

Kent County Medical Examiner



2012 Annual Report

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

2012 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.

I am pleased to announce that the Kent County Medical Examiner's Office has completed the annual renewal of accreditation by the National Association of Medical Examiners (NAME). This achievement is the result of years of work by all the Medical Examiner staff. We are one of two accredited offices in Michigan.

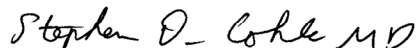
While many regard the Medical Examiner Program as being primarily concerned with the circumstances surrounding the end of life, Medical Examiners are equally concerned with the preservations of life. The chief, deputy chief, and administrative staff of the Medical Examiner's Office continue to spend 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 2012, there were 5,208 deaths in Kent County. The Medical Examiner's Office was contacted regarding 1,586 of these deaths of which 340 required autopsies.

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 2012 Annual Report.

Respectively submitted,



Stephen D. Cohle, MD
Chief Medical Examiner

Office of the Kent County Medical Examiner

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Medical Examiner Personnel

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 Chief Medical Examiner and
 Forensic Pathologist

Theodore E. Oostendorp
 Medical Examiner Investigator

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

Lindsey E. Pitsch
 Medical Examiner Investigator

John T. Connolly
 Medical Examiner Investigator

Richard Washburn
 Kent County Conveyance Specialist and
 Scene Investigator

Paul R. Davison, F-ABMDI
 Medical Examiner Investigator

Dolly M. Olthoff
 Medical Examiner Support Staff

Cynthia L. Debiak, RN
 Medical Examiner Investigator

Carmen M. Perez
 Office Administrator and
 Child Death Review Coordinator

Peter J. Noble
 Medical Examiner Investigator

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, 2011 and 2012

	2011		2012	
	Amount	Percentage	Amount	Percentage
Medical examiner (compensation)	\$ 182,739	14.1%	\$ 185,591	14.9%
Autopsies	919,845	70.7%	860,695	69.1%
Body transport	88,112	6.8%	90,394	7.3%
Support services	49,804	3.8%	48,988	3.9%
Administration	60,000	4.6%	60,000	4.8%
Total	\$1,300,500	100.0%	\$1,245,668	100.0%
Average cost per case investigated		\$1,235		\$1,169

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.

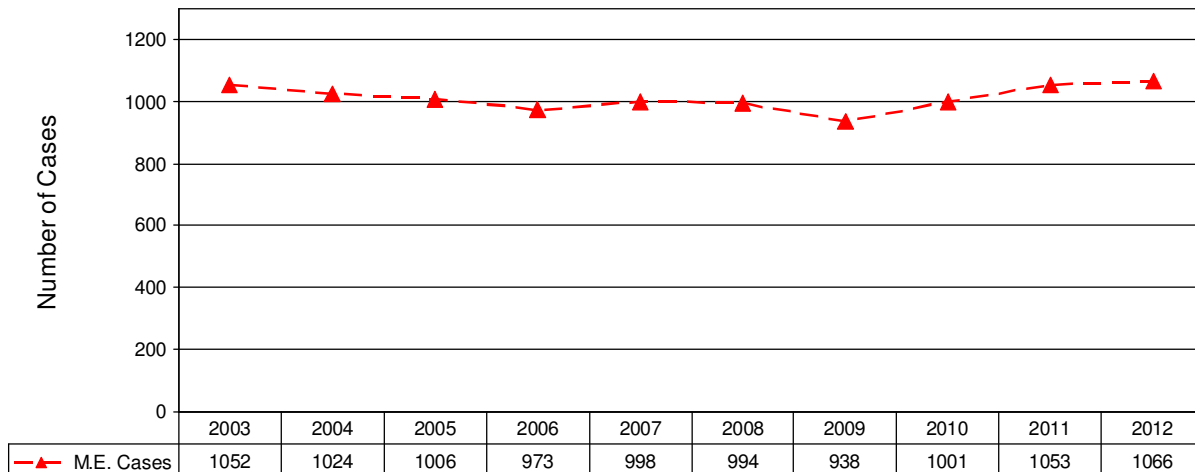
***The 48 hour requirement triggers an investigation when there has been no medical attendance of any kind (i.e., nursing care, etc.)

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 maybe significant injuries that mandate full autopsy.

2012 Medical Examiner Caseload

Figure 1: Accepted Kent County Medical Examiner Cases, 2003-2012

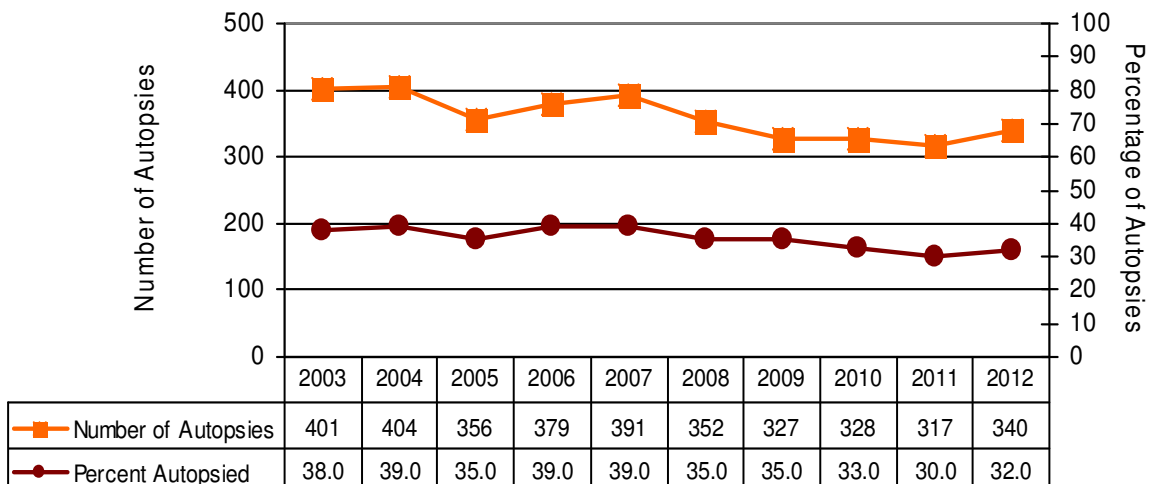


Total Referred Medical Examiner Cases in 2012: 1,586

Accepted	1,066	67.2%
Declined	520	32.8%

In 2012, there were 5,208 deaths in Kent County. The medical examiner was contacted regarding 1,586 of these deaths. 1,066 cases were accepted for investigation, while 520 were declined and did not fall within the requirements for investigation by the Medical Examiner's Office.

