



Hawk, Centennial Park, Salem Ohio

2008 Annual Report

Office of the Coroner
Columbiana County, Ohio



This Report is dedicated
to all those who have died
in Columbiana County, Ohio in the year 2008
to their families, their loved ones
and their friends

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Annual Report – 2008

Office of the Coroner

Columbiana County
8473 County Home Road
Lisbon, Ohio 44432

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 2008. Currently there are 9103 cases entered in the database partially representing known data from the years 1934 through 2008.

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 2008. We will next compare this data to that data collected from 1989 thru 2007.

We will discuss the growing drug death problem in Columbiana County, and show slides concerning the problem statewide and nationally.

And lastly, we share some data from 1959 to 2008, a 50 year summary.

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, 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.

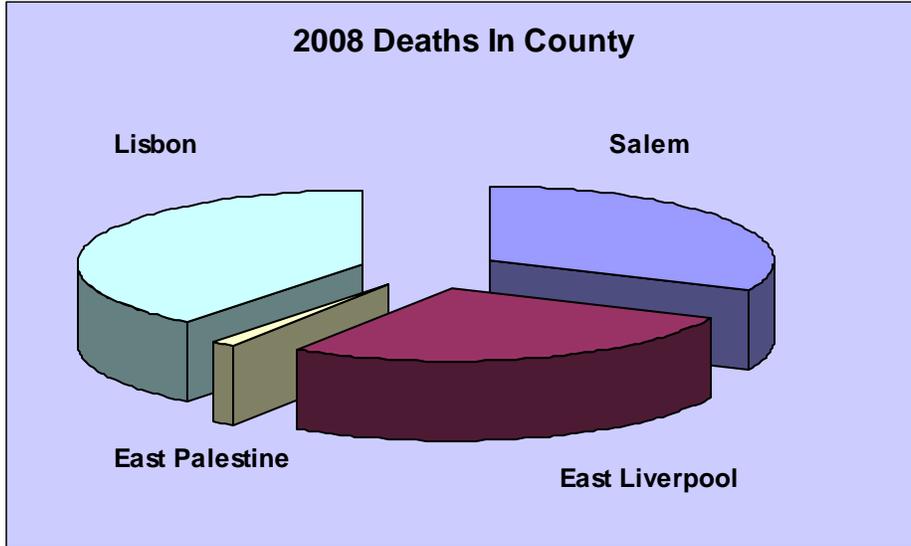
Where can copies of the death certificate be obtained?

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 2008

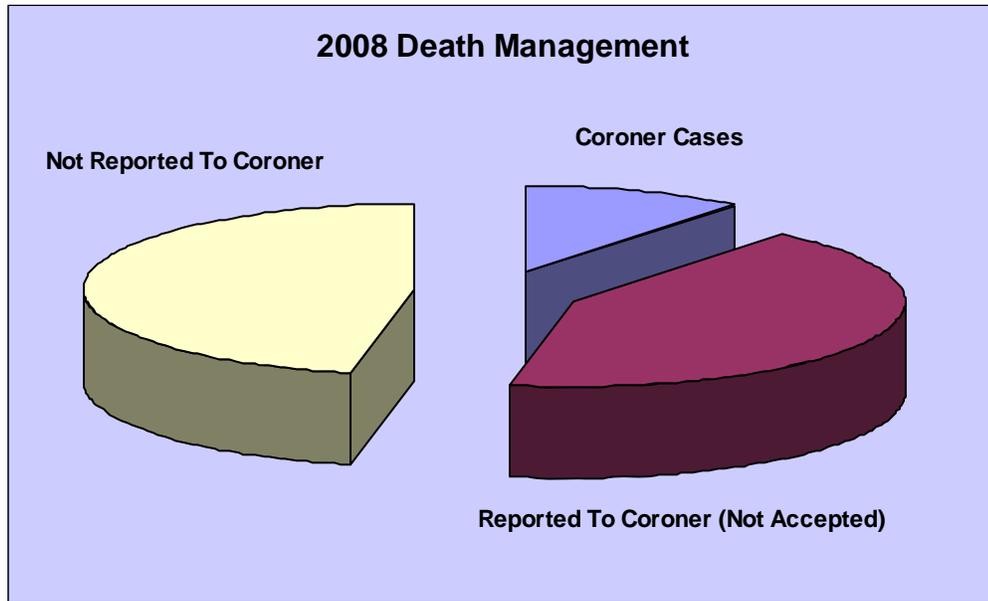


The amount of deaths reported from January 1, 2008 to December 31, 2008 in the county totaled 1132. This is a slight increase as compared with the last year total of 1009. The values displayed were acquired from Lisbon, Salem, East Liverpool, and East Palestine health departments. Each reported the following reported deaths:

Health Departments Data

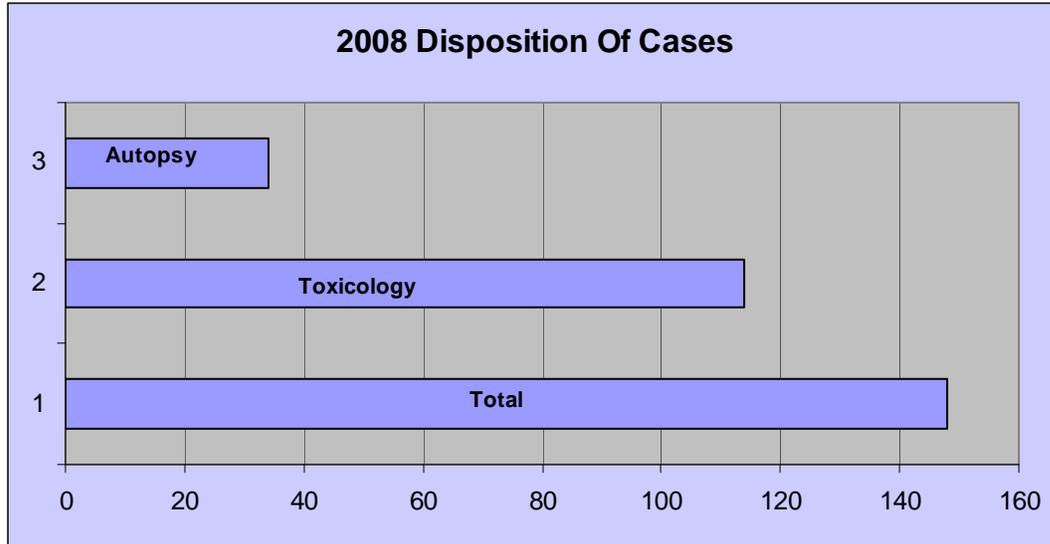
Lisbon	447
Salem	358
East Liverpool	311
East Palestine	16
<i>Total</i>	1132

Death Management for Reported Deaths



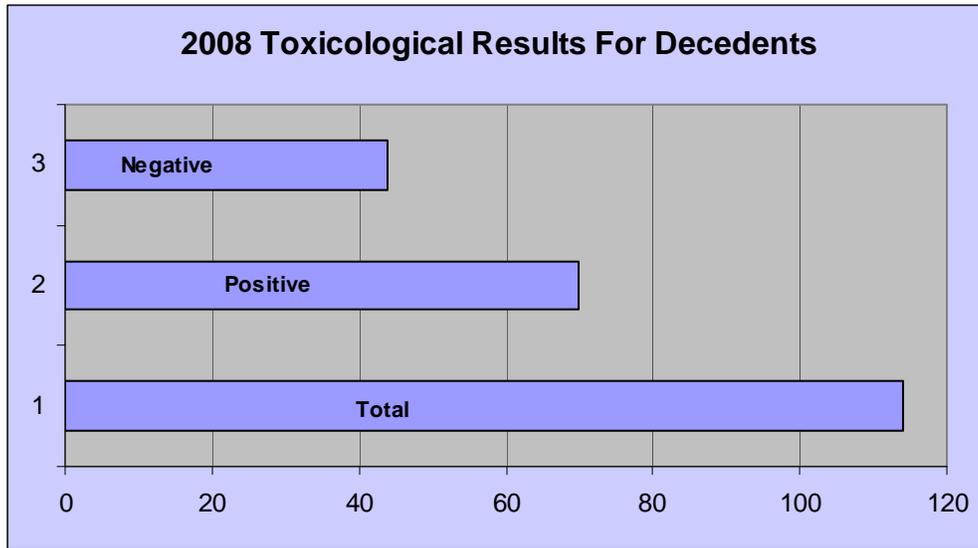
Not all of the cases reported to the coroner are accepted. Some cases do not meet the criteria of a coroner's case, therefore they are recorded as reported to the coroner but do not get investigated by the coroner. However, there are many that become coroner cases and for those a full investigation and final determination are rendered. This year there were 123 cases accepted by the coroner, 479 reported but not accepted by the coroner and the rest of the 530 deaths were not reported, which totaled 1132 deaths.

Disposition of Cases Taken by the Coroner



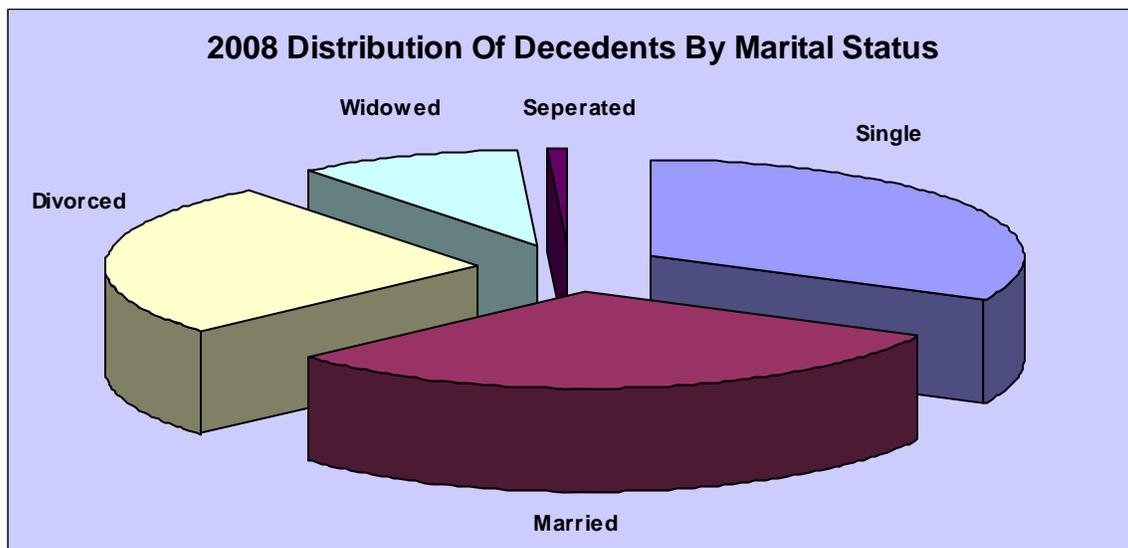
The coroner determines whether or not to run toxicology or do an autopsy on a decedent. For this year, out of the 123 death cases, 34 were autopsies with toxicology and 114 had toxicology testing only.

Toxicological Results of Decedents of 2008



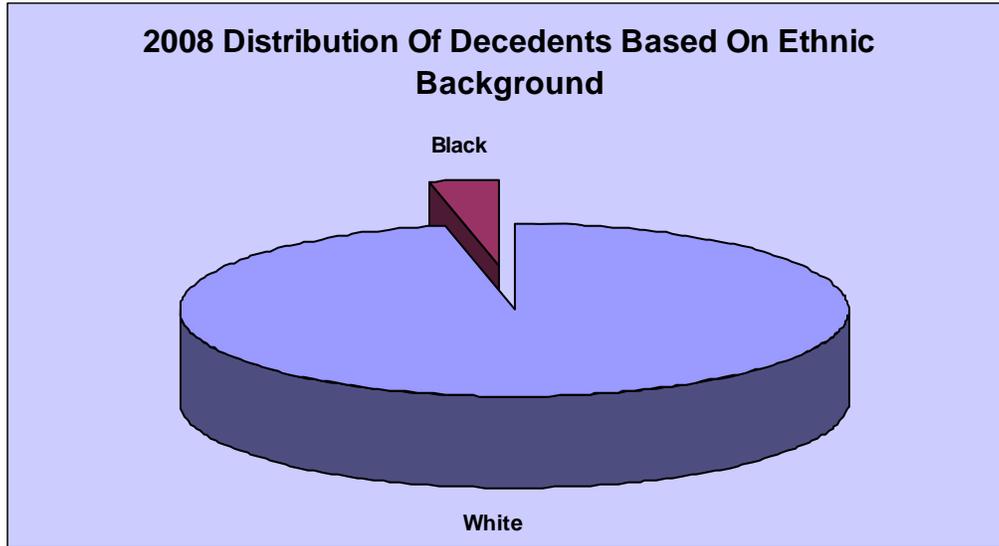
As shown it is a close comparison between the positive and negative results. The negative results were seen in 45 cases and 69 cases resulted positive. Thus, drugs were found in 69 decedents.

