

**OFFICE OF THE
MEDICAL
EXAMINER**

Palm Beach County Medical
Examiner's Office
2022 Annual Report



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Introduction

According to the Florida Legislature Office of Economic and Demographic Research¹, Palm Beach County is Florida's 4th most populous county, with 6.8% of Florida's population. In addition to its year round and seasonal residents, Palm Beach County has several million visitors per year. If any person, resident or visitor, dies within Palm Beach County, and the circumstances of the death fulfill the criteria defined by Florida Statute 406.11², they will be referred to the Palm Beach County Medical Examiner's Office for investigation.

The Palm Beach County Medical Examiner's Office (PBCMEO), District 15 of the Florida Medical Examiner system, is responsible for determining the cause and manner of death of people who die in Palm Beach County and fulfill the criteria of Florida Statute 406.11². The medical examiner shall "make or have performed such examinations, investigations, and autopsies as he or she shall deem necessary or shall be requested by the state attorney" based on the following criteria of Florida Statute 406.11:

(a) When any person dies in the state:

1. Of criminal violence
2. By accident
3. By suicide
4. Suddenly, when in apparent good health
5. Unattended by a practicing physician or other recognized practitioner
6. In any prison or penal institution
7. In police custody
8. In any suspicious or unusual circumstance
9. By criminal abortion
10. By poison
11. By disease constituting a threat to public health
12. By disease, injury or toxic agent resulting from employment

(b) When a dead body is brought into the state without proper medical certification

(c) When a body is to be cremated, dissected, or buried at sea

The Palm Beach County Medical Examiner's Office is located at 3126 Gun Club Road in West Palm Beach. This facility includes medical examination areas, evidence and specimen storage areas, a tissue procurement area, X-ray facilities, and administrative areas and offices. Medicolegal death investigations are carried out 24 hours a day, every day of the year, including Federal Holidays. During weekdays, the PBCMEO is open to the public during normal business hours.

In 2022, 4,226 deaths were reported to the PBCMEO. This included 1,800 cases investigated and determined to not fulfill the criteria of F.S. 406.11. These are called non-medical examiner (non-ME) cases. The PBCMEO reviewed the death certificates of 9,448 decedents who were to be cremated, dissected, or buried at sea to determine if any fulfilled the criteria of F.S. 406.11 and thus become a medical examiner

⁴ ¹ http://edr.state.fl.us/Content/population-demographics/data/MediumProjections_2022.pdf

² http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0400-0499/0406/Sections/0406.11.html

(ME) case. Of those 9,463 cremation reviews, 72 (0.76%) became ME cases because they fulfilled the criteria of F.S. 406.11. The 2022 annual report concentrates on the 2,426 Medical Examiner (ME) cases for the year 2022.

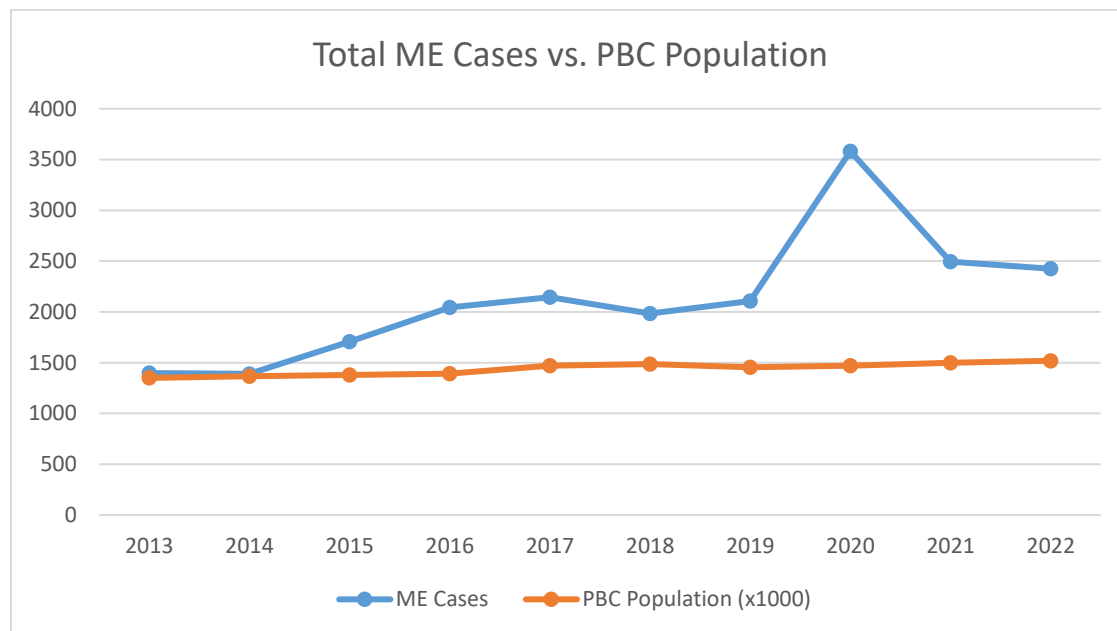
County Demographics

According to the Florida Legislature Office of Economic and Demographic Research, the population of Palm Beach County in 2022 was estimated to be 1,518,152 (The US Census estimate was 1,518,477). Based on data from the U.S. Census Bureau³, this is approximately 1.8% increase since the 2020 census. The U.S. Census Bureau statistics for 2022 indicates that 51.2% of the population was female, 4.9% of the population is under 5 years of age, and 24.5% are over 65 years old. Non-Hispanic white was the most common race (52.6%), followed by Hispanic or Latino (23.9%), Black or African American (20.1%), and Asian (3.0%). Foreign-born persons made up 26.3% of the population. Of those individuals under age 65 years, 18.1% had no health insurance. The median household income (in 2021 dollars) was \$68,874 with 11.6% of the population living in poverty. According to the National Alliance to End Homelessness, in 2021 1,309 people were homeless in Palm Beach County on a given night⁴.

Workload

Graph 1: Total ME Cases vs. PBC Population

Graph 1 shows the total number of ME cases from 2013-2023 compared to the population of Palm Beach County over than same time period.



The dramatic increase in the total number of ME cases from 2014 to 2017 is due largely to fatal opioid overdoses. The decrease in total ME cases in 2018 is due to a reduction in opioid fatalities. The dramatic increase between 2019 and 2020 is due to an increase in drug fatalities and the COVID-19 pandemic. Not accounting for COVID-19 cases, there is an upward trend in cases between 2019 and 2022, which is consistent with an increase in deaths from multiple modalities, and loosely corresponds to the population increase in Palm Beach County during this period of time.

5 ³ <https://www.census.gov/quickfacts/fact/table/palmbeachcountyflorida,FL/PST045222>

⁴ endhomelessness.org/homelessness-in-america/homelessness-statistics/state-of-homelessness-report/florida/

Manner of Death

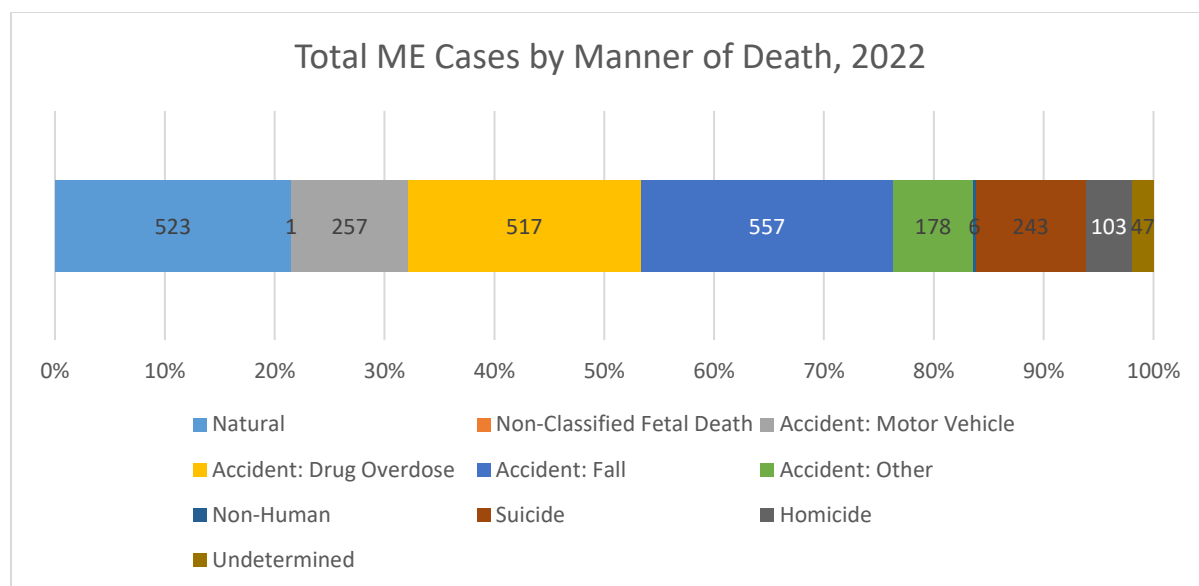
For death certification, each death must be assigned an appropriate manner of death (Figure 1). The assignment of a manner of death is for public health purposes, although other entities (state attorney, insurance companies, etc.) may use this determination for their own purposes. The manners of death are natural, accident, suicide, homicide, and undetermined. A Natural death is one that is entirely caused by a disease without contribution by any injury. Accidental deaths are those where an injury or poisoning causes death and there is little or no evidence that the injury or poisoning occurred with the intent to harm or cause death. Suicides result from an injury or poisoning as a result of an intentional, self-inflicted act committed to do self-harm or cause the death of one’s self. Homicides are deaths that result from a volitional act committed by another person with the intention to cause fear, harm, or death.⁵ If the manner of death cannot be determined because there is more than one reasonable choice or there is a high degree of uncertainty, then it is undetermined.