Figure 2: Medical Examiner Cases with Autopsy, 2003-2012



Of the 340 autopsies performed, 326 were charged to Kent County. The remaining 14 autopsies were performed at the request of another county.

2012 Medical Examiner Caseload

Figure 3: Referred Medical Examiner Caseload by Month, 2008-2012

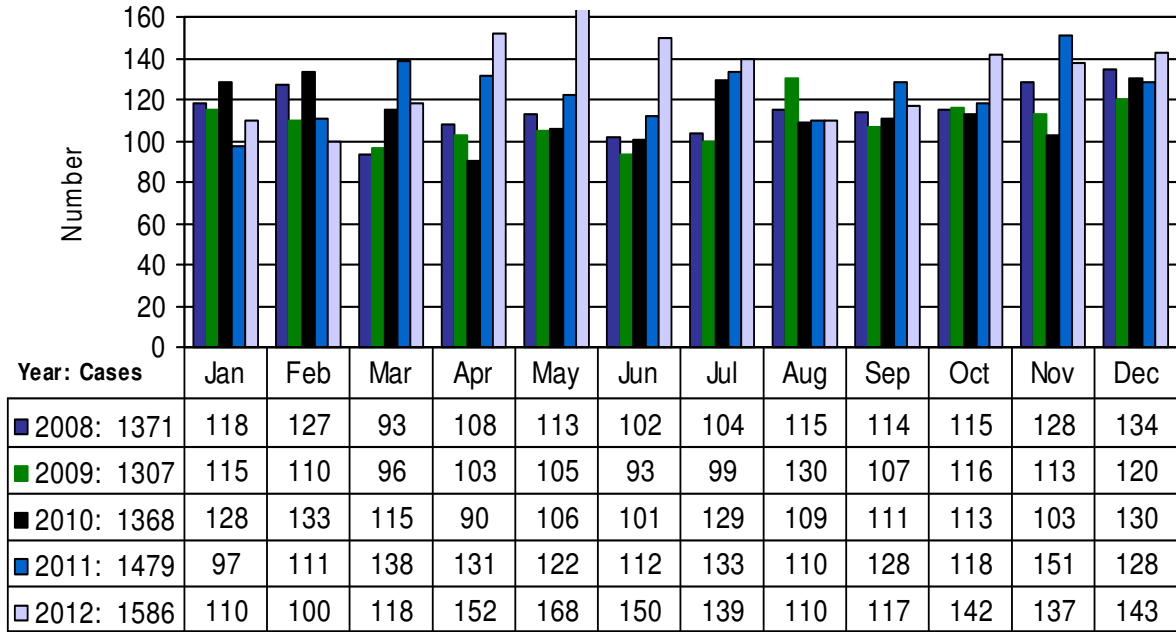
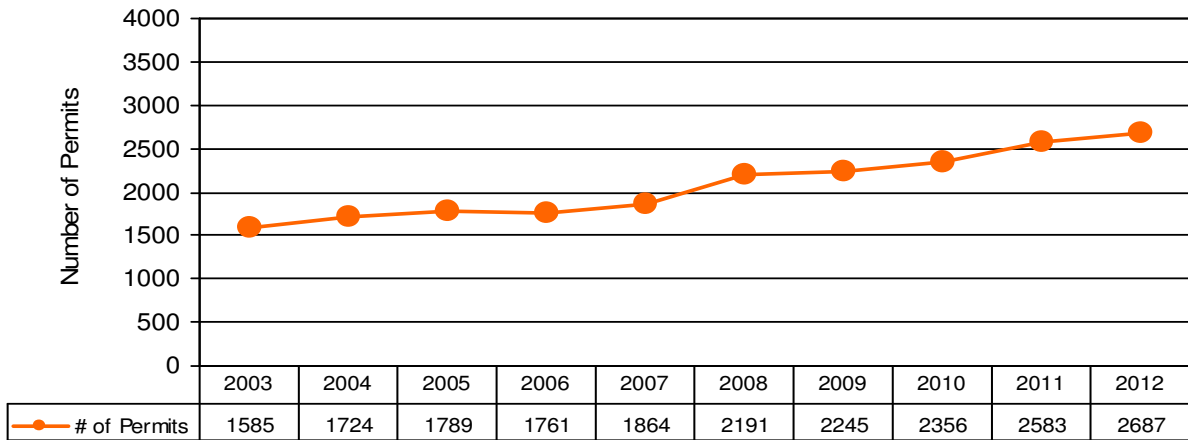


