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Office of Chief Medical Examiner 2018 Annual Report

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**Office of
Chief Medical Examiner
State of Maine**



**Annual Report
2018**

**Office of Chief Medical Examiner
State of Maine**

2018 Annual Report

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INTRODUCTION

The primary function of the Office of Chief Medical Examiner (OCME) is to support public health and safety by investigating deaths in the State of Maine. The facility occupies an 8,350 square foot building at 30 Hospital Street in Augusta.

The Office of Chief Medical Examiner was established in 1968 through the passing of the “Medical Examiner Act”, MSRA 22, Chapter 711. The office is administratively within the Department of the Attorney General and is empowered to take jurisdiction over all deaths that are not known to be due to exclusively natural processes. All violent, criminal, suspicious, and deaths of apparent undetermined causes or manners fall under the jurisdiction of the OCME. Other types of deaths, such as in infants or people in custody or any deaths whose causes represents a potential risk to the public at large, are also investigated by the OCME. When the OCME accepts jurisdiction of a death, it is the OCME that requests or performs all the investigations and procedures necessary to determine the Cause of Death and the Manner of Death (*Manner of Death = Natural, Accident, Homicide, Suicide or Undetermined*).

The purpose of having the State (through the OCME) investigate these deaths is to ensure that the public is safe. Whether it is through the criminal justice system, the public health system, or the work-place safety systems, the purpose of investigating “non-natural” deaths is to prevent their recurrences.

This report summarizes the activities of the OCME for the period of January 1 - December 31, 2018 (some data sets may cover different time periods).

PERSONNEL

The OCME is staffed with twelve full time positions which include: one Chief Medical Examiner, one Deputy Chief Medical Examiner, one Office Administrator, two Medicolegal Death Investigators, one Planning and Research Associate II, three Planning and Research Associate I, one Director of Laboratory and Mortuary Services and two Medical Examiner Assistants.

By statute, the Chief Medical Examiner is appointed for a seven year term by the Governor. The Chief then appoints the Deputy Chief and Office Administrator. The Chief Medical Examiner also appoints all field Medical Examiners and field Medicolegal Death Investigators (see below).

In the office is also one full-time position funded by a grant from the National Violent Death Reporting System (NVDRS). This program is funded and administered by the Centers for Disease Control and Prevention (CDC). There are also two part-time Field Deputy Chief Medical Examiners, two contracted forensic pathologists and three contracted administrative staff to answer the phones overnight, on weekends, on holidays and whenever else the office is officially closed.

In addition to the two full-time Medicolegal Death Investigators employed by the OCME, there are approximately 50 field Medical Examiners who conduct examinations and certify deaths on

behalf of the OCME. They are physician volunteers who are reimbursed a modest fee for their service. There are also three field Medicolegal Death Investigators who conduct examinations under the direction and guidance of the Chief or Deputy Chief Medical Examiner. The field Medical Examiners and field Medicolegal Death Investigators are appointed by and serve at the pleasure of the Chief Medical Examiner for a term of five years and can be renewed indefinitely. The OCME will also utilize medical consultants such as, a forensic anthropologist or forensic odontologist, as necessary for case investigation.

OFFICE OPERATIONS

Notification of deaths: When a death is called in to the OCME the administrative staff is responsible for collecting as much information as possible to document the details of death and to help make the determination of whether the case will be accepted for investigation by the OCME, and if so whether it will be an autopsy, examination or paper review. Some of the information, includes, but is not limited to: decedent demographics, date, time and location of death, decedent medical and social histories, next of kin information and pertinent scene findings.

Scene Visits: There are times when law enforcement personnel request a scene visit by OCME. These are usually when the manner of deaths are suspicious or believed to be homicides. Scene visits are conducted by the Chief Medical Examiner, Deputy Chief Medical Examiner, the Medicolegal Death Investigators, and some of the Field Medical Examiners. In 2018, the OCME performed 32 scene visits; the Medicolegal Death Investigators conducted the majority of them.

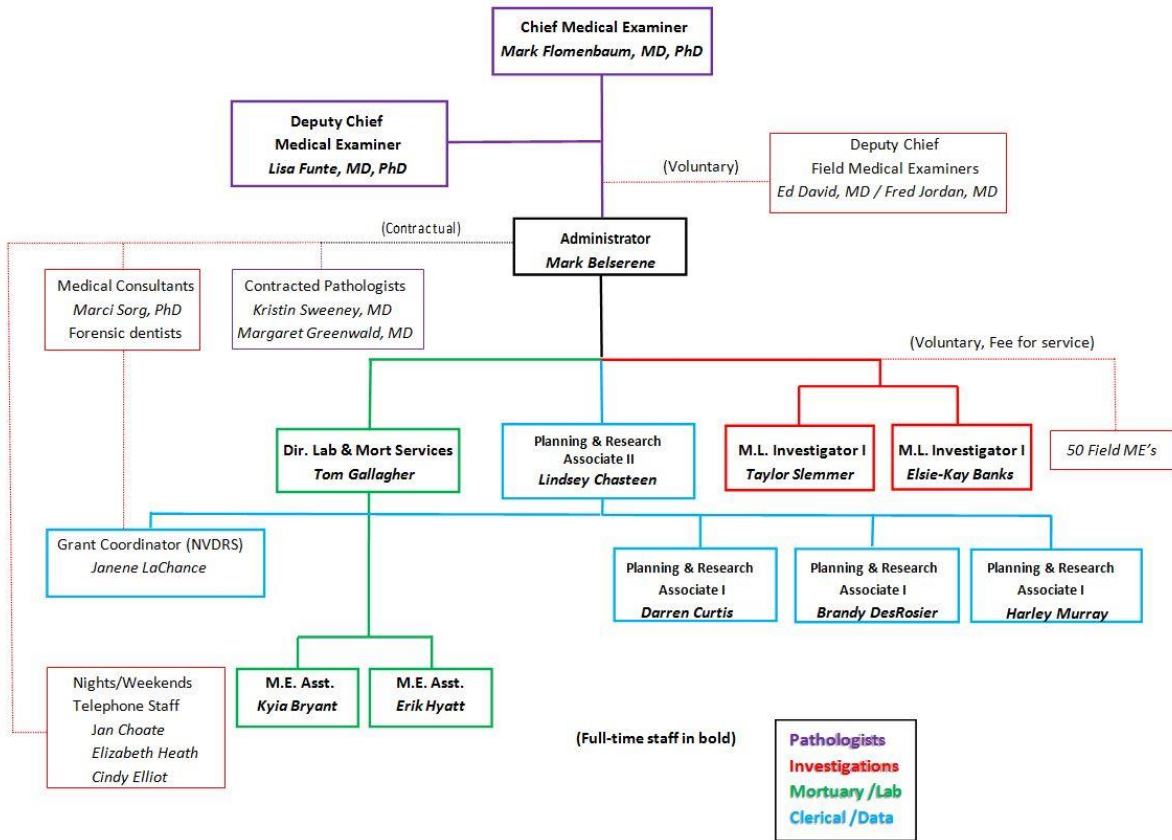
Mortuary Functions: The OCME is dedicated to treating all human remains with respect and dignity, and to expedite transport of bodies into and out of our facility for timely funerary arrangements.

