

Kent County Medical Examiner



2014 Annual Report

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

2014 Kent County Medical Examiner Annual Report

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

The responsibility of determining the cause and manner of unexpected deaths in Kent County is one that the Medical Examiner staff takes very seriously. The results of these investigations provide valuable information which is used by public health personnel, the criminal justice system, families of the deceased, and other concerned parties.

The Kent County Medical Examiner's Office completed the annual renewal of accreditation by the National Association of Medical Examiners (NAME) in 2012 and is preparing for our next inspection. This achievement is the result of years of work by all the Medical Examiner staff. We are one of six accredited offices in Michigan, and 1 of only 84 accredited facilities in the nation.

While many regard the Medical Examiner Program as being primarily concerned with the circumstances surrounding the end of life, Medical Examiners are equally concerned with the preservations of life. The chief, deputy chief, and administrative staff of the Medical Examiner's Office continue to spend many hours with the Child Death Review Team to examine all types of data related to the deaths of children 18 years of age and under in our community.

In 2014, there were 5,751 deaths in Kent County. The Medical Examiner's Office was contacted regarding 1,547 of these deaths of which 337 required autopsies.

Heroin and methadone are the most common culprits of drug overdose deaths with a significant increase in heroin deaths over the past five years, while methadone and other prescription drug abuse continues to be a scourge in our community.

While the high standards to which we adhere provide the foundation for quality investigative practices, it is the practitioners – the Deputy Chief Medical Examiner, David A. Start, MD, and the Medical Examiner Investigators – who ultimately are responsible for our success. Within the frame-work of investigative protocols, the Deputy Chief Medical Examiner and Medical Examiner Investigators must have latitude for judgment and the discretion to exercise it accordingly. I have always sought to direct our Medical Examiner Program in a manner that takes full advantage of the professional training and experience of the Kent County Deputy Chief Medical Examiner and Medical Examiner Investigators, and continue to be an advocate for their expertise as a critical component of a quality program.

On behalf of the Medical Examiner's Office of Kent County, I would like to thank the Board of Commissioners for their continued support of this program which enables the Medical Examiner staff to provide this valuable and necessary service for the citizens of Kent County. I also wish to express my deepest gratitude to the excellent staff of the Kent County Medical Examiner Program – the Deputy Chief Medical Examiner, Medical Examiner Investigators, and the administrative support staff – who keep this program running smoothly. It is my pleasure to present the Kent County Medical Examiner's 2014 Annual Report.

Respectively submitted,



Stephen D. Cohle, MD
Chief Medical Examiner

Office of the Kent County Medical Examiner

700 Fuller N.E., Grand Rapids, MI 49503
 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
 Medical Examiner Investigator

John T. Connolly
 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

Lindsey E. Pitsch
 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, 2013 and 2014

	2013		2014	
	Amount	Percentage	Amount	Percentage
Medical examiner (compensation)	\$ 186,006	16.4%	\$ 188,314	15.0%
Autopsies	764,227	67.6%	877,266	70.0%
Body transport	73,812	6.5%	73,411	5.9%
Support services	47,193	4.2%	53,795	4.3%
Administration	60,000	5.3%	60,000	4.8%
Total	\$1,131,238	100.0%	\$1,252,786	100.0%

Average cost per case investigated \$1,024 \$1,129

Medical Examiner Reportable Deaths and Autopsy

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.

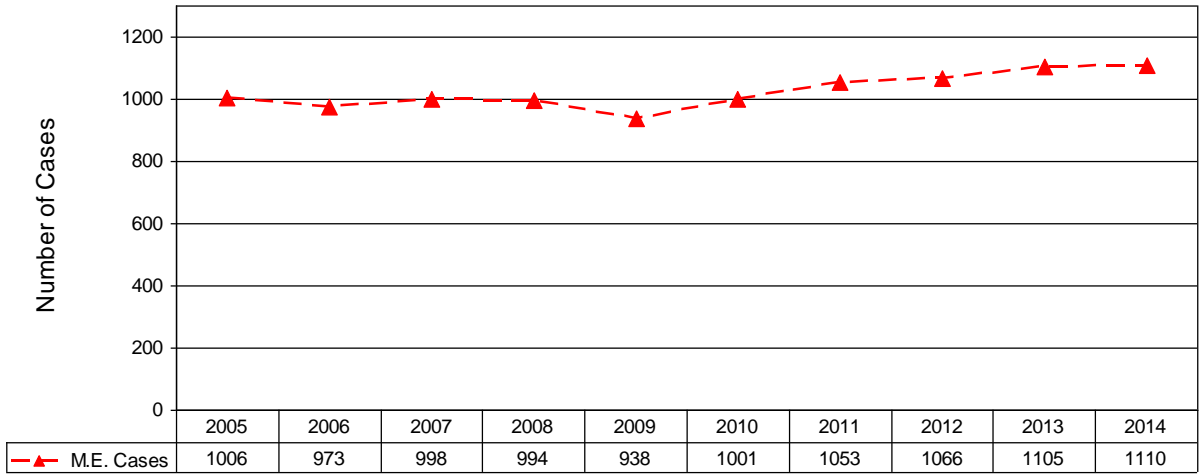
***The 48 hour requirement triggers an investigation when there has been no medical attendance of any kind (i.e., nursing care, etc.)

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 may be significant injuries that mandate full autopsy.

