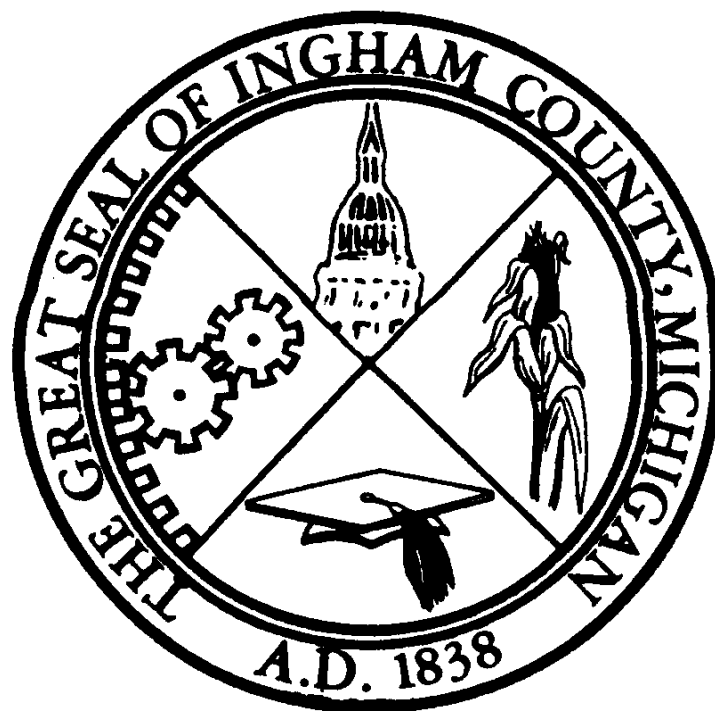


Ingham County Medical Examiner



2009 Annual Report

*Dean G. Sienko, MD, MS
Chief Medical Examiner*

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

Michigan law mandates that the Ingham County Medical Examiner establish the cause and manner of death in all persons who die suddenly, unexpectedly, violently, as a result of any suspicious circumstances, while imprisoned in a county or city jail, or in persons without medical attendance 48 hours prior to the time of death. An additional responsibility of the Medical Examiner is to establish the cause and manner of death when there is no other physician available or none willing to sign the Death Certificate.

During 2009, the Medical Examiner's office investigated 624 deaths in Ingham County. Among these deaths, autopsies were ordered on 145 (increased from the 2008 total of 130 autopsies). The number of accidental deaths in Ingham County for 2009 was 94. Homicides in Ingham County increased to a total of 13 (from 11 in 2008). Suicide cases increased to a total of 36 (up from 21 in 2008 and 29 in 2007).

Ongoing collaboration with the Medical Examiner, the Medical Examiner Investigators, the Forensic Pathologists, and a team of community professionals continue to examine cases in the Child Death Review and the Elder Death Review team meetings. Both of these dynamic groups continue to strive to reduce the number of unexpected child deaths, and to prevent deaths due to abuse or neglect in the elder and vulnerable adult population.

It is my pleasure to present the Ingham County Medical Examiner's 2009 annual report.

Sincerely,



Dean G. Sienko, MD, MS
Chief Medical Examiner
Ingham County

Mortality Statistics

Manner of Death

Manner of Death is classified into one of five categories: natural, accident, suicide, homicide, and undetermined. Undetermined deaths are those deaths where there is insufficient information about the circumstances surrounding the death to make a ruling. The inability to make a determination as to the manner of death may result from doubt about whether the injury occurred with intent or as a result of an accident, a lack of witnesses or prolonged time between death and discovery, or difficulty in classifying street drug or medication overdose deaths.

Cause of Death

Cause of Death is defined as any injury or disease that produces a physiological derangement in the body that results in the death of an individual. Each *manner* of death includes the categories that describe the cause of death.

Of the Ingham County deaths which were referred to the Medical Examiner for investigation between 2004 and 2009, natural causes were consistently the manner of death for the majority of cases (74%). Accidental deaths rated second in the deaths referred to the M.E. for investigation, which amounted to 15% of the total cases in 2009. The 13 homicide cases reflected only 2% of the cases in 2009, in comparison to the 36 suicide cases (6%).

