2023

ORANGE COUNTY
SHERIFF'S DEPARTMENT

CORONER DIVISION

Annual Report

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INTRODUCTION

Divisional History

When the County of Orange was founded in 1889, I.D. Mills became the County's first Coroner/ Public Administrator. The partnership between these two branches of government existed until 1965 when a county ordinance separated the Coroner and Public Administrator functions. Five years later in 1970, the Orange County Board of Supervisors voted to co-join the Office of Coroner and the Office of Sheriff, making it the 31st Sheriff-Coroner Department in California on January 4, 1971. Today, the majority of the 58 counties in the state are Sheriff-Coroner systems.

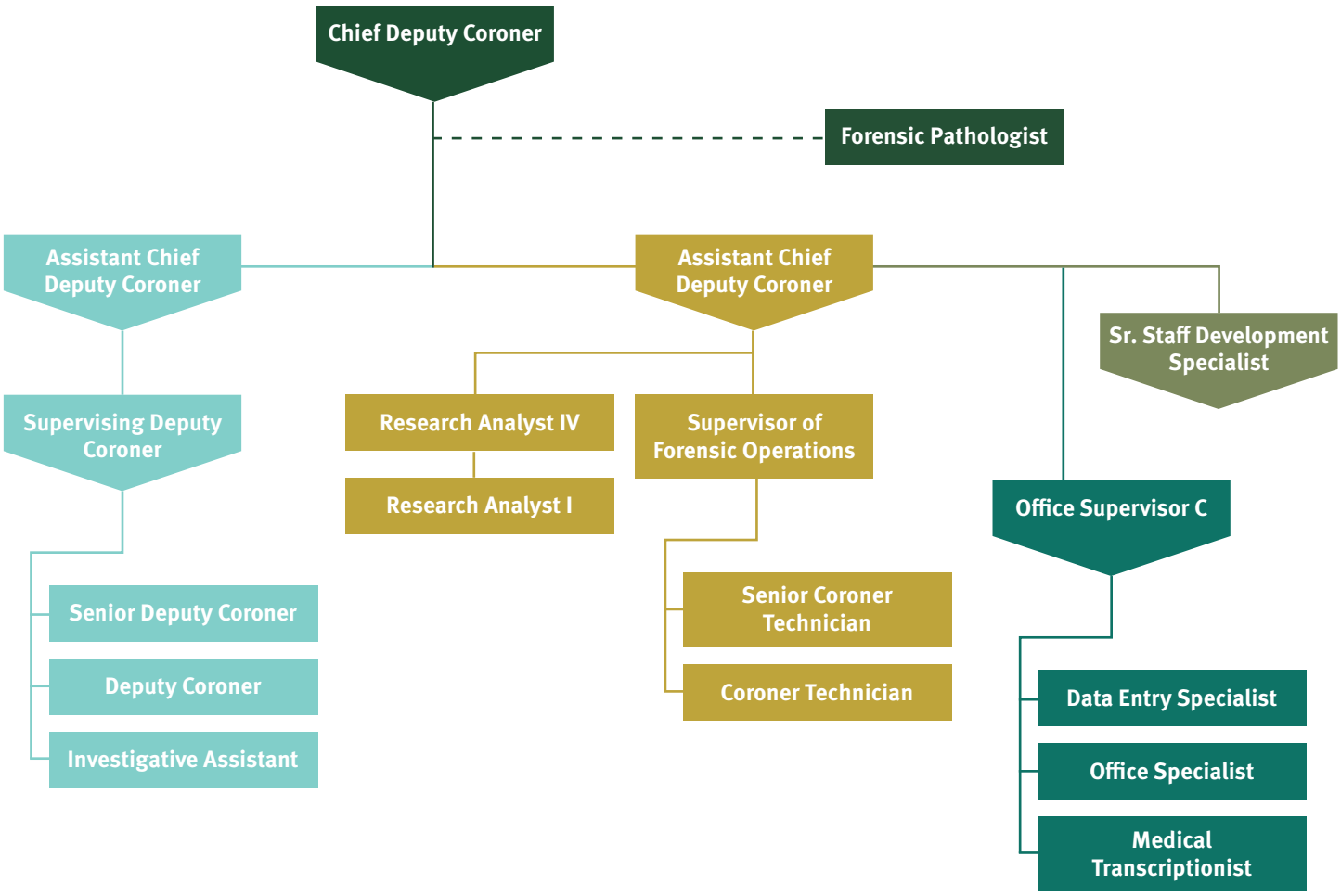
Coroner Division Mission Statement

The mission of the Orange County Coroner Division is to serve the citizens and visitors of Orange County by conducting thorough medicolegal death investigations with compassion and specialized expertise.

Coroner Jurisdiction

The Coroner Division is responsible for carrying out the statutory duties of the Coroner. Those duties include conducting investigations into the circumstances surrounding all deaths falling within the Coroner's jurisdiction for the purpose of determining the identity of the deceased, the medical cause of death, the manner of death and the date and time of death. Medicolegal death investigations are conducted countywide on all homicides, suicides, accidents, suspicious and unexplained deaths. Other duties include notifying the next of kin, safeguarding personal property, collection of evidence and completion of mandatory records and documents. The Division is also proactive in the community, identifying consumer products causing fatal injury; participating in multiple death review teams (domestic violence, child abuse and elder abuse) and providing educational services for medical, legal and law enforcement professionals. Other contributions to the community include cooperative relationships with non-profit organ and tissue procurement agencies to enhance the quality of life and save lives.

ORGANIZATIONAL CHART



TRAINING AND EDUCATION

1. California Coroner Training Center

In the year 2000, Governor Gray Davis and members of the State Assembly and Senate, recognizing the need for a statewide coroner training facility to provide education and training for coroners, pathologists and other professionals involved in death investigation, appropriated $10 million dollars to fund a new state of the art training center. The County of Orange contributed another $2 million dollars for a total of $12 million. As a result, the California Coroner Training Center opened its doors in March of 2004. Since then, countless Medical Examiner Investigators, Deputy Coroners and other law enforcement officials have attended training courses designed to meet the job specific needs of Coroners and other professionals involved in death investigations.

2. Resident and Medical Student Pathology Program

Since September of 1999, the Coroner Division has participated in the College of Medicine, University of California, Irvine (UCI) approved residency training and medical student externship program in Pathology. This professional relationship allows residents and medical students to work either a two or four week rotation at the Coroner Division thereby gifting them with hands-on experience under the expert tutelage of the County's contracted Board Certified Forensic Pathologists. In 2023, a Forensic Neuropathology Fellowship was also added to this partnership with UCI.

MULTIDISCIPLINARY DEATH REVIEW TEAMS

1. Child Death Review Team (CDRT)

The Orange County Child Death Review Team (OCCDRT) was established in 1987 to provide a forum for the multi-disciplinary review of child deaths reported to the Coroner. Initially, the team's focus was on fetal deaths and deaths of children through 12 years of age, with particular focus on improving multi-agency communication on child homicides and unexplained child deaths. One year after the conception of the OCCDRT, the California Legislature authorized counties to officially establish interagency child death review teams. In 1993, the review process expanded to include children through 17 years of age. With the improved coordination and communication among the many agencies responsible for child health, safety and protection achieved by the pioneering team, the primary objectives of the OCCDRT are now broadening to include prevention efforts.

Core members of this multi-disciplinary team are drawn from public agencies responsible for the investigation of child deaths and agencies responsible for protecting the health and welfare of children. These agencies include: the Coroner's Division, Health Care Agency, District Attorney's Office, County Counsel, Department of Education, Probation Department, Local Law Enforcement

Agencies, Social Services, The Raise Foundation (a local child abuse prevention council), County Fire Authority, UCI Pediatric Injury Prevention Research Group, Visiting Nurses Association of Orange County, Child Abuse Services Team (Orange County's multi-disciplinary investigative team for child sexual abuse) and the County Emergency Medical Services.

2. Homeless Death Review Committee (HDRC)

The Coroner Division of the Orange County Sheriff's Department leads the Homeless Death Review Committee, commissioned by Orange County Sheriff Don Barnes in January 2022. The Committee includes broad representation of technical experts from county agencies, municipal police departments, hospitals and non-profits. The Committee has met multiple times since March 2022 to explore the root causes of homeless deaths to determine what, if any, factors contributing to the deaths were preventable.

3. Elder Death Review Team (EDRT)

The Orange County Elder Death Review Team was formed in 2003. Its purpose is to carefully examine cases involving decedents who are 65 or older in which there is suspected abuse by a caregiver or relative. Additionally, the team recognizes that a careful review of fatalities will provide the opportunity to develop education, prevention and if necessary prosecution strategies, that will lead to improved coordination of services for families and the elder population. The goals of the EDRT are to prevent elder abuse fatalities; examine deaths of elders with suspected elder abuse and/or neglect; identify patterns that lead to fatal outcomes; determine whether reviewed deaths could have been prevented; develop prevention strategies; increase awareness of the responsibility of each Health Care Provider to consider abuse or neglect as a contributing factor to death; increase awareness of the responsibility of each Health Care Provider to refer cases arising from abuse or neglect to the appropriate agencies including, but not limited to the Coroner, Adult Protective Services, State Licensing Department, Ombudsman and Law Enforcement; improve system responses by identifying gaps in delivery services; prosecution of offenders; and develop intervention strategies to reduce fatalities and eliminate ongoing abuse and/or neglect.

4 . Domestic Violence Death Review Team (DVDRT)

In 1995, California Legislature passed a bill authorizing counties to establish interagency DVDRT's to assist local agencies in identifying and reviewing domestic violence deaths and facilitating communications among the various agencies involved in domestic violence cases. Its purpose is to review cases where domestic violence is either a major factor in the cause of death or a contributing factor. These cases are studied by the team in hopes of finding solutions to fill any gaps in the system, improving data collection and recommending ways to prevent future tragedies. The Orange County DVDRT was formed in 2000.

REPORTABLE DEATHS

Pursuant to Government Code 27491, it shall be the duty of the Coroner to inquire into and determine the circumstances, manner, and cause of the following deaths:

- Deaths where the decedent was not under the regular care of a physician.
- Deaths where the decedent has not been treated by a physician or registered nurse, who is a member of a hospice interdisciplinary team, within 20 days prior to death.
- Deaths where the physician is unable to accurately state the cause of death.
- When homicide is known or suspected.
- When suicide is known or suspected.
- When a criminal action is involved or suspected to be involved in the death.
- Known or suspected as resulting in whole or in part from an accident or injury, either old or recent.
- When aspiration, starvation, exposure, drug addiction or acute alcoholism is the known or suspected cause.
- When poisoning is known or suspected.
- When occupational disease or hazards are the known or suspected cause.
- When a contagious disease is the known or suspected cause.
- When death occurred while in-custody of a law enforcement agency or while in prison.
- All deaths of State Hospital patients.
- All Sudden Unexplained Infant Death Syndrome (SUIDS) deaths.

Manner of Death Definitions

The deaths identified in this report are organized to five manners; these are Natural, Accident, Homicide, Suicide and Undetermined. Listed below are each of these manners of death and their definition.

Natural

Natural Deaths are those that are caused by a medical event or disease process where the decedent requires a death certificate signed by the Coroner due to the absence of a physician willing or able to state the cause of death.

