

Kent County Medical Examiner



2005 Annual Report

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

2005 Kent County Medical Examiner Annual Report

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

Every number in this report represents a person who is greatly missed and loved by family and friends. This report is dedicated to each person who has been affected by one of these deaths.

We have had a continued increase in the number of deaths in people of Hispanic origin. There has been no change in the age of the cases our office has investigated, with half of our decedents being older than 65 years. Hispanics and African Americans had the highest percentage of homicides in our death investigations, 19% and 9% respectively. Guns continue to be the leading weapon in homicides, followed by knives and asphyxial means.

The greatest at-risk age for suicides is 20 to 44 years. This group accounts for just over half of all suicides. Guns tend to be the preferred method, followed by hangings and drug overdoses, which are tied for second. Nearly three-fourths of the suicides occur in males.

Approximately two-thirds of all our deaths are natural. The most lethal weapon in non-natural deaths continues to be motor vehicles, accounting for 9% of all deaths. In contrast, guns account for approximately 3% of all deaths, which are virtually all homicides and suicides.

There was a sharp increase in cocaine and methadone as the cause of death in 2005 for drug related cases. These two drugs accounted for half of all drug deaths. Prescription narcotics, heroin and ethanol, in that order, accounted for the next three most common causes of death, and each of these decreased from 2004.

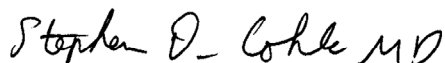
The most frequent cause of accidental deaths is falls, followed by motor vehicle accidents. A substantial majority of falls occurred in the over-65 age group, many of which resulted in hip fractures.

The Child Death Review Committee was very busy in 2005 due to the volume and complexity of cases reviewed. The goal of this multi-disciplinary committee is to identify, and hopefully remove, hazards in the community causing death in children 18 years old and younger. Medical Examiner staff attending these monthly meetings include: Carmen Perez, Medical Examiner Support Staff and Child Death Review Coordinator, David A. Start, MD, Kent County Deputy Chief Medical Examiner, and me. We reviewed 41 cases in 2005, with 11 natural deaths, 12 accidental, two suicides and six homicides. Six of the 11 natural deaths were due to SIDS while the other five were from a variety of other diseases including one case of Neisseria meningitis. Vehicular accidents accounted for 11 of the 21 accidental deaths investigated, of which virtually all involved children toward the upper age range. The second biggest group of accidental deaths (four) was suffocations. Of the six homicides, there were three two-year-olds, one seven-year-old and two 18-year-olds.

In February 2005, the US Food and Drug Administration and Wyeth Pharmaceuticals issued a warning that promethazine (Phenergan) was contraindicated in pediatric patients younger than two years because it could cause respiratory depression and death. Accordingly, we reviewed our SIDS deaths from the past two years, including Kent County and other counties, to determine whether promethazine was detected in the drug screen. Promethazine was not identified in any of the 26 cases. Continuing surveillance for subtle causes of death and apparent SIDS cases continues to be an important and ongoing focus of this office.

I am pleased to present to you the Kent County Medical Examiner's 2005 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) 242-6700

Medical Examiner Personnel

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

Peter J. Noble
 Medical Examiner Investigator

David A. Start, MD
 Deputy Chief Medical Examiner, 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

Amy Kjaer
 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, 2004 and 2005

	2004		2005	
	Amount	Percentage	Amount	Percentage
Medical examiner (compensation)	\$147,609	13.0%	\$155,013	13.9%
Autopsies	774,289	68.3%	765,664	68.8%
Cadaver transportation	74,780	6.6%	61,479	5.5%
Support services	51,876	4.6%	45,335	4.1%
Administration	85,000	7.5%	85,000	7.6%
Total	\$1,139,554	100.0%	\$1,112,491	100.0%

Average cost per case investigated

\$1,107

\$1,106

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.

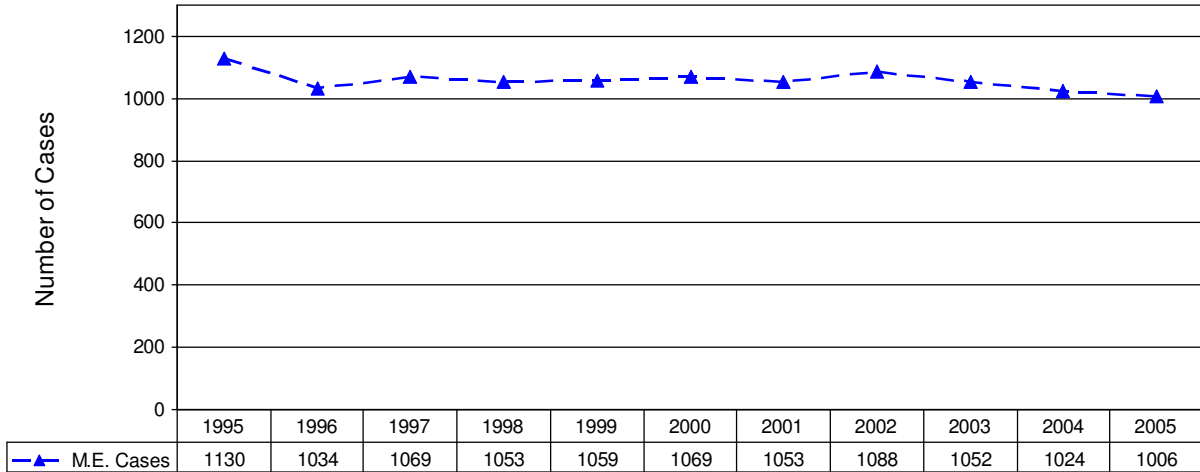
*** The 48 hour requirement triggers an investigation when there has been no medical attendance of any kind (i.e., nursing care, etc.)

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.

