



This Report is dedicated
To all those who have died
In Columbiana County, Ohio in the year 2007
To their families, their loved ones
And their friends

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Annual Report – 2007

Office of the Coroner

Columbiana County
8473 County Home Road
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This publication marks the seventh annual report of the Office of the Coroner for Columbiana County. The report will take a somewhat different approach to reporting the statistics for the year 2007. Currently there are 9103 cases entered in the database partially representing known data from the years 1934 through 2007.

We will first present a short synopsis of general information about the coroner's duties and how those duties may involve you. We will next report and graph data generated in 2007. We will next compare this data to that data collected from 1989 thru 2006. We will then present and document an alarming trend in Columbiana County ... that of **the increase in Male Accidental deaths for the year.**

For those readers unfamiliar with the mechanics of statistics, namely **Normal Distribution** and **Standard Deviation (SD)**, we provide a quick review in Appendix A.

General Information:

When to Report a Death

When a person dies under any of the below circumstances, the death must be reported to the local Office of the Coroner.

Accidental Deaths

If the death occurs when in apparent good health or in any suspicious or unusual manner including:

- Asphyxiation by gagging on foreign substance, including food in airway; compression of the airway or chest by hand, material, or ligature; drowning; handling cyanide; exclusion of oxygen; carbon monoxide; and/or other gasses causing suffocation.
- Blows or other forms of mechanical violence

- Burns from fire, liquid, chemical, radiation or electricity Carbon monoxide poisoning. (Resulting from natural gas, automobile exhaust or other.)
- Cutting, stabbing or gunshot wounds.
- Death from electrocution.
- Drowning (actual or suspected).
- Drug overdose from medication, chemical or poison ingestion, (actual or suspected). This includes any medical substance, narcotic or alcoholic beverage, whether sudden, short or long term survival has occurred.
- Electrical shock
- Explosion
- Falls, including hip fractures or other injury.
- Firearm injuries
- Stillborn or newborn infant death where there is a recent or past traumatic event involving the mother, such as vehicular accident, homicide, suicide attempt, or drug ingestion that may have precipitated delivery or had a detrimental effect to the newborn.
- Vehicular accidents, including auto, bus, train, motorcycle, bicycle, watercraft, snowmobile or aircraft, including driver, passenger, or related non-passenger, (e.g. such as being struck by parts flying or thrown from a vehicle).
- Weather related death (e.g. lightning, heat exhaustion, hypothermia or tornado).

Homicidal Deaths

- By any means, suspected or known.

Suicidal Deaths

- By any means, suspected or known.

Occupational Deaths

Instances in which the environment of present or past employment may have caused or contributed to death by trauma or disease. Deaths in this classification include caisson disease (bends), industrial infections, pneumoconiosis, present or past exposure to toxic waste or product (e.g. nuclear products, asbestos or coal dust), fractures, burns or any other injury received during employment or as a result of past employment, which may have contributed to death.

Sudden Deaths

If the death occurs when in apparent good health or in any suspicious or unusual manner including:

- DOA: Any person pronounced dead on arrival at any hospital, emergency room of a hospital or doctor's office shall be reported.
- Infants and young children: Any infant or young child found dead shall be reported, including Sudden Infant Death Syndrome (5.1.0.5. or Crib Death).
- All stillborn infants where there is suspected or actual injury to the mother.
- All deaths occurring within 24 hours of admission to a hospital unless the patient has been under the continuous care of a physician.

- Deaths occurring while in any jail, confinement or custody.
- All deaths occurring within 24 hours of admission to a hospital unless the patient has been under the continuous care of a physician.
- Deaths under unknown circumstances whenever there are no witnesses or where little or no information can be elicited concerning the deceased person.
- Sudden death on the street, at home, in a public place, or at place of employment.
- Alcoholism.
- Drug abuse, habitual use of drugs or drug addiction.

Special Circumstances

Any death involving allegations of suspicious medical malpractice or possibly poor medical/surgical care.

- Any maternal or infant death where there is suspicious or illegal interference by unethical or unqualified persons or self-induction.
- Any maternal or infant death where there is suspicious or illegal interference by unethical or unqualified persons or self-induction.
- "Delayed death," an unusual type of case, where the immediate cause of death may actually be from natural disease. However, injury may have occurred days, weeks, months, or even years before death and is responsible for initiating the sequence of medical conditions or events leading to death. This would be considered a Coroner's case and is therefore reportable. The most common examples of this type of case are 1) past traffic accidents with debilitating injury and long-term care in a nursing home and 2) hip fractures of the elderly where there is a downward course of condition after the injury.

Therapeutic Deaths

- Death occurring under the influence of anesthesia, during the anesthetic induction, during the post-anesthetic period without the patient regaining consciousness (including death following long-term survival if the original incident is thought to be related to the surgical procedure and/or anesthetic agent).
- Death during or following any diagnostic or therapeutic procedure, whether medical or surgical, if death is thought to be directly related to the procedure or complications from said procedure.
- Death due to the administration of a drug, serum, vaccine, or any other substance for any diagnostic, therapeutic or immunological purpose.

Any Death Where There is a Doubt, Question or Suspicion Not all reported cases fall into the above noted categories. After the investigation is completed, many will be returned to the jurisdiction or institution where the death certificate will be signed by the attending physician as a natural death.

Only the Coroner can legally sign a death certificate of a person who has died as a direct or indirect result of any cause listed in the previously noted reportable deaths.

How to Report a Death

In order to report a death, call the Office of your respective County Coroner, day or night, and state "I wish to report a death."

It is requested that the following information, if known, be provided:

- Name and address of the deceased
- Age and date of birth
- Sex and race
- Social Security number
- Marital status
- Next-of-kin, name, address, phone number
- Place and manner of occurrence
- Date and time of occurrence
- Date and time of death
- Name of person pronouncing death
- Name of person reporting death
- Any other information which may be helpful
- Location of the body
- Name of funeral home

Laws / Attorney General Opinion

Click on the link below to view the entire Ohio Revised Code Coroner Chapter.

Ohio Revised Code

The following selected sections of the Ohio Revised Code (ORC) are listed so that the responsible individual may fully understand that providing information to the Coroner is to comply with the law and that failure to do so would place that person in jeopardy of prosecution.

ORC 313.01 ELECTED; TERM

ORC 313.02 QUALIFICATIONS FOR CORONER; CONTINUING EDUCATION

ORC 313.14 NOTICE TO RELATIVES; DISPOSITION OF PROPERTY

ORC 313.01 ELECTED; TERM

A coroner shall be elected quadrennially in each county, who shall hold his office for a term of four years, beginning on the first Monday of January next after his election. As used in the Revised Code, unless the context otherwise requires, "coroner" means the coroner of the county in which death occurs or the dead human body is found.

ORC 313.02 QUALIFICATIONS FOR CORONER; CONTINUING EDUCATION

(A) No person shall be eligible to the office of coroner except a physician who has been licensed to practice as a physician in this state for a period of at least two years immediately preceding election or appointment as a coroner, and who is in good standing in the person's profession, or is a person who was serving as coroner on October 12, 1945.

B)(1) Beginning in calendar year 2000 and in each fourth year thereafter, each newly elected coroner, after the general election but prior to commencing the term of office to which elected, shall attend and successfully complete sixteen hours of continuing education at programs sponsored by the Ohio state coroners association. Within ninety days after appointment to the office of coroner under section 305.02 of the Revised Code, the newly appointed coroner shall attend and successfully complete sixteen hours of continuing education at programs sponsored by the association. Hours of continuing education completed under the requirement described in division (B)(1) of this section shall not be counted toward fulfilling the continuing education requirement described in division (B)(2) of this section.

As used in division (B) (1) of this section, "newly elected coroner" means a person who did not hold the office of coroner on the date the person was elected coroner.

(2) Except as otherwise provided in division (B)(2) of this section, beginning in calendar year 2001, each coroner, during the coroner's four-year term, shall attend and successfully complete thirty-two hours of continuing education at programs sponsored by the Ohio state coroners association. Except as otherwise provided in division (B)(2) of this section, each coroner shall attend and successfully complete twenty-four of these thirty-two hours at statewide meetings, and eight of these thirty-two hours at regional meetings, sponsored by the association. The association may approve attendance at continuing education programs it does not sponsor but, if attendance is approved, successful completion of hours at these programs shall be counted toward fulfilling only the twenty-four-hour requirement described in division (B)(2) of this section.

(3) Upon successful completion of a continuing education program required by division (B) (1) or (2) of this section, the person who successfully completes the program shall receive from the association or the sponsoring organization a certificate indicating that the person successfully completed the program.

ORC 313.14 NOTICE TO RELATIVES; DISPOSITION OF PROPERTY

The coroner shall notify any known relatives of a deceased person who meets death in the manner described by section 313.12 of the Revised Code by letter or otherwise. The next of kin, other relatives, or friends of the deceased person, in the order named, shall have prior right as to disposition of the body of such deceased person. If relatives of the deceased are unknown, the coroner shall make a diligent effort to ascertain the next of kin, other relatives, or friends of the deceased person. The coroner shall take charge and possession of all moneys, clothing, and other valuable personal effects of such deceased person, found in connection with or pertaining to such body, and shall store such possessions in the county coroner's office or such other suitable place as is provided for such storage by the board of county commissioners. If the coroner considers it advisable, he may [,] after taking adequate precautions for the security of such possessions, store the possessions where he finds them until other storage space becomes available. After using such of the clothing as is necessary in the burial of the body, in case the cost of the burial is paid by the county, the coroner shall sell at public auction the valuable personal effects of such deceased persons, found in connection with or pertaining to the unclaimed dead body, except firearms, which shall be disposed of as provided by section 313.141 [313.14.1] of the Revised Code, and he shall make a verified inventory of such effects. Such effects shall be sold within eighteen months after burial, or after delivery of such body in accordance with section 1713.34 of the Revised Code. All moneys derived from such sale shall be deposited in the county treasury. A notice of such sale shall be given in one newspaper of general circulation in the county, for five days in succession, and the sale shall be held immediately thereafter. The cost of such advertisement and notices shall be paid by the board upon the submission of a verified statement therefore, certified to the coroner.

This section does not invalidate section 1713.34 of the Revised Code.

Frequently Asked Questions

How long does it take for a death ruling to be made?

This procedure is handled differently by various Counties. However, in most cases, a signed death certificate accompanies the body when it is released by the Coroner. When there is insufficient information available to complete the death certificate, a pending Findings, Fact and Verdict death certificate is issued that accompanies the body. This death certificate enables the funeral services and burial to take place while additional chemical, microscopic slide preparation and examination, and investigation continues. At the culmination of these tests and investigation, the ruling is made based on all available information. A supplemental death certificate is then issued with the cause of death and ruling which supersedes the pending death certificate.

When will the autopsy report be completed?

The autopsy report, also called the protocol, usually takes about four weeks to be completed after the autopsy. If microscopic and chemical tests are performed, this time period can lengthen to six to eight weeks.

