

COUNTY OF LOS ANGELES
DEPARTMENT OF MEDICAL EXAMINER-CORONER



2019 ANNUAL REPORT

Dr. Jonathan Lucas
Chief Medical Examiner-Coroner

LOS ANGELES COUNTY BOARD OF SUPERVISORS



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MEDICAL EXAMINER – CORONER MAIN OFFICE

1104 North Mission Road, Los Angeles, CA 90033
(323) 343-0512 | info@coroner.lacounty.gov

mec.lacounty.gov

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MISSION AND VISION

MISSION

The mission of the County of Los Angeles Department of Medical Examiner-Coroner is to provide independent, quality, death investigation using advanced forensic science with compassion and objectivity for families, communities, and public health & safety; working collaboratively with our partners to reduce preventable deaths.

VISION

The Los Angeles County Department of Medical Examiner-Coroner seeks to be the premier medicolegal death investigation agency, nationally recognized as a leader in the forensic science community.

HISTORY

The County of Los Angeles has had a Coroner in place since California became a state in 1850. At the time, the Coroner was an elected official who was tasked with determining the cause and manner of death in specific cases.

The first Coroner, Alpheus P. Hodges, also was the Mayor of Los Angeles.

Following the 1954 Model Postmortem Examinations Act, the Board of Supervisors amended the County Charter in 1956 to require that the Coroner be a certified pathologist.

They appointed Dr. Theodore Curphey as the first Chief Medical Examiner-Coroner in 1957.

The Department occupied its first permanent location at the Old Hall of Records in 1911 and moved to the Hall of Justice in 1926, before the Department moved to its current location on North Mission Road in 1972.

In 1990, the Board of Supervisors appointed acting Chief Medical Examiner-Coroner Dr. J. Lawrence Cogan to oversee medical matters and Director Ilona Lewis to be responsible for all other departmental functions.

In 2013, the Board re-established a single Chief Medical Examiner-Coroner Department Head and appointed Dr. Mark Fajardo to this position. Dr. Jonathan Lucas was appointed in July 2017.

JURISDICTION

California law requires the Department of Medical Examiner-Coroner to inquire into and determine the circumstances, manner, and cause of all sudden, violent, or unusual deaths, and those deaths where the decedent has not been seen by a physician 20 days prior to death. The cause of death is determined by a Deputy Medical Examiner and a death certificate is issued after the examination is completed.

DEPARTMENT DESCRIPTION

The County of Los Angeles Department of Medical Examiner-Coroner (DMEC) is an independent entity, separate from any law enforcement agency. The Department reviews deaths that occur within Los Angeles County, and are sudden, unexpected, or violent, or when the deceased has not been attended recently by a physician (California Government Code 27491). Through forensic investigation and scientific means, the Department offers unbiased determinations of cause and manner of death.

The Department is comprised of five sections, including the Operations Bureau, Forensic Medicine Division, Forensic Sciences Laboratories Division, Public Services Division, and the Administrative Services Division.

OPERATIONS BUREAU

The Operations Bureau is responsible for providing direct services of investigations and decedent services through a 24-hours-a-day, and 7-days-a-week operation. The Bureau includes two main sections: Investigations and Decedent Services.

In the Investigations Section, Coroner Investigators respond to death scenes anywhere in the County. As part of their death investigation, they will conduct a physical examination of the deceased, collect evidence and personal property, take photographs, and conduct interviews. They also are tasked with identifying the deceased and notifying the next of kin. Coroner investigators prepare investigative reports to aid the forensic pathologist in the determination of the cause and manner of death.

The Decedent Services Section is responsible for the transportation, processing, storage, and release of decedents' bodies, which includes the weighing and measuring of bodies, the collection of personal effects, and the collection of physical and medical evidence, fingerprinting and tagging of the decedent.

Additionally, the Operations Bureau oversees the Special Operations Response Team (SORT), emergency and disaster planning, homeland security grants, fleet management, and other ancillary programs, such as regional offices and the court-mandated hospital and morgue program.

FORENSIC MEDICINE DIVISION

The Forensic Medicine Division is comprised of full-time, permanent staff who are board-certified forensic pathologists. Also referred to as Deputy Medical Examiners, the forensic pathologists are responsible for the professional medical investigation and determination of the cause and manner of each death handled by the Department. Also included in the Medical Division are Forensic Technicians, who assist doctors during autopsy, and photograph and x-ray decedents.

The physicians are experts in the evaluation of sudden, unexpected, natural deaths and unnatural deaths, such as deaths from firearms, sharp and blunt force trauma, etc. Physicians are frequently called to court to testify on cause of death and their medical findings and interpretations, particularly in homicide cases.

In addition, the Forensic Medicine Division has consultants in forensic neuropathology, odontology, anthropology, anesthesiology, pediatrics, ophthalmologic pathology, pulmonary pathology, cardiac pathology, psychiatry, psychology, and radiology to assist the deputy medical examiners in evaluating their cases.

Furthermore, the Forensic Medicine Division is one of few medical examiner offices in the nation that uses computed tomography, commonly known as a CT scanner. The instrument improves accuracy of diagnoses, improves turnaround time by conducting virtual autopsies, and minimizes operational costs. In addition to these applications, the CT scanner is utilized for cases where there is religious objection to autopsy.

FORENSIC SCIENCES LABORATORIES DIVISION

The Forensic Sciences Laboratories Division is responsible for the identification, collection, preservation, and analysis of physical and medical evidence associated with Medical Examiner-Coroner cases and includes the following units: Toxicology, Histology, Human Genomics/DNA, Scanning Electron Microscope lab (which includes gunshot residue and toolmark analysis), Field Criminalistics and Evidence Control.

The Laboratories Division conducts a comprehensive scientific investigation into the cause and manner of any death within the Medical Examiner-Coroner jurisdiction. This is accomplished through the chemical and instrumental analysis of physical and medical evidence.

The goal is to provide medical examiners, families of decedents, outside investigating agencies, and the judicial system with timely, accurate, and advanced forensic analyses; and to provide expert interpretation of these analyses through testimony and deposition.

Additionally, the Forensic Sciences Laboratories Division is fully accredited by the prestigious ANSI National Accreditation Board (ANAB) in the following forensic science disciplines: Biology, Firearms and Toolmarks, Materials (Trace), Seized Drugs and Toxicology.

PUBLIC SERVICES DIVISION

The Public Services Division offers compassionate, responsive, and efficient technical decedent processing services to the affected family members, involved law enforcement, mortuaries, medical personnel, and other county departments.

Staff in the division often handle sensitive functions related to the initial, midpoint, and close-out of Medical Examiner-Coroner cases. They offer these functions with utmost professionalism and in a caring manner.

The Public Services Division also manages the Medical Examiner-Coroner case records management and safekeeping and release of decedent personal property. Moreover, the division oversees decedent billing, responds to law enforcement agency inquiries, manages civil and criminal subpoena requirements, and issues death certificates to the mortuaries.