2014 Medical Examiner Caseload

Figure 1: Accepted Kent County Medical Examiner Cases, 2005-2014

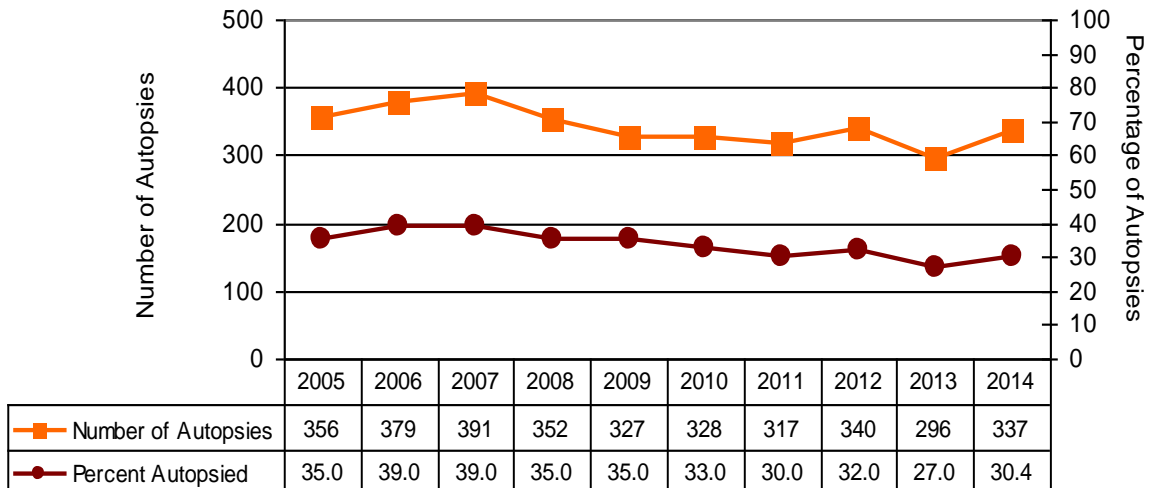


Total Referred Medical Examiner Cases in 2014: 1,547

Accepted	1,110	71.8%
Declined	437	28.2%

In 2014, there were 5,751 deaths in Kent County. The medical examiner was contacted regarding 1,547 of these deaths. 1,110 cases were accepted for investigation, while 437 were declined and did not fall within the requirements for investigation by the Medical Examiner's Office.

Figure 2: Medical Examiner Cases with Autopsy, 2005-2014



Of the 337 autopsies performed, 327 were charged to Kent County. The remaining 10 autopsies were performed at the request of another county.

2014 Medical Examiner Caseload

Figure 3: Referred Medical Examiner Caseload by Month, 2010-2014

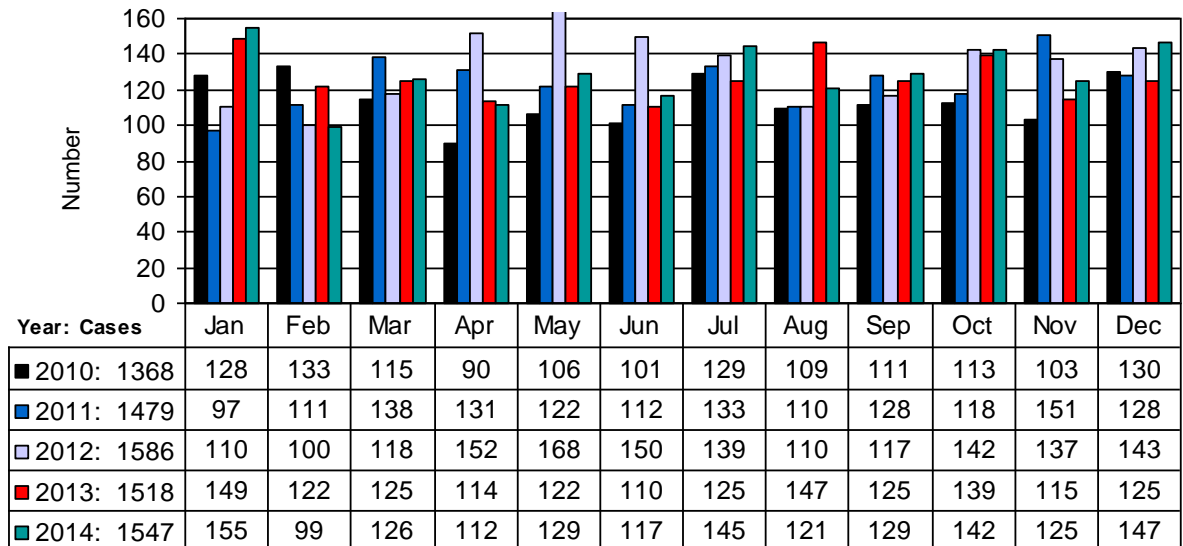
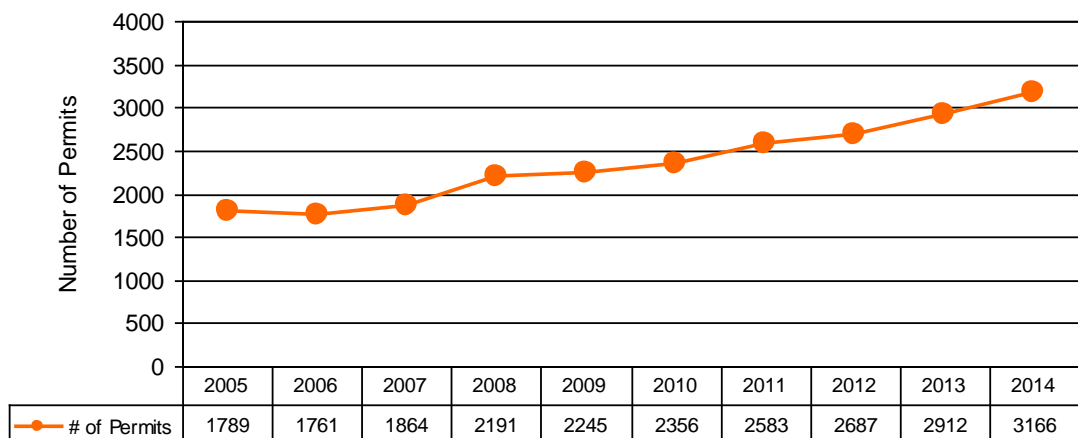