Distribution of Decedents by Marital Status



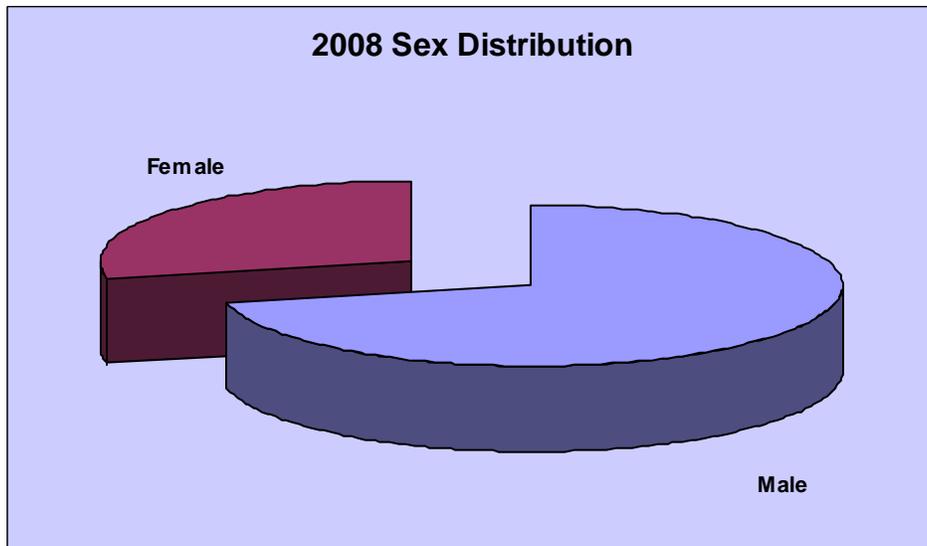
In coroner cases the decedent's information is obtained and documented. The results were as diverse as the decedents themselves. There were 38 people married, 40 single, 32 divorced, 12 widowed, and 1 separated.

Distribution of Decedents Based on Ethnic Background



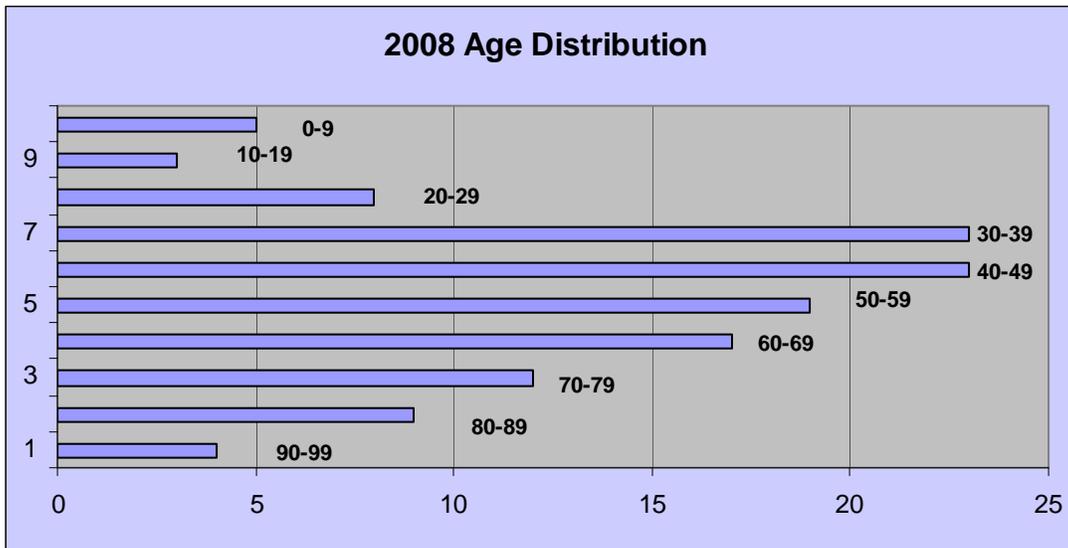
Although the marital status was diverse the ethnic distribution was not. There were mostly white decedents this year with a total of 119, and there were 4 black decedents.

Distribution of Decedents by Sex



In the year 2008, there were twice as many males as females that were accepted as coroner cases. The totals were 88 males and 35 females.

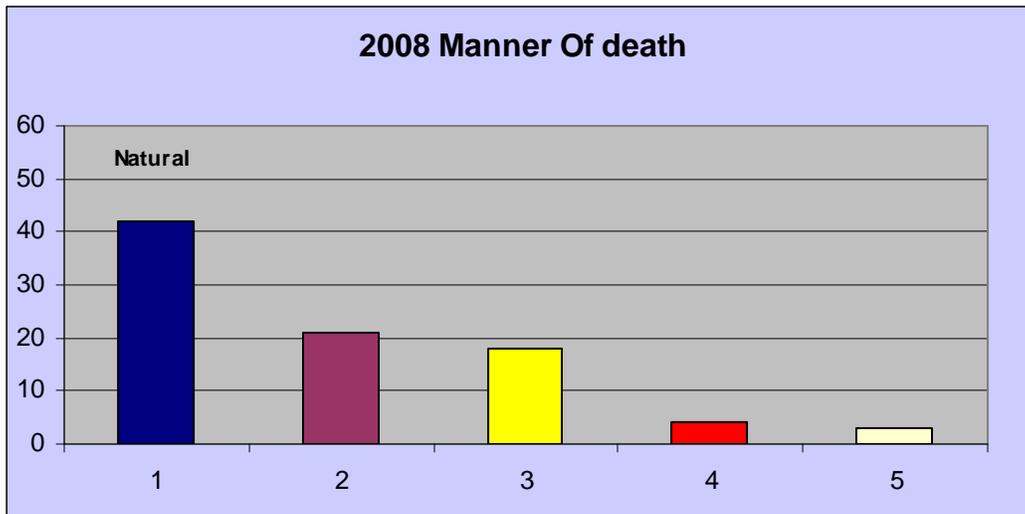
Distribution of the Decedents by Age



The decedent's age ranged from as young as 1 month and 25 days old up to 97 years of age. There were especially high values in the 30-69 age range and a peak from 30-49. The exact values of each are as follows.

<u>Age (range)</u>	<u>#</u>	<u>Age (range)</u>	<u>#</u>
0-9	5	50-59	19
10-19	3	60-69	17
20-29	8	70-79	12
30-39	23	80-89	9
40-49	23	90-99	4

Distribution for Manner of Death Determined by Coroner



For each of the 123 cases, the coroner had to make a determination as to manner of death. For the year there were 61 natural deaths, 30 accidents, 21 suicides, 5 undetermined and 6 homicides.

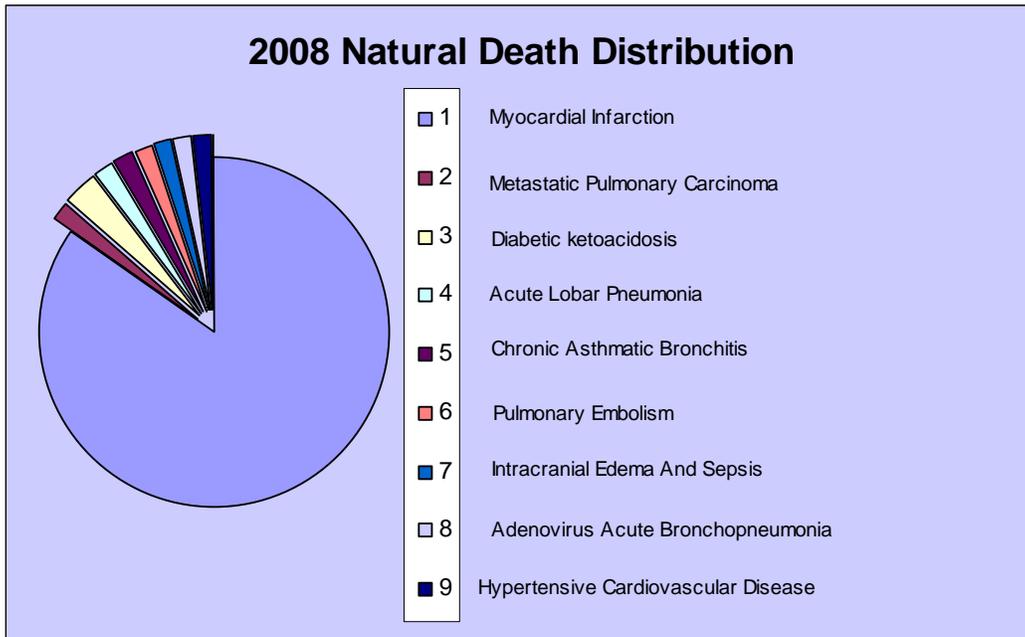
The distribution of the manner of death when compared with age is as follows:

Age	Natural	Accident	Suicide	Homicide	Undetermined	Totals
0-9	2	2	0	0	1	5
10-19	0	2	1	0	0	3
20-29	0	5	2	1	0	8
30-39	8	5	7	2	1	23
40-49	12	6	4	1	0	23
50-59	11	5	2	0	1	19
60-69	12	2	2	1	0	17
70-79	9	1	1	0	1	12
80-89	7	5	1	1	0	4
90-99	0	2	1	0	1	0
Totals	61	30	21	6	5	123

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

Sex	Natural	Accident	Suicide	Homicide	Undetermined	Totals
Male	42	21	18	4	3	88
Female	19	9	3	2	2	35
Totals	61	30	21	6	5	123

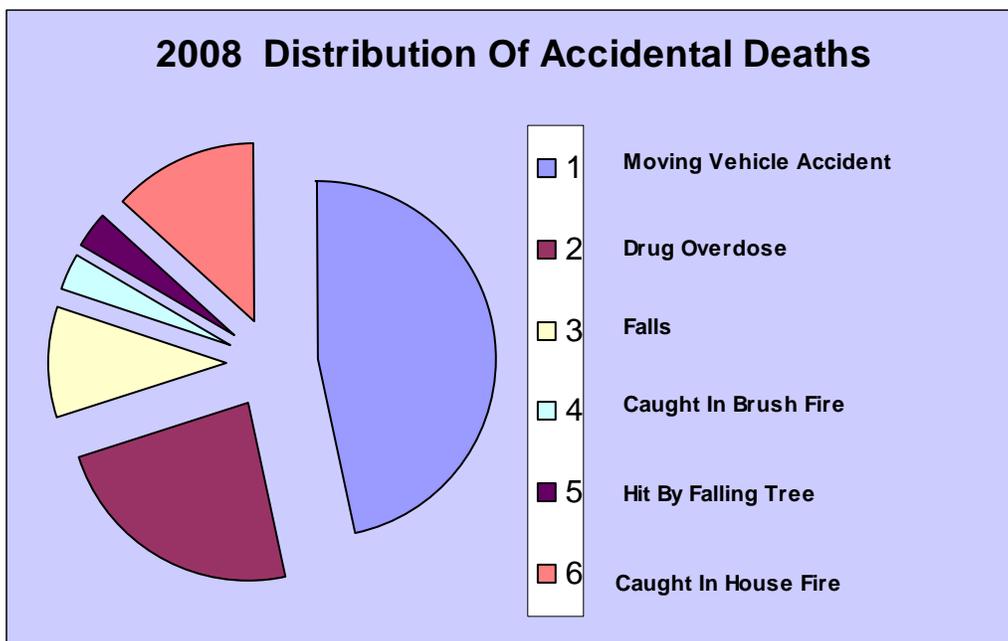
Natural Death Distribution



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:

Myocardial Infarction	50
Metastatic Pulmonary Carcinoma	1
Diabetic Ketoacidosis	1
Acute Lobar Pneumonia	1
Hypertensive and Atherosclerotic Heart Disease	1
Chronic Asthmatic Bronchitis	1
Pulmonary Embolism	1
Intracranial Edema and Sepsis	1
Adenovirus and Acute Bronchopneumonia	1

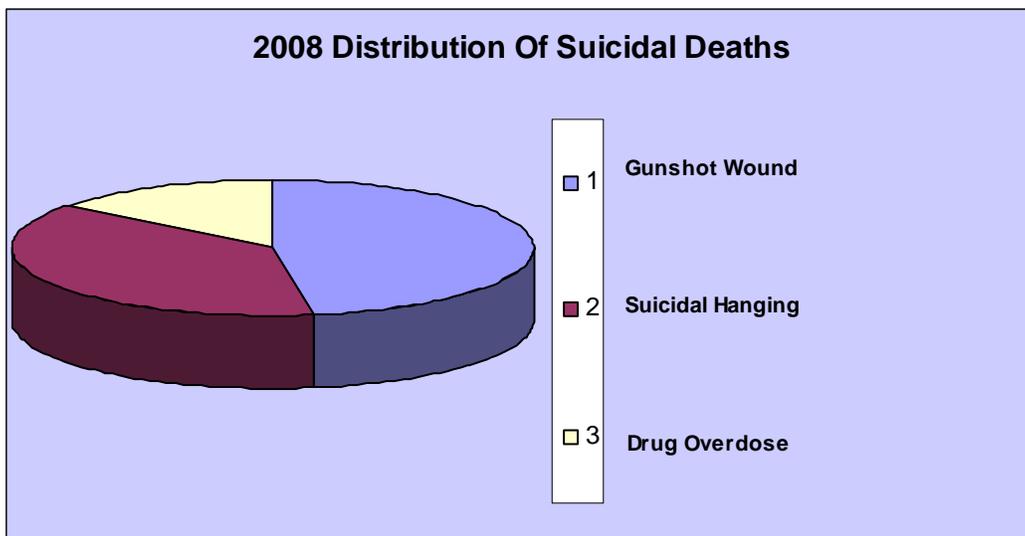
Distribution of Accidental Deaths



Accidental deaths are graphed above and listed below.

