



2022

Volusia County (District 7) Annual Report

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Preface

This report is a compilation of data from the Volusia County (District 7) Medical Examiner's Office (VCMEO) that reflects the work of the employees of the office from the year prior to publication. This report shows metrics of work product, it does not show the dedication of the employees at all levels to the citizens of the county, nor does it show the constant strides to improve the office and our service.

The VCMEO is currently comprised of the following positions:

- Administrative Staff (2)
- Forensic Investigators ((1)
- Forensic Technicians (3)
- Forensic Investigator/Technician Hybrids (5)
- Medical Examiners (3)

The role of a Medical Examiner's Office is to determine the cause and manner of the deaths that occur within its jurisdiction. Although each death investigated by the office has a unique set of circumstances, the totality of the data from a Medical Examiner's Office, when analyzed appropriately, can serve to benefit the community, state, and country within the realms of public health, public safety, and community planning. It is the hope of our office that this set of data will serve such a role.

The data in this report is compiled from the case management system that was implemented in April of 2021. The implementation of this database has improved the efficiency and workflow of the office. The implementation of this case management system is proof of the County's dedication to the office and the people of Volusia County.

Given that this document is meant to serve the needs of the community, the data presented is centered around long-term case tracking and current trends within death investigation. As such, as the trends and interests in death investigation change, this report is expected to evolve over subsequent years.

Overview of Death Investigation in Florida

The duties and responsibilities of Medical Examiners in Florida are described in three resources: Florida Statutes Chapter 406, Florida Administrative Code Chapter 11G, and the Practice Guidelines for Florida Medical Examiners.

Under the provisions of the Florida Medical Examiner Act, Florida Statutes Chapter 406.01-406.17, the medical examiner investigates deaths that are suspected to have resulted from criminal violence, external causes such as injury or poisoning, deaths in prison or police custody, suspicious circumstances and sudden unexplained deaths of persons who are not being treated by a Florida-licensed doctor and when a body is to have a destructive disposition, such as cremation.

When a death is reported to the VCMEO, the case is either accepted and becomes a medical examiner case ("ME") or is declined and becomes a non-medical examiner case ("NME"). If a case is accepted, the VCMEO takes responsibility for signing the death certificate under Florida Statutes 382.011 (The Vital Records Law) and the type of examination completed is the discretion of the assigned medical examiner unless statutes and circumstances dictate an autopsy must be completed.

In Florida, five manner-of-death classifications are utilized on the death certificate:

- *Natural* deaths are due to disease and/or the aging process.
- *Accident* applies when an injury or poisoning causes death and there is little or no evidence that the injury or poisoning occurred with intent to harm or cause death.
- *Suicide* results from an injury or poisoning as a result of an intentional self-inflicted act committed to do self-harm or cause the death of oneself.
- *Homicide* occurs when death results from a volitional or intentional act committed by another person to cause fear, harm, or death.
- *Undetermined* or "could not be determined" is a classification used when the information pointing to one manner of death is no more compelling than one or more other competing manners of death.

County Overview

The District 7 Medical Examiner serves the incorporated and unincorporated areas of Volusia County, an area covering 1432 square miles and an estimated population of 553,543 per the 2020 US Census data.

Based on 2020 census data, the county population is as follows:

Sex:

- 51.2% female
- 49.8% male

Race Identifications:

- 72.3% white
- 14.9% of the population identifies as Hispanic or Latino
- 10.4% black
- 1.9% Asian
- 0.4% indigenous tribes
- 0.1% Native Hawaiian/Pacific Islander
- 9.9% identify as two or more races
- the remaining 5.0% identify as another race not listed .

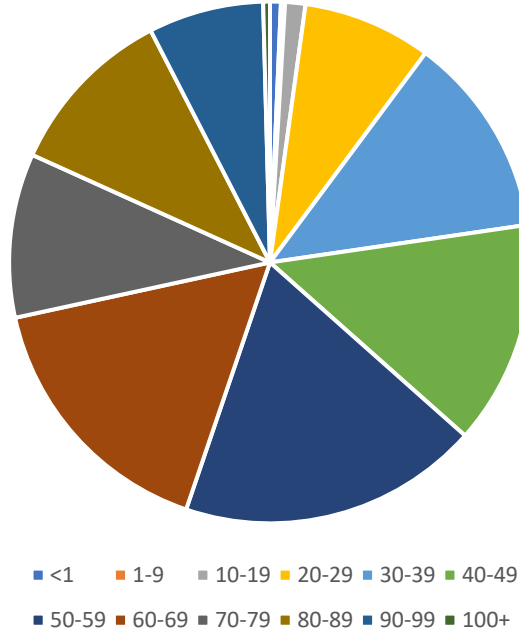
Age distribution of the population of Volusia County is as follows:

- 4.7% under 5 years of age
- 17.5% under 18 years of age
- 24.9% 65 years of age and over
- 57.6% 18 to 64 years of age