Figure 4: Cremation Permits Issued, 2005-2014



Demographics of Medical Examiner Cases

Figure 5: Medical Examiner Cases by Race/Ethnicity, 2010-2014

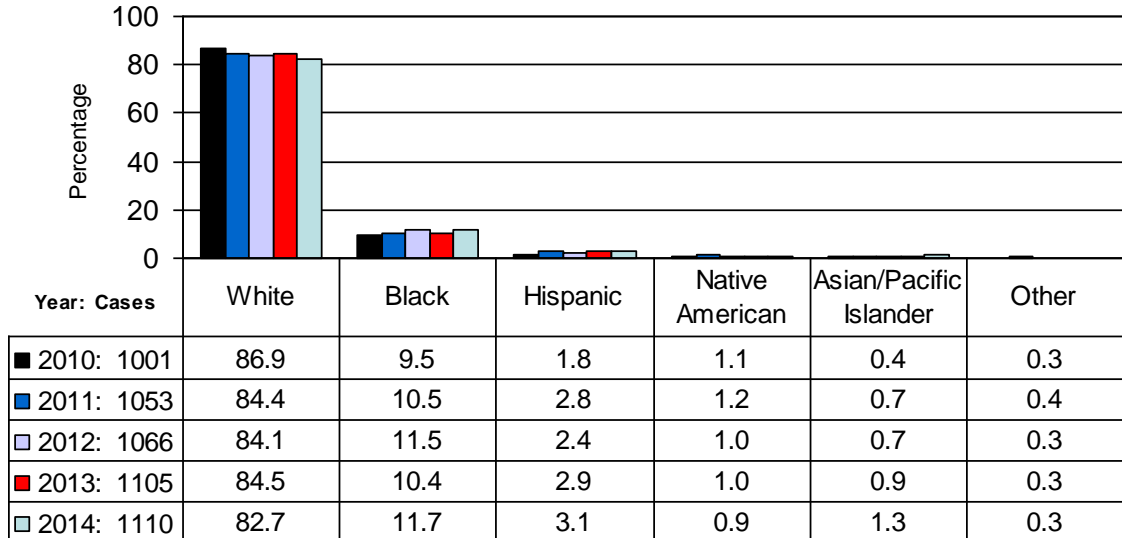


Figure 6: Medical Examiner Cases by Age at Death, 2010-2014

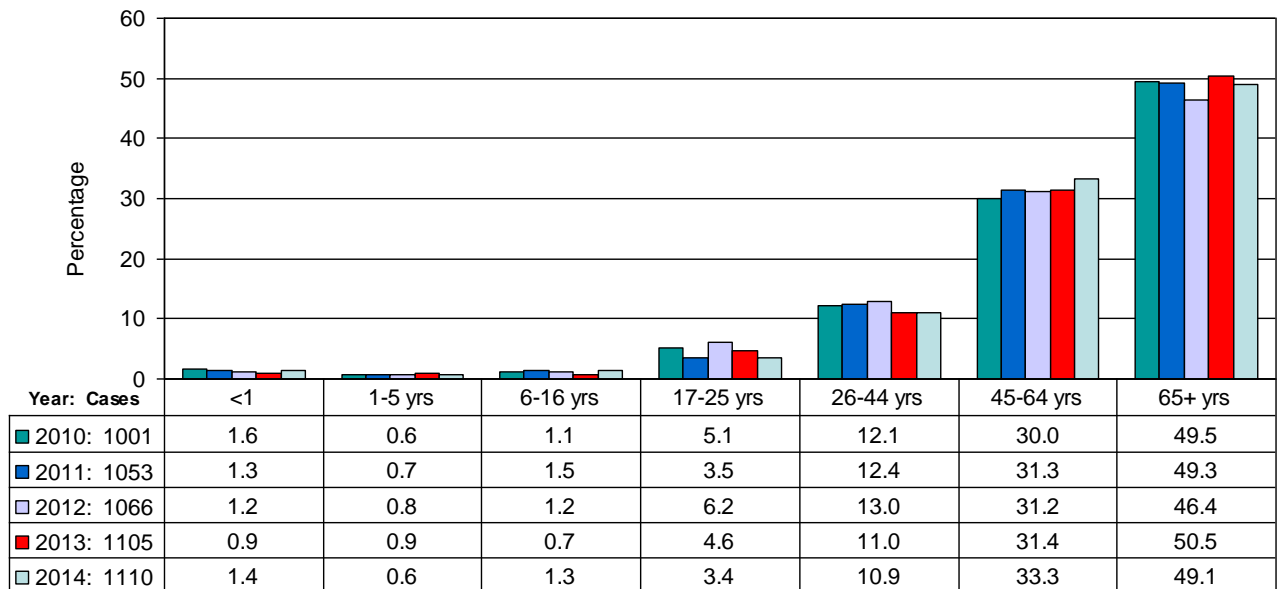


Table 1: Medical Examiner Cases by Gender, 2010-2014

	2010	2011	2012	2013	2014
Female	37.8%	39.5%	35.8%	38.5%	38.8% (431 cases)
Male	61.9%	60.5%	64.2%	61.5%	61.1% (678 cases)
Unknown	0.3% (bones)				0.1% (1 bones)