Accident

Accidental deaths are those that result from an injury or poisoning, where there is little to no evidence that the injury or poisoning occurred with intent to harm or cause death.

Suicide

Suicide Deaths are those that result from an injury or poisoning, as an intentional, self-inflicted act committed to do self-harm or cause the death of one's self.

Homicide

Homicide Deaths are those that result from the volitional act committed by another person.

Undetermined

The classification of Undetermined is used when, with through consideration of all available information, no single manner of death is more compelling or likely than one or more other competing manners of death.

Sub-Classifications of Death Definitions

SONA or Signed Out No Autopsy

Prior to 2010, some cases that would previously have required an autopsy are now triaged and the case is signed out without an autopsy.

In the latter part of December 2009, in order to better manage Coroner Division resources, the case triage process was implemented to reduce the number of autopsies the Coroner performs effectively. The triage process required cases which the death occurred in a hospital facility usually receiving a post-mortem examination to undergo a thorough evaluation to determine whether an autopsy was essential for establishing the cause and manner of death. This evaluation included a detailed review of medical records, clinical tests, collaboration with law enforcement and interviews with informants and witnesses. The triage team determined if the extent of the investigation was adequate to establish the probable cause and manner of death without the necessity of an autopsy. In this manner, cases were adequately evaluated and were co-signed both by the medical provider and the Coroner without an autopsy. This type of case is referred to as a SONA case (Signed Out - No Autopsy).

NNA or Natural No Autopsy

Those deaths which were reported to the Coroner and an investigation was conducted requiring a case number being issued. Based on the findings of the investigation, an autopsy was deemed unnecessary and the treating physician was authorized to certify the medical cause of death. This authorization came after the investigation concluded that the physician had sufficient knowledge of the patient's medical history and that all unnatural circumstances had been ruled out

Declines

Those deaths reported to the Coroner in which the circumstances did not meet the Coroner's statutory jurisdictional requirements.

SUMMARY OF DATA

A. Deaths reported: 10,761

B. Cases accepted: 7,363

C. Manners of death:

1. Accident: 1,442
2. Homicide: 73
3. Natural: 5,476
    a. Natural — Autopsy: 997
    b. Natural — No Autopsy: 4,299
    c. Natural — Consult: 28
    d. Jurisdictional Inquiry: 152
4. Suicide: 323
5. Undetermined: 49

D. Field Responses: 2,185

E. Bodies received: 2,613

F. Autopsies: 2,520

G. Cases with toxicology: 2,030

H. Unidentified bodies after examination: 0

I. Unidentified Decedents Identified: 254

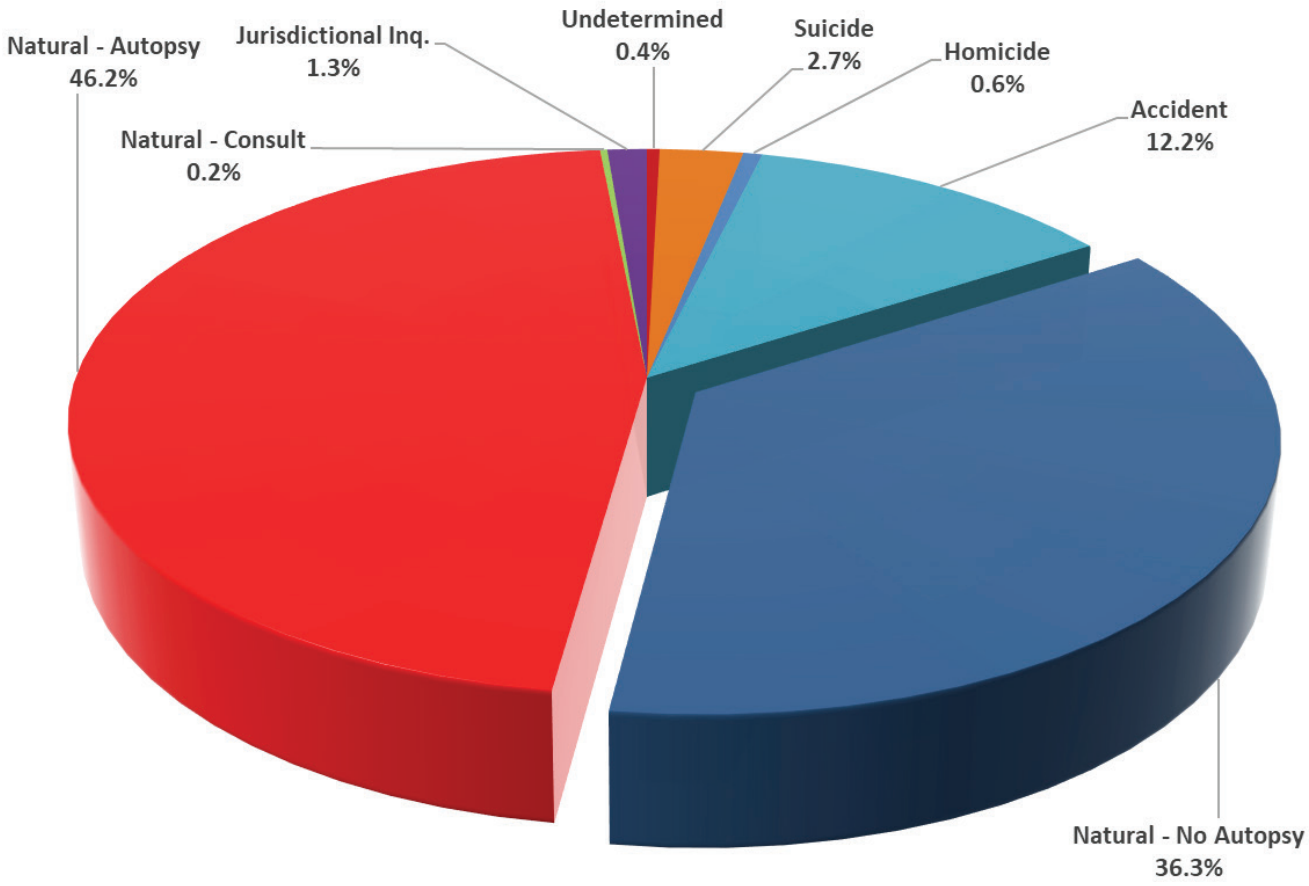
J. Unclaimed bodies: 262

The data in this report reflects deaths reported to the Coroner Division during the 2023 calendar year. This includes both residents and non-residents whose deaths occurred within the borders of Orange County. In 2023, the Orange County Health Department's Birth and Death Registration recorded a total of 23,658 deaths. Of these, 10,761 were reported to the Coroner, accounting for 45% of all deaths.

In 2023, the Coroner Division submitted 2,030 requests for toxicology tests, marking a 10% decrease from the 2,264 requests in 2022. Deputy Coroners responded to 2,185 scenes in 2023, which is an 11% decrease from the 2,456 scenes attended in 2022. The Coroner Division received 2,613 deceased persons into their facility in 2023, reflecting a 9% decrease from the 2,875 received in 2022.

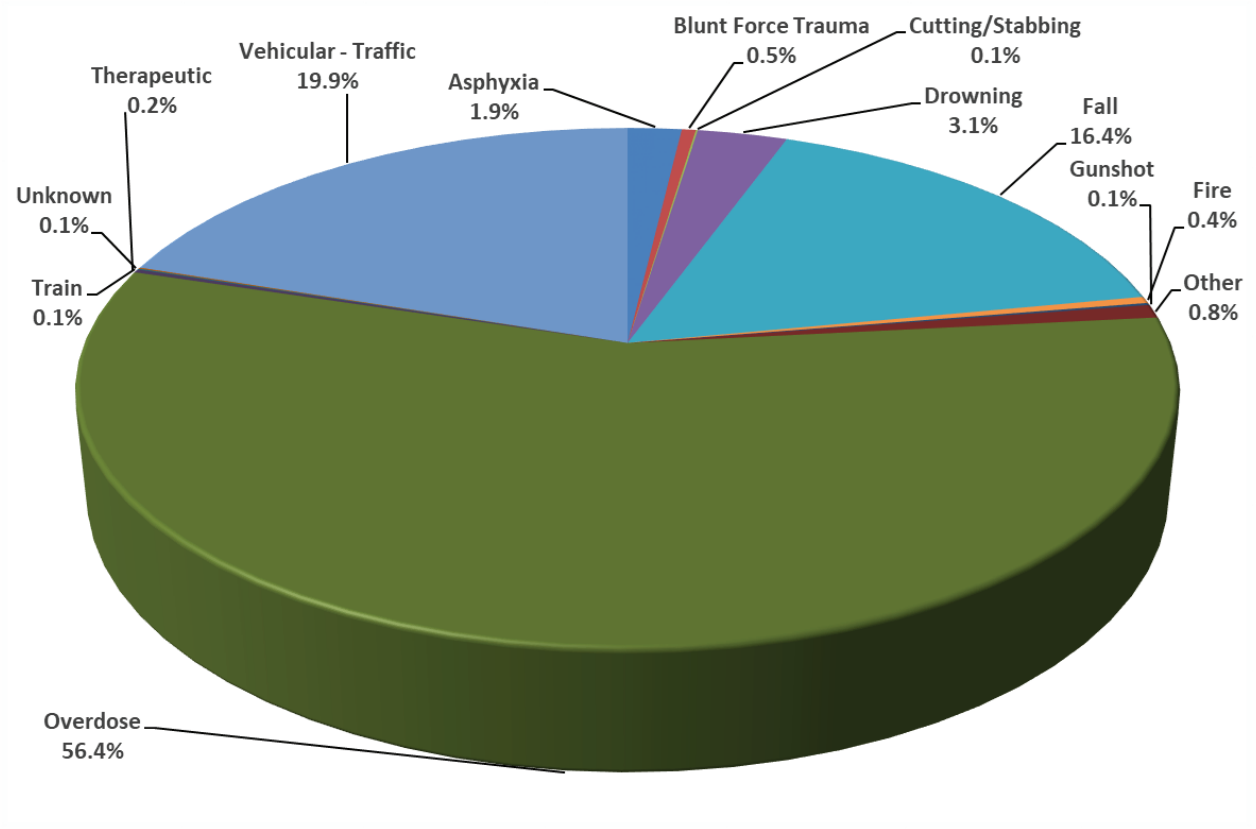
Additionally, in 2023, 254 unidentified decedents were positively identified, showing a 0.4% decrease from 2022. The number of unclaimed bodies increased by 3%, rising from 255 in 2022 to 262 in 2023.

Total Cases by Manner, 2023



Accidental Deaths by Cause, 2023

In 2023, accidental deaths totaled 1,442, with 287 involving traffic accidents, which made up 20% of all accidental deaths. Overdoses accounted for 813 of these deaths, representing 56% of the total.



