Washtenaw County Medical Examiner 2007 Annual Report

Bader J. Cassin, M.D., Chief Medical Examiner

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Office of the Washtenaw County Medical Examiner

To: Washtenaw County Board of Commissioners, and the Citizens of Washtenaw County

From: Bader J. Cassin, M.D., Chief Medical Examiner

The laws of the State of Michigan assign the responsibility for determining the cause and manner of unexpected deaths in each county to the medical examiner. The Washtenaw County Medical Examiner upholds these laws and accepts this responsibility with full commitment to a consistent high quality service, which is recognized as a model throughout the State of Michigan. Every reported death is investigated thoroughly, frequently with the cooperation of law enforcement agencies and health care personnel in Washtenaw County as well as around the State of Michigan. Because Washtenaw County is a principal medical referral center, our inquiries often lead necessarily to distant sources of information regarding the circumstances and causes of injury. The results of these death investigations provide valuable information, which is used in professional education and by the criminal justice system, public health departments, families of the deceased, and other concerned persons.

While the medical examiner staff of investigators, physicians and support persons is primarily concerned with the circumstances surrounding unexpected deaths, our concern for the living is reflected in our regular reviews of all childhood deaths with concerned and involved state and county agencies, as well as our reviews of all deaths of persons receiving community mental health services. Staff members likewise donate many hours to emergency management and disaster preparedness as well as to professional and local public education programs for injury investigation, treatment and prevention.

The maintenance of a properly prepared and effective death investigation system necessarily involves periodic investigator recruitment and continuing education. These regular efforts, along with the requirements of our combined investigator activities, are coordinated by our dedicated support staff.

I want to thank the Washtenaw County Board of Commissioners and the County Administration for their continued encouragement and support of this program, which enables the medical examiner staff to provide this necessary and valuable service to the citizens of Washtenaw County. I respectfully submit this annual report to demonstrate the expanding scope and sophistication of this professional and continued cost-effective service. With you, I take great pride in the development of this office during the past decade. I welcome the opportunity to discuss any aspect of this report with you.

To: Washtenaw County Board of Commissioners, and the Citizens of Washtenaw County

From: Roger D. Simpson, Vice President Huron Valley Ambulance

Our 2007 annual report reflects the increasing number of death investigations done by our staff over this past year. We have again surpassed the number of investigations performed over the previous year. Our staff continues to do an excellent job in providing the vital and necessary contracted Medical Examiner investigative and administrative services for the citizens of our communities. We continue to work closely with the law enforcement agencies, funeral homes, hospitals, and many others that we come in contact with on a daily basis. Huron Valley Ambulance remains committed to providing these contracted services on behalf of Washtenaw County in the most professional and cost efficient manner possible.

Thank you for taking the time to look over our 2007 activities. Please do not hesitate to contact us should you have any questions, or if we can assist you in any way.

Medical Examiner Office Expenses

Fiscal Year 2007 (October 01, 2006 through September 30, 2007)

Budget (Table 1)

Budgeted Amount	$562,416.00
Expenditures	$564,455.00
Balance	-$2,039.00

Washtenaw County Medical Examiner Staff - 2007

Medical Staff

Bader J. Cassin, M.D., Chief Medical Examiner
Jeffrey M. Jentzen, M.D., Deputy Medical Examiner
Yung A. Chung, M.D., Deputy Medical Examiner

Administrative Staff

Roger D. Simpson, Chief Investigator
Paul Davison, Investigator Coordinator
Lisa M. Hooven-Corp, Administrative Coordinator/Medical Transcriptionist

Investigative Staff

Nick Bailey, field (trainee)
Terri Bollinger, UMMC
Sheila Briggs, SJMH
Paul Davison, hospital/field
Mark Deming, UMMC
Mary Derouin, SJMH
Diana French, hospital/field
Chris Heikka, UMMC/field
Mary Kohair, UMMC
R. Keith Johnson, field/hospital
Valerie Mitchell, field/hospital
Leslie Patterson, SJMH
Paul Vaughan, field/hospital

Criteria for Medical Examiner Cases

Deaths which should be reported to the medical examiner include all those which result, either directly or indirectly, from injury, whether by accident or intended, self-inflicted or caused by another person. Injury includes poisoning and drug ingestion or injection. The interval (passage of time) between the injury and the death, whether it be minutes or months, does not change the requirement for reporting the death.

Deaths due to injury include the following:

- **Alcohol intoxication**
- **Asphyxiation (smothering, hanging, strangulation)**
- **Blunt impacts (by any object)**
- **Chemical exposure, at home or in the workplace**
- **Cutting and stab wounds**
- **Drug ingestion or injection**
- **Drowning (submersion in any amount of liquid)**
- **Electrocution (by lightning or wiring)**
- **Falls from any height**
- **Fire, explosion, or exposure to heat or smoke**
- **Firearms (gunshots)**
- **Intrauterine deaths associated with maternal trauma**
- **Pedestrian impacts (by any vehicle)**
- **Vehicle crashes or rollovers (driver or passenger)**

Unexpected and unexplained deaths of persons presumed to have been in good health or for whom no history of serious medical problems or progressive primary disease is known should also be reported to the medical examiner. Deaths in this category are identified by reference to a treating physician, the presence of prescribed medication, family members or friends familiar with the person, or persons present at the time of death.

Deaths occurring in a location other than a healthcare institution (hospital, clinic, nursing care facility) where there is a physician or nurse present need not be reported to the medical examiner if history of serious disease is known. In these cases the primary care or treating physician must be able and willing to determine that the known disease(s) is the sole cause of death (and is therefore a “natural” death). Other deaths which do not need to be reported are those occurring in a residence where a physician or nurse is in attendance and know that the death has resulted from a chronic illness. The funeral director of the family’s choice may be notified in these situations. Otherwise, the medical examiner must be notified of the death.

Criteria for Medical Examiner Cases (continued)

Michigan law also requires, in the interest of public health and safety, the reporting to the medical examiner of all deaths of persons in the following circumstances:

Unexpected infant deaths: Deaths occurring during the first two years of life, without obvious serious disease being present.

Deaths while in custody: The death of any prisoner in a jail or prison, or any person in the custody of a law enforcement officer or agency, whether by known or unknown cause(s). Hospitalized prisoners are also "in custody".

