

Kent County Medical Examiner



2008 Annual Report

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

2008 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 has always taken very seriously. Through rigorous investigation of the scene of death, the medical and personal history of the deceased, as well as the physical pathology revealed through autopsy, the Deputy Chief Medical Examiner and Medical Examiner Investigators are able to find answers where before there were only questions. Our investigations yield valuable information -- data that can inform the development of public policy, evidence that can assist in the prosecution of a crime, and insight that can bring peace of mind to families of the deceased.

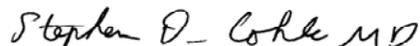
While many regard the Medical Examiner Program as being primarily concerned with the circumstances surrounding the end of life, Medical Examiners are equally concerned with the preservations of life. The Medical Examiner personnel continues to spend many hours with the Child Death Review Team to examine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

In 2008, there were 5,171 deaths in Kent County. The Medical Examiner's Office was contacted regarding 1,371 of these deaths of which 352 required autopsies.

However, while the high standards to which we adhere provide the foundation for quality investigative practices, it is the practitioners – the Deputy Chief Medical Examiner and Medical Examiner Investigators - who ultimately yield results. 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 trainings 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 2008 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

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

Peter J. Noble
 Medical Examiner Investigator

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

Theodore E. Oostendorp
 Medical Examiner Investigator

Jason S. Chatman
 Medical Examiner Investigator

Richard Washburn
 Kent County Conveyance Specialist and
 Scene Investigator

John T. Connolly
 Medical Examiner Investigator

Dolly M. Olthoff
 Medical Examiner Support Staff

Paul R. Davison, F-ABMDI
 Medical Examiner Investigator

Carmen M. Perez
 Medical Examiner Support Staff and
 Child Death Review Coordinator

Cynthia L. Debiak, RN
 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, 2007 and 2008

	2007		2008	
	<u>Amount</u>	<u>Percentage</u>	<u>Amount</u>	<u>Percentage</u>
Medical examiner (compensation)	\$182,592	14.3%	\$180,000	15.6%
Autopsies	880,579	69.1%	772,062	66.8%
Cadaver transportation	84,448	6.6%	85,624	7.4%
Support services	42,325	3.3%	58,296	5.0%
Administration	85,000	6.7%	60,000	5.2%
Total	\$1,274,944	100.0%	\$1,155,982	100.0%
Average cost per case investigated		\$1,277	\$1,163	

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.

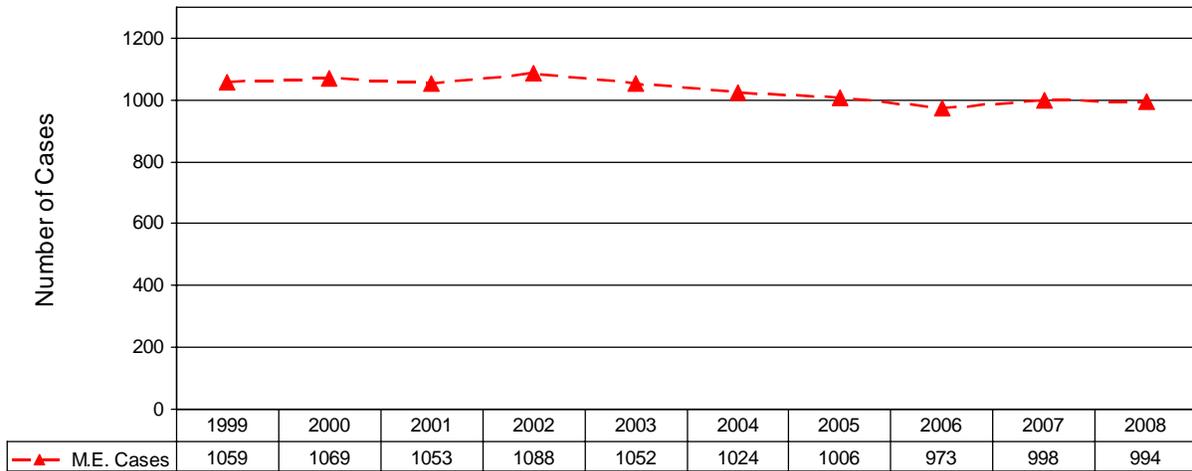
*** The 48 hour requirement triggers an investigation when there has been no medical attendance of any kind (i.e., nursing care, etc.)

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.

2008 Medical Examiner Caseload

Figure 1: Accepted Kent County Medical Examiner Cases, 1999-2008

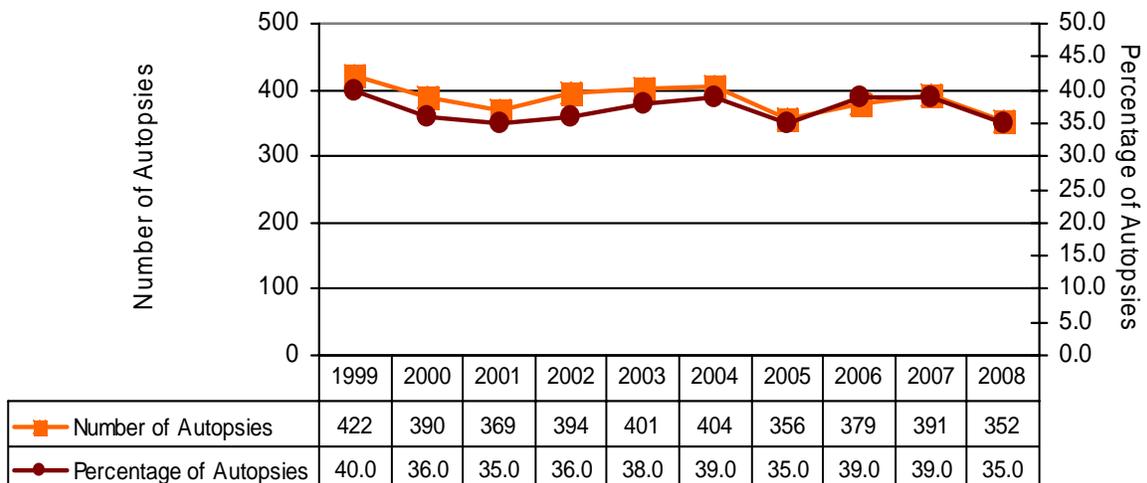


Total Referred Medical Examiner Cases in 2008: 1,371

Accepted	994	72.5%
Declined	377	27.5%

In 2008, there were 5,171 deaths in Kent County. The medical examiner was contacted regarding 1,371 of these deaths. Only 994 cases were accepted for investigation, while 377 were declined and did not fall within the requirements for investigation by the Medical Examiner's Office.

