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# MEMORANDUM

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Date: April 15, 2014

To: The Honorable Chair and Members  
Pima County Board of Supervisors

From: C.H. Huckelberry  
County Administrator 

Re: **Pima County Office of the Medical Examiner 2013 Annual Report**

Attached for your information and review is the Office of the Medical Examiner 2013 Annual Report regarding the actions and activities of the Office of the Medical Examiner (OME) and Forensic Science Center (FSC).

The OME and FSC continue to provide regional services throughout Pima County. The OME also serves as the Medical Examiner for three counties – Pima, Santa Cruz and Cochise – and provides examination and forensic science resources for eight additional counties. Our facility is the only National Association of Medical Examiners fully accredited FSC in Arizona and one of only 75 accredited facilities in the United States.

The 2013 Annual Report includes statistical information regarding the required actions of the OME in death investigations handled by the Medical Examiner and FSC; and as can be seen, their workload continues to increase. Also, the cause of death in cases requiring Medical Examiner involvement has shifted over time from accident and homicide to drug overdose. Drug overdoses by specific drugs have also changed over time. In 2013, methamphetamine was the leading cause of drug overdose; followed by morphine, alcohol and heroin.

The OME continues to provide physician-based forensic pathology, as well as forensic anthropology. More importantly, Pima County is in the preliminary phases of beginning a fellowship training program in forensic pathology in conjunction with the Department of Pathology in the College of Medicine at The University of Arizona. Nationally, there is a critical shortage of practicing forensic pathologists; and there are only 34 accredited training programs, none of which are in Arizona. We anticipate, through the efforts of Chief Medical Examiner Dr. Gregory Hess and the American College of Graduate Medical Education, training for two physician forensic pathology positions in July 2016.

Dr. Hess and our FSC are leaders in professional forensic pathology for the communities for which they provide services, as well as for the law enforcement and criminal justice system in Arizona.

CHH/mjk  
Attachments

c: Dr. Gregory Hess, Chief Medical Examiner

# PIMA COUNTY OFFICE OF THE MEDICAL EXAMINER FORENSIC SCIENCE CENTER

2825 East District  
Tucson, Arizona 85714



Gregory L. Hess, M.D.  
Chief Medical Examiner  
Department Director



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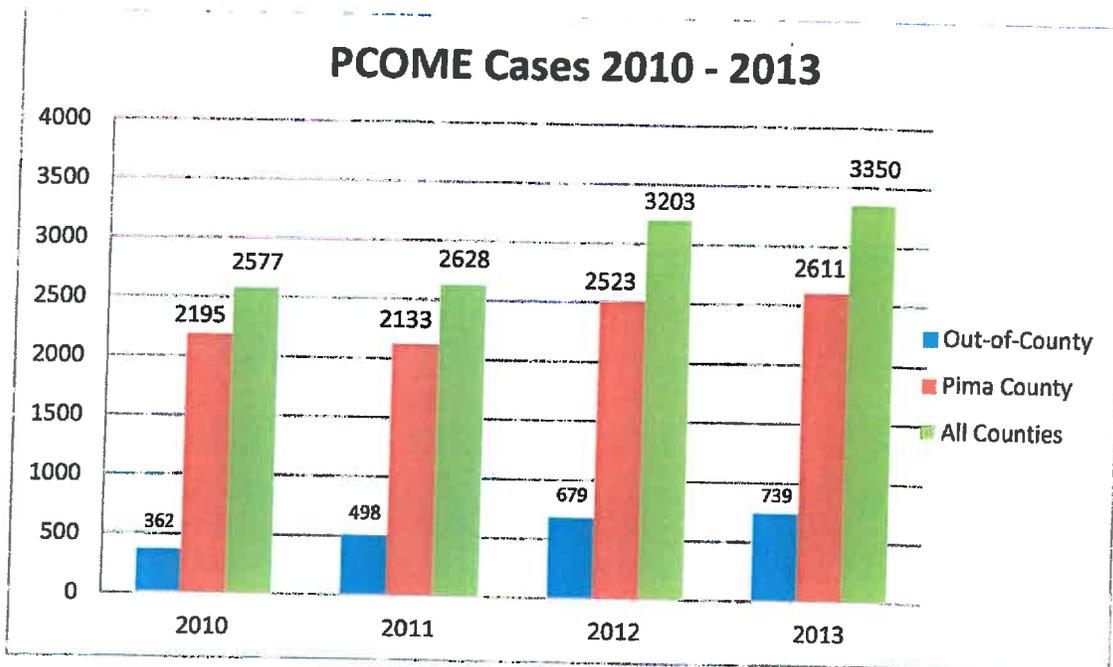
To: CH Huckleberry  
County Administrator

Re: 2013 Annual Report, 2010-2013 highlights and looking ahead

### 2013 Annual Report

Attached is the 2013 Annual Report for the Pima County Office of the Medical Examiner (PCOME). This is the fourth calendar year in which I have produced a report detailing some of the activities of the office and the number and types of deaths examined at the PCOME. This year's report is two pages longer than the 2012 report with the addition of a more robust organ and tissue donation section and with the reformatting of certain graphs and tables.

The number of cases from out-of-county deaths increased slightly from 2012 (679) to 2013 (739) and significantly from 2011 (498). The total number of cases in 2013 (3,350) increased slightly from 2012 (3,203) and significantly from 2011 (2,628). Please reference the graph below for a visual representation of the numbers of cases from 2010-2013.

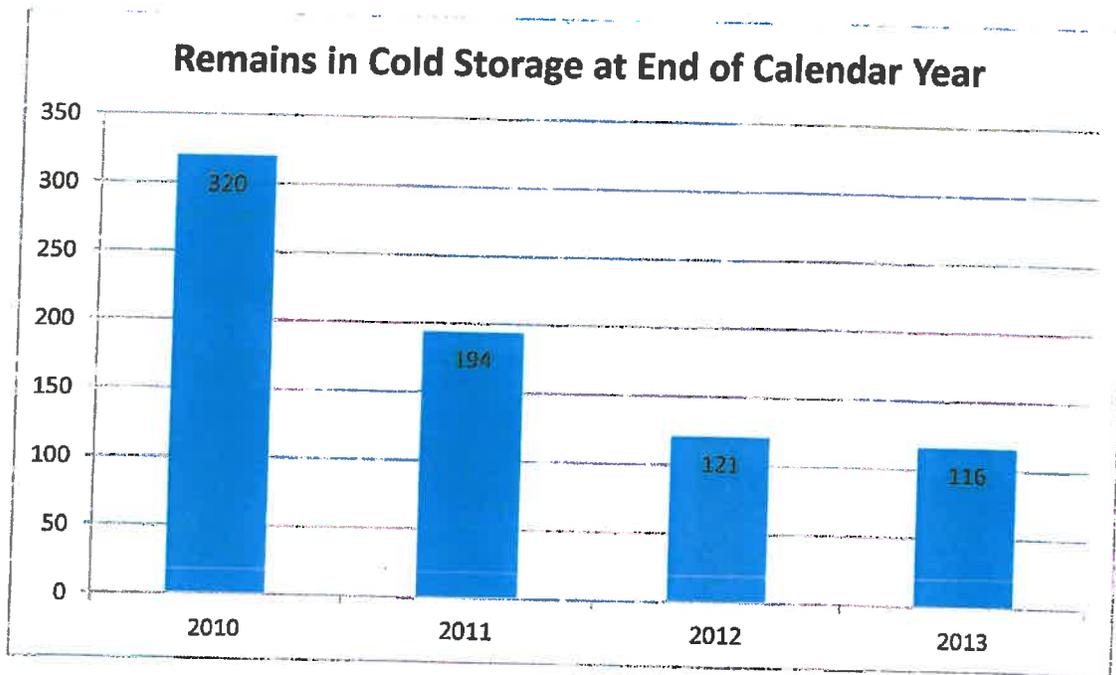


### *2010-2013 Highlights*

In January 2012, pursuant to A.R.S §36-861, the PCOME began death notification referrals to Donor Network of Arizona (DNA) for their consideration concerning organ or tissue donation and DNA began tissue procurement at our facility. This partnership continued in 2013 with 15% of all cornea recoveries and 20% of all tissue recoveries by DNA in Arizona arising from PCOME referrals.

Secondary to the increased number of cases as seen graphically on the previous page, the PCOME transitioned to a 'multiple table' system in September 2012 which increased our weekly capacity from a maximum of 35 autopsy examinations/week to 55 examinations/week. This transition, continued in 2013, required scheduling modifications for the physician staff and the addition of two Pathologist Assistant positions (one in 2012 and one in 2013), but has not otherwise significantly altered the operational costs for the facility beyond the addition of the Pathologist Assistant FTEs.

The storage of decedents, historically a significant problem at this facility, improved with the approval of the Pima County Ordinance No. 2011-84 Forensic Science Fee Schedule in the fall of 2011 and with transition at the helm of the Pima County Public Fiduciary Office, also in 2011. At the end of 2010, 320 remains were in storage at our facility. At the end of each subsequent year the number of remains in storage has decreased from 194 in 2011, to 121 in 2012 and to 116 remains in 2013 (see graph below). Clearly this demonstrates significant improvement and likely now represents a storage plateau that I do not project will change barring alteration of migration patterns into the United States through the southern Arizona deserts.



We began a Postdoctoral Fellowship in Forensic Anthropology in February 2012, the only position of its kind at the time in the United States. Three programs, including Pima County's, were offered in 2013.

*Looking Ahead*

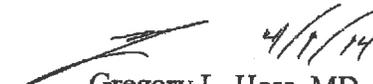
Our position as a regional forensic facility to serve Arizona will continue. The PCOME is the Medical Examiner for three counties (Pima, Santa Cruz, and Cochise) and serves as an examination and forensic service resource for eight additional counties (Apache, Gila, Graham, Greenlee, La Paz, Navajo, Pinal and Yuma). I project our out-of-county examinations to increase slightly or remain static for the foreseeable future secondary to projected needs of the counties we serve and the limitations of our current facility.

The PCOME is in the preliminary phases of beginning a fellowship training program in Forensic Pathology in conjunction with the Department of Pathology in the College of Medicine at the University of Arizona. There is a critical shortage of practicing Forensic Pathologists in the United States with only 34 accredited training programs and none in Arizona. We anticipate accreditation through the American College of Graduate Medical Education for up to two training positions beginning in July 2016.

As I discussed in an April 2012 memo (attached), and reiterated in my 2012 Annual Report cover letter, the PCOME physical plant is inadequate to continue to meet the needs of Pima County and the additional regions of Arizona that we now serve. Total PCOME cases in 2013 increased by 773 in comparison to 2010 (from 2,577 cases in 2010 to 3,350 cases in 2013) and will likely increase in coming years. As the population of Pima and surrounding counties increases over time, we need to expand in order to meet this demand both now and in the future. We do not have the capacity to accept cases beyond our current census in our current facility, effectively capping our ability to generate new revenue with out-of-county cases or respond to an increased demand within Pima County.

Thank you for your continued support and please contact me with any questions or concerns. A bound copy of the annual report will follow this electronic version in the coming days.

Very Respectfully,

  
Gregory L. Hess, MD  
Chief Medical Examiner

**PIMA COUNTY OFFICE OF THE MEDICAL EXAMINER  
FORENSIC SCIENCE CENTER**

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April 27, 2012

To: CH Huckleberry  
County Administrator

Re: Forensic Science Center Physical Plant

As we have discussed in recent meetings, the Pima County Forensic Science Center (FSC) has become a regional center providing autopsy and death investigation services for Pima County and 9 additional counties in Arizona. The aging morgue facilities of the FSC physical plant are stretched to overcapacity by the current workload. Additionally, the administrative facilities are inadequate and have been for some time, despite the temporizing modifications to the physical plant designed and implemented between 2001 and 2005. On July 1, 2012, the FSC will begin accepting cases from a 10<sup>th</sup> additional county, Cochise County, which will increase our workload by an estimated 10-20% annually. Although providing services for outside counties further decreases the FSC's impact to the general fund, it does stress FSC facilities even further.

The norm in offices that deal with sensitive information is to separate the general public from the working environment. FSC personnel meet on-site with families, attorneys, law enforcement, and other interested parties on a regular basis. Additionally, many public groups, including the Child Fatality Review committee, victim witness representatives, various school classes, and those with an interest in border issues, use the FSC administrative building for meetings, seminars and discussions with our pathologists and FSC staff. Currently, any meeting requires admitting the general public into the working environment, creating security and privacy problems for FSC staff members as well as increasing the risk that sensitive information will be seen or heard by those not related to the particular case. Small conference rooms used for consoling and educating families of decedents, meeting with attorneys for deposition and pretrial interviews, discussing cases with law enforcement, and interacting with funeral home staff should be located adjacent to a main lobby, outside of the secure administrative offices, along with restroom facilities and a larger conference space adequate for presentations and larger meetings.

The morgue operations area of the facility is cramped and antiquated. The autopsy suite has capacity for only two examinations at a time; whereas four to six examination

stations are required to efficiently process the work load and to handle multiple-fatality incidents. The anthropology laboratory processes more unidentified skeletal remains on an annual basis than anywhere else in the country. Unfortunately, there is space sufficient to examine only a single set of remains at a time, resulting in an overflow of specimens into the autopsy suite and examination areas. As imaging technology has advanced and become less costly over time, many modern medical examiners offices have incorporated CT scanning in addition to radiographs to document injuries and provide evidentiary and identification information. Several recently renovated offices across the country routinely incorporate CT scanning into their routine work flow. The current FSC radiology suite has only a digital radiograph processor for x-rays, which is outdated and in need of replacement; there is insufficient space for more advanced imaging modalities such as CT scanning.

Refrigerated storage of remains is, as you know, also an issue. Considerable time and expense have gone into storing remains of foreign nationals who have died in the Sonoran desert since 2001. Temporary storage and additional fixed storage are very expensive. Additionally, the life expectancy of our main cooling unit is, unfortunately, near its end, requiring frequent costly and time-consuming repairs. A single larger, modern cooler would be much more cost-effective than our current cooler configuration.

Lastly, the location of the current FSC facility is inconvenient. Frequent, often daily commutes downtown from our office are necessary to testify in court, meet with attorneys, and for many other administrative tasks. Attorneys and law enforcement personnel must travel from downtown to our office for interviews and depositions and to witness autopsies. If a suitable downtown location can be found that satisfies our needs it would result in decreased transportation costs and increased productivity for all parties involved.

In summary, the FSC physical plant is in year 11 of a 10-year renovation plan that began in 2001. Factors unforeseen in 2001 (increase in migrant deaths, development of the FSC into a regional facility through the rapid expansion of out-of-county work) have caused the FSC workload to exceed the capacity of its facilities, necessitating consideration for a new physical plant.

Very Respectfully,

 4/30/12  
Gregory Hess, MD  
Chief Medical Examiner



# PIMA COUNTY

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OFFICE OF THE MEDICAL EXAMINER

## Annual Report 2013



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## **INTRODUCTION**

The Pima County Office of the Medical Examiner (PCOME) investigates any death in Pima County that is sudden, violent, unexpected, or in which the cause of death is unknown. The PCOME also serves as the Medical Examiner for Cochise and Santa Cruz Counties and performs examinations as needed for 8 additional counties. In 2013 there were 9,433 deaths in Pima County; of these 2,611 (28%) were reported to the PCOME for investigation. This annual report consists of two main sections. The first is an overview of the activities and notable events of the office over the course of the report year. The second is a statistical review of the types of cases processed by the office over the same time period.

## **OVERVIEW**

The PCOME was fully accredited by the National Association of Medical Examiners (NAME) following a two day inspection in October 2011. This accreditation is effective October 24, 2011 through October 24, 2016 and requires annual accreditation verification. NAME accredited offices represent the highest quality of death investigation systems. There are 75 offices across the United States accredited by NAME. The PCOME has the distinction of being the sole accredited office in Arizona.

### Reportable Deaths

Arizona statute §11-593 delineates ten circumstances in which a death is reportable to the PCOME.

1. Death when not under the current care of a physician or nurse practitioner for a potentially fatal illness or when an attending physician or nurse practitioner is unavailable to sign the death certificate.
2. Death resulting from violence.
3. Death occurring suddenly when in apparent good health.
4. Death occurring in a prison.
5. Death of a prisoner.
6. Death occurring in a suspicious, unusual or unnatural manner.
7. Death from disease or accident believed to be related to the deceased's occupation or employment.
8. Death believed to present a public health hazard.
9. Death occurring during, in association with or as a result of anesthetic or surgical procedures.
10. Unidentifiable bodies.

### Investigations

Our 11 medical investigators processed 2,611 reports of deaths from Pima County and 739 reports from 10 additional Arizona counties in 2013. Jurisdiction was declined in 837 of these cases. A total of 2,145 decedents were transported to the PCOME for examination or storage in 2013.

### Examinations

Pima County forensic pathologists and anthropologists performed 1,491 autopsies, 474 external examinations, 368 death certifications, and 163 anthropologic examinations, and reviewed 5,346 cremations in 2013.

### Education, Training and Activities

#### 1) *Medicolegal Death Investigators*

Calendar year 2012 saw a transition from the term Forensic Medical Investigator (FMI) to Medicolegal Death Investigator (MDI) for our 11 MDIs in keeping with national norms. Seven MDIs, our MDI Supervisor, Morgue Supervisor and Office Manager are certified by the American Board of Medicolegal Death Investigators to provide competent medicolegal death investigations. PCOME Forensic Pathologists lecture to the MDIs on varying topics monthly. In accordance with our MDI quality assurance and performance improvement program, 10% of cases are pathologist reviewed monthly and 10% of cases are peer reviewed quarterly.

#### 2) *Community education, presentations and media interviews*

The PCOME receives numerous requests from various groups, organizations, individuals and schools for presentations regarding a host of forensic issues annually. Not all requests can be honored due to time and personnel constraints, but examples of educational activities include but are not limited to: presentations at local primary and secondary schools; lectures at various institutions and departments at the University of Arizona; presentations and tours for humanitarian organizations; and the teaching of a 3-credit-hour death investigation class at Pima Community College. The Chief Medical Examiner participated in 173 media interviews, emails and phone calls, many involving migrant death issues. Pima County's Forensic Anthropologist and Postdoctoral Fellow gave numerous platform and poster presentations to various organizations and at national anthropologic and forensic conferences.

