

King County Medical Examiner's Office

2009 Annual Report



Public Health
Seattle & King County





King County Medical Examiner's Office

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Public Health 
Seattle & King County

DEDICATION

We recognize that each case in this report represents the death of a person whose absence is grieved by friends and relatives. To those people who have suffered the loss of a friend or relative, we dedicate this report.

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FOREWORD

The King County Medical Examiner's Office serves the community by investigating sudden, unexpected, violent, suspicious, or 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 which 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 designed to isolate and identify 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. In this way, 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 2009 Annual Report reflects the activities in investigating 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.

A few selected findings are as follows:

- In 2009, there were an estimated 12,967 deaths in King County. Of those deaths, 9,874 (76%) were reported to the Medical Examiner's Office. The Medical Examiner's Office took jurisdiction in 2,190 investigated deaths, and the number of applicable cases used in this report is 2,137 deaths.
- The Medical Examiner's Office performed autopsies in 57% of those jurisdictional deaths (1,226/2,137). In 2009, those jurisdictional deaths included: 63 homicides, 253 suicides, 141 traffic deaths, 632 accidental deaths, 989 natural deaths and 59 undetermined causes.
- Of the 36 natural deaths of children and youth investigated by the Medical Examiner, 61% (22/36) were of infants less than one year of age. Of those 22 infants who died of natural causes, 13 were due to Sudden Infant Death Syndrome (SIDS).
- Several factors appear repeatedly in unnatural deaths. Of all traffic fatalities in which tests were performed, 36% tested positive for the presence of alcohol in the blood. Firearms were the most frequent instrument of death in homicides (65%) and suicides (44%).

The annual report presents detailed analyses of the different manners of deaths, as well as trends in homicides, traffic fatalities, and drug overdoses deaths under the jurisdiction of the Medical Examiner's Office. While the discussion here tends to depict the more violent types of death, the reader should be reminded that 46% of Medical Examiner cases involve natural deaths.

DESCRIPTION AND PURPOSE
of the
Public Health – Seattle & King County
Medical Examiner's Office

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 is a physician trained and certified in Forensic Pathology - the branch of medicine concerned with 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 when indicated, 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 thirty-six 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 an individual who was not under the care of a physician. (4) Death of a person in a nursing home or other institution 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 the operating room whether due to surgical or anesthetic procedures. (4) Narcotics or other drugs including alcohol or toxic agents, or toxic exposure. (5) Death thought to be associated with, or resulting from, the decedent's occupation, including chronic occupational disease such as asbestosis and black lung. (6) Death of the mother caused by known or suspected

- abortion. (7) Death from apparent natural causes during the course of a criminal act, e.g., a victim collapses during a robbery. (8) Death that occurs within one year following an accident, even if the accident is not thought to have contributed to the cause of death. (9) 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, stabs, 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
of the
Public Health – Seattle & King County
Medical Examiner's Office

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; and 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 sensitivity for cultural differences, 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.

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EXPLANATION OF DATA

The information presented in this report was compiled for deaths during the calendar year 2009 in which the King County Medical Examiner assumed jurisdiction (*pages 3 and 4 outline this jurisdictional definition*). This report emphasizes the role of alcohol, drugs, and firearm use in violent deaths. Health agencies, safety councils and lawmakers may find these statistics useful in understanding the most frequent causes of violent death in King County, which may help in making policy decisions that impact the quality of life in King County.

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 2009, the King County population was estimated to be 1,909,300¹. 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 all in the geographic area served by the Medical Examiner's Office. In King County more than 20 hospitals and a major trauma center serve the entire Pacific Northwest region.

The King County Medical Examiner's Office assumes jurisdiction on deaths occurring in King County that include both King County residents and non-residents. King County residents who die in other counties do not fall under King County Medical Examiner jurisdiction. For data on deaths of King County residents, along with several other indicators, please see Public Health – Seattle & King County Community Health Indicators online at <http://www.kingcounty.gov/healthservices/health/data/chi.aspx>.

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 17 and 18 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, sex, 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 2009. The Washington State Office of Financial Management estimates the racial distribution of King County to be 75.8% White, 6.1% African American, 3.5% Two or More Races, 13.7% Asian/Pacific Islander (including Hawaiian and other Pacific Islanders), and 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.

¹State of Washington, Office of Financial Management, June 30, 2010 estimate.

²2008 Estimate (latest figures available).

Medical Examiner figures cannot be directly compared to the racial distribution of King County residents. The main reason for this is that, as mentioned above and emphasized in Table 1-9 on page 21, in 17% 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 41).

Age groups 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 old or older.

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 the incident.

Three sections are included that review specific issues. Data are presented which highlights deaths due to drugs, firearms, and 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. On deaths among children and youth, the analysis focuses on violent, non-natural causes of death.

Data on natural deaths are 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 46% (989/2,137) of all deaths that the Medical Examiner's Office investigated in 2009.

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.

Those interested in obtaining more specific information and data from the King County Medical Examiner's Office should contact (206) 731-3232, extension 1.

MEDICAL EXAMINER CASES IN 2009

The following provides a summary of the raw data from the Medical Examiner's cases for the year 2009. Ten-year trends are shown beginning on page 23.

In 2009, there were an estimated 12,967 deaths that occurred in King County³ (0.68% of a 2009 population estimate of 1,909,300). Of these deaths, 9,874 (76%) were reported to the Medical Examiner's Office by medical and law enforcement personnel. Based on analysis of the scene and circumstances of death and the decedent's medical history gathered by the forensic medicolegal investigators, the Medical Examiner's Office assumed jurisdiction in 2,190 of these reported deaths, of which 53 were either ultimately found to be non-human remains or were anthropology or contract cases (cases in which autopsy and/or anthropology cases are examined for other counties or agencies). Throughout the discussion of data that follows, except where stated, the non-human, anthropology, and contract cases are excluded. The number of applicable cases used in this report is 2,137 deaths.

Of note is the fact that the Medical Examiner declined jurisdiction in 7,684 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 57% (1,226/2,137) 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 2009, there were 476 such deaths, accounting for 20% (476/2,137) of the total deaths. In addition, there were 437 deaths (20%) (437/2,137) certified by attending private physicians after review by and consultation with the Medical Examiner.

Several factors appear repeatedly in the unnatural deaths. Of all traffic fatalities in which tests were performed, 36% (38/106) 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 79 vehicle occupants who died, 62% (49/79) were wearing seatbelt restraints.

In the 19 deaths involving motorcyclists, 18 (95%) were wearing helmets.

³Death certificates filed in King County, Vital Statistics, Public Health - Seattle & King County, August, 2010.

Firearms were the most frequent instrument of death in homicides and suicides, accounting for 65% (41/63) of the homicides and 44% (100/253) of the suicides.

While the discussion here tends to depict the more violent types of death, the reader should be reminded that 46% (989/2,137) of Medical Examiner cases involve natural deaths. Specific discussion and presentation of relevant tables regarding 2009 cases follow this brief summary.

Table 1-1 Deaths Occurring in King County / Medical Examiner Cases / 2009

CASES BY MANNER OF DEATH ⁴			NUMBER OF KCME DEATHS	PERCENT OF KCME DEATHS
Accident Other	(A)		632	29.6%
Accident Traffic	(T)		141	6.6%
Homicide	(H)		63	2.9%
Natural	(N)		989	46.3%
Suicide	(S)		253	11.8%
Undetermined ⁵	(U)		59	2.8%
Total KCME general cases			2,137	100%
Non-applicable cases where jurisdiction was assumed ⁶			53	
Total KCME jurisdiction cases			2,190	
Total KCME general cases ⁷			2,137	
Deaths reported to KCME but no jurisdiction was assumed (NJA)			7,684	
All other deaths in King County not reported to KCME			3,146	
ALL KING COUNTY DEATHS ⁸			12,967	

⁴The letters following each manner of death will be used in most tables throughout this report.

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

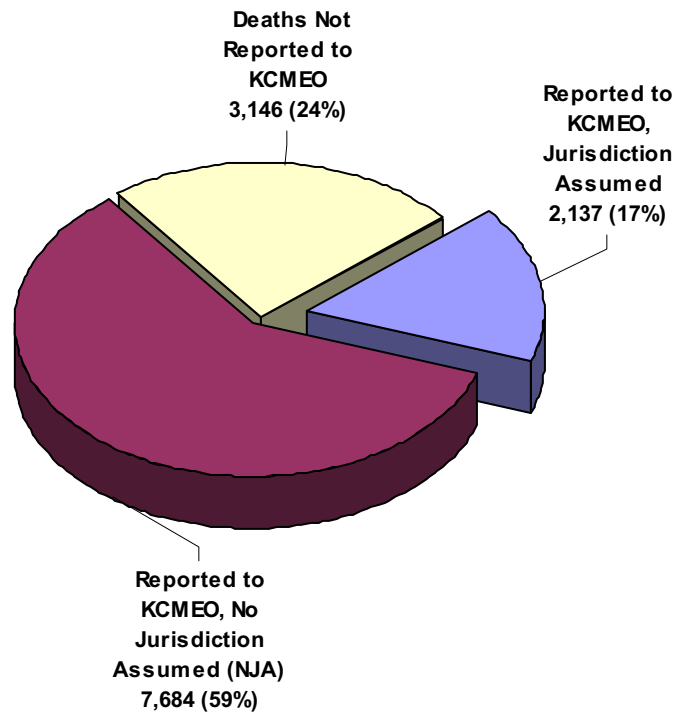
⁶Non-applicable includes 32 non-human bones/tissue, and 21 anthropology/contract cases.

⁷This is the total number of cases that will be referred to throughout this report unless otherwise noted.

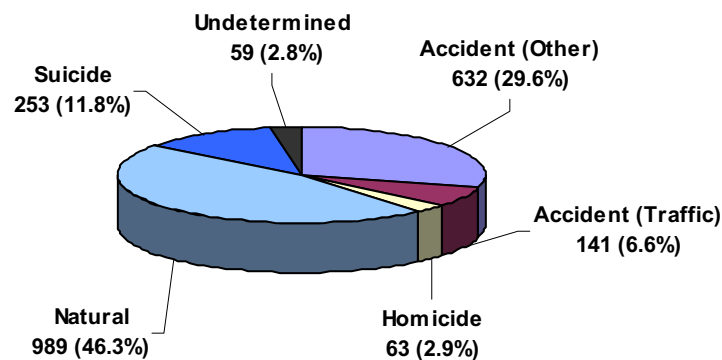
⁸Death certificates filed in King County, Vital Statistics, Public Health - Seattle & King County, August, 2010.

Graph 1-1 All King County Deaths with Medical Examiner Jurisdiction Shown / 2009

There were 12,967 deaths in King County in 2009.

**Graph 1-2 Manner of Death for All Medical Examiner Jurisdiction Cases / 2009**

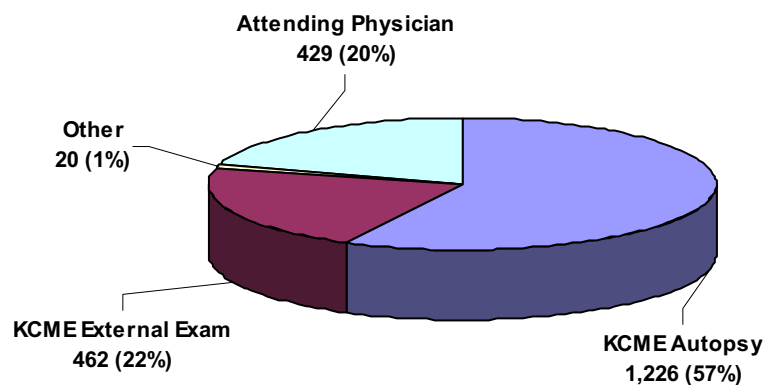
Jurisdiction assumed in 2,137 cases⁹.



⁹This number does not include 53 non-applicable cases (non-human tissue/bones and anthropology/contract cases).

Table 1-2 Method of Certification / Manner of Death / KCME / 2009

CERTIFICATION	MANNER OF DEATH						TOTAL	%
	A	T	H	N	S	U		
KCME Autopsies	357	78	56	479	201	55	1,226	57%
KCME External Exams	173	61	0	175	50	3	462	22%
KCME Other	1	0	7 ¹⁰	9	2	1	20	1%
Attending Physician	101	2	0	326	0	0	429	20%
Totals	632	141	63	989	253	59	2,137	100%

Graph 1-3 Method of Certification for all King County Medical Examiner Jurisdiction Cases / 2009

¹⁰Six cases classified as Homicide were returned to the county(s) where the original injury occurred. Because Harborview Medical Center is a regional trauma center, the King County Medical Examiner's Office receives victims of violence from surrounding counties. By prior agreement, the remains of some of those victims are returned to the originating county for autopsy by the Medical Examiner of record. The injury for one death classified Homicide occurred in a prior year and the deceased was buried prior to notification to the KCMEO.

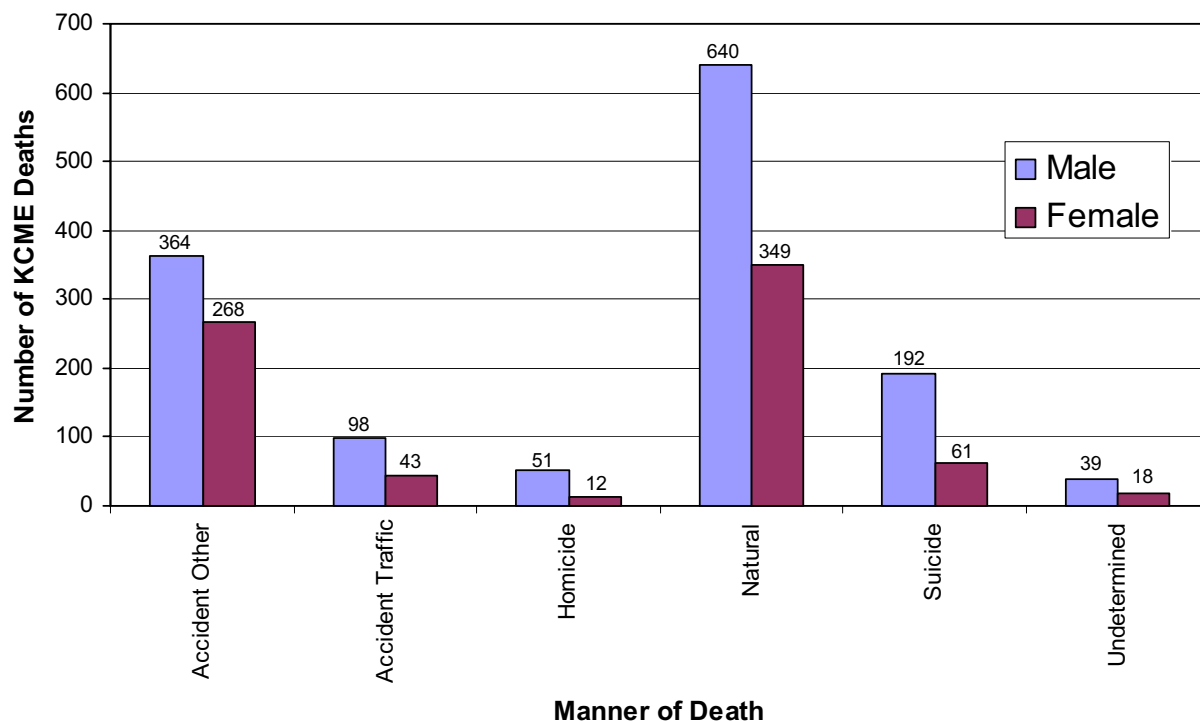
Manner of Death in 2009

King County Medical Examiner General Cases

Table 1-3 Sex / Manner of Death / King County Medical Examiner / 2009

SEX	MANNER OF DEATH						TOTAL	%
	A	T	H	N	S	U		
Male	364	98	51	640	192	39	1,384	65%
Female	268	43	12	349	61	18	751	35%
Totals	632	141	63	989	253	59¹¹	2,137¹²	100%

Graph 1-4 Sex / Manner of Death / King County Medical Examiner / 2009



¹¹Total includes two deaths of undetermined sex.

¹²Total includes two deaths of undetermined sex.

Table 1-4 Age / Sex / Manner of Death / King County Medical Examiner / 2009

AGE / SEX	MANNER OF DEATH						Sub-Total	TOTAL	%
	A	T	H	N	S	U			
Under 1 year	4	0	1	22	0	10		37	1.7%
<i>Male</i>	2	0	0	9	0	5	16		
<i>Female</i>	2	0	1	13	0	3	19		
<i>Unknown</i>	0	0	0	0	0	2	2		
1 - 5 years	3	1	0	5	0	1		10	0.5%
<i>Male</i>	1	0	0	3	0	1	5		
<i>Female</i>	2	1	0	2	0	0	5		
6- 12 years	0	4	0	3	1	0		8	0.4%
<i>Male</i>	0	1	0	1	0	0	2		
<i>Female</i>	0	3	0	2	1	0	6		
13-15 years	3	1	0	1	2	2		9	0.4%
<i>Male</i>	3	1	0	0	1	1	6		
<i>Female</i>	0	0	0	1	1	1	3		
16-19 years	5	10	4	5	6	2		32	1.5%
<i>Male</i>	4	9	4	3	4	1	25		
<i>Female</i>	1	1	0	2	2	1	7		
20- 29 years	33	21	19	16	39	8		136	6.4%
<i>Male</i>	25	17	17	12	32	5	108		
<i>Female</i>	8	4	2	4	7	3	28		
30- 39 years	71	27	15	56	48	5		222	10.4%
<i>Male</i>	42	18	13	36	37	3	149		
<i>Female</i>	29	9	2	20	11	2	73		
40- 49 years	94	18	7	107	44	10		280	13.1%
<i>Male</i>	58	15	6	73	32	6	190		
<i>Female</i>	36	3	1	34	12	4	90		
50- 59 years	101	18	9	238	62	10		438	20.5%
<i>Male</i>	65	13	7	179	41	8	313		
<i>Female</i>	36	5	2	59	21	2	125		
60 - 69 years	51	17	7	209	26	3		313	14.7%
<i>Male</i>	37	11	4	154	22	3	231		
<i>Female</i>	14	6	3	55	4	0	82		
70 - 79 years	62	12	1	147	11	1		234	11.0%
<i>Male</i>	39	5	0	97	10	1	152		
<i>Female</i>	23	7	1	50	1	0	82		
80 - 89 years	138	11	0	129	13	2		293	13.7%
<i>Male</i>	66	7	0	54	12	2	141		
<i>Female</i>	72	4	0	75	1	0	152		
90+ years	67	1	0	51	1	1		121	5.7%
<i>Male</i>	22	1	0	18	1	0	42		
<i>Female</i>	45	0	0	33	0	1	79		
Totals	632	141	63	989	253	59¹³		2,137	100%

¹³Includes 4 cases of unknown age.

Table 1-5 Race / Sex / Manner of Death / King County Medical Examiner / 2009¹⁴

RACE / SEX	MANNER OF DEATH						Sub-Total	TOTAL	%
	A	T	H	N	S	U			
White	556	115	43	789	213	39		1,755	82.1%
<i>Male</i>	321	78	32	510	168	27	1136		
<i>Female</i>	235	37	11	279	45	11	618		
<i>Unknown</i>	0	0	0	0	0	1	1		
African American	38	10	15	98	13	7		181	8.5%
<i>Male</i>	24	9	14	66	9	4	126		
<i>Female</i>	14	1	1	32	4	3	55		
Asian/Pacific Is.	27	12	4	80	18	6		147	6.9%
<i>Male</i>	14	9	4	49	9	4	89		
<i>Female</i>	13	3	0	31	9	2	58		
Amer Ind/AK Native	9	4	0	18	5	5		41	1.9%
<i>Male</i>	3	2	0	11	4	3	23		
<i>Female</i>	6	2	0	7	1	2	18		
Other	2	0	1	4	4	2		13	0.6%
<i>Male</i>	2	0	1	4	2	1	10		
<i>Female</i>	0	0	0	0	2	0	2		
<i>Unknown</i>	0	0	0	0	0	1	1		
Totals	632	141	63	989	253	59		2,137	100%

¹⁴A = Accident (Non-Traffic), T = Traffic, H = Homicide, N = Natural, S = Suicide, U = Undetermined.

Table 1-6 Marital Status / Sex / Manner of Death / King County Medical Examiner / 2009¹⁵

MARITAL STATUS / SEX	MANNER OF DEATH						Sub-Total	TOTAL	%
	A	T	H	N	S	U			
Never Married	153	58	37	298	103	31		680	31.8%
Male	99	41	32	226	83	20	501		
Female	54	17	5	72	20	9	177		
Married	212	47	17	236	84	12		608	28.4%
Male	148	32	13	162	59	9	423		
Female	64	15	4	74	25	3	185		
Divorced	120	24	7	238	50	5		444	20.8%
Male	69	19	5	146	37	3	279		
Female	51	5	2	92	13	2	165		
Widowed	139	9	1	147	11	5		312	14.6%
Male	42	3	0	45	9	2	101		
Female	97	6	1	102	2	3	211		
Unknown	8	3	1	70	5	6		93	4.4%
Male	6	3	1	961	4	5	80		
Female	2	0	0	9	1	1	13		
Totals	632	141	63	989	253	59		2,137	100%

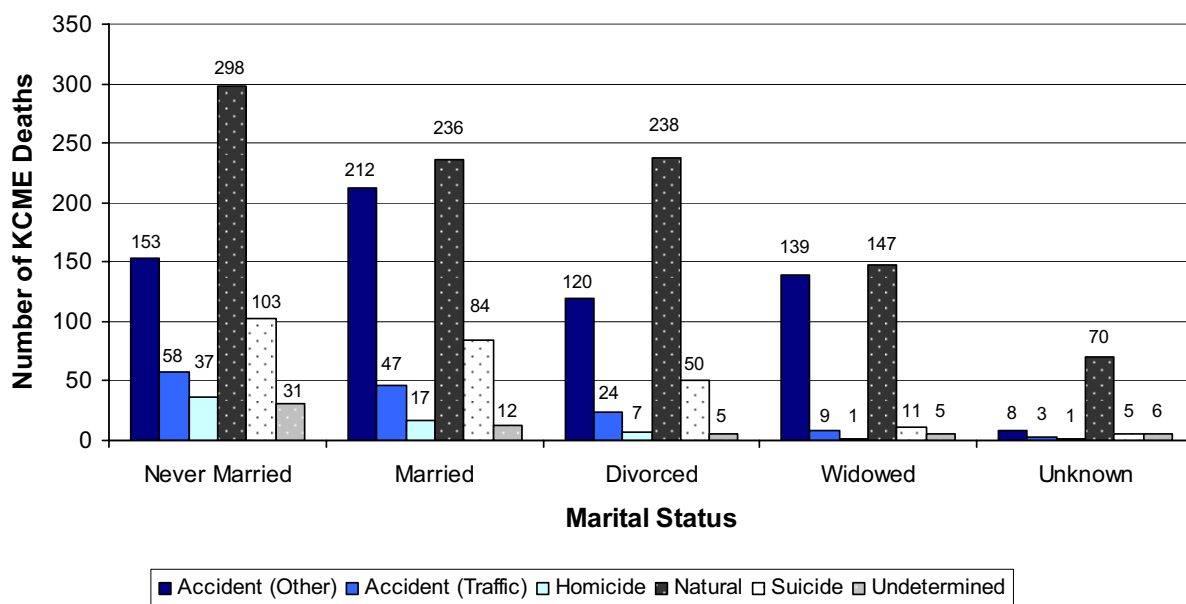
Graph 1-5 Marital Status / Manner of Death / King County Medical Examiner / 2009¹⁵A = Accident (Non-Traffic), T = Traffic, H = Homicide, N = Natural, S = Suicide, U = Undetermined.

Table 1-7 Month / Manner of Death / King County Medical Examiner / 2009¹⁶

MONTH	MANNER OF DEATH						Total	%
	A	T	H	N	S	U		
Prior to 2008	1	0	0	0	0	1	2	0.09%
2008	3	0	0	12	3	0	18	0.84%
January	57	14	4	78	21	4	178	8.33%
February	53	16	6	66	19	4	164	7.67%
March	56	8	4	92	21	6	187	8.75%
April	36	2	5	79	16	8	146	6.84%
May	64	15	4	70	20	4	177	8.28%
June	46	17	5	80	21	7	176	8.24%
July	54	10	8	83	19	3	177	8.28%
August	43	14	7	81	23	7	175	8.20%
September	55	13	4	75	26	4	177	8.28%
October	50	11	3	95	24	4	187	8.75%
November	45	8	3	77	27	2	162	7.58%
December	69	13	10	101	13	5	211	9.87%
Totals	632	141	63	989	253	59	2,137	100%

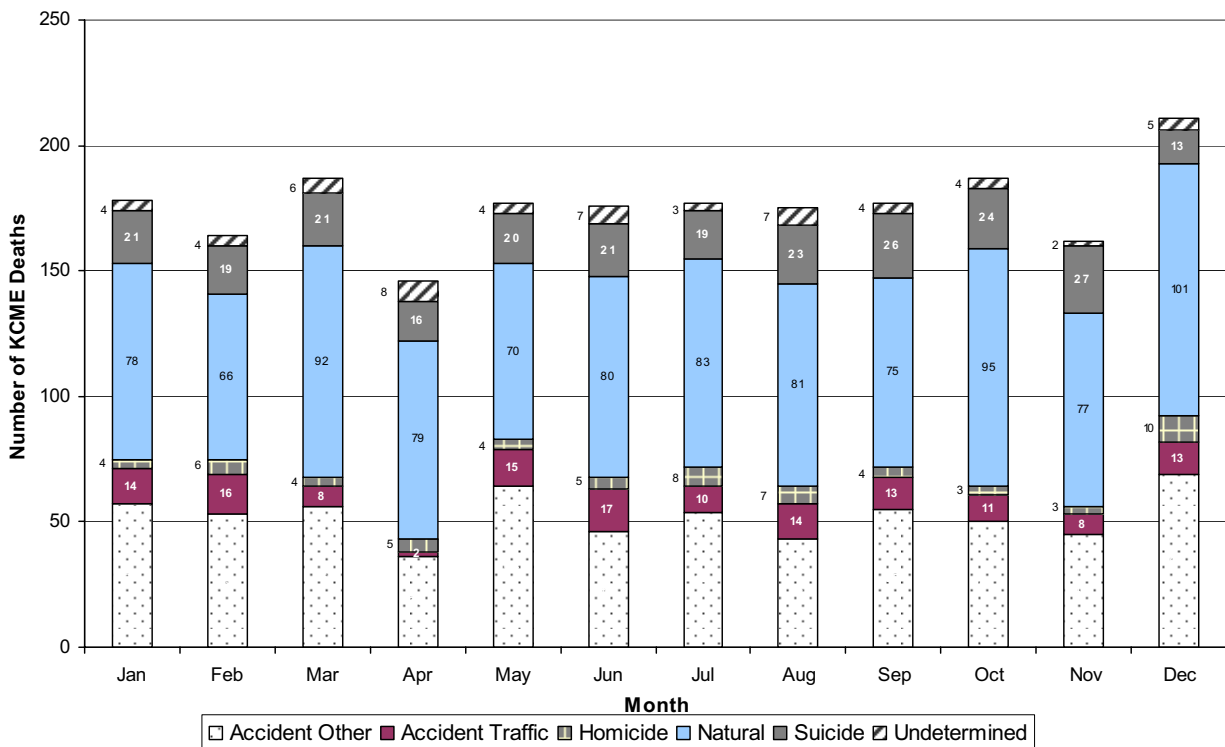
Graph 1-6 Month / Manner of Death / King County Medical Examiner / 2009¹⁶A = Accident (Non-Traffic), T = Traffic, H = Homicide, N = Natural, S = Suicide, U = Undetermined.

Table 1-8 Nearest Incorporated City to the Fatal Incident / KCME / 2009¹⁷

CITY	MANNER OF DEATH					TOTAL	%
	A	T	H	S	U		
Algona	1	1	0	2	0	4	0.35%
Auburn	25	7	2	16	1	51	4.44%
Beaux Arts	0	0	0	0	0	0	0.00%
Bellevue	33	1	2	15	3	54	4.70%
Black Diamond	1	0	0	0	1	2	0.17%
Bothell	5	0	0	3	0	8	0.70%
Burien	11	2	1	5	1	20	1.74%
Carnation	2	1	0	2	0	5	0.44%
Clyde Hill	0	0	0	0	0	0	0.00%
Covington	0	1	0	0	0	1	0.09%
Des Moines	12	0	0	2	0	14	1.22%
Duvall	3	1	0	1	1	6	0.52%
Enumclaw	5	2	0	2	1	10	0.87%
Federal Way	29	3	6	14	2	54	4.70%
Hunt's Point	1	0	0	0	0	1	0.09%
Issaquah	13	1	0	3	1	18	1.57%
Kenmore	9	0	0	1	0	10	0.87%
Kent	26	6	5	16	1	54	4.70%
Kirkland	21	3	1	9	5	39	3.40%
Lake Forest Park	1	0	0	0	0	1	0.09%
Maple Valley	4	1	0	3	1	9	0.78%
Medina	0	0	0	0	0	0	0.00%
Mercer Island	4	0	0	2	0	6	0.52%
Milton	0	1	0	0	0	1	0.09%
Newcastle	0	0	0	0	1	1	0.09%
Normandy Park	1	0	0	0	0	1	0.09%
North Bend	5	2	0	2	1	10	0.87%
Pacific	1	0	0	2	1	4	0.35%

¹⁷Table 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 / 2009¹⁸ (continued)

CITY	MANNER OF DEATH					Total	%
	A	T	H	S	U		
Redmond	15	2	0	4	1	22	1.92%
Renton	27	5	2	8	2	44	3.83%
Sammamish	2	0	0	3	1	6	0.52%
SeaTac	10	3	2	5	3	23	1.99%
Seattle	216	39	27	94	15	391	34.06%
Shoreline	27	1	1	6	0	34	3.05%
Skykomish	1	1	0	1	0	3	0.26%
Snoqualmie	2	1	0	2	0	5	0.44%
Tukwila	6	4	1	6	2	19	1.66%
Woodinville	3	0	1	1	0	5	0.44%
Yarrow Point	0	0	0	0	0	0	0.00%
Unincorporated King County							
Fall City	4	0	0	2	0	6	0.52%
Ravensdale	0	1	0	0	1	2	0.17%
Vashon Island	3	0	0	2	0	5	0.44%
Outside of King County	103	51	12	19	12	198	17.16%
Unknown Location	0	0	0	0	1	1	0.09%
Totals	632	141	63	253	59	1,148	100%

¹⁸A = Accident (Non-Traffic), T = Traffic, H = Homicide, S = Suicide, U = Undetermined.

