

Washoe County Regional Medical Examiner's Office



**REGIONAL MEDICAL
EXAMINER'S OFFICE**

2016 Annual Report

Chief's Report

HISTORY

In brief, the history of the Medical Examiner's Office can be summed up in the pre-2007 and post-2007 eras. Prior to 2007, the office was the Washoe County Coroner Office (WCCO), and was managed by a layperson coroner with a law enforcement background. Pathologists were retained on a contract basis to perform autopsies, and frequently also actively practiced hospital pathology at the same time. Effective July 1, 2007, the Board of County Commissioners approved county code that established a Medical Examiner system in Washoe County, and the office became known as the Washoe County Medical Examiner-Coroner Office. A forensic pathologist was the Chief Medical Examiner and Coroner, and employed a second forensic pathologist as a full-time Assistant Medical Examiner; numerous part-time locum tenens pathologists from across the country were added over time to handle the increasing regional caseload. A Deputy Chief Medical Examiner position was added in 2015 due to both caseload and the need for succession planning. Dr. Ellen Clark was the first Chief Medical Examiner of the office. After many years of dedicated service, Dr. Clark retired at the end of 2016.

CURRENT STATUS

Dr. Laura Knight, Deputy Chief Medical Examiner since 2015, accepted a promotion to Chief Medical Examiner beginning in January 2017. Assistant Medical Examiner vacancies were filled in late 2016 to early 2017, and a newly created third Assistant Medical Examiner position was filled in July 2017. As of July 2017, the office is staffed by four full-time, board-certified forensic pathologists who perform all autopsies and other medical examinations, eliminating the need for part-time, itinerant locum tenens pathologists. With four forensic pathologists, the annual caseload can be divided in such a way that no individual pathologist is over-burdened, the chief has sufficient time for administrative duties, and the office can now meet per-pathologist caseload requirements for national accreditation. No longer needing to rely on contractual locum tenens pathologists with varying schedules and availability will also lead to increased stability of the office, more standardized pathologist reports, and improved report turnaround times.

2016 YEAR IN REVIEW

2016 was a busy and eventful year for the office, with events extending into early 2017. Construction of a new Medical Examiner facility was underway for the entirety of 2016, wrapping up at the end of December. During construction, Medical Examiner staff members were frequently involved in reviewing plans, and selecting finishes and equipment. The result of the construction project, and many years of planning and effort, was a modern, physically beautiful, highly efficient and functional facility. The building dedication and ribbon-cutting was held on 1/18/2017, and was attended by the County Commissioners, County Manager and Assistant Managers, Medical Examiner staff, community partners, and the media. Operations were moved to the new building on 1/27/2017. With the move into the new facility, the office was rebranded as the Washoe County Regional Medical Examiner's Office (WCRMEO), reflecting the office's status as a modern Medical Examiner system and facility, and the regional services the office provides.

Caseload increased in 2016. This is in keeping with the trends tracked in the office, documenting an average annual increase of 10% or more in total cases reported, and autopsies/examinations performed, since 2007. Additional information on annual caseload and case types, is presented subsequently in this annual report. Caseload increases have led to increased staffing requirements, and budgetary requests to add staff were made in the recently completed budget process; 3 additional staff positions were approved for the FY18 budget (including the 4th forensic pathologist mentioned above). Increased caseload reflects influx of population in the area, as well as an ageing population, and increases in certain categories of death over time, such as drug-related deaths and suicides.

Mass fatality incident preparedness remains a focus for the office, with recent memory including incidents such as the Mizpah Fire, Amtrak crash in Churchill County, and the Reno Air Races incident. In May 2016, a training exercise was conducted with the Northern Nevada Disaster Victim Recovery Team (a volunteer team organized by the Medical Examiner's Office) at the Desert Research Institute. Medical Examiner staff also conducted training for airport personnel regarding use of the UVIS (Unified Victim Identification System) in June 2016, and participated in a grant-based project in conjunction with the Health District to produce a Logistics Coordination Annex for our existing Mass Fatality Plan. The WCRMEO is as well-prepared for all phases of a mass fatality incident as is possible, given finite staffing and resources.