2005 Medical Examiner Caseload

Kent County Medical Examiner Cases, 1995-2005

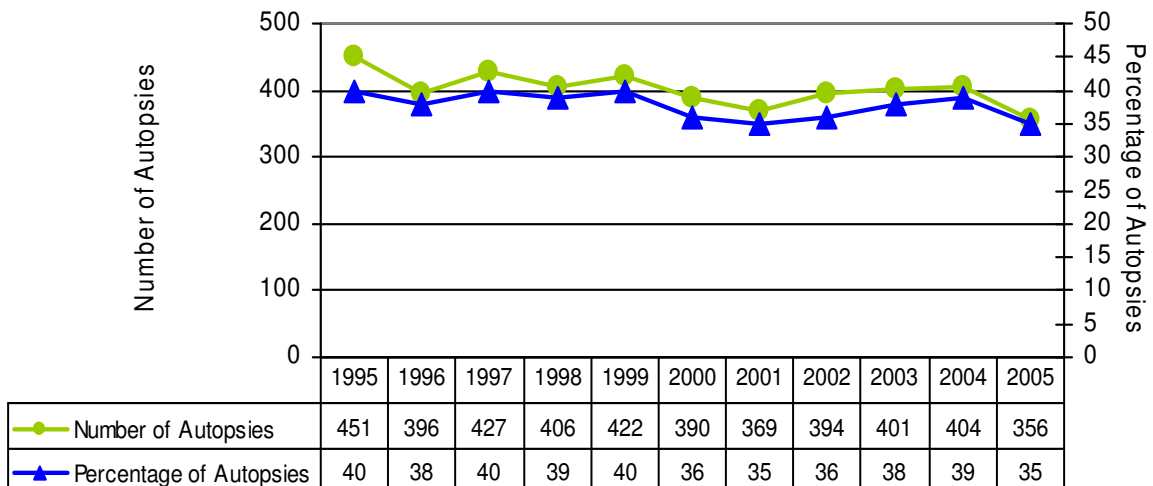


Total Medical Examiner Cases in 2005: 1,328

Accepted	1,006	75.8%
Declined	332	24.2%

In 2005, there were 4,762 deaths in Kent County. The medical examiner was contacted regarding 1,328 deaths. Only 1,006 cases were accepted for investigation, while 332 were declined and did not fall within the requirements for investigation by the Medical Examiner's Office.

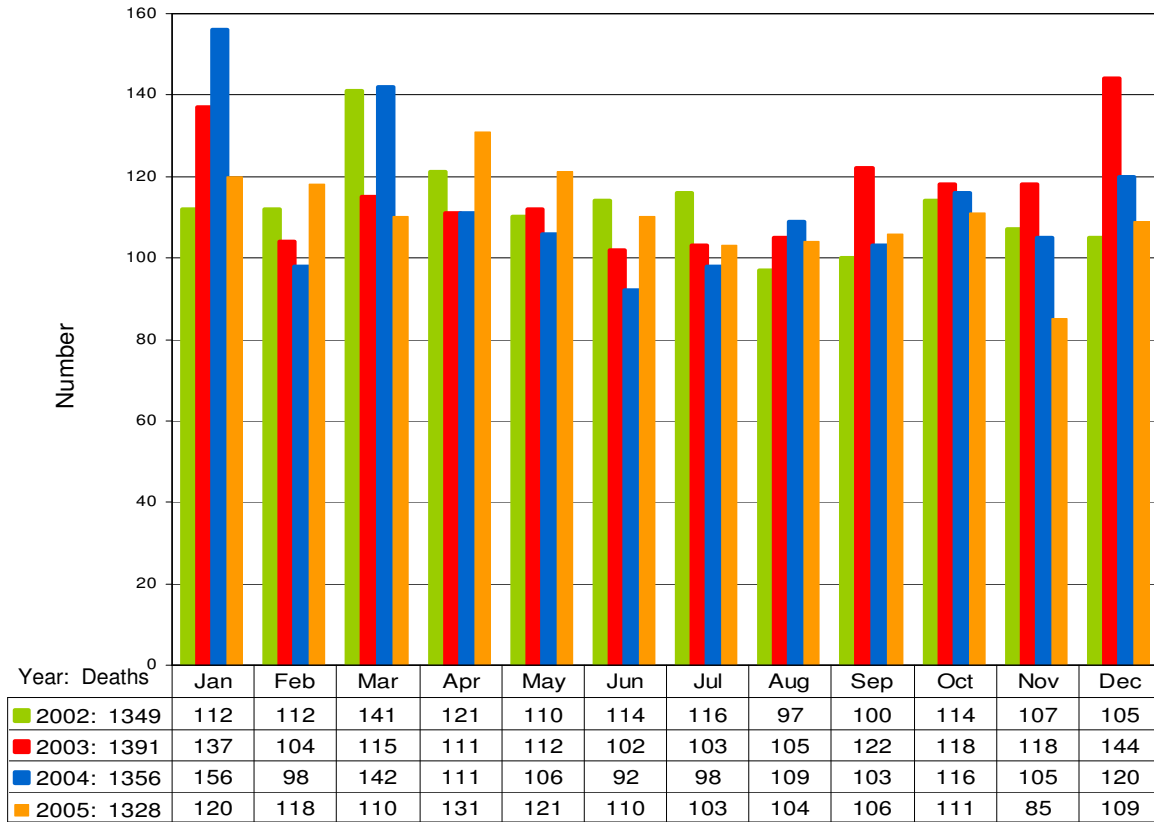
Medical Examiner Cases with Autopsy, 1995-2005



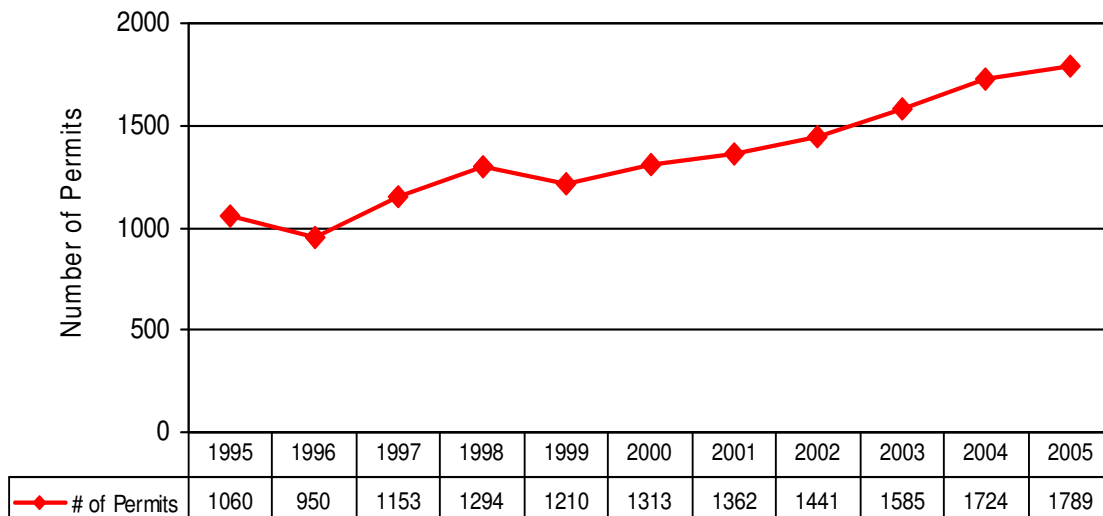
Of the 356 autopsies performed, 313 were charged to Kent County. The remaining 43 autopsies were performed either by a request from the family or another county.