Unidentified and Unclaimed Bodies: OCME office policies apply equally to all decedents whether or not they are identified or claimed. The standard practice for the OCME is to contact the town of death to arrange burial for a body that is unclaimed.

In addition to the resources available in Maine to make identifications, especially through the State Police Crime Laboratory, the OCME also participates in and utilizes The National Missing and Unidentified Persons System (NamUs) and The National Criminal Information Center (NCIC). These organizations help identify unknown decedents and share their data with other jurisdictions throughout the nation. At the conclusion of 2018 the office was actively attempting to identify five unidentified bodies; with an additional 11 unidentified partial skeletal remains cases.

On rare occasions, an exhumation may be required to pursue an investigation; this can only be granted by court order for investigative purposes. The OCME did not conduct any exhumations in 2018.

CURRENT ORGANIZATIONAL CHART



STATISTICS AND DEMOGRAPHICS OF CASES

All cases that are referred to the OCME are assigned a unique numerical identifier and then placed into one of several lettered categories that indicate the level of investigation that will be performed:

A = Autopsy: These are cases where jurisdiction is accepted by the OCME for investigation and a forensic autopsy is deemed necessary to determine the Cause and/or Manner of Death. The Chief or Deputy Chief Medical Examiner will complete the death certificate after all autopsy studies are completed.

E = Examination: These are cases where jurisdiction is accepted by the OCME for investigation but do not require a full autopsy. They will receive a thorough external examination, usually by a field Medical Examiner, and may require additional testing or investigation. The field Medical Examiner usually completes the death certificate, especially if further studies are not necessary. The infrequent “partial autopsy” is usually categorized as an examination.

P = Paper Review: These are cases where jurisdiction is accepted by the OCME in order to properly certify the deaths, but the decedent has been in a hospital or other healthcare setting for a period of time, or the body is no longer available to be viewed. These investigations require reviewing all pertinent medical records, police reports, and emergency-services run sheets, but no

examination of the body will be done. The Chief or Deputy Chief Medical Examiner will complete these death certificates.

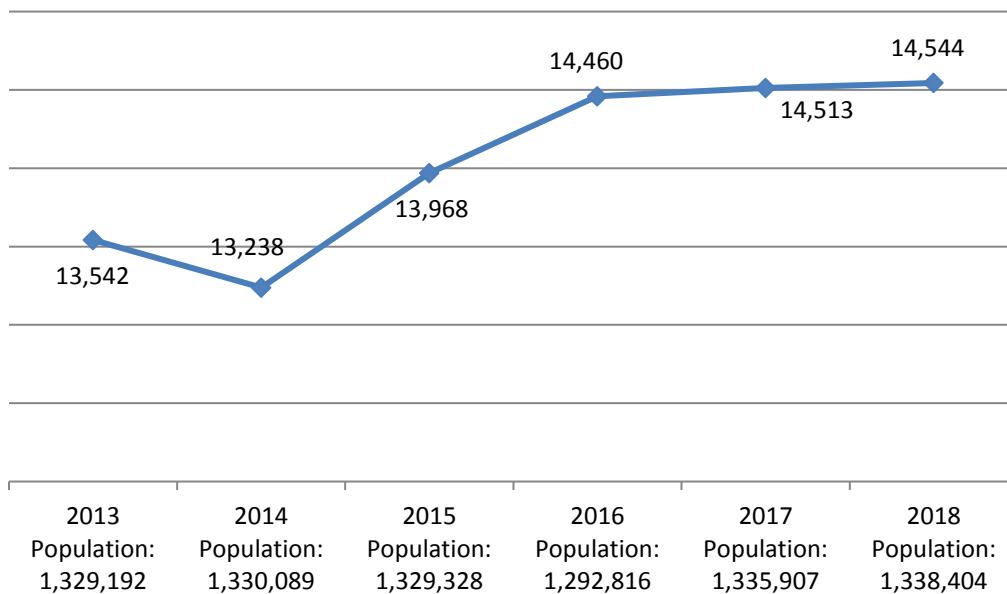
R = Released: In an unattended, natural death where a person’s primary care physician or hospital physician is familiar with the patient and willing to sign the death certificate, the OCME releases the case back to the doctor, essentially turning over (or “releasing”) jurisdiction.

