Kent County Medical Examiner

2003 Annual Report

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

2003 Kent County Medical Examiner Annual Report

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

2003 was a year of change for the Kent County Medical Examiner system. One of our veteran medical examiner investigators, Martha J. Scholl, left Grand Rapids to take a full-time medical examiner investigator job in Florida. Three new medical examiner investigators were hired in 2003: Peter J. Noble, Theodore E. Oostendorp and Cynthia L. Debiak, RN. Each has done admirable work as a medical examiner investigator and has contributed greatly to our efforts. On January 1, 2003, I became the chief medical examiner and on February 13, 2003, David A. Start, MD, became the deputy chief medical examiner for Kent County.

Over all, our total number of deaths reportable to the medical examiner remained stable at just over 1,000, while our percentage of cases autopsied remained unchanged at about 40% of our total reported cases. Our cremation permits have doubled over the last 10 years, generating significant income for Kent County.

Please note in our report that for 2003 we separated out bicycle and pedestrian fatalities from all of our deaths and from our accidental deaths as well.

Our drug deaths increased by nearly 10% in 2003 over the previous year. Most of this rise in drug deaths is due to an increase in cocaine related deaths. Of interest, oxycodone deaths, which peaked in 2001 with 13.3% of our deaths, only accounted for 2.3% of our deaths in 2003.

Dr. Start and I provided forensic pathology information for the Kent County Child Death Review Team. In 2003, 29 cases were reviewed. These deaths included five natural, eight SIDS, eight accidents, three suicides, three homicides and two undetermined causes and manners of death. The SIDS death rates have decreased dramatically in the past decade following the back to sleep campaign, in which parents are advised to place their children on their backs rather than face down. This decrease of deaths when infants are placed on their backs suggests that many SIDS deaths are caused by suffocation.

In the cohort of children, motor vehicle crashes reviewed dominated the accidental types of deaths. These tended to be in teenagers, and alcohol, as usual, was a factor in most of these deaths. Drowning deaths generally occurred in toddler-aged children who were unsupervised and wandered into a neighbor's swimming pool or drowned in the bathtub. Unfortunately, suicides provided nearly 10% of the deaths that we reviewed, indicating that this is a continuing problem in this age group. Similarly, homicides also accounted for 10% of our case numbers. As always, the goal of the Child Death Review Team is to decrease fatalities in children 17 years and under by identifying risk factors for death in this age group.

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, Forensic Pathologist

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

Jason S. Chatman
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

Martha J. Scholl, D-ABMDI
Medical Examiner Investigator (resigned 02/03)

Richard Washburn
Kent County Conveyance Specialist and Scene Investigator

Amy Kjaer
Medical Examiner Support Staff

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

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, 2002 and 2003

	2002		2003	
	Amount	Percentage	Amount	Percentage
Medical examiner (compensation)	$121,426	13.1%	$130,209	11.4%
Autopsies	606,424	65.4%	811,679	71.2%
Cadaver transportation	66,603	7.2%	75,271	6.6%
Support services	53,475	5.8%	37,534	3.3%
Administration	80,000	8.6%	85,000	7.5%
Total	$927,928	100.0%	$1,139,693	100.0%
Average cost per case investigated	$853		$1,083	

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.

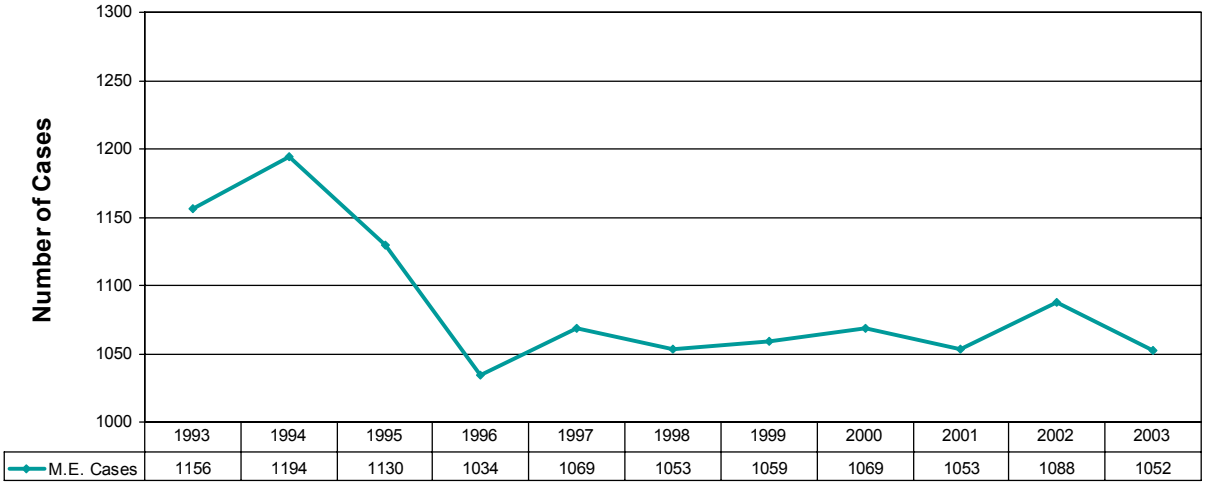
* All trauma related deaths no matter when the trauma occurred.
** The ten (10) day requirement relates solely to physician attendance.
*** The 48 hour requirement triggers an investigation when there has been no medical attendance of any kind (i.e., nursing care, etc.)