#### 3) *University of Arizona College of Medicine, Department of Pathology and School of Anthropology*

PCOME Forensic Pathologists hold clinical appointments with the Department of Pathology at the University of Arizona, College of Medicine, where they are involved with pathology resident and medical student teaching. Eight pathology residents, seven medical students and three pathology post-sophomore fellows rotated through the PCOME for month-long rotations in 2013. Our Forensic Anthropologist also holds an academic appointment at the University of Arizona and four anthropology interns trained at our facility in 2013.

### Law Enforcement and Legal System

The availability of our pathologists to assist or advise law enforcement personnel in their investigations and the legal system in its proceedings is an important function of the PCOME. Involvement of the PCOME in the legal system generally consists of pretrial interviews, depositions and courtroom testimony. In 2013, the office's six forensic pathologists and two anthropologists participated in approximately 52 pretrial interviews, 60 depositions and 50 jury trials.

Pima County Office Of The Medical Examiner – Annual Report 2013

Organ and Tissue Donation

Pursuant to A.R.S §36-861, the PCOME refers death notifications to, and partners with Donor Network of Arizona (DNA) for the coordination and procurement of anatomic gifts. The importance of supporting the efforts of the organ and tissue transplant and research communities in Arizona cannot be understated. Anatomic gifts can be life saving for organ and tissue recipients and these gifts are always in short supply.

Organ Donations with PCOME Involvement 2013

Heart	Lungs	Liver	Kidneys	Pancreas	Sm. Intestine	Total
5	2	10	30	1	0	48

The total lives saved through organ donation involving deaths investigated by the PCOME in 2013 were 46 with 48 organs being transplanted. The authorization for the procurement of organs was granted in 100% of cases.

Cornea Donations with PCOME Involvement 2013

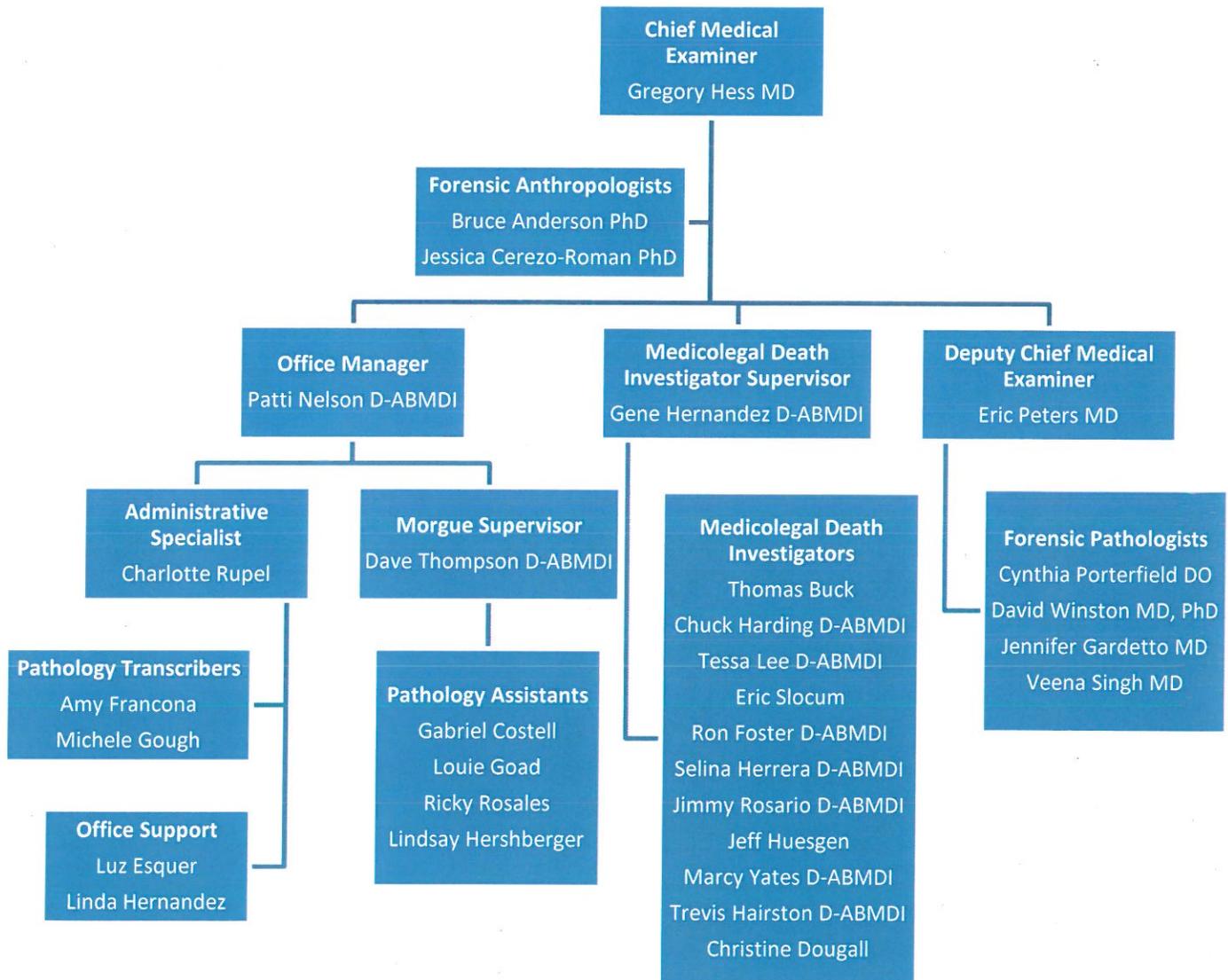
Corneas Recovered	Corneas Transplanted
268	192

There were 268 corneas recovered (15% of all corneas recovered in Arizona) and 192 transplanted in 2013 with PCOME involvement. The release of corneas was granted 97% of the time.

Tissue Donation with PCOME Involvement 2013

Bone	Skin	Vascular	Heart	Aortoiliac
84	90	24	33	8

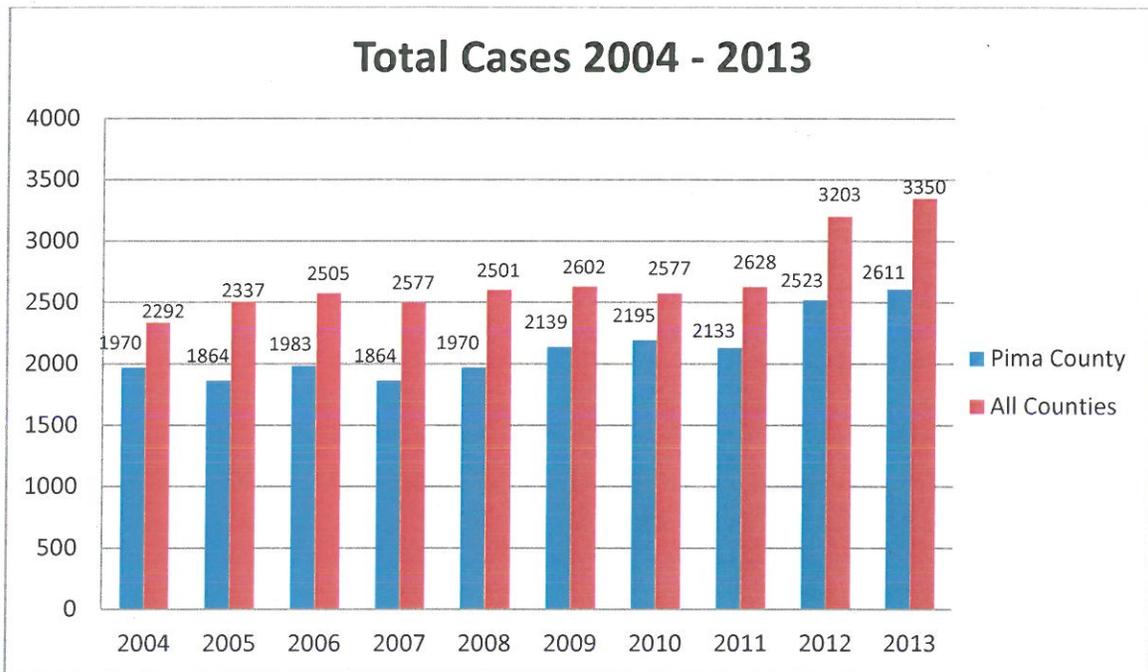
The PCOME was involved in 20% of all DNA tissue recoveries in 2013. The average release of tissue for procurement was granted 80% of the time across the state of Arizona in 2013. The release of tissues was granted 94% of the time by the PCOME, significantly above the state average.



**OFFICE OF THE MEDICAL EXAMINER  
ORGANIZATIONAL CHART AS OF DECEMBER 2013**

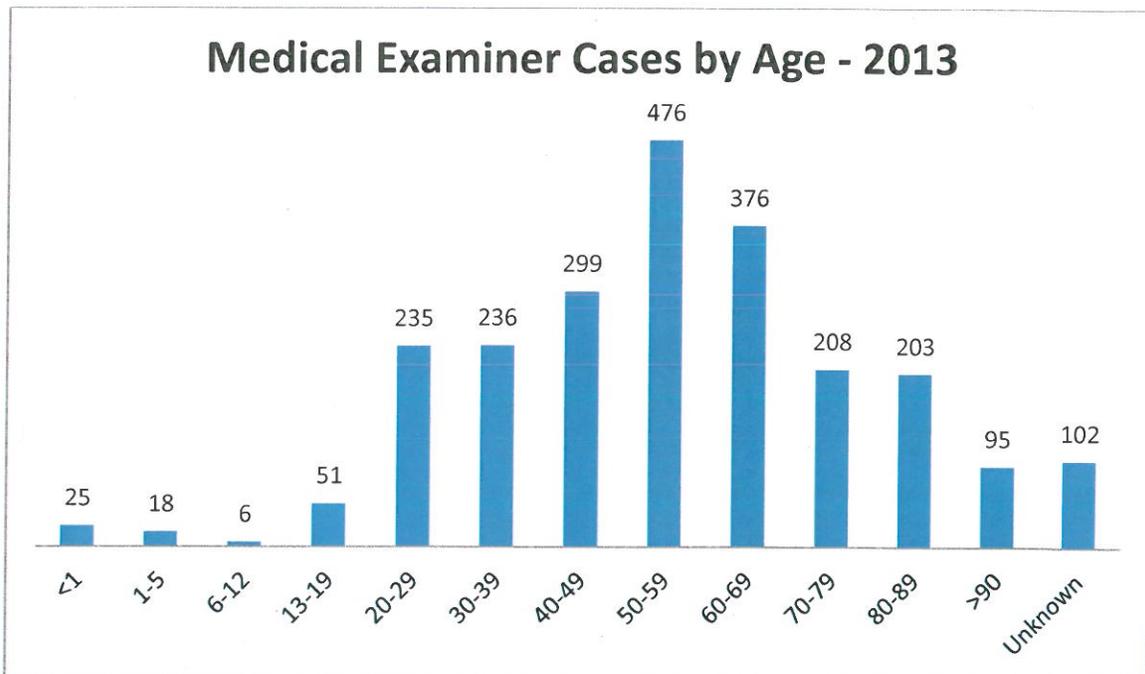
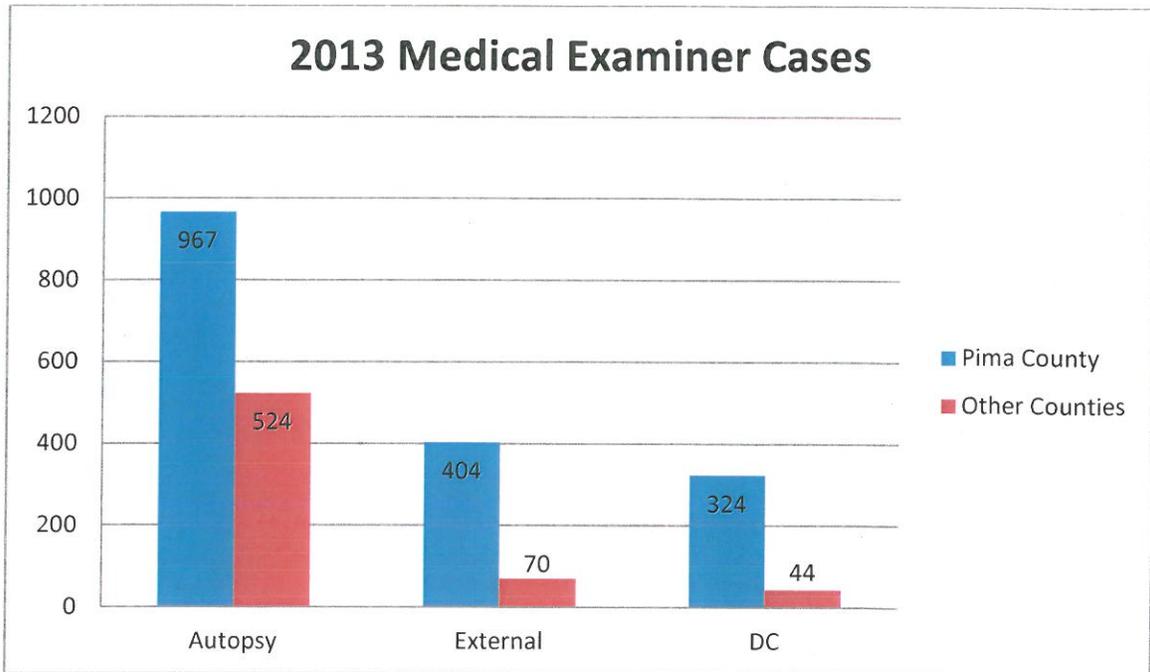
## TOTAL CASES

The total cases handled by the PCOME in a given year are the sum of the medical examiner (ME) cases (autopsies, external examinations, and death certificate cases), cases in which jurisdiction was declined, and the number of cases stored at our facility during the calendar year (storage cases). ‘All Counties’ includes cases examined at the PCOME from Apache, Cochise (effective 7/1/12), Gila, Graham, Greenlee, La Paz, Navajo, Pinal, Santa Cruz and Yuma counties in addition to Pima County.

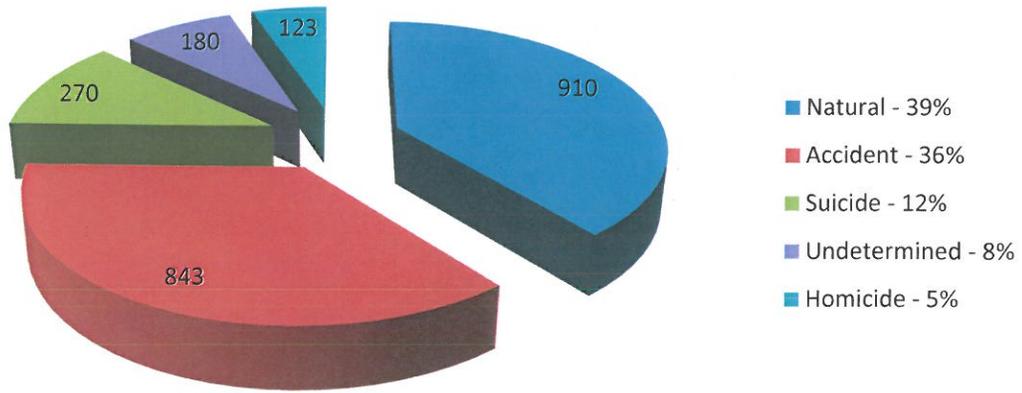


## MEDICAL EXAMINER CASES

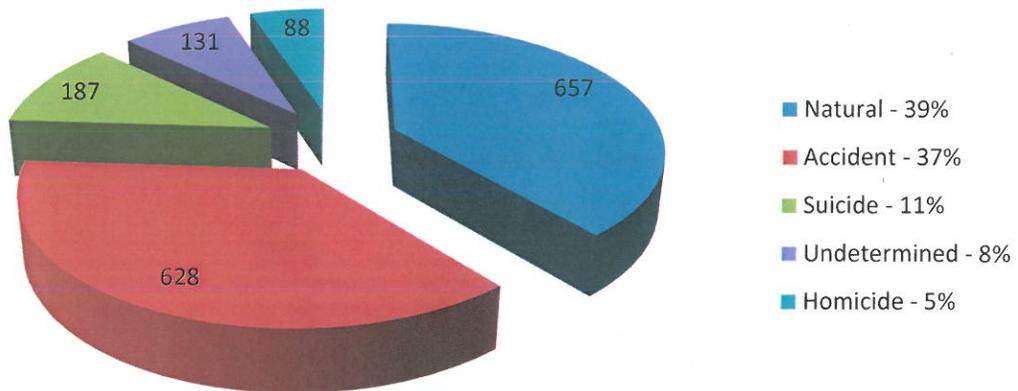
The PCOME considers all cases in which the cause and manner of death are determined by this office as “medical examiner cases.” Those cases include autopsies, external examinations and death certificate (DC) cases. Autopsies are examinations where a decedent is examined both externally and internally for evidence of injury or natural disease which may have caused or contributed to the individual’s death. External examinations consist of an external examination of the body without the internal examination. A DC case involves review of the medical records, law enforcement reports and any other information that may be necessary to determine the cause and manner of death without physical examination of the decedent. In 2013, for Pima and all other counties listed above, 1491 autopsies, 474 external examinations and 368 DC cases were performed at the PCOME. Pima County alone accounted for 967 autopsies, 404 external examinations and 324 DC cases.