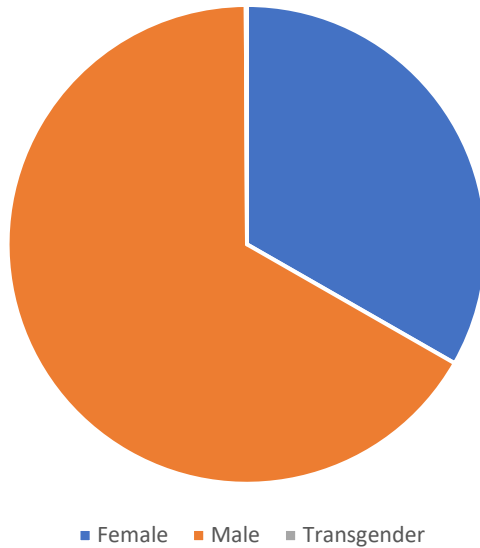
Demographics of Population of VCMEO Decedents in 2022

Age	Count
<1	8
1-9	2
10-19	15
20-29	95
30-39	149
40-49	165
50-59	222
60-69	195
70-79	121
80-89	127
90-99	85
100+	5

Age Distribution



Gender Distribution



Female	396
Male	793
Transgender	1

Case Disposition for 2022

In 2022, 8268 deaths occurred in Volusia County (per the vital statistics website on April 30, 2023), and of these 1975 were reported to the VCMEO (23.9% report rate). The disposition of the cases reported to the VCMEO are as follows:

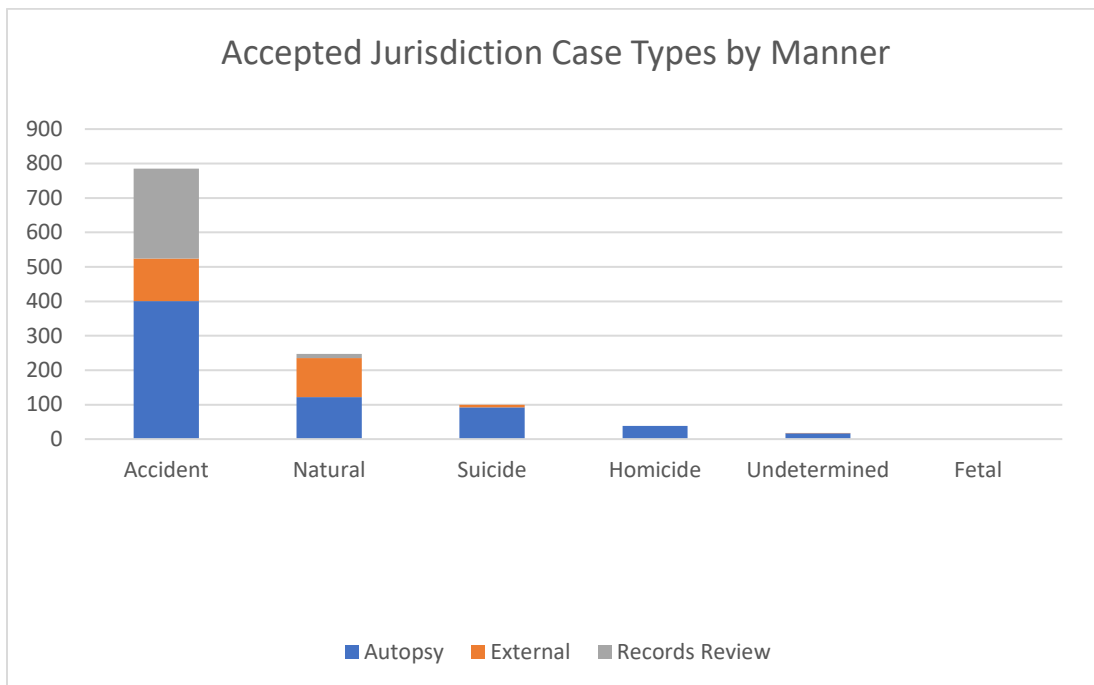
Reported Deaths	Total	Percentage of Reported Deaths
Accept Jurisdiction: Autopsy	670	34%
Accept Jurisdiction: External	245	12%
Accept Jurisdiction: Records Review	273	14%
Declined Jurisdiction	787	40%
Total	1975	100%

- Autopsies are examinations that include an incision made into the body and examination of organs pertinent to the cause of death.
- External examinations do not include incisions into the body. Only the exterior of the body is assessed.
- Records reviews are medical examiner cases completed without viewing decedents. Medical records, police reports and EMS reports are reviewed to make a cause and manner of death determination.

In addition to the above reported cases which are investigated by the VCMEO, the office also reviewed 5234 death certificates in order to authorize cremation. Thus, the VCMEO reviewed 63% of the death certificates issued in Volusia County by community physicians in 2022.