Where may the clothing of the deceased be located?

Usually, the clothing of the deceased is released to the funeral director for disposal or use as the family requests. In cases of homicide, various suicides, or vehicular deaths, the clothing may be held by the Coroner or the investigating law enforcement agency for use as evidence.

How is a funeral director selected?

Most often, the next-of-kin discusses the selection of the funeral director with the other family members, clergy or friends. The Office of the Coroner is prohibited from recommending a funeral director. A listing of funeral directors is available in the telephone book as well as other sources.

What is an autopsy and is there a charge for it?

An autopsy is a systematic examination by a qualified physician of the body of a deceased person for the purpose of determining the cause of death. A record is made of the findings of the autopsy, including microscopic and toxicological laboratory tests. These laboratory tests are conducted before the release of the body to the next-of-kin for burial. There is no charge to the next-of-kin for an autopsy, nor for any of the tests that may be conducted by the Coroner.

Does the Coroner need permission from the next-of-kin for an autopsy?

Ohio Law (ORC 2108-52) provides that the Coroner does not need permission for an autopsy. The Office of the Coroner will attempt to comply with the wishes of the next-of-kin, provided this does not conflict with the duties of the Coroner as charged by Ohio Law including due regard for the deceased's religious persuasion.

When is an autopsy performed?

Not all persons brought to the Coroner's Office are autopsied. Certain cases are not autopsied where no foul play is suspected and evidence of a natural death is present. In other cases where the possibility of legal proceedings may arise as a result of a homicide, accident, suicide, etc., an autopsy will be performed. In these cases, both positive and negative information ordinarily is found which substantiates the ruling and cause of death as signed by the Coroner. Under a recent change in the Ohio Revised Code, any child under the age of two years that is referred to the Coroner's Office with no known potentially lethal disease shall be autopsied unless contrary to the parents' religious beliefs. (ORC 313.131)

Why is a body brought to the Coroner's Office?

The remains of deceased persons are brought to the Coroner's Office because Ohio Law requires that the Coroner investigate deaths of persons dying from criminal violence, by accident, by suicide, suddenly, when unattended by a physician for a reasonable period of time, in detention, or in any suspicious or unusual manner. Another reason that a body may be brought to the Coroner's Office is that the identity of the deceased or the next-of-kin is unknown.

How can the deceased's personal effects and other valuables be obtained?

By Ohio Law (ORC 313.14), the Office of the Coroner will take possession of monies and other personal effects of the deceased. These items are inventoried and released to the next-of-kin. (Money over \$100.00 may only be released with a release From Probate Order from the court or a letter of Appointment naming an executor of the estate of the deceased.)

How do I make arrangements for a body to be released from the Office of the County Coroner?

Routinely, the Coroner releases the body to a licensed funeral director. The next-of-kin of the deceased person should notify a funeral director who, in turn, will arrange transportation for the deceased to the funeral home and obtain the necessary documents for burial or cremation.

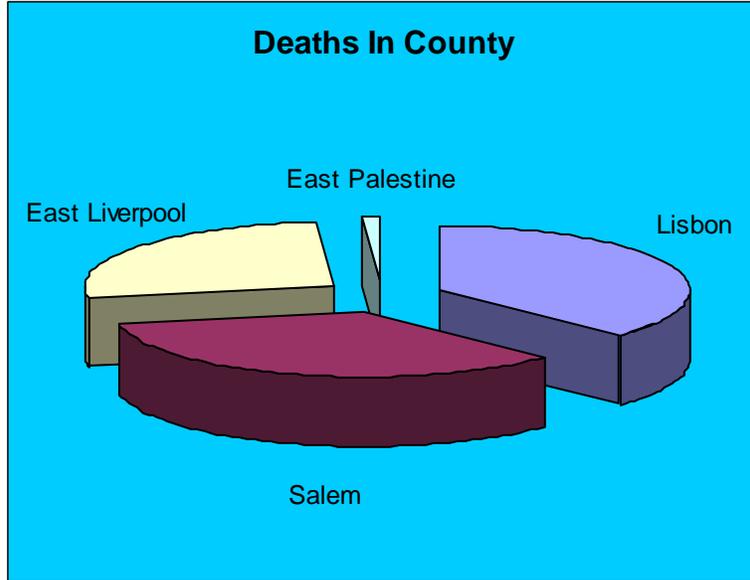
Where can copies of the death certificate be obtained?

Certified copies of death certificates can be obtained only from the Bureau of Vital Statistics of each respective county.

How can I obtain records, including a Coroner's report, autopsy report, and/or toxicology report, pertaining to a death on a case that was referred to the Coroner?

This procedure differs from County to County. To obtain this information, contact your County Coroner.

Total Deaths Reported Across the County in 2007

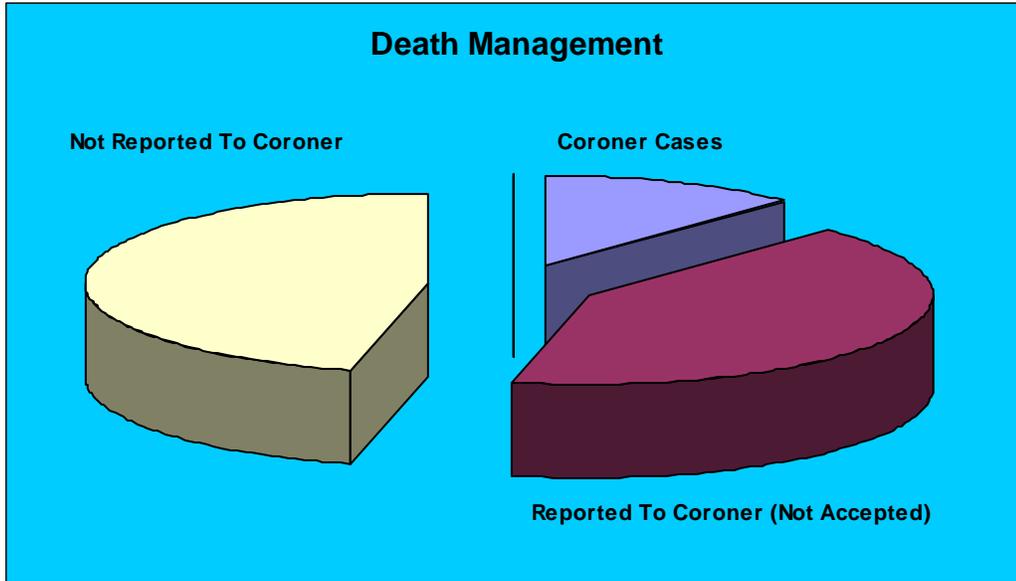


The amount of deaths reported from January 1, 2007 to December 31, 2007 in the county totaled 1,009. This was a slight decrease as compared with the last year total of 1026. The values displayed were acquired from Lisbon, Salem, East Liverpool, and East Palestine health departments. Each reported the following reported deaths:

Health Departments Data

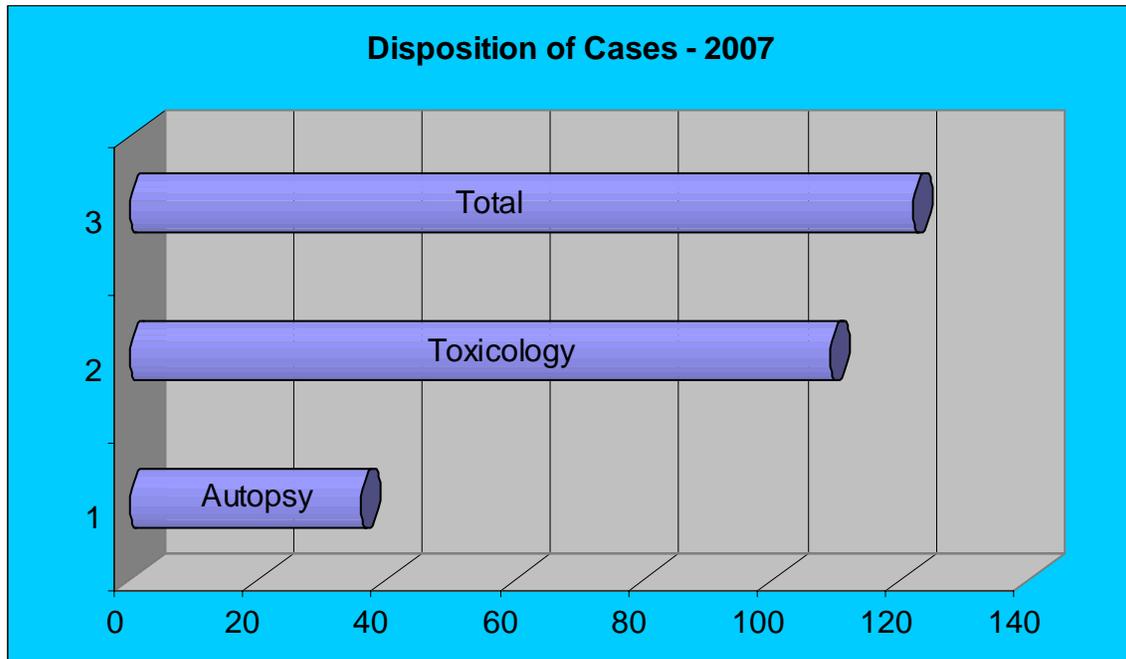
Lisbon	375
Salem	353
East Liverpool	271
East Palestine	10
<i>Total</i>	1009

Death Management for Reported Deaths



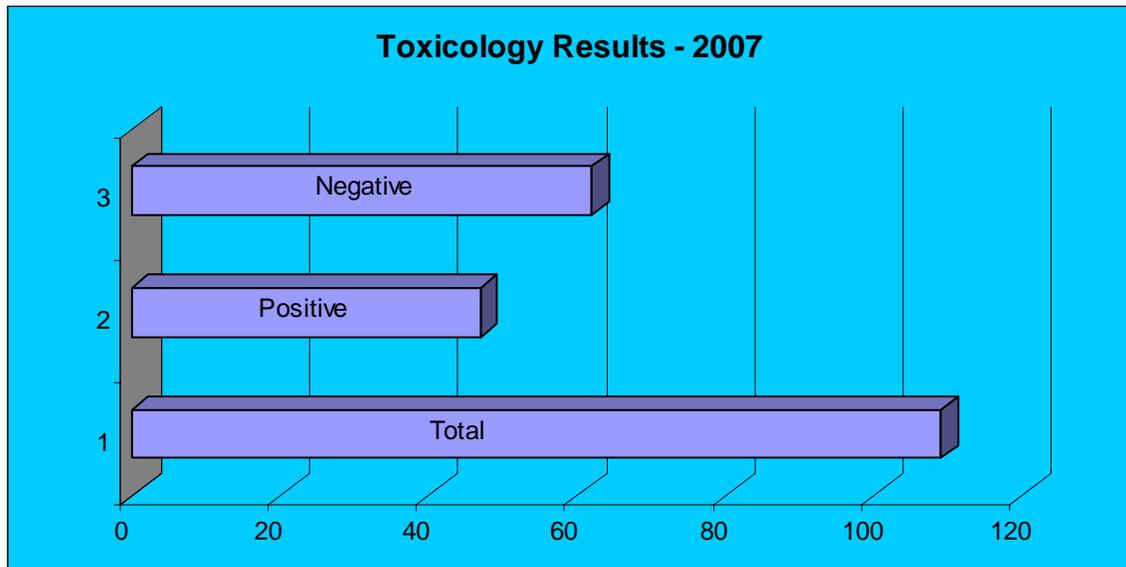
Not all of the cases reported to the coroner are taken. Some cases do not meet the criteria of a coroner's case, therefore they are recorded as reported to the coroner but do not get investigated by the coroner. However, there are many cases that become coroner cases and for those a full investigation and final determination are rendered. This year there were 122 cases taken by the coroner, 420 reported but not accepted by the coroner and the rest of the 467 deaths were not reported, which totaled 1009 deaths.

