MEMORANDUM

Date: May 6, 2021

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

From: C.H. Huckelberry
      County Administrator

Re: 2020 Annual Report from the Medical Examiner and our Public Health Response to the Increase in Overdose Related Deaths

Attached is important information for Board related to the number of deaths that have occurred in Pima County.

Deaths have Measurably Increased in Pima County

Pima County has experienced a significant increase in the total number of deaths in Pima County as well as the number of deaths reported to the Office of the Medical Examiner (increase 26 percent and 28 percent, respectively). These deaths have increased significantly in comparison to the prior three years. This increase is largely likely attributable to increased mortality associated with the complication of COVID infection. The overall trend in increased deaths impacted the health care and death cares systems to the point that storage capacity had to be augmented temporarily. At the height of the January COVID-19 surge, more than 375 remains required storage in our County facility.

Testing for COVID was not appropriate, indicated or available for the vast majority of Medical Examiner cases, however testing was positive in 115 of the 2,050 (6 percent) cases accepted for examination. Although it is impossible to estimate the impact of COVID with precision, our local findings here are consistent with observations coming from other jurisdictions.

One particular finding that is notable in this report is a continued trend in accidental deaths associated with drug overdose. We have now set a new record in overdose deaths, an increase from the previous record of 337 deaths to now 446 deaths related to overdosing; an increase of 32 percent compared to the prior three-year average. It is apparent that over this 10-year period the number of opioid deaths have more than doubled. The most significant increase in overdose deaths is related to Fentanyl. In 2014, there were 5 overdose deaths related to Fentanyl compared to 207 deaths in 2020. In addition, methamphetamine related deaths has also increased in frequency from 38 deaths in 2014 to 182 deaths in 2020.

There are other notable findings that may be of interest to the Board. Suicides deaths decreased slightly to 225, this is a 3 percent reduction compared to the average of the three prior years. Among suicide deaths, the only age groups to experience a significant increase compared to the prior year were individuals in their 50’s and 80s. Homicides by comparison were increased from 69 in 2019 to 86 last year; but are essentially unchanged from the homicide deaths reported in 2011, 2012, 2013, 2017 and 2018. Finally, there were a total
The Honorable Chair and Members, Pima County Board of Supervisors  
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of 220 undocumented border crossing deaths last year. This is a 76 percent increase in comparison to the average of the three previous years, these deaths were exacerbated by record heat as well as shifting federal policy driving crossings into more remote areas of the border.

Current County Efforts in Substance Misuse Prevention

The significant increases in overdose related mortality have been the focus of the public health response as led by the Community Mental Health and Addiction Prevention team in the Health Department. This effort relies on evidence-based methods to mitigate the risk of a person experiencing an overdose, including detailed data analysis, several harm reduction and preventative care strategies, crisis response strategies, and extensive community collaboration.

**Education and Awareness:** The Health Department’s education efforts offer multiple evidence-based trainings and curriculum focusing on addiction and treatment, prescription drug safety, and youth and family educational series. Collectively these sessions focus on symptoms of addiction, early intervention techniques, signs and symptoms of opioid overdose, naloxone administration, prescription medication safety, trauma-informed approaches, stress management, and youth and adult mental health first aid. This is also supported with published materials including pamphlets, flyers, media messaging, and other handouts highlighting the risks associated with drug use. Prior to the pandemic, the Health Department also focused on a professional education initiative promoting best practices among prescribers and pharmacists, disseminating new recommendations for the treatment of chronic pain as well as prescription monitoring.

**Prevention Intervention:** The Health Department has a central storage and targeted distribution program to provide free naloxone to partners and community members across the county. Naloxone has been the gold standard for more than 60 years to reverse opioid overdoses. We supply these kits to law enforcement, fire departments, outpatient clinics, jails, hospitals, businesses, syringe access programs, and individuals or families in need. The Health Department is in the process of incorporating fentanyl test strips as a harm reduction strategy that empowers persons using drugs to make informed decisions around their drug use and safety.

**Direct Services and Referral:** Partnering with local behavioral health entities (HOPE and CBI), substance using individuals are identified and referred to case management and peer navigation to assist high risk patients in obtaining resources and gaining access to addiction treatment. The health department has added two full time case managers to expand the work being done by our partners. These staff respond to high risk patients in high risk circumstances. The goal is to equip the person with safety tips, risk awareness, naloxone take-home kits, peer support, and referral to long-term treatment. The initial encounter occurs at the facility level (i.e. jail or hospital) and then a follow up encounter is provided in the
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home/community to ensure needs are met. There is no cost or additional requirements on the part of the patient and participation is voluntary.

**Surveillance:** Two full-time Health Department epidemiologists are dedicated to better understand the morbidity and mortality data around the issues of overdose prevention. In collaboration with law enforcement, behavioral health, addiction treatment specialist, and other community partners, they conduct regular surveillance of non-fatal and fatal overdoses and analyze demographic data, drug types contributing to overdose, and geographic patterns. Surveillance data helps identify specific groups that may be disproportionately impacted based on age, sex, race, and ethnicity. Surveillance data fuels local health alerts to clinicians, health education messages, media campaigns, and public facing reports to assist treatment providers with strengthening intervention strategies.

The Health Department now has in place multiple partnerships to pool resources, share data, and develop overdose prevention strategies to address the growing crisis of overdose deaths and the underlying substance misuse crisis that is affecting this community and the nation. Collaborations with local law enforcement agencies, fire departments, courts, outpatient treatment providers, hospitals, jails, housing entities, and the community-at-large are working together to address substance misuse in this community, but clearly much more remains to be accomplished.

CHH/anc

Attachment

c: Jan Lesher, Chief Deputy County Administrator
Franscisco García, MD, MPH, Deputy County Administrator & Chief Medical Officer
Health and Community Services
Gregory Hess, MD, Chief Medical Examiner, Office of the Medical Examiner
Terry Cullen, MD, MS, Public Health Director, Pima County Health Department
MEMORANDUM

Date: May 4, 2021

To: Chuck Huckelberry
County Administrator

From: Gregory Hess, M.D.
Chief Medical Examiner

Via: Francisco Garcia, M.D.
Deputy County Administrator

Re: 2020 PCOME Annual Report

Attached are the 2020 PCOME Annual Report and a 2020 Annual Report Supplement. The Annual Report is of similar format to previous years with the addition concerning homeless decedents and is the second year in which we have included an accounting of the Indigent Interment Program in Pima County. The Supplement discusses some of the findings evident in the Annual Report and highlights pandemic related challenges unique to 2020 and the first quarter of 2021. I include the summary portion of the Supplement here for your ease of reference.

- Total mortality in Pima County in 2020 increased 26% in comparison to the average for the previous three years.
- Deaths reported from Pima County to the PCOME in 2020 increased 38% in comparison to the average for the previous three years. This increase was comprised of both an increase in reporting of non-jurisdictional, natural deaths and jurisdictional deaths.
- Non-jurisdictional, natural death reporting increased secondary to both confusion over coronavirus death reporting requirements and the PCOME acting as fatality overflow for the local death care industry.
- Four hundred and forty six (446) decedents were transported and stored at the PCOME as community cold storage was exceeded. Over half of which (243) occurred in January 2021. This mass fatality storage program began in July 2020 and ended in mid-April 2021.
- Overdose deaths in 2020 increased 32% in one year and 47% in comparison to the average of the previous three years.
- Undocumented Border Crossover recoveries increased 62% in one year and 76% in comparison to the average of the previous three years.
- Suicide deaths decreased 11% in one year and 3% in comparison to the average of the previous three years.
- The PCOME certified 115 of Pima Counties COVID related deaths in 2020. The majority of COVID related deaths were unrelated to the OME.
2020 Annual Report Supplement

Looking back at 2020 and the Viral Pandemic

What happened in 2020 with the total number of deaths and the number of deaths reported to the PCOME?

In short, total deaths reported to the PCOME and total mortality in Pima County are increased in comparison to previous years.

Why?

In large part secondary to deaths from complications of novel coronavirus (SARS_CoV_2 (COVID-19)) respiratory infection. Some death classification categories certified by the PCOME in 2020 were significantly different in comparison to previous years as well and will be discussed in this supplement.

What proportion of the increased total mortality is secondary to direct virus effect?

I do not know as stated in previous communications regarding this issue. I can only speak to the deaths certified through the PCOME and not to those that we did not certify. The PCOME certifies, on average, 20% of all-cause mortality in Pima County. The other 80% we do not. Please reference the August 11, 2020 memorandum to the Board of Supervisors from the County Administrator entitled Report from the Pima County’s Chief Medical Examiner Regarding Deaths in Pima County and the Impact of the 2020 Viral Pandemic for background information regarding how deaths are triaged, partial year statistics concerning 2020 and impacts on the death care industry at large.

The following supplement is separated into the following sections.

I. All-Cause, Total Mortality in Pima County
II. Deaths Reported to the PCOME
III. Deaths by Select Cause or Manner of Interest
IV. Summary
I. All-Cause, Total Mortality in Pima County

Please note that the data in the previous report used monthly total mortality statistics published by the State (ADHS) for Pima County… https://pub.azdhs.gov/health-stats/mu/index.php This updated report does not. ADHS’s County mortality statistics report deaths of Pima County residents only, and do not include deaths of non-residents. This is not helpful for the purposes of this review. Any death certified in Pima County, resident or non-resident, affects both the PCOME and greater Pima County death care structure (funeral homes, hospitals, community providers, relatives of decedents, etc.). The average four-year variance between total deaths registered in Pima County and ADHS mortality data is 12%. Please reference the below table for illustration.

