

BERRIEN COUNTY MEDICAL EXAMINER



2017 ANNUAL REPORT



**Berrien County
Health Department**

Office of the Medical Examiner
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MEDICAL EXAMINER PERSONNEL

Frederick A. Johansen, MD, MPH
Chief Medical Examiner

Larry Wile, MD
Deputy Medical Examiner

Mary Baker
Chief Administrative Medical Examiner Investigator

Josh Kay, CCEMTP I/C
Medical Examiner Investigator

Cris Rieli, HTL (ASCP)
Medical Examiner Investigator

Joan LaLonde, HT (ASCP)
Medical Examiner Investigator

Kim Rodgers
Executive Staff Assistant

I am pleased to present the 2017 Medical Examiner's Annual Report.

Our activities provide valuable data for public health, the criminal justice system, families of the deceased, and the citizens of Berrien County. The Medical Examiner's Office is not only concerned with events associated with the end of life but activities that prevent unexpected, un-natural, and needless deaths. Medical Examiner and Public Health activities intersect in many areas. I would like to thank law enforcement, the medical community, emergency medical technicians, local funeral homes, and our County Commissioners.

This fourth annual report permits some data analysis of trends. The percent of deaths requiring Medical Examiner evaluation has decreased each year. The autopsy rate remains below the National average as do our costs per capita.

Our overdose deaths decreased for the first time, which most likely reflects a described "Narcan Effect". Berrien County first responders and law enforcement were quick to implement Narcan (a drug that can reverse opioid overdose in emergency situations) use on a wide scale, and were leaders in Statewide efforts! Thank you. Hopefully drug prevention activities are also having an impact. However, opioids accounted for 21 out of our 23 overdose deaths! In 6 of the deaths, Fentanyl was the only cause; and in 4 of the deaths Fentanyl plus another drug were involved. In 4 deaths Heroin was the only cause. As a community we continue to have work to do!

Homicides, suicides and vehicular deaths remain fairly consistent.

The number of deaths attributed to falls appears to be decreasing and may very well reflect the "Heads-Up" Falls Prevention Campaign, initiated through the Healthy Berrien Consortium a decade ago.

There were nineteen deaths by firearm (8 homicides and 11 suicides).

Midyear we successfully and smoothly transitioned our autopsy services from Spectrum Health in Grand Rapids to Western Michigan University Medical School (WMed). We are thankful for their service to us!

The diligent, passionate work of Mary Baker, Kim Rodgers, and our investigators is central to excellent medical examiner service for Berrien County.

Frederick A Johansen, MD, MPH
Berrien County Medical Examiner

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 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.
11. Partial autopsies are not done because it is not best practice.
12. Views are performed in cases in which there is adequate history to explain the death, but there are external findings, such as injuries, that require direct examination to determine whether they may be significant injuries that mandate full autopsy.

MEDICAL EXAMINER PROGRAM EXPENDITURES 2014 THROUGH 2017

	2014	%	2015	%	2016	%	2017	%
ME Compensation	13,250.00	6.18%	15,000.00	5.80%	15,000.00	5.11%	23,999.96	7.11%
Chief ME Investigator	19,195.06	8.96%	41,630.95	16.10%	60,347.28	20.55%	67,997.80	20.13%
Investigators & Examinations	50,420.00	23.53%	33,975.35	13.14%	32,200.00	10.97%	26,000.00	7.70%
Autopsies	74,186.85	34.62%	94,221.04	36.43%	127,794.18	43.52%	138,697.61	41.07%
Body Transportation	37,281.18	17.40%	49,185.25	19.02%	36,830.20	12.54%	32,332.51	9.57%
Contractual Services	18,291.85	8.54%	15,157.00	5.86%	15,031.00	5.12%	11,862.58	3.51%
Office Supplies & Other	1,645.25	0.77%	5,375.35	2.08%	2,217.03	.75%	2,615.42	0.77%
Indirect Cost			4,056.00	1.57%	4,239.00	1.44%	34,225.76	10.13%
Total	214,270.19	100%	258,600.94	100%	293,658.69	100%	337,731.64	100%
Per Person, 2014 Population	1.38		1.67		1.89		2.18	