Figure 2: Medical Examiner Cases with Autopsy, 1999-2008



Of the 352 autopsies performed, 328 were charged to Kent County. The remaining 24 autopsies were performed either by a request from the family or another county.

2008 Medical Examiner Caseload

Figure 3: Referred Medical Examiner Caseload by Month, 2004-2008

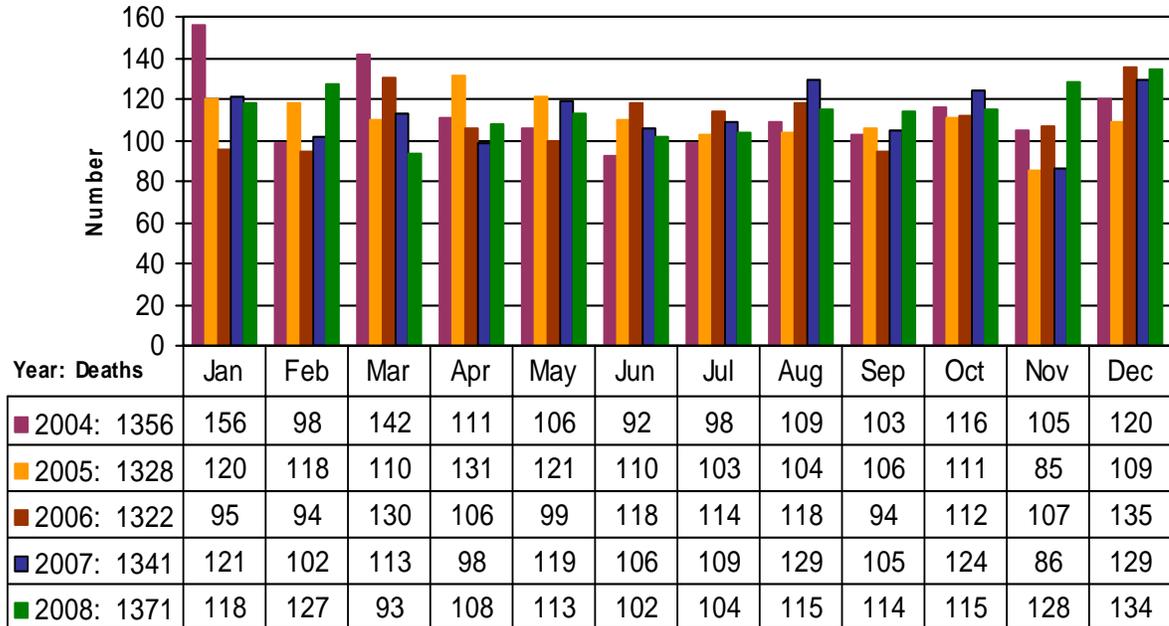
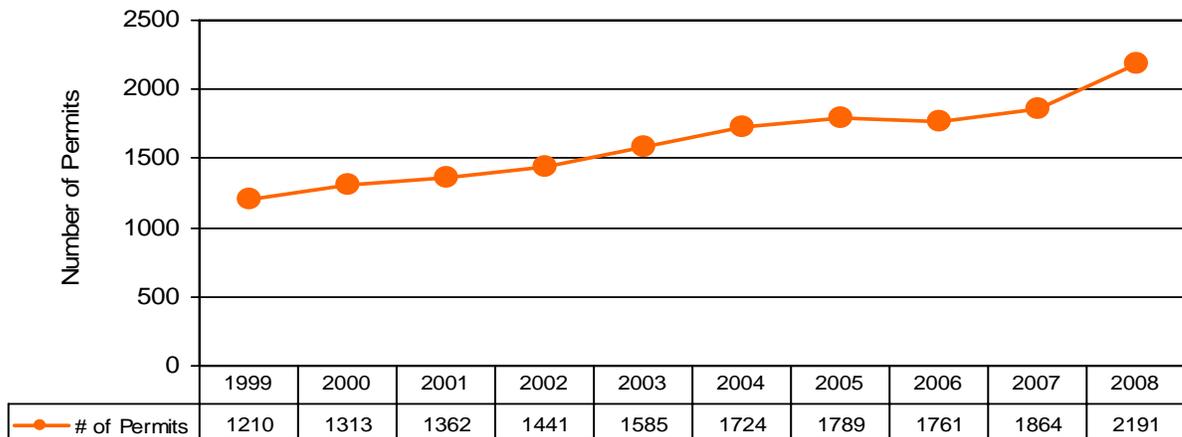