Figure 4: Cremation Permits Issued, 2003-2012



Demographics of Medical Examiner Cases

Figure 5: Medical Examiner Cases by Race/Ethnicity, 2008-2012

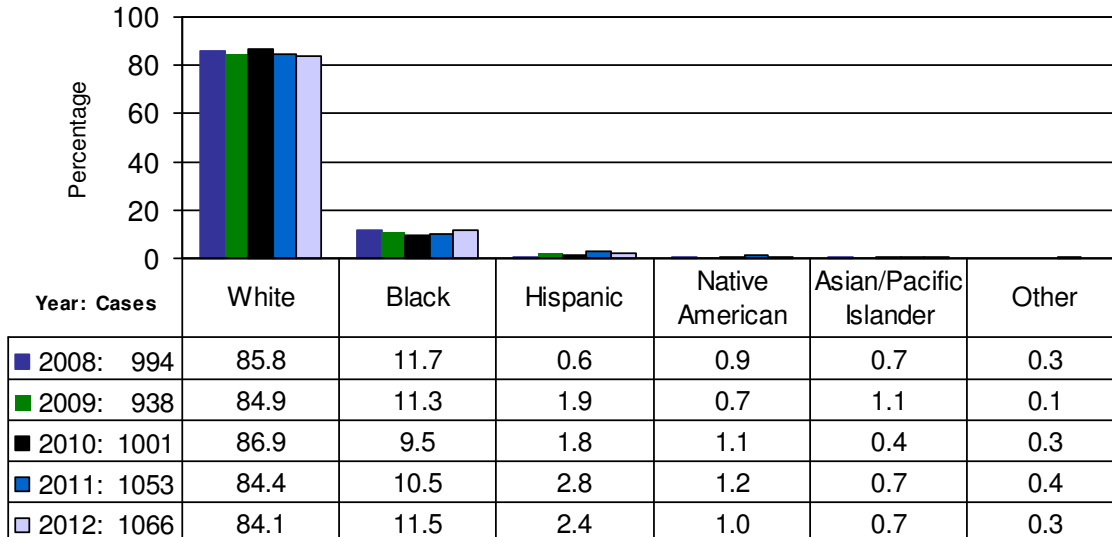


Figure 6: Medical Examiner Cases by Age at Death, 2008-2012

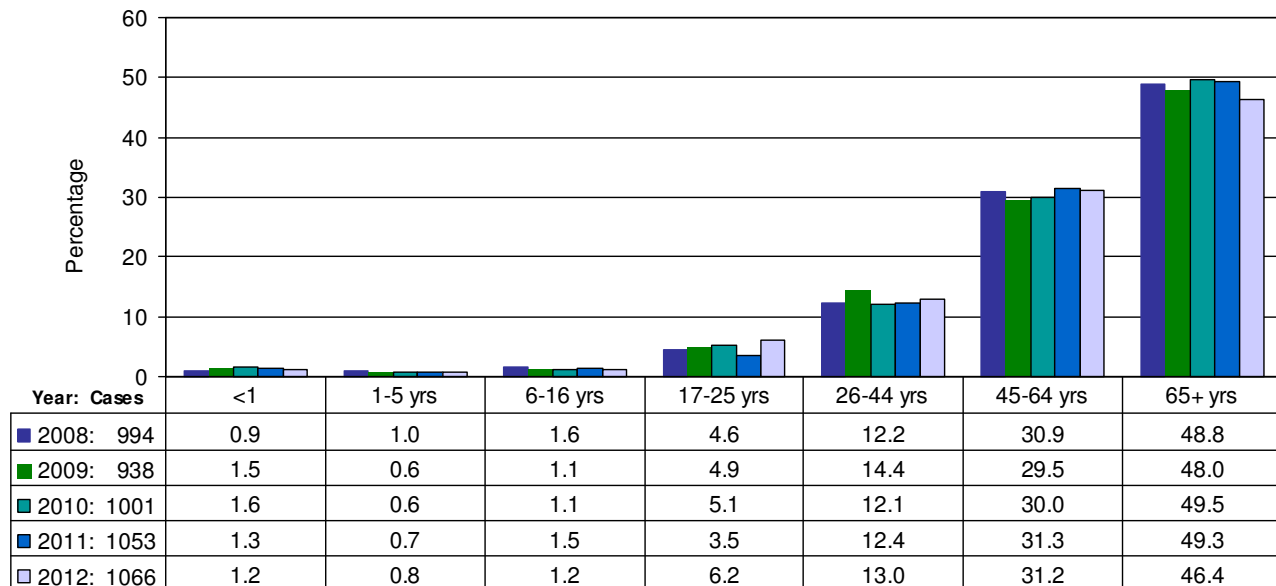


Table 1: Medical Examiner Cases by Gender, 2008-2012

	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Female	36.5%	37.7%	37.8%	39.5%	35.8% (382 cases)
Male	63.5%	62.3%	61.9%	60.5%	64.2% (684 cases)
Unknown			0.3% (bones)		

Manner of Death

Figure 7: Medical Examiner Cases by Manner of Death, 2003-2012

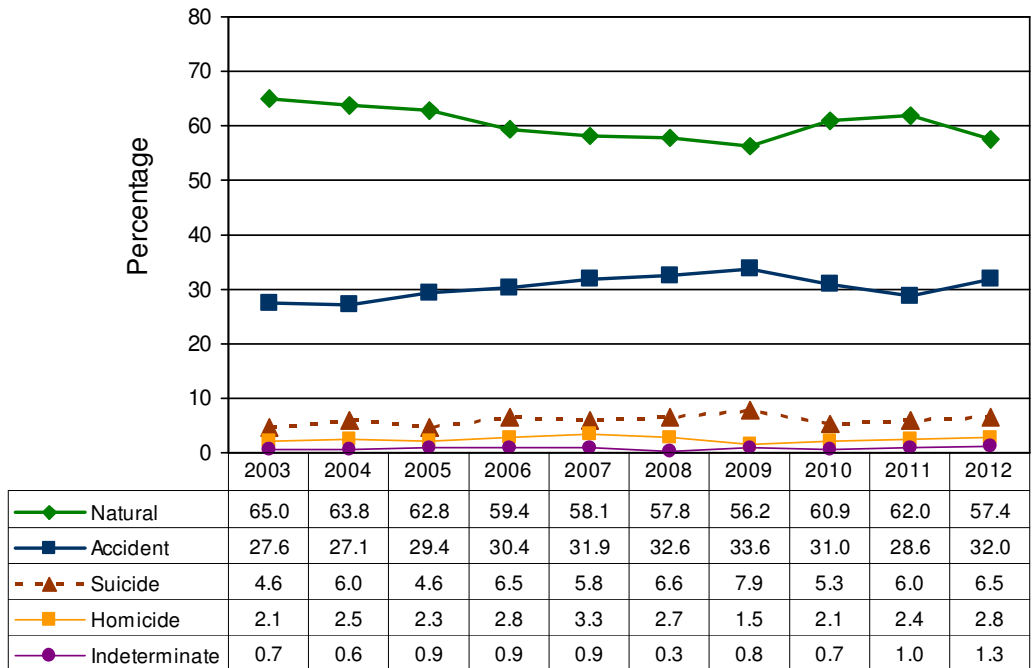
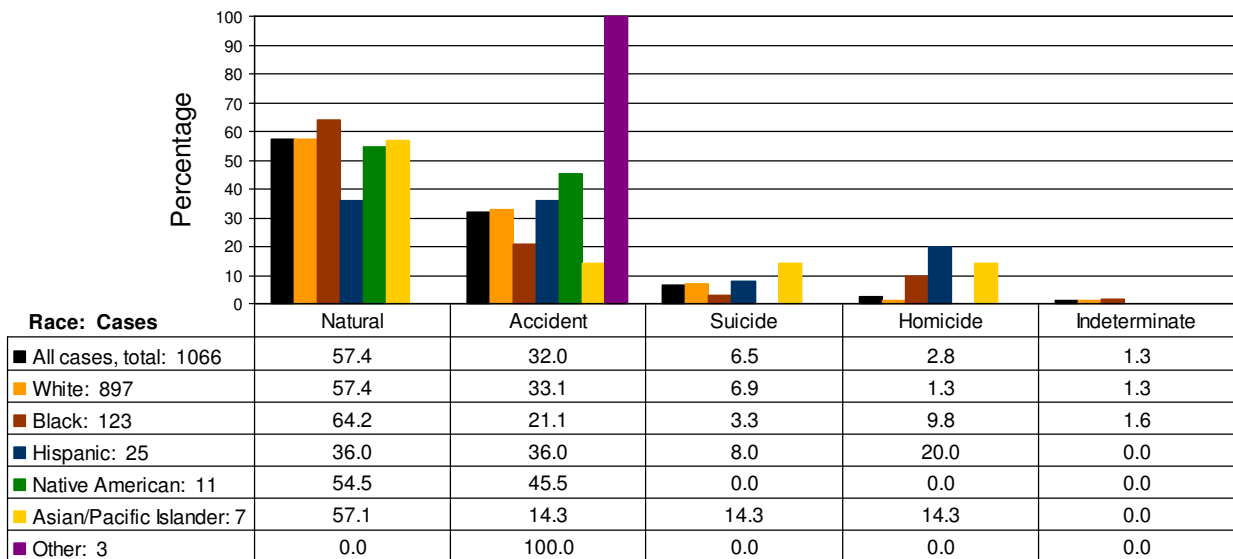


