

# Kent County Medical Examiner



## 2017 Annual Report

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

## 2017 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 the Kent County Medical Examiner 2017 Annual Report. Most remarkable was the increase of 75 autopsies between 2017 and 2016, an increase of over 18%. This was accompanied by an increase of accepted medical examiner cases of 1,810, compared to 1,155 in 2016, representing a 57% increase. This has put a considerable strain on our investigators. The number of whom has remained constant for the past 15 years. The increase in death investigations and autopsies resulted in a record expenditure of 1.7 million dollars up from 1.36 million dollars in 2016.

Our extremely high rate of referrals of tissue donors to Gift of Life continued, with 186 referrals resulting in 42 tissue donors and 23 eye donors. Kent County had the highest conversion rate for referrals – donors.


- Tissue Donors: 42 Referred by Kent County ME Office (#1 in Michigan)  
124 Tissue Donors facilitated by ME Office
- Eye Donors 23 Referred by Kent County ME Office (#1 in Michigan)  
41 Eye Donors facilitated by ME Office
- 21 ORGAN donors facilitated by Kent County ME Office
- Kent County Medical Examiner received the 2017 Donation Champion Award!

We have had an increase in compliance from the local hospitals in terms of saving blood and other specimens for a toxicology screen in individuals who have survived for days or longer in the hospital with a drug overdose. We still have progress to make and hope for continued improvements in 2018.

Our homicides showed an uptick of 28 cases in 2017 compared with 22 in 2016. Suicides remained essentially constant with 89 in 2017 versus 86 in 2016. Gunshot wounds, hangings, and drug overdoses were the most prevalent causes of death in suicides, which continues the trend of the past 5 years. The opioid crisis hit Kent County in 2017 as it did the rest of the country. Our overdose deaths, (predominantly accidental) increased from 93 in 2016 to 156 in 2017. Males outpaced females by nearly 2:1. Of our overdoses, narcotic analgesic drugs, predominantly fentanyl, accounted for nearly half of the deaths. Heroin accounted for about one fifth, and cocaine and methadone each accounted for about 10%. The number of child deaths reviewed showed a continued downward trend with 20 cases in 2017 as supposed to 21 in 2016.

We at the Medical Examiner's Office hope that our efforts will contribute to the overall health of Kent County and our partners in the hospitals, public health, and law enforcement fields.

Respectively submitted,



Stephen D. Cohle, MD  
Kent County Chief Medical Examiner

# Office of the Kent County Medical Examiner

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 Phone (616) 632-7247; Fax (616) 632-7088  
 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, D-ABMDI  
 Medical Examiner Investigator

Judy A. Chamberlain  
 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 (retired June 2017)  
 Medical Examiner Support Staff

Jessica Carnes  
 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, 2016 and 2017

	2016		2017	
	<u>Amount</u>	<u>Percentage</u>	<u>Amount</u>	<u>Percentage</u>
Medical examiner (compensation)	\$ 226,772	16.6%	\$ 267,830	15.7%
Autopsies	951,695	69.8%	1,270,827	74.5%
Body transport	85,838	6.3%	100,977	5.9%
Support services	38,899	2.9%	6,221	0.4%
Administration	60,000	4.4%	60,000	3.5%
<b>Total</b>	<b>\$1,363,204</b>	<b>100.0%</b>	<b>\$1,705,855</b>	<b>100.0%</b>
Average cost per case investigated		\$1,180		\$1,358

## 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.

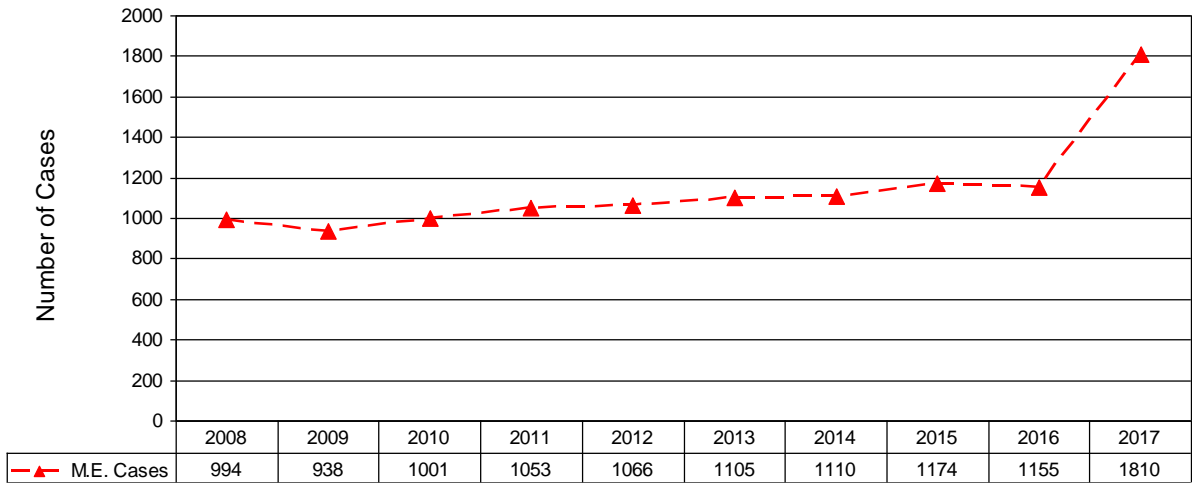
\*\*\*The 48 hour requirement triggers an investigation when there has been no medical attendance of any kind (i.e., nursing care, etc.)