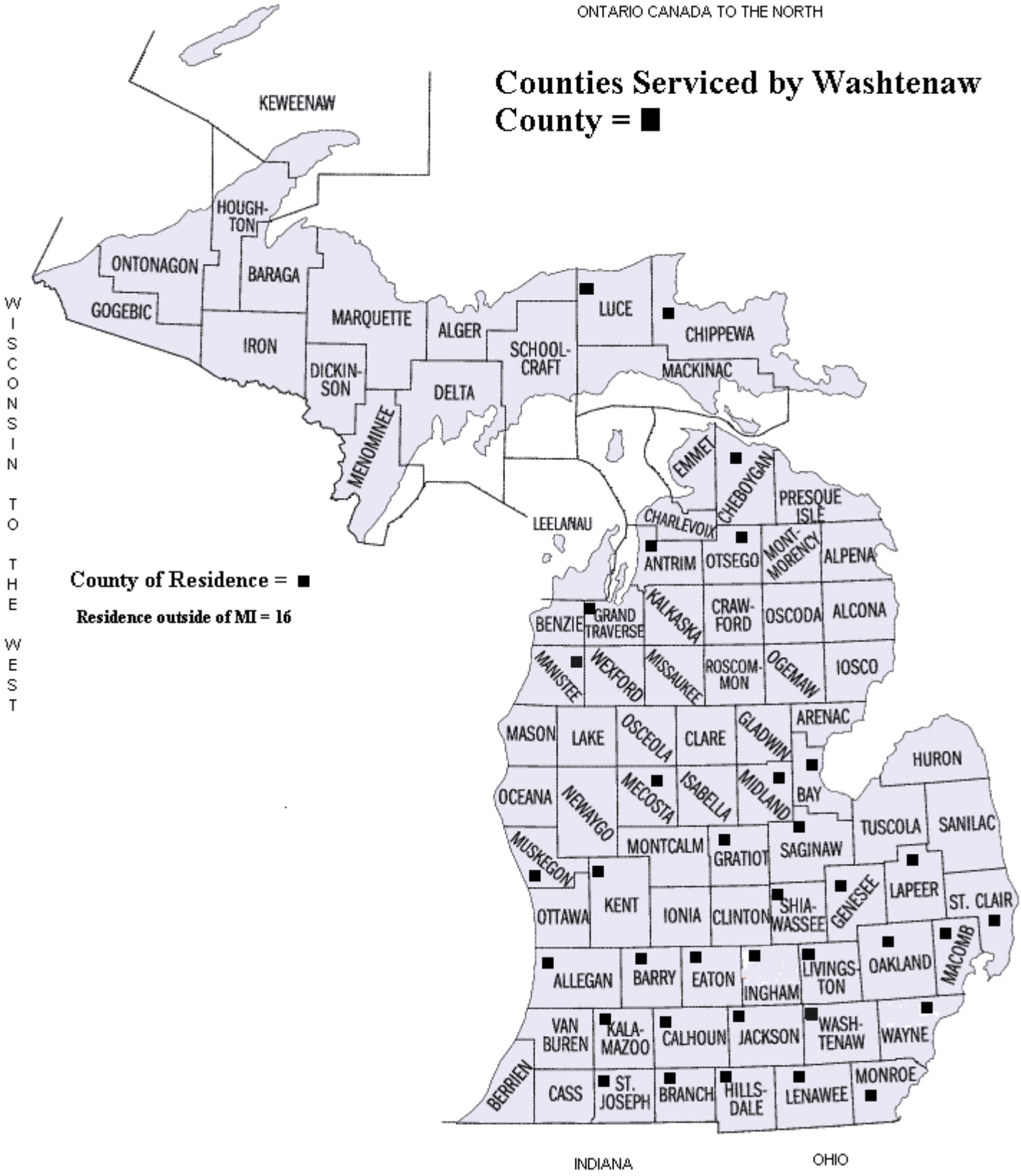
Deaths resulting from abortion: The death of any woman resulting from or following an abortion or attempted abortion, whether self-induced or otherwise.

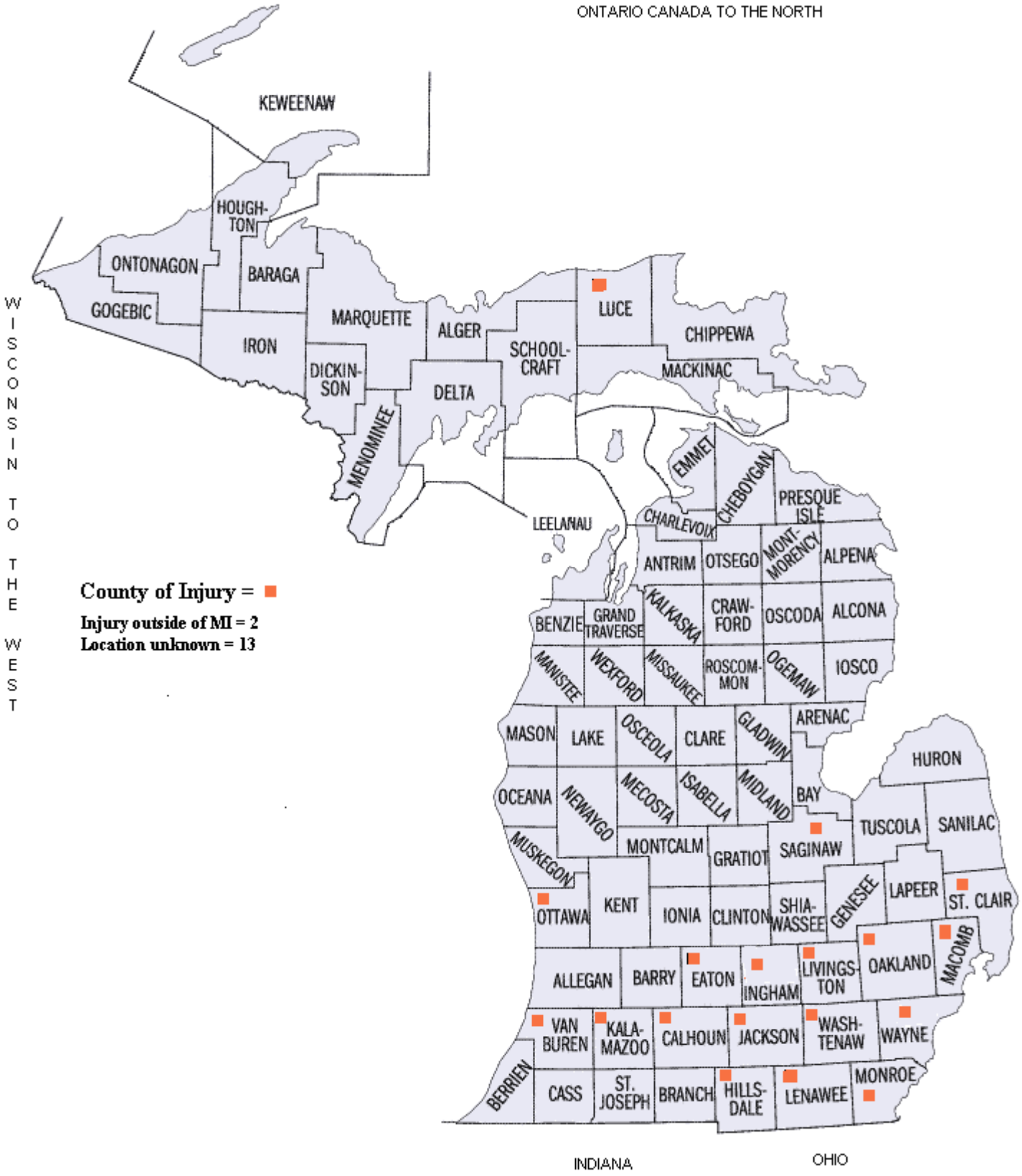
Found bodies: Bodies (whether or not identified) found within county boundaries, which are known or suspected to have come to their death through any of the "unnatural" means described above.

Deaths in the workplace: Deaths occurring to persons in their place of employment.

Deaths during medical procedures, whether diagnostic or therapeutic, in any location, must be reported to the medical examiner if the reason for the procedure is any of the causes listed above or if the death is unexpected and/or results from the procedure itself.

Any of the situations described above may require an autopsy as a part of the death investigation. Autopsies are done only if the information (or evidence) available is insufficient for accurate death certification (or effective prosecution).


ONTARIO CANADA TO THE NORTH
Counties Serviced by Washtenaw County = ■
WISCONSIN TO THE WEST
ONTARIO CANADA TO THE EAST
County of Residence = ■
Residence outside of MI = 16
KEWEENAW
HOUGH-TON
ONTONAGON
BARAGA
GOGEBIC
IRON
MARQUETTE
ALGER
SCHOOL-CRAFT
LUCE
CHIPPEWA
MACKINAC
DICKIN-SON
DELTA
MENOMINEE
LEELANAU
EMMET
CHEBOYGAN
PRESQUE ISLE
CHARLEVOIX
ANTRIM
OTSEGO
MONT-MORENCY
ALPENA
BENZIE
GRAND TRAVERSE
KALKASKA
CRAW-FORD
OSCODA
ALCONA
MANISTEE
WEXFORD
MISSAUKEE
ROSCOM-MON
OGEMAW
IOSCO
MASON
LAKE
OSCEOLA
CLARE
GLADWIN
ARENAC
HURON
OCEANA
NEWAYGO
MECOSTA
ISABELLA
MIDLAND
BAY
TUSCOLA
SANILAC
MUSKEGON
MONTCALM
GRATIOT
SAGINAW
OTTAWA
KENT
IONIA
CLINTON
SHIA-WASSEE
GENESEE
LAPEER
ST. CLAIR
ALLEGAN
BARRY
EATON
INGHAM
LIVINGS-TON
OAKLAND
MACOMB
VAN BUREN
KALA-MAZOO
CALHOUN
JACKSON
WASH-TENAW
WAYNE
BERRIEN
CASS
ST. JOSEPH
BRANCH
HILLS-DALE
LENAWEE
MONROE
INDIANA
OHIO