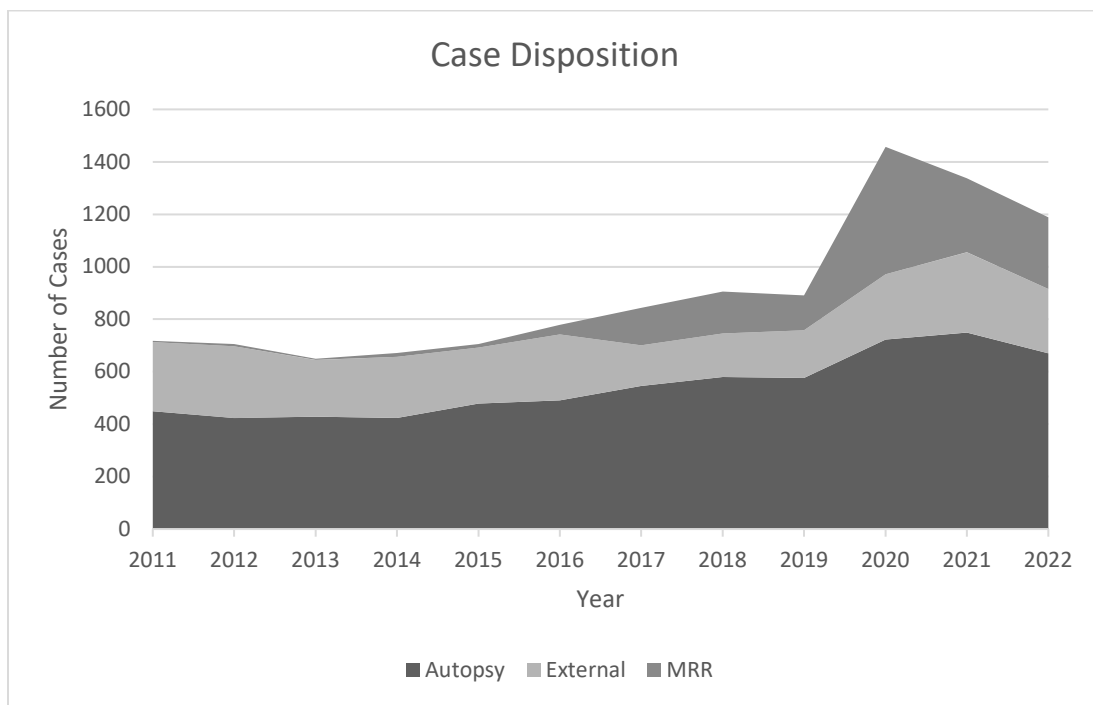
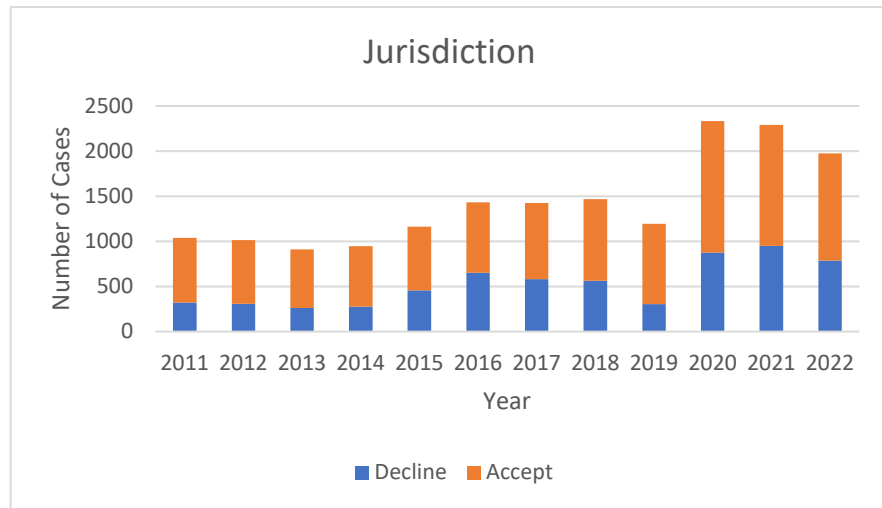
Accepted Jurisdiction Case Types by Manner

