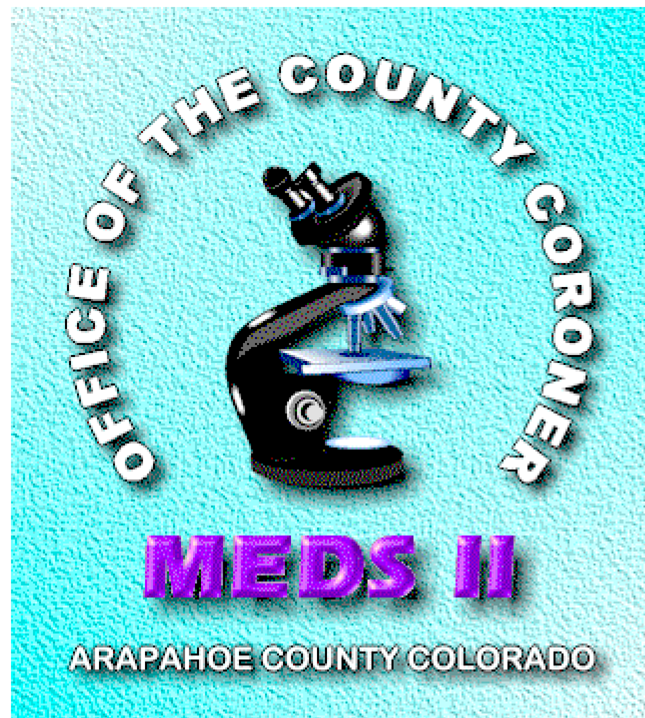
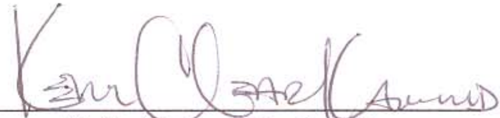
Coroner's Office
2005 Annual Report



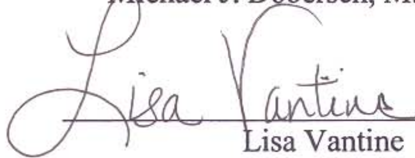
DEDICATION

It is recognized that each case in this report represents the death of a person whose absence is grieved by relatives and friends. To those individuals of Arapahoe County who have suffered the loss of a Relative or a friend, this report is dedicated.

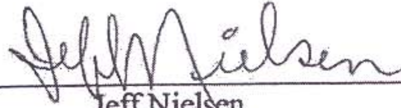
Michael J. Dobersen, M.D., Ph.D.



Kelly C. Lear-Kaul, MD.



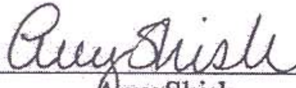
Lisa Vantine



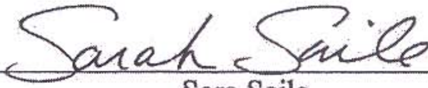
Jeff Nielsen

Cherry Goodman

Shannon Sanamo

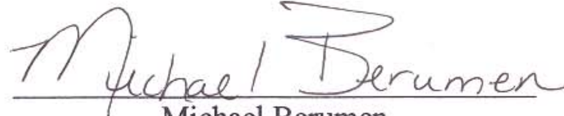


Amy Shish



Sara Saile

Tamara Davis



Michael Berumen

TABLE OF CONTENTS

FOREWORD 1

DESCRIPTION AND PURPOSE OF THE ARAPAHOE COUNTY CORONER'S OFFICE 2

EXPLANATION OF DATA 3

CORONER CASES IN 2005 5

TEN-YEAR PERSPECTIVE 9

ACCIDENT 11

ACCIDENT (TRAFFIC) 13

HOMICIDE 21

SUICIDE 31

NATURAL 43

UNDETERMINED 45

CORONER ACTIVITY 46

GLOSSARY OF TERMS 48

ORGANIZATION OF THE ARAPAHOE COUNTY CORONER'S OFFICE — 2005 50

LIST OF TABLES AND GRAPHS

FIGURE 1: STATISTICS TOTALS 6
FIGURE 2: STATISTICS BY MONTH 7
FIGURE 3: JURISDICTION ASSUMED BY ARAPAHOE COUNTY CORONER 8
FIGURE 4: CORONER'S JURISDICTION CUMULATIVE DATA 10
FIGURE 5: ACCIDENTAL FATALITIES 12
FIGURE 6: TRAFFIC FATALITIES — BY AGE 14
FIGURE 7: TRAFFIC FATALITIES — BY LOCATION OF DECEDENT 15
FIGURE 8: TRAFFIC FATALITIES — SEAT BELTS 16
FIGURE 9: TRAFFIC FATALITIES — BY BLOOD ALCOHOL 17
FIGURE 10: TRAFFIC FATALITIES — BY TYPE OF ACCIDENT 18
FIGURE 11: TRAFFIC FATALITIES — BY DAY OF WEEK 19
FIGURE 12: TRAFFIC FATALITIES — BY TIME OF DAY 20
FIGURE 13: HOMICIDES — BY MODE 22
FIGURE 14: HOMICIDES — BY MODE BY GENDER 23
FIGURE 15: HOMICIDES — BY AGE 24
FIGURE 16: HOMICIDES — BY RACE 25
FIGURE 17: HOMICIDES — BY BLOOD ETHANOL 26
FIGURE 18: HOMICIDES — BY MARITAL STATUS 27
FIGURE 19: HOMICIDES — BY SETTING 28
FIGURE 20: HOMICIDES — BY DAY OF WEEK 29
FIGURE 21: HOMICIDES — BY TIME OF DAY 30
FIGURE 22: SUICIDES — BY MODE 32
FIGURE 23: SUICIDES — BY MODE BY GENDER 33
FIGURE 24: SUICIDES: GUNSHOT WOUNDS — BY SITE OF ENTRANCE 34
FIGURE 25: SUICIDES — BY DRUGS AND POISONS 35
FIGURE 26: SUICIDES — BY DRUG BY GENDER 36
FIGURE 27: SUICIDES — BY AGE 37
FIGURE 28: SUICIDES — BY SUICIDE NOTE 38
FIGURE 29: SUICIDES — BY BLOOD ETHANOL 39
FIGURE 30: SUICIDES — BY MARITAL STATUS 40
FIGURE 31: SUICIDES — BY DAY OF WEEK 41
FIGURE 32: SUICIDES — BY TIME OF DAY 42
FIGURE 33: NATURAL DEATHS 44

FOREWORD

The Coroner's Office serves the living by investigating sudden and unexpected deaths and, in particular, those that occur under violent or suspicious circumstances. The Coroner's staff recognizes the tragedy surrounding an untimely death and performs its investigations, in part, to assist the grieving family. A complete investigation provides for the expeditious settling of insurance claims and estates, 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 should have the assurance that a complete investigation was conducted.