Figure 8: Manner of Death by Race/Ethnicity, 2012



Manner of Death

Figure 9: Kent County Homicides by Gender, 2008-2012

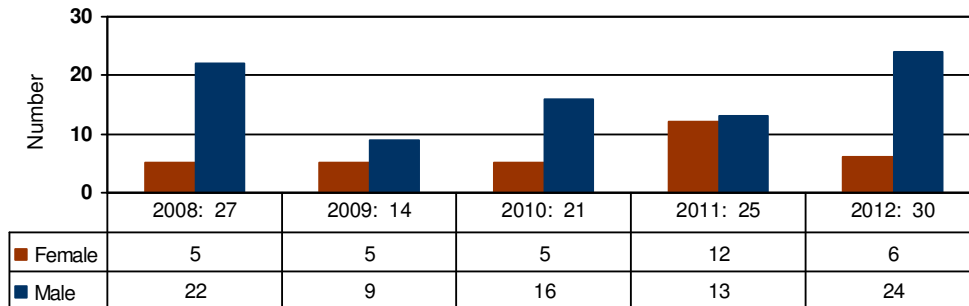


Figure 10: Kent County Homicides, Three-Year Moving Averages, 2000-2012

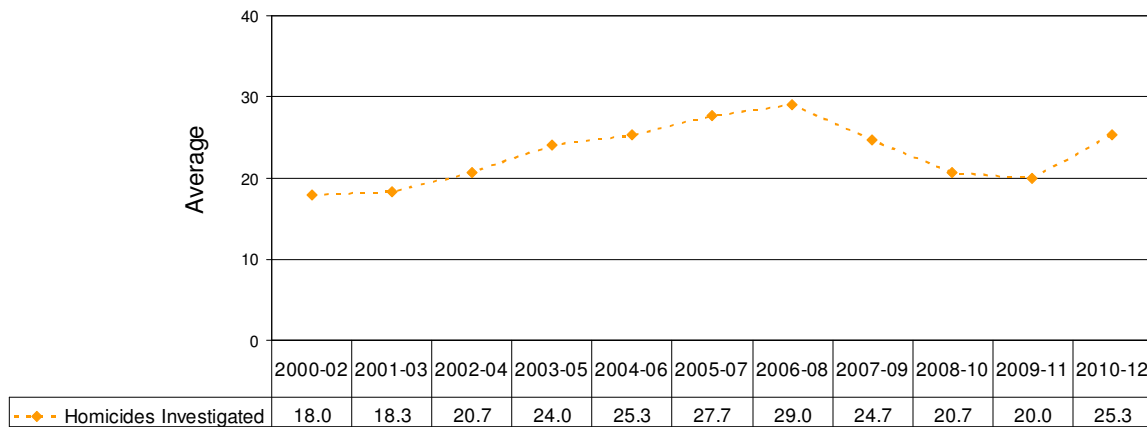


Figure 11: Homicides by Race, 2008-2012

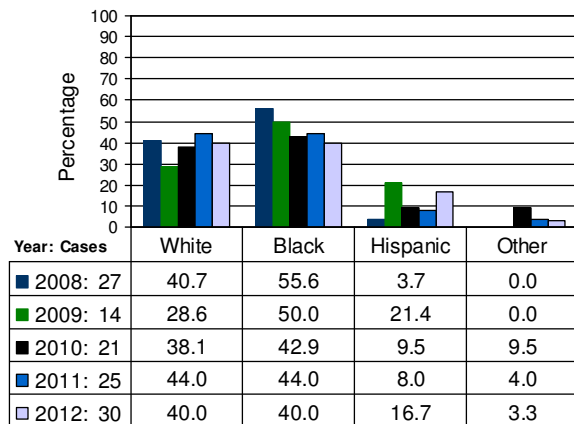
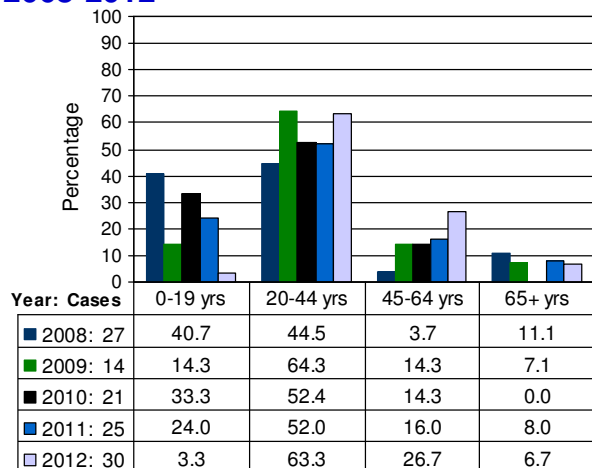
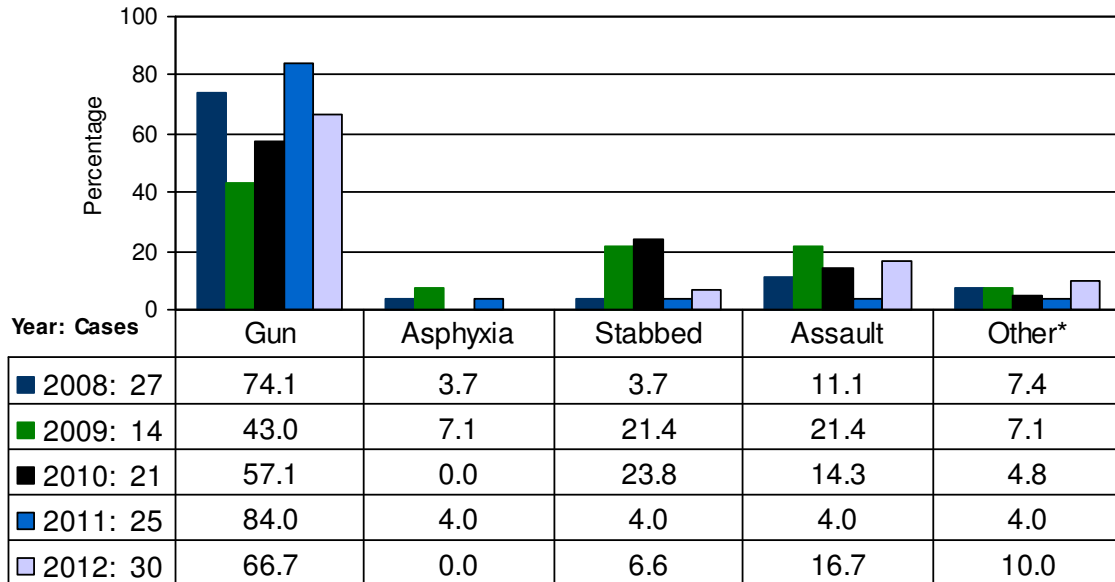


Figure 12: Homicides by Age, 2008-2012



Manner of Death

Figure 13: Homicide Cases by Method Used, 2008-2012



*For 2012, there was 1 homicide where the cause of death was due to being run over by a vehicle and 2 involving fire.