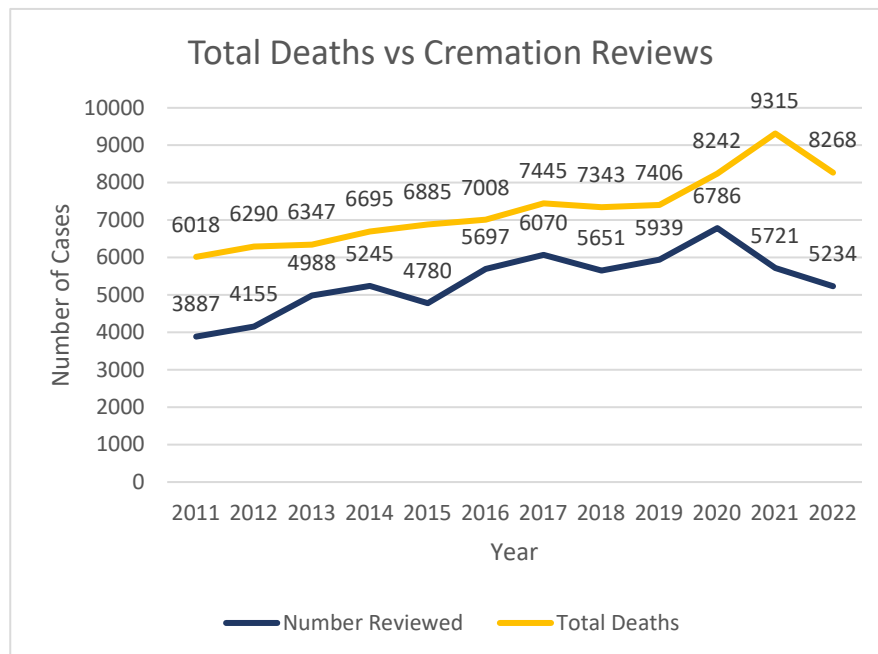
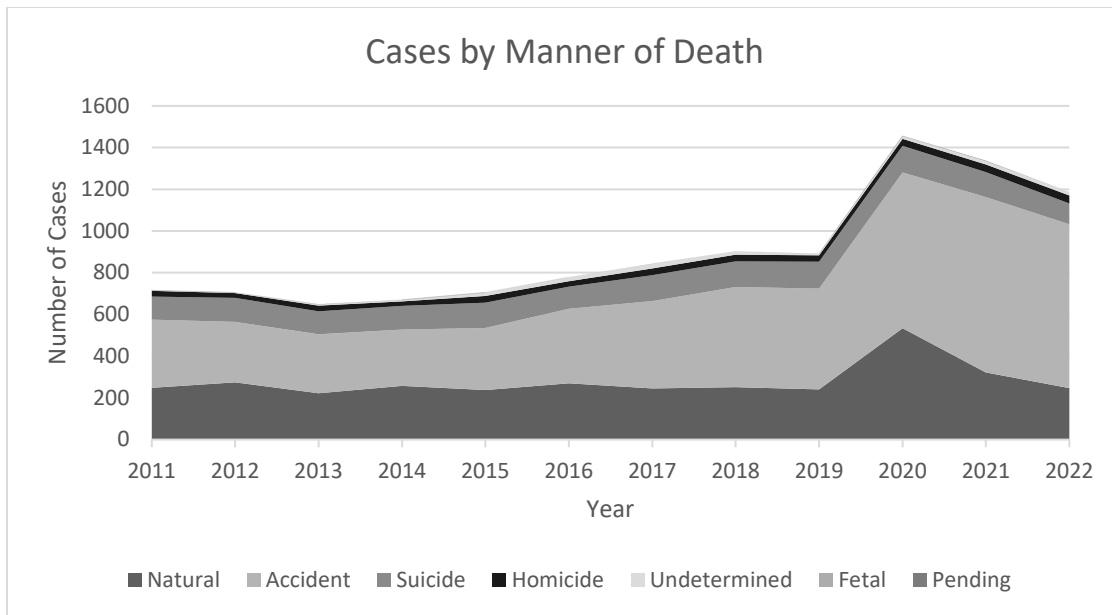
Manner of Death	Autopsy	External	Records Review
Accident	401	123	261
Natural	122	113	12
Suicide	92	8	0
Homicide	38	0	0
Undetermined	17	1	0
Fetal	0	0	0



Historical Case Data

Year	Accept	Decline
2011	717	321
2012	706	307
2013	649	261
2014	671	276
2015	705	457
2016	779	652
2017	843	582
2018	905	564
2019	891	304
2020	1457	875
2021	1337	951
2022	1188	787





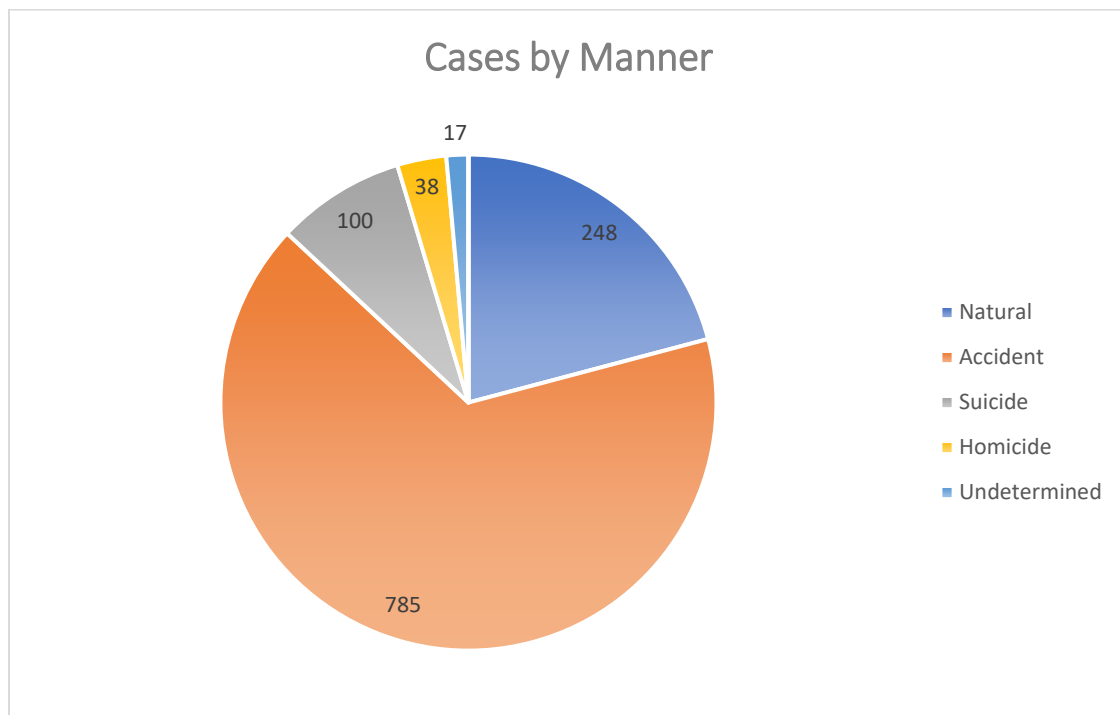
Year	Total Deaths	Cremation Reviews
2011	3887	6017
2012	4155	6290
2013	4988	6347
2014	5245	6695
2015	4780	6885
2016	5697	7008
2017	6070	7445
2018	5651	7343
2019	5939	7406
2020	6786	8242
2021	5721	9315
2022	5234	8268

