Public Health
Seattle & King County

2020
King County Medical Examiner's Annual Report

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2020 Annual Report

DEDICATION

We recognize that each case in this report represents the death of a person whose absence is grieved by friends and relatives. These deaths also represent a loss to our community. As those responsible for investigating these deaths, we dedicate this report to the memory of those lost and to those who have suffered the loss of a friend or relative.

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FOREWORD

The King County Medical Examiner's Office serves the community by investigating sudden, unexpected, violent, suspicious, and unnatural deaths. Medical Examiner staff recognize the tragedy surrounding an untimely death and perform investigations, in part, to assist the grieving family. A complete investigation provides for the quick settling of estates and insurance claims, as well as for implementing civil and criminal actions. Questions that seem irrelevant in the initial hours after death can become significant in the following months. For example, it is not uncommon that families will question whether a fatal action was intentional or not. The surviving family, friends, and general public can have the assurance that the Medical Examiner conducted a comprehensive investigation.

When a death occurs on the job or is work-related, the King County Medical Examiner's Office immediately forwards the results of its investigation to the Washington State Department of Labor and Industries to fully investigate the death, which may be important to the family as well as industrial safety. Private insurance companies also routinely use the findings to settle claims. Whenever a consumer product is implicated in a death, the King County Medical Examiner's Office notifies the Consumer Product Safety Commission to ensure that the product is reported and the necessary steps are taken to protect the public.

The public health role of the Medical Examiner is to isolate and identify the causes of sudden, unexpected death that might affect more than one person. When an infectious agent or toxin is implicated in a death, the Medical Examiner's Office reports to the Communicable Diseases Office within Public Health and notifies the family of the deceased so they may receive any needed medical treatment. Trends in injury and violence are monitored. In this era of concern about emergency response and bioterrorism, the Medical Examiner provides an important level of preparedness and surveillance.

Civil or criminal judicial proceedings frequently require the medical investigation of violent death. Thus, the King County Medical Examiner's Office conducts a prompt medical investigation to provide the criminal justice system with medical information and evidence required for adjudication. Although criminal death investigations constitute a small portion of deaths investigated by the Medical Examiner, these deaths are studied in great detail because of the issues and legal consequences involved. The King County Medical Examiner's Office provides the criminal justice system the best support that medical science can provide.

In summary, the King County Medical Examiner's Office provides expert medical evaluation and extensive services related to the investigation of deaths that are of concern to the health, safety, and welfare of the community.

EXECUTIVE SUMMARY

The Medical Examiner's Office 2020 Annual Report reflects the activities pertaining to the investigation of deaths in King County. The mission of the King County Medical Examiner's Office (KCMEO) is to investigate sudden, unexpected and unnatural deaths in King County with the highest level of professionalism, compassion and efficiency, and to provide a resource for improving the health and safety of the community.

This annual report presents detailed analyses of the different manners of death, as well as trends in homicides, traffic fatalities, and drug overdose deaths. While non-natural causes of death comprise a significant portion of Medical Examiner cases, it is worth noting that 58% (2,234/3,837) of cases are classified as natural deaths.

In addition, data provided within this report helps shape Public Health policies designed to save lives by reducing preventable deaths. This report also documents the Medical Examiner's role in support of life saving organ and tissue donations, see page 60 for further details.

A few selected findings are highlighted below:

- In 2020, there were an estimated 15,829 deaths in King County. Of those deaths, 10,320 (65%) were reported to the Medical Examiner's Office. Deaths occurring in a hospital or hospice setting from a known natural disease process are not required to be reported to the Medical Examiner's Office. The Medical Examiner's Office assumed jurisdiction over 3,914 deaths; the number of applicable cases used in this report is 3,837 deaths after non-human remains and cases from other jurisdictions (autopsies provided through contractual arrangements) are removed. The King County Medical Examiner's Office assumes jurisdiction if a death meets the criteria under the Revised Code of Washington (RCW 68.50.101) that defines the Medical Examiner's charge.

- The Medical Examiner's Office performed autopsies in 40% of jurisdictional deaths (1,546/3,837). In 2020, these jurisdictional deaths included: 125 homicides, 268 suicides, 170 traffic deaths, 964 accidental deaths, 2,234 natural deaths and 76 deaths due to undetermined causes.

- Of the 12 natural deaths of children (ages 0-3 years) investigated by the Medical Examiner, 92% (11/12) were of infants less than one year of age. Of those 11 infants who died of natural causes, 2 were due to Sudden Infant Death Syndrome (SIDS). 10 were classified as "Sudden Unexplained Infant Death" (SUID), manner undetermined, due to the inability to exclude external factors that might have contributed to the death.

- Of all traffic fatalities in which alcohol testing was performed, 24% tested positive for the presence of alcohol in the blood.

- Firearms were the most frequent instrument of death in homicides (68%) and suicides (37%).

- Males comprised 78% (98/125) and women 22% (27/125) of the homicide victims in 2020. The majority of victims, 51% (64/125), were between the age 25 and 44 years. The number of homicide victims 24 years old and younger accounted for 28% (35/125) with 7 of those victims being under 18 years of age. Of the 125 homicide victims 94% (117/125) were tested for the presence of alcohol in the blood. Of those tested 26% (31/117) showed alcohol present at the time of death.

- In 2020, there were 85 firearm homicide victims, 29% (25/85) were 23 years old and younger. There was a disproportionate number (34/85 or 40%) of firearm homicide victims that were African American when compared to the percentage of African Americans in King County's population (6.6%). Of the 34 African American firearm homicide victims, 74% (25/34) were males 29 years old and younger. In comparison, 48% (41/85) of all the homicide firearm victims were White. Of the 41 White firearm homicide victims, 46% (19/41) were males 29 years old and younger.

- For King County in 2020, acute drug/poison intoxication caused 539 deaths, approximately 14% (539/3,837) of all deaths investigated. The total number of drug-caused deaths increased from 448 in 2019. In 2020, deaths due to drugs comprised 34% (539/1,603) of all suicidal, accidental, homicidal, and undetermined cause deaths combined. Accidental drug overdose deaths in 2020 were the highest ever, representing an increase of 135% over the last 10 years with the majority of the increase related to cases positive for both heroin and methamphetamine. Cases positive for fentanyl increased rapidly through the end of year 2020.

- Since early 2017, KCMEO has been building its capacity to monitor and disseminate information about overdose deaths in real-time. Using information from death investigations, autopsies, and field drug testing, the KCMEO started documenting "probable overdose deaths". Line-level information about probable and confirmed drug overdose deaths is shared with a close network of individuals responsible for responding to emerging drug threats. Aggregate information about probable and confirmed drug overdose deaths is updated weekly on the KCMEO website (https://kingcounty.gov/depts/health/examiner/overdose.aspx).

- In 2020 the King County Medical Examiner's Office maintained accreditation by the National Association of Medical Examiners. This is the national professional organization of physician medical examiners, medicolegal death investigators and death investigation system administrators who perform the official duties of the medicolegal investigation of deaths in the United States.

- In response to the emergent COVID-19 pandemic, KCMEO conducted surveillance to identify deaths due to COVID-19, collecting samples from decedents coming into KCMEO as well as from decedents at funeral homes who died at care facilities and other targeted locations. The COVID-19 surveillance effort, drove a large increase in the number of jurisdictional cases 2020.

Description and purpose

In 1969, the King County Home Rule Charter abolished the King County Office of the Coroner, which was replaced with the King County Medical Examiner's Office. The Medical Examiner's Office is a part of the Prevention Division of Public Health – Seattle & King County. The King County Medical Examiner's Office is funded by King County and operates under the direction of the King County Executive.

The Chief Medical Examiner, Dr. Richard Harruff, is a physician trained and certified in forensic pathology - the branch of medicine devoted to the scientific investigation of sudden, unexpected, violent, suspicious, or unnatural deaths. There are four sections under the Chief Medical Examiner's direction: Forensic Pathology, Scene Investigation, Autopsy Support and Administrative Support. The duties of these four sections include the performance of autopsies, certification of death, field investigation of scene and circumstances of death, identification of the deceased, notification of next-of-kin, and control and disposition of the deceased's personal property.

Deaths that come under the jurisdiction of the Medical Examiner are defined by state statute (RCW 68.50) and include, but are not limited to, the following circumstances:

1. *Persons who die suddenly when in apparent good health and without medical attendance within 36 hours preceding death.* This category is reserved for the following situations: (1) Sudden death of an individual with no known natural cause for the death. (2) Death during an acute or unexplained rapidly fatal illness, for which a reasonable natural cause has not been established. (3) Death of a person who was not under the care of a physician. (4) Death of a person in a nursing home or care facility where medical treatment is not provided by a licensed physician.

2. *Circumstances which indicate death was caused in part or entirely by unnatural or unlawful means*. This category includes but is not limited to: (1) Drowning, suffocation, smothering, burns, electrocution, lightning, radiation, chemical or thermal injury, starvation, environmental exposure, or neglect. (2) Unexpected death during, associated with, or as a result of diagnostic or therapeutic procedures. (3) All deaths in an operating room whether due to surgical or anesthetic procedures. (4) Narcotics or other drugs including alcohol or toxic agents, or toxic exposure. (5) Death of the mother caused by known or suspected abortion. (6) Death from apparent natural causes during the course of a criminal act, e.g., a victim collapses during a robbery. (7) Death that occurs within one year following an accident, even if the accident is not thought to have contributed to the cause of death. (8) Death following all injury-producing accidents, if recovery was considered incomplete or if the accident is thought to have contributed to the cause of death (regardless of the interval between the accident and death).

3. *Suspicious circumstances.* This category includes, but is not limited to, deaths under the following circumstances: (1) Deaths resulting from apparent homicide or suicide. (2) Hanging, gunshot wounds, stab wounds, cuts, strangulation, etc. (3) Alleged rape, carnal knowledge, or sodomy. (4) Death during the course of, or precipitated by, a criminal act. (5) Death that occurs while in a jail or prison, or while in custody of law enforcement or other non-medical public institutions.

4. *Unknown or obscure causes.* This category includes: (1) Bodies that are found dead. (2) Death during or following an unexplained coma.

5. *Deaths caused by any violence whatsoever, when the injury was the primary cause or a contributory factor in the death.* This category includes, but is not limited to: (1) Injury of any type, including falls. (2) Any death due to or contributed to by any type of physical trauma.

6. *Contagious disease.* This category includes only those deaths wherein the diagnosis is undetermined and the suspected cause of death is a contagious disease which may be a public health hazard.

7. Unclaimed bodies. *This category is limited to deaths where no next of kin or other legally responsible representatives can be identified for disposition of the body.*

8. Premature and stillborn infants. *This category includes only those stillborn or premature infants whose birth was precipitated by maternal injury or drug use, criminal or medical negligence, or abortion under unlawful circumstances.*

Mission Statement

The mission of the King County Medical Examiner's Office (KCMEO) is to investigate sudden, unexpected and unnatural deaths in King County with the highest level of professionalism, compassion and efficiency and to provide a resource for improving the health and safety of the community consistent with the general mission of Public Health.

To achieve this mission, the KCMEO will:

- Coordinate investigative efforts with law enforcement, hospitals, and other agencies in a professional and courteous manner.
- Treat decedents and their effects with dignity and respect, and without discrimination.
- Conduct investigations and autopsies professionally, scientifically, and conscientiously; complete reports expeditiously with regard for the concerns of family members, criminal justice, and public health and safety.
- Provide compassion, courtesy, and honest information to family members and, with cultural competence, make appropriate efforts in assisting with their grief, medical and legal questions, disposition of decedents and effects, and other settlements.
- Collect, compile, and disseminate information regarding deaths in a manner consistent with the laws of Washington state and consistent with the mission of Public Health.
- Provide medical and scientific testimony in court and in deposition as well as medicolegal consultation for prosecuting attorneys, defense attorneys, and attorneys representing surviving family members.
- Promote and advance, through education and research, the sciences and practices of death investigation, pathology, and anthropology within KCMEO and in collaboration with educational institutions.
- Promote and maintain an emotionally and physically healthy and safe working environment for KCMEO employees, following Public Health policies for standards of conduct, management, and support for employee diversity, training, and development.
- Expand communication throughout Public Health and the community at large regarding the roles, responsibilities, and objectives of KCMEO.

Explanation of data

The Medical Examiner serves the geographic area that includes all 2,307 square miles of King County, bounded by Pierce County to the south, Snohomish County to the north, Kittitas and Chelan Counties to the east, and Puget Sound to the west. In 2020, the King County population was estimated to be 2,269,675.[1] Included within King County are 39 cities and towns including Seattle, the state's largest city. Mercer Island, Vashon Island, two major airports and several colleges and universities are in the geographic area served by the Medical Examiner's Office. In King County there are more than 20 hospitals and one regional trauma center (Harborview) which serves the entire Pacific Northwest region.

The KCMEO assumes jurisdiction of deaths occurring in King County that include both King County residents and nonresidents. King County residents who die in other counties do not fall under KCMEO jurisdiction. For data on deaths of King County residents, along with other health indicators, please see Public Health–Seattle & King County Community Health Indicators online at: www.kingcounty.gov/healthservices/health/data/chi.

This report summarizes demographics from individual cases in which the Medical Examiner assumed jurisdiction and presents them in aggregate form. Table 1-7 (Nearest Incorporated City to the Fatal Incident) on pages 18 and 19 represents the location of the incident to the nearest city, not the residential address of the individual. Each manner (category) of death is subdivided into the various sub-groupings (methods) appropriate to that manner, which together form a more detailed description of the cause and manner of death.

The variables displayed in the tables such as race, gender, age, etc., have been selected as those most likely to assist and interest individuals using this data in assembling a profile of statistics on deaths examined by the Medical Examiner's Office for 2020. The United States Census Bureau estimates the racial distribution of King County to be 66.2% White, 20.5% Asian/Pacific Islander (including Hawaiian and other Pacific Islanders), 7% African American, 5.2% Two or More Races, and 1.0% American Indian/Alaska Native.[2] Information on Hispanic ethnicity of the decedent is not available for every case and will not be presented in this report.

Medical Examiner figures cannot be directly compared to the racial distribution of King County residents. This is because as mentioned above and emphasized in Table 1-8 on page 20, in 5% (206/3,837) of the Medical Examiner cases the incident leading to death occurred outside of King County and the decedent likely was not a resident of King County. However, as a rough estimate, the only manner of death that varies from the racial distribution of the county by a large percentage is homicide (see discussion on page 30).

Blood alcohol (ethanol) data included here represent the blood level at the time of death. Alcohol is metabolized at a rate of 0.015 to 0.018 grams percent per hour. Thus, if there is a significant survival interval, the blood alcohol at the time of death will be lower than at the time of incident. Consequently, blood alcohol tests are not performed in cases where death occurs more than 24 hours after the fatal injury. For these reasons, an unknown number of

[1] United States Census Bureau 2020 estimate.

[2] United States Census Bureau 2019 estimate.

cases not tested or showing no blood alcohol may have had a measurable alcohol concentration at the time of incident.

Three sections are included that review specific issues: deaths due to drugs, deaths due to firearms, and deaths among infants and young children. The firearm data pertain to the victim because data relating to the shooter are not included in the Medical Examiner's investigation. For deaths among infant and young children, the analysis focuses on violent, non-natural causes of death.

Data on natural deaths is included. However, these deaths due to natural causes are not representative of all natural deaths in King County. Natural deaths that the Medical Examiner investigates are those that occur suddenly and unexpectedly with no physician in attendance, or under suspicious circumstances. Such natural deaths comprised 58% (2,234/3,837) of all deaths that the Medical Examiner's Office investigated in 2020.

The "undetermined" category includes deaths in which the manner could not be clearly determined. In some cases, serious doubt existed as to whether the injury occurred with intent or as a result of an accident. In others, lack of witnesses or prolonged time between death and discovery precluded the accurate determination of the circumstances surrounding death. Moreover, it may be difficult to assess street drug or medication overdose deaths as showing enough features to reasonably determine the manner of death. Also included in the undetermined category are fetal deaths, which, according to the State of Washington death certification guidelines, are not assigned a manner of death.

Medical Examiner cases in 2020

The following provides a summary of the raw data from the Medical Examiner's cases for the year 2020. Ten-year trends are shown beginning on page 21.

In 2020, there were an estimated 15,829 deaths that occurred in King County (0.70% of a 2020 population estimate of 2,269,675). A total of 65% (10,320/15,829) were reported to the Medical Examiner's Office by medical and law enforcement personnel. Based on analysis of the scene, circumstances of death and the decedent's medical history, the Medical Examiner's Office assumed jurisdiction in 3,914 of these reported deaths, of which 77 were either ultimately found to be non-human remains or contract cases in which an autopsy and/or anthropology exams were done for other counties or agencies. Throughout the report, except where stated, the non-human, anthropology, and contract cases are excluded. Thus, the Medical Examiner assumed jurisdiction in 24% (3,837/15,829) of deaths that occurred in King County in 2020.

In approximately 63% (6,406/10,320) of the reported deaths, the Medical Examiner did not assume jurisdiction and perform an investigation; instead, a "No Jurisdiction Assumed" (NJA) number was assigned. In such instances a physician with knowledge and awareness of the decedent's state of health certified the death. These are primarily natural deaths, with a predominance of individuals in nursing homes with a known fatal disease process. The Medical Examiner's Office applies a strict interpretation of its governing legislative language "persons who die suddenly when in apparent good health and without medical attendance within thirty-six hours preceding death" (RCW 68.50). The Medical Examiner assumes jurisdiction only if both conditions (lack of medical care and apparent good health) apply, and there is no attending outside physician with sufficient knowledge of the individual's natural disease condition to certify the death.

The Medical Examiner's Office performed autopsies in 40% (1,546/3,837) of the cases in which jurisdiction was assumed. Autopsies by a Medical Examiner pathologist were not performed in deaths where scene, circumstances, medical history, and external examination of the body provided sufficient information for death certification. In 2020, there were 636 such deaths, accounting for 17% (636/3,837) of the total deaths. In addition, there were 1,268 deaths, accounting for 33% (1,268/3,837) certified by attending private physicians after review by and consultation with the Medical Examiner. The remaining 8% (311/3,837) of the cases were cases where the Medical Examiner completed the death certificate after review of medical records and investigation reports without a need for examination of the body.

Of all the traffic fatalities in which tests were performed 29% (41/140) tested positive for presence of alcohol (ethanol) in the blood. In recognition of the importance of safety devices in traffic accidents, Medical Examiner data indicate that of the 75 vehicle occupants who died, 27% (20/75) were known to be wearing seatbelt restraints.

In the 26 deaths involving motorcyclists, 77% (20/26) were known to be wearing helmets.

Firearms were the most frequent instrument of death in homicides and suicides, accounting for 68% (85/125) of the homicides and 37% (99/268) of the suicides.

Table 1-1 Deaths Occurring in King County / Medical Examiner Cases / 2020

ALL KING COUNTY DEATHS	15,829[3]	100%
Deaths in King County not reported to KCMEO	5,586	35%
Deaths reported to KCMEO but no jurisdiction was assumed (NJA)	6,406	40%
Total KCMEO general cases	3,837[4]	24%
3,837 KCMEO GENERAL CASES BY MANNER OF DEATH[5]	NUMBER OF KCMEO DEATHS	PERCENT OF KCMEO DEATHS
Accident Other (A)	964	25%
Accident Traffic (T)	170	4%
Homicide (H)	125	3%
Natural (N)	2,234	58%
Suicide (S)	268	7%
Undetermined (U)	76[6]	2%

[3]Total requests for disposition authorization in 2020 and 2021 with 2020 listed as the year of death.

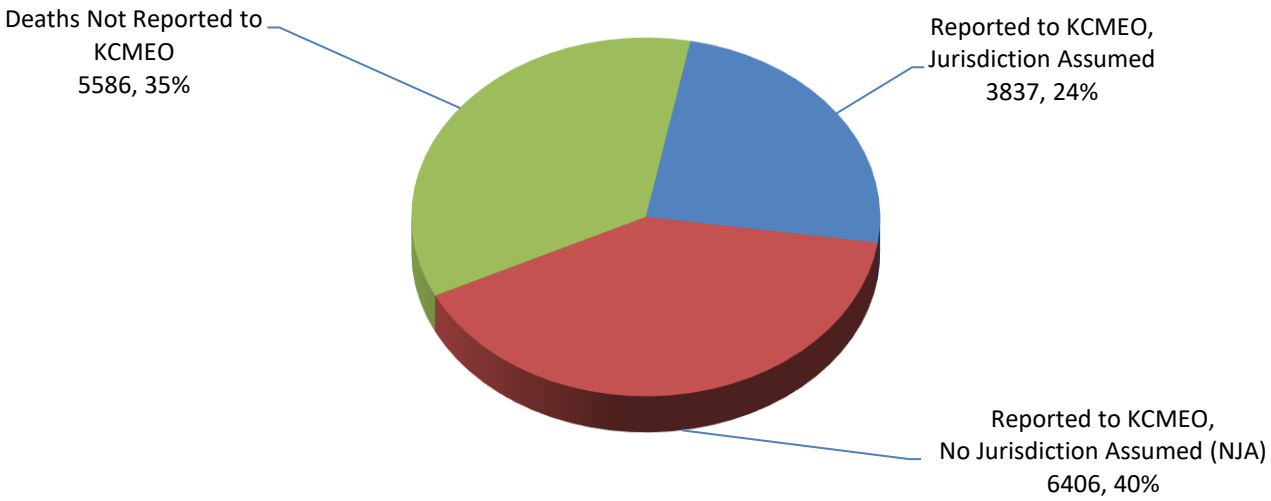
[4]This is the total number of cases that will be referred to throughout this report unless otherwise noted.