Type of Accident	Number of Cases
Asphyxia	27
Blunt Force Trauma	7
Cutting/Stabbing	1
Drowning	45
Fall	237
Fire	6
Gunshot	2
Other	12
Overdose	813
Therapeutic	3
Train	1
Unknown	1
Vehicular - Traffic	287
TOTAL	1442

Accidental Deaths by Cause, 2023

ASPHYXIA 27

Aspiration 18

Autoerotic 1

Compression 1

Hanging 1

Other (Mechanical asphyxia, pinned inside metal donation bin) 1

Positional 5

BLUNT FORCE TRAUMA 7

Blunt Object 1

Crushing 4

Other (Struck by mechanical bull; struck by steel enclosure gate) 2

CUTTING/STABBING 1

Sharp Object 1

DROWNING 45

Bathtub 6

Lake 1

Ocean 13

Other (Freshwater drowning, flood control channel {2}; freshwater drowning, creek) 3

Pond 2

Pool 15

Spa 5

FALL 237

Height 30

Other (Fall from golf cart; fall from wheelchair; fall in moving vehicle; fall during fight) 4

Same Level 116

Unknown 87

FIRE 6

Commercial 1

Other (Set self on fire while doing drugs) 1

Residence 4

GUNSHOT 2

Handgun 1

Rifle 1

OTHER 12

Other (Surfing accident; diving accident; body surfing accident; spear fishing accident) 4

Other (Burned using metal grinder) 1

Other (Anaphylactic reaction to: food, anesthetic injection, contrast agent and bee sting) 4

Other (Hypothermia, exposure to elements) 1

Other (Agent Orange exposure) 1

Other (Removal of gastrointestinal tube) 1

Continued next page

Accidental Deaths by Cause, 2023 (continued)

OVERDOSE 813

Abuse (Illicit drugs only) 599

Drugs (Prescription drugs only) 35

Ethanol 16

Mixture (Combination of illicit and either prescription or over-the-counter drugs) 158

Other (Inhalation of 1,1-difluoroethane; ingestion of isopropanol) 5

THERAPEUTIC 3

Surgical 2

Medical 1

TRAIN 1

Pedestrian 1

UNKNOWN 1

Unknown 1

VEHICULAR 287

Bicycle - Operator 15

Motorcycle - Operator 44

Motorcycle -Passenger 1

Operator 100

Other (Rider of horse; operator of scooter {2}; operator of electric skateboard) 4

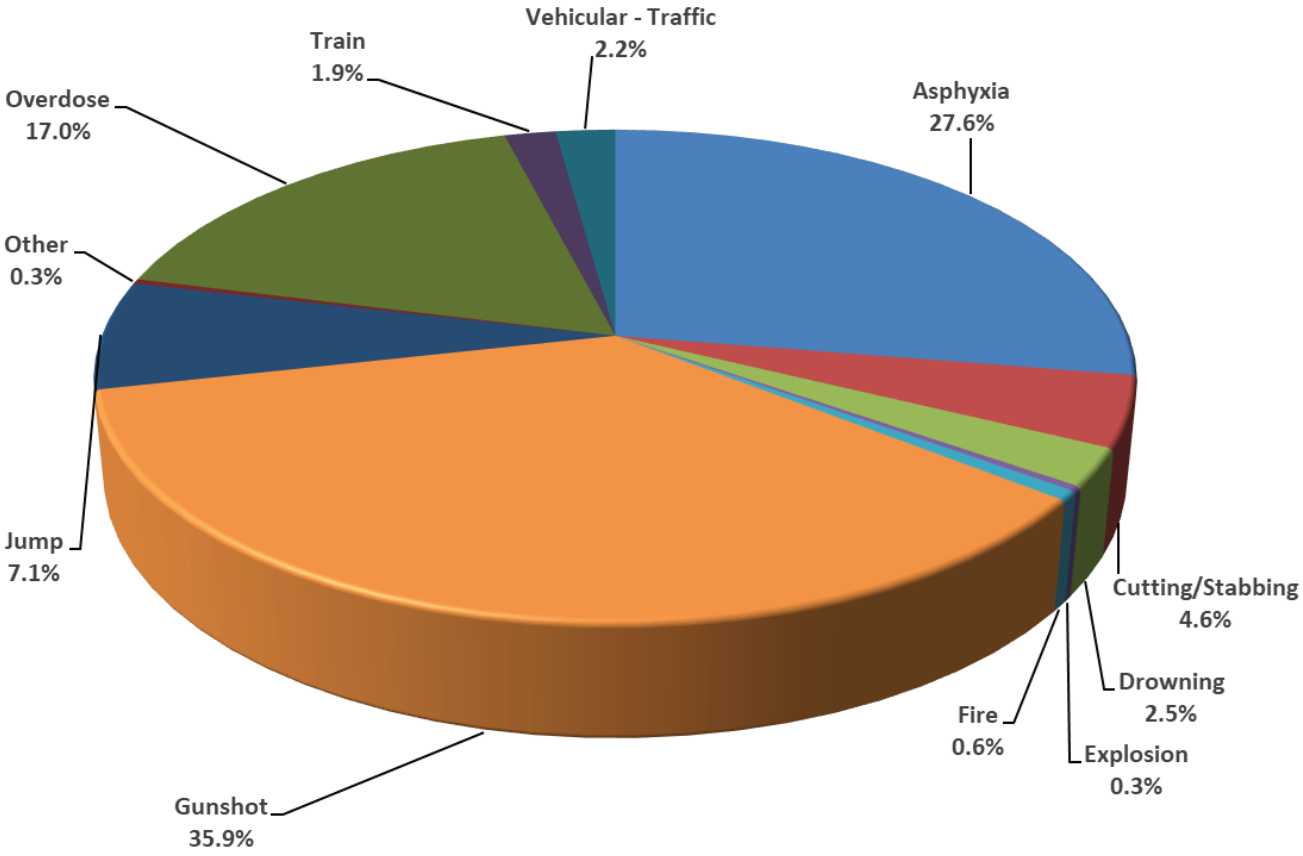
Passenger 29

Pedestrian 94

TOTAL 1442

Suicide Deaths by Cause, 2023

In 2023, suicides accounted for 4% of total cases, totaling 323 deaths. The most common method was by gunshot, representing 36% of cases, followed by asphyxia at 28%. The majority of those who died by suicide were aged 20 to 30, comprising 34% of the total, or 109 deaths. Males were significantly more affected, making up 75% of the cases compared to 25% for females. Only 18% of the individuals who died by suicide left behind a note, which is a 1% increase from the previous year.



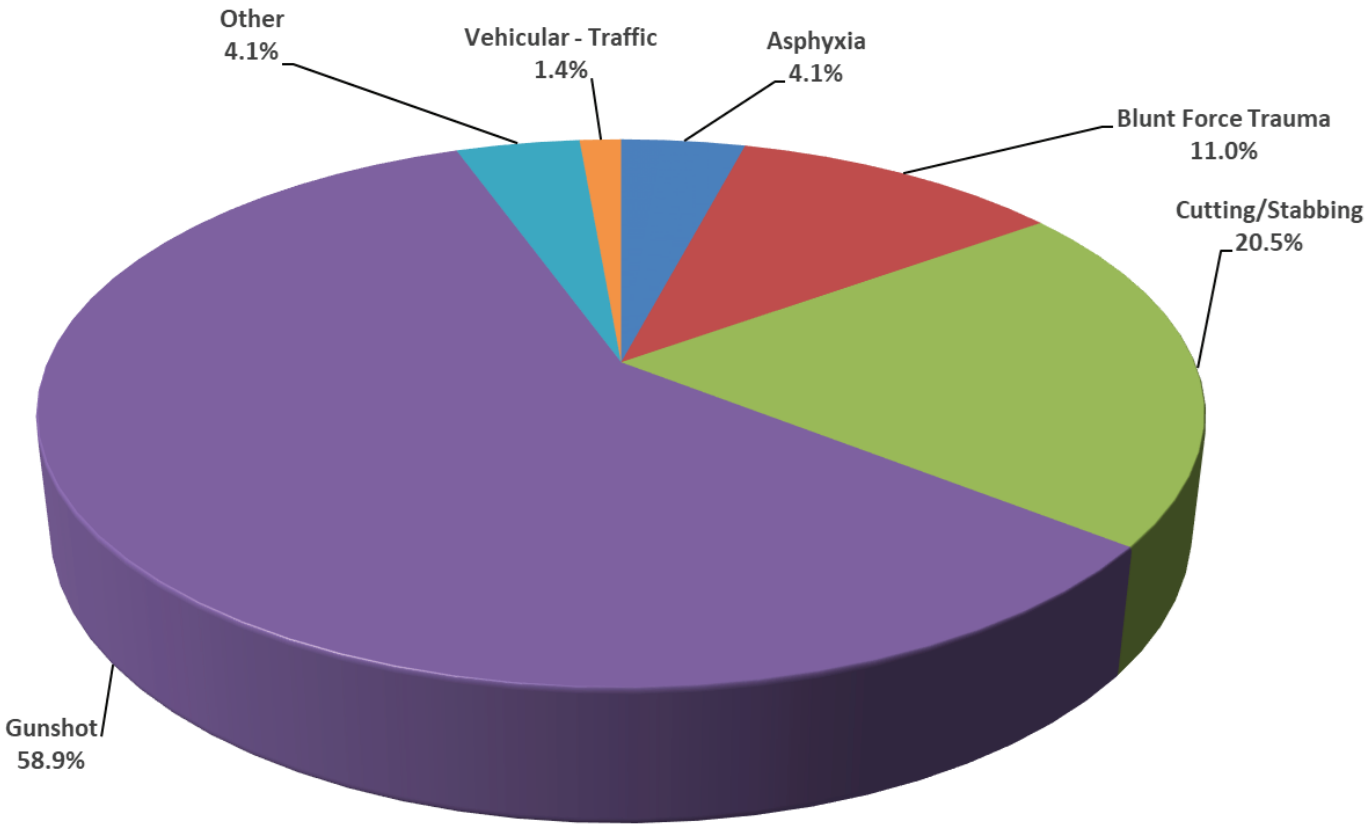
Type of Suicide	Number of Cases
Asphyxia	89
Cutting/Stabbing	15
Drowning	8
Explosion	1
Fire	2
Gunshot	116
Jump	23
Other	1
Overdose	55
Train	6
Vehicular - Traffic	7
TOTAL	323

Suicide Deaths by Cause, 2023

ASPHYXIA	89
Carbon Monoxide	3
Hanging	79
Suffocation	7
CUTTING/STABBING	15
Sharp Object	15
DROWNING	8
Bathtub	2
Ocean	5
Other (Flood control channel)	1
EXPLOSION	1
Gas	1
FIRE	2
Immolation	2
GUNSHOT	116
Handgun	106
Rifle	5
Shotgun	5
JUMP	23
Height	23
OTHER	1
Other (Cut hemodialysis catheter tube with scissors)	1
OVERDOSE	55
Abuse (Illicit drugs)	10
Drugs (Prescription drugs only)	36
Mixture (Combination of illicit and prescription and/or over-the-counter drugs)	6
Other (Ingestion of nitrate/nitrite; Ingestion of sodium nitrate)	3
TRAIN	6
Bicycle	1
Pedestrian	5
VEHICULAR	7
Operator	2
Motorcycle-Operator	1
Pedestrian	4
TOTAL	**323**

Homicide Deaths by Cause, 2023

In 2023, there were 73 homicide deaths. The majority of these incidents involved gunshots, accounting for approximately 59% of the cases and 79% of the victims were male.