FUTURE GOALS

Future goals of the office include national accreditation by the National Association of Medical Examiners; enhanced partnerships with organ and tissue donation organizations, including an in-house tissue donation program; and increased academic partnership with the University, including a possible fellowship training program to produce future forensic pathologists. We will continue to be the regional referral center for high quality autopsies, providing services on a contract basis to 18 additional counties in Nevada and Northern California, and the regional center for excellence in medicolegal death investigation. We will continue to conduct high quality mass fatality training exercises, and regular training conferences on medicolegal death investigation for surrounding county coroners and law enforcement. We will increase our academic presence, through cooperation with the University of Nevada-Reno School of Medicine, enhancing the education of medical students, and hopefully, training forensic pathology fellows in the future. Finally, we will strive to continue to serve the citizens of Washoe County with diligence, respect, and compassion, at a time when many of them are having the worst day of their lives, having lost a loved one.

This report represents the first ever annual statistical and informational report of the Washoe County Regional Medical Examiner's Office. It is my sincere hope that other community agencies, community leaders, law enforcement, regional county coroners, and citizens may find it interesting and useful. Additionally, I hope this data may be of use in prevention efforts, as many of the deaths that come to the attention of the Medical Examiner/Coroner are ultimately preventable.

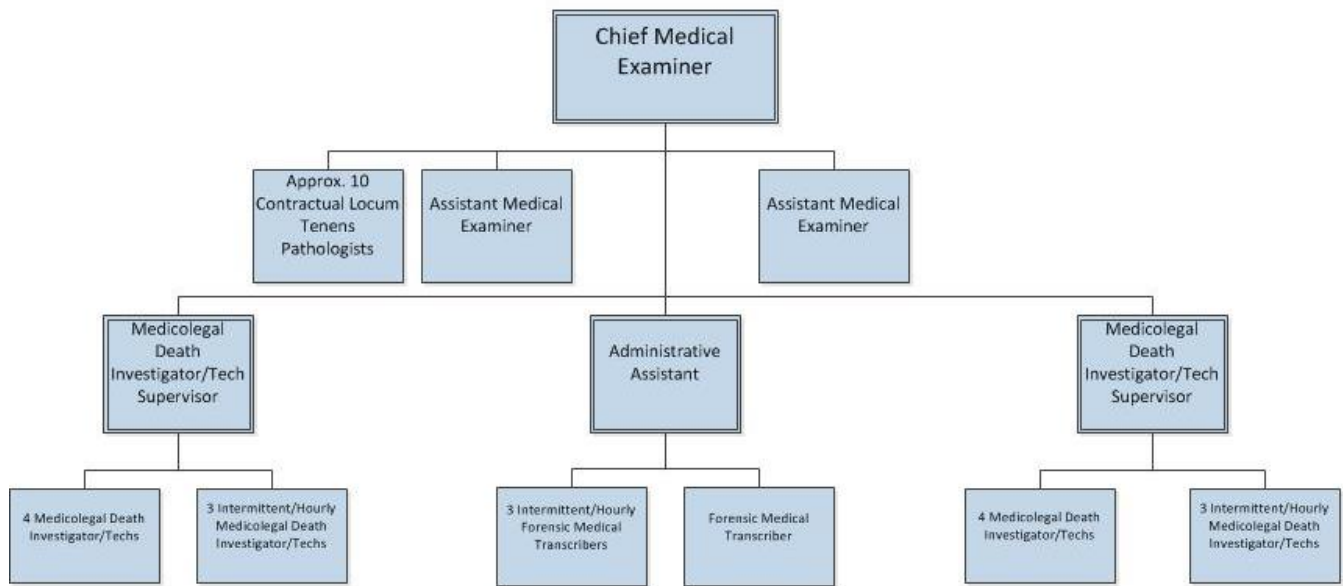
Yours in service,



Dr. Laura D. Knight, MD
Chief Medical Examiner & Coroner
July 20, 2017

I. Introduction

2016 Organizational Chart*



*Does not include new Fiscal Year 2018 positions. Includes now-eliminated locum tenens contractual pathologists.

Mission Statement

The mission of the Washoe County Regional Medical Examiner's Office (WCRMEO) is to investigate unexpected and unexplained deaths in order to identify and report on the cause and manner of death. We apply scientific investigative techniques and medical procedures, using integrity and compassion, to serve families and public agencies impacted by sudden unexpected death.

Statutory Authority

The WCRMEO is primarily governed by Chapter 259 of the Nevada Revised Statutes (NRS) and Chapter 35 of the Washoe County Code (WCC). NRS 259 requires that each county have a coroner and WCC 35 creates the Medical Examiner system to fulfill coroner duties.

