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Message to the Board of Commissioners and Citizens of Washtenaw County

The main duties of the medical examiner are to determine the cause and manner of death and make legal determinations of identity of the decedent. The Washtenaw County Medical Examiner’s Office investigates sudden, violent, unexpected, and suspicious deaths that occur in Washtenaw County. The Office of the Medical Examiner certifies death after investigation and postmortem examination and issues the death certificate as required by law. Complete findings of the death investigation are distributed to families and law enforcement agencies as appropriate. Bereavement counseling and viewing of the decedent are provided as needed. The 2018 annual budget was $993,631 with additional revenue of $201,167 or $1.97 per capita, one of the lowest in Michigan. A total of 2750 cremation certifications were approved, which is an 9.3% increase over the number in 2015.

There were a total of 1071 deaths reported and the office performed 339 complete autopsies, 58 external examinations, 7 limited examinations and 456 death scene investigations.

The opioid epidemic continues unabated in Washtenaw County. In 2018 there were a total of 100 drug-related deaths, excluding alcohol-related deaths. There was a marked increase in the synthetic opioid Fentanyl which alone or in combination with other drugs accounted for 48 percent of all drug deaths. Heroin and Cocaine alone or in combination was present in another 40 percent and 20 percent of drug deaths, respectively. These three drugs are often used in combination, with 36 per cent of drug deaths containing two or more of these drugs. Prescription opioids (Methadone, Hydrocodone, etc.,) continued to show a significant decrease and were present in only 13 per cent of all drug deaths.

2018 witnessed a marked decrease in motor vehicle-related deaths. Included in this category was an increasing number of pedestrian deaths. The medical examiner office continues to participate in research with the International Center for Automotive Medicine (ICAM), which is housed in the University of Michigan. The goals of the research are to gain better understanding of the injuries related to motor vehicle and how automotive design can improve survival.

The medical examiner office continues with its participate with Gift-Of-Life, the local organ and tissue procurement program. In 2018 the office referred 398 total cases and 186 non-hospital cases that resulted in 20 tissue or organ donations, third highest in the state.

We extend our sincere gratitude to the Washtenaw County Board of Commissioners for their continued support and encouragement of the medical examiner program and the services we provide and the opportunity to serve the citizens of the Washtenaw County.

Respectfully submitted,

Jeffrey Jentzen, M.D.
Medical Examiner
Types of Deaths Reportable to the Medical Examiner

The Michigan County Medical Examiner Law, Act 181, P.A. of 1953, as amended, and the Michigan Public Health Code, Act 368, P.A. of 1978, as amended, mandates that specific types of death be referred to the Medical Examiner for investigation (see list below). These deaths include sudden and unexpected deaths, accidental deaths, and violent deaths. The medical examiner has the authority under these Acts to order an autopsy at any time it is deemed necessary to determine or confirm the cause and manner of death.

Deaths Reportable to the Medical Examiner:

- Violent death (e.g., strangulation, gunshot, stabbing, poisoning, etc.)
- Accidental deaths (e.g., falls, drowning, motor vehicle collisions, burns, overdose, etc.)
- Death of a prisoner (e.g., deaths in any county or city jail while imprisoned or in custody)
- Suspicious Circumstances (e.g., Unidentified Bodies or events surrounding death)
- Sudden and Unexpected deaths (e.g., all deaths during a surgical procedure, in recovery, anesthesia-related, unexpected natural death, occupational-related deaths)
- Without medical attendance within 48 hours of death
- In cases of chronic illness, the attending physician may sign the death certificate if s/he can be reasonably certain of the cause of death
- Death of a mother due to an abortion
- Unexpected infant deaths

The medical examiner would generally order an autopsy for any of the reportable deaths listed above.

Washtenaw County Medical Examiner Cases

Population 370,963
Cases Reported to Medical Examiner 1071
A. Number of deaths certified after postmortem examination 406
   1. Number of Medical Examiner Cases with Complete Autopsy 339
   2. Number of Medical Examiner Cases with External Examination 58
   3. Number of Medical Examiner Cases with Limited Examination 7

B. Number of deaths certified without postmortem examination 531

C. Number of deaths not certified by Medical Examiner's Office after investigation* 146

Definitions:
- Full Autopsy: A complete external and internal examination of a decedent
- Limited Examination: An examination which is focused on a specific organ or region of the body, i.e., heart. The limited examination also includes an external examination.
- External examination: An examination of the exterior of a decedent

*The high volume of certified cases results from M.E. signing all ER deaths
CREMATION PERMITS ISSUED

Cremation Permits Issued

<table>
<thead>
<tr>
<th>YEAR</th>
<th># Permits Issued</th>
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<tr>
<td>2013</td>
<td>2251</td>
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<tr>
<td>2014</td>
<td>2262</td>
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<td>2015</td>
<td>2355</td>
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<tr>
<td>2016</td>
<td>2550</td>
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<tr>
<td>2017</td>
<td>2570</td>
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<tr>
<td>2018</td>
<td>2750</td>
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Autopsy Activity