[5]The letters following each manner of death will be used in most tables throughout this report.

[6]Includes 8 fetal deaths, which according to Washington State death certification procedures, are not assigned a manner of death.

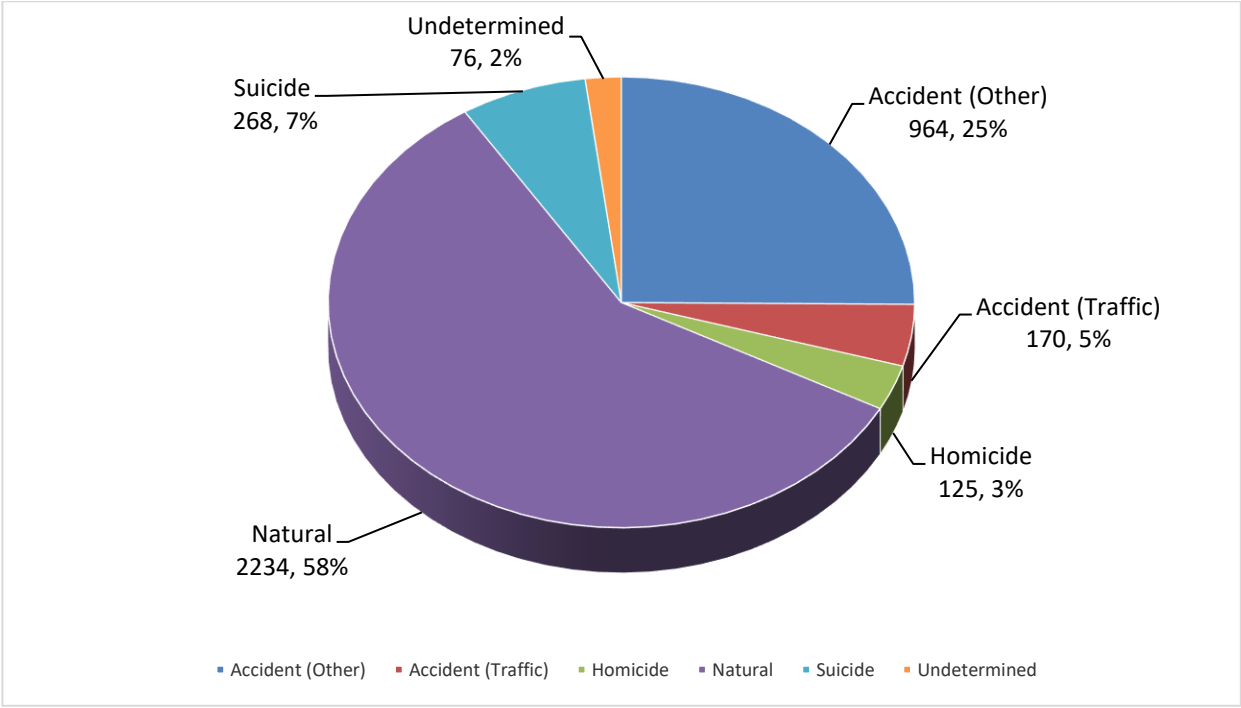
Graph 1-1 All King County Deaths with Medical Examiner Jurisdiction / 2020

Total Deaths in King County, 2020: 15,829



Graph 1-2 Manner of Death for All Medical Examiner Jurisdiction Cases / 2020

Jurisdiction assumed in 3,837 cases.[7]



[7]This number does not include 77 non-applicable cases (non-human tissue/bones and anthropology/contract cases).

Graph 1-3 Method of Certification for all King County Medical Examiner Jurisdiction Cases / 2020

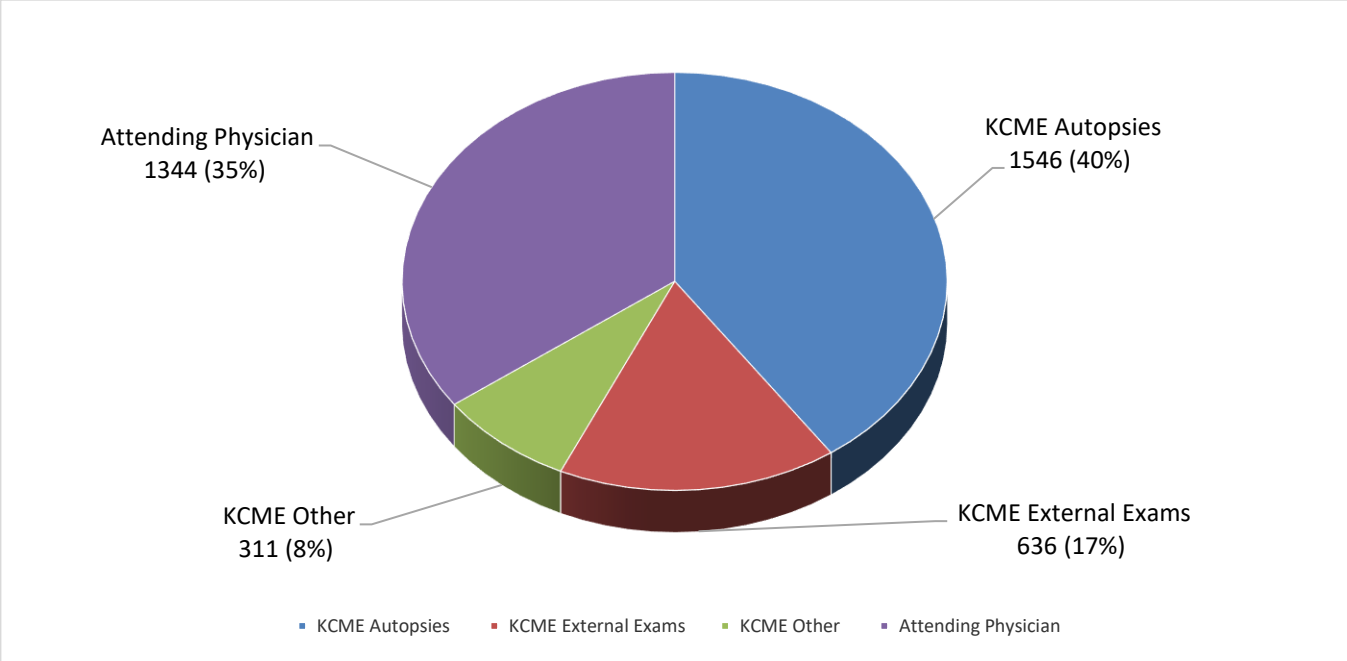


Table 1-2 Method of Certification / Manner of Death / KCME / 2020[8]

	MANNER OF DEATH							
	A	T	H	N	S	U	TOTAL	%
KCME Autopsies	531	87	123	546	190	69	1,546	40%
KCME External Exams	164	70	1	320	78	4	636	17%
KCME Other	245	13	0	52	0	1	311	8%
Attending Physician	24	0	1	1,316	0	3	1,344	35%
Totals	**964**	**170**	**125**	**2,234**	**268**	**76**	**3,837**	**100%**

[8] A = Accident (Non-Traffic), T = Traffic, H = Homicide, S = Suicide, U = Undetermined.

Graph 1-4 Gender / Manner of Death / KCME / 2020

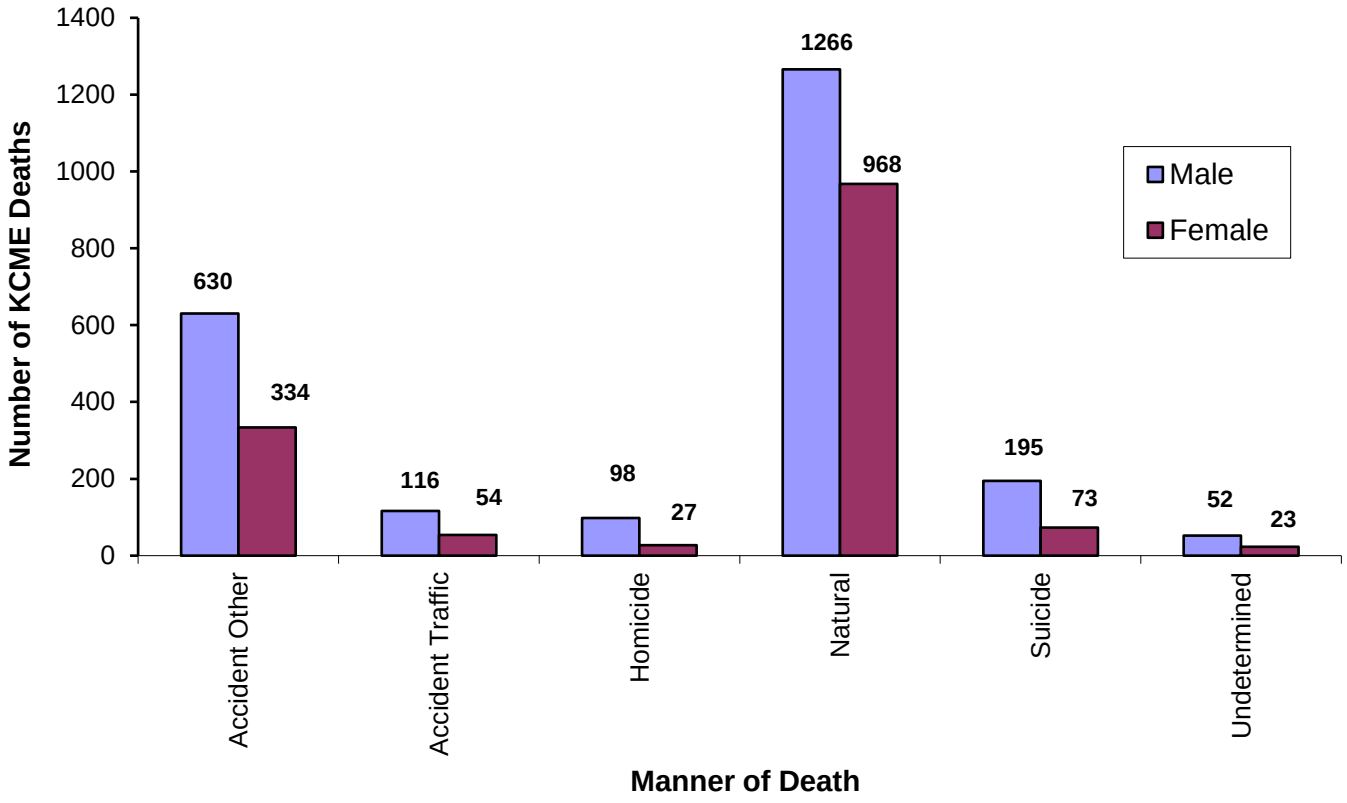


Table 1-3 Gender / Manner of Death / KCME / 2020[9]

GENDER	MANNER OF DEATH						TOTAL	%
	A	T	H	N	S	U		
Male	630	116	98	1,266	195	52	2,357	61%
Female	334	54	27	968	73	23	1,479	39%
Totals	**964**	**170**	**125**	**2,234**	**268**	**76**[10]	**3,837**	100%

[9]A = Accident (Non-Traffic), T = Traffic, H = Homicide, S = Suicide, U = Undetermined.

[10]Includes one fetal death of undetermined gender.

Table 1-4 Age / Gender / Manner of Death / KCME / 2020[11]

AGE / GENDER	MANNER OF DEATH A	T	H	N	S	U	Sub-Total	TOTAL	%
Under 1 year	2	0	1	11	0	18[12]		32	1%
Male	*2*	*0*	*1*	*8*	*0*	*12*	*23*		
Female	*0*	*0*	*0*	*3*	*0*	*5*	*8*		
1-17 years	14	14	6	5	15	4		58	2%
Male	*9*	*9*	*6*	*3*	*9*	*3*	*39*		
Female	*5*	*5*	*0*	*2*	*6*	*1*	*19*		
18-24	51	23	28	14	25	4		145	4%
Male	*46*	*14*	*27*	*12*	*21*	*3*	*123*		
Female	*5*	*9*	*1*	*2*	*4*	*1*	*22*		
25-44 years	254	45	64	150	88	16		617	21%
Male	*186*	*31*	*48*	*104*	*66*	*9*	*446*		
Female	*66*	*14*	*16*	*46*	*22*	*7*	*171*		
45-64 years	256	47	24	554	101	25		1,007	33%
Male	*181*	*34*	*15*	*382*	*72*	*17*	*701*		
Female	*75*	*13*	*9*	*172*	*29*	*8*	*306*		
≥ 65 years	387	41	2	1,500	39	7		1,976	39%
Male	*206*	*28*	*1*	*757*	*27*	*6*	*1,025*		
Female	*181*	*13*	*1*	*743*	*12*	*1*	*951*		
Totals	**964**	**170**	**125**	**2,234**	**268**	**76**[13]		**3,837**[14]	**100%**

[11] A = Accident (Non-Traffic), T = Traffic, H = Homicide, S = Suicide, U = Undetermined.

[12] Includes one fetal death of undetermined gender.

[13] Includes two unidentified male decedents of unknown age who died of undetermined manner.

[14] Includes two unidentified male decedents of unknown age who died of undetermined manner.

Table 1-5 Race / Gender / Manner of Death / KCME / 2020[15]

	MANNER OF DEATH								
RACE / GENDER	A	T	H	N	S	U	Sub-Total	TOTAL	%
White	764	126	65	1750	207	52		2,964	77%
Male	*492*	*88*	*47*	*968*	*151*	*33*	*1,779*		
Female	*272*	*38*	*18*	*782*	*56*	*18*	*1,184*		
African American	94	16	42	189	16	10		367	10%
Male	*62*	*11*	*38*	*122*	*12*	*7*	*252*		
Female	*32*	*5*	*4*	*67*	*4*	*3*	*115*		
Asian/Pacific Is.	61	16	6	183	34	9		309	8%
Male	*47*	*10*	*4*	*104*	*23*	*7*	*195*		
Female	*14*	*6*	*2*	*79*	*11*	*2*	*114*		
American Indian / Alaska Native	24	6	4	60	4	2		100	3%
Male	*11*	*3*	*3*	*36*	*4*	*2*	*59*		
Female	*13*	*3*	*1*	*24*	*0*	*0*	*41*		
Other	21	6	8	52	7	2		96	3%
Male	*18*	*4*	*6*	*36*	*5*	*2*	*71*		
Female	*3*	*2*	*2*	*16*	*2*	*0*	*25*		
Totals	**964**	**170**	**125**	**2,234**	**268**	**76**[16]		**3,837**	**100%**

[15] A = Accident (Non-Traffic), T = Traffic, H = Homicide, S = Suicide, U = Undetermined.

[16] Includes one unidentified male decedent of unknown race who died of undetermined manner.

Graph 1-5 Month / Manner of Death / KCME / 2020

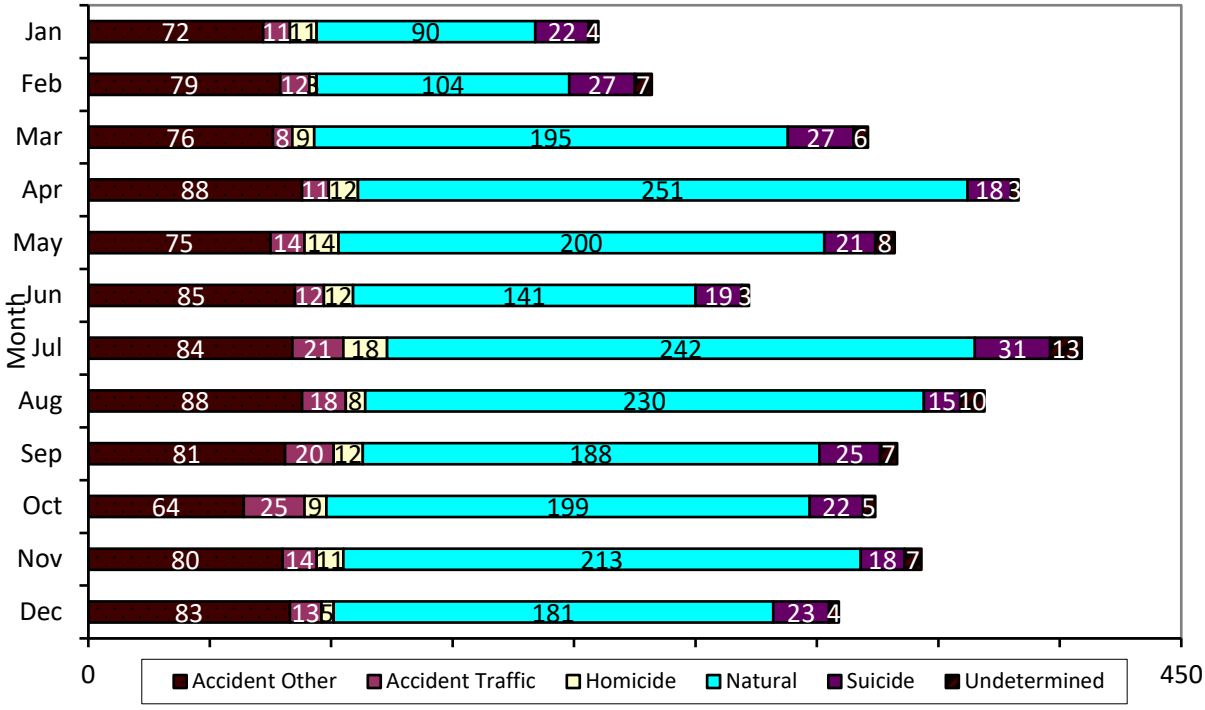


Table 1-6 Month / Manner of Death / KCME / 2020[17]

	MANNER OF DEATH							
MONTH	A	T	H	N	S	U	Total	%
January	72	11	11	90	22	4	210	5.5%
February	79	12	3	104	27	7	232	6.0%
March	76	8	9	195	27	6	321	8.4%
April	88	11	12	251	18	3	383	10.0%
May	75	14	14	200	21	8	332	8.7%
June	85	12	12	141	19	3	272	7.1%
July	84	21	18	242	31	13	409	10.7%
August	88	18	8	230	15	10	369	9.6%
September	81	20	13	188	25	6	333	8.7%
October	64	25	9	199	22	5	324	8.4%
November	80	14	11	213	18	7	343	8.9%
December	83	13	5	181	23	4	309	8.1%
Totals	**955**	**179**	**125**	**2,234**	**268**	**76**	**3,837**	**100%**

[17] A = Accident (Non-Traffic), T = Traffic, H = Homicide, S = Suicide, U = Undetermined.

Table 1-7 Nearest Incorporated City to the Fatal Incident / KCME / 2020[18]

	MANNER OF DEATH						
CITY	A	T	H	S	U	TOTAL	%
Algona	1	0	0	0	0	1	0.1%
Auburn	42	12	9	7	10	80	5.0%
Beaux Arts	0	0	0	0	0	0	0%
Bellevue	41	4	5	8	4	62	3.9%
Black Diamond	3	0	0	0	1	4	0.2%
Bothell	11	0	0	5	0	16	1.0%
Burien	16	1	4	9	1	31	1.9%
Carnation	2	0	0	2	0	4	0.2%
Clyde Hill	0	0	0	0	0	0	0%
Covington	2	1	0	2	0	5	0.3%
Des Moines	11	0	1	1	2	15	0.9%
Duvall	0	0	0	2	0	2	0.1%
Enumclaw	11	4	0	4	2	21	1.3%
Federal Way	41	6	6	10	3	66	4.1%
Hunts Point	0	0	0	0	0	0	0%
Issaquah	19	4	2	8	1	34	2.1%
Kenmore	3	0	0	3	0	6	0.4%
Kent	46	15	10	21	2	94	5.9%
Kirkland	30	2	1	7	1	41	2.6%
Lake Forest Park	4	0	0	2	0	6	0.4%
Maple Valley	9	1	1	7	4	22	1.4%
Medina	1	0	0	0	0	1	0.1%
Mercer Island	7	0	0	1	0	8	0.5%
Milton	1	0	0	0	0	1	0.1%
Newcastle	2	0	0	2	1	5	0.3%
Normandy Park	2	0	0	0	0	2	0.1%
North Bend	8	0	0	4	0	12	0.7%
Pacific	0	2	0	0	0	2	0.1%

[18]Table does not include cases where manner of death is classified "Natural". A = Accident (Non-Traffic), T = Traffic, H = Homicide, S = Suicide, U = Undetermined.

Table 1-7 Nearest Incorporated City to the Fatal Incident / KCME / 2020[19] (continued)

	MANNER OF DEATH						
CITY	A	T	H	S	U	Total	%
Redmond	18	0	2	8	1	29	1.8%
Renton	58	9	8	20	3	98	6.1%
Sammamish	4	0	1	3	0	8	0.5%
SeaTac	10	2	3	3	2	20	1.2%
Seattle	406	37	54	102	22	621	38.8%
Shoreline	11	4	2	3	1	21	1.3%
Skykomish	1	0	0	0	0	1	0.1%
Snoqualmie	3	1	0	2	0	6	0.4%
Tukwila	9	6	2	3	1	21	1.3%
Woodinville	6	1	1	4	1	13	0.8%
Yarrow Point	0	0	0	0	0	0	0%
Unincorporated King County						0	
Baring	0	0	0	0	0	0	0%
Hobart	0	0	0	0	0	0	0%
Greenwater	0	0	0	0	0	0	0%
Fall City	4	0	1	2	1	8	0.5%
Preston	0	0	0	0	0	0	0%
Ravensdale	2	0	0	0	0	2	0.1%
Skyway	0	0	1	1	0	2	0.1%
Vashon Island	3	2	0	1	0	6	0.4%
Outside of King County	114	55	5	11	6	191	11.9%
Unknown Location	2	1	6	0	6	15	0.9%
Totals	**964**	**170**	**125**	**268**	**76**	**1603**	**100%**

[19] A = Accident (Non-Traffic), T = Traffic, H = Homicide, S = Suicide, U = Undetermined.