Moving Vehicle Accident	14	Caught In Brush Fire	1
Drug Overdose	7	Hit by Falling Tree	1
Falls	3	Caught In House Fire	1

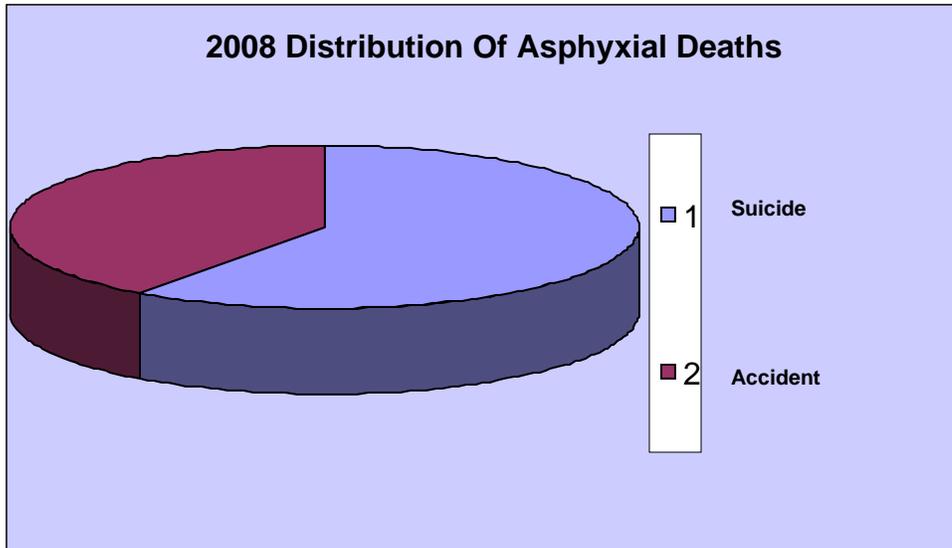
Distribution of Suicidal Deaths



The causes of the 21 suicides were also determined by the coroner and they are as follows:

Drug Overdose	3	Suicidal Hanging	8
Gunshot Wound	10		

Distribution of Asphyxial Death



Of the 20 Asphyxial deaths for 2008, the following manner of death was determined:

Suicide	8
Accident	12

Distribution of Deaths by Town

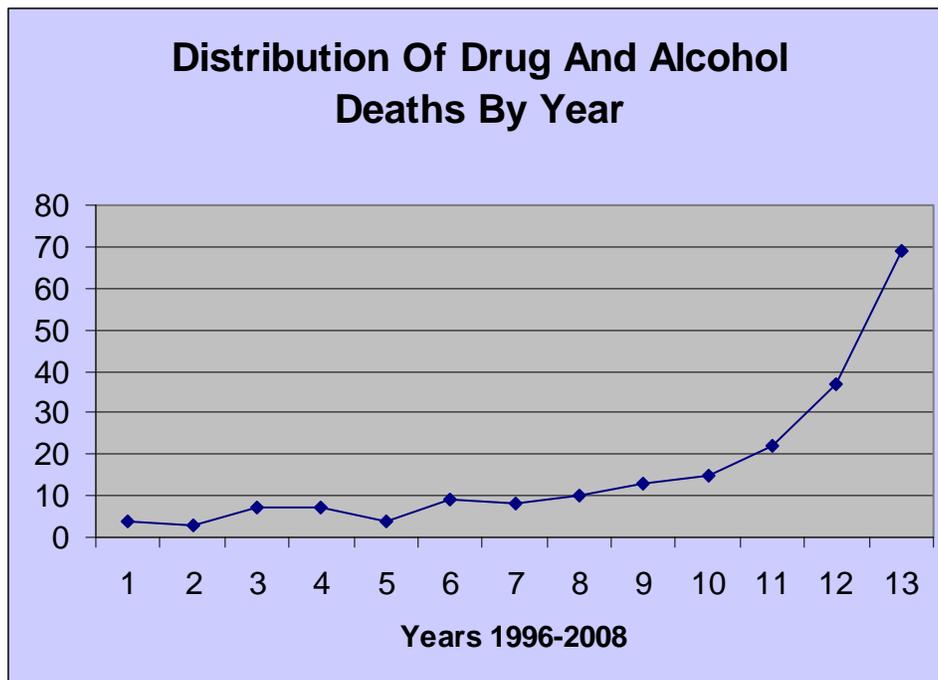
Town	Natural	Accident	Suicide	Homicide	Undetermined	Pending	Total
Salem	11	4	3	0	0	0	18
East Liverpool	12	5	3	3	1	0	24
Lisbon	1	2	2	1	1	0	7
Columbiana	5	3	0	1	0	0	9
East Palestine	4	1	3	0	2	0	10
Salineville	2	3	0	0	0	0	5
Alliance	2	1	0	0	0	0	3
Rogers	1	1	1	0	0	0	3
Leetonia	3	0	0	0	0	0	3
Washingtonville	0	1	0	0	0	0	1
Beliot	0	1	0	0	0	0	1
Wellsville	7	4	0	0	0	0	11
Hanover ton	2	1	0	0	0	0	3
Kensington	1	0	1	0	0	0	2
East Lansing MI	0	0	1	0	0	0	1
Negley	1	1	1	0	0	0	3
New Waterford	0	0	3	0	0	0	3
Irondale	1	1	0	0	0	0	2
Hammondsville	1	0	0	0	0	0	1
Verona, PA	1	0	0	0	0	0	1
Darlington,PA	1	0	0	0	0	0	1
Minerva	0	0	1	0	0	0	1
Newell, W.Va	0	0	0	1	0	0	1
Bristolville	0	0	1	0	0	0	1
Aliquippa, PA	1	0	0	0	0	0	1
Elk Run Twp	1	0	0	0	0	0	1
Imperial,PA	0	0	0	0	1	0	1
Chester, W.Va.	2	1	0	0	0	0	3
Calcutta	1	0	1	0	0	0	2
Total	61	30	21	6	5	0	123

Distribution of Deaths by Zip Code

Zip Code	Natural	Accident	Suicide	Homicide	Undetermined	Pending	Total
44460	11	4	3	0	0	0	18
43920	13	5	4	3	1	0	26
44432	2	2	2	1	1	0	8
44408	5	3	0	1	0	0	9
44413	4	1	3	0	2	0	10
43945	2	3	0	0	0	0	5
44423	2	1	0	0	0	0	3
44431	3	0	0	0	0	0	3
44601	2	1	0	0	0	0	3
44427	1	0	1	0	0	0	2
44441	1	1	1	0	0	0	3
44445	0	0	3	0	0	0	3
44455	1	1	1	0	0	0	3
44490	0	1	0	0	0	0	1
44609	0	1	0	0	0	0	1
15147	1	0	0	0	0	0	1
43968	8	4	0	0	0	0	12
48823	0	0	1	0	0	0	1
44657	0	0	1	0	0	0	1
26034	2	1	0	0	0	0	3
26050	0	0	0	1	0	0	1
16115	1	0	0	0	0	0	1
44402	0	0	1	0	0	0	1
15001	1	0	0	0	0	0	1
15126	0	0	0	0	1	0	1
Totals	61	29	21	6	5	0	123

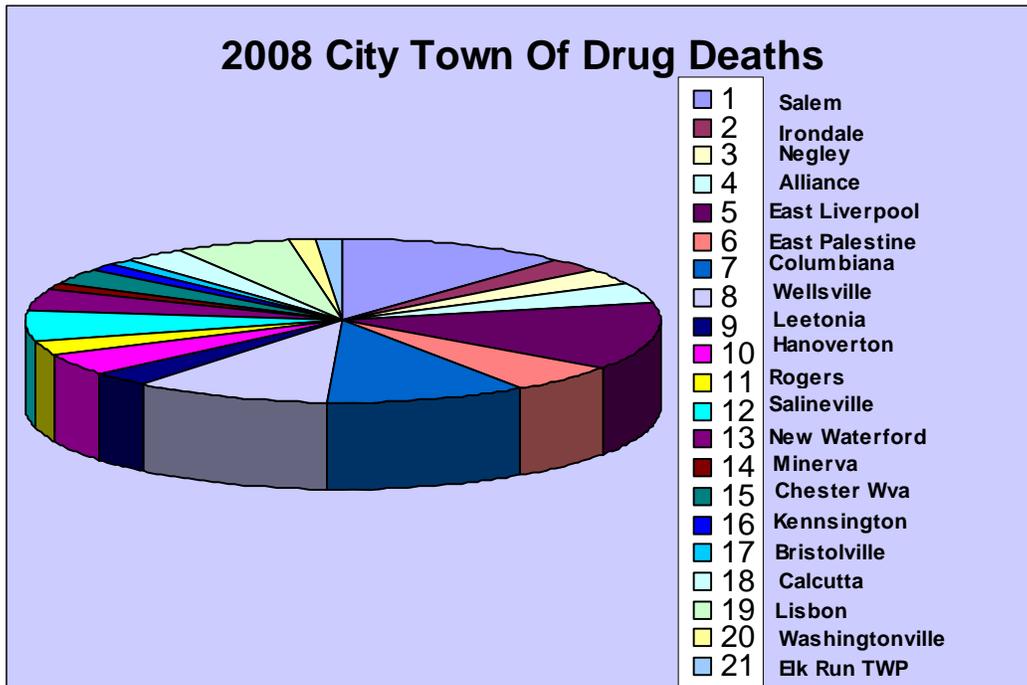
The previous tables display the distribution of manner of death in the cities and zip codes from where the decedents died in 2008.

Distribution of Drug and Alcohol Deaths by Year



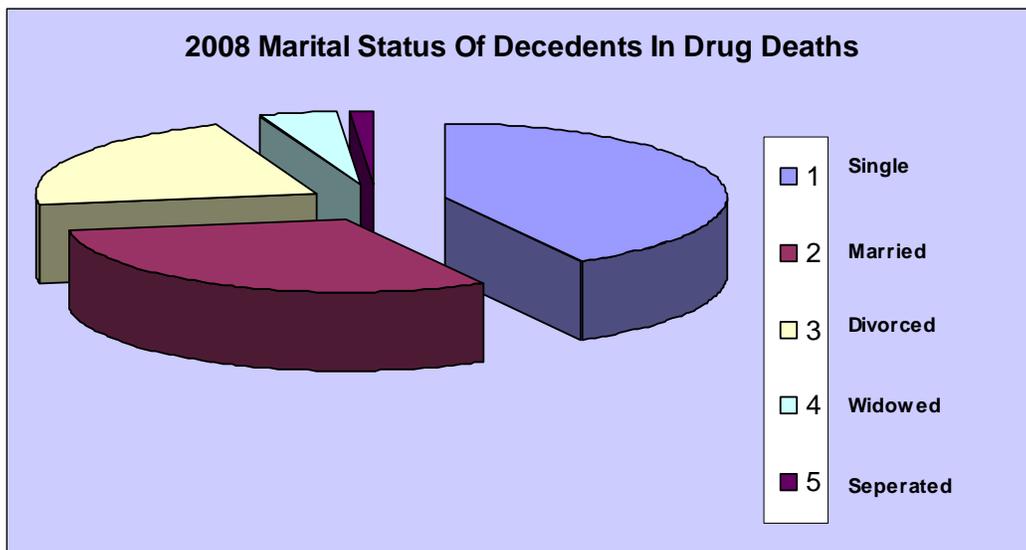
This graph displays the deaths where drugs and/or alcohol directly caused the decedents' deaths for the past 12 years and shows a tremendous jump to 69 for this year when compared to 37 from last year.