Figure 4: Cremation Permits Issued, 1999-2008



Demographics of Medical Examiner Cases

Figure 5: Medical Examiner Cases by Race/Ethnicity, 2004-2008

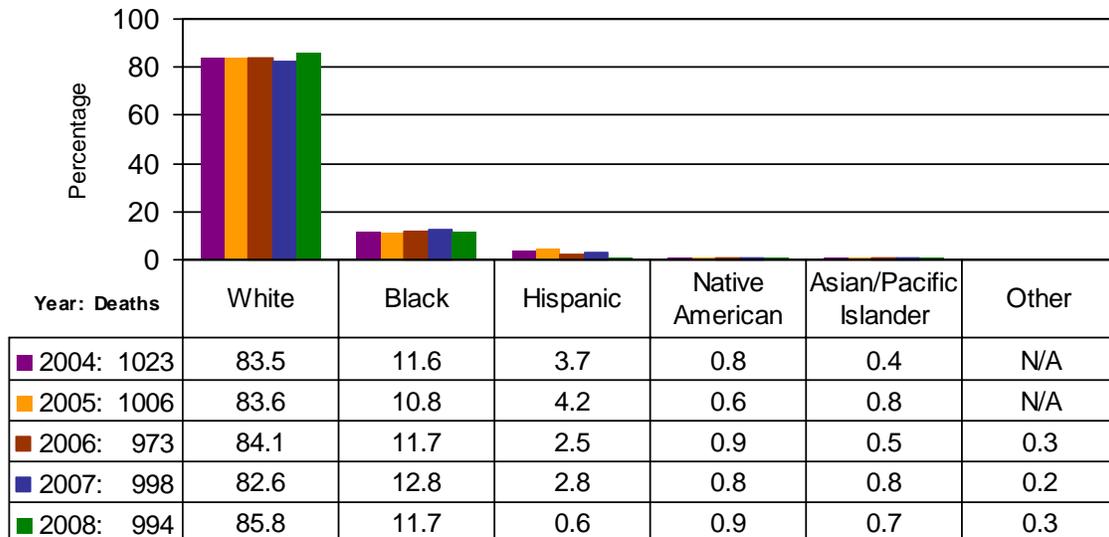


Figure 6: Medical Examiner Cases by Age at Death, 2004-2008

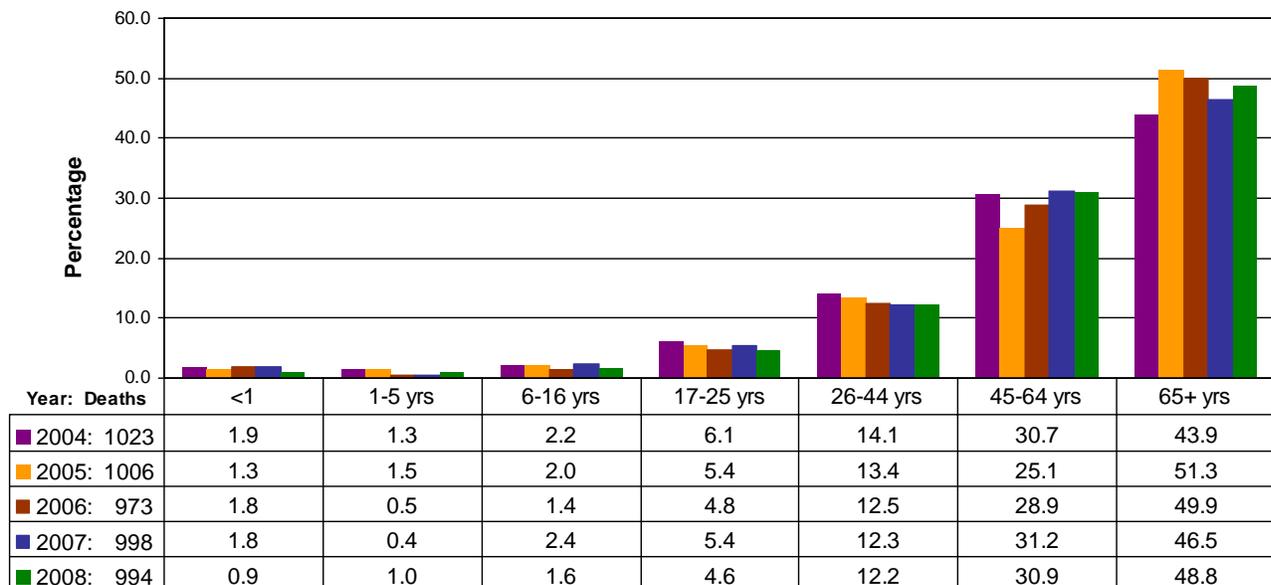


Table 1: Medical Examiner Cases by Gender, 2004-2008

	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>
Female	38.5%	39.7%	39.5%	38.6%	36.5% (363 cases)
Male	61.5%	60.5%	60.5%	61.3%	63.5% (631 cases)
Unknown (fetus)				0.1%	

Manner of Death

Figure 7: Medical Examiner Cases by Manner of Death, 1999-2008

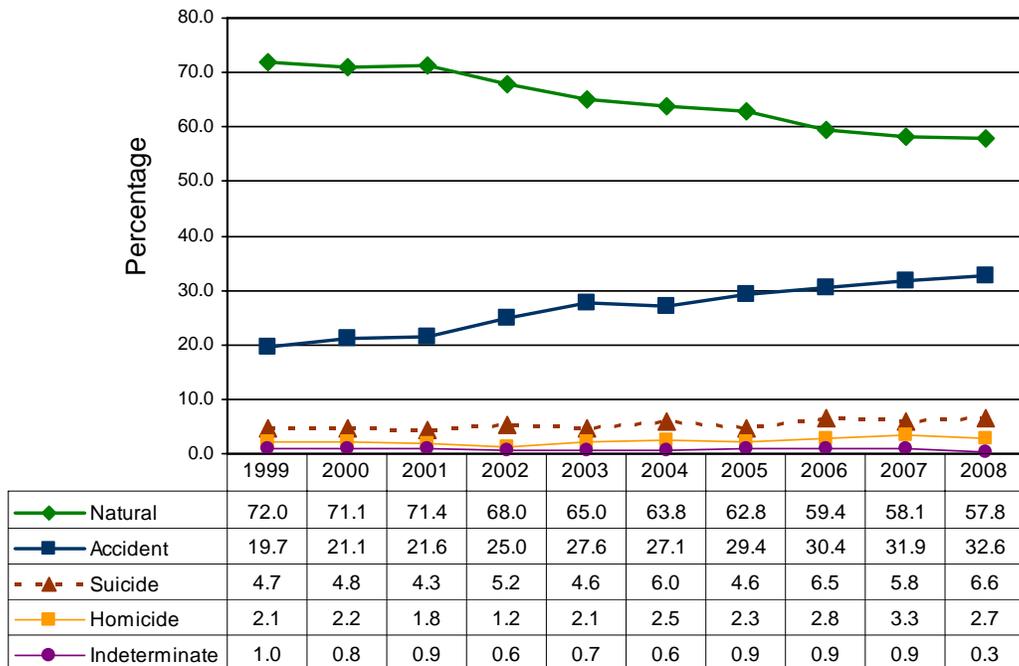
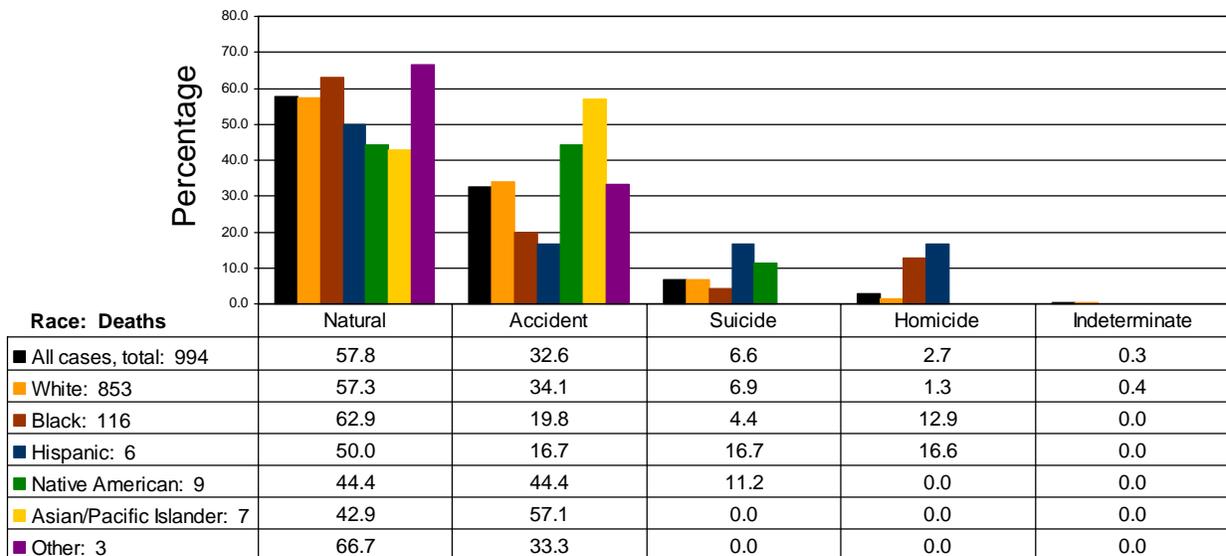