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 17 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.

2003 Medical Examiner Caseload

Kent County Medical Examiner Cases, 1993-2003

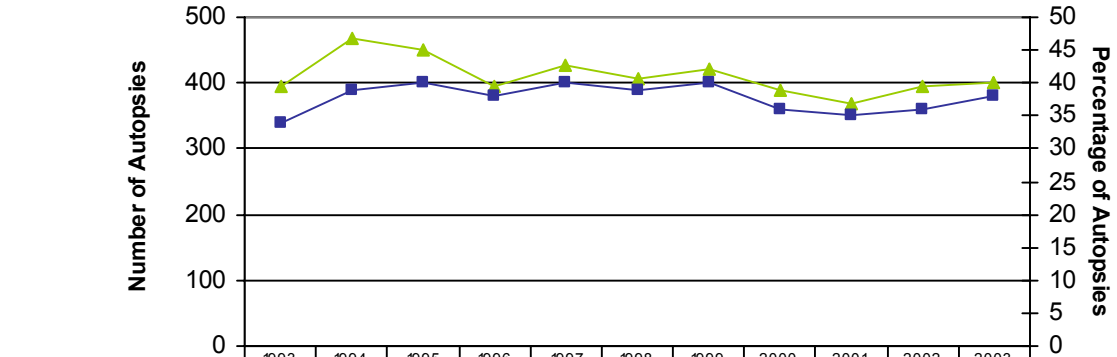


	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
M.E. Cases	1156	1194	1130	1034	1069	1053	1059	1069	1053	1088	1052

Total Medical Examiner Cases in 2003: 1391

Accepted	1052	75.62%
Declined	339	24.37%

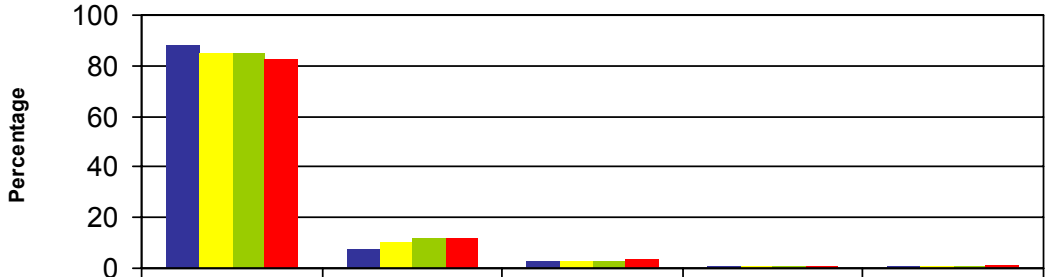
Medical Examiner Cases with Autopsy, 1993-2003



	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Number of Autopsies	394	469	451	396	427	406	422	390	369	394	401
Percentage of Autopsies	34	39	40	38	40	39	40	36	35	36	38