Ingham County Medical Examiner Cases: 2009

Accident	94	15%
Homicide	13	2%
Natural	469	75%
Suicide	36	6%
Undetermined	12	2%
TOTAL	624	

Manner: *NATURAL*

The Ingham County Medical Examiner establishes cause and manner for deaths that are classified as natural due to the sudden and unexpected nature of the death, when there is no other physician available to sign the Death Certificate, or when there are suspicious circumstances surrounding the death.

In 2009, the Ingham County Medical Examiner investigated 469 deaths attributed to natural causes, representing 75% of the cases investigated. Cardiovascular disease accounted for the greatest proportion of natural deaths.

2009

Natural Deaths				
Age	Total	Male	Female	
<1	3	1	2	
1 to 9	2	2	0	
10 to 14	3	2	1	
15 to 19	3	2	1	
20 to 29	3	3	0	
30 to 44	34	15	19	
45 to 64	175	101	74	
65+	246	127	119	
ALL AGES	469	253	216	

Manner: ACCIDENT

The Ingham County Medical Examiner certifies deaths as accidental when there is no evidence of intent, i.e., unintentional.

The Medical Examiner certified 94 deaths as accidents for the calendar year 2009. The largest group of accidental deaths were those that resulted from blunt force trauma/injury or fatal head and cervical injuries (46 cases or 49% of the accidental deaths). The drug and/or alcohol overdose cases (29) ranked the next highest (31%) within the accidental death category.

2009

Accidents

Age Group	Total	Male	Female
< 1	3	1	2
1 to 9	0	0	0
10 to 14	1	1	0
15 to 19	7	6	1
20 to 29	10	8	2
30 to 44	20	16	4
45 to 64	20	14	6
65 +	33	19	14
All Ages	94	65	29

Manner: *SUICIDE*

Suicides are those deaths caused by self-inflicted injuries with evidence of intent to end one's life. Evidence of intent includes an explicit expression, such as a suicide note or verbal threat, or an act constituting implicit intent, such as deliberately placing a gun to one's head or rigging a vehicle's exhaust. Another indication of suicide is when a person has had severe mental health challenges or personal stresses in his/her life. Suicide is the third leading cause of death investigated by the Medical Examiner in Ingham County.

In 2009, there were 36 suicide deaths investigated by the Medical Examiner. There were one teen suicide in 2009 in Ingham County. All suicides occurred in people age 16 or over. Eighty one percent (78%) of the suicides were male.

2009

Age Group	Suicide		
	Total	Male	Female
< 1	0	0	0
1 to 9	0	0	0
10 to 14	0	0	0
15 to 19	1	0	1
20 to 29	7	5	2
30 to 44	11	8	3
45 to 64	12	10	2
65 +	5	5	0
All Ages	36	28	8

Manner: *Homicide*

The Ingham County Medical Examiner classifies a death as a homicide when the death results from intentional injuries inflicted by another person.

During 2009, the Medical Examiner classified 13 deaths as homicide. The number represents 2% of the Medical Examiner death investigations for 2009. Of these 13 homicides deaths, 9 (69%) were the result of gunshot wounds. The age of homicide victims in 2009 ranged from age 4 years to 29 years in Ingham County.

2009

	Homicide		
Age Group	Total	Male	Female
< 1	0	0	0
1 to 9	2	1	1
10 to 14	0	0	0
15 to 19	4	4	0
20 to 29	7	6	1
30 to 44	0	0	0
45 to 64	0	0	0
65 +	0	0	0
All Ages	13	11	2

Manner: *UNDETERMINED*

The Ingham County Medical Examiner certifies a manner of death as undetermined when available information regarding the circumstances of death is insufficient to classify the death into one of the specific manners of natural, accident, homicide, or suicide.

During 2009, the Ingham County Medical Examiner certified 12 deaths as undetermined (or 2% of the total cases investigated by the Medical Examiner). All three infant cases that were declared “undetermined” were related to an unsafe sleep environment.

2009

Undetermined

Age Group	Total	Male	Female
< 1	3	3	0
1 to 9	0	0	0
10 to 14	0	0	0
15 to 19	0	0	0
20 to 29	2	2	0
30 to 44	4	1	3
45 to 64	3	0	3
65 +	0	0	0
All Ages	12	6	6

AGE

Age groups are divided into youth and adult. The youth groups are infants (newborn to 11 months), toddler/grade school (1 – 9 years), junior (10 – 14 years), and high school (15 – 19 years). Adult age groups are grouped as: 20 – 29 years, 30 – 44 years, and 45 – 64 years. The last group is 65 years old or older.