Table 2: Gun Homicides by Age, 2008-2012

Year: Cases	AGE			
	0-19 yrs	20-29 yrs	30-39 yrs	40+ yrs
2008: 20	8	6	3	3
2009: 6	1	3	2	0
2010: 12	5	1	2	4
2011: 21	5	9	3	4
2012: 20	1	11	3	5

Table 3: Suicide Cases by Race, 2008-2012

	<u>White</u>	<u>Black</u>	<u>Hispanic</u>	<u>Native American</u>	<u>Asian</u>
2008: 66	89.4%	7.6%	1.5%	1.5%	0.0%
2009: 74	93.2%	5.4%	1.4%	0.0%	0.0%
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%

Manner of Death

Figure 14: Suicide Cases by Age, 2008-2012

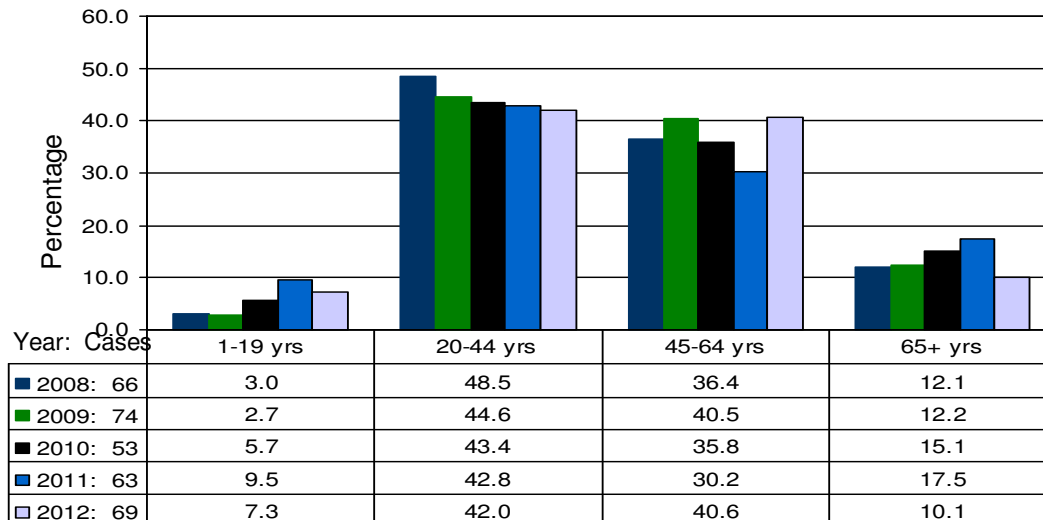
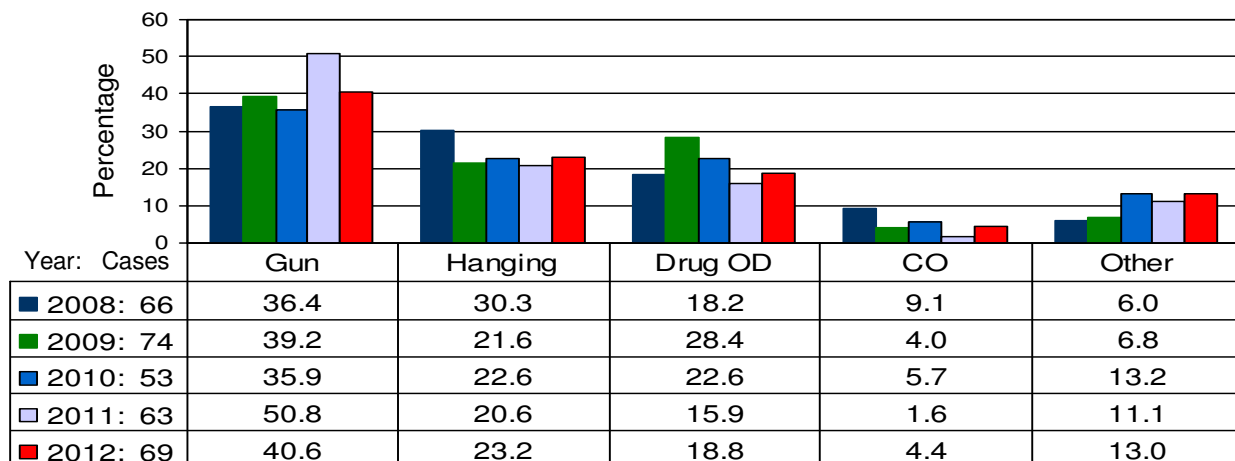