When a death occurs on the job, or is work related, the results of our investigation are immediately forwarded to the State Department of Labor and Industry so that the family can gain the full benefit of our findings. Private insurance companies also routinely use these findings to settle claims. Whenever a consumer product is implicated in a death, we notify 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 dimension of the Coroner's function is designed to isolate and identify causes of sudden, unexpected death. When an infectious agent or poison is implicated in a death, the family and persons recently in physical contact with the deceased are notified in order that they might receive any needed medical treatment.

The medical investigation of violent death is frequently required in civil or criminal adjudication. Thus, a prompt medical investigation is conducted 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 Coroner, these deaths are studied in great detail because of the issues and legal consequences involved. In this way, the criminal justice system is offered the best support.

DESCRIPTION AND PURPOSE OF THE ARAPAHOE COUNTY CORONER'S OFFICE

The Coroner's Office is a separate and independent division of the Arapahoe County Government and is funded through the Arapahoe County Commissioners by the citizens of Arapahoe County.

The Coroner is a physician trained and board certified in Forensic Pathology, the branch of medicine concerned with the investigation of sudden and unexpected, violent or suspicious deaths. Previous board certification in Anatomic and Clinical Pathology were achieved prior to this qualification. Three sections are under the Coroner's direction: Investigations, Autopsy Support, and Administrative Support. These duties include field investigation of scene and circumstances of death, identification of the deceased, performance of autopsies where indicated, certification of death, notification of next-of-kin, and control and disposition of personal property of the deceased.

Deaths which come under the jurisdiction of the Coroner are defined by statute (CRS30-10-606) and include, but are not limited to, the following circumstances:

(a) From external violence, unexplained cause, or under suspicious circumstances.

(b) Where no physician is in attendance, or where, though in attendance, the physician is unable to certify the cause of death.

(c) From thermal, chemical, or radiation injury.

(d) From criminal abortion, including any situation where such abortion may have been self-induced.

(e) From a disease which may be hazardous or contagious or which may constitute a threat to the health of the general public.

(f) While in the custody of law enforcement officials or while incarcerated in a public institution.

(g) When the death was sudden and happened to a person who was in good heath.

EXPLANATION OF DATA

The information presented here was compiled on deaths which came under the jurisdiction of the Coroner during the calendar year 2005. The role of alcohol, drugs, and firearm use in violent deaths is emphasized in the report. Health agencies, safety councils, and lawmakers may find these statistics useful. If the quality of life in Arapahoe County is to be improved, perhaps this report can serve as the basis for change. Comments or criticisms are encouraged so that future reports can be improved.

The geographic area served by the Coroner includes all 810 square miles of Arapahoe County, which is located in the north central part of the state encompassing the southeastern portion of the Denver metropolitan area. A population of 519,155 makes it the fourth most populous county in Colorado. One out of every 8.5 Colorado residents lives in Arapahoe County. The County contains all or part of the following cities and towns: Aurora, Bennett, Bow-Mar, Byers, Cherry Hills Village, Columbine Valley, Deer Trail, Englewood, Foxfield, Glendale, Greenwood Village, Littleton, Sheridan, Strasburg, and Centennial. There are also 10 School Districts and 118 Local Improvement Service Districts within the County.

Demographics in this report are summarized from individual cases under jurisdiction of the Coroner, and presented here in aggregate form. Each manner (category) of death is subdivided into the various sub-groupings appropriate to the manner, which together form a more detailed description of the cause and manner of death. The variables displayed in the tables, such as race, gender, age, etc., have been selected as those most likely to assist and interest individuals using these data in assembling a profile of death statistics in 2005.

Blood ethanol (alcohol) data included here represent the blood level at the time of death. Ethanol is metabolized at a rate of 0.015 to 0.018 grams per deciliter per hour. Thus, if there is a significant 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 twenty-four hours after the fatal injury. For these reasons, an unknown number of cases not tested or showing no blood alcohol, may actually have had a measurable alcohol concentration at the time of incident.

Data on natural deaths of all age groups are included. Natural deaths investigated by the Coroner are those which occur suddenly and unexpectedly with no physician in attendance, or under suspicious circumstances. They are not representative of all natural deaths in Arapahoe County, although they comprise 48% of all deaths investigated by the Coroner.

The “circumstances 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 is difficult to assess street drug or

medication overdose deaths in the absence of enough features to reasonably determine the manner of death.

CORONER CASES IN 2005

This report provides a summary of the raw data from the Coroner's 2005 cases.

In 2005, there were an estimated 5000 deaths in Arapahoe County (1% of a 2000 population estimate of 500,000). Of these deaths, 1888 (37%) were reported to the Coroner's Office by medical and law enforcement personnel. Based on an analysis of the scene, the circumstances of death, and the deceased's medical history gathered by the medical investigators, the Coroner assumed jurisdiction in 397 (21%) of these reported deaths. Autopsies were carried out in 99% (392/397) of the cases. In cases where jurisdiction was not assumed by the Coroner, a local physician, with knowledge and awareness of the deceased's state of health, certified the death. These were primarily natural deaths, predominantly individuals in nursing homes with a known fatal disease process. Autopsies were not performed in deaths where scene, circumstances, medical history, and external examination of the body provided sufficient information for death certification.

The accompanying tables and figures summarize the manner of death in all cases where jurisdiction has been assumed by the Coroner. The majority of cases fall into the natural category (47%). Homicidal deaths, while comprising only 6% of cases, usually garner a disproportionate amount of attention and effort by the Coroner. All of the categories are further analyzed in subsequent sections of this report.

STATISTICS TOTALS

All Arapahoe County Deaths (estimated)	5000
Reported to Arapahoe County Coroner	1888
Jurisdiction Assumed by County Coroner	397
Autopsies by Arapahoe County Coroner	392