Out of County Cases 2020

King County is home to many hospitals and a regional trauma center (Harborview) that serves the entire Pacific Northwest and the western United States. Consequently, there are numerous deaths each year where the incident leading to death occurred outside of King County. However, because the death occurred within King County, it comes under the jurisdiction of the King County Medical Examiner's Office. In 2020, there were 200 deaths, 12% (200/1,603) where the incident (excluding deaths classified as "Natural") occurred out of county or where the incident location was unknown. Table 1-8 displays these deaths by incident location and manner.

Table 1-8 Fatal Incident Occurred Outside of King County / KCME / 2020[20]

	MANNER OF DEATH					
INCIDENT LOCATION	A	T	H	S	U	TOTAL
Alaska	4	0	0	0	0	4
Montana	2	1	0	3	0	6
Idaho	2	2	0	0	0	4
Oregon	2	0	0	0	0	2
Other States	1	3	0	0	0	4
Washington						
Island County	3	4	0	0	0	7
Kitsap County	5	2	0	1	1	9
Pierce County	11	6	0	2	0	19
Skagit County	5	2	0	1	0	8
Snohomish County	29	5	1	2	1	38
Thurston County	4	1	0	0	0	5
Other WA Counties	46	28	4	2	4	84
Washington Sub-Total	*103*	*48*	*5*	*8*	*6*	*170*
Out of Country	0	1	0	0	0	1
Unknown	2	1	6	0	6	15
Totals	**116**	**56**	**11**	**11**	**12**	**206**

[20]Table does not include cases where manner of death is classified as "Natural." A = Accident (Non-Traffic), T = Traffic, H = Homicide, S = Suicide, U = Undetermined.

Ten-year perspective

This section provides a ten-year perspective on deaths investigated by the Medical Examiner. Between 2011 and 2020, the King County population grew by about 15% from 1.97 million to 2.27 million inhabitants and King County Medical Examiner cases increased 88% from 2,036 in 2011 to 3,837 in 2020.

The tables on the following pages attempt to give a perspective on the types of death that the Medical Examiner investigates. The tables display data by category and year and provide trends over time. More detailed analysis of 2020 data is provided in separate sections for each manner of death (Accident, Homicide, Natural, Suicide, Traffic, and Undetermined).

Table 2-1 Comparison of Manners of Death / KCME / 2011 – 2020

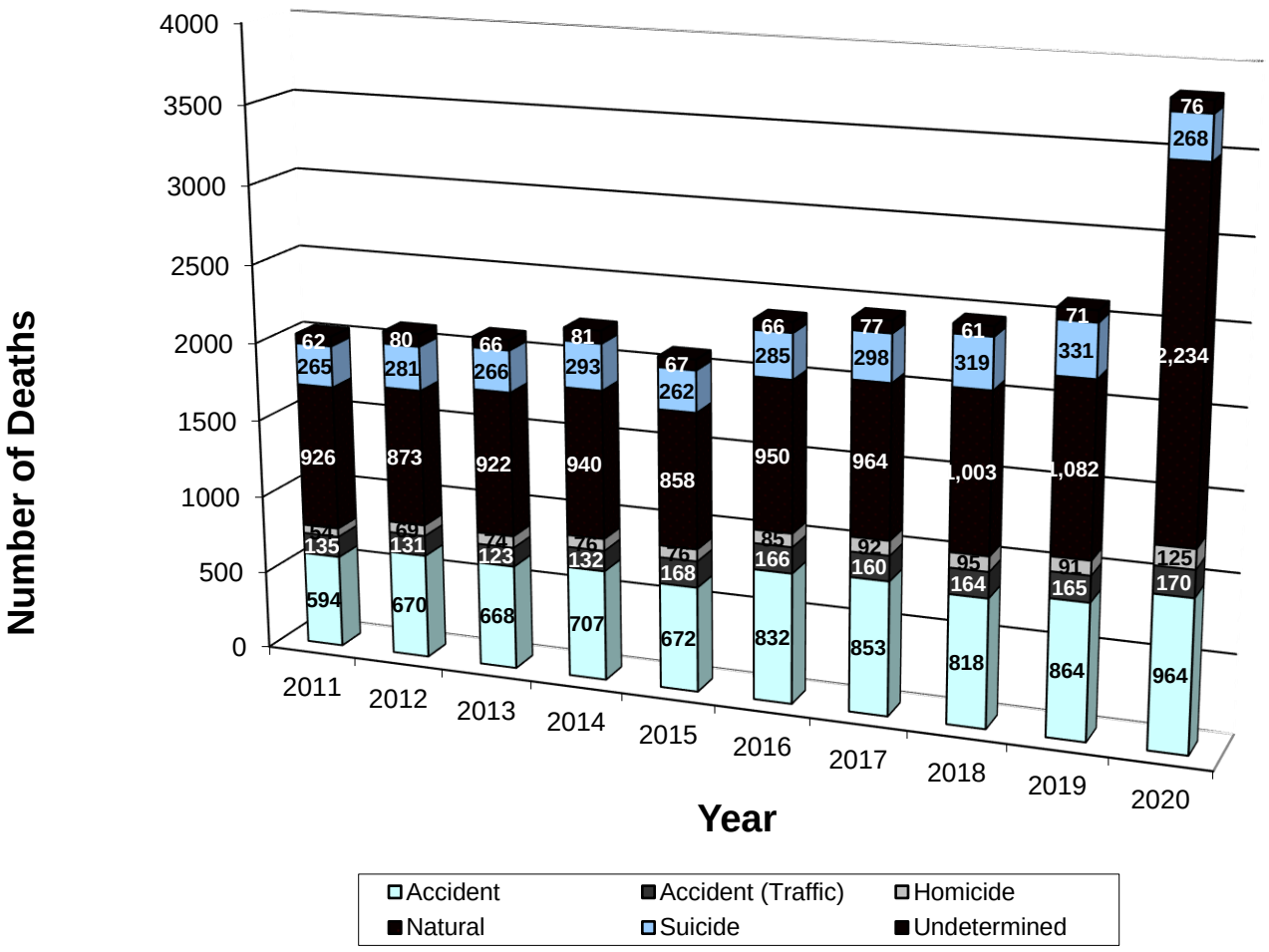
MANNER OF DEATH	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Accident (Other)	594	670	668	707	672	832	853	818	864	964
Accident (Traffic)	135	131	123	132	168	166	160	164	165	170
Homicide	54	69	74	76	76	85	92	95	91	125
Natural	926	873	922	940	858	951	964	1,003	1,082	2,234[21]
Suicide	265	281	266	293	262	285	298	319	331	268
Undetermined	62	80	66	81	67	65	77	61	71	76
Totals	**2,036**	**2,104**	**2,119**	**2,229**	**2,103**	**2,384**	**2,444**	**2,460**	**2,604**	**3,837**

Table 2-2 Comparison of Manners of Death as Percentage of Total Annual Medical Examiner Cases / KCME / 2011 – 2020

MANNER OF DEATH	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	%	%	%	%	%	%	%	%	%	%
Accident (Other)	29.2	31.8	31.5	31.7	32	34.9	34.9	33.3	33.2	25.1
Accident (Traffic)	6.6	6.2	5.8	5.9	8	7	6.5	6.7	6.3	4.4
Homicide	2.7	3.3	3.5	3.4	3.6	3.6	3.8	3.7	3.5	3.3
Natural	45.5	41.5	43.5	42.2	40.8	39.8	39.4	40.8	41.6	58.2
Suicide	13	13.4	12.6	13.2	12.4	11.9	12.2	13	12.7	7.0
Undetermined	3	3.8	3.1	3.6	3.2	2.8	3.2	2.5	2.7	2.0
Totals	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

[21] In 2020, KCMEO assumed jurisdiction on a greater number of natural deaths compared to previous years for the purpose of COVID-19 Surveillance. See "Medical Examiner activity" on pages 62-63

Graph 2-1 Comparison of Manners of Death / KCME / 2011-2020



Graph 2-2 Homicide Deaths / KCME / 2011 – 2020

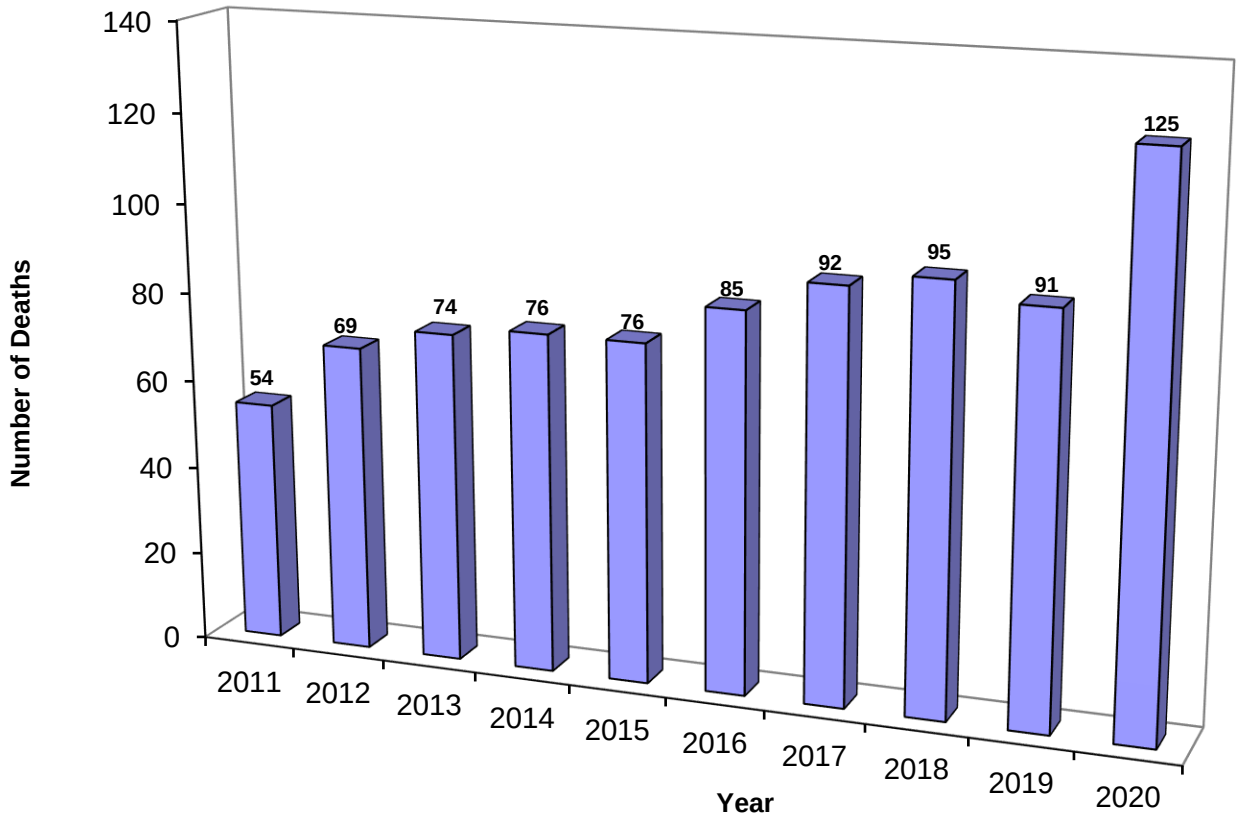


Table 2-3 Ten-Year Perspective of Homicidal Methods / KCME / 2011 - 2020

METHOD USED	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Blunt Force	6	6	14	13	14	12	11	12	17	14
Firearms	35	47	44	51	54	61	69	66	60	85
Homicidal Violence	1	3	0	0	2	1	2	0	1	0
Stabbing	9	13	11	9	4	5	10	16	9	18
Strangulation	2	0	3	2	2	2	0	1	3	5
Other	1	0	2	1	0	4	0	0	1	3
Totals	54	69	74	76	76	85	92	95	91	125

Graph 2-3 Suicide Deaths /KCME / 2011 - 2020

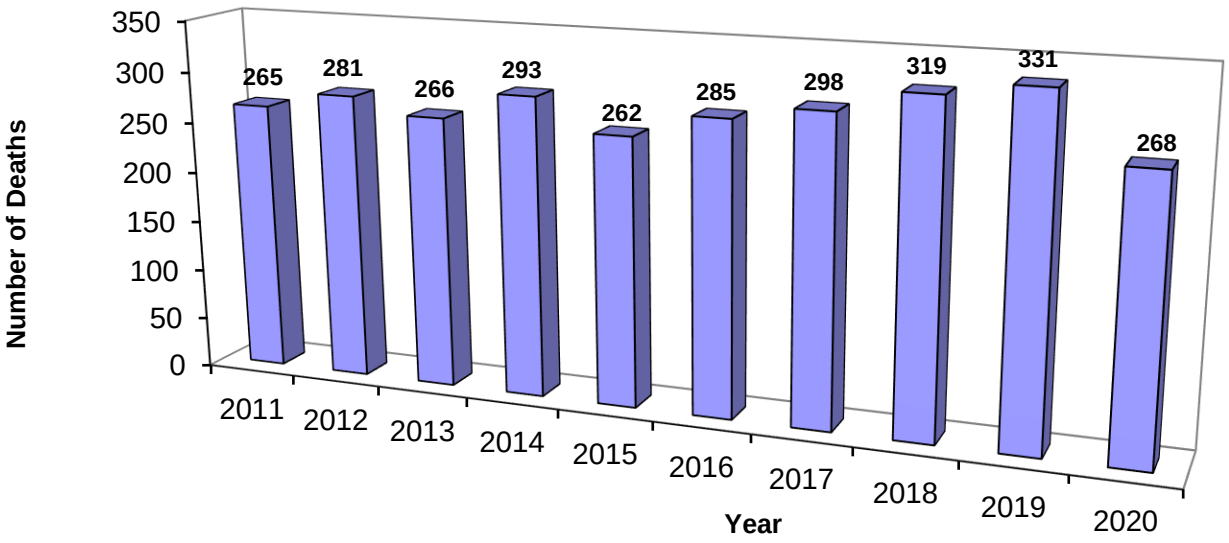


Table 2-4 Ten Year Perspective of Suicidal Injury Modes / KCME / 2011 - 2020

Injury Mode	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Asphyxia / Plastic Bag	15	21	13	22	14	16	17	16	23	9
Burns / Fire	1	2	1	4	2	3	0	1	4	5
Carbon Monoxide	7	9	10	4	8	6	5	0	0	3
Drowning	5	7	2	5	3	4	3	7	4	7
Drugs / Poisons	41	42	41	41	41	40	36	58	48	36
Firearms	116	119	100	124	109	114	126	119	132	99
Hanging	48	48	71	69	59	70	74	81	82	72
Incised Wounds / Stabbing	12	8	9	3	8	8	10	9	15	12
Jumped	19	24	15	19	16	22	21	18	18	15
Traffic	0	0	0	0	0	0	3	7	0	4
Other	1	1	4	2	2	2	3	3	5	6
Totals	265	281	266	293	262	285	298	319	331	268

Graph 2-4 Traffic Fatalities / KCME / 2011 – 2020

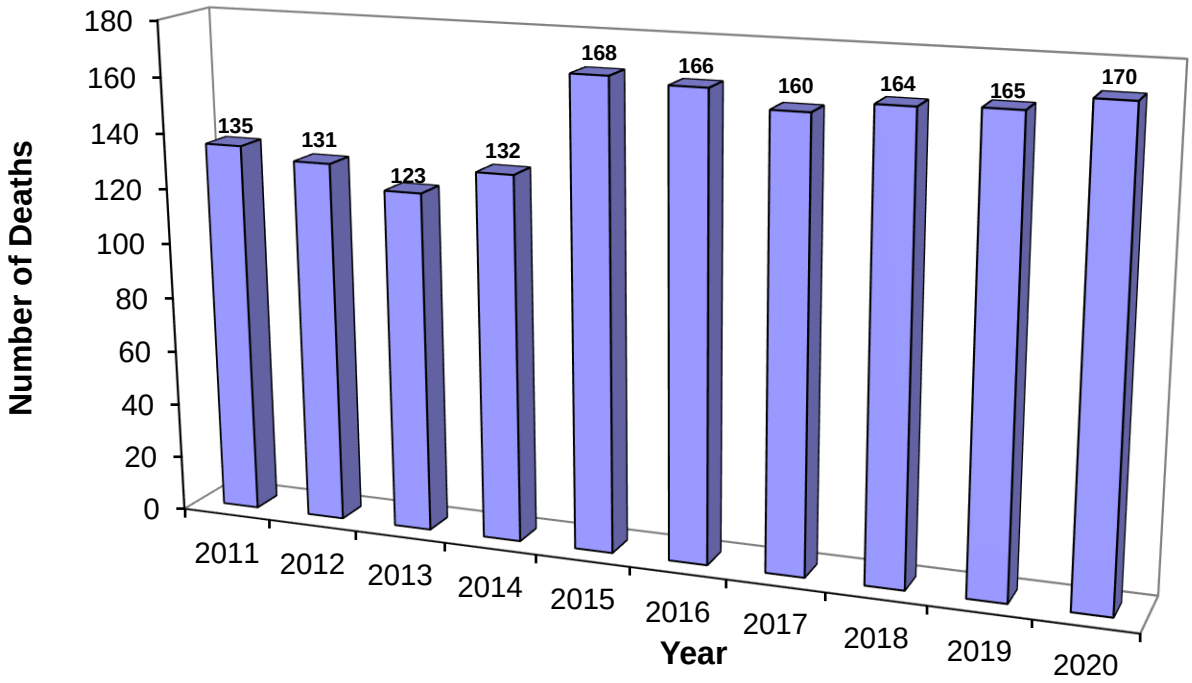


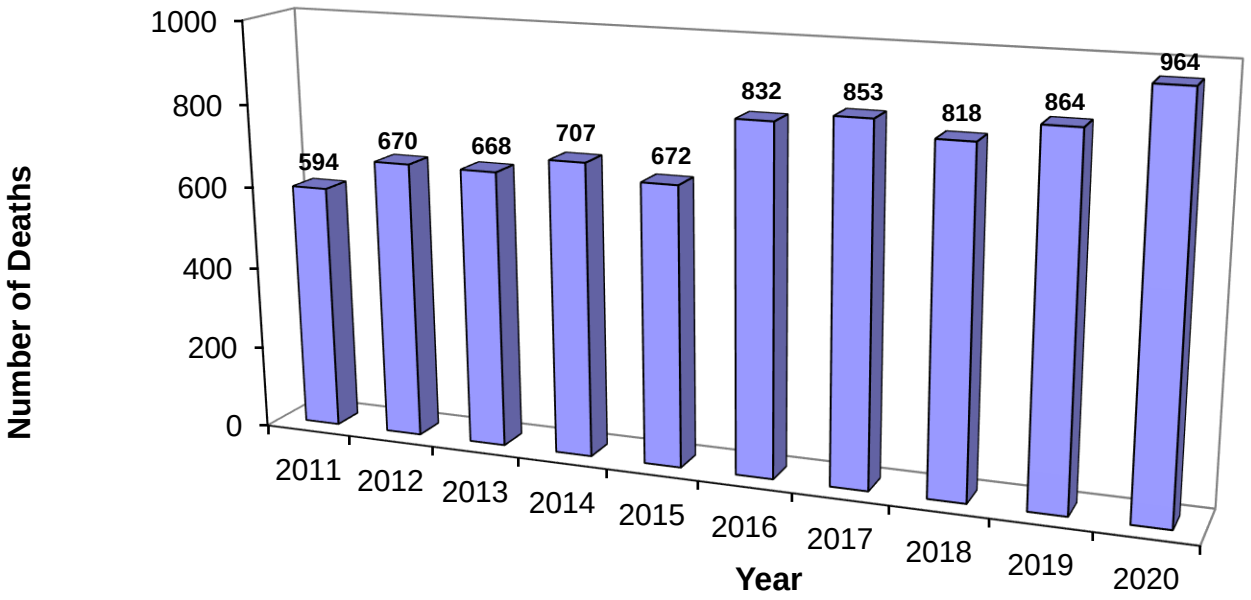
Table 2-5 Traffic Fatality Circumstances / KCME / 2011 - 2020

CIRCUMSTANCES	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Vehicle Driver	55	47	45	58	55	62	67	57	53	48
Vehicle Passenger	22	16	23	19	40	23	17	27	17	24
Vehicle Unknown Position	3	4	0	5	1	14	1	7	7	3
Bicyclist	8	5	7	3	6	8	10	14	8	7
Motorcycle Driver	26	24	22	19	25	24	25	18	26	26
Motorcycle Passenger	1	1	0	1	1	2	1	0	0	1
Pedestrian	17	33	25	26	39	40	38	40	53	53
Other	3	1	1	1	1	3	1	1	1	8
Totals	135	131	123	132	168	166	160	164	165	170