2005 Medical Examiner Caseload

Medical Examiner Caseload by Month, 2002-2005

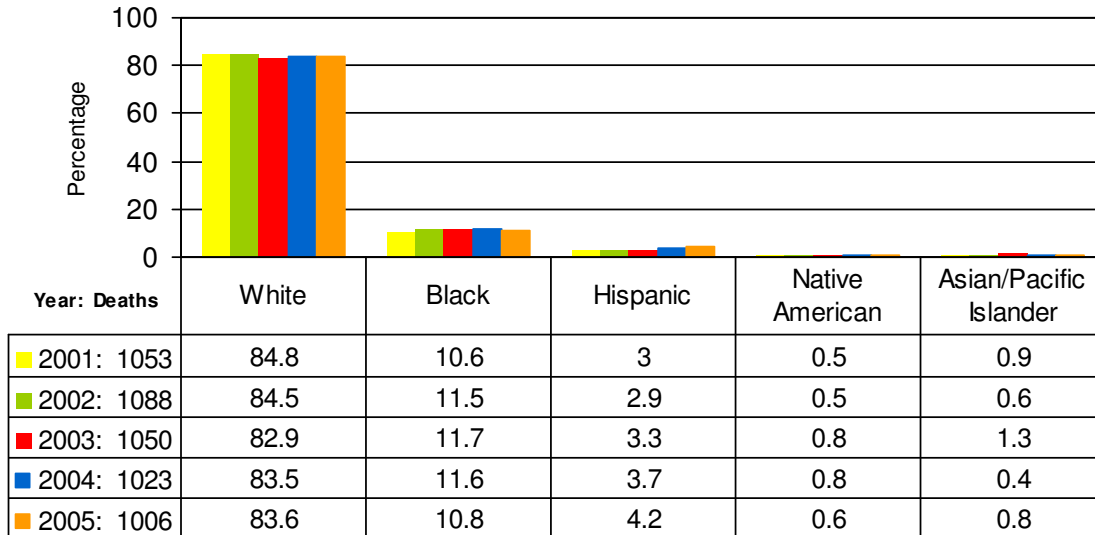


Cremation Permits Issued, 1995-2005

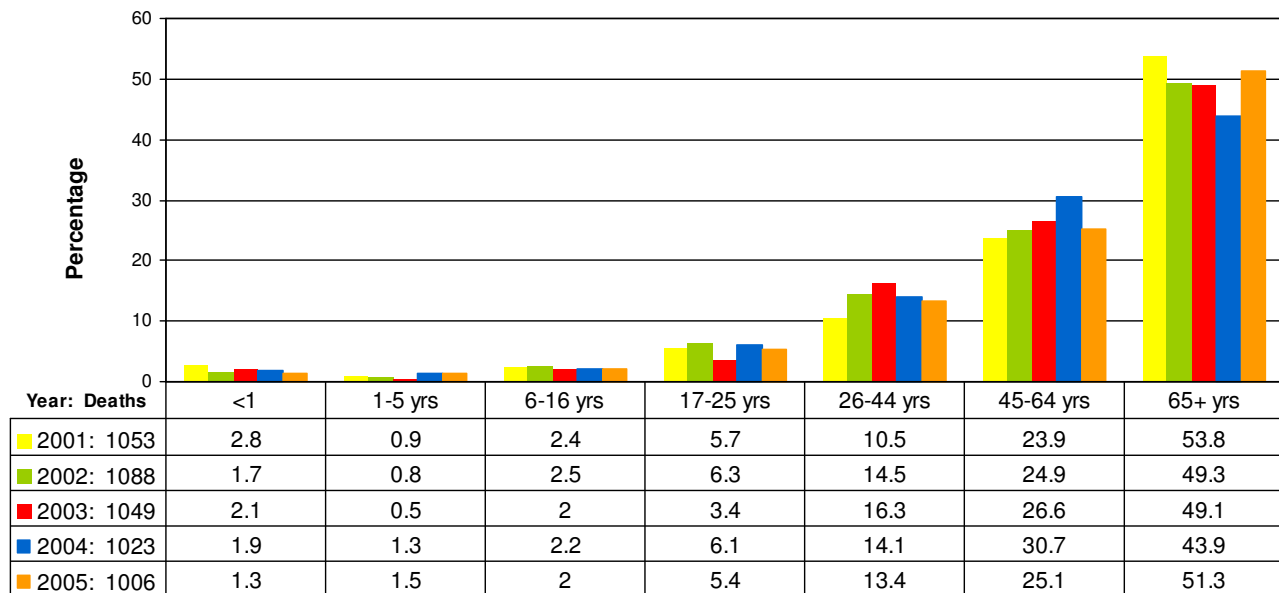


Demographics of Medical Examiner Cases

Medical Examiner Cases by Race/Ethnicity, 2001-2005