Figure 1: Florida Death Certificate with Manner and Cause of Death Sections

39. PROBABLE MANNER OF DEATH		The following are under the jurisdiction of the medical examiner:		40. REPORTED TO MEDICAL EXAMINER DUE TO CAUSE OF DEATH?	
<input type="checkbox"/> Natural		<input type="checkbox"/> Accident		<input type="checkbox"/> Yes	
		<input type="checkbox"/> Suicide		<input type="checkbox"/> No	
		<input type="checkbox"/> Homicide			
		<input type="checkbox"/> Pending Investigation			
		<input type="checkbox"/> Undetermined			
BY: MEDICAL CERTIFIER	41. CAUSE OF DEATH - PART I. (See instructions on back)		Enter the chain of events - diseases, injuries, or complications - that directly caused the death. Enter only one cause on a line. DO NOT enter terminal event such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology.		
	IMMEDIATE CAUSE (Final disease or condition resulting in death)		Approximate Interval: Onset to Death		
	Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST				
	a. _____				
	b. _____				
c. _____					
d. _____					

Graph 2: Total ME Cases by the Manner of Death

Graph 2 shows the proportion of death by the manner of death in 2022. We further break down the accidental deaths into those involving motor vehicles, drug overdoses, falls, and other types of accidents such as drownings. Finally, we also include non-human remains or archeologic specimens that were examined in 2022.

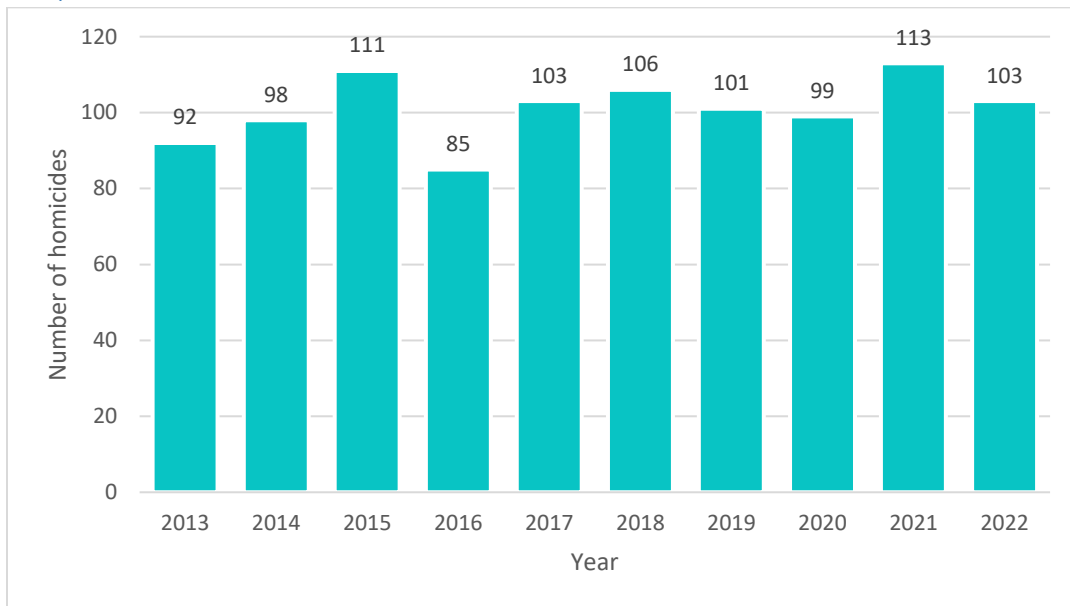


In 2022, the majority (57.5%) of ME cases were accidents, and most of the accidents were fatal drug overdoses (39%). Motor vehicle fatalities constituted 17% of all accidents and falls another 33% of accidents. The majority of fatal falls resulted in head injury and occurred in elders who were often taking anticoagulant medication or “blood thinners.” In 2018, 5% of ME cases were homicides, and 13% were suicides.

Homicides

For death certification, homicide is defined as death at the hands of another person. Homicide determination is not a legal decision. The state attorney and investigative law enforcement agency will determine if and what criminal charges will be brought forth, not the medical examiner.

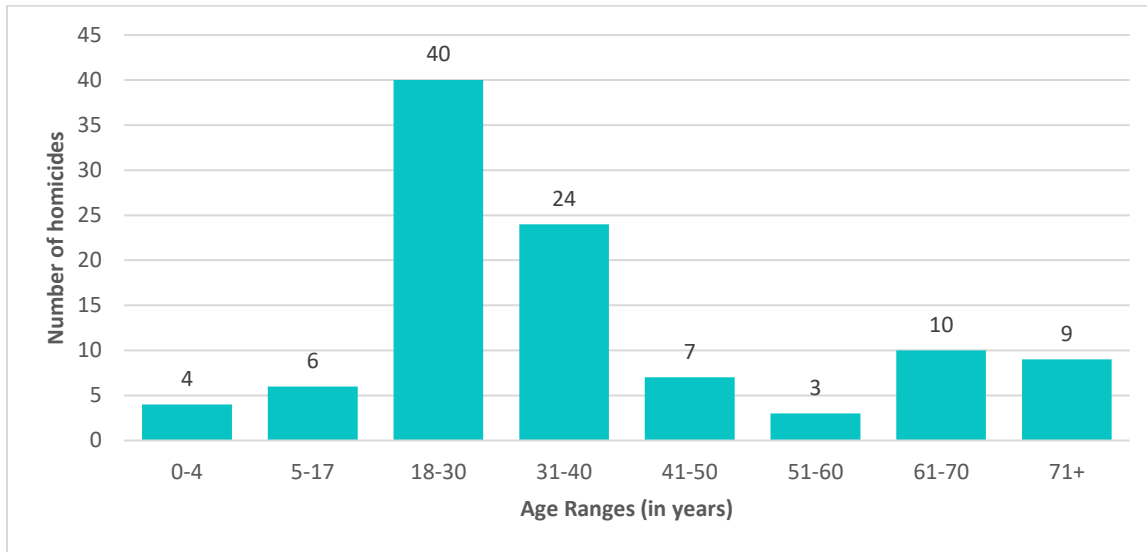
Graph 3: Annual Homicide Totals for 2013-2022



The average annual number of homicides for the last ten years is 101. In 2022, there were 2 more homicides than the annual average. The male: female ratio for homicide victims in 2022 was 2.8: 1. Most 2022 homicide victims were Black or African American (52), followed by White (28) and Hispanic/Latino (22). The average age of homicide victims was 36 years and the age distribution of homicide victims is seen in graph 4.

⁷ ⁵ Hanzlick, R., Hunsaker III, J. C., & Davis, G. J. (2002). (Publication). A Guide for Manner of Death Classification (1st ed.). National Association of Medical Examiners.

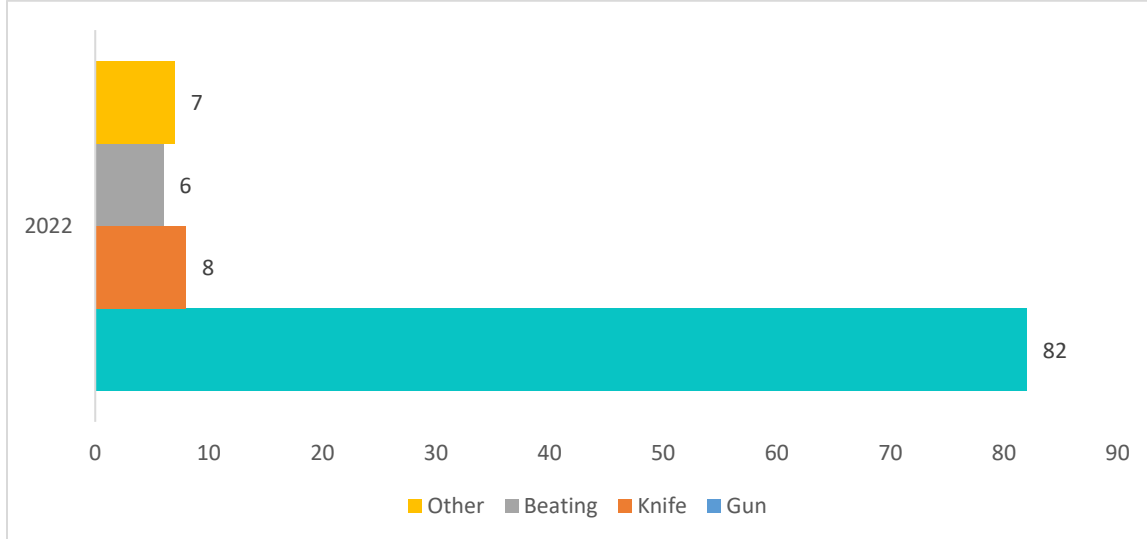
Graph 4: Age Distribution of Homicide Victims in 2022



The most common means or instrument of death in the 2022 homicides was the gun, as seen in graph 5.

Guns far exceeded stabbings, beatings, and other methodologies as the means to kill another person in 2022. Other methodologies employed included (but were not limited to) strangulation, suffocation, and malnutrition.