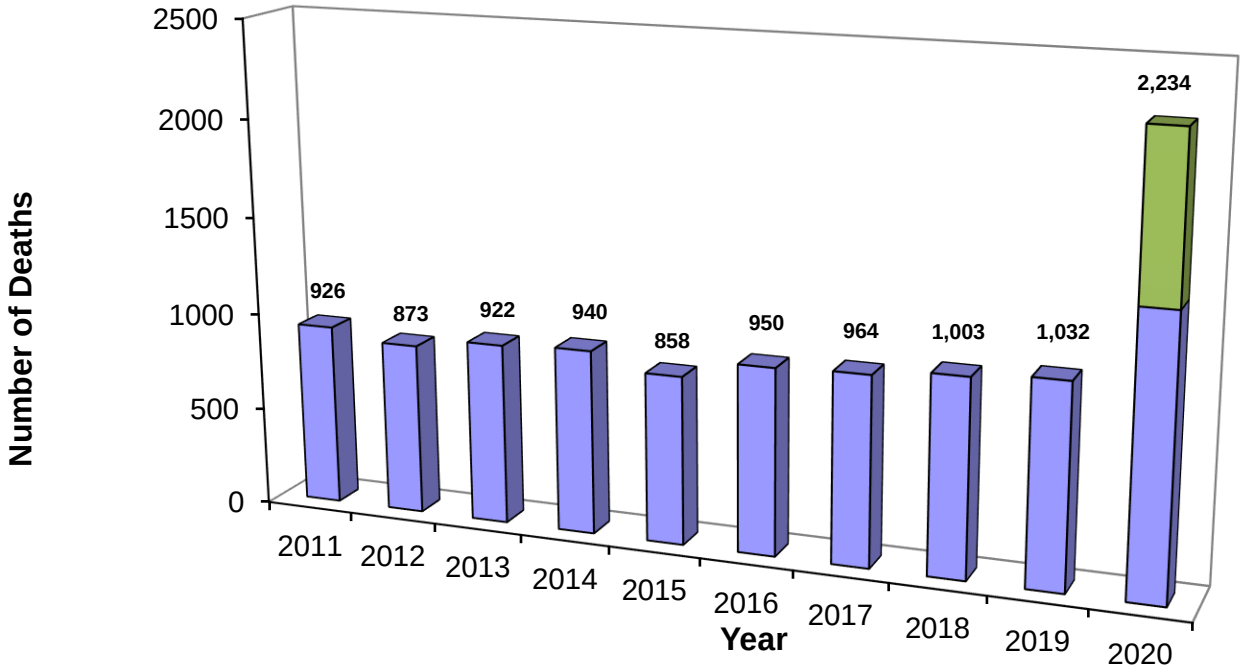
Table 2-6 Ten Year Perspective of Non-Traffic Accidental Death Circumstances / KCME / 2011 - 2020

CIRCUMSTANCES	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Aircraft	1	3	1	4	0	1	1	0	0	0
Asphyxia	6	7	8	14	9	10	8	11	7	8
Aspiration	7	15	13	14	9	17	16	5	18	20
Blunt Force / Crushing	11	20	3	19	12	13	20	12	21	16
Burns / Fire	18	26	19	20	17	23	25	25	19	36
Drowning	21	24	23	18	20	24	18	18	32	32
Drugs / Poisons	203	230	279	289	295	305	340	368	389	481
Electrocution	1	1	2	0	0	1	0	0	0	3
Explosion	0	0	0	0	0	0	0	0	0	1
Fall	291	314	291	310	280	414	398	353	335	339
Firearms	0	2	1	1	0	0	1	0	0	0
Hanging	2	4	1	1	2	3	1	0	0	0
Hypothermia	7	6	5	5	11	12	9	8	21	14
Struck by Object	3	2	1	2	0	0	5	0	0	0
Struck by Train	6	2	5	2	5	1	2	4	2	2
Non-Traffic Vehicular	4	4	7	3	6	5	6	6	9	2
Other	10	10	9	4	6	3	1	8	11	10
Totals	**594**	**670**	**668**	**707**	**672**	**832**	**853**	**818**	**864**	**964**

Graph 2-5 Accidental Deaths / KCME / 2011 – 2020

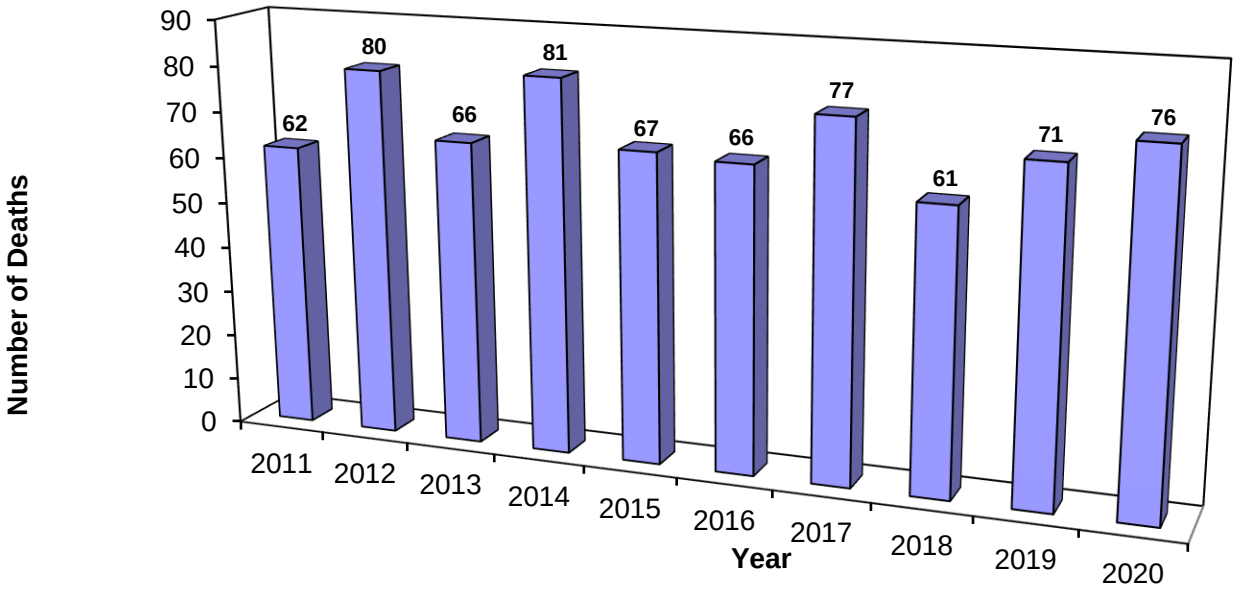


Graph 2-6 Natural Deaths / KCME / 2011 – 2020[22]



[22]Including 826 deaths for which jurisdiction was assumed to perform postmortem COVID-19 testing (shown in green) in 2020.

Graph 2-7 Deaths of Undetermined Manner / KCME / 2011 – 2020



Manner of death: Homicide

The Medical Examiner classifies a death as a homicide when the death results from injuries inflicted by another person. In this context, the word homicide does not necessarily imply the existence of criminal intent behind the action of the other person. This is reflected in the fact that the prosecuting attorney may either charge the person responsible for the injuries with murder or manslaughter, or decline to file charges. In 2020, the Medical Examiner classified 125 deaths as homicide. This number represents 3.3% (125/3,837) of the Medical Examiner death investigations for the calendar year 2020.

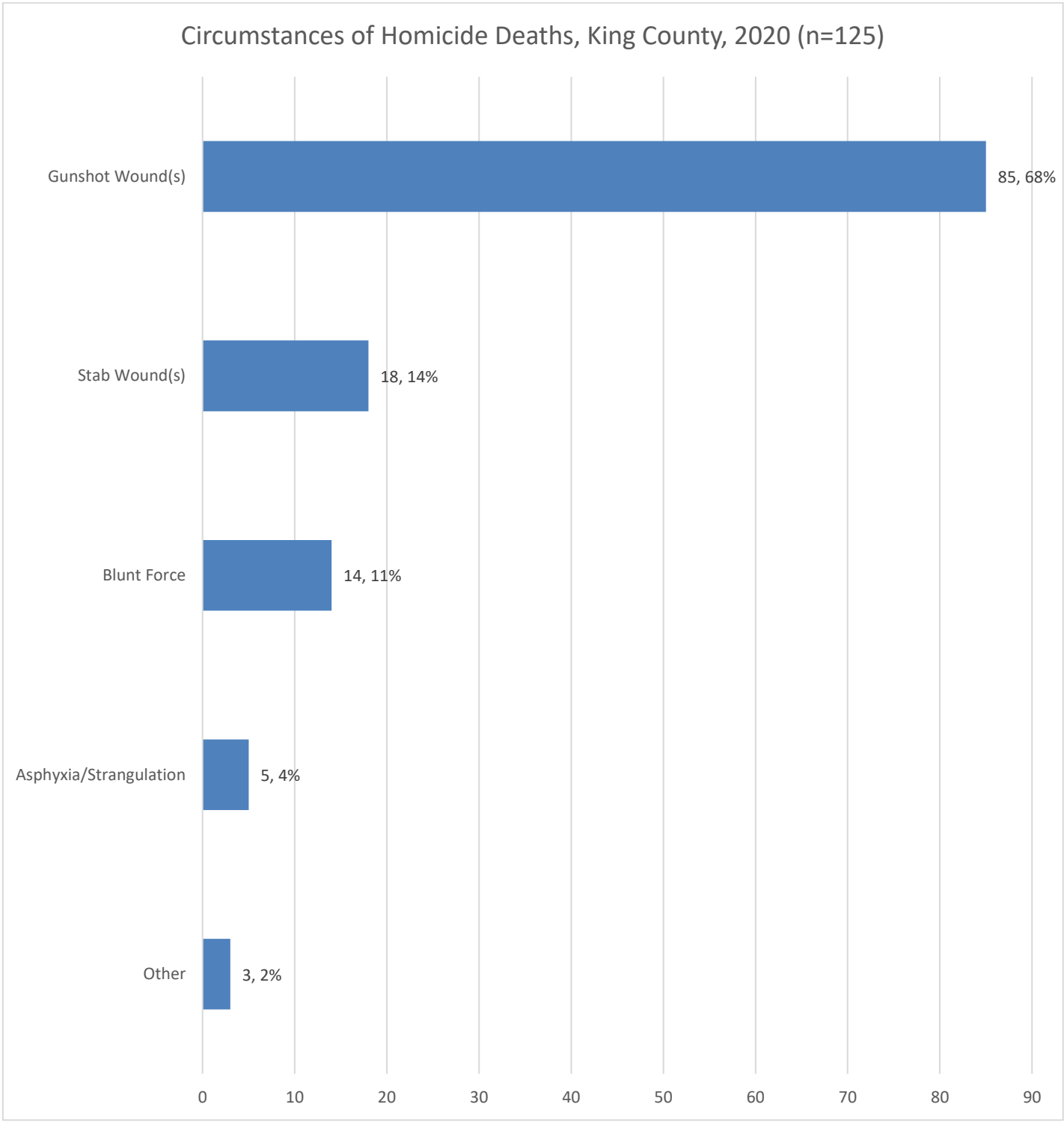
The data reflect the weapons or mechanisms responsible for the homicidal deaths in 2020. Gunshot wound(s) were responsible for 68% (85/125). Stabbing by a knife or other sharp-edged instrument caused 14% (18/125) of deaths of homicide victims. Blunt force injuries were responsible for 11% (14/125) of the 2020 homicide deaths. There were five deaths due to strangulation/asphyxia, two deaths due to burns/fire, and one death due to drug/poison(s).

Certain demographic groups were disproportionately represented among homicide victims. Whereas Black or African American residents comprise only 6.6% of the King County population, 34% (42/125) of homicide victims were Black or African Americans. Almost a quarter of homicide victims (34%, 42/125) were between the age of 20 and 29 years. Fourteen victims were between the age of 12 and 19 years. Males comprised 78% (98/125) of the homicide victims in 2020.

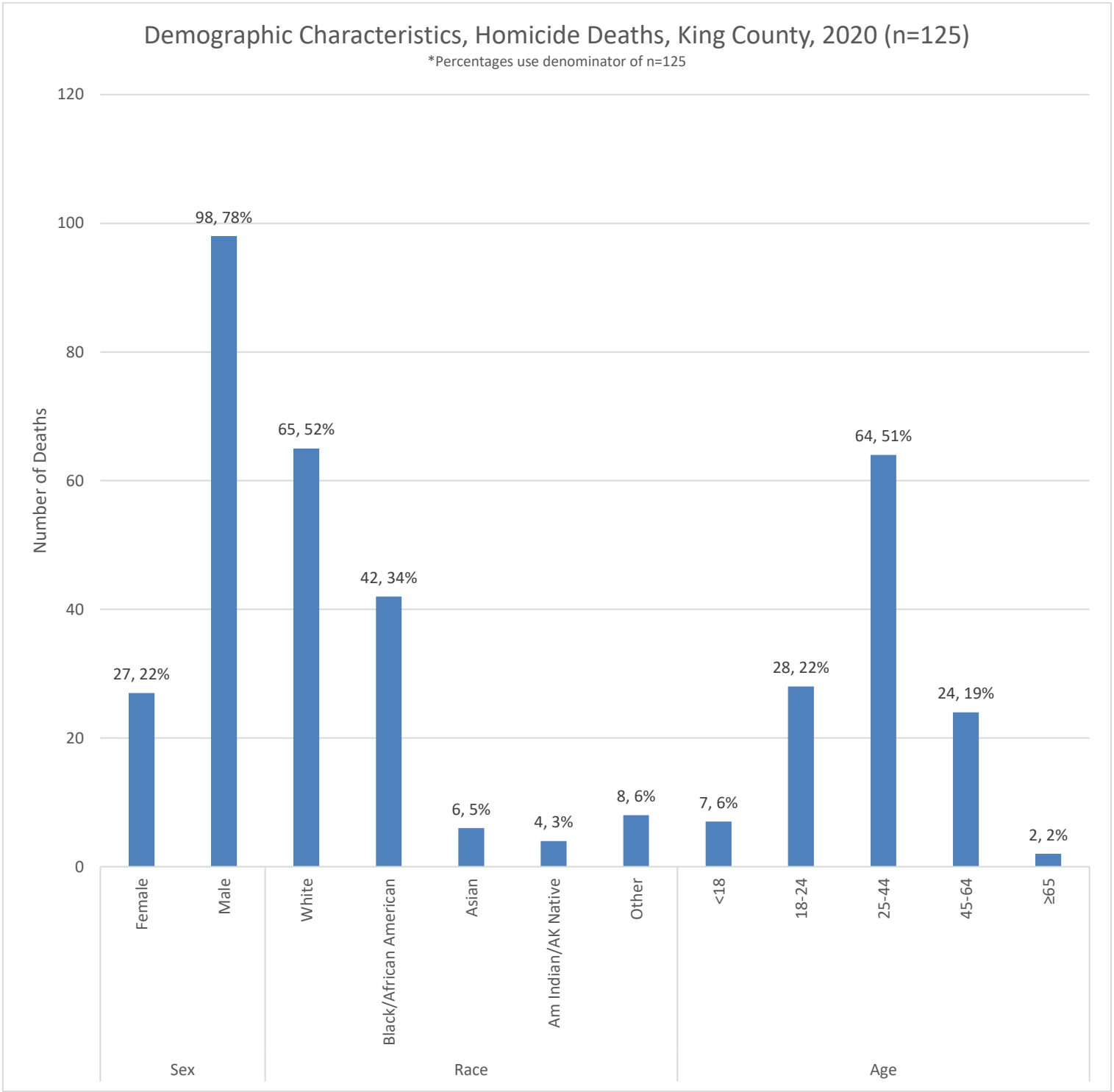
The presence of blood alcohol was tested for in 94% percent (117/125) of the homicide victims. Of those tested 26% (31/117) showed alcohol present at the time of death.

Of the 125 homicide deaths in 2020, 90% (113/125) occurred within King County, and of these, 43% (54/125) occurred within the city limits of Seattle. In 11 of the 125 homicidal deaths, the incident occurred outside of King County, but death occurred within King County or the incident location was unknown.

Graph 3-1 Homicide Injury Methods / KCME / 2020



Graph 3-2 Demographics / Homicide / KCME / 2020



Manner of death: Suicide

Suicides are deaths caused by self-inflicted injuries with evidence of intent to end one's life. Evidence of intent includes an explicit expression, such as a suicide note or verbal threat, or an act constituting implicit intent, such as deliberately placing a gun to one's head or rigging a vehicle's exhaust. In 2020, there were 268 suicides, accounting for 7.0% (268/3,837) of the deaths that the King County Medical Examiner's Office investigated.

Suicide victims were disproportionately comprised of men (71% of all suicide victims) and Whites (77% of suicide victims). Victims ages 24 and under accounted for 15% of all suicides (40/268) with 8% (21/268) being ages 19 and younger.

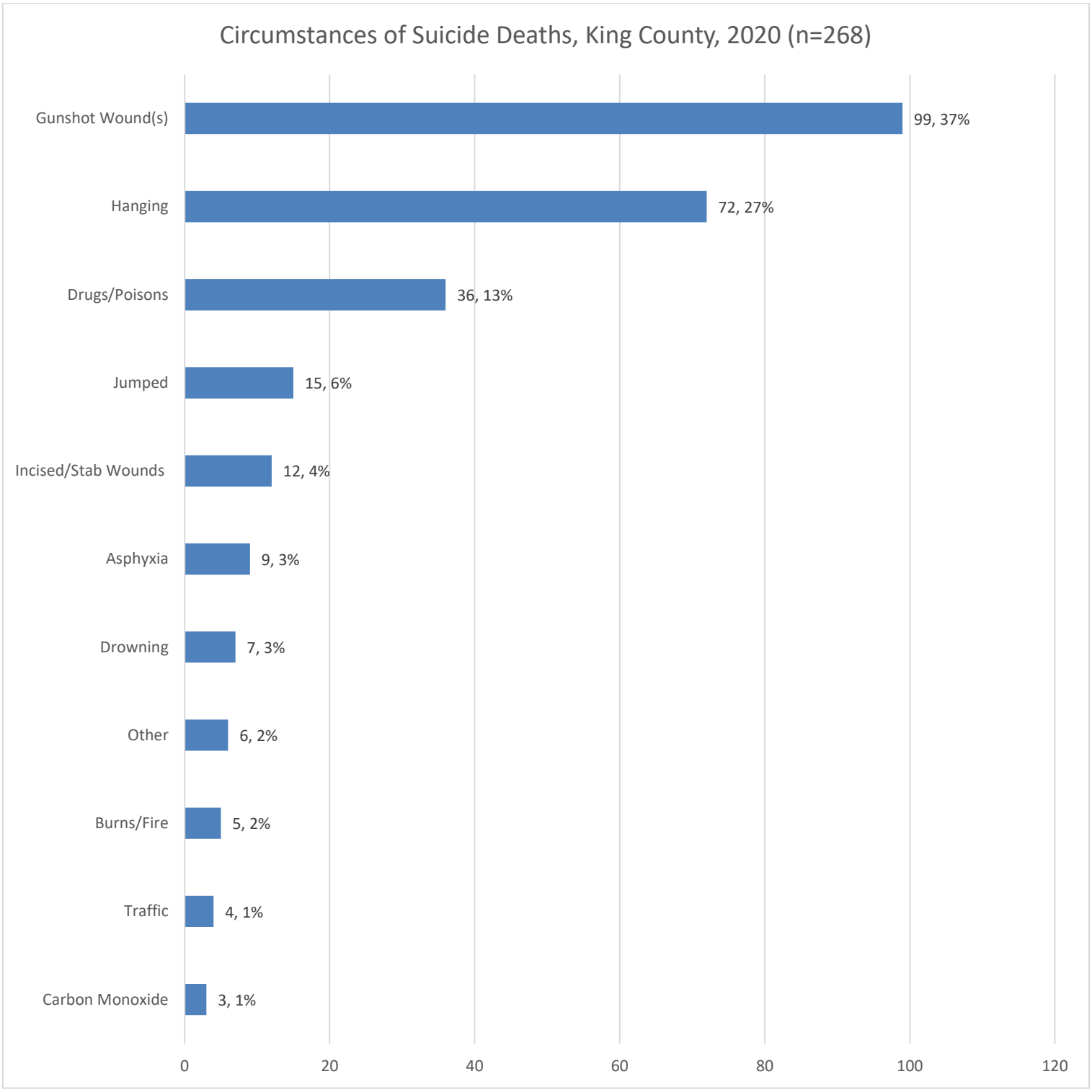
Of the 268 suicide deaths that occurred in 2020, 37% (99/268) were attributed to firearm, 27% (72/268) to hanging, 13% (36/268) to drugs and poisonings, and 6% (15/268) to jumping from a height. Self-inflicted gunshot wounds were significantly more common among men.

Blood alcohol tests were performed in 71% (189/268) of suicidal deaths and were positive in 23% (43/189) of cases tested.