Figure 8: Manner of Death by Race/Ethnicity, 2008



Manner of Death

Figure 9: Kent County Homicides by Gender, 2004-2008

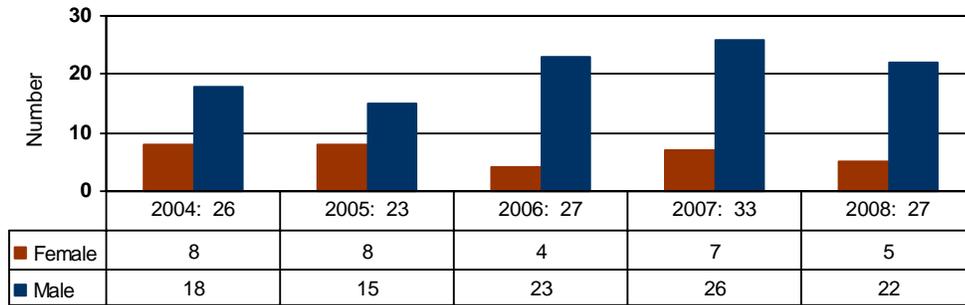


Figure 10: Kent County Homicides, Three-Year Moving Averages, 1996-2008

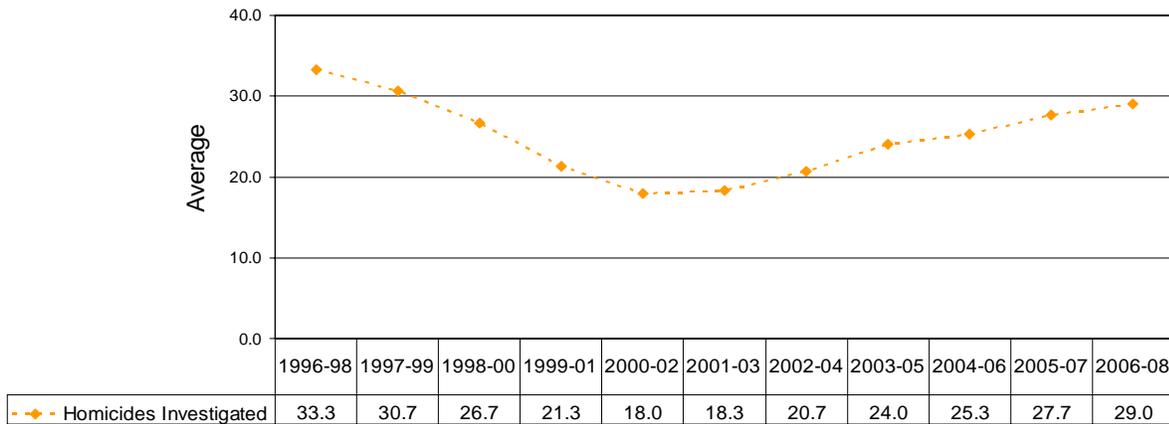


Figure 11: Homicides by Race, 2004-2008

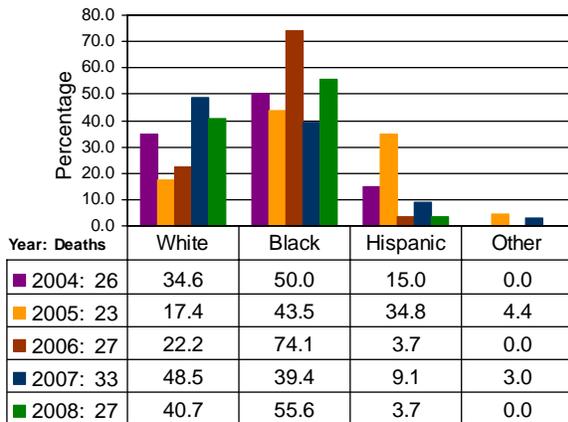
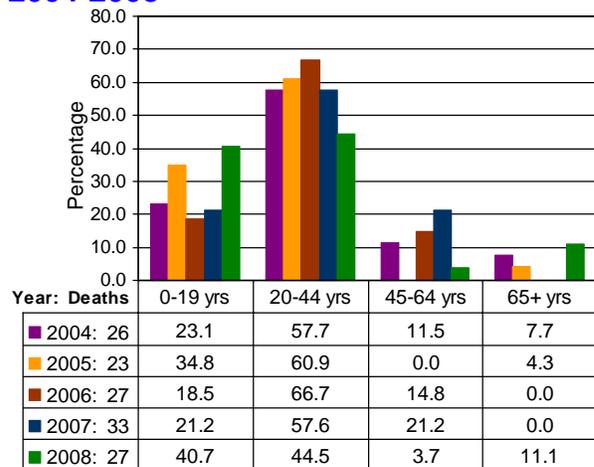
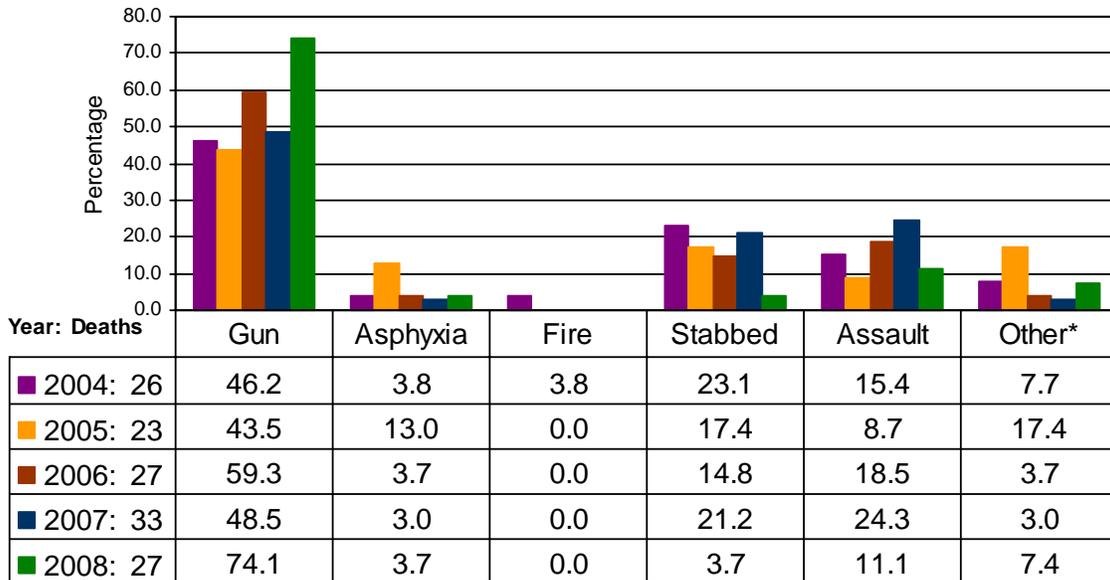


Figure 12: Homicides by Age, 2004-2008



Manner of Death

Figure 13: Homicide Cases by Method Used, 2004-2008



*For 2008, there was 1 homicide where the cause of death was due to shaken baby and 1 due to craniocerebral trauma.

