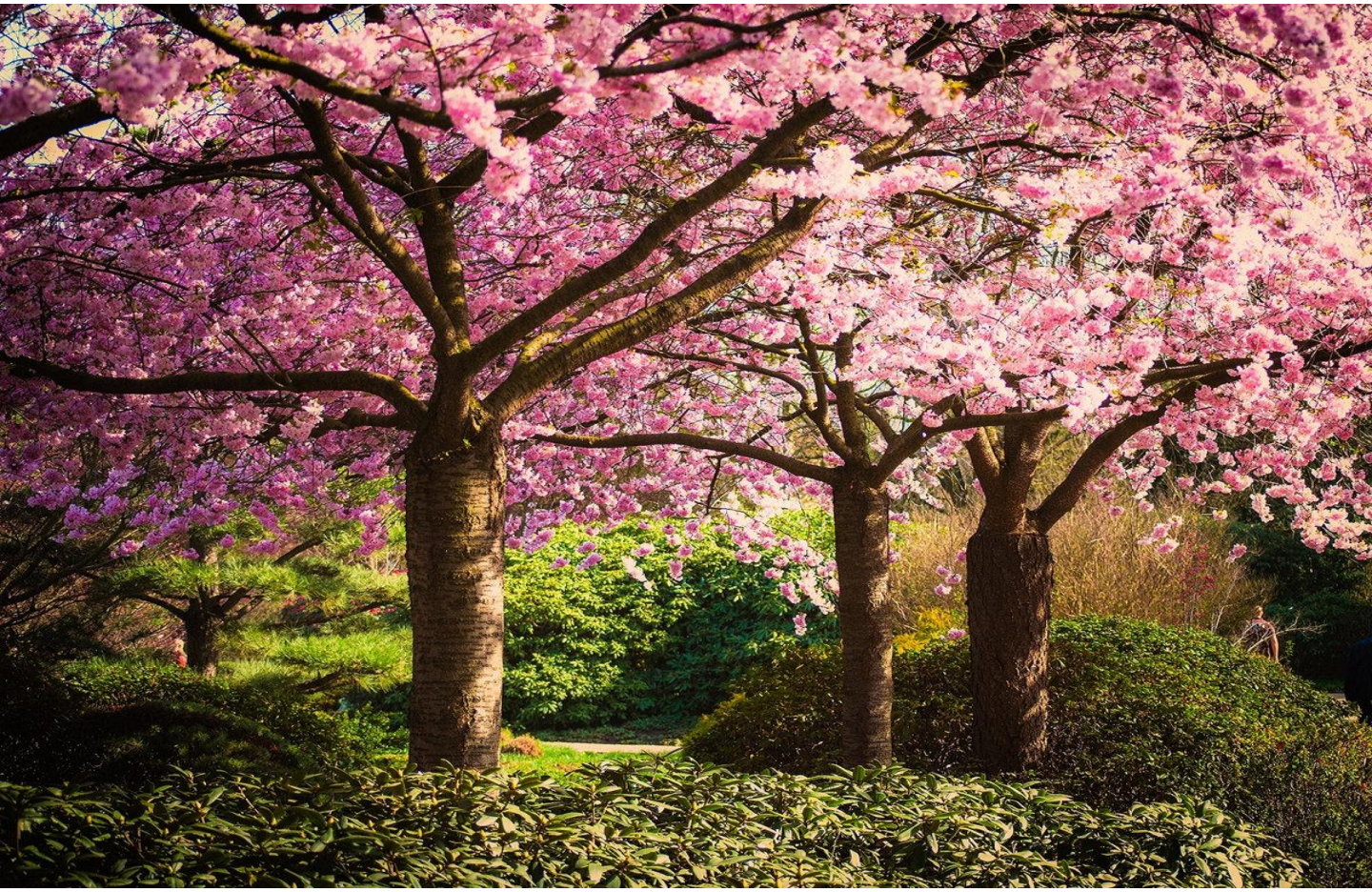
King County Medical Examiner's Office Annual Report 2016



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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. 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 so that the family can gain the full benefit of the findings. 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 studied 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 notifies the family and contacts 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 2016 Annual Report reflects the activities pertaining to the investigation of jurisdictional 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 the report tends to depict the more violent types of death, it is worth noting that nearly 40% of Medical Examiner cases were 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 96 for further details.

A few selected findings are highlighted below:

- In 2016, there were an estimated 14,373 deaths in King County. Of those deaths, 8,630 (60%) 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 2,494 deaths; the number of applicable cases used in this report is 2,384 deaths after non-human remains and contract anthropology cases for other jurisdictions are removed. The King County Medical Examiner's Office assumes jurisdiction if a death falls under the Revised Code of Washington that defines the Medical Examiner's charge.

- The Medical Examiner's Office performed autopsies in 59% of those jurisdictional deaths (1,398/2,384). In 2016, those jurisdictional deaths included: 85 homicides, 285 suicides, 166 traffic deaths, 832 accidental deaths, 951 natural deaths and 65 deaths due to undetermined causes.

- Of the 18 natural deaths of children and youth investigated by the Medical Examiner, 61% (11/18) were of infants less than one year of age. Of those 11 infants who died of natural causes, 4 were due to Sudden Infant Death Syndrome (SIDS). In addition, 5 infant deaths 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.

- Several factors appear repeatedly in unnatural deaths. Of all traffic fatalities in which tests were performed, 24% tested positive for the presence of alcohol in the blood. Firearms were the most frequent instrument of death in homicides (72%) and suicides (40%).

- Males comprised 80% (68/85) and women 20% (17/85) of the homicide victims in 2016. The majority of victims, 67% (57/85), were between the age 20 and 49. The number of homicide victims 19 years old and under increased by one when compared to the previous year. In 2016 they accounted for 18% (15/85) of the homicide victims, compared to 2015 when this younger age group represented 18% (14/76) of all homicide victims. 95% (81/85) of the victims were tested for the presence of alcohol. Of those tested 269% (21/81) showed alcohol present at the time of death.

- In 2016, there were 61 firearm homicide victims, 23% (14/61) were 19 years old and younger – a 6 percentage increase from 2015 when 17% (9/54) of firearm homicide victims were 19 years old and younger. In 2016, there was a disproportionate number (22/61 or 36%) of firearm homicide victims that were African American when compared to the percentage of African Americans in King County's population (6.7%), see discussions on pages 8 and 38. Of the 22 African American firearm homicide victims, 86% (19/22) were males 29 years old and younger. In comparison, 43% (26/61) of all the homicide firearm victims were White. Of the 26 White firearm homicide victims, 50% (13/26) were males 29 years old and younger.

- For King County in 2016, drugs caused 360 deaths, approximately 15% (360/2,384) of all deaths investigated. The total number of drug-caused deaths increased compared to 2015 when there were 345 drug deaths. In 2016, deaths due to drugs comprised 31% (360/1,180) of all suicidal, accidental and undetermined deaths combined. Accidental drug overdose deaths in 2016 were the highest ever representing an increase of 20% over the last 10 years with the majority of the increase related to heroin and methamphetamine.

- In 2016 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.

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 2,130 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 2016, the King County population was estimated to be 2,117,125.[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 1-8 (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 2016. The United States Census Bureau estimates the racial distribution of King County to be 70.1% White, 17.2% Asian/Pacific Islander (including Hawaiian and other Pacific Islanders), 6.7% African American, 4.9% Two or More Races, and 1.1% 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 1-9 on page 20, in 9% (217/2,384) 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 38).

Age groups displayed in the tables are divided into youth and adult. The youth groups are infants (newborn to 11 months), toddlers (1-5 years), grade school (6-12 years), junior high (13-15 years), and high school (16-19 years). Adult age groups are in corresponding decades with the last being 90 years of age or older.

[1] United States Census Bureau 2016 estimate.

[2] United States Census Bureau 2014 estimate.

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 cases not tested or showing no blood alcohol may actually 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 children and youth. 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 children and youth, 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 40% (951/2,384) of all deaths that the Medical Examiner's Office investigated in 2016.

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 2016

The following provides a summary of the raw data from the Medical Examiner's cases for the year 2016. Ten-year trends are shown beginning on page 21.

In 2016, there were an estimated 14,373 deaths that occurred in King County (0.68% of a 2016 population estimate of 2,117,125). A total of 61%, (8,740/14,373) 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 2,494 of these reported deaths, of which 110 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 17% (2,384/14,373) of deaths that occurred in King County in 2016.

In approximately 71% (6,246/8,740) 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. Of note is the fact that the Medical Examiner declined jurisdiction in 6,246 of the deaths that were reported. 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 59% (1,398/2,384) 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 2016, there were 351 such deaths, accounting for 15% (351/2,384) of the total deaths. In addition, there were 249 deaths, accounting for 10% (249/2,384) certified by attending private physicians after review by and consultation with the Medical Examiner. Of the remaining 16% (386/2,384) of the cases, 383 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 and 3 cases were jurisdiction was transferred to the county of incident at the request of that county's Medical Examiner.

Of all the traffic fatalities in which tests were performed 24% (30/124) 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 89 vehicle occupants who died, 48% (46/96) were known to be wearing seatbelt restraints.

In the 26 deaths involving motorcyclists, 88% (23/26) were wearing helmets.

Firearms were the most frequent instrument of death in homicides and suicides, accounting for 72% (61/85) of the homicides and 40% (114/285) of the suicides.

Table 1-1 Deaths Occurring in King County / Medical Examiner Cases / 2016

CASES BY MANNER OF DEATH[3]		NUMBER OF KCME DEATHS	PERCENT OF KCME DEATHS
Accident Other	(A)	832	35%
Accident Traffic	(T)	166	7%
Homicide	(H)	85	3%
Natural	(N)	951	40%
Suicide	(S)	285	12%
Undetermined[4]	(U)	65	3%
Total KCME general cases		2,384	
Non-applicable cases where jurisdiction was assumed		110	
Total KCME jurisdiction cases		2,494	
Total KCME general cases[5]		2,384	
Deaths reported to KCME but no jurisdiction was assumed (NJA)		6,246	
All other deaths in King County not reported to KCME		5,743	
ALL KING COUNTY DEATHS[6]		14,373	

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

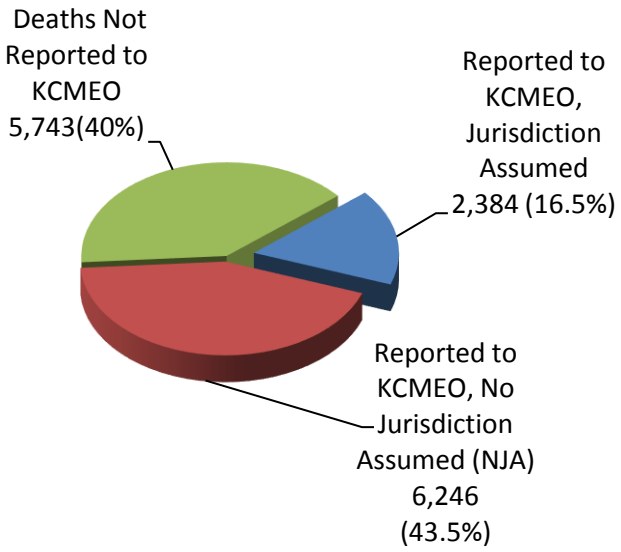
[4]Includes 5 fetal deaths, which according to Washington State death certification procedures, are not assigned a manner of death.

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

[6]Estimate from Washington State Department of Health – August 2017

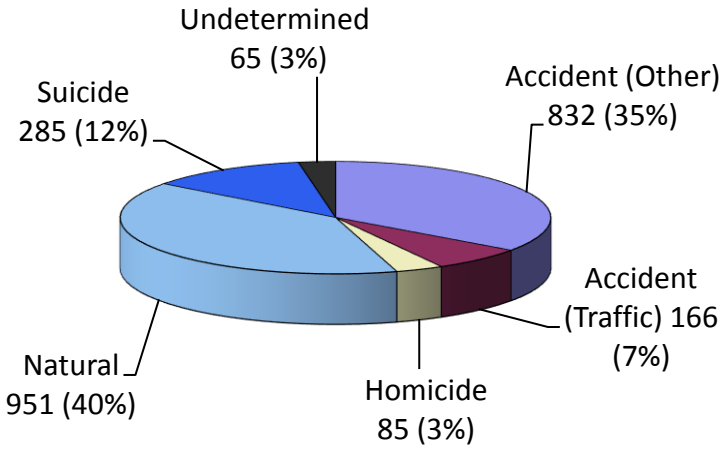
Graph 1-1 All King County Deaths with Medical Examiner Jurisdiction / 2016

Total Deaths in King County, 2016: 14,373



Graph 1-2 Manner of Death for All Medical Examiner Jurisdiction Cases / 2016

Jurisdiction assumed in 2,384 cases.[7]



[7]This number does not include 110 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 / 2016

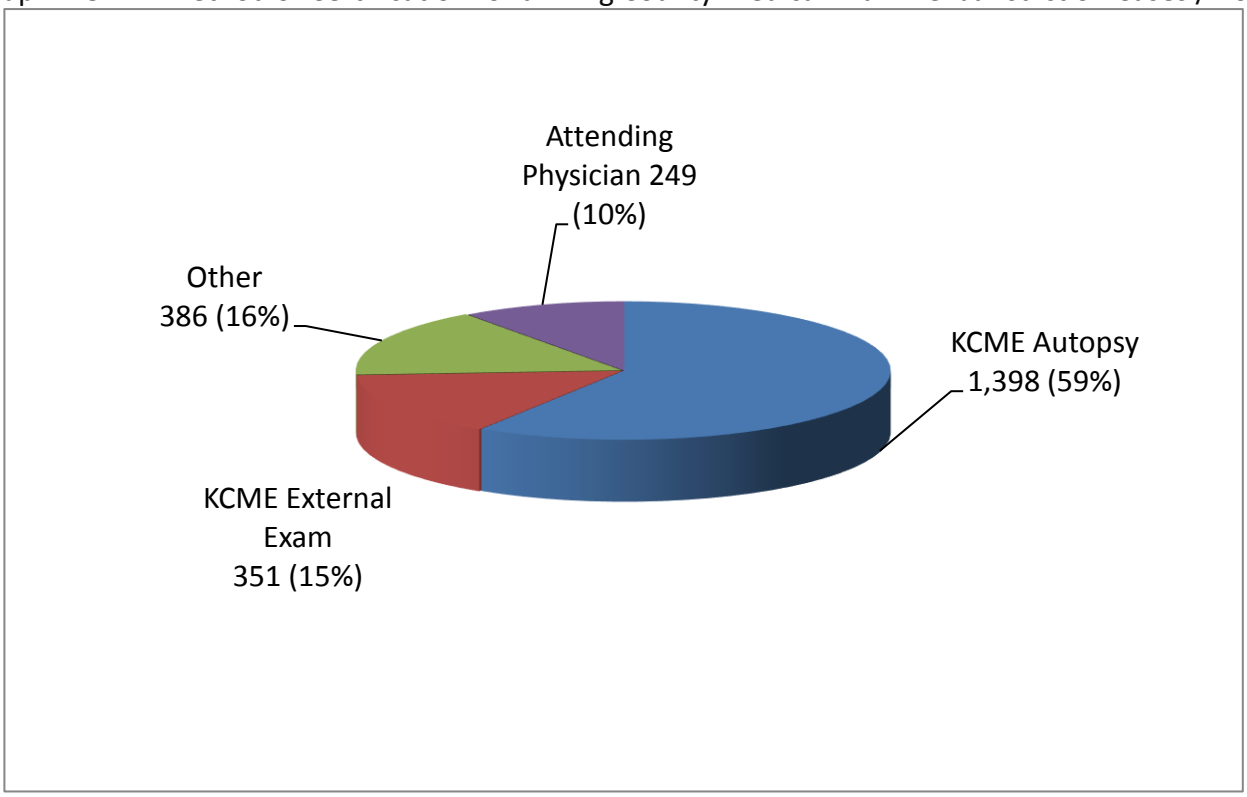


Table 1-2 Method of Certification / Manner of Death / KCME / 2016

	MANNER OF DEATH							
	A	T	H	N	S	U	TOTAL	%
KCME Autopsies	417	94	84	498	242	63	1,398	59%
KCME External Exams	79	56	0	173	3	0	351	15%
KCME Other	336	16	1	31	0	2	386	16%
Attending Physician	0	0	0	249	0	0	249	10%
Totals	**832**	**166**	**85**	**951**	**285**	**65**	**2,384**	**100%**

Manner of Death in 2016

King County Medical Examiner's Office General Cases

Graph 1-4 Gender / Manner of Death / KCME / 2016

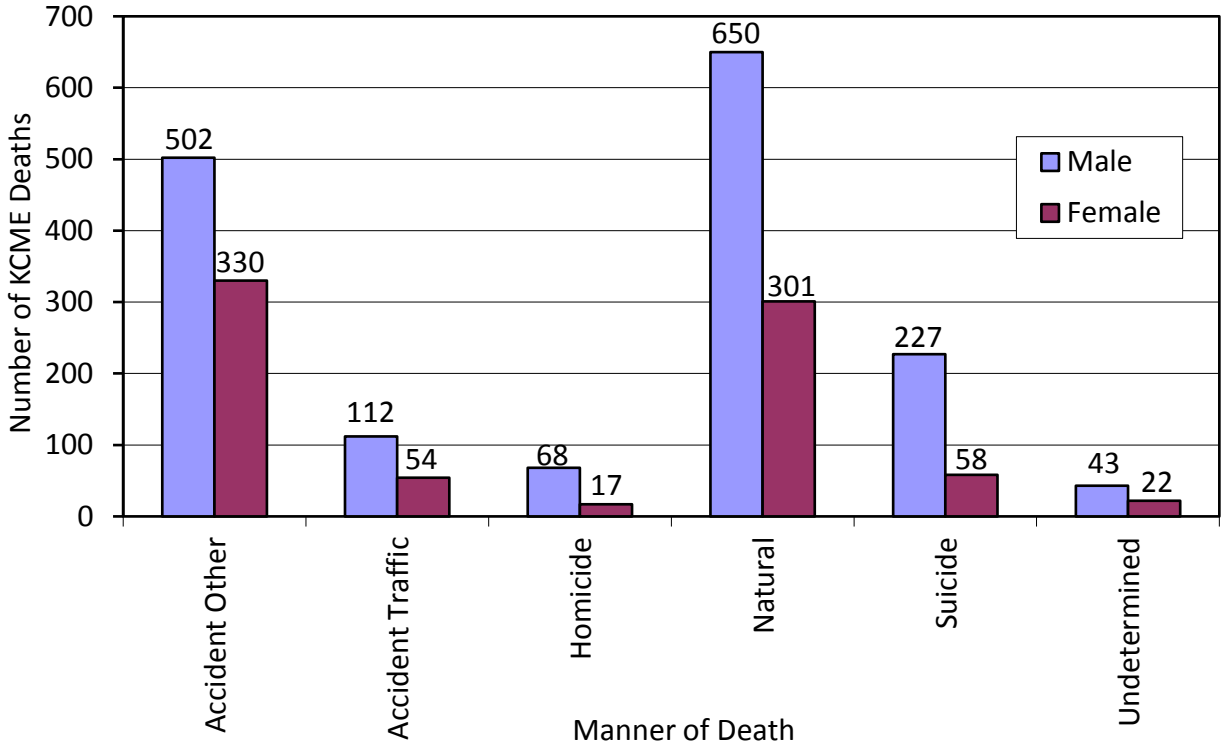


Table 1-3 Gender / Manner of Death / KCME / 2016

GENDER	MANNER OF DEATH						TOTAL	%
	A	T	H	N	S	U		
Male	502	112	68	650	227	43	1,602	67%
Female	330	54	17	301	58	22	782	33%
Totals	**832**	**166**	**85**	**951**	**285**	**65**	**2,384**	100%

Table 1-4 Age / Gender / Manner of Death / KCME / 2016

AGE / GENDER	MANNER OF DEATH A	T	H	N	S	U	Sub-Total	TOTAL	%
Under 1 year	4	0	5	11	0	12		32	1.3%
Male	*0*	*0*	*3*	*7*	*0*	*7*	*17*		
Female	*4*	*0*	*2*	*4*	*0*	*5*	*15*		
1-5 years	2	1	1	2	0	3		9	0.4%
Male	*2*	*1*	*1*	*1*	*0*	*3*	*8*		
Female	*0*	*0*	*0*	*1*	*0*	*0*	*1*		
6-12 years	4	1	0	3	1	0		9	0.4%
Male	*4*	*1*	*0*	*1*	*1*	*0*	*7*		
Female	*0*	*0*	*0*	*2*	*0*	*0*	*2*		
13-15 years	2	1	0	0	5	0		8	0.3%
Male	*2*	*0*	*0*	*0*	*3*	*0*	*5*		
Female	*0*	*1*	*0*	*0*	*2*	*0*	*3*		
16-19 years	10	8	9	2	9	1		39	1.6%
Male	*8*	*6*	*7*	*1*	*6*	*0*	*28*		
Female	*2*	*2*	*2*	*1*	*3*	*1*	*11*		
20-29 years	59	24	29	25	54	6		197	8.3%
Male	*44*	*16*	*25*	*15*	*49*	*6*	*155*		
Female	*15*	*8*	*4*	*10*	*5*	*0*	*42*		
30-39 years	74	22	15	53	46	11		221	9.3%
Male	*50*	*15*	*13*	*34*	*34*	*9*	*155*		
Female	*24*	*7*	*2*	*19*	*12*	*2*	*66*		
40-49 years	93	27	13	116	40	10		299	12.5%
Male	*64*	*19*	*9*	*83*	*33*	*6*	*214*		
Female	*29*	*8*	*4*	*33*	*7*	*4*	*85*		
50-59 years	111	21	8	208	57	11		416	17.5%
Male	*74*	*13*	*6*	*159*	*45*	*6*	*303*		
Female	*37*	*8*	*2*	*49*	*12*	*5*	*113*		
60-69 years	107	34	3	246	42	5		437	18.3%
Male	*81*	*23*	*3*	*187*	*29*	*3*	*326*		
Female	*26*	*11*	*0*	*59*	*13*	*2*	*111*		
70-79 years	95	13	0	147	19	5		279	11.7%
Male	*63*	*10*	*0*	*98*	*17*	*3*	*191*		
Female	*32*	*3*	*0*	*49*	*2*	*2*	*88*		
80-89 years	153	12	1	90	8	1		265	11.1%
Male	*72*	*7*	*1*	*45*	*6*	*0*	*131*		
Female	*81*	*5*	*0*	*45*	*2*	*1*	*134*		
90+years	118	2	1	48	4	0		173	7.3%
Male	*38*	*2*	*0*	*19*	*4*	*0*	*63*		
Female	*80*	*0*	*1*	*29*	*0*	*0*	*110*		
Totals	**832**	**166**	**85**	**951**	**285**	**65**		**2,384**	**100%**

Table 1-5 Race / Gender / Manner of Death / KCME / 2016[8]

	MANNER OF DEATH								
RACE / GENDER	A	T	H	N	S	U	Sub-Total	TOTAL	%
White	682	122	39	780	245	45		1,913	80.3%
Male	*414*	*81*	*29*	*534*	*196*	*27*	*1,281*		
Female	*268*	*41*	*10*	*246*	*49*	*18*	*632*		
African American	57	18	28	102	16	11		232	9.7%
Male	*34*	*14*	*25*	*78*	*13*	*9*	*173*		
Female	*23*	*4*	*3*	*24*	*3*	*2*	*59*		
Asian/Pacific Is.	62	14	10	39	17	6		148	6.2%
Male	*40*	*10*	*9*	*22*	*2*	*4*	*97*		
Female	*22*	*4*	*1*	*17*	*5*	*2*	*51*		
American Indian / Alaska Native	23	8	5	20	2	1		59	2.5%
Male	*11*	*4*	*4*	*9*	*1*	*1*	*30*		
Female	*12*	*4*	*1*	*11*	*1*	*0*	*29*		
Other	8	4	3	10	5	2		32	1.3%
Male	*3*	*3*	*1*	*7*	*4*	*2*	*20*		
Female	*5*	*1*	*2*	*3*	*1*	*0*	*12*		
Totals	**832**	**166**	**85**	**951**	**285**	**65**		**2.384**	**100%**

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

Graph 1-6 Month / Manner of Death / KCME / 2016

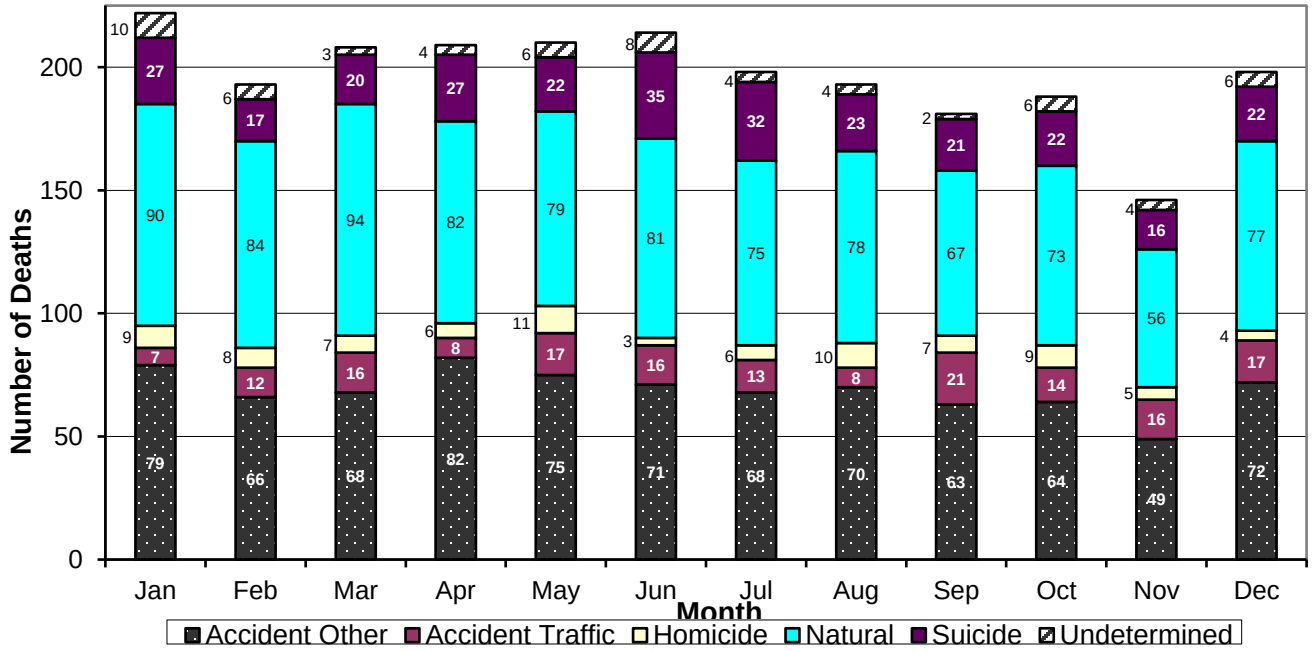


Table 1-7 Month / Manner of Death / KCME / 2016[9]

	MANNER OF DEATH							
MONTH	A	T	H	N	S	U	Total	%
Prior to 2014	0	0	0	2	0	0	2	0.1%
2014	5	1	0	12	1	3	22	0.9%
January	79	7	9	91	27	9	222	9.3%
February	66	12	8	84	17	6	193	8.1%
March	68	16	7	94	20	3	208	8.7%
April	82	8	6	82	27	4	209	8.8%
May	75	17	11	79	22	6	210	8.8%
June	71	16	3	81	35	8	214	9.0%
July	68	13	6	75	32	4	198	8.3%
August	70	8	10	78	23	4	193	8.1%
September	63	21	7	67	21	2	181	7.6%
October	64	14	9	73	22	6	188	7.9%
November	49	16	5	56	16	4	146	6.1%
December	72	17	4	77	22	6	198	8.3%
Totals	**832**	**166**	**85**	**951**	**285**	**65**	**2,384**	**100%**

[9]Month of death; A = Accident (Non-Traffic), T = Traffic, H = Homicide, N = Natural, S = Suicide, U = Undetermined.

Table 1-8 Nearest Incorporated City to the Fatal Incident / KCME / 2016[10]

	MANNER OF DEATH						
CITY	A	T	H	S	U	TOTAL	%
Algona	2	0	0	1	0	3	0.2%
Auburn	39	7	9	14	1	70	4.9%
Beaux Arts	0	0	0	0	0	0	0.0%
Bellevue	32	3	0	15	2	52	3.6%
Black Diamond	0	0	0	2	0	2	0.1%
Bothell	6	2	0	3	0	11	0.8%
Burien	12	1	3	5	2	23	1.6%
Carnation	1	1	0	1	1	4	0.3%
Clyde Hill	0	0	0	0	0	0	0.0%
Covington	0	1	0	0	0	1	0.1%
Des Moines	6	0	3	2	1	12	0.9%
Duvall	0	0	0	2	0	2	0.1%
Enumclaw	13	2	0	3	0	18	1.3%
Federal Way	38	2	10	13	3	66	4.6%
Hunts Point	0	0	0	0	0	0	0.0%
Issaquah	18	1	0	10	1	3	2.1%
Kenmore	5	0	0	3	1	9	0.6%
Kent	34	15	8	14	5	76	5.3%
Kirkland	30	2	1	10	2	45	3.1%
Lake Forest Park	3	1	0	0	0	4	0.3%
Maple Valley	6	4	0	4	0	14	1.0%
Medina	1	0	0	0	1	2	0.1%
Mercer Island	4	0	0	3	0	7	0.5%
Milton	0	0	0	0	0	0	0.0%
Newcastle	1	1	0	0	0	2	0.1%
Normandy Park	1	0	0	2	0	3	0.2%
North Bend	4	2	0	2	0	8	0.6%
Pacific	1	0	0	1	1	3	0.2%

[10] 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 1-8 Nearest Incorporated City to the Fatal Incident / KCME / 2016[11] (continued)

	MANNER OF DEATH						
CITY	A	T	H	S	U	Total	%
Redmond	15	4	0	6	1	26	1.8%
Renton	40	9	5	17	4	76	5.3%
Sammamish	6	0	0	3	1	10	0.7%
SeaTac	12	2	2	3	25	21	1.5%
Seattle	337	39	29	100	16	521	36.3%
Shoreline	11	2	2	7	0	22	1.5%
Skykomish	0	1	0	0	1	2	0.1%
Snoqualmie	5	0	0	6	2	13	0.9%
Tukwila	2	2	2	6	4	16	1.1%
Woodinville	6	3	0	2	1	12	0.9%
Yarrow Point	0	0	0	0	0	0	0.0%
Unincorporated King County							
Baring	0	1	0	0	0	1	0.1%
Hobart	0	0	0	0	0	0	0.0%
Fall City	3	0	0	1	0	4	0.3%
Preston	0	0	0	0	0	0	0.0%
Ravensdale	2	0	0	1	0	3	0.2%
Snoqualmie Pass	1	0	0	0	0	1	0.1%
Vashon Island	8	0	0	5	3	16	0.1%
Outside of King County	124	58	11	17	7	217	15.1%
Unknown Location	3	0	0	1	2	6	0.4%
Totals	**832**	**166**	**85**	**285**	**65**	**1,434**	**100%**

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

Out of County Cases 2016

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 2016, there were 217 deaths, 15% (217/1,434) where the incident (excluding deaths classified as "Natural") occurred out of county or where the incident location was unknown. Table 1-9 displays these deaths by incident location and manner.