### 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.

# 2017 Medical Examiner Caseload

**Figure 1: Accepted Kent County Medical Examiner Cases, 2008-2017**

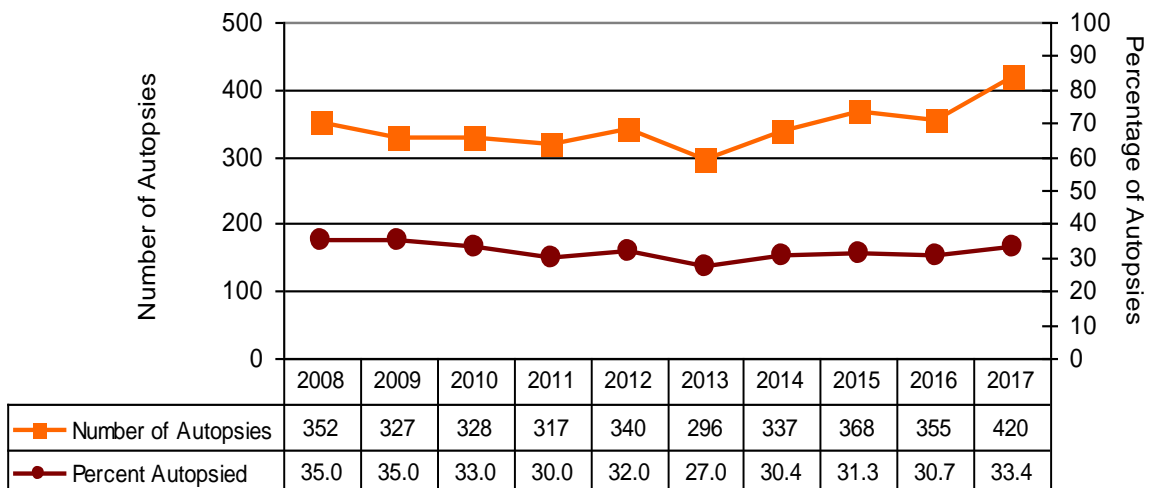


**Total Referred Medical Examiner Cases in 2017: 1,810**

Accepted	1,256	69.4%
Declined	554	30.6%

In 2017, there were 6,004 deaths in Kent County. The medical examiner was contacted regarding 1,810 of these deaths. 1,256 cases were accepted for investigation, while 554 were declined and did not fall within the requirements for investigation by the Medical Examiner's Office. There were no exhumations in 2017. In 2017, there were 186 referrals to Gift of Life and Eversight resulting in 42 tissue donors and 23 eye donors.

**Figure 2: Medical Examiner Cases with Autopsy, 2008-2017**



Of the 420 autopsies performed, 409 were charged to Kent County. The remaining 11 autopsies were performed at the request of other counties. Toxicology was performed on 431 cases with 11 of those being views (92) and 14 where only toxicology was performed. There were no partial autopsies performed.

# 2017 Medical Examiner Caseload

Figure 3: Accepted Medical Examiner Caseload by Month, 2013-2017

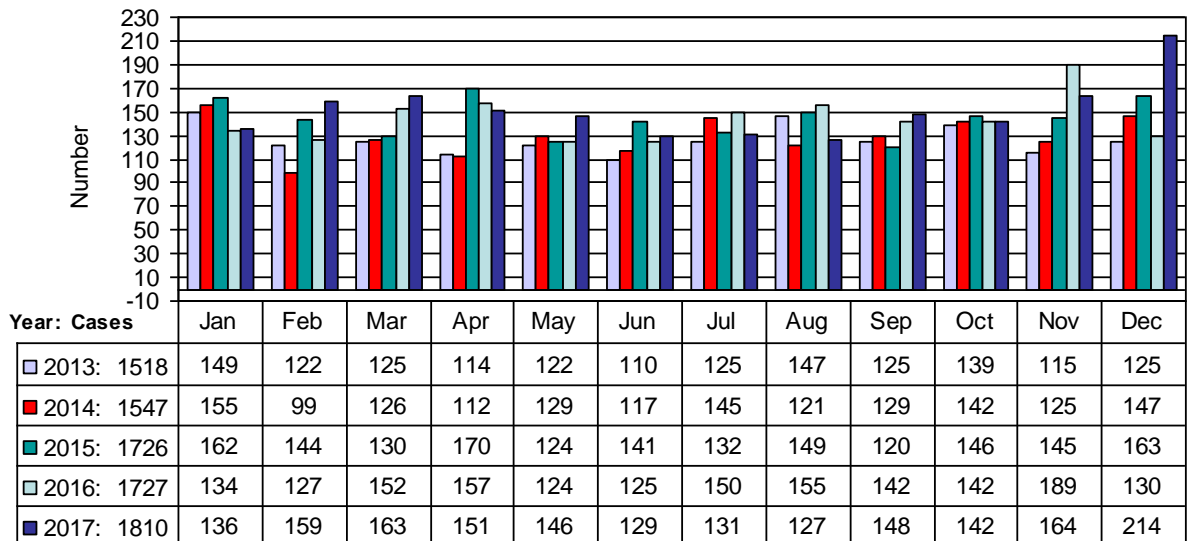
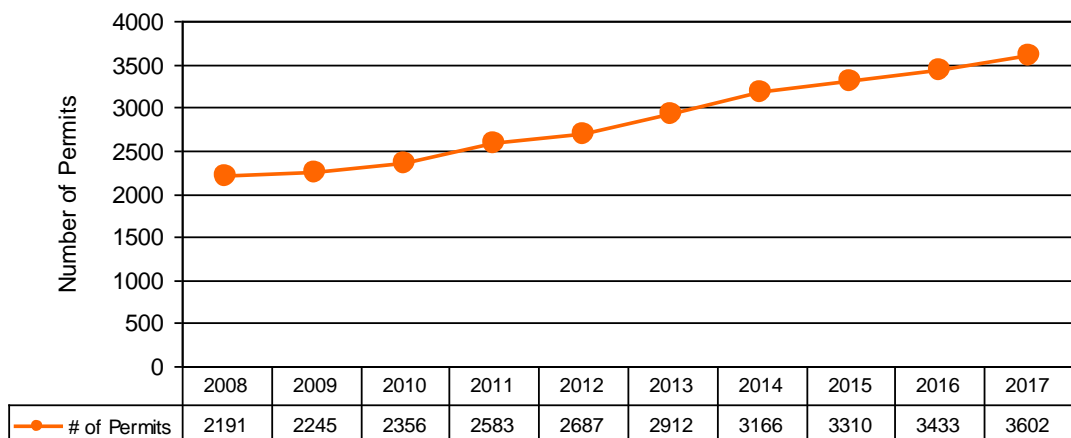