Internal departmental support services include expeditious transcription of all dictated autopsy reports, neuropathology reports, microscopic reports and clerical support to Deputy Medical Examiners.

ADMINISTRATIVE SERVICES DIVISION

The Administrative Services Division is responsible for all departmental financial operations, departmental budget preparation, fiscal reports, personnel, payroll, procurement, accounting, revenue collection, marketing, volunteer services, contracts and grants, public records request processing, information technology, workfare programs, facilities management, and other related functions.

OTHER SERVICES PROVIDED BY DMEC

Special Operations Response Team (SORT)

Within the Operations Bureau is a specialized response unit called SORT (Special Operations Response Team). It is comprised of Medical Examiner-Coroner staff including investigators, criminalists, technicians, doctors and consultants in anthropology and entomology.

The SORT team responds to cases requiring specialized recovery and scene processing techniques, such as those required in aircraft crashes, buried bodies, scattered human remains and fires, and assists law enforcement agencies in general searches for scattered human remains or possible burial sites. They are the primary responders for mutual aid requests and multiple fatality incidents.

Organ & Tissue Donation

The Tissue Recovery/Organ Transplantation Program provides organs, corneas and other tissue to all in need in the community through coordinated efforts with various tissue banks and hospitals.

After consent is obtained, medical staff provide review of organ and tissue procurement in Medical Examiner-Coroner cases. In addition, the program makes tissue available to low-income and indigent patients at County medical facilities at no cost to the patients or hospitals.

Forensic Pathology Resident Training Program

The Department offers the opportunity for pathology residents from local university- affiliated hospitals (USC, UCLA, Cedars-Sinai, and others) to train at the DMEC facility with costs paid by the hospitals. This program fosters positive relationships with the university hospitals' pathology department and improves the standard of practice of forensic medicine in general, as these pathology residents will be practicing in the community when they finish training.

Youthful Drunk Driver Visitation Program (YDDVP)

Since 1989, the Department of Medical Examiner-Coroner has conducted the Youthful Drunk Driver Visitation Program (YDDVP) program, which a judicial officer can consider as an alternative sentencing option. The program is designed to present the consequences of certain behavior to the participants in a manner that is both impactful and educational.

STATISTICS AND DATA

INTRODUCTION

California statute mandates the Department to determine the cause and manner of death for each person that falls under the jurisdiction of the Medical Examiner-Coroner. However, another important function of the DMEC is to compile data regarding the deaths it investigates. Coupled with the right information from other agencies, it can potentially be used to reduce preventable deaths of those living in the community.

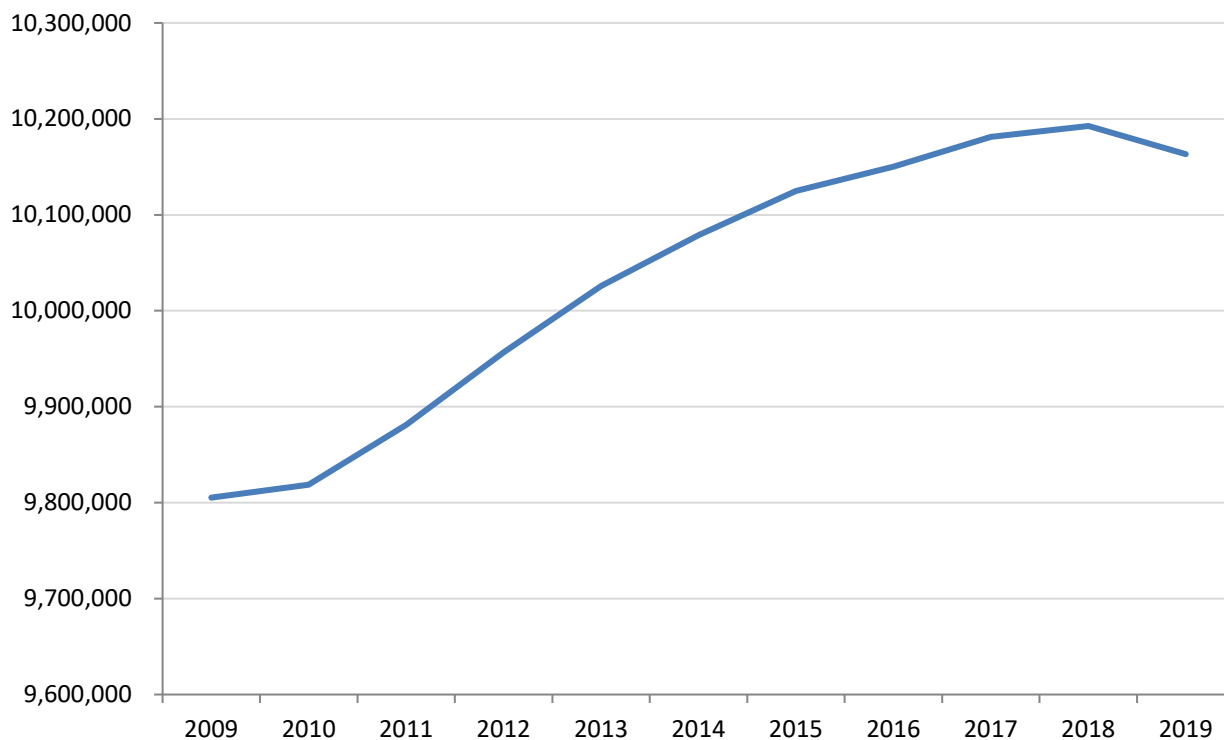
Keep in mind that this report represents investigation of only a certain subset of deaths in the county –14.5% (9,489) of the 65,404¹ deaths in 2019. These are the deaths in which the Department is required to take jurisdiction and include all deaths due to non-natural causes countywide (injury, drugs/alcohol, homicides, suicides, etc.) and a relatively small proportion of natural deaths (5% of all natural deaths in the county).