Demographics of Medical Examiner Cases

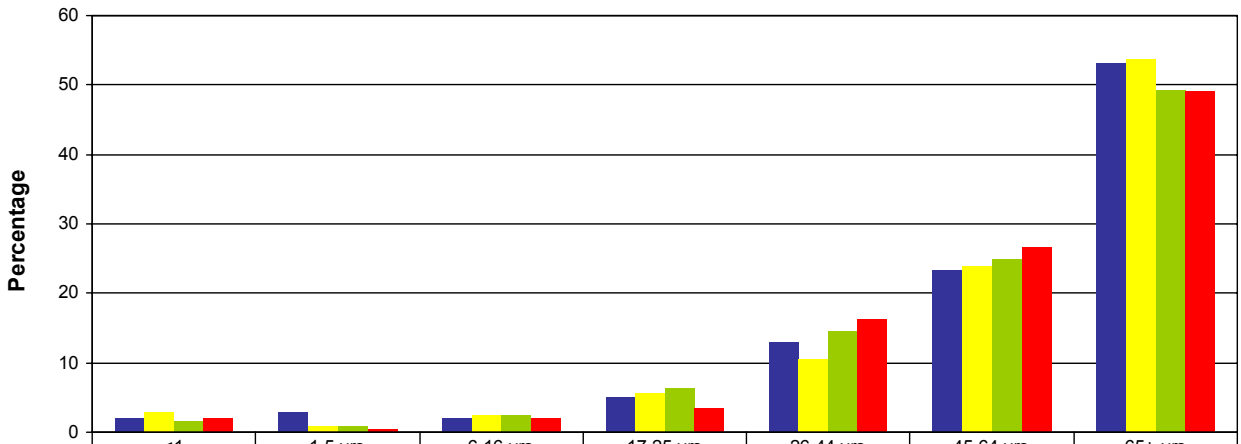
Medical Examiner Cases by Race/Ethnicity, 2000-2003



Year: Deaths	White	Black	Hispanic	Native American	Asian/Pacific Islander
2000: 1069	88	7.9	3	0.4	0.6
2001: 1053	84.8	10.6	3	0.5	0.9
2002: 1088	84.5	11.5	2.9	0.5	0.6
2003: 1050	82.9	11.7	3.3	0.8	1.3

*Out of the 1052 medical examiner cases for 2003, 2 cases were of animal bones and were not included in the totals for race/ethnicity.

Medical Examiner Cases by Age at Death, 2000-2003



Year: Deaths	<1	1-5 yrs	6-16 yrs	17-25 yrs	26-44 yrs	45-64 yrs	65+ yrs
2000: 1069	2.1	2.8	2.1	5.1	12.9	23.4	53.2
2001: 1053	2.8	0.9	2.4	5.7	10.5	23.9	53.8
2002: 1088	1.7	0.8	2.5	6.3	14.5	24.9	49.3
2003: 1049	2.1	0.5	2	3.4	16.3	26.6	49.1

*Out of the 1052 medical examiner cases for 2003, 2 cases were of animal bones and 1 case of a laboratory anatomy skull. These cases were not included in the totals for age at death.

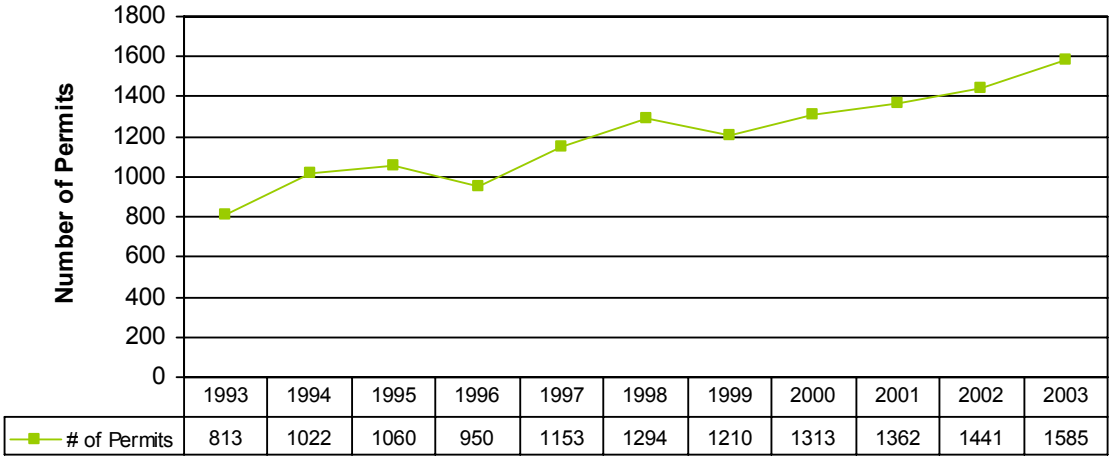
Demographics of Medical Examiner Cases

Medical Examiner Cases by Sex, 2001-2003

	2001	2002	2003
Female	39.4%	39.4%	39.5% (415 cases)
Male	60.6%	60.6%	60.5% (635 cases)

*Out of the 1052 medical examiner cases for 2003, sex could not be determined in 2 cases that were of animal remains. These 2 cases were not included in the totals for cases by sex.