Figure 4: Cremation Permits Issued, 2008-2017



## Demographics of Medical Examiner Cases

Figure 5: Medical Examiner Cases by Race/Ethnicity, 2013-2017

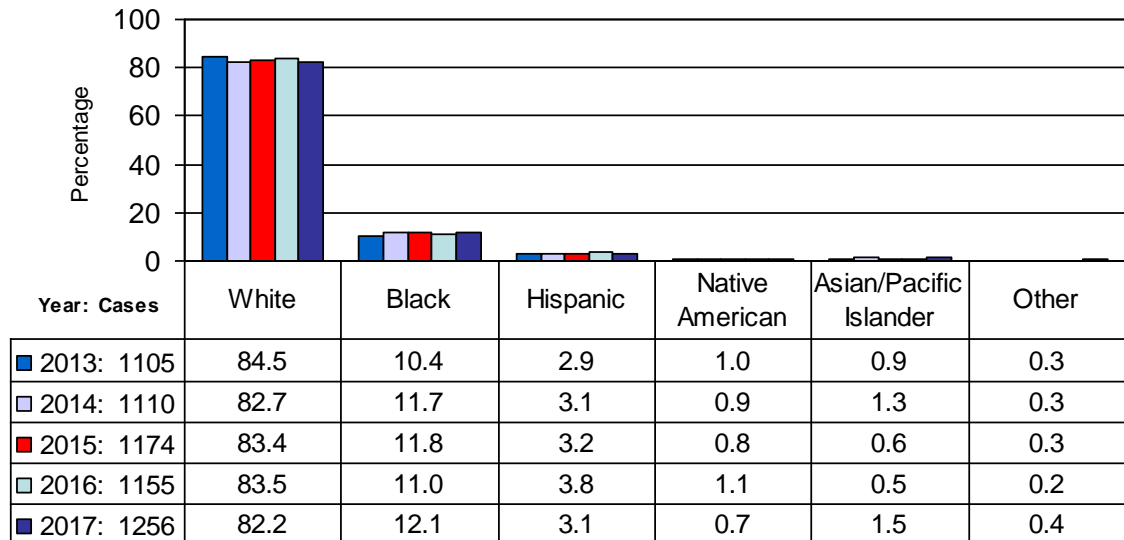


Figure 6: Medical Examiner Cases by Age at Death, 2013-2017

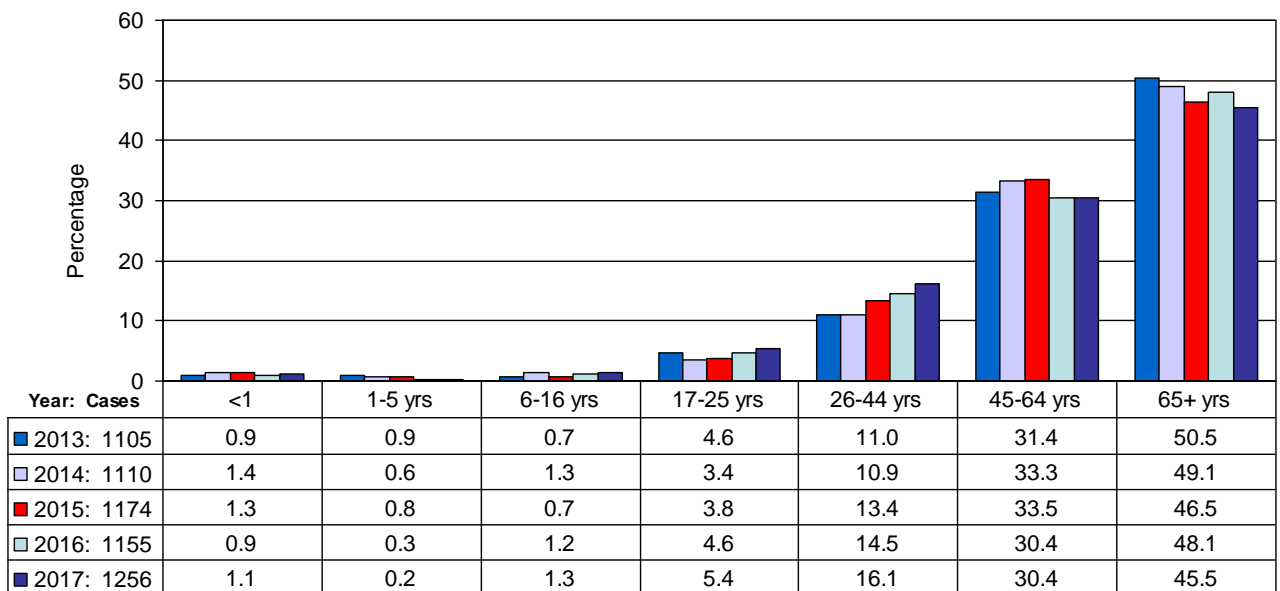


Table 1: Medical Examiner Cases by Gender, 2013-2017

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Female	38.5%	38.8%	37.3%	39.8%	37.9% (476 cases)
Male	61.5%	61.1%	62.7%	60.2%	62.1% (780 cases)
Unknown		0.1% (bones)			