### ME Cases (all counties) by Manner of Death - 2013

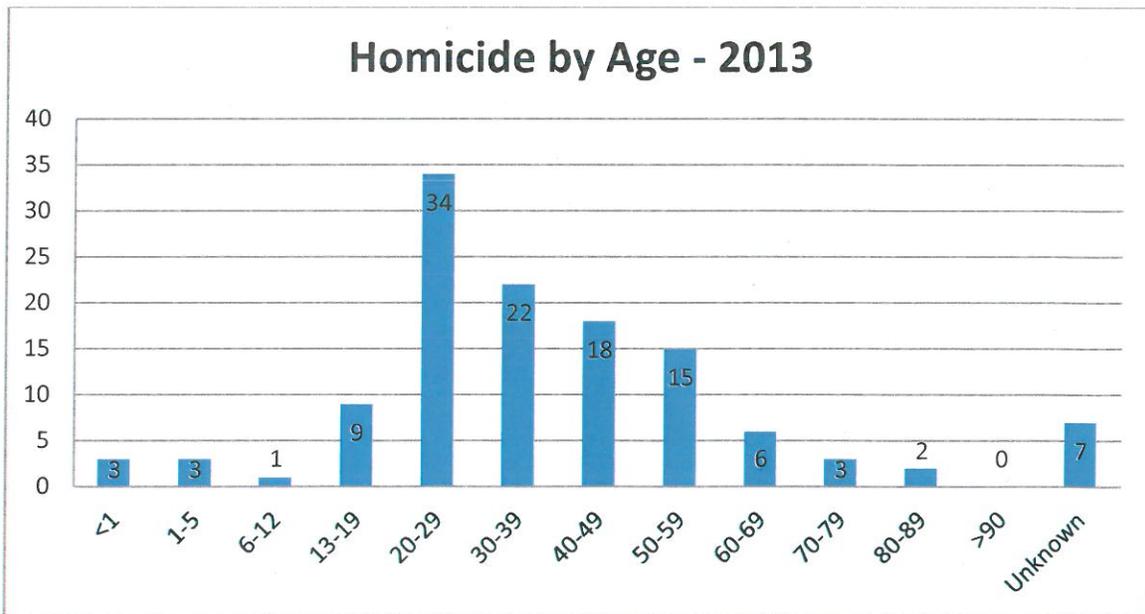
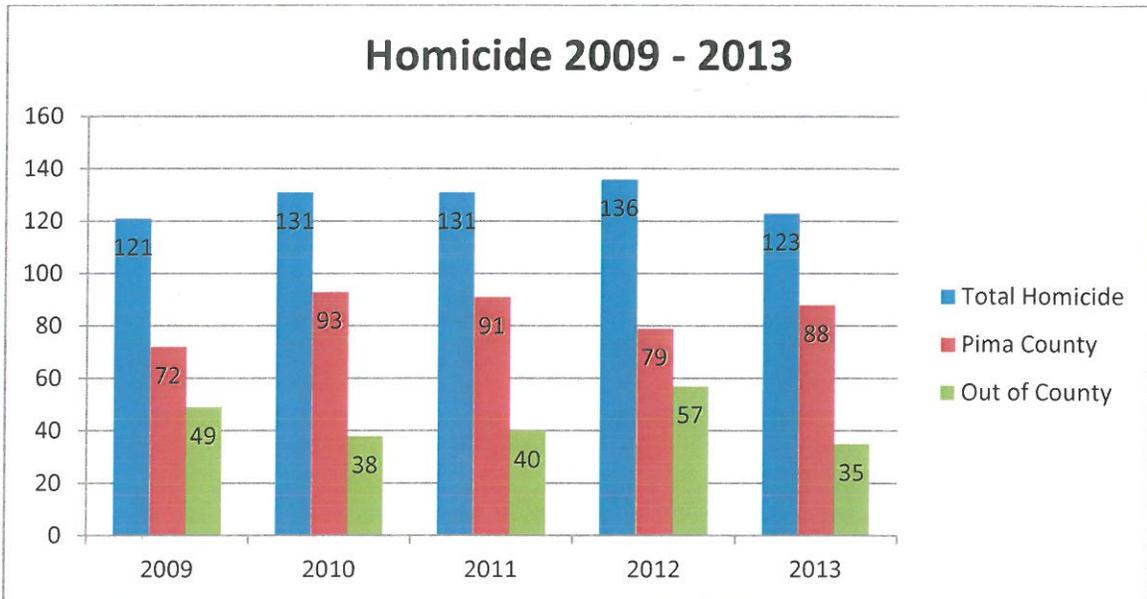


### ME Cases (Pima only) by Manner of Death - 2013

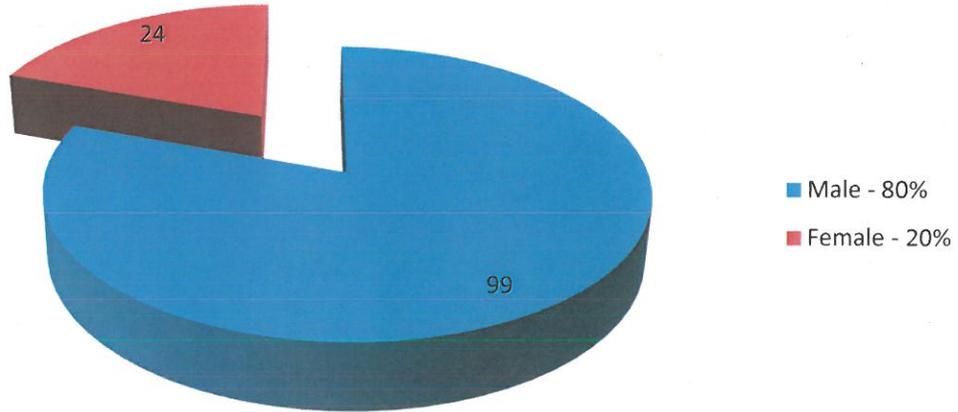


## HOMICIDE DEATHS

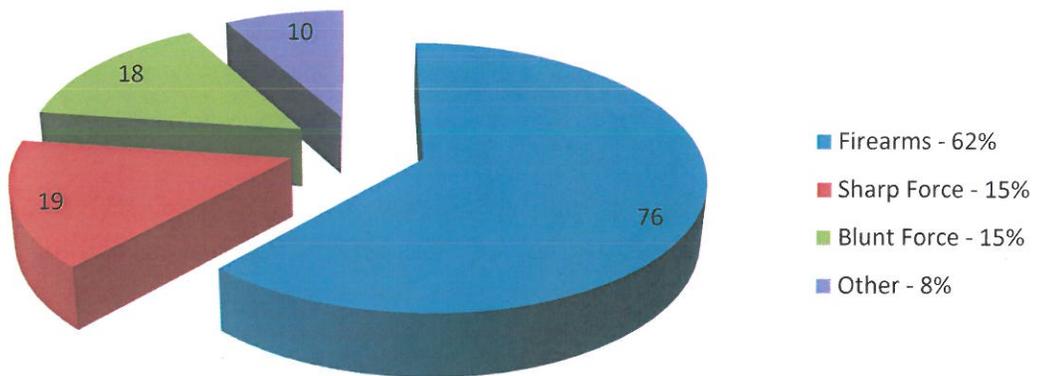
The PCOME examined 123 homicides in 2013, 88 from Pima County and 35 from other counties. Homicide totals from 2009 – 2013 are compared below. Homicide victims were most frequently male (80%), between 20-29 years of age (28%) and died as the result of firearms (62%).



### Homicide by Gender - 2013

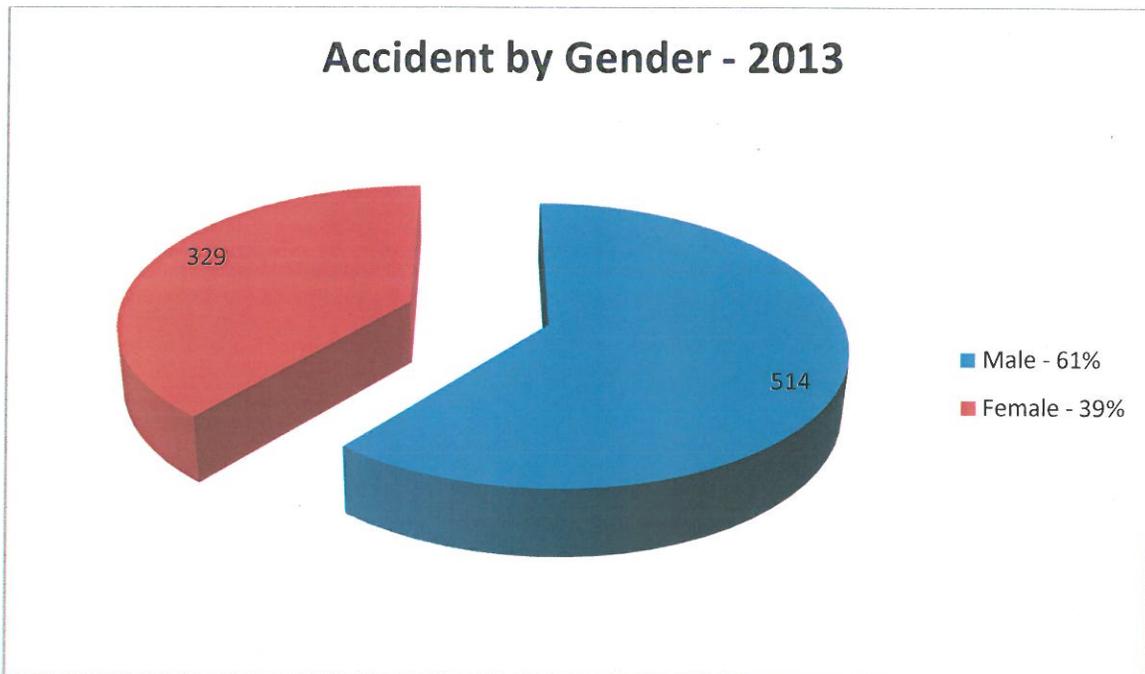
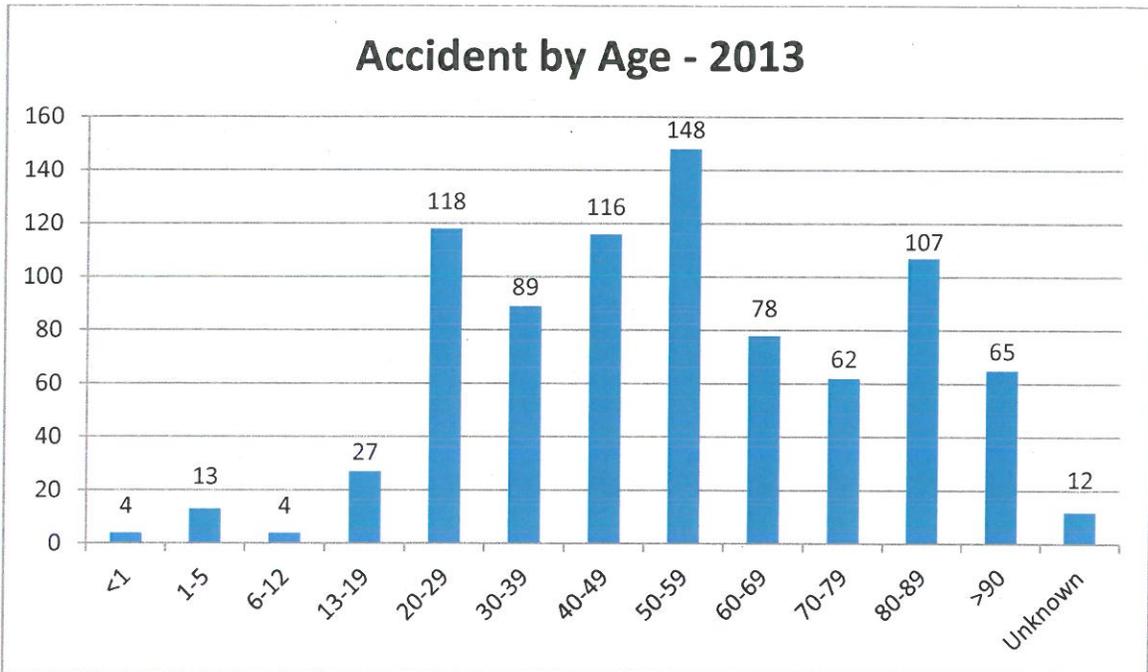


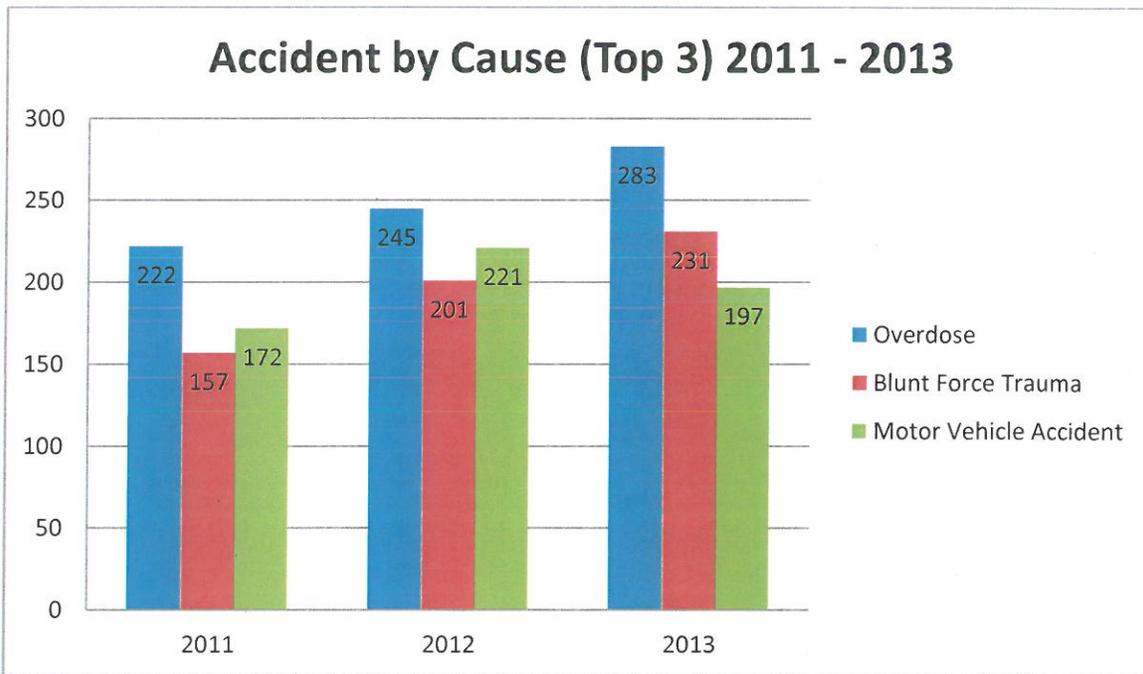
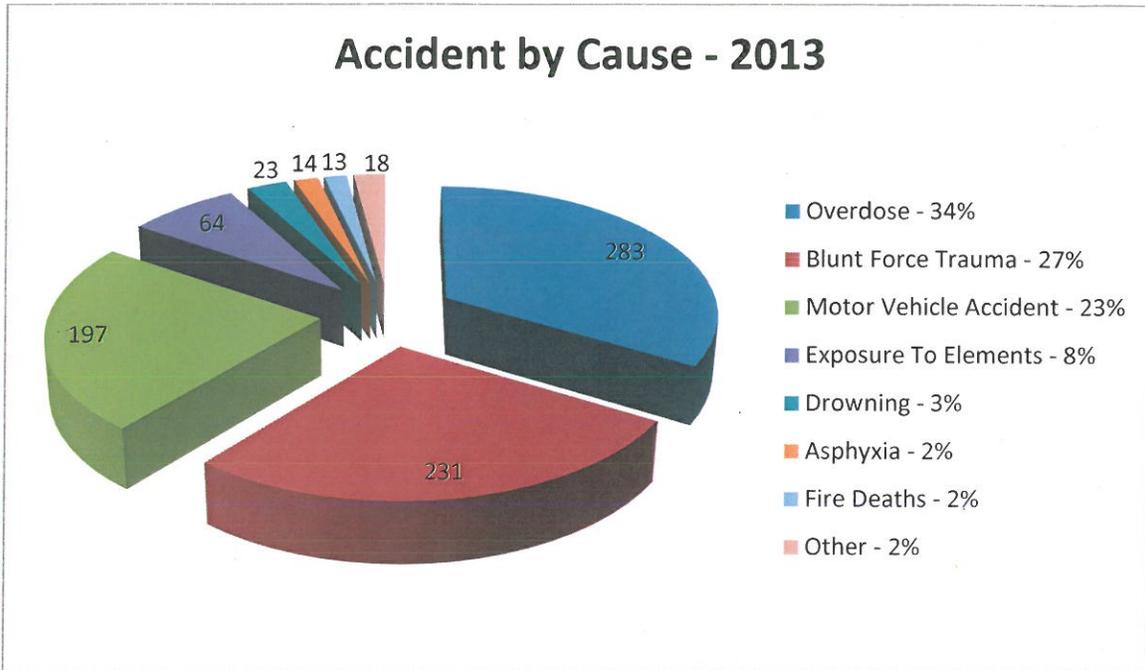
### Homicide by Cause - 2013