Medical Examiner Cases by Age at Death, 2001-2005

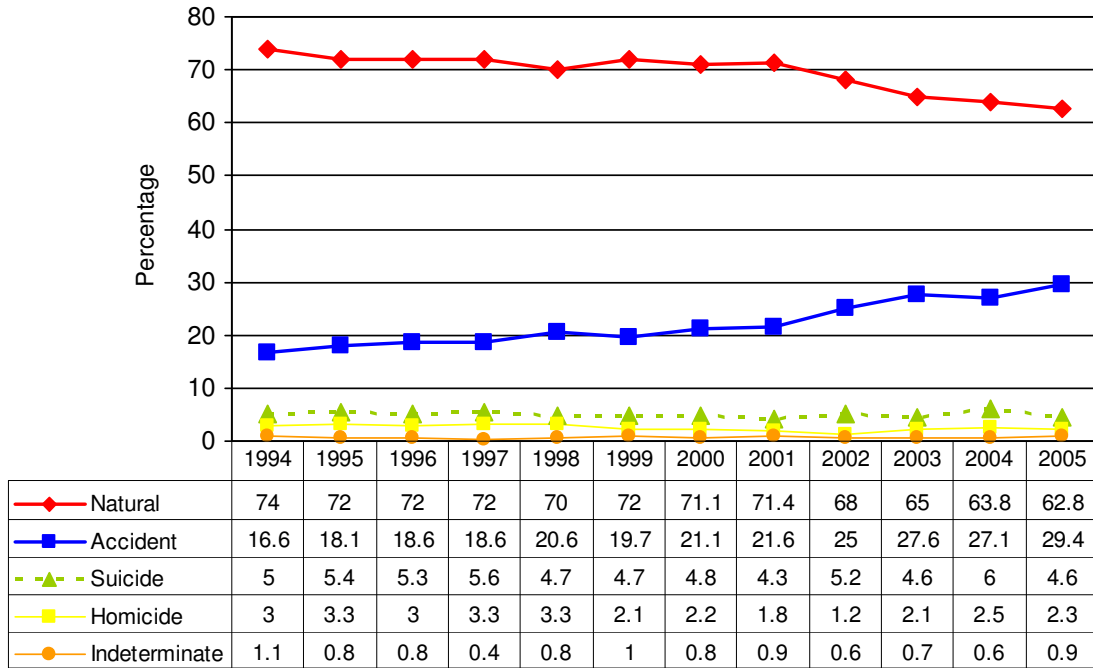


Medical Examiner Cases by Gender, 2001-2005

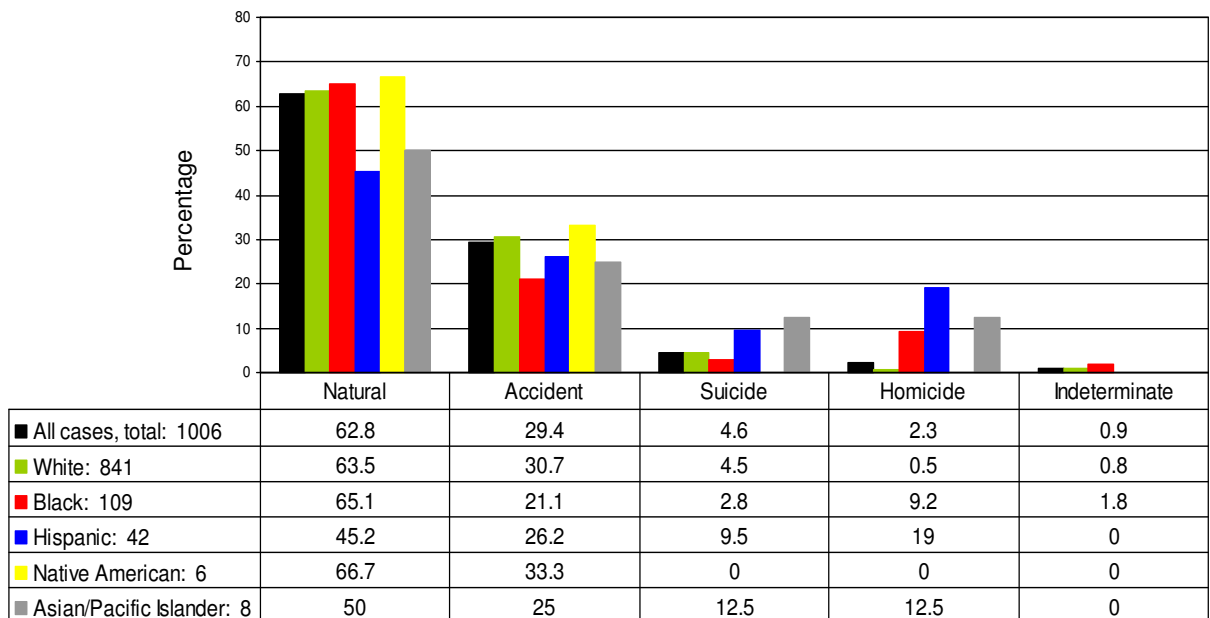
	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>
Female	39.4%	39.4%	39.5%	38.5%	39.7% (397 cases)
Male	60.6%	60.6%	60.5%	61.5%	60.5% (629 cases)