# Manner of Death

Figure 7: Medical Examiner Cases by Manner of Death, 2008-2017

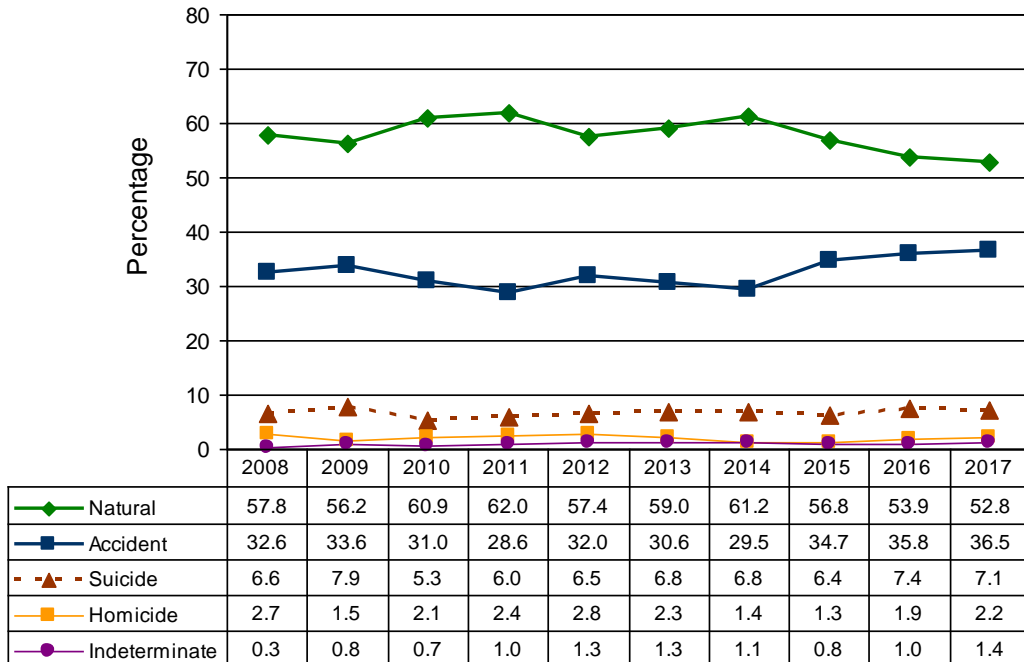
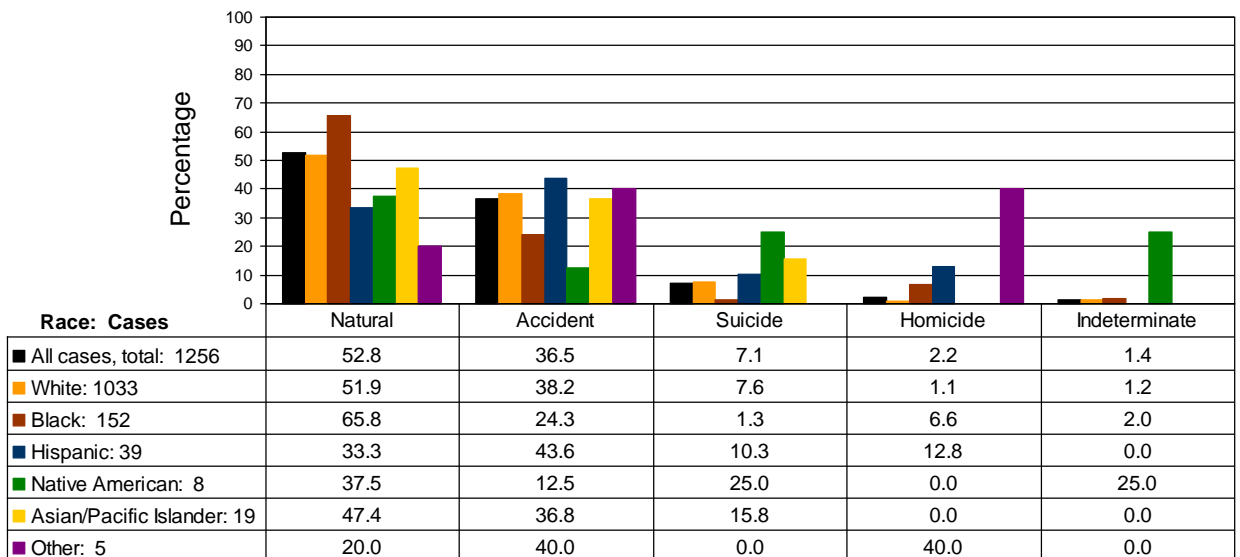


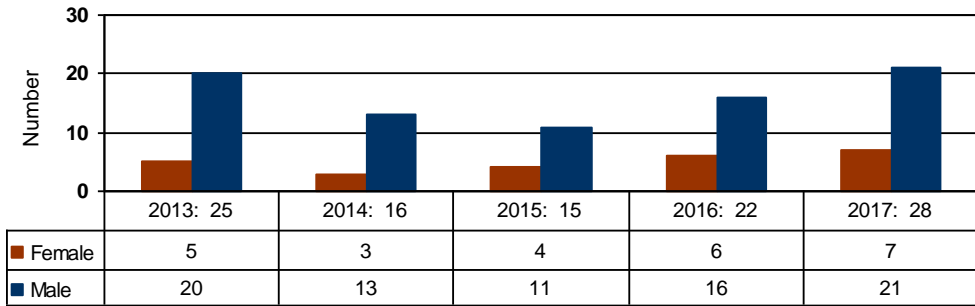
Figure 8: Manner of Death by Race/Ethnicity, 2017



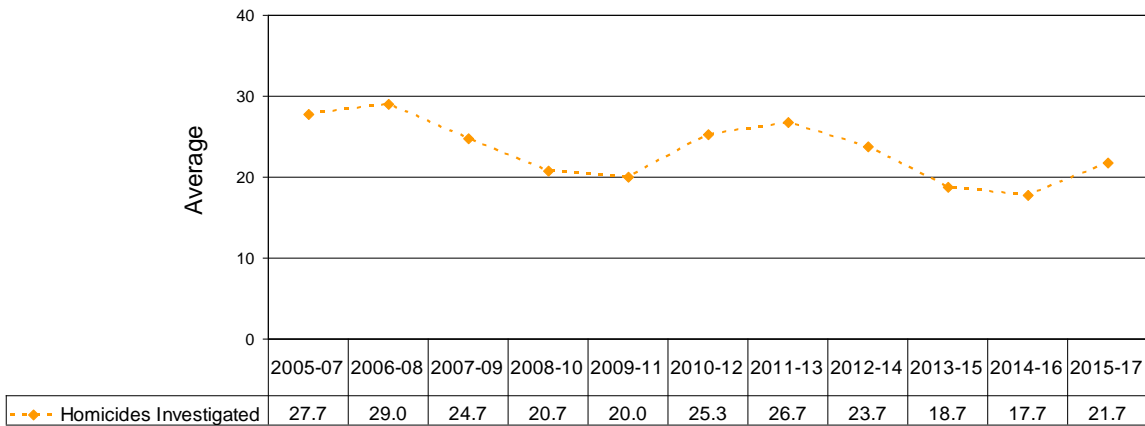


# Manner of Death

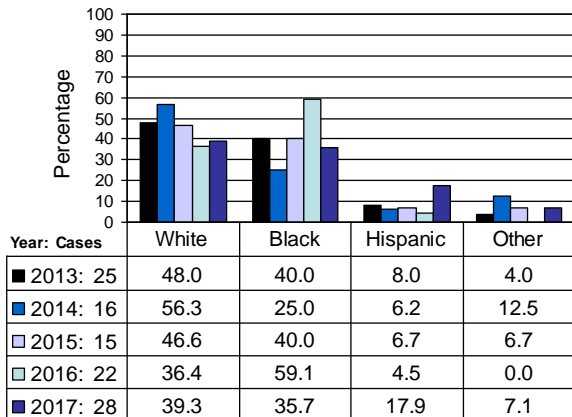
**Figure 9: Kent County Homicides by Gender, 2013-2017**