Type of Homicide	Number of Cases
Asphyxia	3
Blunt Force Trauma	8
Cutting/Stabbing	15
Gunshot	43
Other	3
Vehicular - Traffic	1
TOTAL	73

Homicide Deaths by Cause, 2023

ASPHYXIA 3

Strangulation 3

BLUNT FORCE TRAUMA 8

Blunt Object 4

Other (Battered by another; 3) 3

Unknown 1

CUTTING/STABBING 15

Sharp Object 15

GUNSHOT 43

Handgun 33

Other (Shot by on-duty police officers with handgun and rifle) 1

Rifle 2

Shotgun 1

Unknown 6

OTHER 3

Other (Casualty of war during active military service; operator of bicycle vs. auto, stabbed; battered by another) 3

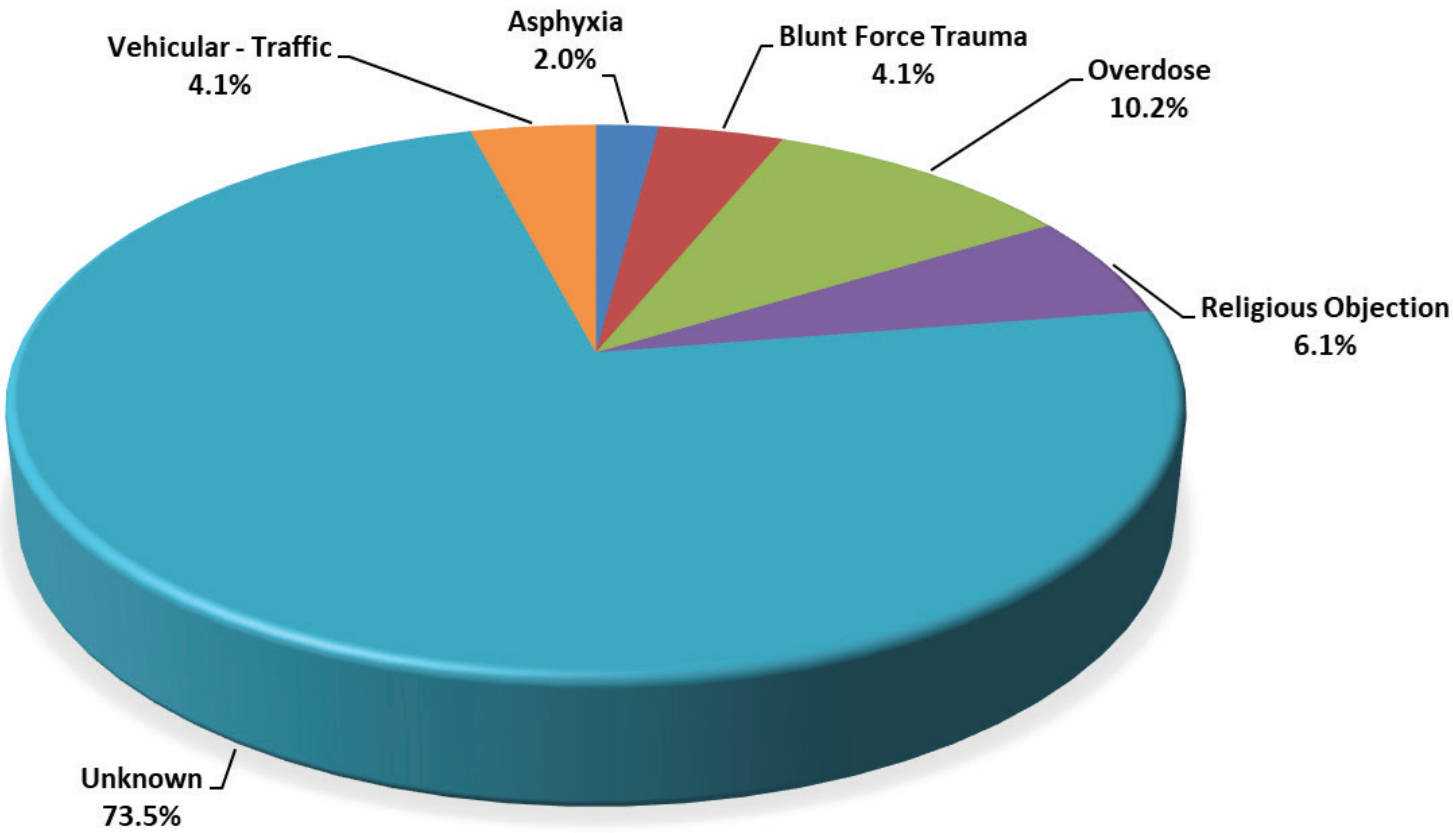
VEHICULAR 1

Bicycle 1

TOTAL 73

Undetermined Deaths, 2023

There were 49 deaths classified as Undetermined, with approximately 73% having an unknown cause of death.



Type of Undetermined	Number of Cases
Asphyxia	1
Blunt Force Trauma	2
Overdose	5
Religious Objection	3
Unknown	36
Vehicular - Traffic	2
TOTAL	49

Undetermined Deaths by Cause, 2023

ASPHYXIA 1

Unknown 1

BLUNT FORCE TRAUMA 2

Unknown 2

OVERDOSE 5

Abuse (Illicit drugs only) 2

Drugs (Prescription medication and/or over-the-counter drugs) 1

Mixture (Combination of illicit and prescription and/or over-the-counter drugs) 1