2008-City or Town of Drug Deaths



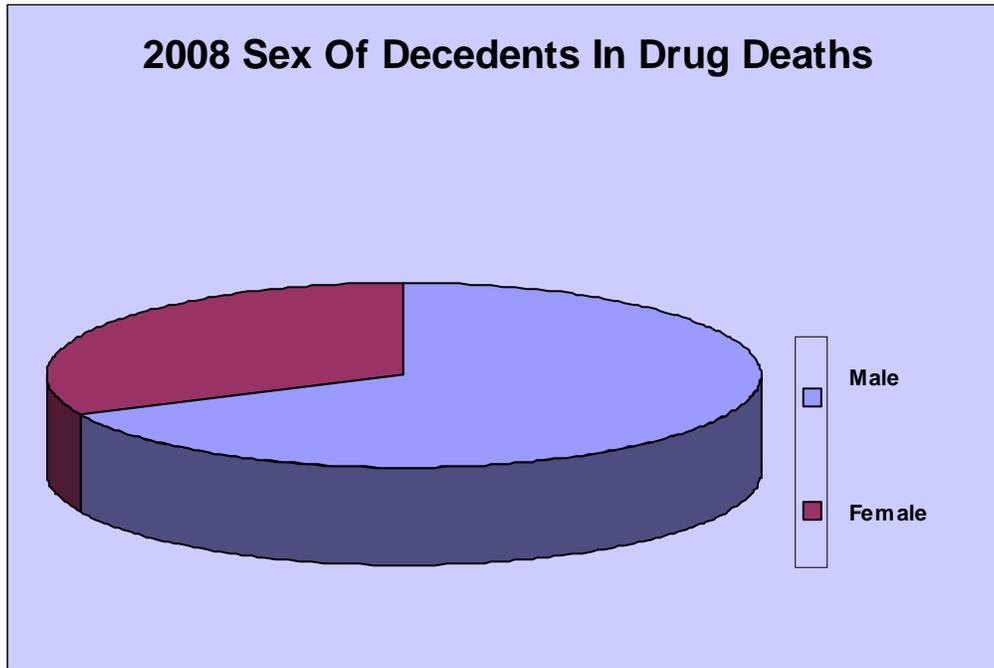
For the drug deaths in 2008 the city where the decedent's died was evaluated and recorded. Of the 69 deaths, East Liverpool had 9, Salem had 8, Columbiana and Wellsville both had 7 and the rest of the cities are less. These results displayed East Liverpool and Salem were the top two.

2008-Marital Status of Decedents in Drug Deaths



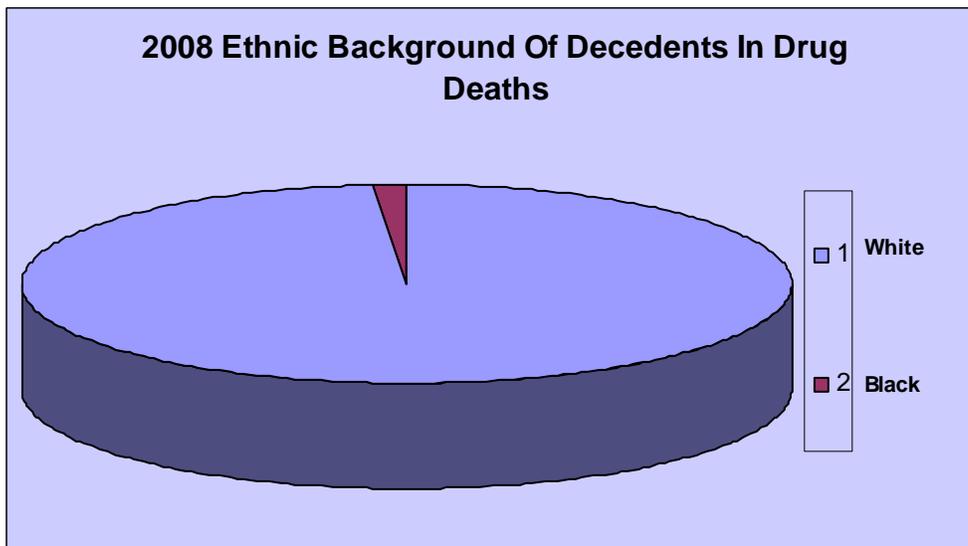
This shows the marital status of the decedents that died in a drug related death. Of the 69 decedents, 29 were single, 21 were Married, 15 were divorced, 3 were widowed and 1 was separated.

2008-Sex of Decedents in Drug Deaths



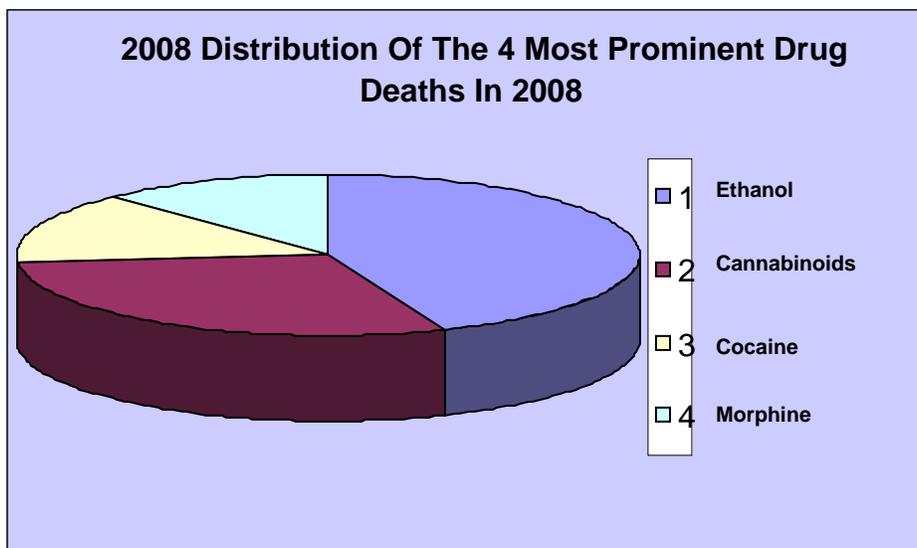
This graph shows the ratio of male to females in drug related deaths. There were 47 males and 22 females of the 69 drug related deaths.

2008-Race of Decedents in Drug Deaths



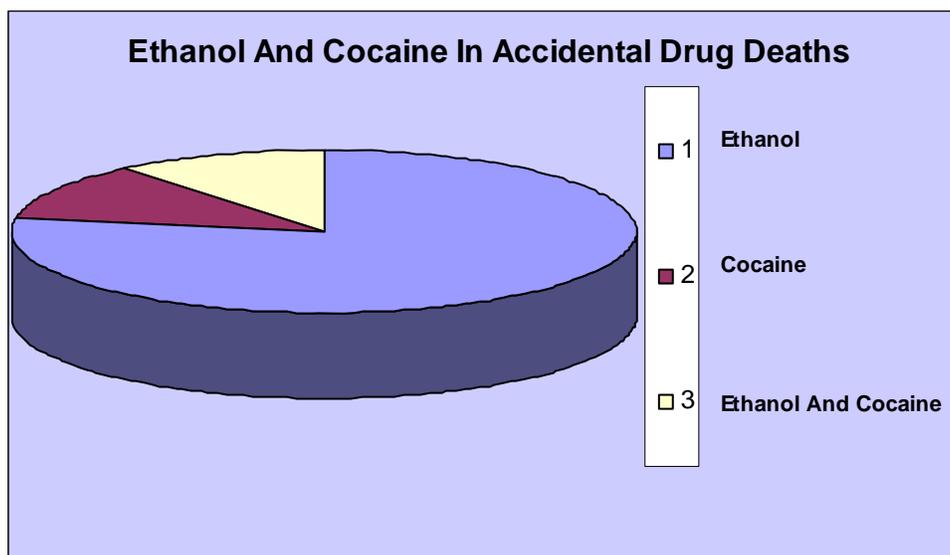
The ethnic background of the decedents was overwhelmingly white. There were 68 white individuals and 1 black decedent involved with drug related deaths.

Distribution of the 4 Most Prominent Drugs for Drug Deaths in 2008



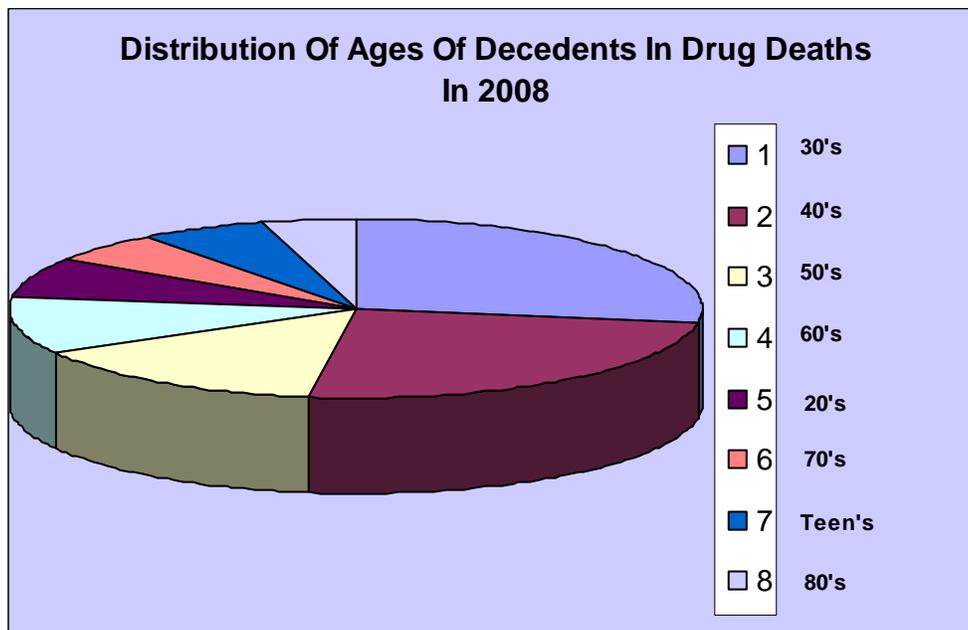
The prominent drugs for 2008 were Ethanol, Cannabinoids, Cocaine and Morphine.

Distribution of Ethanol and Cocaine among the Accidental Drug Deaths in 2008



Of the 69 drug related deaths 17 were accidental. For the 17 accidental deaths there was 7 that contained ethanol, 1 contained cocaine, and 1 that contained both ethanol and cocaine.

Distribution of Ages of Decedents in Drug Deaths in 2008



The decedents' ages in drug deaths were interesting to evaluate. Most decedents were in their 30s. There were 4 people in their teens, 5 in their twenties, 19 in their thirties, 17 in their forties, 10 in their 50s, none in the 60-79 range and one person in their 80s. Drug related deaths peak in the 30 to 40 year range.

Drug and alcohol related deaths are a growing problem in Columbiana County and in Ohio and nationally in the U.S. In a speech presented at the last O.S.C.A. (Ohio State Coroner's Association) annual meeting in May of this year a representative of the Ohio Department of Health, Christi Beeghly, MPH gave a presentation on just this subject. We will share a few of the slides she presented.

 Ohio Department of Health
Violence and Injury Prevention Program

Alarming Rise in
Fatal
Unintentional
Drug Overdoses
in Ohio



1

“Surveillance efforts revealed rapid, large increases in fatal unintentional poisoning rates. We’ve been exploring underlying issues”



What do these people
have in common?