Manner of Death

Medical Examiner Cases by Manner of Death, 1995-2005



Manner of Death by Race/Ethnicity, 2005



Manner of Death

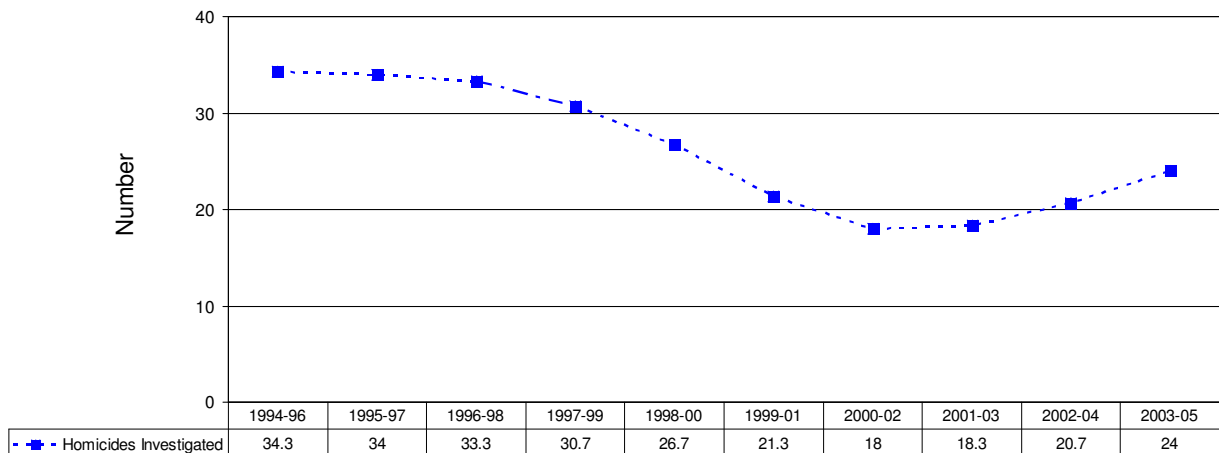
Kent County Homicides, 2001-2005

<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>
19	13	23	26	23

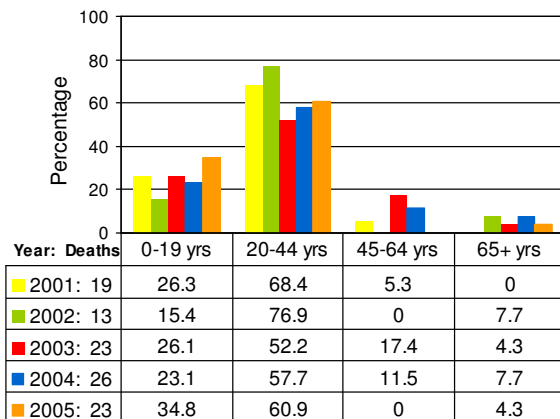
Homicides by Gender, 2005

Female 8 Male 15

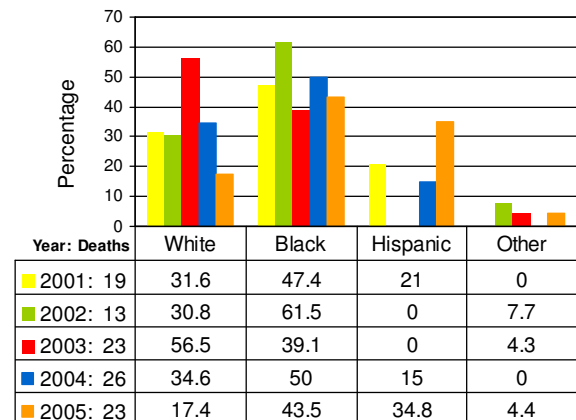
Kent County Homicides, Three-Year Moving Averages, 1994-2005



Homicides by Age, 2001-2005

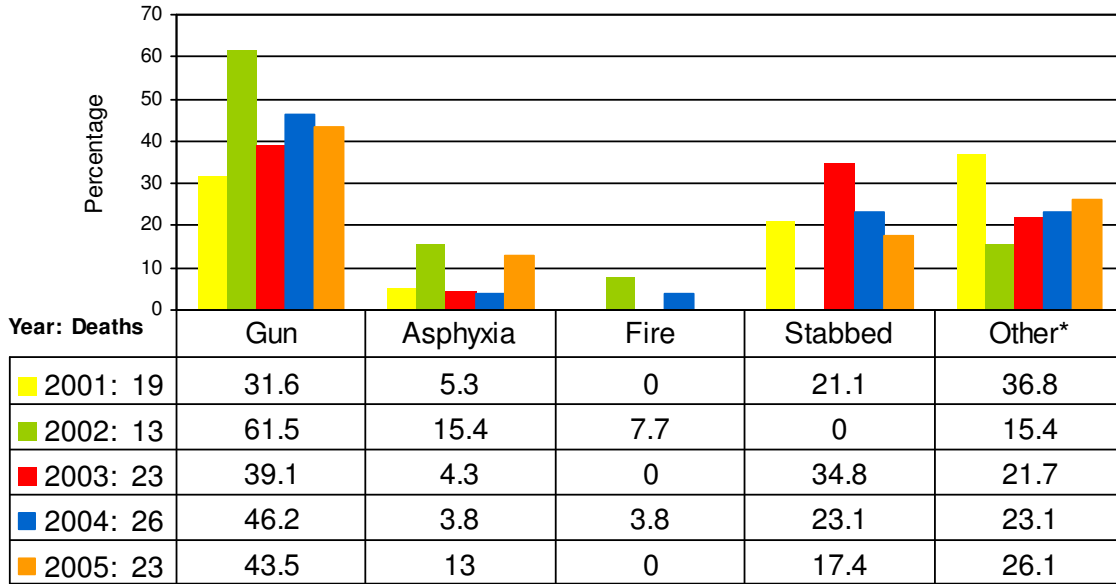


Homicides by Race, 2001-2005



Manner of Death

Homicide Cases by Method Used, 2001-2005



*Other is comprised of the following for 2005: physical abuse (4; 66.7%); assault (2; 33.3%).

Gun Homicides by Age, 2001-2005

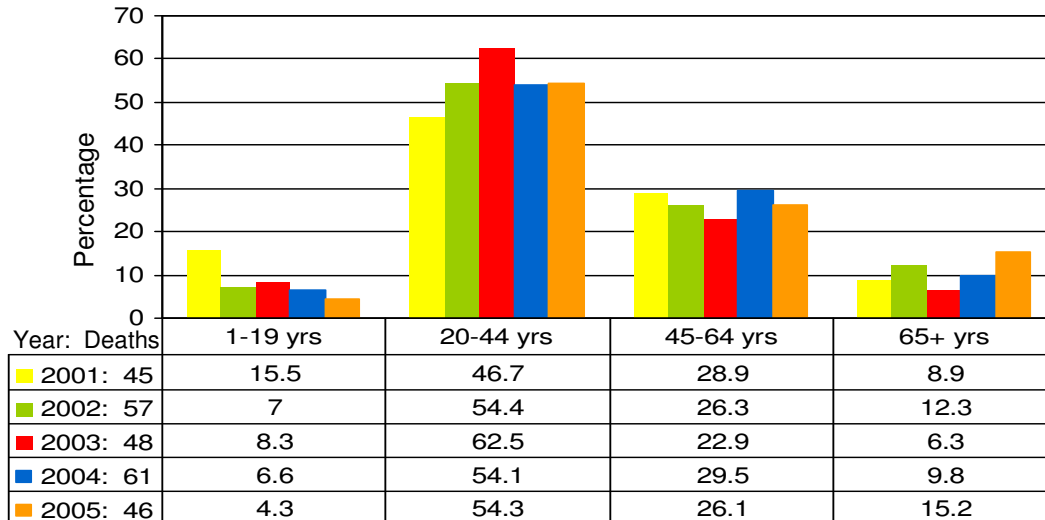
Year: Deaths	AGE			
	0-19 yrs	20-29 yrs	30-39 yrs	40+ yrs
2001: 6	1	3	1	1
2002: 8	1	4	1	2
2003: 9	2	4	1	2
2004: 12	2	5	3	2
2005: 10	2	5	3	0