¹<https://data.chhs.ca.gov/dataset/death-profiles-by-county>

STATISTICS REQUIRED BY NATIONAL ASSOCIATION OF MEDICAL EXAMINERS

Deaths Reported	17,940
Cases Accepted	9,489
Number of cases by manner of death	
Accident	3,608
Homicide	571
Natural	4,319
Suicide	871
Undetermined	120
Scene Visits	4,444
Number of bodies transported	6,976
External examinations	
By physician	3,430
By investigator	2,934
Partial autopsies	129
Complete autopsies	3,324
Hospital Autopsies under ME Jurisdiction	1
Cases where toxicology was performed	4,992
Bodies unidentified after examination	22
Organ and tissue donations	
Organ only	187
Tissue only	420
Organ and tissue	92
Unclaimed bodies	715
Exhumations	0

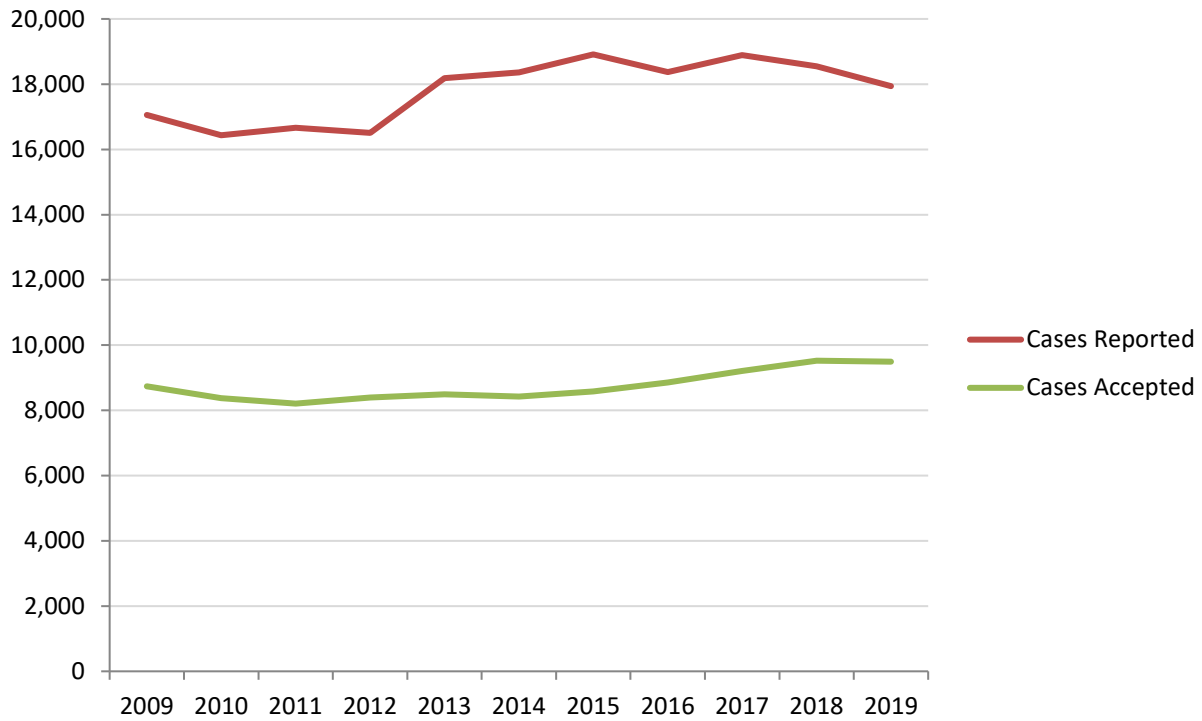
POPULATION OF LOS ANGELES COUNTY, 2009-2019



Year	Population
2009	9,805,233
2010	9,818,605
2011	9,881,070
2012	9,956,888
2013	10,025,721
2014	10,078,942
2015	10,124,800
2016	10,150,386
2017	10,181,162
2018	10,192,593
2019	10,163,139

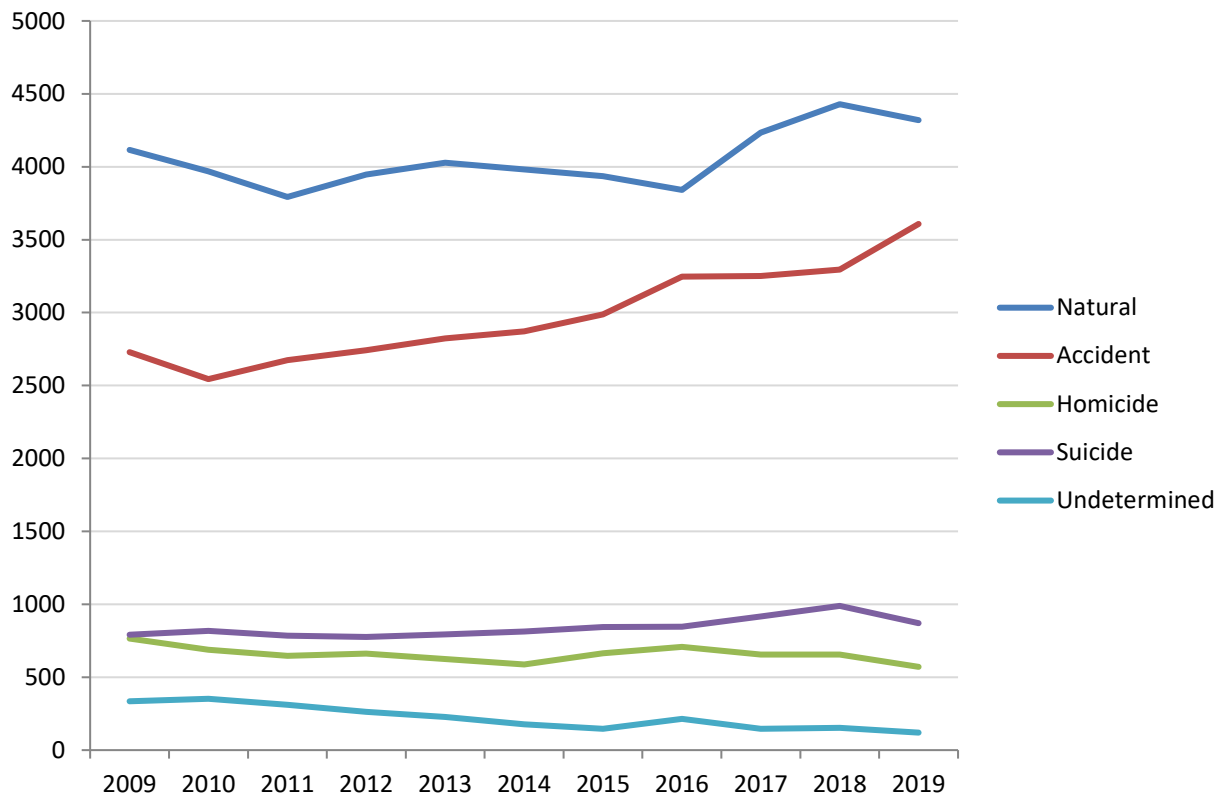
Source: State of California, Department of Finance