Table 1-9 Fatal Incident Occurred Outside of King County / KCME / 2016[12]

	MANNER OF DEATH					
INCIDENT LOCATION	A	T	H	S	U	TOTAL
Alaska	9	1	0	1	0	11
Montana	4	1	0	0	1	6
Idaho	0	1	0	0	0	1
Oregon	3	0	0	0	0	3
Other States	5	2	2	0	1	10
Washington						
Island County	3	2	1	4	1	11
Kitsap County	8	6	1	1	0	16
Pierce County	10	6	0	1	0	17
Skagit County	3	4	1	0	0	8
Snohomish County	26	5	1	4	1	37
Thurston County	5	3	0	3	0	11
Other WA Counties	43	25	4	2	2	76
Washington Sub-Total	*98*	*51*	*8*	*15*	*4*	*176*
Out of Country	2	0	0	0	0	2
Unknown	3	2	1	1	1	8
Totals	**124**	**58**	**11**	**17**	**6**	**217**

[12]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 and shows the variations in data from year to year.

The tables on the following pages attempt to give a perspective on the types of deaths that the Medical Examiner investigates. The tables display data by category and year and provide trends over time. More detailed analysis of 2016 data is provided in separate sections for each manner of death (Accident, Homicide, Natural, Suicide, Traffic, and Undetermined).

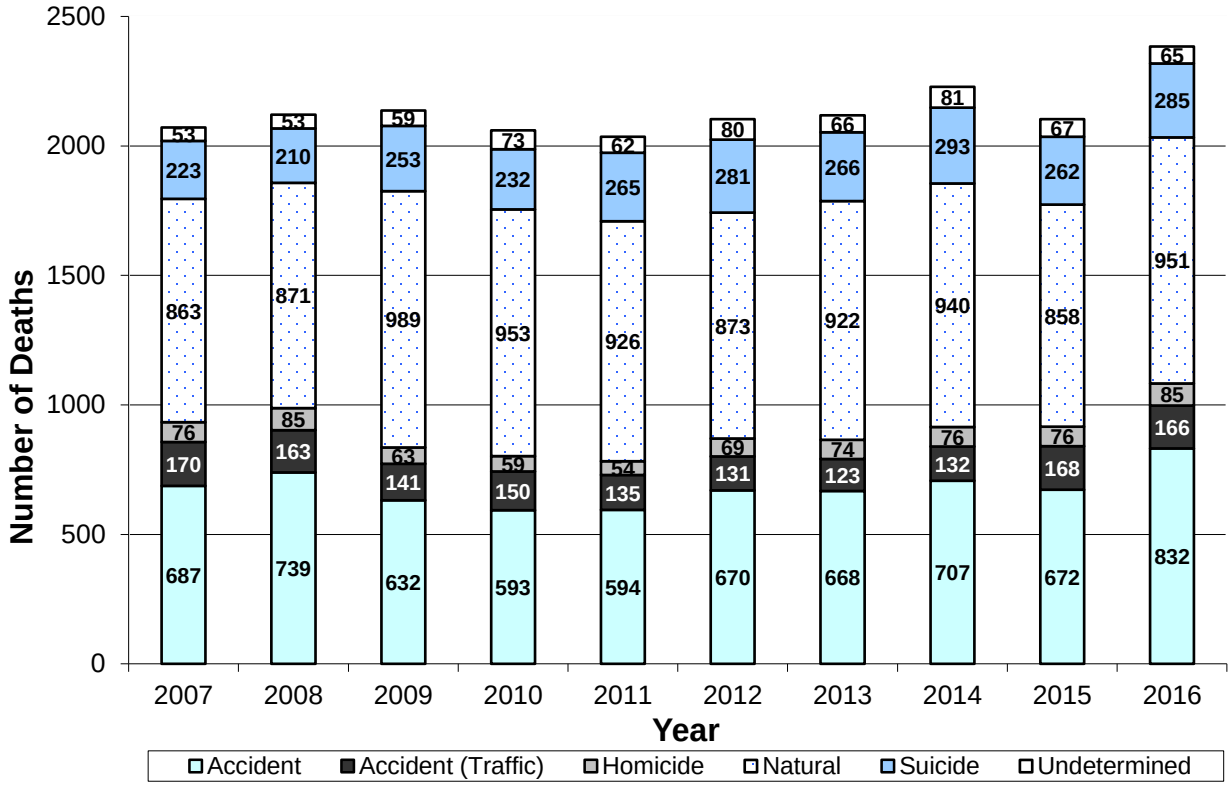
Table 2-1 **Comparison of Manners of Death / KCME / 2007 - 2016**

MANNER OF DEATH	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Accident (Other)	687	739	632	593	594	670	668	707	672	832
Accident (Traffic)	170	163	141	150	135	131	123	132	168	166
Homicide	76	85	63	59	54	69	74	76	76	85
Natural	863	871	989	953	926	873	922	940	858	951
Suicide	223	210	253	232	265	281	266	293	262	285
Undetermined	53	53	59	73	62	80	66	81	67	65
Totals	**2,072**	**2,121**	**2,137**	**2,060**	**2,036**	**2,104**	**2,119**	**2,229**	**2,103**	**2,384**

Table 2-2 **Comparison of Manners of Death as Percentage of Total Annual Medical Examiner Cases / KCME / 2006 – 2016**

MANNER OF DEATH	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	%	%	%	%	%	%	%	%	%	%
Accident (Other)	33.1	34.8	29.6	28.8	29.2	31.8	31.5	31.7	32.0	34.9
Accident (Traffic)	8.2	7.7	6.6	7.3	6.6	6.2	5.8	5.9	8.0	7.0
Homicide	3.7	4.0	2.9	2.9	2.7	3.3	3.5	3.4	3.6	3.6
Natural	41.7	41.1	46.3	46.3	45.5	41.5	43.5	42.2	40.8	39.8
Suicide	10.8	9.9	11.8	11.2	13	13.4	12.6	13.2	12.4	11.9
Undetermined	2.5	2.5	2.8	3.5	3.0	3.8	3.1	3.6	3.2	2.8
Totals	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Graph 2-1 Comparison of Manners of Death / KCME / 2007- 2016



Graph 2-2 Homicide Deaths / KCME / 2007 - 2016

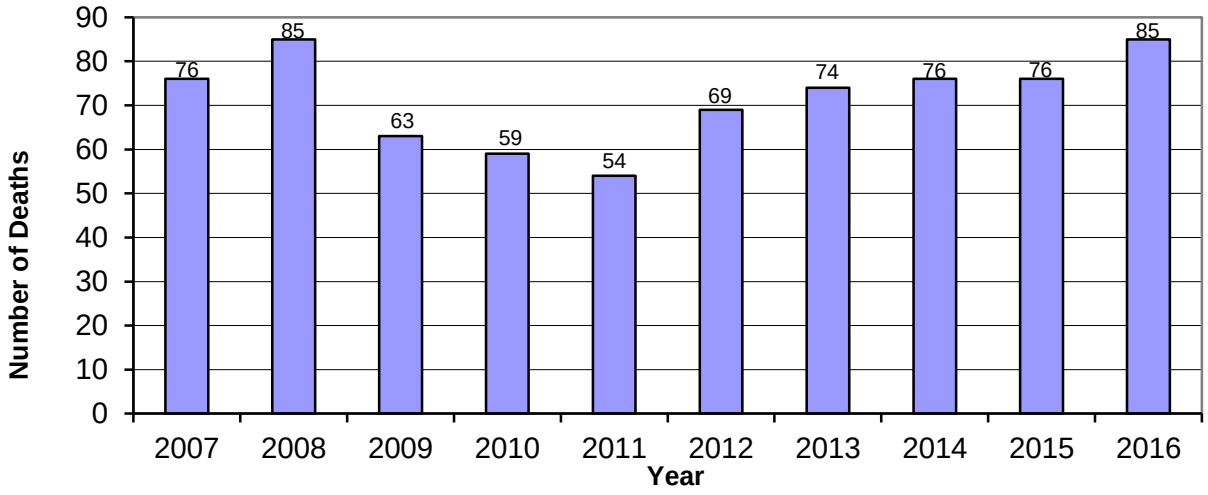


Table 2-3 Ten-Year Perspective of Homicidal Methods / KCME / 2007 - 2016

METHOD USED	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Blunt Force (#)	9	16	5	11	6	6	14	13	14	12
Blunt Force (%)	12%	19%	8%	18%	11%	9%	19%	17%	18%	14%
Firearms (#)	55	45	41	39	35	47	44	51	54	61
Firearms (%)	72%	53%	65%	66%	65%	68%	59%	67%	71%	72%
Hom. Violence (#)	0	0	0	1	1	3	0	0	2	1
Hom. Violence (%)	0%	0%	0%	2%	2%	4%	0%	0%	3%	1%
Stabbing (#)	12	12	11	2	9	13	11	9	4	5
Stabbing (%)	16%	14%	17%	4%	16%	19%	15%	12%	5%	6%
Strangulation (#)	0	4	3	1	2	0	3	2	2	2
Strangulation (%)	0%	5%	5%	2%	4%	0%	4%	3%	3%	2%
Other (#)	0	8	3	5	1	0	2	1	0	4
Other (%)	0%	9%	5%	8%	2%	0%	3%	1%	0%	5%
Totals	**76**	**85**	**63**	**59**	**54**	**69**	**74**	**76**	**76**	**85**

Graph 2-3 Suicide Deaths /KCME / 2007 - 2016

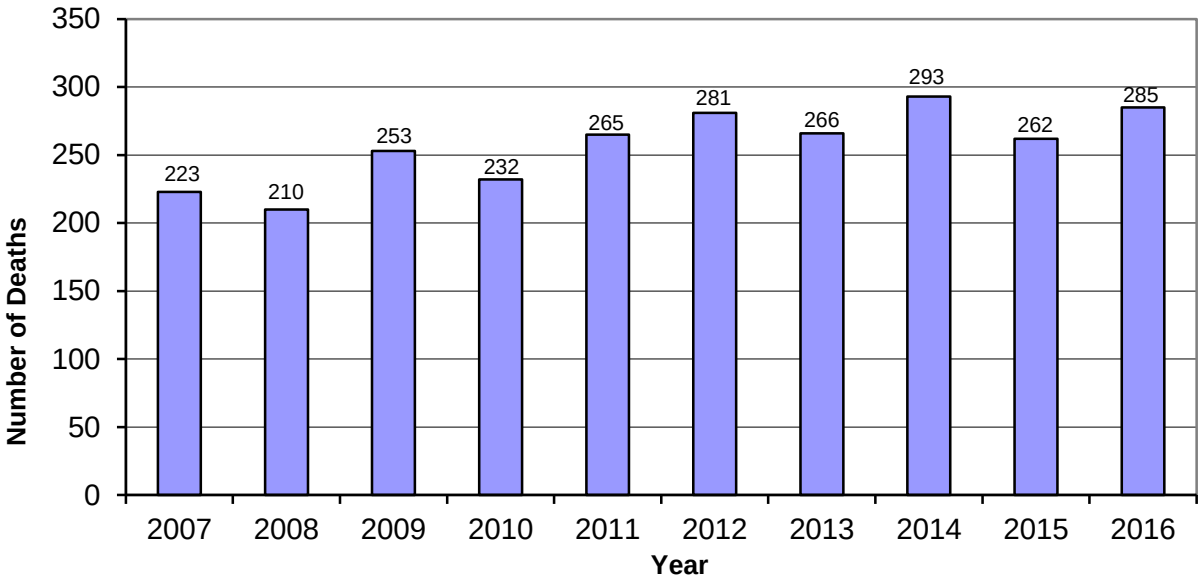


Table 2-4 Ten Year Perspective of Suicidal Injury Modes / KCME / 2007 - 2016

INJURY MODE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Asphyxia / Plastic Bag	3	8	8	13	15	21	13	22	14	16
Burns / Fire	1	3	2	2	1	2	1	4	2	3
Carbon Monoxide	17	4	14	4	7	9	10	4	8	6
Drowning	3	3	7	3	5	7	2	5	3	4
Drugs / Poisons	36	29	29	43	41	42	41	41	41	40
Firearms	93	93	100	92	116	119	100	124	109	114
Hanging	43	48	60	44	48	48	71	69	59	70
Incised Wounds / Stabbing	4	5	8	7	12	8	9	3	8	8
Jumped	22	13	20	21	19	24	15	19	16	22
Other	1	4	5	3	1	1	4	2	2	2
Totals	**223**	**210**	**253**	**232**	**265**	**281**	**266**	**293**	**262**	**285**

Graph 2-4 Traffic Fatalities / KCME / 2007 - 2016

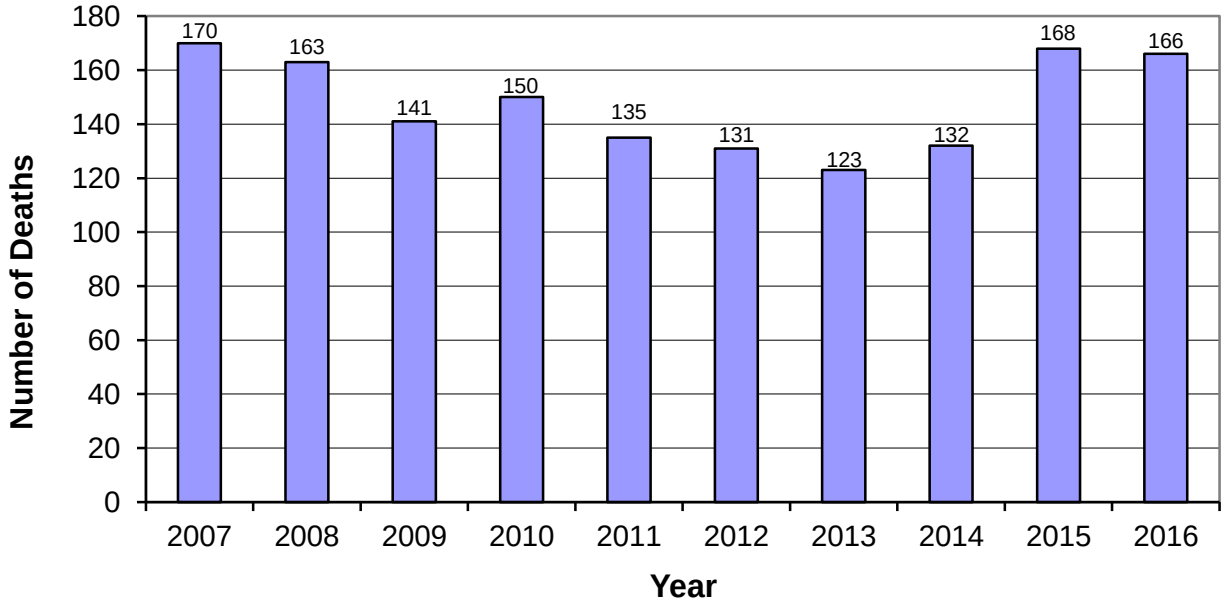


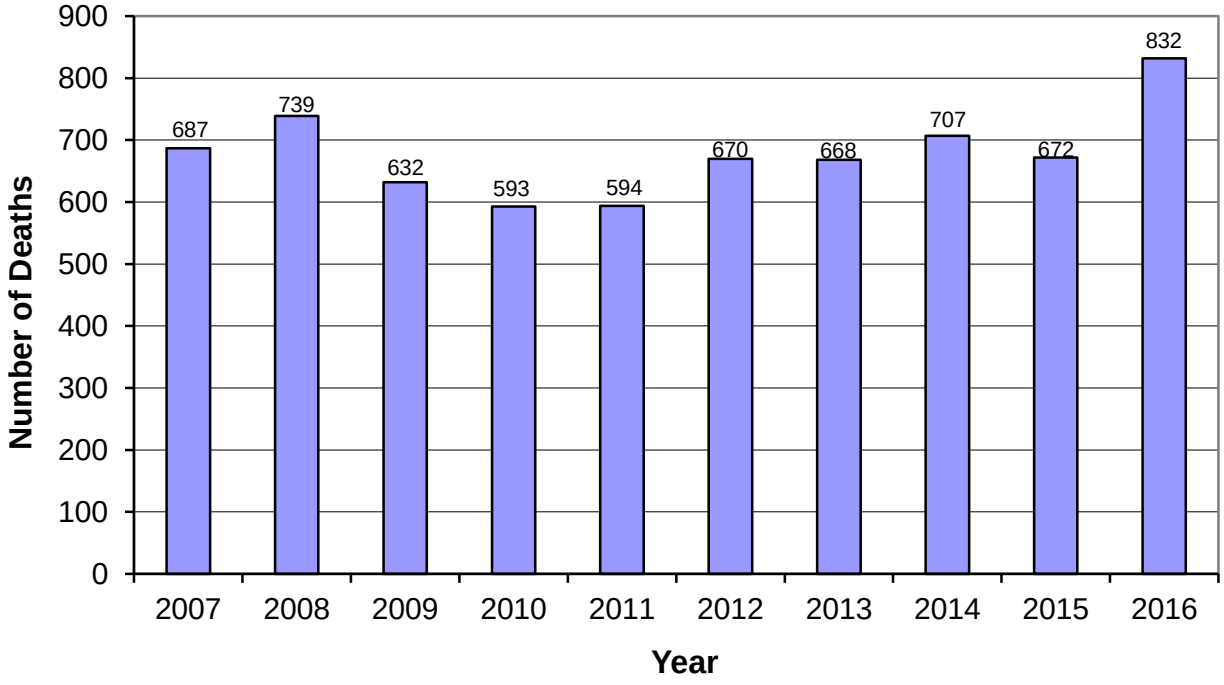
Table 2-5 Traffic Fatality Circumstances / KCME / 2007 - 2016

CIRCUMSTANCES	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Vehicle Driver	71	71	51	69	55	47	45	58	55	62
Vehicle Passenger	29	24	28	27	22	16	23	19	40	23
Vehicle Unknown Position	1	4	0	0	3	4	0	5	1	14
Bicyclist	7	4	12	3	8	5	7	3	6	8
Motorcycle Driver	26	28	18	24	26	24	22	19	25	24
Motorcycle Passenger	2	1	1	0	1	1	0	1	1	2
Pedestrian	31	26	29	27	17	33	25	26	39	40
Other	3	5	2	0	3	1	1	1	1	3
Totals	**170**	**163**	**141**	**150**	**135**	**131**	**123**	**132**	**168**	**166**

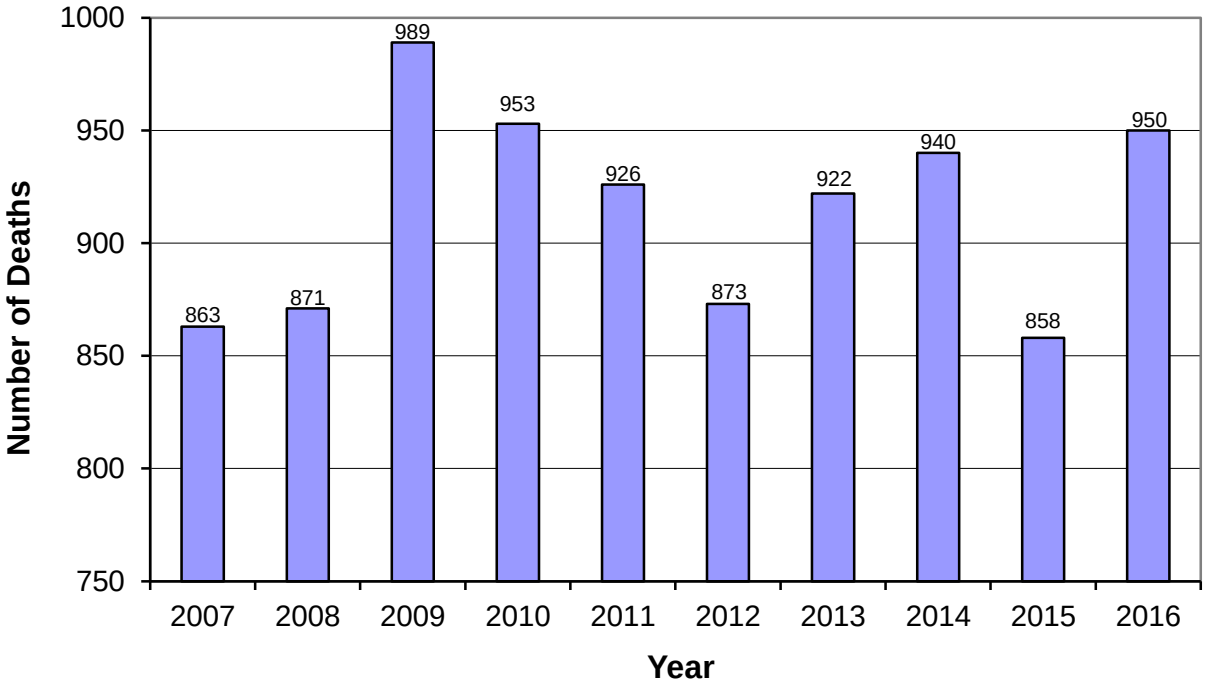
Table 2-6 **Ten Year Perspective of Non-Traffic Accidental Death Circumstances / KCME / 2007 - 2016**

CIRCUMSTANCES	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Aircraft	11	1	0	0	1	3	1	4	0	1
Asphyxia	11	14	10	5	6	7	8	14	9	10
Aspiration	5	10	7	6	7	15	13	14	9	17
Blunt Force / Crushing	10	10	6	5	11	20	3	19	12	13
Burns / Fire	23	13	15	29	18	26	19	20	17	23
Drowning	23	23	17	11	21	24	23	18	20	24
Drugs / Poisons	247	232	233	214	203	230	279	289	295	305
Electrocution	1	1	2	2	1	1	2	0	0	1
Explosion	2	0	0	3	0	0	0	0	0	0
Fall	292	323	309	291	291	314	291	310	280	414
Firearms	1	1	1	1	0	2	1	1	0	0
Hanging	0	1	1	1	2	4	1	1	2	3
Hypothermia	3	4	7	4	7	6	5	5	11	12
Struck by Object	5	2	4	4	3	2	1	2	0	0
Struck by Train	1	3	2	0	6	2	5	2	5	1
Vehicular Non-Traffic	7	10	5	2	4	4	7	3	6	5
Other	2	6	9	13	10	10	9	4	6	3
Totals	**687**	**739**	**632**	**593**	**594**	**670**	**668**	**707**	**672**	**832**

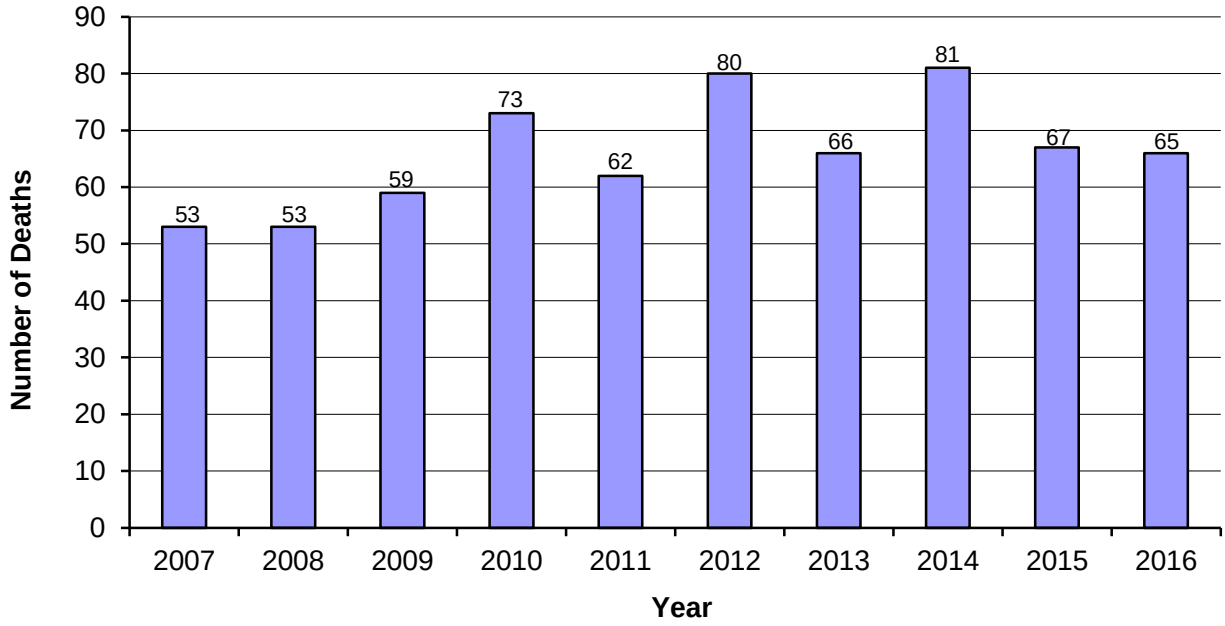
Graph 2-5 Accidental Deaths / KCME / 2007 – 2016



Graph 2-6 Natural Deaths / KCME / 2007 – 2016



Graph 2-7 Deaths of Undetermined Manner / KCME / 2007 – 2016



Manner of death: Accident

The Medical Examiner certified 832 deaths as non-traffic accidents for the calendar year 2016. The largest group of non-traffic accidental deaths was individuals who died as a result of a fall, representing 50% (414/832). Of the 414 deaths attributed to injury sustained in falls, 79% (326/414) occurred in the age group 70 years and over. The largest percentage was ground-level falls in elderly individuals, which resulted in fractures leading to complications such as pneumonia.

The second largest group of accidental deaths was those who died as a result of accidental overdoses of drugs and/or poisons, 37% (305/832). There were five accidental drug deaths of a child between the ages of 16-19 years, and there was one death of a child less than one year of age.

The 2016 accidental drug death percentage, 37% (305/832) is seven percent less than the 44% (295/672) of accidental drug deaths in 2015. A more detailed discussion of these deaths is presented in the section "Death Due to Drugs and Poisons" on pages 74 and 75.

In 2016, 23 deaths resulted from fire or thermal injury, an increase from 2015 when there were 17. Of the 23 fire-related deaths, 48% (11/23) were the result of accidents that occurred outside of King County. The injured were transported to Harborview Medical Center's Burn Intensive Care Unit where they died.

Another category of accidental deaths worthy of comment is death resulting from drowning. There were 24 drowning deaths in 2016, as compared to 20 in 2015.

Aspiration is a type of death that results from a person choking on a foreign object, often a bolus of food while eating. In 2016, there were seventeen deaths due to aspiration of a foreign body, compared to nine in 2015. Of the aspiration deaths 94% (16/17) were in adults over the age of 50.

Of the 832 accidental deaths in 2016, 16% (132/832) were the result of incidents which occurred outside of King County, but the death took place within King County. These deaths were the result of the injured being transported from outside King County to medical facilities within King County where they died. Since these deaths occurred in King County, they fall under King County Medical Examiner's Office jurisdiction.

53% (441/832) of the victims were tested for the presence of alcohol. Of those tested, 29% (117/441) showed alcohol present at the time of death.