Suicide Cases by Race, 2001-2005

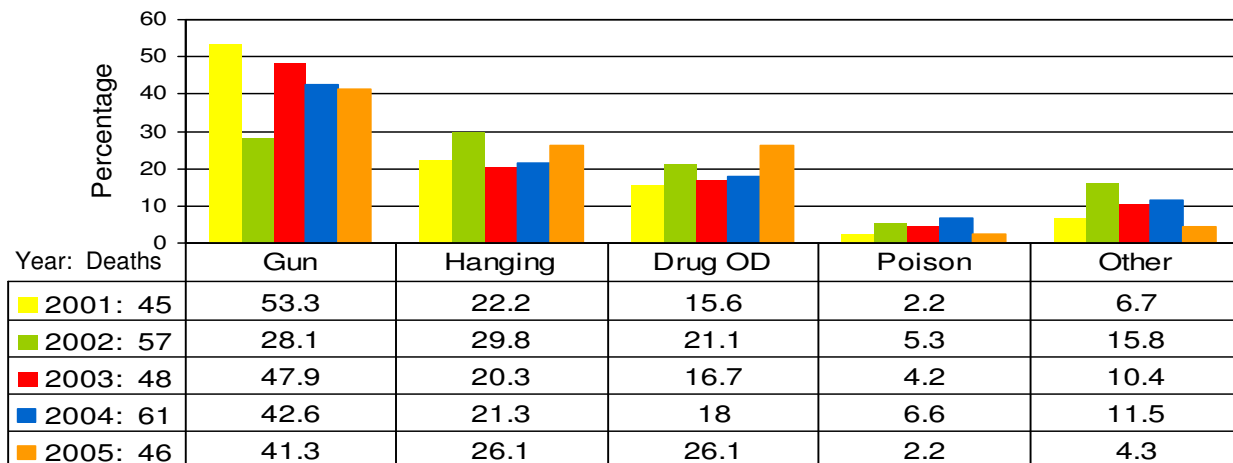
	White	Black	Hispanic	Native American	Asian
2001: 45	86.7%	6.7%	4.4%	0%	2.2%
2002: 57	80.7%	10.5%	8.8%	0%	0%
2003: 48	85.4%	10.4%	0%	2.1%	2.1%
2004: 61	83.6%	3.3%	8.2%	0%	4.9%
2005: 46	82.6%	6.5%	8.7%	0%	1%

Manner of Death

Suicide Cases by Age, 2001-2005



Suicide Cases by Method Used, 2001-2005

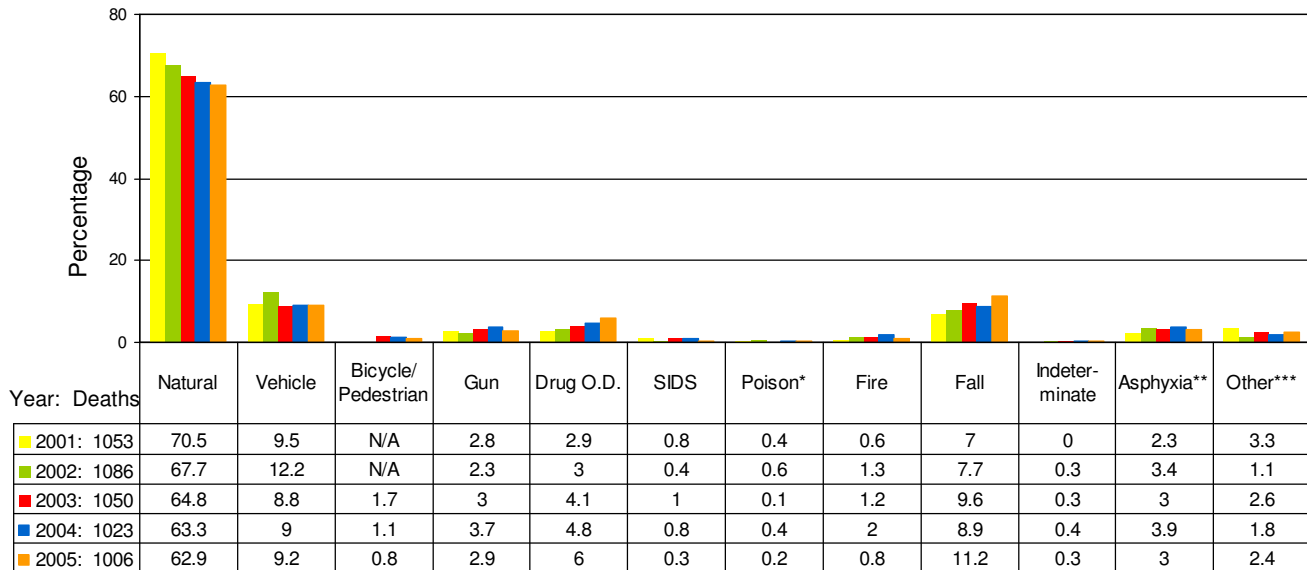


In 2005, Poison includes carbon monoxide and other chemical poisoning, while Other consists of 2 stabbings.

Of the 46 suicide deaths for 2005, females accounted for 13 (28.3%) deaths, while males accounted for 33 (71.7%).

Cause of Death

Medical Examiner Cases by Cause of Death, 2001-2005

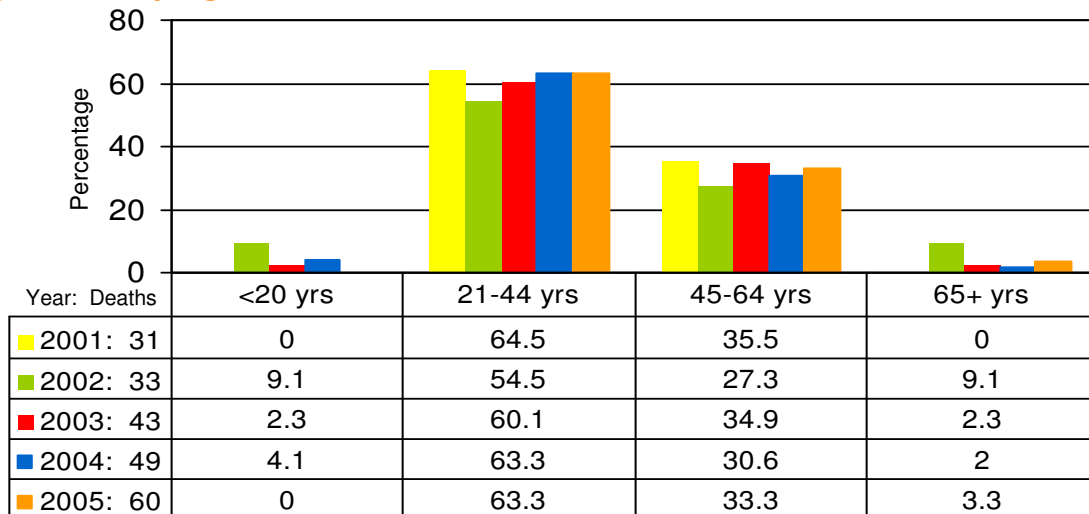


*Poison includes carbon monoxide poisoning and other chemical poisoning.

**Asphyxia includes deaths from choking (6; 20%), drowning (7; 23.3%), hanging (12; 40%), strangulation (2, 6.7%) and suffocation (3; 10%).