Other (Complications of thallium toxicity) 1

RELIGIOUS OBJECTIONS 3

Religious Objection to Autopsy 3

UNKNOWN 36

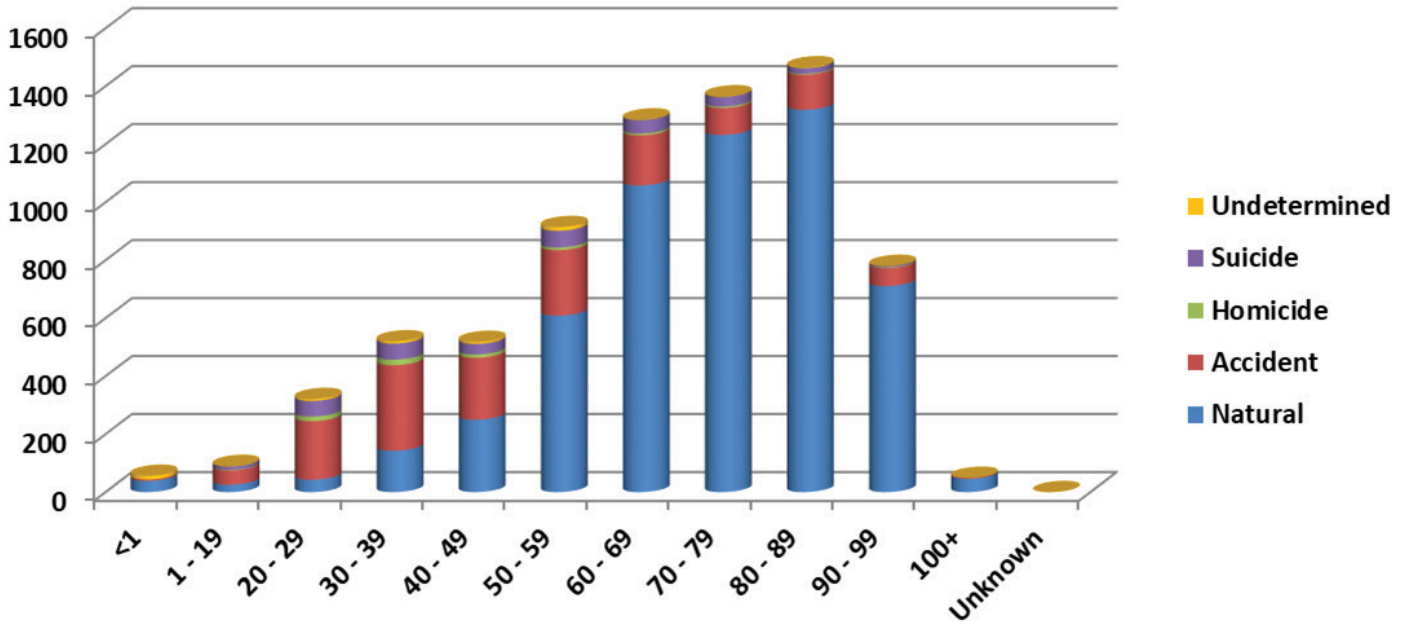
Undetermined Cause of Death 36

VEHICULAR 2

Pedestrian 2

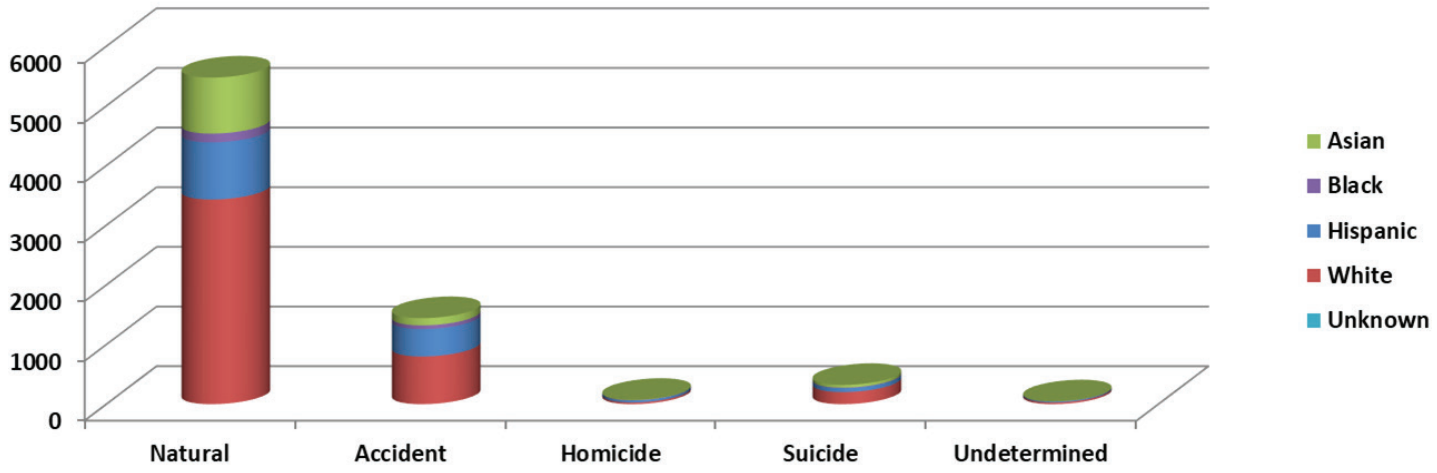
TOTAL 49

Manner Distribution for Each Age Group, 2023



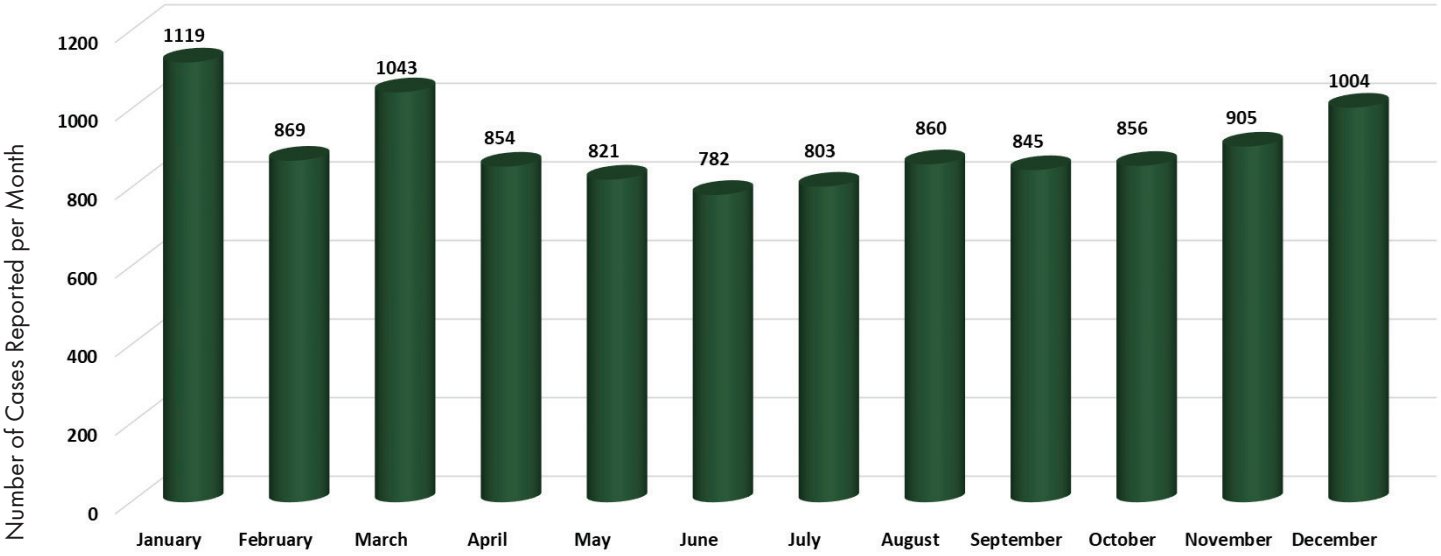
Manner	<1	1-19 years	20-29 years	30-39 years	40-49 years	50-59 years	60-69 years	70-79 years	80-89 years	90-99 years	100+ years	Unknown
Natural	39	26	43	143	250	609	1058	1232	1319	711	46	0
Accident	5	49	202	295	214	226	173	93	121	62	3	0
Homicide	0	2	16	19	11	9	6	5	3	2	0	0
Suicide	0	12	54	56	37	58	47	34	20	5	0	0
Undetermined	12	1	6	7	6	12	1	1	2	0	0	0
TOTAL	56	90	321	520	518	914	1285	1365	1465	780	49	0

Racial Distribution for Each Manner, 2022

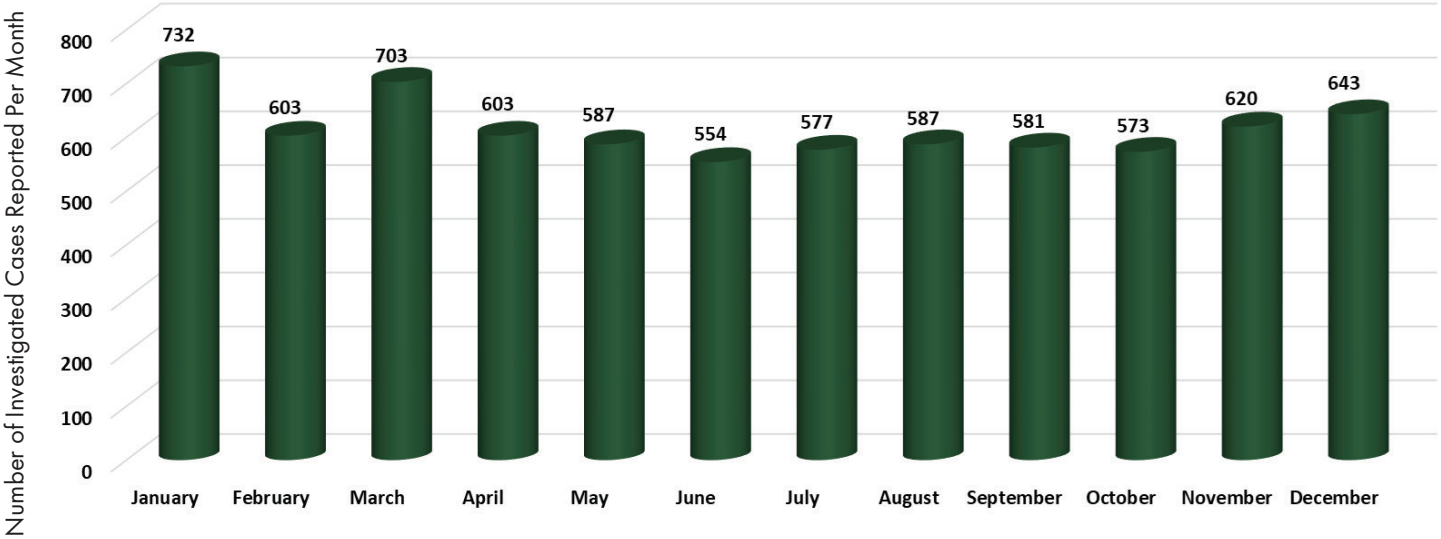


Ethnicity	Natural	Accident	Homicide	Suicide	Undetermined
Asian	939	121	5	45	3
Black	147	63	6	8	2
Hispanic	958	459	33	67	15
White	3432	800	29	203	28
Unknown	0	0	0	0	0
TOTAL	5476	1443	73	323	48

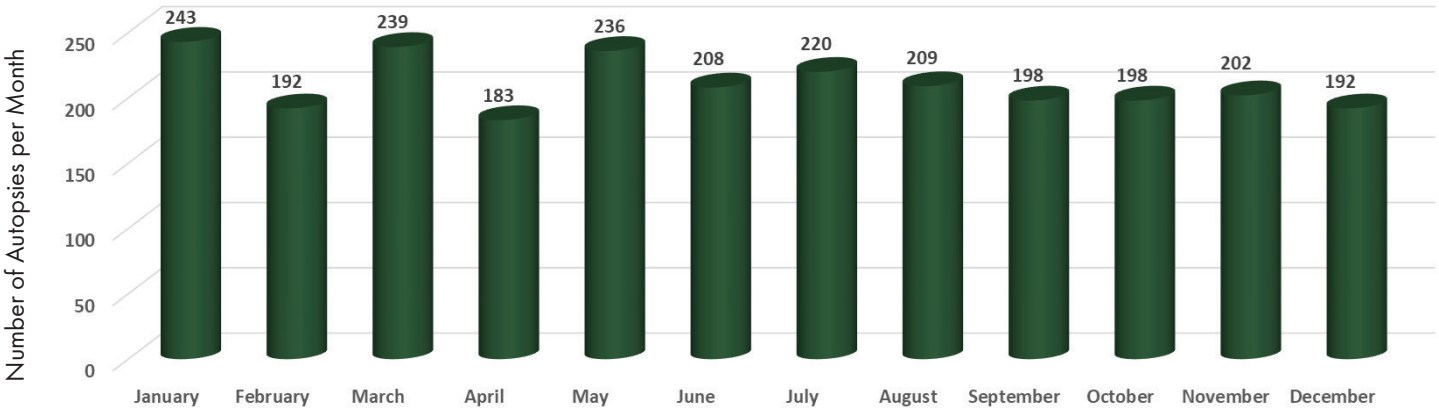
Total Caseload Including Declines by Month Reported, 2023



Total Investigated Cases by Month Reported, 2023



Total Autopsies by Month 2023



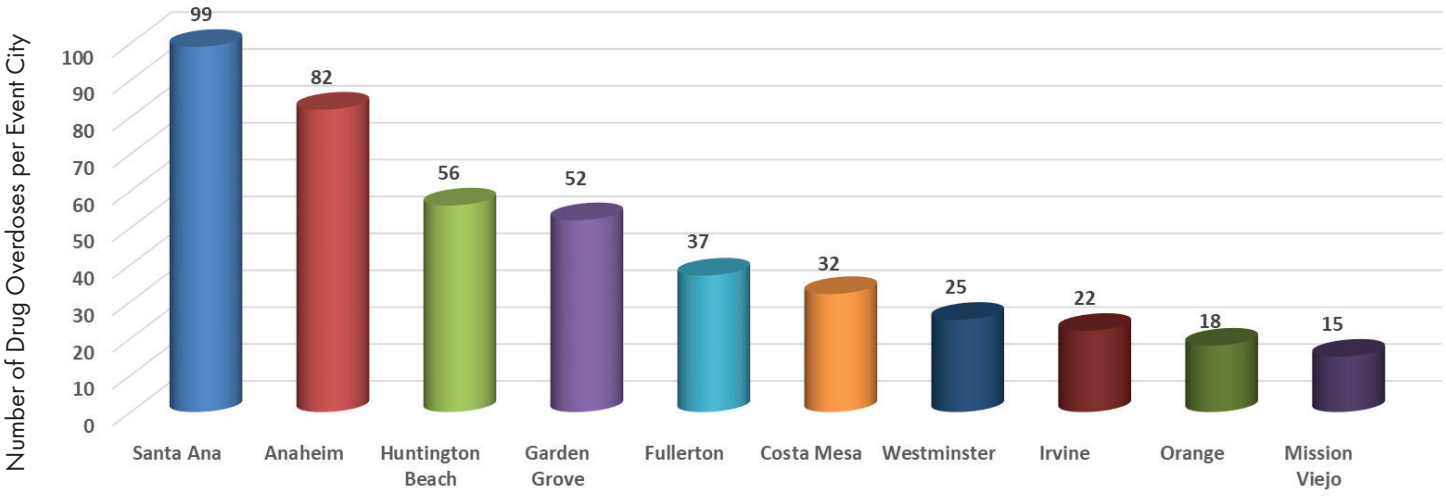
Total Cases by City of Death, 2023

City of Death	Total Cases 2023
Aliso Viejo	35
Anaheim	908
Brea	52
Buena Park	107
Capistrano Beach	10
Corona del Mar	19
Costa Mesa	150
Coto De Caza	2
Cypress	57
Dana Point	38
Foothill Ranch	1
Fountain Valley	327
Fullerton	485
Garden Grove	339
Huntington Beach	396
Irvine	438
La Habra	63
La Palma	40
Ladera Ranch	9
Laguna Beach	68
Laguna Hills	183
Laguna Niguel	72
Laguna Woods	77
Lake Forest	89
Los Alamitos	135
Midway City	15
Mission Viejo	468
Newport Beach	445
Newport Coast	10
North Tustin	1
Orange	756
Placentia	133
Rancho Mission Viejo	1
Rancho Santa Margarita	33
San Clemente	77
San Juan Capistrano	50
Santa Ana	734
Seal Beach	71
Silverado	4
Stanton	80
Sunset Beach	4
Trabuco Canyon	24
Tustin	108
Villa Park	10
Westminster	171
Yorba Linda	68
TOTAL	7363