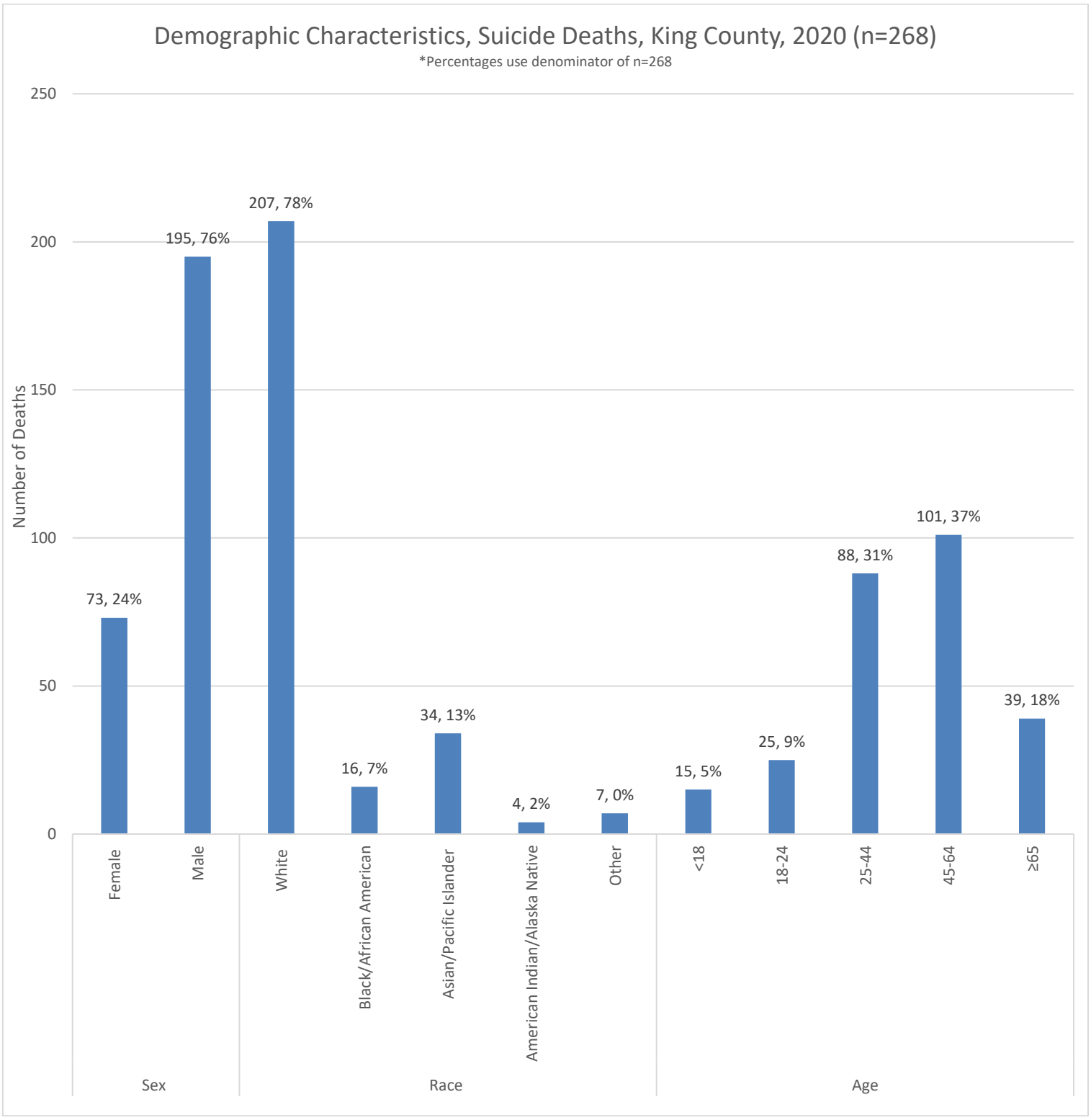
The Washington Death with Dignity Act, Initiative 1000, codified as RCW 70.245, passed on November 4, 2008 and took effect on March 5, 2009. This act allows terminally ill adults seeking to end their life to request lethal doses of medication from medical and osteopathic physicians. These terminally ill patients must be Washington state residents who have less than six months to live.[23] As provided in the act, "the patient's death certificate…shall list the underlying terminal disease as the cause of death." The act also states that, "Actions taken in accordance with this chapter do not, for any purpose, constitute suicide, assisted suicide, mercy killing, or homicide, under the law." Given these instructions, the King County Medical Examiner's Office has no involvement in these cases and collects no statistics on the number of deaths where an individual has utilized their rights under the provisions of this act. Statistics are kept and released annually by the Washington State Department of Health.

[23]Washington State Department of Health website: http://www.doh.wa.gov/dwda

Graph 4-1 Suicide Injury Methods / KCME / 2020



Graph 4-2 Demographics / Suicide / KCME / 2020



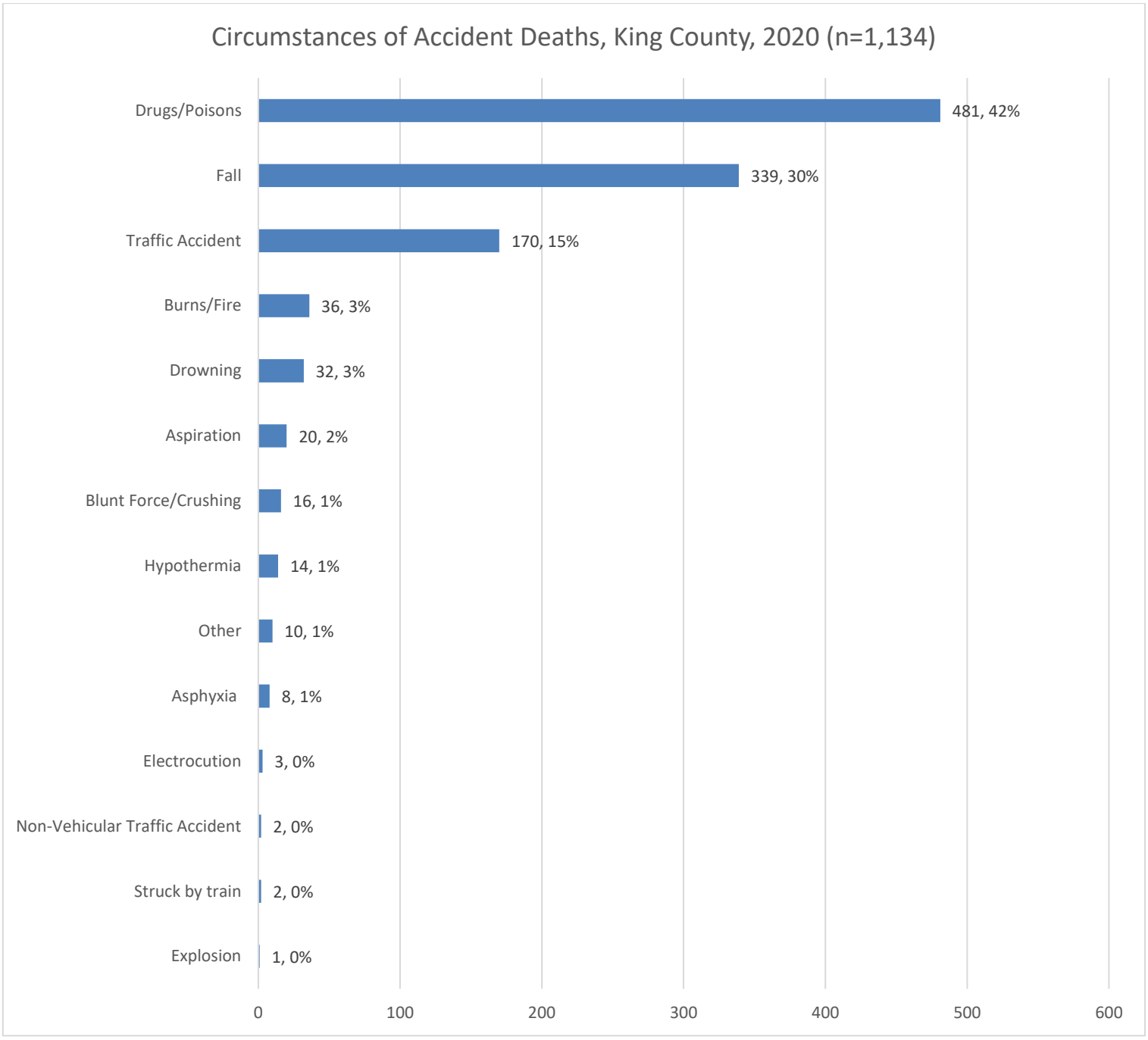
Manner of death: Accident

The Medical Examiner certified 1,134 accidental deaths for the calendar year 2020. Nearly 30% (339/1,134) of accidental deaths were attributed to injury sustained in falls, which most commonly involved ground-level falls in elderly adults that resulted in fractures or head injuries leading to complications such as pneumonia. Drug overdose and accidental poisonings accounted for 42% (481/1,134) of accidental deaths; these deaths are described beginning on page 44. Traffic fatalities accounted for 15% (170/1,134) of accidental deaths; these deaths are described beginning on page 39. Other causes of accidental death that were investigated by the Medical Examiner include fire (n=36), blunt force/crushing (n=16), drowning (n=32), and aspiration (n=20).

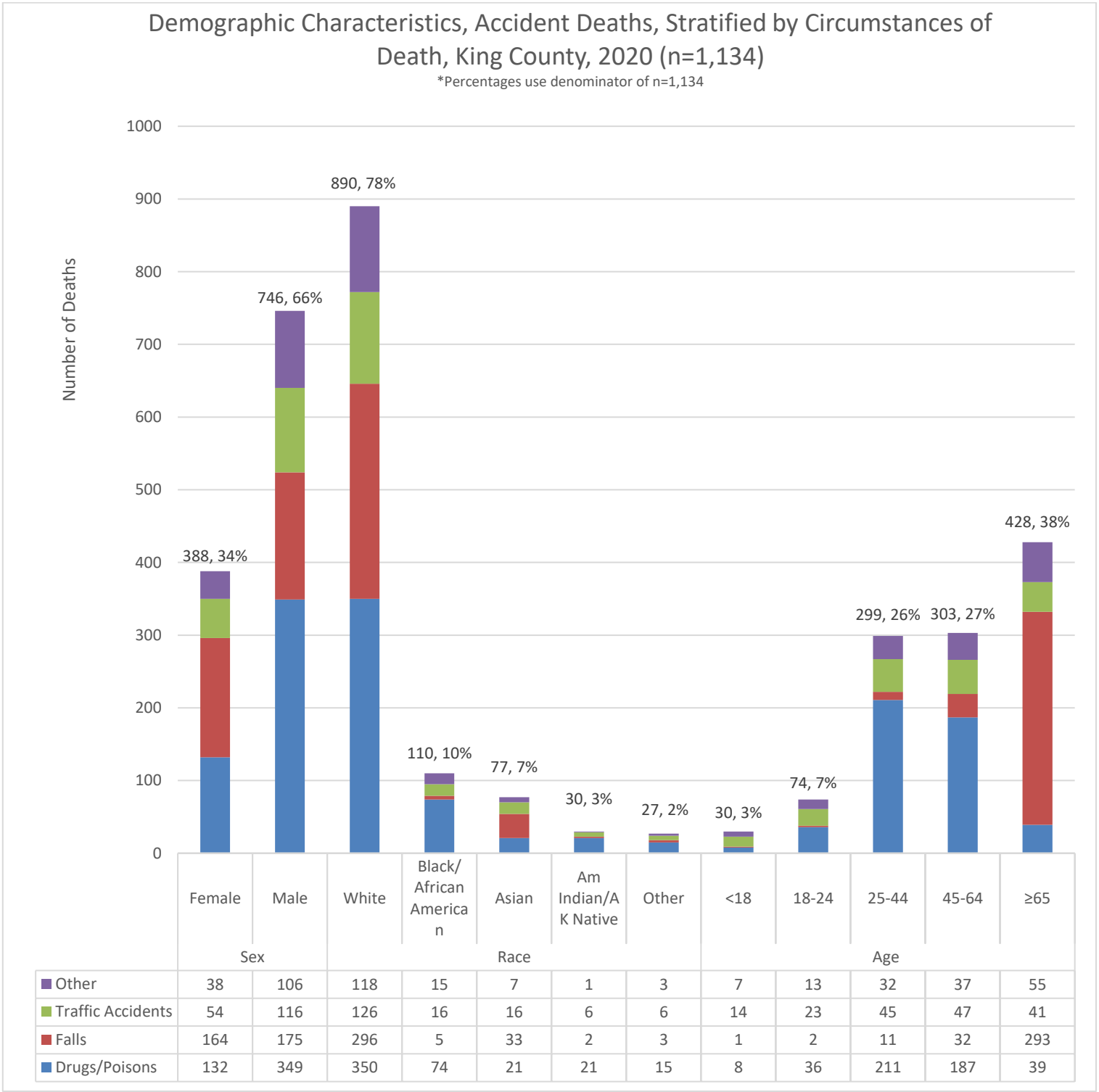
Of the 964 individuals with deaths attributed to non-traffic accidents, 12% (116/964) had suffered an injury outside of King County, were transported to King County for medical care, and ultimately died in King County and thus fell under King County Medical Examiner's Office jurisdiction.

65% (631/964) of the victims were tested for the presence of alcohol. Of those tested, 26% (164/631) showed alcohol present at the time of death.

Graph 5-1 Circumstances of Accidental Death / KCME / 2020



Graph 5-2 Demographics /Accidental Deaths / KCME/ 2020



	Female	Male	White	Black/ African American	Asian	Am Indian/AK Native	Other	<18	18-24	25-44	45-64	≥65
	Sex		Race					Age				
Other	38	106	118	15	7	1	3	7	13	32	37	55
Traffic Accidents	54	116	126	16	16	6	6	14	23	45	47	41
Falls	164	175	296	5	33	2	3	1	2	11	32	293
Drugs/Poisons	132	349	350	74	21	21	15	8	36	211	187	39

Traffic deaths

During the calendar year 2020, the Medical Examiner's Office investigated 170 traffic fatalities. Thirty three percent (56/170) of the traffic deaths that the Medical Examiner investigated were the result of collisions that occurred outside of King County, with the injured transported to hospitals in King County where death occurred, primarily Harborview Medical Center. These deaths fall under the jurisdiction of the King County Medical Examiner. Although these deaths are classified "Accident" for death certification purposes, the more accurate term is "motor vehicle collision."

In 2020, 28% (48/170) of the traffic fatalities were motor vehicle drivers. By age, 2% (1/48) vehicle driver deaths were people under the age of 18, 21% (10/48) between the ages of 18 and 24, 31% (15/48) between the ages of 25 and 44, 29% (14/48) between the ages 45-64, and 17% (8/48) age 65 or greater. Male drivers represented 67% (32/48) of driver deaths and female drivers represented 33% (16/48) of driver deaths.

Of the 170 traffic fatalities in 2020, 14% (24/170) were motor vehicle passengers. In 2020, teenagers (13-19 years of age) accounted for three motor vehicle passenger deaths. There was no passenger death of infants (less than one year of age), 1 vehicle passenger deaths of a child between the ages of 1-5 years, and 1 death of child between the ages of 6-12 years.

Blood alcohol statistics are presented to describe the role of alcohol in traffic deaths.[24] However, it should be noted that in many cases someone other than the person who died was under the influence of alcohol and was directly responsible for the collision. The Medical Examiner determines the blood alcohol levels of persons who die, not of everyone involved in the incident. In addition, blood alcohol is not tested in persons who die after surviving more than 24 hours, because in those deaths the alcohol has had time to metabolize and is no longer detectable.[24] Therefore, blood alcohol figures presented in this report underestimate the role of alcohol intoxication in traffic collisions.

Seatbelt restraint status was known in 65% (49/75) of the fatalities involving motor vehicle occupants. Of those, 34 cases 69% (34/49) were drivers. Of those drivers, 62% (21/34) were not restrained. The figures for drivers not wearing seatbelts for the previous three years are: 32% (12/38) in 2019, 44% (25/57) in 2018, and 15% (22/53) in 2017.

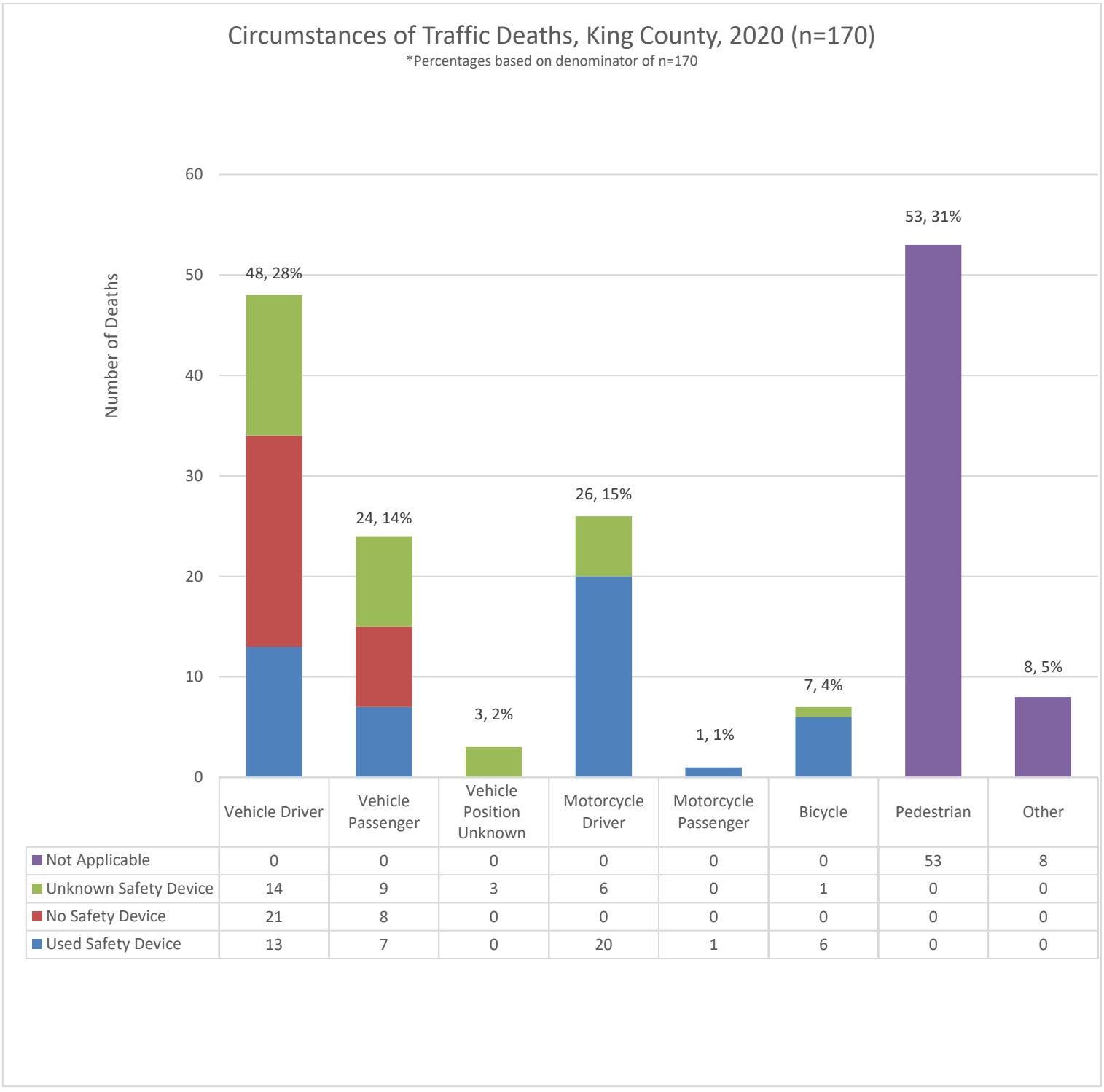
Motorcycle riders accounted for 16% (27/170) of traffic fatalities. Among the 27 motorcycle fatalities, 26 were drivers and 26 were male. Of the 27 motorcycle fatalities, 74% (20/27) of the motorcyclists were wearing a helmet, no motorcyclist was not wearing a helmet, and in 22% (6/27) of the deaths it was unknown if a helmet was in use. Of the 27 motorcyclist fatalities 20 were tested for the presence of blood alcohol and 20% (4/20) had alcohol detectable.

[24] See "Explanation of Data" for criteria for blood alcohol testing, page 8.

Pedestrians constituted 31% (53/170) of traffic fatalities. The majority of pedestrian deaths, 58% (31/53), were male. Of the pedestrian fatalities that were tested, 29% (14/49) had detectable amounts of alcohol present in their blood at the time of death.

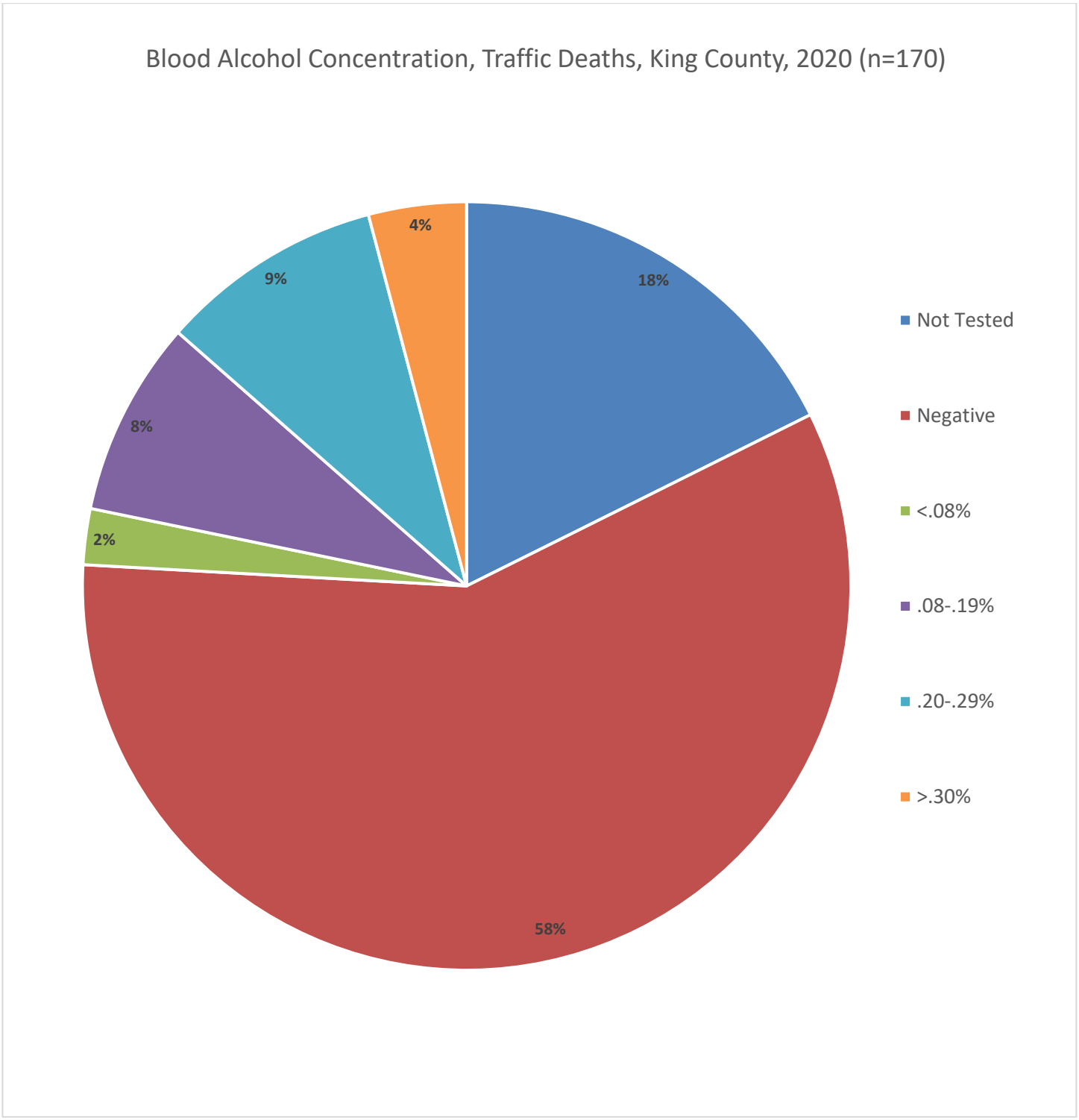
There were 7 bicyclist deaths in 2020; 6 were riders wearing a helmet, and 1 had unknown helmet status. Five of the bicyclist fatalities were tested and none had detectable amount of alcohol present in their blood at the time of death.