OUT OF COUNTY CASES IN 2009

King County is home to many hospitals and a major trauma center that serve 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. In 2009, there were 199 deaths (17%, 199/1,148) where the incident (excluding deaths classified as “Natural”) occurred out of county. Table 1-9 displays these deaths by incident location and manner.

Table 1-9 Fatal Incident Occurred Outside of King County / KCME / 2009¹⁹

INCIDENT LOCATION	MANNER OF DEATH					TOTAL
	A	T	H	S	U	
Alaska	3	1	0	1	1	6
Idaho	3	0	0	0	0	3
Montana	2	4	0	0	0	6
Oregon	0	0	0	0	0	0
Other States	2	0	2	1	0	5
Washington						
<i>Island County</i>	3	0	0	0	1	4
<i>Kitsap County</i>	13	4	0	1	3	21
<i>Pierce County</i>	5	2	2	1	1	11
<i>Skagit County</i>	10	3	0	0	0	13
<i>Snohomish County</i>	30	14	5	10	1	60
<i>Thurston County</i>	0	2	0	3	0	5
<i>Other WA Counties</i>	29	21	3	3	2	58
Washington Sub-Total	90	46	10	18	8	172
Out of Country	3	0	0	0	3	6
Unknown	0	0	0	0	1	1
Totals	103	51	12	20	13	199

¹⁹Table does not include cases where manner of death is classified as “Natural”. A = Accident (Non-Traffic), T = Traffic, H = Homicide, S = Suicide, U = Undetermined.

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TEN-YEAR PERSPECTIVE

This section provides a ten-year perspective on deaths that the Medical Examiner investigated and variation in data from year to year.

Approximately 76% (9,821/12,967¹) of the deaths that occurred in 2009 in King County were reported to the Medical Examiner. The Medical Examiner's Office, however, did not assume responsibility for certification in all of these deaths. In about 78% (7,684/9,821) of these 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. Thus, the Medical Examiner assumed jurisdiction in 16% (2,137/12,967) of deaths that occurred in King County in 2009².

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 2009 data is provided in separate sections for each manner of death (Accident, Homicide, Natural, Suicide, Traffic, and Undetermined).

¹Death certificates filed in King County, (Vital Statistics, Public Health - Seattle & King County, August, 2010).

²Does not include non-human remains or anthropology/contract cases.

Table 2-1 Comparison of Manners of Death / KCME / 2000 - 2009

MANNER OF DEATH	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Accident (Other)	441	417	472	485	542	602	721	687	739	632
Accident (Traffic)	203	220	203	179	192	226	211	170	163	141
Homicide	73	74	93	93	76	80	91	76	85	63
Natural	522	619	661	770	765	763	752	863	871	989
Suicide	178	185	200	217	229	233	227	223	210	253
Undetermined	90	63	55	71	59	41	53	53	53	59
Totals	1,507	1,578	1,684	1,815	1,863	1,945	2,055	2,072	2,121	2,137

Table 2-2 Comparison of Manners of Death as Percentage of Total Annual Medical Examiner Cases / KCME / 2000 - 2009

MANNER OF DEATH	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
	%	%	%	%	%	%	%	%	%	%
Accident (Other)	29.3	26.5	28.0	26.8	29.1	31.0	35.1	33.1	34.8	29.6
Accident (Traffic)	13.5	13.9	12.1	9.9	10.3	11.6	10.3	8.2	7.7	6.6
Homicide	4.8	4.7	5.5	5.1	4.1	4.1	4.4	3.7	4.0	2.9
Natural	34.6	39.2	39.3	42.4	41.0	39.2	36.6	41.7	41.1	46.3
Suicide	11.8	11.7	11.9	11.9	12.3	12.0	11.0	10.8	9.9	11.8
Undetermined	6.0	4.0	3.2	3.9	3.2	2.1	2.6	2.5	2.5	2.8
Totals	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Graph 2-1 Comparison of Manners of Death / King County Medical Examiner / 2000 - 2009

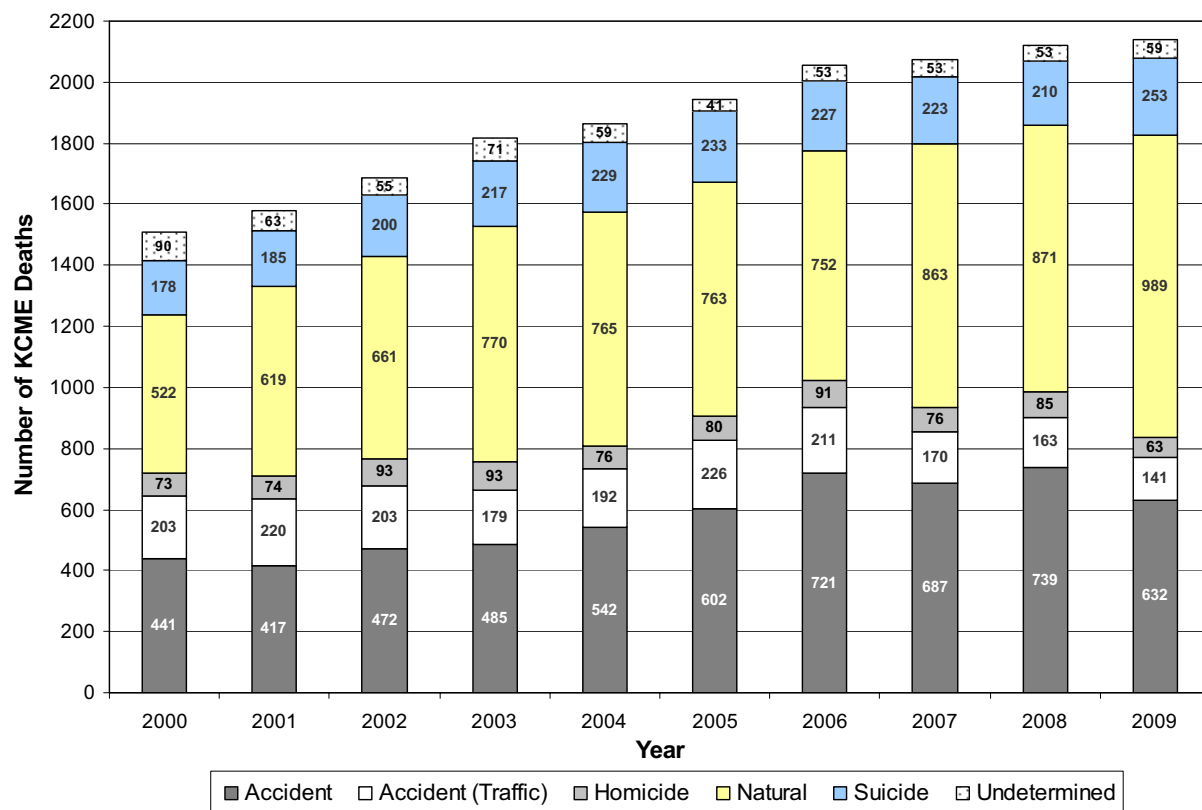


Table 2-3 Ten-Year Perspective of Homicidal Methods / KCME / 2000 - 2009

METHOD USED	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Blunt Force (#)	12	14	14	14	10	12	16	9	16	5
Blunt Force (%)	16%	19%	15%	15%	13%	15%	18%	12%	19%	8%
Firearms (#)	39	43	53	52	46	47	52	55	45	41
Firearms (%)	53%	58%	57%	56%	61%	59%	57%	72%	53%	65%
Hom. Violence (#)	0	0	2	3	3	2	0	0	0	0
Hom. Violence (%)	0%	0%	2%	3%	4%	3%	0%	0%	0%	0%
Stabbing (#)	16	8	17	16	10	14	14	12	12	11
Stabbing (%)	22%	11%	18%	17%	13%	17%	15%	16%	14%	17%
Strangulation (#)	2	3	3	5	1	4	1	0	4	3
Strangulation (%)	3%	4%	3%	6%	1%	5%	1%	0%	5%	5%
Other (#)	4	6	4	3	6	1	8	0	8	3
Other (%)	6%	8%	5%	3%	8%	1%	9%	0%	9%	5%
Totals	73	74	93	93	76	80	91	76	85	63
Percentage	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

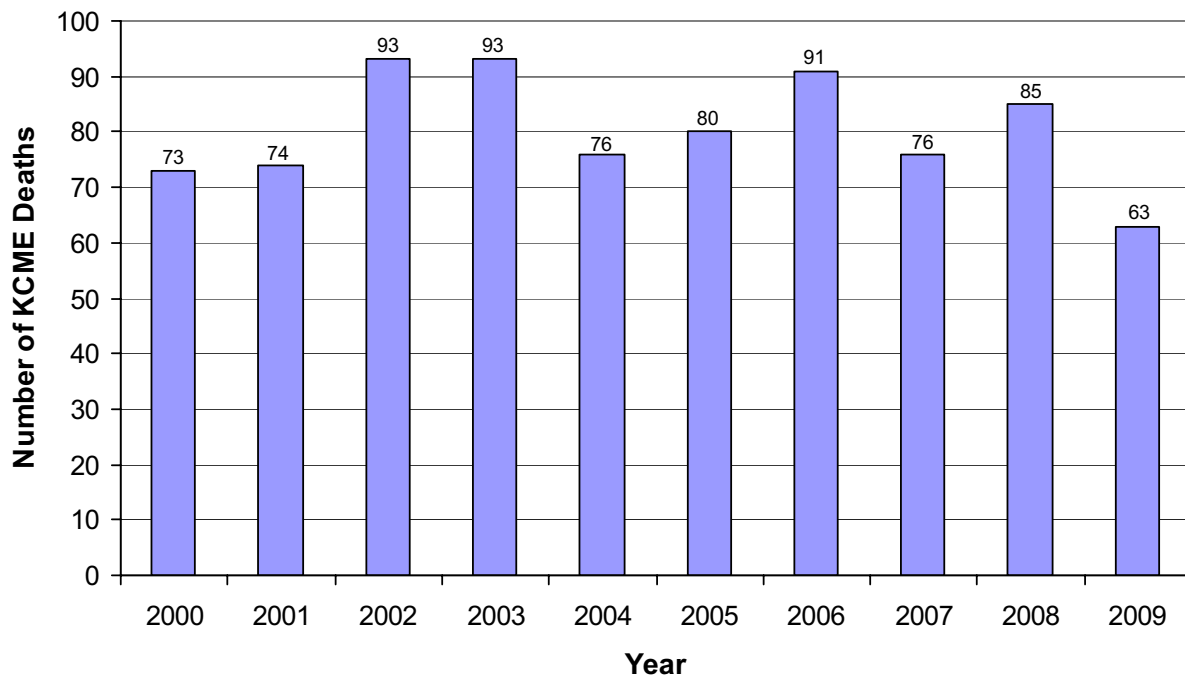
Graph 2-2 Homicide Deaths / King County Medical Examiner / 2000 - 2009

Table 2-4 Ten Year Perspective of Suicidal Injury Modes / KCME / 2000 - 2009

INJURY MODE	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Asphyxia / Plastic Bag	6	9	5	8	7	5	11	3	8	8
Burns / Fire / Heat	1	1	2	1	1	3	3	1	3	2
Carbon Monoxide	5	9	17	12	8	13	11	17	4	14
Drowning	0	1	2	4	5	0	1	3	3	7
Drugs / Poisons	31	21	23	35	41	39	36	36	29	29
Firearms	87	85	98	101	95	96	98	93	93	100
Hanging	31	38	32	36	44	42	31	43	48	60
Incised Wounds / Stabbing	7	9	4	6	8	9	5	4	5	8
Jumped	8	11	14	11	15	22	26	22	13	20
Other	2	1	3	3	5	4	5	1	4	5
Totals	178	185	200	217	229	233	227	223	210	253

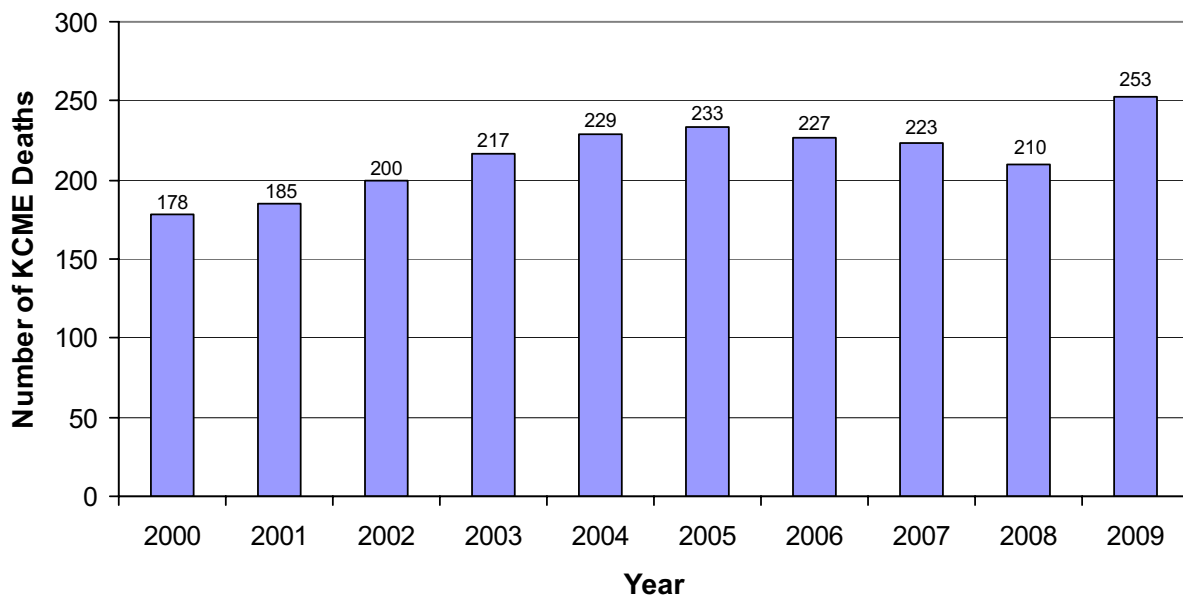
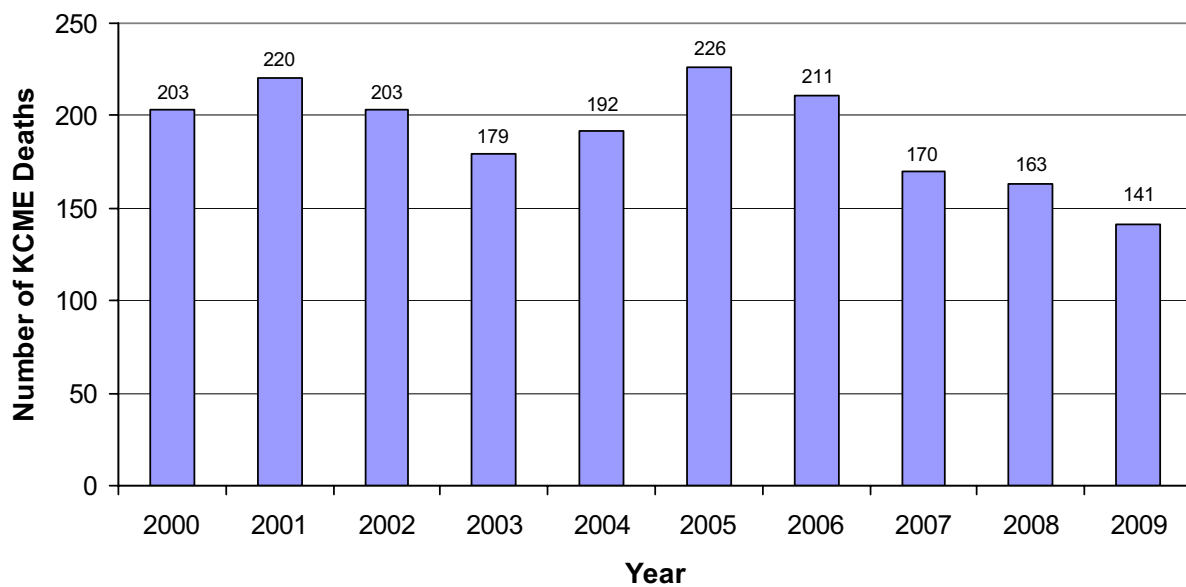
Graph 2-3 Suicide Deaths / King County Medical Examiner / 2000 – 2009

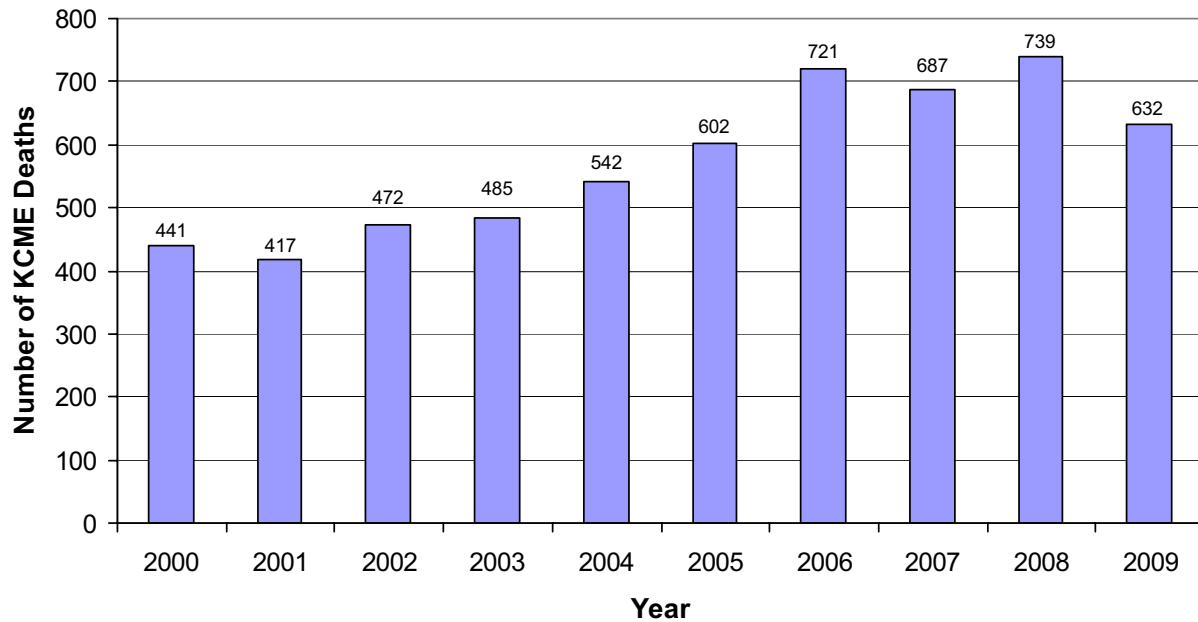
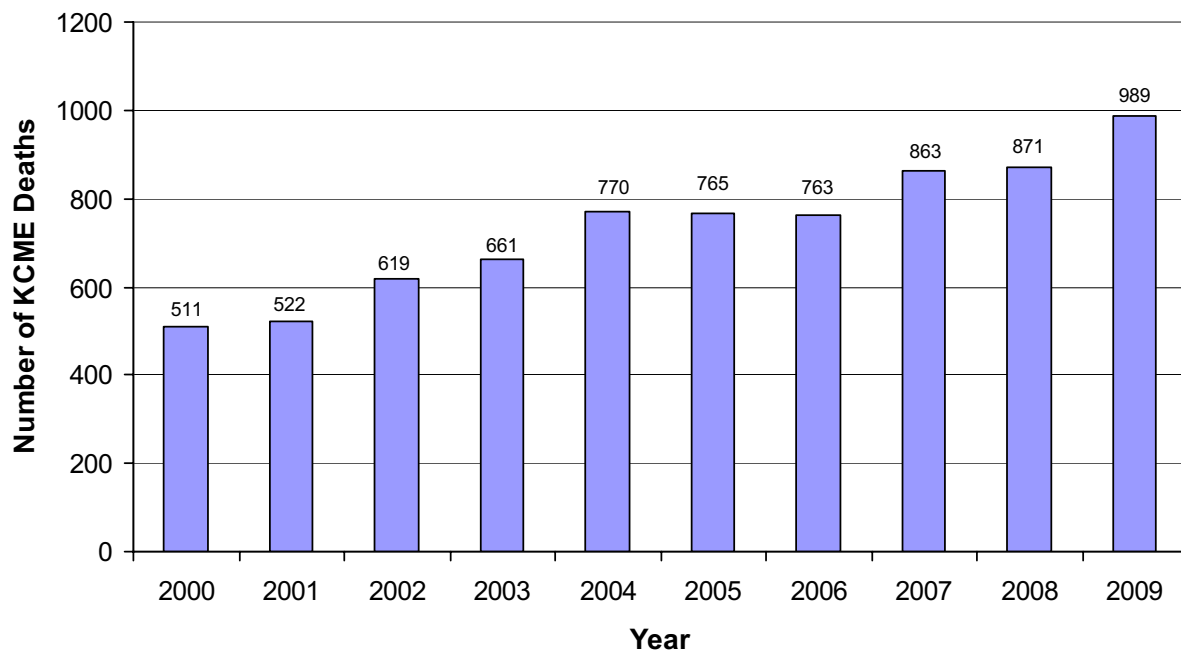
Table 2-5 Traffic Fatality Circumstances / KCME / 2000 - 2009

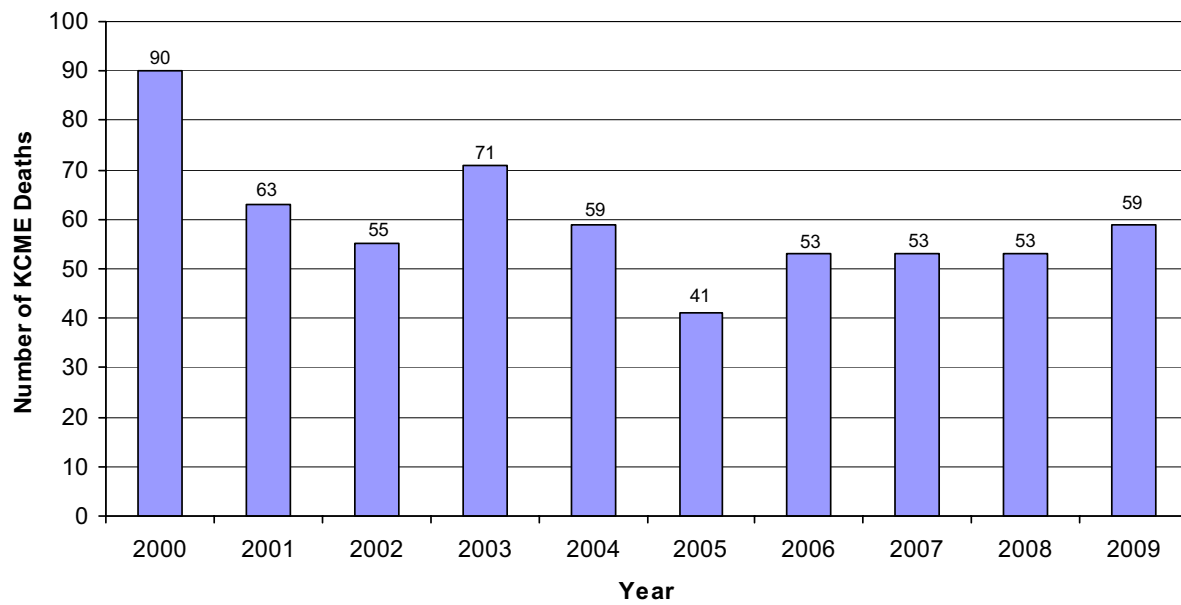
CIRCUMSTANCES	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Vehicle Driver	90	93	99	75	78	99	92	71	71	51
Vehicle Passenger	52	56	46	36	54	47	44	29	24	28
Vehicle Unknown Position	2	2	1	2	1	1	5	1	4	0
Bicyclist	8	7	3	3	5	6	8	7	4	12
Motorcycle Driver	9	21	17	21	23	33	27	26	28	18
Motorcycle Passenger	4	0	0	3	0	3	1	2	1	1
Pedestrian	32	40	34	38	30	36	33	31	26	29
Other	6	1	3	1	1	1	1	3	5	2
Totals	203	220	203	179	192	226	211	170	163	141

Graph 2-4 Traffic Fatalities / King County Medical Examiner / 2000 – 2009

**Table 2-6 Ten Year Perspective of Non-Traffic Accidental Death
Circumstances / KCME / 2000 - 2009**

CIRCUMSTANCES	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Aircraft	3	1	0	0	2	3	3	11	1	0
Asphyxia	7	10	7	4	2	9	12	11	14	10
Aspiration	7	5	5	9	8	10	9	5	10	7
Blunt Force / Crushing	11	7	12	9	8	10	4	10	10	6
Burns / Fire	23	29	22	19	24	26	23	23	13	15
Carbon Monoxide	1	5	0	1	3	4	8	3	4	4
Drowning	23	35	32	27	17	19	30	23	23	17
Drugs / Poisons	177	122	173	160	211	216	262	247	232	233
Electrocution	3	1	2	0	2	1	2	1	1	2
Explosion	0	1	0	0	4	1	1	2	0	0
Fall	149	157	171	207	213	230	308	292	323	309
Firearms	0	0	0	1	1	2	0	1	1	1
Hanging	4	0	1	0	2	2	0	0	1	1
Hypothermia	0	8	6	2	2	4	4	3	4	7
Struck by Object	2	5	2	8	7	1	8	5	2	4
Struck by Train	4	3	2	0	3	1	0	1	3	2
Vehicular Non-Traffic	6	6	8	14	10	8	9	7	10	5
Other	5	5	5	2	5	10	7	2	6	9
Totals	441	417	472	485	542	602	721	687	739	632

Graph 2-5 Accidental Deaths / King County Medical Examiner / 2000 – 2009**Graph 2-6 Natural Deaths / King County Medical Examiner / 2000 – 2009**

Graph 2-7 Deaths of Undetermined Manner / King County Medical Examiner / 2000 – 2009

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Manner of Death: ACCIDENT

The Medical Examiner certified 632 deaths as non-traffic accidents for the calendar year 2009. The largest group of accidental deaths was those who died as a result of a fall, 49% (309/632). Of the 309 deaths attributed to injury sustained in falls, 77% (239/309) occurred in the age group 70 years and over. A large percentage of these falls were ground-level falls in elderly individuals, which resulted in fractures leading to complications such as pneumonia.

The second largest group of non-traffic accidental deaths was individuals who died as a result of accidental overdoses of drugs and/or poisons, representing 37% (233/632). By age, the largest percentage of these accidental drug deaths, 32% (75/233), occurred among adults between 40-49 years. The second largest group, 25% (58/233), included adults between the ages of 50-59. Twenty three percent (53/233) were adults between 30-39 years of age. There were two accidental drug deaths of children between the ages of 16-19 years, and there were two accidental drug deaths of children 13-15. There were no deaths of children or infants less than 12 years of age.

The 2009 drug rate number (233) represents a less than 1% increase compared to the 232 accidental drug deaths in 2008. A more detailed discussion of these deaths is presented in the section "Death Due to Drugs and Poisons" on pages 87 and 88.

In 2009, 15 deaths resulted from fire or thermal injury, an increase from 2008 when there were 13. Of the 15 fire-related deaths, 67% (10/15) 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 17 drowning deaths in 2009, as compared to 23 in 2008.

Aspiration is a type of death that results from a person choking on a foreign object, often a bolus of food while eating. In 2009, there were seven deaths due to aspiration of a foreign body, compared to ten in 2008. Six of the aspiration deaths in 2009 were in adults over 50 years of age.

Of the 632 accidental deaths in 2009, 16% (103/632) 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 jurisdiction.