ONTARIO CANADA TO THE NORTH
KEWEENAW
HOUGH-TON
ONTONAGON
BARAGA
GOGEBIC
IRON
MARQUETTE
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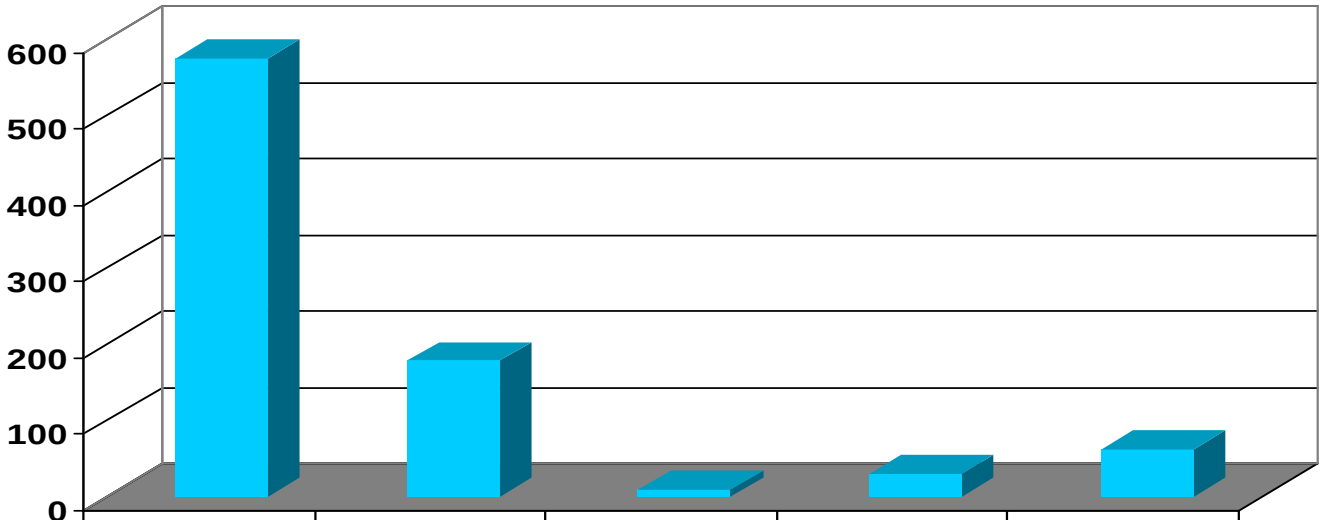
OSCODA
ALCONA
MANISTEE
WEXFORD
MISSAUKEE
ROSCOM-MON
OGEMAW
IOSCO
MASON
LAKE
OSCEOLA
CLARE
GLADWIN
ARENAC
HURON
OCEANA
NEWAYGO
MECOSTA
ISABELLA
MIDLAND
BAY
TUSCOLA
SANILAC
MUSKEGON
MONTCALM
GRATIOT
SAGINAW
OTTAWA
KENT
IONIA
CLINTON
SHIA-WASSEE
GENESEE
LAPEER
ST. CLAIR
ALLEGAN
BARRY
EATON
INGHAM
LIVINGS-TON
OAKLAND
MACOMB
VAN BUREN
KALA-MAZOO
CALHOUN
JACKSON
WASH-TENAW
WAYNE
BERRIEN
CASS
ST. JOSEPH
BRANCH
HILLS-DALE
LENAWEE
MONROE
INDIANA
OHIO
WISCONSIN TO THE WEST
ONTARIO CANADA TO THE EAST
County of Injury =
Injury outside of MI = 2
Location unknown = 13

2007 Mortality Statistics

Manner of Death (Table 3)

Manner of death is classified into one of the five categories listed below. Indeterminate deaths are those deaths where there is insufficient information about the circumstances surrounding the death to make a ruling; e.g., most unwitnessed deaths due to illicit drug(s) are Indeterminate.

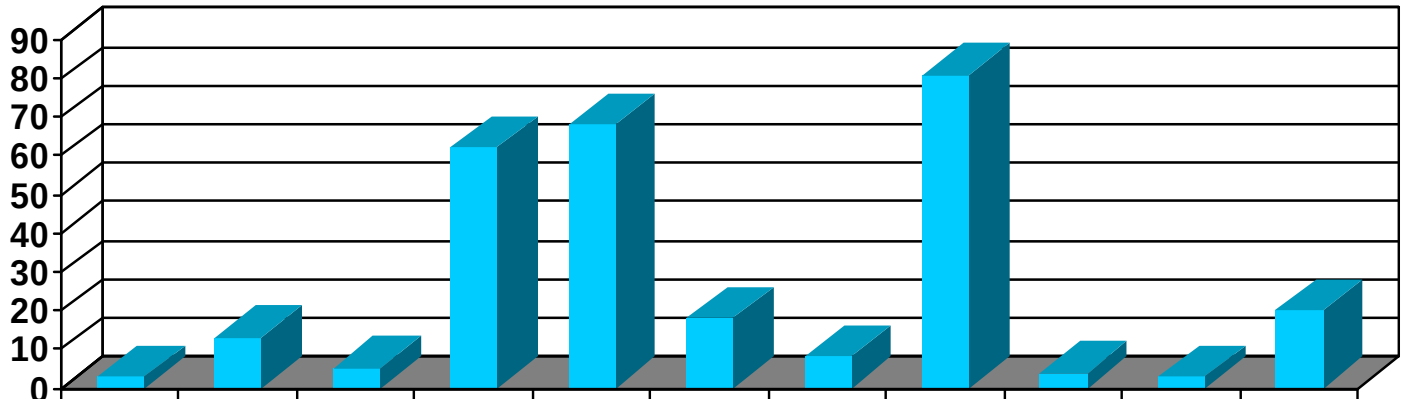


	Natural	Accident	Homicide	Suicide	Indeterminate
Total 856	574	178	10	31	63

Cause of death is defined as any injury or disease that produces an irreversible physiological decline.

Unnatural Causes of Death (Table 4)