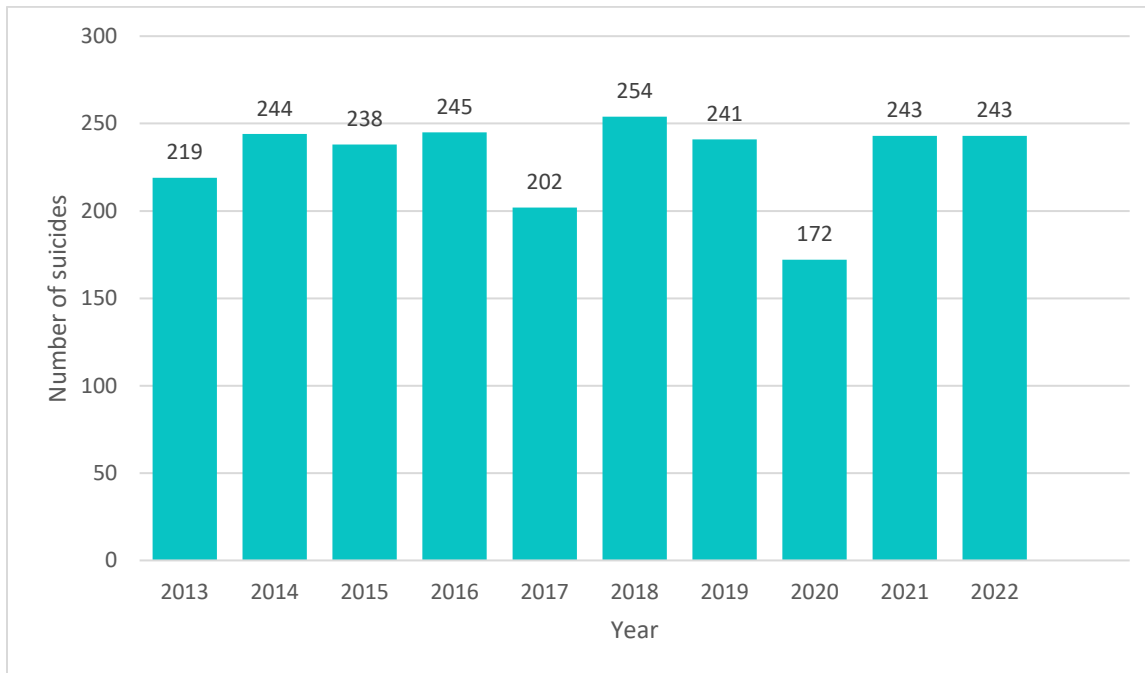
Graph 5: Types of Homicides in 2022



Suicides

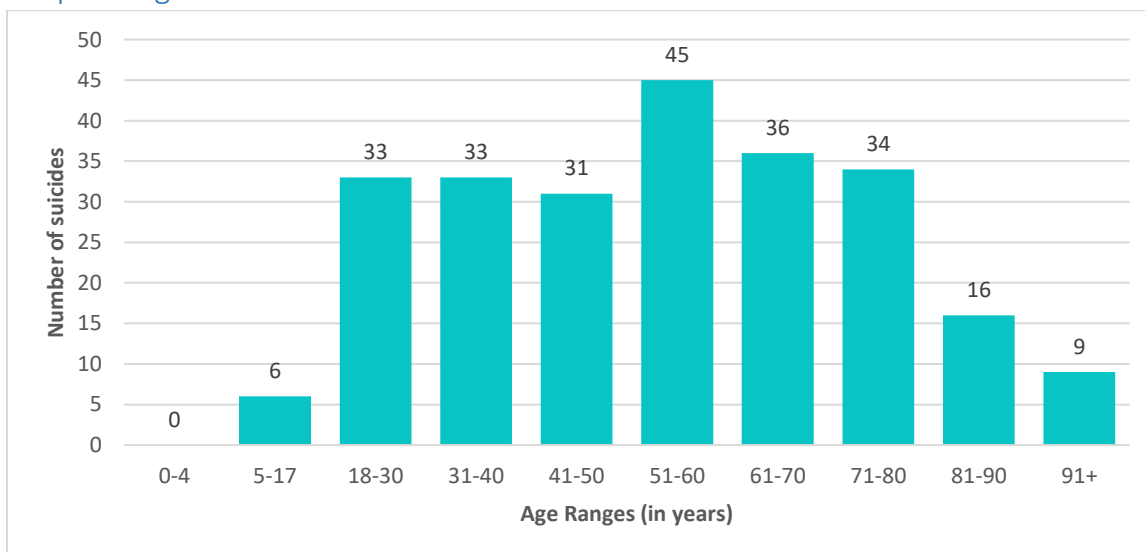
For death certification, suicide is defined as death at one's own hands.

Graph 6: Annual Suicide Totals for 2013-2022



The average annual number of suicides for the last ten years is 230. In 2022, there were 13 more suicides than the annual average. The male: female ratio for suicide victims in 2022 was 2.3:1. Most 2022 suicide victims were White (192), followed by Hispanic/Latino (29), Black or African American (16), and Asian (4). The average age of a suicide victim was 54 years. The age distribution of suicide victims is seen in graph 7.

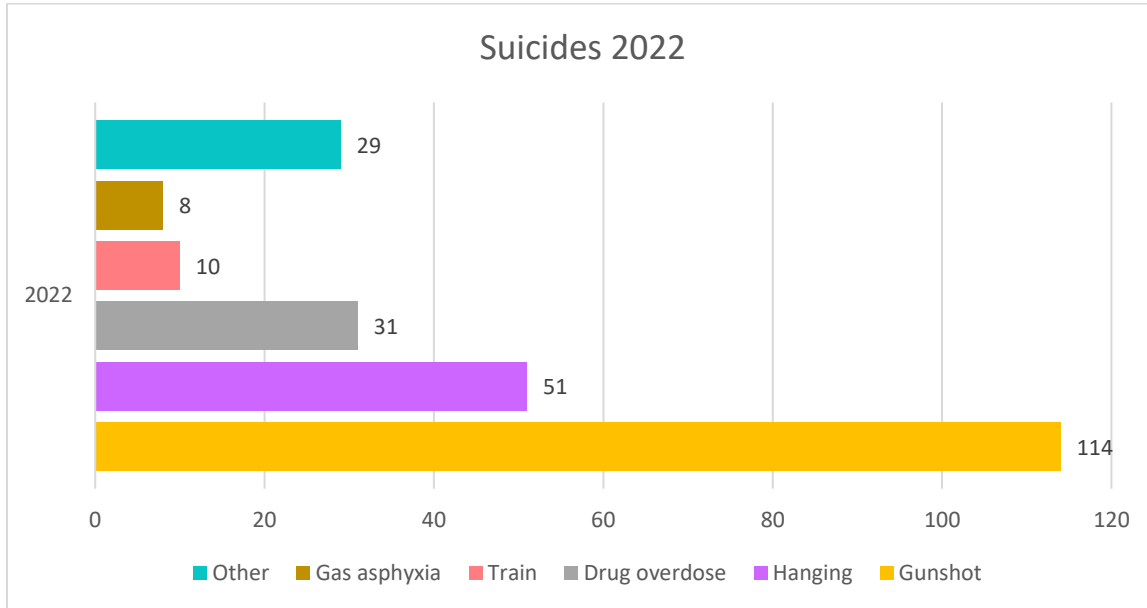
Graph 7: Age Distribution of Suicide Victims in 2022



The most common means or instrument of death in the 2022 suicides was the gun, as seen in graph 8.

In 2022, guns exceeded drugs and hanging as the preferred means to kill oneself. Gas asphyxia included six people who died from carbon monoxide poisoning (usually car exhaust). The other types of suicide included jumping from height (8), sharp-force injuries (8), drowning (4), self-immolation (1), plane crash (1), smothering with plastic bag (1), and motor vehicle collision (1).