NUMBER OF REPORTED AND ACCEPTED CASES PER YEAR, 2009-2019



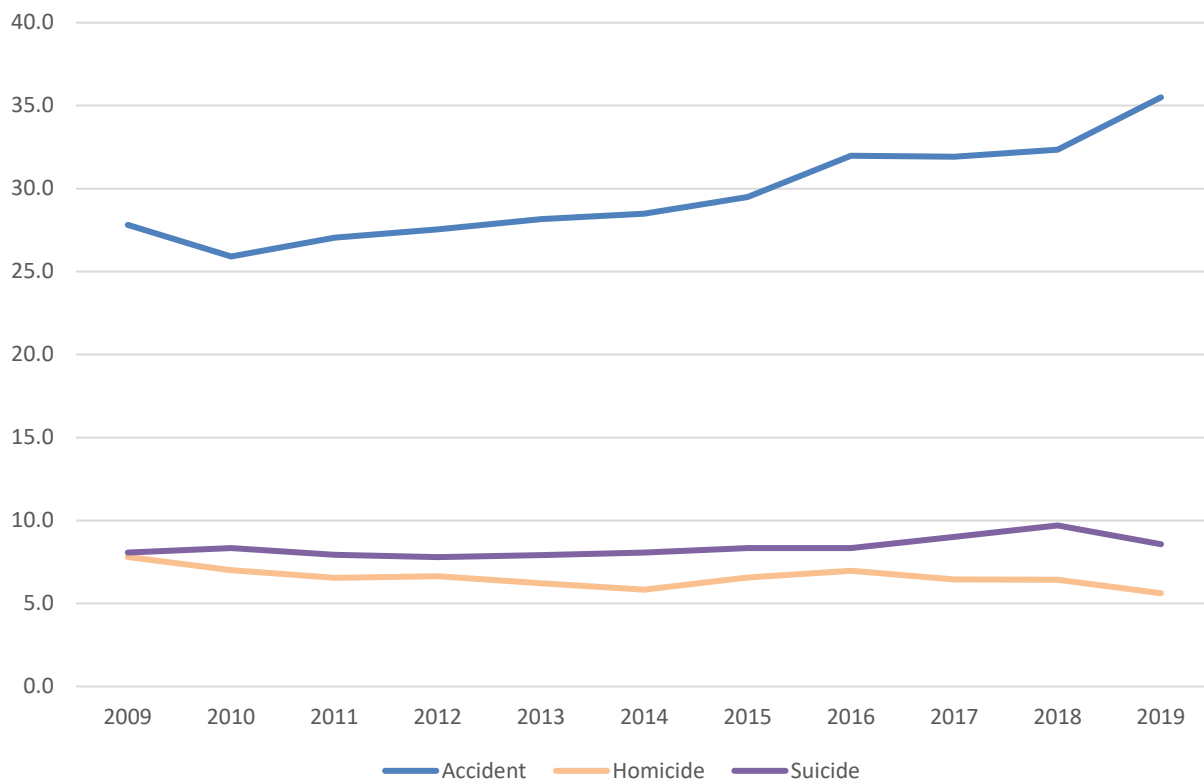
Year	Cases Reported	Cases Accepted
2009	17,053	8,734
2010	16,434	8,371
2011	16,668	8,207
2012	16,508	8,390
2013	18,187	8,495
2014	18,365	8,428
2015	18,913	8,578
2016	18,367	8,856
2017	18,892	9,204
2018	18,551	9,523
2019	17,940	9,489

MANNER OF DEATH BY YEAR, 2009-2019



Year	Natural	Accident	Homicide	Suicide	Undetermined
2009	4115	2728	765	791	335
2010	3968	2544	689	818	352
2011	3793	2673	647	784	310
2012	3947	2743	662	776	262
2013	4027	2823	624	793	228
2014	3981	2871	587	813	176
2015	3936	2987	664	845	146
2016	3842	3247	707	846	214
2017	4233	3251	656	917	147
2018	4429	3296	656	989	153
2019	4319	3608	571	871	120

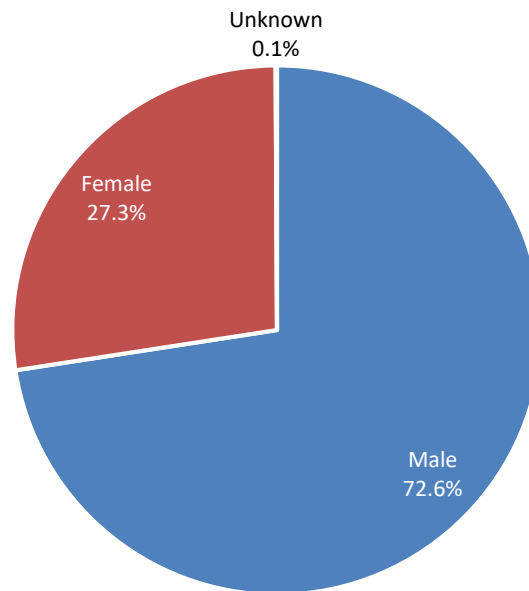
DEATH RATES* BY MANNER PER 100,000 POPULATION, 2009-2019



*crude rates

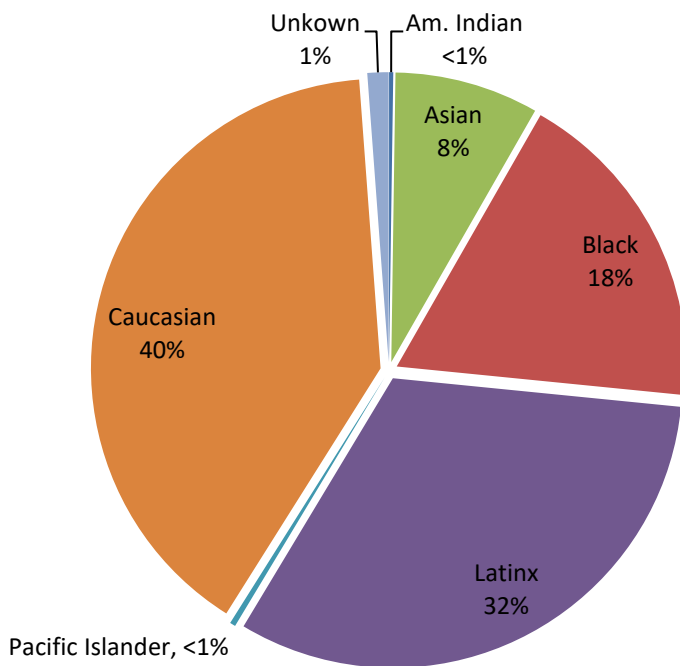
Year	Accident	Homicide	Suicide
2009	27.8	7.8	8.1
2010	25.9	7.0	8.3
2011	27.1	6.5	7.9
2012	27.5	6.6	7.8
2013	28.2	6.2	7.9
2014	28.5	5.8	8.1
2015	29.5	6.6	8.3
2016	32.0	7.0	8.3
2017	31.9	6.4	9.0
2018	32.3	6.4	9.7
2019	35.5	5.6	8.6