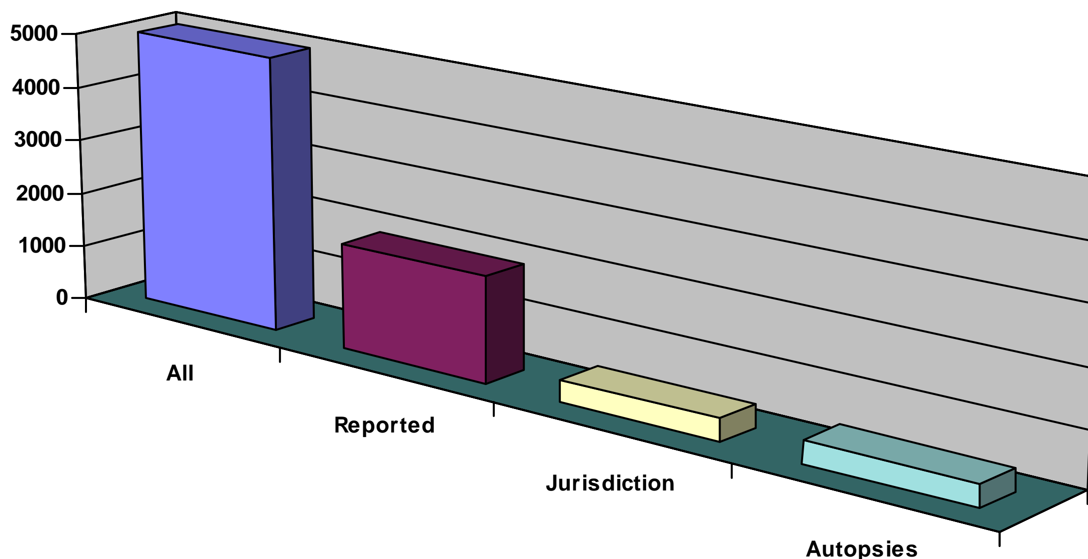


FIGURE 1: STATISTICS TOTALS

STATISTICS BY MONTH

Month	Total Cases	Released Cases	Jurisdiction Assumed	Coroner Autopsies
January	137	110	27	27
February	128	99	29	29
March	156	129	27	26
April	139	101	38	38
May	145	110	35	34
June	156	110	46	46
July	134	90	44	42
August	135	111	24	24
September	146	119	27	27
October	142	111	31	31
November	139	105	34	33
December	151	116	35	35
Total	**1708**	**1311**	**397**	**392**

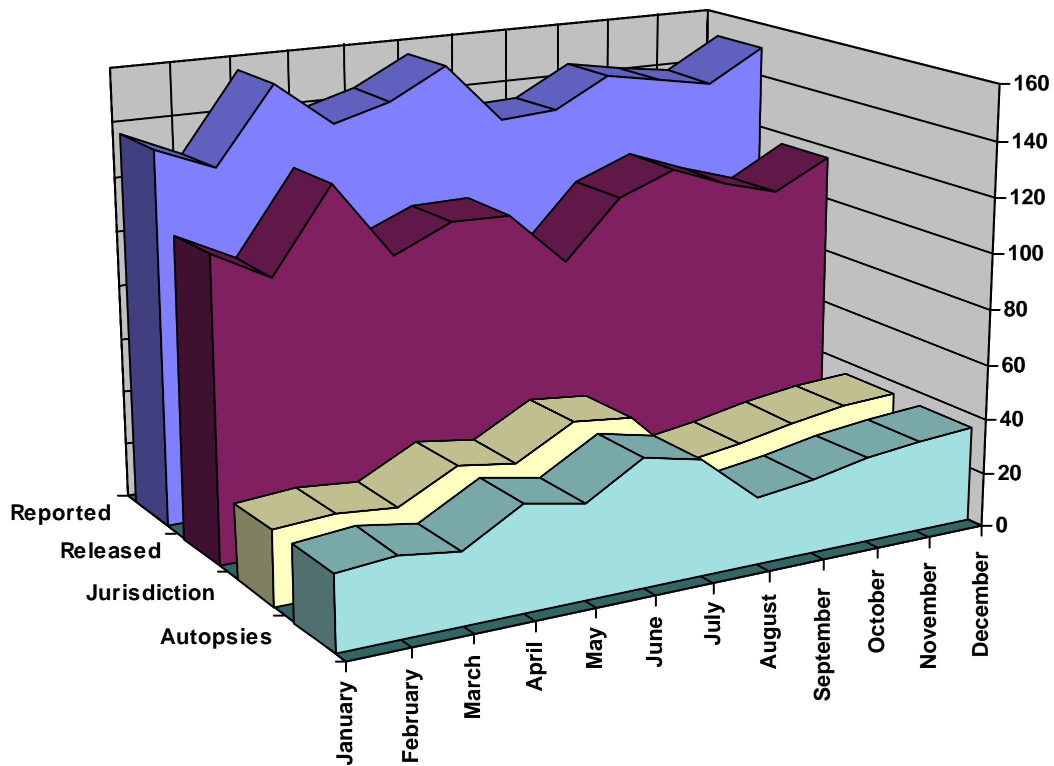


FIGURE 2: STATISTICS BY MONTH

JURISDICTION ASSUMED BY ARAPAHOE COUNTY CORONER

Cases By Manner of Death

Category	Number of Deaths	
Accident	79	20 %
Homicide	22	6 %
Natural	176	44 %
Suicide	73	18 %
Traffic	41	10 %
Undetermined	6	2 %
Total	**397**	

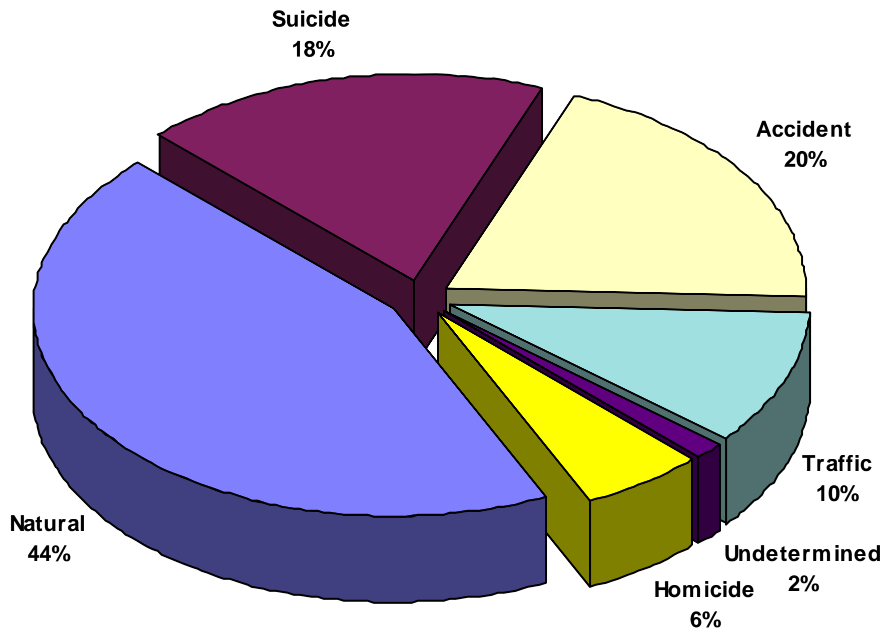


FIGURE 3: JURISDICTION ASSUMED BY ARAPAHOE COUNTY CORONER

TEN-YEAR PERSPECTIVE

This section provides a ten-year perspective on deaths investigated by the Coroner and variation in data from year to year. The table and graph display data by category and year, and provide trends over time.