Graph 3-1 Circumstances of Accidental Death / KCME / 2016

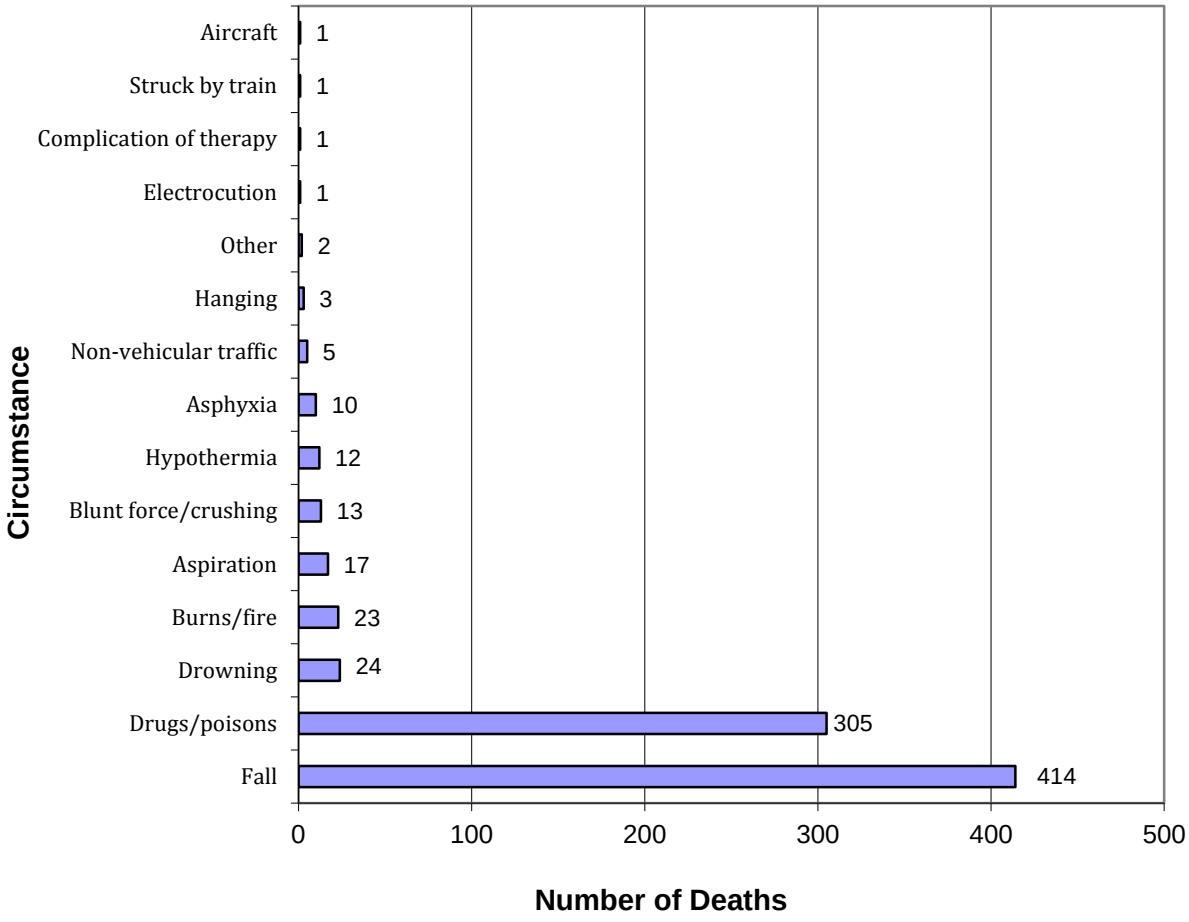


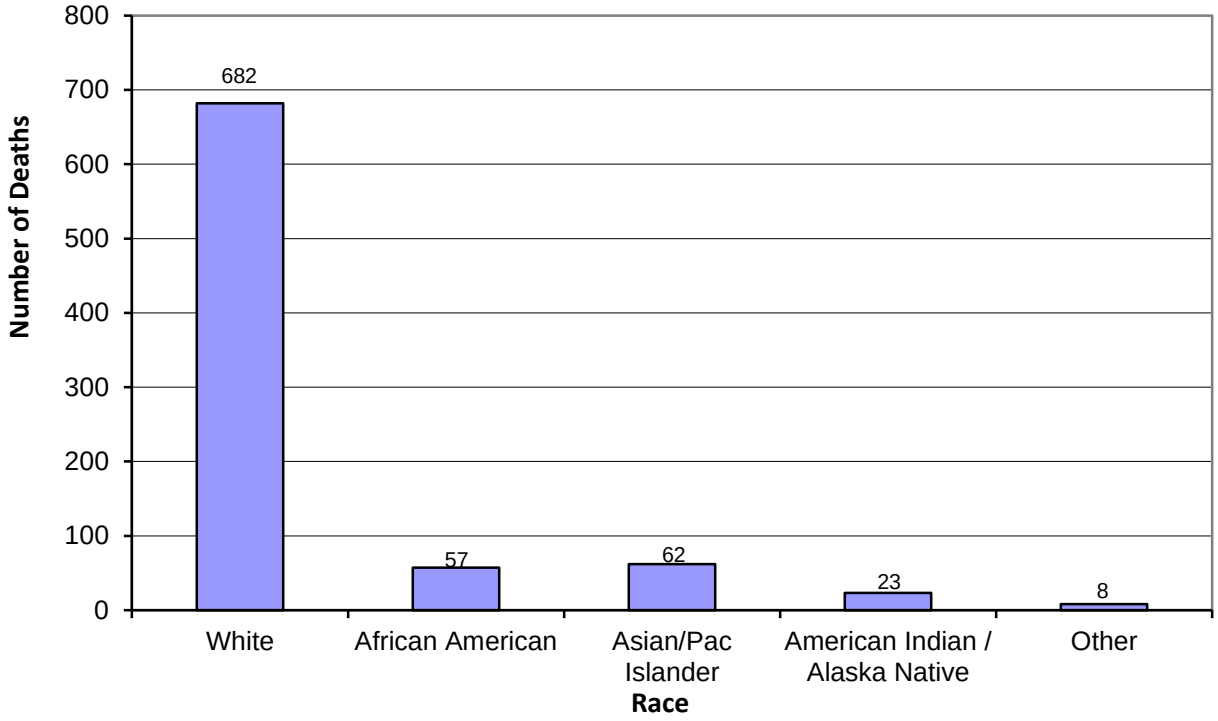
Table 3-1 Circumstances of Accidental Death / Race / Gender / KCME / 2016

CIRCUMSTANCES / GENDER	RACE					SUB-TOTAL	TOTAL
	WHITE	AFRICAN AMER	ASIAN/ PAC IS	AM INDIAN / AK NATIVE	OTHER		
Aircraft	1	0	0	0	0		1
Male	*1*	*0*	*0*	*0*	*0*	*1*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	
Asphyxia (compressional / positional / mechanical)	6	4	0	0	0		10
Male	*6*	*2*	*0*	*0*	*0*	*8*	
Female	*0*	*2*	*0*	*0*	*0*	*2*	
Aspiration	14	0	3	0	0		17
Male	*9*	*0*	*2*	*0*	*0*	*11*	
Female	*5*	*0*	*1*	*0*	*0*	*6*	
Blunt Force / Crushing	10	0	3	0	0		13
Male	*6*	*0*	*3*	*0*	*0*	*10*	
Female	*4*	*0*	*0*	*0*	*0*	*4*	
Burns / Fire	18	0	3	2	0		23
Male	*10*	*0*	*1*	*1*	*0*	*12*	
Female	*8*	*0*	*2*	*1*	*0*	*11*	
Complication of Therapy	1	0	0	0	0		1
Male	*1*	*0*	*0*	*0*	*0*	*1*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	
Drowning	12	4	5	0	3		24
Male	*10*	*4*	*5*	*0*	*1*	*20*	
Female	*2*	*0*	*0*	*0*	*2*	*4*	
Drugs / Poisons	234	37	15	17	2		305
Male	*167*	*22*	*15*	*7*	*1*	*212*	
Female	*67*	*15*	*0*	*10*	*1*	*93*	
Electrocution	1	0	0	0	0		1
Male	*1*	*0*	*0*	*0*	*0*	*1*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	
Fall	366	11	32	2	3		414
Male	*189*	*6*	*14*	*1*	*1*	*211*	
Female	*177*	*5*	*18*	*1*	*2*	*203*	

Table 3-1 Circumstances of Accidental Death / Race / Gender / KCME / 2016 (continued)

CIRCUMSTANCES / GENDER	RACE					SUB-TOTAL	TOTAL
	WHITE	AFRICAN AMER	ASIAN/ PAC IS	AM INDIAN/ AK NATIVE	OTHER		
Hanging	2	1	0	0	0		3
Male	*2*	*0*	*0*	*0*	*0*	*2*	
Female	*0*	*1*	*0*	*0*	*0*	*1*	
Hypothermia	10	0	1	0	1		12
Male	*7*	*0*	*0*	*0*	*1*	*8*	
Female	*3*	*0*	*1*	*0*	*0*	*4*	
Non-Traffic Vehicular	5	0	0	0	0		5
Male	*5*	*0*	*0*	*0*	*0*	*5*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	
Struck by Train	0	0	0	1	0		1
Male	*0*	*0*	*0*	*1*	*0*	*1*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	
Other	2	0	0	0	0		2
Male	*0*	*0*	*0*	*0*	*0*	*0*	
Female	*2*	*0*	*0*	*0*	*0*	*2*	
Totals	**682**	**57**	**62**	**23**	**8**		**832**
Percent	82%	6.8%	7.4%	2.8%	1%		100%

Graph 3-2 Accidental Deaths / Race / KCME / 2016



Graph 3-3 Accidental Deaths / Age Group / KCME / 2016

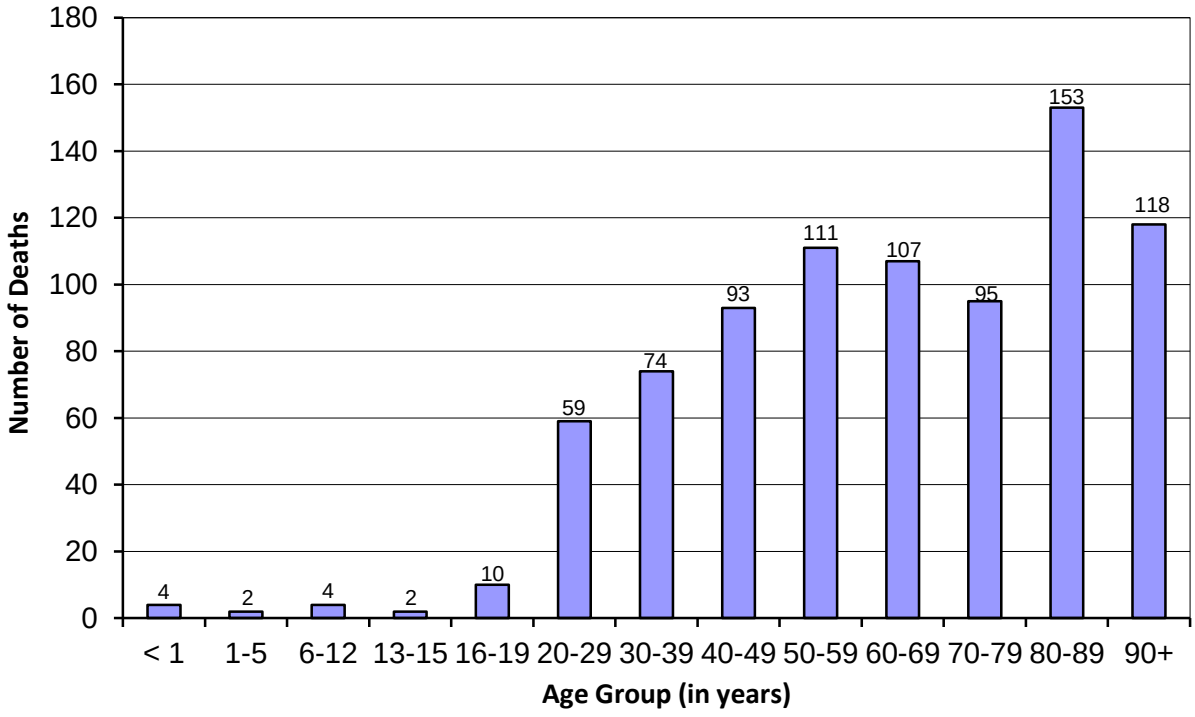


Table 3-2 Circumstances of Accidental Death / Age / Gender / KCME / 2016

CIRCUMSTANCES / GENDER	AGE GROUP (YEARS)													SUB-TOTAL	TOTAL
	< 1	1 to 5	6 to 12	13 to 15	16 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 +		
Aircraft	0	0	0	0	0	0	0	0	0	0	1	0	0		1
Male	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*1*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Asphyxia	2	0	0	0	0	0	1	3	2	1	1	0	0		10
Male	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*3*	*2*	*1*	*1*	*0*	*0*	*8*	
Female	*2*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*2*	
Aspiration	0	0	0	0	0	0	1	0	3	6	3	3	1		17
Male	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*2*	*5*	*2*	*1*	*1*	*11*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*1*	*1*	*1*	*2*	*0*	*6*	
Blunt Force / Crushing	0	2	0	0	0	1	1	3	1	1	0	3	1		13
Male	*0*	*2*	*0*	*0*	*0*	*1*	*1*	*1*	*1*	*1*	*0*	*2*	*0*	*9*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*2*	*0*	*0*	*0*	*1*	*1*	*4*	
Burns / Fire	0	0	1	0	0	2	1	2	3	4	3	5	2		23
Male	*0*	*0*	*1*	*0*	*0*	*1*	*1*	*1*	*2*	*3*	*0*	*1*	*2*	*12*	
Female	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*1*	*1*	*1*	*3*	*4*	*0*	*11*	
Comp. of	0	0	0	0	0	0	0	0	0	1	0	0	0		1
Male	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*1*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Drowning	1	0	2	0	3	4	2	0	4	4	2	2	0		24
Male	*0*	*0*	*2*	*0*	*2*	*3*	*2*	*0*	*4*	*3*	*2*	*2*	*0*	*20*	
Female	*1*	*0*	*0*	*0*	*1*	*1*	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*4*	
Drugs / Poisons	1	0	0	0	5	48	68	69	68	40	6	0	0		305
Male	*0*	*0*	*0*	*0*	*4*	*36*	*45*	*49*	*43*	*31*	*4*	*0*	*0*	*212*	
Female	*1*	*0*	*0*	*0*	*1*	*12*	*23*	*20*	*25*	*9*	*2*	*0*	*0*	*93*	
Electrocution	0	0	0	0	1	0	0	0	0	0	0	0	0		1
Male	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Fall	0	0	0	1	1	3	0	14	22	47	75	139	112		414
Male	*0*	*0*	*0*	*1*	*1*	*2*	*0*	*8*	*14*	*33*	*52*	*66*	*34*	*211*	
Female	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*6*	*8*	*14*	*23*	*73*	*78*	*203*	
Hanging	0	0	0	0	0	0	0	1	0	1	1	0	0		3
Male	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*1*	*0*	*0*	*0*	*2*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*1*	
Hypothermia	0	0	0	0	0	0	0	1	8	1	1	1	0		12
Male	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*6*	*1*	*0*	*0*	*0*	*8*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*2*	*0*	*1*	*1*	*0*	*4*	
Non-traffic	0	0	1	1	0	1	0	0	0	1	0	0	1		5
Male	*0*	*0*	*1*	*1*	*0*	*1*	*0*	*0*	*0*	*1*	*0*	*0*	*1*	*5*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	

Struck by Train	0	0	0	0	0	0	0	0	0	0	1	0	0		1
Male	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*1*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Other	0	0	0	0	0	0	0	0	0	0	1	0	1		2
Male	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*1*	*2*	
Totals	4	2	4	2	10	59	74	93	111	107	95	153	118		832
Percent	0.5	0.2	0.5	0.2	1.2	7.1	8.9	11.2	13.3	12.9	11.4	18.4	14.2		100%

Table 3-3 Circumstances of Accidental Death / Gender / KCME / 2016

CIRCUMSTANCES	GENDER		TOTAL
	MALE	FEMALE	
Aircraft	1	0	1
Asphyxia (compressional / positional / mechanical)	8	2	10
Aspiration	11	6	17
Blunt Force / Crushing	9	4	13
Burns / Fire	12	11	23
Complication of therapy	1	0	1
Drowning	20	4	24
Drugs / Poisons	212	93	305
Electrocution	1	0	1
Fall	211	203	414
Gunshot wound(s)	0	0	0
Hanging	2	1	3
Hypothermia	8	4	12
Non-traffic Vehicular	5	0	5
Struck by Object	0	0	0
Struck by Train	1	0	1
Other	0	2	2
Totals	**502**	**330**	**832**
Percent	60%	40%	100%

Table 3-4 Circumstances of Accidental Death / Blood Alcohol Results / KCME / 2016

CIRCUMSTANCES	TESTED		NOT TESTED	TOTAL
	TESTED POSITIVE	TESTED NEGATIVE		
Aircraft	0	0	1	1
Asphyxia (compressional/ positional / mechanical)	3	6	1	10
Aspiration	0	9	8	17
Blunt Force / Crushing	1	7	5	13
Burns / Fire	4	14	5	23
Complication of Therapy	0	1	0	1
Drowning	2	20	2	24
Drugs / Poisons	85	203	17	305
Electrocution	0	1	0	1
Fall	18	46	350	414
Hanging	0	3	0	3
Hypothermia	3	9	0	12
Non-traffic Vehicular	0	3	2	5
Struck by Train	0	1	0	1
Other	0	2	0	2
Totals	**116**	**325**	**391**	**832**
Percent	14%	39%	47%	100%

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 2016, the Medical Examiner classified 85 deaths as homicide. This number represents 3.6% (85/2,384) of the Medical Examiner death investigations for the calendar year 2016. Of these 85 homicides, 87% (74/85) were the result of incidents that occurred within King County. For comparison, there were 76 homicides investigated in 2015, of which 88% (67/76) were incidents in King County.

The data reflect the weapons or mechanisms responsible for the homicidal deaths in 2016. Firearms were responsible for 72% (61/85), compared to 2015, when 71% (54/76) were due to firearms. Stabbing by a knife or other sharp-edged instrument caused 6% (5/85) of deaths of homicide victims. Blunt force injuries were responsible for 14% (12/85) of the 2016 homicide deaths. There were two deaths due to strangulation/asphyxia, one death due to homicidal violence and four deaths due to other means. The term "homicidal violence" is used when circumstances indicate that death was due to homicide, but the exact cause of death is not determined, for example, in a decomposed body. There were two such deaths in 2015.

In 2016, there were six homicide victims under five years of age. There were no homicide victims between 6 - 15 years of age and nine homicide victims were between the ages of 16 and 19 years.

Examining the racial distribution of victims of homicide, 33% (28/85) of the victims were African American, compared to 2015, when 38% (29/76) of the victims were African American. Whites, while representing 70.8% of the population, made up 46% (39/85) of the homicide victims. The remaining 21% of homicide victims (18/85) included Asian/Pacific Islanders (10/85), Native Americans/AK Natives (5/85), and other (3/85). As indicated on pages 8 and 20, in 9% of the Medical Examiner cases the incident leading to death occurred outside of King County and the decedent was likely not a resident of King County. Therefore, Medical Examiner figures cannot be directly compared to the racial distribution of King County residents (refer to Table 1-9 on page 20.)

Males comprised 80% (68/85) and women 20% (17/85) of the homicide victims in 2016. The majority of victims, 76% (65/85), were between the ages of 20 and 59 years. Young people, 19 years old and under, comprised 18% (15/85) of the homicide victims. For comparison, this younger age group also represented 18% (14/76) in the year 2015.

The presence of alcohol was tested for in 95% percent (81/85) of the homicide victims. Of those tested 26% (21/81) showed alcohol present at the time of death.

Of the 85 homicide deaths in 2016, 87% (74/85) of the fatal incidents occurred within King County, and of these deaths, 34% (29/85) occurred within the city limits of Seattle. In 11 of the 76 homicidal deaths, the incident occurred outside of King County, but death occurred within King County.

Graph 4-1 Homicide Injury Methods / KCME / 2016

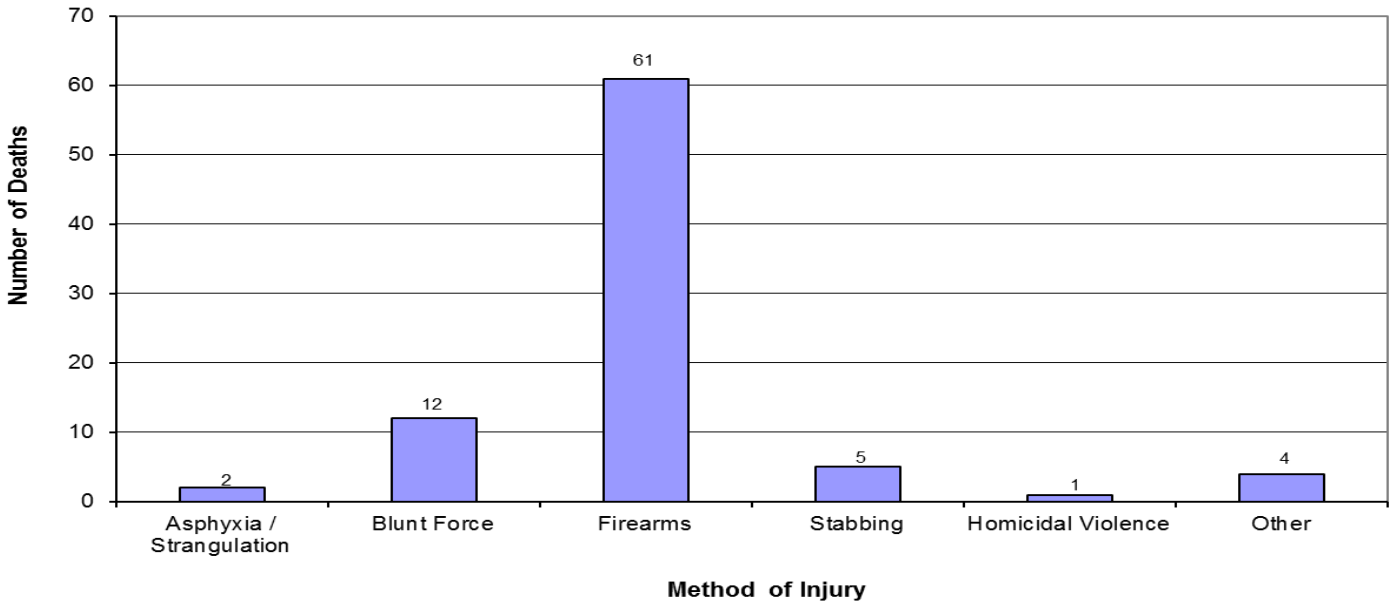


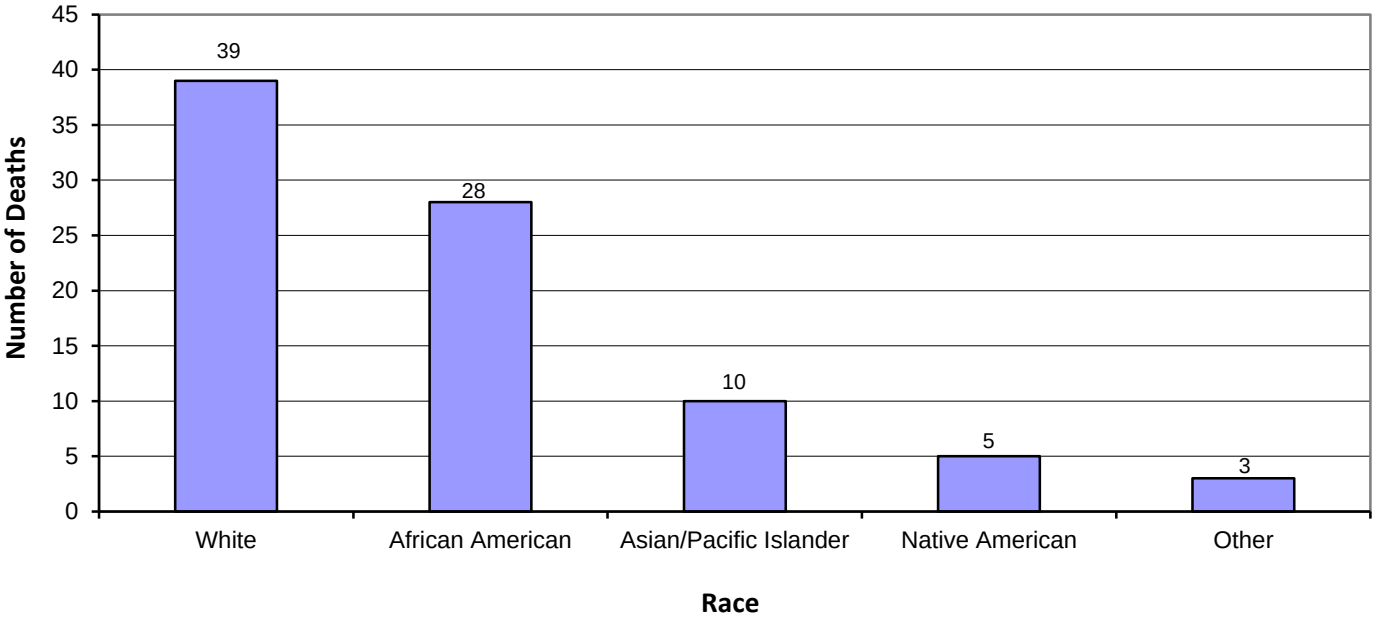
Table 4-1 Homicide Methods / Race / Gender / KCME / 2016

CIRCUMSTANCES / GENDER	RACE WHITE	AFRICAN AMER	ASIAN/ PAC IS	AM INDIAN / AK NATIVE	OTHER	SUB-TOTAL	TOTAL
Asphyxia / Strangulation	2	0	0	0	0		2
Male	*0*	*0*	*0*	*0*	*0*	*0*	
Female	*2*	*0*	*0*	*0*	*0*	*2*	
Blunt Force	6	2	1	2	1		12
Male	*4*	*2*	*1*	*2*	*0*	*9*	
Female	*2*	*0*	*0*	*0*	*1*	*3*	
Firearms	26	22	8	3	2		61
Male	*22*	*19*	*7*	*2*	*1*	*51*	
Female	*4*	*3*	*1*	*1*	*1*	*10*	
Stabbing	2	3	0	0	0		5
Male	*2*	*3*	*0*	*0*	*0*	*5*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	
Homicidal Violence	1	0	0	0	0		1
Male	*0*	*0*	*0*	*0*	*0*	*0*	
Female	*1*	*0*	*0*	*0*	*0*	*1*	
Other	2	1	1	0	0		4
Male	*1*	*1*	*1*	*0*	*0*	*3*	
Female	*1*	*0*	*0*	*0*	*0*	*1*	
Totals	**39**	**28**	**10**	**5**	**3**		**85**
Percent	45.9%	32.9%	11.8%	5.9%	3.5%		100%

Table 4-2 Homicide Methods / Age / Gender / KCME / 2016

METHOD / GENDER	AGE GROUP (YEARS)													SUB-TOTAL	TOTAL
	< 1	1 to 5	6 to 12	13 to 15	16 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 +		
Asphyxia / Strangulation	0	0	0	0	0	1	0	1	0	0	0	0	0		2
Male	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Female	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*1*	*0*	*0*	*0*	*0*	*0*	*2*	
Blunt Force	3	1	0	0	0	2	1	2	2	0	0	1	0		12
Male	*2*	*1*	*0*	*0*	*0*	*1*	*1*	*1*	*2*	*0*	*0*	*1*	*0*	*9*	
Female	*1*	*0*	*0*	*0*	*0*	*1*	*0*	*1*	*0*	*0*	*0*	*0*	*0*	*3*	
Firearms	0	0	0	0	8	23	13	10	4	2	0	0	1		61
Male	*0*	*0*	*0*	*0*	*7*	*21*	*11*	*8*	*2*	*2*	*0*	*0*	*0*	*51*	
Female	*0*	*0*	*0*	*0*	*1*	*2*	*2*	*2*	*2*	*0*	*0*	*0*	*1*	*10*	
Stabbing	0	0	0	0	0	3	1	0	1	0	0	0	0		5
Male	*0*	*0*	*0*	*0*	*0*	*3*	*1*	*0*	*1*	*0*	*0*	*0*	*0*	*5*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Homicidal Violence	1	0	0	0	0	0	0	0	0	0	0	0	0		1
Male	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Female	*1*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Other	1	0	0	0	1	0	0	0	1	1	0	0	0		4
Male	*1*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*1*	*0*	*0*	*0*	*3*	
Female	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	
Totals	**5**	**1**	**0**	**0**	**9**	**29**	**15**	**13**	**8**	**3**	**0**	**1**	**1**		**85**
Percent	5.8%	1.2%	0%	0%	10.6%	34.2%	17.6%	15.3%	9.4%	3.5%	0%	1.2%	1.2%		100%