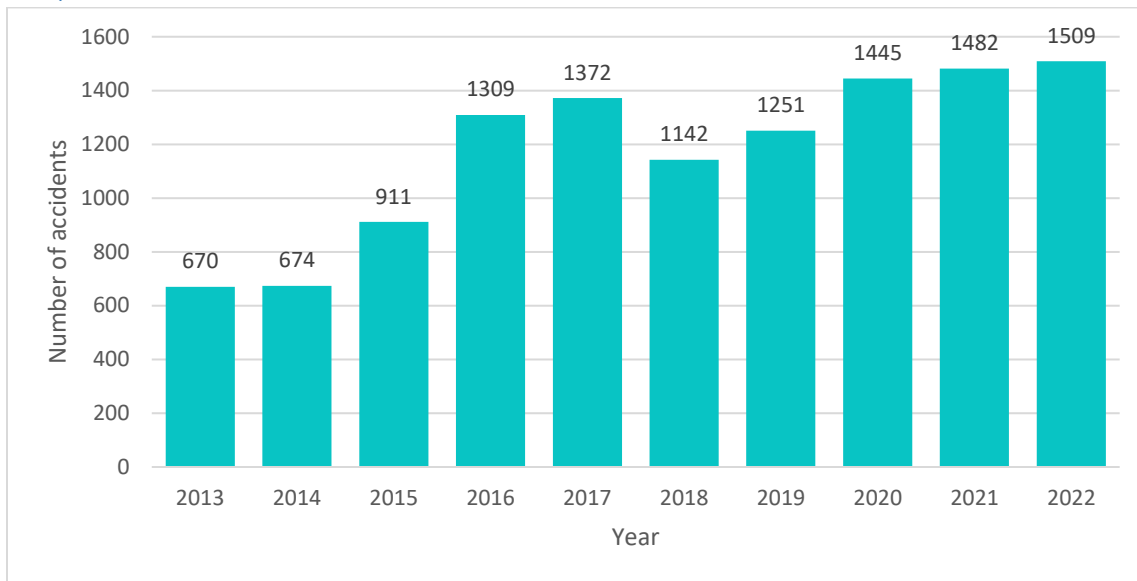
Graph 8: Types of Suicides in 2022



Accidents

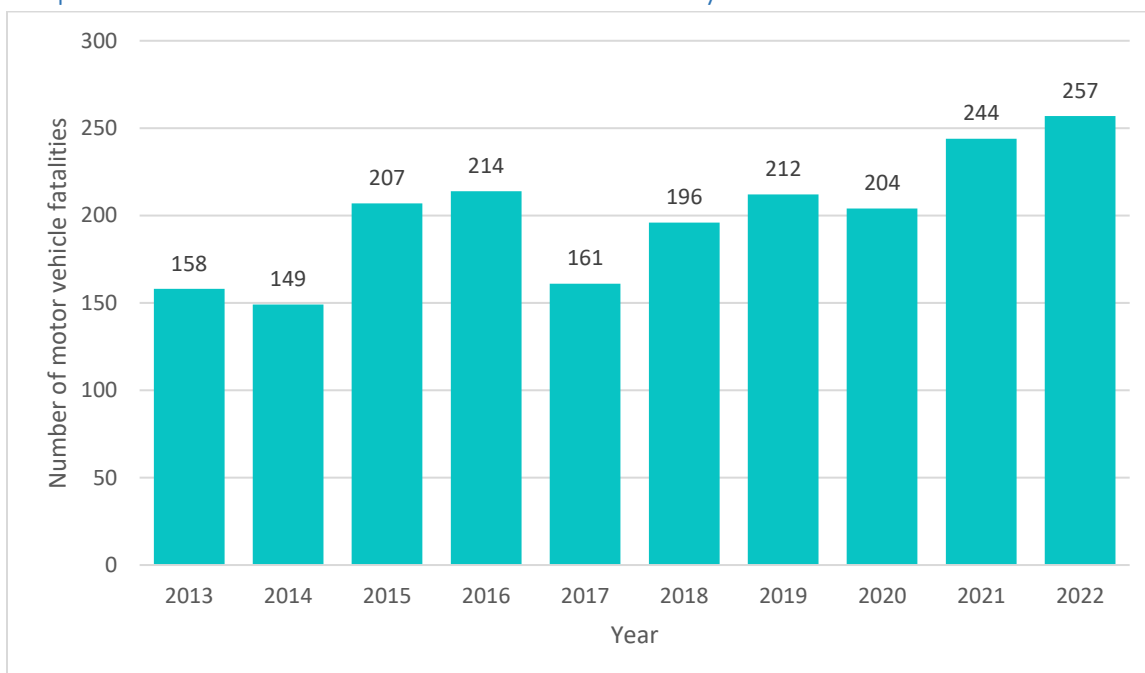
Accidents are deaths that result from an unintentional injury. In this report, we further break down the accidents into four large subgroups: deaths from motor vehicle collisions, drug overdoses, falls, and other accidental deaths. These subgroups are examined in greater detail later. In graph 9, the marked increase in accidental deaths is due to the rise in drug, predominantly opioid fatalities. The decrease in opioid deaths causes the decrease in accidents in 2018.

Graph 9: Annual Accident Totals for 2013-2022



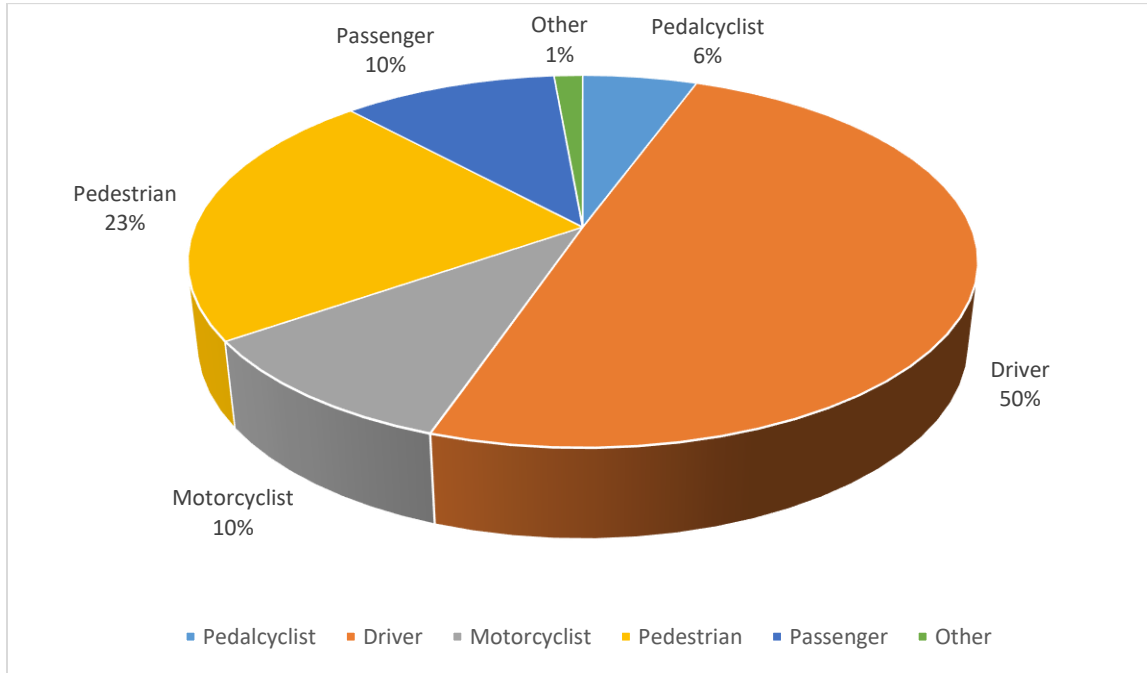
Accidents: Motor Vehicle Fatalities

Graph 10: Annual Accidental Motor Vehicle Fatality Totals for 2013-2022

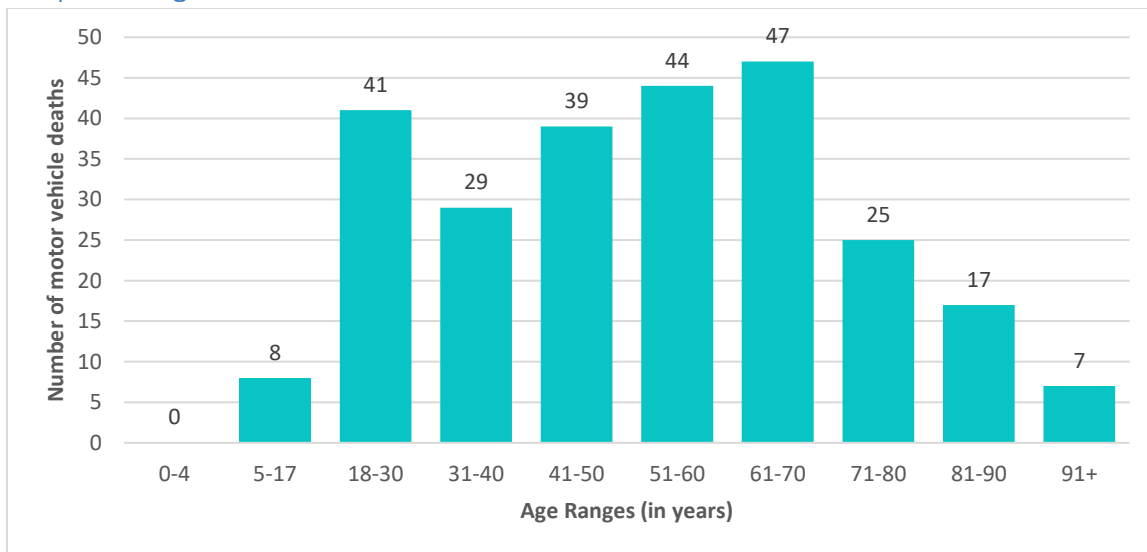


There were 257 accidental motor vehicle fatalities in Palm Beach County for 2022. Graph 10 shows the annual number of motor vehicle deaths from 2013 to 2022. In 2022, 28% of those killed in motor vehicle collisions were driving a car or truck. Other vehicles driven by decedents included SUVs, motorcycles, ATVs, and planes. The remaining victims' percentages are seen in Graph 11. In 2022, men were 3.2 times more likely to accidentally die in a motor vehicle collision than women. White individuals were 2.5 times more likely to accidentally die in a motor vehicle crash than those of Black/African American or Hispanic/Latino descent. The average age of the victims was 52 years old. The age distribution of decedents by decades is seen in graph 12.

Graph 11: Victims of 2022 Motor Vehicle Fatalities



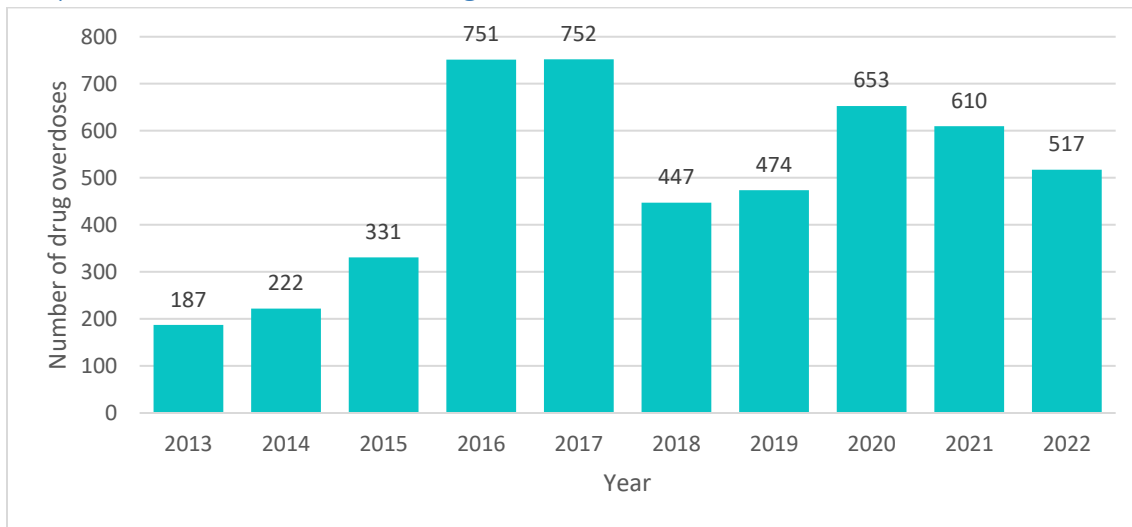
Graph 12: Age Distribution of Motor Vehicle Fatalities in 2022