Washtenaw County Autopsy Activity 2013-2018

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
<th>Autopsies</th>
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<tbody>
<tr>
<td>2013</td>
<td>939</td>
<td>358</td>
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<tr>
<td>2014</td>
<td>848</td>
<td>359</td>
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<td>2015</td>
<td>917</td>
<td>342</td>
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<td>2016</td>
<td>1063</td>
<td>437</td>
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<tr>
<td>2017</td>
<td>1008</td>
<td>426</td>
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<tr>
<td>2018</td>
<td>1071</td>
<td>406</td>
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Manner of Death by Postmortem Examination
Deaths by Unnatural Causes

Accidental Deaths by Type

OTHER: Asphyxia, Therapeutic injury, Undetermined

OTHER: Asphyxia, Blunt force trauma, Therapeutic injury
Accidental Deaths – Motor Vehicle Crashes

OTHER: ATV, Bike, Tractor

Suicides by Means

OTHER: Fire, Drowning, Asphyxia, CO
Homicide Deaths

Deaths by Age Group
Drug Deaths Per Year

*Excludes deaths due to alcohol
Drug Deaths by Type

Drug-Related Deaths Washtenaw County (2013 - 2018)
Drug Death Trends

Washtenaw County Drug-Related Deaths 2013-2018
Deaths Due to Drug Type

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heroin</td>
<td>21</td>
<td>25</td>
<td>19</td>
<td>14</td>
<td>7</td>
<td>4</td>
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<tr>
<td>Fentanyl</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>9</td>
<td>14</td>
<td>19</td>
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<tr>
<td>Cocaine</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>4</td>
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<tr>
<td>Heroin/Fentanyl</td>
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<td>6</td>
<td>13</td>
<td>11</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>Fentanyl Cocaine</td>
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<td>0</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>21</td>
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# Motor Vehicle Death Trends

<table>
<thead>
<tr>
<th>Year</th>
<th>Motor Vehicle Deaths</th>
<th>Pedestrian Deaths</th>
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<tbody>
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<td>2009</td>
<td>38</td>
<td>3</td>
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<tr>
<td>2010</td>
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<td>2011</td>
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<td>2012</td>
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<td>2013</td>
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<td>2014</td>
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<td>2015</td>
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<td>2016</td>
<td>47</td>
<td>11</td>
</tr>
<tr>
<td>2017</td>
<td>70</td>
<td>12</td>
</tr>
<tr>
<td>2018</td>
<td>46</td>
<td>6</td>
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</table>
New Groups, New Substances, Continued Harm

The Opioid Epidemic in Washtenaw County
2018 Year In Review

• 81 Deaths in 2018, the Highest Number of Deaths in one year for Washtenaw County residents since tracking began in 2011.
• Deaths for Females Doubled from 14 to 28 between 2017 to 2018. Deaths for males stayed stable from 55 to 53 during the same period.
• Deaths for Black/African American Washtenaw County Residents Doubled in number and proportion between 2017 (8 deaths; 11% of total) to 2018 (18 deaths; 22% of total). Nearly all of these opioid related deaths involved both cocaine and Fentanyl.
• The Proportion of Opioid Related Deaths Involving Cocaine Increased from 20% in 2017 to 44% in 2018.
• Opioid Related Poisonings Diagnosed as Resulting from ‘Unintentional Poisoning’ Increased from 34% to 48% of opioid related emergency visits in 2018. During this same period, emergency visits for opioid poisonings coded as ‘Adverse Effects’ have decreased from 56% in 2016 to 43%. Those coded as ‘Intentional’ stayed steady at only 7%.
• The Proportion of Opioid Related Poisoning Deaths Associated with Synthetic Opioids like Fentanyl Increased from 38% to 84% in from 2016 to 2018. However, during this same period, only 7% of opioid poisoning related emergency visits involved Fentanyl.
• The Proportion of Opioid Related Deaths for Persons under 25 Years Decreased from 36% in 2016 to 10% in 2018. During the same period, the proportion of deaths among Washtenaw County residents 25-44 years increased from 33% in 2016 to 59% in 2018.
• Heroin Related Deaths Decreased from 60% of all opioid related deaths in 2016 to 30% in 2018.
• Pharmaceutical Opioids were Involved in 42% of opioid poisoning related emergency visits in 2018.

Visit washtenaw.org/opioids for additional opioid reports and data.