Graph 5-3 Traffic Fatality Circumstances / KCME / 2020

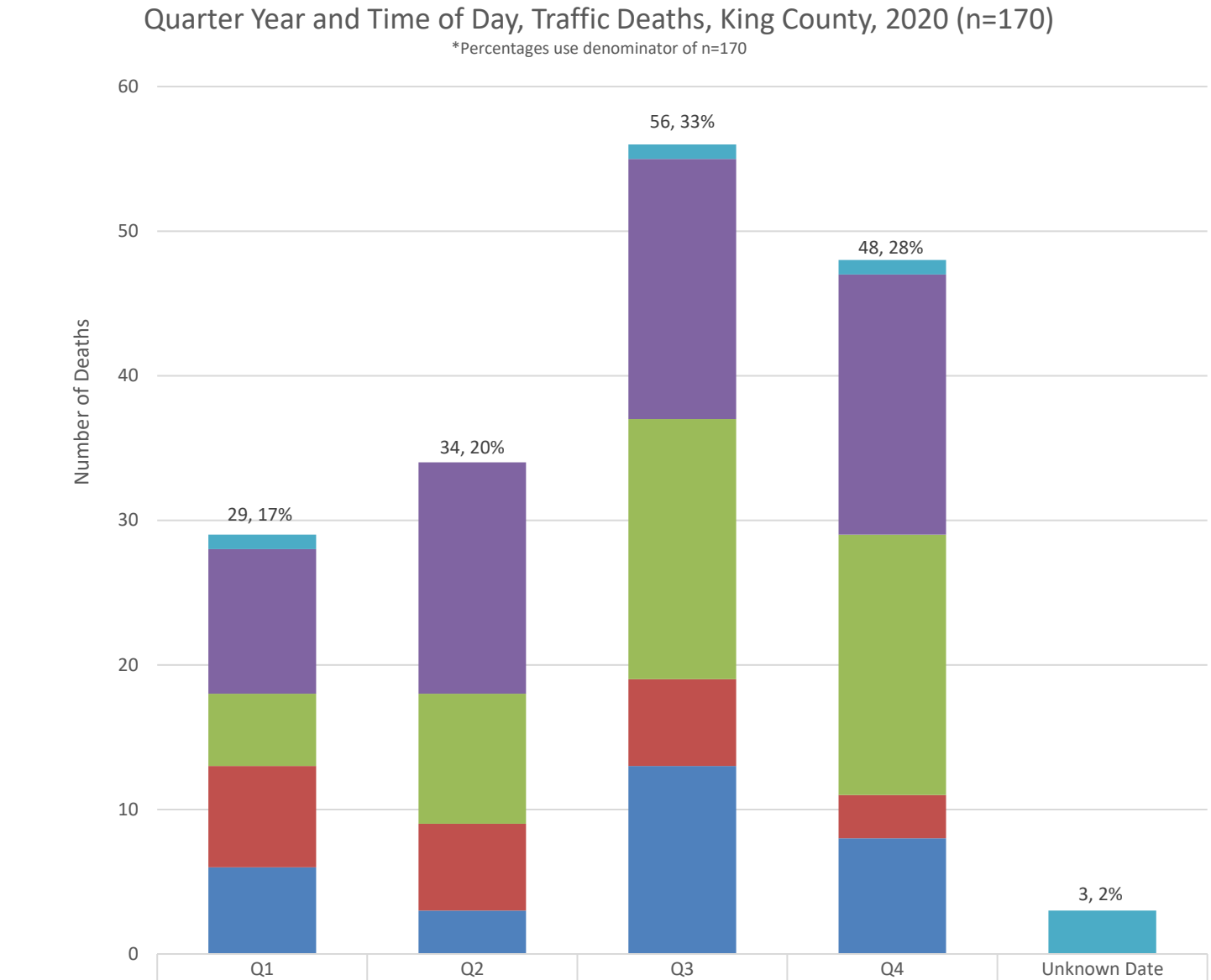


	Vehicle Driver	Vehicle Passenger	Vehicle Position Unknown	Motorcycle Driver	Motorcycle Passenger	Bicycle	Pedestrian	Other
Not Applicable	0	0	0	0	0	0	53	8
Unknown Safety Device	14	9	3	6	0	1	0	0
No Safety Device	21	8	0	0	0	0	0	0
Used Safety Device	13	7	0	20	1	6	0	0

Graph 5-4 Traffic Fatalities / Blood Alcohol / KCME / 2020



Graph 5-5 Time of Fatal Traffic Collision / KCME / 2020



	Q1	Q2	Q3	Q4	Unknown Date
Unknown Time	1	0	1	1	3
6pm-11:59pm	10	16	18	18	0
12pm-5:59am	5	9	18	18	0
6am-11:59am	7	6	6	3	0
12am-5:59am	6	3	13	8	0

Deaths due to drugs and poisons

In 2012, it was reported in the *National Vital Statistics Report*[25] that preliminary cause of death information from 2009 shows drug-induced deaths were the leading cause of accidental deaths of Americans. This was the first time drug-induced deaths had surpassed motor vehicle accidents as the number one cause of accidental deaths.

For King County in 2020, acute drug or poison intoxication caused 539 deaths, approximately 14% of all deaths investigated (539/3,837) and represented approximately 35% (539/1,546) of autopsies conducted. The total number of drug-caused deaths increased compared to 2019 when there were 448 overdose deaths. In 2020, deaths due to drugs and poisons comprised 34% (539/1,603) of all suicidal, accidental, homicidal, and undetermined deaths combined.

For the purpose of this section, the term "overdose" is used to describe a death caused by the acute intoxication of a single drug or multiple drugs in combination. Multiple drug intoxication continued to cause the majority of overdose deaths in 2020. Of the drug/poison deaths in 2020, a single drug or poison caused 30% (163/539) of the drug related deaths, and drugs or poisons in combination caused 70% (376/539). Multiple drug intoxication caused 63% of the drug/poison deaths in 2019. Table 5-1 displays the specific drugs that caused death in 2020. Data regarding opioids[26], cocaine, methamphetamine, and ethanol are described in detail at https://kingcounty.gov/depts/health/examiner/overdose.aspx.

Deaths due to drugs and poisons are represented in the manners of accident, suicide, homicide, and undetermined. There was 1 death classified as homicide in 2020 in which drugs or poisons were the primary cause of the death.

The classification of undetermined manner is used when the circumstances surrounding the overdose does not allow clarification of whether the fatal intoxication was suicide or an accident. In 2020, drugs and poisons caused 17 deaths of undetermined manner, compared to 11 in 2019.

In 2020, 35 suicides were due to drugs/poisons, compared to 48 in 2019.

[25]Kenneth D. Kochanek, M.A.; Jiaquan Xu, M.D.; Sherry L. Murphy, B.S.; Arialdi M. Miniño M.P.H.; and Hsiang-Ching Kung, Ph.D., Division of Vital Statistics "Deaths: Preliminary Data 2009," National Vital Statistics Report Volume 59 Number 4 (March 2013)

[26]The term opioid refers to the general class of drugs, often called narcotics, which interact with the opioid receptor. When the term "opiate" is used in this section, the drug detected by analysis is a derivative of opium, usually morphine, the source of which is either pharmaceutical morphine or heroin. For example, oxycodone, and methadone are "opioids" but in this section are not "opiates."

Ethanol (alcohol) is also a drug to be critically examined for its role in the circumstances surrounding death. In 2020, 2 accidental deaths were attributed to acute ethanol intoxication where ethanol was the single substance used. Ninety-five people died in 2020 where ethanol, in combination with other drugs, was the cause of death. Blood alcohol (ethanol) tests were performed in 70% (1,122/1,603) of non-natural deaths. Blood alcohol tests are only performed when death occurs within 24 hours of the initial injury/event, or, in hospital deaths when an admission blood sample is available for testing. Positive blood alcohol levels were detected in 27% (432/1,603) of non-natural deaths where tests were performed. High blood alcohol levels found in chronic alcoholics are usually certified as "natural", meaning that the high ethanol level represents an exacerbation of the underlying chronic disease (alcoholism) and not the cause of death. This practice is in accordance with the prevailing standards of death certification.

It is important to know that the following tables and charts represent toxicology results only from specimens gathered by the King County Medical Examiner's Office and are not necessarily reflective of the total number of overdose deaths. While there were 539 overdose deaths in 2020, not all of those deaths had toxicological specimens available for testing by the Medical Examiner's Office. In certain instances, delayed hospital deaths were classified based on toxicology test results from medical records where samples for confirmatory laboratory testing by the Medical Examiner's Office were no longer available. There were 23 such deaths listed as drug overdose based on documentation in medical records alone.

Additional information about drug overdose deaths can be viewed at: https://kingcounty.gov/depts/health/examiner/overdose.aspx.

Table 5-1 2020 Drug & Poison Caused Deaths[1]

		Overdose Deaths (539) – Drug Present						Overdose Deaths (539) – Drug Causing					
Drug Name	**Total deaths out of 3,837 cases in which drug was present**	In which drug was present	Single drug OD in which drug was present	Multiple drug OD in which drug was present	Accident	Suicide	Undetermined	In which drug caused death	OD in which a single drug caused death	OD in which multiple drugs caused death	Accident	Suicide	Undetermined
Acetaminophen[2]	21	14	4	10	7	5	2	7	3	4	1	5	1
Alprazolam	53	42	0	42	37	3	2	36	0	36	31	3	2
Amitriptyline	8	7	1	6	4	2	1	6	0	6	3	2	1
Atenolol	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphetamine	342	217	62	155	205	4	7	4	0	4	3	0	1
Buprenorphine	35	18	1	17	14	2	2	11	0	11	7	2	2
Bupropion	10	8	0	8	4	3	1	6	0	6	2	3	1
Buspirone	0	0	0	0	0	0	0	0	0	0	0	0	0
Cannabinoids / THC[3]	259	125	36	89	115	6	4	0	0	0	0	0	0
Carbon Monoxide[4]	24	5	4	1	2	3	0	6	6	0	2	3	1
Chlordiazepoxide	9	5	0	5	4	1	0	5	0	5	4	1	0
Citalopram	16	7	1	6	6	1	0	5	0	5	4	1	0
Clonazepam	20	14	1	13	11	1	2	6	0	6	5	0	1
Clonidine	1	1	0	1	1	0	0	1	0	1	1	0	0
Cocaine[5]	116	97	16	81	92	3	2	113	18	95	109	2	2
Codeine	137	115	101	14	108	4	2	0	0	0	0	0	0
Cyanide	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyclobenzaprine	15	12	1	11	6	4	2	10	0	10	5	4	1
Diazepam	34	22	2	20	18	3	1	11	0	11	8	2	1
Diclazepam	0	0	0	0	0	0	0	0	0	0	0	0	0
Dicyclomine	1	1	0	1	0	1	0	1	0	1	0	1	0
Difluoroethane	1	1	1	0	0	0	1	1	1	0	0	0	1
Diphenhydramine	28	20	2	18	12	6	2	18	1	17	11	5	2
Doxepin	4	4	0	4	2	2	0	4	0	4	2	2	0
Doxylamine	5	1	0	1	1	0	0	1	0	1	1	0	0
Duloxetine	5	4	1	3	2	2	0	3	0	3	1	2	0
Ethanol	432	145	22	123	134	8	3	97	2	95	90	4	3

Table 5-1 2020 Drug & Poison Caused Deaths, page 2

		Overdose Deaths (539) – Drug Present						Overdose Deaths (539) – Drug Causing					
Drug Name	**Total deaths out of 3,837 cases in which drug was present**	In which drug was present	Single drug OD in which drug was present	Multiple drug OD in which drug was present	Accident	Suicide	Undetermined	In which drug caused death	OD in which a single drug caused death	OD in which multiple drugs caused death	Accident	Suicide	Undetermined
Etizolam	16	12	0	12	11	1	0	9	0	9	8	1	0
Fentanyl[6]	219	178	31	147	170	5	3	173	31	142	165	5	3
Fluoxetine	9	7	0	7	3	3	1	7	0	7	3	3	1
Gabapentin	39	22	0	22	16	4	2	17	0	17	11	4	2
Guaifenesin	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrochlorothiazide	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrocodone	12	9	3	6	5	3	1	6	1	5	5	1	0
Hydromorphone	53	41	7	34	34	4	3	6	0	6	6	0	1
Hydroxyzine	14	12	0	12	6	4	2	10	0	10	4	4	2
Ibuprofen	2	2	0	2	0	1	1	2	0	2	0	1	1
Isopropanol[7]	39	7	0	7	7	0	0	0	0	0	0	0	0
Ketamine	7	4	0	4	3	1	0	3	0	3	2	1	0
Lamotrigine	10	4	0	4	1	2	1	4	0	4	1	2	1
Lorazepam	39	9	1	8	5	3	1	7	0	7	3	3	1
MDA	6	3	1	2	3	0	0	1	0	1	1	0	0
MDMA	6	5	0	5	5	0	0	4	0	4	4	0	0
Methadone	81	49	7	42	47	1	1	54	5	49	52	1	1
Methamphetamine	357	232	66	166	221	4	6	228	56	172	219	4	4
Methocarbamol	3	3	0	3	3	0	0	2	0	2	2	0	0
Methanol	2	0	0	0	0	0	0	0	0	0	0	0	0
Mirtazapine	9	5	1	4	4	1	0	1	0	1	1	0	0
Mitragynine[8]	7	5	1	4	5	0	0	3	0	3	3	0	0
Monoacetylmorphine[9]	64	61	3	58	58	2	0	0	0	0	0	0	0
Nortriptyline[10]	11	10	1	9	5	4	1	4	1	3	2	2	0
Olanzapine	10	5	0	5	2	3	0	5	0	5	2	3	0
Opiate[11]	226	168	19	149	160	4	3	176	20	156	168	4	3

Table 5-1 2020 Drug & Poison Caused Deaths, page 3

		Overdose Deaths (539) – Drug Present						Overdose Deaths (539) – Drug Causing					
Drug Name	**Total deaths out of 3,837 cases in which drug was present**	In which drug was present	Single drug OD in which drug was present	Multiple drug OD in which drug was present	Accident	Suicide	Undetermined	In which drug caused death	OD in which a single drug caused death	OD in which multiple drugs caused death	Accident	Suicide	Undetermined
Oxycodone	47	22	2	20	14	6	2	23	1	22	16	6	1
Pentobarbital	0	0	0	0	0	0	0	0	0	0	0	0	0
Phencyclidine	2	1	0	1	1	0	0	1	0	1	1	0	0
Phenobarbital	1	0	0	0	0	0	0	1	0	1	1	0	0
Phenibut	0	0	0	0	0	0	0	0	0	0	0	0	0
Promethazine	12	11	0	11	7	4	0	9	0	9	5	4	0
Propranolol	1	1	0	1	0	1	0	1	0	1	0	1	0
Pseudoephedrine	0	0	0	0	0	0	0	0	0	0	0	0	0
Quetiapine	13	10	0	10	5	3	2	9	0	9	4	3	2
Sertraline	25	13	0	13	10	2	1	12	0	12	9	2	1
Topiramate	3	2	0	2	1	1	0	2	0	2	1	1	0
Tramadol	5	4	0	4	2	2	0	4	0	4	2	2	0
Trazodone	17	10	0	10	8	2	0	9	0	9	7	2	0
Venlafaxine	12	8	0	8	3	4	1	5	0	5	2	3	0
Verapamil	0	0	0	0	0	0	0	0	0	0	0	0	0
Zolazepam	0	0	0	0	0	0	0	0	0	0	0	0	0
Zolpidem	2	2	0	2	0	2	0	2	0	2	0	2	0

Table 5-1 2020 Drug & Poison Caused Deaths, page 4

[1]Table 5-1 is constructed on the basis of finding each of the listed drugs by laboratory analysis of the decedent's blood. The first column represents the total number of cases in which the specific drug was detected, regardless of cause and manner of death. The rest of the columns represent only drug overdose deaths and are divided into two parts. The part that lists "Drug Present" represents the number of cases in drug overdose deaths in which the drug was present. The other part that lists "Drug Causing" represents the number of drug overdose deaths in which the specific drug caused or contributed to death in the opinion of the certifying Medical Examiner, i.e., the drug was included on the death certificate. In many cases, the numbers in the first part are more than those in the second part because the drug, although present, was not considered to contribute significantly to death, i.e., the drug was not listed on the death certificate even though it was detected in the decedent. In a few cases, the column that lists "In which drug caused death" is greater than the column that lists "In which drug was present", usually because the drug was detected by a hospital before the patient died of a drug overdose, and the drug was no longer present in the sample obtained at autopsy.

[2]In general, acetaminophen was listed as causing our contributing to death only if liver necrosis was identified anatomically or clinically.

[3]Cannabinoids are not routinely tested for in death investigations except under certain circumstances, for example law enforcement-related, traffic-related, or at the request of the submitting agency or family. Cannabinoids are listed if they were found at any level in blood, not necessarily in quantified levels. Cannabinoids in levels typically found are not considered lethal agents and, therefore, there are no instances of single drug overdose deaths involving cannabinoids or THC. Although cannabinoids/THC were not considered contributory to death, they were detected in overdose deaths as listed.

[4]Carbon monoxide fatalities are listed in the first column if the level of carboxyhemoglobin was 5% or greater.

[5]Includes benzoylecgonine.

[6]Includes fentanyl, fentanyl precursor 4-ANPP, fentanyl analogues: acetylfentanyl, cyclopropylfentanyl, furanylfentanyl, methoxyacetylfentanyl, and the drug U-47700.

[7]Isopropanol (isopropyl alcohol) is usually encountered in cases of diabetic ketoacidosis. in which this alcohol is a conversion product of the ketone, acetone, arising as a metabolic disturbance of diabetes.

[8]The toxicity of mitragynine (kratom) is still not well established, and it was listed in this table by its presence in combination drug overdoses.

[9]Monoacetylmorphine (MAM) is a principal toxicological marker for heroin. It is the first breakdown product of heroin, which is diacetylmorphine. The presence of MAM, therefore, proves the source of opiate to be heroin. However, the absence of MAM does not imply that the source of the opiate was not heroin.

[10]In 4 of the 11 total cases, nortriptyline was present without the presence of amitriptyline, indicating that the source of the drug was, in fact, nortriptyline. In the other 7 cases, amitriptyline was also present, indicating that the nortriptyline was present due to the breakdown of amitriptyline.

[11]As used in this section, "opiate" refers exclusively to the naturally occurring drug (morphine) or its derivative (heroin). This category does not include the other "opioids" such as oxycodone, hydrocodone, hydromorphone, oxymorphone, tramadol and methadone. In 2020 there were 176 deaths caused by opiates. Toxicological analysis detects only morphine and cannot differentiate heroin and pharmaceutical morphine as the likely source of the opiate. Based on toxicology analysis (presence of acetylmorphine), scene investigation, and circumstances it was determined that out of these 176 deaths, 166 were definitely or probably due to heroin and 5 were due to pharmaceutical morphine. In the remaining 5 cases it was not possible to determine whether the death was due to heroin or pharmaceutical morphine.

Table 5-2 Total Overdose Deaths / Accident, Suicide, Undetermined / 2011 – 2020

Overdose Deaths	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Accident	205	230	279	290	295	305	340	367	389	481
Suicide	48	51	41	41	41	40	41	58	48	38
Undetermined	15	17	9	13	9	15	18	10	11	19
Totals	**268**	**298**	**329**	**344**	**345**	**360**	**399**	**435**	**448**	**539**[27]

Table 5-3 Blood Alcohol Testing / Manner / KCME / 2020

Test Results	ACCIDENT	TRAFFIC	HOMICIDE	NATURAL	SUICIDE	UNDETERMINED	TOTAL
Tested	631 (65%)	140 (82%)	117 (94%)	619 (28%)	189 (71%)	66 (87%)	1762 (46%)
Positive	164 (17%)	41 (24%)	*31 (25%)*	*136 (6%)*	*43 (16%)*	*17 (22%)*	432 (11%)
Negative	467 (48%)	99 (58%)	*86 (69%)*	*483 (22%)*	*146 (54%)*	*49 (64%)*	1330 (35%)
Not Tested	333 (35%)	30 (18%)	8 (6%)	1615 (72%)	79 (29%)	10 (13%)	2075 (54%)
Totals	964	170	125	2234	268	76	3837

[27] Includes 1 homicidal death which was drug causing.

