Washtenaw County Medical Examiner 2007 Annual Report

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Table of Contents

Letter from the Medical Examiner ..............................................................2
Letter from Huron Valley Ambulance ..........................................................2
Medical Examiner Office Expenses ...............................................................3
Washtenaw County Medical Examiner Staff ..................................................3
Criteria for Medical Examiner Cases ...........................................................4-5
Counties Serviced by Washtenaw County .......................................................6
County of Injury ............................................................................................7
2007 Mortality Statistics ..............................................................................8
  Table 3: Manner of Death
  Table 4: Unnatural Cause of Death
2007 Natural Deaths .....................................................................................9
  Table 5
2007 Infant Deaths ......................................................................................10
  Table 6: Cause of Death
  Table 7: History of Infant Deaths
2007 Accidental Deaths ..............................................................................11
  Table 8: Cause of Death
  Table 9: Motor Vehicle Crashes
2007 Homicide Deaths ...............................................................................12
  Table 10: Cause of Death
2007 Suicide Deaths ...................................................................................13
  Table 11: Cause of Death
  Table 12: Methods Used by Age of Deceased
Deaths Due to Drugs ....................................................................................14
  Table 13
2007 Demographic Statistics .....................................................................15
  Table 14: Sex of Deceased
  Table 15: Ethnicity of Deceased
  Table 16: Age at Death
2007 Medical Examiner Autopsies ...............................................................16
  Table 17: Total Autopsies
  Table 18: ME Cases Requiring Autopsies
  Table 19: Autopsy Comparison
History of the Medical Examiner’s Office 1966 – 2007 .............................17
  Table 20: Manner of Death
  Table 21: Type of Injury
Washtenaw County Demographics 1966 – 2007 ........................................18
  Table 22: County Population
  Table 23: Number of Medical Examiner Cases versus Total County Deaths
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)

<table>
<thead>
<tr>
<th></th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budgeted Amount</td>
<td>$562,416.00</td>
</tr>
<tr>
<td>Expenditures</td>
<td>$564,455.00</td>
</tr>
<tr>
<td>Balance</td>
<td>-$2,039.00</td>
</tr>
</tbody>
</table>

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)                  Chris Heikka, UMMC/field
Terri Bollinger, UMMC                        Mary Kohair, UMMC
Sheila Briggs, SJMH                          R. Keith Johnson, field/hospital
Paul Davison, hospital/field                 Valerie Mitchell, field/hospital
Mark Deming, UMMC                            Leslie Patterson, SJMH
Mary Derouin, SJMH                           Paul Vaughan, field/hospital
Diana French, hospital/field
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.
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).
Counties Serviced by Washtenaw County = ■

County of Residence = ■
Residence outside of MI = 16
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.

<table>
<thead>
<tr>
<th>Manner of Death</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural</td>
<td>574</td>
</tr>
<tr>
<td>Accident</td>
<td>178</td>
</tr>
<tr>
<td>Homicide</td>
<td>10</td>
</tr>
<tr>
<td>Suicide</td>
<td>31</td>
</tr>
<tr>
<td>Indeterminate</td>
<td>63</td>
</tr>
</tbody>
</table>

Total 856

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

<table>
<thead>
<tr>
<th>Cause</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blunt Trauma</td>
<td>285</td>
</tr>
<tr>
<td>Burns</td>
<td>3</td>
</tr>
<tr>
<td>Drowning</td>
<td>13</td>
</tr>
<tr>
<td>Drug Toxicity</td>
<td>5</td>
</tr>
<tr>
<td>Fall</td>
<td>62</td>
</tr>
<tr>
<td>Firearms</td>
<td>68</td>
</tr>
<tr>
<td>Hanging</td>
<td>18</td>
</tr>
<tr>
<td>Motor Vehicle</td>
<td>81</td>
</tr>
<tr>
<td>Poisoning</td>
<td>4</td>
</tr>
<tr>
<td>Stabbing or Cuts</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>20</td>
</tr>
</tbody>
</table>

8
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)

- Disease
- Indeterminate
- Motor Vehicle
- Shaking
- Other
2007 Accidental Deaths = 178

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.

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.
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)