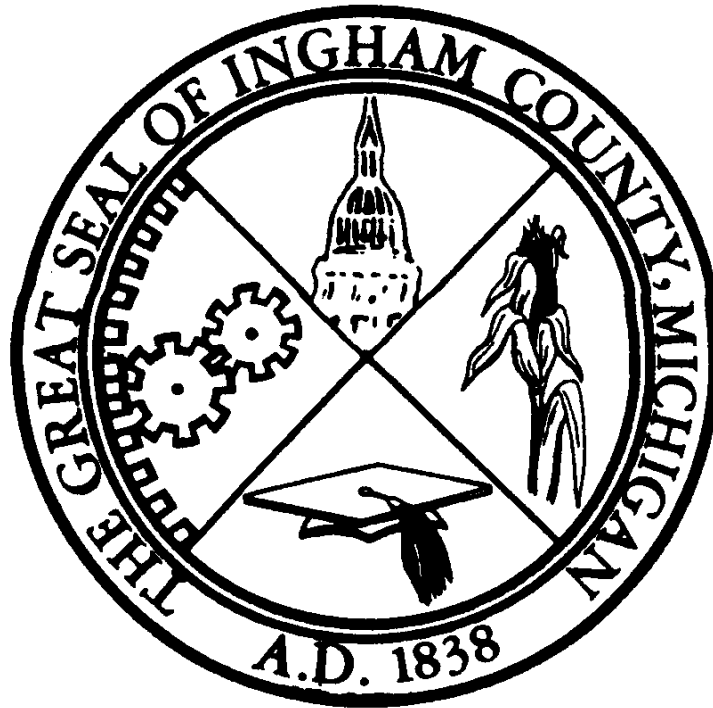


Ingham County Medical Examiner



2010 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 2010, the Medical Examiner's office investigated 569 deaths in Ingham County. This was a decrease by 55 cases as reported in 2009. Among these deaths, autopsies were ordered on 132. The number of accidental deaths in Ingham County for 2010 was 84. Homicides in Ingham County increased to a total of 17 (from 13 in 2009). Suicide cases decreased to a total of 26 (down from 36 in 2009).

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 2010 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 2010, natural causes were consistently the manner of death for the majority of cases (76%). Accidental deaths rated second in the deaths referred to the M.E. for investigation, which amounted to 15% of the total cases in 2010. The 17 homicide cases reflected only 3% of the cases in 2010, in comparison to the 26 suicide cases (5%).

Ingham County Medical Examiner Cases: 2010

Accident	84	15%
Homicide	17	3%
Natural	435	76%
Suicide	26	5%
Undetermined	6	1%
Pending	1	01%
TOTAL	569	

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 2010, the Ingham County Medical Examiner investigated 435 deaths attributed to natural causes, representing 76% of the cases investigated. Cardiovascular disease accounted for the greatest proportion of natural deaths.

2010

Natural Deaths			
Age	Total	Male	Female
<1	2	1	1
1 to 9	3	0	3
10 to 14	1	0	1
15 to 19	1	0	1
20 to 29	8	4	4
30 to 44	36	24	12
45 to 64	158	102	56
65+	226	120	106
ALL AGES	435	251	184

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 84 deaths as accidents for the calendar year 2010. The largest group of accidental deaths were those that resulted from blunt force trauma/injury or fatal head and cervical injuries (42 cases or 50% of the accidental deaths). The drug and/or alcohol overdose cases (33 total) ranked the next highest (40%) within the accidental death category.

2010

Accidents			
Age Group	Total	Male	Female
< 1	0	0	0
1 to 9	1	1	0
10 to 14	0	0	0
15 to 19	2	1	1
20 to 29	13	9	4
30 to 44	9	7	2
45 to 64	30	15	15
65 +	29	18	11
All Ages	84	51	33

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 2010, there were 26 suicide deaths investigated by the Medical Examiner. There were two teen suicides in 2010 in Ingham County. All suicides occurred in people age 16 or over. Eighty-five percent (85%) of the suicides were male.

2010

Suicide			
Age Group	Total	Male	Female
< 1	0	0	0
1 to 9	0	0	0
10 to 14	0	0	0
15 to 19	2	2	0
20 to 29	6	6	0
30 to 44	4	3	1
45 to 64	8	6	2
65 +	6	5	1
All Ages	26	22	4

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 2010, the Medical Examiner classified 17 deaths as homicide. The number represents 3% of the Medical Examiner death investigations for 2010. Of these 17 homicides deaths, 9 (53%) were the result of gunshot wounds. The age of homicide victims in 2010 ranged from age 3 years to 86 years in Ingham County.