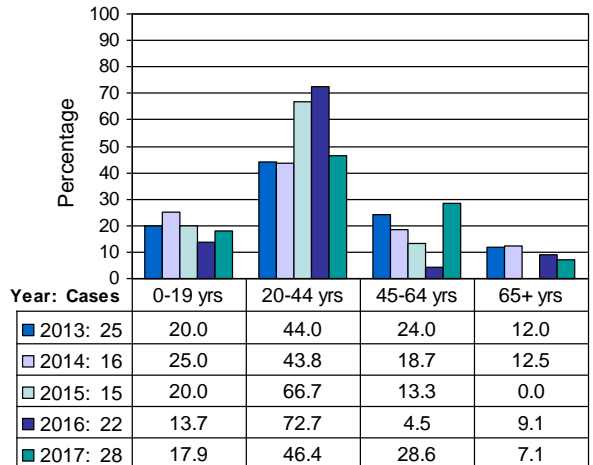
**Figure 10: Kent County Homicides, Three-Year Moving Averages, 2005-2017**



**Figure 11: Homicides by Race, 2013-2017**

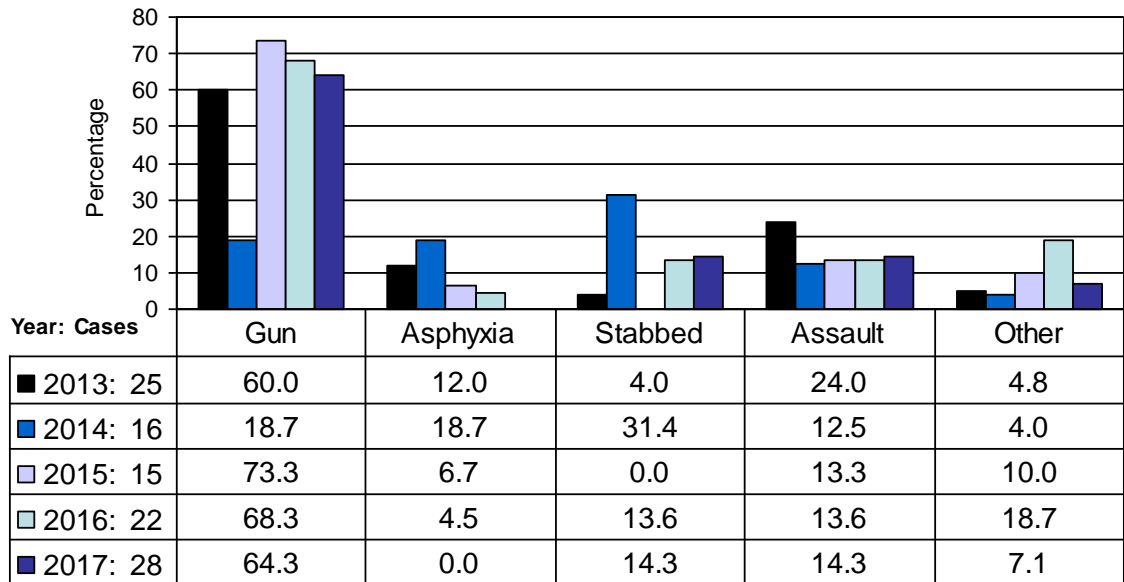


**Figure 12: Homicides by Age, 2013-2017**



# Manner of Death

**Figure 13: Homicide Cases by Method Used, 2013-2017**



**Table 2: Gun Homicides by Age, 2013-2017**

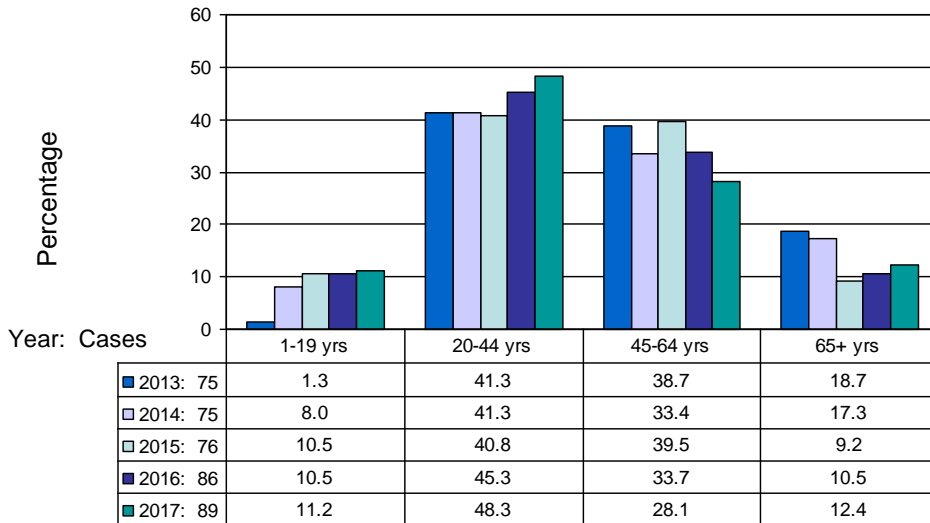
Year: Cases	AGE			
	0-19 yrs	20-29 yrs	30-39 yrs	40+ yrs
2013: 15	4	5	1	5
2014: 3	1	1	1	0
2015: 11	1	3	5	2
2016: 15	1	8	3	3
2017: 18	2	9	1	6

**Table 3: Suicide Cases by Race, 2013-2017**

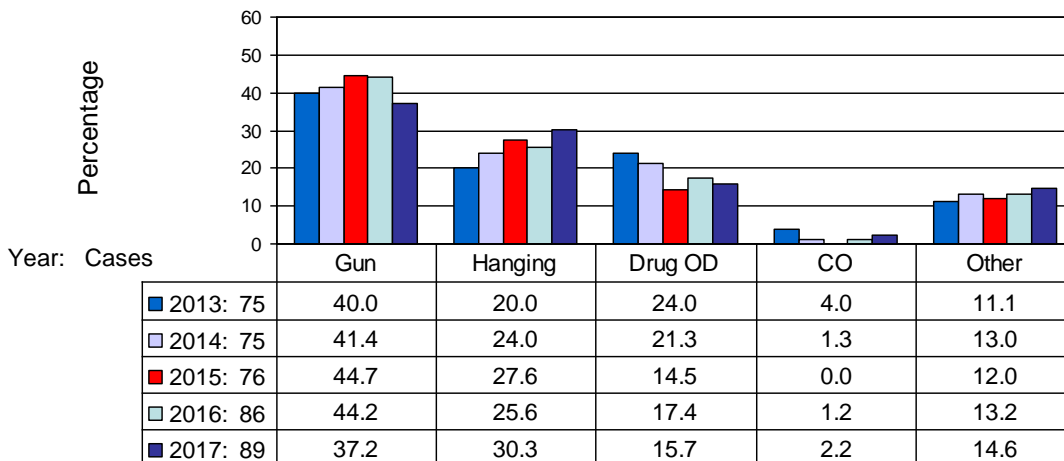
	White	Black	Hispanic	Native American	Asian
2013: 75	90.7%	1.3%	6.7%	0.0%	1.3%
2014: 75	90.7%	8.0%	0.0%	0.0%	1.3%
2015: 76	85.5%	7.9%	5.3%	0.0%	1.3%
2016: 86	83.7%	7.0%	3.5%	3.5%	2.3%
2017: 89	87.7%	2.2%	4.5%	2.2%	3.4%