<table>
<thead>
<tr>
<th>Year</th>
<th>Deaths in Pima County of Pima County Residents</th>
<th>Deaths of non-residents in Pima County</th>
<th>Total Deaths Registered in Pima County</th>
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<tr>
<td>2020</td>
<td>11967</td>
<td>1494</td>
<td>13461</td>
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<td>2019</td>
<td>9667</td>
<td>1213</td>
<td>10880</td>
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<td>2018</td>
<td>9578</td>
<td>1125</td>
<td>10703</td>
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<tr>
<td>2017</td>
<td>9339</td>
<td>1216</td>
<td>10555</td>
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</table>

Total Mortality in Pima County by Year

Total mortality increased 26% in 2020 (13,461) in comparison to the average number of deaths in the previous three years (10,713). As previously stated above, a large proportion of this increase reflects deaths secondary to complications resulting from coronavirus infection. The PCOME does not have insight into the exact percentage of virus related deaths but we can speak to deaths reported to, accepted by and certified by the PCOME.
II. Deaths Reported to the PCOME

Deaths reported to the PCOME increased 38% in 2020 (3920) in comparison to the average number of reported deaths in the previous three years (2846) and increased 28% in one year in comparison to 2019.

Is the increase in reported deaths in Pima County (PC) simply a function of an increase in total mortality or does this represent something different?

Total Deaths in PC vs PC Deaths Reported to OME by Year

- Total reported and % of total mortality
- Total mortality
The above chart shows that although deaths reported from PC to the OME increased in number in 2020, the percentage reported as a function of total mortality was minimally increased (1% increase from 2019, 2% increase from 17-19 average). Let us look at the disposition or triage of reported deaths to see if there are any specific trends.

### Disposition of Reported Deaths*

<table>
<thead>
<tr>
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<th>Pima 2017 – 2019 Average</th>
<th>Pima 2020</th>
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</thead>
<tbody>
<tr>
<td>Total Mortality (TM)</td>
<td>10713</td>
<td>13461</td>
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<tr>
<td>Reported</td>
<td>2846 (27% of TM)</td>
<td>3940 (29% of TM)</td>
</tr>
<tr>
<td>Declined (JD)</td>
<td>1124 (40% of Reported)</td>
<td>1870 (48% of Reported)</td>
</tr>
<tr>
<td>Accepted</td>
<td>1721 (60% of Reported)</td>
<td>2050 (52% of Reported)</td>
</tr>
<tr>
<td>Autopsy</td>
<td>1000 (58% of Accepted)</td>
<td>1146 (56% of Accepted)</td>
</tr>
<tr>
<td>External</td>
<td>388 (23% of Accepted)</td>
<td>510 (25% of Accepted)</td>
</tr>
<tr>
<td>DC</td>
<td>333 (19% of Accepted)</td>
<td>394 (19% of Accepted)</td>
</tr>
</tbody>
</table>

*Reference Deaths and Predictability contained in memorandum noted on page 1 for background information on the above table.

Deaths reported but in which jurisdiction was declined (746) increased 8% in 2020 in comparison to the average of the previous three years. There is a twofold likely explanation for this.

1) The PCOME acted as cold storage overflow for local funeral homes during fatality peaks over the course of the pandemic. Remains transported to the PCOME under this program we termed COVID – Mass Fatality (COVID-MF) cases. COVID-MF deaths fall into our Jurisdiction Declined (JD) category as the PCOME was not certifying those deaths, just storing them on behalf of the local death care industry as they worked through final arrangements with the families of the decedents.

2) In the early stages of the pandemic, who needed to be notified of COVID related death was less clear to community providers (hospitals, nursing homes, care facilities, etc.) and the PCOME was frequently notified of deaths which were not technically required to be reported to us.

The accepted percentage decreased in 2020 secondary to the increase in JDs as described above. The disposition of the accepted deaths (autopsies, external examination and death certifications by record review) was not significantly changed.

**COVID-MF**

The number of decedents managed by the local death care industry increased significantly during the pandemic. Pima County managed the increased volume through the use of the PCOME’s morgue capacity and began offering cold storage spaces, located at the PCOME, for the community to use (funeral homes and hospitals) beginning in July of 2020. Decedents transported to the PCOME under this program were termed COVID-Mass Fatality (COVID-MF) cases as described above. The program was discontinued in mid-April 2021. There were 446
remains stored at the PCOME at the behest of 25 different funeral homes and hospitals over the duration of this program. The chart below shows the number of remains received from the community by month.

The number of remains overwhelmed our existing cold storage infrastructure and additional refrigerated assets were procured to store remains. At the height of this mass fatality event, 375-400 remains were in storage at the PCOME.

III. Deaths by Select Cause or Manner of Interest

Overdose Deaths

Overdose fatalities are well covered in the 2020 Annual Report so I will reiterate only the highlights here. Overdose deaths in 2020 (446) increased 32% in one year from 2019 (337) and increased 47% in comparison to the average over the last three years (303). Fentanyl was the most commonly abused illicit drug in 2020, contributing to 46% of all 2020 overdoses, followed by methamphetamine (41%). Fentanyl contributed to 5 overdose deaths in 2014 in contrast to 207 deaths in 2020, a 4040% increase in the number of deaths involving fentanyl from 2014. Methamphetamine related deaths have also increased in frequency from 38 deaths in 2014 to 182 deaths in 2020, a 379% increase.
Undocumented Border Crosser (UBC) Recoveries

UBC recoveries increased 62% in 2020 (220) in comparison to 2019 (136) and increased 76% in comparison to an average of the previous three years (125). The single greatest contributing factor to this 2020 increase is likely the record heat and drought in southern Arizona in 2020.
Suicide deaths decreased 11% in 2020 (225) in comparison to 2019 (253) and decreased 3% in comparison to the average of the previous three years (232).

Suicide, age and their relationship to the pandemic are topics of interest. The largest 2020 increase was seen in those 50-59 years old (31% increase) in comparison to an average over the previous three years. The largest decrease was seen in those 20-29 years old (33% decrease) in comparison to an average over the previous three years. Suicide deaths in those less than 20 years of age are less common. There was a slight decrease (two deaths) in the 13-19 years old group and a slight increase in those aged 6-12 (2017 = 1, 2018 = 1, 2019 = 0, 2020 = 2) in comparison to an average of the previous three years. What is unknown are those who attempt suicide but are not successful. The PCOME does not have information on suicide attempts.

Manners of Death Homicide, Accident, Natural and Undetermined

Homicide – Homicides are less common than other manners and are more sensitive to year-to-year variations secondary to the smaller sample size. That stated, homicides increased in 2020 (86) in comparison to 2019 (69) but were similar in number to multiple previous years (2011, 2012, 2013, 2017, 2018).

Accident – Accidental manner classifications increased significantly in 2020 but was largely secondary to accidental overdoses and UBC environmental deaths as previously discussed.

Natural – Natural death certifications at the PCOME increased in 2020 largely because of coronavirus certifications. Most coronavirus related deaths were certified in the community at hospitals or care facilities, by community physicians who were treating that patient prior to their
death. Some COVID related deaths were certified through the PCOME for various reasons. The PCOME certified 115 deaths as COVID related in 2020, a fraction of the overall total in the County.

*Undetermined* – Undetermined manner certifications increased secondary to an increase in UBC recoveries described in a previous section.

**IV. Summary**

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Pima County Office Of The Medical Examiner – Annual Report 2020

Rev: 04/30/2021
### Deaths by County – Medical Examiner*

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<td>Pima County</td>
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<td>Accident Deaths</td>
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<td>Suicide Deaths</td>
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<td>La Paz County</td>
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<td>Santa Cruz County</td>
<td>102 - 106</td>
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*Medical Examiner Counties – Pima County serves as appointed Medical Examiner

### Deaths by County – Non-Medical Examiner*

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<td>Gila County</td>
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<td>Greenlee County</td>
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<td>Navajo County</td>
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<td>Pinal County</td>
<td>119 - 121</td>
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<tr>
<td>Yuma County</td>
<td>122 - 124</td>
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*Non-Medical Examiner Counties – Pima County performs examinations on fee-for-service basis but does not serve as appointed Medical Examiner for these counties
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 (ME) for Cochise, Graham, La Paz and Santa Cruz Counties and performs examinations as needed for five additional counties. In 2020 there were 13,461* deaths in Pima County; of these 3,920 (29%) were reported to the PCOME for investigation. This annual report consists of four 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 all cases processed by the office regardless of the county of death. The third is a breakdown of certain death classifications for the five counties for which the PCOME is the appointed medical examiner. The fourth is a breakdown of certain death classifications for deaths reported to the PCOME from counties in which the PCOME is not the appointed medical examiner.

OVERVIEW
The PCOME was fully accredited by the National Association of Medical Examiners (NAME) following a two-day inspection in October 2011. This accreditation was effective from October 24, 2011 through October 24, 2016 and required annual accreditation verifications. The office was re-inspected in January 2017 and received continued full accreditation valid through October 25, 2021. NAME accredited offices represent the highest quality of death investigation systems. There are 95 fully and provisionally accredited Medical Examiner’s Offices across the United States. The PCOME has the distinction of being one of two fully accredited offices in Arizona.

Reportable Deaths
Arizona Revised 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 health care provider as defined pursuant to section 36-301.
2. Death resulting from violence.
3. Unexpected or unexplained death.
4. Death of a person in a custodial agency as defined in section 13-4401.
5. Unexpected or unexplained death of an infant or child.
6. Death occurring in a suspicious, unusual or non-natural manner, including death from an accident believed to be related to the deceased's occupation or employment.
7. Death occurring as a result of anesthetic or surgical procedures.
8. Death suspected to be caused by a previously unreported or undiagnosed disease that constitutes a threat to public safety.
9. Death involving unidentifiable bodies.