Graph 4-2 Homicide Deaths / Race / KCME / 2016



Graph 4-3 Homicide Deaths / Age Group / KCME / 2016

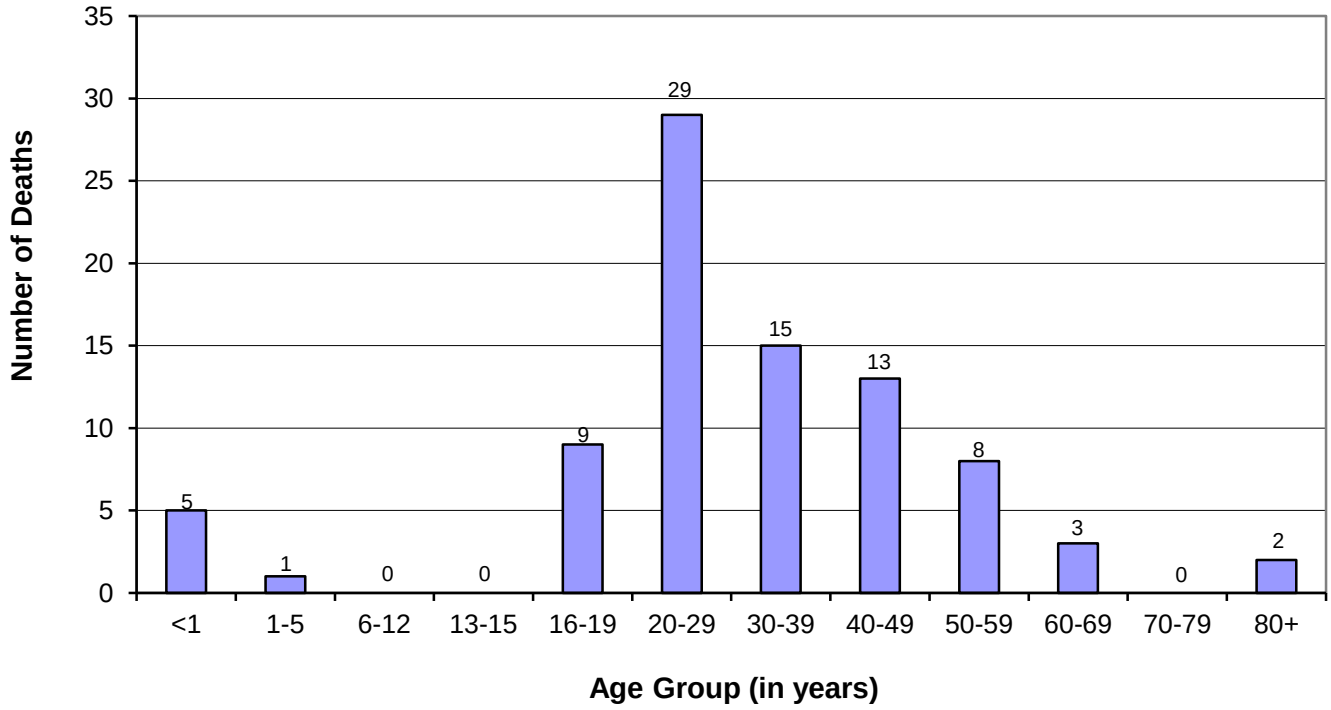


Table 4-3 Homicide Deaths / Age / Race / Gender / KCME / 2016

METHOD		< 16	16 to 19	20 to 29	30 to 39	40 to 49	50+	SUB-TOTAL	TOTAL
Asphyxia	White	0	0	1	0	1	0		2
	Male	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
	Female	*0*	*0*	*1*	*0*	*1*	*0*	*2*	
Blunt Force	White	1	0	1	1	1	2		12
	Male	*1*	*0*	*0*	*1*	*0*	*2*	*4*	
	Female	*0*	*0*	*1*	*0*	*1*	*0*	*2*	
	African Am.	1	0	0	0	1	0		
	Male	*1*	*0*	*0*	*0*	*1*	*0*	*2*	
	Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
	Asian/Pac Is.	0	0	1	0	0	0		
	Male	*0*	*0*	*1*	*0*	*0*	*0*	*1*	
	Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
	Am. Indian / AK Native	1	0	0	0	0	1		
	Male	*1*	*0*	*0*	*0*	*0*	*1*	*2*	
	Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
	Other	1	0	0	0	0	0		
	Male	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
	Female	*1*	*0*	*0*	*0*	*0*	*0*	*1*	
Firearms	White	0	5	8	5	4	4		61
	Male	*0*	*5*	*7*	*4*	*3*	*3*	*22*	
	Female	*0*	*0*	*1*	*1*	*1*	*1*	*4*	
	African Am.	0	3	10	3	3	3		
	Male	*0*	*2*	*10*	*3*	*3*	*1*	*19*	
	Female	*0*	*1*	*0*	*0*	*0*	*2*	*3*	
	Asian/Pac	0	0	2	4	2	0		
	Male	*0*	*0*	*2*	*4*	*1*	*0*	*7*	
	Female	*0*	*0*	*0*	*0*	*1*	*0*	*1*	
	Am. Indian / AK Native	0	0	2	0	1	0		
	Male	*0*	*0*	*1*	*0*	*1*	*0*	*2*	
	Female	*0*	*0*	*1*	*0*	*0*	*0*	*1*	
	Other	0	0	1	1	0	0		
	Male	*0*	*0*	*1*	*0*	*0*	*0*	*1*	
	Female	*0*	*0*	*0*	*1*	*0*	*0*	*1*	
Stabbing	White	0	0	1	0	0	1		5
	Male	*0*	*0*	*1*	*0*	*0*	*1*	*2*	

	Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
	African Am.	0	0	2	1	0	0		
	Male	*0*	*0*	*2*	*1*	*0*	*0*	*3*	
	Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Homicidal Violence	White	*1*	*0*	*0*	*0*	*0*	*0*		1
	Male	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
	Female	*1*	*0*	*0*	*0*	*0*	*0*	*1*	
Other	White	0	1	0	0	0	1		4
	Male	*0*	*0*	*0*	*0*	*0*	*1*	*1*	
	Female	*0*	*1*	*0*	*0*	*0*	*0*	*1*	
	African Am.	*0*	*0*	*0*	*0*	*0*	*1*		
	Male	*0*	*0*	*0*	*0*	*0*	*1*	*1*	
	Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
	Asian/Pac.	*1*	*0*	*0*	*0*	*0*	*0*		
	Male	*1*	*0*	*0*	*0*	*0*	*0*	*1*	
	Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Totals		6	9	29	15	13	13		85

Table 4-4 Homicide Methods / Gender / KCME / 2016

METHOD	Gender MALE	FEMALE	TOTAL
Asphyxia / Strangulation	0	2	2
Blunt Force	9	3	12
Firearms	51	10	61
Stabbing	5	0	5
Homicidal Violence	0	1	1
Other	3	1	4
Totals	**68**	**17**	**85**
Percent	80%	20%	100%

Table 4-5 Homicide Methods / Blood Alcohol Results / KCME / 2016

METHOD	TESTED POSITIVE	NEGATIVE	NOT TESTED	TOTAL
Asphyxia / Strangulation	1	1	0	2
Blunt Force	1	9	2	12
Firearms	17	44	0	61
Stabbing	2	3	0	5
Homicidal Violence	0	0	1	1
Other	0	3	1	4
Totals	**21**	**60**	**4**	**85**
Percent	25%	74%	1%	100%

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 2016, the King County Medical Examiner's Office assumed jurisdiction over 951 deaths attributed to natural causes, representing 40% (951/2,384) of the cases investigated. The King County Medical Examiner certified 71% (671/951) of these deaths; attending physicians who had knowledge of the decedent's medical condition certified 29% (279/951). 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 74% (498/671) of the deaths certified as natural, which included autopsies performed in 100% (4/4) 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 deaths in which an autopsy was not performed were certified as due to "probable arteriosclerotic cardiovascular disease."

Table 5-1	Disease Processes Causing Natural Deaths / KCME / 2016
NUMBER OF DEATHS	DISEASE DESCRIPTION
	CARDIOVASCULAR
4	Aortic aneurysm
11	Aortic dissection
109	Arteriosclerotic cardiovascular disease (ASCVD)
14	Bacterial endocarditis
7	Cardiac dysrhythmia
26	Cardiomyopathy
1	Congenital heart disease
7	Congestive heart failure
165	Hypertensive ASCVD / Hypertensive heart disease
3	Myocarditis
157	Probable arteriosclerotic cardiovascular disease
10	Valvular heart disease
514	TOTAL CARDIOVASCULAR
	CENTRAL NERVOUS SYSTEM
11	Epilepsy (idiopathic & other non-traumatic etiologies)
4	Infarct
2	Meningitis
9	Spontaneous intracerebral hemorrhage
10	Spontaneous rupture of aneurysm
1	Subarachnoid hemorrhage (unknown etiology)
29	Other
66	TOTAL CENTRAL NERVOUS SYSTEM
	COMPLICATION OF THERAPY (COT)
0	Drug Related COT
5	Procedure Related COT
4	Surgery Related COT
9	TOTAL COMPLICATION OF THERAPY
	ENDOCRINE
9	Diabetic ketoacidosis
13	Diabetes mellitus
0	Pancreatitis
6	Other
28	TOTAL ENDOCRINE

Table 5-1	Disease Processes Causing Natural Deaths / KCME / 2016
NUMBER OF DEATHS	DISEASE DESCRIPTION
	GASTROINTESTINAL
0	Bacterial peritonitis
8	Gastrointestinal hemorrhage
1	Obstruction
5	Perforating ulcer
4	Other
18	TOTAL GASTROINTESTINAL
	HEPATIC
10	Cirrhosis
1	Fatty liver
1	Hepatic failure
5	Hepatitis
17	TOTAL HEPATIC
	MALIGNANCY
2	Breast
6	Colon
16	Lung
3	Pancreas
6	Prostate
28	Other
61	TOTAL MALIGNANCY
	RESPIRATORY
3	Asthma
22	Chronic obstructive pulmonary disease
44	Pneumonia
25	Pulmonary thromboembolus
9	Other
103	TOTAL RESPIRATORY
	SUDDEN INFANT DEATH SYNDROME
4	SIDS

Table 5-1	**Disease Processes Causing Natural Deaths / KCME / 2016** (continued)
NUMBER OF DEATHS	DISEASE DESCRIPTION
	OTHER PROCESSES
68	Chronic ethanolism (alcoholism)
1	Developmental delay
2	HIV / AIDS
9	Infection
2	Labor/delivery/prematurity
16	No anatomic or toxicological cause of death
14	Sepsis
1	Sudden unexplained neonatal death
18	Other
0	Unspecified natural causes
131	TOTAL OTHER PROCESSES
436	TOTAL Non-Cardiovascular Cause of Death
514	TOTAL Cardiovascular Cause of Death
951	**Total NATURAL DEATHS under KCMEO Jurisdiction 2016**

Graph 5-1 Deaths due to Natural Causes / KCME / 2016

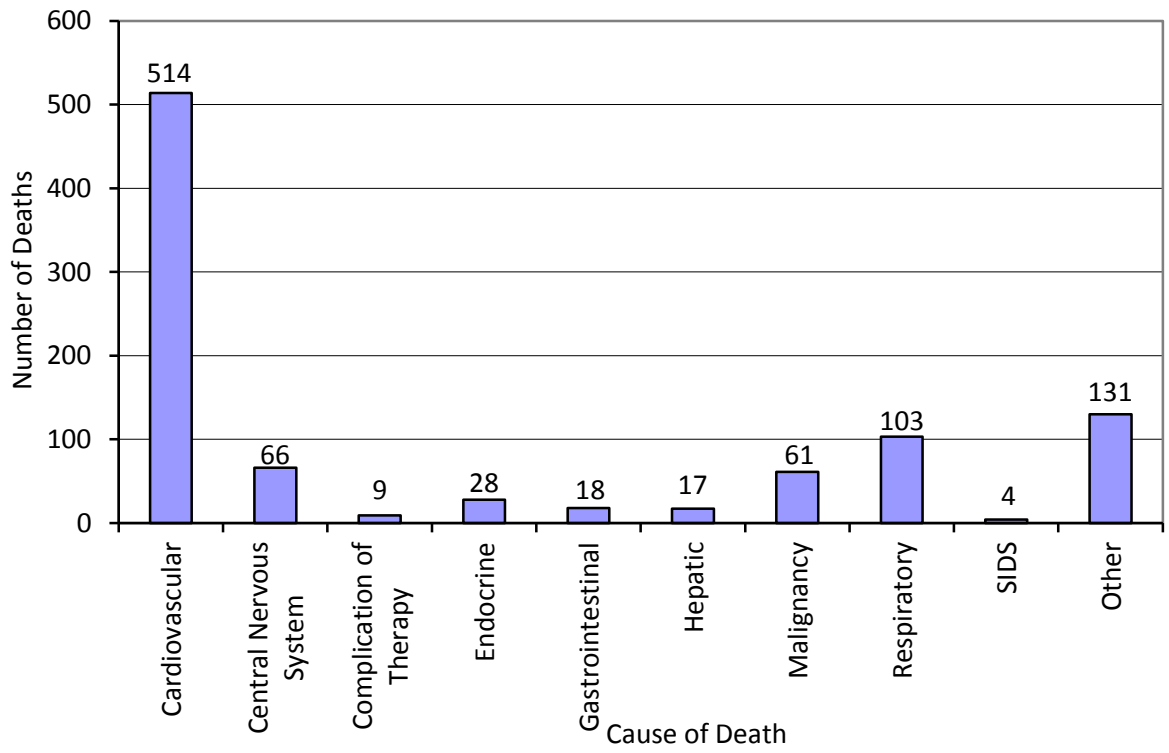
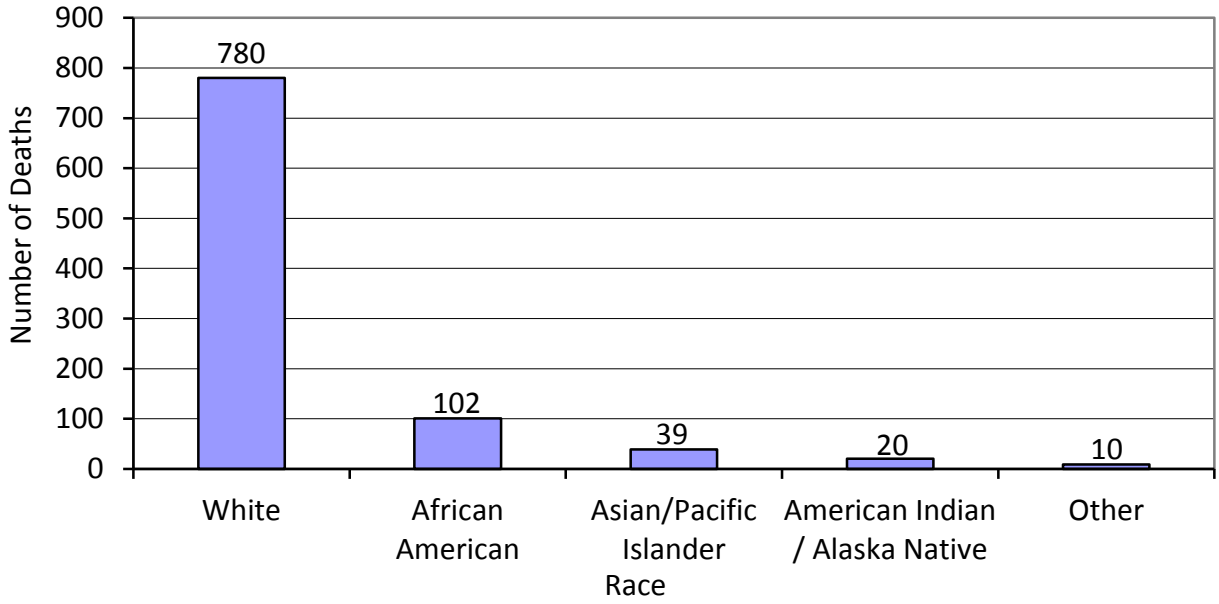


Table 5-2 **Natural Deaths / Race / Gender / KCME / 2016**

DISEASE PROCESS / GENDER	RACE					SUB-TOTAL	TOTAL
	WHITE	AFRIC AMER	ASIAN/ PAC IS	AM INDIAN/ /AK NATIVE	OTHER		
Cardiovascular	432	52	25	2	3		514
Male	*308*	*43*	*13*	*1*	*3*	*368*	
Female	*124*	*9*	*12*	*1*	*0*	*146*	
Central Nervous	51	9	4	2	0		66
Male	*28*	*4*	*3*	*1*	*0*	*36*	
Female	*23*	*5*	*1*	*1*	*0*	*30*	
Complication of Therapy	8	0	0	0	1		9
Male	*4*	*0*	*0*	*0*	*0*	*4*	
Female	*4*	*0*	*0*	*0*	*1*	*5*	
Endocrine	23	4	0	0	1		28
Male	*14*	*4*	*0*	*0*	*1*	*19*	
Female	*9*	*0*	*0*	*0*	*0*	*9*	
Gastrointestinal	16	0	2	0	0		18
Male	*10*	*0*	*2*	*0*	*0*	*12*	
Female	*6*	*0*	*0*	*0*	*0*	*6*	
Hepatic	15	0	1	1	0		17
Male	*14*	*0*	*0*	*0*	*0*	*14*	
Female	*1*	*0*	*1*	*1*	*0*	*3*	
Malignancy	48	12	1	0	0		61
Male	*29*	*10*	*1*	*0*	*0*	*40*	
Female	*19*	*2*	*0*	*0*	*0*	*21*	
Respiratory	81	8	3	8	3		103
Male	*54*	*5*	*2*	*4*	*2*	*67*	
Female	*27*	*3*	*1*	*4*	*1*	*36*	
SIDS	3	0	1	0	0		4
Male	*3*	*0*	*0*	*0*	*0*	*3*	
Female	*0*	*0*	*1*	*0*	*0*	*1*	
Other	103	17	2	7	2		131
Male	*70*	*12*	*1*	*3*	*1*	*87*	
Female	*33*	*5*	*1*	*4*	*1*	*44*	
Totals	**780**	**102**	**39**	**20**	**10**		**951**
Percent	82%	11%	4%	2%	1%		100%

Graph 5-2 Natural Deaths / Race / KCME / 2016



Graph 5-3 Natural Deaths / Age Group / KCME / 2016

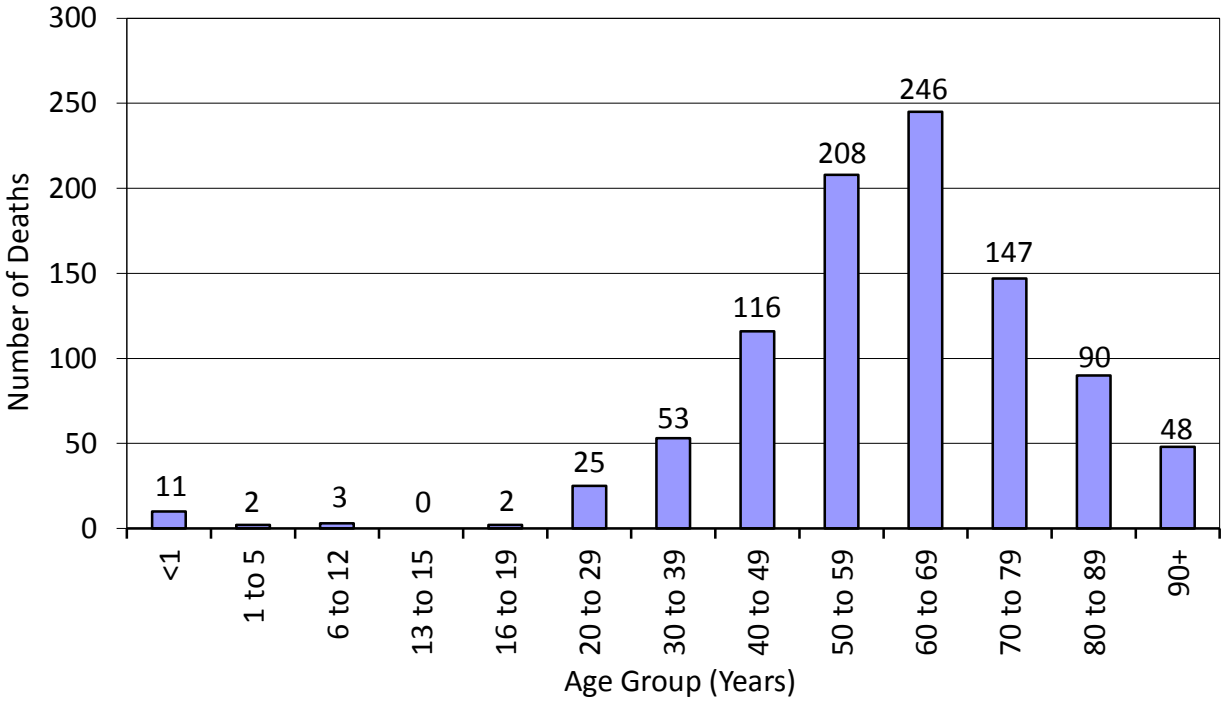


Table 5-3 **Natural Deaths / Age / Gender / KCME / 2016**

DISEASE PROCESS/ GENDER	AGE GROUP (YEARS) < 1	1 to 5	6 to 12	13 to 15	16 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 +	SUB-TOTAL	TOTAL
Cardiovascular	0	0	0	0	0	6	23	50	104	155	91	56	29		514
Male	*0*	*0*	*0*	*0*	*0*	*4*	*18*	*42*	*78*	*127*	*61*	*28*	*10*	*368*	
Female	*0*	*0*	*0*	*0*	*0*	*2*	*5*	*8*	*26*	*28*	*30*	*28*	*19*	*146*	
Central Nervous	1	0	1	0	0	6	6	8	6	11	6	11	10		66
Male	*1*	*0*	*1*	*0*	*0*	*4*	*1*	*5*	*3*	*7*	*3*	*6*	*5*	*36*	
Female	*0*	*0*	*0*	*0*	*0*	*2*	*5*	*3*	*3*	*4*	*3*	*5*	*5*	*30*	
Complication of Therapy	0	0	1	0	0	0	2	1	0	1	1	3	0		9
Male	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*1*	*0*	*1*	*1*	*0*	*0*	*4*	
Female	*0*	*0*	*1*	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*0*	*3*	*0*	*5*	
Endocrine	0	0	0	0	0	1	6	5	4	6	5	0	1		28
Male	*0*	*0*	*0*	*0*	*0*	*1*	*4*	*3*	*3*	*6*	*1*	*0*	*1*	*19*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*2*	*2*	*1*	*0*	*4*	*0*	*0*	*9*	
Gastrointestinal	0	1	0	0	0	0	1	2	4	5	2	0	3		18
Male	*0*	*1*	*0*	*0*	*0*	*0*	*1*	*1*	*3*	*3*	*2*	*0*	*1*	*12*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*1*	*2*	*0*	*0*	*2*	*6*	
Hepatic	0	0	0	0	1	0	0	1	6	6	2	1	0		17
Male	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*6*	*4*	*2*	*1*	*0*	*14*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*2*	*0*	*0*	*0*	*3*	
Malignancy	0	0	0	0	0	1	0	5	13	18	18	4	2		61
Male	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*3*	*11*	*11*	*11*	*2*	*1*	*40*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*2*	*2*	*7*	*7*	*2*	*1*	*21*	
Respiratory	2	0	1	0	0	5	5	14	21	24	16	13	2		103
Male	*1*	*0*	*0*	*0*	*0*	*1*	*3*	*9*	*18*	*13*	*14*	*7*	*1*	*67*	
Female	*1*	*0*	*1*	*0*	*0*	*4*	*2*	*5*	*3*	*11*	*2*	*6*	*1*	*36*	
SIDS	4	0	0	0	0	0	0	0	0	0	0	0	0		4
Male	*3*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*3*	
Female	*1*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	
Other	4	1	0	0	1	6	10	30	50	20	6	2	1		131
Male	*2*	*0*	*0*	*0*	*0*	*4*	*6*	*19*	*37*	*15*	*3*	*1*	*0*	*87*	
Female	*2*	*1*	*0*	*0*	*1*	*2*	*4*	*11*	*13*	*5*	*3*	*1*	*1*	*44*	
Totals	**11**	**2**	**3**	**0**	**2**	**25**	**53**	**116**	**208**	**246**	**147**	**90**	**48**		**951**
Percent	1.1%	0.2 %	.03%	0%	0.2%	2.6%	5.6%	12.2%	21.9%	25.8%	15.5%	9.5%	5.1%		**100%**

Table 5-4 **Natural Deaths / Gender / KCME / 2016**

CIRCUMSTANCES	GENDER		TOTAL
	MALE	FEMALE	
Cardiovascular	368	146	514
Central Nervous	36	30	66
Complication of Therapy	4	5	9
Endocrine	19	9	28
Gastrointestinal	12	6	18
Hepatic	14	3	17
Malignancy	40	21	61
Respiratory	67	36	103
SIDS	3	1	4
Other	87	44	131
Totals	**650**	**301**	**951**
Percent	68%	32%	100%

Table 5-5 **Natural Deaths / Blood Alcohol Results / KCME / 2016**

METHOD	TESTED		NOT TESTED	TOTAL
	POSITIVE	NEGATIVE		
Cardiovascular	52	251	211	514
Central Nervous System	1	31	34	66
Complication of Therapy	0	2	7	9
Endocrine	1	10	17	28
Gastrointestinal	2	8	8	18
Hepatic	0	6	11	17
Malignancy	1	12	48	61
Respiratory	5	40	58	103
SIDS	0	4	0	4
Other	28	60	43	131
Totals	**90**	**424**	**437**	**951**
Percent	9.5%	44.6%	45.9%	100%

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 2016, there were 285 suicides, accounting for 12% (285/2,384) of the deaths that the King County Medical Examiner's Office investigated.

In 2016, 5% of all suicides (15/285) were among persons 19 years and younger which is less than in 2015 when there were 17 suicides in this age group. Suicides in the age group 60 years and older represented 27% (73/285) of all suicides in 2016.

Firearms were responsible for 40% (114/285) of the 2016 suicide deaths, 5 more than in 2015 when there were 109. Hanging accounted for 25% (70/285) of suicidal deaths, while jumping from a height accounted for 7.7% (22/285). Drugs and poisons accounted for 14% (40/285) of all suicides, while carbon monoxide caused death in 2% (5/285) of the cases. More information regarding drug-caused deaths is presented in the section "Deaths Due to Drugs & Poisons" beginning on page 89.

While firearms were the primary method of committing suicide for all age groups. In the 19 years and younger age group, firearms represented 40% (6/15) of the deaths while hanging also represented 40% (6/15) of the deaths.

Blood alcohol tests were performed in 93% (266/285) of suicidal deaths and were positive in 29% (76/266) of cases tested.

In 2016, there were eleven deaths due to drugs and/or poisons by adults 60 years of age and over. In 2016, there was one suicide attributed to drugs and/or poisons among youths 19 years and younger. In 2015, there were no deaths from drug and/or poisons in this age group.

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.[13]

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.

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

Graph 6-1 Suicide Injury Methods / KCME / 2016

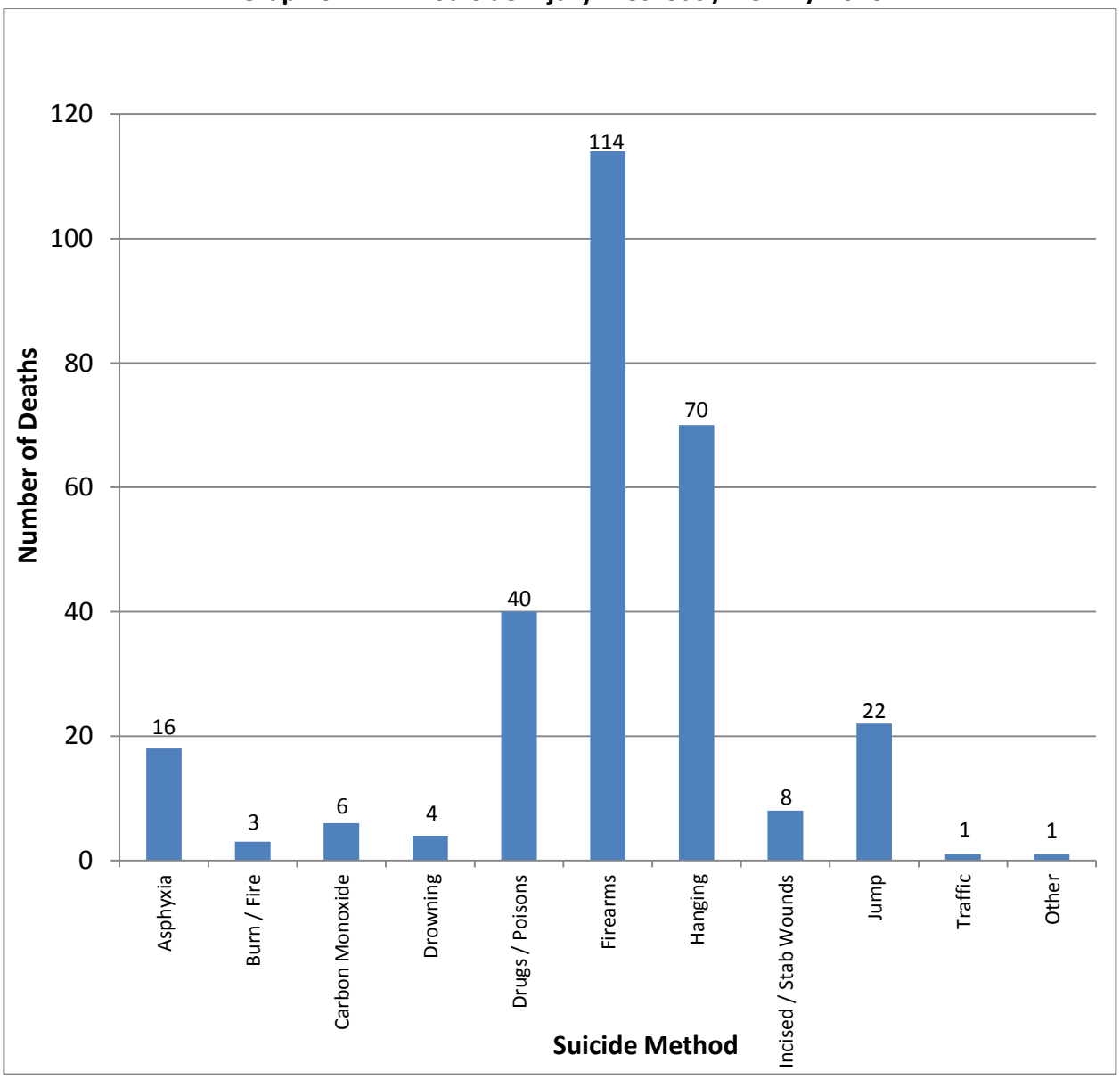
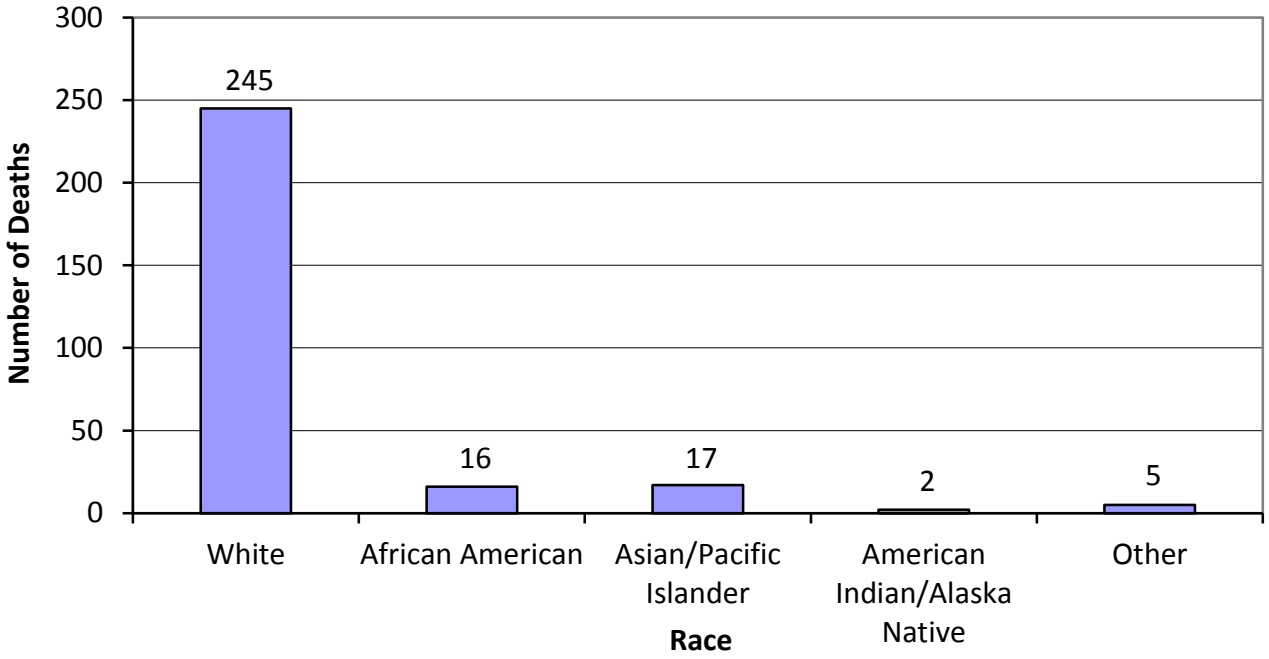