Figure 15: Suicide Cases by Method Used, 2008-2012

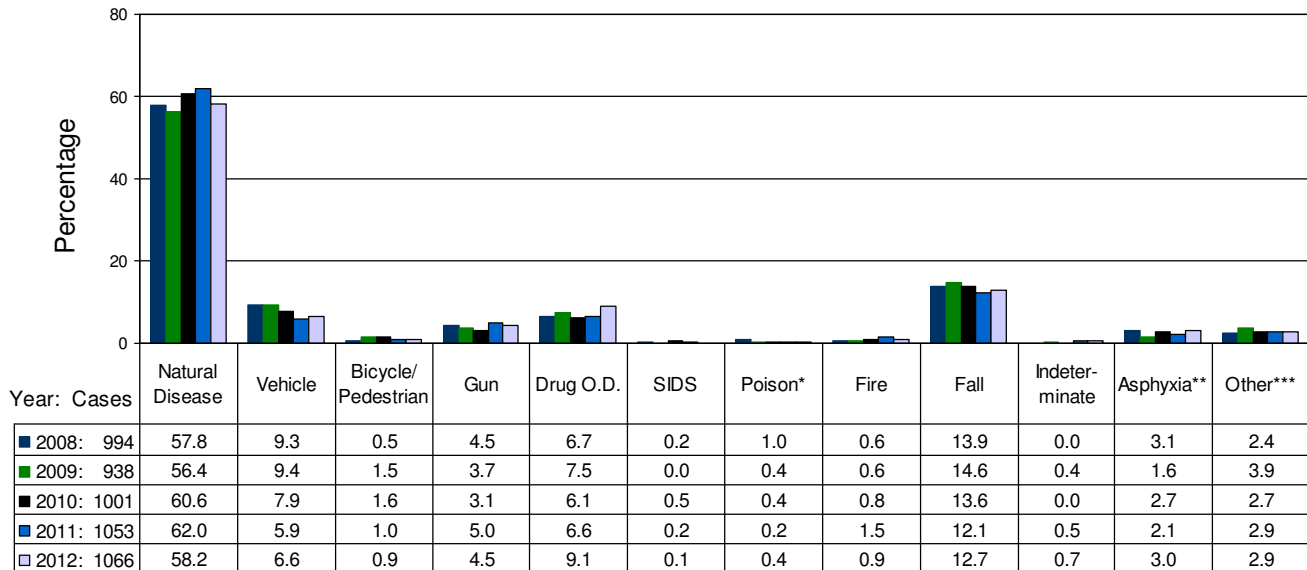


In 2012, CO is carbon monoxide poisoning, while Other consists of asphyxia (3), exsanguination (1), motor vehicle (1), drowning (1), falls (2) and fire (1).

Of the 69 suicide deaths for 2012, females accounted for 16 (23.2%) deaths, while males accounted for 53 (76.8%).

Cause of Death

Figure 16: Medical Examiner Cases by Cause of Death, 2008-2012



*Poison includes carbon monoxide poisoning (3; 75.0%), ingestion of hydrogen peroxide (1; 25.0%).

**Asphyxia includes deaths from choking on food (3; 9.4%), hanging (16; 50.0%), ligature about neck (1; 3.1%), suffocation, (3; 9.4%), positional asphyxia (3; 9.4%), crushed by object (1; 3.1%) and suffocation (co-sleeping) (5; 15.6%).

***Other is comprised of deaths from hyperthermia (1; 3.2%), electrocution (1; 3.2%), exsanguination (2; 6.5%), stabbing (2; 6.5%), drowning (9; 29.0%), hypoxic encephalopathy d/t ligature compression of neck (1; 3.2%), assault-physical abuse and/or struck by object (6; 19.4%), fractured neck d/t swimming accident (2; 6.5%), struck/crushed by object (2; 6.5%), anoxic encephalopathy d/t choking on food/possible suffocation (3; 9.6%), hip dislocation (1; 3.2%), and head injury-unknown origin (1; 3.2%).