J = Jurisdiction Declined: If the OCME is notified of an attended, medically expected, natural death, the OCME declines jurisdiction and the attending physician completes the death certification.

O = Other: When bones or other suspected human remains are called into the OCME and identified as being of non-human origin, or surgical specimens the case category is “other”.

C = Consult: On very rare occasion law enforcement or state prosecutors may ask the OCME to render a forensic pathology opinion or interpretation of injuries sustained by a living person. These files are kept in our case management system with all other cases but are distinguished as “Consults” because the victims are still alive. There are usually less than four of these cases per year.

NUMBER OF DEATHS IN MAINE

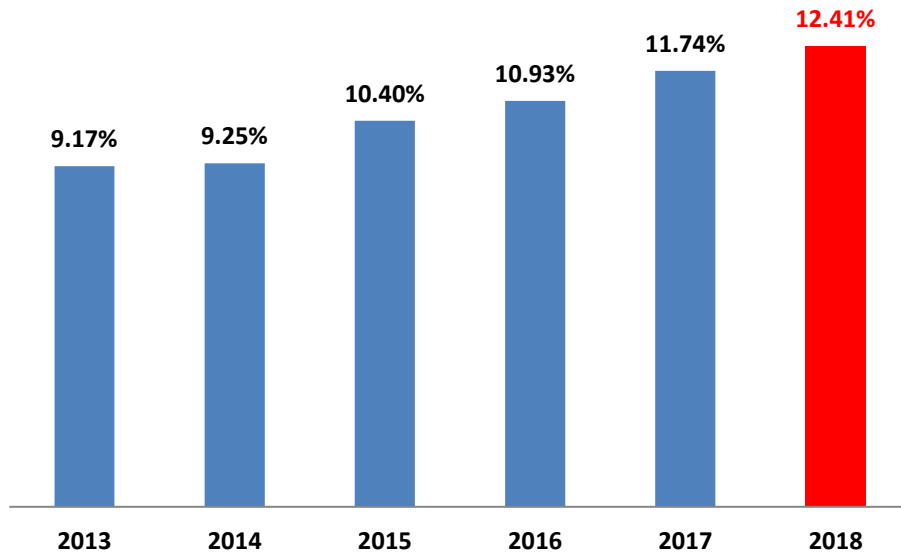


(Maine Department of Health - Vital Records)

In 2018, the OCME received over 3,200 reports of death or possible human remains. The office took jurisdiction and performed investigations on approximately 55.5% of those cases.

| | <u>2013</u> | <u>2014</u> | <u>2015</u> | <u>2016</u> | <u>2017</u> | <u>2018</u> |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| # of Deaths Reported to OCME | 2,731 | 2,688 | 2,912 | 3,139 | 3,272 | 3,252 |
| # of Cases OCME took Jurisdiction | 1,242 | 1,224 | 1,453 | 1,581 | 1,704 | 1,805 |
| # of Examinations Conducted | 910 | 897 | 1,075 | 1,166 | 1,185 | 1,084 |
| # of Autopsies Conducted | 304 | 282 | 319 | 302 | 319 | 264 |
| # of Paper Reviews | 28 | 45 | 59 | 113 | 200 | 457 |

PERCENTAGE OF DEATHS INVESTIGATED BY OCME



ANALYSIS OF CASES BY MANNER OF DEATH

Manner of Death is typically defined as an explanation of how a death occurred, either natural or violent. There are currently five classifications for manners of death in Maine. These are: natural, accident, homicide, suicide, and undetermined.

A **natural** death is defined as one that is due entirely to disease or natural process(es).

An **accident** is a death resulting from a chemically or physically traumatic event that usually was unanticipated by all parties involved; such as a motor vehicle accident, fall, drowning, or unintentional overdose.

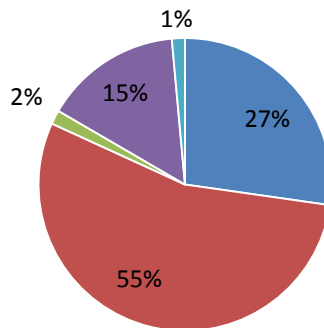
A **homicide** is a death that occurs at the hands of another person or as a result of an illegal act. Intent to cause death is a common component but is not required to classify a death as a homicide. For the purpose of a death certificate, the classification of homicide is a “neutral” term and does not carry the judicial implication of whether the death was due to criminal intent or whether it was justified. (Other agencies in the state may use different working definitions of the term “homicide”.)

A **suicide** is a death where an individual took his or her own life intentionally and is psychologically competent enough to comprehend the significance of the act.

An **undetermined** death can be either of undetermined cause, undetermined manner or both. An undetermined cause of death may be of physiologic origin without anatomic findings. An unwitnessed seizure or death from an undiagnosed cardiac rhythm disturbance with no trauma or positive toxicologic findings may result in a designation of “undetermined” cause of death. A clear-cut drowning may have the cause of death listed as “drowning”, but if the circumstances of how the individual came to be submerged are not apparent after a thorough investigation, the manner of death may be listed as “undetermined”. If skeletonized remains are discovered without obvious trauma or known circumstances, the cause and manner of death may both be listed as “undetermined”. The Chief and Deputy Chief Medical Examiners are the only persons authorized to classify a death as undetermined.

MANNER OF DEATH FOR OCME CASES

■ Natural ■ Accident ■ Homicide ■ Suicide ■ Undetermined



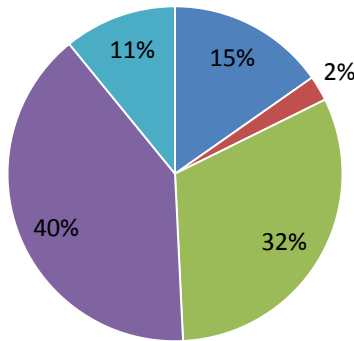
ACCIDENTS

The mode of death here refers to the type of event within a given category of Manner that led to an individual’s death. Some common modes of death for Manner being Accident are: motor vehicle collisions, drug overdoses, falls, and drownings. Over half of all cases the OCME

investigates are accidents. Of all accident cases, the most common mode is unintentional drug overdoses, followed by falls and then motor vehicle accidents.