Manner of Death

Figure 7: Medical Examiner Cases by Manner of Death, 2005-2014

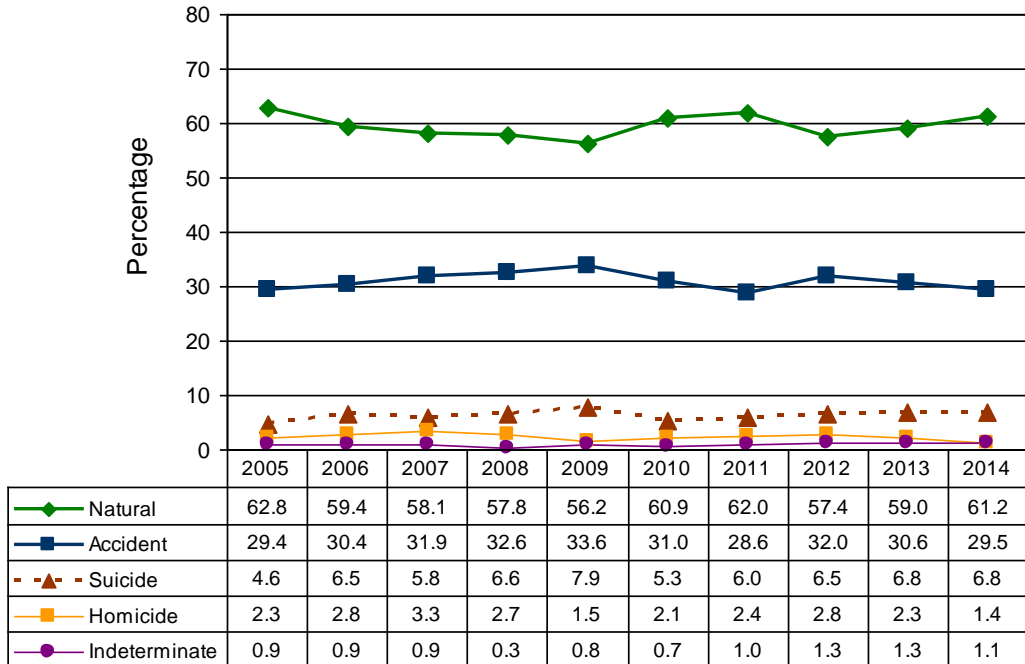
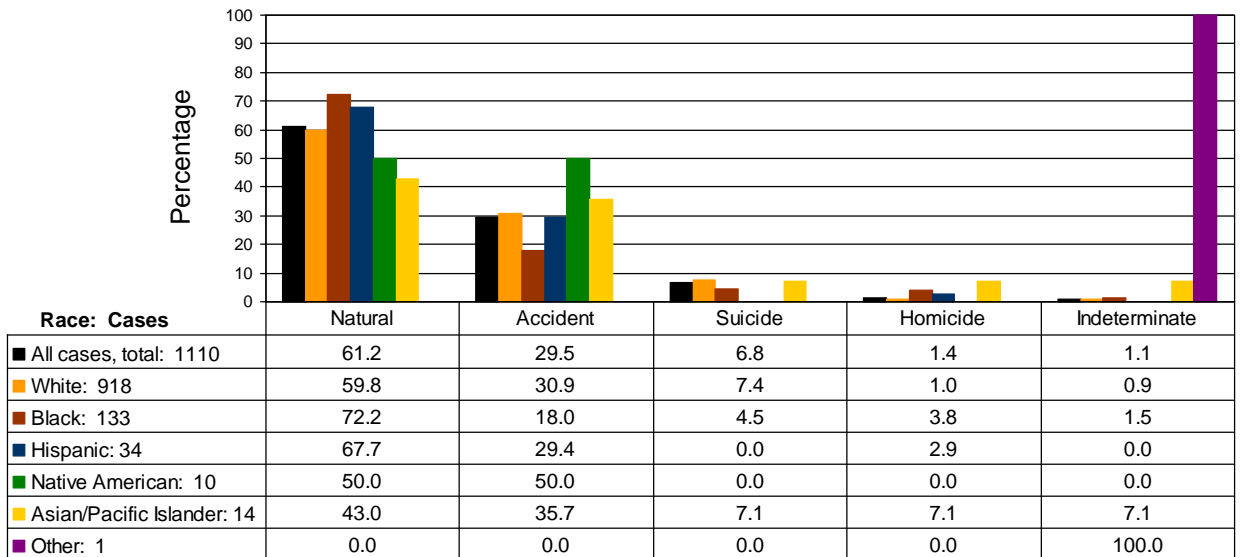


Figure 8: Manner of Death by Race/Ethnicity, 2014



Manner of Death

Figure 9: Kent County Homicides by Gender, 2010-2014

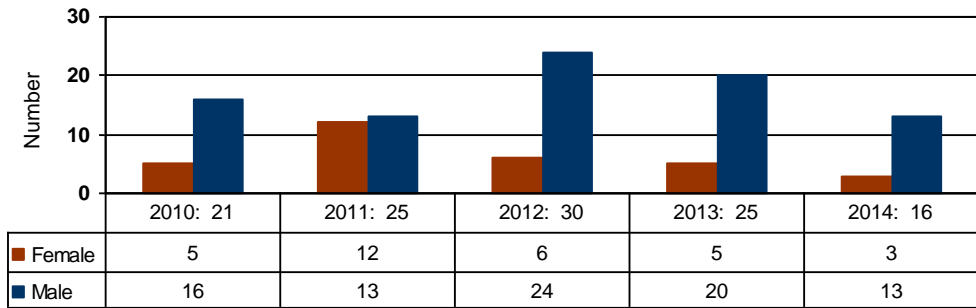


Figure 10: Kent County Homicides, Three-Year Moving Averages, 2002-2014

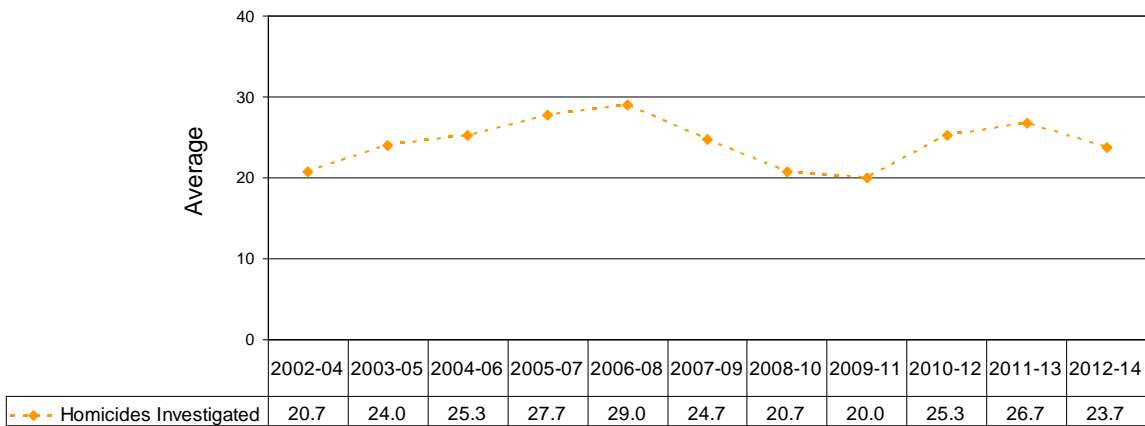


Figure 11: Homicides by Race, 2010-2014

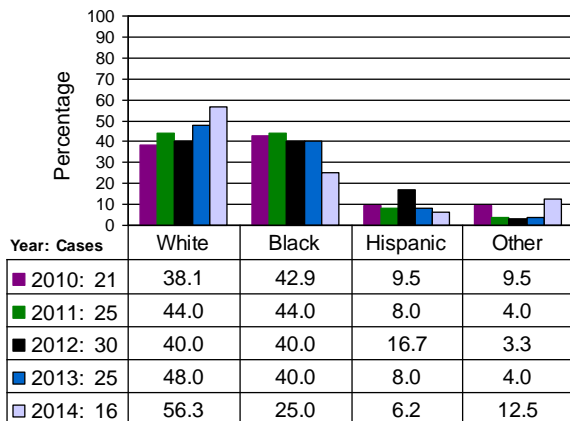
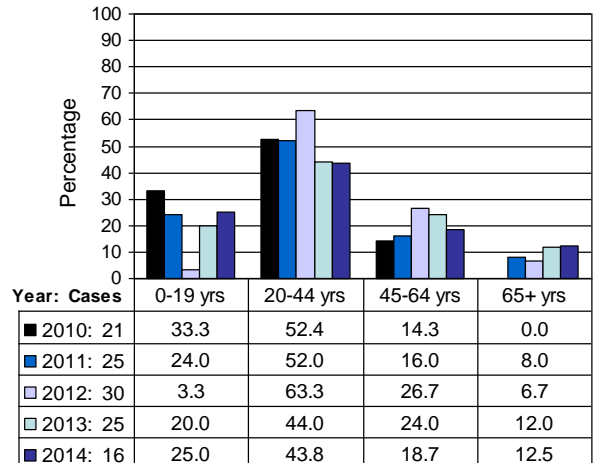