## ACCIDENTAL DEATHS

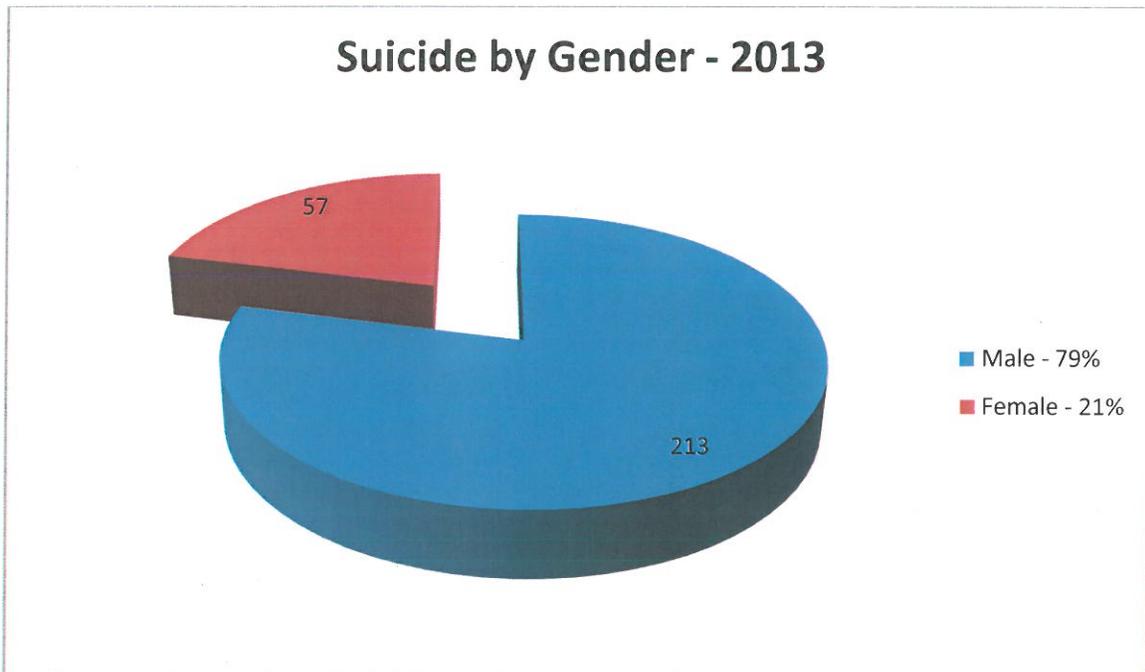
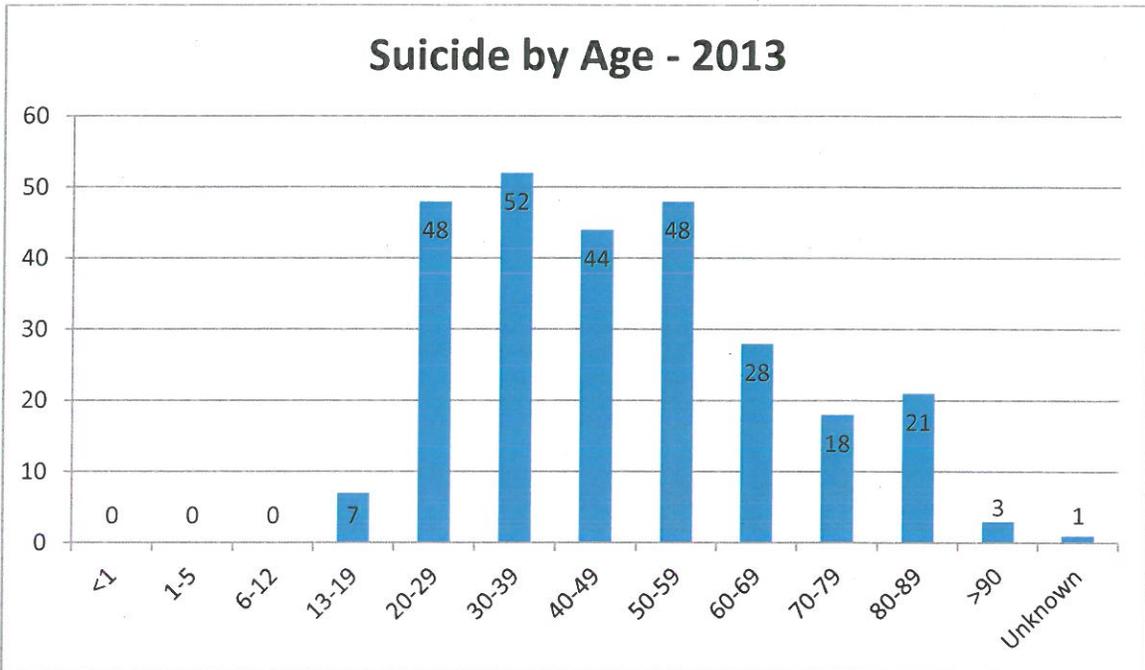
Deaths due to accidents accounted for 36% of the ME deaths investigated by the PCOME in 2013. Accident victims were most frequently males (61%), between 50-59 years of age (18%) and died as the result of a drug or medication overdose (34%).

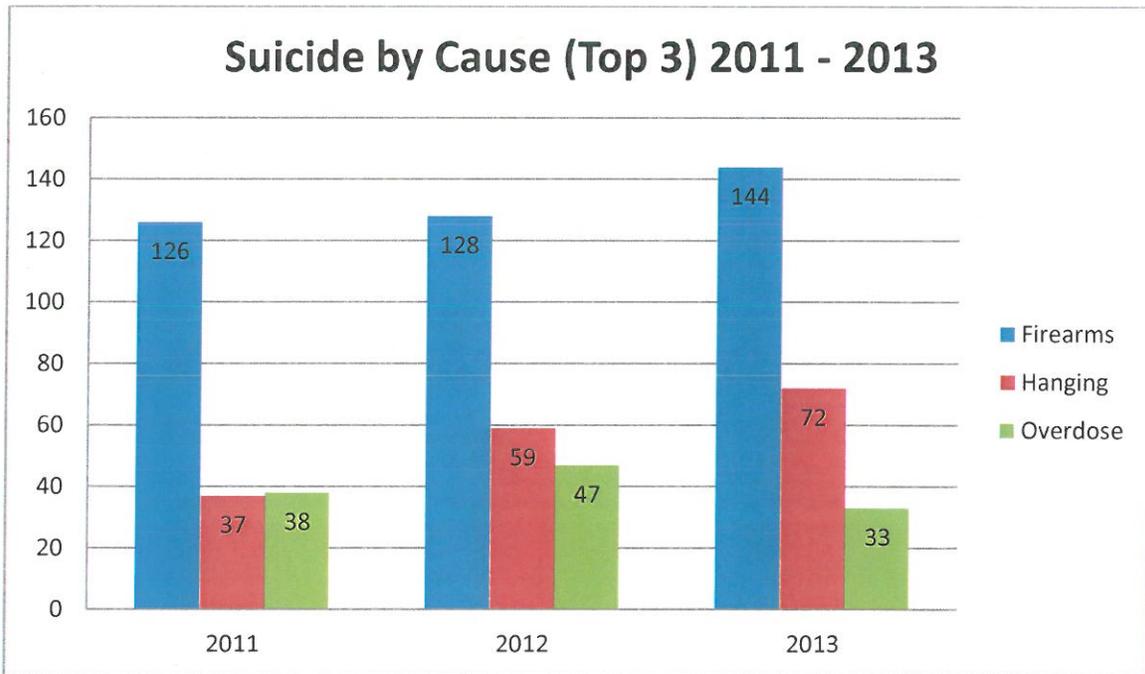
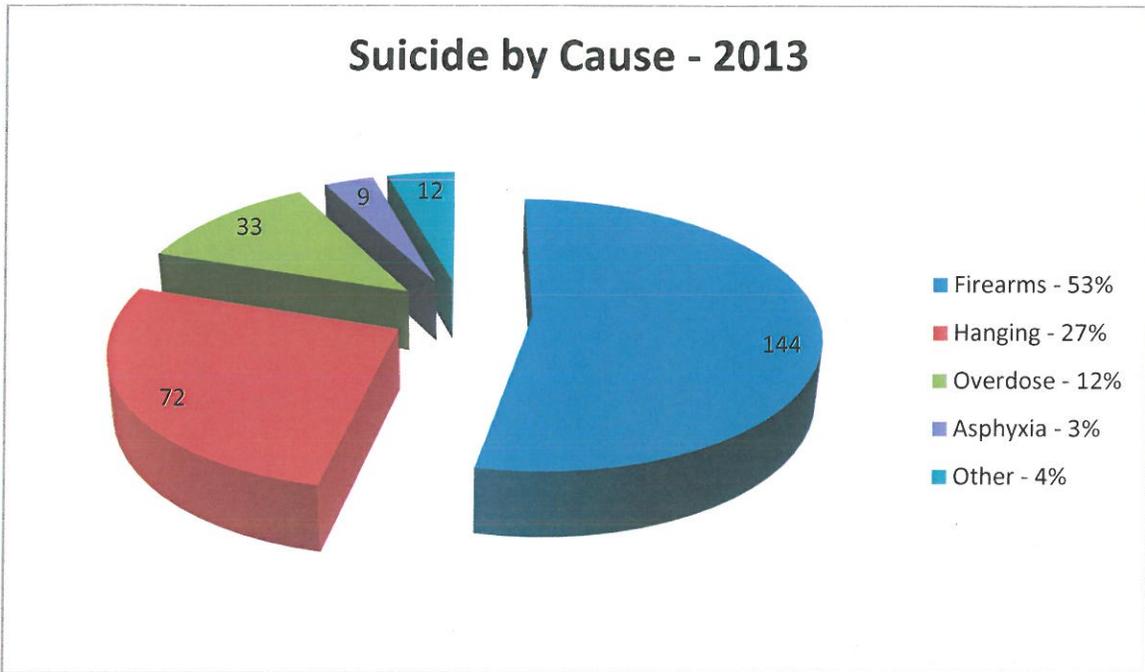




## SUICIDE DEATHS

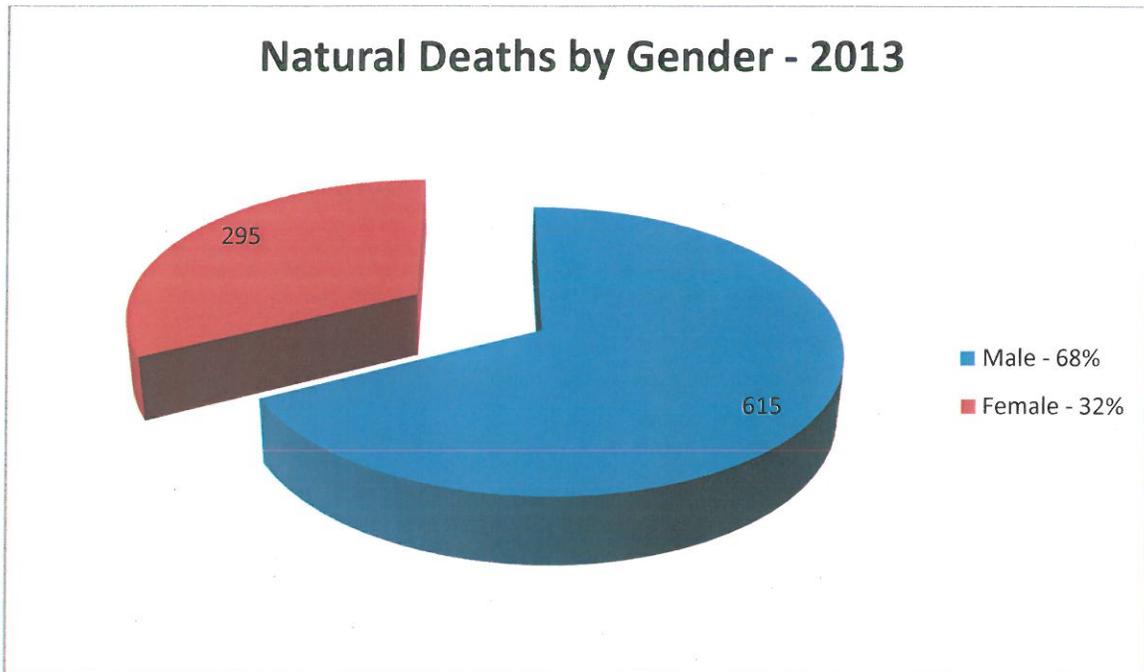
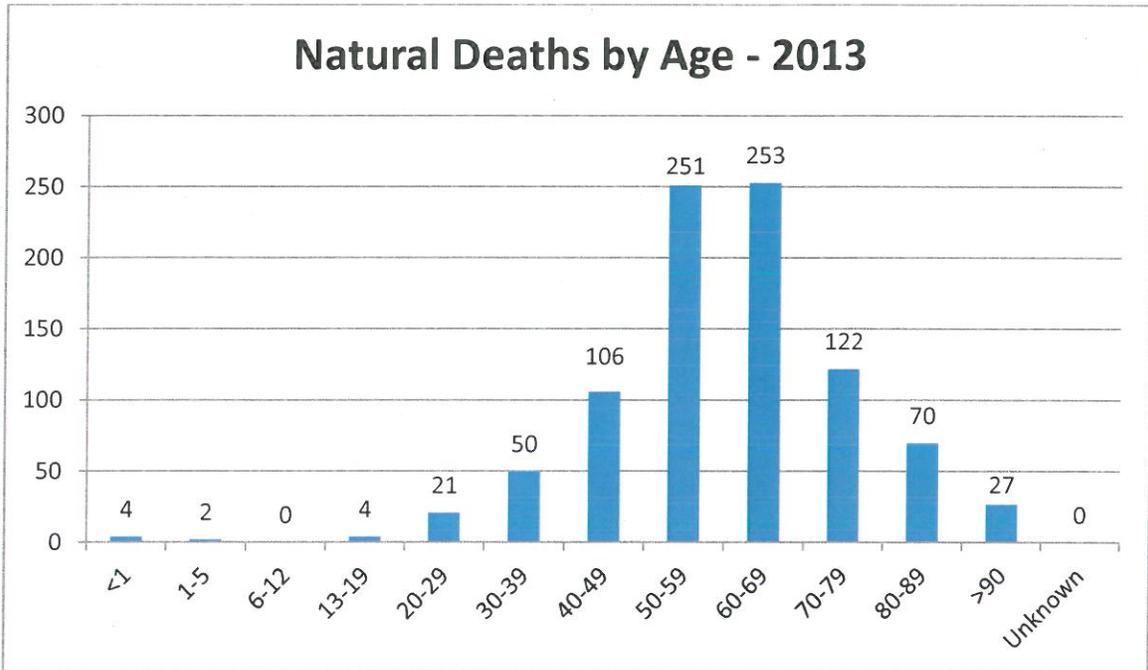
Suicide deaths accounted for 12% of the ME deaths investigated by the PCOME in 2013. Suicide victims were most frequently males (79%), between 30-39 years of age (19%) and died as the result of firearms (53%).

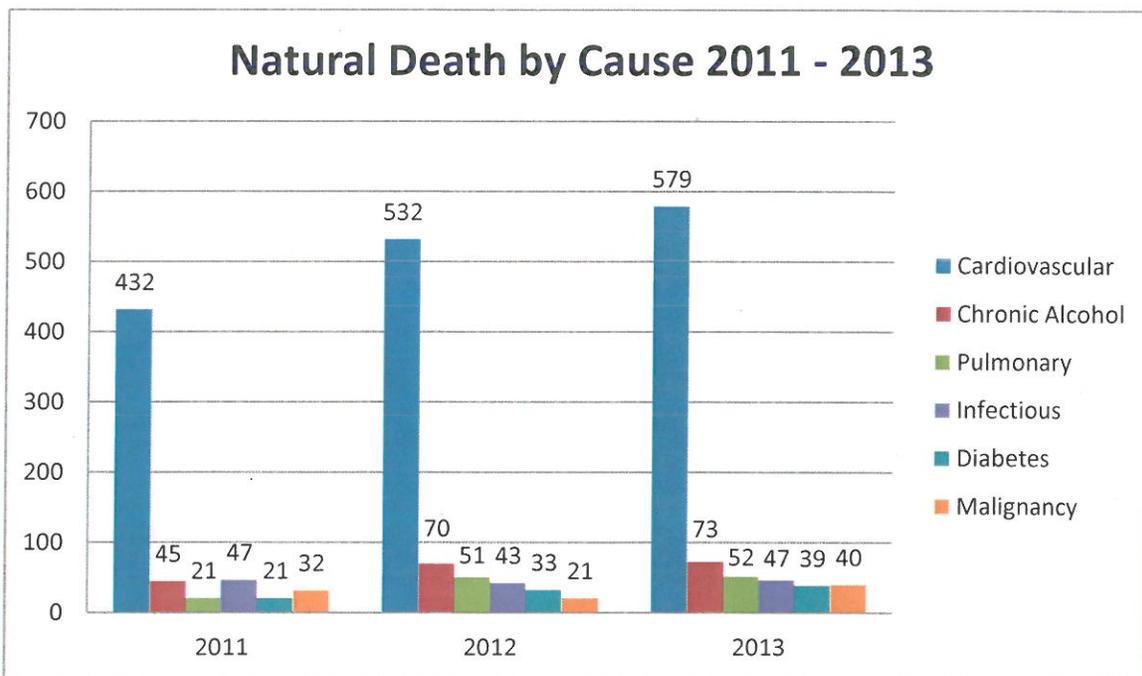
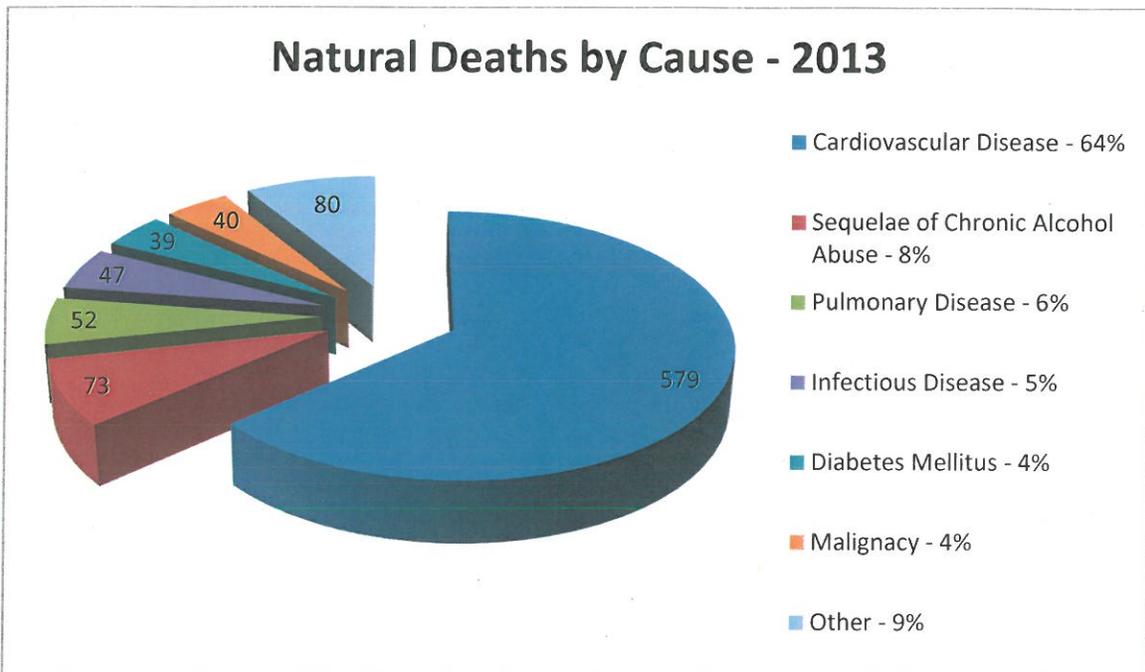