Questions? Contact Adreanne Waller, MPH, Epidemiologist, Washtenaw County Health Department.
Opioid Poisoning Related Deaths and Emergency Department Visits*
Rates Per 10,000**
Washtenaw County Residents
Zip Code of Residence
January 2016 - December 2018

*Opioid Poisoning including unintentional, intentional self harm, adverse effects, assault or undetermined (ICD-10 - T40(0,1,2,3,4,6)X(1-5).
Source: Emergency department data provided by Washtenaw County Health Department, Michigan Medicine and Saint Joseph Mercy hospitals reporting Washtenaw County residents only. These numbers do not include persons who survived their overdose and refused or did not seek or receive medical care.

**Opioid Poisoning Rate =
(Number of Opioid Related Emergency Department Admissions Plus Opioid Related Deaths / Total Number of Residents in Zip Code)*10,000

Visit washtenaw.org/opioids for additional opioid reports and data.
Questions? Contact Adreanne Waller, MPH, Epidemiologist, Washtenaw County Health Department.
### 2018 Highlights

- **186** Non-Hospital Death Referrals! (#2 in state)
- **20** TISSUE Donors Referred by Washtenaw County ME Office (#3 in state!)
- **16** EYE Donors Referred by WCME (#2 in state of Michigan)
- **26** ORGAN donors from Washtenaw County Hospitals were facilitated by WCME, as well as **23** Tissue and **25** Eye Donors!

<table>
<thead>
<tr>
<th>Washtenaw County Medical Examiner</th>
<th>2018</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Total Hospital Referrals</td>
</tr>
<tr>
<td>Michigan Medicine</td>
<td>1167</td>
</tr>
<tr>
<td>St. Joseph Mercy AA</td>
<td>684</td>
</tr>
<tr>
<td>Total Hospital</td>
<td>1851</td>
</tr>
<tr>
<td>Non Hospital Death ME Referrals</td>
<td>186</td>
</tr>
<tr>
<td>Total All</td>
<td>2037</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2018 Top Counties for ME Referrals!</th>
<th>Non-Hospital Death Referrals</th>
<th>Eligible for Tissue Donation</th>
<th>Tissue Donors</th>
<th>Conversion Rate</th>
<th>Eye Donors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wayne</td>
<td>322</td>
<td>88</td>
<td>4</td>
<td>5%</td>
<td>7</td>
</tr>
<tr>
<td>Washtenaw</td>
<td>186</td>
<td>102</td>
<td>20</td>
<td>20%</td>
<td>16</td>
</tr>
<tr>
<td>Kent</td>
<td>150</td>
<td>104</td>
<td>29</td>
<td>28%</td>
<td>21</td>
</tr>
<tr>
<td>Kalamazoo</td>
<td>129</td>
<td>66</td>
<td>16</td>
<td>24%</td>
<td>7</td>
</tr>
<tr>
<td>Muskegon</td>
<td>128</td>
<td>70</td>
<td>15</td>
<td>21%</td>
<td>8</td>
</tr>
<tr>
<td>Ingham</td>
<td>120</td>
<td>61</td>
<td>12</td>
<td>20%</td>
<td>5</td>
</tr>
<tr>
<td>Calhoun</td>
<td>107</td>
<td>51</td>
<td>11</td>
<td>22%</td>
<td>9</td>
</tr>
<tr>
<td>Ottawa</td>
<td>101</td>
<td>63</td>
<td>23</td>
<td>37%</td>
<td>16</td>
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</tbody>
</table>

Thank you WASHTENAW COUNTY! Your collaboration, dedication & going ABOVE & BEYOND to help facilitate the donation process is truly appreciated!

You are **MAKING A DIFFERENCE**!
Sleep-related infant deaths are defined in Michigan as deaths to infants less than 1 year of age that occur suddenly and unexpectedly, including Suffocation/Positional Asphyxia, sudden infant death Syndrome (SIDS), Unexplained Infant Death (UID), and other causes wherein the sleep environment was likely to have contributed to the death.

From 2010 to 2012, there were 10 sleep-related infant deaths in Washtenaw County.

**Mortality Rate**

The sleep-related infant mortality rate in Washtenaw County is 0.9 deaths per 1,000 live births, which is lower than the overall rate in Michigan (1.2 deaths/1,000 live births).

**Sleep Environment**

The American Academy of Pediatrics (AAP) recommends that infants:
1. sleep in a safety-approved crib, bassinet, or portable crib with a firm mattress and tight-fitting sheet.
2. sleep on surfaces separate from adults or other children free of blankets, pillows, or toys.
3. be placed on his or her back every sleep time.

50% of sleep-related deaths in Washtenaw County involved an infant sleeping on the same surface with another person at the time of death.

70% of sleep-related deaths in Washtenaw County occurred in an unsafe sleep location.

Approximately 50% of infants found unresponsive were in a position other than on their backs.

Prepared by the Michigan Public Health Institute, Center for Child and Family Health, August 2014. Questions may be directed to Lindsey Gross, MPH, (517) 222-7540.