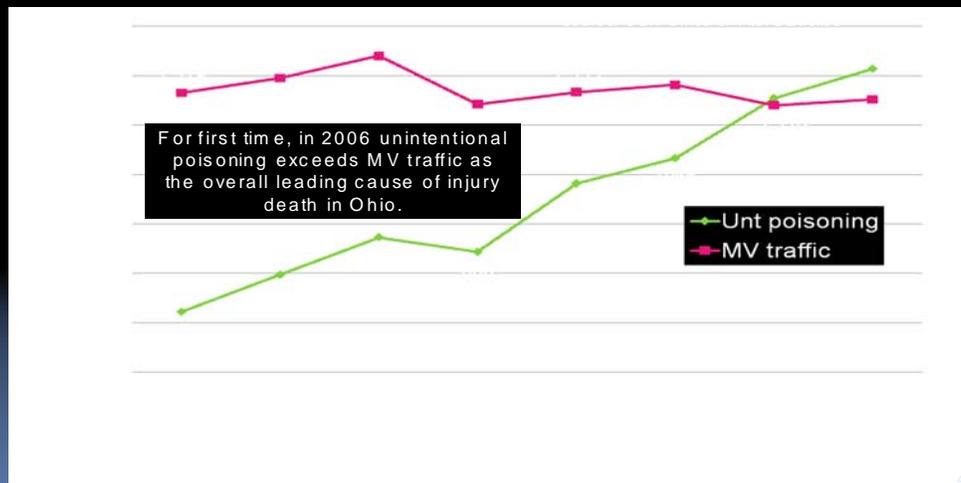
2

A GROWING
PROBLEM:
CHANGES OVER
TIME IN
U.S. & OHIO



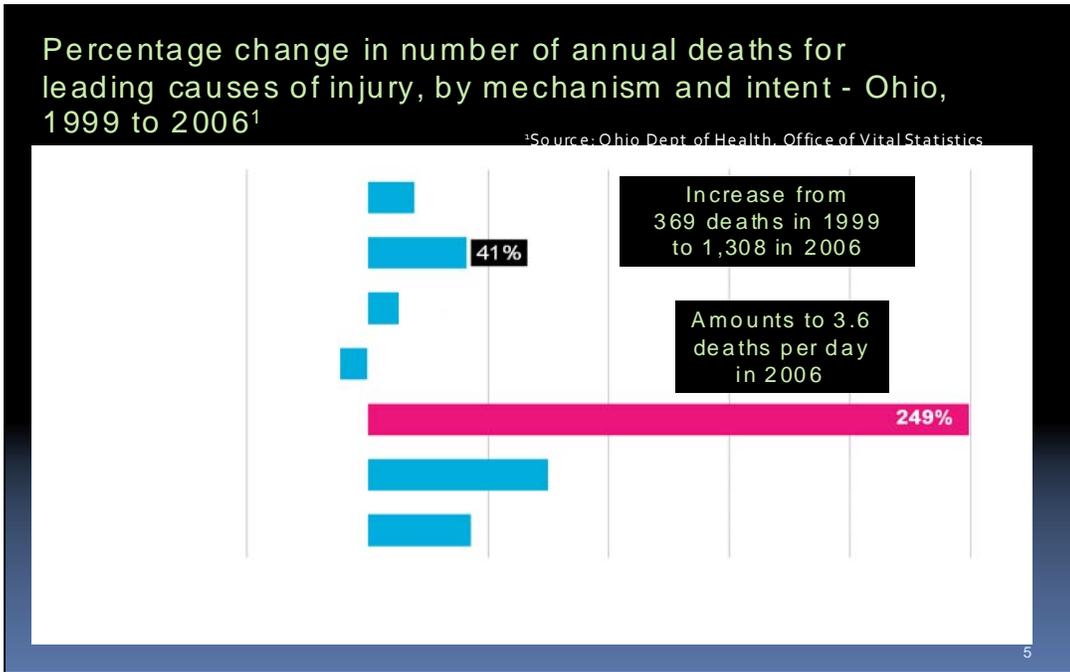
3

Number of deaths from MV traffic and
unintentional poisonings by year, Ohio 1999-2007*

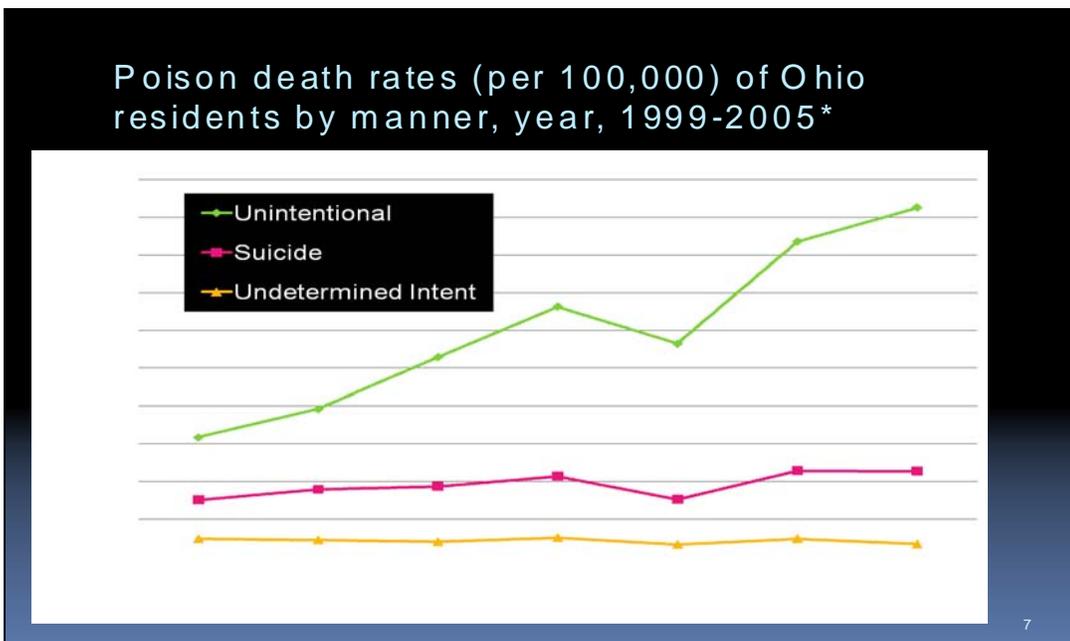


This chart shows that the number of death from motor vehicle accidents was surpassed by the number of drug deaths in 2006.

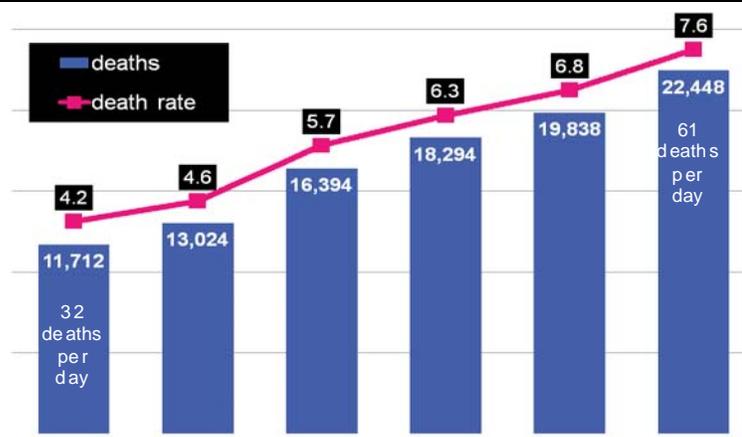
“Unintentional Poison rates have increased 406% since 1989 from 2.0 to 12.5 in 2007”



“From 1999 to 2007, the number of unintentional poison deaths in Ohio increased 290% from 369 to 1,438 deaths annually”



US deaths and death rates due to unintentional drug poisoning by year, 2000-



*Source: CDC WONDER

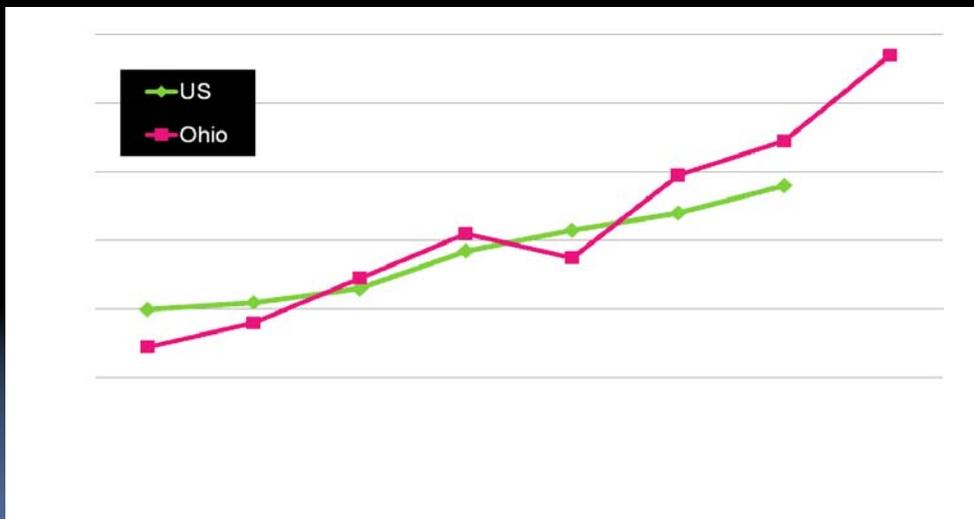
8

Number of U.S. deaths due to unintentional drug overdoses in 2005 exceeds that of one large jet crash *every day for 2 months*, each killing 350 people



This slide shows the magnitude of the drug deaths in the U.S. What kind of public outcry would we expect if this were to happen?

Ohio¹ and US² unintentional drug poisoning death rates per 100,000 population, 1999-2006

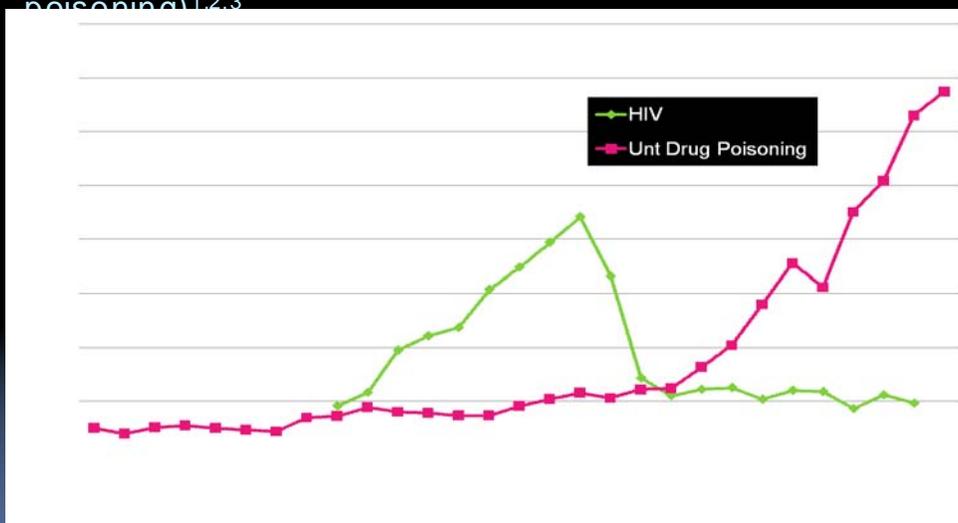


¹Source: ODH Office of Vital Statistics; ²Source: CDC WONDER:

10

This chart shows that the rate of drug deaths in Ohio is climbing faster than the national rate of drug deaths.

Number of deaths due to HIV/AIDS and unintentional drug poisonings by year, Ohio, 1979-2006 (2007 for poisoning)^{1,2,3}

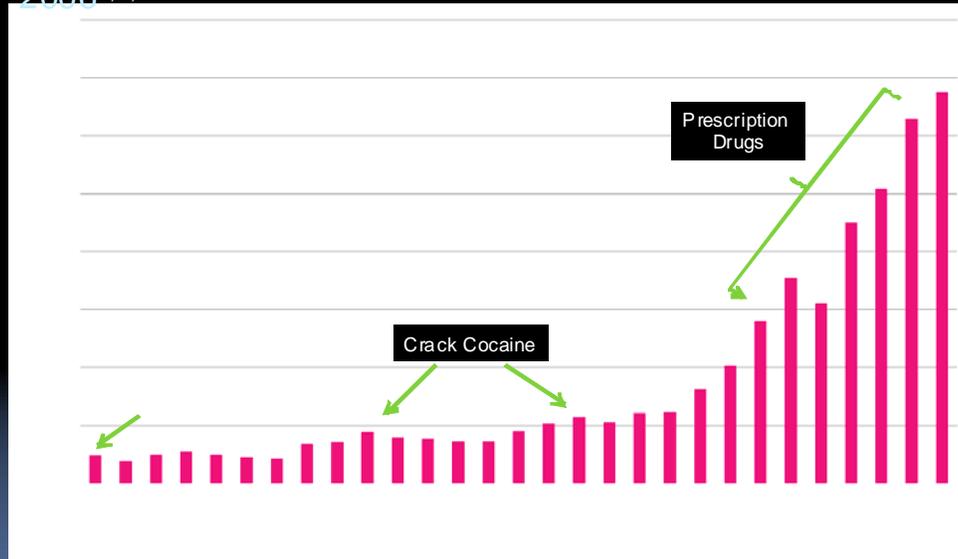


Source: ¹WONDER (NCHS Compressed Mortality File, 1979-1998 & 1999-2005) ²2006-7 ODH Office of Vital Statistics, ³Change from ICD-9 to ICD-10 coding in 1999 (caution in comparing before and after 1998 and 1999)

11

This chart shows that death from HIV/AIDS has now been exceeded by drug deaths

Epidemics of unintentional drug overdoses in Ohio, 1979-2006^{1,2,3}



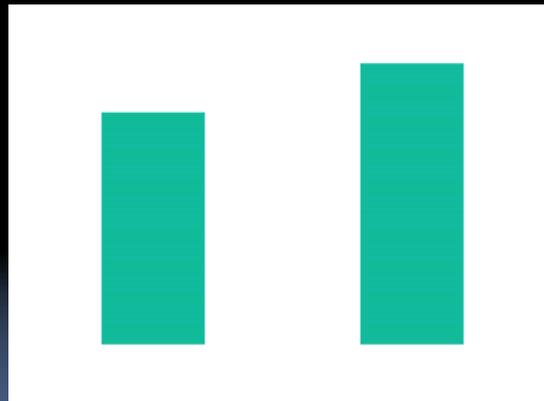
Source: ¹WONDER (NCHS Compressed Mortality File, 1979-1998 & 1999-2005) ²2006 ODH Office of Vital Statistics, ³Change from ICD-9 to ICD-10 coding in 1999 (caution in comparing before and after 1998 and 1999)

12

This chart shows the shift from illicit drugs to prescription drugs as a primary cause of death in Ohio.