Accidents: Drug Overdoses

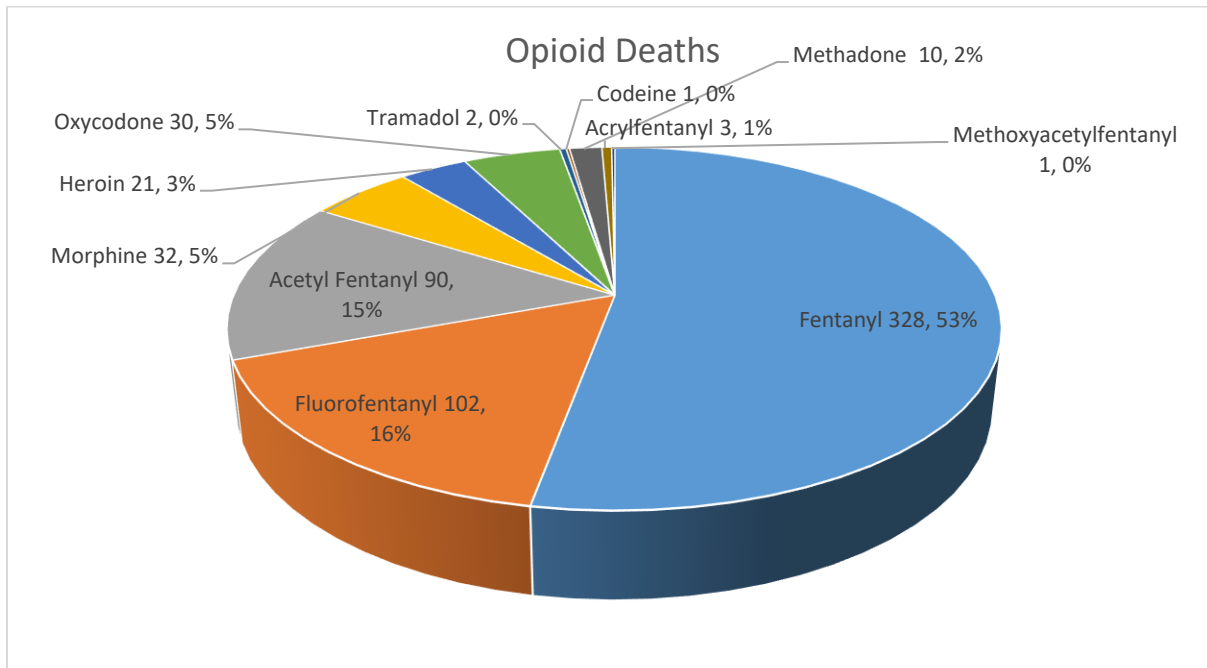
If a drug or drugs accidentally caused or contributed to the death of a person, then this was counted as an accidental drug death. Alcohol is considered a drug along with illicit drugs (i.e., heroin, cocaine), prescription medications, and non-prescription medications. Opioids are a subset of both illicit drugs (i.e., heroin) and prescription medications (i.e., oxycodone). Suicidal drug overdoses and drug overdoses in which the manner of death was undetermined are not included in these graphs.

Graph 13: Annual Accidental Drug Overdose Totals for 2013-2022



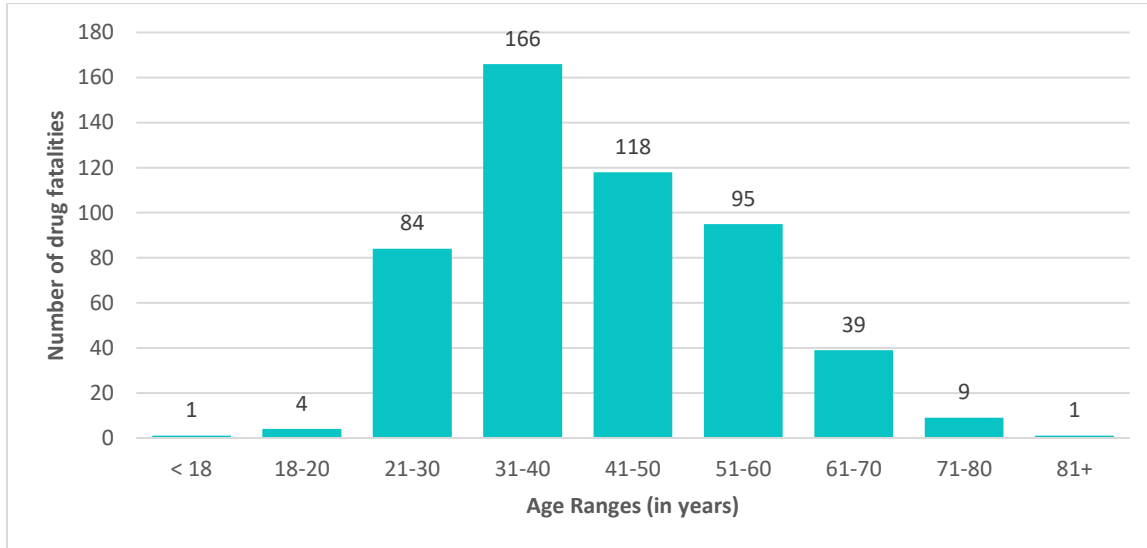
In 2022, there were 517 accidental drug fatalities, of which 350 involved one or more opioid drugs. The relative percentage of opioid drugs causing or contributing to the 350 drug fatalities in 2022 is seen in graph 14.

Graph 14: Opioid Drugs in Accidental Drug Deaths, 2022



Fentanyl and its analogs (including acetyl fentanyl and fluorofentanyl) far exceeded the other opiates (such as heroin and oxycodone) in 2022. Most opioid deaths had multiple opioids contributing to the death; 80 opioid deaths were caused by illicit fentanyl alone. Emerging drugs of concern often seen alongside opioid deaths in 2022 included xylazine (40 cases; always seen in combination with fentanyl), and cathinones (pentylone and eutylone, 14 cases). In 2022, the average age of accidental drug fatality victims was 43 years old. The age distribution of those dying from an accidental drug overdose is seen in graph 15. The victims were predominantly men (2.7:1). White individuals were 5.9 times more likely to die of an accidental drug overdose than those of Hispanic/Latino or Black/African American ancestry.

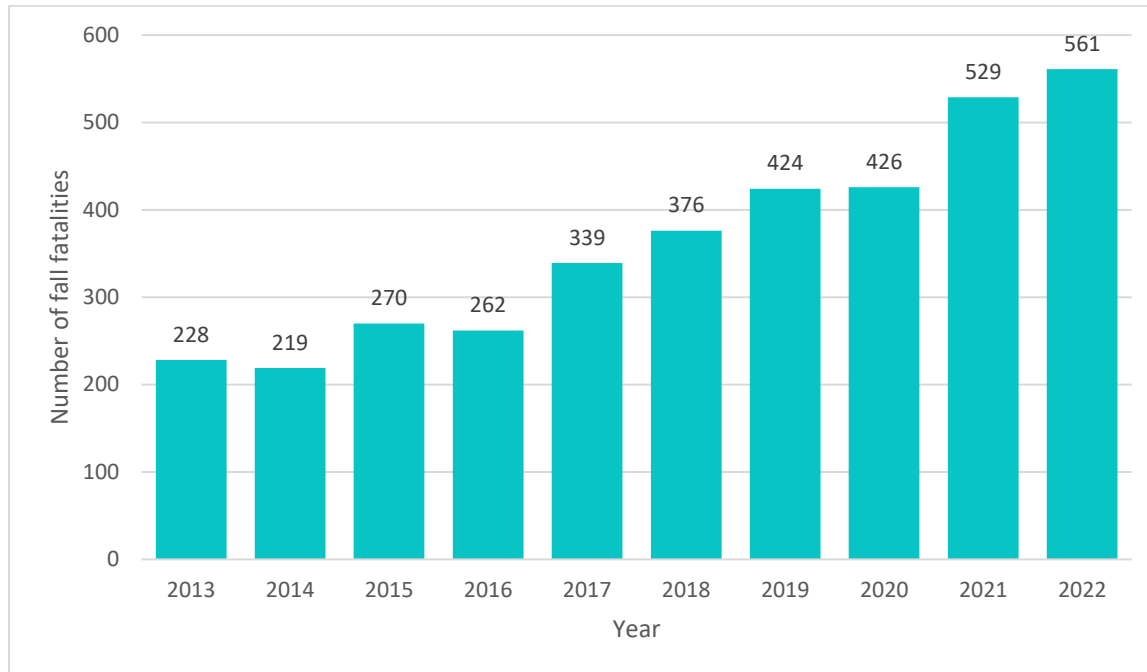
Graph 15: Age Distribution of Accidental Drug Overdose Fatalities in 2022



Accidents: Falls

Fatal falls continue to rise over recent years as seen in graph 16. The vast majority of these deaths occur in unstable elders who fall from a standing position. Women often have osteoporosis and are more likely to fracture their hip. Men with heart disease who are treated with anticoagulants were more likely to strike their head leading to fatal brain hemorrhage.