Sixty-four percent (404/632) of the victims were tested for the presence of alcohol. Of those tested, 24% (95/404), showed alcohol present at the time of death

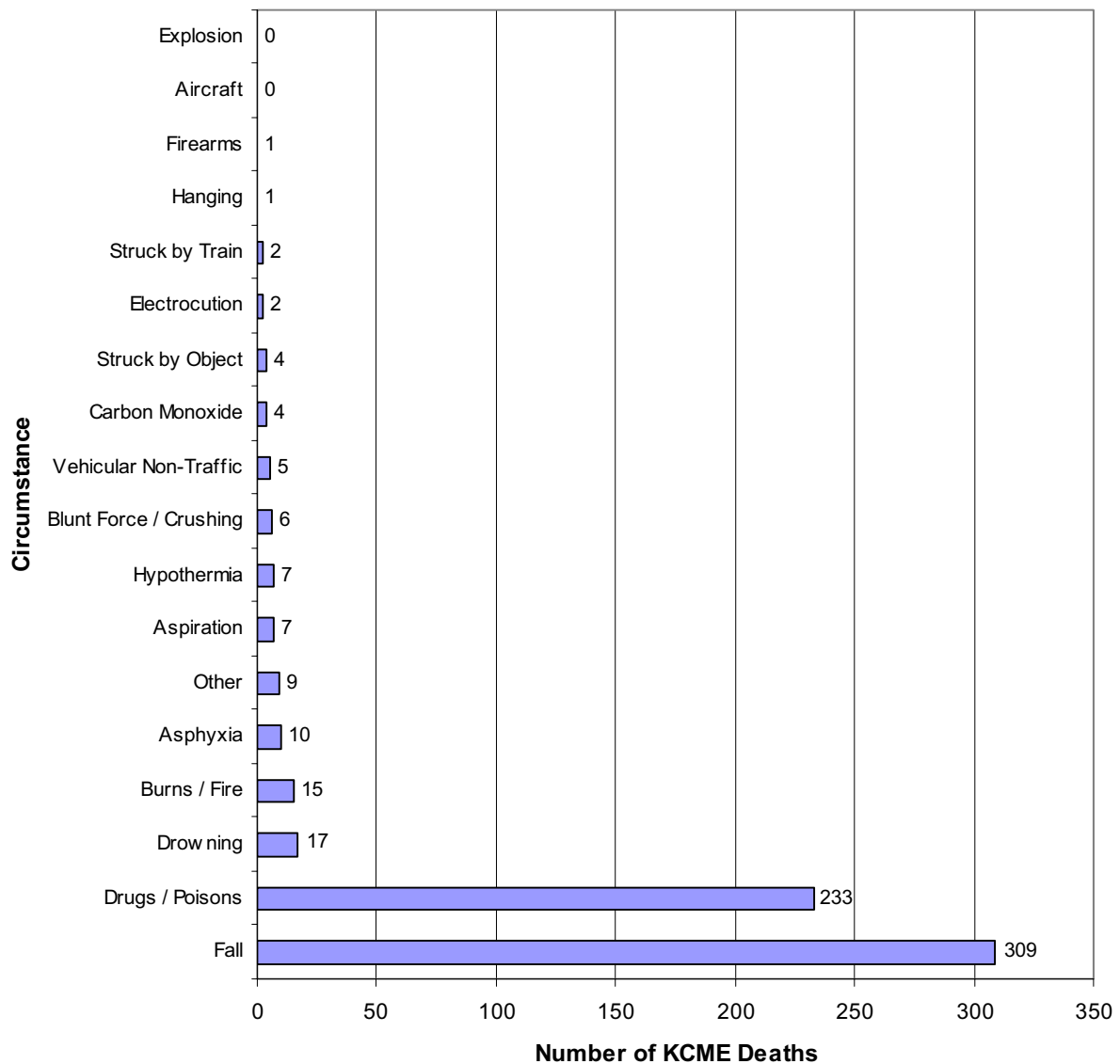
Graph 3-1 Circumstances of Accidental Death / King County Medical Examiner / 2009

Table 3-1 Circumstances of Accidental Death / Race / Sex / KCME / 2009

CIRCUMSTANCES / SEX	RACE					SUB TOTAL	TOTAL
	WHITE	AFRICA N AMER	ASIAN/ PAC IS	AM INDIAN /AK NATIVE	OTHE R		
Aircraft	0	0	0	0	0		0
<i>Male</i>	0	0	0	0	0	0	
<i>Female</i>	0	0	0	0	0	0	
Asphyxia (compressional / positional / mechanical)	9	1	0	0	0		10
<i>Male</i>	6	1	0	0	0	7	
<i>Female</i>	3	0	0	0	0	3	
Aspiration	7	0	0	0	0		7
<i>Male</i>	5	0	0	0	0	5	
<i>Female</i>	2	0	0	0	0	2	
Blunt Force / Crushing	5	1	0	0	0		6
<i>Male</i>	5	1	0	0	0	6	
<i>Female</i>	0	0	0	0	0	0	
Burns / Fire	13	0	0	2	0		15
<i>Male</i>	5	0	0	0	0	5	
<i>Female</i>	8	0	0	2	0	10	
Carbon Monoxide	3	1	0	0	0		4
<i>Male</i>	3	1	0	0	0	4	
<i>Female</i>	0	0	0	0	0	0	
Drowning	14	2	0	0	1		17
<i>Male</i>	10	2	0	0	1	13	
<i>Female</i>	4	0	0	0	0	4	
Drugs / Poisons	198	25	6	4	0		233
<i>Male</i>	119	15	3	2	0	139	
<i>Female</i>	79	10	3	2	0	94	
Electrocution	2	0	0	0	0		2
<i>Male</i>	1	0	0	0	0	1	
<i>Female</i>	1	0	0	0	0	1	
Explosion	0	0	0	0	0		0
<i>Male</i>	0	0	0	0	0	0	
<i>Female</i>	0	0	0	0	0	0	
Fall	279	5	21	3	1		309
<i>Male</i>	147	4	11	1	1	164	
<i>Female</i>	132	1	10	2	0	145	

Table 3-1 Circumstances of Accidental Death / Race / Sex / KCME / 2009 (continued)

CIRCUMSTANCES / SEX	RACE					SUB TOTAL	TOTAL
	WHITE	AFRICA N AMER	ASIAN/ PAC IS	AM INDIAN /AK NATIVE	OTHE R		
Firearms	1	0	0	0	0		1
<i>Male</i>	1	0	0	0	0	1	
<i>Female</i>	0	0	0	0	0	0	
Hanging	1	0	0	0	0		1
<i>Male</i>	1	0	0	0	0	1	
<i>Female</i>	0	0	0	0	0	0	
Hypothermia	6	1	0	0	0		7
<i>Male</i>	5	0	0	0	0	5	
<i>Female</i>	1	1	0	0	0	2	
Struck by Object	4	0	0	0	0		4
<i>Male</i>	4	0	0	0	0	4	
<i>Female</i>	0	0	0	0	0	0	
Struck by Train	1	1	0	0	0		2
<i>Male</i>	1	0	0	0	0	1	
<i>Female</i>	0	1	0	0	0	1	
Vehicular Non-Traffic	5	0	0	0	0		5
<i>Male</i>	2	0	0	0	0	2	
<i>Female</i>	3	0	0	0	0	3	
Other	8	1	0	0	0		9
<i>Male</i>	6	0	0	0	0	6	
<i>Female</i>	2	1	0	0	0	3	
Totals	556	38	27	9	2		632
Percent	88.0%	6.0%	4.3%	1.4%	0.3%		100%

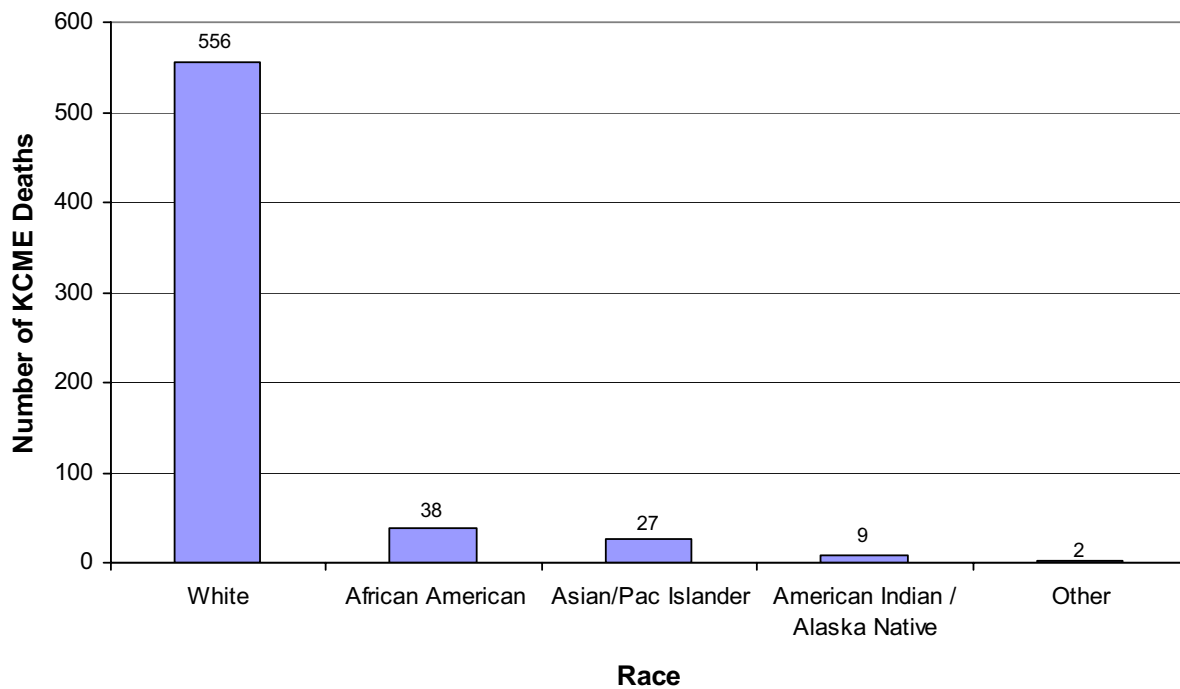
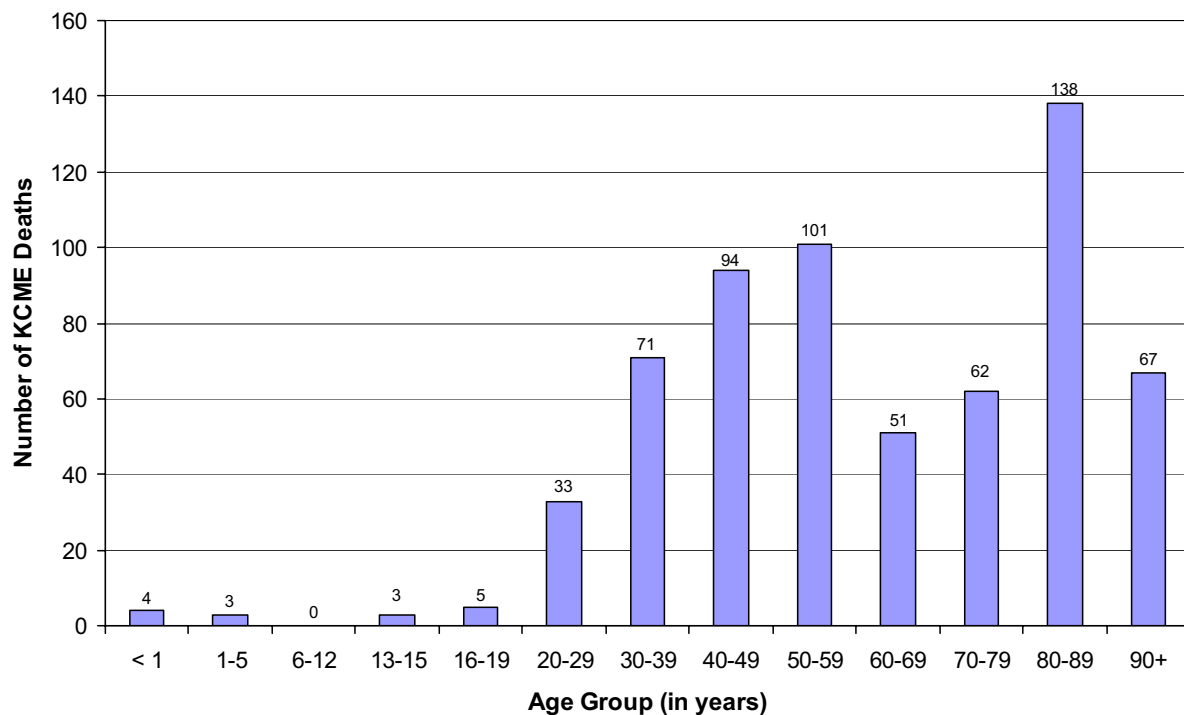
Graph 3-2 Accidental Deaths / Race / King County Medical Examiner / 2009**Graph 3-3 Accidental Deaths / Age Group / King County Medical Examiner / 2009**

Table 3-2 Circumstances of Accidental Death / Age / Sex / KCME / 2009

CIRCUMSTANCES / SEX	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	0	0	0	0	0
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	0	0	0	0	
Asphyxia (compressional / positional / mechanical)	3	0	0	0	0	0	2	1	1	0	0	2	1	10	
Male	2	0	0	0	0	0	2	1	1	0	0	1	0	7	
Female	1	0	0	0	0	0	0	0	0	0	0	1	1	3	
Aspiration	0	1	0	0	0	0	0	0	2	1	0	2	1	7	
Male	0	1	0	0	0	0	0	0	2	1	0	1	0	5	
Female	0	0	0	0	0	0	0	0	0	0	0	1	1	2	
Blunt Force / Crushing	0	0	0	0	0	1	0	1	3	0	1	0	0	6	
Male	0	0	0	0	0	1	0	1	3	0	1	0	0	6	
Female	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Burns / Fire	1	1	0	0	0	1	1	2	1	2	2	3	1	15	
Male	0	0	0	0	0	1	0	1	0	1	1	0	1	5	
Female	1	1	0	0	0	0	1	1	1	1	1	3	0	10	
Carbon Monoxide	0	0	0	0	0	1	1	1	1	0	0	0	0	4	
Male	0	0	0	0	0	1	1	1	1	0	0	0	0	4	
Female	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Drowning	0	0	0	0	1	5	2	0	3	1	2	2	1	17	
Male	0	0	0	0	1	4	2	0	2	1	2	0	1	13	
Female	0	0	0	0	0	1	0	0	1	0	0	2	0	4	
Drugs / Poisons	0	0	0	2	2	21	53	75	58	20	2	0	0	233	
Male	0	0	0	2	1	15	27	43	36	14	1	0	0	139	
Female	0	0	0	0	1	6	26	32	22	6	1	0	0	94	
Electrocution	0	0	0	0	0	0	0	1	1	0	0	0	0	2	
Male	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
Female	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
Explosion	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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	0	0	0	0	
Fall	0	0	0	0	2	1	8	9	24	26	52	12 6	61	309	
Male	0	0	0	0	2	1	7	8	14	19	32	62	19	164	
Female	0	0	0	0	0	0	1	1	10	7	20	64	42	145	

Table 3-2 Circumstances of Accidental Death / Age / Sex / KCME / 2009 (continued)

Circumstance / Sex	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 +	
Firearms	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Male	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Female	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hanging	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Male	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Female	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hypothermia	0	0	0	0	0	0	0	0	5	0	0	0	2	7
Male	0	0	0	0	0	0	0	0	4	0	0	0	1	5
Female	0	0	0	0	0	0	0	0	1	0	0	0	1	2
Struck by Object	0	0	0	0	0	1	1	0	0	0	1	1	0	4
Male	0	0	0	0	0	1	1	0	0	0	1	1	0	4
Female	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Struck by Train	0	0	0	0	0	2	0	0	0	0	0	0	0	2
Male	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Female	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Vehicular Non-Traffic	0	1	0	0	0	0	0	1	0	0	2	1	0	5
Male	0	0	0	0	0	0	0	1	0	0	1	0	0	2
Female	0	1	0	0	0	0	0	0	0	0	1	1	0	3
Other	0	0	0	0	0	0	3	2	2	1	0	1	0	9
Male	0	0	0	0	0	0	2	1	1	1	0	1	0	6
Female	0	0	0	0	0	0	1	1	1	0	0	0	0	3
Totals	4	3	0	3	5	33	71	94	101	51	62	138	67	632
Percent	1	0.5	0	0.5	1	5	11	15	16	8	10	22	10	100%

Table 3-3 Circumstances of Accidental Death / Sex / KCME / 2009

CIRCUMSTANCES	SEX		TOTAL
	MALE	FEMALE	
Aircraft	0	0	0
Asphyxia (compressional / positional / mechanical)	7	3	10
Aspiration	5	2	7
Blunt Force / Crushing	6	0	6
Burns / Fire	5	10	15
Carbon Monoxide	4	0	4
Drowning	13	4	17
Drugs / Poisons	139	94	233
Electrocution	1	1	2
Explosion	0	0	0
Fall	164	145	309
Firearms	1	0	1
Hanging	1	0	1
Hypothermia	5	2	7
Struck by Object	4	0	4
Struck by Train	1	1	2
Vehicular Non-Traffic	2	3	5
Other	6	3	9
Totals	364	268	632
Percent	58%	42%	100%

Table 3-4 Circumstances of Accidental Death / Blood Alcohol Results / KCME / 2009

CIRCUMSTANCES	TESTED		NOT TESTED	TOTAL
	TESTED POSITIVE	TESTED NEGATIVE		
Aircraft	0	0	0	0
Asphyxia (compressional / positional / mechanical)	2	8	0	10
Aspiration	0	6	1	7
Blunt Force / Crushing	0	4	2	6
Burns / Fire	4	8	3	15
Carbon Monoxide	0	4	0	4
Drowning	3	12	2	17
Drugs / Poisons	63	158	12	233
Electrocution	1	1	0	2
Explosion	0	0	0	0
Fall	18	90	201	309
Firearms	0	0	1	1
Hanging	0	1	0	1
Hypothermia	1	6	0	7
Struck by Object	0	2	2	4
Struck by Train	1	1	0	2
Vehicular Non-Traffic	0	3	2	5
Other	2	5	2	9
Totals	95	309	228	632
Percent	15%	49%	36%	100%

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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 2009, the Medical Examiner classified 63 deaths as homicide. This number represents 3% (63/2,137) of the Medical Examiner death investigations for the calendar year 2009. Of these 63 homicides, 51 (81%, 51/63) were the result of incidents that occurred within King County. For comparison, there were 85 homicides investigated in 2008, of which 74 (87%, 74/85) were incidents in King County.

The data reflect the weapons or mechanisms responsible for the homicidal deaths in 2009. Firearms were responsible for 65% (41/63), compared to 2008, when 53% (45/85) were due to firearms. Stabbing by a knife or other sharp-edged instrument caused 17% (11/63) of deaths of homicide victims. Blunt force injuries were responsible for 8% (5/63) of the 2009 homicide deaths. There were three deaths due to strangulation/asphyxia, no deaths due to homicidal violence and three 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.

In 2009, there was one homicide victim under five years of age. There were no homicide victims between 6 - 15 years of age. Four homicide victims were between the ages of 16 and 19 years.

Examining the racial distribution of victims of homicide, 24% (15/63) of the victims were African American, compared to 2008, when 32% (27/85) of the victims were African American. Whites, while representing 76% of the population, made up 68% (43/63) of the homicide victims. The remaining 8% of homicide victims (5/63) included Asian/Pacific Islanders and Other. As indicated on pages 5 and 19, in 17% 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 19).

Males comprised 81% (51/63) and women 19% (12/63) of the homicide victims in 2009. The majority of victims, 65% (41/63), were between the ages of 20 and 49 years. Young people, 19 years old and under, comprised 8% (5/63) of the homicide victims. For comparison, this younger age group represented 26% (22/85) in the year 2008. Eighty-three percent (52/63) of the victims were tested for the presence of alcohol. Of those tested 35% (18/52) showed alcohol present at the time of death.

Of the 63 homicidal deaths in 2009, 51 (81% 51/63) of the fatal incidents occurred within King County, and of these deaths, 27 (53%, 27/51) occurred within the city limits of Seattle. In 12 of the 63 homicidal deaths, the incident occurred outside of King County, but death occurred within King County.

The relationship of victim to assailant was not tabulated as part of this report. In order to investigate such associations, additional review of police records would be necessary.

Graph 4-1 Homicide Injury Methods / King County Medical Examiner / 2009

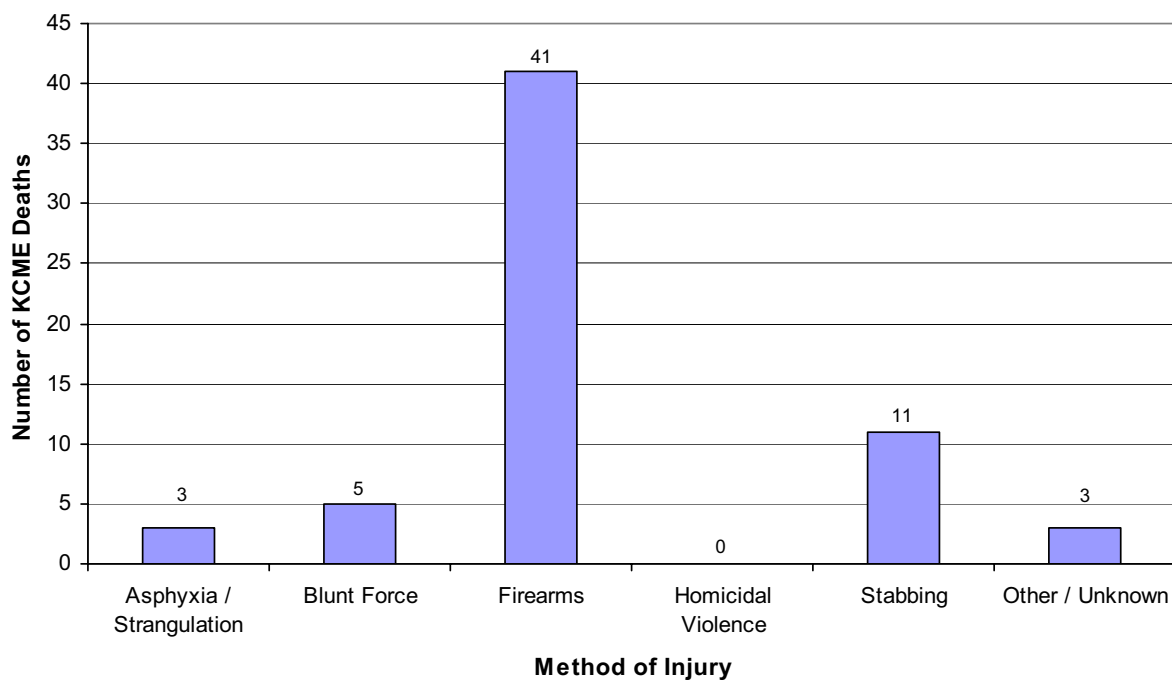


Table 4-1 Homicide Methods / Race / Sex / King County Medical Examiner / 2009

CIRCUMSTANCES / SEX	RACE					SUB TOTAL	TOTAL
	WHITE	AFRICAN AMER	ASIAN/ PAC IS	AM INDIAN /AK NATIVE	OTHER		
Asphyxia / Strangulation	3	0	0	0	0		3
<i>Male</i>	2	0	0	0	0	2	
<i>Female</i>	1	0	0	0	0	1	
Blunt Force	4	1	0	0	0		5
<i>Male</i>	2	1	0	0	0	3	
<i>Female</i>	2	0	0	0	0	2	
Firearms	26	10	4	0	1		41
<i>Male</i>	22	10	4	0	1	37	
<i>Female</i>	4	0	0	0	0	4	
Homicidal Violence	0	0	0	0	0		0
<i>Male</i>	0	0	0	0	0	0	
<i>Female</i>	0	0	0	0	0	0	
Stabbing	8	3	0	0	0		11
<i>Male</i>	5	2	0	0	0	7	
<i>Female</i>	3	1	0	0	0	4	
Other / Unknown	2	1	0	0	0		3
<i>Male</i>	1	1	0	0	0	2	
<i>Female</i>	1	0	0	0	0	1	
Totals	43	15	4	0	1		63
Percent	68%	24%	6%	0%	2%		100%

Table 4-2 Homicide Methods / Age / Sex / King County Medical Examiner / 2009

METHOD / SEX	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	0	1	1	1	0	0	0	0		3
Male	0	0	0	0	0	0	1	1	0	0	0	0	0	2	
Female	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
Blunt Force	0	0	0	0	0	0	1	1	2	1	0	0	0		5
Male	0	0	0	0	0	0	0	1	2	0	0	0	0	3	
Female	0	0	0	0	0	0	1	0	0	1	0	0	0	2	
Firearms	1	0	0	0	3	16	9	4	5	3	0	0	0		41
Male	0	0	0	0	3	14	9	4	4	3	0	0	0	37	
Female	1	0	0	0	0	2	0	0	1	0	0	0	0	4	
Homicidal Violence	0	0	0	0	0	0	0	0	0	0	0	0	0		0
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	0	0	0	0	
Stabbing	0	0	0	0	0	3	3	1	1	3	0	0	0		11
Male	0	0	0	0	0	3	2	0	1	1	0	0	0	7	
Female	0	0	0	0	0	0	1	1	0	2	0	0	0	4	
Other / Unknown	0	0	0	0	1	0	1	0	0	0	1	0	0		3
Male	0	0	0	0	1	0	1	0	0	0	0	0	0	2	
Female	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
Totals	1	0	0	0	4	19	15	7	9	7	1	0	0		63
Percent	2%	0%	0%	0%	6%	30%	24%	11%	14%	11%	2%	0%	0%		100%

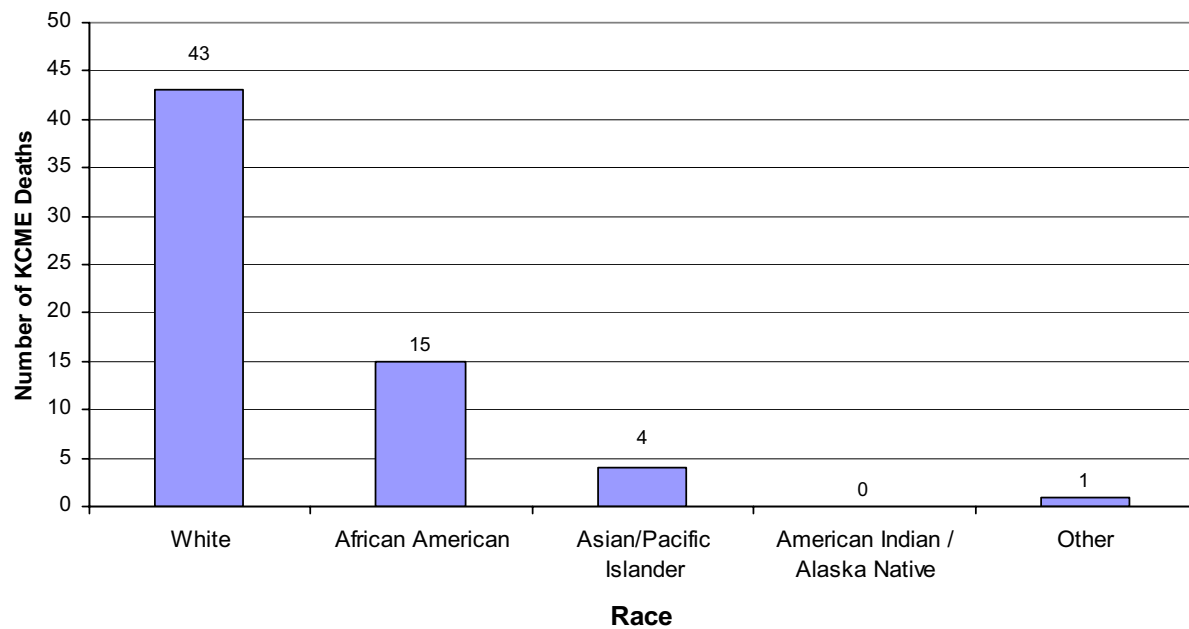
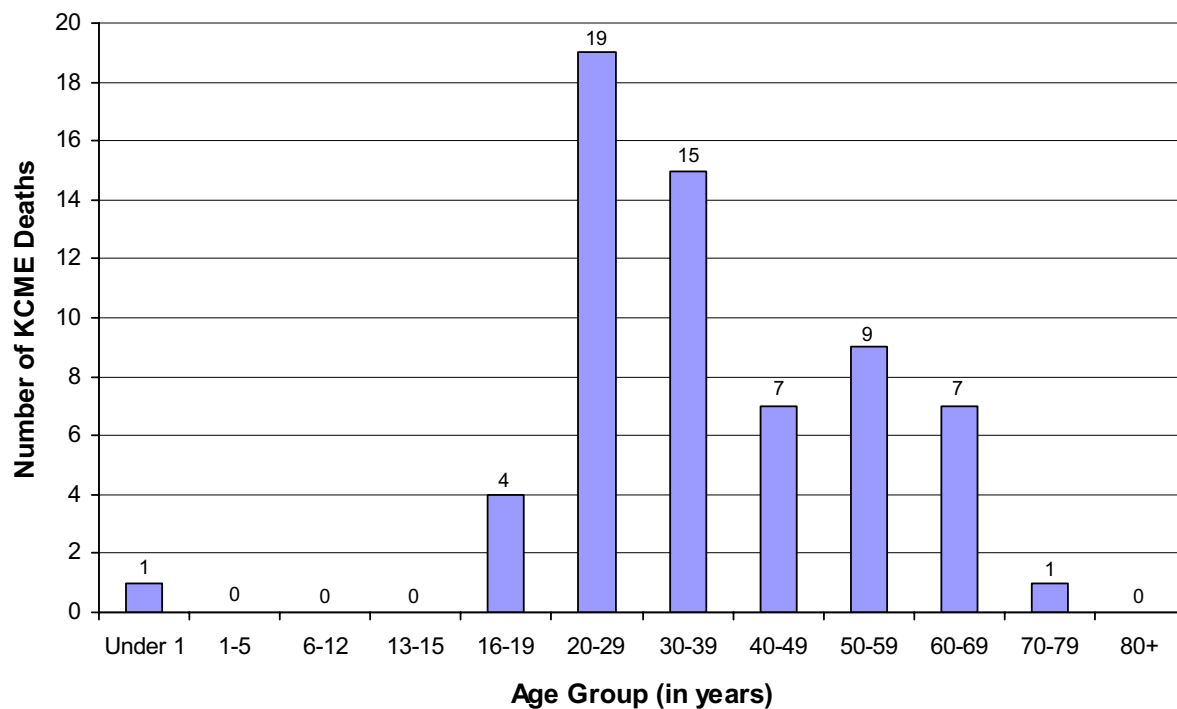
Graph 4-2 Homicide Deaths / Race / King County Medical Examiner / 2009**Graph 4-3 Homicide Deaths / Age Group / King County Medical Examiner / 2009**

Table 4-3 Homicide Deaths / Age / Race / Sex / King County Medical Examiner / 2009

METHOD		AGE						SUB TOTAL	TOTAL
		< 16	16 to 19	20 to 29	30 to 39	40 to 49	50+		
Asphyxia/ Strangulation	White	0	0	0	1	1	1		3
	Male	0	0	0	1	1	0	2	
	Female	0	0	0	0	0	1	1	
Blunt Force	White	0	0	0	1	1	2		4
	Male	0	0	0	0	1	1	2	
	Female	0	0	0	1	0	1	2	
	African Amer.	0	0	0	0	0	1		1
	Male	0	0	0	0	0	1	1	
	Female	0	0	0	0	0	0	0	
Firearms	White	1	1	9	5	3	7		26
	Male	0	1	7	5	3	6	22	
	Female	1	0	2	0	0	1	4	
	African Amer.	0	2	5	3	0	0		10
	Male	0	2	5	3	0	0	10	
	Female	0	0	0	0	0	0	0	
	Asian/Pac Is.	0	0	1	1	1	1		4
	Male	0	0	1	1	1	0	3	
	Female	0	0	0	0	0	1	1	
	Other	0	0	1	0	0	0		1
	Male	0	0	1	0	0	0	1	
	Female	0	0	0	0	0	0	0	
Stabbing	White	0	0	2	2	0	4		8
	Male	0	0	2	1	0	2	5	
	Female	0	0	0	1	0	2	3	
	African Amer.	0	0	1	1	1	0		3
	Male	0	0	1	1	0	0	2	
Other	Female	0	0	0	0	1	0	1	
	White	0	1	0	0	0	1		2
	Male	0	1	0	0	0	0	1	
	Female	0	0	0	0	0	1	1	
	African Amer.	0	0	0	1	0	0		1
	Male	0	0	0	1	0	0	1	
	Female	0	0	0	0	0	0	0	
TOTALS		1	4	19	15	7	17		63

Table 4-4 Homicide Methods / Sex / King County Medical Examiner / 2009

METHOD	SEX		TOTAL
	MALE	FEMALE	
Asphyxia / Strangulation	2	1	3
Blunt Force	3	2	5
Firearms	37	4	41
Homicidal Violence	0	0	0
Stabbing	7	4	11
Other / Unknown	2	1	3
Totals	51	12	63
Percent	81%	19%	100%

Table 4-5 Homicide Methods / Blood Alcohol Results / KCME / 2009

METHOD	TESTED		NOT TESTED	TOTAL
	POSITIVE	NEGATIVE		
Asphyxia / Strangulation	1	1	1	3
Blunt Force	3	0	2	5
Firearms	11	27	3	41
Homicidal Violence	0	0	0	0
Stabbing	3	5	3	11
Other / Unknown	0	1	2	3
Totals	18	34	11	63
Percent	29%	54%	17%	100%

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Manner of Death: NATURAL

The Medical Examiner assumes jurisdiction over deaths that are classified as 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 2009, the King County Medical Examiner's Office assumed jurisdiction over 989 deaths attributed to natural causes, representing 46% (989/2,137) of the cases investigated. The King County Medical Examiner certified 67% (663/989) of these deaths; attending physicians who had knowledge of the decedent's medical condition certified 33% (326/989). 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 72% (479/663) of the deaths certified as natural, which included autopsies performed in 92% (12/13) of deaths classified as Sudden Infant Death Syndrome (SIDS). In the one case of sudden infant death where an autopsy was not performed by the King County Medical Examiner an autopsy was performed by the pathology department at Seattle Children's Hospital. 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.