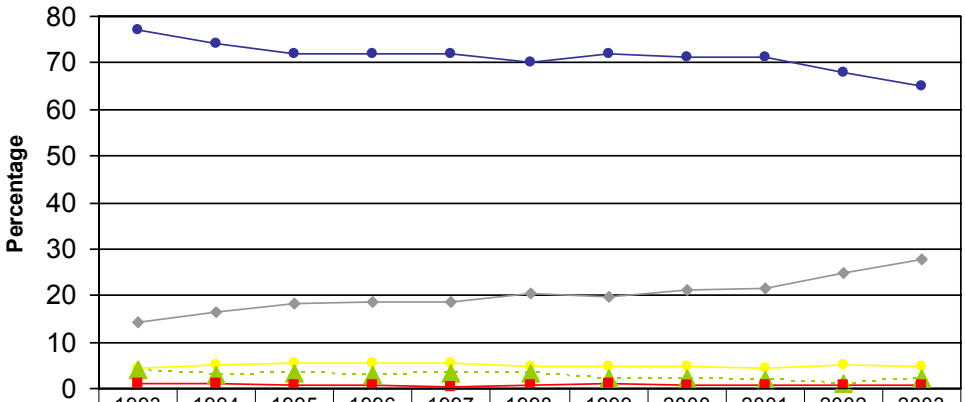
Cremation Permits Issued, 1993-2003



Manner of Death

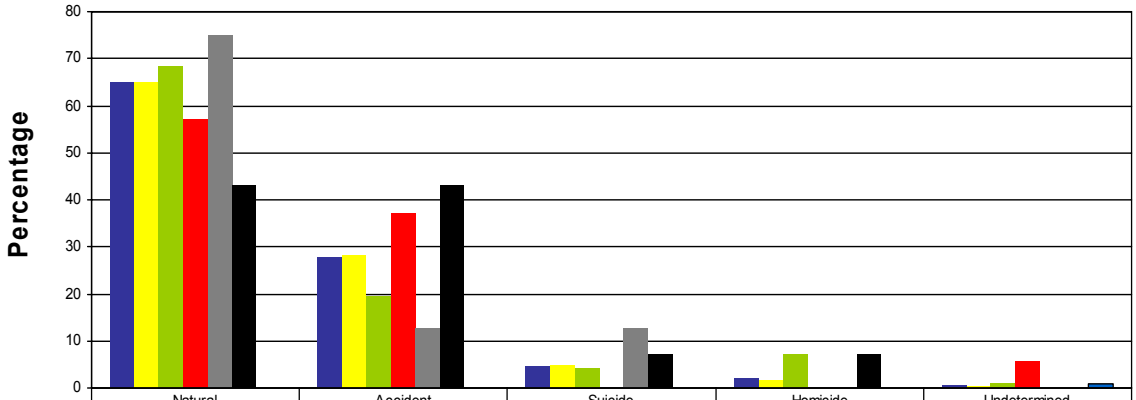
All of the following information is based on 1050 cases. The 2 cases not included out of the 1052 medical examiner cases were skeletal remains (animal).

Medical Examiner Cases by Manner of Death, 1993-2003



	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Natural	77	74	72	72	72	70	72	71.1	71.4	68	65
Accident	14.1	16.6	18.1	18.6	18.6	20.6	19.7	21.1	21.6	25	27.6
Suicide	4.3	5	5.4	5.3	5.6	4.7	4.7	4.8	4.3	5.2	4.6
Homicide	4	3	3.3	3	3.3	3.3	2.1	2.2	1.8	1.2	2.1
Undetermined	1.1	1.1	0.8	0.8	0.4	0.8	1	0.8	0.9	0.6	0.7

Manner of Death by Race/Ethnicity, 2003



	Natural	Accident	Suicide	Homicide	Undetermined
All cases, total: 1050	65	27.6	4.6	2.2	0.7
White: 869	65.1	28.3	4.7	1.5	0.3
Black: 123	68.3	19.5	4.1	7.3	0.8
Hispanic: 35	57.1	37.1	0	0	5.7
Native American: 8	75	12.5	12.5	0	0
Asian/Pacific Islander: 14	42.9	42.9	7.1	7.1	0
Unknown: 1	0	0	0	0	1