Disposition of Cases Taken by the Coroner



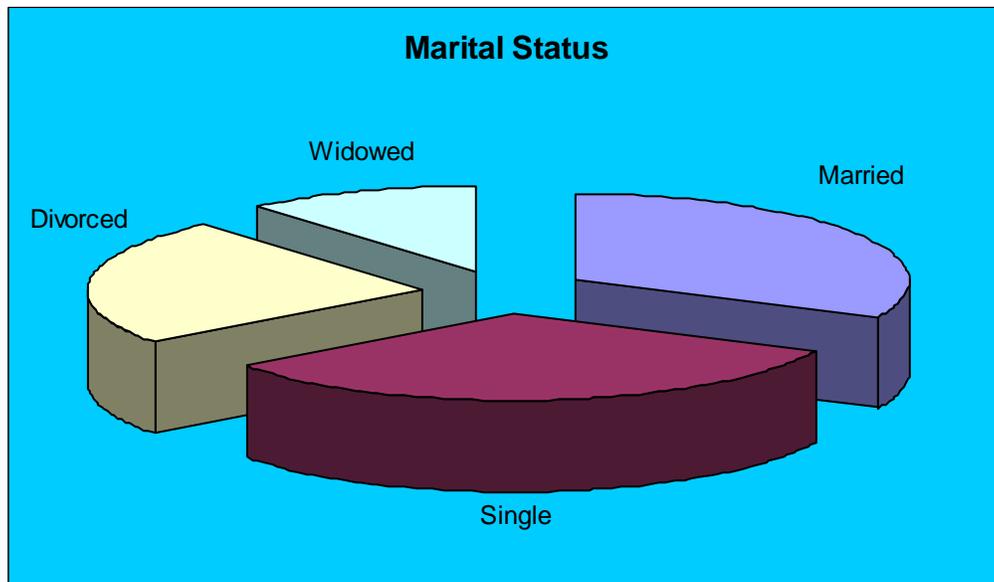
The coroner determines whether or not to run toxicology or an autopsy on a decedent. For this year, of the 122 death cases, 36 were autopsies and 109 had toxicology run on the specimens obtained from the decedents.

Toxicological Results of Decedents of 2007



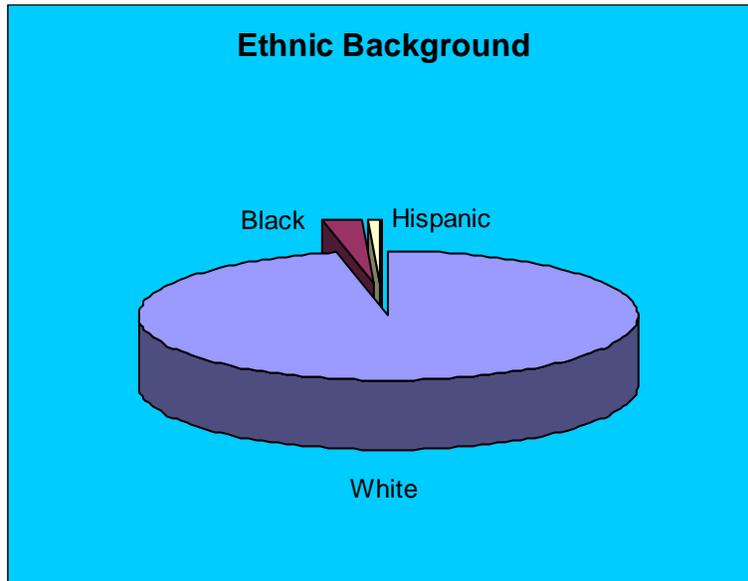
As shown it is a close comparison between the positive and negative results. The negative results were seen in 62 cases and 47 cases resulted positive. Thus, drugs were found in 47 decedents.

Distribution of Decedents by Marital Status



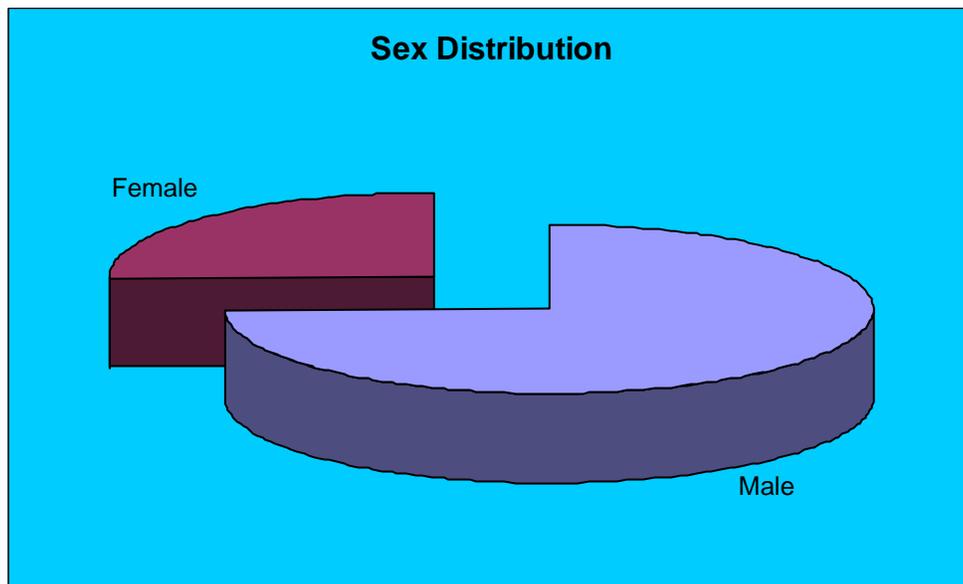
In coroner cases the decedent's information is obtained and documented. The results were as diverse as the decedents themselves and included at least a few people from each type of marital status. There were 39 people that were married, 40 single, 29 divorced, and 14 widowed.

Distribution of Decedents Based on Ethnic Background



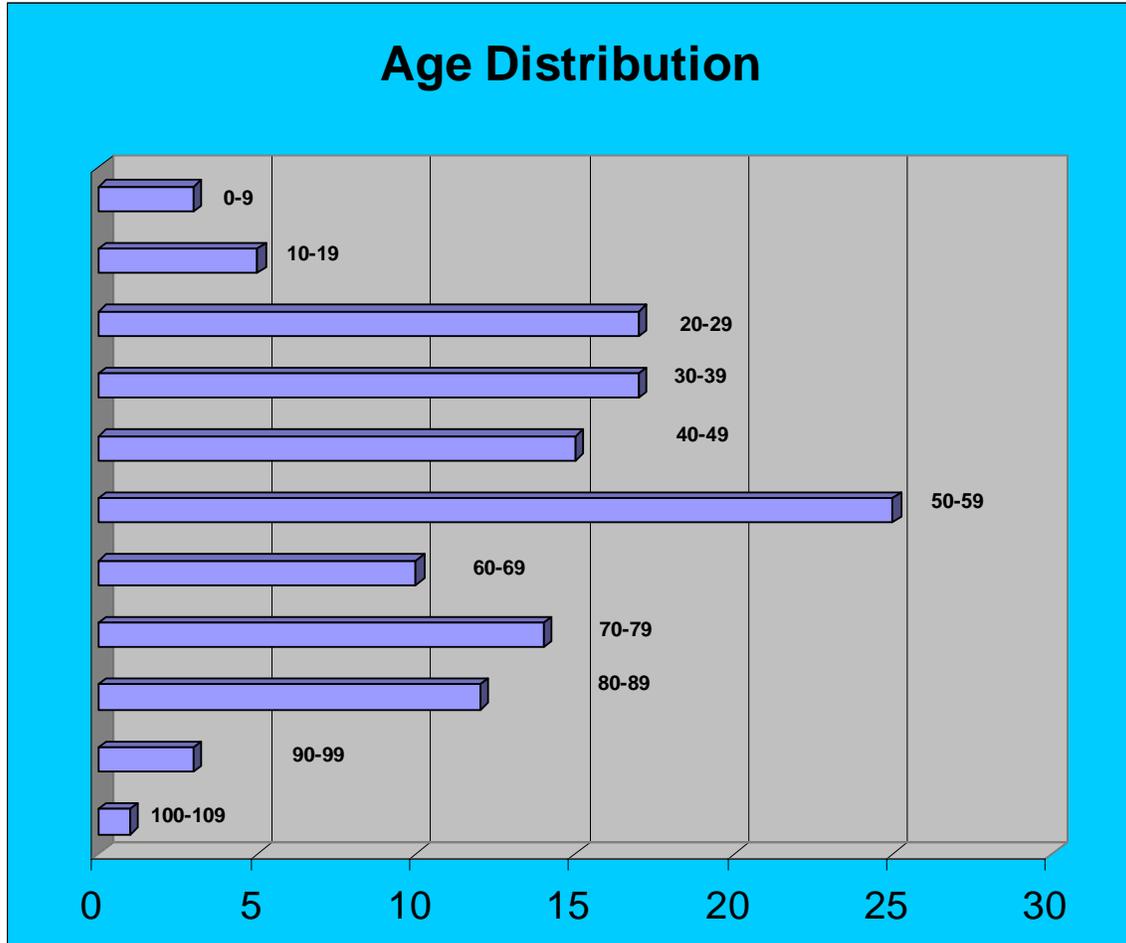
Although the marital status was diverse the ethnic distribution was not. There were mostly white decedents this year with a total of 118. There were 3 black, and 1 Hispanic.

Distribution of Decedents by Sex



In the year 2007, there were almost three times as many males as females that were accepted as coroner cases. The totals were 91 males and 31 females.