Table 2: Gun Homicides by Age, 2004-2008

Year: Deaths	AGE			
	0-19 yrs	20-29 yrs	30-39 yrs	40+ yrs
2004: 12	2	5	3	2
2005: 10	2	5	3	0
2006: 16	3	7	2	4
2007: 16	4	8	2	2
2008: 20	8	6	3	3

Table 3: Suicide Cases by Race, 2004-2008

	<u>White</u>	<u>Black</u>	<u>Hispanic</u>	<u>Native American</u>	<u>Asian</u>
2004: 61	83.6%	3.3%	8.2%	0.0%	4.9%
2005: 46	82.6%	6.5%	8.7%	0.0%	1.0%
2006: 63	92.1%	4.8%	3.2%	0.0%	0.0%
2007: 58	89.7%	5.2%	1.7%	1.7%	1.7%
2008: 66	89.4%	7.6%	1.5%	1.5%	0.0%

Manner of Death

Figure 14: Suicide Cases by Age, 2004-2008

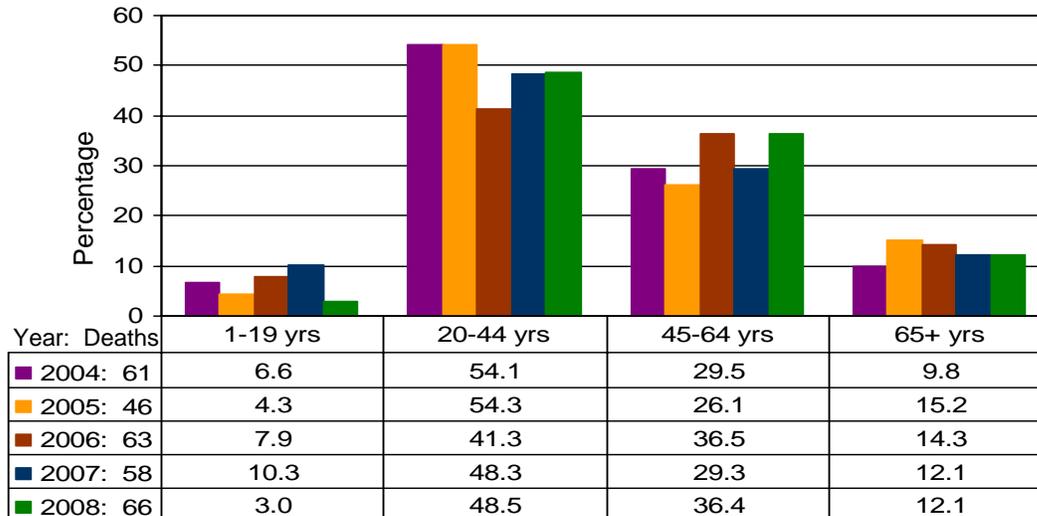
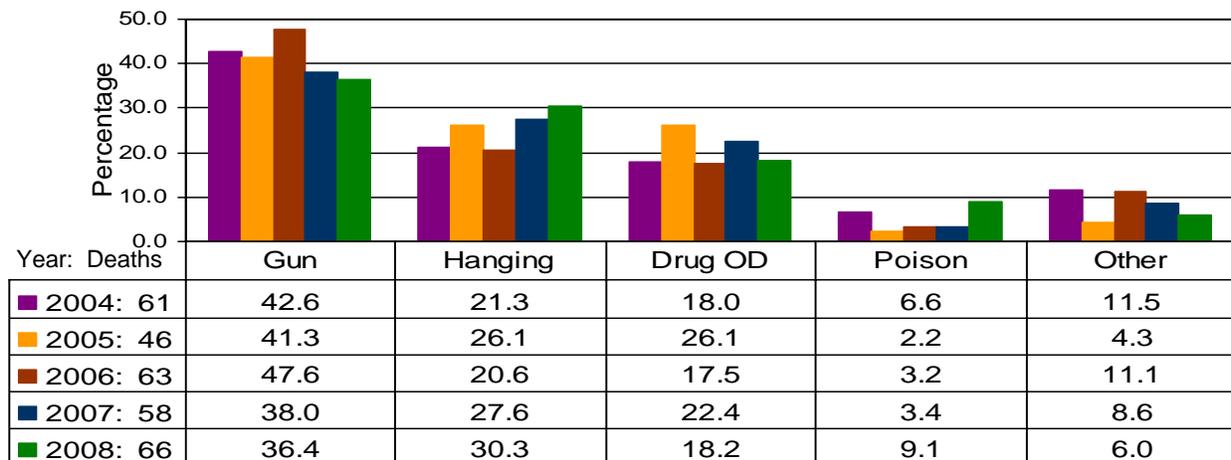