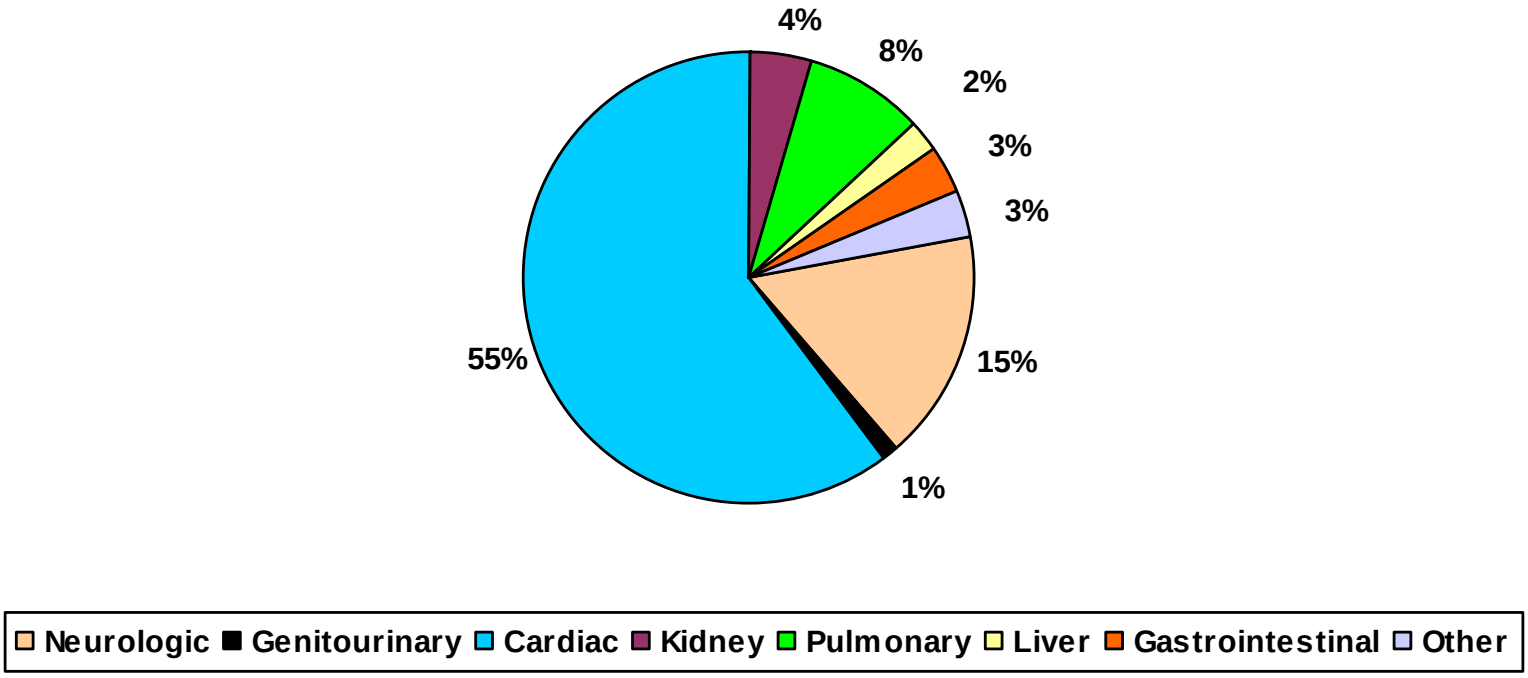
Other = found bones, hypothermia, therapeutic, asphyxia, suffocation, shaken, unknown



	Blunt Trauma	Burns	Drowning	Drug Toxicity	Fall	Firearms	Hanging	Motor Vehicle	Poisoning	Stabbing or Cuts	Other
285	3	13	5	62	68	18	8	81	4	3	20

2007 Natural Deaths = 574

Table 5



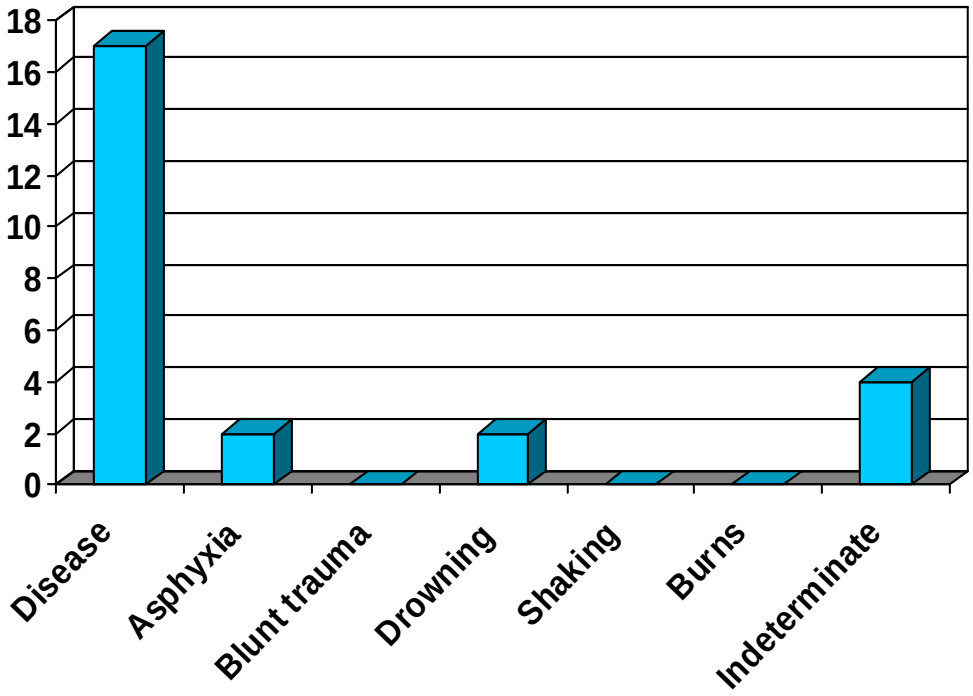
Many of the unexpected deaths reported to the medical examiner's office ultimately are determined to be natural events (I.e., due to disease). This chart exhibits the various organ systems primarily involved in the cause of death.

2007 INFANT DEATHS = 24

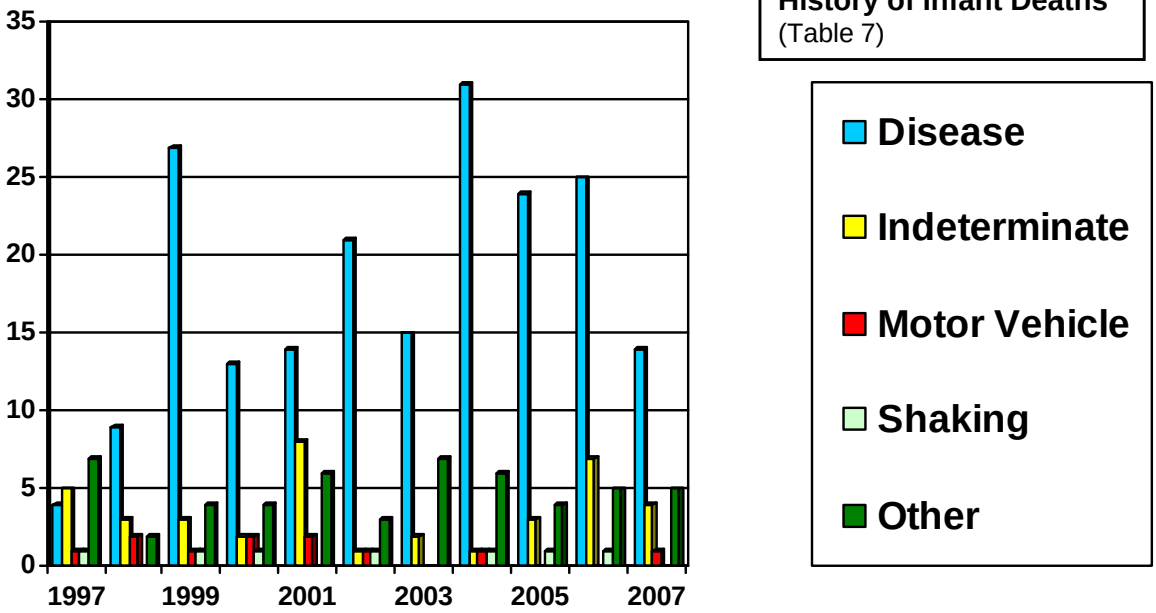
Cause of Death (Table 6)

(2 years of age or less)

Washtenaw County residents = 11

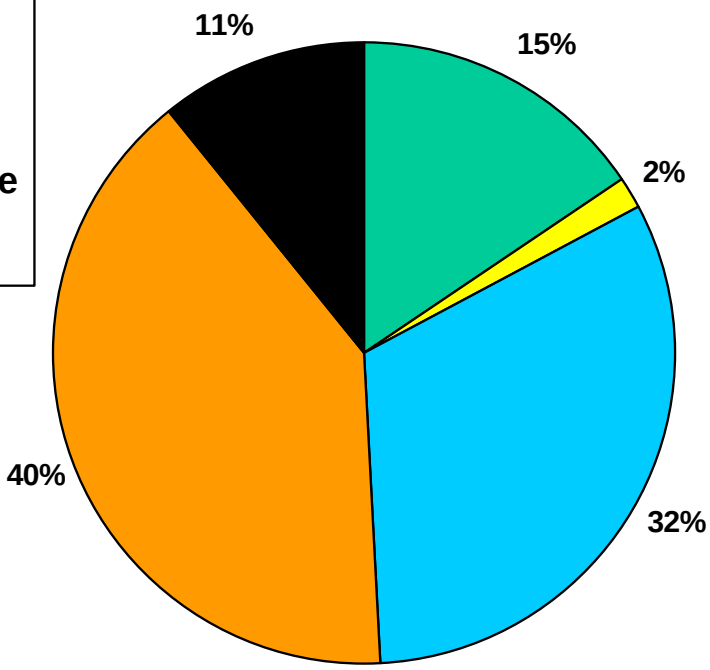


History of Infant Deaths
(Table 7)