CORONER'S JURISDICTION CUMULATIVE DATA (PAST 10 YEARS)

Year	Accident	Homicide	Natural	Suicide	Traffic	Undetermined	Total
1996	59	16	151	62	30	18	336
1997	59	15	106	55	42	11	288
1998	41	29	96	59	48	7	280
1999	40	17	148	55	33	9	302
2000	59	22	145	47	28	4	305
2001	62	21	165	78	45	6	377
2002	60	21	178	75	40	3	377
2003	73	19	180	68	27	1	368
2004	64	24	186	80	34	8	396
2005	79	22	176	73	41	6	397
Total	**596**	**206**	**1531**	**652**	**368**	**73**	**3426**

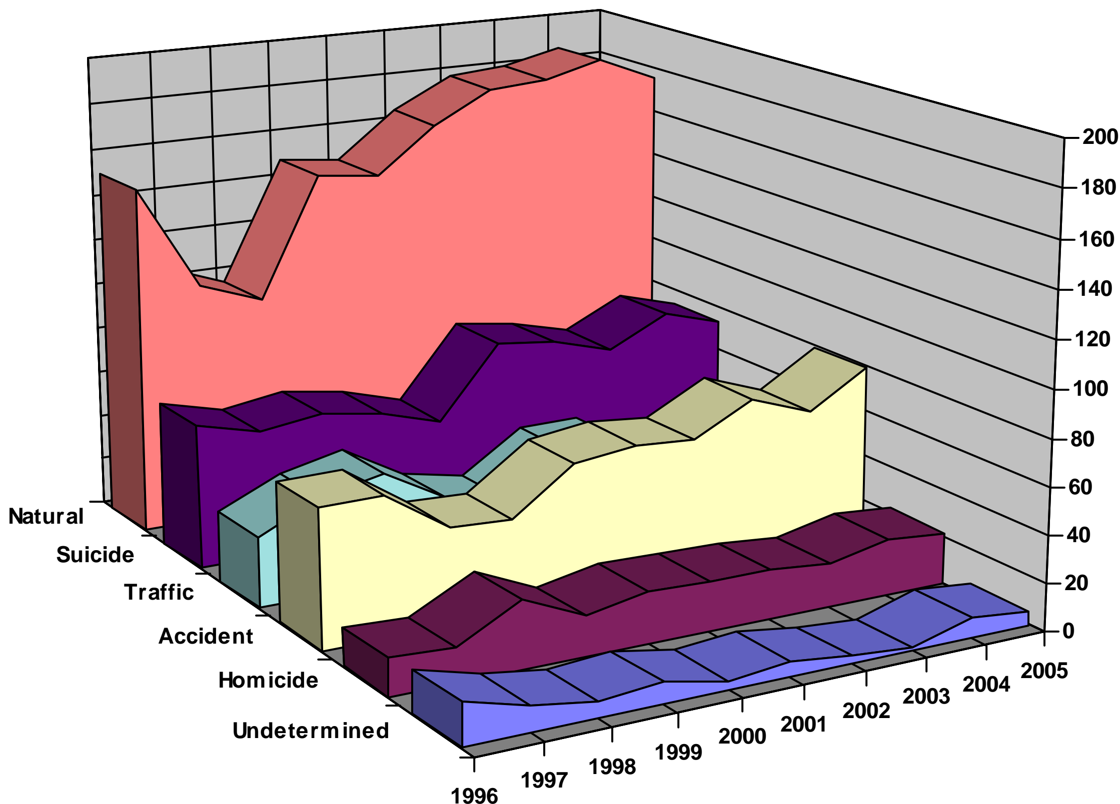


Figure 4: Coroner's Jurisdiction Cumulative Data

ACCIDENT

Seventy-nine (79) deaths were certified as accidental for calendar year 2005. Of these, the largest single group were people who died as the result of overdoses of drugs including ethanol. This category accounted for 50% (40/79) of accidental deaths.

The second largest group were those due to accidental falls. Heroin intoxication and pneumonia (neglected) were the third leading cause of accidental deaths for the year 2005.

ACCIDENTAL FATALITIES

Cause	Males	Females	Total
acute alcohol intoxication	23	17	40
Cardiomyopathy		1	1
Ethanol toxicity	3	5	8
Ethanol withdrawl siezure		1	1
Fall at residence	2		2
Fall from stairs	3	1	4
Fall in store	1		1
Fracture due to fall	1	1	2
heroin intoxication	3		3
Housefire- CO toxicity	1		1
Industrial Accident		1	1
Inhalation of Propane	1		1
opiate intoxication	1		1
Opiate/Ethanol Toxicity	1		1
pneumonia (neglect)	1	3	4
spinal cord injury	1		1
Subdural hematoma due to fall	3	3	6
Therapeutic misadventure	1		1
Total	**46**	**33**	**79**

FIGURE 5: ACCIDENTAL FATALITIES

ACCIDENT (TRAFFIC)

During 2005, the Coroner's Office participated in the investigation of 41 traffic fatalities. Deaths due to traffic accidents have remained relatively constant over the past five years, ranging from 27 to 45 per year. The information depicted in the accompanying tables and graphs, shows the age distribution of traffic fatalities in Arapahoe County. The peak age is in the range of 41 to 50 years, with male driver deaths almost two times more frequent than female drivers.

Fifty-three percent (22/41) of the traffic fatalities were motor vehicle operators. Six motorcycle deaths occurred during 2005. Pedestrians made up 24% (10/41) of traffic related fatalities.

Seat belts were not used in 51% (21/41) of the fatalities, although this number may be erroneously low since pedestrians and motorcycle drivers are included. The use of seat belts was unknown in eleven other cases. Seat belts were in use for 21% (9/41) of the fatalities. Of the 21 deaths occurring when seat belts were not used, including pedestrians and motorcycle drivers, 61% (13/21) involved males.

Other variables, e.g., type of accident, location of accident, etc., are depicted in the remaining figures.

TRAFFIC FATALITIES – BY AGE

Age	Males	Female	Total
Under 1 year		1	1
1 to 10 years			
11 to 20 years	5	4	9
21 to 30 years	2	1	3
31 to 40 years	4	1	5
41 to 50 years	10	2	12
51 to 60 years	1	2	3
61 to 70 years	3	2	5
71 to 80 years	1		1
81 to 90 years		2	2
Over 91 years			
Total	**26**	**15**	**41**