Figure 12: Homicides by Age, 2010-2014



Manner of Death

Figure 13: Homicide Cases by Method Used, 2010-2014

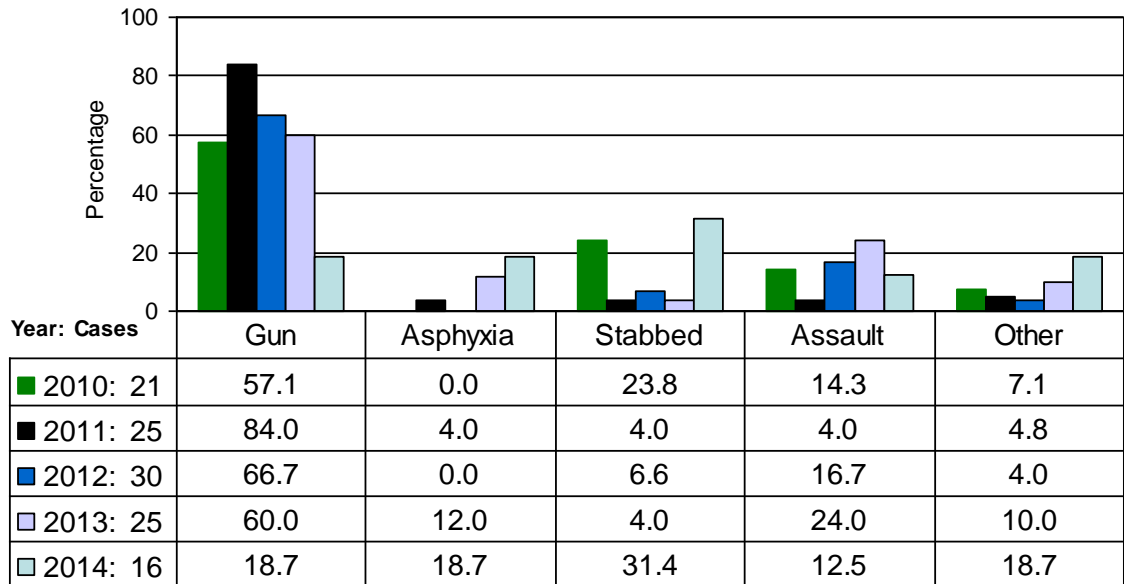


Table 2: Gun Homicides by Age, 2010-2014

Year: Cases	AGE			
	0-19 yrs	20-29 yrs	30-39 yrs	40+ yrs
2010: 12	5	1	2	4
2011: 21	5	9	3	4
2012: 20	1	11	3	5
2013: 15	4	5	1	5
2014: 3	1	1	1	0

Table 3: Suicide Cases by Race, 2010-2014

	White	Black	Hispanic	Native American	Asian
2010: 53	86.8%	11.3%	1.9%	0.0%	0.0%
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%

Manner of Death

Figure 14: Suicide Cases by Age, 2010-2014

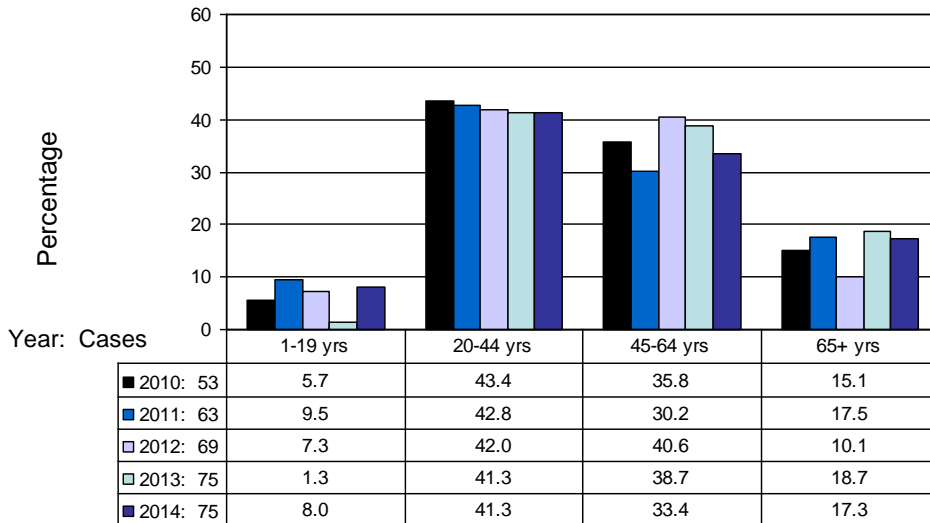
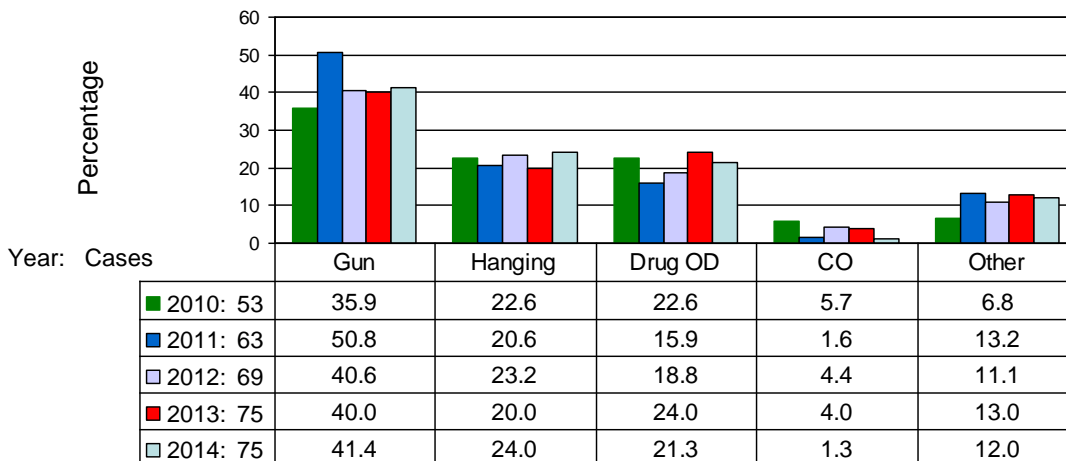