Description

The Medical Examiner investigates sudden or unexpected deaths, traumatic deaths, and suspicious deaths. Certain categories of sudden death, by law, must be reported to and investigated by this office. All suspicious and many apparent natural death scenes in Washoe County are attended and evaluated by trained Medicolegal Death Investigators employed by the Medical Examiner's Office. Many reported deaths are ultimately determined to be due to natural causes, but as many as 40% of reported cases are found to be due to accidents, homicidal trauma and suicides. Of the deaths reported to and falling within the office's jurisdiction, approximately 25% will require autopsy or other medical examination. Board-certified forensic pathologists (medical doctors specializing in forensic pathology) conduct these autopsy and medical examinations.

Responsibilities of the office include:

- Determining the cause and manner of death for jurisdictional cases
- Electronic certification of death certificates in all cases of unnatural death and in many cases of natural death
- Conducting investigations of death scenes
- Identifying, collecting and processing evidence in order to ensure scientific integrity and usefulness
- Recognizing unsuspected homicidal violence
- Recognizing and reporting communicable and dangerous diseases, poisonings, and consumer product safety concerns
- Positively identifying the dead
- Notifying the decedent's next of kin and providing proper assistance to grieving families
- Ensuring integrity of the personal property of decedents
- Providing expert legal testimony in criminal and civil matters
- Preparing for and responding to mass disasters
- Assisting in providing for burial of indigent citizens in accordance with law

Jurisdiction and Service Area

The WCRMEO's primary jurisdiction is Washoe County. However, the office provides services to 13 additional Nevada counties and 5 California counties through interlocal agreements.



WCRMEO service area highlighted in blue

Examination Types and Descriptions

Autopsy	A full postmortem examination encompassing detailed examination of the exterior and interior of the body, including dissection of internal organs and structures, to determine cause of death. Specimens for additional studies, such as toxicology testing, are obtained during the autopsy.
Limited Autopsy-Head Only	An autopsy examination limited to the external examination of the entire body and internal examination of only the head. Used in select trauma or suspected trauma cases only. Toxicology specimens can be obtained during a limited autopsy.
External Examination	An examination of the exterior of the body that documents identifying features, stigmata of disease, and findings of injury, without accompanying internal dissection. Toxicology specimens such as blood can be obtained during an external examination.
Consultation	Death investigated by the WCRMEO in which no physical examination is performed because the decedent has well-documented medical condition(s) and no primary care physician, or trauma with prolonged hospitalization, determined to be the cause of death. A Medical Examiner reviews medical records and circumstances of death, and completes the death certificate.
Jurisdiction Terminated	Natural death from known natural disease that is reported to the WCRMEO but does not fall within its jurisdiction

Manner of Death Types and Descriptions

Natural	Death caused by a natural disease or medical condition
Suicide	Death caused by a purposeful self-action with the intent of ending one's own life
Homicide	Death at the hands of another
Accident	Death caused by an unintentional action or external factor
Undetermined	Death in which the cause of death may or may not be known, but the circumstances in which the death came about are unknown or cannot be determined
Pending	Death in which the investigation is not yet finished

II. General Statistics

Deaths reported to the WCRMEO increased by 11% from 2015 to 2016.

Total Cases by Type

	<u>2015</u>	<u>2016</u>	<u>Percent Change</u>
Autopsies	565	657	+16%
Head-Only Autopsy	27	54	+100%
External Exams	316	279	-12%
Consultations	655	641	-2%
Jurisdiction Terminated	2255	2622	+16%
Total Cases Reported	3819	4253	+11%

Total* Examination Cases by Manner of Death

	<u>2015**</u>	<u>2016</u>	<u>Percent Change</u>
Natural	288	326	+13%
Suicide	137	170	+24%
Homicide	34	38	+12%
Accident	237	263	+11%
Undetermined	41	27	-34%
Pending	0	4	N/A

*Total Examination Cases comprises all autopsies, limited (head-only) autopsies, and external examinations completed by the WCRMEO.

**Manner of death for cases occurring outside Washoe County limits is not certified by the WCRMEO but rather the local county coroner. The majority of outside county cases are reported back to the WCRMEO by the jurisdiction agency with manner of death after the death is certified. Prior to mid-2015, cases occurring outside Washoe County limits returned no manner of death reporting.