## NATURAL DEATHS

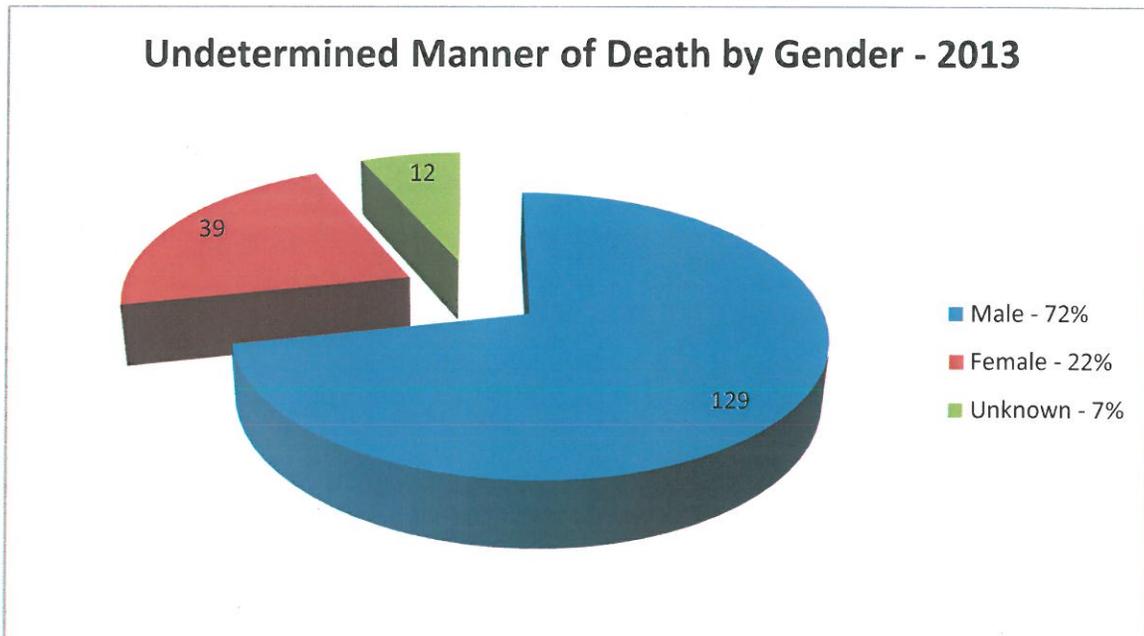
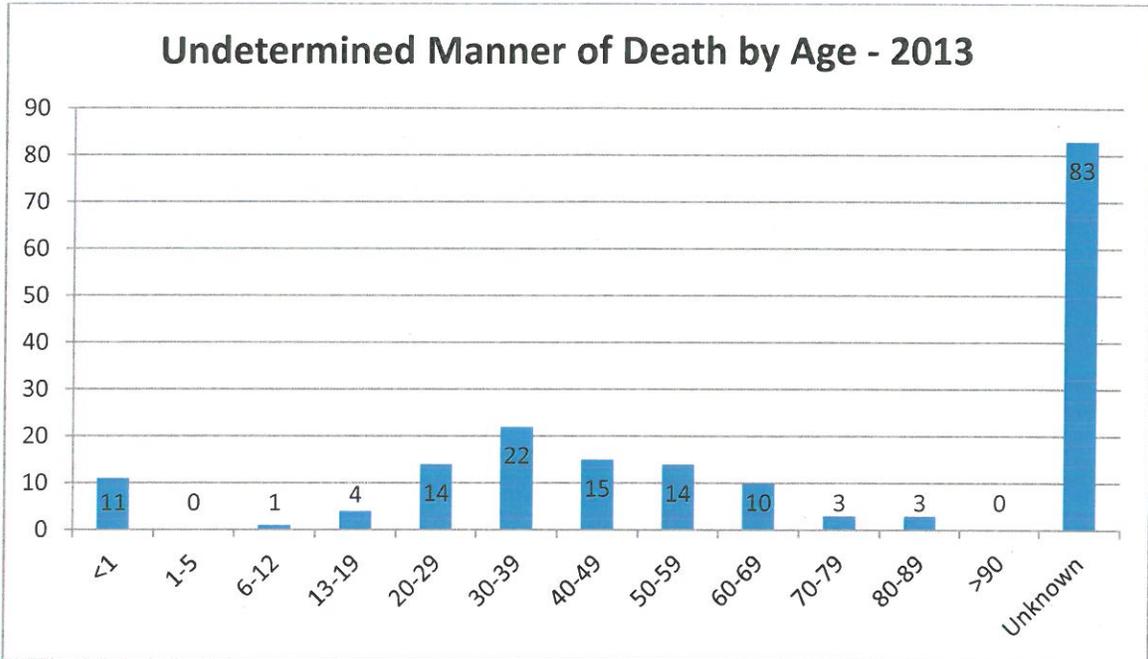
Natural deaths accounted for 39% of the ME deaths investigated by the PCOME in 2013. Individuals who died from natural causes were most frequently males (68%), between 60-69 years of age (28%) and died as the result of cardiovascular disease (64%).



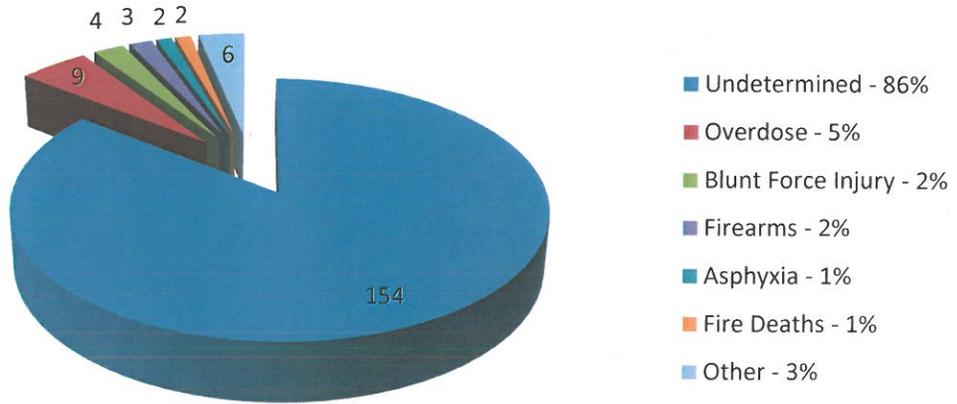


## UNDETERMINED MANNER OF DEATH

Deaths in which the manner of death was undetermined accounted for 8% of the ME deaths investigated by the PCOME in 2013. Individuals who died with an undetermined manner were most frequently males (72%), of unknown age (46%) and died from undetermined causes (86%). Many of these deaths represent skeletal remains of undocumented border crossers who died in the deserts of southern Arizona.



### Undetermined Manner of Death by Cause - 2013



## OVERDOSE DEATHS

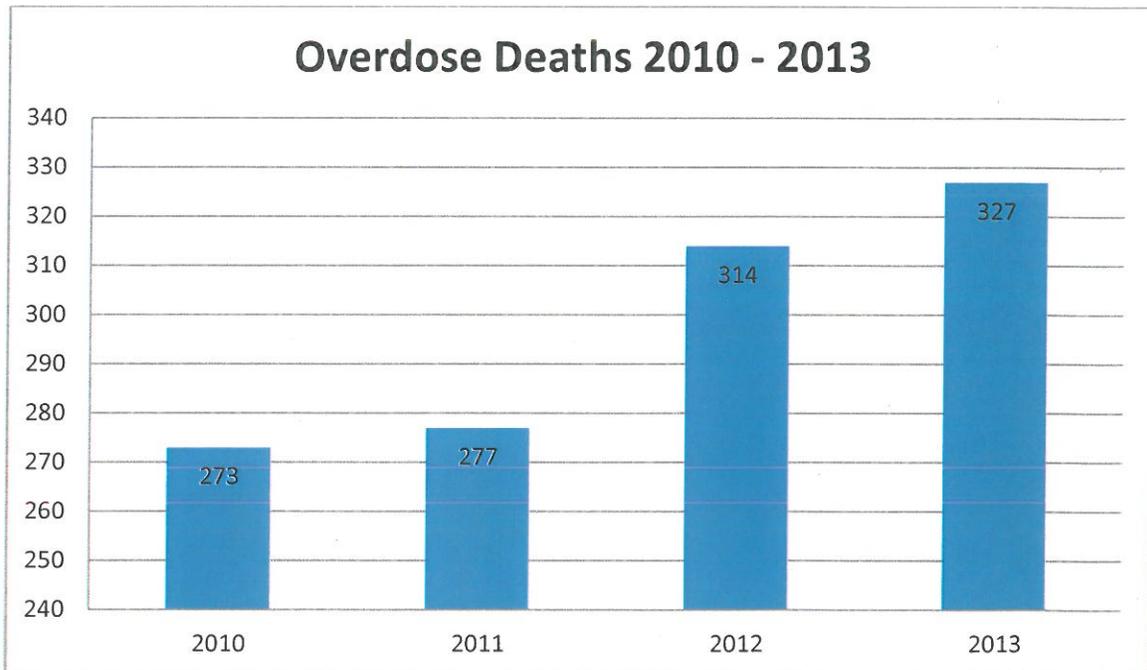
There were 327 deaths attributed to an overdose of either a single drug (165 deaths, 50%) or a combination of drugs (162 deaths, 50%) in 2013. Overdose deaths commonly involved males (58%) between the ages of 50-59 (26%). The majority of these deaths were classified as accidents (87%).

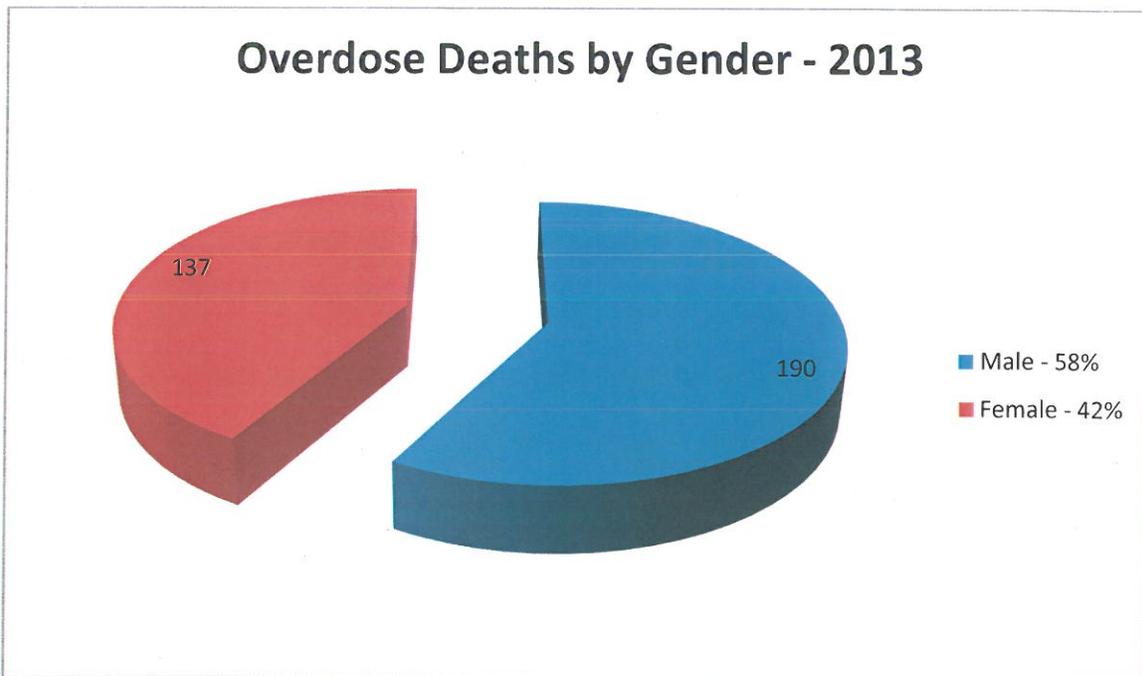
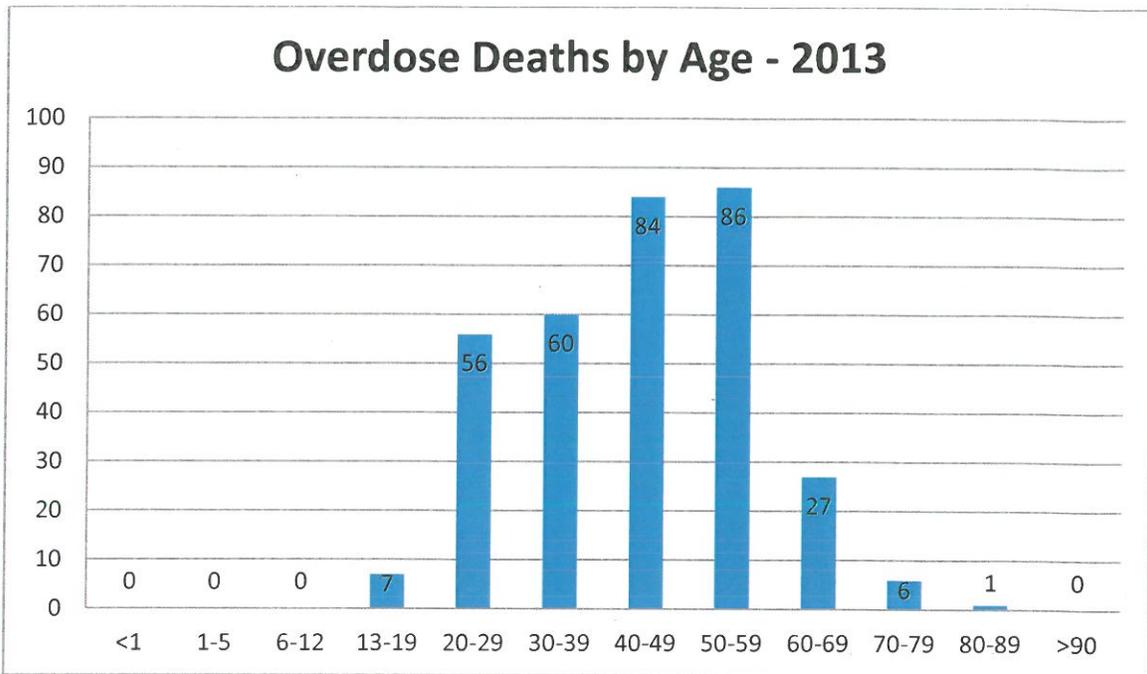
Opiate drugs (heroin, oxycodone, methadone, hydrocodone, morphine, oxymorphone, hydromorphone, tramadol, opiate unspecified) and fentanyl (a synthetic opioid narcotic) accounted for the majority (195) of overdose deaths, either as a single drug or a component of a poly-drug overdose. Methamphetamine was the most commonly abused illicit drug contributing to death in 2013 followed by heroin; both significantly increased in comparison to 2012.

The number of heroin deaths is likely underreported as heroin is rapidly metabolized to morphine by the body and if the parent compound indicative for heroin (6-monoacetylmorphine) is not present on the toxicology report these deaths may be classified as either morphine intoxication or opiate intoxication.

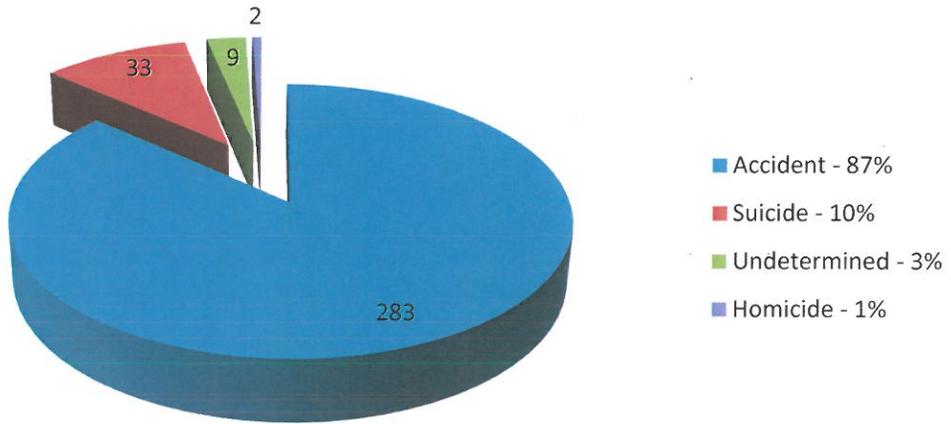
Acute alcohol intoxication alone, not as component of a poly-drug overdose, accounted for 22 overdose (7%) deaths in 2013.

There were two judicial executions by injection of pentobarbital and/or phenobarbital examined at the PCOME in 2013.