Table 6-1 **Suicide Injury Methods / Race / Gender / KCME / 2016**

CIRCUMSTANCES / GENDER	RACE					SUB-TOTAL	TOTAL
	WHITE	AFRIC AMER	ASIAN/ PAC IS	AM INDIAN/ AK NATIVE	OTHER		
Asphyxia	15	0	1	0	0		16
Male	10	0	1	0	0	11	
Female	5	0	0	0	0	5	
Burns / Fire	2	0	1	0	0		3
Male	2	0	0	0	0	2	
Female	0	0	1	0	0	1	
Carbon Monoxide	5	1	0	0	0		6
Male	4	1	0	0	0	5	
Female	1	0	0	0	0	1	
Drowning	2	0	1	0	1		4
Male	2	0	0	0	1	3	
Female	0	0	1	0	0	1	
Drugs / Poisons	35	3	2	0	0		40
Male	17	2	2	0	0	21	
Female	18	1	0	0	0	19	
Firearms	102	6	5	0	1		114
Male	92	6	4	0	1	103	
Female	10	0	1	0	0	11	
Hanging	58	2	6	1	3		70
Male	50	1	5	0	2	58	
Female	8	1	1	1	1	12	
Incised / Stab Wound(s)	7	0	0	1	0		8
Male	5	0	0	1	0	6	
Female	2	0	0	0	0	2	
Jumping	17	4	1	0	0		22
Male	12	3	1	0	0	16	
Female	5	1	0	0	0	6	
Traffic	1	0	0	0	0		1
Male	1	0	0	0	0	1	
Female	0	0	0	0	0	0	
Other	1	0	0	0	0		1
Male	1	0	0	0	0	1	
Female	0	0	0	0	0	0	
Totals	245	16	17	2	5		285
Percent	86%	5.6%	6%	0.7%	1.7%		100%

Graph 6-2 Suicide Deaths / Race / KCME / 2016



Graph 6-3 Suicide Deaths / Age Group / KCME / 2016

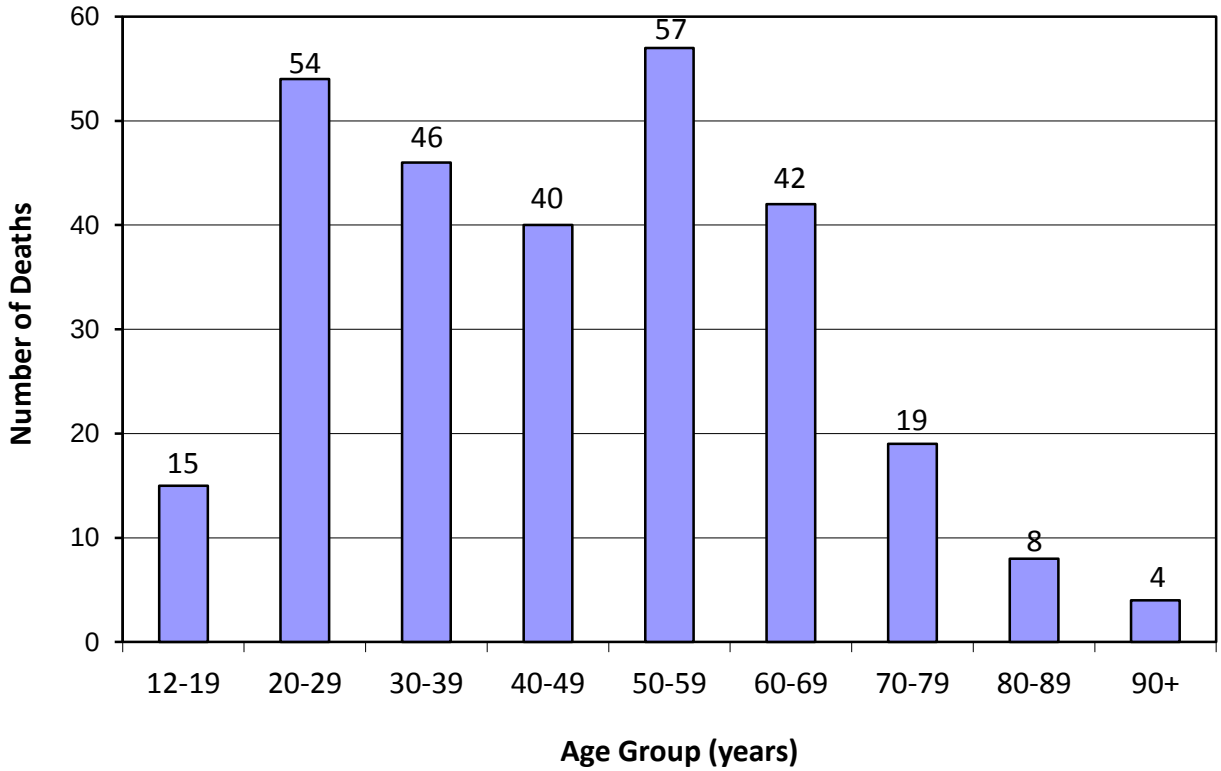


Table 6-2 **Suicide Injury Methods / Age / Gender / KCME / 2016**

INJURY METHOD/ GENDER	AGE GROUP (YEARS) 12 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 +	SUB-TOTAL	TOTAL
Asphyxia	2	4	1	1	4	3	0	1	0		16
Male	*1*	*4*	*1*	*1*	*3*	*1*	*0*	*0*	*0*	*11*	
Female	*1*	*0*	*0*	*0*	*1*	*2*	*0*	*1*	*0*	*5*	
Burns / Fire	0	1	1	0	0	0	0	0	0		3
Male	*0*	*1*	*1*	*0*	*0*	*0*	*0*	*0*	*0*	*2*	
Female	*0*	*0*	*1*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	
Carbon Monoxide	0	1	1	1	2	1	0	0	0		6
Male	*0*	*1*	*1*	*0*	*2*	*1*	*0*	*0*	*0*	*5*	
Female	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*0*	*0*	*1*	
Drowning	0	1	0	0	1	2	0	0	0		4
Male	*0*	*1*	*0*	*0*	*1*	*1*	*0*	*0*	*0*	*3*	
Female	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*1*	
Drugs / Poisons	1	4	7	5	12	8	3	0	0		40
Male	*0*	*2*	*3*	*4*	*6*	*5*	*1*	*0*	*0*	*21*	
Female	*1*	*2*	*4*	*1*	*6*	*3*	*2*	*0*	*0*	*19*	
Firearms	6	17	20	13	20	16	12	6	4		114
Male	*5*	*16*	*18*	*11*	*19*	*13*	*12*	*5*	*4*	103	
Female	*1*	*1*	*2*	*2*	*1*	*3*	*0*	*1*	*0*	*11*	
Hanging	6	17	13	11	12	9	2	0	0		70
Male	*4*	*15*	*10*	*11*	*10*	*6*	*2*	*0*	*0*	*58*	
Female	*2*	*2*	*3*	*0*	*2*	*3*	*0*	*0*	*0*	*12*	
Incised / Stab Wound(s)	0	2	0	3	0	2	1	0	0		8
Male	*0*	*2*	*0*	*2*	*0*	*1*	*1*	*0*	*0*	*6*	
Female	*0*	*0*	*0*	*1*	*0*	*1*	*0*	*0*	*0*	*2*	
Jumping	0	5	2	6	6	1	1	1	0		22
Male	*0*	*5*	*0*	*4*	*4*	*1*	*1*	*1*	*0*	*16*	
Female	*0*	*0*	*2*	*2*	*2*	*0*	*0*	*0*	*0*	*6*	
Traffic	0	1	0	0	0	0	0	0	0		1
Male	*0*	*1*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Other	0	1	0	0	0	0	0	0	0		1
Male	0	1	0	0	0	0	0	0	0	1	
Female	0	0	0	0	0	0	0	0	0	0	
Totals	**15**	**54**	**46**	**40**	**57**	**42**	**19**	**8**	**4**		**285**

Percent	5.3%	19%	16.1%	14%	20%	14.7%	6.7%	2.8%	1.4%	100%

Table 6-3 Suicide Injury Methods / Gender / KCME / 2016

INJURY METHOD	GENDER		TOTAL
	MALE	FEMALE	
Asphyxia	11	5	16
Burns/ Fire	2	1	3
Carbon Monoxide	5	1	6
Drowning	3	1	4
Drugs / Poisons	21	19	40
Firearms	103	11	114
Hanging	58	12	70
Incised / Stab Wound(s)	6	2	8
Jumping	16	6	22
Traffic	1	0	1
Other	1	0	1
Totals	**227**	**58**	**285**
Percent	80%	20%	100%

Table 6-5 Suicide Injury Methods / Blood Alcohol / KCME / 2016

METHOD	TESTED		NOT TESTED	TOTAL
	POSITIVE	NEGATIVE		
Asphyxia	4	12	0	16
Burns/ Fire	1	1	1	3
Carbon Monoxide	2	4	0	6
Drowning	1	3	0	4
Drugs / Poisons	12	25	3	40
Firearms	30	72	12	114
Hanging	24	43	3	70
Incised / Stab Wound(s)	1	7	0	8
Jumping	1	21	0	22
Other	0	1	0	1
Traffic	0	1	0	1
Totals	**76**	**190**	**19**	**285**
Percent	27%	67%	6%	100%

Manner of death: Undetermined

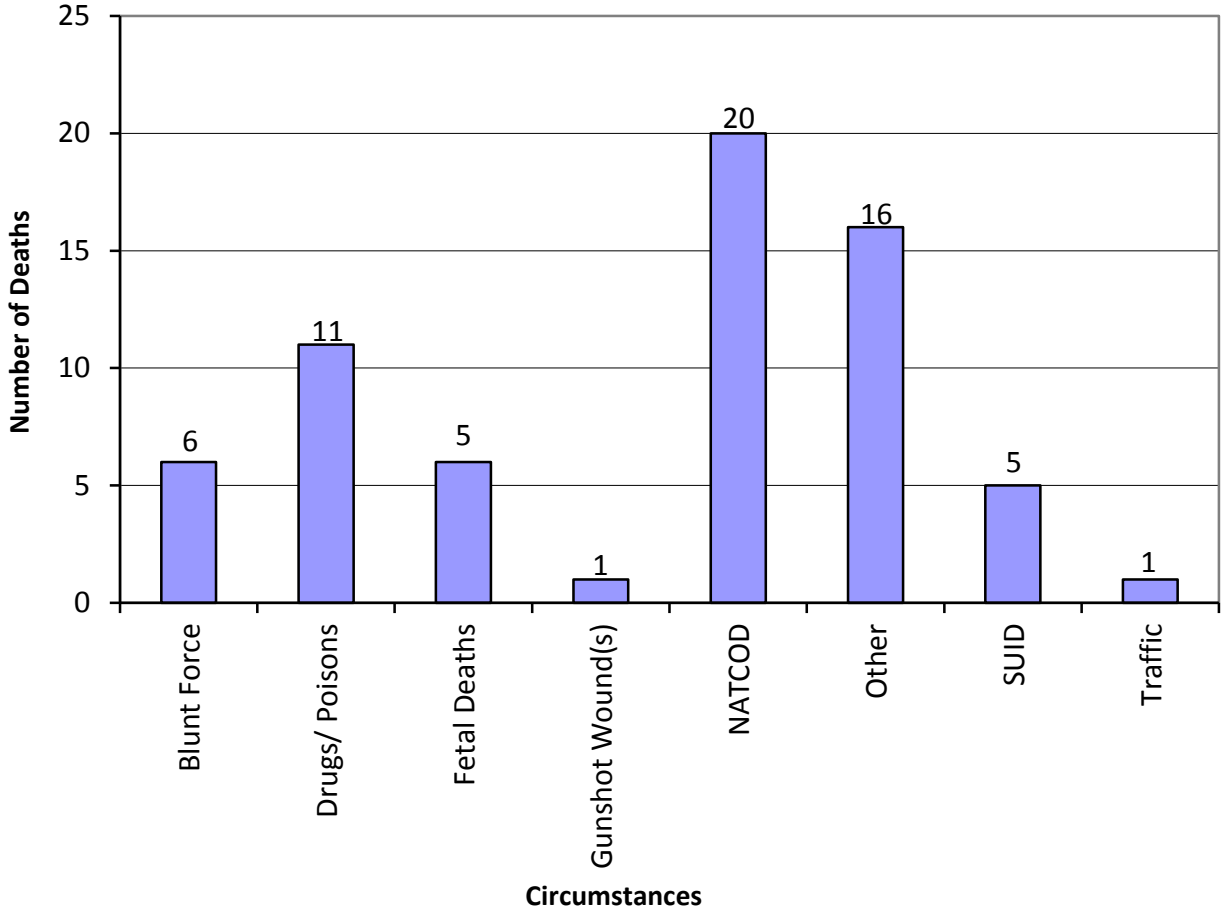
The King County Medical Examiner's Office certifies a manner of death as undetermined when available information regarding the circumstances of death is insufficient to classify the death into one of the specific manners of natural or unnatural (Accident, Homicide or Suicide) death. In some cases, serious 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 65 deaths with manner undetermined, accounting for 2.7% (65/2,384) of the deaths investigated in 2016. Drugs and poisons caused 16.9% (11/65) of the deaths classified as undetermined. For a more detailed review of drug-caused deaths in 2016, see the discussion in the section on Drugs and Poisons on pages 74 and 75.

The 65 deaths that were classified as undetermined for 2016 included 5 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 5 fetal deaths in 2016, four were related to maternal drug abuse.

Although there were none in 2016, Sudden Unexplained Neonatal Death (SUND) cases, can be included in the Sudden Unexplained Infant Death (SUID) statistics. An infant is defined as a newborn that is only hours, days, or up to a few weeks old. In medical contexts, neonate refers to an infant that is in the first 28 days after birth whether premature, postmature or full term.

Graph 7-1 Undetermined Manner of Death[14] / KCME / 2016

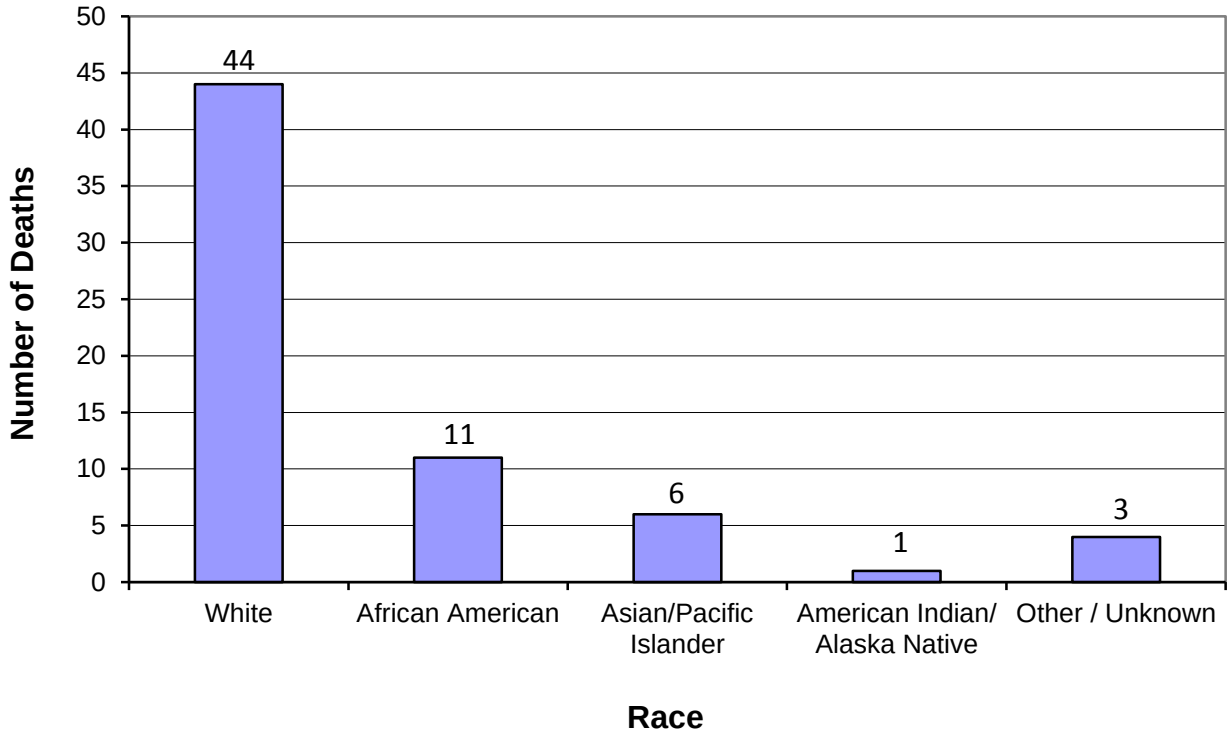


[14]NATCOD is an abbreviation for "no anatomic or toxicological cause of death," and refers to deaths in which full autopsies and toxicological analyses (if relevant) fail to identify an adequate cause of death.

Table 7-1 Undetermined Manner of Death / Race / Gender / KCME / 2016

CIRCUMSTANCES / GENDER	RACE: WHITE	AFRIC AMER	ASIAN/ PAC IS	AM INDIAN/ AK NATIVE	OTHER / UNK	SUB-TOTAL	TOTAL
Blunt Force	6	0	0	0	0		6
Male	*5*	*0*	*0*	*0*	*0*	*5*	
Female	*1*	*0*	*0*	*0*	*0*	*1*	
Drugs / Poisons	10	1	0	0	0		11
Male	*3*	*1*	*0*	*0*	*0*	*4*	
Female	*7*	*0*	*0*	*0*	*0*	*7*	
Fetal Deaths	2	3	0	0	1		6
Male	*2*	*1*	*0*	*0*	*1*	*4*	
Female	*0*	*2*	*0*	*0*	*0*	*2*	
Gunshot Wound(s)	1	0	0	0	0		1
Male	*0*	*0*	*0*	*0*	*0*	*0*	
Female	*1*	*0*	*0*	*0*	*0*	*1*	
No Anatomic or Toxicological Cause of Death	15	2	2	0	1		20
Male	*11*	*2*	*2*	*0*	*1*	*16*	
Female	*4*	*0*	*0*	*0*	*0*	*4*	
Other	7	4	3	1	0		15
Male	*4*	*4*	*2*	*1*	*0*	*11*	
Female	*3*	*0*	*1*	*0*	*0*	*4*	
SUID	2	1	1	0	1		5
Male	*0*	*1*	*0*	*0*	*1*	*2*	
Female	*2*	*0*	*1*	*0*	*0*	*3*	
Traffic	1	0	0	0	0		1
Male	*1*	*0*	*0*	*0*	*0*	*1*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	
Totals	**44**	**11**	**6**	**1**	**3**		**65**
Percent	68%	17%	9%	1.5%	4.5%		100%

Graph 7-2 Undetermined Manner / Race / KCME / 2016



Graph 7-3 Undetermined Manner / Age Group / KCME / 2016

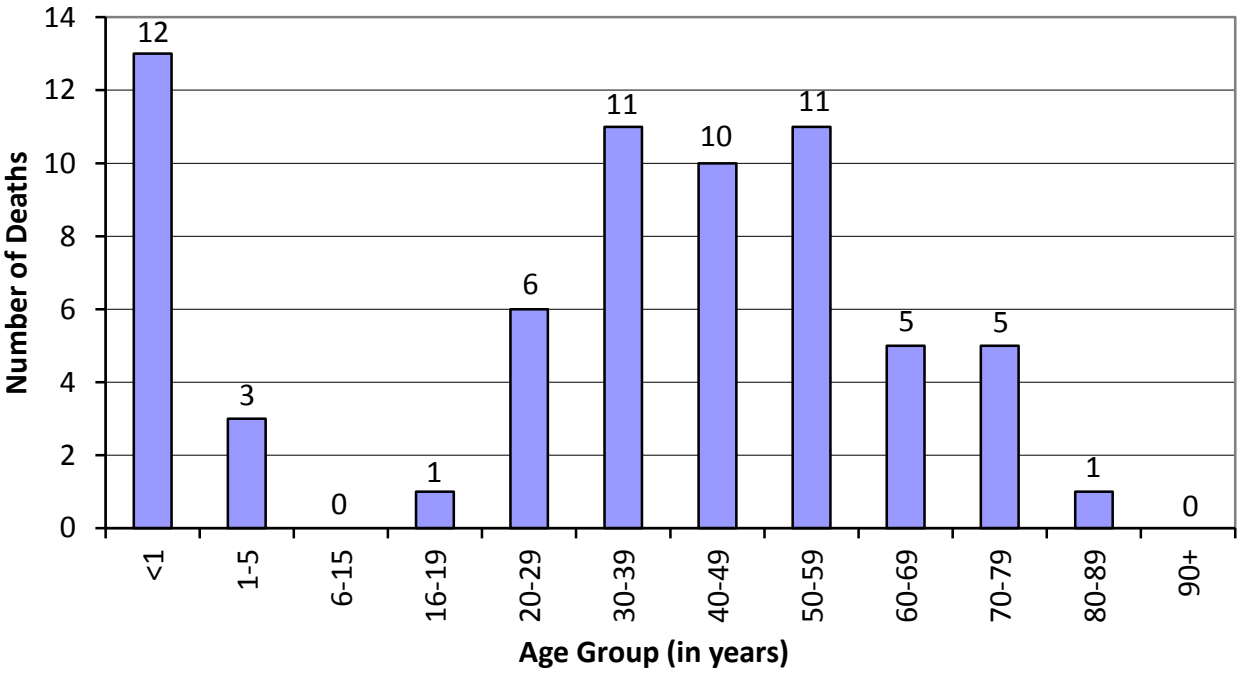


Table 7-2 Undetermined Circumstances / Age / Gender / KCME / 2016

INJURY METHOD / GENDER	AGE GROUP (YEARS) <1	1 to 5	6 to 15	16 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 +	SUB-TOTAL	TOTAL
Blunt Force	0	0	0	0	0	3	0	3	0	0	0	0		6
Male	*0*	*0*	*0*	*0*	*0*	*2*	*0*	*3*	*0*	*0*	*0*	*0*	*5*	
Female	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	
Drugs / Poisons	0	0	0	0	0	3	4	1	2	1	0	0		11
Male	*0*	*0*	*0*	*0*	*0*	*2*	*1*	*0*	*1*	*0*	*0*	*0*	*4*	
Female	*0*	*0*	*0*	*0*	*0*	*1*	*3*	*1*	*1*	*1*	*0*	*0*	*7*	
Fetal Deaths	5	0	0	0	0	0	0	0	0	0	0	0		5
Male	*3*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	3	
Female	*2*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	2	
Gunshot Wound(s)	0	0	0	1	0	0	0	0	0	0	0	0		1
Male	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Female	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	
No anatomic or toxicological cause of death	1	1	0	0	2	3	5	5	2	1	0	0		20
Male	*1*	*1*	*0*	*0*	*2*	*3*	*4*	*2*	*2*	*1*	*0*	*0*	*16*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*3*	*0*	*0*	*0*	*0*	*4*	
Other	1	2	0	0	4	1	1	2	1	3	1	0		16
Male	*1*	*2*	*0*	*0*	*4*	*1*	*1*	*1*	*0*	*2*	*0*	*0*	*12*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*1*	*1*	*1*	*0*	*4*	
SUID	5	0	0	0	0	0	0	0	0	0	0	0		5
Male	*2*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	2	
Female	*3*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	3	
Traffic	0	0	0	0	0	1	0	0	0	0	0	0		1
Male	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Totals	**12**	**3**	**0**	**1**	**6**	**11**	**10**	**11**	**5**	**5**	**1**	**0**		**65**
Percent	18.6%	4.6%	0%	1.5%	9.2%	16.9%	15.4%	16.9%	7.7%	7.7%	1.5%	0%		100%

Table 7-3 **Undetermined Manner / Gender / KCME / 2016**

INJURY METHOD	GENDER		TOTAL
	MALE	FEMALE	
Blunt Force	5	1	6
Drugs / Poisons	4	7	10
Fetal Deaths	3	2	6
Gunshot Wound(s)	0	1	1
No Anatomic or Toxicological Cause of Death	16	4	20
Other	12	4	16
SUID	2	3	5
Traffic	1	0	1
Totals	**43**	**22**	**65**
Percent	66.2%	33.8%	100%

Table 7-4 **Undetermined Manner / Blood Alcohol Results / KCME / 2016**

INJURY METHOD	TESTED		NOT TESTED	TOTAL
	POSITIVE	NEGATIVE		
Blunt Force	1	5	0	6
Drugs / Poisons	1	9	1	11
Fetal Deaths	0	5	0	5
Gunshot Wounds(s)	0	0	1	1
No Anatomic or Toxicological Cause of Death	2	14	4	20
Other	3	8	5	16
SUID	0	5	0	5
Traffic	0	1	0	1
Totals	7	47	11	65
Percent	11%	72%	17%	100%

Traffic deaths

During the calendar year 2016, the Medical Examiner's Office participated in the investigation of 166 traffic fatalities. In 65% (108/166) of the traffic deaths, the collisions occurred in King County, compared to 70% (118/168) of the collisions in 2015. In 2016, 28% (47/166) 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, primarily Harborview Medical Center. Because the deaths occurred in King County, it falls 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 2016, 37% (62/166) of the traffic fatalities were motor vehicle drivers. Teenage drivers (16-19 years of age) were 3% (2/62) of the driver deaths in 2016 and 7% (4/55) in 2015. By age, 16% of vehicle driver deaths (10/62) were people between the ages of 20 and 29. 8% of driver deaths (5/62) were adults between the ages of 30 and 39. 18% (11/62) were adults between the ages of 40 and 49. Male drivers represented 73% (45/62) of driver deaths and female drivers represented 26% of driver deaths (17/62).

Of the 166 traffic fatalities in 2016, 23 were motor vehicle passengers, representing 14% of the total (23/166). In 2016, teenagers (13-19 years old) accounted for 4 motor vehicle passenger deaths. There were no passenger deaths of infants (less than one year of age), one vehicle passenger death of a child between the ages of 1-5 years, and one death of child between the ages of 6-12 years.

Blood ethanol (alcohol) statistics are presented to describe the role of alcohol in traffic deaths. 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.[15] Therefore, blood alcohol figures presented in this report are not a total description of the role of alcohol in traffic collisions.

Of cases in which seatbelt restraint status was known (41/62), 15% (6/41) of drivers in vehicle deaths were not restrained. The figures for drivers not wearing seatbelts for the previous three years are: 42% (23/55) in 2015, 40% (19/47) in 2014, and 26% (9/34) in 2013.

Motorcycle riders accounted for 16% (26/166) of traffic fatalities. In 2016, there were 24 motorcycle driver fatalities and 2 motorcycle passenger fatalities. Twenty two of the motorcycle driver deaths were male and 2 were female. Of the 26 motorcycle fatalities, 88% (23/26) of the motorcyclists were wearing a helmet; and 12% (3/26) were not using a helmet at the time of the collision. Nineteen of the motorcyclist fatalities were tested for the presence of blood alcohol. 6, or 32% (6/19), had a detectable amount of alcohol at the time of autopsy.

[15] See "Explanation of Data" for criteria for blood alcohol testing, page 6.

Pedestrians constituted 24% (40/166) of traffic fatalities. The majority of pedestrian deaths, 58% (23/40), were male. Of the pedestrian fatalities that were tested, 24% (8/33) had detectable amounts of alcohol present in their blood at the time of death.

There were 8 bicyclist deaths in 2016; 6 were riders wearing a helmet, 2 were not wearing a helmet. Five of the bicyclist fatalities were tested and two of them had a detectable amount of alcohol present in his/her blood at the time of death.