Figure 15: Suicide Cases by Method Used, 2010-2014

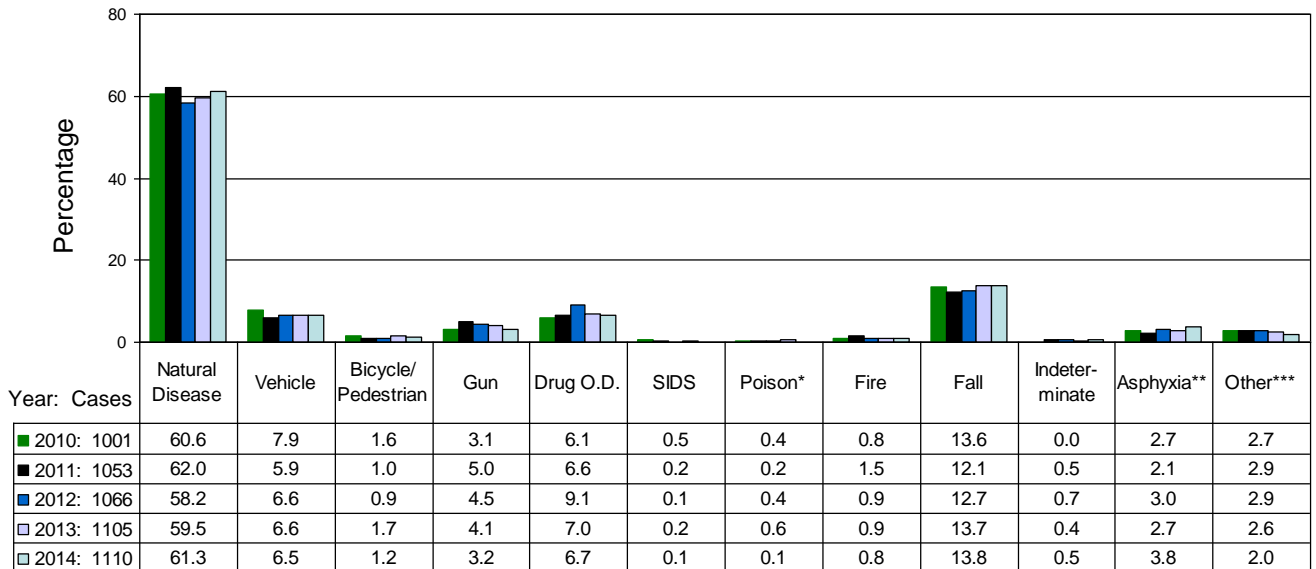


In 2014, CO is carbon monoxide poisoning, while Other consists of asphyxia (4), vehicle (1), falls (2), drowning (1), incised wounds of wrist and neck (1).

Of the 75 suicide deaths for 2014, females accounted for 20 (26.7%) deaths, while males accounted for 55 (73.3%).

Cause of Death

Figure 16: Medical Examiner Cases by Cause of Death, 2010-2014



*Poison includes carbon monoxide poisoning (1; 100.0%).

**Asphyxia includes deaths from choking on food (5; 12.0%), hanging (18; 42.9%), suffocation, (8; 19.0%), positional asphyxia (3; 7.1%), crushed by person (1; 2.4%), suffocation-cosleeping (3; 7.1%), self extubation of trach tube (1; 2.4%) and strangulation (3; 7.1%).

***Other is comprised of deaths from stabbing (5; 22.8%), assault-physical abuse (2; 9.1%), crushed by object (2; 9.1%), surgical procedure (1; 4.5%), drowning (6; 27.4%), homicide by unspecified means (2; 9.1%), incised wounds (1; 4.5%), blunt force injury of leg (1; 4.5%), small aviation plane (1; 4.5%) and bones (1; 4.5%).