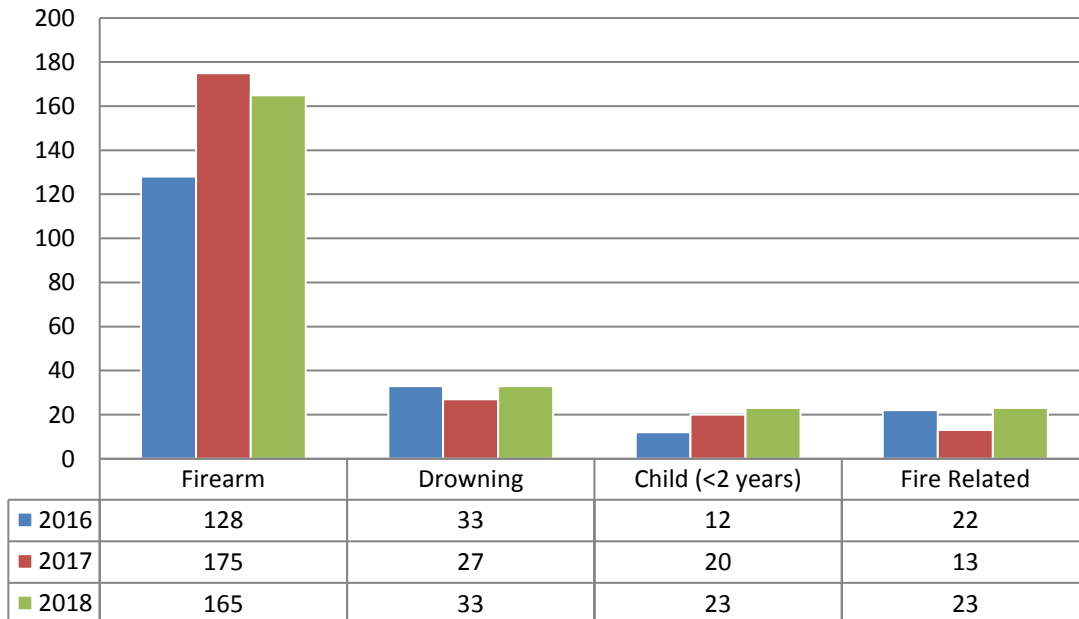
Breakdown of Accidental Deaths by Mode

■ Motor Vehicle ■ Drowning ■ Overdose ■ Fall ■ Other



Categorizations of Modes of Death

The OCME handles various modes of death, including but not limited to: firearm, drowning, child involved (< 2 years of age), and fire related deaths. These deaths may be accidents, suicides or homicides. In 2018, the OCME saw a decrease in deaths from firearms and an increase in drowning, fire-related and child deaths.

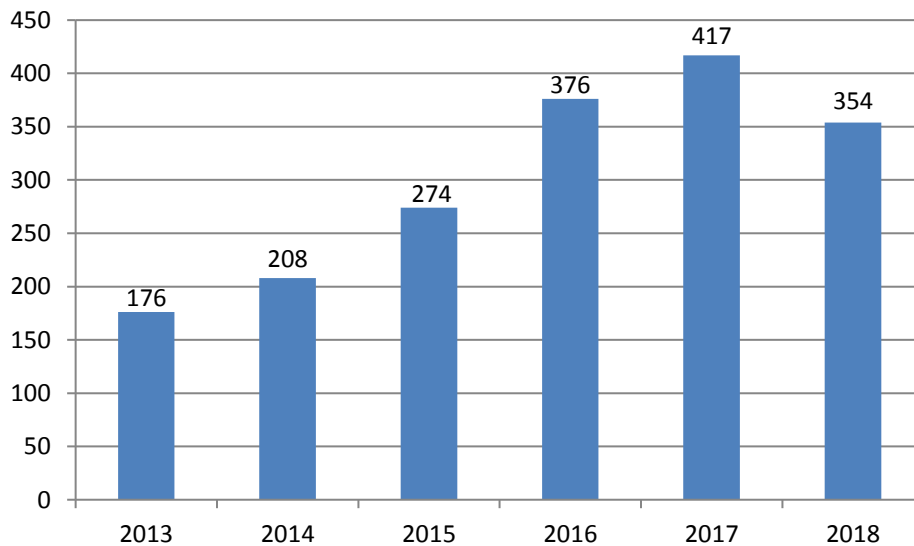


Drug Related Deaths

When a case requires toxicologic testing, the OCME sends body fluid samples to NMS Labs in Pennsylvania (an accredited forensic toxicology reference laboratory). The OCME does not perform toxicologic testing on every case; toxicology testing is performed primarily for suspected overdoses, individuals with little to no medical history, and drivers of motor vehicles. The OCME works closely with the Department of Highway Safety to report alcohol detected in drivers and pedestrians killed in motor vehicle incidents. As a part of this cooperative relationship, the Department of Highway Safety pays for those alcohol screens. For the year 2018, the OCME sent samples for alcohol testing in 80 cases of drivers and pedestrians killed in motor vehicle incidents.