Graph 8-1 Traffic Fatality Circumstances / KCME / 2016

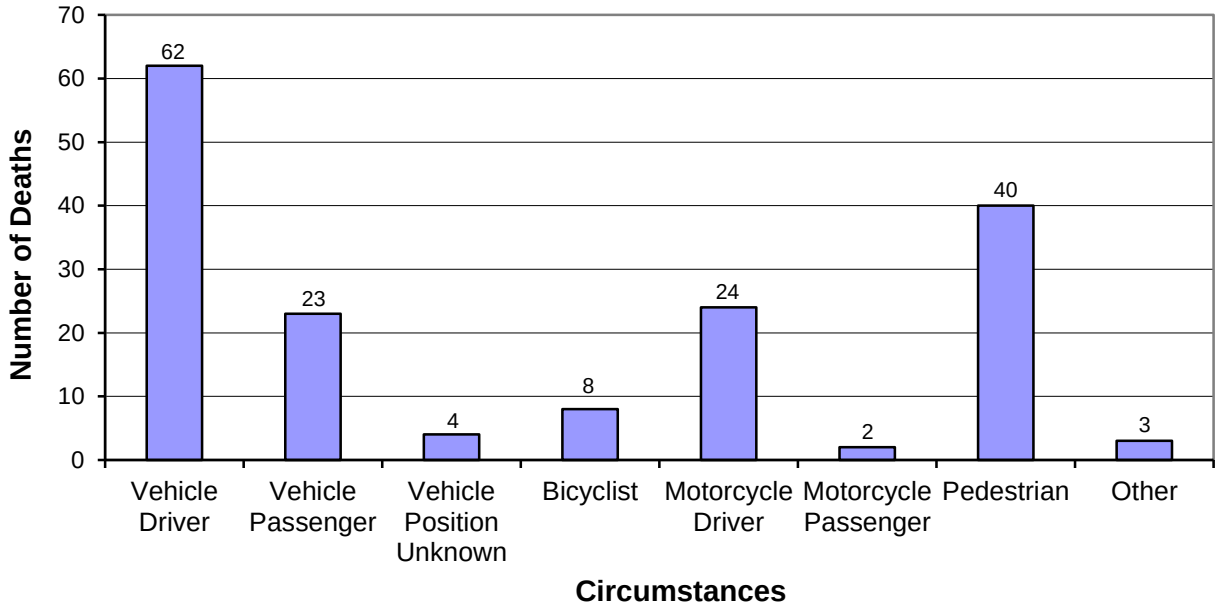
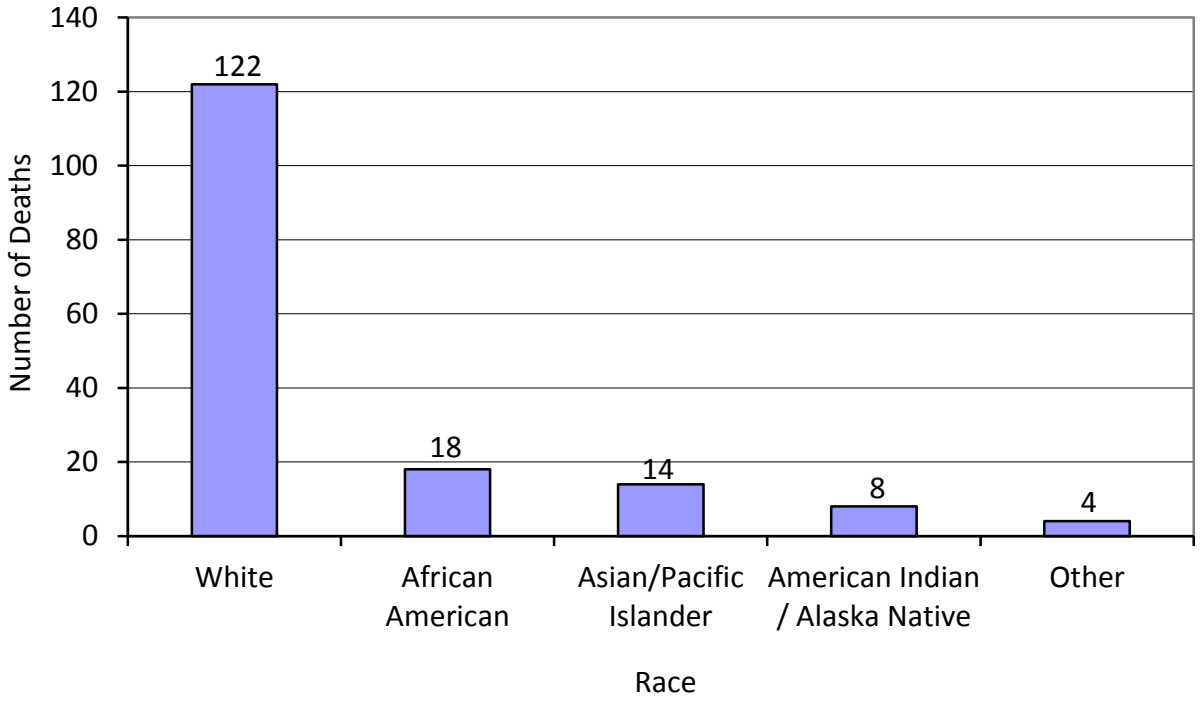


Table 8-1 Traffic Fatality Circumstances / Race / Gender / KCME / 2016

CIRCUMSTANCES / GENDER	RACE					SUB-TOTAL	TOTAL
	WHITE	AFRICAN AMER	ASIAN/ PAC IS	AM INDIAN /AK NATIVE	OTHER		
Vehicle Driver	47	11	4	0	0		62
Male	*32*	*9*	*4*	*0*	*0*	*45*	
Female	*15*	*2*	*0*	*0*	*0*	*17*	
Vehicle Passenger	15	3	2	3	0		23
Male	*8*	*1*	*2*	*2*	*0*	*13*	
Female	*7*	*2*	*0*	*1*	*0*	*10*	
Vehicle Unknown Position	4	0	0	0	0		4
Male	*2*	*0*	*0*	*0*	*0*	*2*	
Female	*2*	*0*	*0*	*0*	*0*	*2*	
Bicycle	8	0	0	0	0		8
Male	*5*	*0*	*0*	*0*	*0*	*5*	
Female	*3*	*0*	*0*	*0*	*0*	*3*	
Motorcycle Driver	20	1	2	0	1		24
Male	*18*	*1*	*2*	*0*	*1*	*22*	
Female	*2*	*0*	*0*	*0*	*0*	*2*	
Motorcycle Passenger	2	0	0	0	0		2
Male	*0*	*0*	*0*	*0*	*0*	*0*	
Female	*2*	*0*	*0*	*0*	*0*	*2*	
Pedestrian	24	3	6	4	3		40
Male	*15*	*3*	*2*	*1*	*2*	*23*	
Female	*9*	*0*	*4*	*3*	*1*	*17*	
Other	2	0	0	1	0		3
Male	*1*	*0*	*0*	*1*	*0*	*2*	
Female	*1*	*0*	*0*	*0*	*0*	*1*	
Totals	**122**	**18**	**14**	**8**	**4**		**166**
Percent	74%	11%	8%	5%	2%		100%

Graph 8-2 Traffic Fatalities / Race / KCME / 2016



Graph 8-3 Traffic Fatalities / Age / KCME / 2016

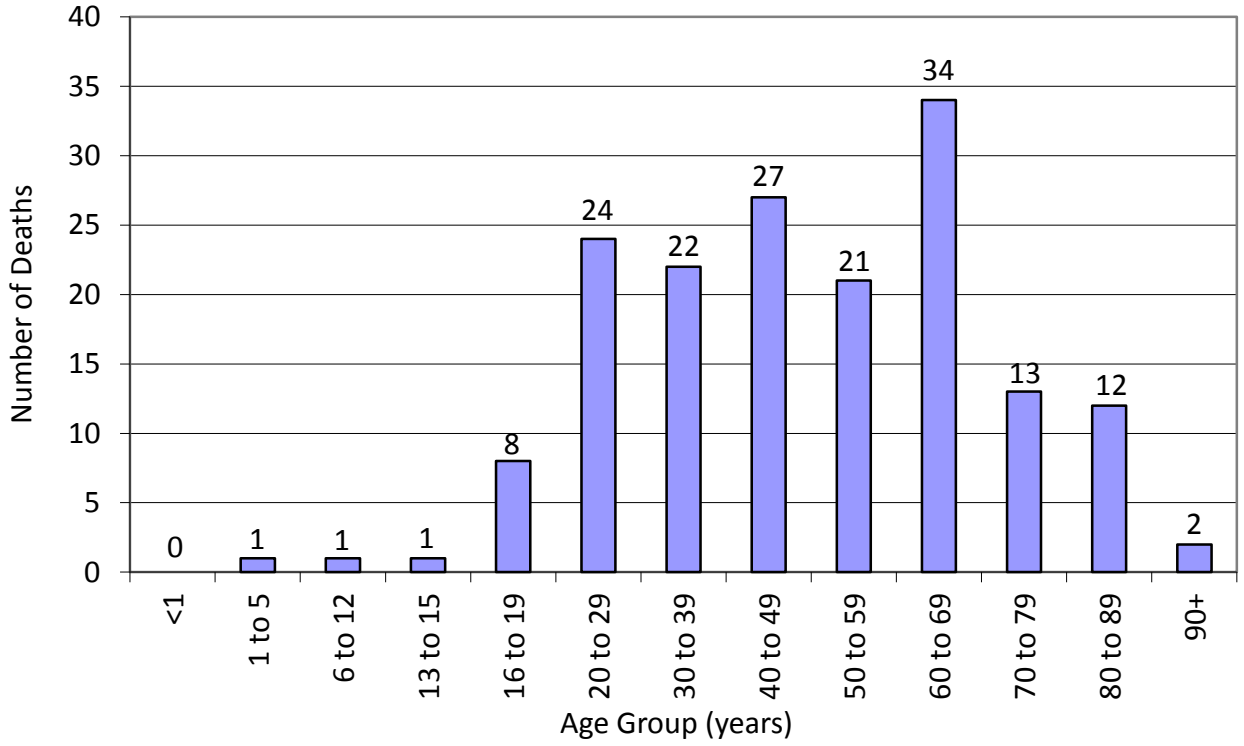


Table 8-2 Traffic Fatality Circumstances / Age / Gender / KCME / 2016

Circumstances/Gender	AGE GROUP (YEARS)													SUB-TOTAL	TOTAL
	< 1	**1 to 5**	**6 to 12**	**13 to 15**	**16 to 19**	**20 to 29**	**30 to 39**	**40 to 49**	**50 to 59**	**60 to 69**	**70 to 79**	**80 to 89**	**90 +**		
Vehicle Driver	0	0	0	0	2	10	5	11	9	13	5	6	1		62
Male	*0*	*0*	*0*	*0*	*1*	*7*	*3*	*8*	*7*	*10*	*5*	*3*	*1*	*45*	
Female	*0*	*0*	*0*	*0*	*1*	*3*	*2*	*3*	*2*	*3*	*0*	*3*	*0*	*17*	
Vehicle Passenger	0	1	1	1	2	5	4	4	1	2	1	1	0		23
Male	*0*	*1*	*1*	*0*	*1*	*3*	*4*	*2*	*0*	*0*	*1*	*0*	*0*	*13*	
Female	*0*	*0*	*0*	*1*	*1*	*2*	*0*	*2*	*1*	*2*	*0*	*1*	*0*	*10*	
Vehicle Position Unknown	0	0	0	0	0	1	1	0	0	2	0	0	0		4
Male	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*2*	*0*	*0*	*0*	*2*	
Female	*0*	*0*	*0*	*0*	*0*	*1*	*1*	*0*	*0*	*0*	*0*	*0*	*0*	*2*	
Bicyclist	0	0	0	0	0	2	1	2	3	0	0	0	0		8
Male	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*1*	*3*	*0*	*0*	*0*	*0*	*5*	
Female	*0*	*0*	*0*	*0*	*0*	*2*	*0*	*1*	*0*	*0*	*0*	*0*	*0*	*3*	
Motorcycle Driver	0	0	0	0	1	4	6	5	1	6	1	0	0		24
Male	*0*	*0*	*0*	*0*	*1*	*4*	*5*	*5*	*1*	*5*	*1*	*0*	*0*	*22*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*1*	*0*	*0*	*0*	*2*	
Motorcycle Passenger	0	0	0	0	0	0	1	0	0	1	0	0	0		2
Male	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*1*	*0*	*0*	*0*	*2*	
Pedestrian	0	0	0	0	3	2	4	5	7	8	6	4	1		40
Male	*0*	*0*	*0*	*0*	*3*	*2*	*2*	*3*	*2*	*4*	*3*	*3*	*1*	*23*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*2*	*2*	*5*	*4*	*3*	*1*	*0*	*17*	
Other	0	0	0	0	0	0	0	0	0	2	0	1	0		3
Male	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*1*	*0*	*2*	
Female	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*1*	
Totals	**0**	**1**	**1**	**1**	**8**	**24**	**22**	**27**	**21**	**34**	**13**	**12**	**2**		**166**
Percent	0%	1%	1%	1%	5%	14%	13%	16%	13%	20%	8%	7%	1%		100%

Table 8-3 Traffic Fatality Circumstances / Gender / KCME / 2016

CIRCUMSTANCES	GENDER		TOTAL
	MALE	FEMALE	
Vehicle Driver	45	17	62
Vehicle Passenger	13	10	23
Vehicle Position Unknown	2	2	4
Bicyclist	5	3	8
Motorcycle Driver	22	2	24
Motorcycle Passenger	0	2	2
Pedestrian	23	17	40
Other Mode	2	1	3
Totals	**112**	**54**	**166**
Percent	67%	33%	100%

Table 8-4 Traffic Fatality Circumstances / Use of Restraint / Helmet / KCME / 2016[2]

CIRCUMSTANCES	Used Safety Device	No Safety Device Used	Unknown	TOTAL
Vehicle Driver	35	6	21	62
Vehicle Passenger	11	6	6	23
Bicyclist	6	2	0	8
Motorcycle Driver	21	3	0	24
Motorcycle Passenger	2	0	0	2
Totals	**75**	**17**	**27**	**119**
Percent	63%	`14%	23%	100%

Table 8-5 Traffic Fatality Circumstances / Blood Alcohol Results / KCME / 2016

CIRCUMSTANCES	TESTED		NOT TESTED	TOTAL
	POSITIVE	NEGATIVE		
Vehicle Driver	11	39	12	62
Vehicle Passenger	3	11	9	23
Vehicle Position Unknown	0	2	2	4
Bicyclist	2	3	3	8
Motorcycle Driver	6	11	7	24
Motorcycle Passenger	0	2	0	2
Pedestrian	8	25	7	40
Other Mode	0	1	2	3
Totals	**30**	**94**	**42**	**166**
Percent	18%	57%	25%	100%

Graph 8-4 Blood Alcohol Results / KCME / 2016

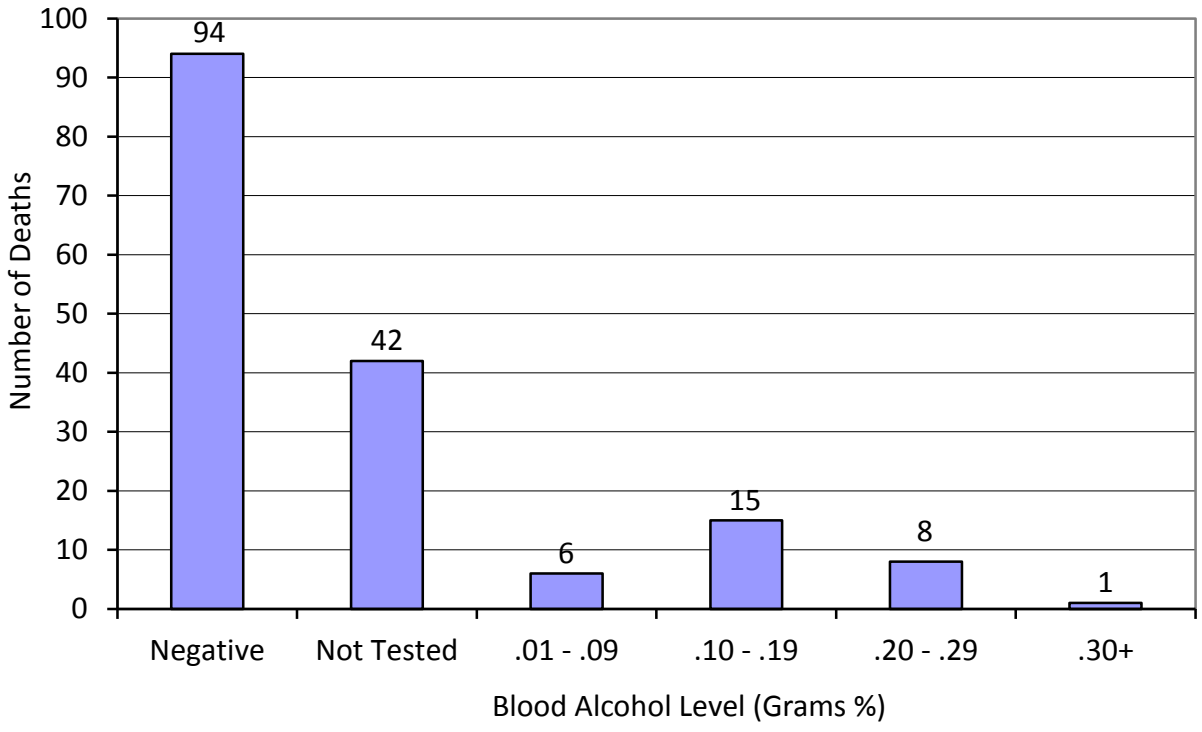
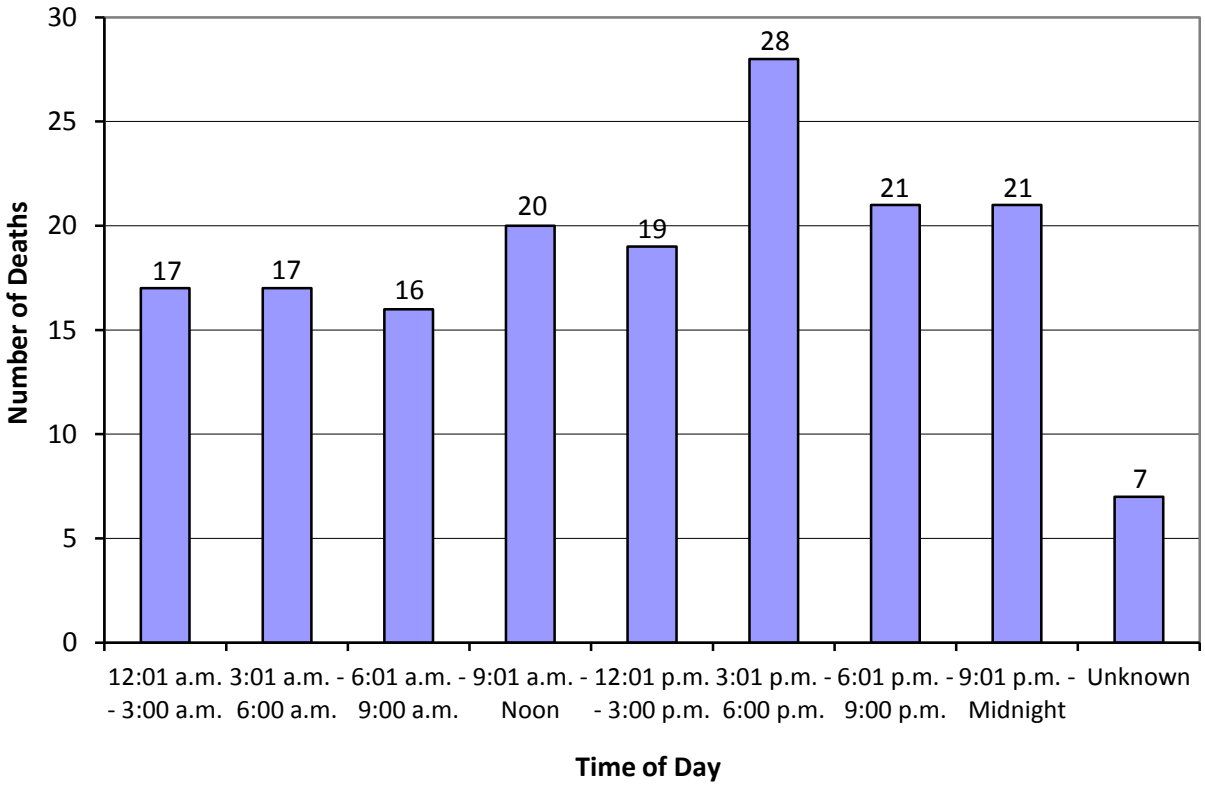


Table 8-6 **Time of Fatal Traffic Collision / KCME / 2016**

TIME OF DAY	TOTAL	PERCENT
12:01 a.m. - 3:00 a.m.	17	10%
3:01 a.m. - 6:00 a.m.	17	10%
6:01 a.m. - 9:00 a.m.	16	10%
9:01 a.m. - Noon	20	12%
12:01 p.m. - 3:00 p.m.	19	11%
3:01 p.m. - 6:00 p.m.	28	17%
6:01 p.m. - 9:00 p.m.	21	13%
9:01 p.m. - Midnight	21	13%
Unknown	7	4%
TOTALS	**166**	100%

Graph 8-5 **Time of Fatal Traffic Collision / KCME / 2016**



Deaths due to drugs and poisons

In 2012, it was reported in the *National Vital Statistics Report*[16] 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 2016, drugs and poisons caused 360 deaths, approximately 15% of all deaths investigated (360/2,384). The total number of drug-caused deaths increased compared to 2015 when there were 345 drug deaths. In 2016, deaths due to drugs and poisons comprised 31% (360/1,180) of all suicidal, accidental and undetermined deaths combined.

For the purpose of this section, the term "overdose" is used to describe a death caused by a single drug or multiple drugs in combination. Multiple drug intoxication continued to cause the majority of drug deaths in 2016. Of the drug/poison deaths in 2016, a single drug or poison caused 34% of the drug related deaths (112/360), and drugs or poisons in combination caused 66% (238/360.) Multiple drug intoxication caused 68% of the drug/poison deaths in 2015. Table 9-3 displays the specific drugs that caused death in 2016. Because of their prevalence, ethanol, cocaine (a stimulant), and opiates[17] are identified as separate drug categories. Data on deaths involving methadone, oxycodone, and methamphetamine are also shown in detail.

Deaths due to drugs and poisons are represented in the manners of accident, suicide, and undetermined. There were no deaths classified as homicide in 2016 in which drugs or poisons were the primary cause of the death, although the victim may have been under the influence of drugs at the time of the fatal incident.

The classification of undetermined manner is used when the circumstances surrounding the drug death does not allow clarification of whether the fatal intoxication was intentional, unintentional ("recreational"), or due to another person's actions. In the year 2016, drugs and poisons caused 15 deaths of undetermined manner, compared to 9 in 2015. Of the 15 undetermined drug related deaths in 2016, 4 were fetal deaths attributed to maternal drug use.

In 2016, drugs/poisons caused 40 suicides, compared to 41 in 2015.

Drugs/poisons caused 305 accidental overdose deaths in 2016 compared to 295 in 2015. In 2016, accidental drug deaths comprised 37% (305/832) of all accidental deaths.

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[16] 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)

[17] 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. The term opioid refers to the general class of drugs, often called narcotics, which interact with the opioid receptor. 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 2016, 9 accidental deaths were attributed to acute ethanol intoxication where ethanol was the single substance used. Fifty-eight people died in 2016 where ethanol, in combination with other drugs, was the cause of death. Blood alcohol (ethanol) tests were performed in 67% (967/1434) 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 18% (260/967) of non-natural deaths where tests were performed.

It is important to know that the following tables and charts represent toxicology results from specimens gathered by the King County Medical Examiner's Office and are not necessarily reflective of the total number of overdoses. While there were 360 overdose deaths in 2016 not all of those deaths had toxicological specimens available for testing. In certain instances delayed hospital deaths were classified based on medical records where samples for confirmatory laboratory testing were no longer available. For example there were 2 methamphetamine, 2 cocaine, and 3 opiate deaths where the cause of death was based on medical records alone.

Table 9-1 Blood Alcohol Testing / Manner / KCME / 2016

Test Results	ACCIDENT	TRAFFIC	HOMICIDE	NATURAL	SUICIDE	UNDETER-MINED	TOTAL
Tested	441	124	82	512	266	54	1,479
Positive	*117*	*30*	*24*	*100*	*78*	*11*	*360*
Negative	*324*	*94*	*58*	*412*	*188*	*43*	*1,119*
Not Tested	391	42	3	439	19	11	905
Totals	**832**	**166**	**85**	**951**	**285**	**65**	**2,384**

Table 9-2 Blood Alcohol Testing / Percentage / Manner / KCME / 2016

Test Results	ACCIDENT	TRAFFIC	HOMICIDE	NATURAL	SUICIDE	UNDETER-MINED	TOTAL
Tested	53%	75%	96%	54%	93%	82%	62%
Positive	*14%*	*18%*	*28%*	*11%*	*27%*	*17%*	*15%*
Negative	*39%*	*57%*	*68%*	*43%*	*66%*	*65%*	*47%*
Not Tested	47%	25%	4%	46%	7%	18%	38%
Totals	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 9-3 2016 Drug & Poison Caused Deaths[1]

		Overdose Deaths (360) – Drug Present						Overdose Deaths (360) – Drug Causing					
Drug Name	**Total deaths out of 2,103 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	10	8	4	4	5	3	0	5	3	2	2	3	0
Alprazolam	71	51	2	49	47	2	2	48	1	47	45	2	1
Amitriptyline	16	6	1	5	2	3	1	6	1	5	2	3	1
Amlodepine	1	1	0	1	0	1	0	1	0	1	0	1	0
Amphetamine	152	88	37	51	75	7	6	2	0	2	1	1	0
Buprenorphine	4	1	0	1	1	0	0	1	0	1	1	0	0
Bupropion	12	6	1	5	4	1	1	6	1	5	4	1	1
Butalbital	1	1	0	1	1	0	0	1	0	1	1	0	0
Cannabinoids / THC[2]	94	10	2	8	9	0	1	0	0	0	0	0	0
Carbon Monoxide[3]	28	5	5	0	5	0	0	5	5	0	5	0	0
Carisoprodol	1	1	0	1	1	0	0	1	0	1	1	0	0
Chlordiazepoxide	11	6	0	6	6	0	0	6	0	6	6	0	0
Chloroethane	1	1	1	0	1	0	0	1	0	1	1	0	0
Chloroquine	1	1	0	1	0	1	0	1	0	1	0	1	0
Chlorpheniramine	1	1	0	1	0	1	0	1	0	1	0	1	0
Citalopram	42	16	2	14	9	6	1	15	1	14	9	5	1
Clonazepam	5	4	0	4	4	0	0	4	0	4	4	0	0
Cyproheptadine	1	1	0	1	0	1	0	1	0	1	0	1	0
Cocaine[4]	91	62	12	50	61	1	0	59	10	49	58	1	0
Codeine[5]	82	68	16	52	64	3	1	2	0	2	2	0	0
Cyclobenzaprine	11	6	1	5	3	3	0	5	0	5	2	3	0
Dextromethorphan	6	5	0	5	4	1	0	5	0	5	4	1	0
Diazepam	40	19	1	18	13	5	1	18	0	18	13	5	0
Difluoroethane	3	2	1	1	1	0	1	2	1	1	1	0	1
Diphenhydramine	55	25	4	21	13	8	4	23	2	21	13	7	3
Doxepin	3	2	0	2	2	0	0	2	0	2	2	0	0
Doxylamine	11	9	0	9	7	2	0	9	0	9	7	2	0

Table 9-3 **2016 Drug & Poison Caused Deaths,** page 2

		Overdose Deaths (360) – Drug Present						Overdose Deaths (360) – Drug Causing					
Drug Name	**Total deaths out of 2,103 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
Ethanol	260	98	17	81	85	12	1	76	9	67	65	10	1
Fentanyl[6]	36	24	2	22	22	2	0	23	2	21	21	2	0
Fluoxetine	23	8	1	7	3	4	1	6	0	6	2	3	1
Gabapentin	23	13	3	10	9	3	1	10	0	10	9	1	0
Hydrocodone	37	15	2	13	13	2	0	11	0	11	11	0	0
Hydromorphone	30	14	0	14	13	1	0	11	0	11	10	1	0
Hydroxyzine	3	1	0	1	0	1	0	1	0	1	0	1	0
Isopropanol	10	2	0	2	2	0	0	2	0	2	2	0	0
Ketamine	4	1	1	0	0	0	1	1	1	0	0	0	1
Lamotrigine	13	3	0	3	1	2	0	3	0	3	1	2	0
Loperamide	1	1	1	0	1	0	0	1	1	0	1	0	0
Lorazepam	17	8	1	7	5	2	1	6	0	6	3	2	1
MDA	3	3	2	1	1	2	0	2	1	1	1	1	0
MDMA	2	2	1	1	1	1	0	2	1	1	1	1	0
Meprobamate	4	2	0	2	1	1	0	1	0	1	0	1	0
Methadone	65	45	2	43	43	1	1	45	2	43	43	1	1
Methamphetamine	161	97	41	56	87	4	6	94	38	56	84	4	6
Metoprolol	3	2	0	2	0	2	0	2	0	2	0	2	0
Midazolam	66	9	5	4	8	1	0	1	1	0	0	1	0
Mitragynine	3	2	0	2	2	0	0	2	0	2	2	0	0
Monoacetylmorphine[7]	63	60	11	49	58	1	1	0	0	0	0	0	0
Nortriptyline[8]	23	9	1	8	3	5	1	3	0	3	1	2	0
Opiate[9]	198	135	26	109	127	4	4	129	21	108	123	3	3
Oxazepam	7	5	0	5	2	3	0	0	0	0	0	0	0
Oxycodone	63	34	2	32	25	81	1	33	1	32	25	8	0
Oxymorphone	20	14	14	10	4	0	0	0	0	0	0	0	0

Table 9-3 **2016 Drug & Poison Caused Deaths,** page 3

		Overdose Deaths (360) – Drug Present						Overdose Deaths (360) – Drug Causing					
Drug Name	**Total deaths out of 2,103 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
Paroxetine	6	5	0	5	3	2	0	1	0	1	1	0	0
Phenobarbital	11	5	0	5	3	2	0	5	0	5	3	2	0
Propofol	1	1	0	1	0	1	0	1	0	1	0	1	0
Propranolol	1	1	0	1	0	1	0	1	0	1	0	1	0
Quetiapine	17	10	0	10	5	0	5	10	0	10	5	0	5
Salicylate	2	2	0	2	1	1	0	2	0	2	1	1	0
Sertraline	29	13	0	13	9	4	0	12	0	12	9	3	0
Tapentadol	1	1	0	1	1	0	0	1	0	1	1	0	0
Temazepam	9	5	0	5	3	2	0	1	0	1	1	0	0
Theophylline	1	1	1	0	1	0	0	1	1	0	1	0	0
Tizanidine	1	1	0	1	0	0	1	1	0	1	0	0	1
Topiramate	6	2	0	2	1	0	1	2	0	2	1	0	1
Tramadol	23	9	1	8	5	4	0	7	1	6	3	4	0
Trazodone	58	28	4	24	24	4	0	22	0	22	22	0	0
Venlafaxine	17	9	0	9	7	1	1	9	0	9	7	1	1
Zopiclone	1	1	0	1	0	1	0	1	0	1	0	1	0
Zolpidem	16	8	0	8	3	5	0	8	0	8	3	5	0

Table 9-3 2016 Drug & Poison Caused Deaths, page 4

[1]Table 9-3 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 in quantifiable amounts. 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," because the drug was detected but not in quantifiable levels, and the certifying Medical Examiner considered the drug to have contributed to death.