US military deaths in Iraq (2003-present)¹ vs. unintentional drug poisoning deaths in Ohio (2003-07)²

- As of **May 5, 2009**: 4,284 members of the U.S. military had died in the Iraq war since it began in March 2003.
- 5,189 deaths due to unintentional drug/medication poisoning in Ohio.



Sources: ¹Associated Press, accessed 5/5/09

²ODH Office of Vital Statistics

13

This comparison shows that US military deaths in Iraq from 2003 to the present do not exceed the deaths from drug poisoning.

Back to Columbiana County

Having seen the data and the graphs of the year 2008 ... we ask the question, "Was 2008 a 'normal' year?" We will answer this question by comparing it to the previous 19 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 2008:

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
2008	123	88	35	0.715447
Sum	1811	1296	515	13.572683
Mean	95.315789	68.21053	27.105263	0.714352
SD	14.067703	12.059410	5.866001	0.052503
- 3 SD	53.112679	32.032297	9.507259	0.556842
- 2 SD	67.180383	44.091707	15.373260	0.609345
2008	123	88	35	0.715447
+ 2 SD	123.451196	92.329346	38.837266	0.819358
+ 3 SD	137.518899	104.38876	44.703267	0.871862

The total number of cases is **123**, the greatest number of cases since this coroner took office in 1989. The number of **123** is just shy of the +2SD of 123.451196 calculated above, so we must label this value as "*normal*". The number of male deaths, **88**, is well within the limits of -2SD and +2SD, as is the number of female deaths, **35**, and the female to male ratio of **0.715447**.

Now let's look at the number of homicides in the year 2008:

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
2008	6	4	2	0.666667
Sum	39	18	21	8.6
Mean	2.052632	0.947368	1.105263	0.452632
SD	1.129094	0.779864	0.737468	0.325998
- 3 SD	-1.33465	-1.39222	-1.10714	-0.52536
- 2 SD	-0.20556	-0.61236	-0.36967	-0.19936
2008	6	4	2	0.666667
+ 2 SD	4.31082	2.507095	2.5802	1.104627
+ 3 SD	5.439914	3.286959	3.317668	1.430625

The total number of homicides jumped significantly in 2008. The 6 homicides is the largest number in this coroner's experience, closely rivaled by the 5 homicides in 1995. The statistical analysis shows the total number of 6 exceeds even the +3SD of 5.439914, and as well the male total of 4 exceeds the +3SD of 3.286959. The female total of 2 and the ratio of male to female, 0.666667, however remain well within the -2SD and +2SD, and must be considered as "normal".

The first homicide in 2008 occurred on April 22. This was a 35 year old male shot twice by another male in Wellsville. This case has gone to trial and the assailant has been found guilty of murder. Defense attorneys are currently (June, 2008) making a motion for a new trial..

The second homicide in 2008 occurred on June 4. This was a 67 year old male fatally beaten by two alleged assailants in Chester, West Virginia. The deceased was brought to East Liverpool City Hospital Emergency Room, where he was pronounced dead. The case is currently under prosecution in Hancock County, West Virginia.

The third homicide in 2008 occurred on June 15. The decedent was a 20 year old male shot once by another male in Lisbon. This case went to Grand Jury and was there considered a justifiable homicide (self-defense).

In the fourth homicide in 2008 the decedent passed away on July 16. The decedent, a 35 year old male, suffered a severe head injury as the result of a beating by another male in East Liverpool on September 14, 2006. The decedent underwent intense medical therapy, but finally succumbed in 2008. The alleged assailant was tried for felonious assault on December 26, 2006, but the jury returned a judgment of not guilty.

In the fifth homicide in 2008 the decedent passed away August 17. The decedent was an 89 year old female in East Liverpool who suffered a beating on February at the hands of a 28 year old male. This male was tried for aggravated burglary, felonious assault, and attempted burglary and was sentenced to 11 years in Lorain Correctional Institution.

The sixth homicide in 2008 occurred on August 24. The decedent was a 47 year old female in Lisbon who was shot by an alleged family member. This case is currently under investigation.

The next data set involves Suicides in the year 2008:

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
2008	21	18	3	0.857143
Sum	257	210	47	15.570931
Mean	13.52632	11.05263	2.473684	0.819523
SD	3.09782	2.857226	1.711673	0.111615
- 3 SD	4.232855	2.480952	-2.66133	0.484678
- 2 SD	7.330675	5.338179	-0.94966	0.596293
2008	21	18	3	0.857143
+ 2 SD	19.72196	16.76708	5.89703	1.042753
+ 3 SD	22.81978	19.62431	7.608703	1.154368

This chart shows the total number of suicides, **21**, as being the largest number since this coroner has been in office. Not only the largest number but it exceeds the +2SD making this “*abnormal*” in a statistical sense. Looking further in the male column, the number of men, **18**, is also the largest number of males during the period from 1989 to 2008. The female column shows a value of **3** which is “*normal*” for the year as well the value of **0.857143** is within the “*normal*” range for the male to female ratio.

The next data set involves Accidents in the year 2008:

Year	Accident	Male	Female	Ratio
1989	31	22	9	0.709677
1990	32	26	6	0.812500
1991	18	10	8	0.555556
1992	20	17	3	0.850000
1993	25	21	4	0.840000
1994	22	12	10	0.545455
1995	22	16	6	0.727273
1996	28	21	7	0.750000
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	0.750000
2002	19	15	4	0.789474
2003	24	12	12	0.500000
2004	24	14	10	0.583333
2005	21	16	5	0.761905
2006	30	21	9	0.700000
2007	42	31	11	0.738095
2008	30	21	9	0.700000
Sum	457	322	135	13.296642
Mean	24.05263	16.94737	7.105263	0.699823
SD	6.141604	5.492153	2.685242	0.110796
- 3 SD	5.62782	0.47091	-0.95046	0.367435
- 2 SD	11.76942	5.963063	1.734779	0.478231
2008	30	21	9	0.700000
+ 2 SD	36.33584	27.93167	12.47575	0.921416
+ 3 SD	42.47744	33.42383	15.16099	1.032212

The statistical evaluation of total accidents, **30**, is well within the “normal” range. The male total, **21**, is also within the “normal” range. The female total, **9**, is within the normal range. And in fact the male to female range, **0.700000** is “normal”. An unusual co-incidence is seen by comparing the figures for the year 2006 ... an exact match!

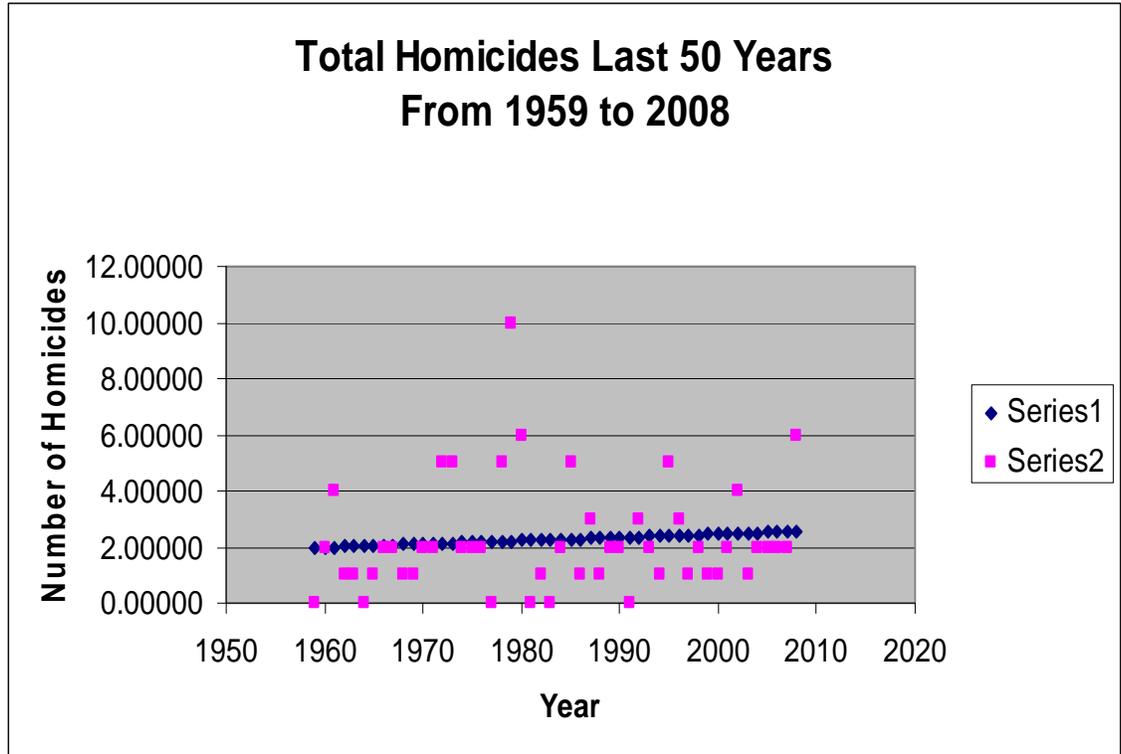
The next data set involves Natural Deaths in the year 2008:

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
2008	61	42	19	0.688525
Sum	1017	720	297	13.43647
Mean	53.52632	37.89474	15.63158	0.707182
SD	11.16228	9.048602	5.418185	0.074448
- 3 SD	20.03948	10.74893	-0.62298	0.483837
- 2 SD	31.20176	19.79753	4.79521	0.558286
2008	61	42	19	0.688525
+ 2 SD	75.85088	55.99194	26.46795	0.856079
+ 3 SD	87.01316	65.04054	31.88613	0.930528

The statistical evaluation of natural deaths for the year 2008 reveals all values within the “*normal*” range, that is to say, all values fall within the range of -2SD and +2SD.

50 Year Summary of Deaths in Columbiana County

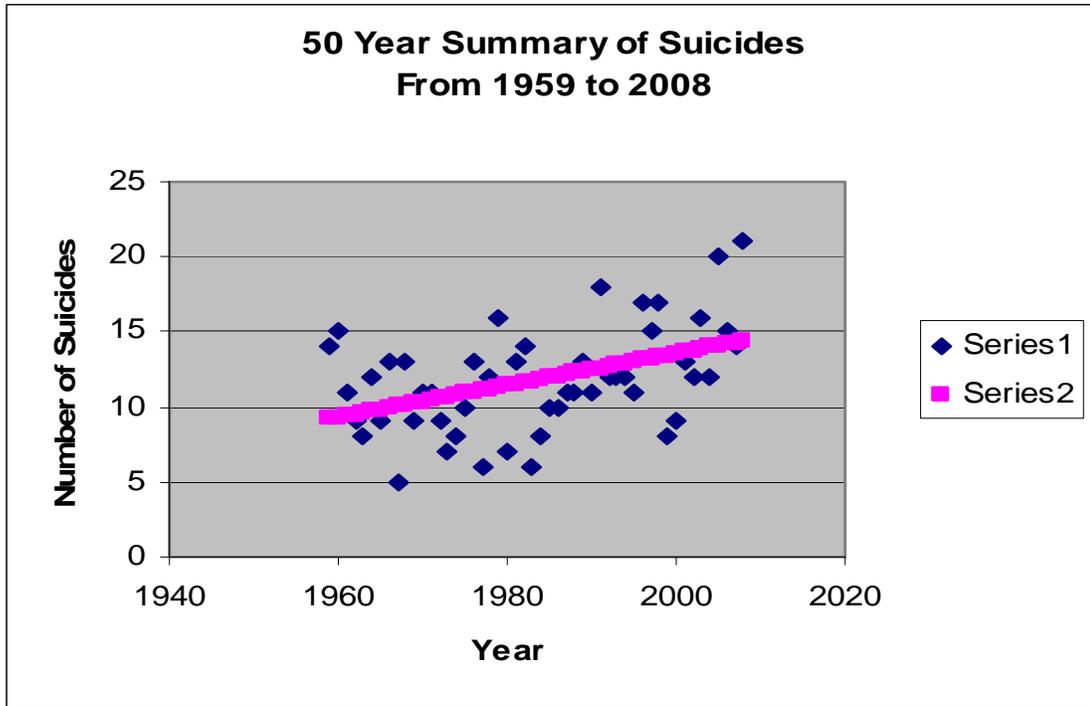
The entire record set for the Coroner's Office is in a searchable database. We thought it might be interesting to review some of the previous 50 years as it pertains to the Coroner's Office.