Figure 17: Drug Deaths by Age, 2010-2014

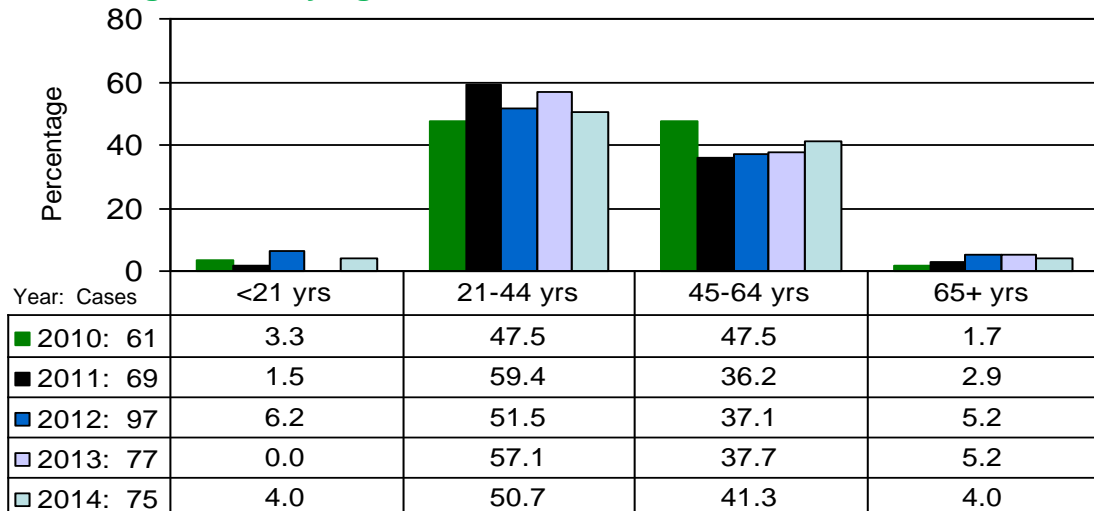


Table 4: Drug Deaths by Gender, 2014

	Female (33)	Male (42)
Accident	21	36
Suicide	11	5
Indeterminate	0	1
Homicide	1	

Cause of Death

Figure 18: Drug Deaths by Drug of First Mention, 2010-2014

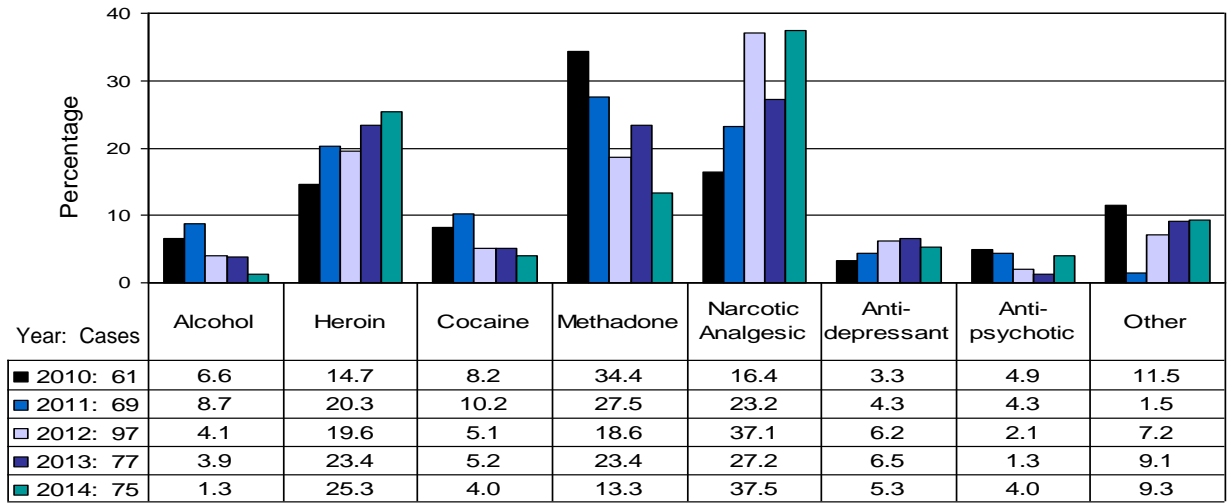


Figure 19: Vehicular Deaths by Age, 2010-2014

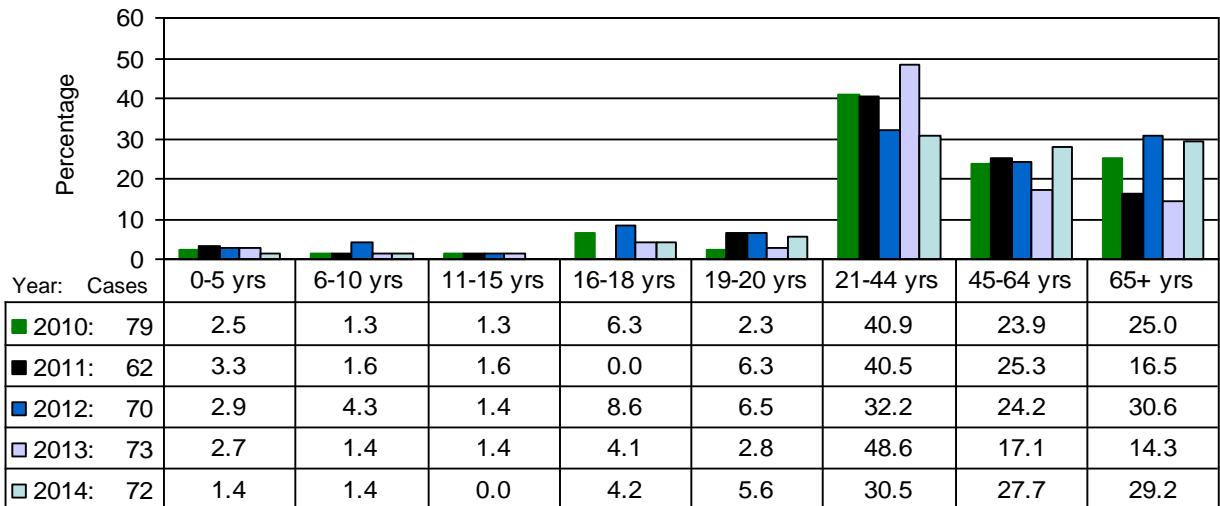


Table 5: Vehicular Deaths by Gender, 2010-2014

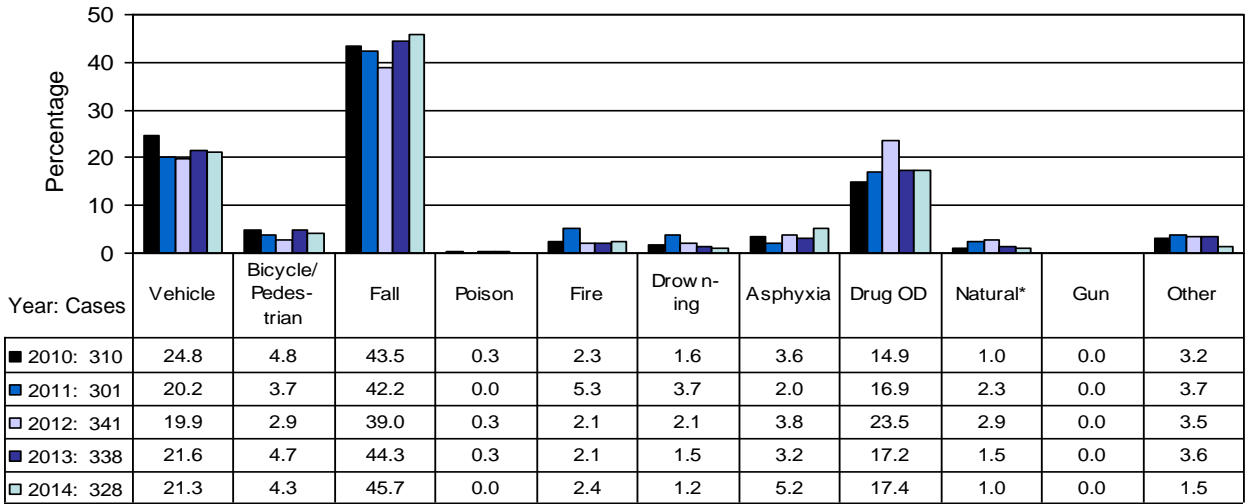
	Female	Male
2010: 79	32.9% (26)	67.1% (53)
2011: 62	32.3% (20)	67.7% (42)
2012: 70	30.0% (21)	70.0% (49)
2013: 73	28.8% (21)	71.2% (52)
2014: 72	38.9% (28)	61.1% (44)