[2]Cannabinoids confirmation tests are not routinely tested for in death investigations except under certain circumstances where the death was law enforcement-related, traffic-related, impairment may be a factor, or at the request of the submitting agency. 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.

[3]Carbon monoxide fatalities are listed in the first column if the level of carboxyhemoglobin was 5% or greater. The rest of the columns represent only drug overdose deaths and are divided into two parts, "Drug Present" and "Drug Causing". There were 5 suicides from the inhalation of carbon monoxide but these deaths were listed as asphyxia deaths secondary to a suffocating and were not listed as drug overdoses. There were 17 accidental deaths where carbon monoxide was present. Five were related to accidental asphyxiation from car engine and 12 where from fires. There were 2 undetermined overdose deaths involving carbon monoxide.

[4]Includes benzoylecgonine.

[5]Out of the 68 overdose deaths involving codeine, in 65 cases, the source of the drug was likely small quantities of codeine present in heroin used by illicit drug users.

[6]Includes 8 fentanyl analogues.

[7]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.

[8]In 7 of the 23 total cases, nortriptyline was present without the presence of amitriptyline, indicating that the source of the drug was, in fact, nortriptyline. In the other 16 cases, amitriptyline was also present, indicating that the nortriptyline was present due to the breakdown of amitriptyline. There were a total of 3 nortriptyline overdose deaths; all three were multiple drug overdoses. Of those one was an accident and two were suicides.

[9] 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 and methadone. In 2016 there were 135 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 129 deaths, 114 were definitely or probably due to heroin and 10 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.

Graph 9-1 Drug & Poison Caused Deaths / Accident, Suicide, Undetermined / KCME / 2007- 2016

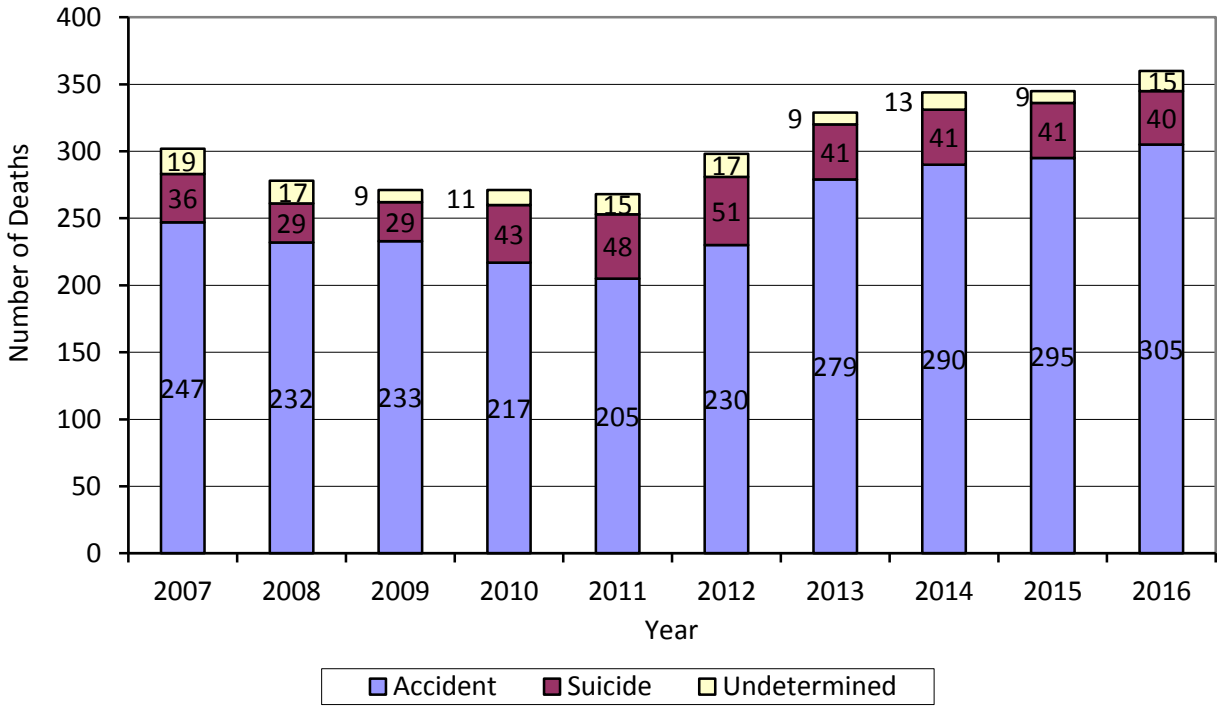


Table 9-4 Total Overdose Deaths / Accident, Suicide, Undetermined / 2007 – 2016[19]

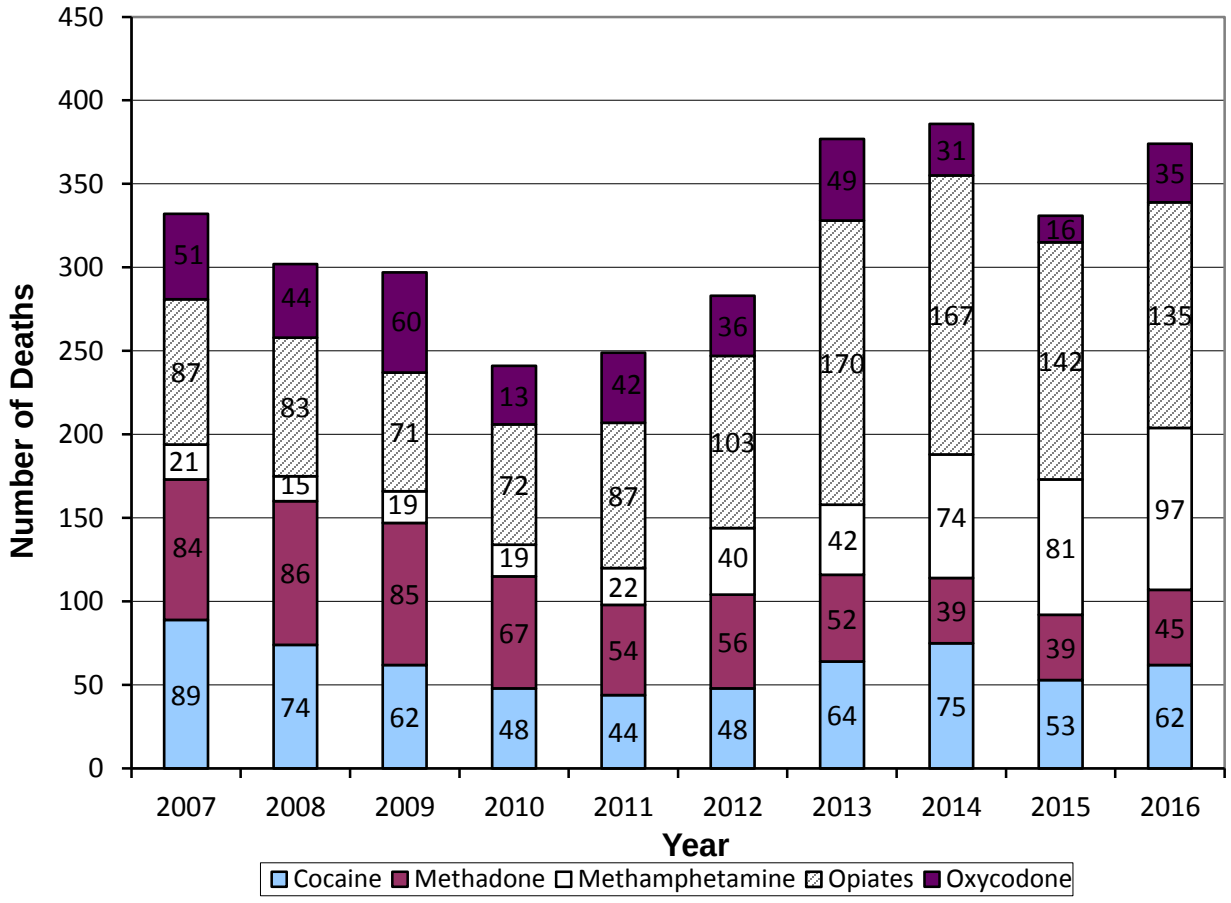
Overdose Deaths	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Accident	247	232	233	217	205	230	279	290	295	305
Suicide	36	29	29	43	48	51	41	41	41	40
Undetermined	19	17	9	11	15	17	9	13	9	15
Totals	**302**	**278**	**271**	**271**	**268**	**298**	**329**	**344**	**345**	**360**

[19]Includes all deaths classified as overdose, regardless of whether lab samples were available for analysis.

Table 9-5 **Overdose Deaths Caused by Cocaine, Methadone, Opiates, Methamphetamine, or Oxycodone[20] / KCME / 2007 - 2016**

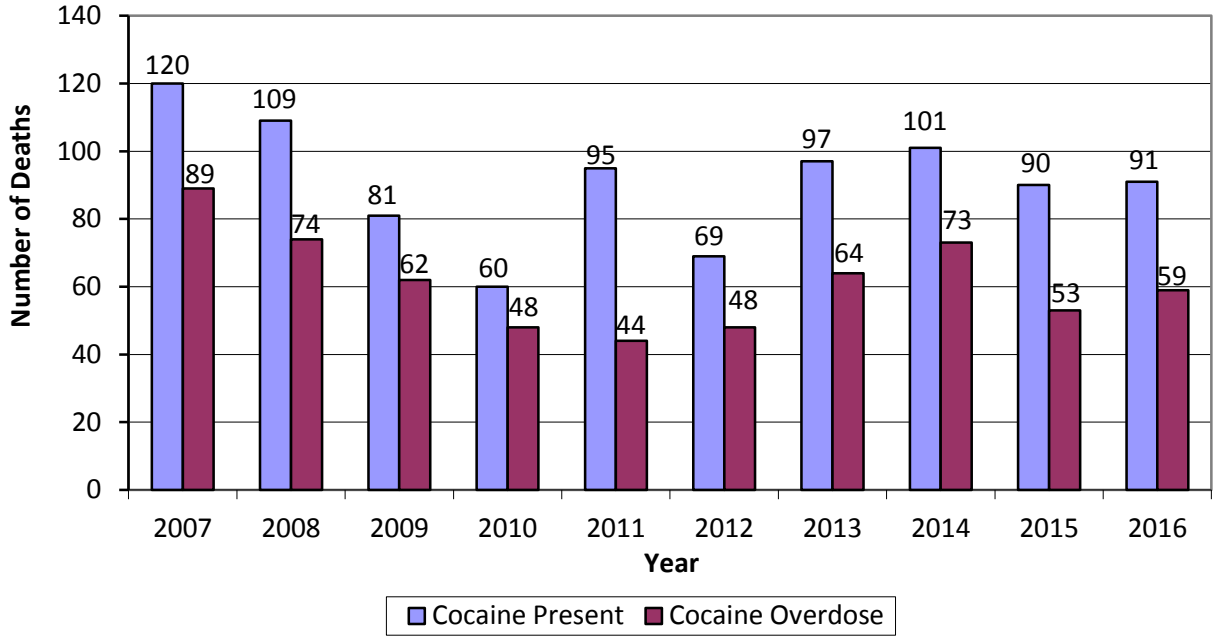
DRUG	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Cocaine	89	74	62	48	44	48	64	75	53	62
Methadone	84	86	85	67	54	56	52	39	39	45
Methamphetamine	21	15	19	19	22	40	42	74	81	97
Opiates	87	83	71	72	87	103	170	167	142	135
Oxycodone	51	44	60	35	42	36	49	31	16	35

Graph 9-2 Drug & Poison Caused Deaths / Accident, Suicide, Undetermined / KCME / 2007 - 2016

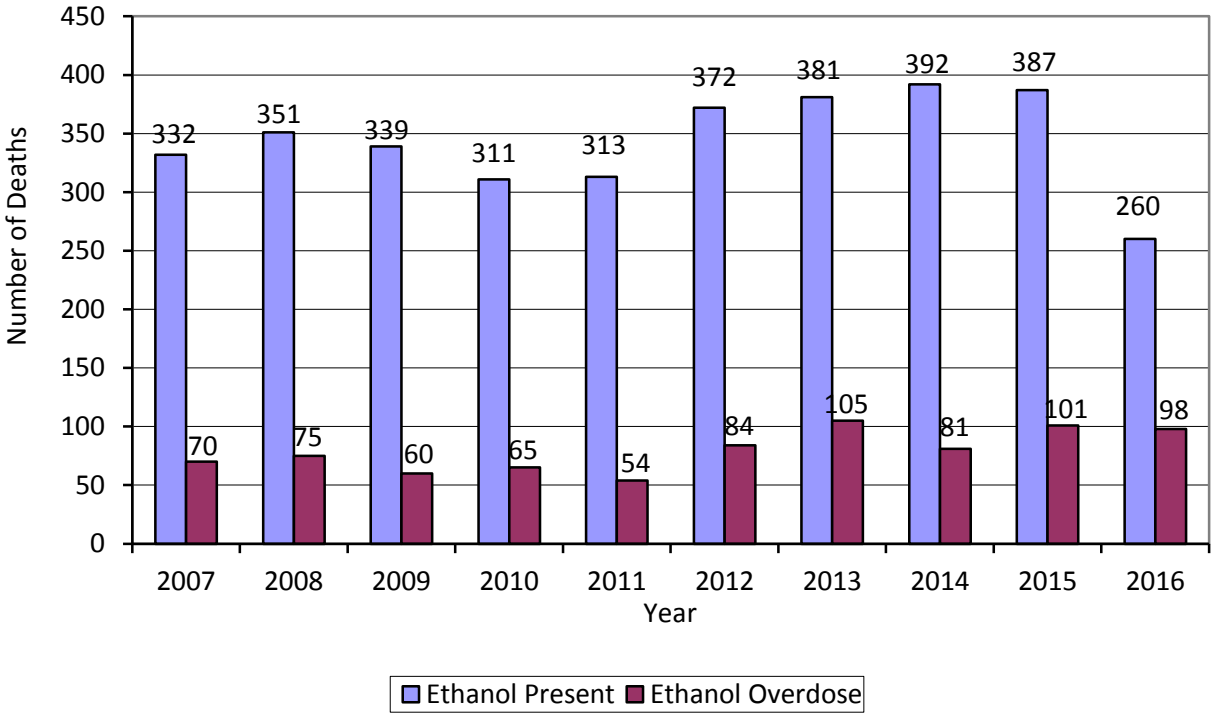


[20] In this context, "caused by" refers to single or multiple drug overdoses in which the drug was listed on the death certificate.

Graph 9-3 Cocaine Involved Deaths[21] / KCME / 2007 – 2016

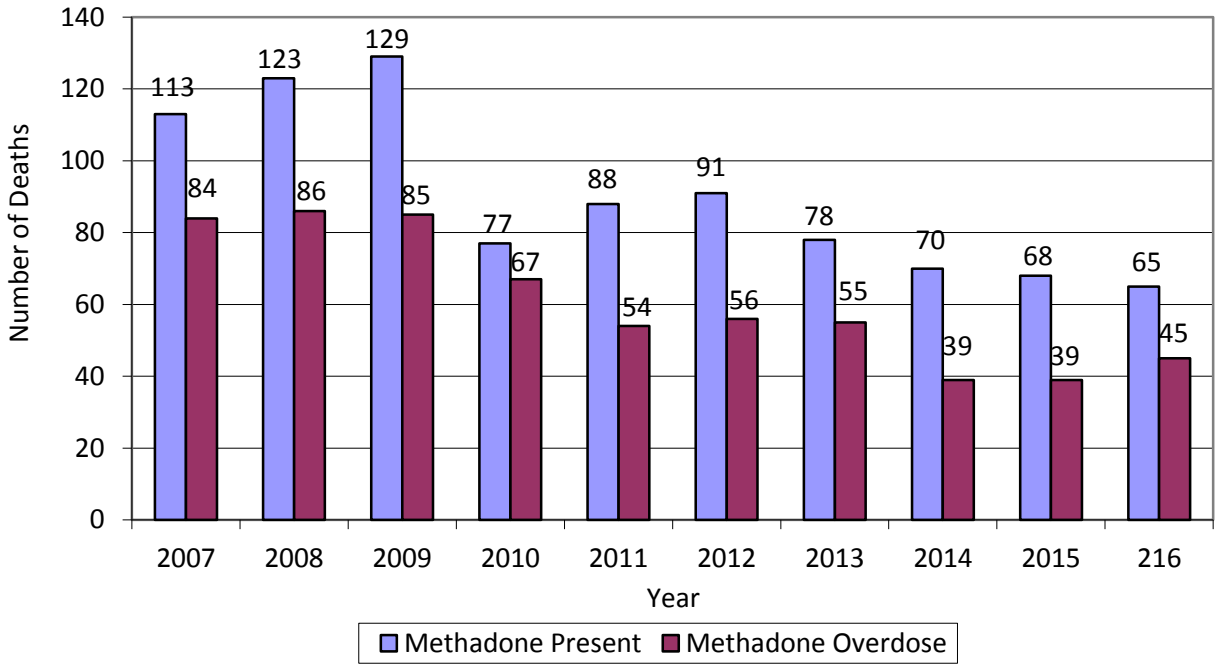


Graph 9-4 Ethanol Involved Deaths / KCME/ 2007– 2016

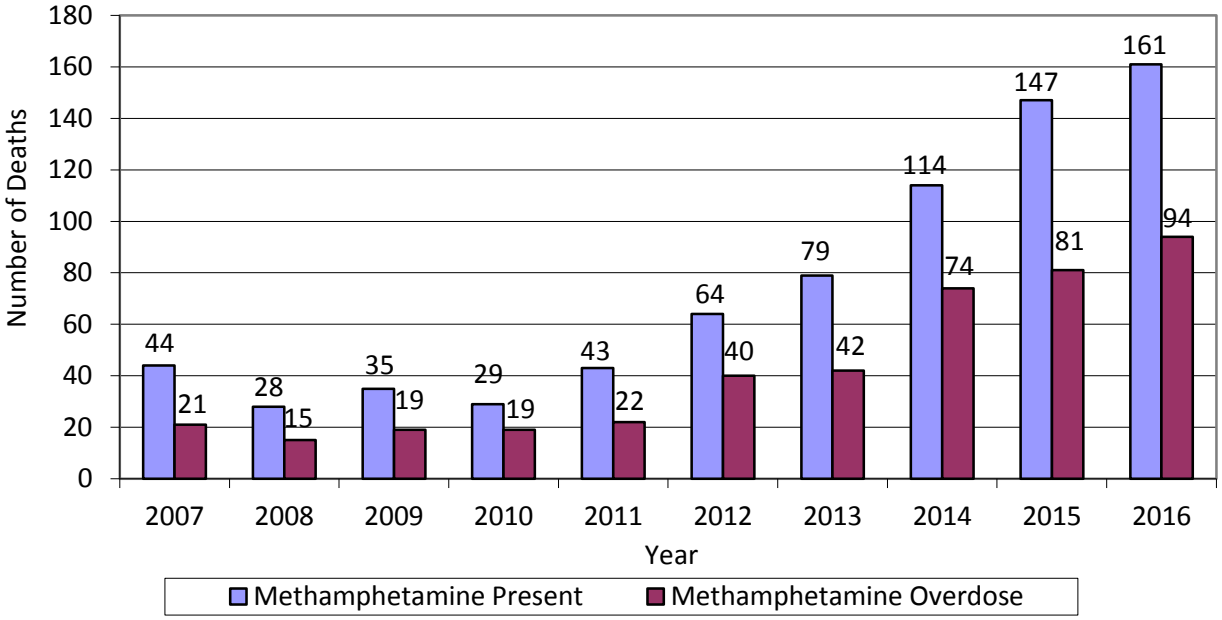


[21]In Graphs 9-3, 9-4, 9-5 and 9-6, "overdose" refers to deaths due to the listed drug in single or multiple drug overdose deaths.

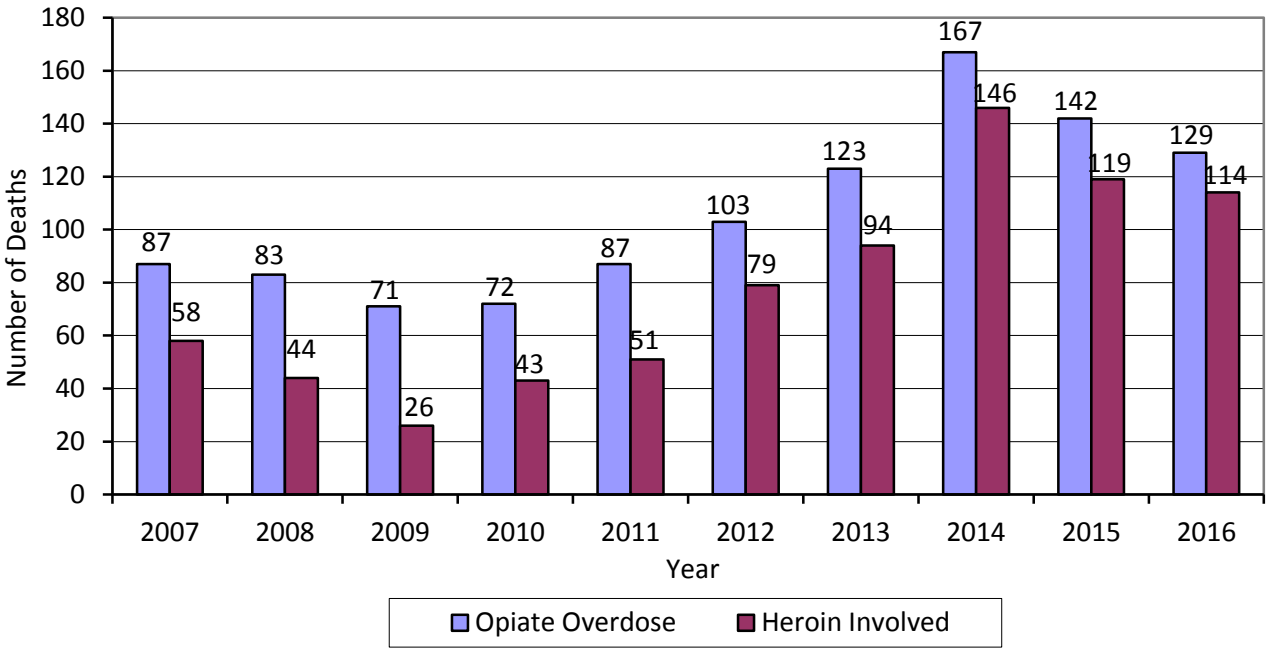
Graph 9-5 Methadone Involved Deaths / KCME / 2007 - 2016



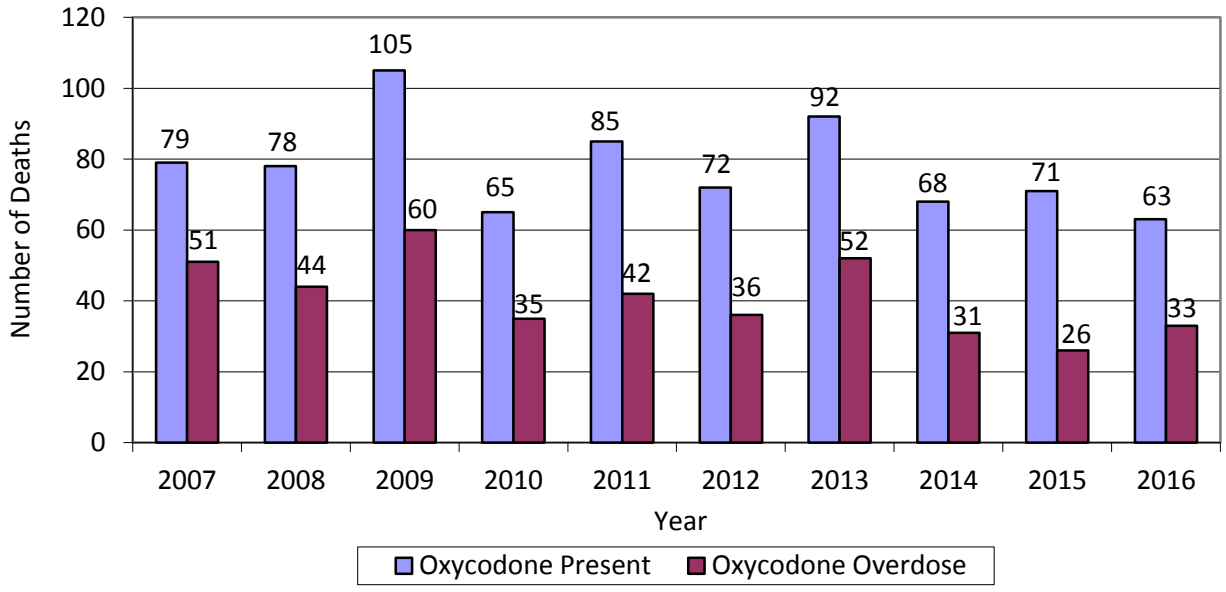
Graph 9-6 Methamphetamine Involved Deaths / KCME / 2007 – 2016



Graph 9-7 Opiate Overdose Deaths & Heroin-Related Deaths / KCME / 2007 - 2016



Graph 9-8 Oxycodone Involved Deaths / KCME / 2007- 2016



Graph 9-9 Drug / Poison Deaths / Age / KCME / 2007 – 2016

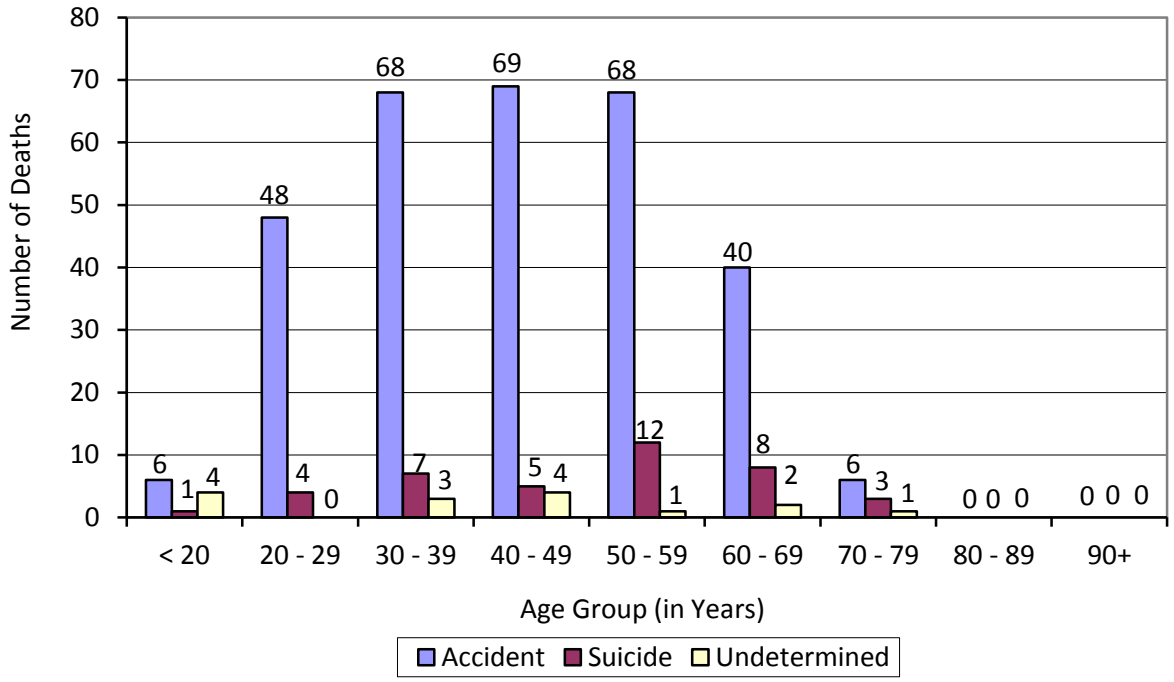


Table 9-6 **Drug / Poison Deaths / Age / KCME / 2016**

AGE GROUP (YEARS) / GENDER	MANNER OF DEATH			SUB-TOTAL	TOTAL
	ACCIDENT	SUICIDE	UNDETERMINED		
<20	6	1	4[22]		11
Male	*4*	*0*	*2*	*6*	
Female	*2*	*1*	*2*	*5*	
20-29	48	4	0		52
Male	*36*	*2*	*0*	*38*	
Female	*12*	*2*	*0*	*14*	
30-39	68	7	3		78
Male	*45*	*3*	*2*	*50*	
Female	*23*	*4*	*1*	*28*	
40-49	69	5	9		78
Male	*49*	*4*	*1*	*54*	
Female	*20*	*1*	*3*	*24*	
50-59	68	12	1		81
Male	*31*	*5*	*1*	*37*	
Female	*9*	*3*	*1*	*13*	
60-69	40	8	2		50
Male	*31*	*5*	*1*	*37*	
Female	*9*	*3*	*1*	*3*	
70-79	6	3	1		10
Male	*4*	*1*	*0*	*5*	
Female	*2*	*2*	*1*	*5*	
80-89	0	0	0		0
Male	*0*	*0*	*0*	*0*	
Female	*0*	*0*	*0*	*0*	
90+	0	0	0		0
Male	*0*	*0*	*0*	*0*	
Female	*0*	*0*	*0*	*0*	
Totals	**305**	**40**	**15**		**360**

[22] Includes 4 fetal deaths where maternal drug use contributed.