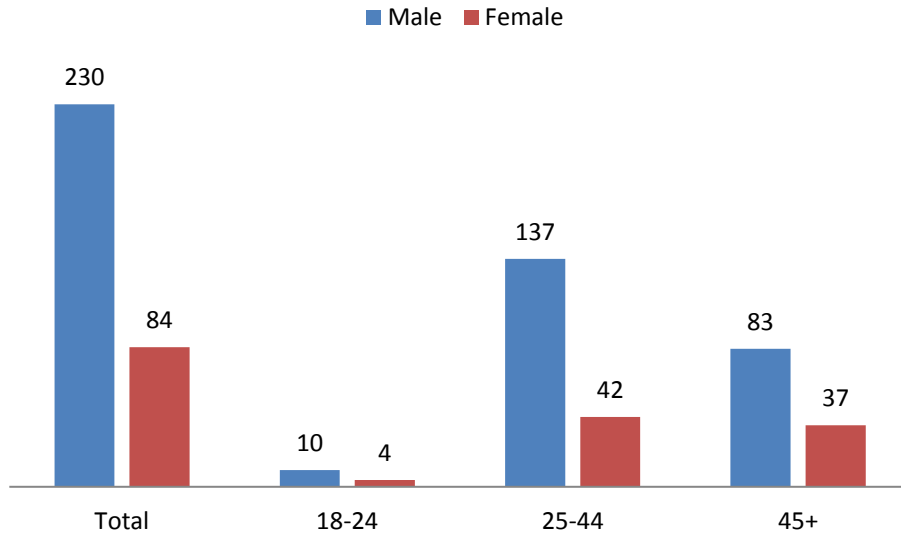
Over the past few years Maine has experienced a sharp increase in the total number of unintentional deaths caused by drug overdoses. These deaths are from pharmaceutical or illicit drugs used alone or in combination. The drug epidemic is not unique to Maine. According to the National Institute on Drug Abuse, the United States has seen a 35% increase (22,568) of drug deaths over the five-year period 2012-2016. Maine has had a 56% increase over this same five-year period. Maine did see a decrease in the number of drug deaths between 2017 and 2018. There is not enough data yet to surmise what the cause of the decrease may be.

Drug Deaths 2013-2018



In 2018, the highest number of unintentional drug deaths occurred in men and women between the ages of 25 and 44 years.

2018 Unintentional Drug Overdose by Age and Sex

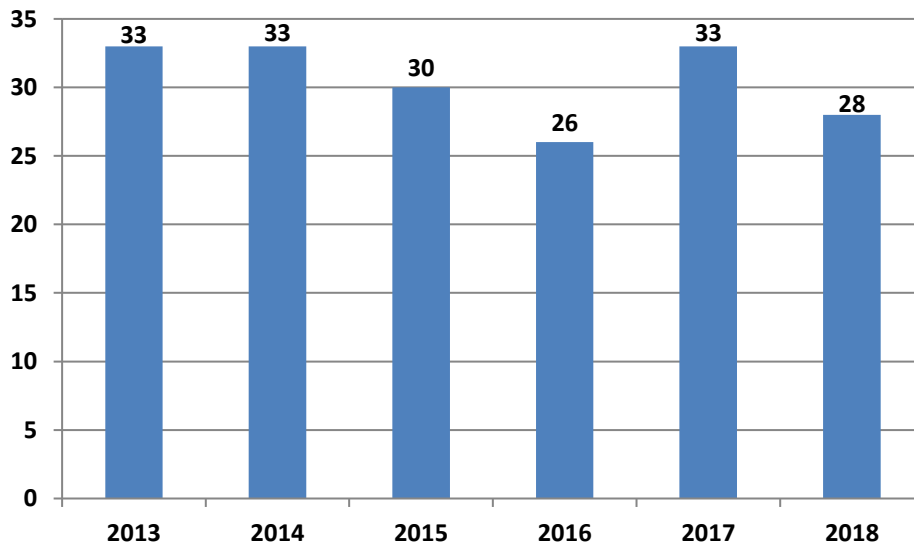


N.B.: There was one unintentional drug death of a female under the age of 18.

HOMICIDES

Maine has had a relatively stable number of homicides over the past several years.