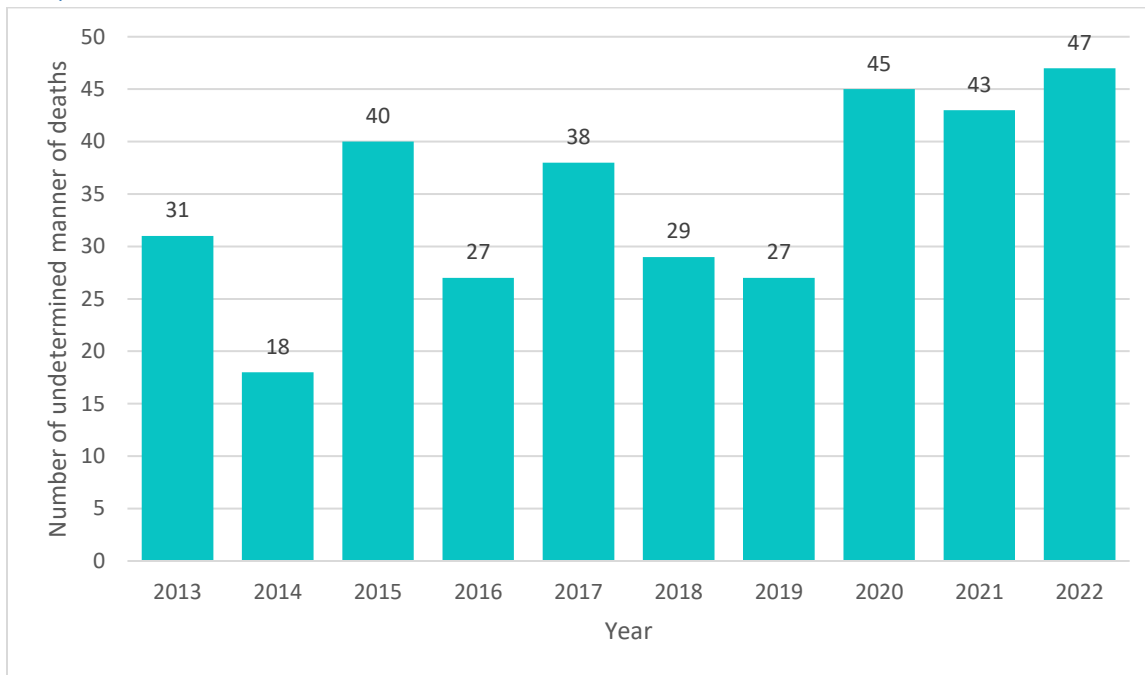
Graph 16: Annual Fatalities Caused by Falls Totals for 2013-2022



Deaths with an Undetermined Manner of Death

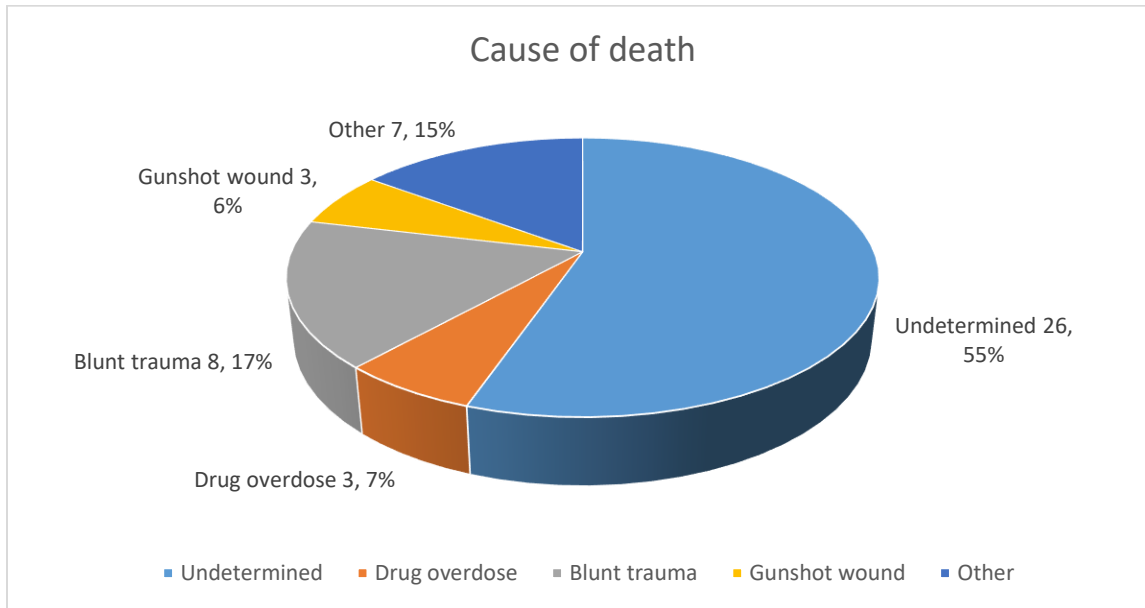
The manner of death is how the death came about and is for death certification and public health purposes. The manners of death are natural, accident, suicide, homicide, and undetermined. If the manner of death cannot be determined because there is more than one reasonable choice, then it is undetermined. The annual number of deaths with an undetermined manner from 2013 to 2022 is seen in graph 17.

Graph 17: Annual Undetermined Death Totals for 2013-2022



In 2022, there were 47 deaths in which the manner of death could not be determined. Cases where the manner of death was listed as 'Undetermined' may always be amended if additional information or circumstances come to light. The causes of death in these cases are seen in graph 18.

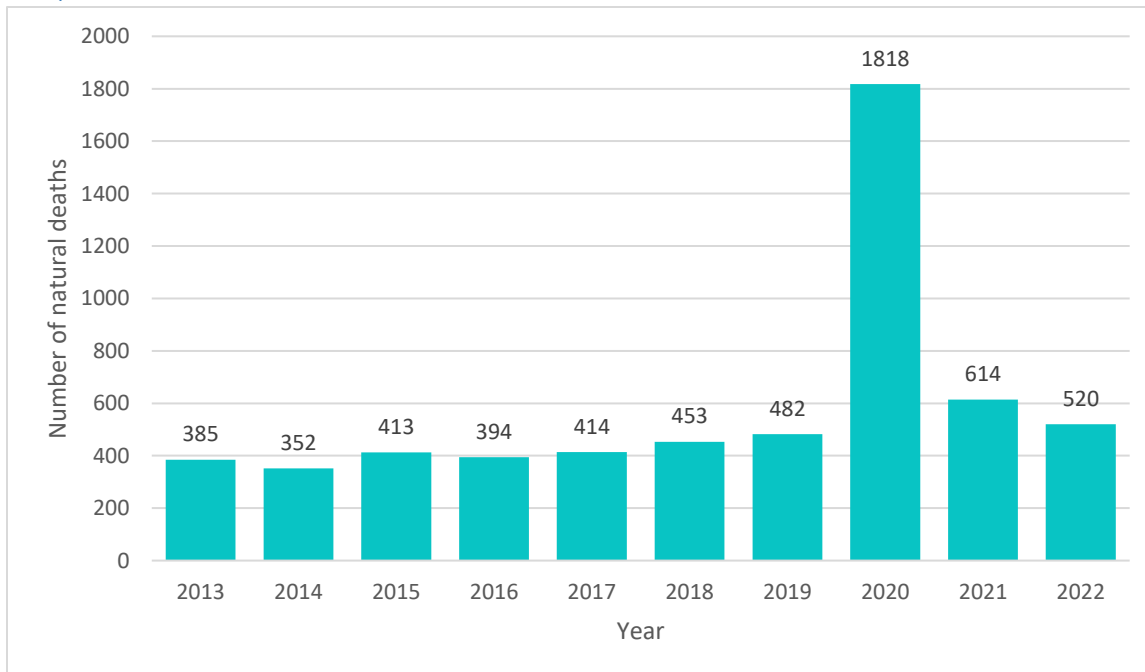
Graph 18: Causes of Death in 2022 Undetermined Manner of Death Cases



Natural Deaths

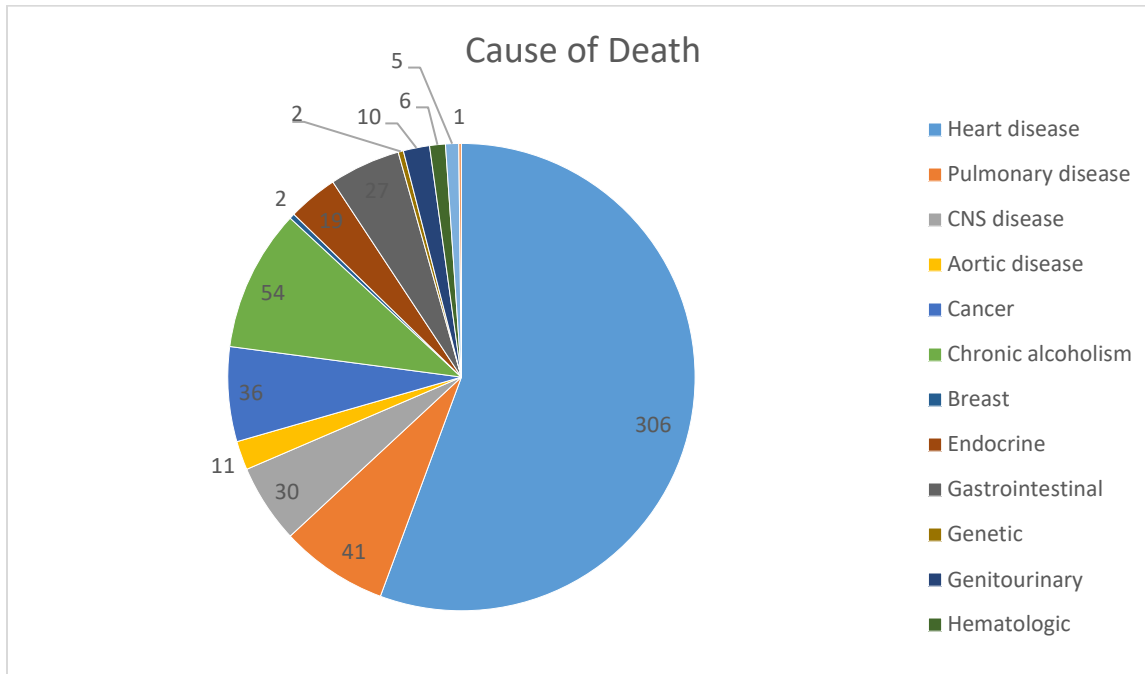
A natural death is one that is entirely caused by a disease without contribution by any injury. The annual number of natural deaths from 2013 to 2022 is seen in graph 19.