Figure 17: Drug Deaths by Age, 2008-2012

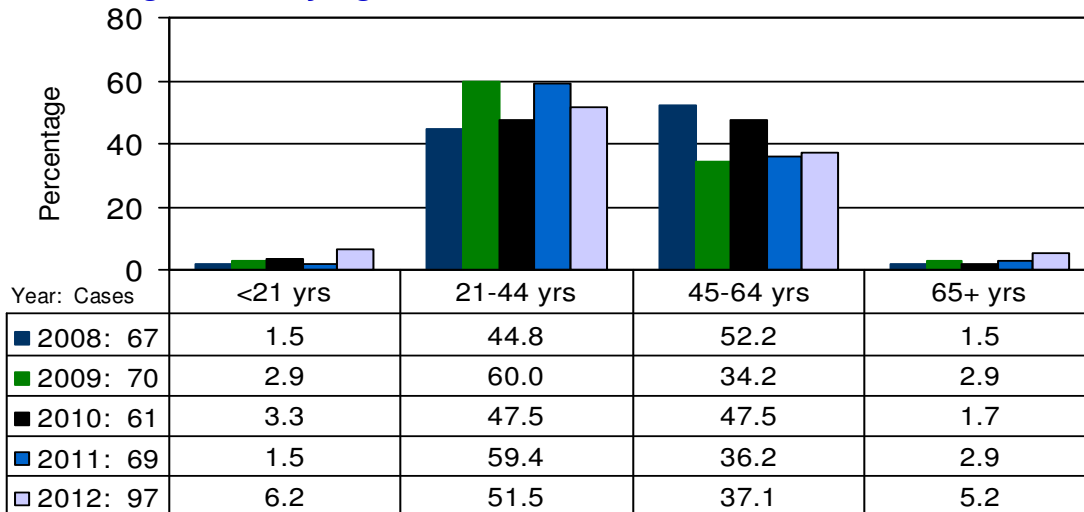


Table 4: Drug Deaths by Gender, 2012

	Female (30)	Male (67)
Accident	23	57
Suicide	5	8
Indeterminate	2	1
Natural	0	1*

*Acute Ethanol Abuse

Cause of Death

Figure 18: Drug Deaths by Drug of First Mention, 2008-2012

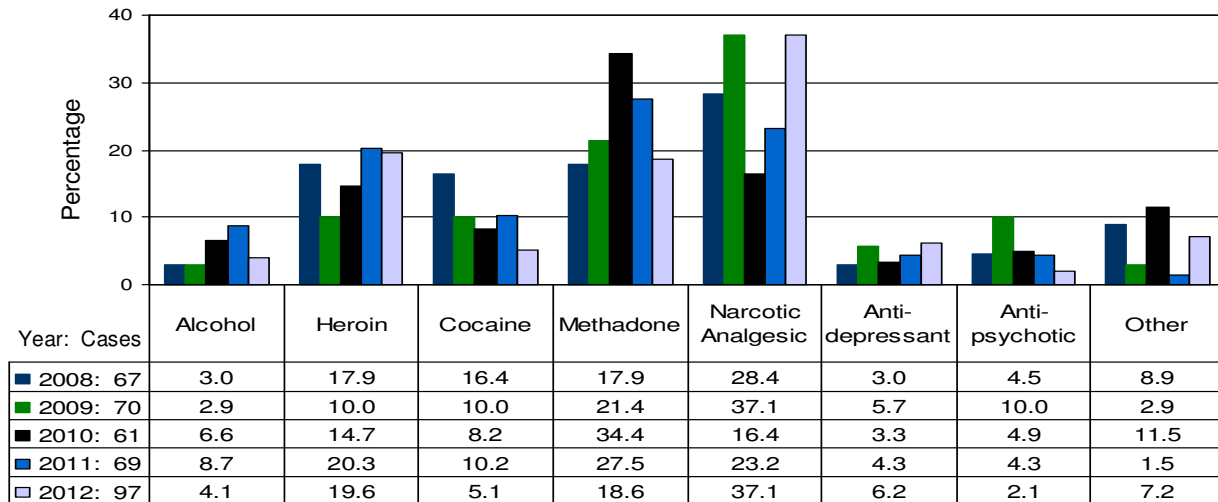


Figure 19: Vehicular Deaths by Age, 2008-2012

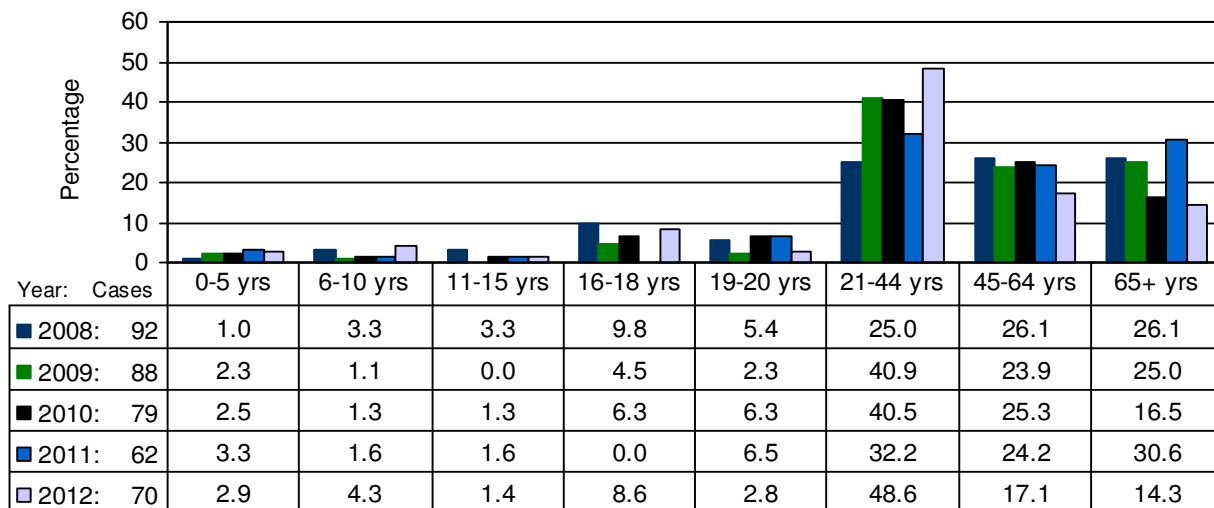


Table 5: Vehicular Deaths by Gender, 2008-2012

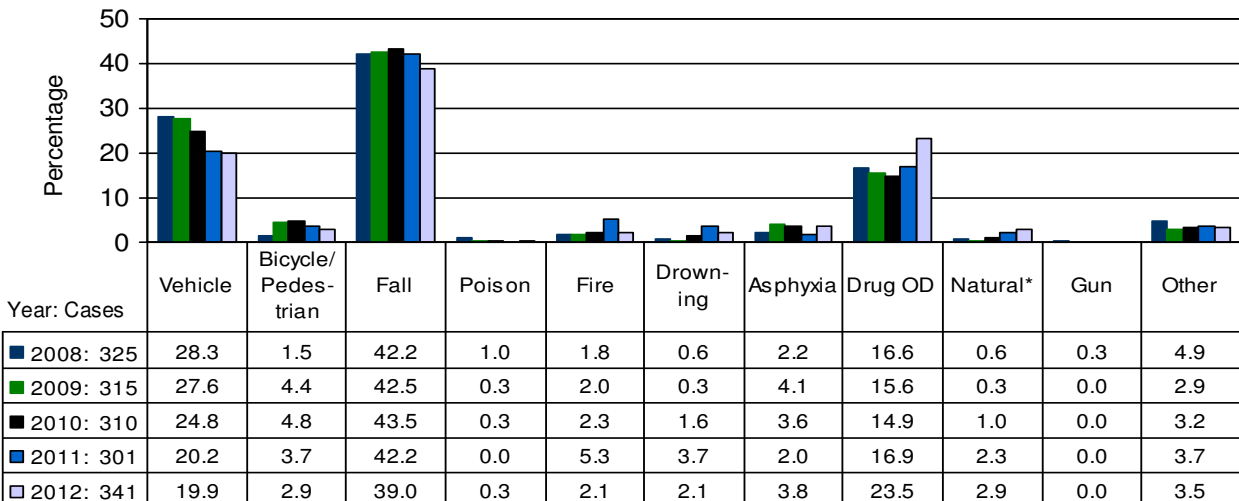
	Female	Male
2008: 92	29.3% (27)	70.7% (65)
2009: 88	43.2% (38)	56.8% (50)
2010: 79	32.9% (26)	67.1% (53)
2011: 62	32.3% (20)	67.7% (42)
2012: 70	30.0% (21)	70.0% (49)