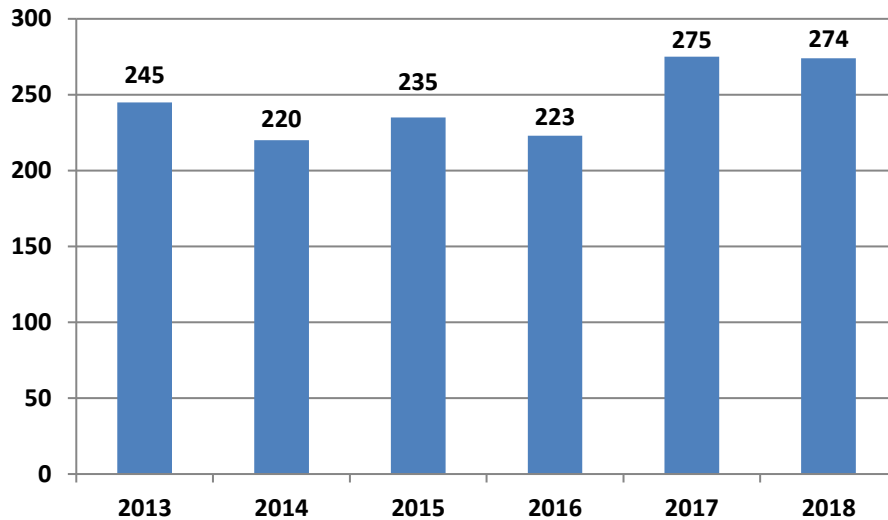
Number of Homicides 2013-2018



SUICIDES

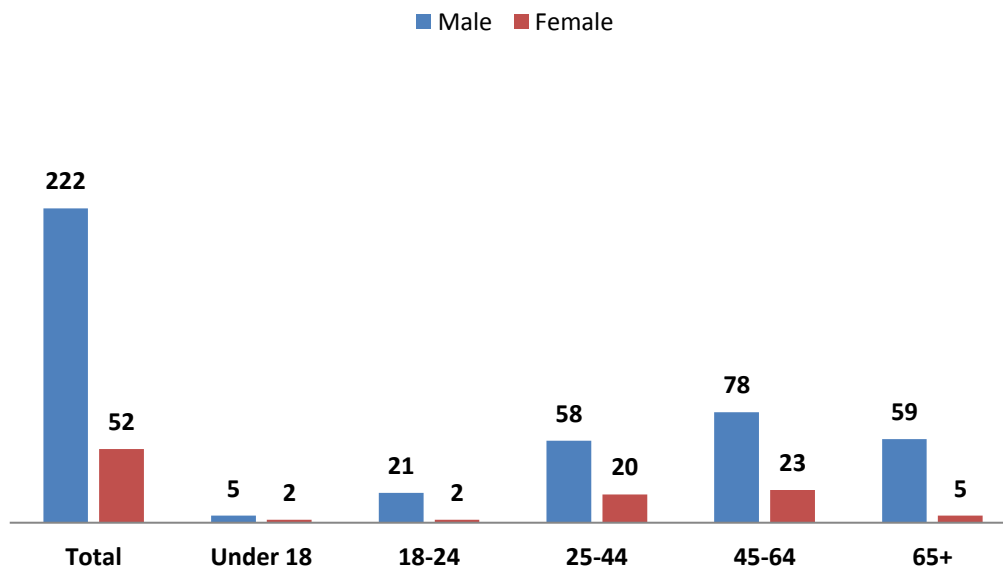
In the six-year period between 2013 and 2018 Maine had an average suicide rate of 245.3 deaths per year or 18.3 suicidal deaths per 100,000 citizens. According to the National Center for Health Statistics' most available data (2017), the United States had 14.0 suicidal deaths per 100,000 citizens.

Number of Suicides 2013-2018



There is a marked gender disparity in suicide deaths: 81% are male. There is also an age disparity: Maine has a higher suicide rate in people aged 45 and older than in any other age group. Of the 274 suicide deaths in 2018, 165 (60%) occurred in people 45 and older.

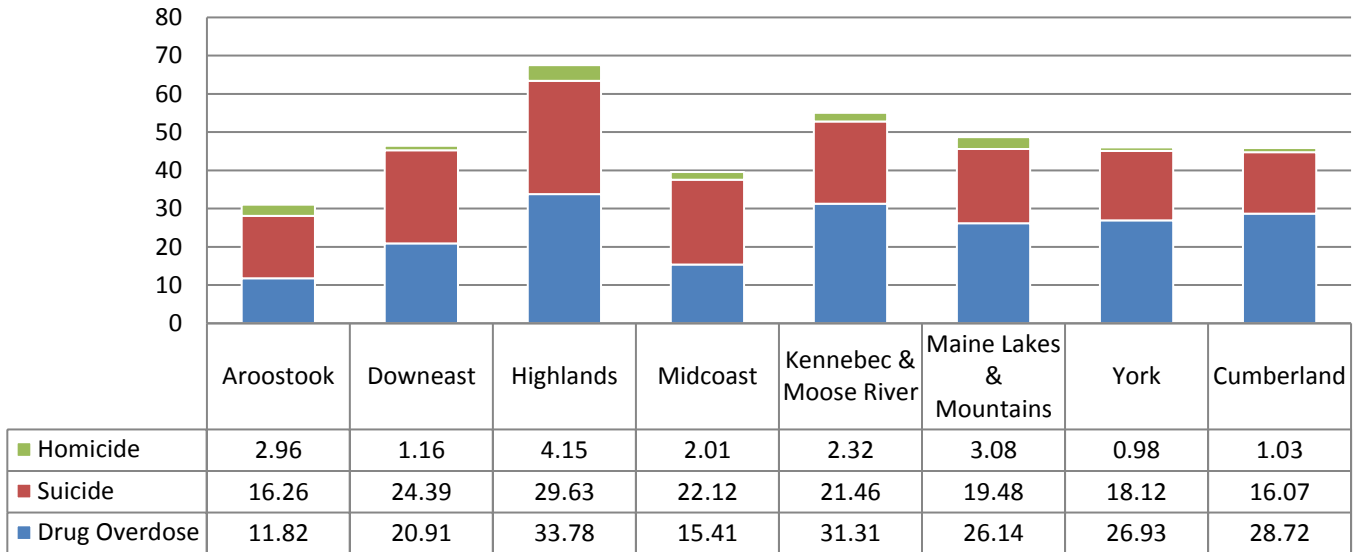
2018 Suicide by Age and Sex



ANALYSIS OF VIOLENT DEATHS BY REGION

For demographic purposes, Maine can be sub-divided into several regions; these include Aroostook, Downeast, Highlands, Midcoast, Kennebec & Moose River, Maine Lakes & Mountains, York, and Cumberland.

| <u>Region:</u> | <u>County(ies) included within region</u> | | | |
|-------------------------------------|--|--------------------|------------------|--------------|
| Aroostook: | <i>Aroostook</i> | | | |
| Downeast: | <i>Hancock</i> | <i>Washington</i> | | |
| Highlands: | <i>Penobscot</i> | <i>Piscataquis</i> | | |
| Midcoast: | <i>Knox</i> | <i>Lincoln</i> | <i>Sagadahoc</i> | <i>Waldo</i> |
| Kennebec & Moose River: | <i>Kennebec</i> | <i>Somerset</i> | | |
| Maine Lakes & Mountains: | <i>Androscoggin</i> | <i>Franklin</i> | <i>Oxford</i> | |
| York: | <i>York</i> | | | |
| Cumberland: | <i>Cumberland</i> | | | |