*Total registered deaths in Pima County – residents and non-residents
Investigations
Our 11 medical investigators processed 3,920 reports of deaths from Pima County and 725 reports from 11 additional Arizona counties in 2020. Jurisdiction was declined in 2,095 of these cases. A total of 2,295 decedents were transported to the PCOME for examination or storage in 2020.

Examinations
Pima County forensic pathologists and anthropologists performed 1,524 autopsies, 588 external examinations, 430 death certifications, 242 anthropologic examinations, and reviewed 8,803 death certificates for cremation authorization in 2020.

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, and Administrative Supervisor 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 (barring COVID restrictions). In accordance with our MDI quality assurance and performance improvement program, 10% of reports are reviewed by a pathologist monthly and 10% of reports 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 recorded 165 media interviews, emails and phone calls over the calendar year.

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. Four pathology residents and three medical students rotated through the PCOME for month-long rotations in 2020. Funded by the Department of Pathology, the PCOME began a Forensic Pathology training program in 2016; the only such training program offered in Arizona. Our Forensic Anthropologists hold academic appointments at the University of Arizona did not accept interns in 2020 secondary to COVID.
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 2020, the office’s seven forensic pathologists and three anthropologists participated in a number of virtual interviews, depositions and one jury trial. Throughput of cases through the legal system was severely curtailed in 2020 secondary to the pandemic.

Organ and Tissue Donation
Pursuant to A.R.S §36-861, the PCOME refers death notifications to, and partners with, Donor Network of Arizona (DNAZ) and other associated tissue research agencies 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 donations are always in short supply. The authorization for the procurement of organs was granted in 100% of cases. The PCOME has long been the state leader in percentage of release on tissue and ocular cases and 2020 was no different. The release of tissues and corneas was granted over 95% of the time.

Organ Donations with PCOME Involvement 2020

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Tissue Donation with PCOME Involvement 2020

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OFFICE OF THE MEDICAL EXAMINER
ORGANIZATIONAL CHART AS OF DECEMBER 31, 2020
TOTAL REPORTED DEATHS & CASES

The total cases handled by the PCOME in a given year are the sum of the 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 reported to the PCOME from Apache (35), Cochise (370), Gila (15), Graham (49), Greenlee (8), La Paz (85), Maricopa (3), Navajo (44), Pinal (6), Santa Cruz (99) and Yuma (11) counties in addition to Pima County (3,920).

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 2020, for Pima and all other counties listed above, 1,524 autopsies (60% of total deaths certified (TDC)), 588 external examinations (23% TDC) and 430 DC cases (17% TDC) were performed or certified at the PCOME. Pima County alone accounted for 1,146 autopsies, 510 external examinations and 394 DC cases.
2020 Medical Examiner Cases

Medical Examiner Cases by Age - 2020
ME Cases (all counties) by Manner of Death - 2020

- Accident: 46%
- Natural: 29%
- Suicide: 11%
- Undetermined: 9%
- Homicide: 5%

ME Cases (Pima only) by Manner of Death - 2020

- Accident: 48%
- Natural: 27%
- Suicide: 11%
- Undetermined: 10%
- Homicide: 4%
HOMICIDE DEATHS

The PCOME certified 120 deaths as homicide in 2020, 86 from Pima County and 34 from other counties. Homicide totals from 2011 – 2020 are compared below. Homicide victims were most frequently male (81%), between 20-29 years of age (28%) and died as the result of firearms (72%).

Homicide Deaths 2011 - 2020

Homicide Deaths by Age 2020
Homicide Deaths by Sex 2020

- Male: 81%
- Female: 19%

Homicide Deaths by Cause 2020

- Firearms: 72%
- Sharp Force: 12%
- Blunt Force: 10%
- Asphyxia: 2%
- Other: 4%
ACCIDENT DEATHS

Deaths due to accidents accounted for 46% of the ME deaths investigated by the PCOME in 2020. Accident victims were most frequently males (68%), between 20-29 years of age (16%) and died as the result of an overdose (43%).

Accident Deaths by Age 2020

Accident Deaths by Sex 2020
**Accident Deaths by Cause 2020**

- Overdose: 43%
- Blunt Force: 27%
- Motor Vehicle: 19%
- Exposure: 7%
- Fire Deaths: 1%
- Asphyxia: 1%
- Drowning: 1%
- Other: < 1%

**Accident Death by Cause (Top 3) 2016 - 2020**

- Overdose
- Blunt Force
- Motor Vehicle
**SUICIDE DEATHS**

Suicide deaths accounted for 11% of the ME deaths investigated by the PCOME in 2020. Suicide victims were most frequently males (78%), between 20-29 years of age (17%) and died as the result of firearms (61%).

**Suicide Deaths by Age 2020**

**Suicide Deaths by Sex 2020**

- Male: 221 (78%)
- Female: 62 (22%)
Suicide Deaths by Cause 2020

- Firearms: 172 (61%)
- Hanging: 58 (20%)
- Overdose: 12 (8%)
- Asphyxia: 17 (4%)
- Other: 24 (6%)

Suicide Deaths by Cause (Top 3) 2016 - 2020

- 2016: Firearms 143, Hanging 46, Overdose 27
- 2017: Firearms 161, Hanging 57, Overdose 27
- 2018: Firearms 154, Hanging 60, Overdose 36
- 2019: Firearms 180, Hanging 75, Overdose 31
- 2020: Firearms 172, Hanging 58, Overdose 24
Natural deaths accounted for 29% of the ME deaths investigated by the PCOME in 2020. Individuals who died from natural causes were most frequently males (70%), between 60-69 years of age (31%) and died as the result of cardiovascular disease (52%).
Natural Deaths by Cause 2020

- Cardiovascular: 52%
- Chronic Alcohol: 10%
- Infectious Disease: 14%
- Pulmonary Disease: 4%
- Diabetes Mellitus: 3%
- Malignacy: 4%
- Other: 11%
**Undetermined Manner of Death**

Deaths in which the manner of death was undetermined accounted for 9% of the ME deaths investigated by the PCOME in 2020. Individuals who died with an undetermined manner were most frequently males (67%), of unknown age (64%) and died from undetermined causes (89%). Many of these deaths represent skeletal remains of undocumented border crossers who died in the deserts of southern Arizona.

**Undetermined Manner of Death by Age 2020**

**Undetermined Manner of Death by Sex 2020**

- Male: 67%
- Female: 18%
- Unsure: 15%
Undetermined Manner of Death by Cause 2020

- Undetermined: 89%
- Blunt Force: 3%
- Overdose: 3%
- Firearms: 1%
- Other: 3%

Total: 207 cases
OVERDOSE DEATHS

There were 529 deaths attributed to an overdose of either a single drug (273 deaths, 52%) or a combination of drugs (256 deaths, 48%) in 2020. Overdose deaths commonly involved males (71%) between the ages of 30-39 (23%). The majority of these deaths were classified as accidents (94%). Over the last ten years, overdose deaths certified by the PCOME increased 91% from 277 deaths in 2011 to 529 deaths in 2020.

Opiate drugs (heroin, oxycodone, methadone, hydrocodone, morphine, oxymorphone, hydromorphone, tramadol, opiate unspecified) and fentanyl (a synthetic opioid narcotic) contributed to the majority of overdose deaths (364 deaths, 69%), either as a single drug or as a component of a poly-drug overdose. Fentanyl was the most commonly abused illicit drug contributing to death in 2020 followed by methamphetamine.

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

Fentanyl related deaths continued to increase (3300% increase) from a low of 7 deaths in 2014 to 238 deaths in 2020. Fentanyl related deaths increased 133% in one year from 102 in 2019 to 238 related deaths in 2020.
Overdose Deaths by Age 2020

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</table>

Overdose Deaths by Sex 2020

- Male: 373 (71%)
- Female: 156 (29%)
**Overdose Deaths by Manner 2020**

- Accident: 94%
- Suicide: 5%
- Undetermined: 1%

**Select Drugs by Year 2013 - 2020**

- Heroin
- Fentanyl
- Oxycodone
- Morphine
- Meth
- Cocaine
- Benzo
- Alcohol

Rev: 04/30/21
Overdose Deaths by Drug 2020

Opiate compounds are red

- Heroin: 89
- Oxycodone: 30
- Hydrocodone: 6
- Oxymorphone: 2
- Hydromorphone: 3
- Methadone: 20
- Morphine: 16
- Codeine: 2
- Tramadol: 3
- Opiate Unspecified: 13
- Fentanyl: 238
- Methamphetamine: 218
- Cocaine: 66
- Benzodiazepines: 39
- Ethanol: 74
- Antihistamines: 7
- SSRI/SNRI: 13
- Methanol: 4
- Atypical Antipsychotics: 6
- Muscle Relaxants: 5
- Mitragynine: 3
- Acetaminophen: 4
- Amphetamine: 9
- Other: 12
Motor Vehicle Related Fatalities

Motor vehicle related fatalities accounted for 227 total deaths in 2020. The majority, 113 deaths, were occupants of a motor vehicle involved in an accident (MVA). Of the remaining, 34 were motorcycle accidents (MCA), 73 were pedestrians or bicyclists struck by vehicles and 7 involved all-terrain vehicles (ATV). Individuals who died from motor vehicle related fatalities were most frequently males (74%) and between 60-69 years of age (19%).
Motor Vehicle Fatalities by Sex 2020

- Male: 60 (74%)
- Female: 167 (26%)

Motor Vehicle Fatalities by Type 2020

- MVA: 113 (50%)
- Pedestrian: 55 (24%)
- MCA: 34 (15%)
- Bicyclist: 18 (8%)
- ATV: 7 (3%)
Forensic Anthropologists at the W.H. Birkby Forensic Anthropology Laboratory within the PCOME performed 175 examinations (biological profiles, trauma evaluations, dental examinations and examinations for identification) in 2020 on human remains of forensic significance. An additional 67 examinations were performed on remains ultimately deemed non-human, prehistoric or otherwise not forensically significant and these remains were classified as jurisdiction declined (JD) 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 2020, skeletal remains comprised 82% of FA examinations. Five main types of exams are performed: biologic profiles, dental examinations, trauma evaluations, comparisons to antemortem information and field activities.