Graph 19: Annual Natural Death Totals for 2013-2022



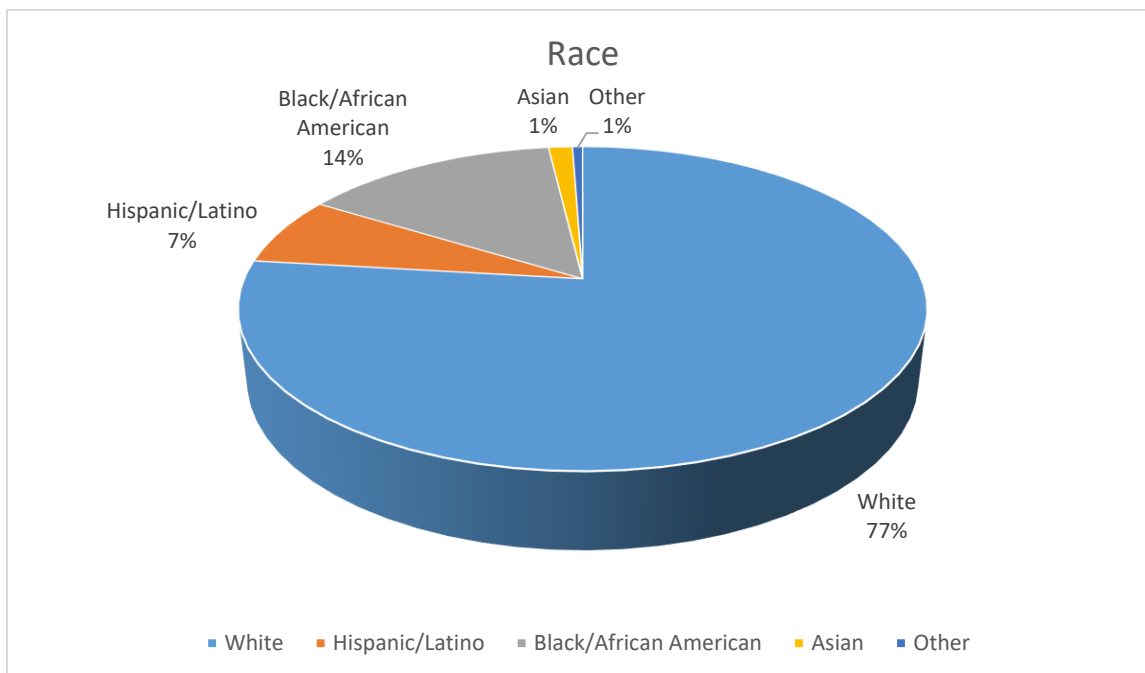
In 2022, the majority of natural deaths investigated by the medical examiner were due to heart disease as this is most likely to kill suddenly without any previous signs or symptoms. Graph 20 shows the diseases that caused natural deaths and examined by the medical examiner in 2022.

Graph 20. Causes of Natural Death Examined by the Medical Examiner in 2022



Of those who died of heart disease in 2022, 76 percent died of hypertension and/or atherosclerotic coronary artery disease. In 2022, the average age of those who died of natural disease and fell under medical examiner jurisdiction was 64 years with a range of 1 month to 101 years. Men outnumbered women 1.8 to 1. Graph 21 shows the relative proportions of people who died of natural disease by their race.

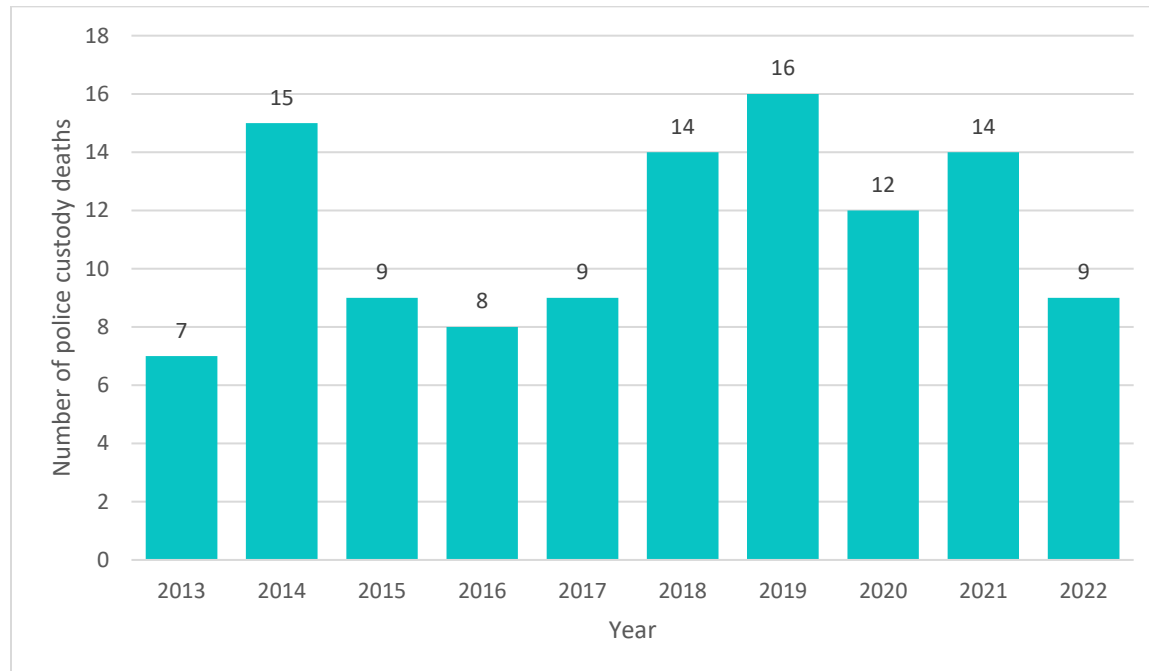
Graph 21: Race of Decedents Who Died of Natural Disease and Examined by the Medical Examiner in 2022



Deaths in Police Custody

Deaths in police custody are of two broad categories: law enforcement involved and penal institution, as defined by the Florida Medical Examiner Commission. In 2022, eight men and one woman died in police custody. Their ages ranged from 18 to 67 years old. One man was the driver of a vehicle that was impacted by another vehicle being chased by police. Police shot two men after separate confrontations. One man committed suicide with prescription medications while under house arrest. One man shot himself with a shotgun during the execution of a warrant by police. One man shot himself while driving a vehicle under police pursuit. One man and one woman were in the same vehicle under police pursuit when the vehicle crashed and sank in a pond. One man died of COVID-19 while incarcerated.

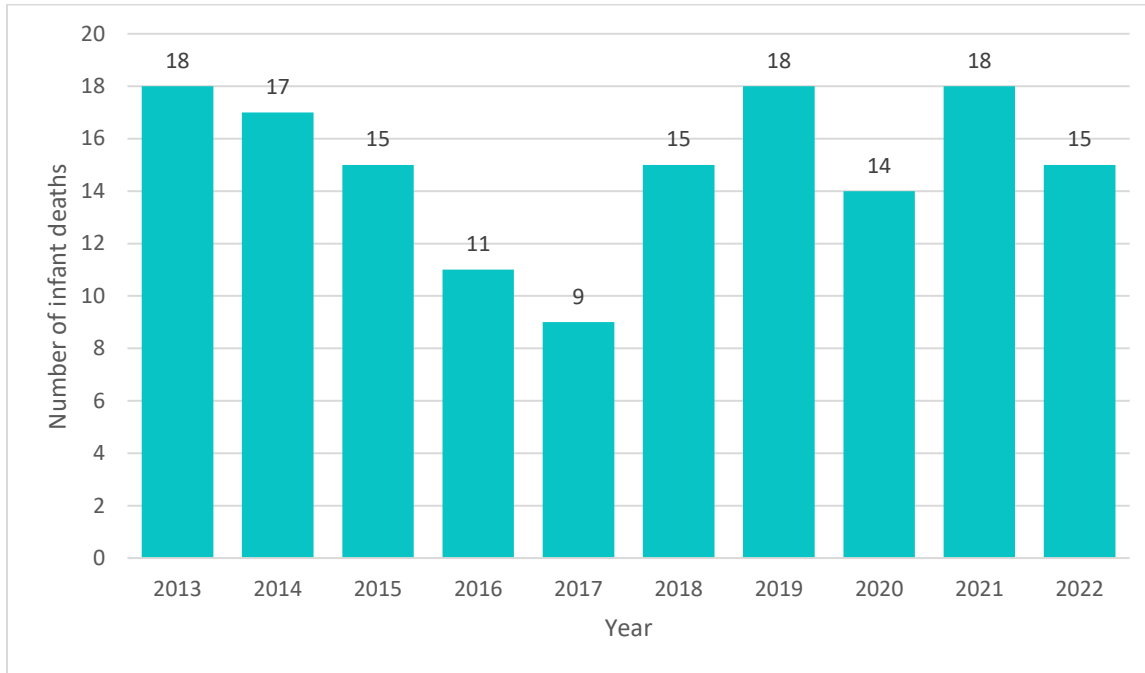
Graph 22: Annual Police Custody Deaths Totals for 2013-2022



Infant Deaths

An infant is a child under the age of one year. Graph 23 shows the number of infant deaths from 2013 to 2022.