2007 Accidental Deaths = 178

- Burn
- Drowning
- Fall
- Motor Vehicle
- Other



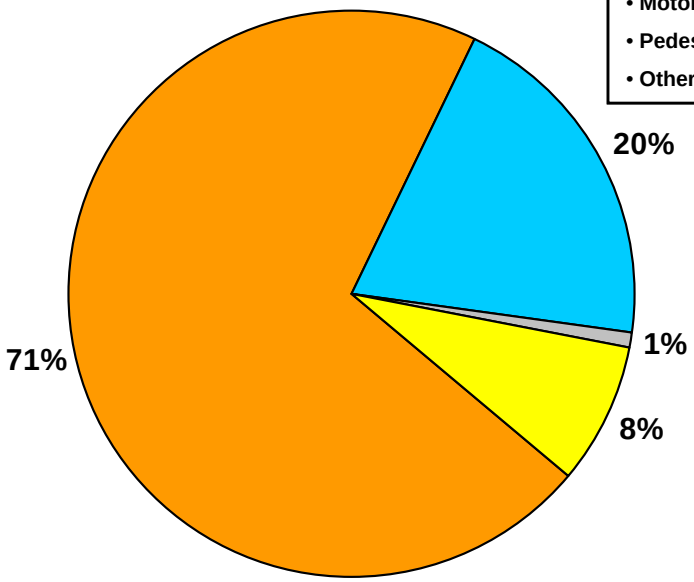
Cause of Death (Table 8)

Other = therapeutic, asphyxia, suffocation, blunt trauma, drug overdose, hypothermia, unknown

Explanation of Falls

The potential for accidental falls increases with age. One-fifth of the trauma-related deaths are due to the injuries sustained in a fall.

- Driver: (Restrained = 57%)
- Passenger: (Restrained = 47%)
- Unknown: (Restrained = 0%)
- Pedestrian



Total Motor Vehicle Deaths = 80

(Table 9)

- **Auto/SUV = 57**
- **Motorcycle = 10**
- **Pedestrian = 5**
- **Other= 8 (ATV, bicycle, dirt bike, tractor, etc.)**

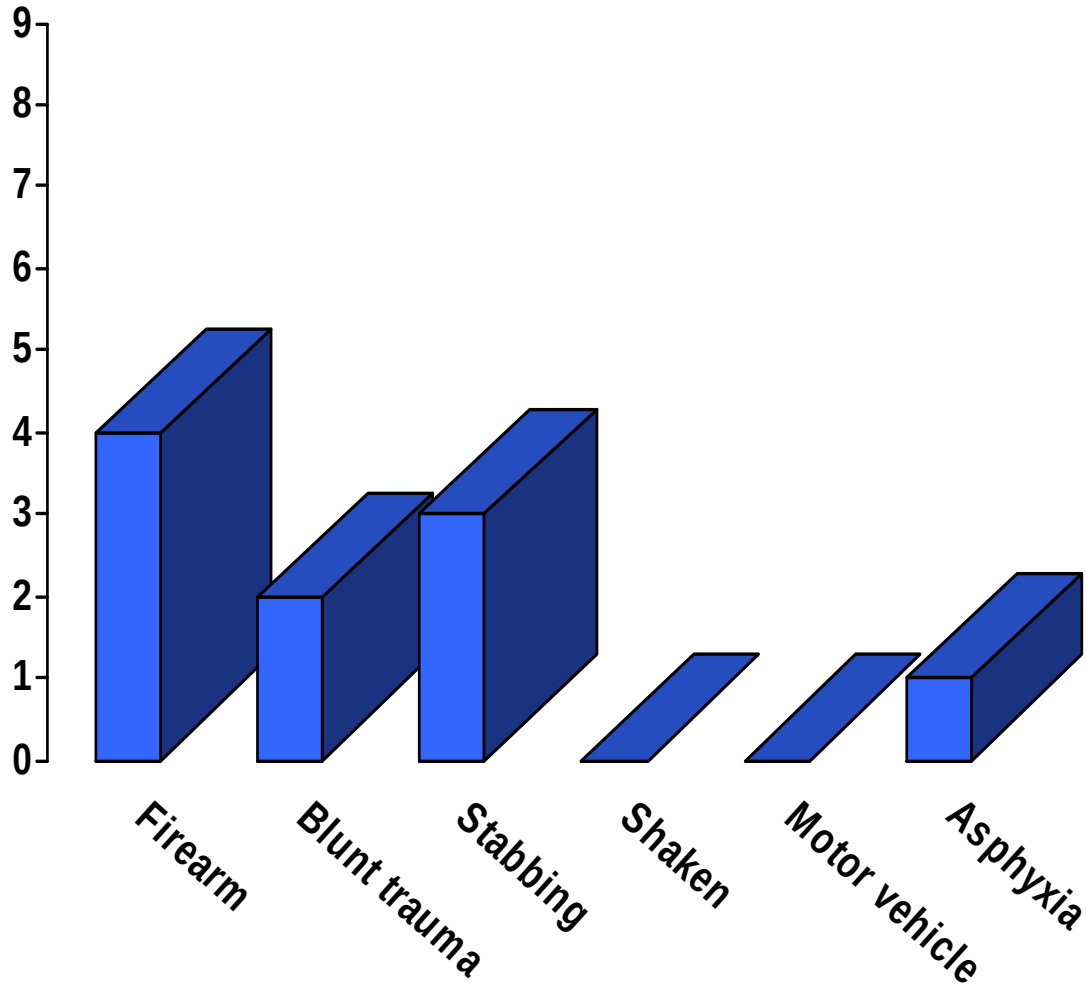
Vehicle crashes, Washtenaw County = 33

2007 Homicide Deaths = 10

Cause of Death (Table 10)

Blunt trauma = beating

Firearm = pistol, rifle, shotgun



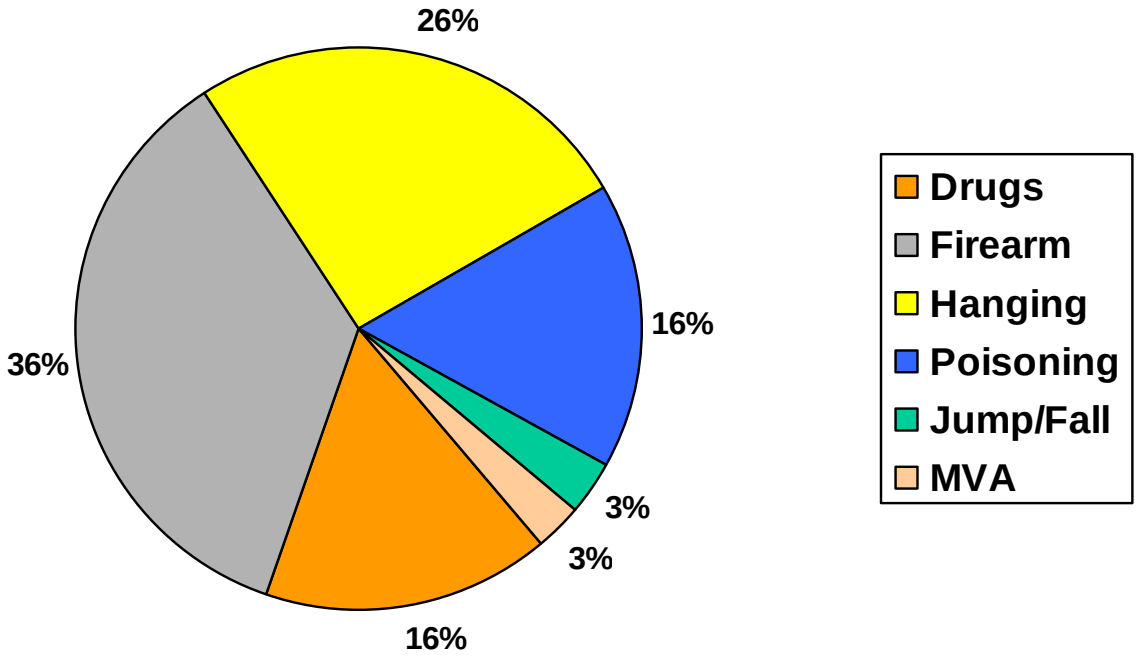
6 of these homicidal assaults occurred in Washtenaw County.