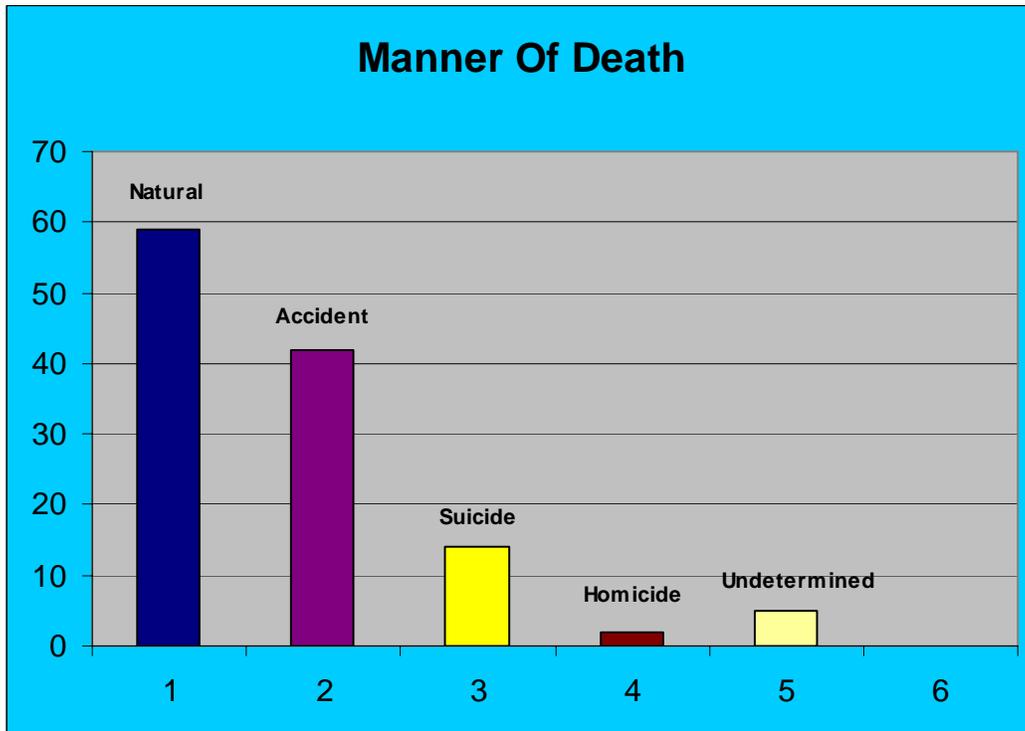
Distribution of the Decedents by Age



The decedent's age ranged from as young as 1 month and 16 days old up to 100 years of age. There were especially high values in the 40-79 range and a peak from 50-59. The exact values of each range are as follows.

<u>Age (range)</u>	<u>#</u>	<u>Age (range)</u>	<u>#</u>
0-9	3	50-59	25
10-19	5	60-69	10
20-29	17	70-79	14
30-39	17	80-89	12
40-49	15	90-99	3
		100-109	1

Distribution for Manner of Death Determined by Coroner



For each of the 122 cases, the coroner had to make a determination as to manner of the decedent's death. In all but he came to a conclusion and a final decision was rendered. For the year there were 59 natural deaths, 42 accidents, 14 suicides, 2 homicides, and 5 undetermined.

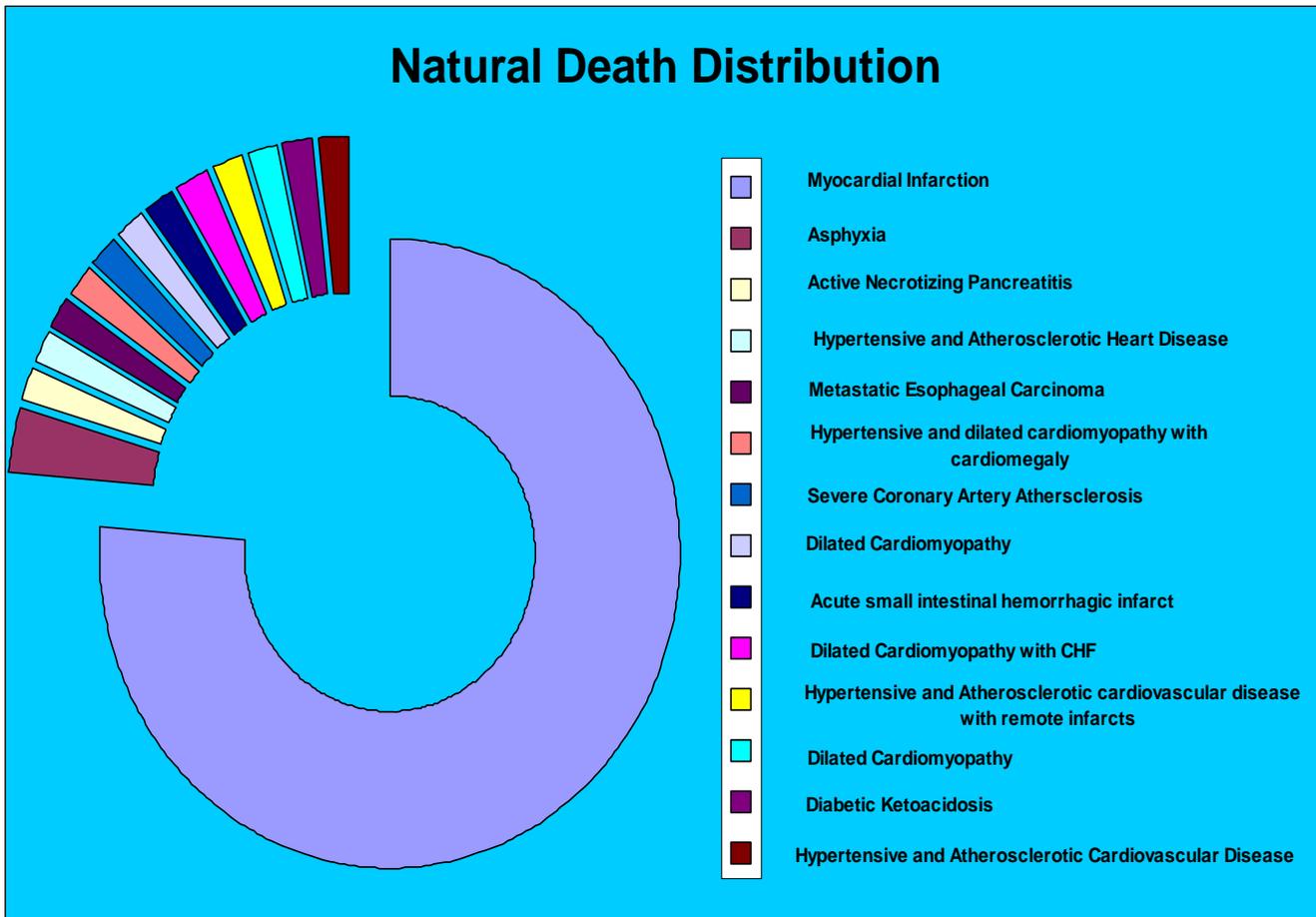
The distribution of the manner of death when compared with age is as follows:

Age	Natural	Accident	Suicide	Homicide	Undetermined	Totals
0-9	0	1	0	0	2	3
10-19	0	4	1	0	0	5
20-29	2	10	4	1	0	17
30-39	6	7	3	0	1	17
40-49	6	6	2	0	1	15
50-59	18	3	3	1	0	25
60-69	9	0	1	0	0	10
70-79	9	5	0	0	0	14
80-89	6	5	0	0	1	12
90-99	2	1	0	0	0	3
100-109	1	0				1
Totals	59	42	14	2	5	122

The distribution of the manner of death when compared to sex is as follows:

Sex	Natural	Accident	Suicide	Homicide	Undetermined	Totals
Male	44	31	13	1	3	92
Female	15	11	1	1	2	30
Totals	59	42	14	2	5	122

Natural Death Distribution

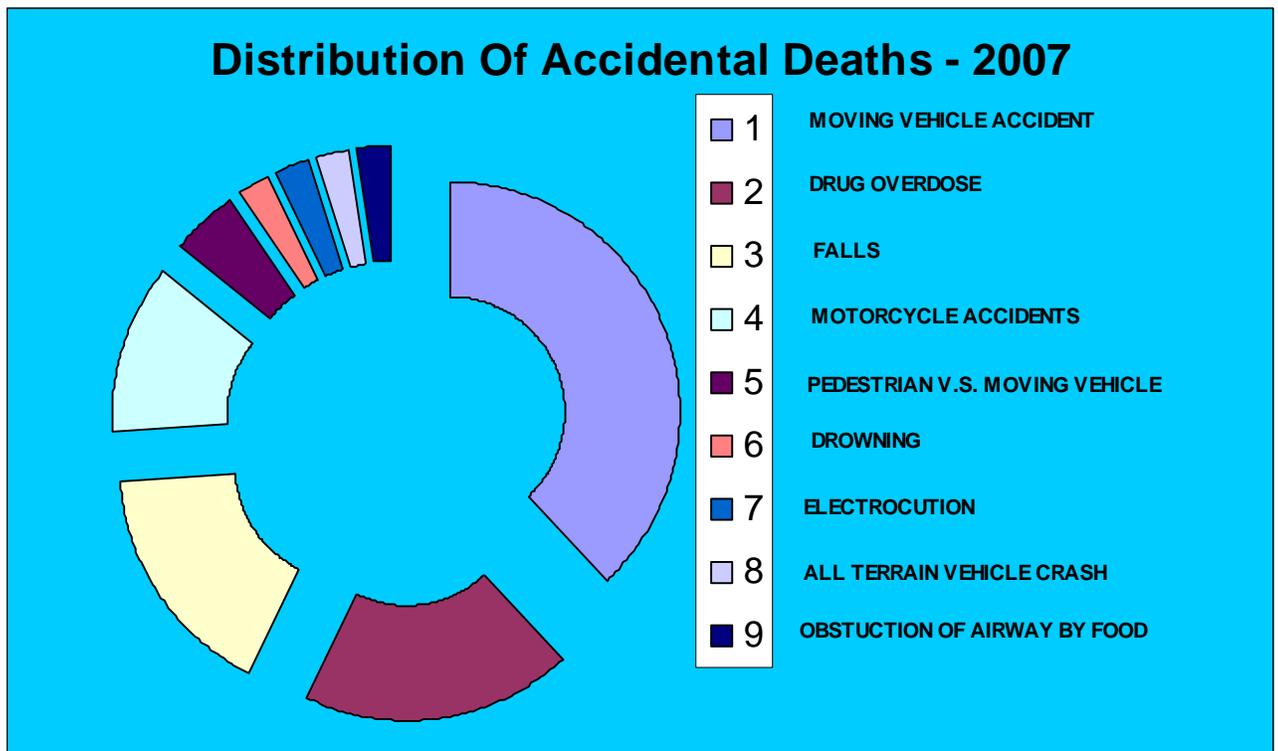


Each death that is determined to be natural in manner the coroner gives a cause. Above are the distributions of the various causes of natural deaths for this year and the exact amounts are as follows:

Natural Death Distribution - Continued

Myocardial Infarction	45
Asphyxia	2
Active Necrotizing Pancreatitis	1
Hypertensive and Atherosclerotic Heart Disease	1
Metastatic Esophageal Carcinoma	1
Hypertensive and Dilated Cardiomyopathy with Cardiomegaly	1
Severe Coronary Artery Atherosclerosis	1
Dilated Cardiomyopathy	1
Acute small intestinal hemorrhagic infarct	1
Dilated Cardiomyopathy with CHF	1
Hypertensive and Atherosclerotic cardiovascular Disease with remote myocardial infarcts	1
Dilated Cardiomyopathy	1
Diabetic Ketoacidosis	1
Hypertensive and Atherosclerotic Cardiovascular Disease	1
Total	59

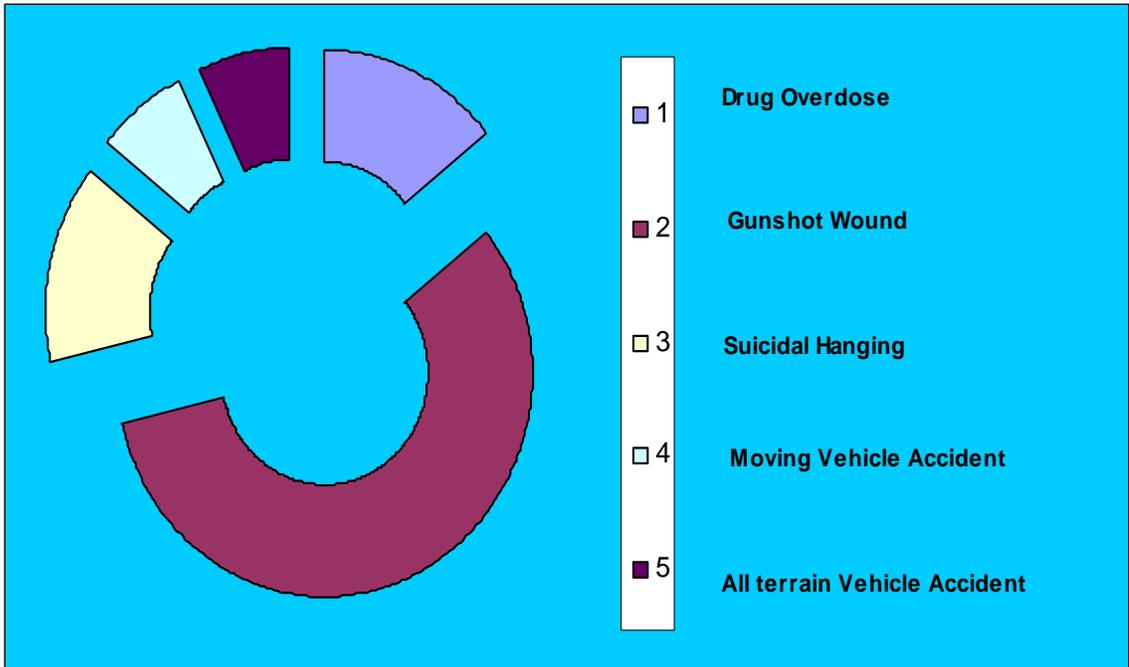
Distribution of Accidental Deaths



Accidental deaths are graphed above and listed below.

Moving Vehicle Accident	16	Drowning	1
Drug Overdose	8	Electrocution	1
Fall	7	ATV Crash	1
Motorcycle Accident	5	Obstruction of Airway	
Pedestrian versus Moving Vehicle	2	by food	1

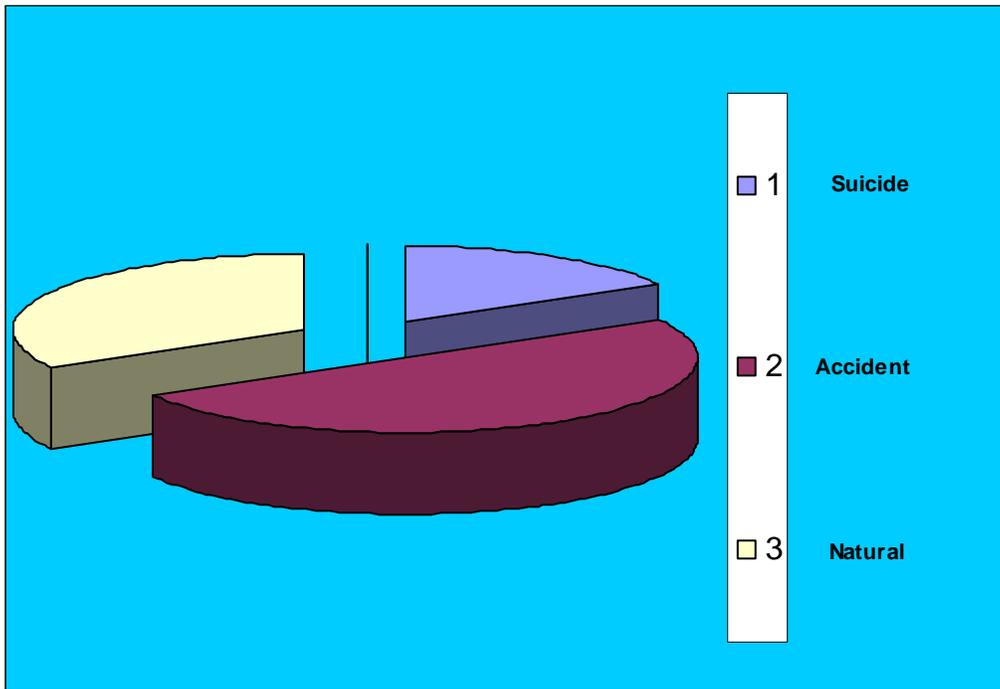
Distribution of Suicidal Death



The causes of the 14 suicides were also determined by the coroner and they are as follows:

Drug Overdose	2	Moving Vehicle Accident	1
Gunshot Wound	8	ATV Accident	1
Suicidal Hanging	2		

Distribution of Asphyxia Deaths



Of the 6 Asphyxia deaths for the year there were the following manners of deaths that were determined:

Suicide	1
Accident	3
Natural	2

Distribution of Deaths by Town

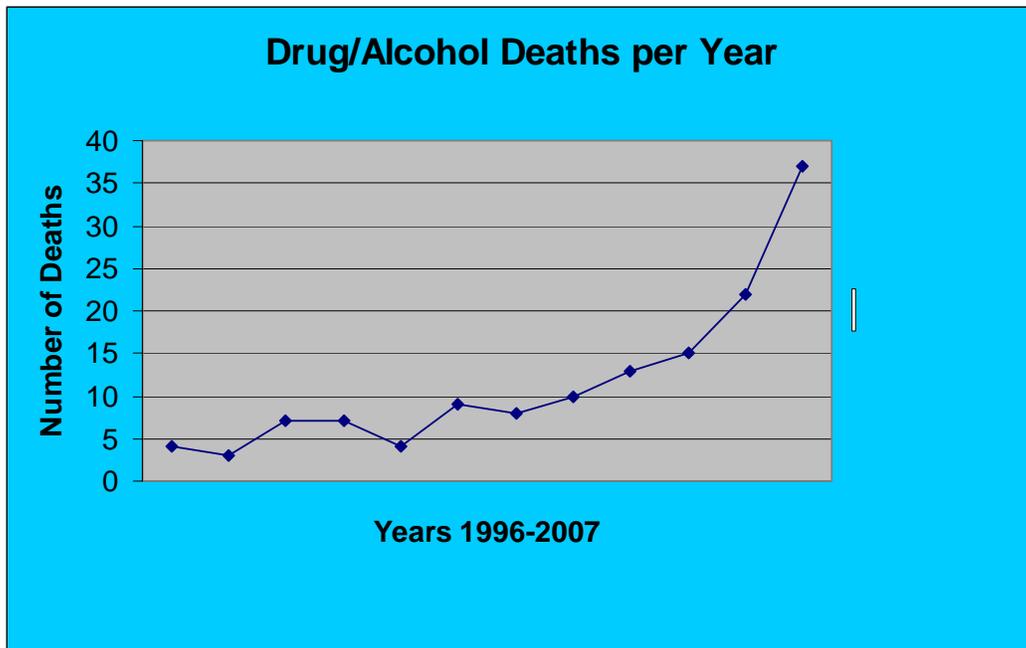
Town	Natural	Accident	Suicide	Homicide	Undetermined	Pending	Total
Salem	15	7	1	0	1	0	23
East Liverpool	7	6	2	0	4	0	19
Lisbon	3	3	3	0	0	0	9
Columbiana	3	1	0	0	0	0	4
East Palestine	5	5	0	0	0	0	10
Salineville	3	2	0	0	0	0	5
Alliance	1	1	0	0	0	0	2
Rogers	2	1	0	0	0	0	3
Leetonia	2	1	1	0	0	0	4
Washingtonville	2	0	0	0	0	0	2
Beliot	0	3	0	0	0	0	3
Wellsville	5	0	2	2	1	0	10
Hanoverton	2	2	0	0	0	0	4
Kensington	1	0	0	0	0	0	1
Onconto Co. WI	1	0	0	0	0	0	1
Negley	1	0	0	0	0	0	1
New Waterford	0	2	0	0	0	0	2
Irondale	0	1	0	0	0	0	1
Hammondsville	1	0	0	0	0	0	1
Berlin Center	1	0	1	0	0	0	2
Youngstown	0	1	0	0	0	0	1
Homeworth	0	0	1	0	0	0	1
Weirton, W.Va	0	1	0	0	0	0	1
Atwater	0	1	0	0	0	0	1
New Cumberland, W.Va	0	1	0	0	0	0	1
Elkton	1	0	0	0	0	0	1
Williamstown, N.J.	0	1	0	0	0	0	1
Chester, W.Va.	0	1	2	0	0	0	3
Midland, Pa.	0	0	1	0	0	0	1
Damascus	0	1	0	0	0	0	1
Austintown	1	0	0	0	0	0	1
Struthers	1	0	0	0	0	0	1
Petersburgh, Pa.	1	0	0	0	0	0	1
Total	59	42	14	2	5	0	122

Distribution of Deaths by Zip Code

Zip Code	Natural	Accident	Suicide	Homicide	Undetermined	Pending	Total
44460	15	7	1	0	0	0	23
43920	7	5	2	0	4	0	18
44432	3	4	3	0	0	0	10
44408	3	1	0	0	0	0	4
44413	5	5	0	0	0	0	10
43945	3	2	0	0	0	0	5
44423	2	2	0	0	0	0	4
44431	2	1	1	0	0	0	4
44601	1	1	0	0	0	0	2
44427	1	0	0	0	0	0	1
44441	1	0	0	0	0	0	1
44445	0	2	0	0	0	0	2
44455	2	1	0	0	0	0	3
44490	2	0	0	0	0	0	2
44609	0	3	0	0	0	0	3
54139	1	0	0	0	0	0	1
43968	5	1	2	2	1	0	11
43930	1	0	0	0	0	0	1
44401	1	0	1	0	0	0	2
44502	0	1	0	0	0	0	1
44634	0	0	1	0	0	0	1
26062	0	1	0	0	0	0	1
44201	0	1	0	0	0	0	1
26047	0	1	0	0	0	0	1
44415	1	0	0	0	0	0	1
08094	0	1	0	0	0	0	1
26034	0	1	2	0	0	0	3
16669	1	0	0	0	0	0	1
15059	0	0	1	0	0	0	1
44619	0	1	0	0	0	0	1
44515	1	0	0	0	0	0	1
44471	1	0	0	0	0	0	1
Totals	59	42	14	2	5	0	122