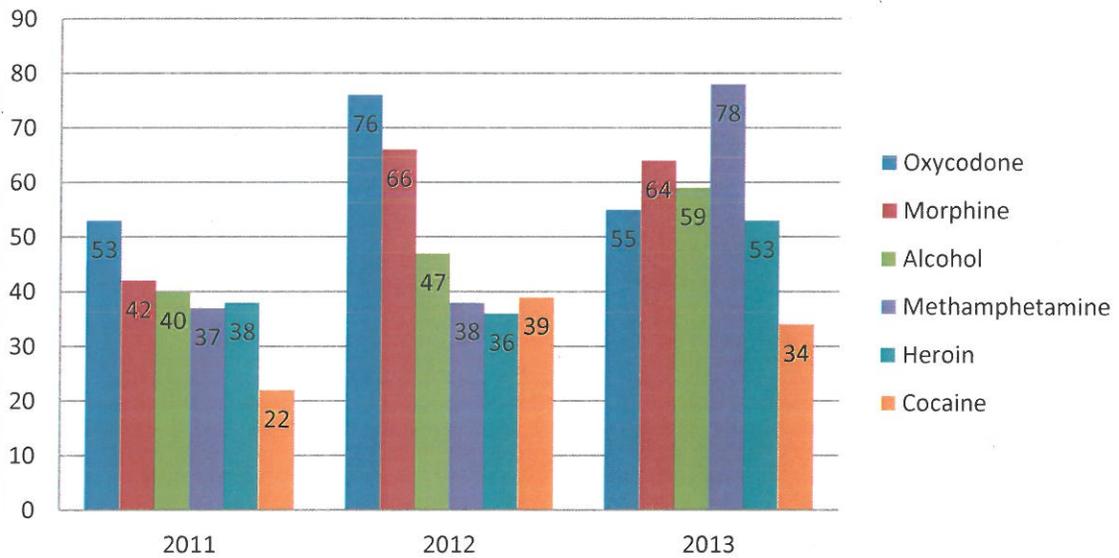


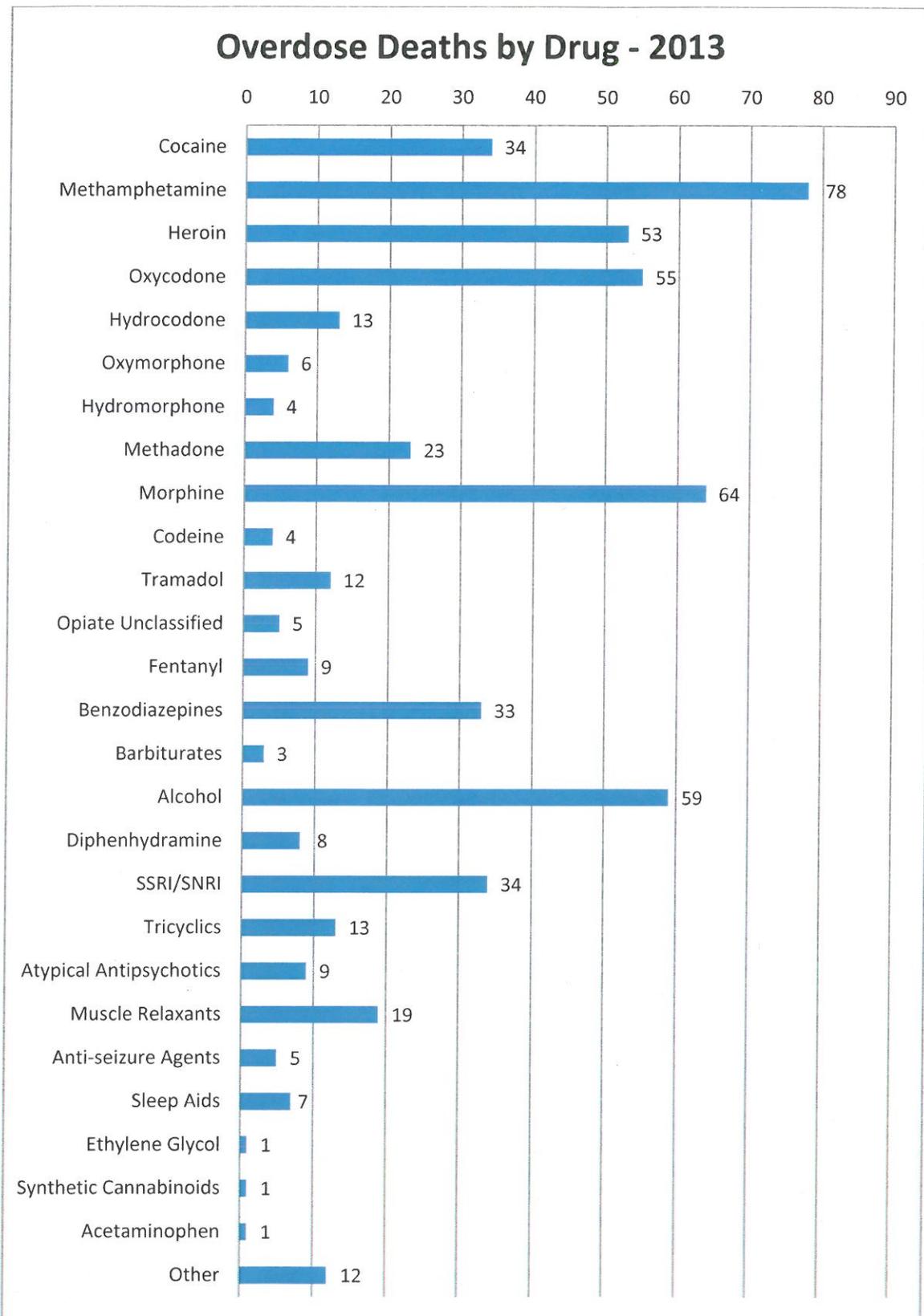


### Overdose Deaths by Manner - 2013



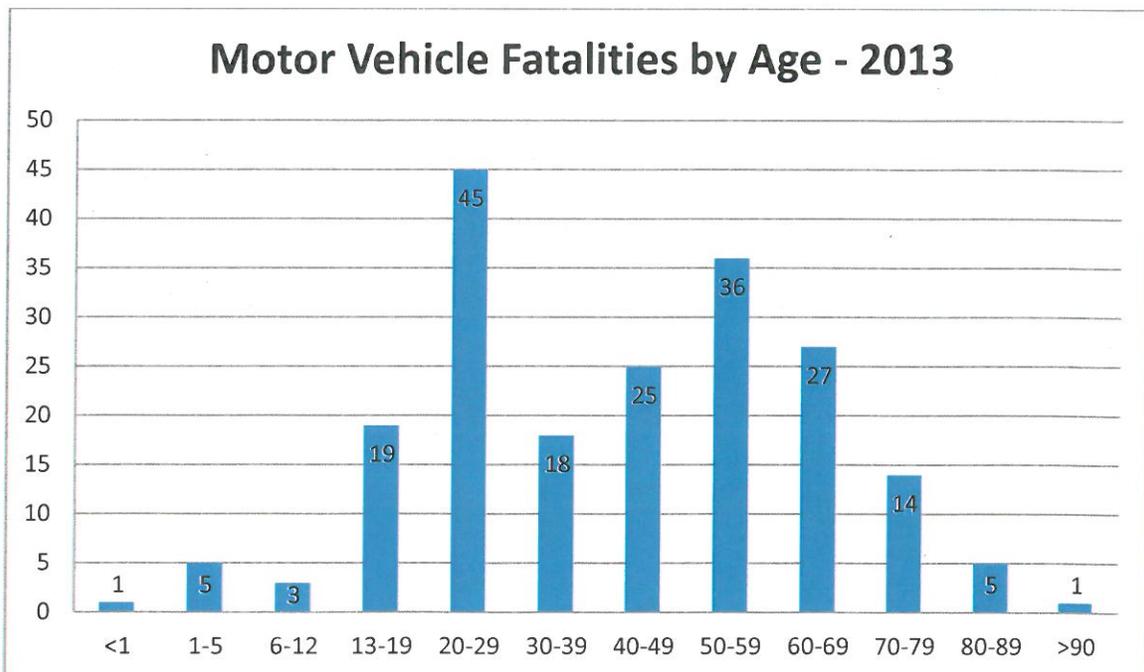
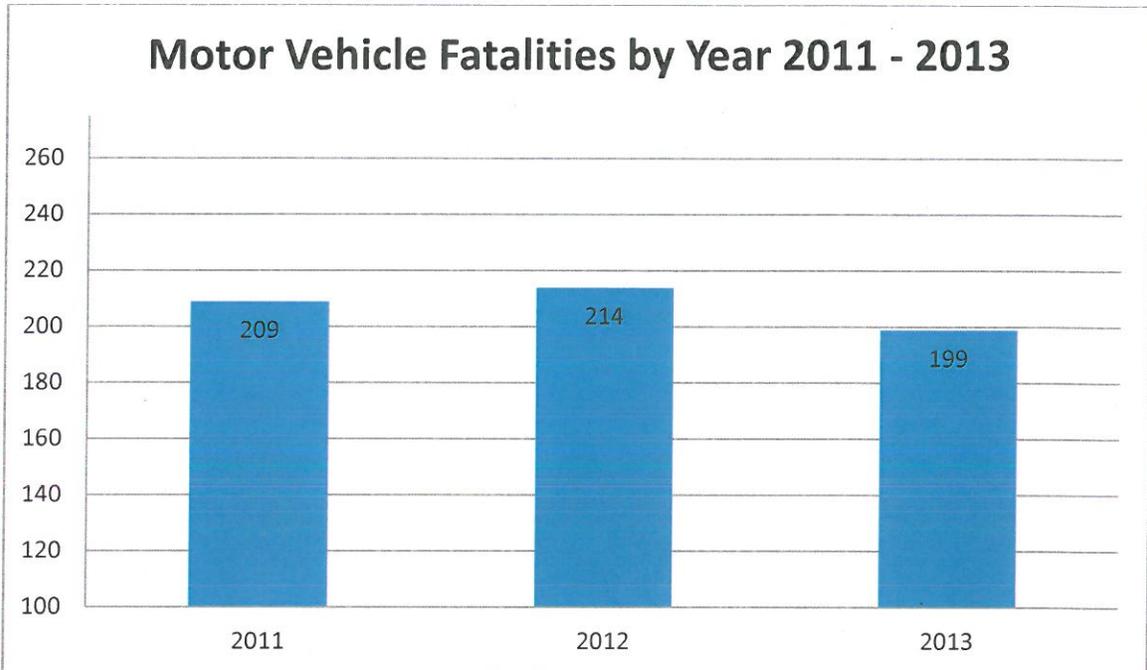
### Select Drugs by Year 2011 - 2013



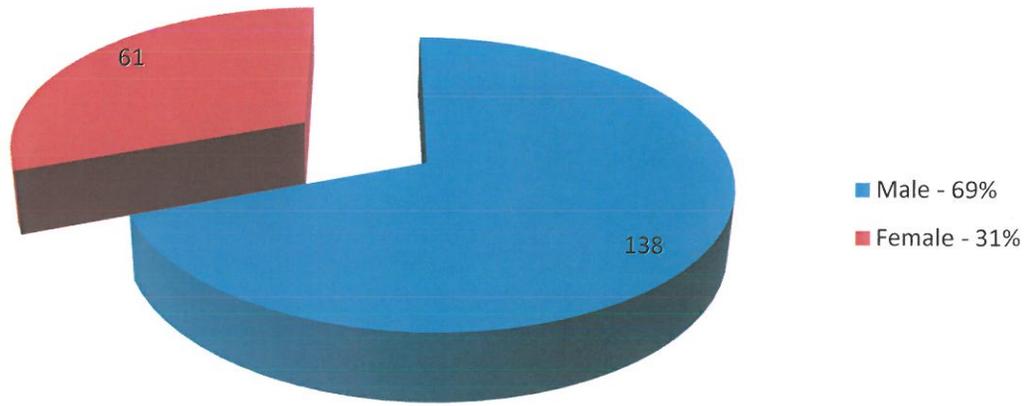


## MOTOR VEHICLE RELATED FATALITIES

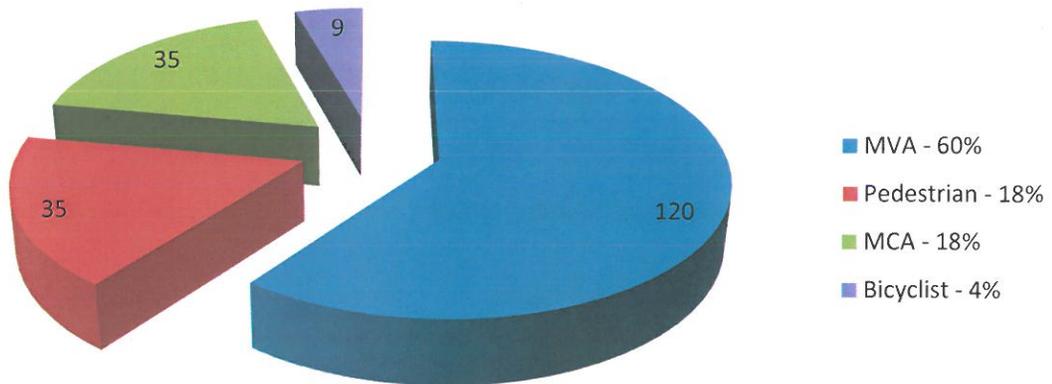
Motor vehicle related fatalities accounted for 199 total deaths in 2013. The majority, 120 deaths, were occupants of a motor vehicle involved in an accident (MVA). Of the remaining, 35 were motorcycle accidents (MCA), and 44 were pedestrians or bicyclists struck by vehicles. Individuals who died from motor vehicle related fatalities were most frequently males (69%) and between 20-29 years of age (23%).



### Motor Vehicle Fatalities by Gender - 2013



### Motor Vehicle Fatalities by Type - 2013



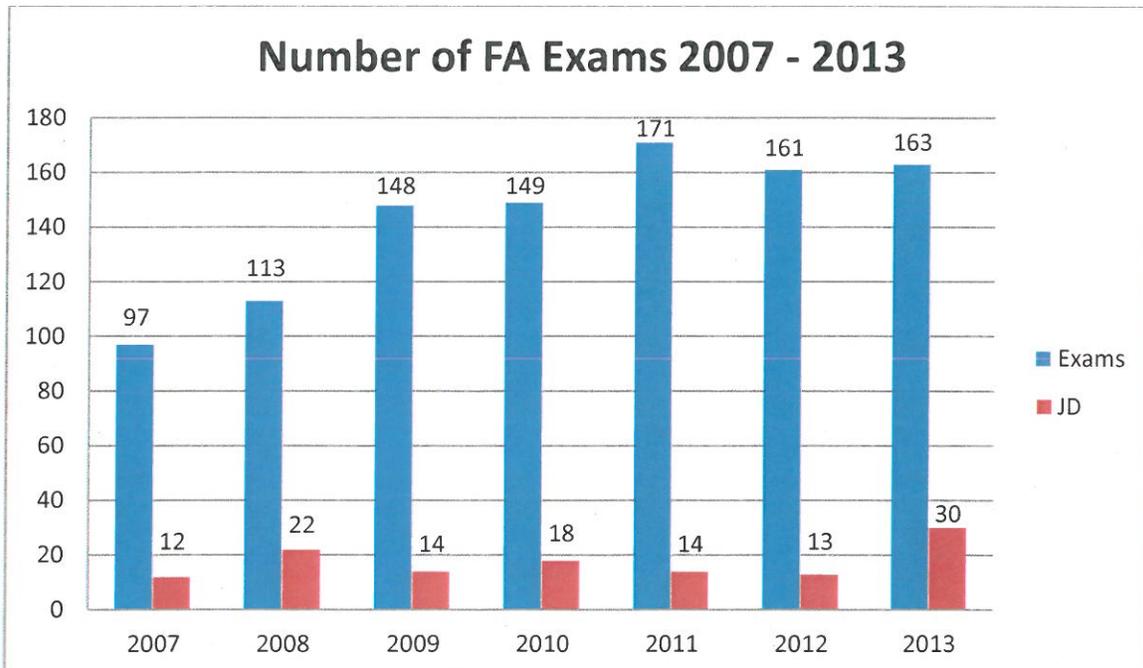


## W.H. BIRKBY FORENSIC ANTHROPOLOGY LABORATORY

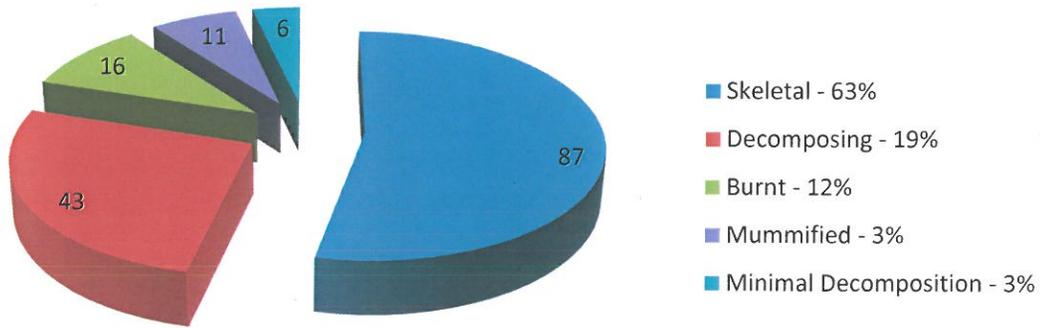
Forensic Anthropologists at the W.H. Birkby Forensic Anthropology Laboratory within the PCOME performed 163 examinations (biological profiles, trauma evaluations, dental examinations and examinations for identification) in 2013 on human remains of forensic significance. An additional 30 examinations were performed on remains ultimately deemed non-human, prehistoric or otherwise not forensically significant and jurisdiction of the remains was declined (JD) in those cases.

The extent of postmortem decomposition of a particular set of remains is important when performing a Forensic Anthropology (FA) examination. Remains examined by Forensic Anthropologists were categorized as minimally decomposed, decomposing, mummified, skeletal or burnt. In 2013, skeletal remains comprised 63% of FA examinations. Four main types of exams are performed; biologic profiles, dental, trauma and identification examinations.