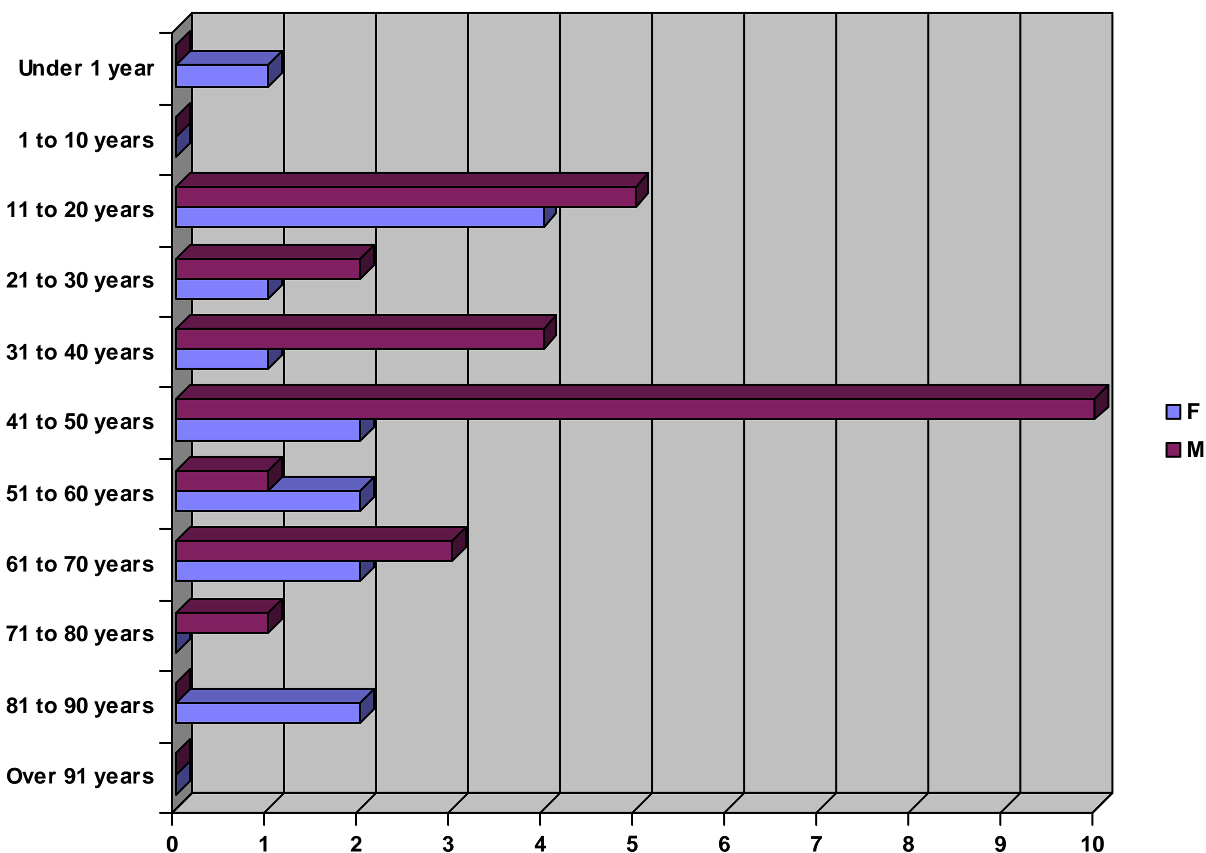


FIGURE 6: TRAFFIC FATALITIES — BY AGE

TRAFFIC FATALITIES — BY LOCATION OF DECEDENT

Location	Males	Female	Total
Driver	13	4	17
Motorcycle Driver	4	1	5
Motorcycle		1	1
Passenger in back	2		2
Passenger in front	1	5	6
Pedestrian	6	4	10
Total	**26**	**15**	**41**

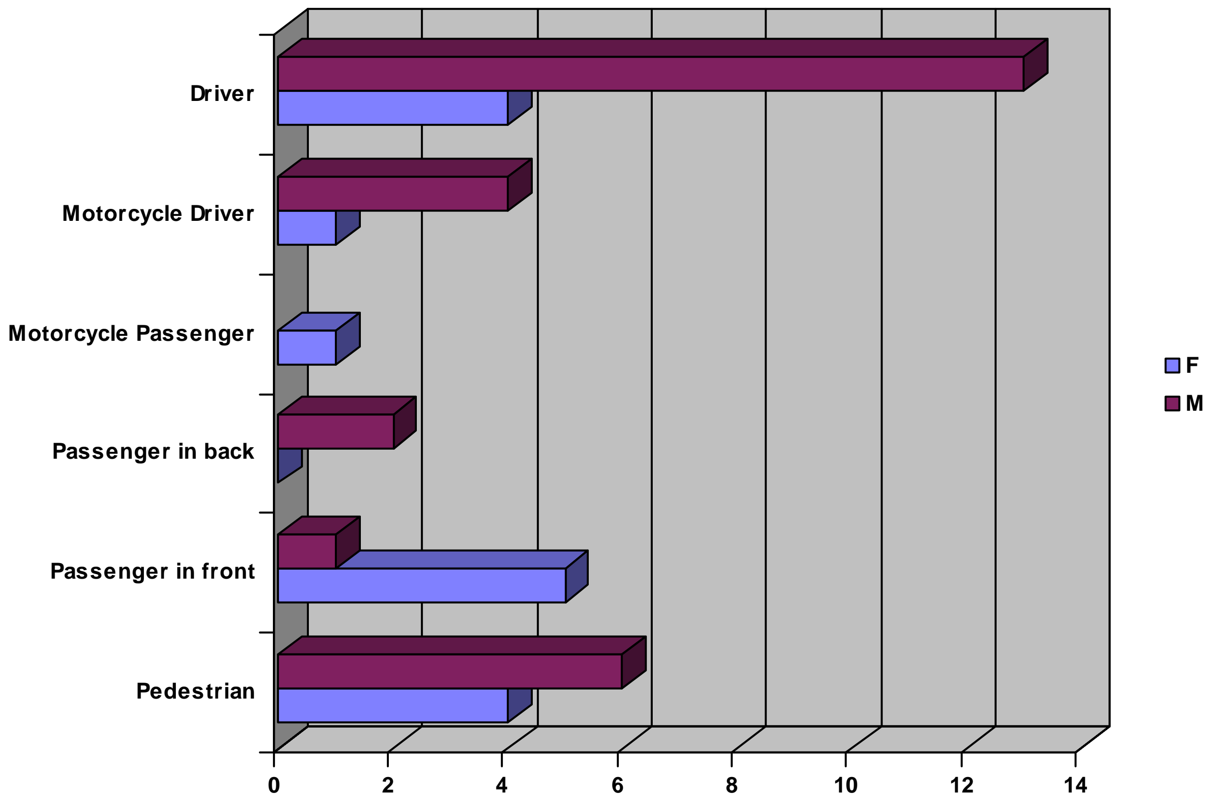


FIGURE 7: TRAFFIC FATALITIES — BY LOCATION OF DECEDENT

TRAFFIC FATALITIES — SEAT BELTS

Seat Belts	Males	Female	Total
Yes	5	4	9
No	13	8	21
Unknown	8	3	11
Total	**26**	**15**	**41**