Deaths Caused by Drug Overdose by Event City

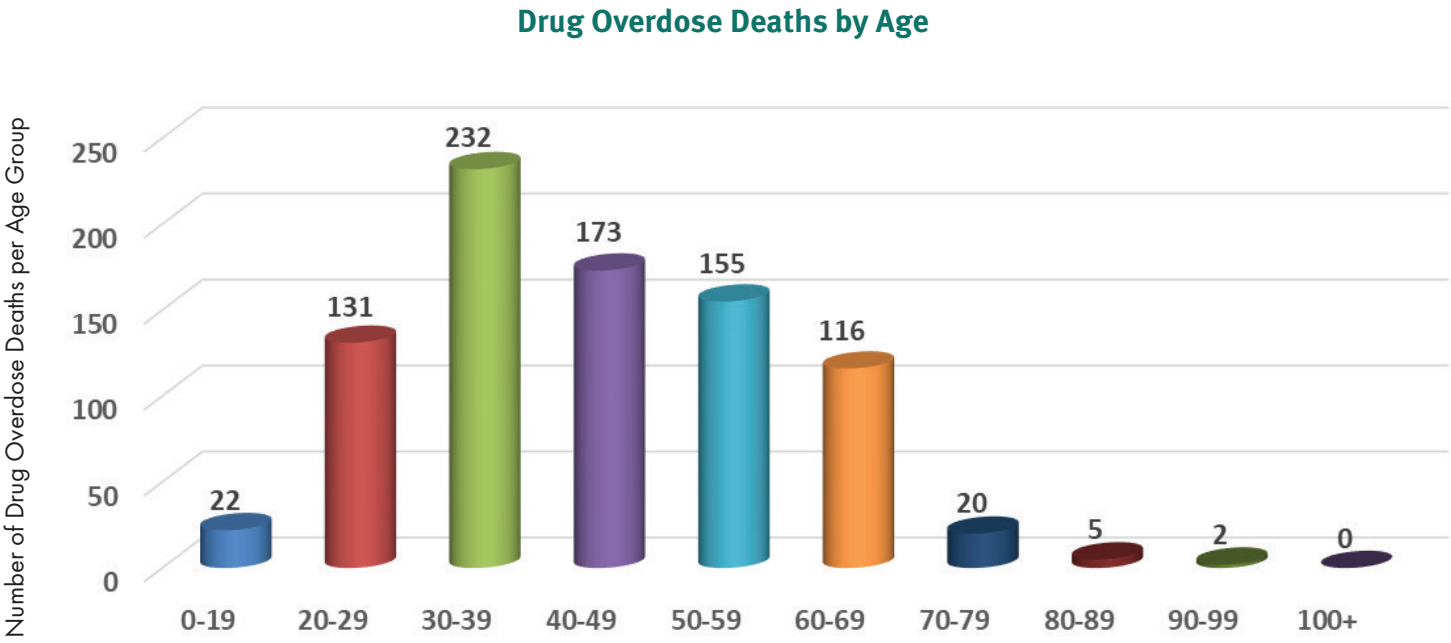
There have been numerous inquiries over the years about the cities where drug overdoses are occurring. To address this, we have included a chart in this report, displaying the top 10 cities for drug overdoses.

Top 10 Event Cities — Drug Overdoses



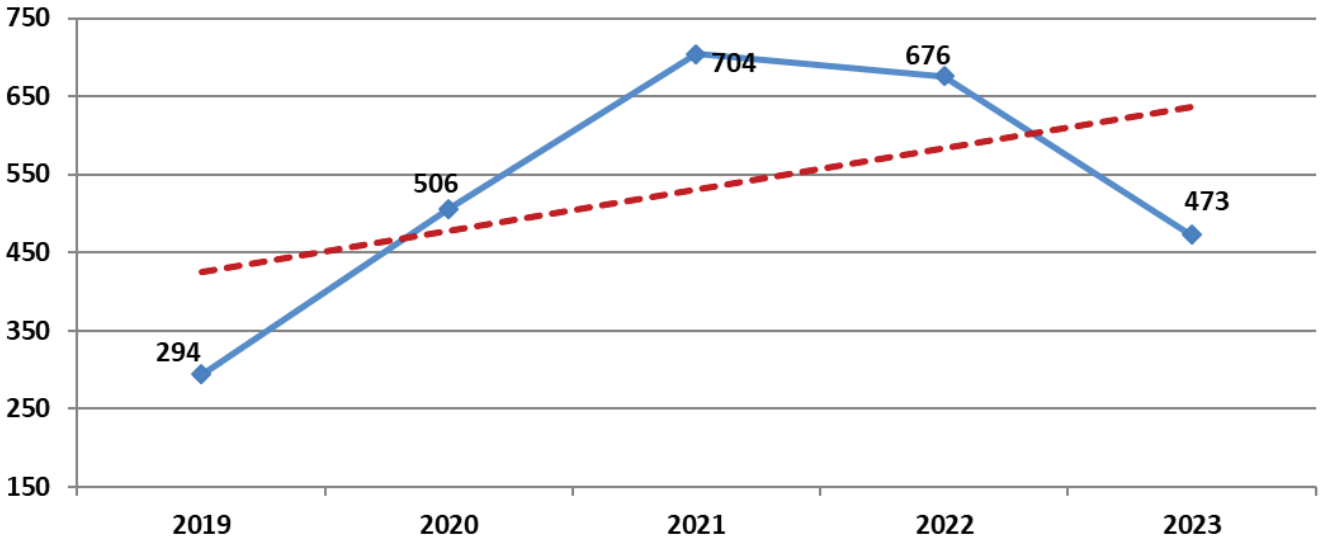
Deaths Caused by Drug Overdose by Age

There is significant interest in both the location and ages of individuals who have died from drug overdoses. The chart below illustrates the number of drug overdose deaths by age group.



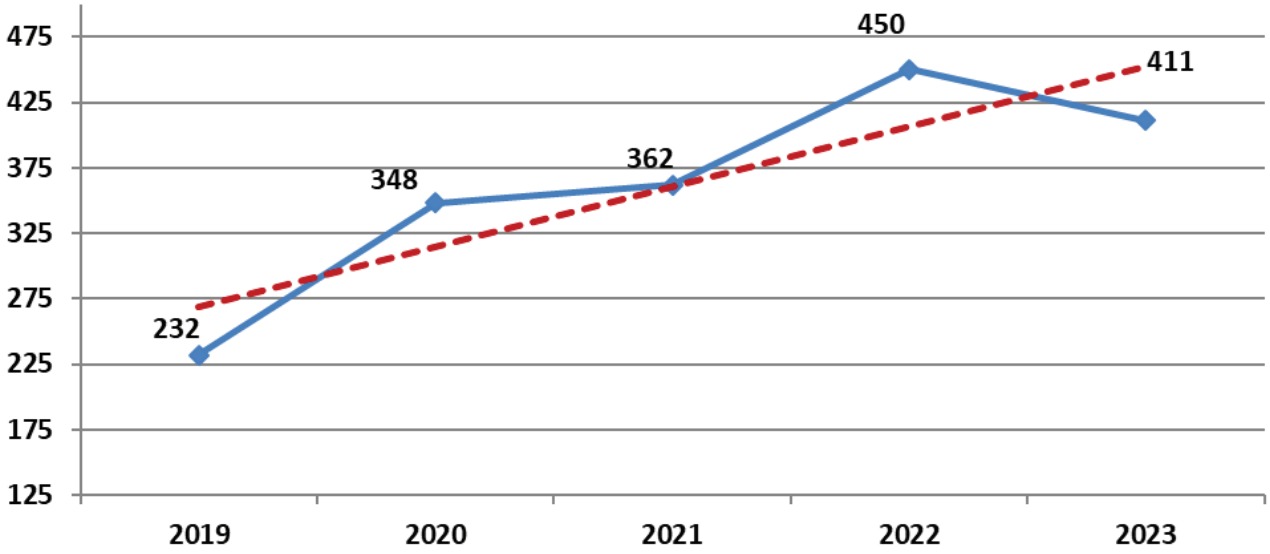
Deaths with Methamphetamine in Toxicology Results

The chart below shows the number of deaths in which methamphetamine was found in toxicology reports, revealing a positive trend with a 30% decrease since 2022.



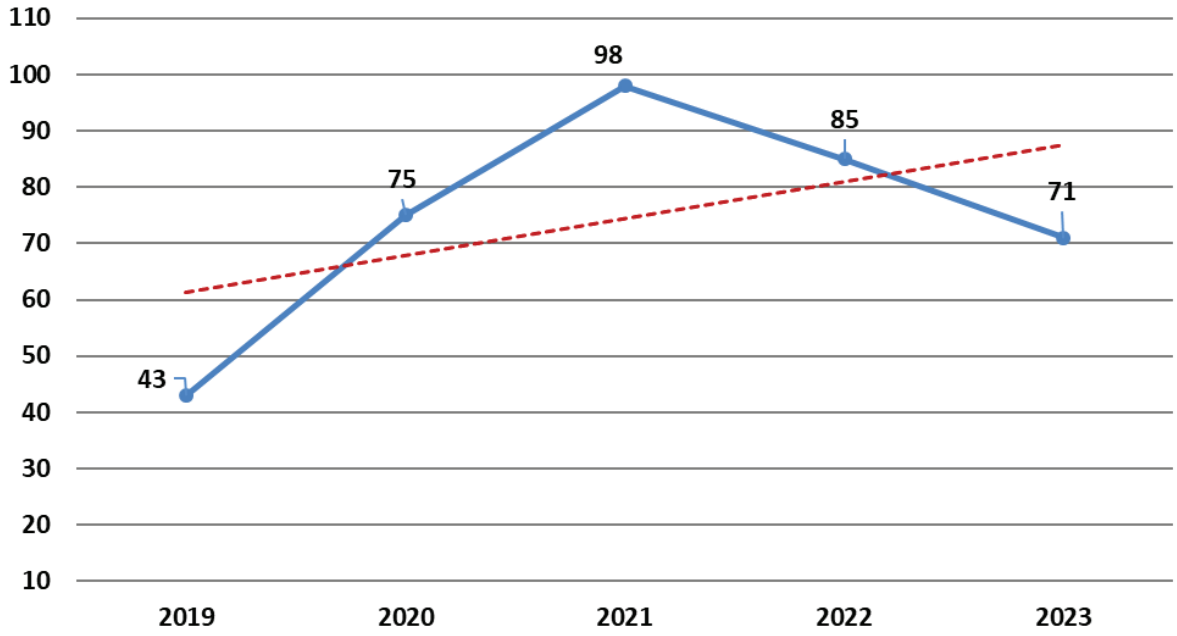
Deaths with THC in Toxicology Results

Deaths involving Tetrahydrocannabinol (THC), the active component in marijuana, detected in toxicology results, have decreased by 9% since 2022, as shown in the chart below.