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 examinations entail charting, descriptions, radiographs and photographs in an effort to preserve dental information. 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. Comparisons are evaluation of postmortem distinctive skeletal characteristics or dental information to antemortem information for purposes of identification. Field activities are exhumations or other excursions from the office to assist local law enforcement with the recovery of remains. It is common for a particular set of remains to receive more than one type of examination.

**Number of FA Exams 2011 - 2020**

![Number of FA Exams 2011 - 2020](image)
FA Exam by Condition of Remains 2020

- Skeletal: 144 (82%)
- Mummified: 8 (7%)
- Decomposing: 8 (5%)
- Fully Fleshed: 2 (1%)
- Burnt: 13 (5%)

FA Examination by Type 2020

- Biologic Profiles: 161
- Dental Examinations: 130
- Comparisons: 10
- Trauma: 4
- Field Activities: 0
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 (CY) 2010 saw the highest number of UBC recoveries (222) recorded at the PCOME as compared to the annual average (164 recoveries per year on average from 2002 - 2020). The PCOME has received 3,275 recovered remains of suspected UBCs since 2000. The recoveries per year are adjusted annually to account for the association of remains found months or years apart later discovered to be that of the same individual.

There were 220 UBC recoveries in calendar year 2020. Of the decedents who were identified, 71% (51 decedents) were between 20-39 years of age. Additionally, 75% (164) of the recovered remains, identified or unidentified, were males, 8% (18) were females and in 17% (38) the sex was unable to be determined at the time of the writing of this report.

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 1-8 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 34 of this report. In 2020, 39 remains (condition 1) were found within less than a day of death (18%), 47 remains (conditions 2-4) were found with a few days up to a few weeks from death (21%), and skeletal remains (body conditions 5-7) accounted for 134 (61%) of the recovered remains.

The cause of death was undetermined in 74% (162) 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 21% (46) of deaths. Other, less frequent, causes of death included blunt force trauma (10 cases), hanging (1 case), and gunshot wounds (1 case).

In 2020, 57 (76%) of identified UBCs were of Mexican nationality, followed by 11 Guatemalans (15%), 2 Hondurans (3%), and 2 Colombians (3%). Since 2000, identified UBCs of Mexican nationality have been the most numerous (1,673, 80%), followed by Guatemalans (246, 12%) and Salvadorans (59, 3%) and Hondurans tied (59, 3%). Of the 3,275 decedents recovered since 2000, 2,084 (64%) have been identified. As of December 31, 2020, 1,190 decedents remain unidentified.
UBC Recoveries by Age 2020

UBC Recoveries by Age 2000 - 2020

Rev: 04/30/2021
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)
8 – Other
Pooled Body Conditions of Recovered UBC Remains by Year 2000 - 2020

1 - 4 represents not fully skeletal remains with a likely PMI of ≤ 3 months
5 - 7 represents fully skeletal remains with a likely PMI of ≥ 3 months

UBC Recoveries by Sex 2020

- Male: 164 (75%)
- Female: 38 (8%)
- Unsure: 18 (17%)
UBC Recoveries by Sex 2000 - 2020

- Male: 84%
- Female: 15%
- Unsure: 1%

UBC Recoveries by Cause 2020

- Undetermined: 74%
- Exposure: 21%
- Blunt Force Trauma: 5%
- Hanging: <1%
- Gunshot Wound: <1%
UBC Recoveries by Cause 2000 - 2020

- Undetermined: 1617 (49%)
- Exposure: 1239 (39%)
- Blunt Force: 38 (7%)
- Firearms: 46 (3%)
- Natural Causes: 38 (1%)
- Drowning: 16 (1%)
- Hanging: 13 (<1%)
- Other: 11 (<1%)

Identified UBC Recoveries by Nationality 2020

- Mexican: 57 (76%)
- Guatemalan: 11 (15%)
- Colombian: 2 (3%)
- Honduran: 2 (3%)
### Identified UBC Recoveries by Nationality 2000 - 2020

- **Mexican** - 80% - 1673
- **Guatemalan** - 12% - 246
- **Salvadoran** - 3% - 59
- **Honduran** - 3% - 59
- **Ecuadorian** - <1% - 15
- **Peruvian** - <1% - 8
- **Colombian** - <1% - 5
- **Brazilian** - <1% - 4
- **Costa Rican** - <1% - 4
- **Indian** - <1% - 3
- **Nicaraguan** - <1% - 2
- **Dominican** - <1% - 2
- **Other** - <1% - 3

### Identified vs Unidentified UBC Recoveries

- **2000 - 2020**
  - Total Recoveries: 3275
  - Identified: 2083
  - Unidentified: 1192

- **2020**
  - Total Recoveries: 72
  - Identified: 220
  - Unidentified: 148
### UBC Methods of Identification 2000 – 2020

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<td><strong>58</strong></td>
<td><strong>70</strong></td>
<td><strong>73</strong></td>
<td><strong>59</strong></td>
<td><strong>64</strong></td>
<td><strong>65</strong></td>
<td><strong>58</strong></td>
<td><strong>67</strong></td>
<td><strong>70</strong></td>
<td><strong>60</strong></td>
<td><strong>67</strong></td>
<td><strong>147</strong></td>
<td><strong>1198</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>74</strong></td>
<td><strong>77</strong></td>
<td><strong>147</strong></td>
<td><strong>155</strong></td>
<td><strong>169</strong></td>
<td><strong>195</strong></td>
<td><strong>168</strong></td>
<td><strong>214</strong></td>
<td><strong>161</strong></td>
<td><strong>190</strong></td>
<td><strong>222</strong></td>
<td><strong>178</strong></td>
<td><strong>154</strong></td>
<td><strong>165</strong></td>
<td><strong>127</strong></td>
<td><strong>135</strong></td>
<td><strong>148</strong></td>
<td><strong>118</strong></td>
<td><strong>121</strong></td>
<td><strong>136</strong></td>
<td><strong>220</strong></td>
<td><strong>3274</strong></td>
</tr>
<tr>
<td>% ID’d</td>
<td><strong>82%</strong></td>
<td><strong>75%</strong></td>
<td><strong>82%</strong></td>
<td><strong>78%</strong></td>
<td><strong>79%</strong></td>
<td><strong>77%</strong></td>
<td><strong>69%</strong></td>
<td><strong>73%</strong></td>
<td><strong>71%</strong></td>
<td><strong>70%</strong></td>
<td><strong>69%</strong></td>
<td><strong>59%</strong></td>
<td><strong>62%</strong></td>
<td><strong>61%</strong></td>
<td><strong>49%</strong></td>
<td><strong>57%</strong></td>
<td><strong>55%</strong></td>
<td><strong>41%</strong></td>
<td><strong>50%</strong></td>
<td><strong>51%</strong></td>
<td><strong>33%</strong></td>
<td><strong>64%</strong></td>
</tr>
</tbody>
</table>

Pima County Office Of The Medical Examiner – Annual Report 2020
**PIMA COUNTY**

**TOTAL MORTALITY**

The number of deaths reported to the medical examiner’s office in a given period is a reflection of the total population that the office serves. In 2020 there were 13,461 deaths registered in Pima County; of these 3,920 (29%) were reported to the PCOME for investigation.

---

**Pima County Total Mortality 2011 - 2020**

*Deaths of Pima County residents
†Total registered deaths in Pima County – residents and non-residents*
TOTAL REPORTED DEATHS

The total cases handled by the PCOME from Pima County in a given year are the sum of the 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).

**Total Reported Deaths from Pima County 2011 - 2020**

<table>
<thead>
<tr>
<th>Year</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>2133</td>
</tr>
<tr>
<td>2012</td>
<td>2523</td>
</tr>
<tr>
<td>2013</td>
<td>2611</td>
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<td>2520</td>
</tr>
<tr>
<td>2015</td>
<td>2437</td>
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<tr>
<td>2016</td>
<td>2657</td>
</tr>
<tr>
<td>2017</td>
<td>2705</td>
</tr>
<tr>
<td>2018</td>
<td>2774</td>
</tr>
<tr>
<td>2019</td>
<td>3058</td>
</tr>
<tr>
<td>2020</td>
<td>3920</td>
</tr>
</tbody>
</table>

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 2020, 1146 autopsies (56% of total deaths certified (TDC)), 510 (25% of TDC) external examinations and 394 (19% of TDC) DC cases were performed on deaths from Pima County.
Pima County ME Cases by Manner of Death 2020

- Accident: 48%
- Natural: 27%
- Suicide: 11%
- Undetermined: 11%
- Homicide: 4%

Total cases: 992
HOMICIDE DEATHS

The PCOME examined 86 homicides from Pima County in 2020; 4% of total Pima County deaths certified. Homicide totals from 2011 – 2020 are compared below. Homicide victims were most frequently male (84%), between 20-29 years of age (27%) and died as the result of firearms (76%).
Pima County Homicide Deaths by Sex 2020

Male - 84%
Female - 16%

Pima County Homicide Deaths by Cause 2020

Firearms - 76%
Sharp Force - 10%
Blunt Force - 8%
Other - 6%
Pima County Homicide Deaths by Cause (Top 3) 2016 - 2020

<table>
<thead>
<tr>
<th>Year</th>
<th>Firearms</th>
<th>Sharp Force</th>
<th>Blunt Force</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>41</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>2017</td>
<td>56</td>
<td>12</td>
<td>8</td>
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<td>2018</td>
<td>54</td>
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</tr>
<tr>
<td>2019</td>
<td>48</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>2020</td>
<td>65</td>
<td>9</td>
<td>7</td>
</tr>
</tbody>
</table>

- **Firearms**
- **Sharp Force**
- **Blunt Force**
ACCIDENT DEATHS

Deaths due to accidents accounted for 48% of the Pima County deaths certified by the PCOME in 2020. Accident victims were most frequently males (67%), between the ages of 20-29 (16%) and died as the result of an overdose (42%).