Total* Examination Cases by Sex

Male	698	70%
Female	292	30%
Unknown	0	0%

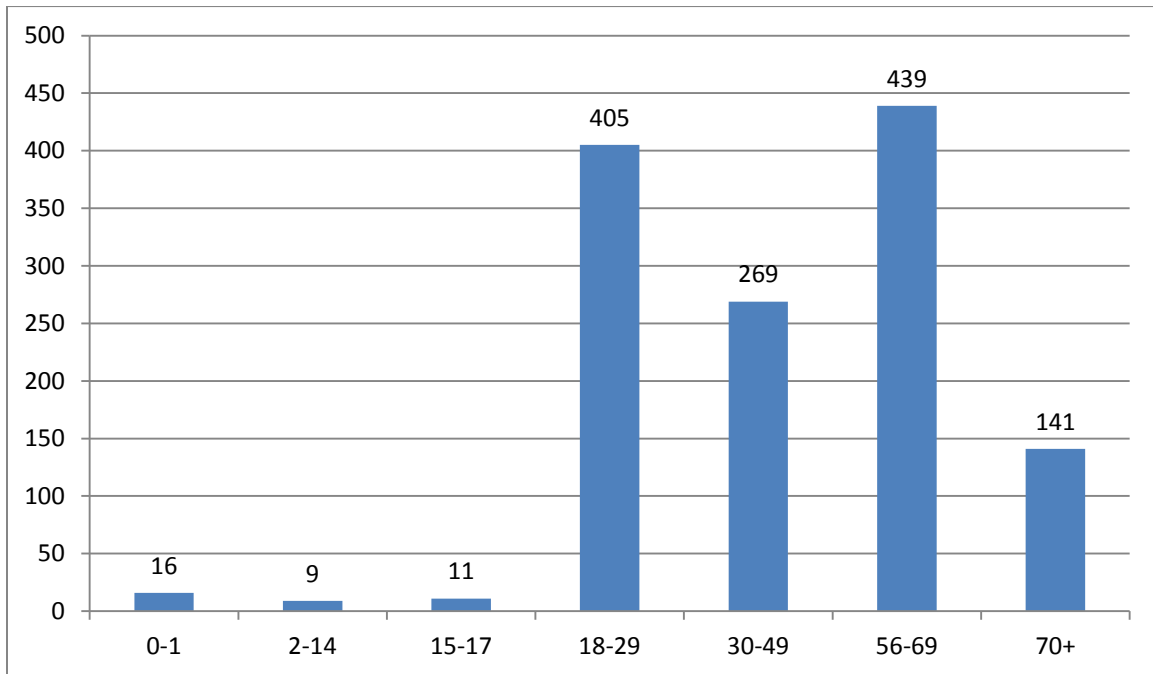
*Total Examination Cases comprises all autopsies, limited (head-only) autopsies, and external examinations completed by the WCRMEO.

Total* Examination Cases by Race

White	794	80%
Mexican/Hispanic	89	9%
Black/African American	38	4%
American Indian/Native American	32	3%
Asian	25	3%
Other	12	1%

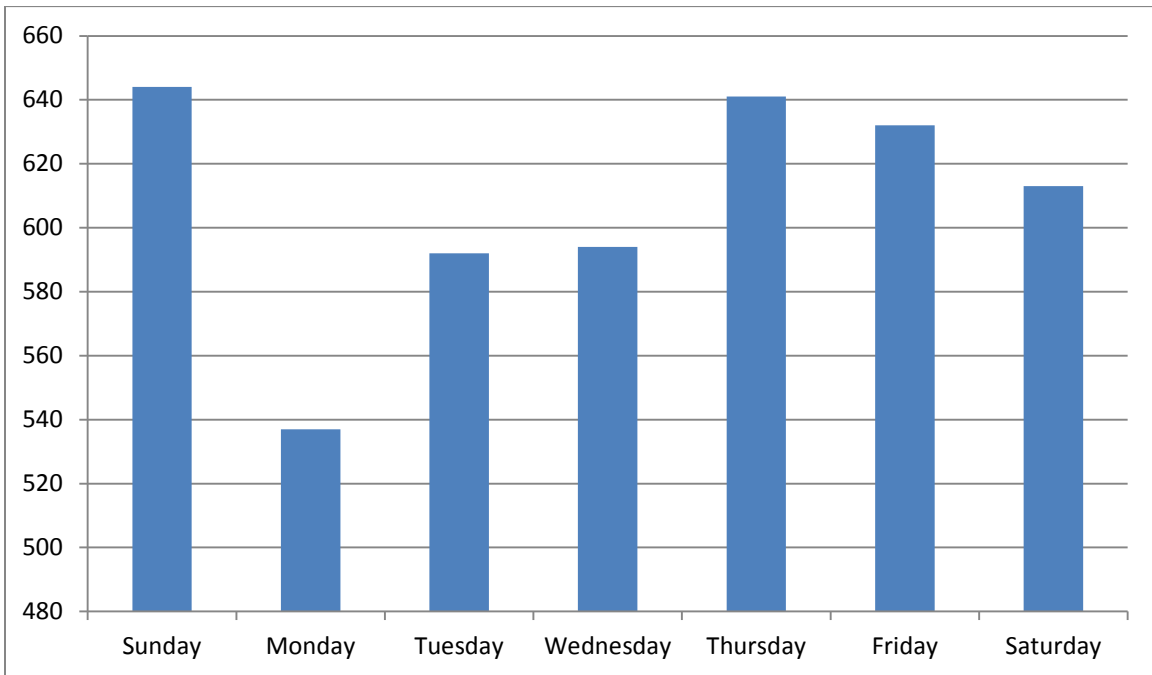
*Total Examination Cases comprises all autopsies, limited (head-only) autopsies, and external examinations completed by the WCRMEO.