MEDICAL EXAMINER-CORONER CASES BY GENDER, 2019



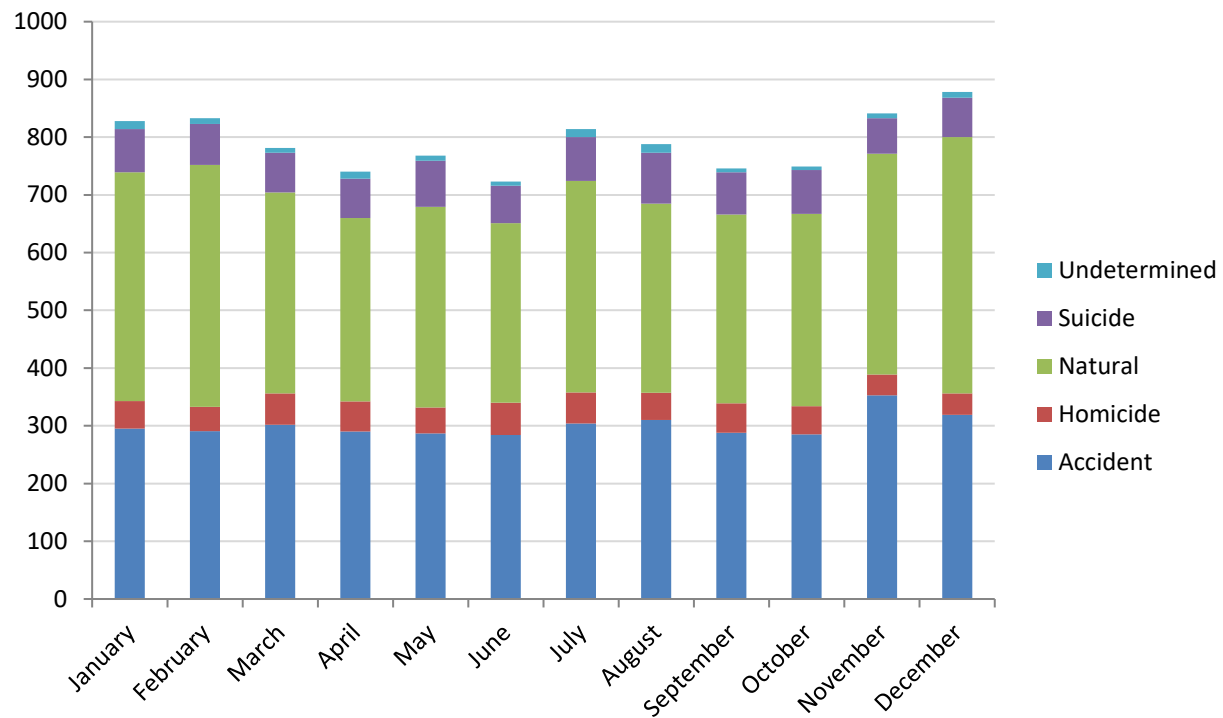
Gender	Number of Cases
Female	2,595
Male	6,886
Unknown	8
Total	9,489

MEDICAL EXAMINER-CORONER CASES BY RACE, 2019



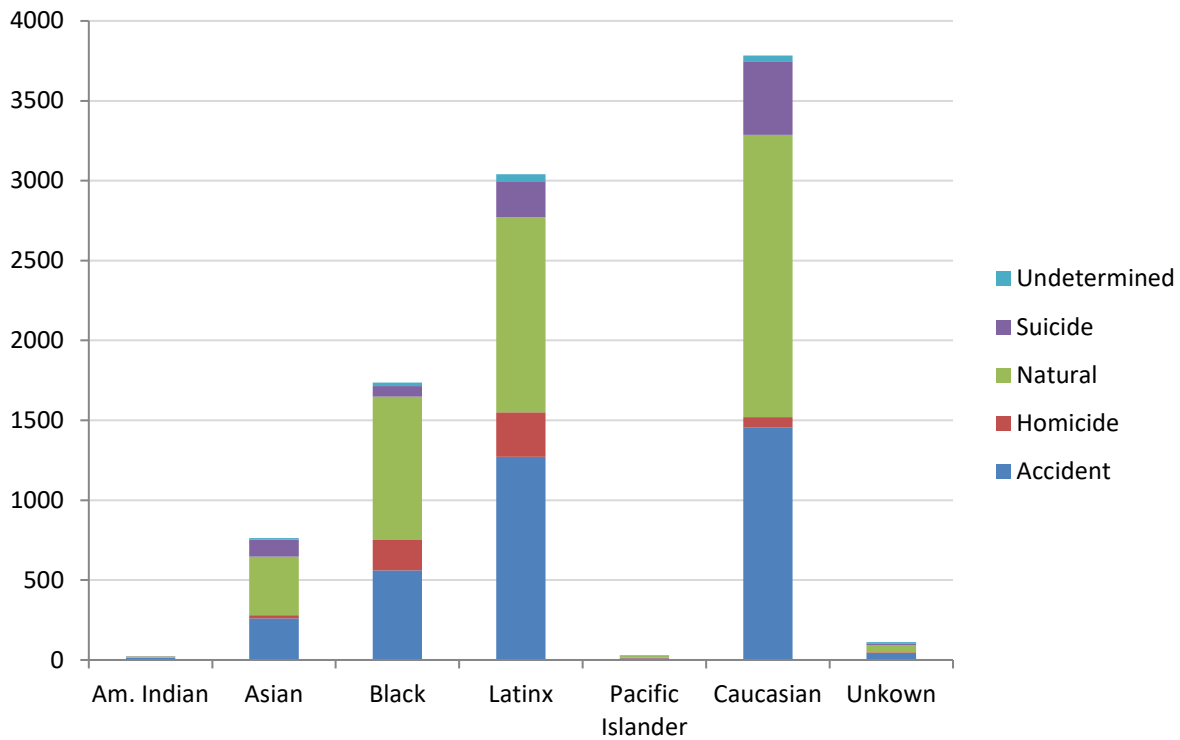
Race	Number of Cases
American Indian	22
Asian	763
Black	1,737
Latinx	3,041
Pacific Islander	30
Caucasian	3,784
Unknown	112
Total	9,489