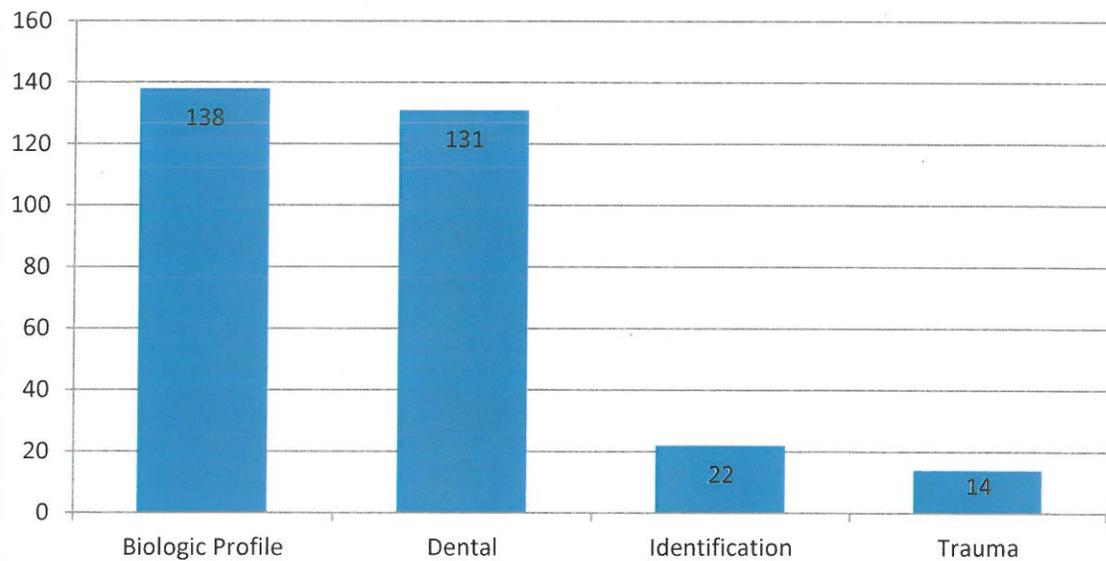
Biological profiles refer to charting, measurements, descriptions, radiographs and photographs taken to estimate sex, age, ancestry, stature and postmortem interval of a set of remains. Dental and identification examinations entail charting, descriptions, radiographs and photographs in an effort to identify an unknown individual or confirm a suspected identity. Trauma examinations entail charting, measurements, descriptions, radiographs and photographs to characterize the nature of an injury, implement used to cause injury to the bone, age of injury, etc. It is common for a particular set of remains to receive more than one type of examination. Most (83%) FA exams include a biological profile with dental examination (79%) when applicable. Less common are examinations for identification (13%) or trauma (8%) with or without biological profiles and dental examinations.



### FA Exam by Condition of Remains - 2013



### FA Examination by Type - 2013



## **UNDOCUMENTED BORDER CROSSER (UBC) REMAINS**

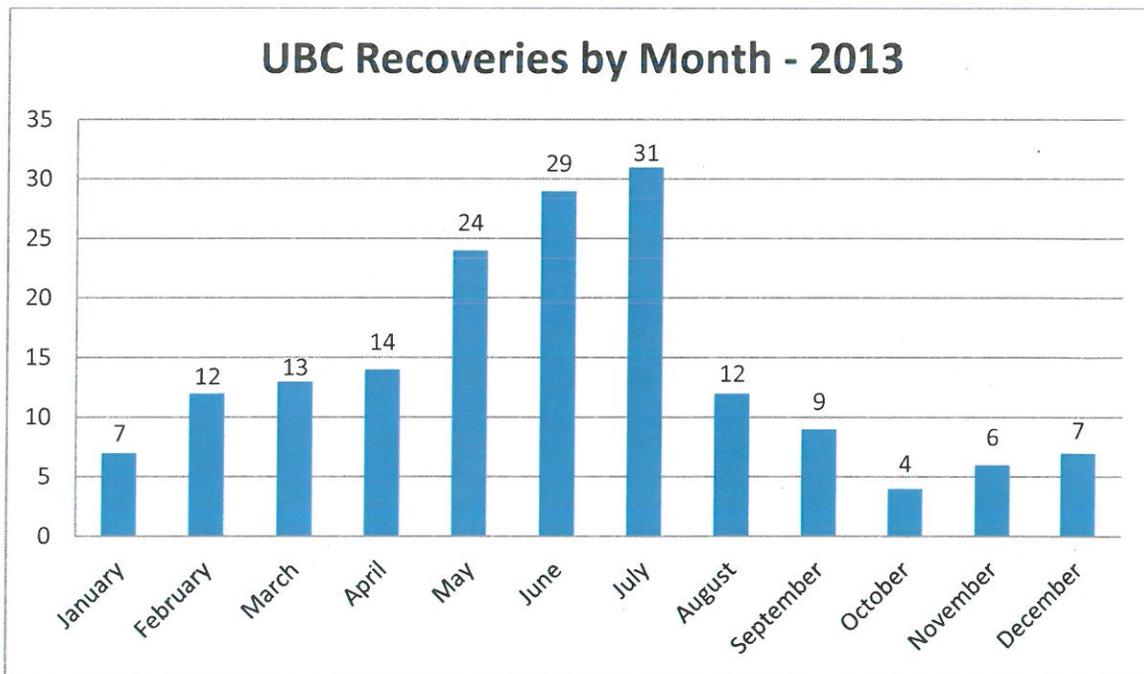
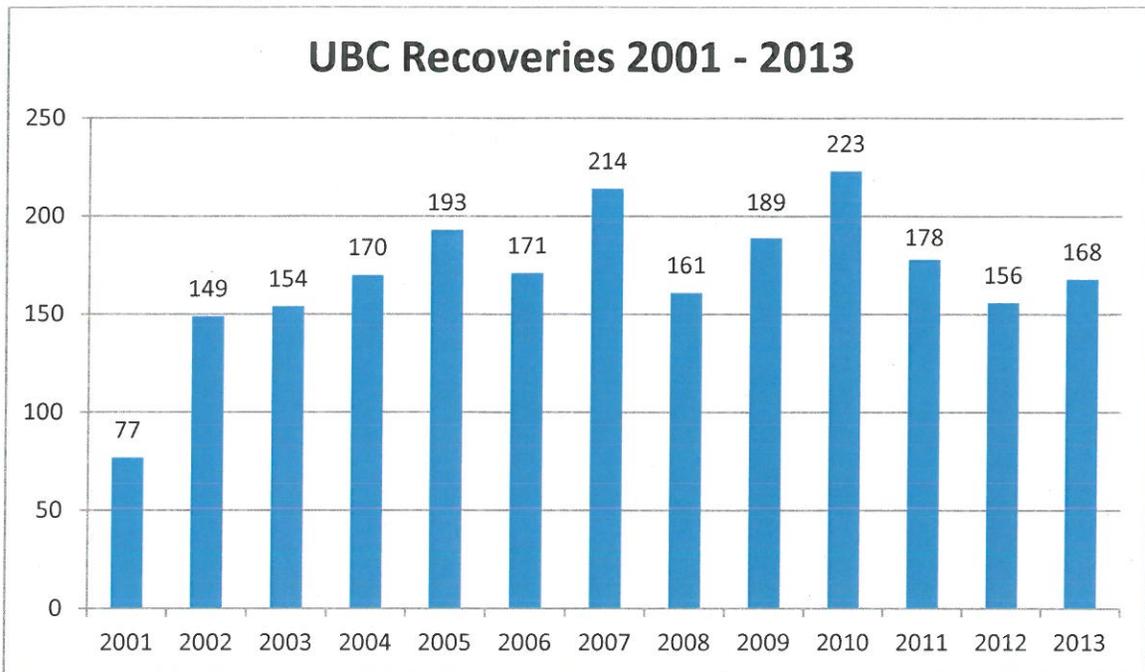
The term ‘UBC’ refers to foreign nationals who die attempting to cross the southern Arizona desert without permission from the United States government. Calendar year 2010 saw the highest number of UBC recoveries (223) recorded at the PCOME as compared to the annual average (177 recoveries per year on average from 2002 - 2013). The PCOME has received 2,203 recovered remains of suspected UBCs since 2001. The recoveries per year are adjusted annually to account for identification of remains initially thought to be those of a UBC that are not, and association of remains found months or years apart later discovered to be that of the same individual.

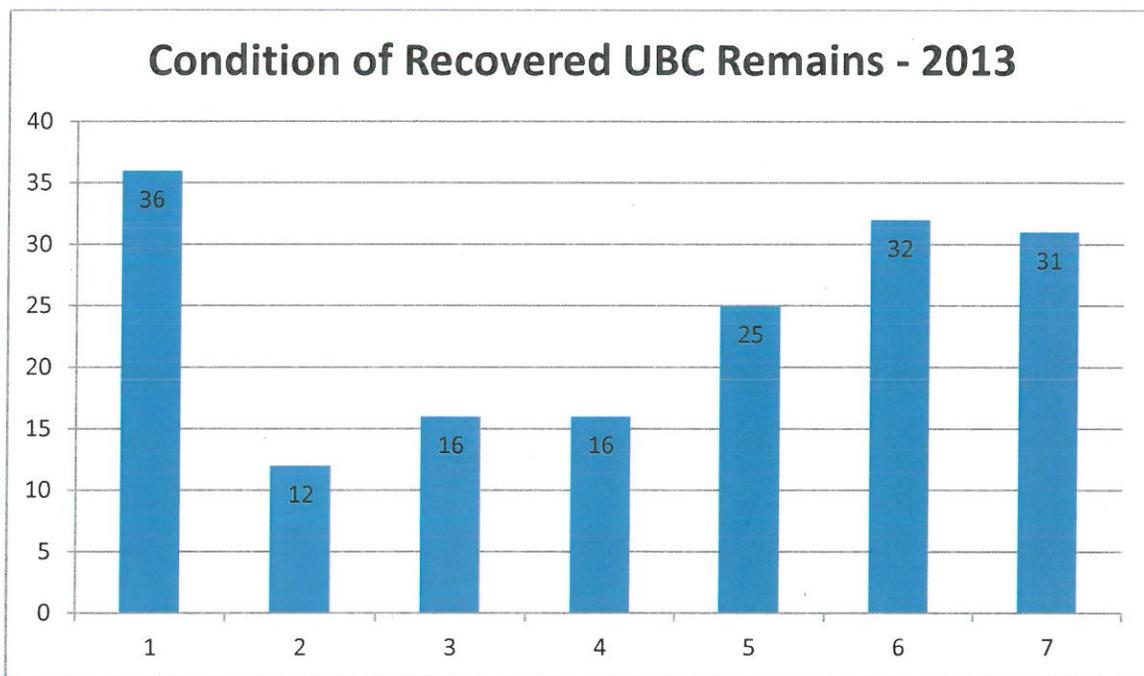
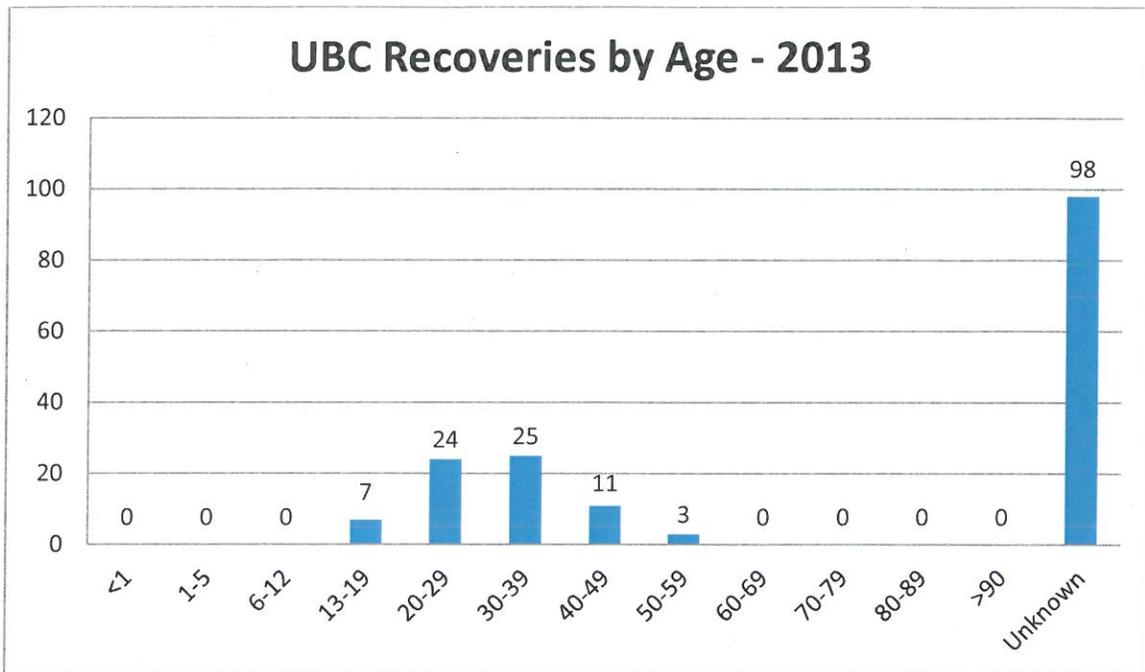
There were 168 UBC recoveries in calendar year 2013. As is the historic norm, UBC recoveries peaked during the summer months (May – August) with 96 recoveries (57% of total for year) in 2013. Many remains are not identifiable due to postmortem changes and efforts by UBCs to obscure their identities. Of the decedents who were identified, 67% (49 deaths) were between 20-39 years of age and 84% (141) were males.

Since the exact date and time of death of found remains are often unknown, PCOME staff determine a ‘postmortem interval (PMI)’, which is an assessment of what period of time elapsed from death to recovery of the remains. A 1-7 body condition scale was developed in 2013 to provide a more objective measure of the PMI. The PMI is an estimate and therefore subject to error. The PMIs for the body condition categories are listed following the Condition of Recovered UBC Remains table on page 31 of this report. In 2013, 36 remains (condition 1) were found within less than a day of death (21%), 44 remains (conditions 2-4) were found with a few days up to a few weeks from death (26%), and skeletal remains (body conditions 5-7) accounted for 88 (52%) of the recovered remains.

The cause of death was undetermined in 63% of cases, primarily due to limitations of examination of decomposed and skeletal remains. Of the remainder, environmental exposure to extremes in heat or cold combined with dehydration comprised 27% of deaths. Other, less frequent, causes of death included gunshot wound injuries (5 cases), blunt force injuries from falls or motor vehicle accidents (7), drowning (1) and a natural death (1).

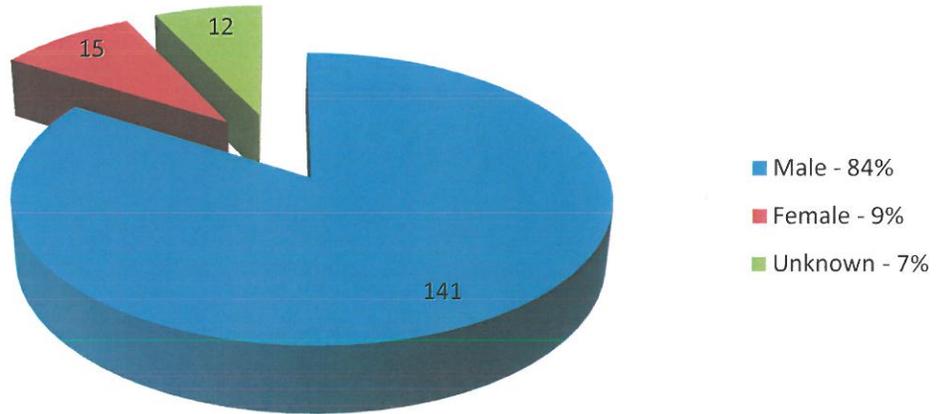
In 2013, 61 (85%) of identified UBCs were of Mexican nationality, followed by Guatemalans (7, 9%), identified decedents of uncertain nationality (3, 4%) and one Colombian. Since 2001, identified UBCs of Mexican nationality have been the most numerous (1,248, 85%), followed by Guatemalans (105, 7%) and Salvadorans (39, 3%). Of the 2,203 decedents since 2001, 1,463 (66%) have been identified, 281 (13%) by DNA comparison to a family or law enforcement reference sample. As of December 31, 2013, 740 decedents remain unidentified.



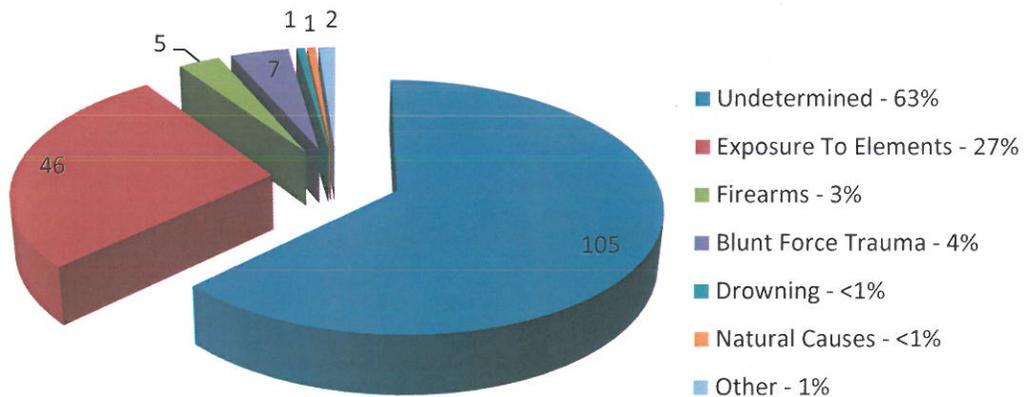


- 1 – Fully fleshed (PMI < 1 day)
- 2 – Decomposed (PMI < week)
- 3 – Decomposition with focal skeletonization (PMI < 3 weeks)
- 4 – Mummification with skeletonization (PMI < 5 weeks)
- 5 – Skeletonization with articulation/ligamentous attachments (PMI < 3 months)
- 6 – Complete skeletonization with disarticulation (PMI < 6-8 months)
- 7 – Complete skeletonization with bone degradation (PMI > 6-8 months)