Table 6: Bicycle/Pedestrian Deaths by Age, 2010-2014

	<21 yrs	21-44 yrs	45-64 yrs	65+ yrs
2010: 16	3	6	2	5
2011: 11	2	3	5	1
2012: 10	6	2	1	1
2013: 16	2	3	8	3
2014: 14	2	4	8	0

Cause of Death

Figure 20: Accidental Deaths by Cause, 2010-2014



*A natural cause of death can have a contributing factor that determines the death to be accidental. There were 3 deaths that fell into this category in 2014 from falls (1), cocaine toxicity (1), and mixed drug toxicity (1).

Figure 21: Accidental Deaths by Age, 2010-2014

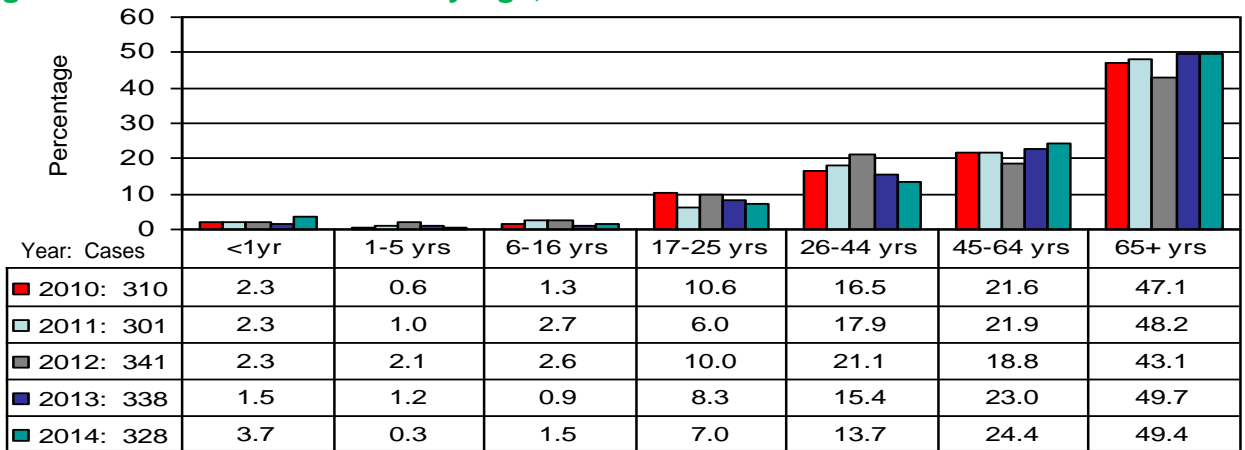
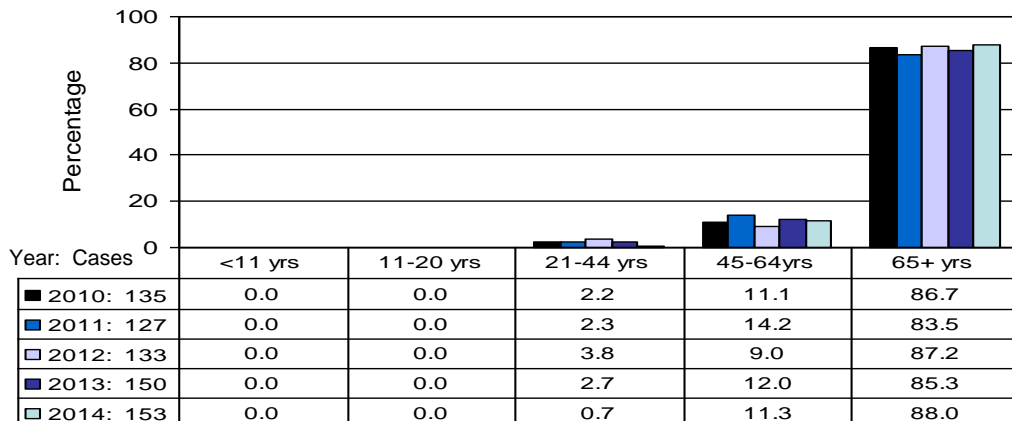


Figure 22: Deaths Resulting from Falls by Age, 2010-2014



MISCELLANEOUS

Unclaimed Bodies 2010-2014

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 2014, the office processed 30 unclaimed bodies.

	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
Medical Examiner Cases	9	12	10	18	11
Not Medical Examiner Cases	15	24	20	16	19
Total Cases	24	26	30	34	30

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 2010-2014

The Child Death Review Team reviews the deaths of those in Kent County who are 17 and younger. In 2014, there were 27 child death cases reviewed. Of these cases, 5 were deaths from 2013 and 22 were deaths from 2014.

	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
Natural	2	5	3	7	5
SIDS	4	1	1	0	2
Vehicular Accident	4	3	7	4	5
Accidental	7	8	14	5	6
Suicide	3	1	15	1	4
Homicides	6	5	1	5	3
Indeterminate	0	4	0	0	2
Total Cases	26	27	33	22	27

Natural includes deaths from Group A beta-hemolytic streptococcus septic d/t community acquired pneumonia (1); astrocytoma (1); prematurity d/t chorioamnionitis (1); hypertrophic cardiomyopathy (1) and respiratory syncytial virus bronchiolitis w/acute pneumonia (1).

Accidental includes deaths from suffocation: face down in crib (1); plastic bag over head (1); co-sleeping (2); probable positional asphyxia (1); and asphyxia by smothering against mother's breast (1).

Suicide includes death by hanging (3) and gun (1).

Homicide includes death by gun (1); stabbing (1) and acute morphine toxicity (1).

Indeterminate includes death by gunshot wound of neck (1) and sudden death with co-sleeping (based upon autopsy, toxicology and a thorough investigation of the circumstances a cause of death cannot be determined).

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Created by:
Carmen D. Marrero-Perez
Office Administrator