Manner of death: Natural

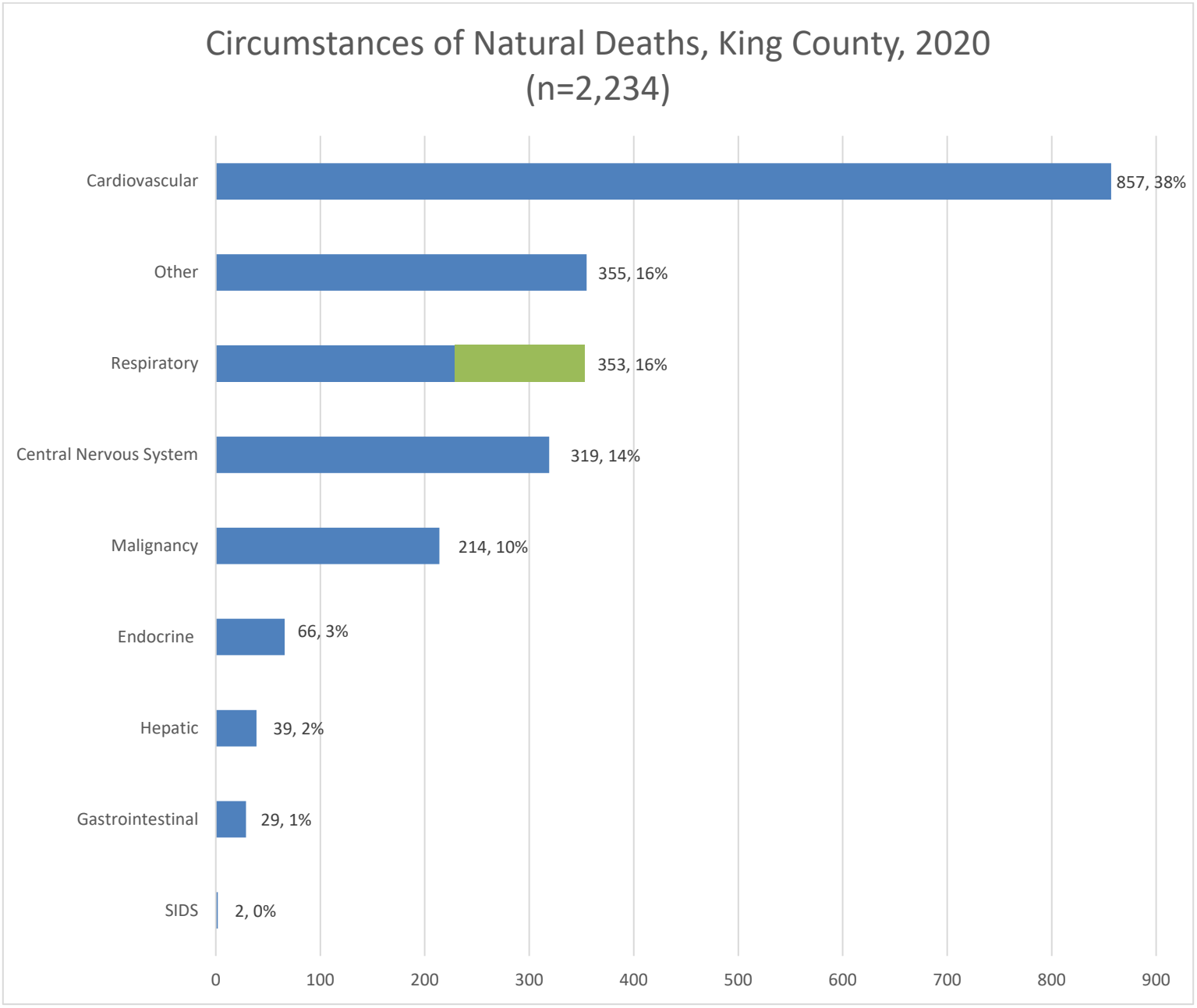
The Medical Examiner assumes jurisdiction over deaths that are determined to be natural due to the sudden and unexpected nature of the death in an apparently healthy individual, when there is no physician who has knowledge or awareness of the decedent's condition, when there is no next of kin to make disposition, or when there are suspicious circumstances surrounding the death. In these situations, the Medical Examiner becomes responsible for certification of death. It should be stressed that the natural deaths the Medical Examiner investigates may not be representative of all natural deaths in the general population, due to the possibility that jurisdictional considerations introduce significant bias.

In 2020, the King County Medical Examiner's Office assumed jurisdiction over 2,234 deaths attributed to natural causes, representing 58% (2,234/3,837) of the cases investigated. The King County Medical Examiner certified 41% (918/2,234) of these deaths; attending physicians who had knowledge of the decedent's medical condition certified 59% (1,316/2,234). It should be noted that when a death is initially reported, there may be no evidence of an attending physician. A thorough scene investigation often reveals that the deceased did, in fact, have a physician with knowledge of the decedent's medical condition. In that case, this physician would then be contacted to certify the death.

The King County Medical Examiner performed autopsies in 59% (546/918) of the deaths certified as natural, which included autopsies performed in 100% (2/2) of deaths classified as Sudden Infant Death Syndrome (SIDS). In this context, it is important to recognize that there are changes occurring in the classification of sudden infant deaths. The term "Sudden Unexplained Infant Death" (SUID) is used by some as an alternative to SIDS. Whatever the designation, it is important to recognize that an autopsy is performed on all sudden infant deaths.

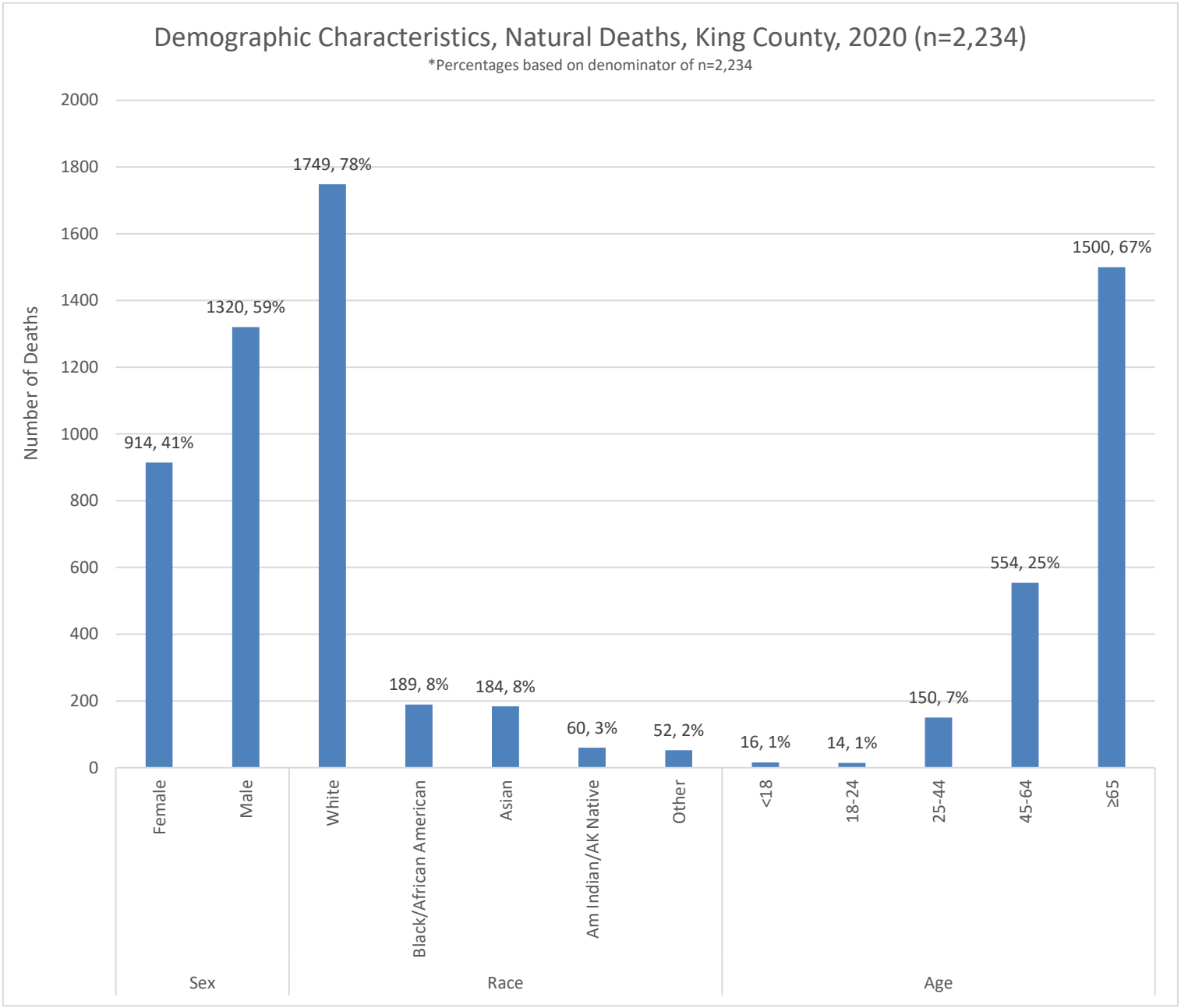
Cardiovascular disease accounted for the greatest proportion of natural deaths. Most jurisdictional deaths in which an autopsy was not performed were certified as due to "probable atherosclerotic cardiovascular disease."

Graph 6-1 Deaths due to Natural Causes[28] / KCME / 2020



[28]Including 124 deaths caused by COVID-19 (shown in green).

Graph 6-2 Demographics/ Natural / KCME / 2020



Manner of death: Undetermined

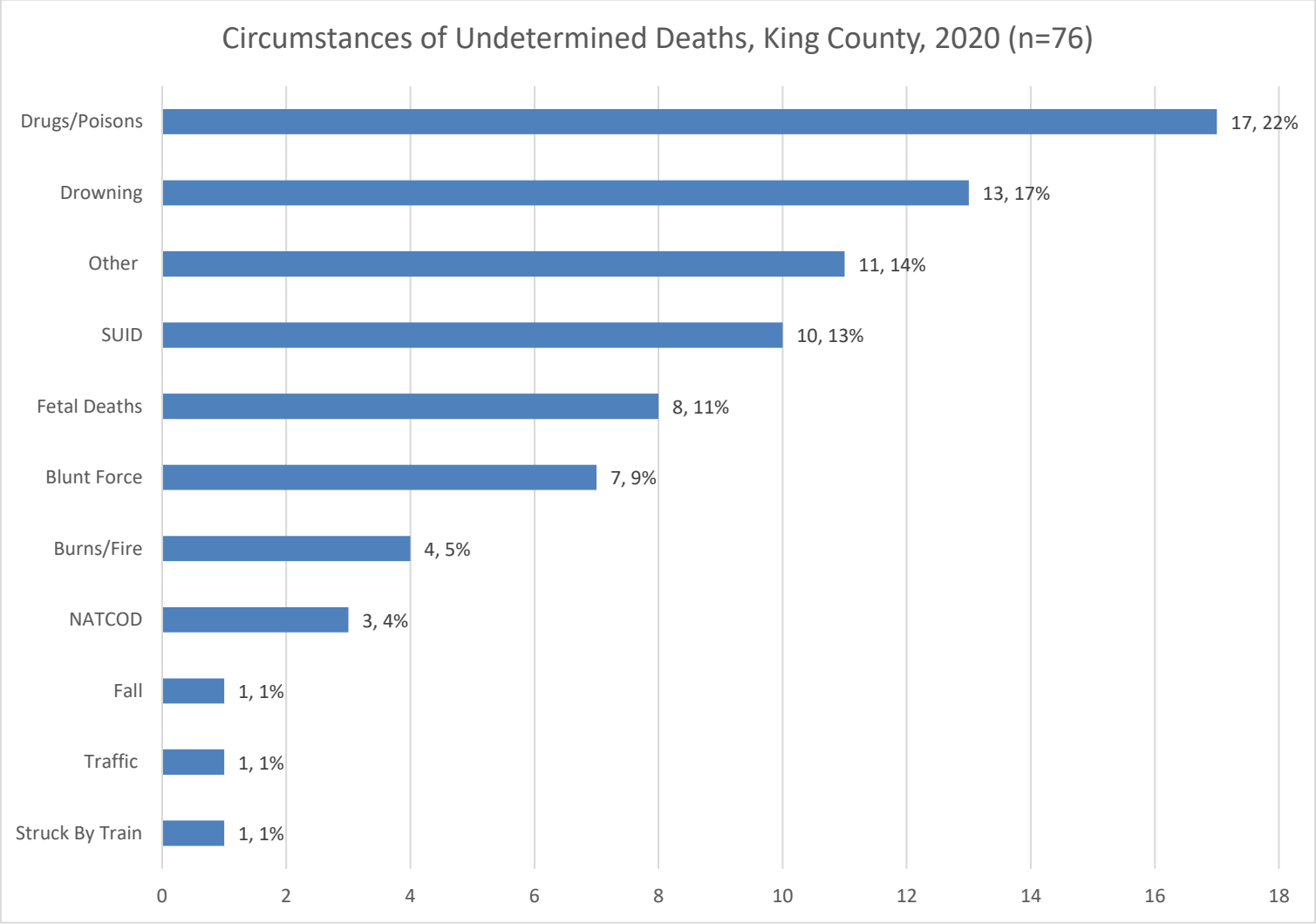
The King County Medical Examiner's Office certifies a manner of death as undetermined when available information regarding the circumstances of death is insufficient to classify the death into one of the specific manners of natural or unnatural (Accident, Homicide or Suicide) death. In some cases, serious doubt exists as to whether an injury occurred with intent or as a result of an accident. Information concerning the circumstances may be lacking due to the absence of background information or witnesses, or because of a lengthy delay between death and discovery of the body. Moreover, it may be difficult to assess street drug or medication overdose deaths as showing enough features to reasonably determine the manner of death. If an extensive investigation and autopsy cannot clarify the circumstances, the death is classified undetermined.

The King County Medical Examiner's Office certified 76 deaths with manner undetermined, accounting for 2.0% (76/3,837) of the deaths investigated in 2020. Drugs and poisons caused 22% (17/76) of the deaths classified as undetermined. For a more detailed review of overdose deaths in 2020, see the discussion in the section on Drugs and Poisons on page 44.

The 76 deaths that were classified as undetermined for 2020 included 8 fetal deaths, which, in accordance with the Washington State Department of Health - Center for Health Statistics Fetal Death Certification Guidelines, are not assigned a manner of death. Fetal death certificates must be issued for every fetus of 20 weeks or more gestation. Of the 8 fetal deaths in 2020, 2 were related to maternal drug abuse.

There were no Sudden Unexplained Neonatal Death (SUND) cases in 2020 and 10 Sudden Unexplained Infant Deaths. In medical contexts, neonatal refers to an infant that is in the first 28 days after birth while an infant would be any child in the first year of life.

Graph 7-1 Undetermined Manner of Death[29] / KCME / 2020



[29]NATCOD is an abbreviation for "no anatomic or toxicological cause of death," and refers to deaths in which full autopsies and toxicological analyses (if relevant) fail to identify an adequate cause of death.

Deaths due to firearms

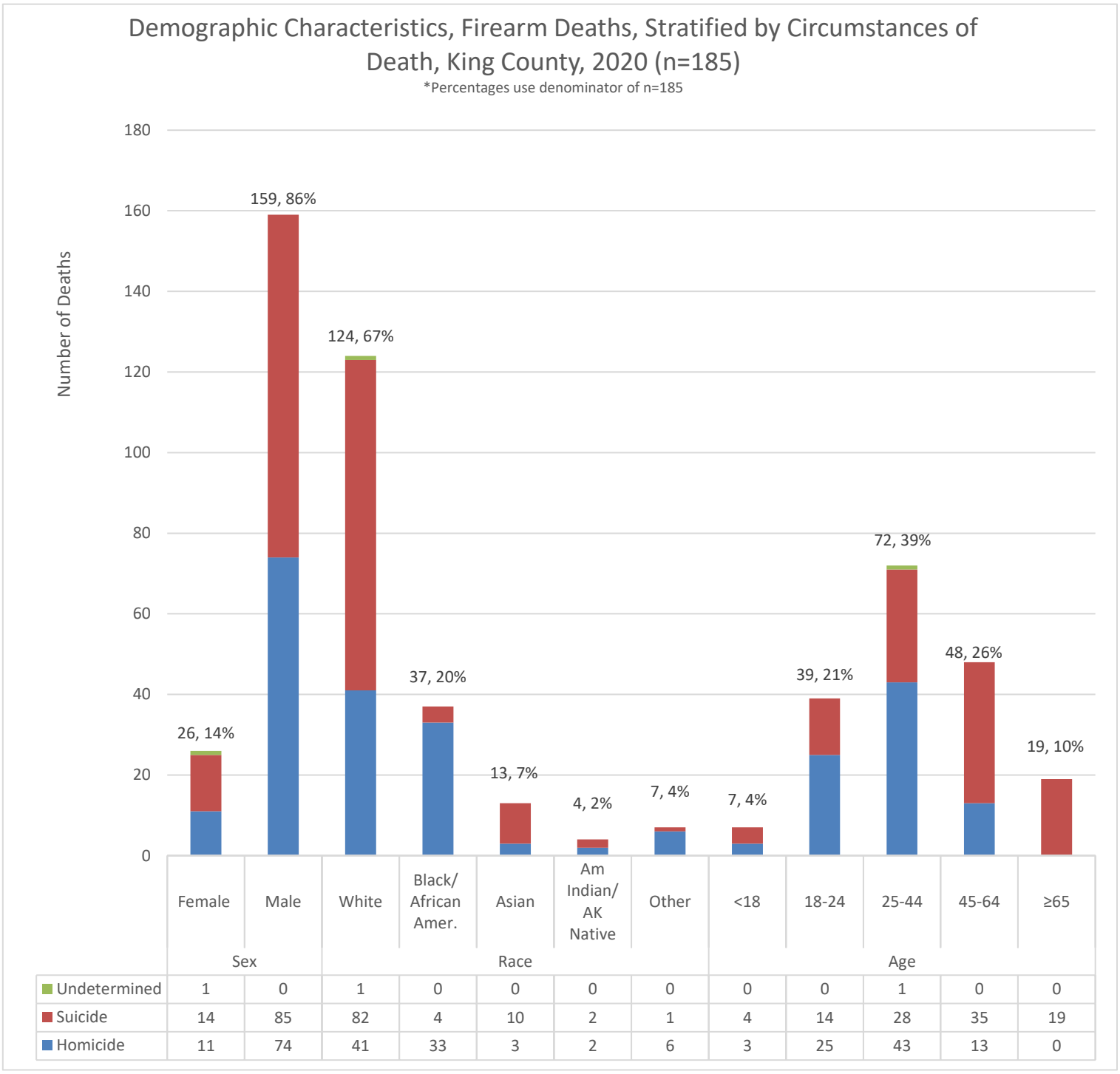
The Medical Examiner is responsible for investigating all deaths due to firearms that occur in King County. Medical Examiner data relate primarily to the victim because information regarding the weapon and the shooter is often unknown.

In 2020, the Medical Examiner investigated 185 firearm deaths. As stated previously (see discussion on page 31 and 34 respectively), 85 deaths (46%) were homicides and 99 deaths (54%) were suicides. One firearm death was classified as undetermined.

Of the 85 firearm homicide victims, 51% (43/85) were between the ages 25 and 44 years and a substantial majority 87% (74/85) were male. A disproportionate number were African American, 39% (33/85), compared to the percentage of African Americans in the general population (7%). Of the 99 firearm suicide victims in 2020, 35% (35/99) were between 45 and 64 years of age, 83% (82/99) were White and 86% (85/99) were male.

The one undetermined firearm death was between 25 and 44 years of age.