	2014	2015	2016	2017		
Deaths in County	1723	1699	1695	1775		
Referred to ME Office	231	209	185	172		
% of Deaths Referred	13.4%	12.30%	10.91%	9.7%		
ME Cases Autopsied	38	44	53	43		
% of ME Cases Autopsied	16.45%	21.05%	28.65%	25%		

	2014	2015	2016	2017		
Homicides	4	9	11	10		
Suicides	26	31	21	23		
Accident	74	66	67	52		
Overdose	34	34	34	23		
Vehicle	14	18	19	11		

DEMOGRAPHICS OF MEDICAL EXAMINER CASES

Figure 1: Medical Examiner Cases by Age at Death

<1	1-5	6-16	17-25	26-44	45-64	65+
2		4	10	38	67	51

Figure 2: Medical Examiner Cases by Race/Ethnicity

White	Black	Hispanic	Native American	Asian/Middle Eastern	Other*	Total
130	30	5	1	5	1	172

* Mixed Race

Figure 3: Medical Examiner Cases by Manner of Death

Natural	Accident	Suicide	Homicide	Indeterminate		
82	52	23	10	5		

Figure 4: Manner of Death by Race/Ethnicity

	Natural	Accident	Suicide	Homicide	Indeterminate	
White	59	42	22	6	1	
Black	21	3		4	2	
Hispanic	1	4				
Native American		1				
Middle Eastern	1	2	1		1	
Other					1	
Totals	82	52	23	10	5	

Figure 5: Homicides by Age

0-19	20-44	45-64	65+			
	7	2	1			

Figure 6: Homicides by Race

White	Black	Hispanic	Other			
6	4					

MANNER OF DEATH

Figure 7: Homicide Cases by Method Used

Gun	Asphyxia	Stabbed	Assault	Other		
8	1		1			

Figure 8: Gun Homicides by Age

0-19	20-29	30-39	40+			
	2	4	2			

Figure 9: Suicide Cases by Method Used

Gun	Hanging	Drug Overdose	Carbon Monoxide	Other		
11	7		1	4		

Figure 10: Suicide Cases by Age

1-19	20-44	45-64	65+			
1	7	11	4			

Figure 11: Suicide Cases by Gender

Female	Male
3	20

Figure 12: Suicide Cases by Race

White	Black	Hispanic	Native American	Other	Asian/Mid East	
22					1	

CAUSE OF DEATH

Figure 13: Drug Deaths by Age

<21	21-44	45-64	65+			
1	18	4				

Figure 14: Drug Deaths by Gender

	Female	Male
Accident	7	16

Figure 15: Medical Examiner Cases by Cause of Death

Natural	Vehicle	Bike/Ped.	Gun	Drug OD	Poison*	Fire	SIDS	Fall	Asphyxia*	Other*	Indeterminate
82	11	7	19	23	2			3	19	4	2

*Poison: Carbon Monoxide Poisoning

*Asphyxia: Hanging/Drowning/Strangulation/Choking/Suffocation

*Other: Assault/Probable Hypothermia/Farm Accident

Figure 16: Medical Examiner Cases by Cause of Death

Cause	2014	2015	2016	2017
Natural	125	99	83	82
Vehicle	11	11	13	11
Bike/Pedestrian	3	7	3	7
Gun	14	25	17	19
Drug OD	34	34	34	23
Poison	6	1	1	2
Fire	0	0	0	0
SIDS/SUIDS	4	1	5	2
Fall	10	10	5	3
Asphyxia	15	15	15	19
Other	9	4	7	4
Indeterminate	0	2	2	0
Total	231	209	185	172