: 20	3	4	10	3

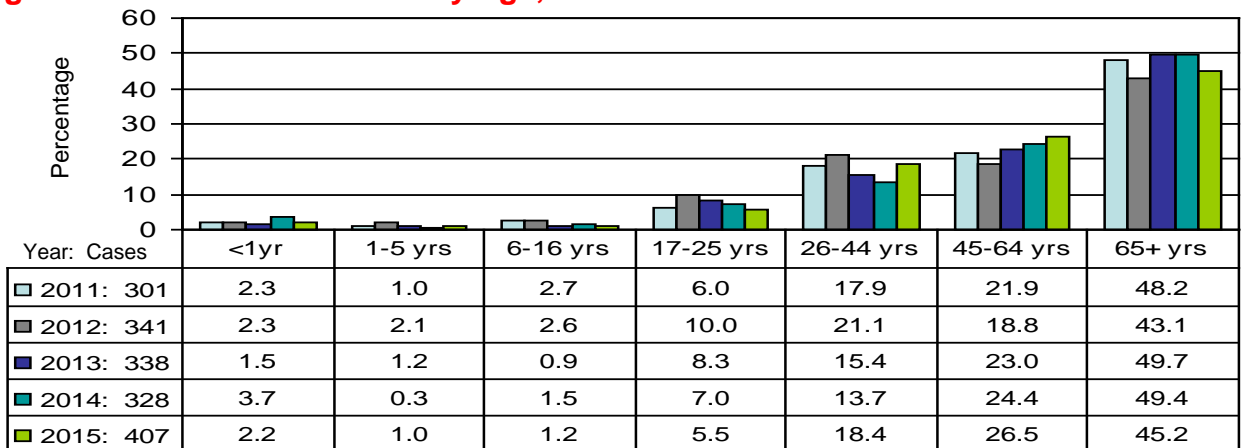
# Cause of Death

**Figure 20: Accidental Deaths by Cause, 2011-2015**

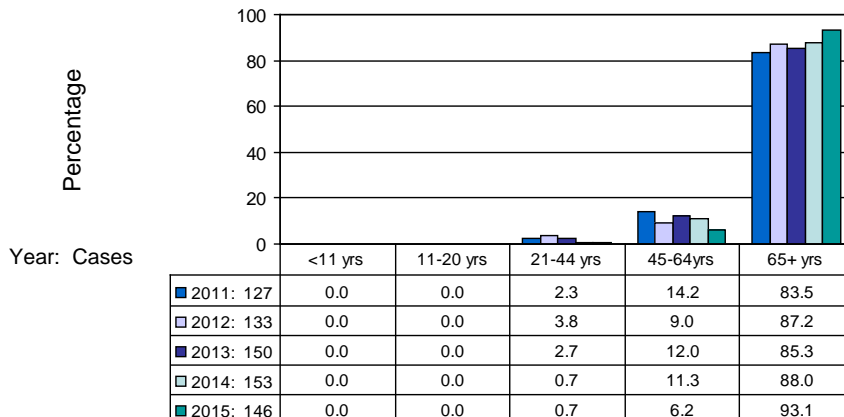


\*A natural cause of death can have a contributing factor that determines the death to be accidental. There were 15 deaths that fell into this category in 2015 from falls (9), motor vehicle accident (2), crushed by object (1), cocaine toxicity (2), and mixed drug toxicity (1).

**Figure 21: Accidental Deaths by Age, 2011-2015**



**Figure 22: Deaths Resulting from Falls by Age, 2011-2015**



# MISCELLANEOUS

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## Unclaimed Bodies 2011-2015

The Medical Examiner's Office handles all indigent burials in Kent County even if they do not fall under the medical examiner's jurisdiction with the assistance of the Michigan Department of Human Services. In 2015, the office processed 36 unclaimed bodies.

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Medical Examiner Cases	13	10	18	11	18
Not Medical Examiner Cases	13	20	16	19	18
Total Cases	26	30	34	30	36

Deceased are considered unclaimed when they absolutely have no legal next of kin, and others fall under this category when family members either can not afford the expense of a burial/cremation or just do not want anything to do with the funeral arrangements.

## Child Death Cases Reviewed 2011-2015

The Child Death Review Team reviews the deaths of those in Kent County who are 17 and younger. In 2015, there were 24 child death cases reviewed. Of these cases, 4 were deaths from 2014 and 20 were deaths from 2015.

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Natural	5	3	7	5	3
SIDS	1	1	0	2	1
Vehicular Accident	3	7	4	5	2
Accidental	8	14	5	6	11
Suicide	1	5	1	4	4
Homicides	5	1	5	3	1
Indeterminate	4	2	0	2	2
Total Cases	27	33	22	27	24

Natural includes deaths from bilateral pneumonia (1); medical complications of prematurity (1); cardiac arrest secondary to acute hypoxia d/t acute respiratory d/t parainfluenza bronchiolitis (1).

Accidental includes deaths from suffocation: face down in crib (1); probable positional asphyxia & co-sleeping (5); strangulation by electrical cord (1); positional asphyxia between mattress & wall (1); asphyxia d/t choking on foreign object (1); and drowning (2).

Suicide includes death by gun (2); hanging (1) and drug overdose (1).

Homicide includes death by gun (1).

Indeterminate includes death by found body-based upon autopsy, toxicology and a thorough investigation of the circumstances a cause of death cannot be determined (2).

## **Kent County Medical Examiner 2015 Annual Report**

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