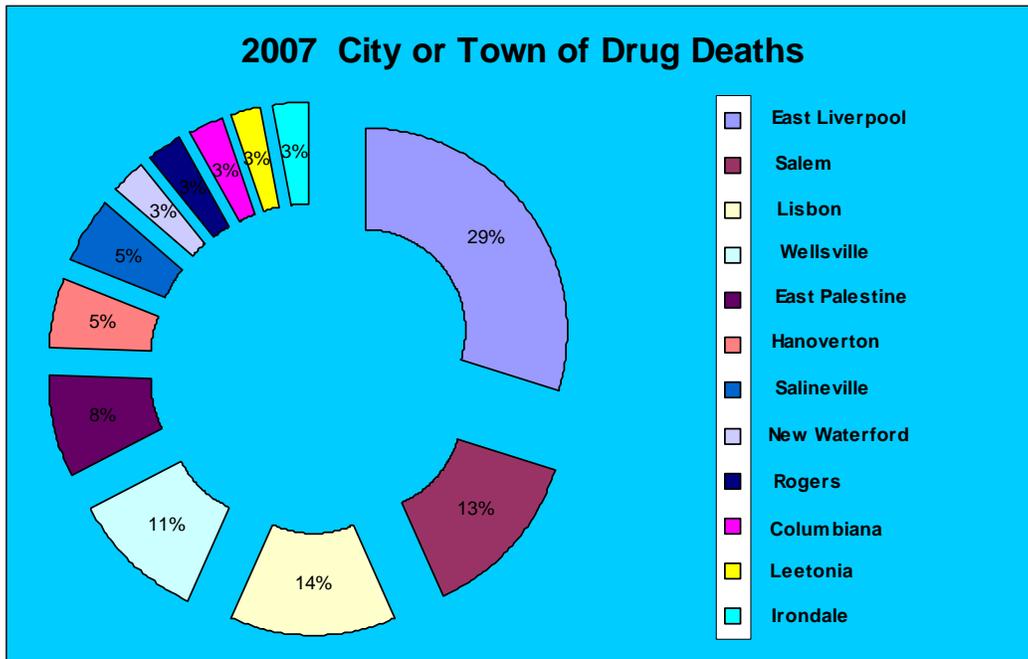
The previous tables display the distribution of manner of death in the cities and zip codes from where the decedents died in 2007.

Distribution of Drug and Alcohol Deaths by Year



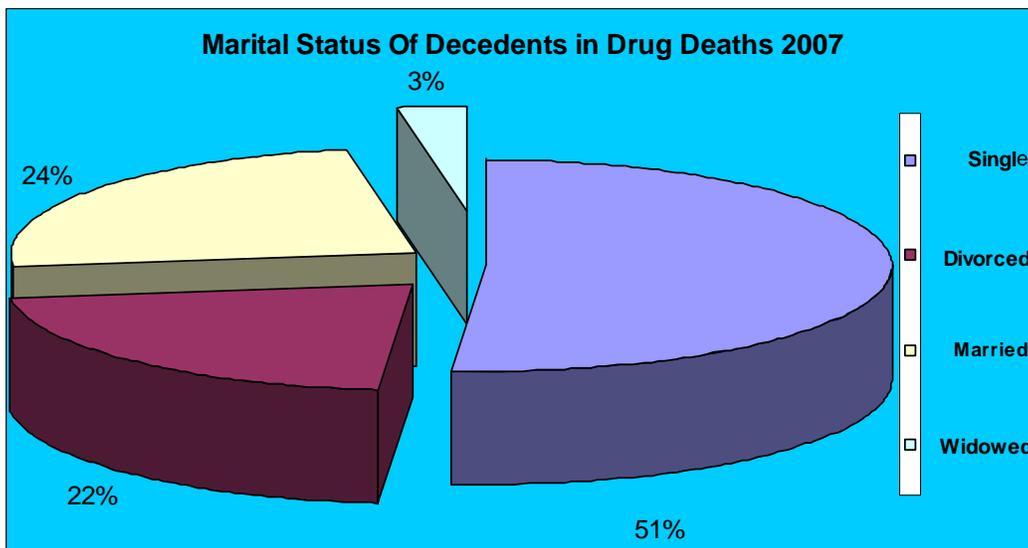
This graph displays the deaths where drugs and or alcohol directly caused the decedents' deaths for the past 12 years and shows a tremendous jump from previous years to 37 for this year when compared to the 22 from last year. This office predicted the major importance of drugs to the coroner's office and it was dramatically understated as 37 deaths were caused by drugs or alcohol and the other 10 of the 47 positive toxicology results that did not cause the decedents' deaths but drugs or alcohol were found in these individuals

2007-City or Town of Drug Deaths



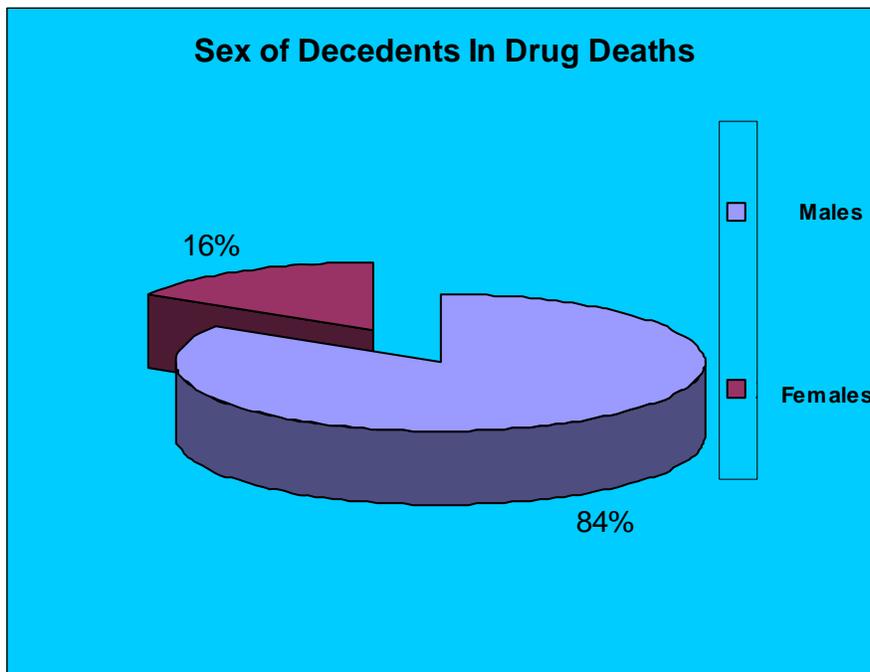
For the drug deaths in 2007 the city where the decedent's died was evaluated and recorded. Of the 37 deaths, East Liverpool had 11, Salem and Lisbon had 5 each, Wellsville had 4, East Palestine had 3, Hanoverton and Salineville had 2 each and the rest of the cities Irondale, Columbiana, Leetonia, Rogers and New Waterford had one. These results displayed East Liverpool and Salem were the top two at 29 and 13 percent of the deaths.

2007-Marital Status of Decedents in Drug Deaths



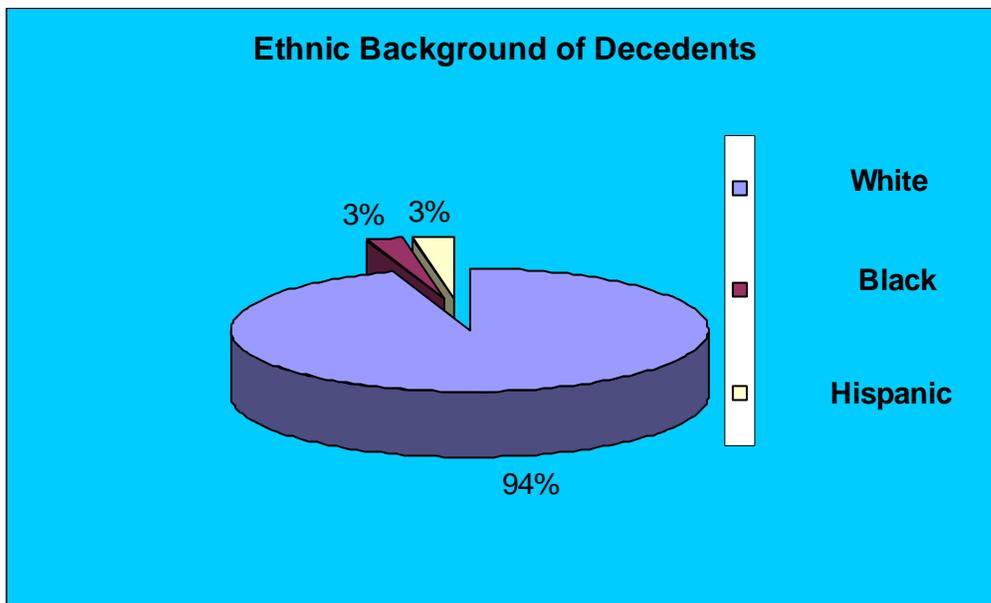
This shows the marital status of the decedents that died in a drug related death. Of the 37 decedents, 19 were single, 8 divorced, 9 married and 1 widowed.