The data presented in this section are derived from the 989 natural deaths in which the King County Medical Examiner assumed jurisdiction in 2009. 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".

A special subset of deaths designated "Complication of Therapy" has been incorporated in the statistical analyses of natural deaths. Previously, these deaths were classified separately and included in the Accident chapter. Complication of Therapy is not an official manner of death recognized by state or federal standards of death certification. It is, however, a useful category that includes deaths resulting from medical therapy or surgical procedures that are not easily classified as either natural or accidental deaths. As such, this category of deaths warrants special mention because of an apparent upward trend in incidence and increased public interest. A Complication of Therapy is defined as a death that arises as a predictable consequence of appropriate medical therapy. Deaths that are excluded from this category include falls and

mechanical injuries in hospitals, inadvertent misadministration of drugs, wrong-sided surgeries, and wholly unexpected procedure-related injuries, all of which are more appropriately classified as manner Accident.

As an example, a patient who dies after an operation for colon cancer in whom there is an infection complicating the colectomy, the manner of death would be classified as Complication of Therapy, manner Natural. Contrast this example with the case of a hospital patient for whom is written a proper prescription for a heart medication but is dispensed an unintentional overdose of the medication. In this second case, the manner of death would be Accident, not Complication of Therapy.

It is important to note that the classification of a death as a Complication of Therapy is a non-judgmental means by which the inherent risk of medical therapies can be recognized and tracked. By no means is Complication of Therapy synonymous with malpractice or negligence.

Complication of Therapy deaths have increased in the previous ten years, from 16 in 2000 to 134 in 2009 and can be divided into three general categories: drug-related, consequence of medical procedure, and consequence of surgery. Drug-related includes anaphylactic/allergic reaction, hemorrhagic complications of anticoagulants, anesthesia related events, and other adverse drug reactions. Consequence of medical procedure refers to complications from procedures that are therapeutic or diagnostic but do not meet the criteria for surgery, such as placement of catheters, penetration of body cavities by needles, or manipulation of body regions, etc. Consequence of surgery refers to direct anatomic damage during a procedure and usually involves a diseased organ system, such as perforation of a viscus or vessel or hemorrhagic complications of surgery.

In 2009, 134 deaths were classified as Complication of Therapy. Graph 5-4 shows the Complication of Therapy deaths by general category and Graph 5-5 further divides the general category of surgical injury into “type of surgery” and “comorbidity”. (Comorbidity is defined as the coexistence of natural disease serious enough to be listed on the death certificate as a contributing condition.)

There may be multiple reasons for this apparent upward trend in the incidence of Complication of Therapy over the last ten years, but one of the most important factors is probably the rate at which non-natural deaths are reported to the KCMEO. The Medical Examiner is dependent on clinical providers to report deaths that may have been a consequence of medical therapy. Another important factor for the increase in cases from 2007 to 2009 is the inclusion of *Clostridium difficile* colitis as a complication of antibiotic therapy.

Recognition of the importance of identifying and reporting these deaths by the medical community has surged since the Institute of Medicine of the National Academy of Sciences published a report in 1999 that estimated that up to 98,000 preventable deaths may occur each year in the United States due to medical errors. The subsequent public interest and efforts by the healthcare system to address issues of patient safety may contribute to a greater percentage of these cases being reported to the medical examiner.

Table 5-1 Disease Processes Causing Natural Deaths / KCME / 2009

NUMBER OF DEATHS	DISEASE DESCRIPTION
CARDIOVASCULAR	
5	Aortic aneurysm
14	Aortic dissection
227	Arteriosclerotic cardiovascular disease (ASCVD)
4	Bacterial endocarditis
6	Cardiac dysrhythmia
12	Cardiomyopathy
3	Congenital heart disease
55	Hypertensive ASCVD / Hypertensive heart disease
4	Myocarditis
131	Probable arteriosclerotic cardiovascular disease
5	Valvular heart disease
466	TOTAL CARDIOVASCULAR
CENTRAL NERVOUS SYSTEM	
16	Epilepsy (idiopathic & other non-traumatic etiologies)
0	Infarct
0	Meningitis
10	Spontaneous intracerebral hemorrhage
10	Spontaneous rupture of aneurysm
13	Other
49	TOTAL CENTRAL NERVOUS SYSTEM
COMPLICATION OF THERAPY (COT)	
58	C. Difficile Colitis COT
8	Cardiothoracic Surgery COT
21	Drug Related COT
27	General Surgery COT
1	Neurosurgery COT
2	Orthopedic Surgery COT
17	Procedure Related COT
134	TOTAL COMPLICATION OF THERAPY
ENDOCRINE	
14	Diabetic ketoacidosis
22	Diabetes mellitus
5	Pancreatitis
2	Other
43	TOTAL ENDOCRINE

Table 5-1 Disease Processes Causing Natural Deaths / KCME / 2009 (continued)

NUMBER OF DEATHS	DISEASE DESCRIPTION
GASTROINTESTINAL	
2	Bacterial peritonitis
4	Gastrointestinal hemorrhage
2	Obstruction
4	Perforating ulcer
3	Other
15	TOTAL GASTROINTESTINAL
HEPATIC	
9	Cirrhosis
1	Fatty liver
9	Hepatitis
1	Other
20	TOTAL HEPATIC
MALIGNANCY	
9	Breast
3	Colon
20	Lung
3	Pancreas
1	Prostate
0	Rectum
26	Other
62	TOTAL MALIGNANCY
RESPIRATORY	
4	Asthma
22	Chronic obstructive pulmonary disease
25	Pneumonia
23	Pulmonary thromboembolus
7	Other
81	TOTAL RESPIRATORY
SUDDEN INFANT DEATH SYNDROME	
13	SIDS

Table 5-1 Disease Processes Causing Natural Deaths / KCME / 2009 (continued)

NUMBER OF DEATHS	DISEASE DESCRIPTION
OTHER PROCESSES	
44	Chronic ethanolism (alcoholism)
4	Chronic renal disease
10	HIV / AIDS
0	Infection
2	Labor / Delivery / Prematurity
8	Necrotizing fasciitis
5	No anatomic or toxicological cause of death
21	Sepsis
12	Other
106	TOTAL OTHER PROCESSES
523	TOTAL Non-Cardiovascular Cause of Death
466	TOTAL Cardiovascular Cause of Death
989	Total NATURAL DEATHS under KCME Jurisdiction, 2009

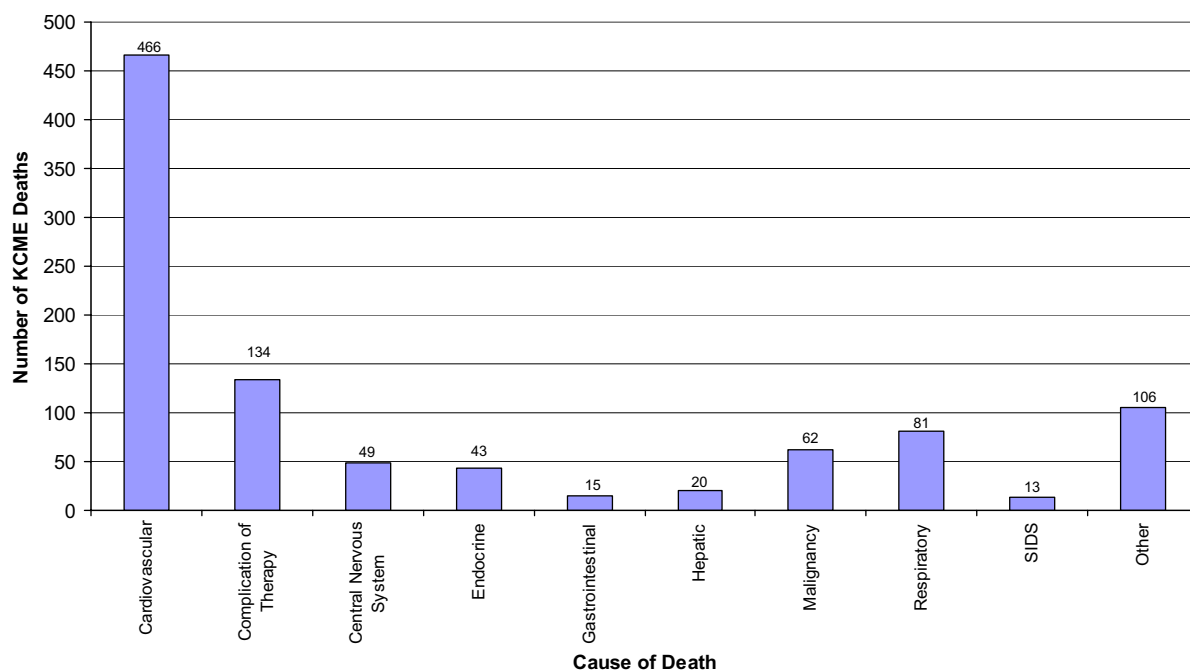
Graph 5-1 Deaths due to Natural Causes / King County Medical Examiner / 2009

Table 5-2 Natural Deaths / Race / Sex / King County Medical Examiner / 2009

DISEASE PROCESS / SEX	RACE					SUB TOTAL	TOTAL
	WHITE	AFRIC AMER	ASIAN/ PAC IS	AM INDIAN /AK NATIVE	OTHER		
Cardiovascular	366	50	42	7	1		466
<i>Male</i>	260	35	29	5	1	330	
<i>Female</i>	106	15	13	2	0	136	
Central Nervous	38	7	4	0	0		49
<i>Male</i>	24	5	0	0	0	29	
<i>Female</i>	14	2	4	0	0	20	
Complication of Therapy	118	4	9	2	1		134
<i>Male</i>	59	1	6	1	1	68	
<i>Female</i>	59	3	3	1	0	66	
Endocrine	33	7	2	1	0		43
<i>Male</i>	23	5	1	1	0	30	
<i>Female</i>	10	2	1	0	0	13	
Gastrointestinal	12	0	1	2	0		15
<i>Male</i>	3	0	1	1	0	5	
<i>Female</i>	9	0	0	1	0	10	
Hepatic	17	2	1	0	0		20
<i>Male</i>	13	2	0	0	0	15	
<i>Female</i>	4	0	1	0	0	5	
Malignancy	49	7	6	0	0		62
<i>Male</i>	28	6	5	0	0	39	
<i>Female</i>	21	1	1	0	0	23	
Respiratory	64	11	4	1	1		81
<i>Male</i>	36	6	1	1	1	45	
<i>Female</i>	28	5	3	0	0	36	
SIDS	10	1	1	0	1		13
<i>Male</i>	5	0	1	0	1	7	
<i>Female</i>	5	1	0	0	0	6	
Other	82	9	10	5	0		106
<i>Male</i>	59	6	5	2	0	72	
<i>Female</i>	23	3	5	3	0	34	
Totals	789	98	80	18	4		989
Percent	79.8%	9.9%	8.1%	1.8%	0.4%		100%

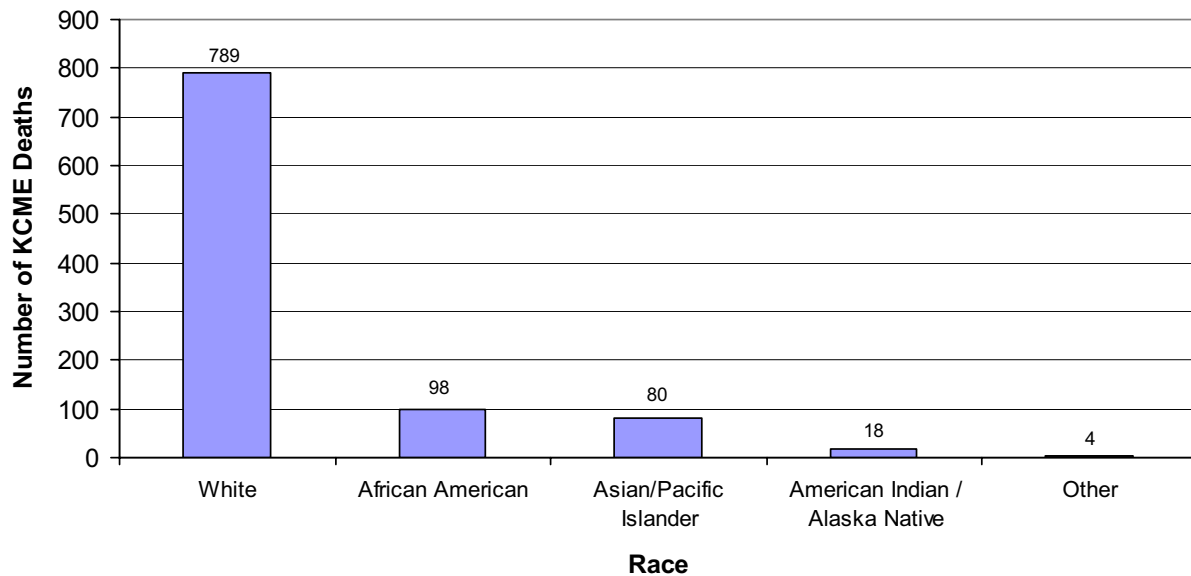
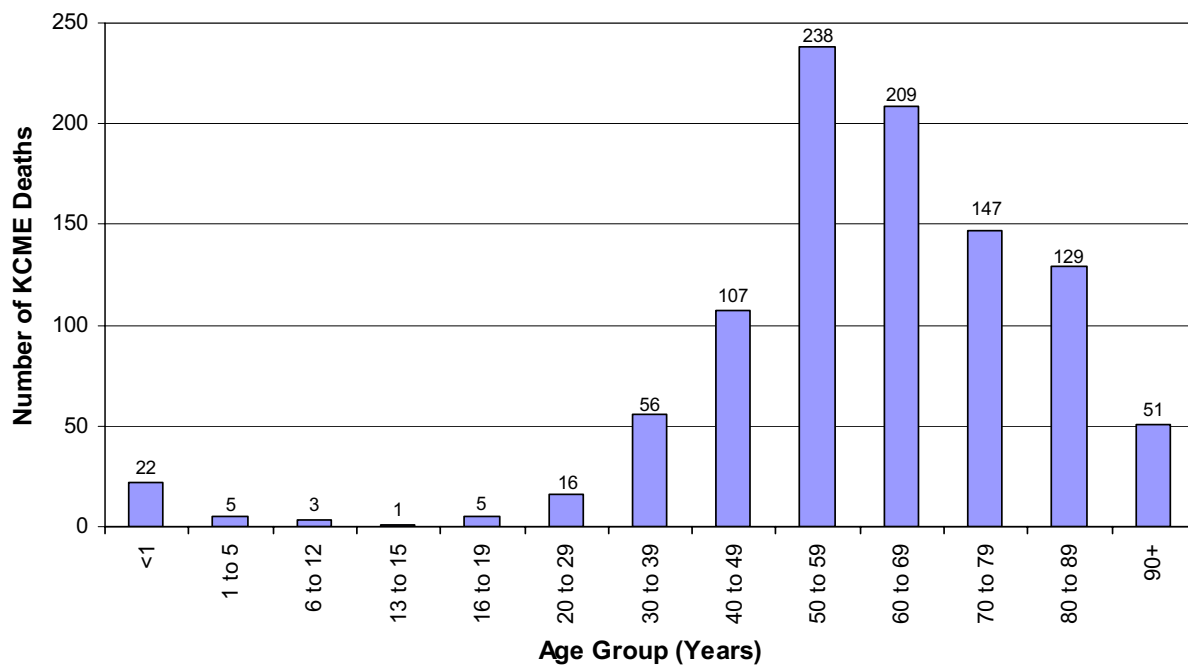
Graph 5-2 Natural Deaths / Race / King County Medical Examiner / 2009**Graph 5-3 Natural Deaths / Age Group / King County Medical Examiner / 2009**

Table 5-3 Natural Deaths / Age / Sex / King County Medical Examiner / 2009

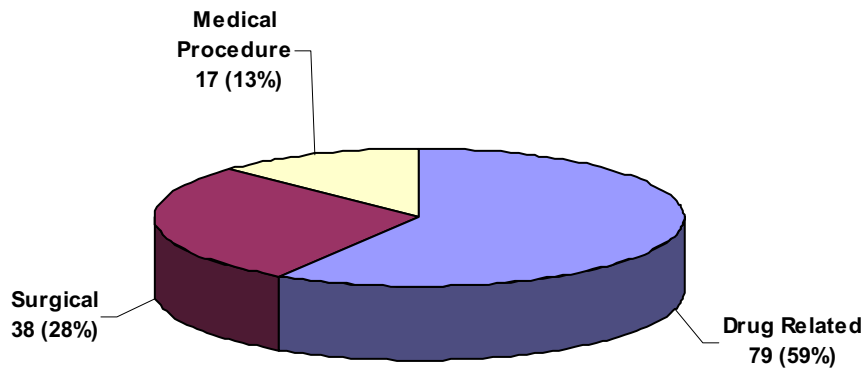
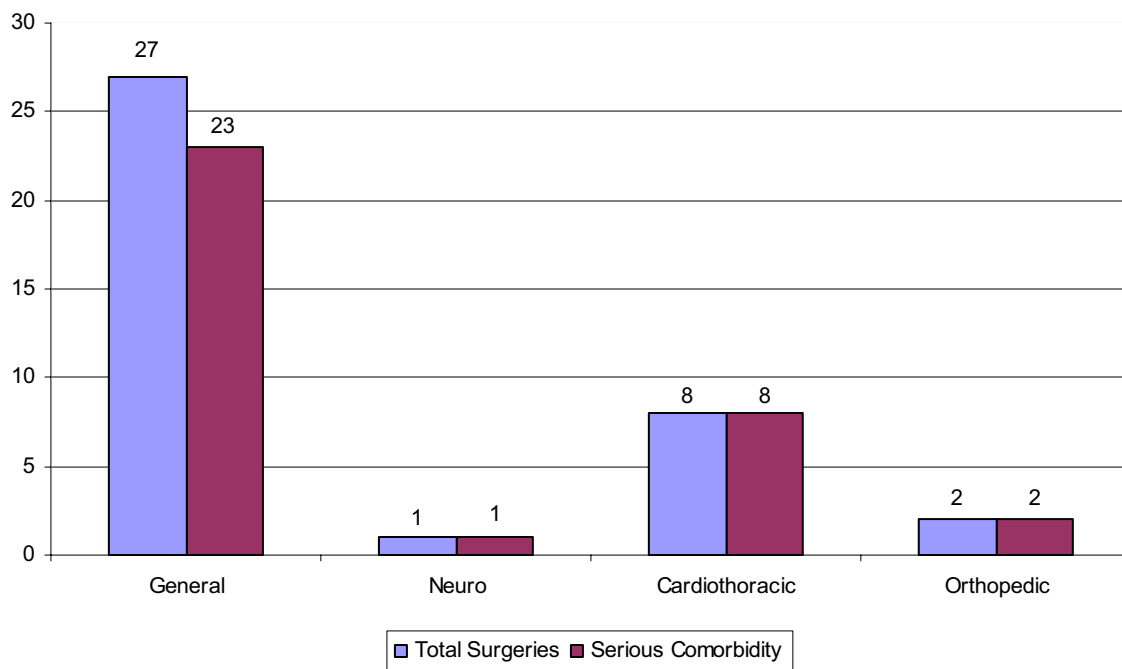
DISEASE PROCESS/ SEX	AGE GROUP (YEARS)													SUB TOTAL	TOTAL
	< 1	1 to 5	6 to 12	13 to 15	16 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 +		
Cardiovascular	0	1	0	0	2	6	17	45	112	127	73	56	27		466
Male	0	1	0	0	2	4	13	35	90	99	52	26	8	330	
Female	0	0	0	0	0	2	4	10	22	28	21	30	19	136	
Central Nervous	0	2	0	1	1	3	4	8	9	2	6	7	6		49
Male	0	1	0	0	1	2	3	5	6	1	4	4	2	29	
Female	0	1	0	1	0	1	1	3	3	1	2	3	4	20	
Complication of Therapy	1	1	0	0	0	1	5	7	16	23	26	43	11		134
Male	0	0	0	0	0	1	3	4	10	15	13	15	6	68	
Female	1	1	0	0	0	0	2	3	6	8	13	28	5	66	
Endocrine	0	0	0	0	0	2	6	5	18	7	3	2	0		43
Male	0	0	0	0	0	2	5	3	12	6	2	0	0	30	
Female	0	0	0	0	0	0	1	2	6	1	1	2	0	13	
Gastrointestinal	1	0	0	0	0	0	0	3	3	2	5	0	1		15
Male	0	0	0	0	0	0	0	1	2	0	2	0	0	5	
Female	1	0	0	0	0	0	0	2	1	2	3	0	1	10	
Hepatic	0	0	0	0	0	0	0	2	12	4	0	2	0		20
Male	0	0	0	0	0	0	0	1	10	4	0	0	0	15	
Female	0	0	0	0	0	0	0	1	2	0	0	2	0	5	
Malignancy	0	0	0	0	0	0	0	0	19	21	16	5	1		62
Male	0	0	0	0	0	0	0	0	14	12	10	3	0	39	
Female	0	0	0	0	0	0	0	0	5	9	6	2	1	23	
Respiratory	1	0	3	0	1	2	13	10	12	12	15	8	4		81
Male	1	0	1	0	0	2	6	4	6	8	12	3	2	45	
Female	0	0	2	0	1	0	7	6	6	4	3	5	2	36	
SIDS	13	0	0	0	0	0	0	0	0	0	0	0	0		13
Male	7	0	0	0	0	0	0	0	0	0	0	0	0	7	
Female	6	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other	6	1	0	0	1	2	11	27	37	11	3	6	1		106
Male	1	1	0	0	0	1	6	20	29	9	2	3	0	72	
Female	5	0	0	0	1	1	5	7	8	2	1	3	1	34	
Totals	22	5	3	1	5	16	56	107	238	209	147	129	51		989
Percent	2.2%	0.5%	0.3%	0.1%	0.5%	1.6%	5.7%	10.8%	24.1%	21.1%	14.9%	13%	5.2%		100%

Table 5-4 Natural Deaths / Sex / King County Medical Examiner / 2009

CIRCUMSTANCES	SEX		TOTAL
	MALE	FEMALE	
Cardiovascular	330	136	466
Central Nervous	29	20	49
Complication of Therapy	68	66	134
Endocrine	30	13	43
Gastrointestinal	5	10	15
Hepatic	15	5	20
Malignancy	39	23	62
Respiratory	45	36	81
SIDS	7	6	13
Other	72	34	106
Totals	640	349	989
Percent	65%	35%	100%

Table 5-5 Natural Deaths / Blood Alcohol / King County Medical Examiner / 2009

METHOD	TESTED		NOT	
	POSITIVE	NEGATIVE	TESTED	TOTAL
Cardiovascular	57	243	166	466
Central Nervous System	8	24	17	49
Complication of Therapy	0	16	118	134
Endocrine	8	20	15	43
Gastrointestinal	3	6	6	15
Hepatic	3	4	13	20
Malignancy	0	18	44	62
Respiratory	1	47	33	81
SIDS	0	11	2	13
Other	17	47	42	106
Totals	97	436	456	989
Percent	10%	44%	46%	100%

Graph 5-4 Complication of Therapy / General Categories / KCME / 2009**Graph 5-5 Complication of Therapy¹ / Surgical Injuries / KCME / 2009**

¹Serious comorbidity indicates coexisting natural disease serious enough to contribute to death.

Manner of Death: SUICIDE

Suicides are those 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 2009, there were 253 suicides, accounting for 12% (253/2,137) of the deaths that the King County Medical Examiner's Office investigated.

Firearms were responsible for forty percent (100/253) of the 2009 suicide deaths. The number of gunshot suicides (100) in 2009 is seven more than in 2008 when there were 93. Hanging accounted for 24% (60/253) of suicidal deaths, while jumping from a height accounted for 8% (20/253). Drugs and poisons accounted for 11% (29/253) of all suicides, while carbon monoxide caused death in 6% (14/253) of the cases. More information regarding drug caused deaths is presented in the section "Deaths Due to Drugs & Poisons" beginning on page 87.

Blood alcohol tests were performed in 94% (238/253) of suicidal deaths and were positive in 30% (72/238) of cases tested.

In 2009, there were nine suicides among persons 19 years and younger (3.6% of all suicides, 9/253), which is unchanged from 2008 when there were also nine suicides in this age group (9/210, 4.3%). Suicides in the age group 60 years and older represented 20% (51/253) of all suicides in 2009.

Firearms were the primary method of committing suicide for all age groups over the age of 50. However, in the age groups from 20-49 firearms and hanging each equaled 33% (43/131) of the deaths in 2009. In the 19 years and younger age group, firearms represented 22% (2/9) of the deaths while hanging represented 67% (6/9) of the deaths.

In 2009, there were five deaths due to drugs and/or poisons by adults 60 years of age and over. In 2009, there was one suicide attributed to drugs and/or poisons among youths 19 years and younger. In 2008, there was also one death 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.¹

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

¹Washington State Department of Health website: <http://www.doh.wa.gov/dwda>

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.

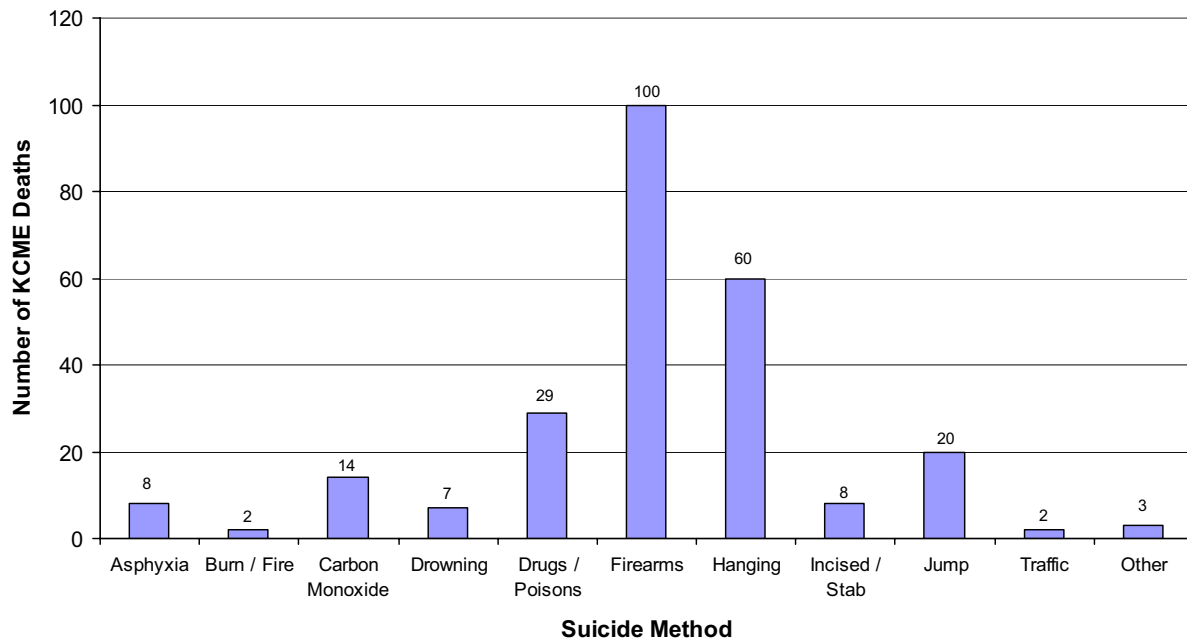
Graph 6-1 Suicide Injury Methods / King County Medical Examiner / 2009

Table 6-1 Suicide Injury Methods / Race / Sex / King County Medical Examiner / 2009

CIRCUMSTANCES / SEX	RACE					SUB TOTAL	TOTAL
	WHITE	AFRIC AMER	ASIAN/ PAC IS	AM INDIAN /AK NATIVE	OTHE R		
Asphyxia	6	1	0	0	1		8
<i>Male</i>	4	0	0	0	1	5	
<i>Female</i>	2	1	0	0	0	3	
Burns/ Fire	2	0	0	0	0		2
<i>Male</i>	0	0	0	0	0	0	
<i>Female</i>	2	0	0	0	0	2	
Carbon Monoxide	12	2	0	0	0		14
<i>Male</i>	12	1	0	0	0	13	
<i>Female</i>	0	1	0	0	0	1	
Drowning	5	0	1	0	1		7
<i>Male</i>	2	0	1	0	0	3	
<i>Female</i>	3	0	0	0	1	4	
Drugs / Poisons	26	3	0	0	0		29
<i>Male</i>	14	2	0	0	0	16	
<i>Female</i>	12	1	0	0	0	13	
Firearms	87	4	5	3	1		100
<i>Male</i>	73	4	2	3	1	83	
<i>Female</i>	14	0	3	0	0	17	
Hanging	43	3	11	2	1		60
<i>Male</i>	36	2	6	1	0	45	
<i>Female</i>	7	1	5	1	1	15	
Incised / Stab Wound(s)	8	0	0	0	0		8
<i>Male</i>	7	0	0	0	0	7	
<i>Female</i>	1	0	0	0	0	1	
Jumping	19	0	1	0	0		20
<i>Male</i>	16	0	0	0	0	16	
<i>Female</i>	3	0	1	0	0	4	
Other	3	0	0	0	0		3
<i>Male</i>	2	0	0	0	0	2	
<i>Female</i>	1	0	0	0	0	1	
Traffic	2	0	0	0	0		2
<i>Male</i>	2	0	0	0	0	2	
<i>Female</i>	0	0	0	0	0	0	
Totals	213	13	18	5	4		253
Percent	84.2%	5.1%	7.1%	2.0%	1.6%		100%