MANNER OF DEATH BY MONTH, 2019



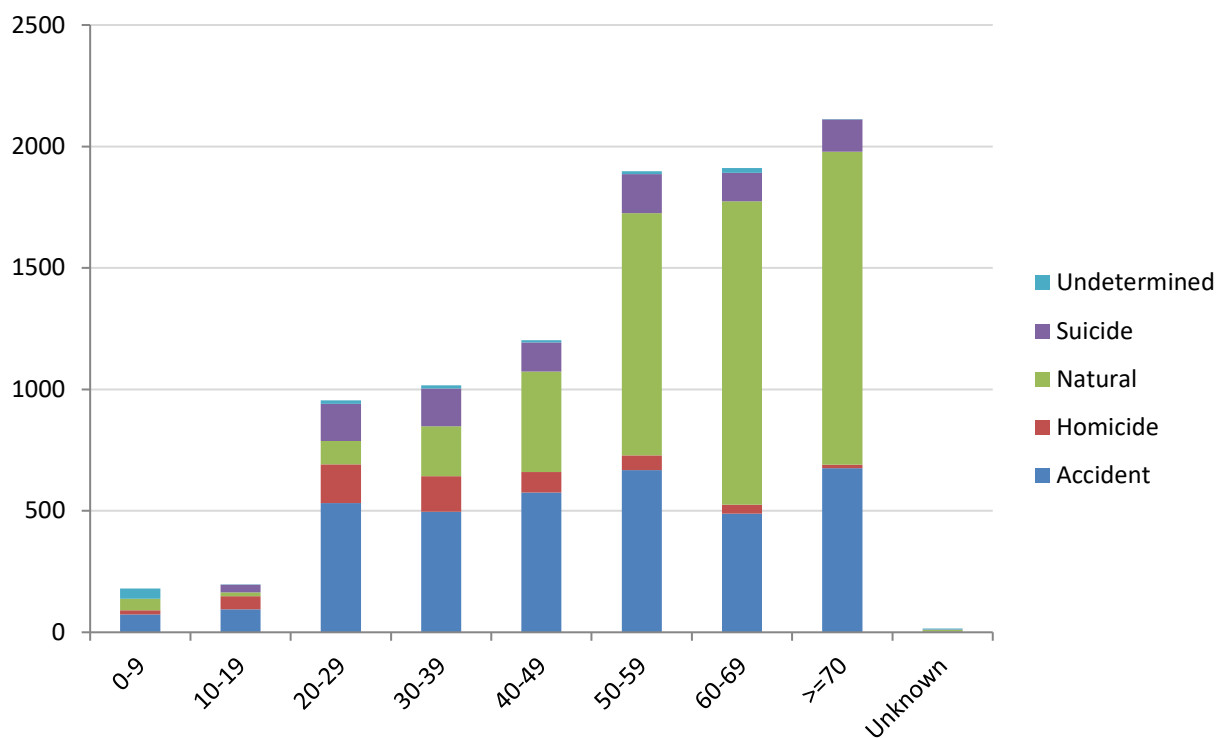
Month	Accident	Homicide	Natural	Suicide	Undetermined
January	295	48	396	75	14
February	291	42	419	71	10
March	302	54	348	69	8
April	290	52	318	68	12
May	287	45	347	80	9
June	284	56	311	65	7
July	304	54	366	76	14
August	310	47	328	88	15
September	288	51	327	73	7
October	285	49	333	76	6
November	353	36	382	62	8
December	319	37	444	68	10
Total	3608	571	4319	871	120

RACE/ETHNICITY DISTRIBUTION FOR EACH MANNER, 2019



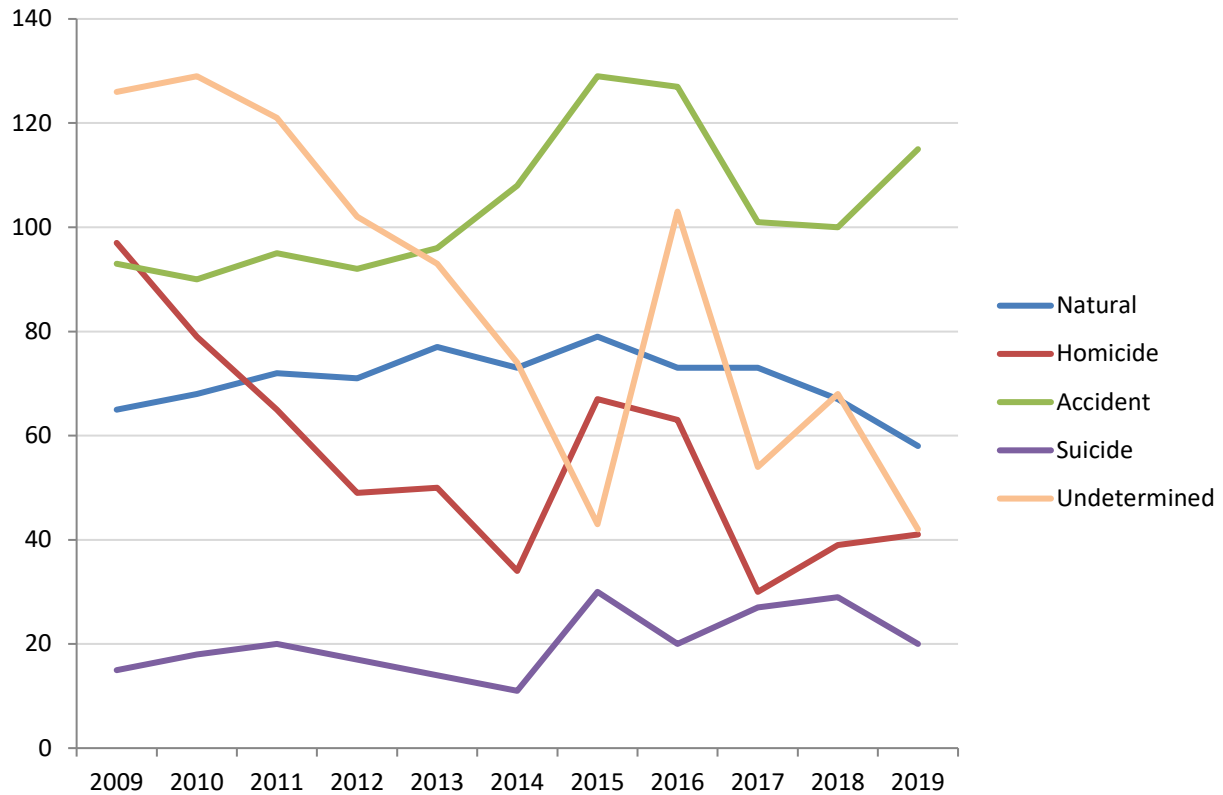
Race	Accident	Homicide	Natural	Suicide	Undetermined
Am. Indian	13		8	1	
Asian	261	20	366	107	9
Black	560	191	898	66	22
Latinx	1272	279	1221	224	45
Pacific Islander	10	4	14	2	
Caucasian	1454	67	1765	462	36
Unknown	38	10	47	9	8
Total	3608	571	4319	871	120