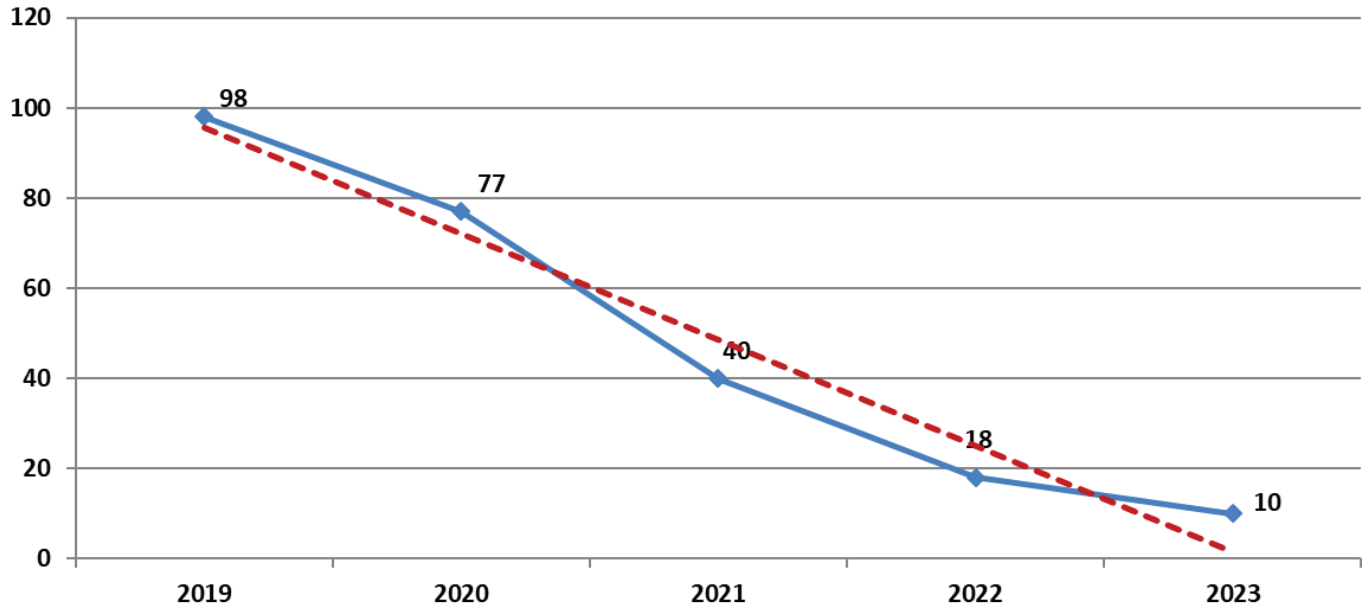
Deaths with Cocaine in Toxicology Results

In 2023, there was a 16% decrease in cocaine-related deaths compared to 2022, with 71 deaths in 2023 compared to 85 in the previous year.



Deaths Caused by Heroin Usage

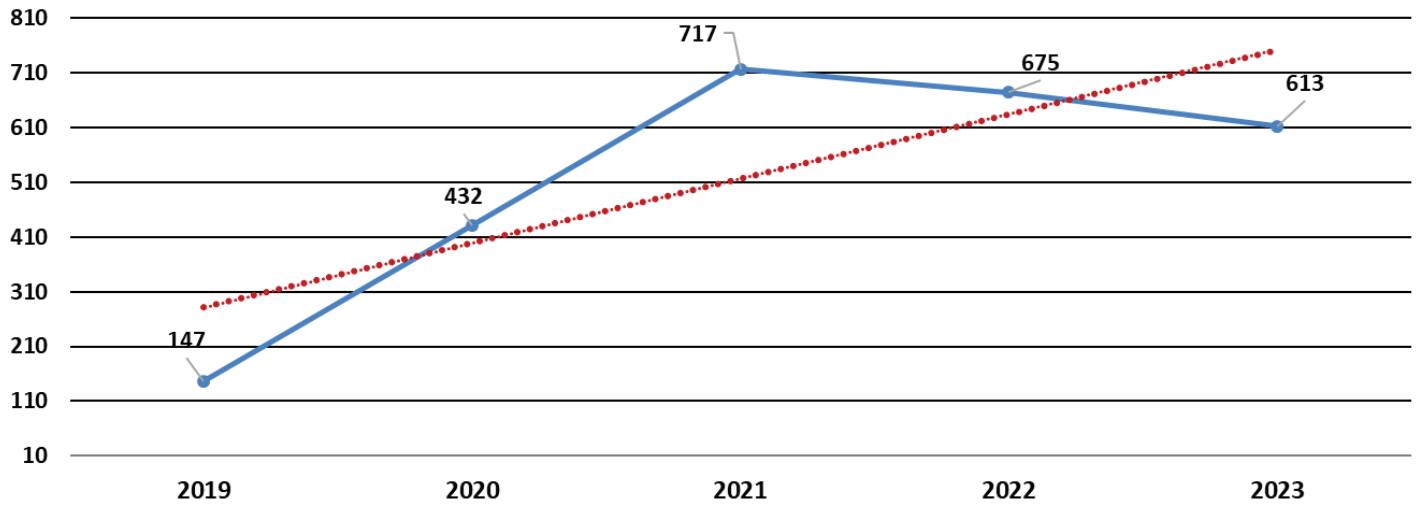
The chart below shows a 44% decrease in heroin-related deaths over five years, from 18 deaths in 2022 to 10 deaths in 2023.



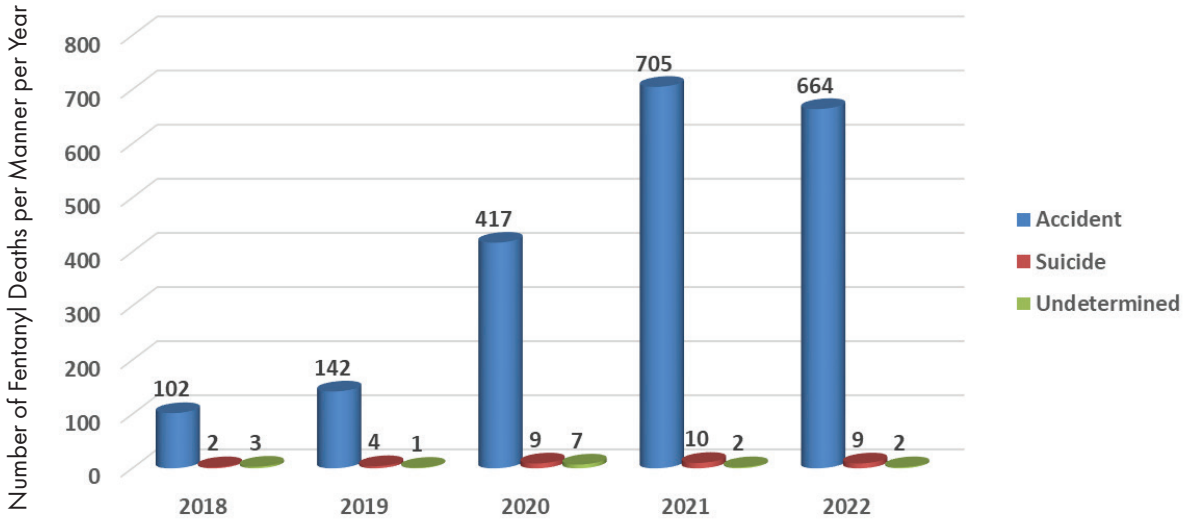
Deaths Caused by Fentanyl

Fentanyl is an extremely potent Schedule II synthetic opiate painkiller that can be lethal at very low doses. Most fentanyl is produced clandestinely, but it is also prescribed by physicians. Fentanyl is 50 to 100 times more potent than heroin. The typical dosage of fentanyl is measured in micrograms, which is one-millionth of a gram—similar to just a few granules of table salt. Even a tiny amount ingested or absorbed through the skin can be fatal. Besides Fentanyl, the US Drug Enforcement Agency has identified at least 15 other deadly fentanyl-related compounds, known as analogs. Analogs are slight chemical variations of the parent drug and can be even more potent than fentanyl. Due to the extreme danger posed by these chemicals, the Coroner Division and the Forensic Chemistry section of the Orange County Crime Lab have been aggressively focusing on the analysis of these compounds.

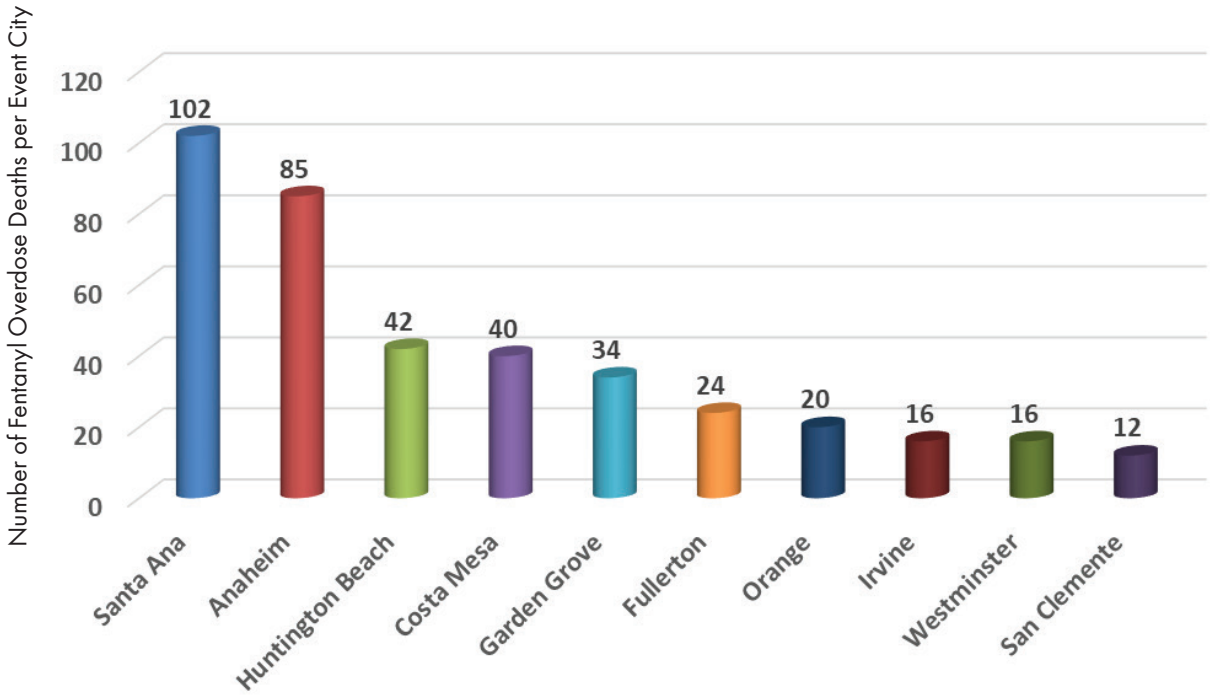
The chart below shows the number of fentanyl deaths over 5 years and combines the analog (illicit) and prescription-related deaths. From 2020 (432) to 2021 (717), fentanyl deaths increased by 66%. In 2023 (613) deaths decreased by 9% compared to 2022 (675).