Pima County Accident Deaths 2014 - 2020

Pima County Accident Deaths by Age 2020
Pima County Accident Deaths by Sex 2020

- Male: 67%
- Female: 33%

Pima County Accident Deaths by Cause 2020

- Overdose: 42%
- Blunt Force: 30%
- Motor Vehicle: 18%
- Exposure: 5%
- Asphyxia: 1%
- Drowning: 1%
- Other: 2%
Pima County Accident Deaths by Cause (Top 3) 2016 - 2020

<table>
<thead>
<tr>
<th>Year</th>
<th>Overdose</th>
<th>Blunt Force</th>
<th>Motor Vehicle</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>233</td>
<td>279</td>
<td>142</td>
</tr>
<tr>
<td>2017</td>
<td>253</td>
<td>279</td>
<td>138</td>
</tr>
<tr>
<td>2018</td>
<td>246</td>
<td>249</td>
<td>146</td>
</tr>
<tr>
<td>2019</td>
<td>306</td>
<td>239</td>
<td>187</td>
</tr>
<tr>
<td>2020</td>
<td>421</td>
<td>302</td>
<td>175</td>
</tr>
</tbody>
</table>
SUICIDE DEATHS

Deaths due to suicide accounted for 11% of the Pima County deaths certified by the PCOME in 2020. Suicide victims were most frequently males (77%), between 50-59 years of age (19%) and died as the result of firearms (64%).
Pima County Suicide Deaths by Sex 2020

- Male: 77%
- Female: 23%

Pima County Suicide Deaths by Cause 2020

- Firearms: 64%
- Hanging: 17%
- Overdose: 9%
- Asphyxia: 5%
- Sharp Force: 2%
- Other: 4%
Pima County Suicide Deaths by Cause (Top 3) 2016 – 2020

- **Firearms**
- **Hanging**
- **Overdose**
Natural Deaths

Deaths due to natural causes accounted for 27% of the Pima County deaths certified by the PCOME in 2020. Individuals who died from natural causes were most frequently males (69%), between 60-69 years of age (31%) and died as the result of cardiovascular disease (50%).

Pima County Natural Deaths 2014 - 2020

Pima County Natural Deaths by Age 2020
Pima County Natural Deaths by Sex 2020

- Male: 171 (69%)
- Female: 273 (31%)

Pima County Natural Deaths by Cause 2020

- Cardiovascular: 271 (50%)
- Chronic Alcohol: 61 (11%)
- Infectious Disease: 58 (11%)
- Malignancy: 58 (11%)
- Pulmonary Disease: 58 (11%)
- Diabetes Mellitus: 58 (11%)
- Thromboemboli: 58 (11%)
- Other: 58 (11%)
**Undetermined Manner of Death**

Deaths of undetermined manner accounted for 11% of the Pima County deaths certified by the PCOME in 2020. Individuals who died with an undetermined manner were most frequently males (68%), of unknown age (70%) and died from undetermined causes (89%). Many of these deaths represent skeletal remains of UBCs who died in the deserts of southern Arizona.

**Pima County Undetermined Manner 2014 - 2020**

**Pima County Undetermined Manner of Death by Age 2020**
Pima County Undetermined Manner of Death by Sex 2020

- Male: 68%
- Female: 16%
- Unsure: 16%

Pima County Undetermined Manner of Death by Cause 2020

- Undetermined: 89%
- Blunt Force: 4%
- Firearms: 2%
- Overdose: 3%
- Other: 3%
PIMA COUNTY OVERDOSE DEATHS IN 2020

There were 446 deaths attributed to an overdose of either a single drug (230 deaths, 52%) or a combination of drugs (216 deaths, 48%) in 2020. Overdose deaths commonly involved males (71%) between the ages of 30-39 (24%). The majority of these deaths were classified as accidents (94%).

Opiate compounds are typically heroin, oxycodone, methadone, hydrocodone, morphine, oxymorphone, hydromorphone, tramadol, codeine, fentanyl (a synthetic opioid narcotic) and clandestinely manufactured fentanyl analogs. In 2020 an opiate compound contributed to 312 (70%) of the 446 total overdose deaths. Opiate compounds, which contributed to an overdose death in 2020, are indicated in red in the Pima County Overdose Deaths by Drug 2020 figure.

The number of heroin deaths (78 deaths, 17%) is likely underreported as heroin is rapidly metabolized to morphine by the body and if the metabolite indicative for heroin (6-monoacetylmorphine) is not present on the toxicology report these deaths may be classified as either morphine intoxication (morphine) or opiate intoxication (opiate unspecified).

Fentanyl was the most commonly abused illicit drug in 2020, contributing to 46% of all 2020 overdoses, followed by methamphetamine (41%).

OVERDOSE TRENDS

Overdose deaths in Pima County increased 112% overall from 2011 (210) to 2020 (446), punctuated by plateaus from 2013 (240) to 2014 (241), from 2015 (262) to 2016 (263) and again from 2017 (286) to 2018 (286). Unfortunately, 2020 overdose deaths represent a significant increase (32% one year increase) from 2019. The impact of opiate compounds on overdose deaths is of significant interest. An opiate compound contributed to 175 (67%) of the 263 total overdose deaths in 2016, 189 (66%) of the 286 total overdose deaths in 2017, 181 (63%) of the 286 overdose deaths in 2018, 208 (62%) of the 337 overdose deaths in 2019 and 312 (70%) of the 446 overdose deaths in 2020 as previously described.

Pima County is experiencing a rapid increase in the number of overdose deaths in which fentanyl is found to be a contributing factor. Fentanyl contributed to 5 overdose deaths in 2014 in contrast to 207 deaths in 2020, a 4040% increase in the number of deaths involving fentanyl from 2014.

Interestingly, methamphetamine related deaths have also increased in frequency from 38 deaths in 2014 to 182 deaths in 2020, a 379% increase. The significant decrease is seen in oxycodone deaths, a 51% decrease from 2014 (39 deaths) to 2020 (19 deaths).
Pima County Overdose Deaths 2011 - 2020

Pima County Overdose Deaths by Age 2020
Pima County Office Of The Medical Examiner – Annual Report 2020

Pima County Overdose Deaths by Sex 2020

- Male: 316 (71%)
- Female: 130 (29%)

Pima County Overdose Deaths by Manner 2020

- Accident: 421 (94%)
- Suicide: 20 (5%)
- Undetermined: 5 (1%)
# Pima County Overdose Deaths by Drug 2020

Opiate compounds are red

<table>
<thead>
<tr>
<th>Drug</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heroin</td>
<td>78</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>19</td>
</tr>
<tr>
<td>Hydrocodone</td>
<td>2</td>
</tr>
<tr>
<td>Oxymorphone</td>
<td>1</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>2</td>
</tr>
<tr>
<td>Methadone</td>
<td>17</td>
</tr>
<tr>
<td>Morphine</td>
<td>15</td>
</tr>
<tr>
<td>Codeine</td>
<td>2</td>
</tr>
<tr>
<td>Tramadol</td>
<td>1</td>
</tr>
<tr>
<td>Opiate Unspecified</td>
<td>13</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>207</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>182</td>
</tr>
<tr>
<td>Cocaine</td>
<td>61</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>33</td>
</tr>
<tr>
<td>Alcohol</td>
<td>57</td>
</tr>
<tr>
<td>Antihistamines</td>
<td>5</td>
</tr>
<tr>
<td>SSRI/SNRI</td>
<td>9</td>
</tr>
<tr>
<td>Tricyclics</td>
<td>1</td>
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<tr>
<td>Atypical Antipsychotics</td>
<td>5</td>
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<td>Muscle Relaxants</td>
<td>4</td>
</tr>
<tr>
<td>Methanol</td>
<td>2</td>
</tr>
<tr>
<td>Sleep Aids</td>
<td>1</td>
</tr>
<tr>
<td>Acetaminophen</td>
<td>3</td>
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<tr>
<td>Mitragynine</td>
<td>3</td>
</tr>
<tr>
<td>Bupropion</td>
<td>1</td>
</tr>
<tr>
<td>Amphetamine</td>
<td>8</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
</tr>
</tbody>
</table>
Pima County Overdoses by drug by year 2014 - 2020
PIMA COUNTY MOTOR VEHICLE RELATED FATALITIES

Motor vehicle related fatalities accounted for 182 total deaths in Pima County in 2020. The majority, 84 deaths, were occupants of a motor vehicle involved in an accident (MVA). Of the remaining, 29 were motorcycle accidents (MCA), 64 were pedestrians or bicyclists struck by vehicles, and 5 were all-terrain vehicle (ATV) accidents. Individuals who died from motor vehicle related fatalities were most frequently males (75%) and between 20-29 years of age (21%).