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. The following data are specific to the victims of firearm deaths.

In 2016, the Medical Examiner investigated 176 firearm deaths. In 2015, firearms caused 164 deaths. Of the 176 firearm deaths in 2016, 61 (35%) were homicides and 114 (65%) were suicides. No firearm deaths were classified as an accident in 2016. In 2015, there was also no firearm deaths classified as accident. In 2016, there were 1 firearm deaths that was classified as undetermined; there was also 1 in 2015.

In 2016, gunshot wounds were the leading cause of death for homicides and suicides. Firearm deaths comprised 72% (61/85) of homicides, compared to 71% (54/76) in 2015. In 2016, suicides by firearms represented 40% (114/285) of suicide deaths compared to 42% (110/262) in 2015.

In 2016, of the 61 firearm homicide victims, 13% (8/61) were 19 years old and younger – a decrease from 2014 when 17% of firearm homicide victims were 19 years old and younger. In 2016, it is estimated that a disproportionate number of firearm homicide victims were African American 36% (22/61) compared to the percentage of African Americans in the general population (see discussion on pages 8 and 38). Of the 22 African American firearm homicide victims, 3 were 19 years old and/or younger and 10 were males between 20 and 29 years of age. In comparison, 43% (26/61) of the homicide firearm victims were white. Of the 26 white homicide victims, 5 were males 19 years old and/or younger and 7 were males between 20 and 29 years old.

Of the 114 firearm suicide victims in 2016, 89% (102/114) were white and 90% (103/114) were males. Of the firearm suicide victims 5% (6/114) were 19 years old or under. Of the gunshot suicide victims 32% (37/114) were between the ages of 20 and 39 years of age, 29% (33/114) were between 40 and 59 years, and 33%, (38/114) were 60 years and older.

Table 10-1 Firearm Deaths / Manner / Age / Gender / KCME / 2016

AGE GROUP / GENDER	MANNER OF DEATH				SUB-TOTAL	TOTAL
	A	H	S	U		
<13 years	0	0	0	0		0
Male	*0*	*0*	*0*	*0*	*0*	
Female	*0*	*0*	*0*	*0*	*0*	
13-15 years	0	0	1	0		1
Male	*0*	*0*	*0*	*0*	*0*	
Female	*0*	*0*	*1*	*0*	*1*	
16-19 years	0	8	5	1		14
Male	*0*	*7*	*5*	*0*	*12*	
Female	*0*	*1*	*0*	*1*	*2*	
20-29 years	0	23	17	0		40
Male	*0*	*21*	*16*	*0*	*37*	
Female	*0*	*2*	*1*	*0*	*3*	
30-39 years	0	13	20	0		33
Male	*0*	*11*	*18*	*0*	*29*	
Female	*0*	*2*	*2*	*0*	*4*	
40-49 years	0	10	13	0		23
Male	*0*	*8*	*11*	*0*	*19*	
Female	*0*	*2*	*2*	*0*	*4*	
50-59 years	0	4	20	0		24
Male	*0*	*2*	*19*	*0*	*21*	
Female	*0*	*2*	*1*	*0*	*3*	
60-69 years	0	2	16	0		18
Male	*0*	*2*	*13*	*0*	*15*	
Female	*0*	*0*	*3*	*0*	*3*	
70-79 years	0	0	12	0		12
Male	*0*	*0*	*12*	*0*	*12*	
Female	*0*	*0*	*0*	*0*	*0*	
80-89 years	0	0	6	0		6
Male	*0*	*0*	*5*	*0*	*5*	
Female	*0*	*0*	*1*	*0*	*1*	
90+	0	1	4	0		5
Male	*0*	*0*	*4*	*0*	*4*	
Female	*0*	*1*	*0*	*0*	*1*	
Totals	**0**	**61**	**114**	**1**		**176**
Percent	0	35%	65%	<1%		100%

Graph 10-1 Firearm Deaths / Manner / Age Group / KCME / 2016

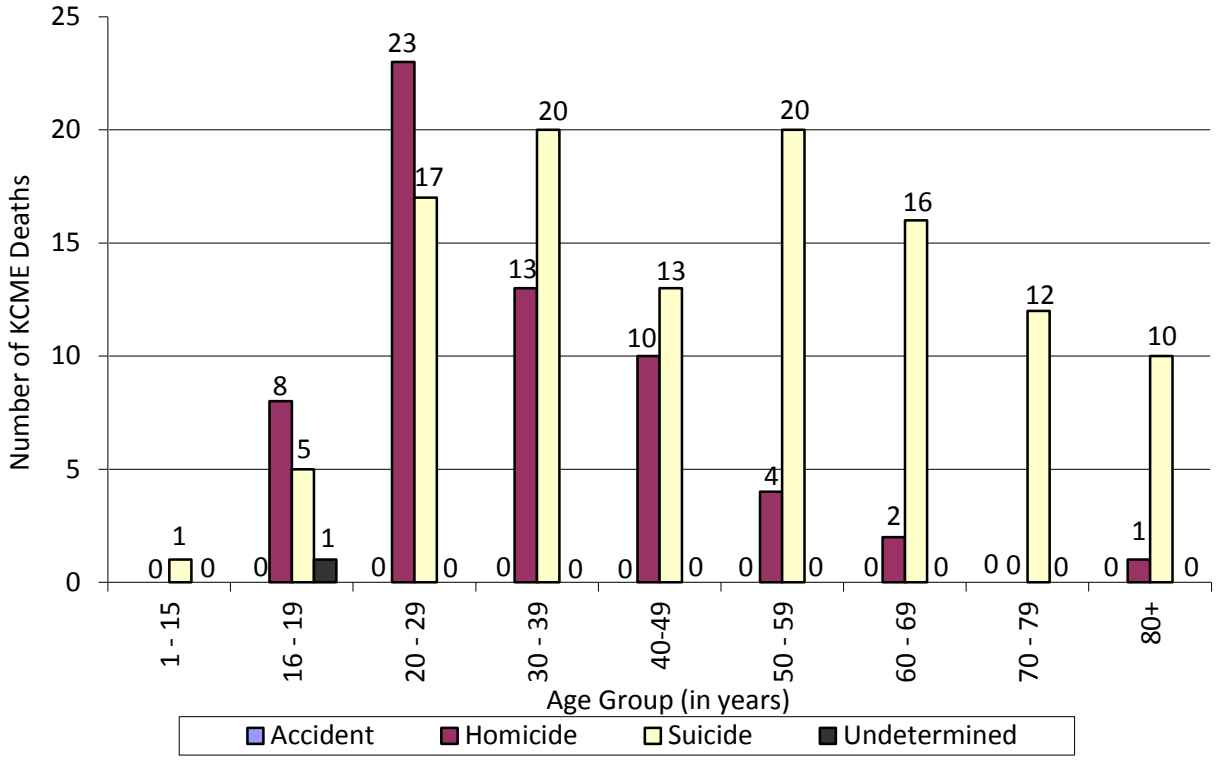


Table 10-2 Firearm Deaths / Manner / Race / Gender / KCME / 2016

RACE / GENDER	MANNER OF DEATH A	H	S	U	SUB-TOTAL	TOTAL
Asian/Pacific Islander	0	8	5	0		13
Male	*0*	*7*	*4*	*0*	*11*	
Female	*0*	*1*	*1*	*0*	*2*	
African American	0	22	6	0		28
Male	*0*	*19*	*6*	*0*	*25*	
Female	*0*	*3*	*0*	*0*	*3*	
Am Indian / AK Native	0	3	0	0		3
Male	*0*	*2*	*0*	*0*	*2*	
Female	*0*	*1*	*0*	*0*	*1*	
White	0	26	102	1		129
Male	*0*	*22*	*92*	*0*	*114*	
Female	*0*	*4*	*10*	*1*	*15*	
Other	0	2	1	0		3
Male	*0*	*1*	*1*	*0*	*2*	
Female	*0*	*1*	*0*	*0*	*1*	
Totals	**0**	**61**	**114**	**1**		**176**
Percent	**0%**	**35%**	**65%**	**<1%**		

Causes of death in children and youth

In 2016, the King County Medical Examiner's Office investigated 92 deaths of children and youth ages 19 years or younger, which represented 4% (92/2,384) of the total deaths investigated. Of these deaths, 20% (18/92) were natural, 24% (22/92) were accidental (non-traffic), 16% (15/92) were homicides, 12% (11/92) were traffic-related, 16% (15/92) were suicides, and 16% (11/92) were classified as manner undetermined. In addition to investigating childhood deaths, the King County Medical Examiner participates in Child Death Review, a process which discusses these deaths in detail and formulates prevention strategies.

Of the 22 natural deaths of children and youth investigated by the Medical Examiner, 50% (11/22) were of infants less than one year of age. Of these 11 infants who died of natural causes, 4 were due to Sudden Infant Death Syndrome (SIDS). In addition, 5 infant deaths were classified as "Sudden Unexplained Infant Death" (SUID), manner undetermined, due to the inability to exclude if external factors contributed to death.

There were 15 homicides among children and youth. Of these 15 homicide victims, 9 were teenagers (13 - 19 years of age), 1 was a child (1 to 12 years of age), and 5 were infants less than one year of age. Homicides as a result of gunshot wounds accounted for 53% (8/15) of the children and youth homicide victims.

There were 15 youth suicides, with 14 being between the ages of 13 and 19 years. 1 occurred in the age group of 1 – 12 years of age. Males comprised 65% (10/15) of the victims. Regarding the methods used to commit suicide by youth, 6 were by firearm, 6 were by hanging, 2 were from asphyxia after placing a plastic bag over the head, 1 was from drugs.

Eleven children and youth (19 years and under) died in traffic-related accidents, of whom 82% (9/11) were teenagers 13 – 19 years of age. There were 2 motor vehicle driver deaths, 5 motor vehicle passenger deaths, 3 pedestrian deaths, and 1 motorcycle operator death. Of the 7 children and youth who died in automobiles, 3 were known to be restrained, 3 unrestrained and 1 was restraint unknown.

The following tables list the causes of death among children and youth for all manners in three age groups: less than one year, 1-12 years and 13-19 years.

Graph 11-1 Causes of Death in Children & Youth / KCME / 2016

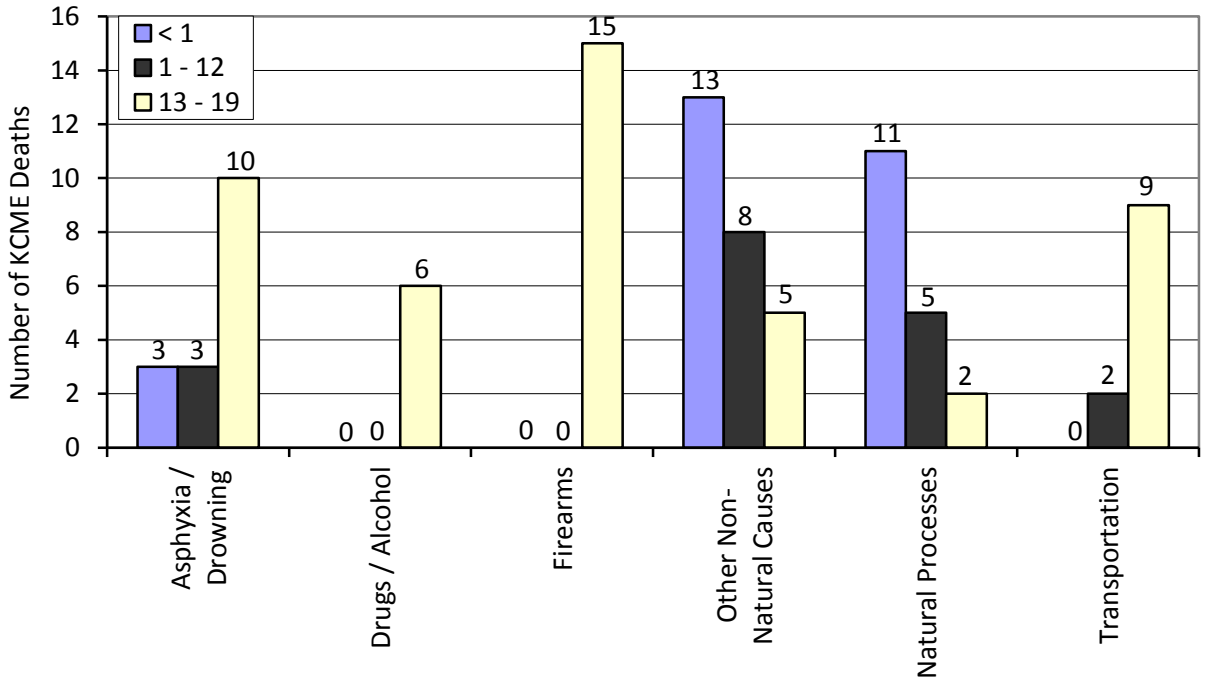


Table 11-1 Causes of Death: Children Under 1 Year of Age / KCME / 2016

CIRCUMSTANCES	MANNER OF DEATH A	H	S	T	U	N	SUB-TOTAL	TOTAL
Miscellaneous	4	5	0	0	7	6		22
Asphyxia	*2*	*0*	*0*	*0*	*0*	*0*	*2*	
Drowning	*1*	*0*	*0*	*0*	*0*	*0*	*1*	
Prematurity	*0*	*0*	*0*	*0*	*0*	*2*	*2*	
Other	*1*	*5*	*0*	*0*	*7*[22]	*0*	*13*	
SIDS	*0*	*0*	*0*	*0*	*0*	*4*	*4*	
Other Natural Disease	0	0	0	0	0	5		5
Totals	**4**	**5**	**0**	**0**	**7**	**11**		**27**

[22] Includes 6 cases classified as Sudden Unexplained Infant Death.

Table 11-2 Causes of Death: Children 1 to 12 Years of Age / KCME / 2016

CIRCUMSTANCES	MANNER OF DEATH A	H	S	T	U	N	SUB-TOTAL	TOTAL
Asphyxia	2	0	1	0	0	0		3
Carbon Monoxide	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Drowning	*2*	*0*	*0*	*0*	*0*	*0*	*2*	
Hanging	*0*	*0*	*1*	*0*	*0*	*0*	*1*	
Mechanical	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Other	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Compressional	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Miscellaneous	1	0	0	0	3	0		4
Complication of Therapy	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Drugs / Poisons	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Fall	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Fire / Explosion	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Hyperthermia	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Jump	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Non Traffic -Vehicle	*1*	*0*	*0*	*0*	*0*	*0*	*1*	
Other	*0*	*0*	*0*	*0*	*3*	*0*	*3*	
Physical Trauma	3	1	0	0	0	0		4
Abuse	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Blunt Force / Crushing	*2*	*1*	*0*	*0*	*0*	*0*	*3*	
Burns / Fire	*1*	*0*	*0*	*0*	*0*	*0*	*1*	
Firearms	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Incised / Stab Wound(s)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Other	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Transportation Related	0	0	0	2	0	0		2
Bicycle	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Motor Vehicle Driver	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Motor Vehicle Passenger	*0*	*0*	*0*	*2*	*0*	*0*	*2*	
Other	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Pedestrian	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Natural Disease	0	0	0	0	0	5		5
Totals	**6**	**1**	**1**	**2**	**3**	**5**		**18**

Table 11-3 Causes of Death: Children 13 to 19 Years of Age / KCME / 2016

CIRCUMSTANCES	MANNER OF DEATH A	H	S	T	U	N	SUB-TOTAL	TOTAL
Asphyxia	3	0	7	0	0	0		10
Carbon Monoxide	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Drowning	*3*	*0*	*0*	*0*	*0*	*0*	*3*	
Hanging	*0*	*0*	*5*	*0*	*0*	*0*	*5*	
Smothering	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Positional	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Other	*0*	*0*	*2*	*0*	*0*	*0*	*0*	
Drugs / Alcohol	5	0	1	0	0	0		6
Miscellaneous	3	0	0	0	0	0		3
Complication of Therapy	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Fall	*2*	*0*	*0*	*0*	*0*	*0*	*2*	
Jump	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Non-Traffic Vehicular	*1*	*0*	*0*	*0*	*0*	*0*	*1*	
Other	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Physical Trauma	1	9	6	0	1	0		8
Blunt Force / Crushing	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Burns / Fire	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Firearms	*0*	*8*	*6*	*0*	*1*	*0*	*15*	
Homicidal Violence	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Incised / Stab Wound(s)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Other	*1*	*1*	*0*	*0*	*0*	*0*	*2*	
Transportation Related	0	0	0	9	0	0		9
Bicycle	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Motor Vehicle Driver	*0*	*0*	*0*	*3*	*0*	*0*	*3*	
Motor Vehicle Passenger	*0*	*0*	*0*	*3*	*0*	*0*	*3*	
Motorcycle	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Pedestrian	*0*	*0*	*0*	*3*	*0*	*0*	*3*	
Other	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Natural Disease	0	0	0	0	0	2		
Totals	**12**	**9**	**14**	**9**	**1**	**2**		**47**

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 2016, the King County Medical Examiner's Office gave release on 49 deaths that came under the office's jurisdiction. Altogether, there were 211 organs donated for transplant from the 64 cases referred to the King County Medical Examiner. The number of specific organs transplanted in 2016 is shown in Table 12-1. In addition to the living organs listed in Table 12-1 that were donated in 2016, the KCMEO approved the donation of skin, bone, cartilage, heart valves, corneas and other tissues through the tissue procurement agency, LifeNet Health. Altogether, there were 132 donors who were able to provide nearly 20,000 tissue grafts to tissue transplant recipients.

Table 12-1 **Organs Transplanted / KCME / 2016**

ORGAN	# Transplanted
Heart	22
Intestine	0
Kidney	78
Liver	25
Lung	20
Pancreas	6
Total	**151**

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 2016, the Medical Examiner's Office handled 14,585 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 proficient 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).

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.

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.

In 2016, staff participated as speakers at universities, conferences, and training seminars for law enforcement, medical, legal, and social service personnel in the following presentations and lectures:

Richard C. Harruff, M.D., Ph.D., Chief Medical Examiner

Academic appointment:

- Clinical Associate Professor, Department of Pathology, University of Washington School of Medicine.

Professional organizations:

- American Academy of Forensic Sciences.
- Editorial review board, Journal of Forensic Sciences
- National Association of Medical Examiners.
- Disaster Mortuary Operations Response Team, Region 10.

Preceptor and faculty positions

- Program Director, King County Medical Examiner's Office Fellowship Training Program in Forensic Pathology.
- Course Director and Faculty, "Problems in Forensic Pathology", King County Medical Examiner's Office.
- Preceptor for medical students and pathology residents, University of Washington School of Medicine.

Scientific presentation

- Murphy CE, Stanzione N, Harruff R. The 20 year Acetaminophen Experience in a Pacific Northwest Medical Examiner's Office. 2016 Annual Meeting of the College of American Pathologists, Las Vegas, Nevada, September 25-28, 2016.

- Margaret Flanagan, Richard C Harrruff. Digitalis Intoxication and Death from Accidental Fox Glove Ingestion. USACAP 2016 Annual Meeting, Seattle, Washington, March 12-18, 2016.

Educational presentations

- Demonstrating knowledge of forensic pathology. Medicolegal Death Investigator Training Course, Washington Association of Coroners and Medical Examiners, Leavenworth, Washington, February 8.
- Introduction of King County Medical Examiner's Office for paramedic students. March 3.
- Pattern injury and strangulation. Sexual Assault Nurse Examiner Spring Training, Harborview Center for Sexual Assault and traumatic Stress, Seattle, Washington, March 30.
- Cascadia Mass Disaster Training Exercise, DMORT Subject Matter Expert for Incident Response Command Team, Tumwater, Washington, June 8-10.
- Forensic pathology and the medical examiner, University of Washington Private Investigator course, May 14.
- Role of the medical examiner in the Harborview Medical Center, Social Work Grand Rounds, June 14.
- Electrical injuries and electrocutions, Michael K. Copass Paramedic Training Program, Harborview Medical Center Seattle, Washington, September 6.
- Preparing for the defense interview of the medical examiner, (with Denise Scaffidi, Criminal Defense Investigator), Investigating and Defending Homicide and Death Penalty Cases, Washington Defender Association, King County Department of Public Defense, and the Innocence Project Northwest, University of Washington School of Law, Seattle, Washington September 14.
- Role of the medical examiner and community notification preference, Public Health – West African Community Emergency Communication Partnership, Skyway Library, September 24.
- Pattern injury and strangulation. Sexual Assault Nurse Examiner Fall Training, Harborview Center for Sexual Assault and traumatic Stress, Seattle, Washington, September 28.
- Introduction to the death investigation, Washington Defender Association, King County Medical Examiner's Office, Seattle, October 14.
- Death notification and medical examiner processes, presentation for foreign consulates in planning for multiple Casualty incidents involving foreign nations, Seattle Office of Emergency Management, Seattle. City hall, October 19.
- Mechanism of injury in fatal vehicular collisions, Washington State Patrol Collision Investigation Program, Shelton, Washington, October 20.
- Investigation of traffic fatalities, Seattle Police Department Technical Collision Investigations course, November 13.

Aldo Fusaro, DO, Associate Medical Examiner

Academic Appointment

- Clinical Assistant Professor, Department of Pathology, University of Washington School of Medicine

Preceptorship

- University of Washington School of Medicine, medical students and pathology residents
- King County Medical Examiner's Office, forensic pathology fellow trainer

Associations, Committees and Boards

- Member, American Medical Association
- Member, Washington Association of Coroners and Medical Examiners
- Member, Washington State Medical Association
- Member, National Association of Medical Examiners
    - Membership Committee
    - Delegate to the American Medical Association
- Fellow, College of American Pathologists
- Fellow, American College of Clinical Pathologists
- Advisory Committee, King County Medical Examiner's Office
- Child Death Review Committee, King County Medical Examiner's Office
- Elder Death Review Committee, King County Medical Examiner's Office
- Quality Improvement Subcommittee, King County Medical Examiner's Office
- Multiple Fatality Incident Preparedness Team, Seattle King County Public Health

Timothy Williams, MD, Associate Medical Examiner

Academic Appointment

- Clinical Assistant Professor, Department of Pathology, University of Washington School of Medicine

Preceptorship

- University of Washington School of Medicine, Supervisor of Medical Student and Resident Rotations
- King County Medical Examiner's Office, Forensic Pathology Fellowship Faculty
- Rotating Moderator, Medicolegal Death Investigation didactic series, King County Medical Examiner's Office

Associations, Committees, Boards

- Member, National Association of Medical Examiners
    - Maintenance of Certification Committee
    - Forensic Pathology Education Committee
    - Death Certification Improvement Committee
- Child Death Review Committee, King County Medical Examiner
- Elder Death Review Committee, King County Medical Examiner
- Graduate Medical Education Committee, King County Medical Examiner

Micheline Lubin, MD, Associate Medical Examiner

Associations, Committees & Boards

- Child Death Review Committee, King County Medical Examiner Office
- Elder Death Review Committee, King County Medical Examiner Office
- Quality Improvement Subcommittee, King County Medical Examiner Office
- Multiple Fatality Incident Committee, King County Medical Examiner Office

Brian Mazrim, MD, Associate Medical Examiner

Associations, Committees & Boards

- Child Death Review Committee, King County Medical Examiner Office
- Elder Death Review Committee, King County Medical Examiner Office
- Quality Improvement Subcommittee, King County Medical Examiner Office
- Multiple Fatality Incident Committee, King County Medical Examiner Office

Katherine M. Taylor, Ph.D., D-ABFA Forensic Anthropologist

Academic Affiliation

- Child Death Review Committee, King County Medical Examiner Office
- Elder Death Review Committee, King County Medical Examiner Office
- Quality Improvement Subcommittee, King County Medical Examiner Office
- Multiple Fatality Incident Committee, King County Medical Examiner Office

Educational presentations

- Buried Body and Surface Recovery: Instructor Washington Association of Corner's and Medical Examiner's WACME) 3-day annual conference. Walla Walla, WA May 16-18
- Evidence Collection: Instructor Washington State Search and Rescue Annual conference. May 20
- "Forensic Anthropology" Presentation to the Washington Association of Prosecuting Attorneys. Lake Chelan, WA. June 22
- Buried Body School Instructor - Sponsored by the Lewis County Coroner's Office. Chehalis, WA July 18-19
- Speaker, Washington State Patrol Missing and Unidentified Unit's annual conference. Wenatchee, WA September 15
- Speaker, Federal Bureau of Investigation Basic Homicide Investigation class. Burien, WA September 28
- Buried Body School Instructor – Sponsored by the Lewis County Coroner's Office. Chehalis, WA October 18-19

William Barbour, BS, D-ABMDI, Medicolegal Investigator II

Associations

- Diplomate, American Board of Medicolegal Death Investigators
- Member, Washington Associations of Coroners & Medical Examiners
- Compiling Editor of KCMEO Annual Report

Educational Presentations

- Role and Responsibility of the King County Medical Examiner's Office
  - Seattle University Forensic Sciences - KCMEO - Seattle, WA March 3.
  - Kentridge HighSchool Police Sciences – KHS- Seattle, WA March 18.
  - Chaplains – KCMEO – Seattle, WA August 10.
  - Seattle University Criminal Justice Club – KCMEO – Seattle, WA October 26

Activities

- Annual Report compilation

Barry Peterson, Forensic Autopsy Technician

Associations, Committees & Boards

- Certificate Holder, Washington State Peace Officer
- Member, International Association for Identification
- Member, American Society of Media Photographers

Samantha Barbour, BS, Health Program Assistant I

Associations, Committees & Boards

- Child Death Review Committee, King County Medical Examiner Office
- Quality Improvement Subcommittee, King County Medical Examiner Office
- Multiple Fatality Incident Committee, King County Medical Examiner Office

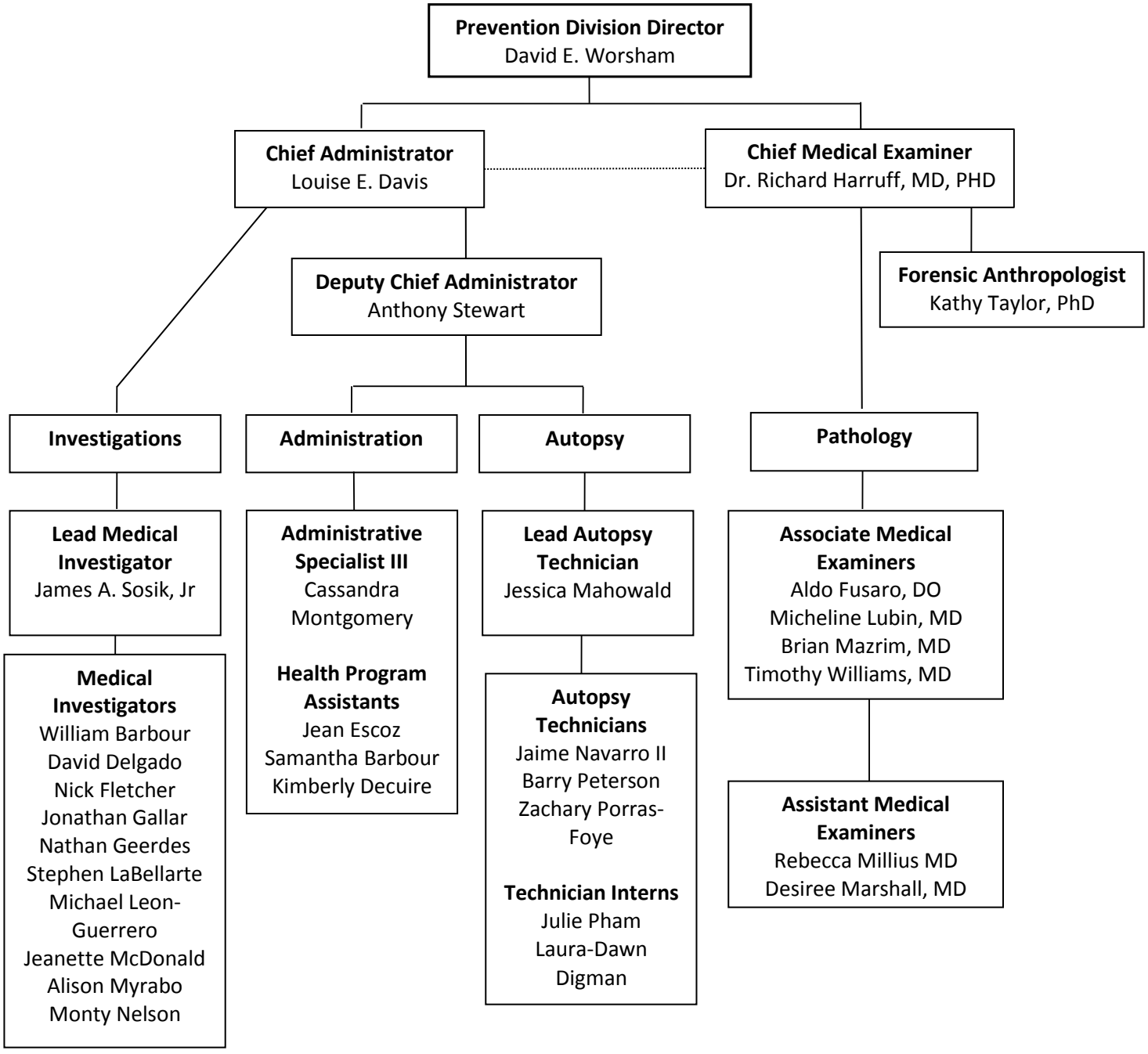
Table 14-1 Weekly Variation of Deaths Investigated by the King County Medical Examiner's Office

	TOTAL
Number of weeks studied	52
Mean number of ME jurisdiction cases per week	45
Maximum ME jurisdiction cases in any one week	62
Minimum ME jurisdiction cases in any one week	28

Table 14-2 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	27
Maximum # autopsies performed in any one week	38
Minimum # autopsies performed in any one week	14

Organization of the King County Medical Examiner's Office 2016



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.[1]

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. [2]

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

[2]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.