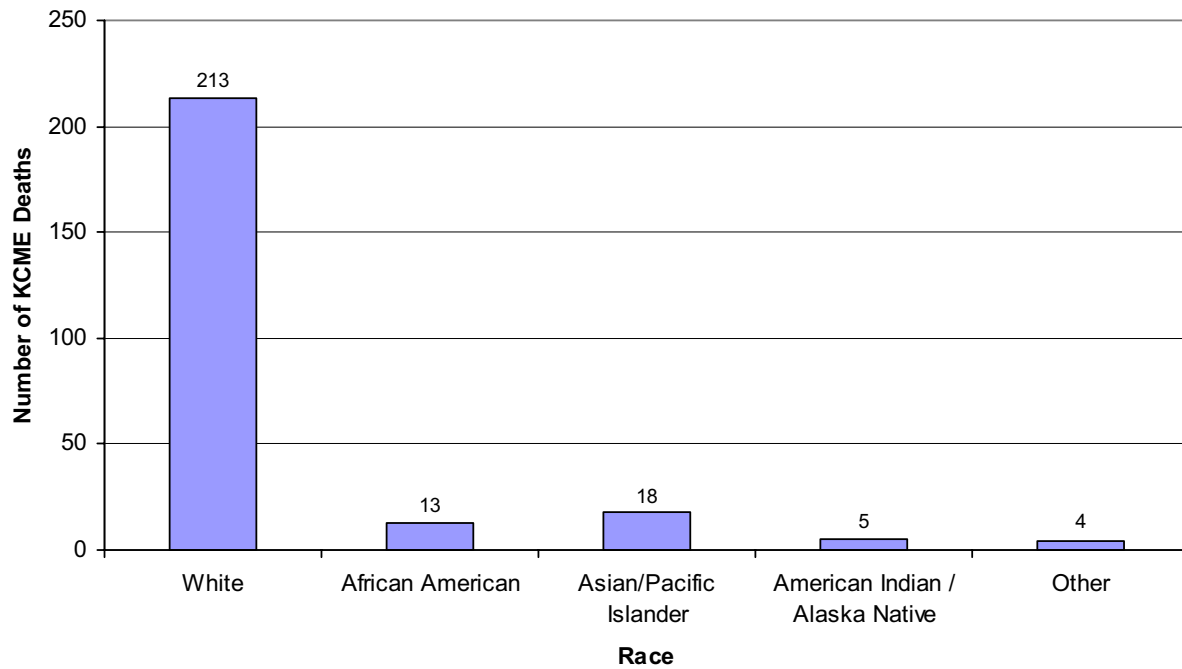
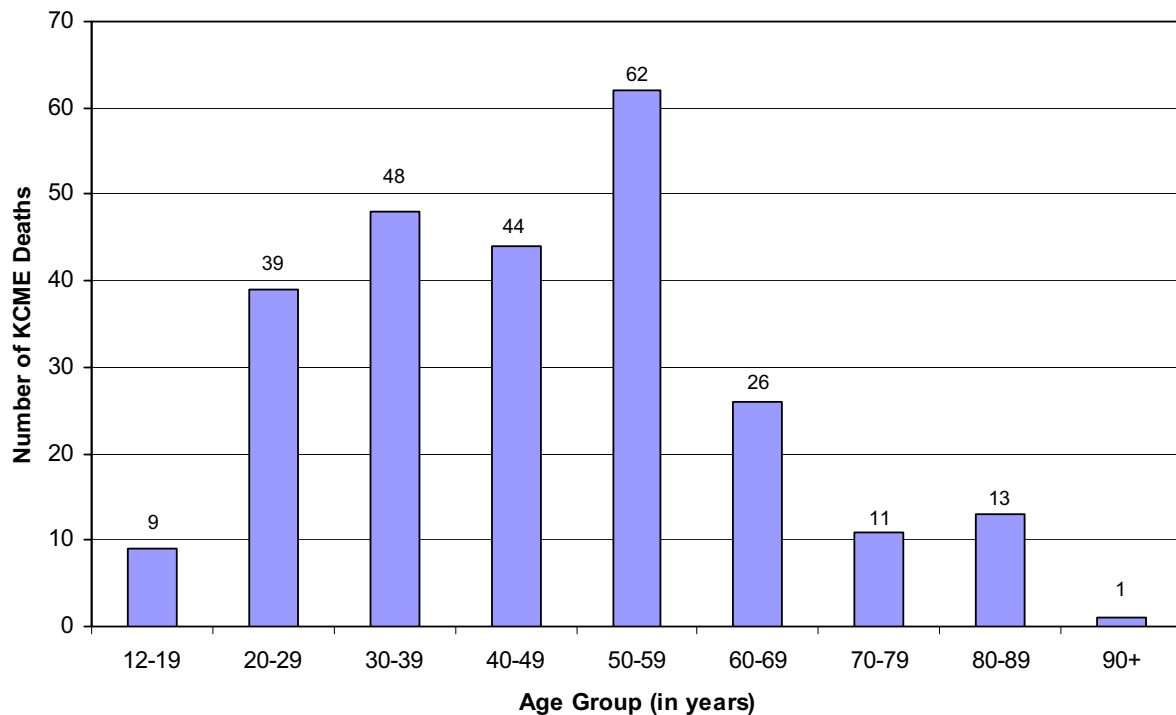
Graph 6-2 Suicide Deaths / Race / King County Medical Examiner / 2009**Graph 6-3 Suicide Deaths / Age Group / King County Medical Examiner / 2009**

Table 6-2 Suicide Injury Methods / Age / Sex / King County Medical Examiner / 2009

INJURY METHOD/ SEX	AGE GROUP (YEARS)									SUB TOTAL	TOTAL
	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 +		
Asphyxia	0	1	3	1	3	0	0	0	0		8
Male	0	1	2	1	1	0	0	0	0	5	
Female	0	0	1	0	2	0	0	0	0	3	
Burns/ Fire	0	0	0	0	2	0	0	0	0		2
Male	0	0	0	0	0	0	0	0	0	0	
Female	0	0	0	0	2	0	0	0	0	2	
Carbon Monoxide	0	1	3	3	5	1	0	1	0		14
Male	0	1	2	3	5	1	0	1	0	13	
Female	0	0	1	0	0	0	0	0	0	1	
Drowning	0	1	3	0	1	1	1	0	0		7
Male	0	1	1	0	0	0	1	0	0	3	
Female	0	0	2	0	1	1	0	0	0	4	
Drugs / Poisons	1	4	2	7	10	2	2	1	0		29
Male	0	3	1	2	6	2	1	1	0	16	
Female	1	1	1	5	4	0	1	0	0	13	
Firearms	2	12	16	15	26	13	6	9	1		100
Male	1	10	13	12	20	12	6	8	1	83	
Female	1	2	3	3	6	1	0	1	0	17	
Hanging	6	12	16	15	7	2	1	1	0		60
Male	4	9	14	12	3	1	1	1	0	45	
Female	2	3	2	3	4	1	0	0	0	15	
Incised / Stab Wound(s)	0	1	0	1	1	3	1	1	0		8
Male	0	1	0	1	1	2	1	1	0	7	
Female	0	0	0	0	0	1	0	0	0	1	
Jumping	0	7	3	1	6	3	0	0	0		20
Male	0	6	3	0	4	3	0	0	0	16	
Female	0	1	0	1	2	0	0	0	0	4	
Other	0	0	2	0	0	1	0	0	0		3
Male	0	0	1	0	0	1	0	0	0	2	
Female	0	0	1	0	0	0	0	0	0	1	
Traffic	0	0	0	1	1	0	0	0	0		2
Male	0	0	0	1	1	0	0	0	0	2	
Female	0	0	0	0	0	0	0	0	0	0	
Totals	9	39	48	44	62	26	11	13	1		253
Percent	4%	15%	19%	17%	25%	10%	4%	5%	1%		100%

Table 6-3 Suicide Injury Methods / Sex / King County Medical Examiner / 2009

INJURY METHOD	SEX		TOTAL
	MALE	FEMALE	
Asphyxia	5	3	8
Burns/ Fire	0	2	2
Carbon Monoxide	13	1	14
Drowning	3	4	7
Drugs / Poisons	16	13	29
Firearms	83	17	100
Hanging	45	15	60
Incised / Stab Wound(s)	7	1	8
Jumping	16	4	20
Other	2	1	3
Traffic	2	0	2
Totals	192	61	253
Percent	76%	24%	100%

Table 6-4 Suicide Injury Methods / Marital Status / Sex / KCME / 2009

CIRCUMSTANCES / SEX	MARITAL STATUS					Sub Total	Total
	Single	Married	Divorced	Widowed	Unknown		
Asphyxia	5	1	2	0	0		8
Male	4	1	0	0	0	5	
Female	1	0	2	0	0	3	
Burns/ Fire	2	0	0	0	0		2
Male	0	0	0	0	0	0	
Female	2	0	0	0	0	2	
Carbon Monoxide	5	5	4	0	0		14
Male	5	5	3	0	0	13	
Female	0	0	1	0	0	1	
Drowning	3	3	1	0	0		7
Male	2	1	0	0	0	3	
Female	1	2	1	0	0	4	
Drugs / Poisons	9	11	9	0	0		29
Male	6	4	6	0	0	16	
Female	3	7	3	0	0	13	
Firearms	35	37	20	7	1		100
Male	28	30	19	6	0	83	
Female	7	7	1	1	1	17	
Hanging	28	18	11	3	0		60
Male	24	12	7	2	0	45	
Female	4	6	4	1	0	15	
Incised / Stab Wound(s)	2	3	1	1	1		8
Male	2	3	0	1	1	7	
Female	0	0	1	0	0	1	
Jumping	12	4	1	0	3		20
Male	10	2	1	0	3	16	
Female	2	2	0	0	0	4	
Other	1	2	0	0	0		3
Male	1	1	0	0	0	2	
Female	0	1	0	0	0	1	
Traffic	1	0	1	0	0		2
Male	1	0	1	0	0	2	
Female	0	0	0	0	0	0	
Totals	103	84	50	11	5		253
Percent	41%	33%	20%	4%	2%		100%

Table 6-5 Suicide Injury Methods / Blood Alcohol / KCME / 2009

METHOD	TESTED		NOT TESTED	TOTAL
	POSITIVE	NEGATIVE		
Asphyxia	2	6	0	8
Burns/ Fire	0	2	0	2
Carbon Monoxide	4	10	0	14
Drowning	2	5	0	7
Drugs / Poisons	9	17	3	29
Firearms	23	71	6	100
Hanging	26	32	2	60
Incised / Stab Wound(s)	2	5	1	8
Jumping	2	15	3	20
Other	1	2	0	3
Traffic	1	1	0	2
Totals	72	166	15	253
Percent	28%	66%	6%	100%

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TRAFFIC DEATHS

During the calendar year 2009, the Medical Examiner's Office participated in the investigation of 141 traffic fatalities. In 64% (90/141) of the traffic deaths in 2009, the collision occurred in King County. In 2008, 69% (112/163) of the collisions occurred in King County. In 2009, 36% (51/141) 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 death occurred in King County, it falls under the jurisdiction of the King County Medical Examiner. The 2009 number of deaths from incidents occurring outside of King County is the same as in 2008 when 31% (51/163) of the collisions occurred outside of King County. Although these deaths are classified "Accident" for death certification purposes, the more accurate term is "motor vehicle collision".

In 2009, 36% (51/141) of the traffic fatalities were motor vehicle drivers. Teenage drivers (16-19 years of age) were 10% (5/51) of the driver deaths in 2009 compared to 6% (4/71) in 2008. By age, 16% percent of vehicle driver deaths (8/51) were people between the ages of 20 and 29. Twenty percent of driver deaths (10/51) were adults between the ages of 30 and 39. Sixteen percent (8/51) were adults between the ages of 40 and 49. Male drivers represented 73% (37/51) of driver deaths and female drivers represented 27% of driver deaths (14/51).

Of the 141 traffic fatalities in 2009, 28 were motor vehicle passengers, representing 20% of the total (28/141). In 2009, teenagers (13-19 years old) accounted for three motor vehicle passenger deaths. There were no passenger deaths of infants (less than one year of age), one death of a child between the ages of 1-5 years, and three deaths of children 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 directly responsible for the accident. 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 metabolize¹. Therefore, blood alcohol figures presented in this report are not a total description of the role of alcohol in traffic collisions. In 43% (17/40) of drivers tested, blood ethanol was present. In 11 vehicle driver deaths, no alcohol determination was performed. Passenger fatalities showed the presence of alcohol in 33% (6/18) of victims tested.

¹See "Explanation of Data" for criteria for blood alcohol testing, page 6.

Of cases in which seatbelt restraint status was known, 32% (15/47) of drivers in vehicle deaths were not restrained. The figures for drivers not wearing seatbelts for the previous 3 years are: 31% (20/65) in 2008, 41% (26/63) in 2007, and 35% (29/84) in 2006. Of the vehicle drivers who died at the scene of the collision and who tested positive for blood alcohol, 14% (2/14) were unrestrained.

Motorcycle riders accounted for 13% (19/141) of traffic fatalities. In 2009, there were 18 motorcycle driver fatalities and one motorcycle passenger fatality. All eighteen of the motorcycle driver deaths were male. The one motorcycle passenger who died in 2009 was female. Of the 19 motorcycle fatalities, 95% (18/19) of the motorcyclists were wearing a helmet; in one case, the motorcycle driver was not wearing a helmet. Sixteen of the motorcyclist fatalities were tested for the presence of blood alcohol. Nine, or 56% (9/16), had a detectable amount of alcohol at the time of autopsy.

Pedestrians constituted 21% (29/141) of traffic fatalities. The majority of pedestrian deaths, 72% (21/29), were male. Of the pedestrian fatalities that were tested, 27% (6/22) had detectable amounts of alcohol present in their blood at the time of death.

There were twelve bicyclist deaths in 2009; six riders were wearing helmets, five were not wearing helmets, and helmet use by the other one bicyclist is not known. Of the bicyclist fatalities that were tested, none (0/9) had detectable amounts of alcohol present in their blood at the time of death.

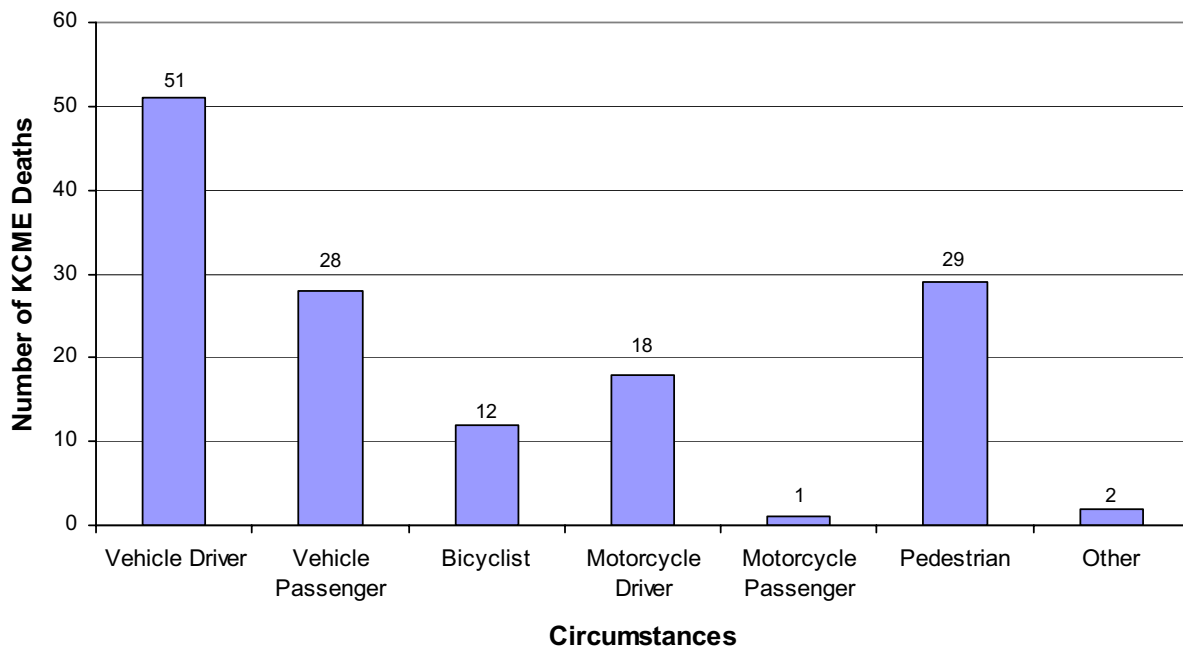
Graph 7-1 Traffic Fatality Circumstances / King County Medical Examiner / 2009

Table 7-1 Traffic Fatality Circumstances / Race / Sex / KCME / 2009

CIRCUMSTANCES / SEX	RACE					SUB TOTAL	TOTAL
	WHITE	AFRICAN AMER	ASIAN/ PAC IS	AM INDIAN /AK NATIVE	OTHER		
Vehicle Driver	48	1	1	1	0		51
<i>Male</i>	35	1	0	1	0	37	
<i>Female</i>	13	0	1	0	0	14	
Vehicle Passenger	21	2	4	1	0		28
<i>Male</i>	6	2	3	0	0	11	
<i>Female</i>	15	0	1	1	0	17	
Bicycle	11	0	0	1	0		12
<i>Male</i>	8	0	0	1	0	9	
<i>Female</i>	3	0	0	0	0	3	
Motorcycle Driver	15	2	1	0	0		18
<i>Male</i>	15	2	1	0	0	18	
<i>Female</i>	0	0	0	0	0	0	
Motorcycle Passenger	1	0	0	0	0		1
<i>Male</i>	0	0	0	0	0	0	
<i>Female</i>	1	0	0	0	0	1	
Pedestrian	18	5	5	1	0		29
<i>Male</i>	13	4	4	0	0	21	
<i>Female</i>	5	1	1	1	0	8	
Other	1	0	1	0	0		2
<i>Male</i>	1	0	1	0	0	2	
<i>Female</i>	0	0	0	0	0	0	
Totals	115	10	12	4	0		141
Percent	82%	7%	8%	3%	0%		100%

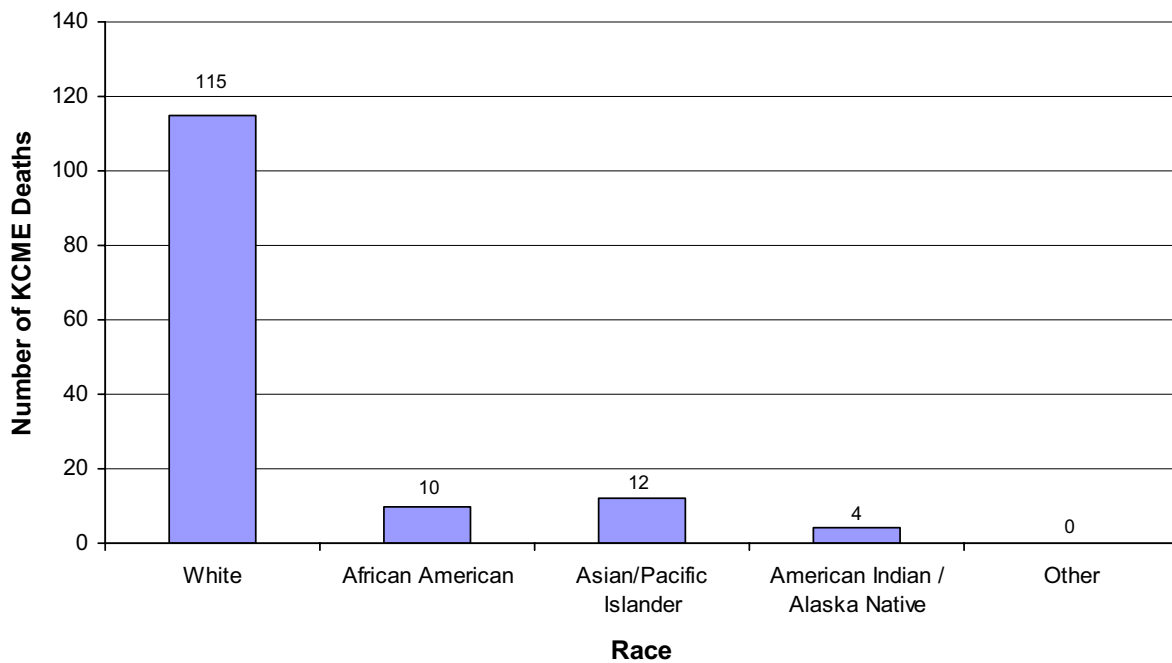
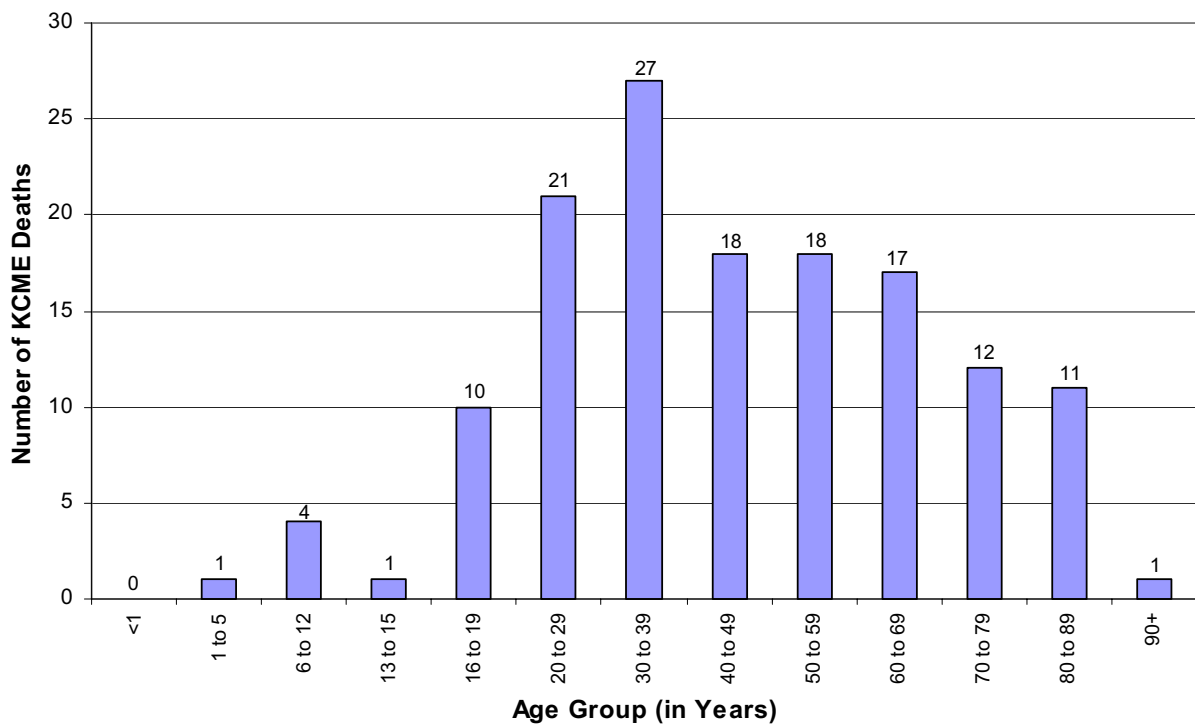
Graph 7-2 Traffic Fatalities / Race / King County Medical Examiner / 2009**Graph 7-3 Traffic Fatalities / Age / King County Medical Examiner / 2009**

Table 7-2 Traffic Fatality Circumstances / Age / Sex / KCME / 2009

Circumstances / Sex	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	5	8	10	8	8	5	2	5	0		51
Male	0	0	0	0	5	7	6	8	5	3	0	3	0	37	
Female	0	0	0	0	0	1	4	0	3	2	2	2	0	14	
Vehicle Passenger	0	1	3	0	3	4	4	1	3	3	4	2	0		28
Male	0	0	0	0	2	2	1	1	1	2	2	0	0	11	
Female	0	1	3	0	1	2	3	0	2	1	2	2	0	17	
Bicyclist	0	0	0	0	0	0	3	1	1	6	0	1	0		12
Male	0	0	0	0	0	0	2	1	1	4	0	1	0	9	
Female	0	0	0	0	0	0	1	0	0	2	0	0	0	3	
Motorcycle Driver	0	0	0	0	0	6	7	2	1	1	1	0	0		18
Male	0	0	0	0	0	6	7	2	1	1	1	0	0	18	
Female	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Motorcycle Passenger	0	0	0	0	0	0	0	1	0	0	0	0	0		1
Male	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Female	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
Pedestrian	0	0	1	1	0	3	3	5	5	2	5	3	1		29
Male	0	0	1	1	0	2	2	3	5	1	2	3	1	21	
Female	0	0	0	0	0	1	1	2	0	1	3	0	0	8	
Other	0	0	0	0	2	0	0	0	0	0	0	0	0		2
Male	0	0	0	0	2	0	0	0	0	0	0	0	0	2	
Female	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals	0	1	4	1	10	21	27	18	18	17	12	11	1		141
Percent	0%	0.7%	2.8%	0.7%	7.1%	14.9%	19.1%	12.8%	12.8%	12.1%	8.5%	7.8%	0.7%		100%

Table 7-3 Traffic Fatality Circumstances / Sex / King County Medical Examiner / 2009

CIRCUMSTANCES	SEX		TOTAL
	MALE	FEMALE	
Vehicle Driver	37	14	51
Vehicle Passenger	11	17	28
Bicyclist	9	3	12
Motorcycle Driver	18	0	18
Motorcycle Passenger	0	1	1
Pedestrian	21	8	29
Other Mode	2	0	2
Totals	98	43	141
Percent	70%	30%	100%

Table 7-4 Traffic Fatality Circumstances / Use of Restraint / Helmet / KCME / 2009²

CIRCUMSTANCES	Used Safety Device	No Safety Device Used	Unknown	TOTAL
Vehicle Driver	32	15	4	51
Vehicle Passenger	17	4	7	28
Bicyclist	6	5	1	12
Motorcycle Driver	17	1	0	18
Motorcycle Passenger	1	0	0	1
Totals	73	25	12	110
Percent	66%	23%	11%	100%

²Does not include pedestrian or other mode deaths.

Table 7-5 Traffic Fatality Circumstances / Blood Alcohol / KCME / 2009

CIRCUMSTANCES	TESTED		NOT TESTED	TOTAL
	POSITIVE	NEGATIVE		
Vehicle Driver	17	23	11	51
Vehicle Passenger	6	13	9	28
Bicyclist	0	9	3	12
Motorcycle Driver	8	7	3	18
Motorcycle Passenger	1	0	1	1
Pedestrian	6	16	7	29
Other Mode	0	0	2	2
Totals	38	68	35	141
Percent	27%	48%	25%	100%

Table 7-6 Blood Alcohol Levels of Traffic Fatalities who Died at the Scene of the Collision / King County Medical Examiner / 2009

CIRCUMSTANCES	BLOOD ALCOHOL LEVEL (g/100mL)					TOTAL
	NONE	.01-.09	.10-.19	.20-.29	.30+	
Vehicle Driver	6	0	3	5	0	14
Vehicle Passenger	3	1	2	0	2	8
Bicyclist	1	0	0	0	0	1
Motorcycle Driver	3	2	2	1	0	8
Pedestrian	5	1	1	0	0	7
Totals	18	4	8	6	2	38
Percent	47%	11%	21%	16%	5%	100%

Graph 7-4 Blood Alcohol Levels of Traffic Fatalities who Died at the Scene / King County Medical Examiner / 2009

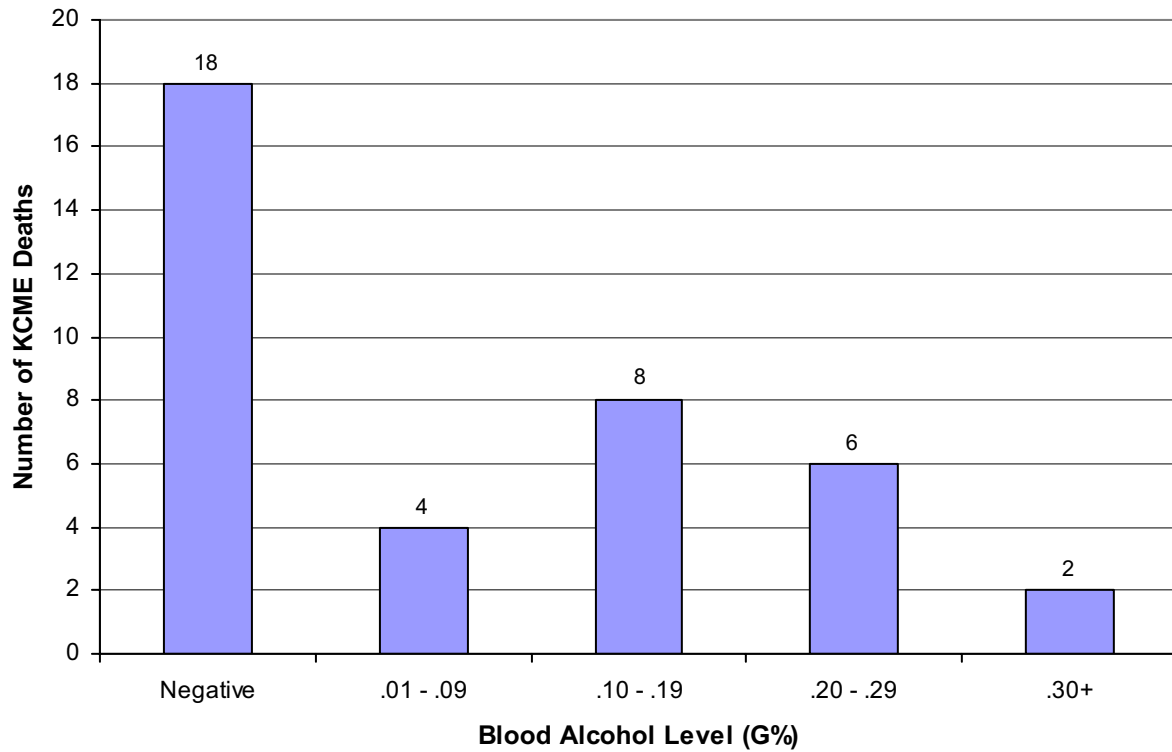
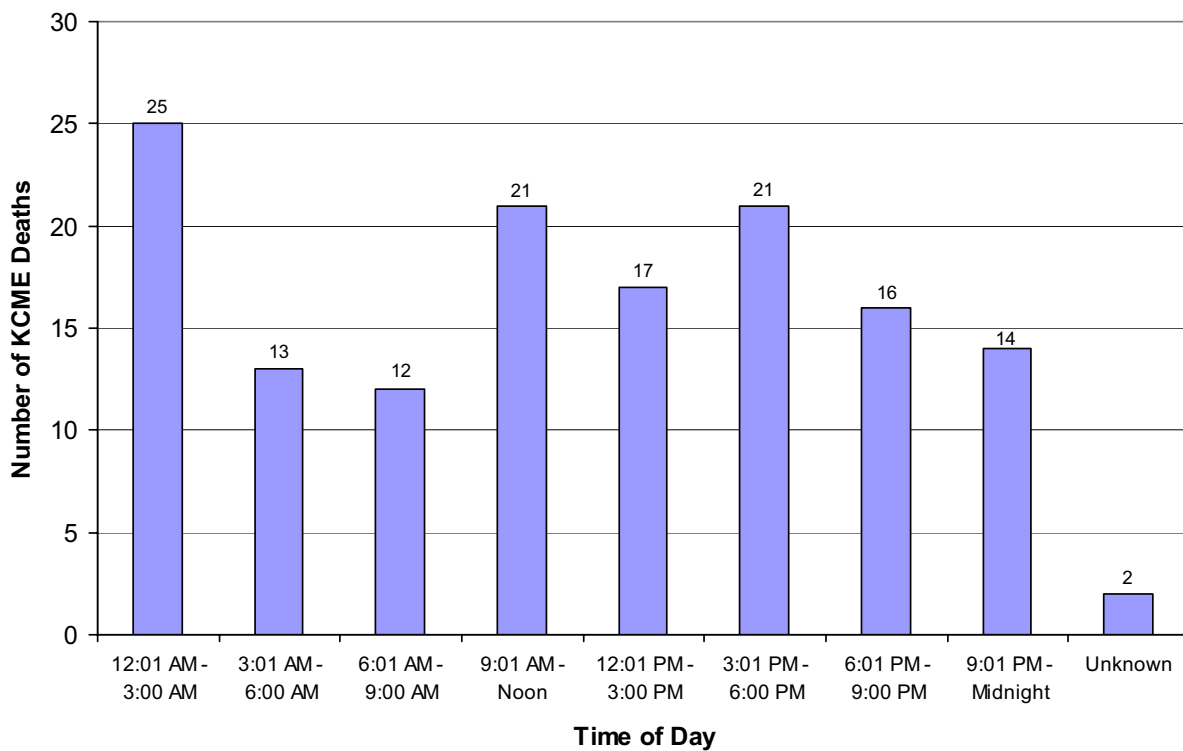