2010

Homicide			
Age Group	Total	Male	Female
< 1	0	0	0
1 to 9	2	0	2
10 to 14	0	0	0
15 to 19	3	1	2
20 to 29	5	3	2
30 to 44	1	1	0
45 to 64	5	4	1
65 +	1	1	0
All Ages	17	10	7

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 2010, the Ingham County Medical Examiner certified 6 deaths as undetermined (or 1% of the total cases investigated by the Medical Examiner).

2010

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

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 2010, there were 569 deaths reported to the Ingham County Medical Examiner by medical and law enforcement personnel. Of these deaths, 262 (46 %) were in the 65 years old or older age group. Eighty-six percent (86%) of the deaths occurring in the 65 years old or older age group were natural deaths while 11% were accidental deaths in the same age group. Accidental deaths were the second leading manner of death for all deaths reported to the Ingham County Medical Examiner in 2010. The accidental deaths in the age 65 and older group decreased from a total of 33 in 2009 to a total of 29 in 2010. There were only 3 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 32 total deaths of people age 20-29 years, 13(or 41%) were accidental. Nine of the 32 deaths in the young adult age group (28%) were due to accidental drug overdose.

Deaths by Manner of Death and Age Ingham County: 2010

	All	1 TO							
	AGES	<1	9	10 TO 14	15 TO 19	20 TO 29	30 TO 44	45 TO 64	65+
ACCIDENT	84	0	1	0	2	13	9	30	29
HOMICIDE	17	0	2	0	3	5	1	5	1
NATURAL	435	2	3	1	1	8	36	158	226
SUICIDE	26	0	0	0	2	6	4	8	6
UNDETERMINED	6	1	0	0	1	0	1	3	0
PENDING	1	1	0	0	0	0	0	0	0
TOTAL	569	4	6	1	9	32	51	204	262

AUTOPSY

Autopsy is a post mortem 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 2010, the cause and manner of 132 deaths were established by autopsy (e.g. a full/complete autopsy, an external with toxicology, or a limited examination with toxicology). The 133 cases represented 23% of total deaths established by the Ingham County Medical Examiner. The 132 complete autopsies increased by two as compared to the 130 complete autopsies which were authorized by the Ingham County Medical Examiner in 2009. The 59 total deaths that occurred due to natural causes accounted for 45% of the investigated deaths which were established by autopsy. The 46 deaths due to accidental causes accounted for 35% of the investigated deaths which were established by autopsy.

Medical Examiner Cases with Causes of Death Established by a Full Autopsy: Ingham County, 2010

	All AGES	1 TO							
		<1	9	10 TO 14	15 TO 19	20 TO 29	30 TO 44	45 TO 64	65+
ACCIDENT	46	0	0	0	1	12	5	20	8
HOMICIDE	16	0	2	0	3	5	0	5	1
NATURAL	59	1	2	0	0	3	16	30	7
SUICIDE	4	0	0	0	1	1	1	0	1
UNDETERMINED	6	1	0	0	1	0	1	3	0
PENDING	1	1	0	0	0	0	0	0	0
TOTAL	132	3	4	0	6	21	23	58	17

Medical Examiner Cases with Causes of Death Established by an External Autopsy: Ingham County, 2010

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

Medical Examiner Cases with Causes of Death Established by a Limited Autopsy: Ingham County, 2010

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	0	0	0	0	0	0	0	0	0
UNDETERMINED	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0

Annual Summary of Medical Examiner Cases by Manner of Death

Ingham County, 2004 – 2010

Annual Summary of Medical Examiner Cases by Manner of Death: Ingham County, 2004-2010

	2004	2005	2006	2007	2008	2009	2010
Accident	111	112	81	74	83	94	84
Homicide	17	15	12	18	11	13	17
Natural	436	418	426	381	425	469	435
Pending	0	0	0	0	0	0	1
SIDS	0	0	0	0	0	0	0
Suicide	27	34	30	29	21	36	26
Undetermined	13	11	7	13	5	12	6
Pending	0	0	0	0	0	0	0
TOTAL	604	590	556	515	545	624	569

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