2007-Sex of Decedents in Drug Deaths



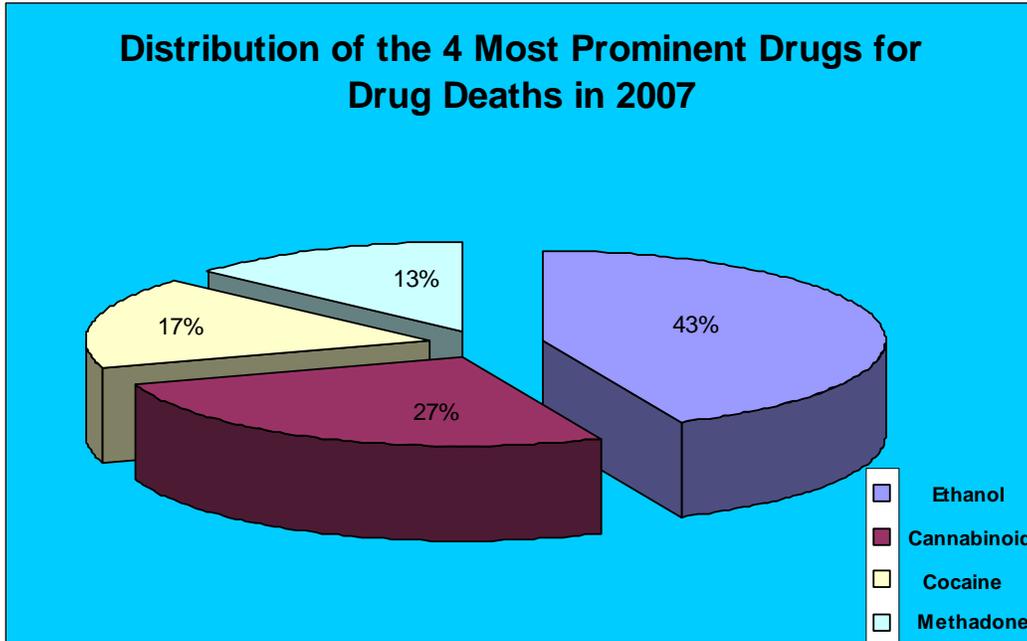
This graph shows the ratio of male to females in drug related deaths. There were 31 males and 6 females of the 37 drug related deaths. Thus, there were over three times more males than females.

2007-Race of Decedents in Drug Deaths



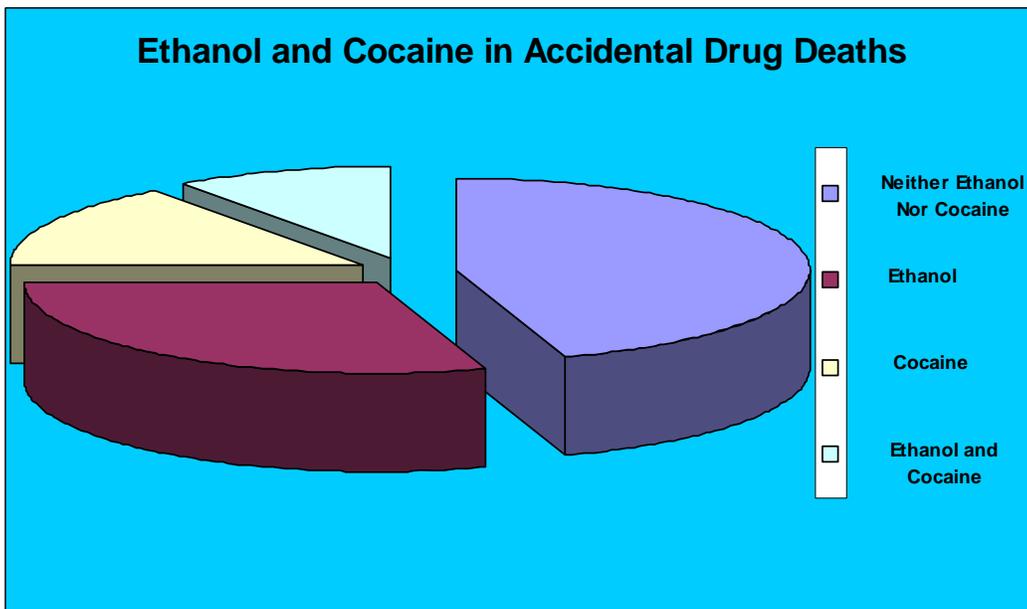
The ethnic background of the decedents was overwhelmingly white. There were 35 white individuals, 1 black and 1 Hispanic decedent involved with drug related deaths.

Distribution of the 4 Most Prominent Drugs for Drug Deaths in 2007



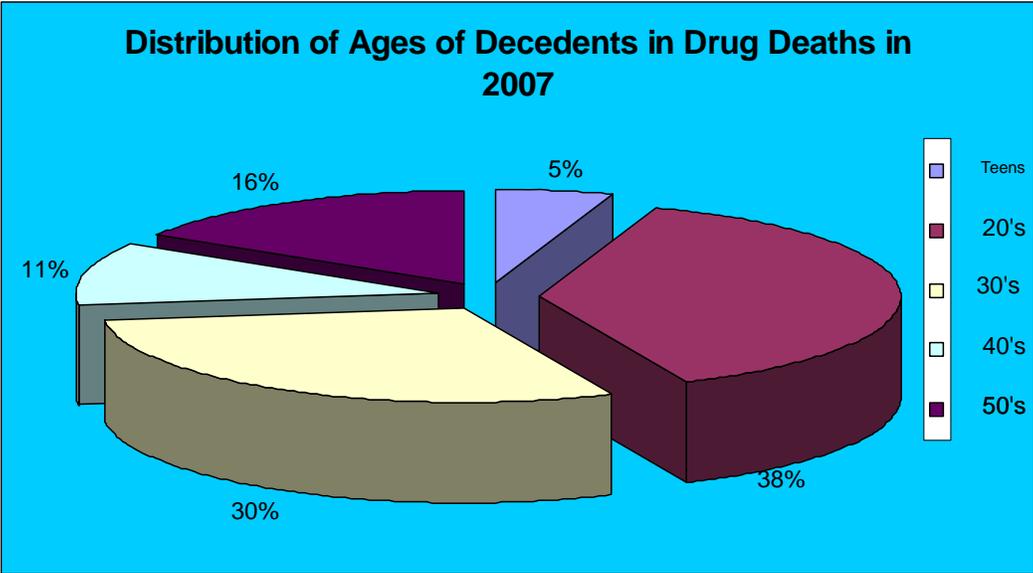
The prominent drugs for 2007 were Ethanol, Cannabinoids, Methadone and Cocaine.

Distribution of Ethanol and Cocaine among the Accidental Drug Deaths in 2007



Of the 37 drug related deaths 20 were accidental.

Distribution of Ages of Decedents in Drug Deaths in 2007



The decedents' ages in drug deaths were quite interesting to evaluate. There were mostly decedents in their 20s. There were 2 people in their teens, 14 in their twenties, 11 in their thirties, 4 in their forties, 6 in their 50s. This shows that mostly those in their 20s-50s were involved in drug related deaths with at peak in the 20s-30s range.

Having seen the data and the graphs of the year 2007 ... we ask the question, “Was this a ‘normal’ year?” We will answer this question by comparing it to the previous 18 years of data. We will use the statistical tools of **Normal Distribution** and **Standard Deviation (SD)**. Refer to appendix A for a quick refresher course if needed.

Let’s look first at the number of cases for the year 2007:

Year	Total Cases	Male	Female	Ratio
1989	94	69	25	0.734043
1990	99	76	23	0.767677
1991	78	51	27	0.653846
1992	90	60	30	0.666667
1993	78	64	14	0.820513
1994	73	50	23	0.684932
1995	89	68	21	0.764045
1996	120	95	25	0.791667
1997	88	66	22	0.750000
1998	88	57	31	0.647727
1999	98	71	27	0.724490
2000	86	56	30	0.651163
2001	96	64	32	0.666667
2002	117	73	44	0.623932
2003	94	66	28	0.702128
2004	108	78	30	0.722222
2005	82	58	24	0.707317
2006	111	83	28	0.747748
2007	122	91	31	0.745902
Sum	1689	1205	484	12.826781
Mean	93.833333	66.94444	26.888889	0.712599
SD	12.928221	11.092902	5.952487	0.053398
- 3 SD	55.048671	33.665739	9.031429	0.552404
- 2 SD	67.976892	44.758641	14.983915	0.605803
2007	122	91	31	0.745902
+ 2 SD	119.689775	89.130248	38.793862	0.819395
+ 3 SD	132.617995	100.22315	44.746349	0.872793

The total number of cases is **122**, the greatest number of cases since this coroner took office in 1989. The number of male deaths, **91**, is also elevated and greater than +2SD. The number of female deaths, **31**, and the male to female ratio, **0.745902**, are well within the -2 SD and +2 SD range.

The increased number of cases is due to the increase in male deaths, which as we will see later is due to the increase in male accidents.

Now let's look at the number of homicides in the year 2007

Year	Homicide	Male	Female	Ratio
1989	2	0	2	0
1990	2	0	2	0
1991	0	0	0	
1992	3	1	2	0.333333
1993	2	1	1	0.5
1994	1	1	0	1
1995	5	3	2	0.6
1996	3	2	1	0.666667
1997	2	0	2	0
1998	2	1	1	0.5
1999	1	1	0	1
2000	1	0	1	0
2001	2	1	1	0.5
2002	4	2	2	0.5
2003	1	1	0	1
2004	2	1	1	0.5
2005	2	1	1	0.5
2006	2	1	1	0.5
2007	2	1	1	0.5
Sum	37	17	20	8.1
Mean	1.947368	0.894737	1.052632	0.426316
SD	1.161754	0.802366	0.758395	0.335982
- 3 SD	-1.53789	-1.51236	-1.22255	-0.58163
- 2 SD	-0.37614	-0.70999	-0.46416	-0.24565
2007	2	1	1	0.5
+ 2 SD	4.270877	2.499468	2.569422	1.09828
+ 3 SD	5.432632	3.301834	3.327817	1.434262

Both the number of homicides and the Male to Female ratio fit well within the -2 SD and the $+2$ SD range. The Number of Male homicides, **2**, and the number of Female homicides, **1**, and the male to female ratio, **0.5** are all within $+2$ and -2 SD thus the homicide data for the year 2007 must be considered “normal”.

The first homicide was committed on June 15th against a 59 year old male. His assailant immediately confessed to the attack and was placed in the County Jail pending a court resolution, trial or confession and sentencing by a judge. On October 12th the assailant committed suicide while in his jail cell.

The second homicide was committed on July 1st against a 25 year old female. This case has been scheduled for trial on September 16th of this year.

Both cases of homicide were at the hands of a family member.

The next data set involves Suicides in the year 2007:

Year	Suicide	Male	Female	Ratio
1989	13	12	1	0.923077
1990	11	9	2	0.818182
1991	18	15	3	0.833333
1992	12	10	2	0.833333
1993	12	10	2	0.833333
1994	12	11	1	0.916667
1995	11	9	2	0.818182
1996	17	15	2	0.882353
1997	15	12	3	0.800000
1998	17	9	8	0.529412
1999	8	6	2	0.750000
2000	9	9	0	1.000000
2001	13	11	2	0.846154
2002	12	7	5	0.583333
2003	16	14	2	0.875000
2004	12	9	3	0.750000
2005	20	17	3	0.850000
2006	15	12	3	0.800000
2007	14	13	1	0.928571
Sum	243	197	46	14.642359
Mean	13.5	10.94444	2.555556	0.813464
SD	3.185445	2.899741	1.722591	0.11159
- 3 SD	3.943665	2.245222	-2.61222	0.478694
- 2 SD	7.12911	5.144963	-0.88963	0.590284
2007	14	13	1	0.928571
+ 2 SD	19.87089	16.74393	6.000738	1.036645
+ 3 SD	23.05633	19.64367	7.723329	1.148235

As can be seen from the chart, the number of suicides, 14, the number of males, 13, the number of females, 1, and the ratio of Male to Female, 0.928571, falls with the “normal” range of -2SD and +2SD .