Manner of Death

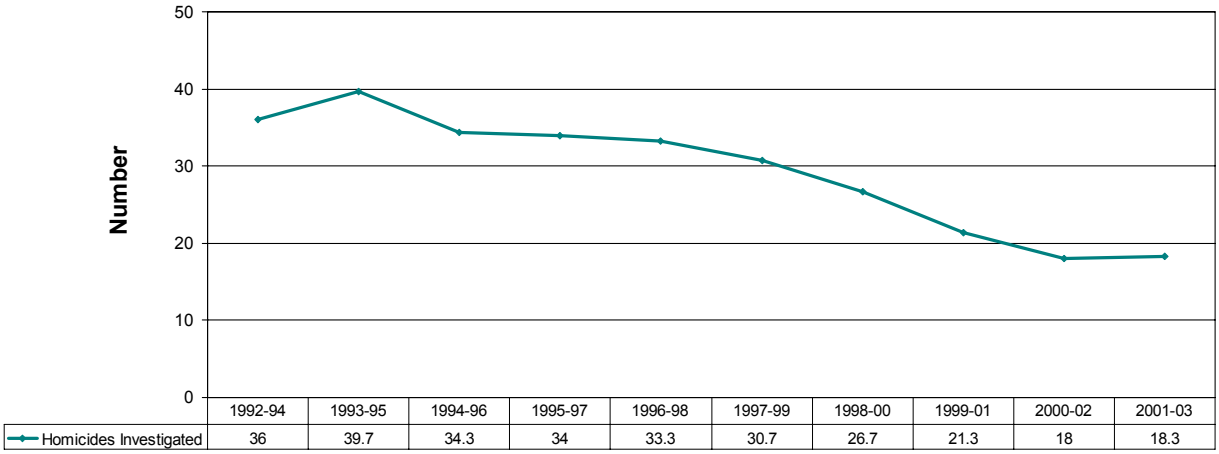
Kent County Homicides, 2000-2003

Year	2000	2001	2002	2003
	22	19	13	23

Homicides by Gender, 2003

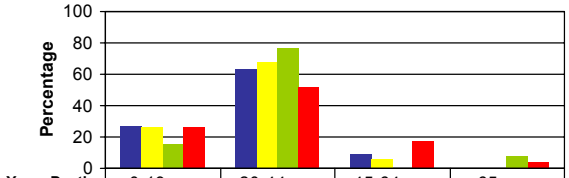
Female 7 Male 16

Kent County Homicide, Three-Year Moving Averages, 1992-2003



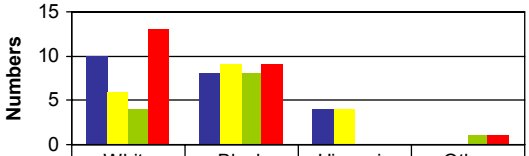
	1992-94	1993-95	1994-96	1995-97	1996-98	1997-99	1998-00	1999-01	2000-02	2001-03
Homicides Investigated	36	39.7	34.3	34	33.3	30.7	26.7	21.3	18	18.3

Homicides by Age, 2000-2003



Year: Deaths	0-19 yrs	20-44 yrs	45-64 yrs	65+ yrs
2000: 22	27.3	63.6	9.1	0
2001: 19	26.3	68.4	5.3	0
2002: 13	15.4	76.9	0	7.7
2003: 23	26.1	52.2	17.4	4.3

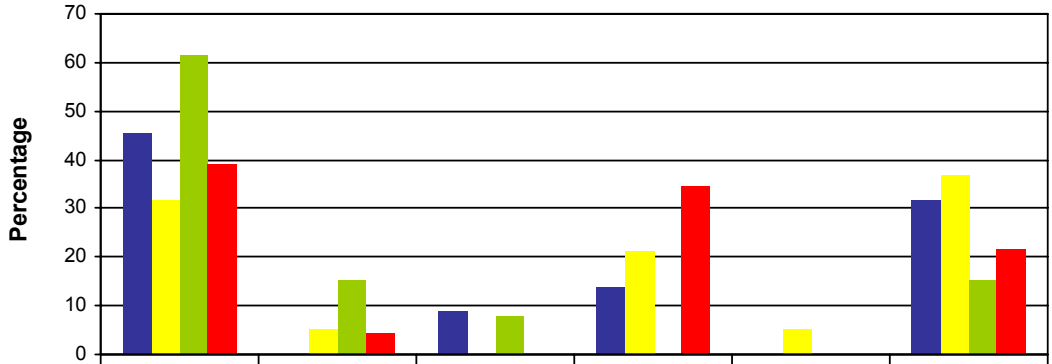
Homicides by Race, 2000-2003



Year: Deaths	White	Black	Hispanic	Other
2000: 22	10	8	4	0
2001: 19	6	9	4	0
2002: 13	4	8	0	1
2003: 23	13	9	0	1

Manner of Death

Homicide Cases by Method Used, 2000-2003



Year: Deaths	Gun	Asphyxia	Fire	Stabbed	Vehicle	Other*
2000: 22	45.5	0	9.1	13.6	0	31.8
2001: 19	31.6	5.3	0	21.1	5.3	36.8
2002: 13	61.5	15.4	7.7	0	0	15.4
2003: 23	39.1	4.3	0	34.8	0	21.7