Per F.S. 406.11(1)(c), the Medical Examiner must conduct an investigation “when a body is to be cremated, dissected, or buried at sea.” The extent of the investigation varies depending on the nature of the case. These investigations begin with obtaining pertinent medical records, police reports, and/or EMS/Fire reports. These reports are reviewed and if it is determined that the death meets criteria to fall under the jurisdiction of the medical examiner’s office, the death certificate must be certified by a medical examiner. The extent of the examination completed is dependent on the nature of the death.

2022 Cases by Manner

The 1188 cases that were accepted for jurisdiction by the VCMEO in 2022 were assigned manners as follows:

Natural	248	20.9%
Accident	785	66.1%
Suicide	100	8.4%
Homicide	38	3.2%
Undetermined	17	1.4%
Fetal	0	0
Pending	0	0
Total	1188	100%



Deaths by Manner

The following information is specific to the 1188 deaths that were certified by the VCMEO. Deaths certified by community physicians are not tracked by the VCMEO.

Natural

Natural deaths by primary “organ system” (number and percentage of total)

Organ System	Number	Percentage
Cardiovascular	136	55%
Liver/Chronic Alcohol	41	16%
Infection (including COVID-19)	14	5%
Pulmonary (including PE)	13	5%
Cancer	10	4%
Central Nervous System (to include dementia)	9	4%
Multi-system (includes complications of chronic drug abuse)	8	3%
Obesity	7	3%
Diabetes	5	2%
GI tract (to include hemorrhage without a history of Alcohol)	4	2%
Renal	1	<1%
Endocrine	1	<1%
Total	249	100%