MEDICAL EXAMINER-CORONER CASES BY AGE AND MANNER, 2019



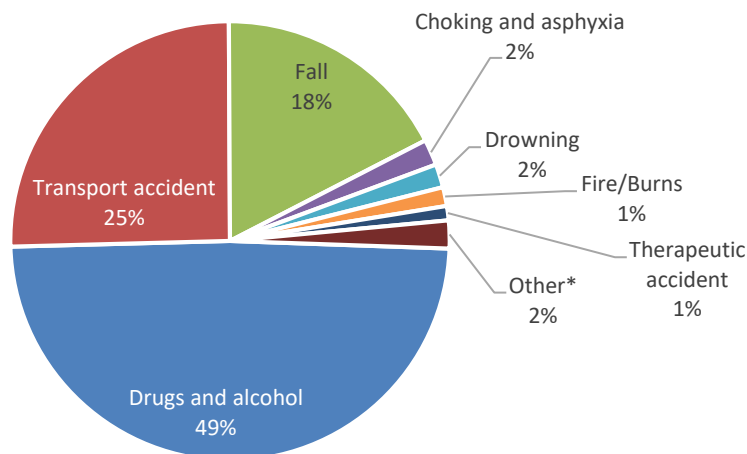
Manner	0-9	10-19	20-29	30-39	40-49	50-59	60-69	>=70	Unknown
Accident	74	94	532	496	576	668	489	676	3
Homicide	16	54	159	147	84	60	36	14	1
Natural	48	16	96	205	413	998	1249	1288	6
Suicide		32	153	155	120	160	117	133	1
Undetermined	42	1	15	14	9	12	20	2	5
Total	180	197	955	1017	1202	1898	1911	2113	16

MANNER FOR CHILD DEATHS (AGES UNDER 18), 2009-2019



Year	Natural	Homicide	Accident	Suicide	Undetermined
2009	65	97	93	15	126
2010	68	79	90	18	129
2011	72	65	95	20	121
2012	71	49	92	17	102
2013	77	50	96	14	93
2014	73	34	108	11	74
2015	79	67	129	30	43
2016	73	63	127	20	103
2017	73	30	101	27	54
2018	67	39	100	29	68
2019	58	41	115	20	42

ACCIDENT DEATHS, 2019



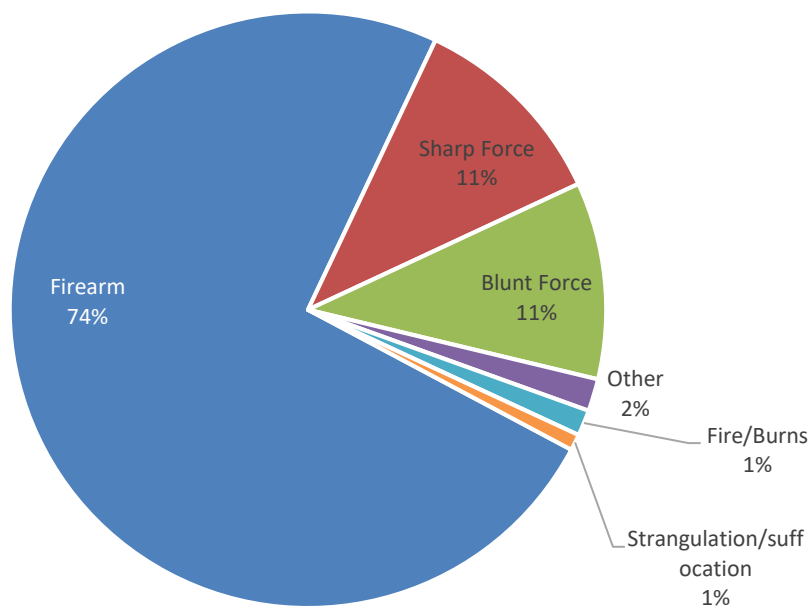
Type of Accident	Number of Cases
Drugs and alcohol	1769
Transport accident	914
Fall	632
Choking and asphyxia	69
Drowning	62
Fire/Burns	50
Therapeutic accident	38
Other	27
Hyperthermia/hypothermia	16
Crushing/struck by objects	14
Electrocution	6
Firearm injuries	6
Carbon monoxide/other gas inhalation	5
Total	3608

*Included in Other in pie chart

TRANSPORTATION ACCIDENTS, 2019

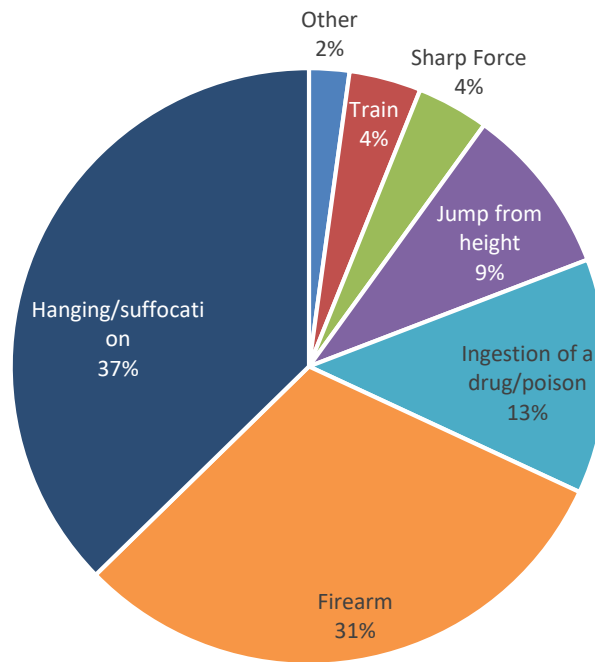
Type of Transportation Accident	Number of Cases
Pedestrians	369
Vehicle Occupants	357
Motorcycle Riders	114
Pedal Cyclists	64
Other Transport Accidents	5
Airplanes	4
Water transport accident	1
Total	914

HOMICIDE DEATHS, 2019



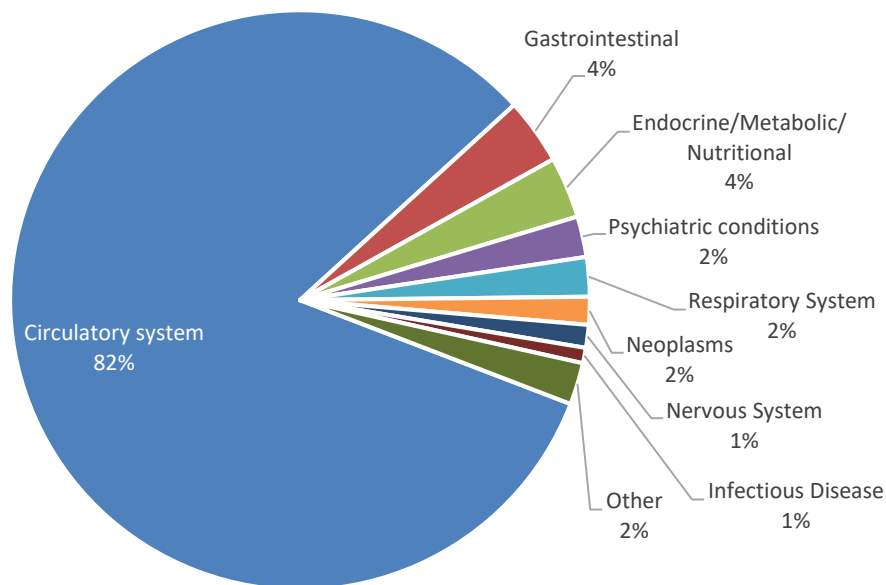
Type of Homicide Death	Number of Cases
Firearm	424
Sharp Force	63
Blunt Force	61
Other	10
Fire/Burns	8
Strangulation/suffocation	5
Total	571