# Manner of Death

**Figure 14: Suicide Cases by Age, 2013-2017**



**Figure 15: Suicide Cases by Method Used, 2013-2017**

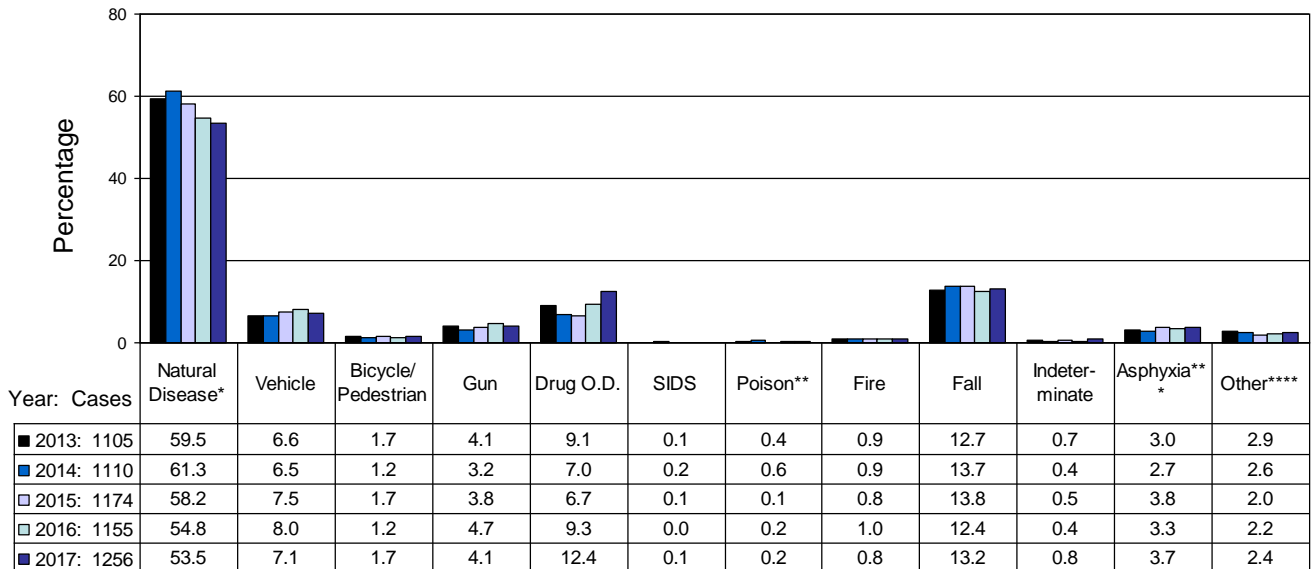


In 2017, CO is carbon monoxide poisoning, while Other consists of asphyxia (5), falls (3), stabbing (1), pedestrian (2) and incised wounds (2).

Of the 89 suicide deaths for 2017, females accounted for 17 (19.1%) deaths, while males accounted for 72 (80.9%).

# Cause of Death

**Figure 16: Medical Examiner Cases by Cause of Death, 2013-2017**



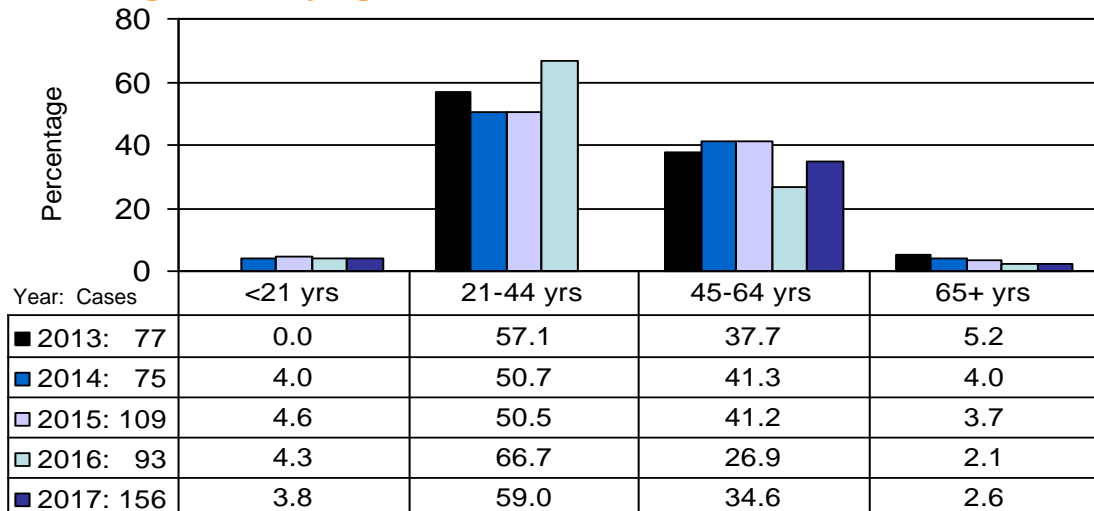
\*Natural: alcohol (46; 6.8%), cancer (26; 3.9%), cardiovascular (499; 74.3%), CNS (26; 3.9%), respiratory (42; 6.2%) and other (33; 4.9%).

\*\*Poison includes carbon monoxide poisoning (3; 100%).

\*\*\*Asphyxia includes deaths from hanging (29, 63.1%), choking on food (4; 8.7%), suffocation with bedding, (3; 6.5%), co-sleeping (3; 6.5%), crushed by object (1; 2.2%), positional asphyxia (1; 2.2%), ligature strangulation (2; 4.3%), traumatic asphyxia (2; 4.3%) and autoerotic (1; 2.2%).