Table 7-7 Time of Fatal Traffic Collision / King County Medical Examiner / 2009

TIME OF DAY	TOTAL	PERCENT
12:01 AM - 3:00 AM	25	17.8%
3:01 AM - 6:00 AM	13	9.2%
6:01 AM - 9:00 AM	12	8.5%
9:01 AM - Noon	21	14.9%
12:01 PM - 3:00 PM	17	12.1%
3:01 PM - 6:00 PM	21	14.9%
6:01 PM - 9:00 PM	16	11.3%
9:01 PM - Midnight	14	9.9%
Unknown	2	1.4%
TOTALS	141	100%

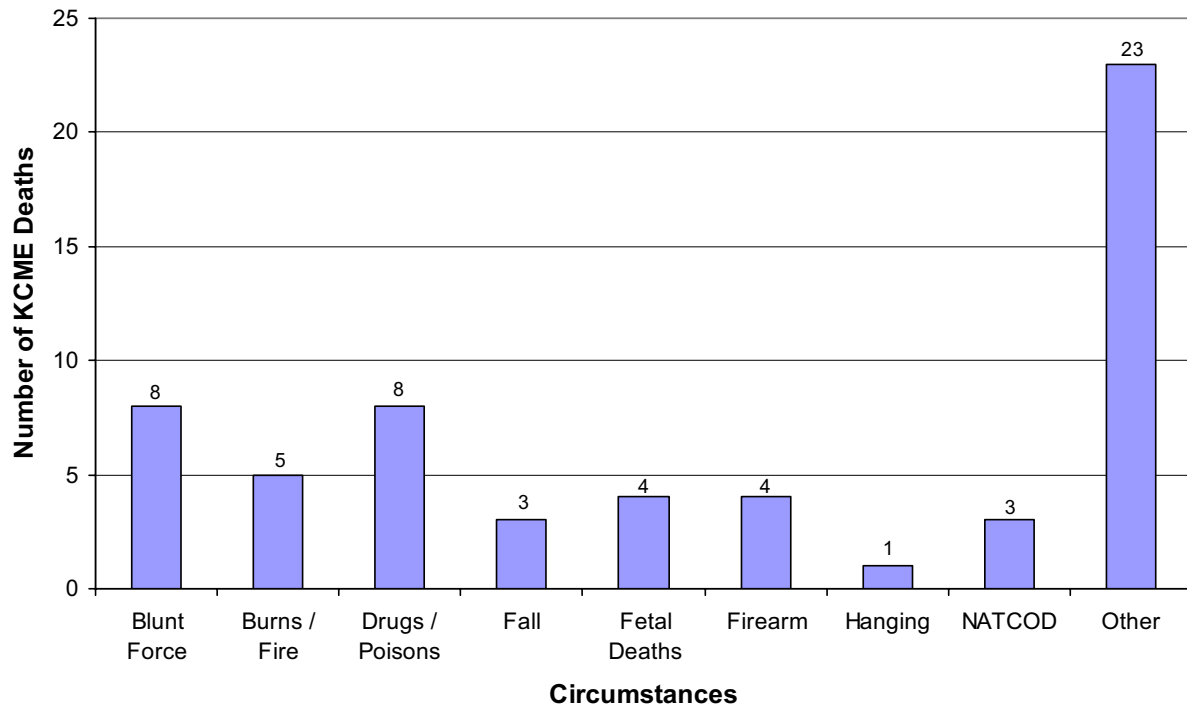
Graph 7-5 Time of Fatal Traffic Collision / King County Medical Examiner / 2009

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 59 deaths with manner undetermined, accounting for 3% (59/2,137) of the deaths investigated for the calendar year 2009. Drugs and poisons caused 15% (9/59) of the deaths classified as undetermined. For a more detailed review of drug-caused deaths in 2009, see the discussion in the section on Drugs and Poisons on pages 87 and 88.

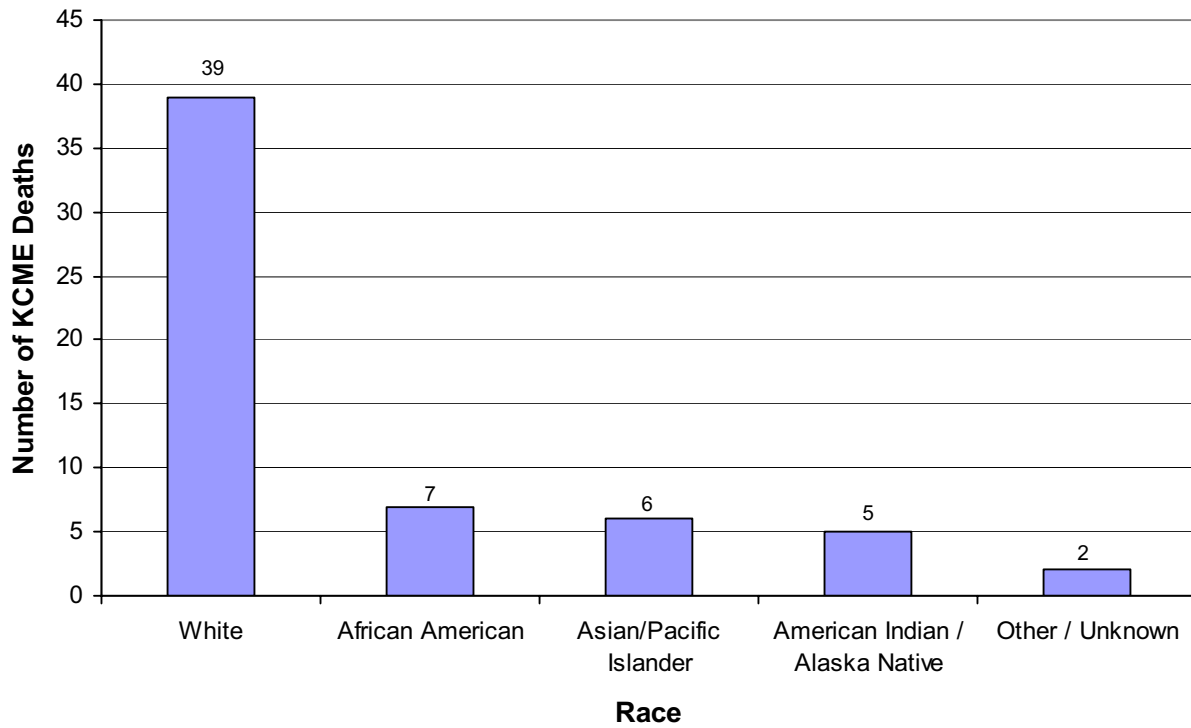
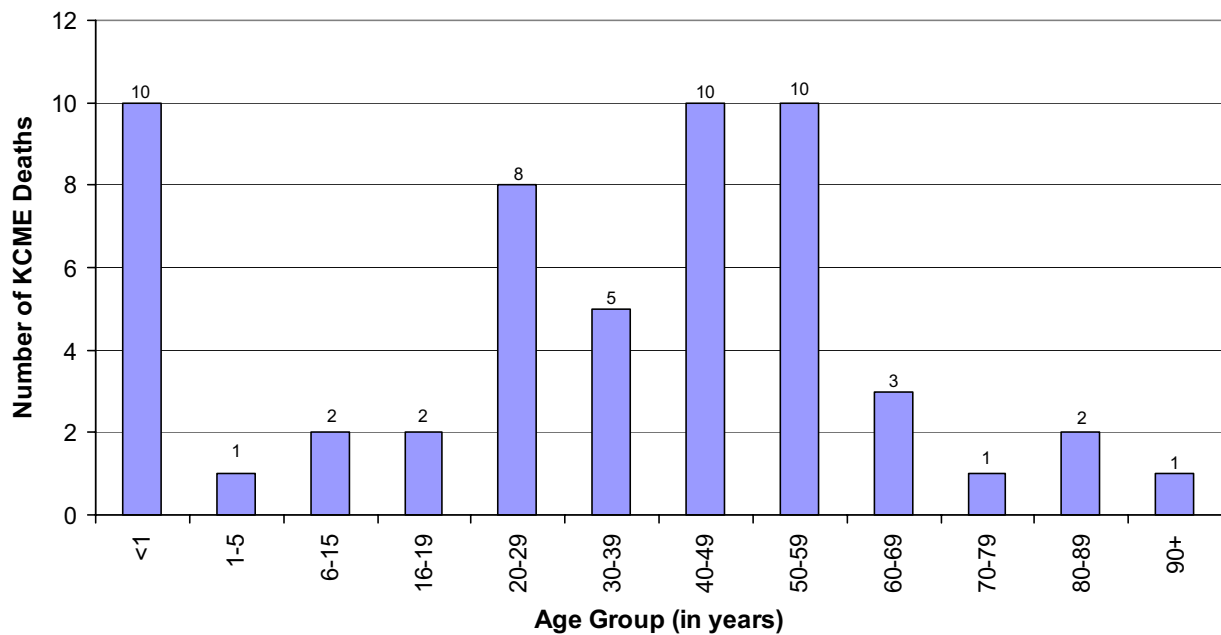
The 59 deaths that were classified as undetermined for 2009 included four fetal deaths, which, in accordance with the Washington State Department of Health - Center for Health Statistics Fetal Death Certification Guidelines, are not assigned a manner of death. Fetal death certificates must be issued for every fetus of 20 weeks or more gestation. Of the four fetal deaths in 2009, one was related to maternal drug abuse.

Graph 8-1 Undetermined Manner of Death¹ / King County Medical Examiner / 2009

¹NATCOD 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 8-1 Undetermined Manner of Death / Race / Sex / KCME / 2009

CIRCUMSTANCES / SEX	RACE					SUB TOTAL	TOTAL
	WHITE	AFRIC AMER	ASIAN / PAC IS	AM INDIAN /AK NATIVE	OTHER / UNK		
Blunt Force	4	0	2	2	0		8
<i>Male</i>	4	0	2	1	0	7	
<i>Female</i>	0	0	0	1	0	1	
Burns / Fire	2	1	1	1	0		5
<i>Male</i>	2	1	0	1	0	4	
<i>Female</i>	0	0	1	0	0	1	
Drugs / Poisons	6	2	0	0	0		8
<i>Male</i>	3	1	0	0	0	4	
<i>Female</i>	3	1	0	0	0	4	
Fall	2	0	0	1	0		3
<i>Male</i>	2	0	0	0	0	2	
<i>Female</i>	0	0	0	1	0	1	
Fetal Deaths	3	0	0	0	1		4
<i>Male</i>	1	0	0	0	0	1	
<i>Female</i>	1	0	0	0	0	1	
<i>Unknown</i>	1	0	0	0	1	2	
Firearms	3	1	0	0	0		4
<i>Male</i>	1	0	0	0	0	1	
<i>Female</i>	2	1	0	0	0	3	
Hanging	1	0	0	0	0		1
<i>Male</i>	1	0	0	0	0	1	
<i>Female</i>	0	0	0	0	0	0	
No Anatomic or Toxicological Cause of Death	2	1	0	0	0		3
<i>Male</i>	2	0	0	0	0	2	
<i>Female</i>	0	1	0	0	0	1	
Other	16	2	3	1	1		23
<i>Male</i>	11	2	2	1	1	17	
<i>Female</i>	5	0	1	0	0	6	
Totals	39	7	6	5	2		59
Percent	66%	12%	10%	9%	3%		100%

Graph 8-2 Undetermined Manner / Race / King County Medical Examiner / 2009**Graph 8-3 Undetermined Manner / Age Group / King County Medical Examiner / 2009**

Undetermined

Table 8-2 Undetermined Circumstances / Age / Sex / KCME / 2009

INJURY METHOD / SEX	AGE GROUP (YEARS)												SUB TOTAL	TOTAL
	<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 +		
Blunt Force	0	1	0	0	3	1	0	2	1	0	0	0		8
<i>Male</i>	0	1	0	0	2	1	0	2	1	0	0	0	7	
<i>Female</i>	0	0	0	0	1	0	0	0	0	0	0	0	1	
Burns / Fire	0	0	0	0	1	2	0	1	1	0	0	0		5
<i>Male</i>	0	0	0	0	1	2	0	0	1	0	0	0	4	
<i>Female</i>	0	0	0	0	0	0	0	1	0	0	0	0	1	
Drugs / Poisons	0	0	1	0	1	1	2	2	0	0	0	1		8
<i>Male</i>	0	0	1	0	0	0	2	1	0	0	0	0	4	
<i>Female</i>	0	0	0	0	1	1	0	1	0	0	0	1	4	
Fall	0	0	0	0	0	1	1	0	0	0	1	0		3
<i>Male</i>	0	0	0	0	0	0	1	0	0	0	1	0	2	
<i>Female</i>	0	0	0	0	0	1	0	0	0	0	0	0	1	
Fetal Deaths	4	0	0	0	0	0	0	0	0	0	0	0		4
<i>Male</i>	1	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Female</i>	1	0	0	0	0	0	0	0	0	0	0	0	1	
<i>Unknown</i>	2	0	0	0	0	0	0	0	0	0	0	0	1	
Firearms	0	0	1	1	0	0	2	0	0	0	0	0		4
<i>Male</i>	0	0	0	0	0	0	1	0	0	0	0	0	1	
<i>Female</i>	0	0	1	1	0	0	1	0	0	0	0	0	3	
Hanging	0	0	0	0	1	0	0	0	0	0	0	0		1
<i>Male</i>	0	0	0	0	1	0	0	0	0	0	0	0	1	
<i>Female</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	
No anatomic or toxicological cause of death	0	0	0	0	0	0	3	0	0	0	0	0		3
<i>Male</i>	0	0	0	0	0	0	2	0	0	0	0	0	2	
<i>Female</i>	0	0	0	0	0	0	1	0	0	0	0	0	1	
Other ²	6	0	0	1	2	0	2	5	1	1	1	0		23
<i>Male</i> ³	4	0	0	1	1	0	0	5	1	1	1	0	18	
<i>Female</i>	2	0	0	0	1	0	2	0	0	0	0	0	5	
Totals⁴	10	1	2	2	8	5	10	10	3	1	2	1		59
Percent	16%	2%	4%	4%	13%	8%	17%	17%	5%	2%	4%	2%		100%

²Total includes 4 cases of undetermined age.³Subtotal includes 4 males of undetermined age.⁴Total includes 4 cases of unknown age.

Table 8-3 Undetermined Manner / Sex / King County Medical Examiner / 2009

INJURY METHOD	SEX		TOTAL
	MALE	FEMALE	
Blunt Force	7	1	8
Burns / Fire	4	1	5
Drugs / Poisons	4	4	8
Fall	2	1	3
Fetal Deaths ⁵	1	1	4
Firearms	1	3	4
Hanging	1	0	1
No Anatomic or Toxicologic Cause of Death	2	1	3
Other	17	6	23
Totals⁶	39	18	59
Percent	66%	31%	100%

Table 8-4 Undetermined Manner / Blood Alcohol / King County Medical Examiner / 2009

METHOD	TESTED		NOT TESTED	TOTAL
	POSITIVE	NEGATIVE		
Blunt Force	3	4	1	8
Burns / Fire	2	2	1	5
Drugs / Poisons	2	5	1	8
Fall	0	2	1	3
Fetal Deaths	0	1	3	4
Firearms	3	1	0	4
Hanging	1	0	0	1
No Anatomic or Toxicologic Cause of Death	1	2	0	3
Other	7	12	4	23
Totals	23	25	11	59
Percent	39%	42%	19%	100%

⁵Total includes two decedents of undetermined sex.⁶Total includes two decedents of undetermined sex.

DEATHS DUE TO DRUGS & POISONS: 2009

In 2009, drugs and poisons caused 271 deaths (with an additional 18 deaths due to carbon monoxide), approximately 13% of all deaths investigated (271/2,137). The total number of drug-caused deaths has decreased compared to 2008 figures when there were 278 drug deaths. In 2009, deaths due to drugs and poisons comprised 29% (271/944) 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 2009. Of the drug/poison deaths in 2009, a single drug or poison caused 23% of the deaths (63/271), and drugs or poisons in combination caused 77% (208/271) of the deaths. (Multiple drug intoxication caused 72% of the drug/poison deaths in both 2008 and 2007.) Table 9-3 displays the specific drugs that caused death in 2009. Because of their prevalence, ethanol, cocaine (a stimulant), and opiates¹ (a narcotic) 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 2009 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 involved another person's actions. In the year 2009, drugs and poisons caused nine deaths of undetermined manner, compared to 17 in 2008 and 19 in 2007. Of the nine undetermined drug related deaths in 2009, one was a fetal death attributed to multiple drug intoxication.

In 2009, drugs/poisons caused 29 suicides, as compared to 29 in 2008 and 36 in 2007.

Drugs/poisons caused 233 accidental overdoses in 2009 compared to 232 in 2008 and 247 in 2007. In 2009, accidental drug deaths comprised 37% (233/632) of all accidental deaths.

¹When 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, much more likely, heroin.

Ethanol (alcohol) is also a drug to be critically examined for its contribution to the circumstances surrounding death. In 2009, four accidental deaths were attributed to acute ethanol intoxication where ethanol was the single substance used. Fifty-six (56) people died in 2009 where ethanol, in combination with other drugs, was the cause of death. Blood alcohol (ethanol) tests were performed in 74% (848/1,148) 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 29% (246/848) of non-natural deaths where tests were performed.

Table 9-1 Blood Alcohol Testing / Manner / King County Medical Examiner / 2009

Test Results	ACCIDENT	TRAFFIC	HOMICIDE	NATURAL	SUICIDE	UNDETERMINED	TOTAL
Tested	404	106	52	533	238	48	1,381
<i>Positive</i>	95	38	18	97	72	23	343
<i>Negative</i>	309	68	34	436	166	25	1038
Not Tested	228	35	11	456	15	11	756
Totals	632	141	63	989	253	59	2,137

Table 9-2 Blood Alcohol Testing / Percentage / Manner / KCME / 2009

Test Results	ACCIDENT	TRAFFIC	HOMICIDE	NATURAL	SUICIDE	UNDETERMINED	TOTAL
Tested	64%	75%	82%	54%	94%	81%	65%
<i>Positive</i>	24%	36%	35%	18%	30%	48%	16%
<i>Negative</i>	76%	64%	65%	82%	70%	52%	49%
Not Tested	36%	25%	18%	46%	6%	19%	35%
Totals	100%	100%	100%	100%	100%	100%	100%

2009 Drug & Poison Caused Deaths¹

Table 9-3

Drug Name	Total Deaths out of 2,137 Cases in which Drug was Present	Overdose Deaths (261) – Drug Present						Overdose Deaths (261) – Drug Causing					
		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	65	23	1	22	16	7	0	12	1	11	6	6	0
Alprazolam	36	28	0	28	26	2	0	29	0	29	27	2	0
Amitriptyline	23	12	0	12	9	2	1	2	0	2	2	0	0
Amphetamine	22	1	0	1	1	0	0	2	0	2	2	0	0
Benztropine	1	0	0	0	0	0	0	0	0	0	0	0	0
Bupivacaine	4	1	0	1	1	0	0	0	0	0	0	0	0
Bupropion	20	10	0	10	7	2	1	9	0	9	7	1	1
Butalbital	1	1	0	1	1	0	0	1	0	1	1	0	0
Cannabinoids / THC ²	148	43	12	31	36	6	1	0	0	0	0	0	0
Carbamazepine	6	3	0	3	3	0	0	3	0	3	3	0	0
Carbon Monoxide ³	24	17	15	2	4	13	0	18	16	2	4	14	0
Carisoprodol	9	6	0	6	6	0	0	6	0	6	6	0	0
Chlordiazepoxide	7	0	0	0	0	0	0	0	0	0	0	0	0
Chlorpheniramine	10	1	0	1	0	1	0	1	0	1	0	1	0
Citalopram	67	35	1	34	30	4	1	35	1	34	30	4	1
Clomipramine	2	2	0	2	2	0	0	1	0	1	1	0	0
Clonazepam	5	4	1	3	4	0	0	9	0	9	7	2	0
Clonidine	1	0	0	0	0	0	0	0	0	0	0	0	0
Clozapine	3	0	0	0	0	0	0	0	0	0	0	0	0
Cocaine ⁴	81	63	16	47	60	1	2	62	15	47	60	0	2
Codeine ⁵	17	11	0	11	9	2	0	5	0	5	3	2	0
Cyclobenzaprine	24	0	0	0	0	0	0	3	0	3	3	0	0
Desipramine	2	1	0	1	0	1	0	0	0	0	0	0	0
Dextromethorphan	13	7	2	5	5	2	0	3	1	2	2	1	0
Diazepam	89	25	4	21	22	2	1	25	0	25	22	2	1

Table 9-3

2009 Drug & Poison Caused Deaths, page 2

Drug Name	Total Deaths out of 2,137 Cases in which Drug was Present	Overdose Deaths (261) – Drug Present						Overdose Deaths (261) – Drug Causing					
		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
Diltiazem	9	2	0	2	2	0	0	2	0	2	2	0	0
Diphenhydramine	67	29	5	24	20	9	0	25	0	25	20	5	0
Doxepin	4	4	0	4	3	1	0	4	0	4	3	1	0
Doxylamine	16	8	0	8	4	4	0	8	0	8	4	4	0
Ethanol (Ethyl Alcohol)	339	74	7	67	63	9	2	60	4	56	52	7	1
Fentanyl	10	6	1	5	5	1	0	6	1	5	5	1	0
Fluoxetine	19	6	1	5	4	2	0	6	1	5	4	2	0
Flurazepam	2	2	0	2	2	0	0	2	0	2	2	0	0
Gabapentin	5	2	1	1	1	0	1	1	0	1	1	0	0
Haloperidol	1	0	0	0	0	0	0	0	0	0	0	0	0
Hydrocodone	34	13	0	13	12	0	1	14	0	14	13	0	1
Hydromorphone	37	15	14	1	14	1	0	13	0	13	12	1	0
Hydroxyzine	8	3	0	3	3	0	0	3	0	3	3	0	0
Ibuprofen	10	2	0	2	1	1	0	2	0	2	1	1	0
Imipramine	1	1	0	1	0	1	0	1	0	1	0	1	0
Isopropanol	51	3	0	3	3	0	0	1	0	1	1	0	0
Ketamine	2	2	0	2	2	0	0	1	0	1	1	0	0
Lamotrigine	26	6	0	6	4	2	0	5	0	5	4	1	0
Levetiracetam	4	0	0	0	0	0	0	0	0	0	0	0	0
Lidocaine	3	1	1	0	1	0	0	1	1	0	1	0	0
Lithium	4	3	0	3	2	1	0	1	0	1	1	0	0
Lorazepam	29	6	1	5	6	0	0	3	0	3	3	0	0
MDMA	2	0	0	0	0	0	0	0	0	0	0	0	0
Meprobamate	11	7	0	7	6	1	0	1	0	1	0	1	0
Methadone	129	79	12	67	77	2	0	85	13	72	82	2	1

Table 9-3

2009 Drug & Poison Caused Deaths, page 3

Drug Name	Total Deaths out of 2,137 Cases in which Drug was Present	Overdose Deaths (261) – Drug Present					Overdose Deaths (261) – Drug Causing						
		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
Methamphetamine	35	19	9	10	18	0	1	19	9	10	18	0	1
Methanol	5	0	0	0	0	0	0	0	0	0	0	0	0
Methocarbamol	2	1	0	1	1	0	0	1	0	1	1	0	0
Methylphenidate	1	1	0	1	1	0	0	1	0	1	1	0	0
Metoprolol	1	1	0	1	0	1	0	1	0	1	0	1	0
Midazolam	19	1	1	0	1	0	0	0	0	0	0	0	0
Mirtazapine	20	4	1	3	4	0	0	3	0	3	3	0	0
Monoacetylmorphine ⁶	11	10	8	2	10	0	0	26	5	21	26	0	0
Morphine ⁷	153	66	9	57	60	3	3	68	7	61	62	3	3
Nortriptyline ⁸	24	12	0	12	9	2	1	2	0	2	2	0	0
Oxazepam	8	3	0	3	2	1	0	2	0	2	1	1	0
Oxcarbazepine	5	0	0	0	0	0	0	0	0	0	0	0	0
Oxycodone	105	62	5	57	53	6	3	60	3	57	53	4	3
Paroxetine	7	5	0	5	4	1	0	5	0	5	4	1	0
Phenobarbital	9	1	0	1	0	1	0	1	0	1	0	1	0
Phenytoin	10	1	0	1	0	1	0	1	0	1	0	1	0
Promethazine	7	4	1	3	4	0	0	1	0	1	1	0	0
Propoxyphene	8	4	0	4	2	2	0	5	0	5	2	3	0
Quetiapine	14	11	2	9	8	3	0	10	1	9	7	3	0
Risperidone	1	0	0	0	0	0	0	0	0	0	0	0	0
Salicylates	1	1	0	1	0	1	0	1	0	1	0	1	0
Secobarbital	1	1	0	1	0	1	0	1	0	1	0	1	0
Sertraline	22	7	0	7	6	1	0	9	0	9	8	1	0
Temazepam	19	8	0	8	6	1	1	6	0	6	5	1	0
Topiramate	7	2	0	2	2	0	0	2	0	2	2	0	0

Table 9-3

2009 Drug & Poison Caused Deaths, page 4

Drug Name	Total Deaths out of 2,137 Cases in which Drug was Present	Overdose Deaths (261) – Drug Present					Overdose Deaths (261) – Drug Causing						
		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
Tramadol	17	5	2	3	5	0	0	3	0	3	3	0	0
Trazodone	25	8	0	8	8	0	0	13	1	12	11	2	0
Trihexyphenidyl	1	0	0	0	0	0	0	0	0	0	0	0	0
Valproic Acid	3	1	0	1	1	0	0	1	0	1	1	0	0
Venlafaxine	20	6	0	6	6	0	0	6	0	6	6	0	0
Verapamil	6	4	1	3	2	1	1	4	1	3	2	1	1
Zolpidem	29	17	2	15	10	7	0	16	0	16	10	6	0
Zonisamide	2	0	0	0	0	0	0	0	0	0	0	0	0

¹Table 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. Furthermore, there were ten additional cases of drug overdose deaths in which no sample was available for analysis. All of these cases represent deaths due to anoxic brain injury that occurred in a hospital after the admission blood sample had been discarded, precluding a confirmatory laboratory analysis. These cases were certified on the basis of the medical records rather than laboratory analysis. These cases included delayed overdose deaths of the following drugs: (1) opiate (probable heroin), benzodiazepine and ethanol; (2) opiates (probable heroin); (3) opiate (prescription opiate) and benzodiazepine; (4) methadone; (5) opiate (probable heroin), methadone and benzodiazepine; (6) cocaine and methadone; (7) tricyclic antidepressant and benzodiazepine; (8) Roundup herbicide; (9) Citalopram; (10) methadone and other unspecified drugs.

²Cannabinoids are listed if they were found at any level in blood or urine, 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.

³Carbon monoxide fatalities are listed in the first column (Total Deaths out of 2,137 cases in which Drug was Present) if the level of carboxyhemoglobin was 10% or greater. The rest of the columns represent only drug overdose deaths and are divided into two parts, "Drug Present" and "Drug Causing". Suicides due to

intentional inhalation of carbon monoxide accounted for 14 of the carbon monoxide deaths. In 11 of the 14 carbon monoxide suicides, other drugs may have been present, but they did not contribute to the death; in three of the 14 carbon monoxide suicides, other drugs were present (fluoxetine, morphine and zolpidem) and contributed to death. Accidental deaths due to inhalation of carbon monoxide accounted for four of the carbon monoxide overdose deaths. All four of the accidental carbon monoxide overdose deaths were attributed solely to inhalation of carbon monoxide. Other sources of carbon monoxide included in this table are six accidental residential fire fatalities and one suicide by gunshot that had a carbon monoxide level > 10%. There were no homicidal deaths due to carbon monoxide in 2009.

⁴Includes benzoylcegonine.

⁵Out of the 11 overdose deaths involving codeine, in five cases, the source of the drug was likely small quantities of codeine present in heroin used by illicit drug users. In five cases the source of the drug was pharmaceutical codeine. The source of the codeine in one case was unknown.

⁶Monoacetylmorphine (MAM), otherwise known as diacetylmorphine, is the first breakdown product of heroin. 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.