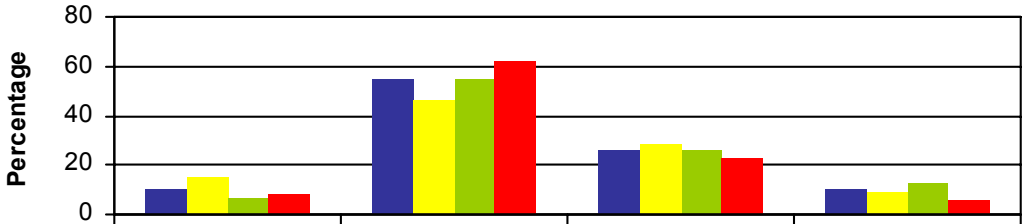
*Other includes deaths caused by beatings, craniocerebral trauma, drug overdose or unknown.

Gun Homicides by Age, 2000-2003

	AGE			
Year: Deaths	0-19 yrs	20-29yrs	30-39yrs	40+ yrs
2000: 10	1	6	1	2
2001: 6	1	3	1	1
2002: 8	1	4	1	2
2003: 9	2	4	1	2

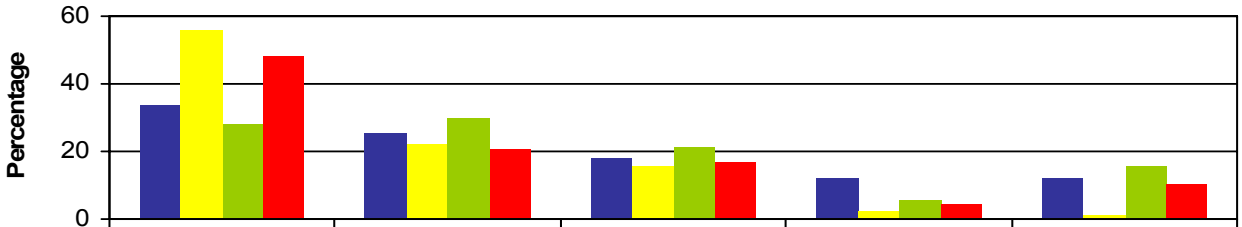
Manner of Death

Suicide Cases by Age, 2000-2003



Year: Deaths	1-19 yrs	20-44 yrs	45-64 yrs	65+ yrs
2000: 51	9.8	55	26	9.8
2001: 45	15.5	46.7	28.9	8.9
2002: 57	7	54.4	26.3	12.3
2003: 48	8.3	62.5	22.9	6.3

Suicide Cases by Method Used, 2000-2003



Year: Deaths	Gun	Hanging	Drug OD	Poison*	Other**
2000: 51	33.3	25.5	17.6	11.8	11.8
2001: 45	55.6	22.2	15.6	2.2	1
2002: 57	28.1	29.8	21.1	5.3	15.8
2003: 48	47.9	20.3	16.7	4.2	10.4

*Poison includes carbon monoxide poisoning and other chemical poisoning.

**Other includes the following: choking 1 (2.1%); drowning 2 (4.2%); fall 1 (2.1%); stabbing 1 (2.1%).

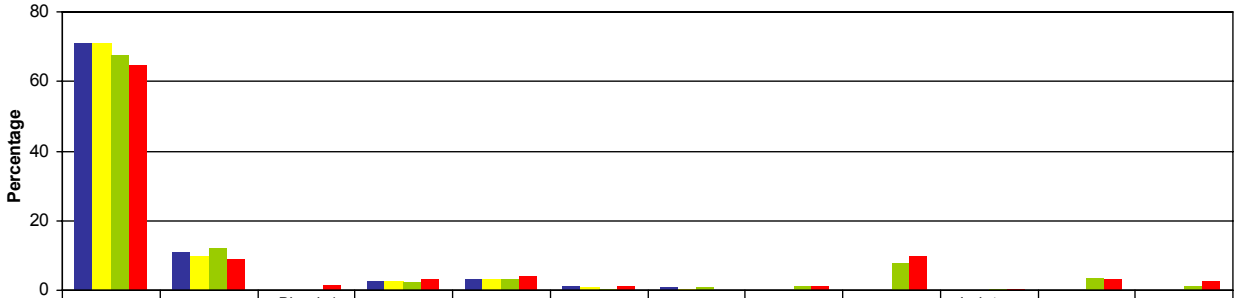
There was a total of 48 suicide deaths for 2003. Females accounted for 9 (18.8%) deaths, while males accounted for 39 (81.2%).