Pima County Motor Vehicle Fatalities 2011 - 2020

Pima County Motor Vehicle Fatalities by Age 2020
Pima County Motor Vehicle Fatalities by Sex 2020

- Male: 75%
- Female: 25%

Pima County Motor Vehicle Fatalities by Type 2020

- MVA: 46%
- Pedestrian: 27%
- MCA: 16%
- Bicyclist: 8%
- ATV: 3%
**PIMA COUNTY HEAT RELATED FATALITIES**

Heat (hyperthermia) related fatalities accounted for 19 total deaths in Pima County in 2020, excluding undocumented border crosser deaths. For environmental deaths involving UBCs, please reference the UBC section on page 36 of this report.

![Graph showing Pima County Heat Related Fatalities 2011-2020](image)

![Graph showing Pima County Heat Related Fatalities by Age 2020](image)
Pima County Heat Related Fatalities by Sex 2020

Male - 53%
Female - 47%
Indigent Interment Program in Pima County

Legal responsibility for interment of a decedent rests with the next of kin (NOK) as determined pursuant to A.R.S. §36-831. The County may provide interment services for circumstances in which the NOK are found to be financially unable to pay for arrangements or in which the decedent is unclaimed or abandoned. The PCOME was appointed administrator of the County’s Indigent Interment Program (IIP) and Pima County Cemetery (PCC) in September 2018, in-lieu of the County Public Fiduciary’s Office, the previously appointed administrator.

In 2020, 681 applications for IIP consideration, approximately 5% of the total deaths (13,461) in the county, were processed by our IIP coordinator. In general, IIP applications can be divided into those that are approved for County assistance and those that are disapproved. Regardless of application outcome, special interest groups such as veterans and the homeless are over represented in comparison to the general population in IIP consideration. Some statistical information concerning application outcomes and those interest groups will be provided in this report.

Definitions – Please consider these definitions when reviewing the charts on the following pages

- **Approved** – The interment of the decedent’s remains was funded by the County
- **Disapproved** – The interment of the decedent’s remains was not funded by the County
- **Met poverty standard** – The decedent’s NOK are known, but meet current federal poverty guidelines as promulgated by the U.S. Department of Health & Human Services, and therefore qualify for government interment assistance
- **Abandonment** - The decedent’s NOK are known but fail, or refuse to make interment arrangements for the decedent
- **Unidentified** – The indentity of the decedent is unknown and therefore NOK and presence or abscense of financial hardship is unknown
- **No NOK** – A search is conducted for family for a decedent in an effort to locate any known NOK who might make interment arrangements but no NOK are found
- **Burial** – The decedent is interred either at the PCC or other cemetery as buried remains, not cremated or otherwise altered remains
- **Cremation** – The decedent is interred as cremains in a columbarium at the PCC, columbarium at another cemetery, or released to NOK for their retention

At the end of 2020, 70 burial plots remain available in the PCC and 1,086 cremation urn locations remain available in the PCC columbaria. The PCC end-of-year columbaria inventory stood at 1,554 remains with a total capacity of 2,640 remains amongst the four columbaria.
IIP Approvals vs Disapprovals

405 (60%) of the 681 IIP referrals were approved for County assistance in 2020. All 405 approvals resulted in cremation as the final disposition of the remains. 274 (40%) of the referrals were disapproved and family, guardians or local assistance groups assumed responsibility for the disposition of the remains.

**Reason for IIP Approval 2020**

- No NOK - 50%
- Met Poverty Standard - 27%
- Abandonment - 23%

**Disposition of IIP Cremation Approvals 2020**

- PCC - 61%
- Claimed by NOK - 27%
- Veterens Cemetery - 12%
IIP Special Interest Groups

Veterans
100 (15%) of the 681 IIP applications were veterans. 66 veterans were approved through the IIP and 34 were disapproved. Veterans approved through the IIP programs are interred at the Southern Arizona Veterans Memorial Cemetery in Marana unless otherwise claimed by surviving family members.

Reason for IIP Veteran Approval 2020

Reason for IIP Homeless Approval 2020

Homeless
73 (11%) of the 681 IIP applications were decedents believed to be homeless. 50 homeless decedents were approved through the IIP and 23 were disapproved.
HOMELESS DECEDEENTS

Caveats concerning the interpretation of homeless decedents in this section

- These figures are not inclusive for all homeless deaths in Pima County in 2020. This only represents deaths reported to the PCOME and we have no knowledge of homeless decedents who were not reported to the PCOME. Homelessness, in and of itself, is not an OME reporting criteria (see page 5 for reporting criteria).
- Homeless in this data set is defined by a “yes” or “no” data field in an electronic case management system and is populated by a death investigator during the course of an initial death report to the PCOME. There will be instances in which a decedent was classified as homeless initially but is later found not to be and instances in which a decedent was not classified as homeless initially but is later learned to be. In short, this data will contain errors.
- There are different forms of homelessness (chronic, episodic, transitional and hidden) and this data does not have the granularity to differentiate between these forms.

Decedents deemed to be homeless (156) accounted for 4% of the Pima County deaths reported to the PCOME in 2020. Jurisdiction was accepted in 124 (79%) of those reported and declined in 32 (21%) of reported deaths. Certified (accepted) homeless decedents were frequently males (79%), between 50-59 years of age (23%) and died as the result of overdoses (53%).
Pima County Homeless Deaths by Sex 2020

- Male: 79%
- Female: 21%

Pima County Homeless Deaths by Cause 2020

- Overdose: 53%
- Firearms: 10%
- Pedestrians: 9%
- Cardiac Disease: 6%
- Exposure: 3%
- Chronic Alcohol: 3%
- Sharp Force Injury: 2%
- Other: 14%
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’s 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 works 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 available as needed with mass fatality planning, fatality review panels, or other medical examiner related issues in Cochise County.

TOTAL MORTALITY

The number of deaths reported to the medical examiner’s office in a given period is a reflection of the total population that the office serves. In 2020 there were 1,631 deaths of Cochise County residents; of these 370 (23%) were reported to the PCOME for investigation.

Cochise County Resident Mortality by Year 2011 - 2020*

*Arizona Department of Vital Statistics as of 04/06/2021
TOTAL REPORTED DEATHS

The total cases investigated by the PCOME from Cochise County in a given year are the sum of the ME cases (autopsies, external examinations, and death certificate cases) and cases in which jurisdiction was declined.

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 2020, 144 autopsies, 50 external examinations and 11 DC cases were performed on deaths from Cochise County.
Cochise County Medical Examiner Cases 2020

Cochise County Medical Examiner Cases by Age 2020
Cochise County ME Cases by Manner of Death 2020

- Natural: 39% (74 cases)
- Accident: 41% (85 cases)
- Suicide: 15% (12 cases)
- Undetermined: 6% (3 cases)
- Homicide: 1% (1 case)
HOMICIDE DEATHS

The PCOME examined one firearms and two blunt force related homicide deaths from Cochise County in 2020; 1% of total deaths certified. Homicide totals from 2013 – 2020 are compared below.

Cochise County Homicide Deaths 2013 - 2020

<table>
<thead>
<tr>
<th>Year</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>3</td>
</tr>
<tr>
<td>2014</td>
<td>7</td>
</tr>
<tr>
<td>2015</td>
<td>6</td>
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<tr>
<td>2016</td>
<td>6</td>
</tr>
<tr>
<td>2017</td>
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<tr>
<td>2018</td>
<td>0</td>
</tr>
<tr>
<td>2019</td>
<td>1</td>
</tr>
<tr>
<td>2020</td>
<td>3</td>
</tr>
</tbody>
</table>
ACCIDENT DEATHS

The PCOME examined 85 accident deaths from Cochise County in 2020; 41% of total Cochise County deaths certified. Accident victims were most frequently males (69%), between 50-59 years of age (28%) and died as the result of an overdose (46%).

Cochise County Accident Deaths 2013 - 2020

Cochise County Accident Deaths by Age 2020
Cochise County Accident Deaths by Sex 2020

- Male: 59 (69%)
- Female: 27 (31%)

Cochise County Accident Deaths by Cause 2020

- Overdose: 39 (46%)
- Motor Vehicle: 20 (24%)
- Blunt Force: 9 (11%)
- Exposure: 9 (11%)
- Asphyxia: 5 (3%)
- Other: 3 (5%)
Cochise County Accident Deaths by Cause (Top 3) 2016 - 2020

*Blunt Force (9) is tied with Exposure (9) as an accidental cause of death in 2020
**SUICIDE DEATHS**

The PCOME examined 30 suicide deaths from Cochise County in 2020; 15% of total Cochise County deaths certified. Suicide victims were most frequently males (80%), between 60-69 years of age (20%) and died as the result of firearms (63%).

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**Cochise County Suicide Deaths 2013 - 2020**

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**Cochise County Suicide Deaths by Age 2020**
Cochise County Suicide Deaths by Sex 2020

- Male: 80%
- Female: 20%

Cochise County Suicide Deaths by Cause 2020

- Firearms: 63%
- Hanging: 27%
- Overdose: 7%
- Suffocation: 3%
Cochise County Suicide Deaths by Cause (Top 3) 2016 - 2020
NATURAL DEATHS

The PCOME examined 74 natural deaths from Cochise County in 2020; 39% of total Cochise County deaths certified. Individuals who died from natural causes were most frequently males (70%), between 60-79 years of age (27%) and died as the result of cardiovascular disease (69%).