Graph 8-1 Firearm Deaths / Manner / Age Group / KCME / 2020



	Female	Male	White	Black/ African Amer.	Asian	Am Indian/ AK Native	Other	<18	18-24	25-44	45-64	≥65
	Sex		Race					Age				
Undetermined	1	0	1	0	0	0	0	0	0	1	0	0
Suicide	14	85	82	4	10	2	1	4	14	28	35	19
Homicide	11	74	41	33	3	2	6	3	25	43	13	0

Causes of death in infants and young children

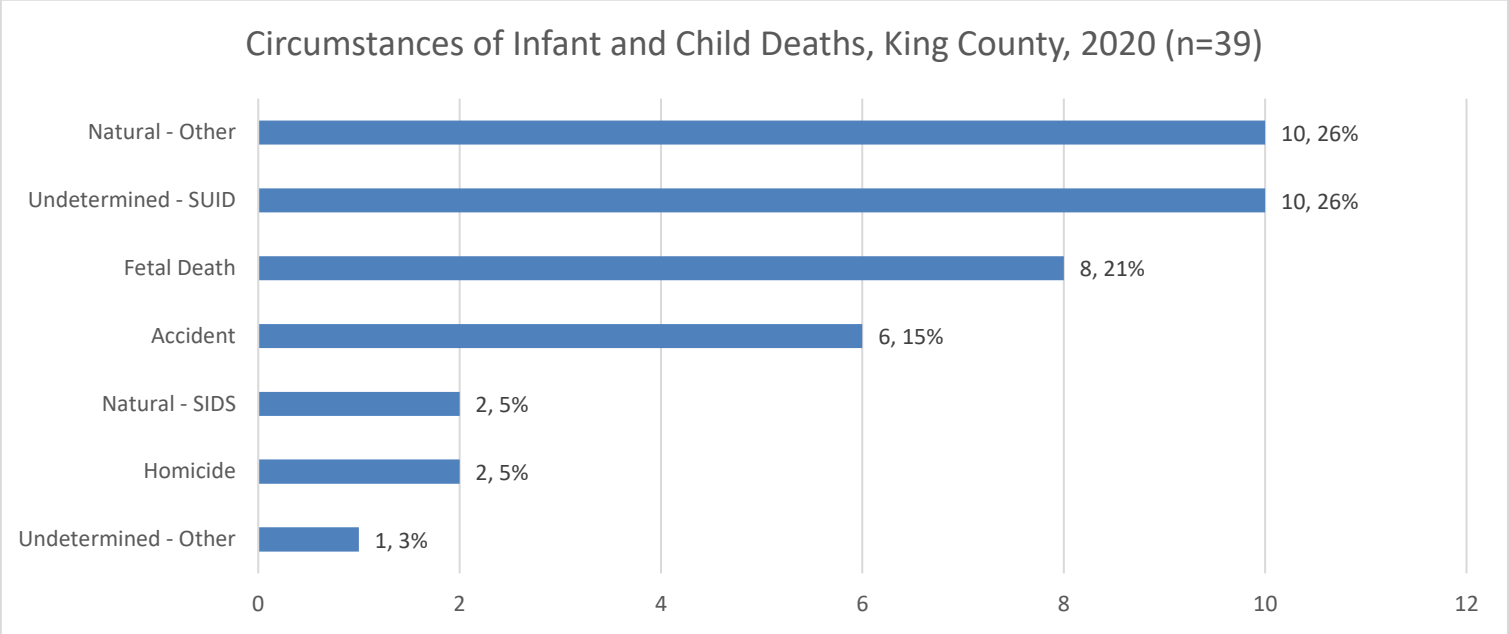
In 2020, the King County Medical Examiner's Office investigated 36 deaths of infants and children three years or younger, which represented 1.5% (39/3,837) of the total deaths investigated. Of these deaths, 31% (12/39) were from natural causes, 8% (3/39) were accidental (non-traffic), 8% (3/39) were accident (traffic), 5% (2/39) were homicide, and 49% (19/39) were classified as manner undetermined. In addition to investigating childhood deaths, the King County Medical Examiner participates in Child Death Review authorized under state law (Revised Code of Washington 70.05.170)[30], a process which discusses these deaths in detail with a multi-disciplinary team and formulates prevention strategies.

Of the 12 natural deaths of infants and young children investigated by the Medical Examiner, 92% (11/12) were of infants less than one year of age. Of these 11 infants who died of natural causes, two were due to Sudden Infant Death Syndrome (SIDS) and nine from other natural causes. In addition, ten infant deaths were classified as "Sudden Unexplained Infant Death" (SUID), manner undetermined due to the inability to exclude if external factors contributed to death.

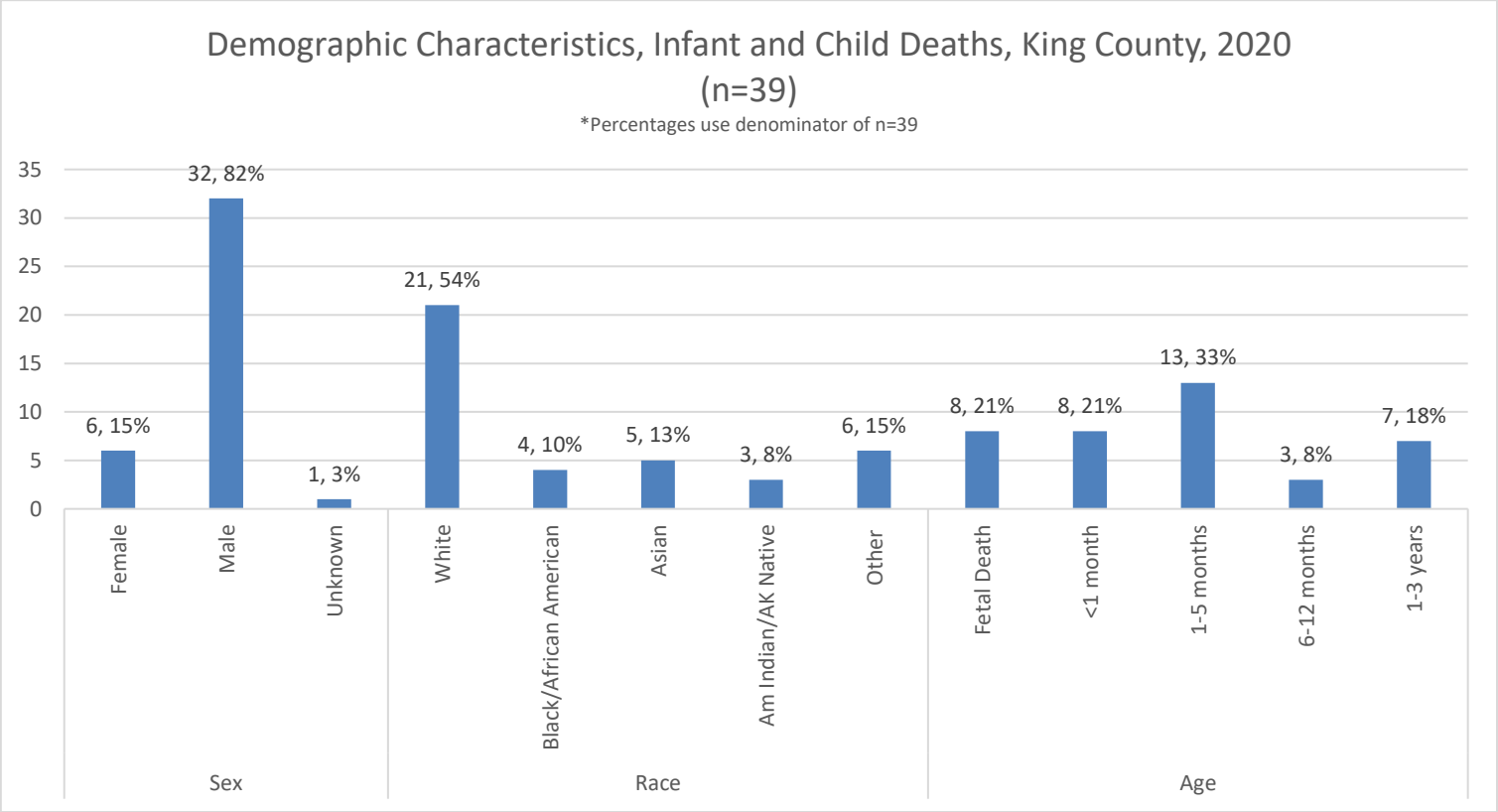
Of the 19 undetermined infant and child deaths, eight were fetal deaths which were listed as manner undetermined in accordance with Washington State law.

[30]Revised Code of Washington 70.05.170: Child Mortality Review., https://app.leg.wa.gov/rcw/default.aspx?cite=70.05.170

Graph 9-1 Causes of Death / Infants & Children / KCME / 2020



Graph 9-2 Demographics / Infant & Children / KCME / 2020



Organ donation

Although the King County Medical Examiner's Office does not approach families for donation of organs and tissue from decedents, we recognize the tremendous need for this life-saving activity and cooperate fully with organ and tissue procurement agencies. It is the philosophy of the King County Medical Examiner's Office that all requests for organ and/or tissue donation be given high priority for approval. In practice, the procurement agency contacts the KCMEO with information regarding a potential donor and the specific organs or tissue requested. The Medical Examiner then evaluates the request to determine if the donation would significantly affect the postmortem examination. In the great majority of cases, examinations can be conducted so that donations do not interfere with certification of death or collection of evidence. In this way, the King County Medical Examiner's Office works to maximize the donation of organs and tissue that go directly to save lives.

In 2020, the King County Medical Examiner's Office gave release for organ donation on 56 deaths that came under the office's jurisdiction. Altogether, there were 162 organs donated for transplant from the 56 cases referred to the King County Medical Examiner. The number of specific organs transplanted in 2020 is shown in Table 10-1. In addition to the living organs listed in Table 10-1 that were donated in 2020, the KCMEO approved the donation of skin, bone, cartilage, heart valves, corneas and other tissues through tissue procurement agencies LifeCenter Northwest, LifeNet Health and Sightlife. Altogether, these donations were able to provide thousands of tissue grafts for patients in need.

Table 10-1 Organs Transplanted / KCME / 2020

ORGAN	# Transplanted
Heart	13
Kidney(s)	101
Liver	32
Lung(s)	14
Pancreas	2
Total	**162**

Disposition review

All deaths covered under RCW 68.50.010 are required by law to be reported to the Medical Examiner, however in the past these deaths have not always been reported in a timely manner. For some of these deaths, a complete investigation is not possible because the body was cremated prior to the death being reported to the Medical Examiner.

Beginning January 1, 2008, the King County Council authorized the Medical Examiner's Office to review the death certificates of all decedents to be cremated in order to rule out the need for additional investigation and ensure the proper determination of cause and manner of death.

Beginning January 1, 2011, the King County Council authorized the Medical Examiner's Office to review the death certificates of all decedents to be buried in order to rule out the need for additional investigation and ensure the proper determination of cause and manner of death.

In 2019, the Medical Examiner's Office handled 15,829 disposition review requests.

Medical Examiner activity

The staff of the Medical Examiner's Office are involved in a wide variety of activities commensurate with the mission of the office including responding to and investigating the scene of death, performing postmortem examinations, certifying the cause and manner of death, and providing information and assistance to families. Investigators, who are familiar with the emotional trauma of an unexpected death, communicate directly with families as do the Medical Examiner pathologists, who review their findings with the families in order to clarify the many questions that accompany a sudden loss of life. The office also provides referrals to grief support services.

In all cases investigated by the Medical Examiner, it is essential that the decedent's identity is established and the next-of-kin is located and notified regarding the death. In addition, property belonging to the decedent must be controlled and released according to legal requirements. In most cases these issues are resolved expeditiously. In certain cases, identification requires additional effort in locating dental, medical or police records. Some individuals may have died leaving no next-of-kin or next-of-kin far removed. Ensuring that all leads have been exhausted in pursuit of next-of-kin can be a very time consuming but ultimately a rewarding effort.

The postmortem examination on each decedent includes the preservation of various body fluids and tissues for microscopic and toxicologic analysis. Photographs are taken of the external and internal portions of the examination, which are available for review at a later date if needed. Photographic documentation is also an essential item in those cases where the pathologist must provide court testimony. Forensic Anthropology is another important activity necessary to resolve skeletal cases and difficult identification issues.

Medical Examiner pathologists, anthropologist and investigators provide testimony in court and at depositions. Staff participates in meetings with police, medical professionals, and attorneys. A recent addition to the duties of the Chief Medical Examiner is expert medical consultation and testimony in cases involving nonfatal domestic violence assaults.

Autopsy reports and related data from individual investigations are provided to law enforcement agencies, prosecuting attorneys and many other agencies including Labor and Industries, the Drug Enforcement Administration, and the Consumer Product Safety Commission. Drug deaths are reported to the Drug Abuse Warning Network (DAWN).

The Medical Examiner's Office has a very active educational program in which KCMEO pathologists and staff host and train pathology residents and medical students from the University of Washington (UW) as well as visiting scholars throughout the year in the field of Forensic Pathology. In participation with the UW, KCMEO conducts a weekly educational conference for Forensic Science that is accredited by the Accreditation Council for Continuing Medical Education (ACCME). The educational program also includes one of approximately 42 Forensic Pathology Fellowship Training Programs in the country and is nationally accredited by the Accreditation Council for Graduate Medical Education (ACGME). KCMEO also provides training opportunities for international physicians.

In 2003, the Medical Examiner's Office created a student internship program that provides educational opportunities for students interested in forensic autopsy and death investigation. Through this program, numerous interns have obtained full-time careers in death investigation, both at the KCMEO and in other area medical examiner's offices.

Responding to the ongoing opioid/drug overdose epidemic and the emergent COVID-19 pandemic, KCMEO created innovative surveillance projects. Starting in 2018 with funding from CDC and Paul Coverdell Forensic Science Improvement Program grants, KCMEO assembled a team and purchased equipment for in-house testing of drug evidence and urine and blood samples from decedents of overdose. This project continued throughout 2020, growing into a large database capturing near real-time information useful for tracking drug overdose mortality and guiding public health and safety responses. The project also benefited families by greatly reducing delays in certifying most deaths due to drug overdose. In 2020, drug overdose deaths accounted for 14% of all KCMEO cases.

After the SARS-CoV-2 virus appeared in early 2020, KCMEO responded in a similar fashion, coordinating with Public Health – Seattle and King County and assembling a special team for reviewing death certificates to identify deaths due to COVID-19 and collecting nasopharyngeal swabs from decedents coming into KCMEO as well as from decedents at funeral homes who died at care facilities and other targeted locations. A special Microsoft Dynamics database was created to collect data from the ongoing COVID-19 surveillance activities, which allows detailed analysis of mortality in King County due to the COVID-19 pandemic. The large increase in caseload documented in other chapters of the 2020 Annual Report is due to COVID-19 surveillance efforts as well as the disease itself. During 2020, KCMEO surveillance efforts screened 1566 for COVID-19, of which 1073 were from medicolegal cases brought into the KCMEO facility and 493 were collected from funeral homes and other sources.

Medical Examiner investigations require frequent contact between the Medical Examiner's Office and the news media. Staff members are skilled in responding to the media inquiries that occur daily. The Medical Examiner pathologists and other staff participate in a variety of medical conferences, and provide information on a regular basis to law enforcement and to medical personnel on various aspects regarding the role and function of the Medical Examiner's Office.

The data collected and presented in this and other Medical Examiner annual reports also provide baseline information for further analysis. Medical Examiner staff analyzes data to study relevant death investigation topics that have applications in such fields as law enforcement, medicine, law, social sciences, and injury prevention. Examples include infant mortality, teenage suicide, child abuse, law enforcement restraint, investigation of vehicular traffic collisions, and investigation of therapeutic complication deaths. In addition, the office participates in teaching medical students, pathology residents, emergency medical service, and law enforcement personnel.

Weekly Variation

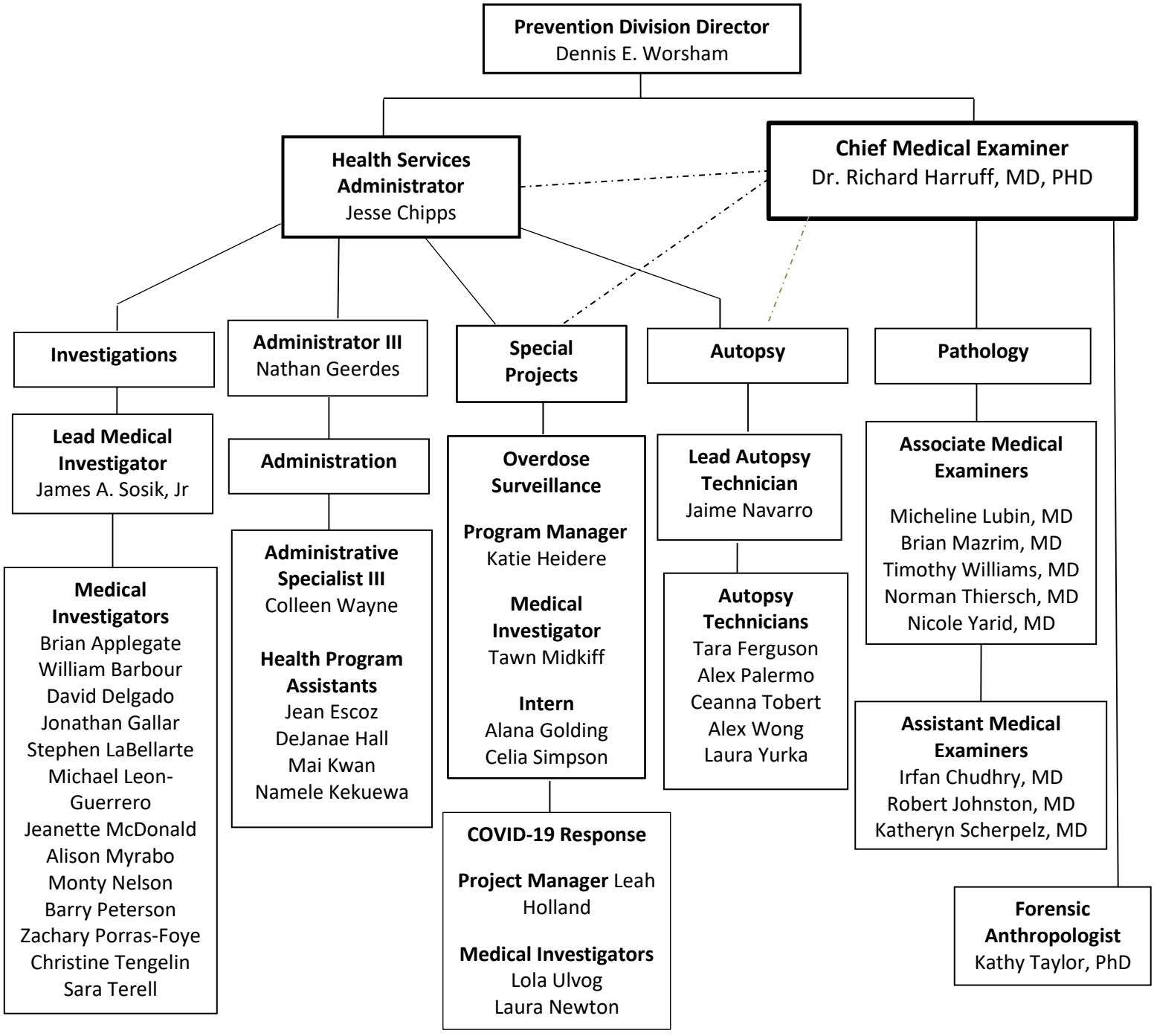
Table 11-1 Weekly Variation of Deaths Investigated by the King County Medical Examiner's Office

	TOTAL
Number of weeks studied	52
Mean number of ME jurisdiction cases per week	74
Maximum ME jurisdiction cases in any one week	104
Minimum ME jurisdiction cases in any one week	45

Table 11-2 Weekly Variation of Autopsies Investigated by the King County Medical Examiner's Office

	TOTAL
Number of weeks studied	52
Mean number of autopsies performed per week	30
Maximum # autopsies performed in any one week	41
Minimum # autopsies performed in any one week	13

Organization of the King County Medical Examiner's Office 2020



Glossary of Terms

Blood alcohol level:

The concentration of ethanol (alcohol) found in blood following ingestion. Measured in grams per 100 ml of blood or grams %. In the State of Washington, 0.08 grams % is considered the legally intoxicated level while driving.

Cause of Death:

Any injury or disease that produces a physiological derangement in the body that results in the death of an individual.[31]

Drug:

Therapeutic drug: A substance, other than food, used in the prevention, diagnosis, alleviation, treatment, or cure of disease.

Recreational drug: A drug used non-medically for personal stimulation/depression/euphoria.

Drug-caused death:

Death directly caused by a drug or drugs in combination with each other or with alcohol.

Fetal Death:

Category of deaths that occur within the uterus. The Medical Examiner assumes jurisdiction over fetal deaths that meet the criteria specified in RCW 68.50. See pages 2 - 3 of this report for details.

Jurisdiction:

The jurisdiction of the Medical Examiner extends to all reportable deaths occurring within the boundaries of King County, whether or not the incident leading to the death (such as an accident) occurred within the county. Reportable deaths are defined by RCW 68.50, as explained in the "Description and Purpose" section of this report. Not all natural deaths reported fall within the jurisdiction of the Medical Examiner**.**

Manner of Death:

A classification of the way in which the events preceding death were causal factors in the death. The manner of death as determined by the forensic pathologist is an opinion based on the known facts concerning the circumstances leading up to and surrounding the death, in conjunction with autopsy findings and laboratory tests. [32]

[31]DiMaio, Vincent J. & DiMaio, Dominick. Forensic Pathology, Second Edition. CRC Press, 2001.

[32]Ibid, p. 3

Manner: Accident

Death other than natural, where there is no evidence of intent, i.e., unintentional. In this report, traffic accidents are classified separately.

Manner: Homicide

Death resulting from intentional harm (explicit or implicit) of one person by another, including actions of grossly reckless behavior.

Manner: Natural

Death caused solely by disease. If natural death is hastened by injury (such as a fall or drowning in a bathtub), the manner of death is classified other than natural. The Natural category includes complication of therapy deaths.

Manner: Suicide

Death as a result of a purposeful action with intent (explicit or implicit) to end one's own life.

Manner: Traffic

Unintentional deaths of drivers, passengers, and pedestrians involving motor vehicles on public roadways. Accidents involving motor vehicles on private property (such as driveways) are not included in this category and are classified non-traffic, vehicular accidents.

Manner: Undetermined

Manner assigned when there is insufficient evidence or information**,** especially about intent, to assign a specific manner.

Opiate:

Any preparation or derivative of opium, including heroin, morphine or codeine. In this report "opiate deaths" most likely refer to heroin caused deaths.

Poison:

Any substance, either taken internally or applied externally, that is injurious to health or dangerous to life, and with no medicinal benefit.

Race:

The racial categories used in this report are: White, African American, American Indian/Alaska Native, Asian/Pacific Islander, and Other.