In 2009, there were 624 deaths reported to the Ingham County Medical Examiner by medical and law enforcement personnel. Of these deaths, 285 (46 %) were in the 65 years old or older age group. Seventy-six percent (76%) of the deaths occurring in the 65 years old or older age group were natural deaths while 15% were accidental deaths, the second leading manner of death for all deaths reported to the Ingham County Medical Examiner in 2009. The accidental deaths in the age 65 and older group increased from a total of 26 in 2008 to a total of 33 in 2009. There were only 11 accidental deaths to people age nineteen years and under investigated by the Ingham County Medical Examiner.

Accidental death was the most common cause of death in young adults. Out of the total deaths of people age 20-29 years, 10 (or 34%) were accidental.

2009

Deaths by Manner of Death and Age Ingham County, 2009

	All AGES	<1	1 TO 9	10 TO 14	15 TO 19	20 TO 29	30 TO 44	45 TO 64	65+
ACCIDENT	94	3	0	1	7	10	20	20	33
HOMICIDE	13	0	2	0	4	7	0	1	1
NATURAL	469	3	2	3	3	3	34	175	246
SUICIDE	36	0	0	0	1	7	11	12	5
UNDETERMINED	12	3	0	0	0	2	4	3	0
TOTAL	624	9	4	4	15	29	69	210	284

AUTOPSY

Autopsy is a postmortem examination performed to confirm or determine the cause of death. Autopsies by a forensic pathologist were not performed in deaths where scene, circumstances, medical history, and external examination of the body provided sufficient information to certify the death.

In 2009, the cause and manner of 145 deaths were established by autopsy (e.g. a full or complete autopsy, an external with toxicology, or a limited examination with toxicology). The 145 cases represented 23% of total deaths established by the Ingham County Medical Examiner. This number was increased from the 130 autopsies which were authorized by the Ingham County Medical Examiner in 2008. The 48 total deaths occurring due to natural causes accounted for 33% of the investigated deaths which were established by autopsy. The 55 deaths due to accidental causes accounted for 38% of the investigated deaths which were established by autopsy.

Medical Examiner Cases with Causes of Death Established by a Full Autopsy: Ingham County, 2009

	All AGES	<1	1 TO 9	10 TO 14	15 TO 19	20 TO 29	30 TO 44	45 TO 64	65+
ACCIDENT	49	3	0	1	4	10	14	12	5
HOMICIDE	13	0	2	0	4	7	0	0	0
NATURAL	46	1	0	2	2	2	13	17	9
SUICIDE	10	0	0	0	0	4	4	2	0
UNDETERMINED	12	3	0	0	0	2	4	3	0
TOTAL	130	7	2	3	10	25	35	34	14

Medical Examiner Cases with Causes of Death Established by an External Autopsy: Ingham County, 2009

	All AGES	<1	1 TO 9	10 TO 14	15 TO 19	20 TO 29	30 TO 44	45 TO 64	65+
ACCIDENT	6	0	0	0	2	0	0	0	4
HOMICIDE	0	0	0	0	0	0	0	0	0
NATURAL	2	0	0	0	0	0	0	1	1
SUICIDE	6	0	0	0	1	1	0	3	1
UNDETERMINED	0	0	0	0	0	0	0	0	0
TOTAL	14	0	0	0	3	1	0	4	6

Medical Examiner Cases with Causes of Death Established by a Limited Autopsy: Ingham County, 2009

ACCIDENT	0	0	0	0	0	0	0	0	0
HOMICIDE	0	0	0	0	0	0	0	0	0
NATURAL	0	0	0	0	0	0	0	0	0
SUICIDE	1	0	0	0	0	1	0	0	0
UNDETERMINED	0	0	0	0	0	0	0	0	0
TOTAL	1	0	0	0	0	1	0	0	0

Annual Summary of Medical Examiner Cases by Manner of Death

Ingham County, 2004 – 2009

Annual Summary of Medical Examiner Cases by Manner of Death: Ingham County, 2009

	2004	2005	2006	2007	2008	2009
Accident	111	112	81	74	83	94
Homicide	17	15	12	18	11	13
Natural	436	418	426	381	425	469
Pending	0	0	0	0	0	0
SIDS	0	0	0	0	0	0
Suicide	27	34	30	29	21	36
Undetermined	13	11	7	13	5	12
Unknown	0	0	0	0	0	0
TOTAL	604	590	556	515	545	624

Medical Examiner Program Staff

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