Series 1: Linear Regression of Yearly Homicides

Series 2: Scatter Plot of Yearly Homicides

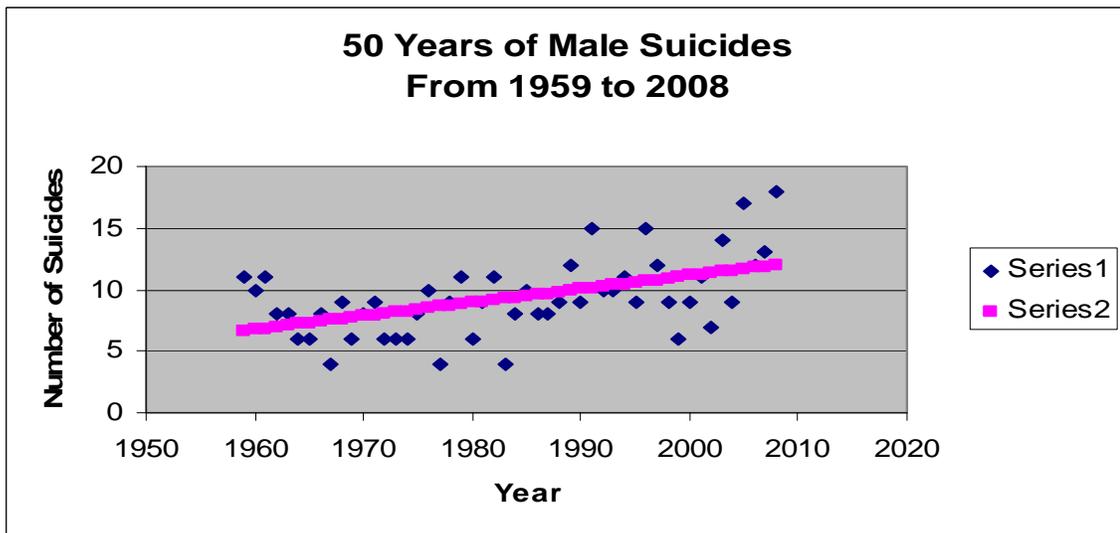
This graph shows a slight increase in the homicide rate over the 50 years. This graph is probably heavily influenced by the six homicides in 2008, and hopefully does not indicate a continuing trend.



Series 1: Scatter Plot of Yearly Suicides

Series 2: Linear Regression of Yearly Suicides

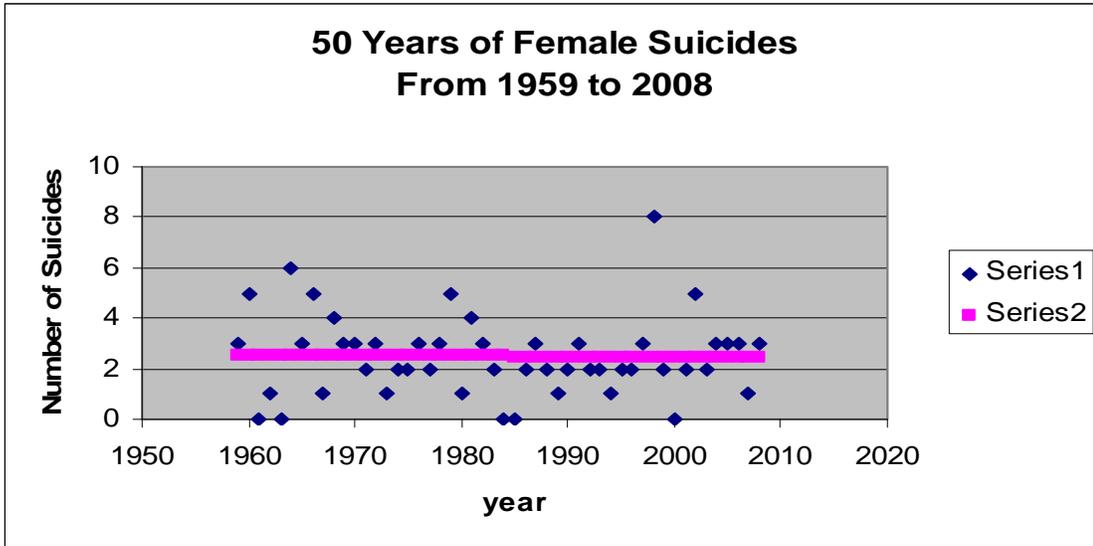
This graph shows an overall increase in suicides.



Series 1: Scatter Plot of Yearly Male Suicides

Series 2: Linear regression of Yearly Male Suicides

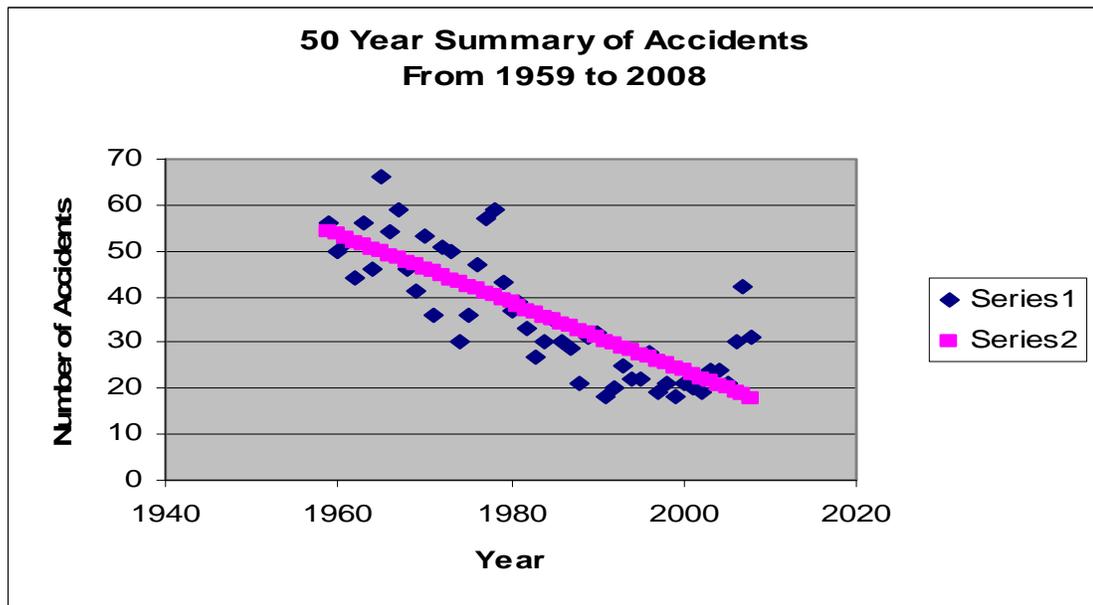
This graph shows a similar increase in male suicides



Series 1: Scatter Plot of Yearly Female Suicides

Series 2: Linear Regression of Yearly Female Suicides

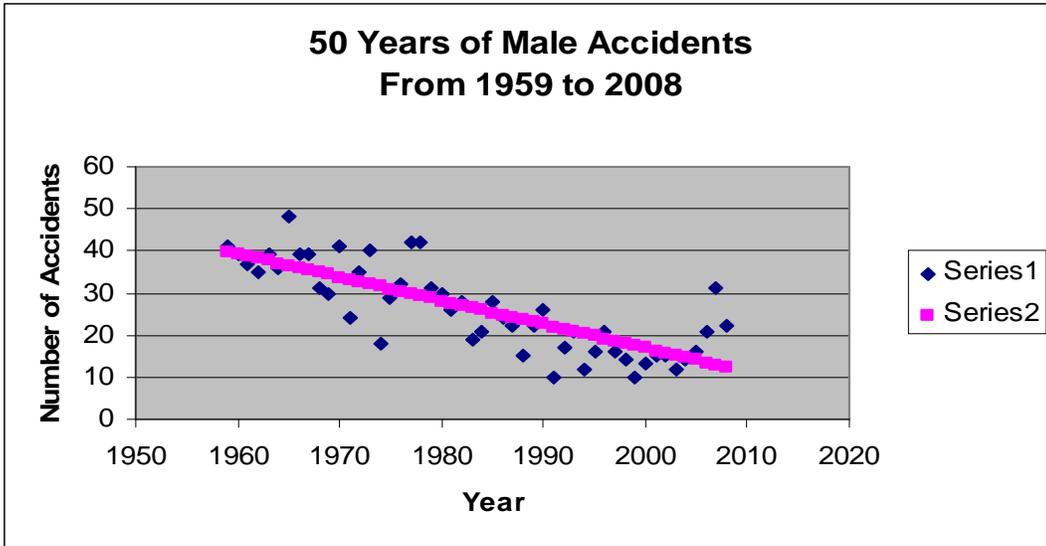
This graph shows that the female suicide rate is essentially flat line to decreasing. The female rate of suicide does not contribute to the overall increase in suicides.



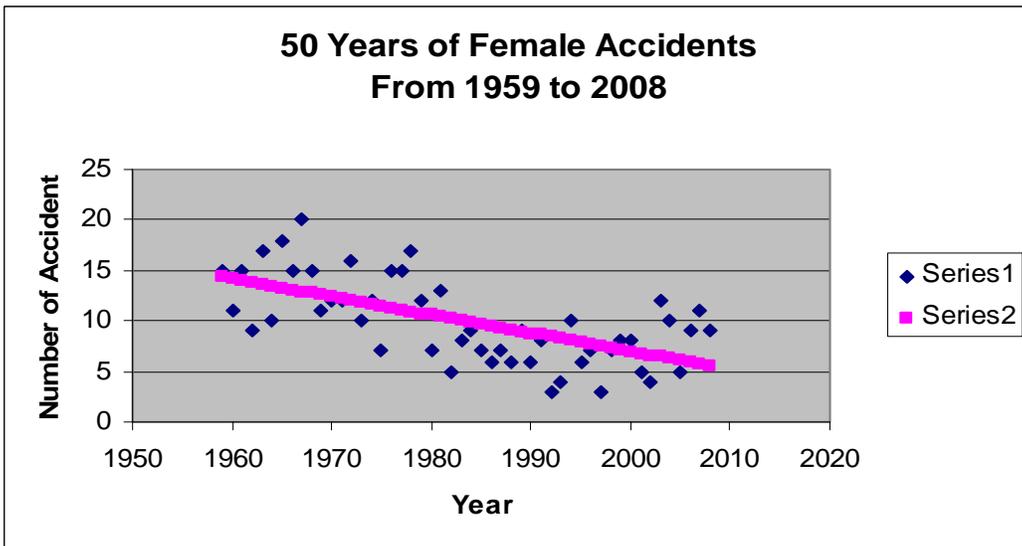
Series 1: Scatter Plot of Yearly Accidents

Series 2: Linear Regression of Yearly Accidents

This graph shows a yearly decrease in overall accidents.