Total* Examination Cases by Age

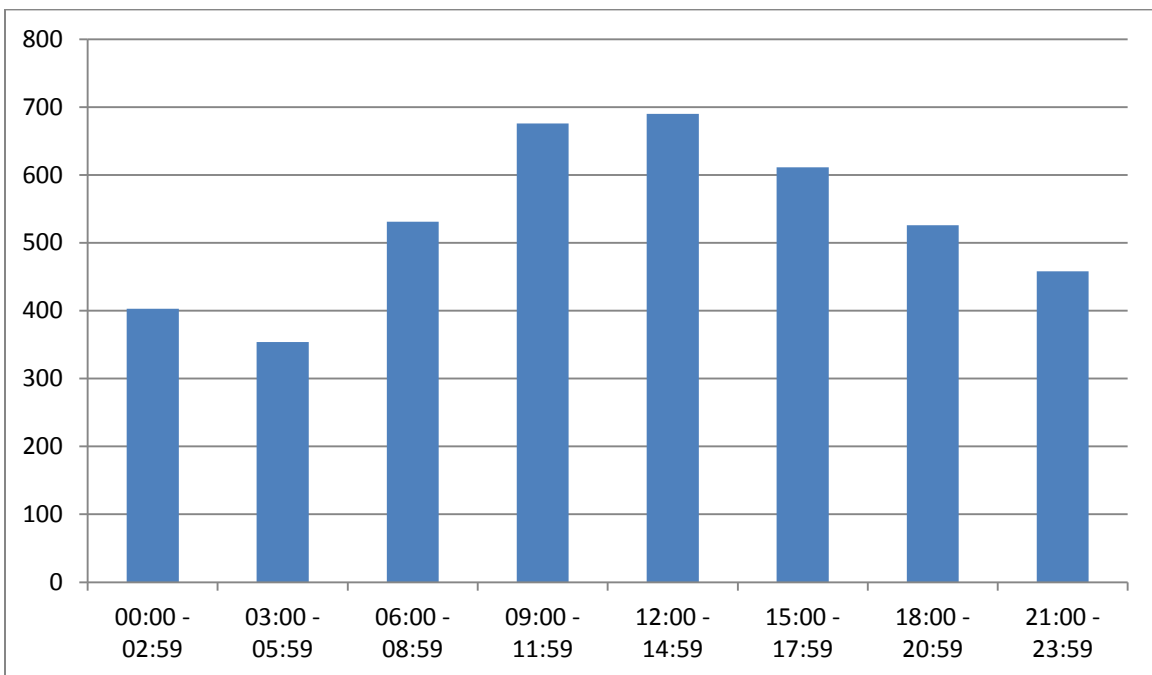


*Total Examination Cases comprises all autopsies, limited (head-only) autopsies, and external examinations completed by the WCRMEO.