***Other is comprised of deaths from animal bite (1; 4.2%), assault (2; 8.3%), crushing (6; 25%), exsanguination (1; 4.2%), hypothermia (1; 4.2%), struck by object (2; 8.3%), physical abuse (4, 16.7%), scalding (1, 4.2%) and stabbing (6; 25%).

Drug Deaths by Age, 2001-2005

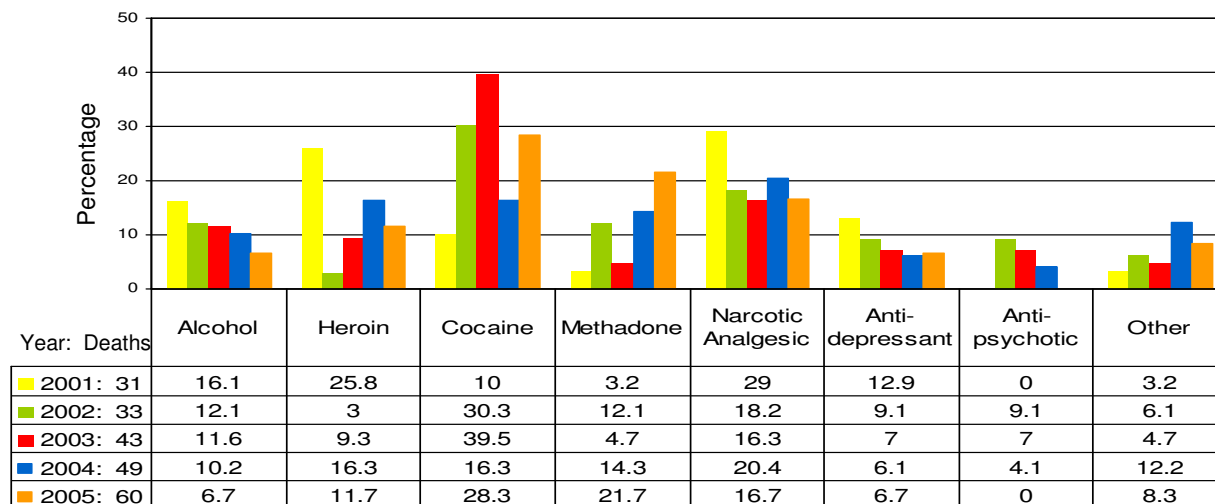


Drug Deaths by Gender, 2005

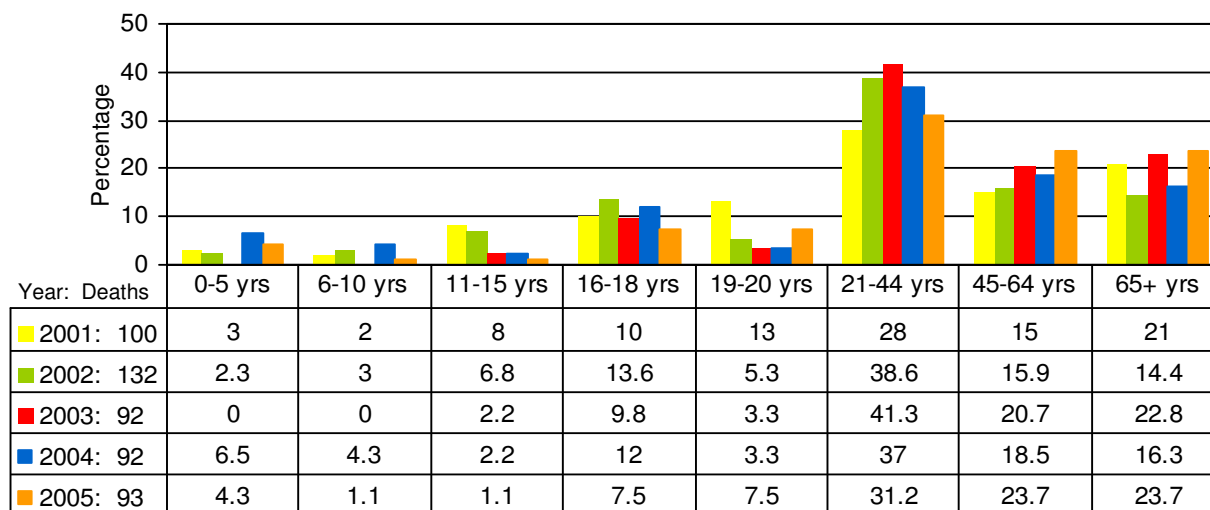
	Female (25)	Male (35)
Accident	20	27
Suicide	4	8
Indeterminate	1	0

Cause of Death

Drug Deaths by Drug of First Mention, 2001-2005



Vehicular Deaths by Age, 2001-2005



Of the 93 vehicle deaths for 2005, 91 were listed as accidents and 2 were listed as indeterminate.

Vehicular Deaths by Gender, 2001-2005

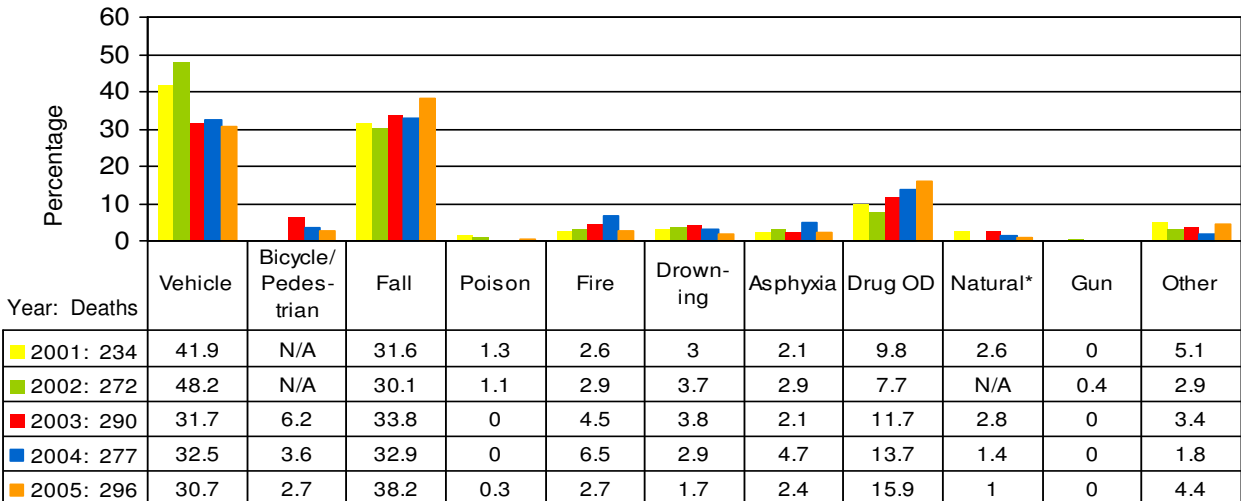
	Female	Male
2001: 100	40.0% (40)	60.0% (60)
2002: 132	31.1% (41)	68.9% (91)
2003: 92	42.4% (39)	57.6% (53)
2004: 92	34.8% (32)	65.2% (60)
2005: 93	31.2% (29)	68.8% (64)