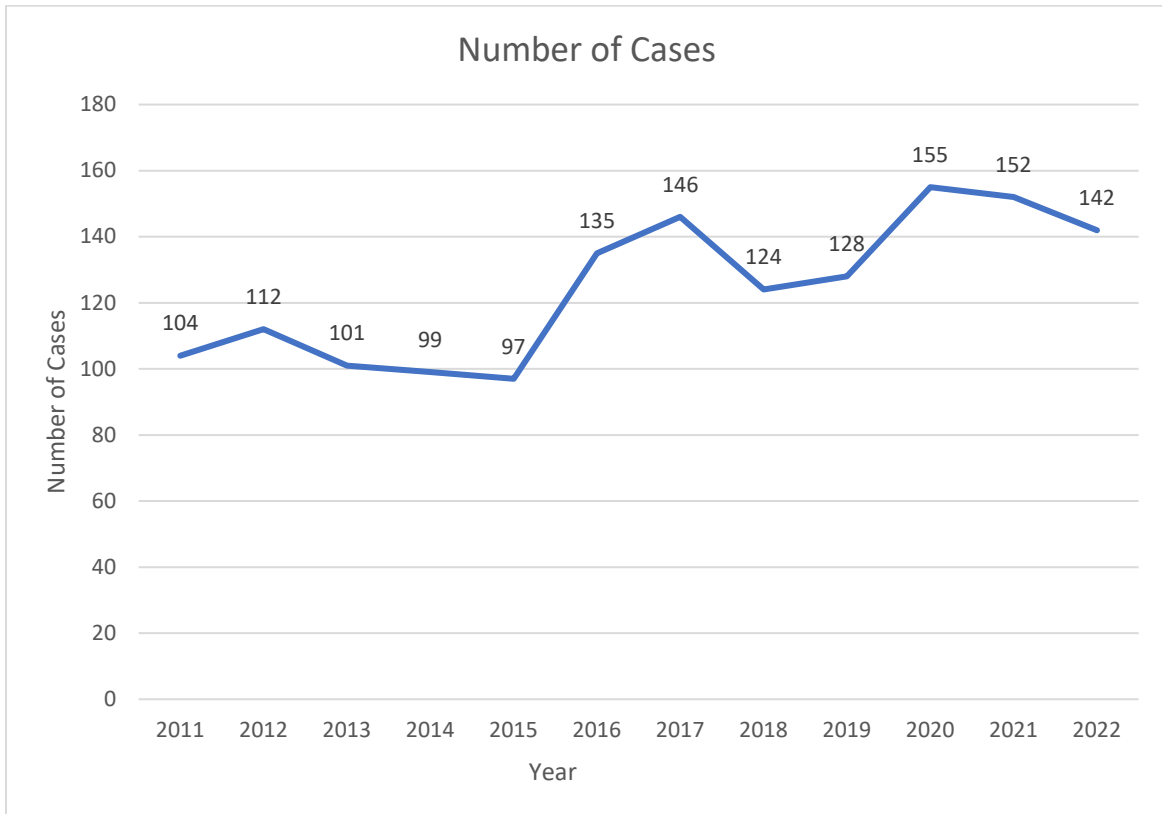
Accident

Category	Number	Percentage
Drugs	337	43
Transportation (including plane, boat, train)	152	19
Fall	236	30
Blunt Force (not Fall or MVC)	7	1
Drowning	31	4
Choking	10	1
Other Asphyxia	6	1
Environmental	3	<1
Fire/Explosion	3	<1
Firearm	1	<1
Total	786	100%

- 142 accidental deaths were due to motor vehicular/traffic collisions.
- Fire-related deaths often involve an asphyxial component due to the production of compounds such as carbon monoxide; however, fire related deaths are looked at separately because of the difference in the presentation of these death and the common coexistence of thermal injuries in fire related deaths.

Additional information on drug related accidental deaths can be found in the “Special Populations” section below.

Historical Trends in Motor Vehicle Related Accidental Deaths



Year	Total
2011	104
2012	112
2013	101
2014	99
2015	97
2016	135
2017	146
2018	124
2019	128
2020	155
2021	152
2022	142

Suicide

Method	Number	Percentage
Firearm	64	64%
Asphyxia	21	21%
Drugs/Toxins	9	9%
Blunt Force	3	3%
Sharp Injury	3	3%
<i>Total</i>	100	100%

- The most common method of suicide was via firearm.
- Of the 21 asphyxial deaths, 16 were via hanging.

Homicide

Method	Number	Percentage
Firearm	26	68.4 %
Blunt Force	5	13.2 %
Sharp Injury	7	18.4 %
<i>Total</i>	38	100

- The most common method of homicide was via a firearm.
- In one blunt force homicide, a motor vehicle was being used as a weapon.

Undetermined

In 2022, 17 cases certified by the VCMEO were assigned a manner of undetermined.

All undetermined cases are peer-reviewed prior to certification.

Of these:

- 7 were infants that were certified as Undetermined manner based on current recommendations set by the National Association of Medical Examiners
- 4 had decomposition changes that limited examination and precluded determining the cause of death
- 6 had conflicting or limited information pertaining to the details needed to determine the manner of death

Special Populations

Children (less than 18 years of age)

Accident: Total – 11

- Blunt Trauma from Motor Vehicle Crashes: 6
- Drowning: 3
- Asphyxia: 2

Natural: Total – 0

Suicide: Total – 1

- Firearm: 1

Homicide: Total – 1

- Firearm: 1

Undetermined: Total – 7

- Sudden Unexplained Death: 7

Infants

Children less than 1 year of age require specialized procedures in both investigation and autopsy examination. In 2020, there was a shift in the recommended terminology for the certification of a subset of deaths in the infant population which is reflected in the change in the wording of the cause of death in these cases certified by the VCMEO. The cases certified with a cause of death stated as “Unexplained Sudden Death” are certified as such based on recommendations by the National Association of Medical Examiners even when intrinsic or extrinsic factors related to death were identified.

Manner	Total
Undetermined	7
Accident (Asphyxia)	1

All infant deaths with an “undetermined” manner had both intrinsic and extrinsic factors identified as per the national recommendations.

Fetal Deaths

Most fetal deaths do not fall under the jurisdiction of the VCMEO, and the fetal death certificate is completed by the physician involved in the care for the pregnancy. No fetal deaths in 2022 were certified by the VCMEO. Fetal death certificates do not have a section to assign manner of death.

In Custody and Police Involved Deaths

In 2022, 11 inmates of correctional facilities died in Volusia County. Of these deaths, 9 were due to natural disease, 1 was due to an accidental overdose of illicit drugs, and 1 was a homicide.

In 2022, 5 deaths occurred during interactions with police in the community. Of these two individuals were homicides (shot during police interactions), two were suicides (shot themselves while in the presence of police), and one was an accident (struck by a police vehicle).

Organ and Tissue Donation

The VCMEO makes referrals for tissue donation to two organizations.