Suicide Cases by Race, 2001-2003

	White	Black	Hispanic	Native American	Asian
2001: 45	91%	6.6%	2.2%	N/A	N/A
2002: 57	80.7%	10.5%	8.8%	N/A	N/A
2003: 48	85.4%	10.4%	0%	2.1%	2.1%

Cause of Death

Medical Examiner Cases by Cause of Death, 2000-2003



Year: Deaths	Natural*	Vehicle	Bicycle/ Pedestrian	Gun	Drug O.D.	SIDS	Poison**	Fire	Fall	Indeter-minate	Asphyxia***	Other****
2000: 1069	71	10.9	N/A	2.6	3.1	1	0.6	N/A	N/A	N/A	N/A	N/A
2001: 1053	71	9.7	N/A	2.8	3	0.8	0.2	N/A	N/A	N/A	N/A	N/A
2002: 1086	67.7	12.2	N/A	2.3	3	0.4	0.6	1.3	7.7	0.3	3.4	1.1
2003: 1050	64.8	8.8	1.7	3	4	1	0.1	1.2	9.6	0.3	3	2.6

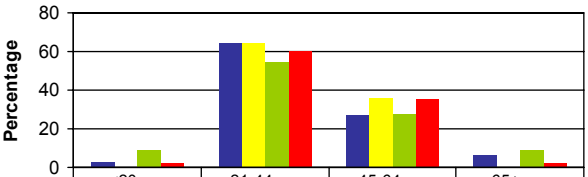
*A natural cause of death can have a contributing factor that determines the death to be accidental. There were 8 deaths that fell into this category (6 from drug toxicity, 2 from hip fractures resulting from falling).

**Poison includes carbon monoxide poisoning and other chemical poisoning.

***Asphyxia includes deaths from choking, drowning, hanging, positional, strangulation, suffocation and traumatic occurrences.

****Other includes deaths from chemical reactions, exsanguinations, hypothermia, medical complications, physical abuse and stabbings.

Drug Deaths by Age, 2000-2003



Year: Deaths	<20 yrs	21-44 yrs	45-64 yrs	65+ yrs
2000: 33	3	64	27	6
2001: 32	0	64	36	0
2002: 33	9.1	54.5	27.3	9.1
2003: 43	2.3	60.1	34.9	2.3

Drug Deaths by Gender, 2003

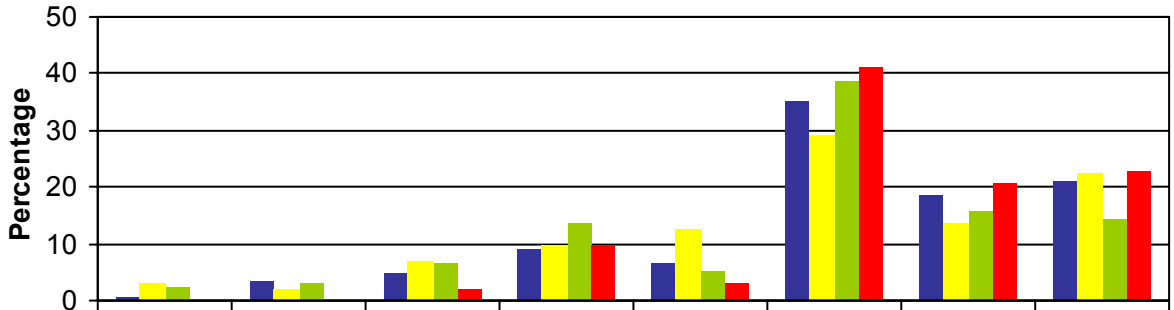
	Female (13)	Male (30)
Accident	10	24
Suicide	3	5
Homicide	0	1

Drug Deaths by Drug of First Mention (on Toxicology Report), 2001-2003

Year: Deaths	Alcohol	Heroin	Cocaine	Methadone	Narcotic Analgesic	OTC Pain Medication	Oxycodone	Anti-depressant	Anti-psychotic	Other
2001: 32	13.3	34.4	10	3	20	3	13.3	0	0	0
2002: 33	12.1	3	30.3	12.1	15.2	0	3	9.1	9.1	6.1
2003: 43	11.6	9.3	39.5	4.7	14	0	2.3	7	7	4.7

Cause of Death

Vehicular Deaths by Age, 2000-2003



Year: Deaths	0-5 yrs	6-10 yrs	11-15 yrs	16-18 yrs	19-20 yrs	21-44 yrs	45-64 yrs	65+ yrs
2000: 119	0.8	3.4	5	9.2	6.7	35.3	18.5	21
2001: 102	3	2	6.9	9.8	12.7	29.4	13.7	22.5
2002: 132	2.3	3	6.8	13.6	5.3	38.6	15.9	14.4
2003: 92	0	0	2.2	9.8	3.3	41.3	20.7	22.8