Cochise County Natural Deaths 2013 - 2020

Cochise County Natural Deaths by Age 2020
Cochise County Natural Deaths by Sex 2020

- Male: 70%
- Female: 30%

Cochise County Natural Deaths by Cause 2020

- Cardiovascular: 69%
- Chronic Alcohol: 9%
- Nonspecific Natural: 7%
- Infection: 4%
- Other: 10%
**Undetermined Manner of Death**

The PCOME examined 12 undetermined deaths from Cochise County in 2020; 6% of total Cochise County deaths certified. Individuals who died with an undetermined manner were most frequently males (67%), of unknown age (42%) and died from undetermined causes (92%). The vast majority of these deaths represent decomposed remains, which oftentimes precludes a definitive cause of death determination.

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**Cochise County Undetermined Manner 2013 - 2020**

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**Cochise County Undetermined Manner of Death by Age 2020**
Cochise County Undetermined Manner of Death by Sex 2020

- Male: 67%
- Female: 25%
- Unsure: 8%

Cochise County Undetermined Manner of Death by Cause 2020

- Undetermined: 92%
- Overdose: 8%
OVERDOSE DEATHS

There were 42 deaths attributed to an overdose of either a single drug (18 deaths, 43%) or a combination of drugs (24 deaths, 57%) in 2020. Overdose deaths commonly involved males (55%) between the ages of 50-59 (43%). The majority of these deaths were classified as accidents (93%).
Cochise County Overdose Deaths by Sex 2020

Male - 55%
Female - 45%

Cochise County Overdose Deaths by Manner 2020

Accident - 93%
Suicide - 5%
Undetermined - 4%
### Cochise County Overdose Deaths by Drug 2020

Opiate compounds are red

<table>
<thead>
<tr>
<th>Drug</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heroin</td>
<td>8</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>7</td>
</tr>
<tr>
<td>Hydrocodone</td>
<td>2</td>
</tr>
<tr>
<td>Oxymorphone</td>
<td>1</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>1</td>
</tr>
<tr>
<td>Methadone</td>
<td>1</td>
</tr>
<tr>
<td>Morphine</td>
<td>1</td>
</tr>
<tr>
<td>Codeine</td>
<td>0</td>
</tr>
<tr>
<td>Tramadol</td>
<td>1</td>
</tr>
<tr>
<td>Opiate Unspecified</td>
<td>0</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>13</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>23</td>
</tr>
<tr>
<td>Cocaine</td>
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<tr>
<td>Benzodiazepines</td>
<td>4</td>
</tr>
<tr>
<td>Barbiturates</td>
<td>0</td>
</tr>
<tr>
<td>Alcohol</td>
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<tr>
<td>Antihistamines</td>
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</tr>
<tr>
<td>SSRI/SNRI</td>
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</tr>
<tr>
<td>Tricyclics</td>
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</tr>
<tr>
<td>Atypical Antipsychotics</td>
<td>0</td>
</tr>
<tr>
<td>Muscle Relaxants</td>
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</tr>
<tr>
<td>Anti-seizure Agents</td>
<td>0</td>
</tr>
<tr>
<td>Sleep Aids</td>
<td>0</td>
</tr>
<tr>
<td>Acetaminophen</td>
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</tr>
<tr>
<td>Amphetamine</td>
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<tr>
<td>Other</td>
<td>1</td>
</tr>
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</table>
Cochise County Overdoses by drug by year 2014 - 2020
**Motor Vehicle Related Fatalities**

Motor vehicle related fatalities accounted for 20 total deaths in Cochise County in 2020. The majority, 11 deaths, were occupants of a motor vehicle involved in an accident (MVA). Of the remaining, three were motorcycle accidents (MCA), four were bicyclists struck by a vehicle, and two were pedestrians struck by vehicles. Individuals who died from motor vehicle related fatalities were most frequently males (80%) between the ages of 60-69 years (25%).

**Cochise County Motor Vehicle Fatalities 2014 - 2020**

![Bar chart showing motor vehicle fatalities by year from 2014 to 2020.](image1)

**Cochise County Motor Vehicle Fatalities by Age 2020**

![Bar chart showing motor vehicle fatalities by age group in 2020.](image2)
Cochise County Motor Vehicle Fatalities by Sex 2020

- Male: 16 (80%)
- Female: 4 (20%)

Cochise County Motor Vehicle Fatalities by Type 2020

- MVA: 11 (80%)
- MCA: 3 (15%)
- Bicyclist: 4 (20%)
- Pedestrian: 2 (10%)
GRAHAM COUNTY

Graham County contracts (beginning July 1, 2020) with the PCOME to certify deaths that fall under the jurisdiction of the medical examiner in Graham County. Graham County does not maintain an in-county Medical Examiner’s office to conduct death scene investigations, transport remains, or triage deaths reportable to the medical examiner. Graham County does provide third party transportation services, local law enforcement death scene investigation and archival support for investigations/certifications that occurred prior to July 1, 2020. The PCOME works closely with Graham County law enforcement agencies, the public fiduciary office and funeral homes to facilitate investigations, disposition of remains and transportation respectively. The PCOME is available as needed with mass fatality planning, fatality review panels, or other medical examiner related issues in Graham County.

TOTAL MORTALITY

The number of deaths reported to the medical examiner’s office in a given period is a reflection of the total population that the office serves. In 2020 there were 383 deaths of Graham County residents; of these 49 (13%) were reported to the PCOME for investigation.

Graham County Resident Mortality by Year 2011 - 2020*

<table>
<thead>
<tr>
<th>Year</th>
<th>Deaths</th>
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</thead>
<tbody>
<tr>
<td>2011</td>
<td>245</td>
</tr>
<tr>
<td>2012</td>
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<td>336</td>
</tr>
<tr>
<td>2019</td>
<td>286</td>
</tr>
<tr>
<td>2020</td>
<td>383</td>
</tr>
</tbody>
</table>

*Arizona Department of Vital Statistics as of 04/06/2021
Graham County Deaths Reported to the PCOME 2011 - 2020

Graham County Deaths by Type of Exam 2020
Graham County Deaths by Manner of Death 2020

Graham County Accident Deaths by Type 2020
Graham County Natural Deaths by Type 2020

Graham County Suicide Deaths by Type 2020
Graham County Homicide Deaths by Type 2020

- **Firearms**: 2
- **Sharp Force**: 1
LA PAZ COUNTY

La Paz County contracts (beginning July 1, 2020) with the PCOME to certify deaths that fall under the jurisdiction of the medical examiner in La Paz County. La Paz County does not maintain an in-county Medical Examiner’s office to conduct death scene investigations, transport remains, or triage deaths reportable to the medical examiner. La Paz County does provide third party transportation services, local law enforcement death scene investigation and archival support for investigations/certifications that occurred prior to July 1, 2020. The PCOME works closely with La Paz County law enforcement agencies, the public fiduciary office and funeral homes to facilitate investigations, disposition of remains and transportation respectively. The PCOME is available as needed with mass fatality planning, fatality review panels, or other medical examiner related issues in La Paz County.

TOTAL MORTALITY

The number of deaths reported to the medical examiner’s office in a given period is a reflection of the total population that the office serves. In 2020 there were 362 deaths of La Paz County residents; of these 85 (23%) were reported to the PCOME for investigation.

La Paz County Resident Mortality by Year 2011 - 2020*

*Arizona Department of Vital Statistics as of 04/06/2021

Rev: 04/30/2021
La Paz County Deaths Reported to the PCOME 2011 - 2020

2011: 21  
2012: 13  
2013: 24  
2014: 22  
2015: 40  
2016: 29  
2017: 29  
2018: 30  
2019: 23  
2020: 85

La Paz County Deaths by Type of Exam 2020

- Autopsy: 36
- External: 8
- Jurisdiction Declined: 26
- Death Certification: 15
La Paz County Deaths by Manner of Death 2020

Accident: 17
Natural: 33
Undetermined: 3
Suicide: 1
Homicide: 5

La Paz County Accident Deaths by Type 2020

Overdose: 3
Motor Vehicle: 6
Exposure: 5
Blunt Force: 3

La Paz County Natural Deaths by Type 2020

- Cardiovascular: 22
- Infectious: 2
- Nonspecific: 2
- Chronic Alcohol: 1
- Neoplasm: 4
- Embolism: 0

La Paz County Suicide Deaths by Type 2020

- Firearms: 3
La Paz County Homicide Deaths by Type 2020

1 Sharp Force
SANTA CRUZ COUNTY

Santa Cruz County does not maintain an in-county Medical Examiner’s office to conduct death scene investigations, transport or examine remains, or certify deaths reportable to the medical examiner. Nor does Santa Cruz County appoint or contract with an Alternate Medical Examiner. The PCOME acts as the de-facto appointed ME for Santa Cruz County. When deaths occur in Santa Cruz County pursuant to A.R.S. §11-593, Santa Cruz County law enforcement agencies investigate the circumstances of the death and notify the PCOME as necessary.

In 2020 there were 463 deaths of Santa Cruz County residents; of these 99 (21%) were reported to the PCOME for investigation and/or examination. Some pertinent statistics regarding these deaths are detailed in the tables below.