\*\*\*\*Other includes deaths from assault (4; 13.4%), choking on food (1; 3.3%), drowning (7; 23.3%), stabbed (5; 16.8%), hypothermia (1; 3.3%), incised wounds (2; 6.7%), crushed by object (1; 3.3%), anaphylaxis d/t bee sting (1; 3.3%), complications from surgery (1; 3.3%), skiing & struck tree (1; 3.3%), thermal burns (2; 6.7%), dehydration (1; 3.3%), attacked by dog (1; 3.3%) and homicide (2; 6.7%).

**Figure 17: Drug Deaths by Age, 2013-2017**

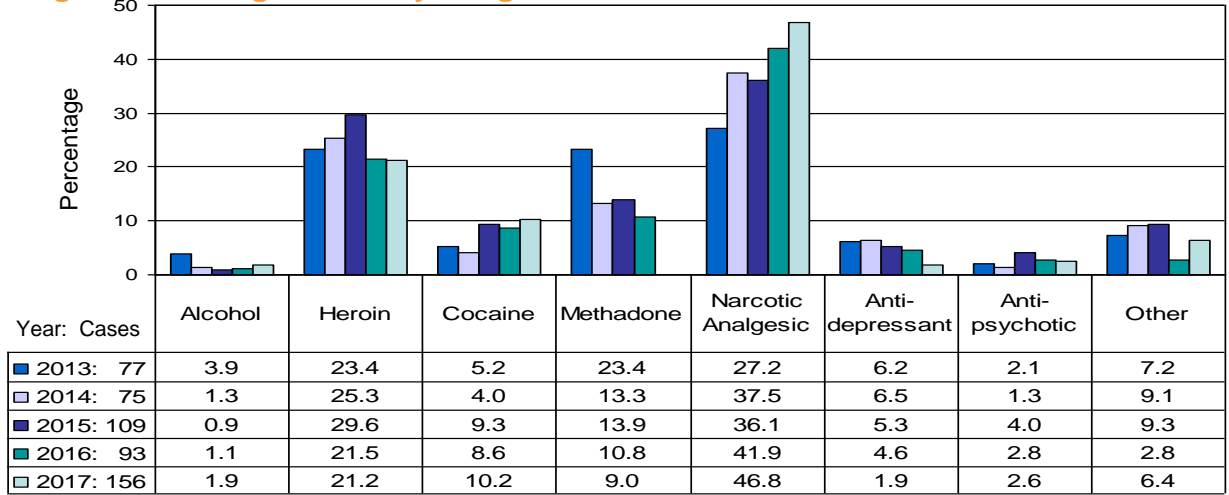


**Table 4: Drug Deaths by Gender, 2017**

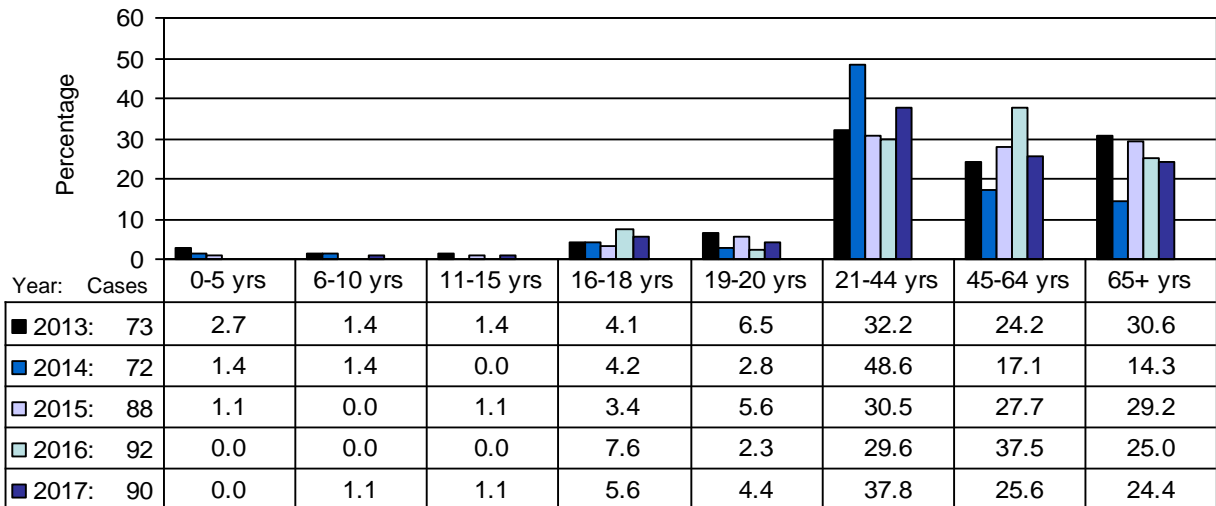
	Female (55)	Male (101)
Accident	48	93
Suicide	6	8
Indeterminate	1	0

# Cause of Death

**Figure 18: Drug Deaths by Drug of First Mention, 2013-2017**



**Figure 19: Vehicular Deaths by Age, 2013-2017**



**Table 5: Vehicular Deaths by Gender, 2013-2017**

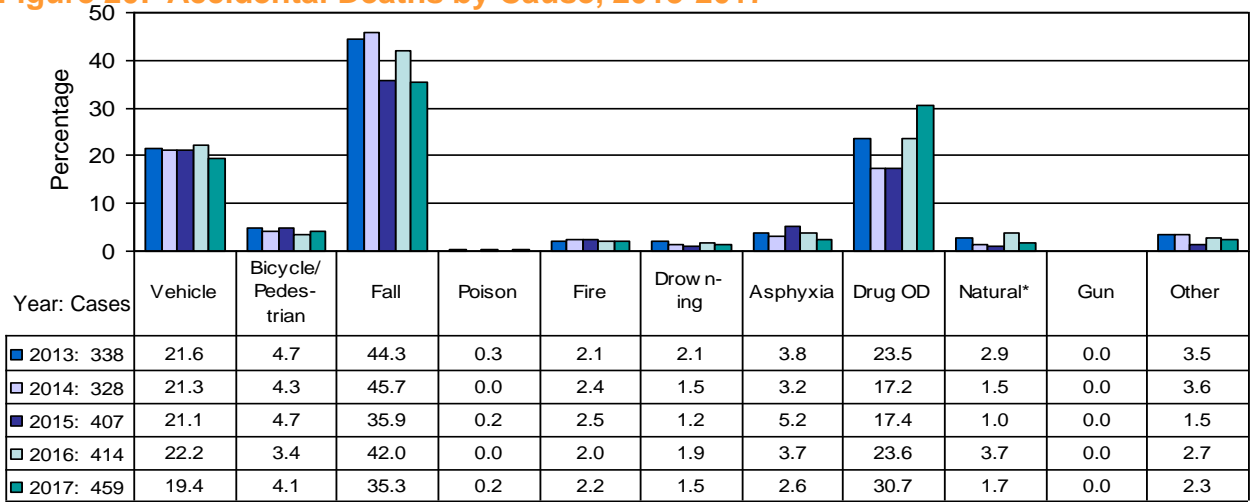
	Female	Male
2013: 73	28.8% (21)	71.2% (52)
2014: 72	38.9% (28)	61.1% (44)
2015: 88	26.1% (23)	73.9% (65)
2016: 92	40.2% (37)	59.8% (55)
2017: 90	30.0% (27)	70.0% (63)