Graph 23: Annual Infant Deaths Totals for 2013-2022

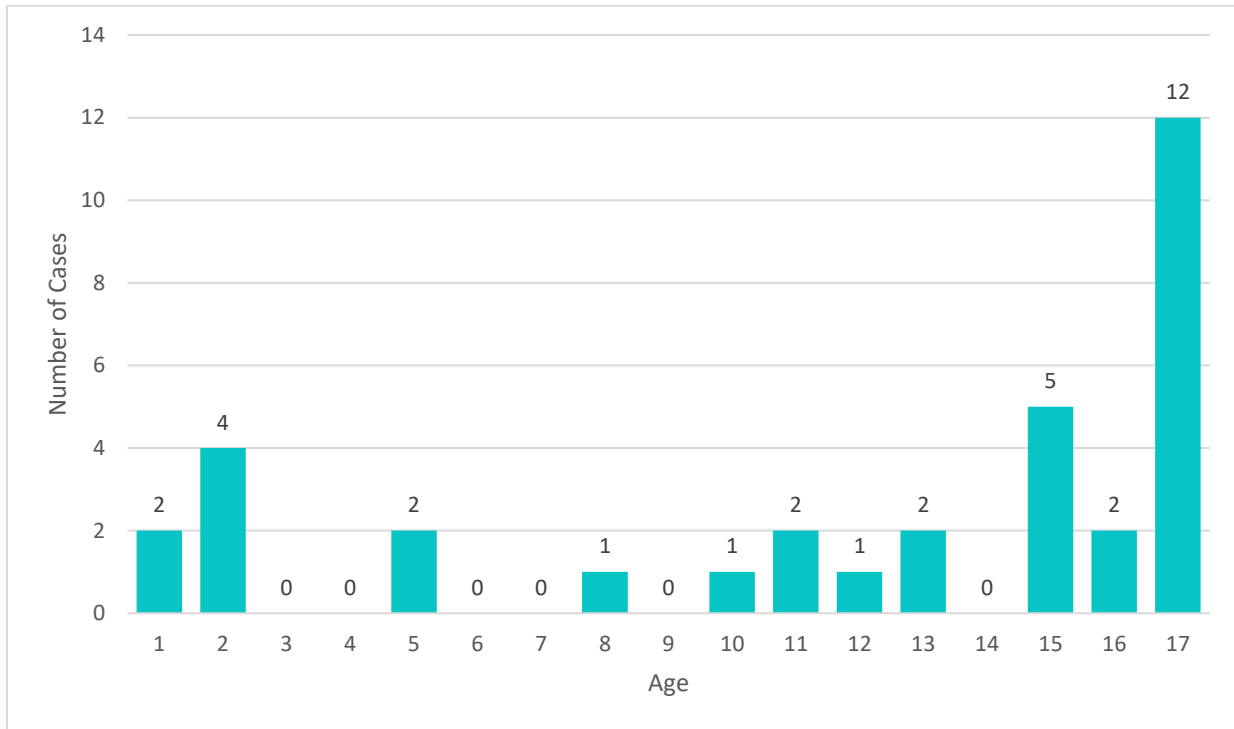


In 2022, fifteen infant deaths were investigated by the Palm Beach County Medical Examiner’s Office. Ten infants were boys. Six infants were Black or African American, five infants were Hispanic or Latino, three infants were White, and one infant was Asian. The age range was newborn to 11 months, and the average age was 4.3 months. Seven deaths were due to accidental asphyxia. Three deaths were homicides, two were related to genetic abnormalities, and one was due to myocarditis in the setting of viral pneumonia. Eight of the deaths were in part contributed to by an unsafe sleep environment.

Child Deaths

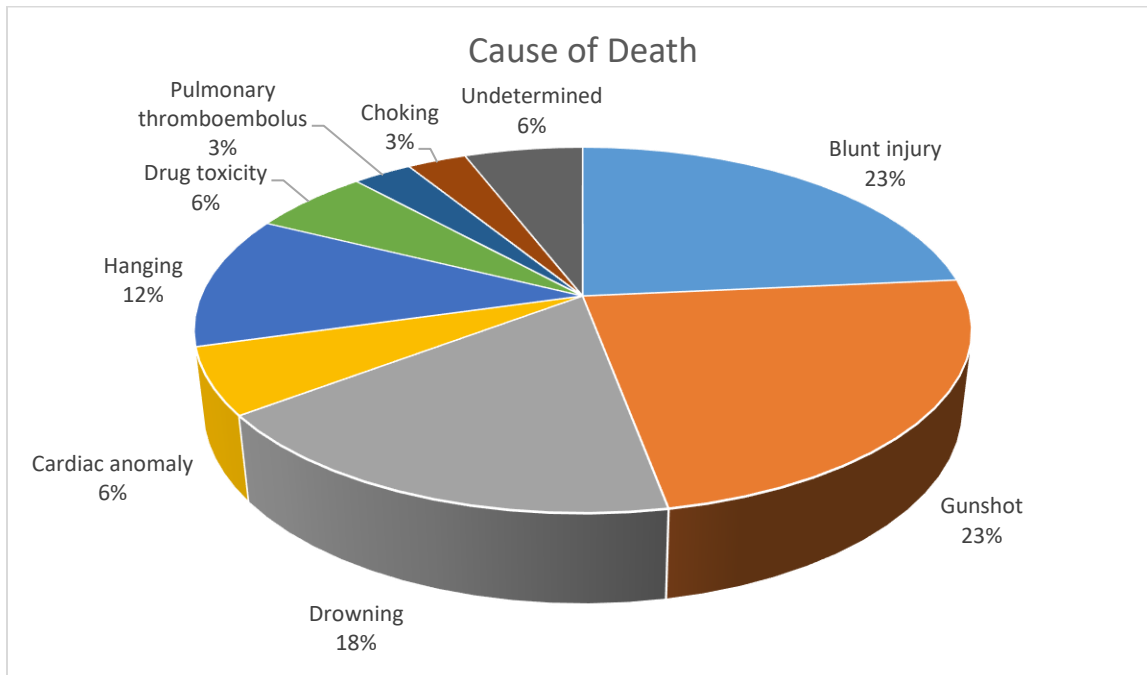
For our purposes, a child is greater than 1 year old, but less than 18 years of age. By this definition, 34 child deaths were investigated by the Palm Beach County Medical Examiner’s Office in 2022. The average age was 12 years and the age distribution of child deaths in 2022 is seen in graph 24. The ratio of males to females was 2 to 1. Twelve of the children were Black or African American, twelve were Hispanic or Latino, six were White, and four were Asian.

Graph 24: Age Distribution in Children Who Died in 2022

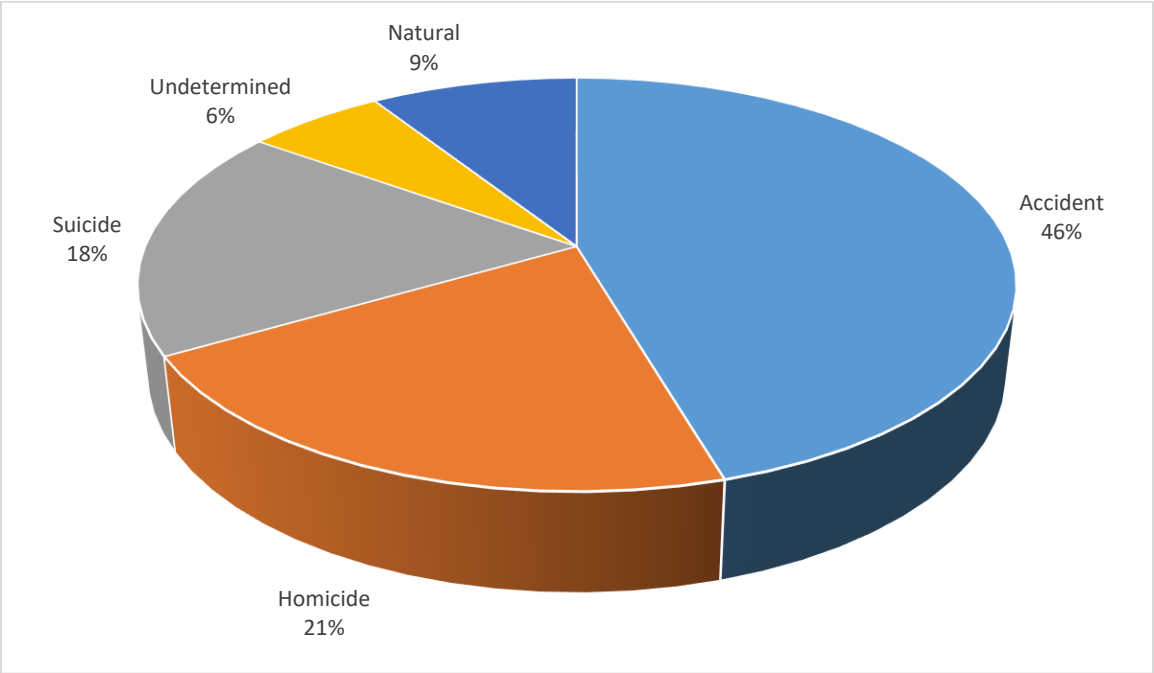


The distribution of cases by cause and manner of death are seen in graphs 25 and 26.

Graph 25: Cause of Death in Child Deaths in 2022



Graph 26: Manner of Death in Child Deaths in 2022



Frequently Asked Questions (FAQ)

District 15: Palm Beach County Medical Examiner's Office website

<http://discover.pbcgov.org/medicalexaminer/Pages/default.aspx>

Florida Statute 406

http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0400-0499/0406/0406PARTIContentsIndex.html

FAC 11-G

<https://www.flrules.org/gateway/RuleNo.asp?ID=11G-2.006>

Practice Guidelines for Florida ME

<https://www.fdle.state.fl.us/MEC/Publications-and-Forms/Documents/2010-Guidelines-Adopted.aspx>

Electronic Death Certificate

Email: D15ME@pbcgov.org

Florida Association of Medical Examiners

<http://www.fameonline.org/>