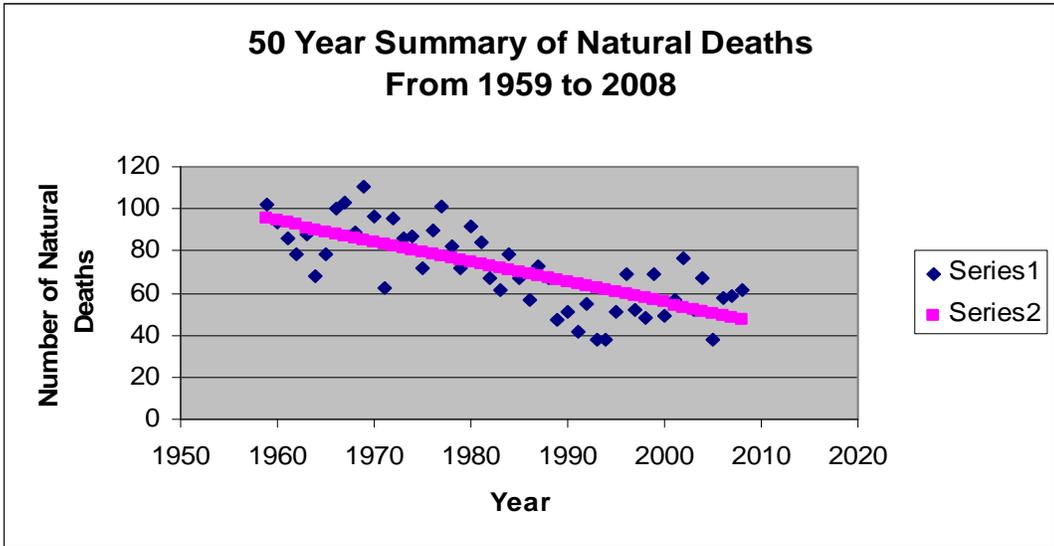


Series 1: Scatter Plot of Yearly Male Accidental Deaths
 Series 2: Linear Regression of Yearly Male Accidental Deaths

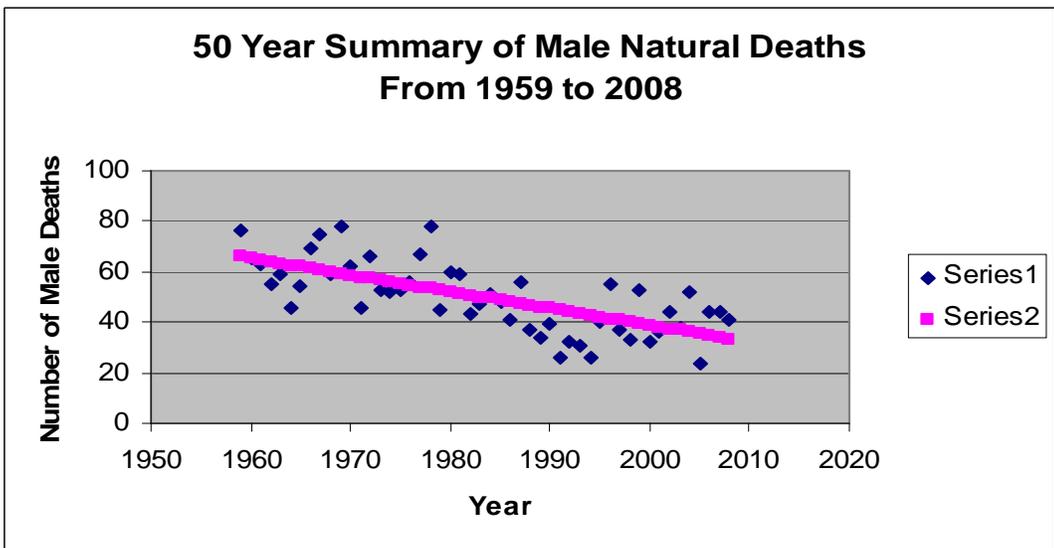


Series 1: Scatter Plot of Yearly Female Accidental Deaths
 Series 2: Linear Regression of Yearly Female Accidental Deaths

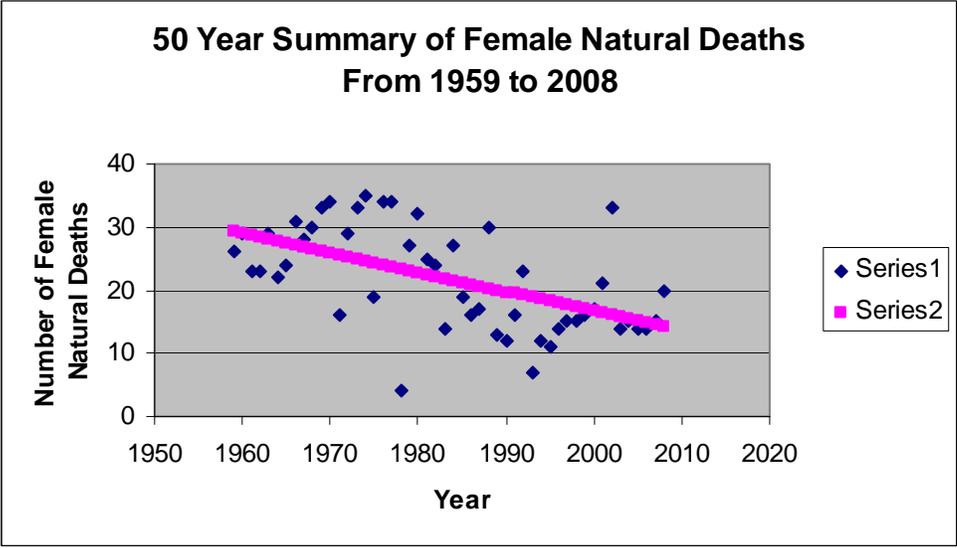
It appears that both Male and Female Accidental rates are decreasing, and that the male accidental rate is decreasing at a slightly faster rate.



Series 1: Scatter Plot of Yearly Overall Natural Deaths
 Series 2: Linear Regression of Yearly Overall Natural Deaths



Series 1: Scatter Plot of Yearly Overall Male Natural Deaths
 Series 2: Linear Regression of Yearly Overall Male Natural Deaths



Series 1: Scatter Plot of Yearly Overall Female Natural Deaths

Series 2: Linear Regression of Yearly Overall Female Natural Deaths

All the natural death graphs show no sex discrimination and appear to be on a slow decline.

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 2008 was an eventful and busy year. **The year contained the most cases (123), the most suicides (21), the most homicides (6) and the most male suicides (18).**

Of the 1132 deaths reported in the County, 530 were not reported to the Coroner, 479 were reported to the Coroner, and of those 123 were accepted by the Coroner. Of the 123 accepted by the Coroner, 34 were autopsied and had toxicology performed, and 114 had toxicology only. The classifications of these deaths were as follows:

Natural	61
Accident	30
Homicide	6
Suicide	21
Not determined	5
Total Cases	123

Of the 123, 88 were male and 35 were female. The marital status was as follows:

Married	38
Single	40
Divorced	32
Widowed	12
Separated	1

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 2008 was reported. A continued increase in the rate of deaths is noted over the past 13 years, with 2008 being the largest jump.

Slides from an ODH presentation were included to show how Columbiana County's drug problems are mirrored on a state and national level.

Statistically 2008 was a bad year for males. The number of male deaths from Accidents and Suicides was slightly increased when compared to the previous 19 years.

And finally a few graphs depicting a 50 year summary were shown.

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.*

Acknowledgements

We must acknowledge the help and encouragement offered to us by the Trumbull County and the Cuyahoga County Coroner offices.

We also acknowledge the help obtained from the website:
<http://bmj.com/collections/statbk/2.shtml> for the statistical primer.

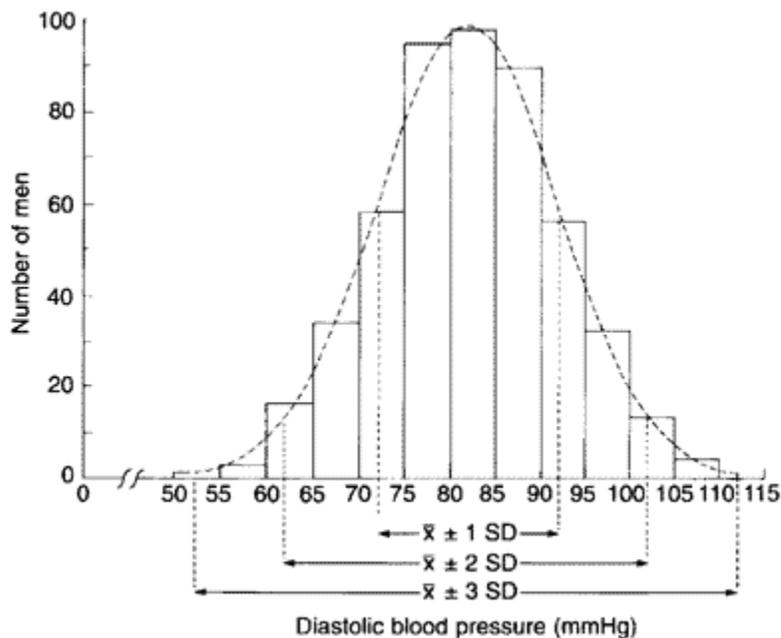
We also acknowledge the help of Jackman S. Vodrey, Lawyer for providing access to the Beaver Kettle Farm. We took 92 pictures which we have used in several of our annual reports.

We also acknowledge the co-operative assistance of Christy Beeghly, MPH of the Ohio Department of Health – Injury Prevention, who was kind enough to let us use slides from a PowerPoint presentation made to the Ohio State Coroner’s Association.

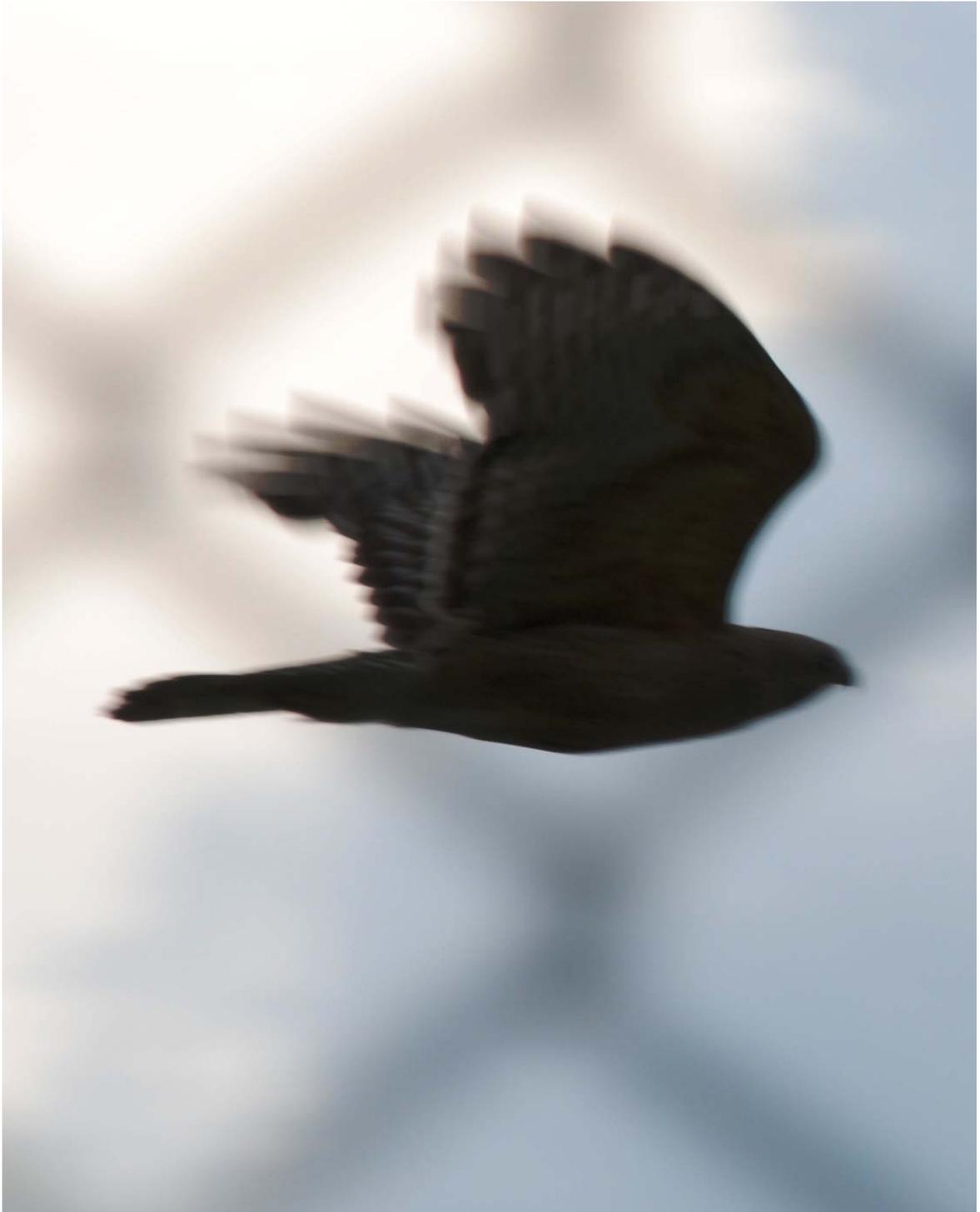
And finally, to Lindsay J. Wilson, a senior at Youngstown State University, who spent part of her summer as a Forensic Intern in the Columbiana County Coroner’s Office. She will be receiving her baccalaureate degree later this year. She lent us her talent and knowledge of computers and statistics to collect, compile interpret and graph information for this report.

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**.



Hawk in flight, Centennial Park, Salem Ohio

2008 Annual Report

Office of the Coroner
Columbiana County, Ohio