**Table 6: Bicycle/Pedestrian Deaths by Age, 2013-2017**

	<21 yrs	21-44 yrs	45-64 yrs	65+ yrs
2013: 16	2	3	8	3
2014: 14	2	4	8	0
2015: 20	3	4	10	3
2016: 14	2	6	4	2
2017: 21	3	8	5	5

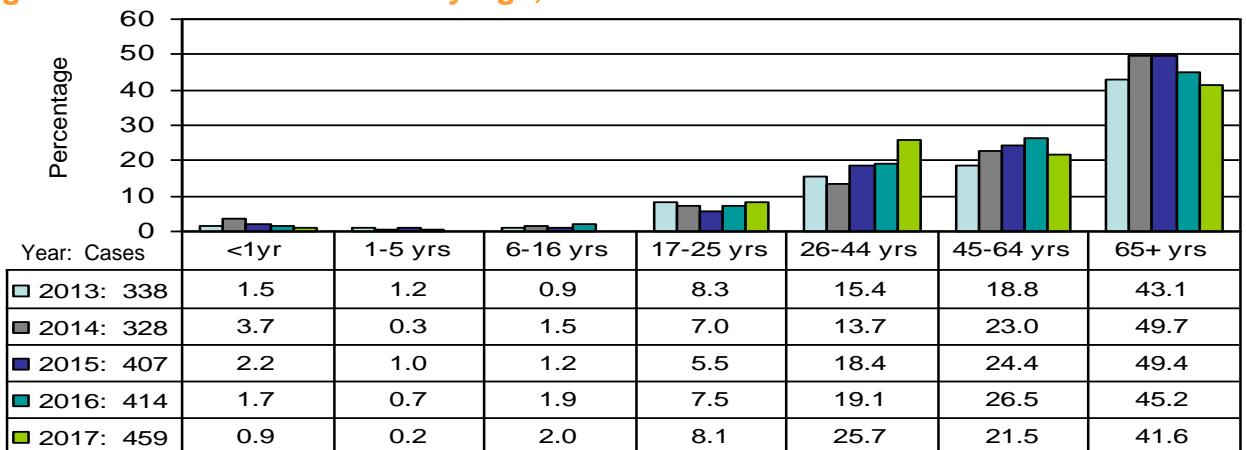
# Cause of Death

**Figure 20: Accidental Deaths by Cause, 2013-2017**

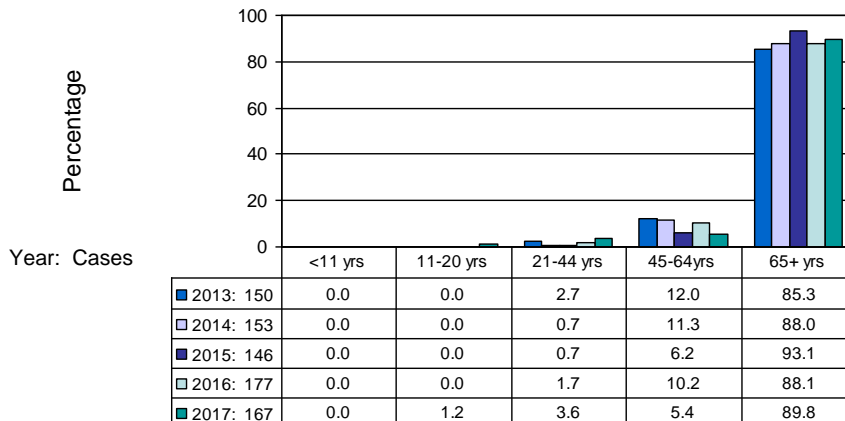


\*A natural cause of death can have a contributing factor that determines the death to be accidental. There were 8 deaths that fell into this category in 2017 from falls (3), hypothermia (1), thermal burns (1), cocaine toxicity (1), quadriplegia (1), and ethanol (1).

**Figure 21: Accidental Deaths by Age, 2013-2017**



**Figure 22: Deaths Resulting from Falls by Age, 2013-2017**



## MISCELLANEOUS

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### Unclaimed Bodies 2013-2017

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 2017, the office processed 37 unclaimed bodies.

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Medical Examiner Cases	18	11	18	9	15
Not Medical Examiner Cases	16	19	18	18	22
Total Cases	34	30	36	27	37

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 2013-2017

The Child Death Review Team reviews the deaths of those in Kent County who are 17 and younger. In 2017, there were 20 child death cases reviewed. Of these cases, 5 were deaths from 2016 and 15 were deaths from 2017.

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Natural	7	5	3	3	1
SIDS	0	2	1	0	0
Vehicular Accident	4	5	2	2	5
Accidental	5	6	11	9	6
Suicide	1	4	4	3	4
Homicides	5	3	1	4	2
Indeterminate	0	2	2	0	2
Total Cases	22	27	24	21	20

Natural includes death by extrahepatic biliary atresia (1).

Accidental includes death by suffocation (1), co-sleeping (2), probable positional asphyxia (1), craniocerebral trauma; dog attack (1) and drowning (1).

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

Homicide includes death by blunt force injuries of abdomen (1) and homicidal neglect (1).

Indeterminate includes deaths by asphyxia by suffocation; infant found face down in pillow (1) and dehydration (1).

## **Kent County Medical Examiner 2017 Annual Report**

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