The remainder were transferred to Washtenaw County hospitals.

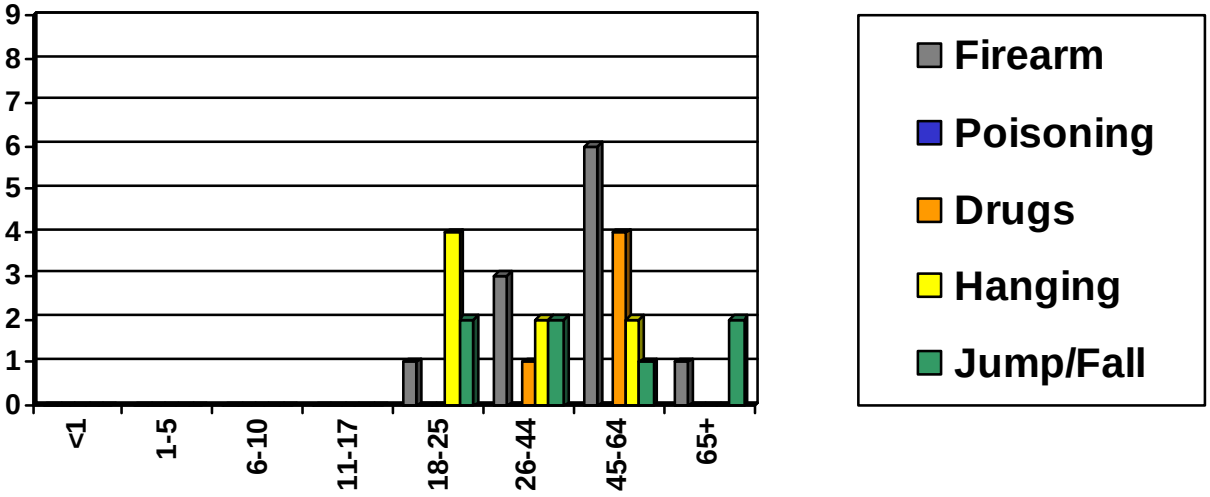
2007 Suicide Deaths = 31

Cause of Death (Table 11)

Deaths are certified as suicide when the injury is self-inflicted and there is a clear indication of intent.



Methods Used by Age of Deceased (Table 12)

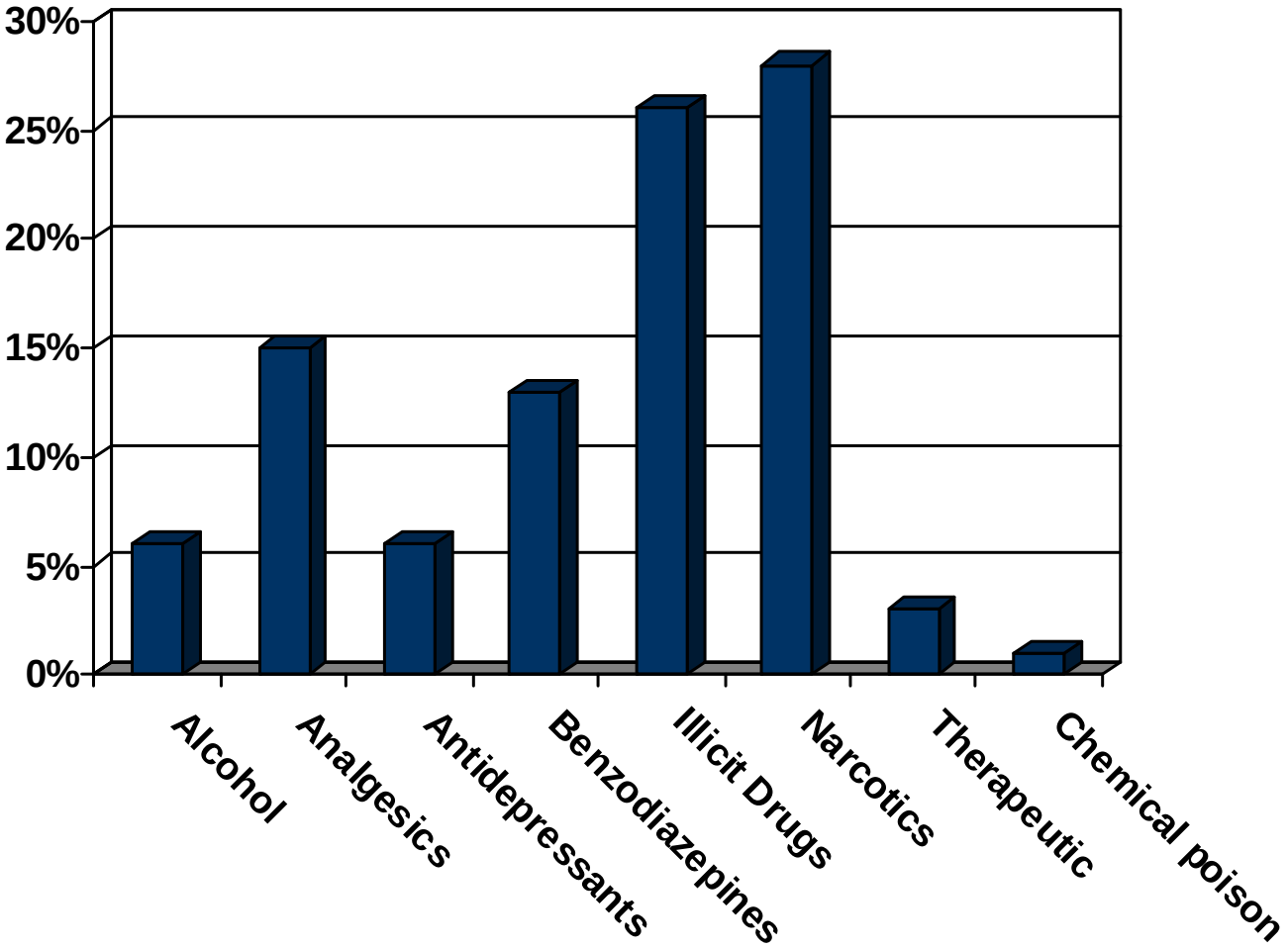


33 of the suicidal injuries occurred in Washtenaw County.

The remainder were transferred to Washtenaw County hospitals.