Figure 15: Suicide Cases by Method Used, 2004-2008

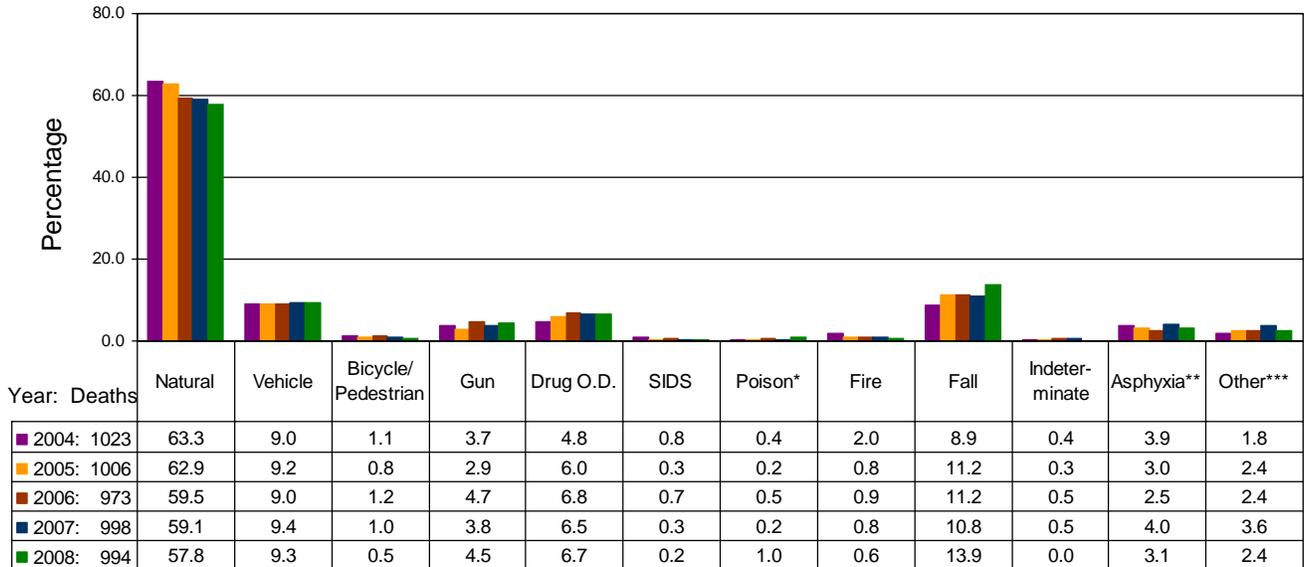


In 2008, Poison is carbon monoxide poisoning, while Other consists of stabbing (2; 50%), drowning (1; 25%) and fall (1; 25%).

Of the 66 suicide deaths for 2008, females accounted for 12 (18.2%) deaths, while males accounted for 54 (81.8%).

Cause of Death

Figure 16: Medical Examiner Cases by Cause of Death, 2004-2008



*Poison includes carbon monoxide poisoning (8; 80.0%) and other chemical poisoning (2; 20.0%).

**Asphyxia includes deaths from choking on food (3; 9.7%), drowning (3; 9.7%), hanging (20; 64.5%), strangulation (1; 3.2%), smothering (1; 3.2%) and trapped under object (3; 9.7%).

***Other is comprised of deaths from assault (3; 12.5%), stabbing (3; 12.5%), hypothermia (2; 8.3%), struck by object (3; 12.5%), medical procedure (3; 12.5%), hypoxic encephalopathy d/t choking on food and entanglement in swing set (2; 8.3%), electrocution (2; 8.3%), physical abuse (2; 8.3%) and medical complications (4; 16.8%).