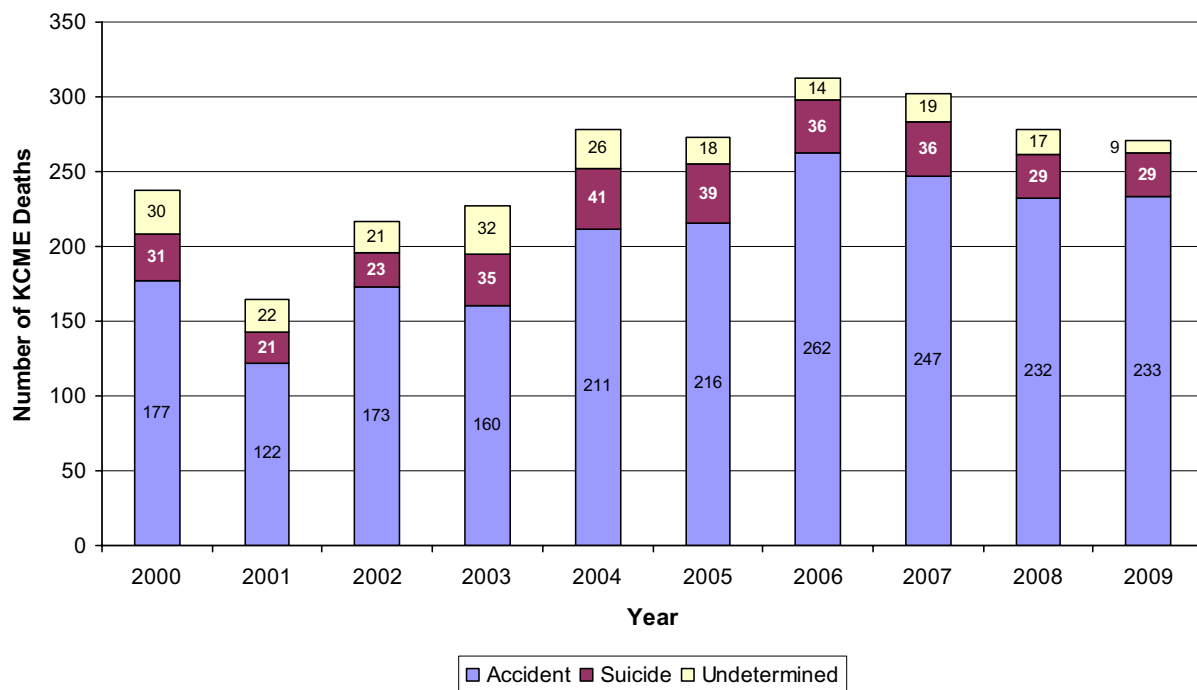
⁷There were 68 overdose deaths involving morphine. In 26 of these cases, the source of the drug was likely the morphine derived from heroin preparations used by illicit drug users. In 17 of these cases the source of the morphine was likely pharmaceutical morphine, and in 25 of these cases the source of the morphine was not known.

⁸In two of the 12 total cases, nortriptyline was present without the presence of amitriptyline, indicating that the source of the drug was, in fact, nortriptyline. In the other 10 cases, amitriptyline was also present, indicating that the nortriptyline was present due to the breakdown of amitriptyline. There were a total of two nortriptyline overdose deaths; both accidental multiple drug overdoses.

Table 9-4 **Total Overdose Deaths / Accident, Suicide, Undetermined / King County Medical Examiner / 2000 - 2009⁹**

OVERDOSE DEATHS	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Accident	177	122	173	160	211	216	262	247	232	233
Suicide	31	21	23	35	41	39	36	36	29	29
Undetermined	30	22	21	32	26	18	14	19	17	9
Totals	238	165	217	227	278	273	312	302	278	271

Graph 9-1 Drug & Poison Caused Deaths / Accident, Suicide, Undetermined / King County Medical Examiner / 2000 - 2009

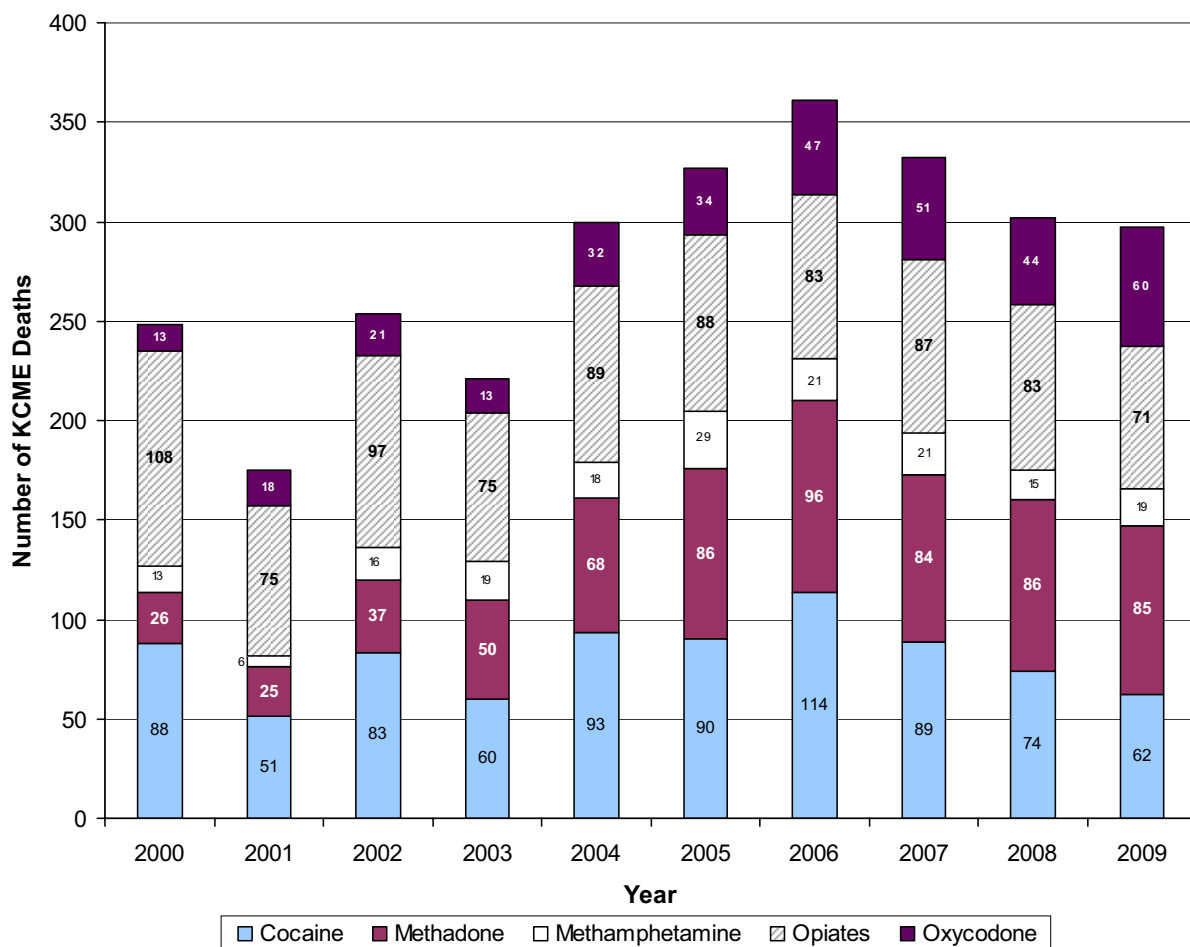


⁹ Includes all deaths classified as overdose, regardless of whether lab samples were available for analysis.

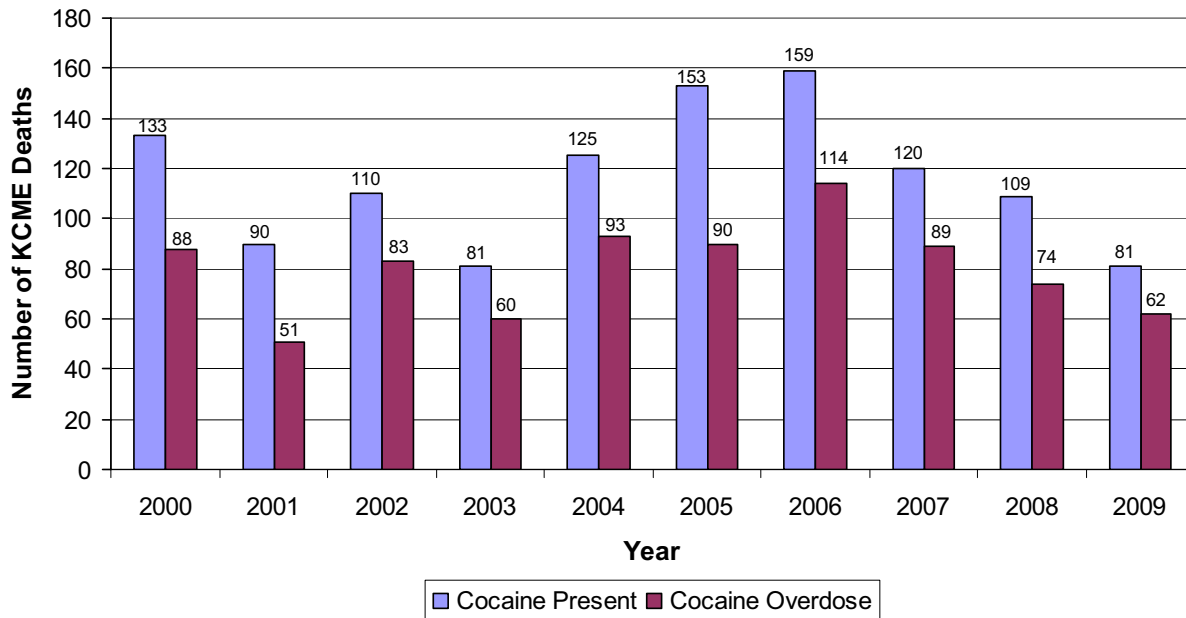
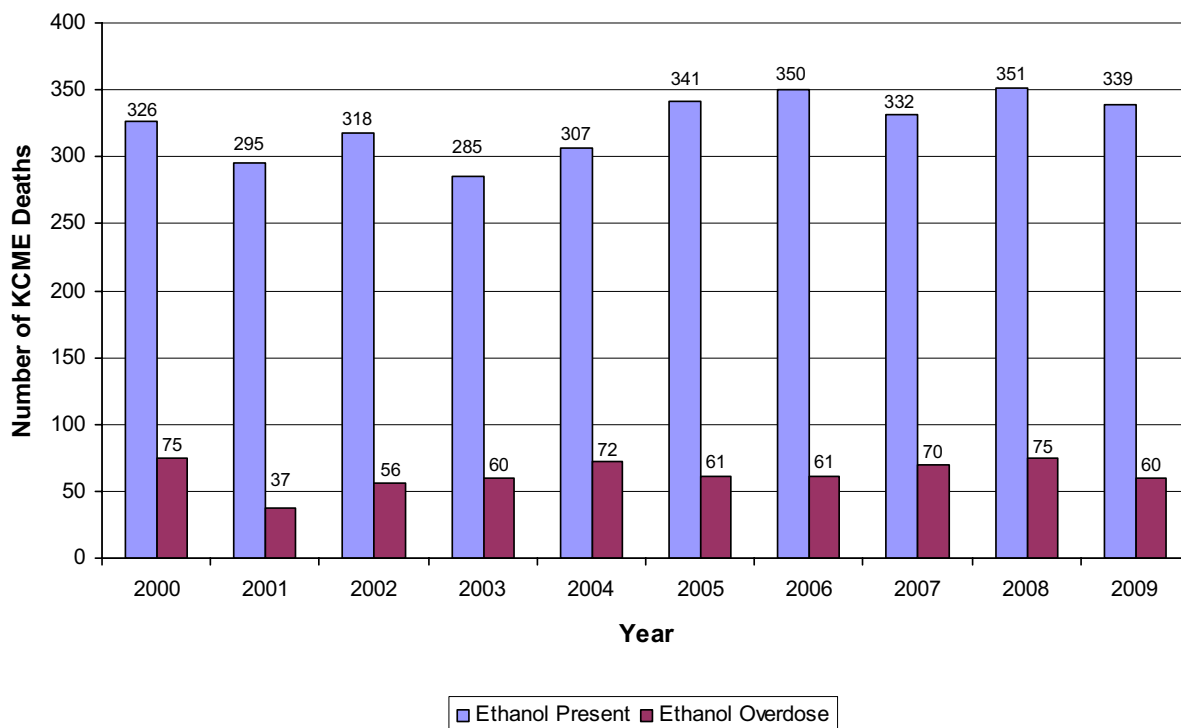
Table 9-5 **Overdose Deaths Caused by Cocaine, Methadone, Opiates, Methamphetamine, or Oxycodone¹⁰ / KCME / 2000 - 2009**

DRUG	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Cocaine	88	51	83	60	93	90	114	89	74	62
Methadone	26	25	37	51	68	86	96	84	86	85
Methamphetamine	13	6	16	19	18	29	21	21	15	19
Opiates	108	75	97	75	89	88	83	87	83	71
Oxycodone	13	18	21	17	32	34	47	51	44	60

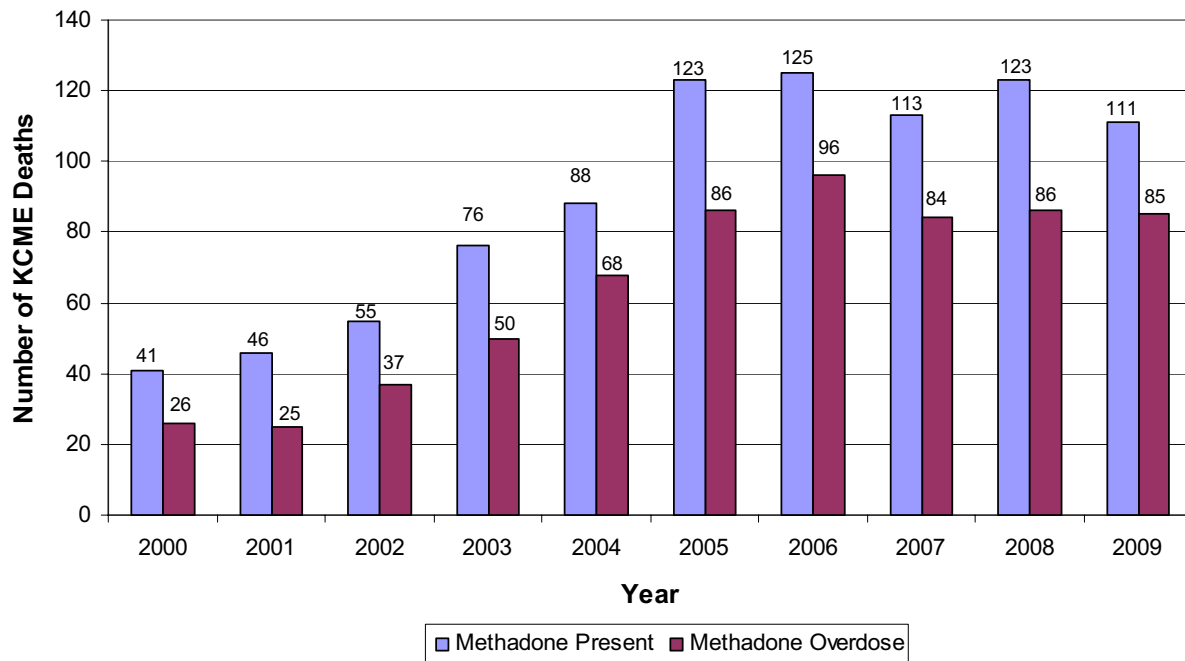
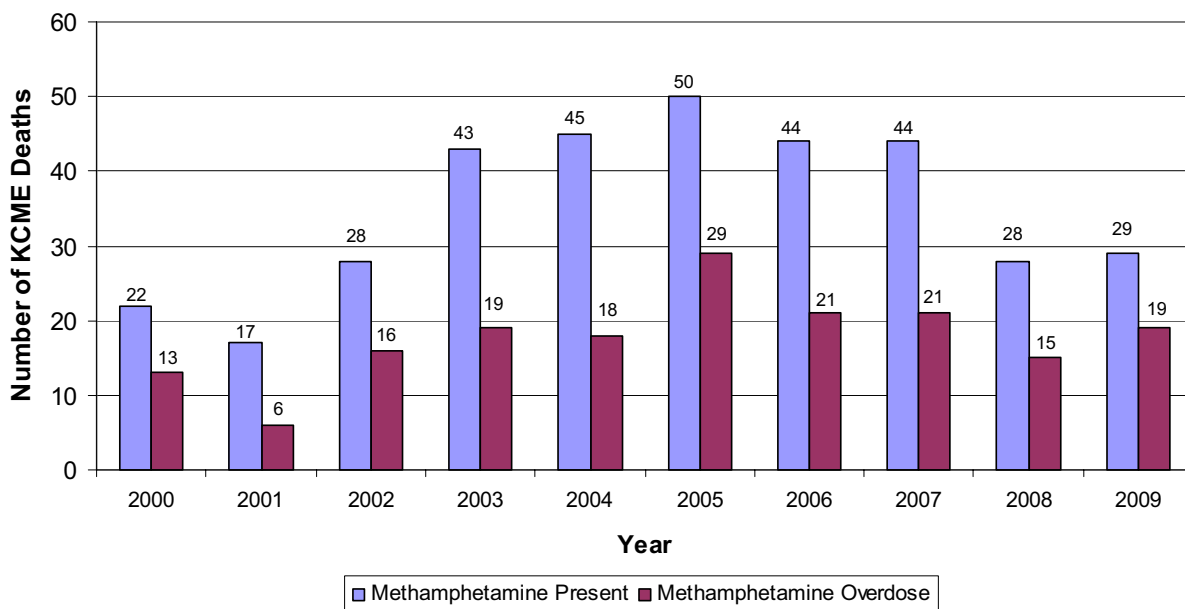
Graph 9-2 **Overdose Deaths Caused by Cocaine, Methadone, Opiates, Methamphetamine, or Oxycodone / KCME / 2000 – 2009**

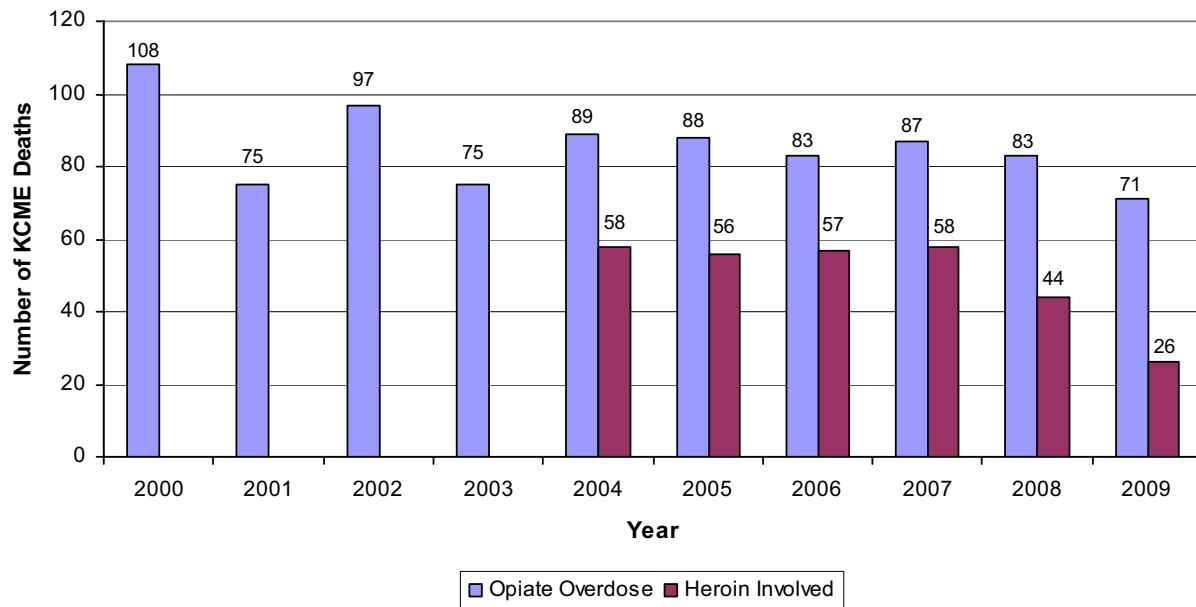
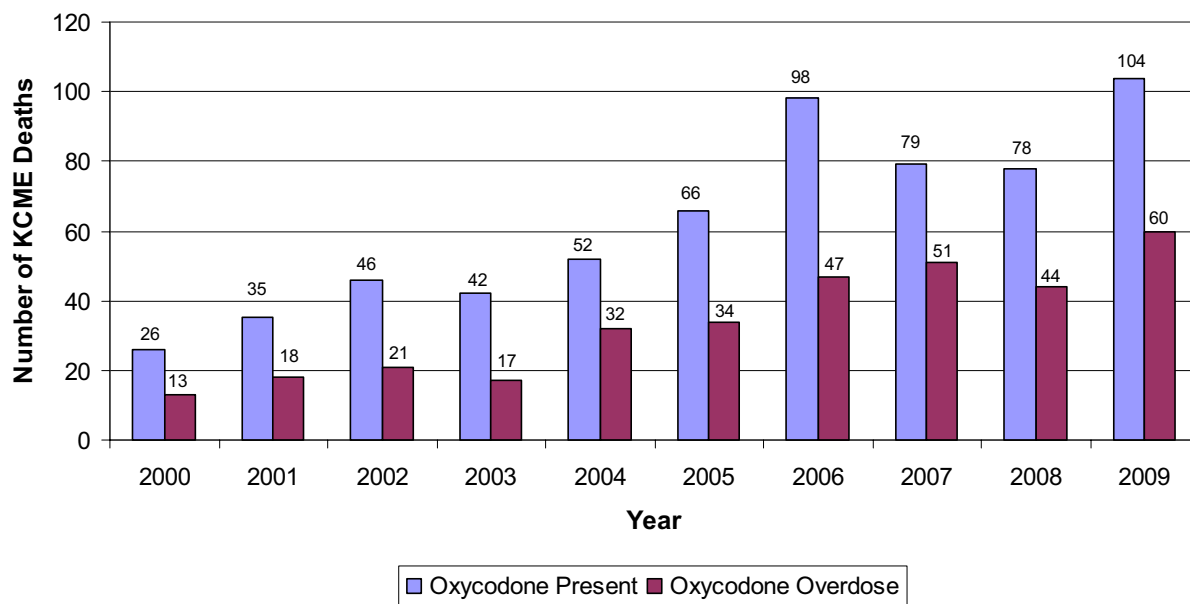


¹⁰ In this context, “caused by” refers to single or multiple drug overdoses in which the drug was listed on the death certificate.

Graph 9-3 Cocaine Involved Deaths¹¹ / King County Medical Examiner / 2000 - 2009**Graph 9-4 Ethanol Involved Deaths / King County Medical Examiner / 2000 - 2009**

¹¹ In Graphs 9-3, 9-4, 9-5 and 9-6, “overdose” refers to deaths due to the listed drug or ethanol in single or multiple drug overdose deaths where the listed drug or ethanol was listed on the death certificate.

Graph 9-5 Methadone Involved Deaths / King County Medical Examiner / 2000 - 2009**Graph 9-6 Methamphetamine Involved Deaths / KCME / 2000 – 2009**

Graph 9-7 Opiate Overdose Deaths & Heroin-Related Deaths / KCME / 2000 - 2009¹²**Graph 9-8 Oxycodone Involved Deaths / King County Medical Examiner / 2000 - 2009**

¹² In 2004, the King County Medical Examiner's Office began collecting data on probable heroin overdoses based on a combination of scene, circumstances, and toxicology results.

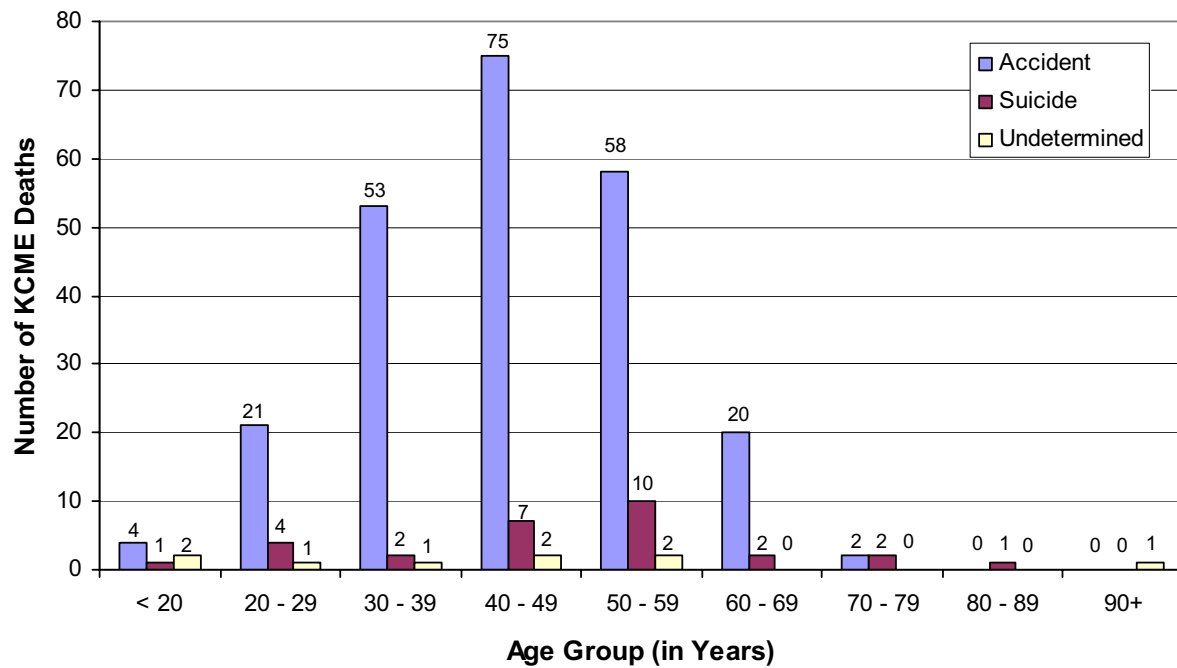
Graph 9-9 Drug / Poison Deaths / Age / King County Medical Examiner / 2000 – 2009

Table 9-6 Drug / Poison Deaths / Age / King County Medical Examiner / 2009

AGE GROUP (YEARS) / SEX	MANNER OF DEATH			SUB- TOTAL	TOTAL
	ACCIDENT	SUICIDE	UNDETERMINED		
<20	4	1	2		7
Male	3	0	2	5	
Female	1	1	0	2	
20-29	21	4	1		26
Male	15	3	0	18	
Female	6	1	1	8	
30-39	53	2	1		56
Male	27	1	0	28	
Female	26	1	1	28	
40-49	75	7	2		84
Male	43	2	2	47	
Female	32	5	0	37	
50-59	58	10	2		70
Male	36	6	1	43	
Female	22	4	1	27	
60-69	20	2	0		22
Male	14	2	0	16	
Female	6	0	0	6	
70-79	2	2	0		4
Male	1	1	0	2	
Female	1	1	0	2	
80-89	0	1	0		1
Male	0	1	0	1	
Female	0	0	0	0	
90+	0	0	1		1
Male	0	0	0	0	
Female	0	0	1	1	
Totals	233	29	9		271

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DEATHS DUE TO FIREARMS: 2009

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 2009, the Medical Examiner investigated 146 firearm deaths. In 2008, firearms caused 139 deaths. Of the 146 firearm deaths in 2009, 41 (28%) were homicides and 100 (68%) were suicides. One firearm death was classified accident in 2009. In 2008, there was also one firearm death classified accident. In 2009, there were four firearms deaths that were classified as undetermined; there were none in 2008.

In 2009, gunshot wounds were the leading cause of death for homicides and suicides. Firearm deaths comprised 65% (41/63) of homicides, compared to 53% (45/85) in 2008. In 2009, suicides by firearms represented 40% (100/253) of suicide deaths compared to 44% (93/210) in 2008.

In 2009, of the 41 firearm homicide victims, 10% (4/41) were 19 years old and younger - a decrease from 2008 when 29% of firearm homicide victims were 19 years old and younger. In 2009, it is estimated that a disproportionate number of firearm homicide victims were African American (24%, 10/41) compared to the percentage of African Americans in the general population (see discussions on pages 7 and 43). Of the 10 African American firearm homicide victims, 20% (2/10) were males 19 years old and younger and 50% (5/10) were males between 20 and 29 years of age. In comparison, 63% (26/41) of the homicide firearm victims were White. Of the 26 White homicide victims, 35% (9/26) were males between 20 and 29 years old.

Of the 100 firearm suicide victims in 2009, 87% (87/100) were White and 83% (83/100) were males. Two of the firearm suicide victims were 19 years old and under (2%, 2/100). Twenty-eight (28%, 28/100) of the gunshot suicide victims were between the ages of 20 and 39 years of age, 41 (41%, 41/100) were between 40 and 59 years, and 29 (29%, 29/100) were 60 years and older.