The Female suicide death in the year 2007 was from a relatively violent method ... that of gun shot wound. The Male suicide deaths ran the gamut from drug overdose, to shooting, to hanging, to drinking anti-freeze and moving vehicle crashes

Accidents for the year 2007

Year	Accident	Male	Female	Ratio	
1989		31	22	9	0.709677
1990		32	26	6	0.8125
1991		18	10	8	0.555556
1992		20	17	3	0.85
1993		25	21	4	0.84
1994		22	12	10	0.545455
1995		22	16	6	0.727273
1996		28	21	7	0.75
1997		19	16	3	0.842105
1998		21	14	7	0.666667
1999		18	10	8	0.555556
2000		21	13	8	0.619048
2001		20	15	5	0.75
2002		19	15	4	0.789474
2003		24	12	12	0.5
2004		24	14	10	0.583333
2005		21	16	5	0.761905
2006		30	21	9	0.7
2007		42	31	11	0.738095
Sum		457	291	124	12.55855
Mean		23.05556	16.16667	6.888889	0.697697
SD		4.465189	4.435817	2.587047	0.113609
- 3 SD		9.65999	2.859216	-0.87225	0.356871
- 2 SD		14.12518	7.295033	1.714796	0.47048
2007		42	31	11	0.738095
+ 2 SD		31.98593	25.0383	12.06298	0.924915
+ 3 SD		36.45112	29.47412	14.65003	1.038523

The statistical evaluation of accidents for the year 2007 is very striking! The total number of accidents, **42**, and the number of male accidents, **31**, are both above +2SD, and in fact the both values are above +3SD. According to an excerpt from Appendix A., **a significant observation has been found.**

Natural deaths from the year 2007

Year	Natural	Male	Female	Ratio
1989	47	34	13	0.723404
1990	51	39	12	0.764706
1991	42	26	16	0.619048
1992	55	32	23	0.581818
1993	38	31	7	0.815789
1994	38	26	12	0.684211
1995	51	40	11	0.784314
1996	69	55	14	0.797101
1997	52	37	15	0.711538
1998	48	33	15	0.6875
1999	69	53	16	0.768116
2000	49	32	17	0.653061
2001	57	36	21	0.631579
2002	77	44	33	0.571429
2003	52	38	14	0.730769
2004	67	52	15	0.776119
2005	38	24	14	0.631579
2006	58	44	14	0.758621
2007	59	44	15	0.745763
Sum	958	676	282	12.6907
Mean	53.22222	37.55556	15.66667	0.705039
SD	11.40462	9.185809	5.573044	0.076001
- 3 SD	19.00836	9.998129	-1.05247	0.477036
- 2 SD	30.41298	19.18394	4.520578	0.553037
2007	59	44	15	0.745763
+ 2 SD	76.03146	55.92717	26.81276	0.857041
+ 3 SD	87.43608	65.11298	32.3858	0.933043

The statistical evaluation of natural deaths for the year 2007 reveals all values within the "Normal Range", that is to say, all values fall within the range of -2SD and +2SD.

Commentary

The one statistical outlier that must be explored is the Accidental deaths, specifically the Greater than 3 standard deviations for male accidents. We decided to look at the various categories involved in accidental deaths, namely "Moving Vehicle Accidents", "Drug Overdoses", "Falls", "Motorcycle Accidents", and other causes having an incidence of 1 or 2 in the year 2007. The following charts illustrate the year by year incidence of death for males in the 4 categories listed above.

MOTOR VEHICLE ACCIDENTS - MALES 1989-2007

	1989	7.00
	1990	7.00
	1991	7.00
	1992	11.00
	1993	12.00
	1994	7.00
	1995	14.00
	1996	11.00
	1997	8.00
	1998	4.00
	1999	5.00
	2000	4.00
	2001	5.00
	2002	10.00
	2003	4.00
	2004	6.00
	2005	7.00
	2006	6.00
	2007	17.00
Sum		135.000000
Mean		7.500000
SD		2.955553
-3SD		-1.366659
-2SD		1.588894
	2007	17.00
+2SD		13.411106
+3SD		16.366659

As can be seen for all the last 19 years male moving vehicle accidents ran from 4 to 14, but in the year 2007 the number was 17. This value is above the 3 standard deviation mark, and is thus "a significant observation" as labeled in Appendix A. Not surprisingly alcohol, drugs, or both were involved with most of the accidents.

Overdose/Intoxication Male Year
2007

1989	3
1990	1
1991	0
1992	0
1993	1
1994	0
1995	1
1996	1
1997	0
1998	0
1999	0
2000	1
2001	3
2002	1
2003	2
2004	1
2005	1
2006	3
2007	8
Sum	19
Mean	1.055556
StDEV	1.055642
-3SD	-2.11137
-2SD	-1.05573
2007	8
+2SD	3.166839
+3SD	4.22248

This chart shows the 2007 deaths due to drugs and/or intoxications for the last 19 years. The number of deaths range from 0 to 3 for those years. However when 2007 came along this county had 8 male deaths. The value of 8 was considerably higher than the +3 Standard deviation making this the another “**significant observation**”

Falls - Male - Year 2007

	1989	1
	1990	2
	1991	0
	1992	1
	1993	1
	1994	1
	1995	0
	1996	0
	1997	0
	1998	0
	1999	1
	2000	0
	2001	0
	2002	1
	2003	2
	2004	2
	2005	1
	2006	4
	2007	5
SUM		17
Mean		0.944444
SD		1.055642
-3		-2.22248
-2		-1.16684
	2007	5
+2		3.055728
+3		4.111369

The chart shows the last 19 years of male accidental falls causing death in this county. The number of deaths ranges from 0 to 4, but in 2007 the number was 5. Statistically the value of 5 is also greater than +3 standard deviations. Once again this makes this a **“significant observation”**.

Motorcycle Male/Year
2007

1989	1
1990	1
1991	2
1992	0
1993	1
1994	0
1995	1
1996	1
1997	1
1998	0
1999	0
2000	2
2001	0
2002	1
2003	0
2004	0
2005	0
2006	1
2007	5
Sum	12
Mean	0.666667
SD	0.685994
-3SD	-1.39132
-2SD	-0.70532
2007	5
+2SD	2.038655
+3SD	2.72465

This chart shows the number of deaths for males for the last 19 years. As can be seen the number of motorcycle deaths range from 0 to 2 for the last 18 years, but in the year 2007 there were 5 deaths. Not only is that $2\frac{1}{2}$ times the highest year, it is also significantly above +3 standard deviation calculated for this category of deaths. Thus once again we have a **“Significant Observation”**.

To summarize this analysis ... it wasn't such a good thing to be a male in Columbiana County in the year 2007. Males had an amazing chance of dying from an accident in the year 2007 as compared to all previous 18 years! Let's hope that the year 2008 is little easier on the males in this county

SUMMARY

1. The Ohio Revised Code concerning the Office of the Coroner was reviewed. Emphasis was placed on when to report a death, how to report a death, laws/attorney general's opinion, and frequently asked questions.

2. The statistical review showed that the calendar year 2007 was an eventful and busy year. Of the 1009 deaths reported in the County, 467 were not reported to the Coroner, 420 were reported to the Coroner, and those 122 were accepted by the Coroner. Of the 122 accepted by the Coroner, 36 were autopsied and 109 had toxicology performed. The classifications of these deaths were as follows:

Natural	59
Accident	42
Homicide	2
Suicide	14
Not determined	5
Total Cases	122

Of the 122, 91 were male and 31 were female. The marital status was as follows:

Married	39
Single	40
Divorced	29
Widowed	14

The ethnic background and age distribution by manner of death are described. As in previous years cardiac disease was the major "natural" killer, and gunshot wounds were the predominant cause of suicidal deaths.

A review of the Drug/Alcohol deaths for 2007 was reported. A continued increase in the rate of deaths is noted over the past 12 years, with 2007 being the largest jump.

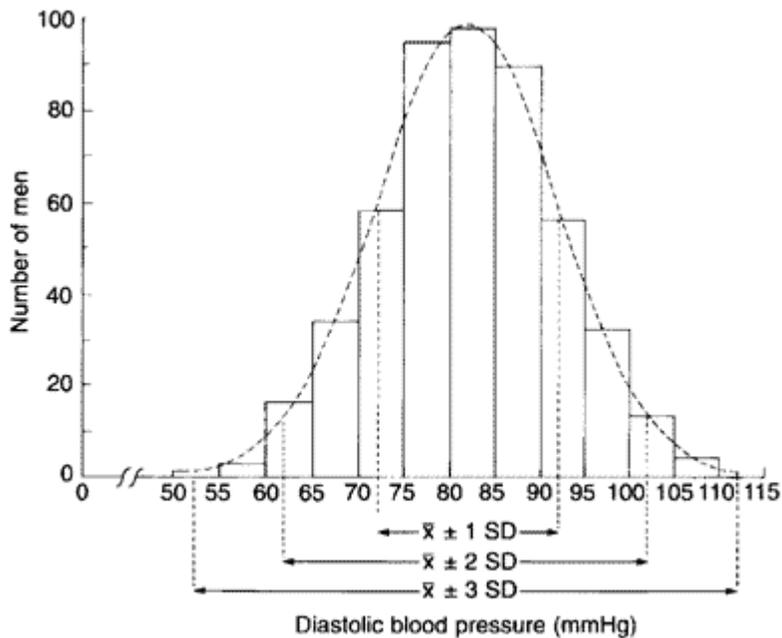
Statistically 2007 was a bad year for males. The number of male deaths from accidents was significantly increased when compared to the previous 18 years.

Mission Statement: This office is committed to represent those who can no longer represent themselves.

Goals: Continue to bring the best skills of medical science to coroner investigations. Continue to serve the needs of law and justice as well as the citizens of Columbiana County.

Appendix A:

Many biological measurements conform to a **Normal Distribution** – for example, heights of adult men and women, blood pressures in a healthy population, random errors in many types of laboratory measurements, and biochemical data. The figure below shows a Normal curve calculated from the diastolic blood pressures of 500 men, mean 82 mmHg, **Standard Deviation** 10 mmHg. The ranges representing $\pm 1SD$, $\pm 2SD$, and $\pm 3SD$ about the mean are marked.



The reason why **Standard Deviation (SD)** is such a useful measure of the scatter of the observations is this: if the observations follow a **Normal distribution**, a range covered by one standard deviation above the mean and one standard deviation below it includes about 68% of the observations; a range of two standard deviations above and two below about 95% of the observations; and of three standard deviations above and three below about 99.7% of the observations. Thus, when one encounters statistical values greater than 2SD or 3SD, a **significant observation has been found**.



Hazy July Morning along the banks of Lake Guilford

2007 Annual Report

**Office of the Coroner
Columbiana County
Ohio**