Santa Cruz County Resident Mortality by Year 2011 - 2020*

*Arizona Department of Vital Statistics as of 04/06/2021
Santa Cruz County Deaths Reported to the PCOME 2011 - 2020

Santa Cruz County Deaths by Type of Exam 2020
Santa Cruz County Deaths by Manner of Death 2020

- Accident: 29
- Natural: 25
- Suicide: 9
- Undetermined: 4
- Homicide: 1

Santa Cruz County Accident Deaths by Type 2020

- Overdose: 14
- Motor Vehicle: 7
- Exposure: 4
- Blunt Force: 3
- Drowning: 1
Santa Cruz County Natural Deaths by Type 2020

- Cardiovascular: 13
- Infectious: 4
- Nonspecific: 5
- Other: 3
- Other: 2

Santa Cruz County Suicide Deaths by Type 2020

- Firearms: 2
- Overdose: 1
- Carbon Monoxide: 1
Santa Cruz County Homicide Deaths by Type 2020

- Firearms: 3
- Sharp Force: 1
APACHE COUNTY

Apache County contracts with an appointed non-Forensic Pathologist physician(s), termed an Alternate Medical Examiner(s) (AME) (A.R.S. §11-591); who triages, investigates and certifies deaths that fall under the jurisdiction of the medical examiner in Apache County. The Apache County AME does not perform autopsy examinations and if the AME deems an autopsy is necessary to certify the cause and manner of death, the decedent may be referred to the PCOME for an examination and death certification. The PCOME is not aware of how many deaths occurring in Apache County are reported to the Apache County AME, nor the total number or types of deaths certified by the AME. The PCOME only has a record of deaths reported to, or referred for examination to Pima County. Deaths on Native American tribal lands do not have to be reported through the respective death investigation system of that County and may be reported directly to the PCOME as necessary for the needs of the appropriate agency investigating that death (Bureau of Indian Affairs (BIA), FBI or local tribal police departments).

Thirty-five deaths from Apache County were reported to the PCOME in 2020, 29 of which required autopsy examinations. Some pertinent statistics regarding these deaths are detailed in the tables and graphs below.

Apache County Resident Mortality by Year 2011 - 2020*

*Arizona Department of Vital Statistics as of 04/06/21
Apache County Deaths Reported to the PCOME 2011 - 2020

Apache County Deaths by Type of Exam 2020
Apache County Deaths by Manner of Death 2020

- Natural: 16
- Accident: 6
- Suicide: 3
- Homicide: 3
- Undetermined: 3

Apache County Deaths by Type of Death 2020

- Cardiovascular: 13
- Firearms: 4
- Motor vehicle: 3
- Overdose: 3
- Exposure: 3
- Undetermined: 3
- Other: 2
GILA COUNTY

Gila County contracts with the Pinal County Office of the Medical Examiner, who triages, investigates and certifies deaths that fall under the jurisdiction of the medical examiner (ME) in Gila County. The PCOME is not aware of how many deaths occurring in Gila County are reported to the ME, nor the total number or types of deaths certified by the ME. The PCOME only has a record of deaths reported to, or referred for examination to Pima County. Deaths on Native American tribal lands do not have to be reported through the respective death investigation system of that County and may be reported directly to the PCOME as necessary for the needs of the appropriate agency investigating that death (BIA, FBI or local tribal police departments).

Fifteen deaths from Gila County were reported to the PCOME in 2020, 13 of which required autopsy examinations. Some pertinent statistics regarding these deaths are detailed in the tables and graphs below.

Gila County Resident Mortality by Year 2011 - 2020*

*Arizona Department of Vital Statistics as of 04/06/2021
Gila County Deaths Reported to the PCOME 2011 - 2020

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
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<tr>
<td>2012</td>
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<td>2018</td>
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</tr>
<tr>
<td>2019</td>
<td>29</td>
</tr>
<tr>
<td>2020</td>
<td>15</td>
</tr>
</tbody>
</table>

Gila County Deaths by Type of Exam 2020

- Autopsy: 13
- External: 2
Gila County Deaths by Manner of Death 2020

Number of Deaths:
- Natural: 5
- Accident: 4
- Homicide: 1
- Undetermined: 1
- Suicide: 3

Gila County Deaths by Type of Death 2020

Number of Deaths:
- Firearms: 7
- Blunt Force: 3
- Cardiovascular: 2
- Other: 3
GREENLEE COUNTY

Greenlee County contracts with an appointed non-Forensic Pathologist physician(s), termed an Alternate Medical Examiner(s) (AME) (A.R.S. §11-591), who triages, investigates and certifies deaths that fall under the jurisdiction of the medical examiner in Greenlee County. The Greenlee County AME does not perform autopsy examinations and if the AME deems an autopsy is necessary to certify the cause and manner of death, the decedent may be referred to the PCOME for an examination and death certification. The PCOME is not aware of how many deaths occurring in Greenlee County are reported to the Greenlee County AME, nor the total number or types of deaths certified by the AME. The PCOME only has a record of deaths reported to, or referred for examination to Pima County. Deaths on Native American tribal lands do not have to be reported through the respective death investigation system of that County and may be reported directly to the PCOME as necessary for the needs of the appropriate agency investigating that death (BIA, FBI or local tribal police departments).

Eight deaths from Greenlee County were reported to the PCOME in 2020, 7 of which required autopsy examinations. Some pertinent statistics regarding these deaths are detailed in the tables and graphs below.

Greenlee County Resident Mortality by Year 2011 - 2020*

*Arizona Department of Vital Statistics as of 04/06/2021

Rev: 04/30/2021
Greenlee County Deaths Reported to the PCOME 2011 - 2020

Greenlee County Deaths by Type of Exam 2020
Greenlee County Deaths by Manner of Death 2020

- Accident: 3
- Suicide: 1
- Natural: 1
- Homicide: 1

Greenlee County Deaths by Type of Death 2020

- Firearms: 4
- Overdose: 2
- ATV: 1
- Embolism: 1
NAVAJO COUNTY

Navajo County contracts with an appointed non-Forensic Pathologist physician(s), termed an Alternate Medical Examiner(s) (AME) (A.R.S. §11-591), who triages, investigates and certifies deaths that fall under the jurisdiction of the medical examiner in Navajo County. The Navajo County AME does not perform autopsy examinations and if the AME deems an autopsy is necessary to certify the cause and manner of death, the decedent may be referred to the PCOME for an examination and death certification. The PCOME is not aware of how many deaths occurring in Navajo County are reported to the Navajo County AME, nor the total number or types of deaths certified by the AME. The PCOME only has a record of deaths reported to, or referred for examination to Pima County. Deaths on Native American tribal lands do not have to be reported through the respective death investigation system of that County and may be reported directly to the PCOME as necessary for the needs of the appropriate agency investigating that death (BIA, FBI or local tribal police departments).

Forty-four deaths from Navajo County were reported to the PCOME in 2020, all of which required autopsy examinations. Some pertinent statistics regarding these deaths are detailed in the tables and graphs below.

Navajo County Resident Mortality by Year 2011 - 2020*

*Arizona Department of Vital Statistics as of 04/06/2021

Rev: 04/30/2021
Navajo County Deaths Reported to the PCOME 2011 - 2020

<table>
<thead>
<tr>
<th>Year</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>29</td>
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<tr>
<td>2012</td>
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<tr>
<td>2019</td>
<td>37</td>
</tr>
<tr>
<td>2020</td>
<td>44</td>
</tr>
</tbody>
</table>

Navajo County Deaths by Type of Exam 2020

- Autopsy: 44
Navajo County Deaths by Manner of Death 2020

Navajo County Deaths by Type of Death 2020
**PINAL COUNTY**

Pinal County appointed a Medical Examiner in December 2016 and maintains its own Medical Examiner’s office staffed to conduct death scene investigations, transport remains, perform examinations and triage deaths reportable to the ME as stated in A.R.S §11-593 above. Deaths on Native American tribal lands do not have to be reported through the respective death investigation system of that County and may be reported directly to the PCOME as necessary for the needs of the appropriate agency investigating that death (BIA, FBI or local tribal police departments).

Six deaths from Pinal County were reported to the PCOME in 2020, 2 of which required autopsy examinations. Some pertinent statistics regarding these deaths are detailed in the tables and graphs below.

*Arizona Department of Vital Statistics as of 04/06/2021*
Pinal County Deaths Reported to the PCOME 2011 - 2020

<table>
<thead>
<tr>
<th>Year</th>
<th>Count</th>
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<tr>
<td>2019</td>
<td>8</td>
</tr>
<tr>
<td>2020</td>
<td>6</td>
</tr>
</tbody>
</table>

Pinal County Deaths by Type of Exam 2020

- **Autopsy**: 3
- **External**: 2
- **Jurisdiction Declined**: 1

Rev: 04/30/2021
Pinal County Deaths by Manner of Death 2020

- Suicide: 2
- Natural: 1

Pinal County Deaths by Type of Death 2020

- Hanging: 1
- Overdose: 1
- Infection: 1
YUMA COUNTY

Yuma County contracts with, and appoints the pathology group at Yuma Regional Medical Center to serve as Medical Examiner for Yuma County. Some decedents (typically suspected homicides) are referred to the PCOME for an examination and death certification at the discretion of the Yuma County Medical Examiner’s Office prior to July 1, 2020. The PCOME discontinued this arrangement after July 1, 2020. The Yuma County Medical Examiner’s Office historically issued its own Annual Report. Please reference that report, if it is still being published, for details concerning deaths occurring in Yuma County that are not referred to the PCOME.

Eleven deaths from Yuma County were reported to the PCOME in 2020, ten of which required autopsy examinations. Some pertinent statistics regarding these deaths are detailed in the tables below.

Yuma County Resident Mortality by Year 2011 - 2020*

*Arizona Department of Vital Statistics as of 04/06/2021

Rev: 04/30/2021
Yuma County Deaths Reported to the PCOME 2011 - 2020

<table>
<thead>
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<th>Year</th>
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<td>2020</td>
<td>11</td>
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</tbody>
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Yuma County Deaths by Type of Exam 2020

- Autopsy: 10
- Jurisdiction Declined: 1
Yuma County Deaths by Manner of Death 2020

- Homicide: 5
- Accident: 2
- Natural: 1
- Suicide: 1

Yuma County Deaths by Type of Death 2020

- Firearms: 4
- Blunt Force: 2
- Overdose: 1
- Cardiac: 1
- Fire: 1
- Neoplasm: 1