Figure 17: Drug Deaths by Age, 2004-2008

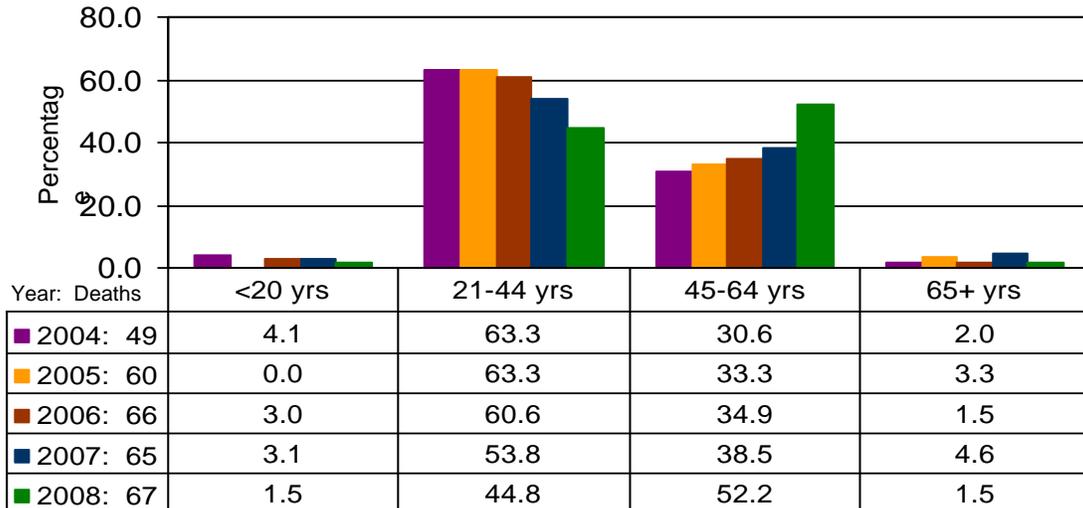


Table 4: Drug Deaths by Gender, 2008

	Female (22)	Male (45)
Accident	16	38
Suicide	5	7
Indeterminate	1	0

Cause of Death

Figure 18: Drug Deaths by Drug of First Mention, 2004-2008

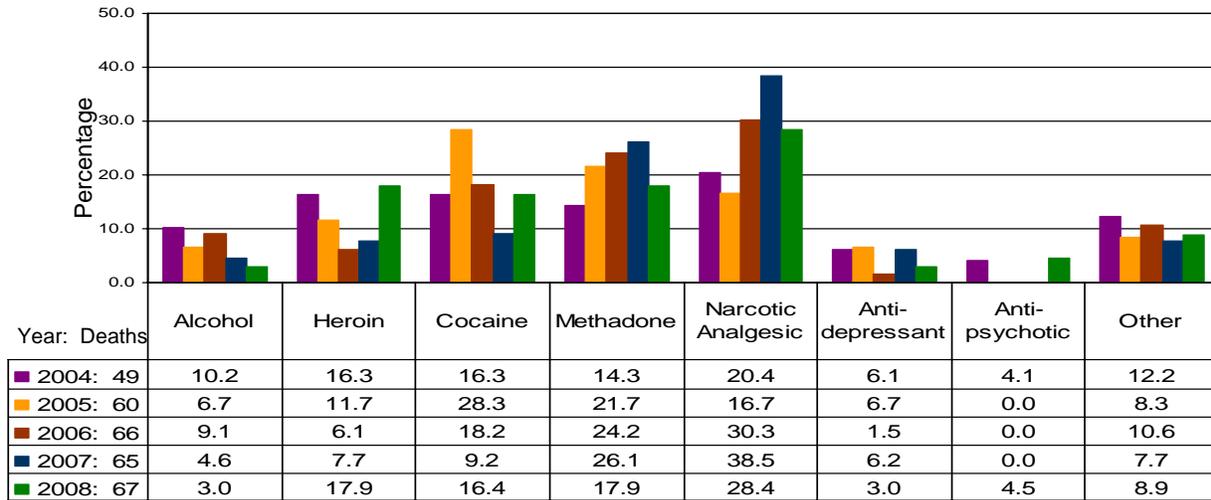


Figure 19: Vehicular Deaths by Age, 2004-2008

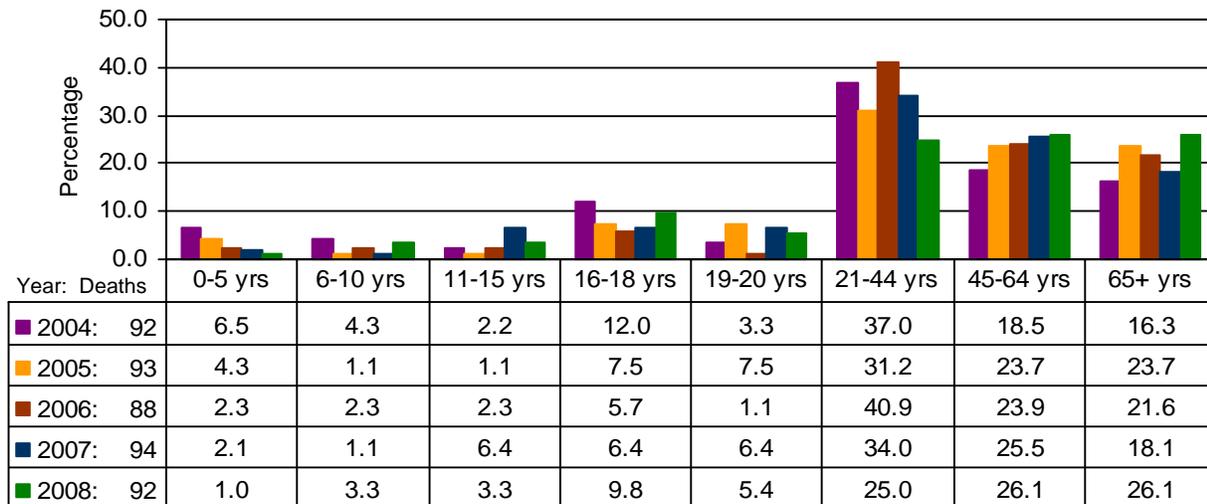


Table 5: Vehicular Deaths by Gender, 2004-2008

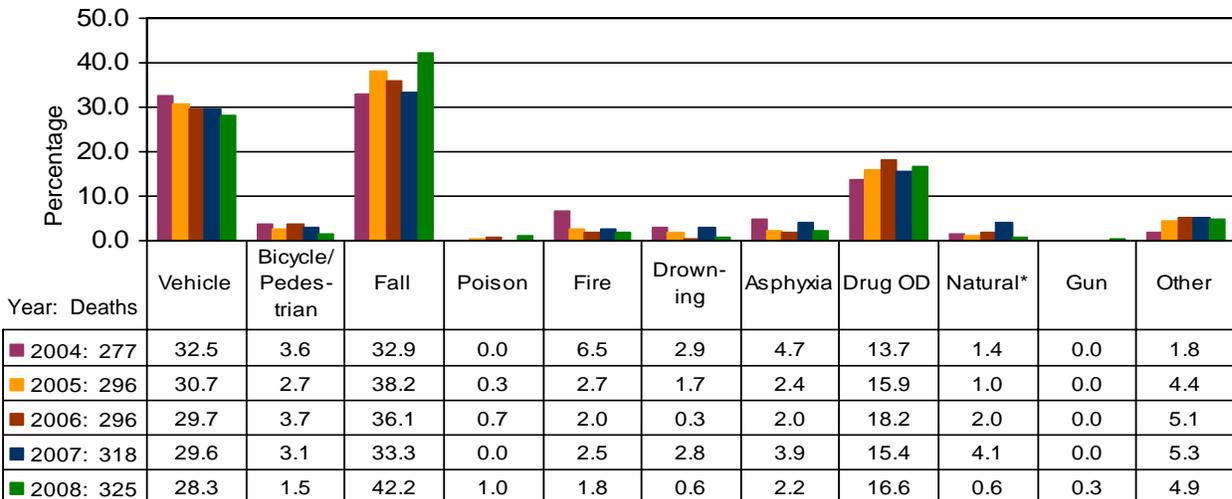
	Female	Male
2004: 92	34.8% (32)	65.2% (60)
2005: 93	31.2% (29)	68.8% (64)
2006: 88	28.4% (25)	71.6% (63)
2007: 94	28.7% (27)	71.3% (67)
2008: 92	29.3% (27)	70.7% (65)