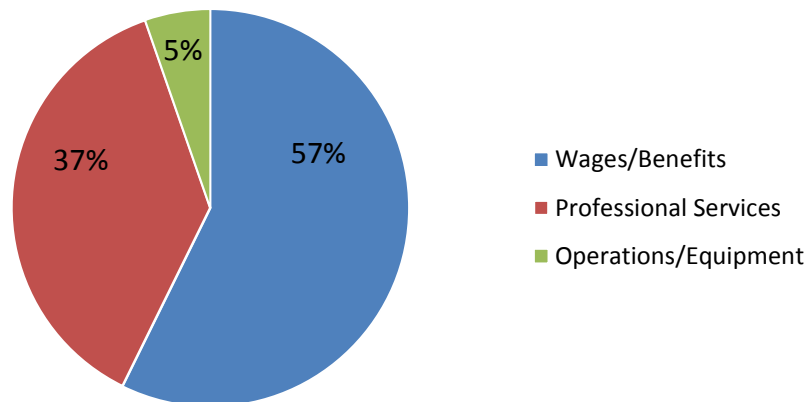


N.B.: Numbers are Rate per 100,000

OFFICE OF CHIEF MEDICAL EXAMINER BUDGET

The OCME FY'18 budget was \$2,251,606.00. The annual budget covers salaries/benefits (\$1,478,564.69), operational costs and equipment (\$142,988.18) and contracted services (\$948,915.06). This total, \$2,570,467.93, comes to approximately \$1.92 per citizen of Maine. According to the National Association of Medical Examiners, the average budget for Medical Examiner's Offices in the United States should be at least \$3.36 per citizen. In 2018 the OCME in Maine was operating with a budget that is approximately 43% of the recommended national standard.

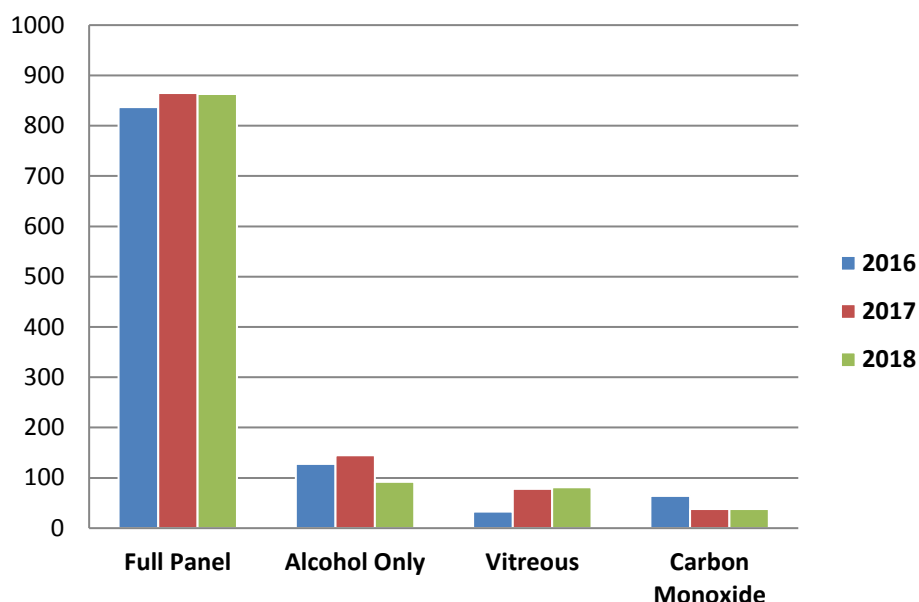
BUDGET BREAKDOWN



All violent deaths, drug related deaths, and unexpected natural deaths should be, and are, accepted for jurisdiction and investigation by the OCME. Ideally, most of these cases should be autopsied. But given the realities of staffing shortages and budgetary constraints the cases in which full autopsies are performed are usually only the ones necessary for criminal prosecution, unexpected deaths in persons under 55-60 years old and a variety of other special types where there are compelling issues of public safety or concern. The remaining cases are being examined without autopsies by our field Medical Examiners and Medicolegal Death Investigators with external inspections and blood draws. In some instances, a partial autopsy (an autopsy confined to a specific body region) is conducted; this can be done at the office in Augusta, or by the field Medical Examiners. The OCME sometimes conducts partial autopsies on burn victims by opening the trachea to determine if soot is in the airway. In 2018, the OCME conducted seven partial autopsies.

In 2018, the OCME expense for toxicology testing was \$202,767.13. The increase in numbers and types of drugs of abuse that must now be tested, and the increase in cost of the routine and special tests are continuing to increase. In 2018, 50% of OCME cases received toxicology testing; this is 902 cases. The scope of the testing has also increased significantly.

TOXICOLOGY TESTING 2016-2018



When a body needs to come to Augusta for autopsy the OCME most often utilizes the transport services of local funeral homes for which we pay a standard minimum fee and mileage rate. These transport fees are not trivial and alternative transport policies must be explored. In 2018, the OCME staff transported 24 bodies to Augusta for autopsy or examination, while funeral homes transported 369 bodies to the office in Augusta, and 955 bodies from death scenes to funeral homes by order of the office.

EXTRAMURAL AND COMMUNITY INVOLVEMENT

The OCME has progressed over the years to no longer be concerned primarily with just how and why people die; the emphasis has evolved much more into how the OCME can keep others from suffering similar fates and how to improve longevity and quality of life for all Mainers.

Public Health: Autopsies help identify natural disease that may have been preventable, and reporting deaths involving consumer products helps the U.S. Consumer Product Safety Commission identify potentially dangerous products and report them to the manufacturer. The OCME has partnered with the U.S. Consumer Product Safety Commission to report deaths that involve consumer products; these may include a ladder, wheelchair, baby-swaddles, bed rail, or even a car seat.