Table 6: Bicycle/Pedestrian Deaths by Age, 2008-2012

	<21 yrs	21-44 yrs	45-64 yrs	65+ yrs
2008: 5	1	0	2	2
2009: 14	4	5	5	0
2010: 16	3	6	2	5
2011: 11	2	3	5	1
2012: 10	6	2	1	1

Cause of Death

Figure 20: Accidental Deaths by Cause, 2008-2012



*A natural cause of death can have a contributing factor that determines the death to be accidental. There were 10 deaths that fell into this category in 2012 from falls (6), cocaine toxicity (1), mixed drug toxicity (1), cutaneous burn injury of feet (1), and motor vehicle accident (1).

Figure 21: Accidental Deaths by Age, 2008-2012

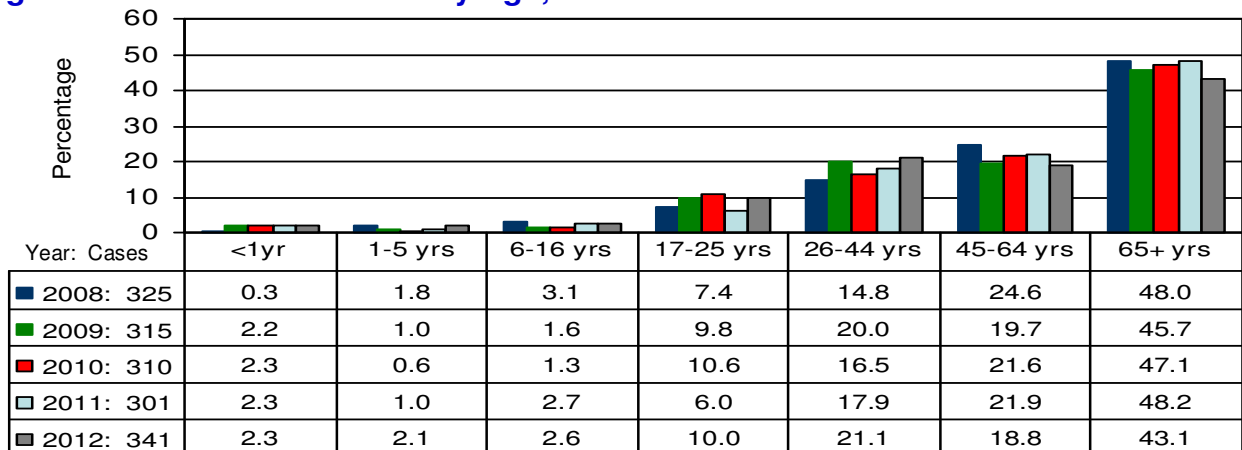
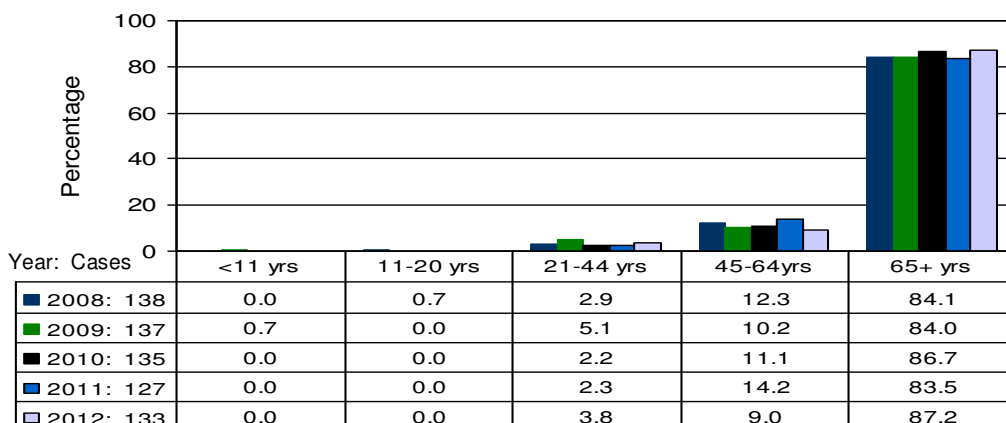


Figure 22: Deaths Resulting from Falls by Age, 2008-2012



MISCELLANEOUS

Unclaimed Bodies 2008-2012

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 2012, the office processed 30 unclaimed bodies.

	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Medical Examiner Cases	14	15	9	12	10
Not Medical Examiner Cases	15	6	15	14	20
<hr/>					
Total Cases	29	21	24	26	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 2008-2012

The Child Death Review Team reviews the deaths of those in Kent County who are 18 and younger. In 2012, there were 33 child death cases reviewed. Of these cases, 4 were deaths from 2011 and 29 were deaths from 2012.

	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Natural	7	3	2	5	3
SIDS	2	1	4	1	1
Vehicular Accident	11	2	4	3	7
Accidental	7	8	7	8	14
Suicide	1	2	3	1	5
Homicides	5	3	6	5	1
Indeterminate	1	2	0	4	2
<hr/>					
Total Cases	34	21	26	27	33

Natural includes deaths from acute bronchopneumonia superimposed upon extensive bronchiolitis (1), medical complications of schizencephaly (1), and diabetes ketoacidosis due to diabetes mellitus (1).
Accidental includes deaths from drowning (3), suffocation, infant face down in bedding (1), co-sleeping (5), adult fell on child safety gate on top of child (1), heroin toxicity (1), acute morphine toxicity (1), acute cocaine toxicity (1), and asphyxia by choking on food – grape (1).
Suicide includes death by hanging (5).
Homicide includes death by blunt force trauma to abdomen (1).
Indeterminate includes death by the following categories: Found body – based upon autopsy, toxicology and a thorough investigation of the circumstances a cause of death cannot be determined (1), and Sudden death – based upon autopsy, toxicology and a thorough investigation of the circumstances a cause of death cannot be determined (1).

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