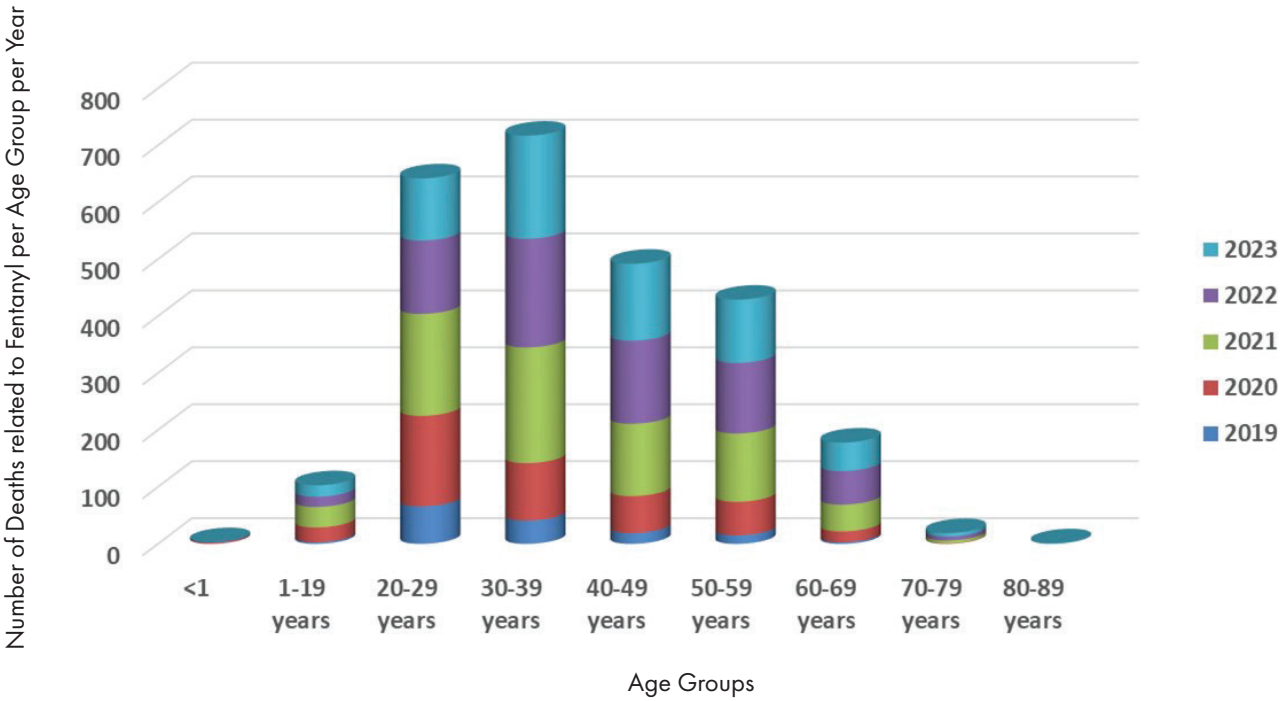
Deaths Related to Fentanyl by Manner - 5 Years



Top 10 Event Cities - Fentanyl Overdoses



Deaths related to Fentanyl by Age - 5 Years

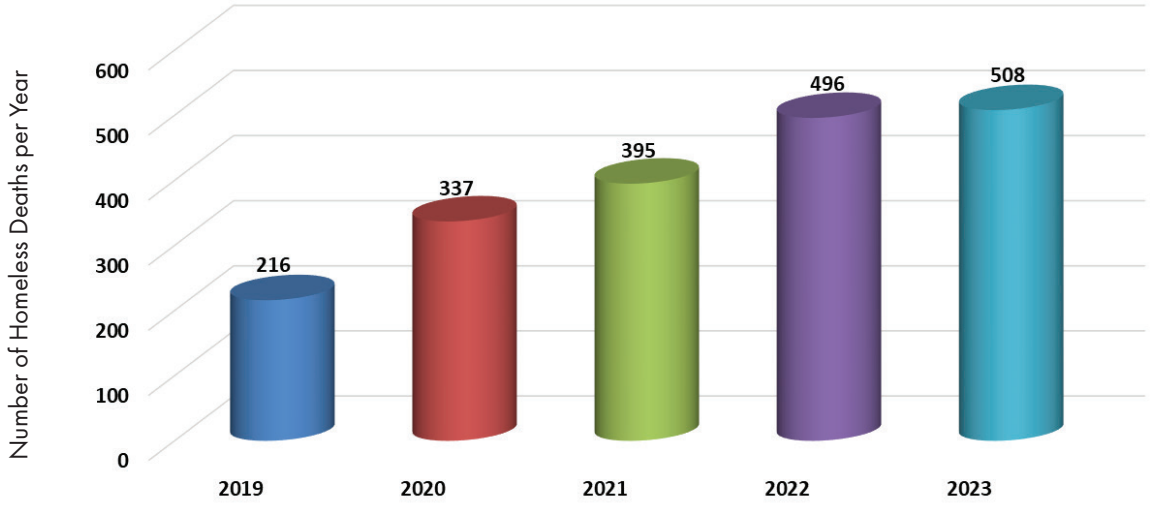


Year	<1	1-19 years	20-29 years	30-39 years	40-49 years	50-59 years	60-69 years	70-79 years	80-89 years
2019	0	3	66	41	19	15	3	0	0
2020	2	26	159	101	65	59	19	1	0
2021	0	36	179	203	127	120	47	5	0
2022	1	18	129	191	146	124	59	7	0
2023	0	20	109	181	135	111	50	6	1
TOTAL	3	103	642	717	492	429	178	19	1

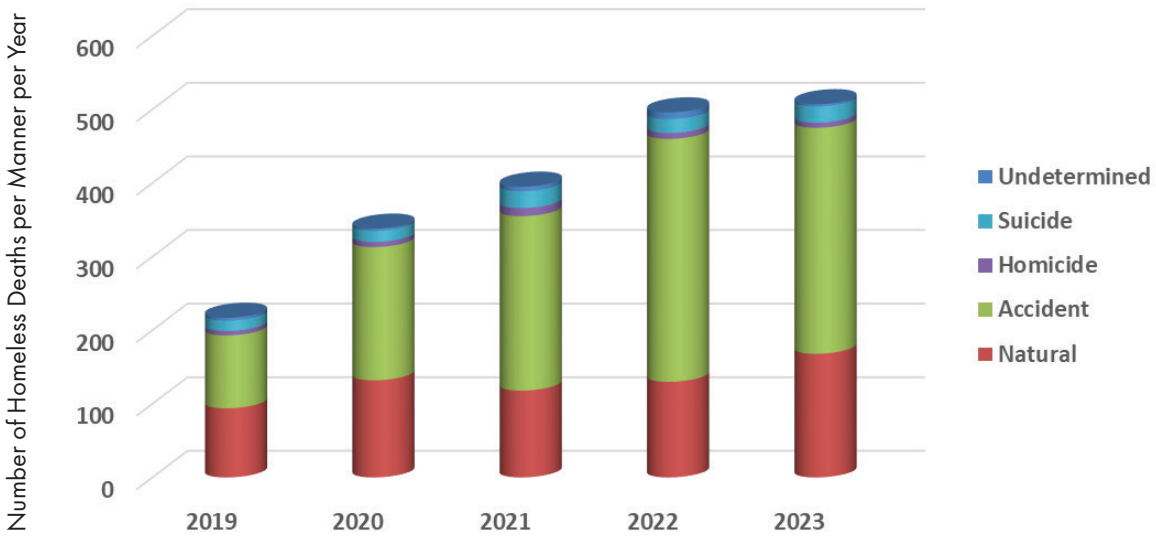
Homeless Deaths

Since 2016, the Coroner Division has noticed an increase in inquiries regarding the deaths of homeless individuals. It is important to note that not all deaths are reported to the Coroner, so the information provided may not present the complete picture but rather a piece of it. Homelessness is defined in the California Welfare and Institutions Code section 16523 as an individual or family who lacks a fixed, regular, and adequate nighttime residence. This determination can be made based on evidence, witness accounts, statements from next of kin, or as reported by the deceased before their passing.

Homeless Deaths by Year - 5 Years



Homeless Deaths by Manner by Year - 5 Years

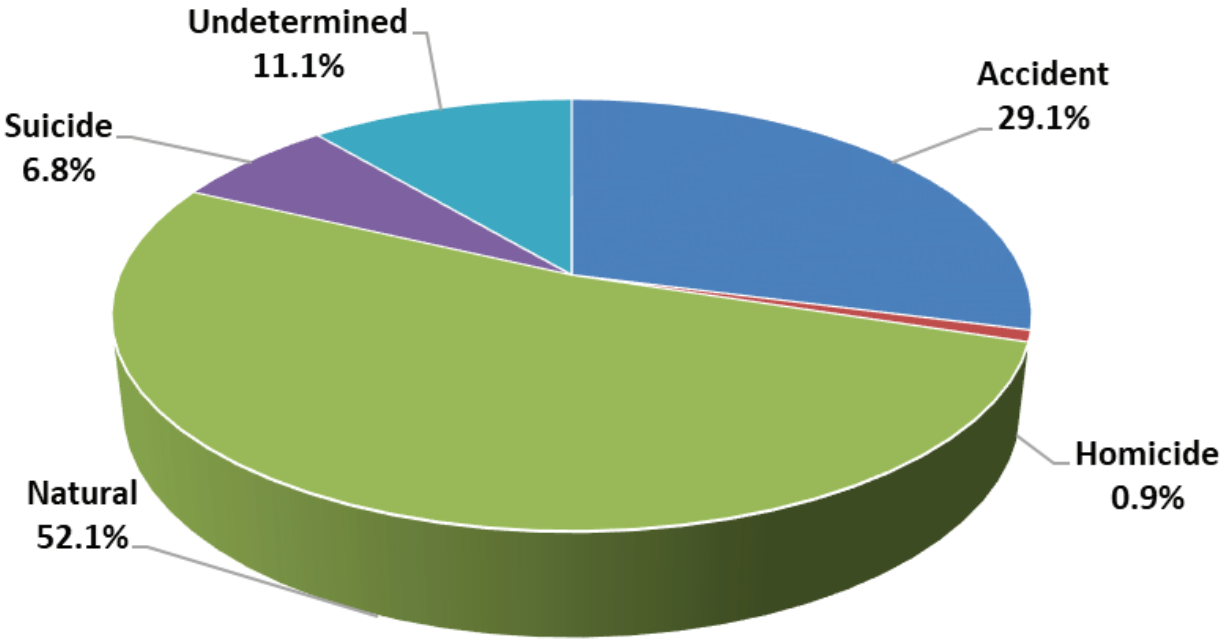


Year	2019	2020	2021	2022	2023
Natural	94	132	118	130	169
Accident	99	181	237	330	307
Homicide	6	7	11	8	7
Suicide	14	14	23	19	22
Undetermined	3	3	6	9	3
TOTAL	216	337	395	496	508

Child Deaths

In 2023, the number of child death cases reported to the Coroner decreased by 52%, from 246 in 2022 to 117 in 2023. Traffic-related deaths stood out, as they also decreased by 25%, going from 12 deaths in 2022 compared to 9 deaths in 2023. Overdose deaths decreased by 8% with 12 in 2022 and 11 in 2023.

Child Deaths



Manner of Death	2019	2020	2021	2022	2023
Accident	17	27	34	37	34
Homicide	4	6	5	3	1
Natural	107	114	153	187	61
Suicide	5	10	9	8	8
Undetermined	7	14	13	11	13
TOTAL	140	171	214	246	117

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