SUICIDE DEATHS, 2019



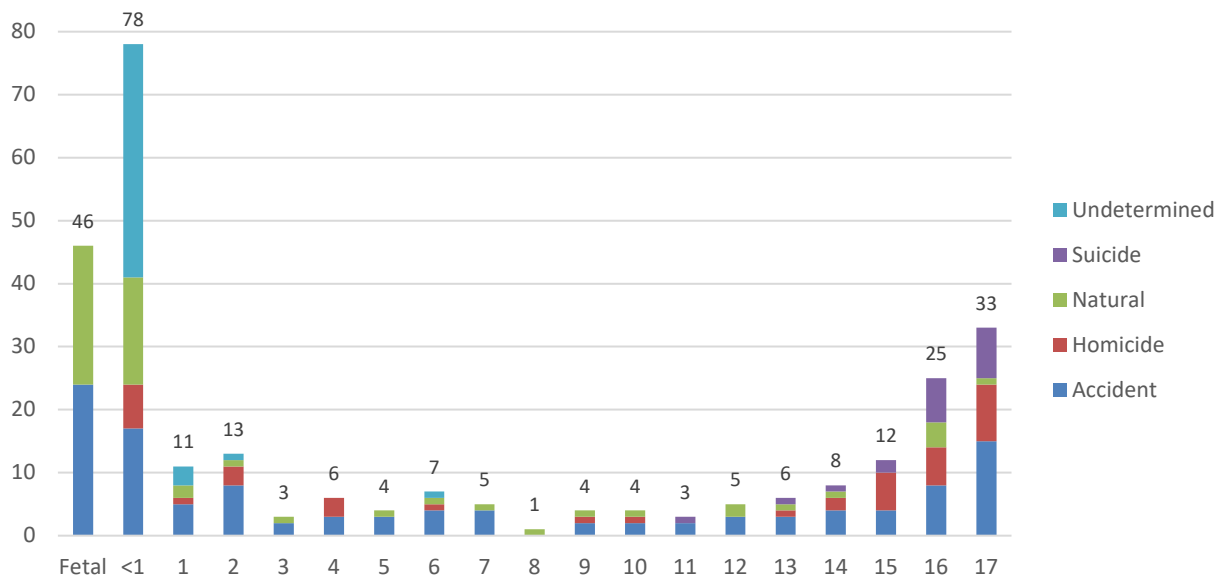
Type of Suicide Death	Number of Cases
Hanging/suffocation	325
Firearm	268
Ingestion of a drug/poison	111
Jump from height	80
Train	34
Sharp Force	34
Other (detailed below)	19
<i>Drowning</i>	12
<i>Fire/Burns</i>	4
<i>Vehicle collision</i>	2
<i>Unspecified</i>	1
Total	871

NATURAL DEATHS, 2019



Type of Natural Death	Number of Cases
Circulatory system	3,559
Gastrointestinal	159
Endocrine/Metabolic/ Nutritional	148
Psychiatric conditions	98
Respiratory System	95
Neoplasms	67
Nervous System	55
Infectious Disease	37
Other (detailed below)	101
<i>Congenital Anomalies</i>	31
<i>Perinatal period</i>	30
<i>Genitourinary System</i>	13
<i>Musculoskeletal System</i>	7
<i>Other</i>	6
<i>Blood/Blood-Forming Organs</i>	5
<i>Skin and Subcutaneous tissue</i>	4
<i>Therapy related</i>	2
<i>Conditions of Pregnancy/Childbirth</i>	2
<i>Sudden Infant Death Syndrome</i>	1
Total	4,319

PEDIATRIC DEATHS BY AGE AND MANNER, 2019



	Age																	Total		
	Fetal	<1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		16	17
Accident	24	17	5	8	2	3	3	4	4		2	2	2	3	3	4	4	8	15	113
Homicide		7	1	3		3		1			1	1			1	2	6	6	9	41
Natural	22	17	2	1	1		1	1	1	1	1	1		2	1	1		4	1	58
Suicide													1		1	1	2	7	8	20
Undetermined		37*	3	1				1												42
Total	46	78	11	13	3	6	4	7	5	1	4	4	3	5	6	8	12	25	33	274

*FACTORS INVOLVED IN INFANT DEATHS, UNDETERMINED MANNER, 2019

Factor Involved	Number
Sudden Unexpected Infant Death (NOS)	20
Unsafe Sleeping Conditions	8
Coexistent infection	6
Undetermined	3
Total	37

PRESENTATIONS AND PUBLICATIONS

PRESENTATIONS

JA Prahlow, Z Ashraf, N Plaza, C Rogers, P Ferreira, DR Fowler, MM Blessing, DA Wolf, MA Graham, K Sandberg, K Timm, TT Brown, PE Lantz. Elevator-Related Deaths. Paper presented at American Academy of Forensic Sciences, Baltimore MD, February 2019.

O Ukpo. Utilization of postmortem computed tomography in the practice of a forensic pathologist. West Coast Training Conference, North Hollywood CA, April 2019.

M Miller. Fatal Automobile Versus Pedestrian Collisions from the Coroner's Perspective. Paper presented at USC National Trauma, Emergency Surgery, and Acute Care Symposium, Pasadena CA, May 2019.

Y Wang, Pulmonary Fat Embolism: A Fatal Surgical Complication. Paper presented at USC National Trauma, Emergency Surgery, and Acute Care Symposium, Pasadena CA, May 2019.

A Panchal, R Martin-Blais, MD, K Adachi, L Sathyavagiswaran, C Rogers, Paenibacillus Sepsis and Meningitis in a Premature Infant—A Case Report. Poster presented at National Association of Medical Examiners, Kansas City MO, October 2019.

C Rogers, L Sathyavagiswaran, Improving Infectious Disease Reporting in a Medical Examiner's Office. Paper presented at National Association of Medical Examiners, Kansas City MO, October 2019.

PUBLICATIONS

Z Ashraf, N Todnam, J Morgan, AM Rojiani. 42-Year-Old Man with Worsening Headache. Brain Pathol. 2019;29(2):305-306.

SC Shelmerdine, CY Gerrard, P Rao, M Lynch, J Kroll, D Martin, E Miller, L Filograna, RM Martinez, O Ukpo, B Daly, H Hyodoh, K Johnson, A Watt, A Taranath, S Brown, D Perry, LWT Boel, A Borowska-Solonyanko, R van Rijn, W Klein, E. Whitby, OJ Arthurs. Joint European Society of Paediatric Radiology (ESPR) and International Society for Forensic Radiology and Imaging (ISFRI) guidelines: paediatric postmortem computed tomography imaging protocol. Pediatr Radiol. 2019 May;49(5):694-701.