Education: Education is a large component of OCME's community involvement. The office has always been accommodating to school group tours and answering questions submitted by people looking to enter the fields of forensic science or forensic pathology. The OCME staff conducts trainings for the community as well. The OCME has developed a partnership with the Veterans Administration Clinical Neuropsychology Postdoctoral Residency Program; allowing residents to observe autopsies. The OCME Medical Examiners and Medicolegal Death Investigators also

conduct trainings with local and state law enforcement agencies when requested. The OCME hosted 45 educational guests in 2018.

The Chief Medical Examiner, Dr. Mark Flomenbaum, periodically conducts on-site lectures regarding topics relevant to forensic pathology for Field Medical Examiners, Medicolegal Death Investigators and law enforcement. These lectures are in addition to lecturing at the Annual New England Seminar in Forensic Sciences held at Colby College every summer. The Chief Medical Examiner also works to accommodate invitations to area colleges to lecture on any number of topics.

The OCME offers hands-on, real world experience to students in nursing programs at several universities in the state, including the University of Maine and the University of New England. The students are invited to the OCME where they can observe an autopsy. This opportunity allows the students to see the internal workings of the human body and discuss any findings with the forensic pathologist. The office has received positive feedback from the nursing programs that have participated and plans to continue offering this unique experience to interested students.

College students interested in an internship are welcome at the OCME; the office can accommodate two interns at a time. The internship usually runs during the summer months and is designed to fulfill the needs of the student based on how many credits he/she is looking to achieve and what the area of interest is. In 2018, the OCME hosted several interns. They were students at University of New England and Philadelphia College of Osteopathic Medicine.

To fulfill the education mission, the OCME also hosts high school volunteers. Projects in the past have included building a digital database by uploading data electronically from archival material.

Tissue and Organ Transplants: The OCME works closely with New England Donor Services (NEDS) in accommodating requests for organ and tissue donation. When a person dies in the hospital, NEDS reaches out to the decedent's next of kin for consent to donate appropriate tissues or organs. If the family agrees to donation, and the death falls within the jurisdiction of the OCME, NEDS contacts the OCME to see if we have any restrictions on organs and tissues donations. The OCME works with NEDS and tries to accommodate every request made. Not all cases receive consent from the families to donate and not all decedents meet the medical criteria for donation.

| |
|--------------------------|
| NEDS |
| 136 Referred Cases |
| 16 Organ Donors |
| 37 Tissue Donors |
| 12 Organ & Tissue Donors |

Cremations: Over 11,000 decedents are cremated in Maine annually. By statute, every request for cremation must be reviewed and approved by a Medical Examiner to ensure the death was either natural and did not need to be reported to the OCME or has been reported and was appropriately certified. Field Medical Examiners have the authority to sign cremation releases and are usually the preferred source for most funeral directors. Often, however, the Field Medical Examiners are not available, and the OCME assists local funeral homes and grieving families by

reviewing the cases and signing cremation releases that are faxed or e-mailed directly to the office. In 2018, the Chief and Deputy Chief signed a total of 4,493 cremation releases; all other cremation releases were signed by field Medical Examiners.

MISSING PERSONS

The OCME is the state clearinghouse for missing people in Maine. It is the office’s statutory responsibility to gather pertinent medical, dental, and DNA information on a missing individual so a timely identification can be made in the event remains are found.

The missing person case management system utilized by the OCME is the National Missing and Unidentified Person System (NamUs), which is funded and administered by the National Institute of Justice. The office ensures dental and fingerprint classifications are entered into the National Criminal Information Center (NCIC) and that DNA is entered into the Combined DNA Index System (CODIS). Both systems are national systems, used by every law enforcement agency in the country. Ensuring missing person information is entered improves the chances of a notification or identification if an individual is found out of state.

In 2018, the OCME identified one individual who had died in Maine in 2014. This individual had been missing from Texas for 13 years; living under an alias. Forensic genealogy was used in making the identification, with the assistance of *DNA Doe Project*, a non-profit organization.

Currently there are 139 people reported missing from Maine and 16 cases of unidentified remains.

STATE OF THE OFFICE

On October 31, 2017 the OCME was awarded full national accreditation by the National Association of Medical Examiners (NAME), for five years (maximum award). To maintain this status, the OCME must expand. Under NAME’s standards, the U.S. range of number of autopsies completed per population is 1-2/100,000. Maine would need to complete 625-1,300 autopsies annually to meet these standards. The Chief Medical Examiner and Deputy Chief Medical Examiner are allotted 20-40% of their time for administrative responsibilities. In order for the OCME to meet the NAME standard for number of autopsies performed per population the office would need to employ at least one more full-time medical examiner, two more full-time Medicolegal Death Investigators, one or two more autopsy technicians and one more administrative staff member.

Per NAME: U.S. range of number of autopsies per population..... 1-2/1000
Annual number of autopsies needed in Maine to reach U.S. norms 625-1,300

Per NAME: number of autopsies/year/non-chief fulltime Medical Examiner..... 250-300
Total number of FTE Medical Examiners needed to meet national guidelines 3.0-3.5

The most recent NAME national survey indicates more than half of all offices do autopsies on both weekend days, and *except* for state systems, contracted services are used by most offices. With only two full-time forensic pathologists, the Maine OCME must use contracted services to meet the demands of forensic investigations. On average, state systems are funded at a lower per capita rate than county/district systems with ranges reported from \$0.44 to \$9.19. The average rate of funding per capita is \$2.58 per person; Maine's current funding rate per capita is \$1.68.

To maintain national accreditation there will need to be a significant budget increase at OCME to accommodate an increase in staff, an increase in operations and a major renovation or replacement of the physical facility.