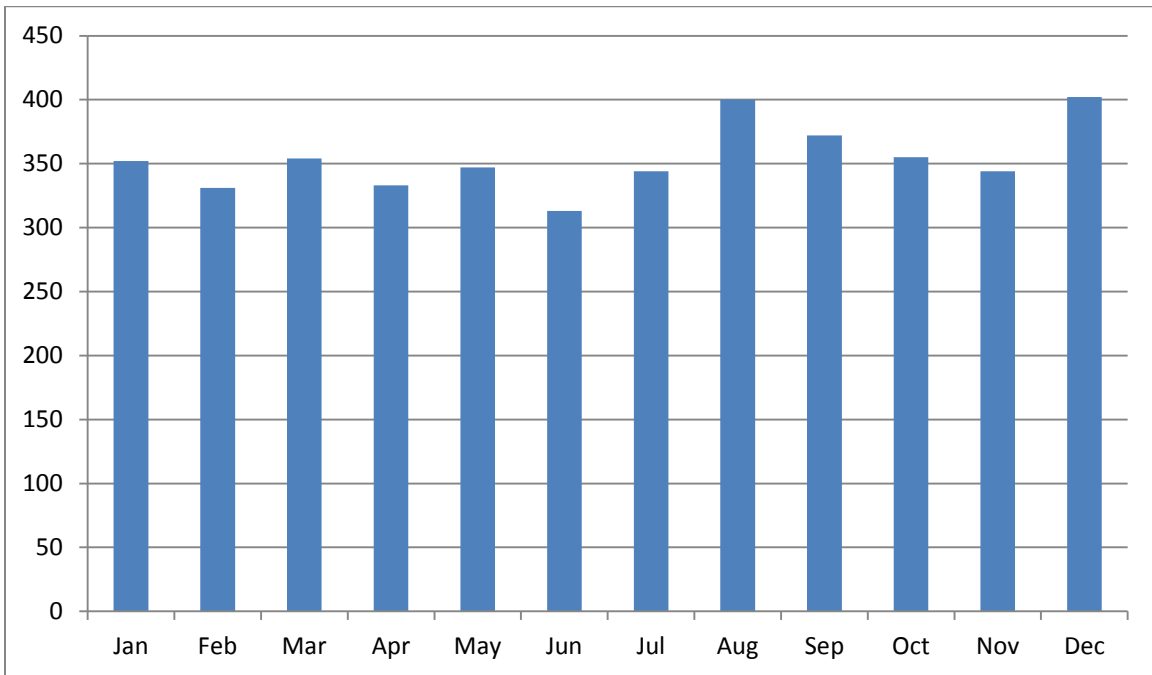
Total Reported Deaths by Day of the Week



Total Reported Deaths by Time of Death

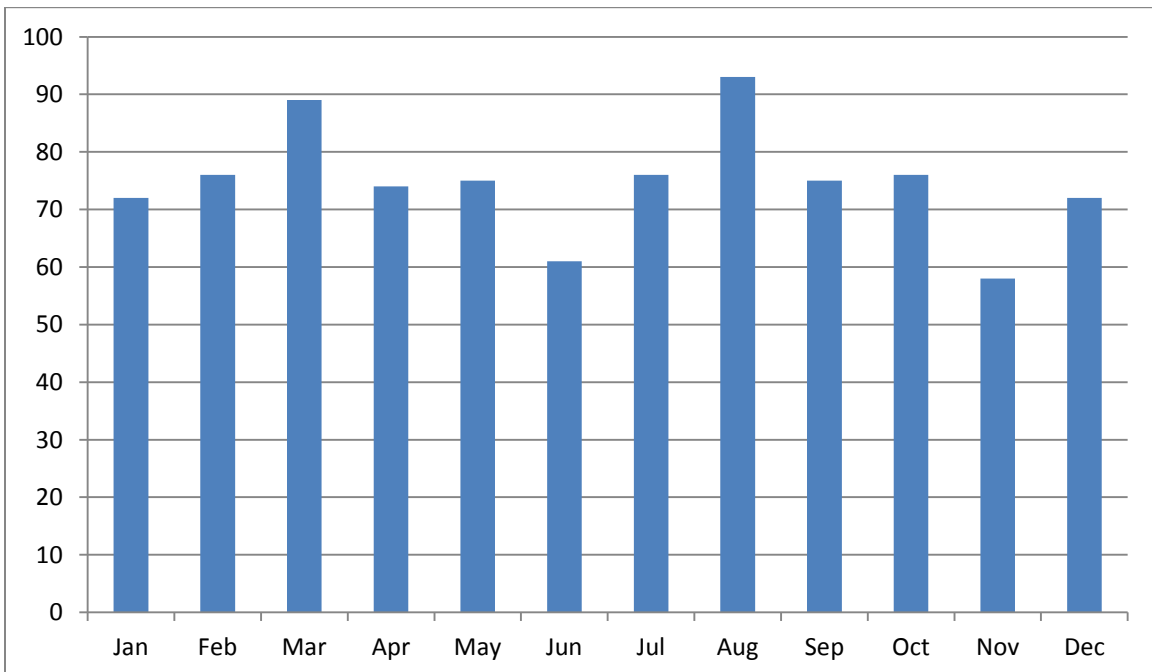


Total Reported Deaths by Month



Scene Responses by Month

897 total scene responses in 2016



III. Specific Causes & Types of Death

Major Causes of Death, for Each Manner of Death

For All* Autopsy/Examination and Consultation Cases Performed at WCRMEO

NATURAL

Cause of Death	Number	Percent
Atherosclerotic and/or hypertensive cardiovascular disease	366	48%
Chronic obstructive pulmonary disease	50	7%
Cancer	40	5%
Others	305	40%
Total	761	100%