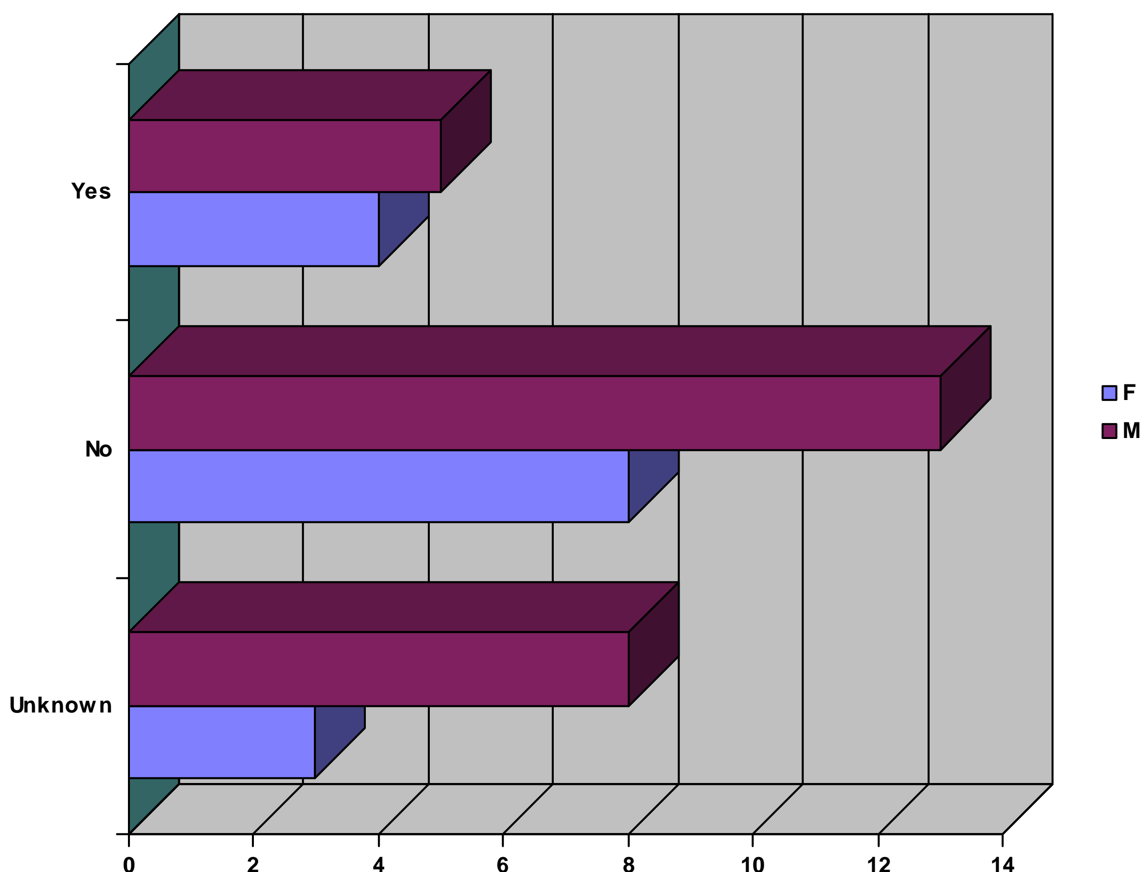


FIGURE 8: TRAFFIC FATALITIES — SEAT BELTS

TRAFFIC FATALITIES — BY BLOOD ETHANOL

Blood Ethanol (g/dl)	Males	Female	Total
Negative	3	2	5
Less than 0.050			
0.051 to 0.100			
0.101 to 0.150			
0.151 and above	5	3	8
Not done	18	10	28
Total	**26**	**15**	**41**

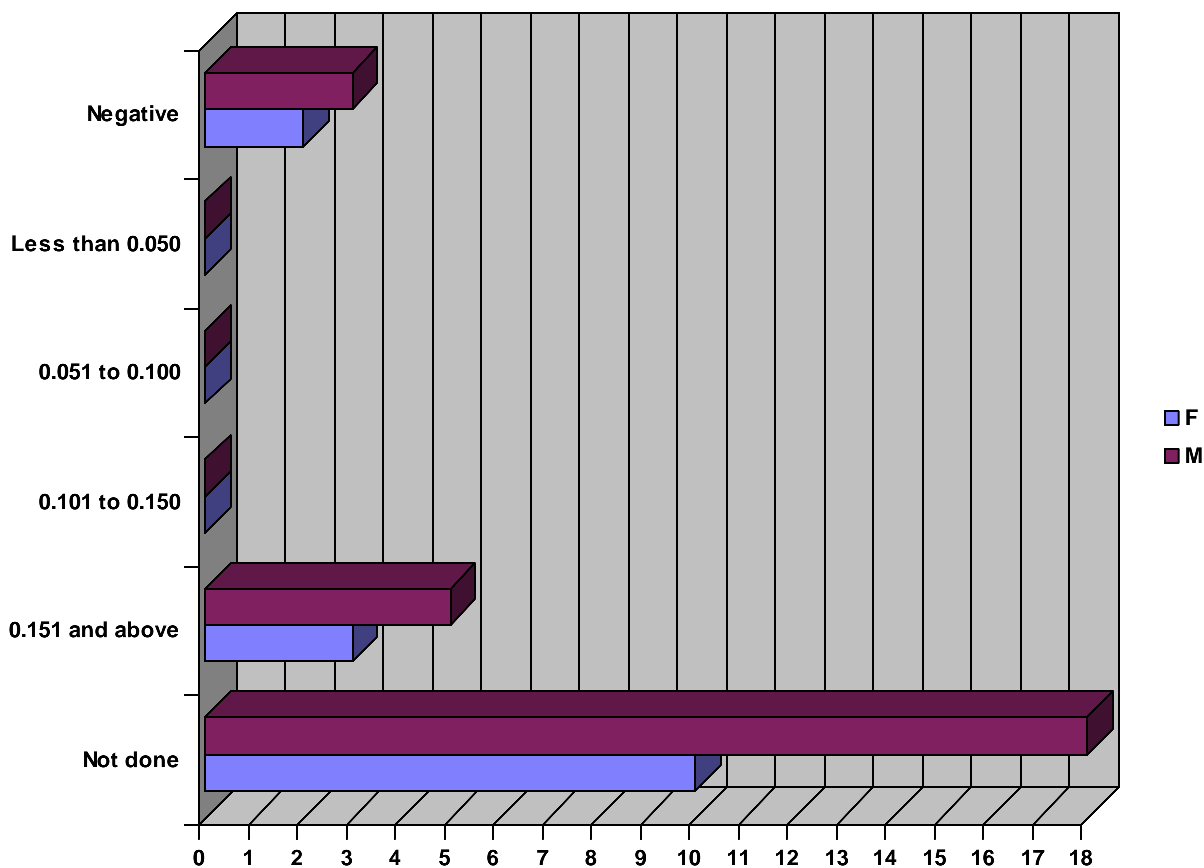


FIGURE 9: TRAFFIC FATALITIES — BY BLOOD ALCOHOL

TRAFFIC FATALITIES — BY TYPE OF ACCIDENT

Type of Accident	Males	Female	Total
Auto vs Parked Truck		1	1
Auto vs. Auto	12	4	16
Auto vs. Motorcycle	2		2
Auto vs. Pedestrian	5	4	9
Auto vs. Truck	2	3	5
Motorcycle	2	1	3
Motorcycle vs truck		1	1
Single vehicle	2		2
Stillborn after auto		1	1
Truck vs. Pedestrian	1		1
Total	**26**	**15**	**41**