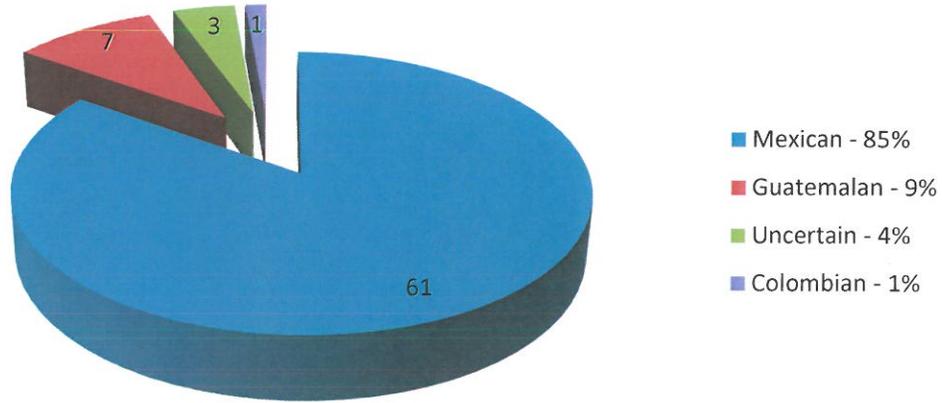
### UBC Recoveries by Gender - 2013



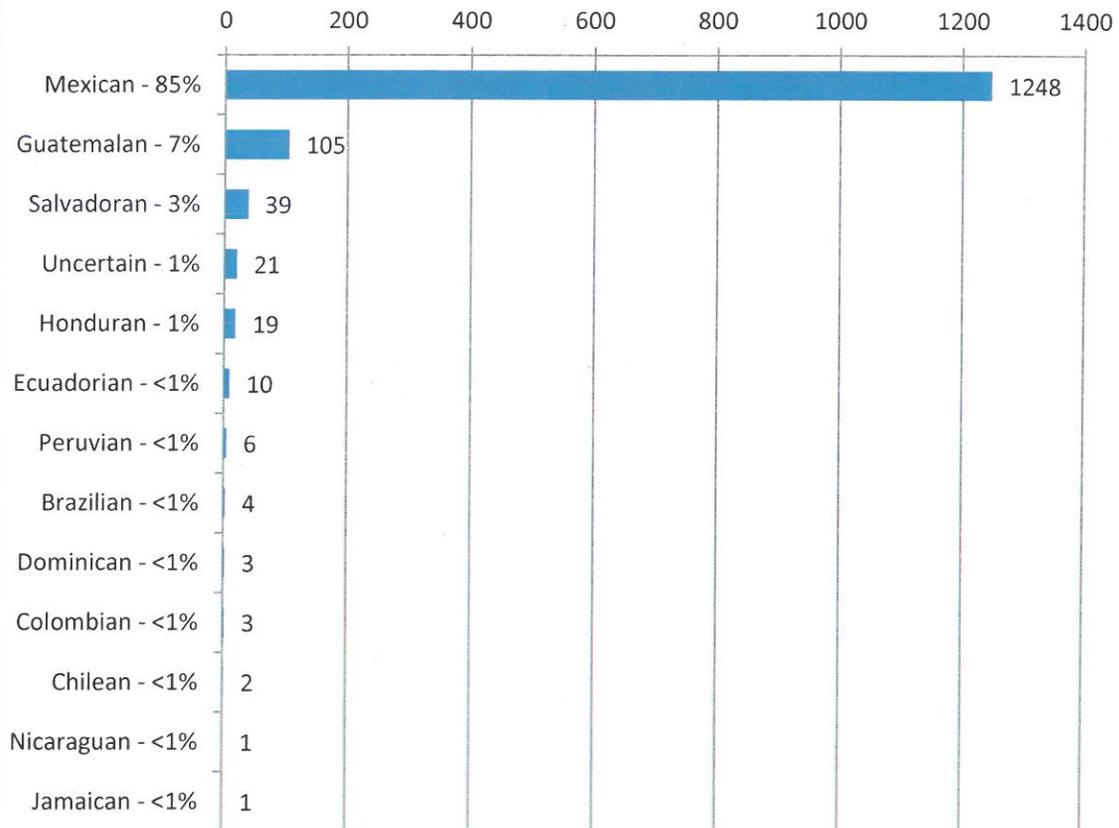
### UBC Recoveries by Cause - 2013

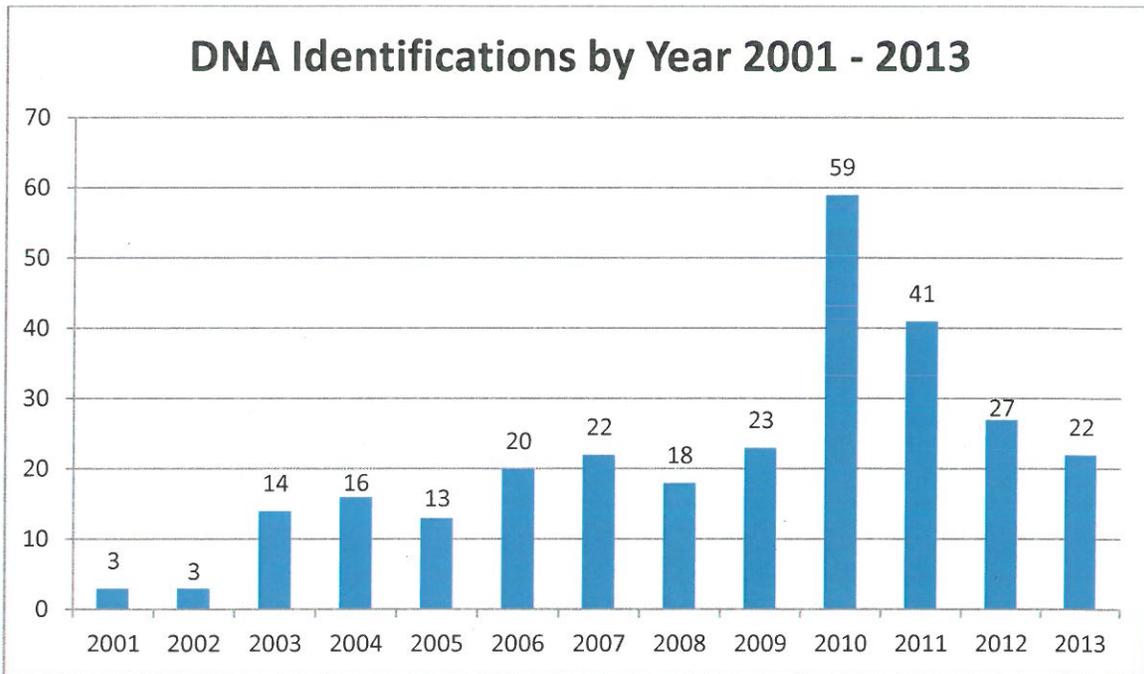
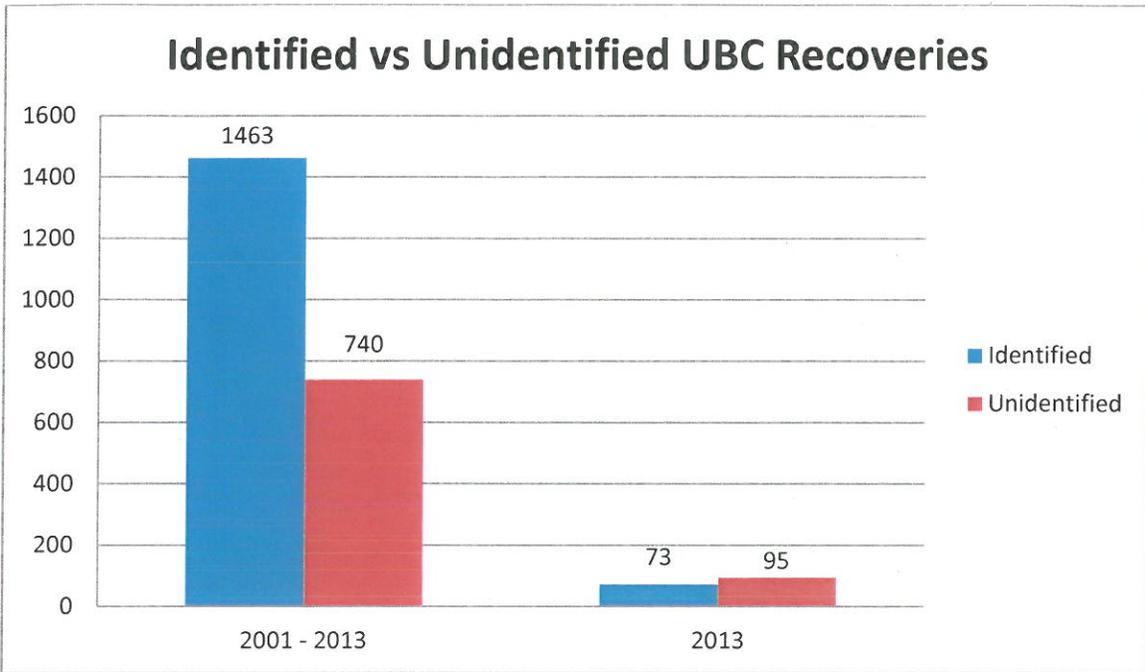


### Identified UBC Recoveries by Nationality - 2013



### Identified UBC Recoveries by Nationality 2001 - 2013







# PIMA COUNTY

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OFFICE OF THE MEDICAL EXAMINER

## Cochise County Supplement 2013



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## **INTRODUCTION**

The Pima County Office of the Medical Examiner (PCOME) performs examinations that fall under the jurisdiction of the Medical Examiner on deaths that occurred in Cochise County beginning July 1, 2012 to present. In calendar year 2013 there were 921 deaths in Cochise County; of these 268 (29%) were reported to the PCOME for investigation and/or examination.

## **OVERVIEW**

The PCOME was fully accredited by the National Association of Medical Examiners (NAME) following a two day inspection in October 2011. This accreditation is effective October 24, 2011 through October 24, 2016 and requires annual accreditation verification. NAME accredited offices represent the highest quality of death investigation systems. There are 75 offices across the United States accredited by NAME. The PCOME has the distinction of being the sole accredited office in Arizona.

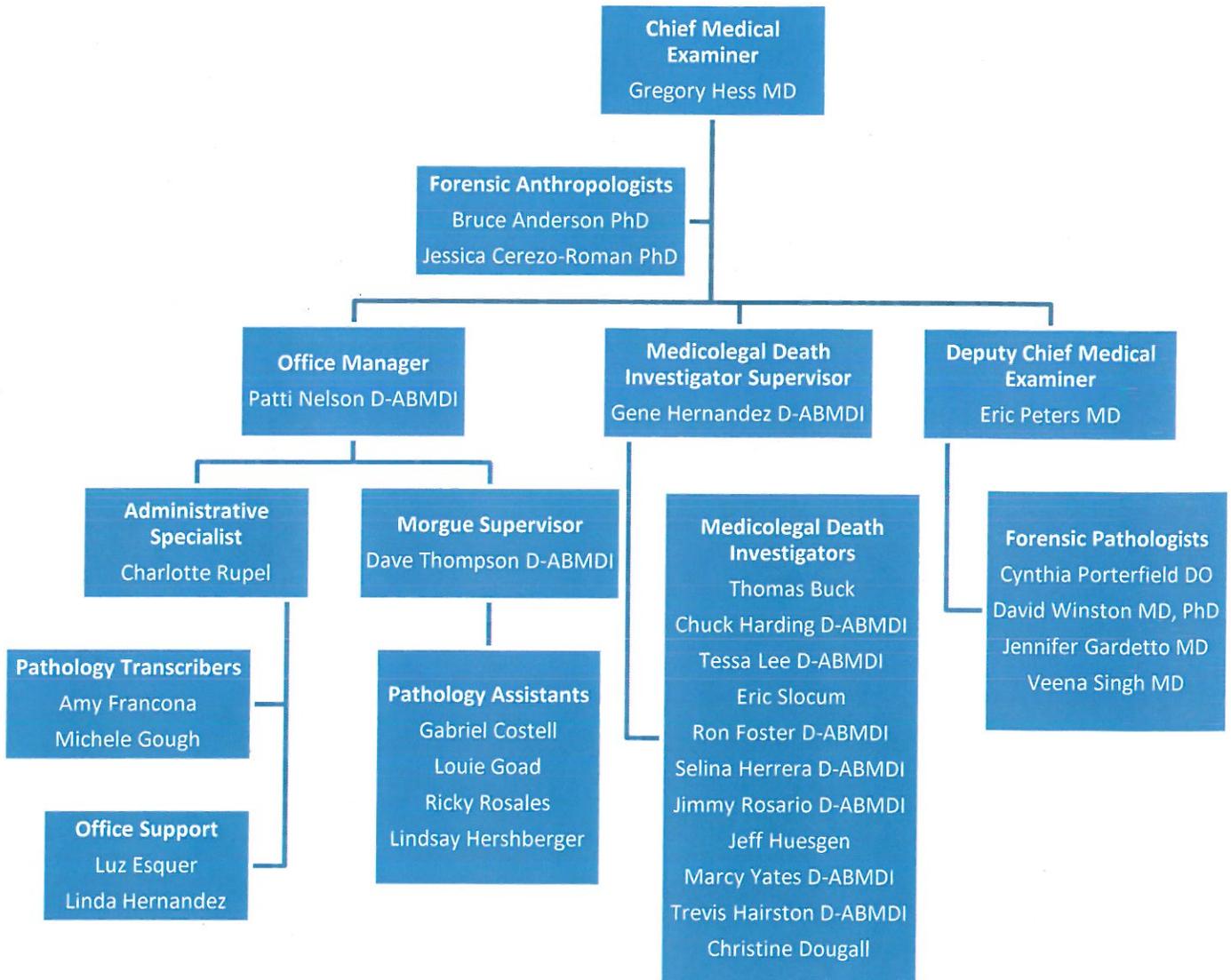
### Reportable Deaths

Arizona statute §11-593 delineates ten circumstances in which a death is reportable to the OME.

1. Death when not under the current care of a physician or nurse practitioner for a potentially fatal illness or when an attending physician or nurse practitioner is unavailable to sign the death certificate.
2. Death resulting from violence.
3. Death occurring suddenly when in apparent good health.
4. Death occurring in a prison.
5. Death of a prisoner.
6. Death occurring in a suspicious, unusual or unnatural manner.
7. Death from disease or accident believed to be related to the deceased's occupation or employment.
8. Death believed to present a public health hazard.
9. Death occurring during, in association with or as a result of anesthetic or surgical procedures.
10. Unidentifiable bodies.

### Relationship between PCOME and Cochise County

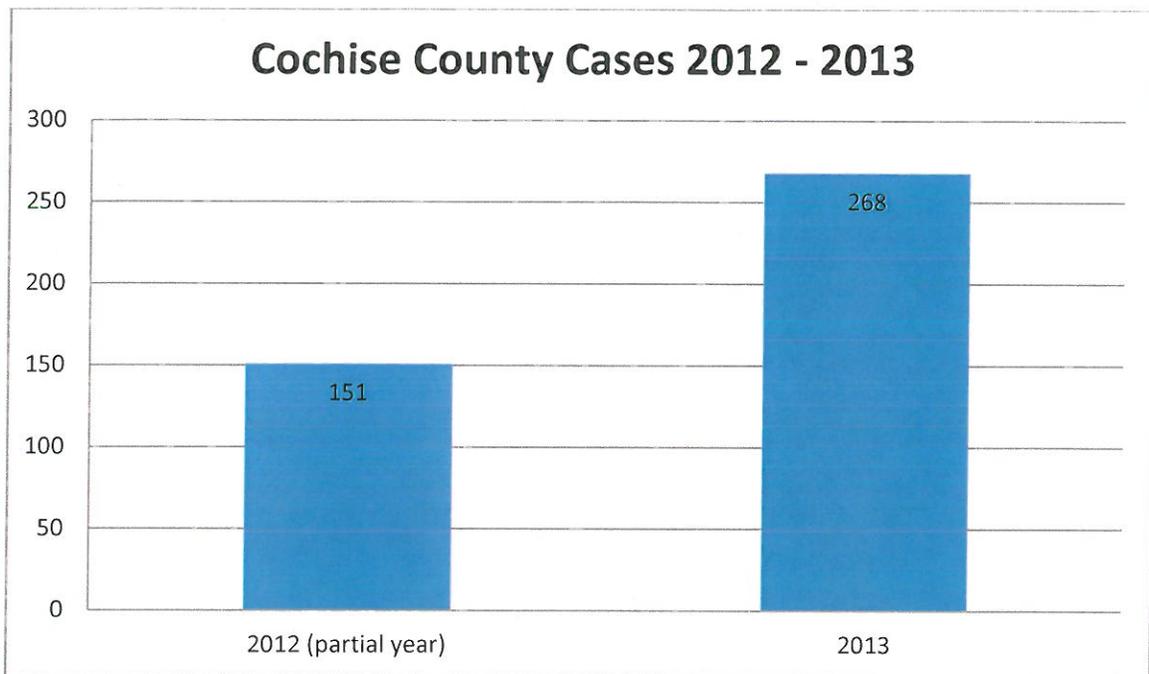
Cochise County contracts with the PCOME to certify deaths that fall under the jurisdiction of the Medical Examiner in Cochise County. Cochise County does not maintain an in-county Medical Examiner office to conduct death scene investigations, transport remains, or triage deaths reportable to the Medical Examiner. Cochise County does provide third party transportation services, local law enforcement death scene investigation and archival support for examinations that occurred prior to July 1, 2012. The PCOME is working closely with Cochise County law enforcement agencies, the public fiduciary office and funeral homes to facilitate investigations, disposition of remains and transportation respectively. The PCOME is also involved as needed with mass fatality planning, child death review, or other medical examiner related issues in Cochise County.



**OFFICE OF THE MEDICAL EXAMINER (PIMA)  
ORGANIZATIONAL CHART AS OF DECEMBER 2013**

## TOTAL CASES

The “total cases” handled by the PCOME in a given year are the sum of the medical examiner (ME) cases (autopsies, external examinations, and death certificate cases), cases in which jurisdiction was declined, and the number of cases stored at our facility during the calendar year (storage cases). The PCOME did not receive any ‘storage’ cases from Cochise County in 2013. The PCOME declined jurisdiction in 89 cases reported from Cochise County in 2013.



## MEDICAL EXAMINER CASES

The PCOME considers all cases in which the cause and manner of death are determined by this office as “medical examiner cases.” Those cases include autopsies, external examinations and death certificate (DC) cases. Autopsies are examinations where a decedent is examined both externally and internally for evidence of injury or natural disease which may have caused or contributed to the individual’s death. External examinations consist of an external examination of the body without the internal examination. A DC case involves review of the medical records, law enforcement reports and any other information that may be necessary to determine the cause and manner of death without physical examination of the decedent. In 2013, for Cochise County, 108 autopsies, 32 external examinations and 39 DC cases were certified by the PCOME.