ACCIDENT

Cause of Death	Number	Percent
Blunt force injuries, including falls	156	37%
Drug intoxication	105	25%
Drowning	10	3%
Asphyxia, various types	7	2%
Others	139	33%
Total	417	100%

SUICIDE

Cause of Death	Number	Percent
Gunshot wound	96	55%
Hanging	39	22%
Drug intoxication	21	12%
Jump from height	4	2%
Sharp force injuries	3	2%
Carbon monoxide poisoning (intentional)	2	1%
Others	11	6%
Total	176	100%

HOMICIDE

Cause of Death	Number	Percent
Gunshot wound(s)	22	60%
Blunt force injuries	6	16%
Sharp force injuries	6	16%
Others	3	8%
Total	37	100%

UNDETERMINED

Cause of Death	Number	Percent
Drug intoxication	7	27%
Sudden unexplained death in an infant	5	19%
Blunt force injuries (unexplained)	4	15%
Others	10	39%
Total	26	100%

*Includes Washoe County and outside counties covered by contract

Washoe County Transportation Deaths

There were 88 transportation-related deaths in Washoe County in 2016.

Transportation Deaths, By Sex

Male	66	75%
Female	22	25%

Transportation Deaths, By Age

0-17	3	3%
18-29	20	23%
30-49	23	26%
50-69	32	36%
70+	10	11%

Transportation Deaths, By Role

Motor Vehicle Driver/Operator	49	56%
Motor Vehicle Passenger	12	14%
Pedestrian	23	26%
Cyclist	1	1%
Aircraft Pilot/Operator	1	1%
Aircraft Passenger	1	1%
Unknown	1	1%

Washoe County Drug Intoxication Deaths

While 2016 saw a decrease in overall number of drug deaths, particularly prescription drug deaths, methamphetamine and heroin remain prevalent and increasingly are being combined with prescription drugs with an end result in death. Designer drug deaths also appeared in Washoe County in 2016, largely due to the illicit designer opioid drug U-47700.

	2012	2013	2014	2015	2016
Total Drug Deaths (Washoe County)	125	145	109	133	110

Major Categories*

Illicit Drugs Only	36	54	41	53	38
Prescription Drugs Only, or Prescription & Over-the-Counter Drugs	77	64	64	65	43
Illicit and Prescription Drugs Combined	8	17	2	11	19

Illicit-involved Deaths, By Drug

Methamphetamine (Without Heroin)	25	50	26	43	46
Heroin (Without Methamphetamine)	11	9	12	13	16
Methamphetamine and Heroin	3	4	3	8	9
Cocaine (Alone or With Others)	5	11	4	3	4
Designer Drugs	1	0	0	0	4

*Not inclusive of all intoxication deaths.

IV. Statistics on Vulnerable Populations and Other Special Categories

Washoe County Homeless Person Deaths

Deaths of homeless individuals (persons with no fixed address or living quarters) reported to the WCRMEO are specifically tracked in the WCRMEO statistical database. The majority of these deaths were accidental in nature or due to natural disease. One death was due to trauma in which the circumstances and manner of death could not be determined.

Washoe County Homeless Deaths, By Sex

Male	23	96%
Female	1	4%

Washoe County Homeless Deaths, By Age

0-17	0	0%
18-29	1	4%
30-49	6	25%
50-69	14	58%
70+	3	13%

Washoe County Homeless Deaths, By Manner of Death

Natural	9	38%
Accident	11	46%
Suicide	2	8%
Homicide	0	0%
Undetermined	2	8%

Washoe County Homeless Person Deaths, by Manner of Death, Cause of Death

NATURAL

Cause of Death	Number	Percent
Cardiovascular disease	5	56%
Complications of chronic alcoholism	2	22%
Diabetes mellitus	1	11%
Sepsis due to pneumonia	1	11%

ACCIDENT

Cause of Death	Number	Percent
Drug-related deaths (all involved methamphetamine and/or heroin)	5	45%
Pedestrians struck by motor vehicle (1) or train (2)	3	27%
Bicyclist struck by motor vehicle	1	9%
Fall	1	9%
Hypothermia	1	9%