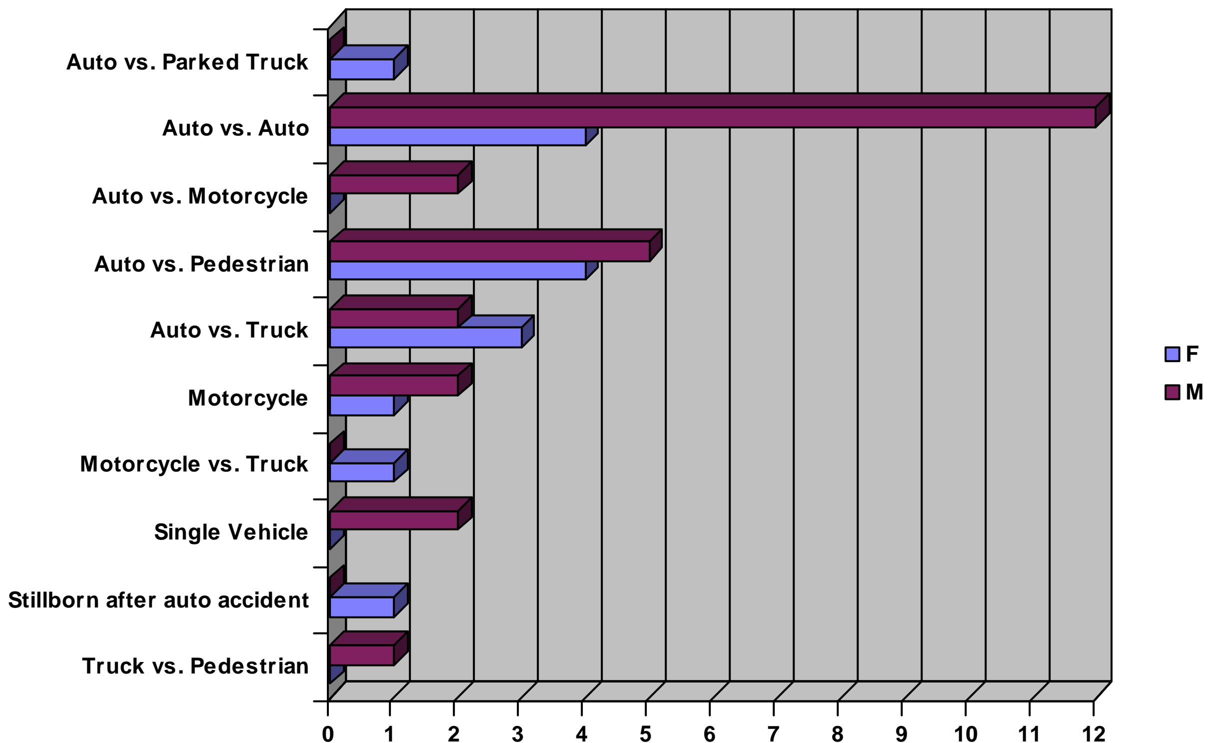


FIGURE 10: TRAFFIC FATALITIES — BY TYPE OF ACCIDENT

TRAFFIC FATALITIES — BY DAY OF WEEK

Day of Week	Males	Female	Total
Sunday	2	4	6
Monday	4		4
Tuesday	7	2	9
Wednesday	3	1	4
Thursday	3	3	6
Friday	3	2	5
Saturday	4	3	7
Total	**26**	**15**	**41**

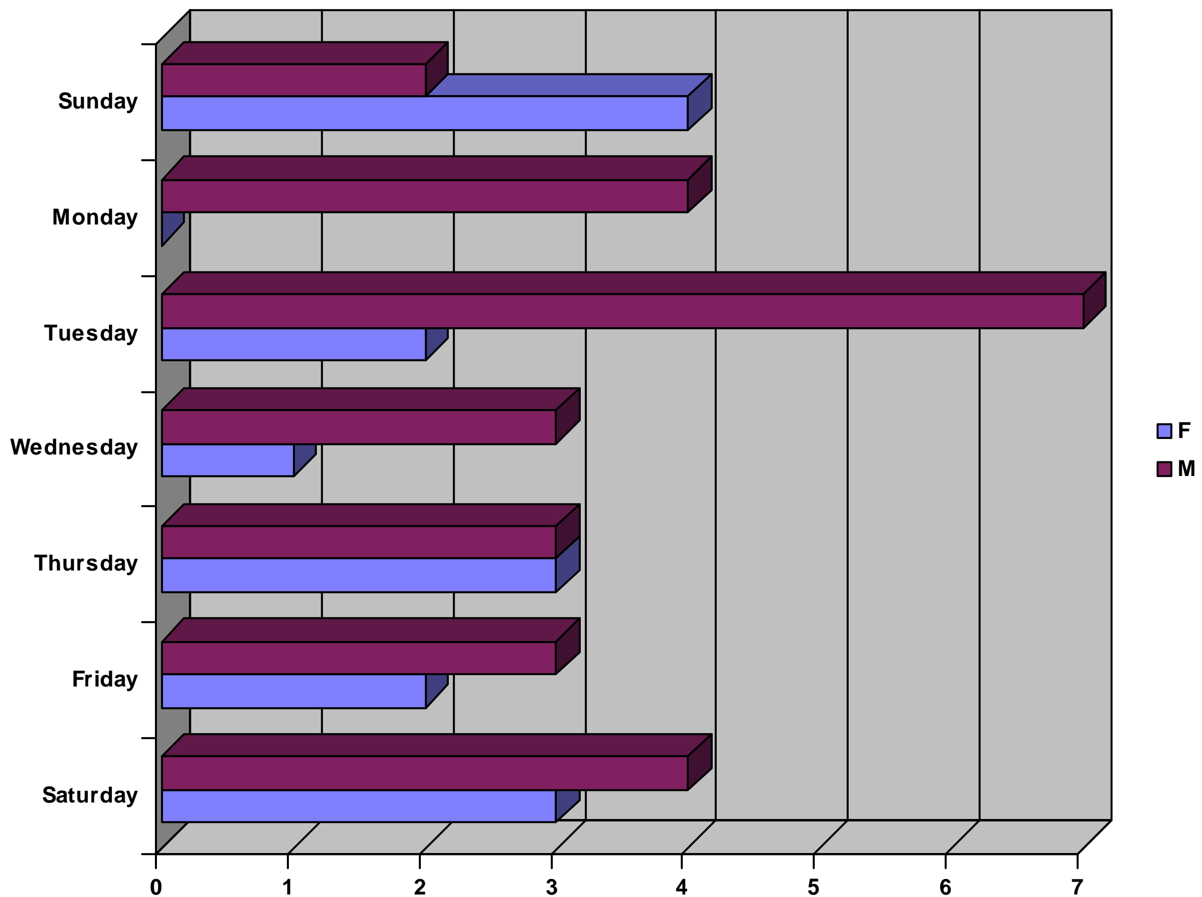


FIGURE 11: TRAFFIC FATALITIES — BY DAY OF WEEK

TRAFFIC FATALITIES — BY TIME OF DAY

Time of Day	Males	Female	Total
6:01 A.M. to 12:00	6	2	8
12:01 P.M. to 6:00	3	5	8
6:01 P.M. to Midnight	11	4	15
Midnight to 6:00 A.M.	6	4	10
Total	**26**	**15**	**41**