Vehicular Deaths by Gender, 2001-2003

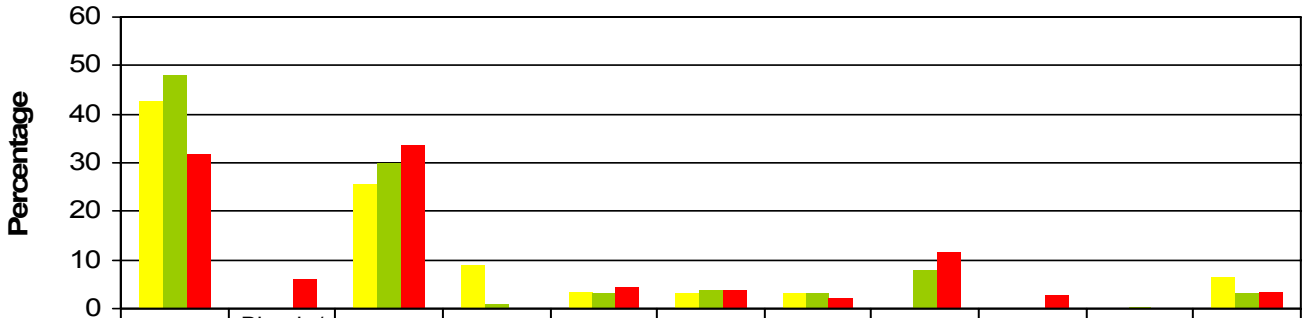
	Female	Male
2001: 102	40.9% (41)	59.8% (61)
2002: 132	31.1% (41)	68.9% (91)
2003: 92	42.4% (39)	57.6% (53)

Bicycle/Pedestrian Deaths by Age, 2003

	<20 yrs	21-44 yrs	45-64 yrs	65+ yrs
2003: 18	**4**	**8**	**3**	**3**

Cause of Death

Accidental Deaths by Cause, 2001-2003



Year: Deaths	Vehicle	Bicycle/ Pedes-trian	Fall	Poison	Fire	Drown-ing	Asphyxia	Drug OD	Natural*	Gun	Other
2001: 226	42.5	N/A	25.7	8.8	3.5	3.1	3.1	0	N/A	0	6.6
2002: 272	48.2	N/A	30.1	1.1	2.9	3.7	2.9	7.7	N/A	0.4	2.9
2003: 290	31.7	6.2	33.8	0	4.5	3.8	2.1	11.7	2.8	0	3.4

*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 (6 from drug toxicity, 2 from hip fractures resulting from falling).

Accidental Deaths by Age, 2001-2003

Year: Deaths	<1yr	1-5 yrs	6-16 yrs	17-25 yrs	26-44 yrs	45-64 yrs	>/=65 yrs
2001: 226	1.3	2.2	6.6	13.7	21.2	16.4	38.5
2002: 272	1.1	2.2	8.5	16.5	20.2	18.4	33.1
2003: 290	0.7	1	3.8	8.6	23.8	20.3	41.7

Deaths Resulting from Falls by Age, 2001-2003

Year: Deaths	<10 yrs	11-20 yrs	21-44 yrs	45-64yrs	>/=65 yrs
2001: 66	1.5	1.5	9.1	12.1	75.8
2002: 82	0	2.4	6.1	13.4	78
2003: 98	0	0	3.1	11.2	85.7

2003 Child Death Review Meetings

There were 29 child death cases reviewed in 2003.

Natural Deaths - 13

- SIDS - 8
  - Black -1
  - Hispanic - 1
  - White - 6
- Other - 5
  - Group A streptococcal pneumonia - 1
  - Aspiration pneumonia - 1
  - Pneumonia, community acquired - 1
  - Medical complications of necrotizing enterocolitis - 1
  - Medical complications of breech delivery - 1

Vehicular Accidents - 4

- Driver – 3; Passenger – 1
  - Seatbelt Worn – 2
  - Seatbelt Not Worn – 1
  - N/A (All Terrain Vehicle) - 1

Accidental Deaths - 4

- Drowning – 3
  - Bathtub – 1
  - Pool - 2
- Suffocations -1

Suicides - 3

- Gun
  - White - 2
- Hanging
  - White - 1

Homicides – 3

- Stabbed
  - Black – 1
  - White – 2

Undetermined - 2

Child Death Cases Reviewed by Year

	2001	2002	2003
Natural	19	16	13
Vehicular Accidents	10	20	4
Accidental	0	7	4
Suicides	3	1	3
Homicides	1	1	3
Undetermined	2	2	2
Total Cases	35	47	29

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