Table 10-1 Firearm Deaths / Manner / Age / Sex / King County Medical Examiner / 2009

AGE GROUP / SEX	MANNER OF DEATH				SUB TOTAL	TOTAL
	A	H	S	U		
<13 years	0	1	1	0		2
Male	0	0	0	0	0	
Female	0	1	1	0	2	
13-15 years	0	0	0	1		1
Male	0	0	0	0	0	
Female	0	0	0	1	1	
16-19 years	0	3	1	1		5
Male	0	3	1	0	4	
Female	0	0	0	1	1	
20-29 years	0	16	12	0		28
Male	0	14	10	0	24	
Female	0	2	2	0	4	
30-39 years	0	9	16	0		25
Male	0	9	13	0	22	
Female	0	0	3	0	3	
40-49 years	1	4	15	2		22
Male	1	4	12	1	18	
Female	0	0	3	1	4	
50-59 years	0	5	26	0		31
Male	0	4	20	0	24	
Female	0	1	6	0	7	
60-69 years	0	3	13	0		16
Male	0	3	12	0	15	
Female	0	0	1	0	1	
70-79 years	0	0	6	0		6
Male	0	0	6	0	6	
Female	0	0	0	0	0	
80-89 years	0	0	9	0		9
Male	0	0	8	0	8	
Female	0	0	1	0	1	
90+	0	0	1	0		1
Male	0	0	1	0	1	
Female	0	0	0	0	0	
Totals	1	41	100	4		146
Percent	1%	28%	68%	3%		100%

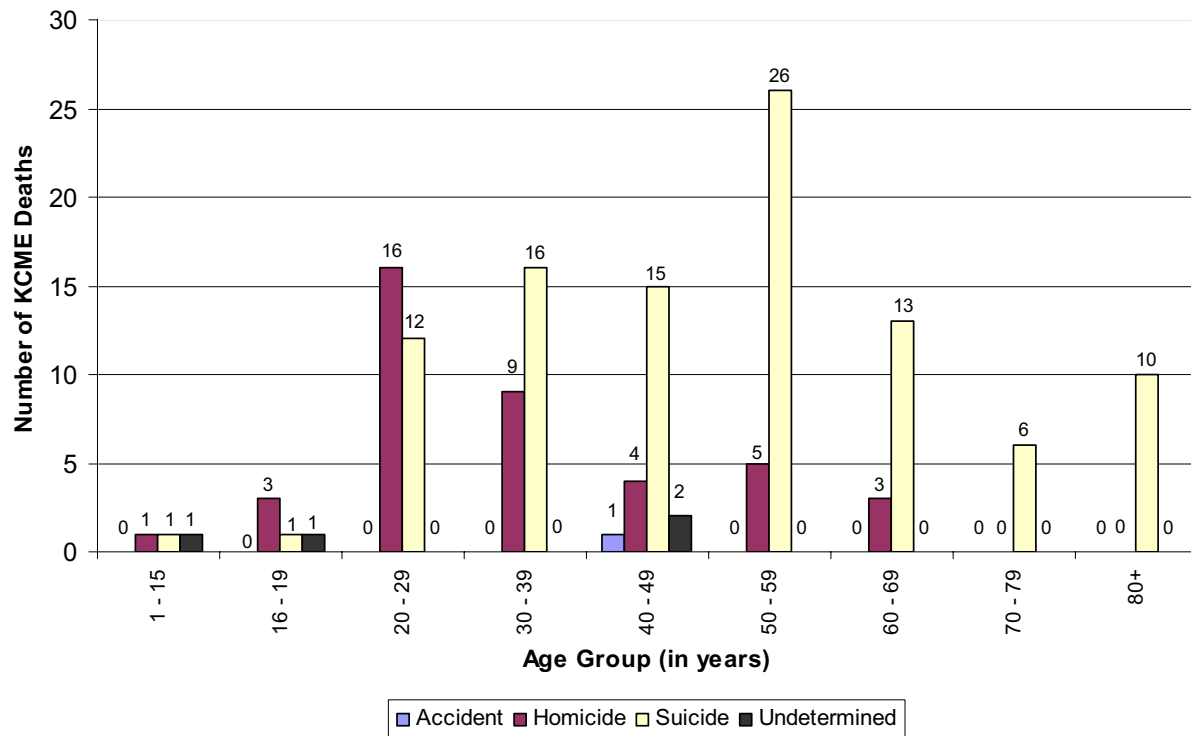
Graph 10-1 Firearm Deaths / Manner / Age Group / King County Medical Examiner / 2009

Table 10-2 Firearm Deaths / Manner / Race / Sex / KCME / 2009

RACE / SEX	MANNER OF DEATH				SUB-	
	A	H	S	U	TOTAL	TOTAL
Asian/Pacific Islander	0	4	5	0		9
<i>Male</i>	0	4	2	0	6	
<i>Female</i>	0	0	3	0	3	
African American	0	10	4	1		15
<i>Male</i>	0	10	4	0	14	
<i>Female</i>	0	0	0	1	1	
Am Indian / AK Native	0	0	3	0		3
<i>Male</i>	0	0	3	0	3	
<i>Female</i>	0	0	0	0	0	
White	1	26	87	3		117
<i>Male</i>	1	22	73	1	97	
<i>Female</i>	0	4	14	2	20	
Other	0	1	1	0		2
<i>Male</i>	0	1	1	0	2	
<i>Female</i>	0	0	0	0	0	
Totals	1	41	100	4		146

CAUSES OF DEATH IN CHILDREN AND YOUTH

In 2009, the King County Medical Examiner's Office investigated 96 deaths of children and youth ages 19 years or younger, which represented 4% (96/2,137) of the total deaths investigated. Of these deaths, 38% (36/96) were natural, 16% (15/96) were accidental (non-traffic), 5% (5/96) were homicides, 17% (16/96) were traffic-related, 9% (9/96) were suicides, and 16% (15/96) 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.

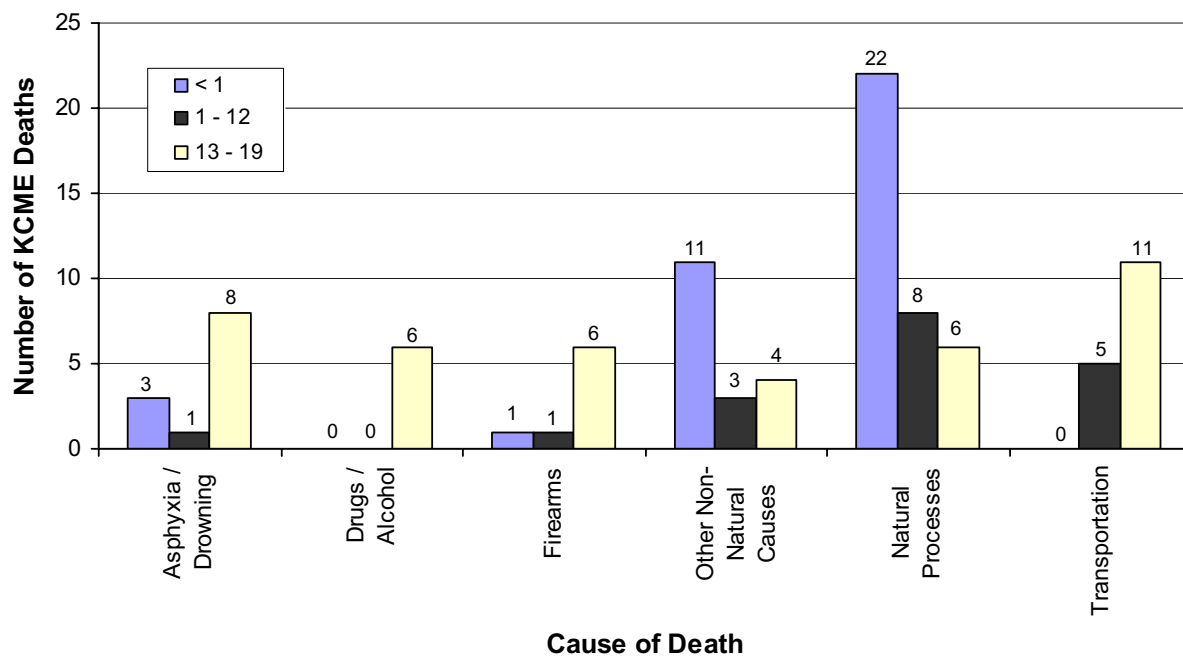
Of the 36 natural deaths of children and youth investigated by the Medical Examiner, 61% (22/36) were of infants less than one year of age. Of these 22 infants who died of natural causes, 13 were due to Sudden Infant Death Syndrome (SIDS). In addition, three infant deaths were classified as "Sudden Unexplained Infant Death" (SUID), manner undetermined, due to the inability to exclude if external factors contributed to death.

There were five homicides among children and youth. Of these five homicide victims, four were teenagers (13 - 19 years of age), none were children (one to 12 years of age), and one was an infant less than one year of age. Eighty percent (4/5) of the children and youth homicide victims died by firearms.

There were nine youth suicides, one between the ages of one and 12 years, and eight between the ages of 13 and 19 years. Males comprised 56% (5/9) of the victims. Regarding the methods used to commit suicide by youth, two were by firearm, six were by hanging, and one was drug related.

Sixteen children and youth (19 years and under) died in traffic-related accidents, of whom 11 (69%) were teenagers 13 – 19 years of age. There were five motor vehicle driver deaths, three motor vehicle passenger deaths, and two other transportation-related deaths among teenagers. There were no teenage bicycle deaths, no teenage motorcycle deaths, and one teenage pedestrian death in 2009. Of the 12 children and youth who died in motor vehicles, ten were known to be restrained, one was unrestrained, and the restraint status of one is unknown.

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

Graph 11-1 Causes of Death in Children & Youth / King County Medical Examiner / 2009**Table 11-1 Causes of Death: Children Under 1 Year of Age / KCME / 2009**

CIRCUMSTANCES	MANNER OF DEATH						SUB-	
	A	H	S	T	U	N	TOTAL	TOTAL
Miscellaneous	4	1	0	0	10	22		37
Asphyxia	3	0	0	0	0	0	3	
Burns / Fire	1	0	0	0	0	0	1	
Firearms	0	1	0	0	0	0	1	
Other	0	0	0	0	10	9	19	
SIDS	0	0	0	0	0	13	13	
Other Natural Disease	0	0	0	0	0	0	0	
Totals	4	1	0	0	10	22		37

Table 11-2 Causes of Death: Children 1 to 12 Years of Age / KCME / 2009

CIRCUMSTANCES	MANNER OF DEATH						SUB-	
	A	H	S	T	U	N	TOTAL	TOTAL
Asphyxia	1	0	0	0	0	0		1
<i>Carbon Monoxide</i>	0	0	0	0	0	0	0	
<i>Drowning</i>	0	0	0	0	0	0	0	
<i>Hanging</i>	0	0	0	0	0	0	0	
<i>Mechanical</i>	0	0	0	0	0	0	0	
<i>Other</i>	1	0	0	0	0	0	1	
<i>Positional</i>	0	0	0	0	0	0	0	
Miscellaneous	1	0	0	0	0	0		1
<i>Complication of Therapy</i>	0	0	0	0	0	0	0	
<i>Drugs</i>	0	0	0	0	0	0	0	
<i>Fall</i>	0	0	0	0	0	0	0	
<i>Fire / Explosion</i>	0	0	0	0	0	0	0	
<i>Hyperthermia</i>	0	0	0	0	0	0	0	
<i>Jump</i>	0	0	0	0	0	0	0	
<i>Non Traffic -Vehicle</i>	1	0	0	0	0	0	1	
<i>Other</i>	0	0	0	0	0	0	0	
Physical Trauma	1	0	1	0	1	0		3
<i>Abuse</i>	0	0	0	0	0	0	0	
<i>Blunt Force / Crushing</i>	0	0	0	0	1	0	1	
<i>Burns / Fire</i>	1	0	0	0	0	0	1	
<i>Firearms</i>	0	0	1	0	0	0	1	
<i>Incised / Stab Wound(s)</i>	0	0	0	0	0	0	0	
<i>Other</i>	0	0	0	0	0	0	0	
Transportation Related	0	0	0	5	0	0		5
<i>Bicycle</i>	0	0	0	0	0	0	0	
<i>Motor Vehicle Passenger</i>	0	0	0	4	0	0	4	
<i>Motorcycle</i>	0	0	0	0	0	0	0	
<i>Pedestrian</i>	0	0	0	1	0	0	1	
Natural Disease	0	0	0	0	0	8		8
Totals	3	0	1	5	1	8		18

Table 11-3 Causes of Death: Children 13 to 19 Years of Age / KCME / 2009

CIRCUMSTANCES	MANNER OF DEATH						SUB-	
	A	H	S	T	U	N	TOTAL	TOTAL
Asphyxia	2	0	6	0	0	0		8
<i>Carbon Monoxide</i>	0	0	0	0	0	0	0	
<i>Drowning</i>	1	0	0	0	0	0	1	
<i>Hanging</i>	1	0	6	0	0	0	7	
<i>Smothering</i>	0	0	0	0	0	0	0	
<i>Positional</i>	0	0	0	0	0	0	0	
<i>Other</i>	0	0	0	0	0	0	0	
Drugs / Alcohol	4	0	1	0	1	0		6
Miscellaneous	2	0	0	0	1	0		3
<i>Complication of Therapy</i>	0	0	0	0	0	0	0	
<i>Fall</i>	2	0	0	0	0	0	2	
<i>Jump</i>	0	0	0	0	0	0	0	
<i>Non-Traffic Vehicular</i>	0	0	0	0	0	0	0	
<i>Other</i>	0	0	0	0	1	0	1	
Physical Trauma	0	4	1	0	2	0		7
<i>Blunt Force / Crushing</i>	0	0	0	0	0	0	0	
<i>Burns / Fire</i>	0	0	0	0	0	0	0	
<i>Firearms</i>	0	3	1	0	2	0	6	
<i>Homicidal Violence</i>	0	1	0	0	0	0	1	
<i>Incised / Stab Wound(s)</i>	0	0	0	0	0	0	0	
<i>Strangulation</i>	0	0	0	0	0	0	0	
Transportation Related	0	0	0	11	0	0		11
<i>Bicycle</i>	0	0	0	0	0	0	0	
<i>Motor Vehicle Driver</i>	0	0	0	5	0	0	5	
<i>Motor Vehicle Passenger</i>	0	0	0	3	0	0	3	
<i>Motorcycle</i>	0	0	0	0	0	0	0	
<i>Pedestrian</i>	0	0	0	1	0	0	1	
<i>Other</i>	0	0	0	2	0	0	2	
Natural Disease	0	0	0	0	0	6		6
Totals	8	4	8	11	4	6		41

ORGAN DONATION

Although the King County Medical Examiner's Office does not approach families for donation of organs and tissue from decedents, we realize the tremendous need for this life-saving activity and cooperate fully with organ and tissue procurement agencies for this purpose. 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 2009, the King County Medical Examiner's Office was notified of 33 deaths that were eligible for organ donation in King County. The KCMEO gave release on all 33 of these deaths. Altogether, there were 75 organs transplanted from King County Medical Examiner cases. The number of specific organs transplanted in 2009 is shown in Table 12-1. In addition to the living organs listed in Table 12-1 that were donated in 2009, the KCMEO approved the donation of skin, bone, cartilage, heart valves, corneas and other tissues through the tissue procurement agency, Northwest Tissue Services. Altogether, there were 93 donors who, on average, were each able to provide 25 donations (2,325) to tissue transplant recipients.

Table 12-1 Organs Transplanted / KCME / 2009

ORGAN	# Transplanted
Heart	6
Intestine	0
Kidneys	40
Liver	14
Lungs	8
Pancreas	7
Total	75

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CREMATION REVIEW

Although all deaths covered under RCW 68.50.010 are required by law to be reported to the Medical Examiner, these deaths are not always reported in a timely manner. For some of these deaths, a complete investigation is rendered impossible because the body was cremated prior to the death being reported to the Medical Examiner.

Certain cases need a complete examination of the body to formally determine both the cause and manner of death. Without such examination it is theoretically possible to destroy all anatomical evidence of a homicide without any investigation from the medical examiner or law enforcement. One of the primary duties of the King County Medical Examiner's Office is to identify homicides. Allowing cremations without review by the Medical Examiner creates the possibility of never identifying such cases and forever destroying evidence that a homicide did occur.

Beginning January 1, 2008, the King County Council tasked the Medical Examiner's Office with reviewing the death certificates of all decedents to be cremated in order to rule out the need for additional investigation.

In 2009, the Medical Examiner's Office handled 9,494 cremation review requests. A total of 156 cases were made from the 9,494 review requests, indicating that the Medical Examiner's Office would have never seen nor investigated those cases had they been cremated. Table 13-1 shows the 156 cases that were initiated by the Medical Examiner's Office from cremation reviews.

Table 13-1**Cremation Reviews / KCME / 2009**

MANNER	SUBTYPE	# CASES	%
Accident	Blunt Force / Crushing	1	0.6%
Accident	Drugs / Poisons	5	3.2%
Accident	Fall	48	30.8%
Accident	Gunshot Wound(s)	1	0.6%
Accident	Traffic	2	1.3%
Natural		96	61.7%
Suicide	Drugs / Poisons	1	0.6%
Undetermined	Drugs / Poisons	1	0.6%
Undetermined	Fall	1	0.6%
Totals		156	100%

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MEDICAL EXAMINER ACTIVITY

The staff members 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 the family 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 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 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).

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 various media personnel. 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 accidents, 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 2009, 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, MD, PhD

Academic Appointment

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

Preceptorships & Faculty Positions

- Director of Forensic Pathology Fellowship Training Program, King County Medical Examiner's Office
- University of Washington School of Medicine, medical students, pathology residents, and physician assistant students
- University of Washington School of Nursing, graduate students in Forensic Nursing
- Course Director and Faculty, "Problems in Forensic Pathology", King County Medical Examiner's Office, accredited by the University of Washington Office for Continuing Medical Education
- Faculty, Certificate Program in Forensics, University of Washington Extension

Professional Organizations

- American Medical Association
- American Academy of Forensic Sciences
- National Association of Medical Examiners
- King County Child Death Review Committee
- King County Elder Abuse Council
- Disaster Mortuary Operations Response Team, Region 10
- Washington Association of Coroners and Medical Examiners

Scientific Presentations

- Role of scene reconstruction in the medicolegal investigation of sudden and unexpected infant deaths
American Academy of Forensic Sciences, 61st Annual Scientific Meeting
Denver, Colorado
February 16-21
- Investigation of Vehicular Fire Fatalities
Platform presentation at the annual meeting of the National Association of Medical Examiners,
Lubin M, Warushahennadi J, Harruff R, Taylor K, Williams TL, Fusaro A.
San Francisco, California
September 11-16

National Conference

- Elder Abuse Prosecution Training Forum
National Institute of Justice
Bethesda, Maryland
September 16-17

Local Conferences

- Digital Radiography in Mass Fatality Response
King County Medical Examiner's Office
Seattle, Washington
August 28
- King County Firearm Conference: History, Injuries, Forensics, & Prevention
King County Medical Examiner's Office & University of Washington School of Nursing
Seattle, Washington
December 2

Local & Regional Educational Presentations

- Essentials of Medicolegal Death Investigation
King County Medic One Paramedic Training
Seattle, Washington
March 2
- Pattern Injuries and Strangulation
Core Training for Sexual Assault Nurse Examiners
Harborview Center for Sexual Assault and Traumatic Stress
Seattle, Washington
March 25
- Sudden Unexplained Infant Death Investigations
Seventh Annual Children's Justice Conference
Seattle, Washington
April 7

- Medicolegal Investigation of Death: Child Deaths
University of Washington Certificate Program in Forensics
Seattle, Washington
May 4
- Medicolegal Investigation of Death: Automobile Accident Reconstruction
University of Washington Certificate Program in Forensics
Seattle, Washington
June 1
- Medicolegal Investigation of Death: Gunshot Wounds
University of Washington Certificate Program in Forensics
Seattle, Washington
June 1
- Sudden Unexpected Infant Death Investigations
Training Program for Clallam and Jefferson Counties
Port Angeles, Washington
June 26
- Basic Death Investigation
Continuing Legal Education for King County Office of the Public Defender
Seattle, Washington
August 21
- Basic Death Investigation
Criminal Justice Institute, Washington State Bar Association
Washington State Convention and Trade Center
Seattle, Washington
September 10
- Firearm Injuries of Center Fire Rifle & Shotguns
Conference of Western Attorneys General, Training for Mexican Law Enforcement Officials
Seattle, Washington
September 24
- Investigation of Traffic Fatalities
Law Enforcement Advance Collision Investigation Course
Everett, Washington
September 25
- Pattern Injuries and Strangulation
Core Training for Sexual Assault Nurse Examiners
Harborview Center for Sexual Assault and Traumatic Stress
Seattle, Washington
October 28
- Forensic Aspects of Firearm Injuries
King County Firearm Conference
Seattle, Washington
December 2

Aldo Fusaro, DO, Associate Medical Examiner

Academic Appointment

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

Preceptorships

- 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
- 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

Scientific Publication

- Case Series of Completed Suicides by Burning Over a 13 year Period
Cimino, P., Williams T., Fusaro, A., Harruff, R.
Submitted for publication to the Journal of Forensic Sciences

Professional Meetings, Trainings and Certifications

- Forensic Investigations Council Meetings
April, May, August, October & November
- Annual Blood Borne Pathogens Training, Public Health - Seattle & King County
September
- Health Information Privacy and Security Training, Public Health - Seattle & King County
December

Local & Regional Educational Presentations

- RISE Examination Review Lectures
University of Washington Department of Pathology
Seattle, Washington
June
- Foreign Things Found In/On Bodies by Radiography.
King County Medical Examiner's Office Digital Radiography Training Course
Seattle, Washington
August

- Investigation of Vehicular Fire Fatalities
Platform presentation at the annual meeting of the National Association of Medical Examiners,
Lubin M, Warushahennadi J, Harruff R, Taylor K, Williams TL, Fusaro A.
San Francisco, California
September 11-16

Timothy L. 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, medical students and pathology residents

Professional Organization

- Member, National Association of Medical Examiners

Scientific Publication

- Cerebral Air Embolism Secondary to Atrial-Esophageal Fistula
Williams TL, Parikh DR, Hopkin JR, Lukovits TG, Kono AT, Mamourian AC, Harris BT
Neurology 2009;72:e54-55

Local & Regional Educational Presentations

- Corpora Amylacea and Sudden Death: A Case of Adult Polyglucosan Body Disease Diagnosed at Forensic Autopsy
The American Academy of Forensic Science Annual Meeting: Accepted for platform presentation
Denver, Colorado
February 19
- Careers in Health Science, Panel Speaker
Juvenile Drug Court Lunch and Learn Series
King County Juvenile Drug Court
Seattle, Washington
October 29
- Investigation of Vehicular Fire Fatalities
Platform presentation at the annual meeting of the National Association of Medical Examiners,
Lubin M, Warushahennadi J, Harruff R, Taylor K, Williams TL, Fusaro A.
San Francisco, California
September 11-16

Micheline Lubin, MD, Assistant Medical Examiner***Associations, Committees and Boards***

- Member, American College of Physicians
- Member, National Association of Medical Examiners

Regional Educational Presentation

- Investigation of Vehicular Fire Fatalities
Platform presentation at the annual meeting of the National Association of Medical Examiners,
Lubin M, Warushahennadi J, Harruff R, Taylor K, Williams TL, Fusaro A.
San Francisco, California
September 11-16

Pamela S. Ulmer, DO, Assistant Medical Examiner***Local & Regional Educational Presentations***

- Preventing Infant Deaths: Lessons from Medicolegal Death Investigation
King County Public Health Nurse Continuing Education
January 13
- Role of Scene Investigation in the Medicolegal Investigation of Sudden Unexpected Infant Deaths
American Academy of Forensic Sciences 61st Annual Meeting
Denver, Colorado
February 16-21
- How to Conduct a Doll Reenactment on Infant Death Investigations
Children's Justice Conference 17th Annual Meeting
Seattle, Washington
April 6-7

Katherine Taylor, PhD, Forensic Anthropologist***Academic Affiliations***

- Affiliate Faculty, University of Washington Department of Anthropology
- Adjunct Faculty, Seattle University Department of Criminal Justice

Associations, Committees and Boards

- Board Member, Family and Friends of Violent Crime Victims
- Board Member, Seattle University Criminal Justice Advisory Board
- Fellow of the American Academy of Forensic Sciences
- Member, Washington Association of Coroners and Medical Examiners

Local & Regional Educational Presentations

- Forensic Anthropology and Homicide Investigations: Basic Homicide Investigation Class
Washington State Patrol
Bellevue, Washington
January 27
- Forensic Anthropology
Washington State Association of Prosecuting Attorneys
Vancouver, Washington
April 23
- Forensic Anthropology and Homicide Investigations: Basic Homicide Investigation Class
Burien, Washington
April 28
- Speaker for the Snohomish County Emergency Management Family Assistance Center Workshop
Everett, Washington
May 15
- Planning for a Mass Fatality Event
Regional Mass Fatality Workshop
Spokane, Washington
June 13
- Mass Fatality Planning: The Medical Examiner Perspective
Northwest Tribal Emergency Management Council 2009 Annual Emergency Management Conference
Marysville, Washington
July 29
- Buried Body and Outdoor Scene Processing
Workshop Training for Washington State Patrol Crime Scene Response Team
Ravensdale, Washington
August 5-6
- Investigation of Vehicular Fire Fatalities
Platform presentation at the annual meeting of the National Association of Medical Examiners,
Lubin M, Warushahennadi J, Harruff R, Taylor K, Williams TL, Fusaro A.
San Francisco, California
September 11-16
- Forensic Anthropology and Homicide Investigations: Basic Homicide Investigation Class
Cheney, Washington
September 15
- Principles of Forensic Anthropology
International Association of Women Police
Seattle, Washington
September 23
- Forensic Anthropology
Law Enforcement Information and Records Association Annual Meeting
Marysville, Washington
October 29

Greg Hewett, Mdiv, Program Manager IV

Associations, Committees & Boards

- Member, Seattle University Advisory Committee, Criminal Justice Program
- Member, Washington Association of Coroners and Medical Examiners
- Washington State Registered Counselor

Local Educational Presentation

- The Role & Responsibility of the Medical Examiner's Office
King County Medical Examiner's Office
Seattle University
Seattle, Washington
February 3

R. Colin Jones, BA, Program Manager III***Associations***

- Member, Washington Association of Coroners and Medical Examiners
- Notary Public, State of Washington
- King County Child Death Review Committee

Local Educational Presentations

- Design and Operation of a Modern Medical Examiner Facility
Ninth & Jefferson Building Grand Opening
King County Medical Examiner's Office
Seattle, Washington
April 8
- Security Requirements for a Medical Examiner
King County Medical Examiner's Office
Seattle, Washington
April 27
- Design and Operation of a Modern Medical Examiner Facility
King County Medical Examiner Law Enforcement Open House
King County Medical Examiner's Office
Seattle, Washington
May 13

Joe Frisino, D-ABMDI, Medicolegal Death Investigator III, Office Coordinator***Associations***

- Diplomate, American Board of Medicolegal Death Investigators
- Board Member, American Board of Medicolegal Death Investigators
- Member, Washington Associations of Coroners & Medical Examiners

Nathan Geerdes, BA, D-ABMDI, Lead Medicolegal Investigator

Association

- Diplomat, American Board of Medicolegal Death Investigators

Local Educational Presentations

- Role and Responsibility of the Medical Examiner's Office
King County Medical Examiner's Office for Seattle University
Seattle, Washington
January 21
- Role and Responsibility of the Medical Examiner's Office
King County Medical Examiner's Office for Seattle University
Seattle, Washington
January 22
- Role and Responsibility of the Medical Examiner's Office
King County Medical Examiner's Office for Seattle University
Seattle, Washington
February 3
- Role and Responsibility of the Medical Examiner's Office
King County Medical Examiner's Office for Seattle University
Seattle, Washington
April 24

William Barbour, BS, D-ABMDI, Medicolegal Investigator***Association***

- Diplomat, American Board of Medicolegal Death Investigators

Local Educational Presentation

- Role and Responsibility of the Medical Examiner's Office
King County Medical Examiner's Office for Seattle University
Seattle, Washington
January 28

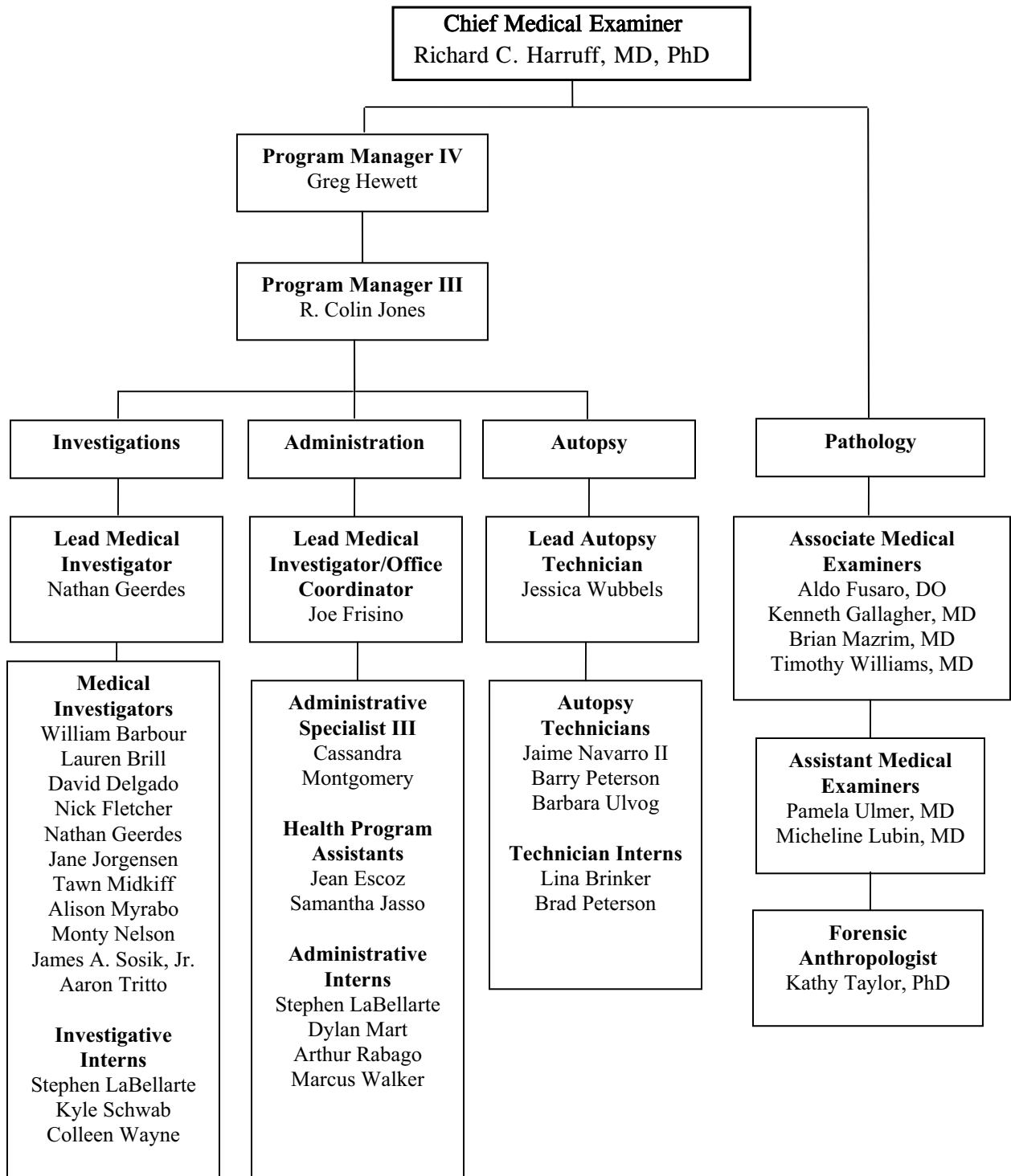
Table 12-1 Weekly Variation of Deaths Investigated by the King County Medical Examiner's Office

	TOTAL
Number of weeks studied	52
Mean number of ME jurisdiction cases per week	41
Maximum ME jurisdiction cases in any one week	58
Minimum ME jurisdiction cases in any one week	28

Table 12-2 Weekly Variation of Autopsies Performed by the King County Medical Examiner's Office

	TOTAL
Number of weeks studied	52
Mean number of autopsies performed per week	24
Maximum # autopsies performed in any one week	38
Minimum # autopsies performed in any one week	12

Organization of the King County Medical Examiner's Office 2009



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

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

²Ibid, p. 3.

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