Table 6: Bicycle/Pedestrian Deaths by Age, 2004-2008

	<20 yrs	21-44 yrs	45-64 yrs	65+ yrs
2004: 11	2	5	2	2
2005: 8	3	3	0	2
2006: 11	0	4	5	2
2007: 10	4	2	3	1
2008: 5	1	0	2	2

Cause of Death

Figure 20: Accidental Deaths by Cause, 2004-2008



*A natural cause of death can have a contributing factor that determines the death to be accidental. There were 2 deaths that fell into this category in 2008, 1 from drug toxicity and 1 from a vehicle accident.

Figure 21: Accidental Deaths by Age, 2004-2008

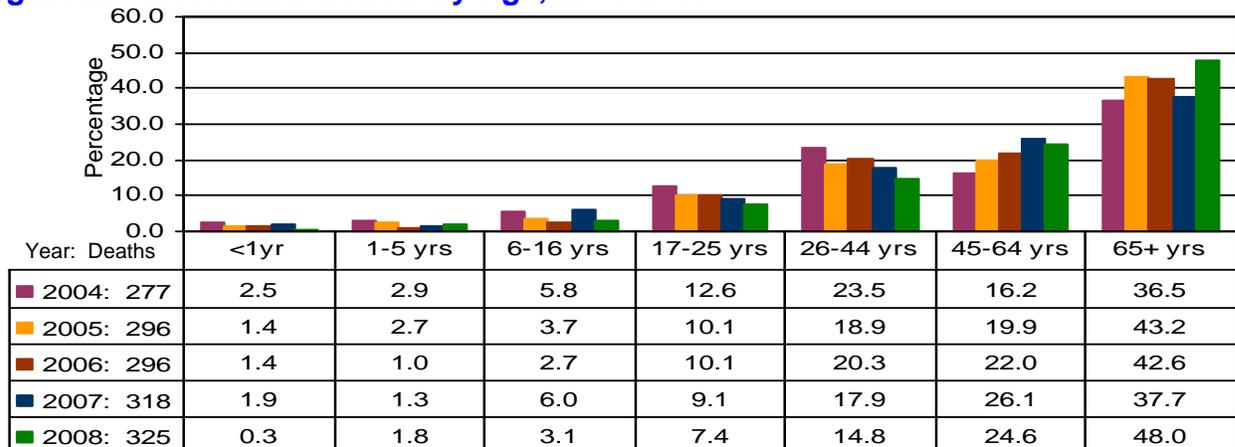
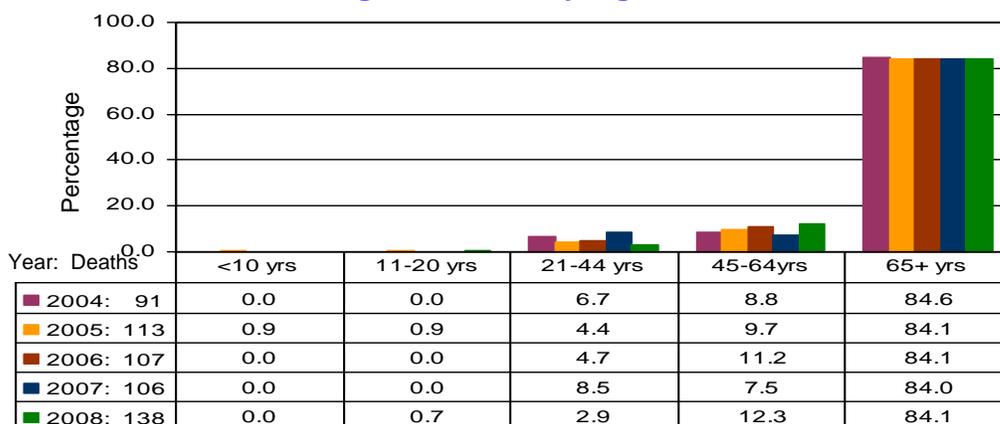


Figure 22: Deaths Resulting from Falls by Age, 2004-2008



2008 Child Death Review Meetings

The Child Death Review Team reviews the deaths of those in Kent County who are 18 and younger. In 2008, there were 34 child death cases reviewed. Of these cases, 7 were deaths from 2007, and 27 were deaths from 2008.

Natural Deaths – 9

- SIDS – 2
 - Black – 1
 - White – 1
- Other – 7
 - Medical complications of placental abruption
 - Chronic lung disease due to prematurity
 - Lymphocytic tracheobronchitis with focal broncholitis (viral type)
 - Pulmonary emboli due to deep venous thrombosis
 - Pneumonia – sickle cell/Beta thalussmia
 - Medical complications due to prematurity
 - Gangrene caused by clostridium perfringens

Accidental Deaths – 18

- Vehicular Accidents – 11
 - Driver – 3
 - Passenger – 5
 - Pedestrian – 2
 - Bicyclist – 1
- Drowning – 1
 - Lake
- Suffocations – 3
 - Co-sleeping
 - Pillow
 - Sleeping bag
- Other – 3
 - Ingestion of isopropanol acetone
 - Hypoxic encephalopathy due to neck compression from entanglement in swing set rope
 - Hypoxic encephalopathy due to aspiration from hot dog

Suicides – 1

- Hanging

Homicides – 5

- Gun – 4
- Traumatic brain injury – 1

Indeterminate – 1

- Infant found in bouncy seat

Child Death Cases Reviewed by Year

	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>
Natural	16	11	9	9	9
Vehicular Accidents	8	11	4	10	11
Accidental	16	10	4	11	7
Suicides	1	2	3	4	1
Homicides	1	6	2	5	5
Indeterminate	1	1	3	1	1
Total Cases	43	41	25	40	34

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