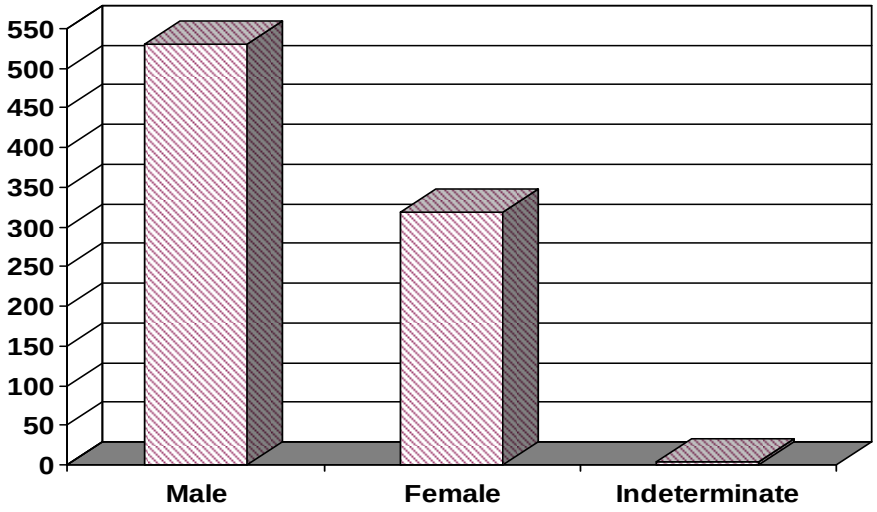
Deaths Due to Drugs

Table 13



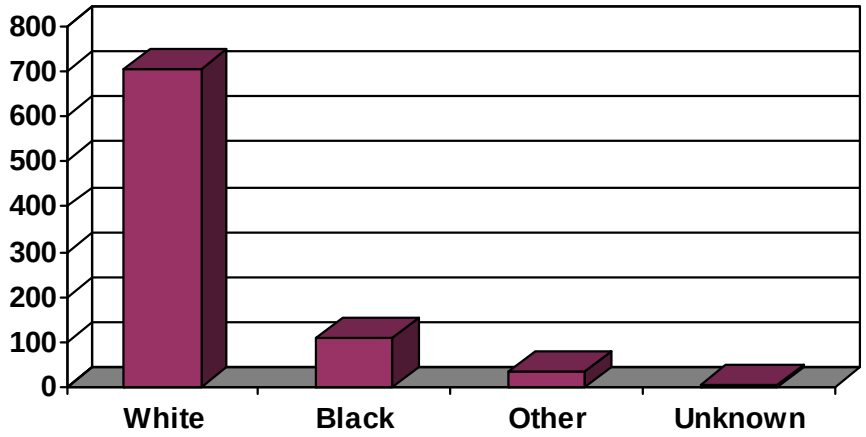
Testing for the presence of abuse and many therapeutic drugs is done in most death investigations. Deaths are attributed to a drug or combination of particular drugs if there is no other reasonable explanation.

2007 Demographic Statistics



Sex of Deceased (Table 14)

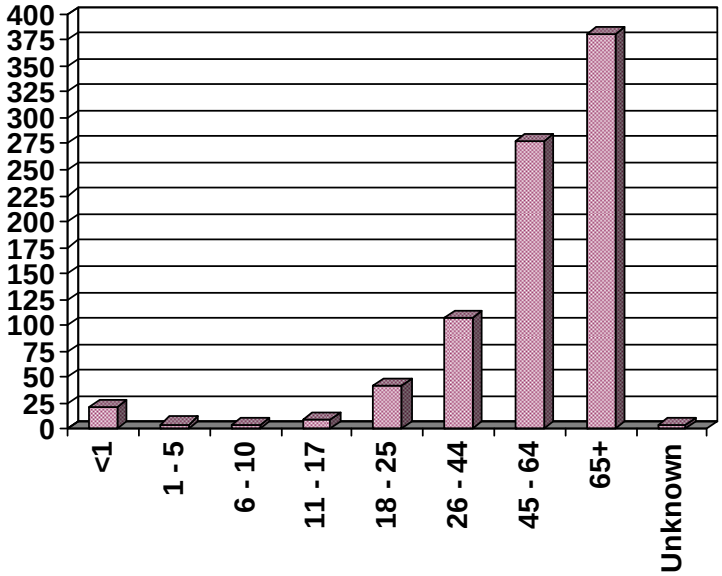
Indeterminate: skeletal remains (animal/human)



Ethnicity of Deceased (Table 15)

Other: Asian; American/East Indian; Hispanic

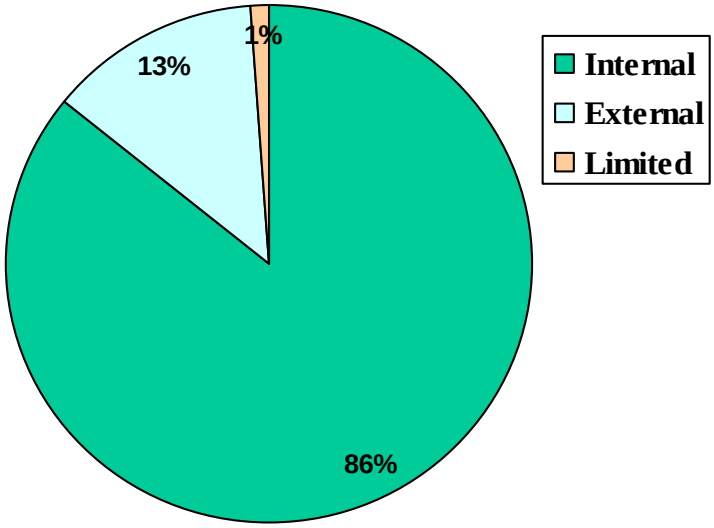
Unknown: skeletal remains (animal/human)



Age at Death (Table 16)

Unknown: skeletal remains (animal/human)

2007 Medical Examiner Autopsies

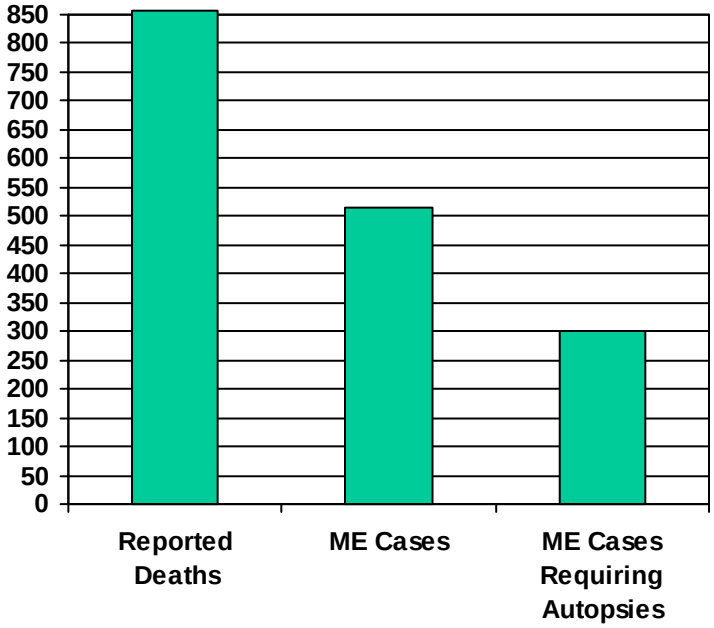


Total Autopsies = 308 (Table 17)

Internal = complete autopsy

External = complete examination of body surfaces

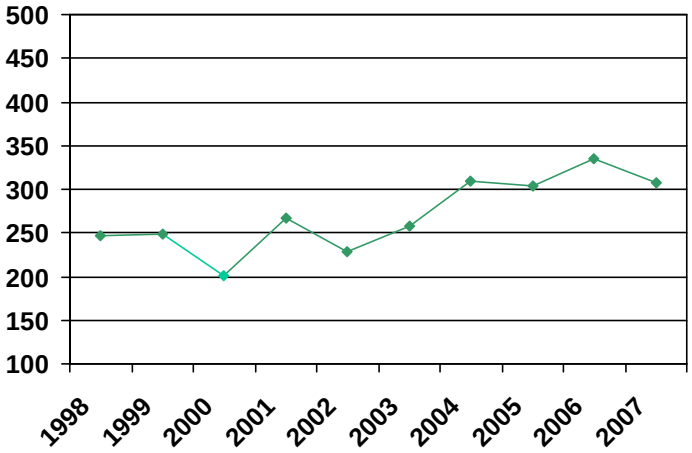
Limited = restricted internal examination



ME Cases Requiring Autopsies (Table 18)

Not all deaths investigated require an autopsy, often because of extensive medical history.

60% of reported deaths become ME cases and 60% of ME cases require autopsies.