Organization 1 received 739 referrals from the VCMEO resulting in 23 tissue donors and 38 ocular donors. Organization 1 also received 113 referrals from local hospitals on cases that fell under the jurisdiction of the VCMEO resulting in an additional 15 tissue donors and 26 ocular donors.

Organization 2 did not provide data.

Accidental Drug Overdose Deaths

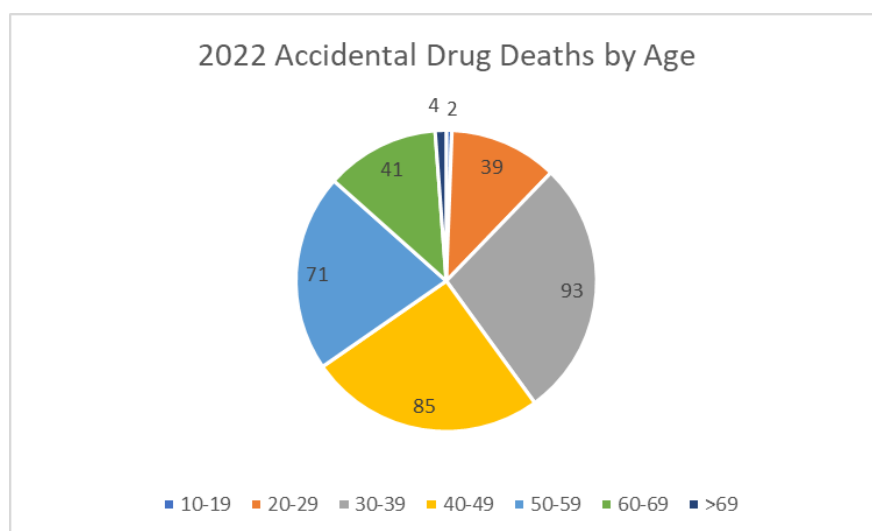
335 of the deaths certified by the VCMEO in 2022 were due to accidental drug overdose, and the preponderance of these deaths were due to combined toxicities of two or more drugs.

The institution of a new case management system now allows the VCMEO to better granulate some data to include the compounds that are involved in drug deaths. Below are the 6 most common drugs that caused or contributed to death in Volusia County in 2022.

Please note, that since this is only a tally of the drugs, as most overdose deaths involve more than one drug. The numbers below do not add to the total number of deaths (which is 335 for 2022).

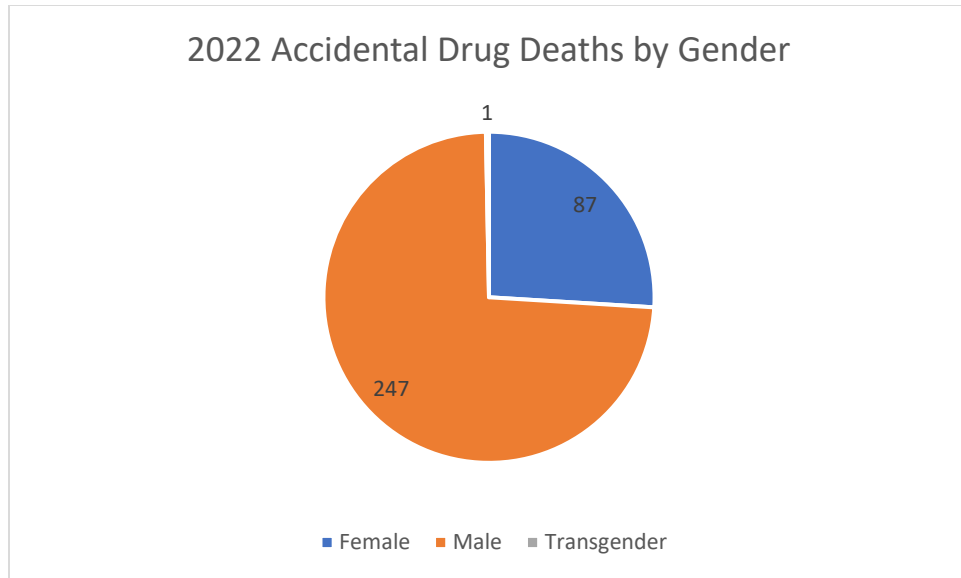
Drug	Number of Cases	Percentage of Drug Deaths
Fentanyl	272	81.2%
Methamphetamine	129	38.5%
Cocaine	99	30.0%
Ethanol	63	18.8%
Xylazine	23	6.9%
Alprazolam	16	4.8%

- The percentage of drug deaths that fentanyl was a contributing factor in increased by nearly 10% in 2022 (81.2%) compared to 2021 (71.5%).
- Xylazine was increasingly recognized in drug deaths in 2022 but was always found in combination with other illicit drugs, most commonly fentanyl.