SUICIDE

Cause of Death	Number	Percent
Jump from height	1	50%
Ligature hanging	1	50%

UNDETERMINED

Cause of Death	Number	Percent
Traumatic head injury (probable unwitnessed fall)	1	50%
Dehydration and malnutrition (possibly intentional)	1	50%

Law Enforcement-Involved Deaths in Washoe County

In-Custody Deaths (Jail)	11
Officer-Involved Shootings*	6

Washoe County Incarcerated/In-Custody Deaths, by Manner of Death

Natural	4	36%
Suicide	3	27%
Homicide	2	18%
Accident	1	9%
Undetermined	1	9%

Causes of Death

Accident

Complications of dehydration due to drug toxicity/withdrawal (1)

Natural

Cerebral vascular infarction (stroke) (2)

End-stage liver disease (1)

Brain tumor (1)

Suicide

Hanging (2)

Hyponatremia due to water intoxication (1)

Homicide

Cardiac event due to methamphetamine intoxication and physical restraint/struggle (2)

Undetermined

Complications of a Subdural Hematoma (1)

*For disambiguation purposes: While these deaths from officer-involved shootings occurred within Washoe County, none of the shooting officers were Washoe County Sheriff's deputies. Officers from Reno Police Department, Nevada Highway Patrol, and Sparks Police Department were involved in these shootings.

Washoe County Pediatric Deaths

There were a total of 20 deaths of individuals under the age of 18 that fell under WCRMEO jurisdiction in Washoe County in 2016.

Washoe County Pediatric Deaths, by Manner of Death

Natural	6	30%
Suicide	3	15%
Homicide	1	5%
Accident	6	30%
Undetermined	4	20%

Causes of Death

Accident

- Blunt force injuries due to motor vehicle collision (3)
- Methadone intoxication (1)
- Asphyxia due to unsafe infant sleep conditions (1)
- Fall from height (1)

Natural

- Viral encephalitis and associated complications (2)
- Heart failure due to congenital heart malformation (1)
- Epilepsy (1)
- Bacterial myocarditis (1)
- Primary cardiac arrhythmia (1)

Suicide

- Hanging (2)
- Gunshot wound (1)

Homicide

- Gunshot wound (1)

Undetermined

- Sudden unexplained infant death while bed-sharing (3)
- Undetermined (1)

Washoe County Senior Deaths

There were 552 deaths at 65 years of age and older that met the criteria for Medical Examiner jurisdiction. Deaths in seniors present special challenges, such as the need to rule out neglect or abuse, and the propensity for ultimately lethal injury from simple falls.

Senior Deaths, By Sex

Male	356	65%
Female	196	36%

Senior Deaths, By Manner of Death

Natural	356	65%
Suicide	45	8%
Homicide	1	<1%
Accident	143	26%
Undetermined	6	1%
Pending	1	<1%

Causes of Death

Accident

- Complications of falls (112, 78%)
- Transportation/motor vehicle accidents (14, 10%)
- Other (17, 12%)

Natural

- Atherosclerotic and hypertensive cardiovascular disease (194, 55%)
- Chronic obstructive pulmonary disease (46, 13%)
- Cancer (23, 7%)
- Other (93, 26%)

Suicide

- Gunshot wounds (33, 73%)
- Drug intoxication (6, 13%)
- Hanging (4, 9%)
- Other (2, 4%)

Homicide

- Blunt force trauma (1)

Undetermined

- Other (6)

Washoe County Unclaimed and Abandoned Bodies

The Washoe County Public Administrator's Office accepted 157 referrals of unclaimed and abandoned decedents from the WCRMEO in 2016.

	2012	2013	2014	2015*	2016*	2017**YTD
Total Unclaimed	39	65	83			66
Family Found	13	41	56			45
No Family Found	26	15	23			21
Abandoned		9	4			4

*No data is available in 2015 and 2016 due to a change in the case database used by the WCRMEO.

**2017 case numbers are year-to-date through June 30, 2017.

Other Statistics of Interest⁺

- 1320 bodies were transported to and stored at the Medical Examiner's Office in 2016.
- Toxicology testing was performed on 809 cases in 2016.
- There were zero (0) cases in which a decedent remained unidentified after thorough investigation in 2016.
- There were 10 cases in which both cause and manner of death were undetermined after a complete investigation.
- 34 organ donations and 78 tissue donations were performed on Medical Examiner cases in 2016, with the full cooperation of the WCRMEO.
- The WCRMEO participated in zero (0) exhumations in 2016.

⁺ Required by the National Association of Medical Examiners for accreditation purposes.