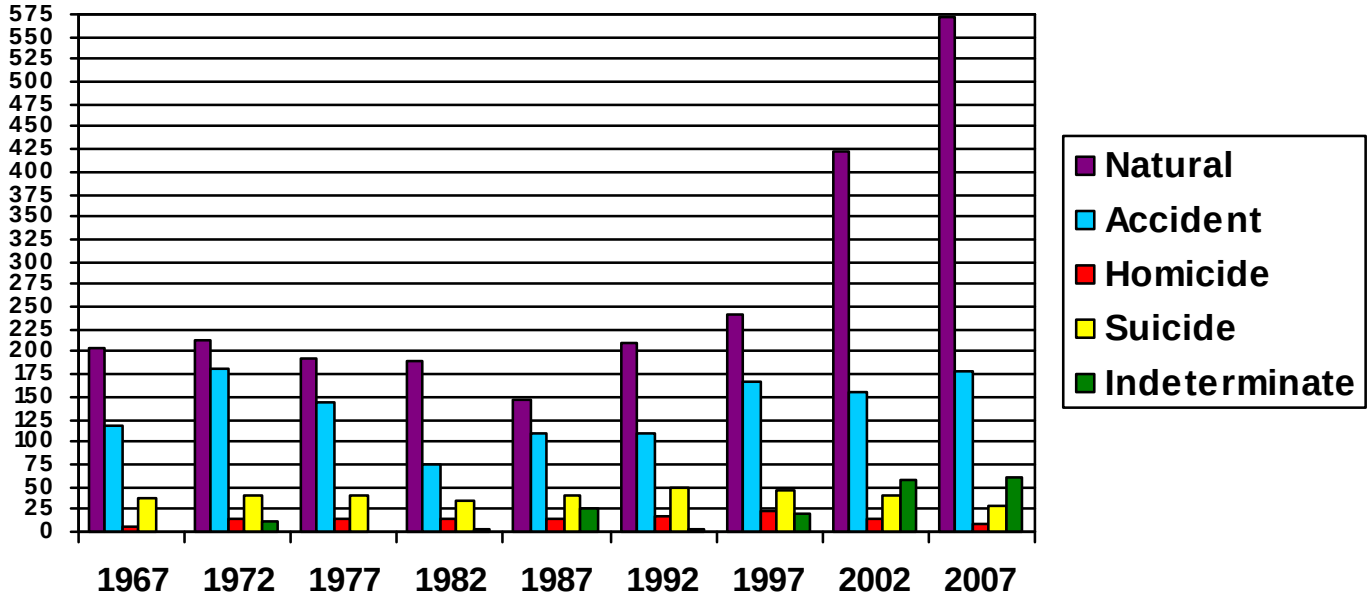
Autopsy Comparison (Table 19)

From previous years, 1998 through 2007

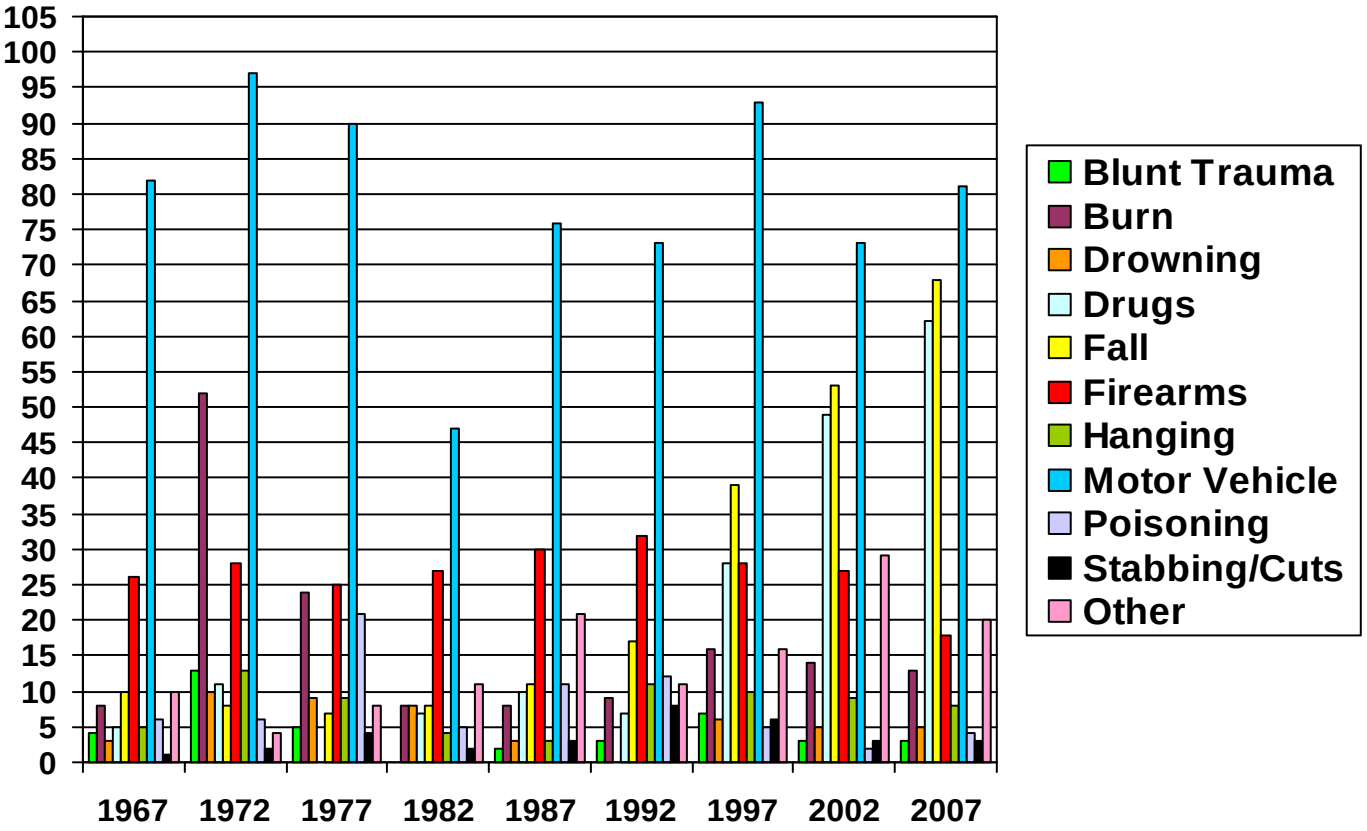
History of Medical Examiner's Office

1967 to 2007

Manner of Death (Table 20)



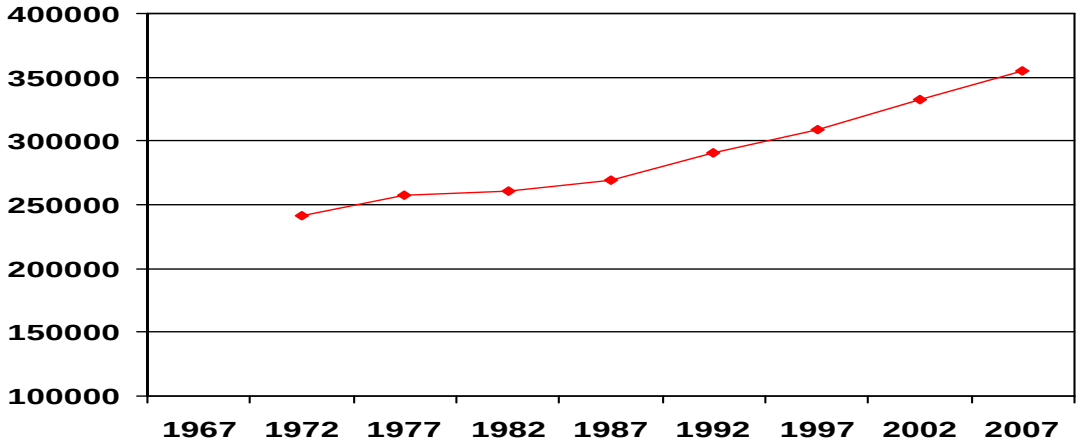
Type of Injury (Table 21)



Washtenaw County Demographics

1967 to 2007

County Population (Table 22) 2007 = 354,947



Number of Medical Examiner Cases versus Total County Deaths (Table 23)