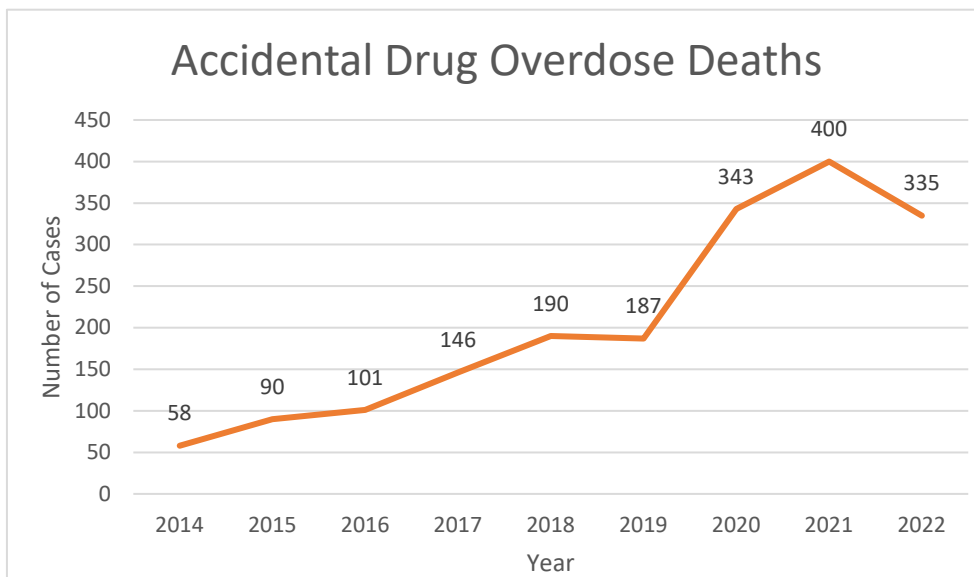


Age Range	Total
10-19	2
20-29	39
30-39	93
40-49	85
50-59	71
60-69	41
>69	4

- The mean age of death for accidental drug overdose deaths was 44 years with a median of 43 years.
- 60.0% of accidental drug overdose deaths were 40 years old or older.
- 88.1% of accidental drug overdose deaths were less than 30 years old.
- No accidental drug overdoses were less than 18 years old in 2022.
- 11 persons who died of accidental drug overdoses had been in a correctional facility in the past year. Of those, 5 had been released within 1 week of their death.
- 73.7% of accidental drug overdose deaths were male.

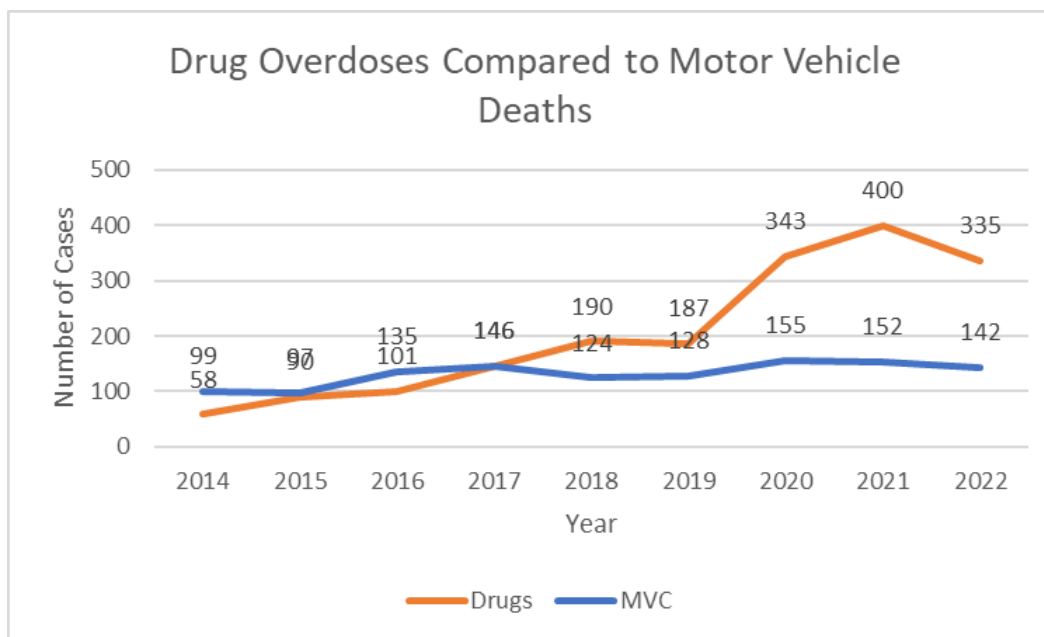


Historical Trends in Accidental Drug Overdose Deaths



Year	Total
2014	58
2015	90
2016	101
2017	146
2018	190
2019	187
2020	343
2021	400
2022	335

For historical comparison, accidental motor vehicle related deaths and accidental drug overdose deaths have been comparable in number prior to 2020. The increase in accidental drug overdose death as compared to motor vehicle deaths continued through 2022.



Year	Drugs Total	MVC Total
2014	58	99
2015	90	97
2016	101	135
2017	146	146
2018	190	124
2019	187	128
2020	343	155
2021	400	152
2022	335	142