Bicycle/Pedestrian Deaths by Age, 2003-2005

	<20 yrs	21-44 yrs	45-64 yrs	65+ yrs
2003: 18	4	8	3	3
2004: 11	2	5	2	2
2005: 8	3	3	0	2

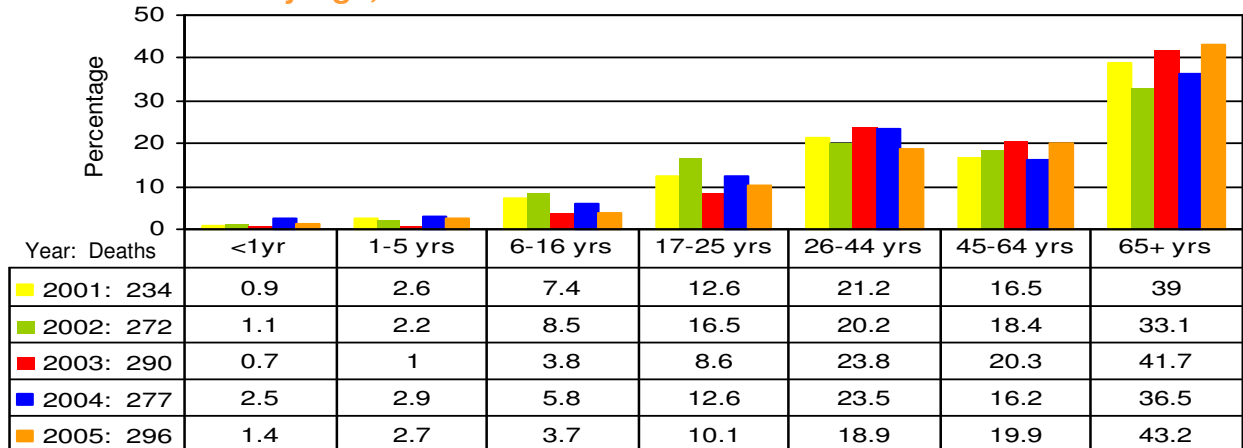
Cause of Death

Accidental Deaths by Cause, 2001-2005

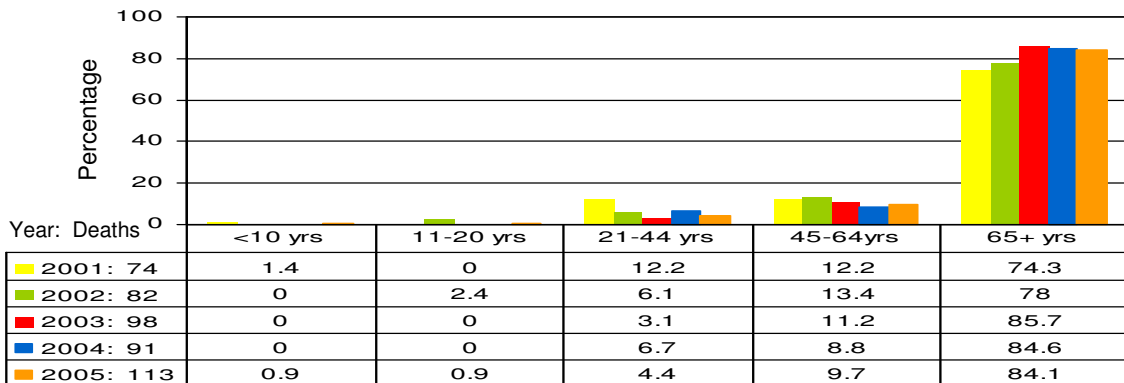


*A natural cause of death can have a contributing factor that determines the death to be accidental. There were 3 deaths that fell into this category in 2005, 1 from drug toxicity and 2 from falls.

Accidental Deaths by Age, 2001-2005



Deaths Resulting from Falls by Age, 2001-2005



2005 Child Death Review Meetings

In 2005, the Child Death Review Team reviewed deaths of those who were 18 and younger. There were 41 child death cases reviewed in 2005. Of these cases, 14 cases were deaths from 2004, and 27 cases were deaths from 2005.

Natural Deaths - 11

- SIDS - 6
 - Black - 3
 - White - 3
- Other - 5
 - Abnormal slit-like ostium of left coronary artery
 - Diabetic ketoacidosis
 - Hydrocephalus
 - Neisseria meningitidis sepsis
 - Tetralogy of Fallot & absent pulmonary valve syndrome

Accidental Deaths – 21

- Vehicular Accidents - 11
 - Driver – 5
 - Passenger – 4
 - Pedestrian – 1
 - Sitting on trunk of car – 1
- Jet ski - 1
- Burns (boiling water) - 1
- Drowning – 2
 - Pool – 1
 - Creek – 1
- Drug overdose – 1
- Fire with functional smoke detector – 1
- Suffocations – 4
 - Crib collapsed
 - Crushed by TV
 - Pillow
 - Window fan

Suicides - 2

- Gunshot
- Hanging

Homicides – 6

- Blunt force injuries – 2
- Gunshot – 1
- Stabbed – 2
- Suffocated - 1

Indeterminate - 1

Child Death Cases Reviewed by Year

	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>
Natural	19	16	13	16	11
Vehicular Accidents	10	20	4	8	11
Accidental	0	7	4	16	10
Suicides	3	1	3	1	2
Homicides	1	1	3	1	6
Indeterminate	2	2	2	1	1
Total Cases	35	47	29	43	41

Kent County Medical Examiner 2005 Annual Report

This publication may be reproduced, in whole or in part, without permission.

Copies of this publication are available on the World Wide Web at:
www.accesskent.com/health/healthdepartment

Created by:
Amy Kjaer
Medical Examiner Support Staff