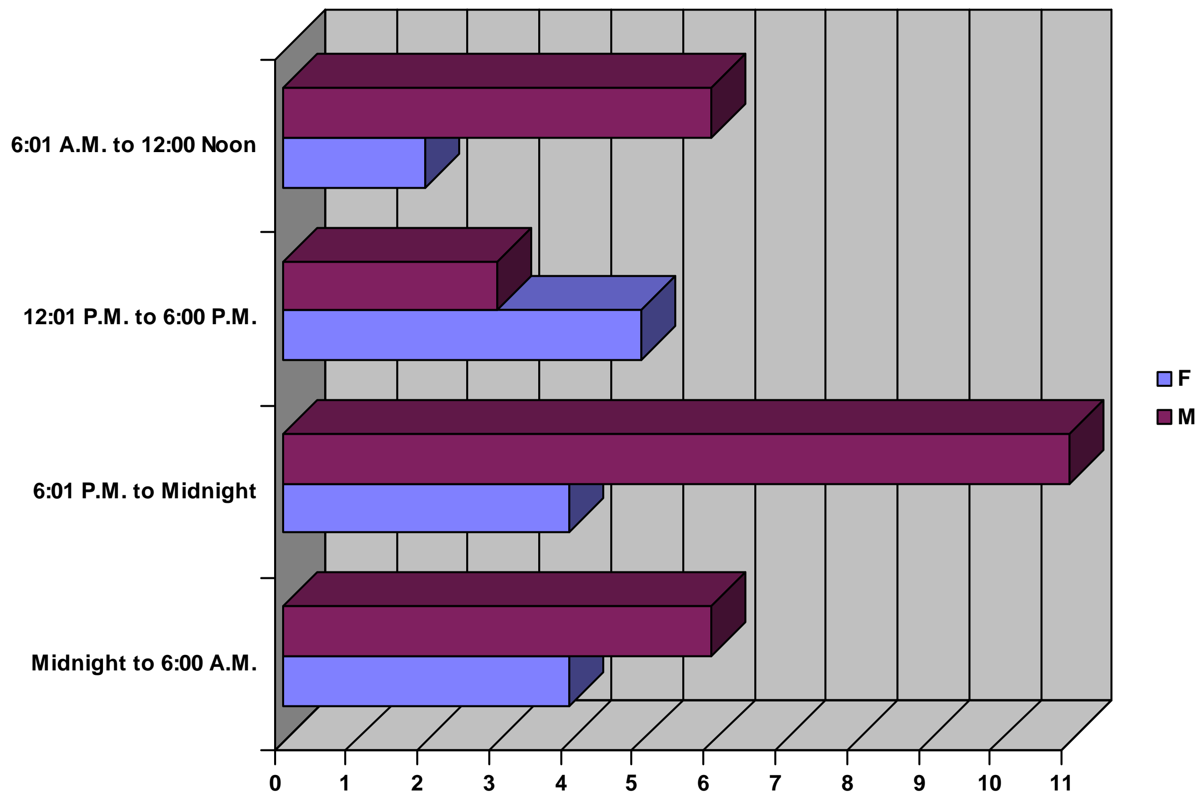


FIGURE 12: TRAFFIC FATALITIES — BY TIME OF DAY

HOMICIDE

A death is classified as a homicide when it results from injuries inflicted by another person. The person thus responsible for the injuries may be charged with murder or manslaughter by the prosecuting attorney, or the prosecuting attorney may decline to file charges. Within Arapahoe County, 22 deaths were classified as homicide, approximately 5% (22/397) of the Coroner's death investigations for the calendar year 2005.

The 22 homicidal deaths in 2005 represent a slight decrease over similar deaths in 2004 having 24 deaths. A review of the data since 1996 shows significant variation from year to year (15 to 29 in number).

A review of weapons responsible for homicidal death indicates that 50% (11/22) were firearms. The remaining ten victims died as a result of blunt trauma, asphyxia, and stab wounds. Two cases of child abuse occurred in 2005.

As is the case nationwide, male homicide victims are predominant by 68% (15/22). Seventy-three percent (11/15) of these deaths involved firearms. Forty-six percent of the male victims (7/15) were in the 21 to 30 year age group.

As in 2004, single individuals were more likely to be homicide victims than those of any other group. Also, outdoors and the home (residence) were the most frequent settings for homicide. The distribution of homicidal deaths by day of week and time of day is also shown, as well as racial distribution.

HOMICIDES — BY MODE

Cause	Males	Females	Total
Child Abuse - Blunt Trauma	2		2
Gunshot wound to abdomen	1		1
Gunshot wound to back	1		1
Gunshot wound to chest	5	1	6
Gunshot wound to head	1	2	3
Homicidal violence/undetermined	1		1
Multiple gunshot wounds	2	1	3
pneumonia (neglect)		1	1
Stab wounds	2	1	3
Undetermined Etiology		1	1
Total	**15**	**7**	**22**

FIGURE 13: HOMICIDES — BY MODE

HOMICIDES — BY MODE BY GENDER

Cause		JAN	FEB	MA	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
Child Abuse - Blunt	Male										1	1		2
Trauma	Female													
Gunshot wound to	Male			1										1
abdomen	Female													
Gunshot wound to	Male									1				1
back	Female													
Gunshot wound to	Male					1	1		1		1		1	5
chest	Female						1							1
Gunshot wound to	Male				1									1
head	Female						1		1					2
Homicidal	Male									1				1
violence/undetermined	Female													
Multiple gunshot	Male								1		1			2
wounds	Female						1							1
pneumonia (neglect)	Male													
	Female										1			1
Stab wounds	Male		1							1				2
	Female										1			1
Undetermined	Male													
Etiology	Female						1							1
Total			**1**	**1**	**1**	**1**	**5**		**3**	**3**	**5**	**1**	**1**	**22**

FIGURE 14: HOMICIDES — BY MODE BY GENDER

HOMICIDES — BY AGE

Age	Males	Female	Total
Under 1 year	1		1
1 to 10 years	1	1	2
11 to 20 years	2	1	3
21 to 30 years	7	1	8
31 to 40 years	3		3
41 to 50 years	1	2	3
51 to 60 years		1	1
61 to 70 years			
71 to 80 years			
81 to 90 years		1	1
Over 91 years			
Total	**15**	**7**	**22**

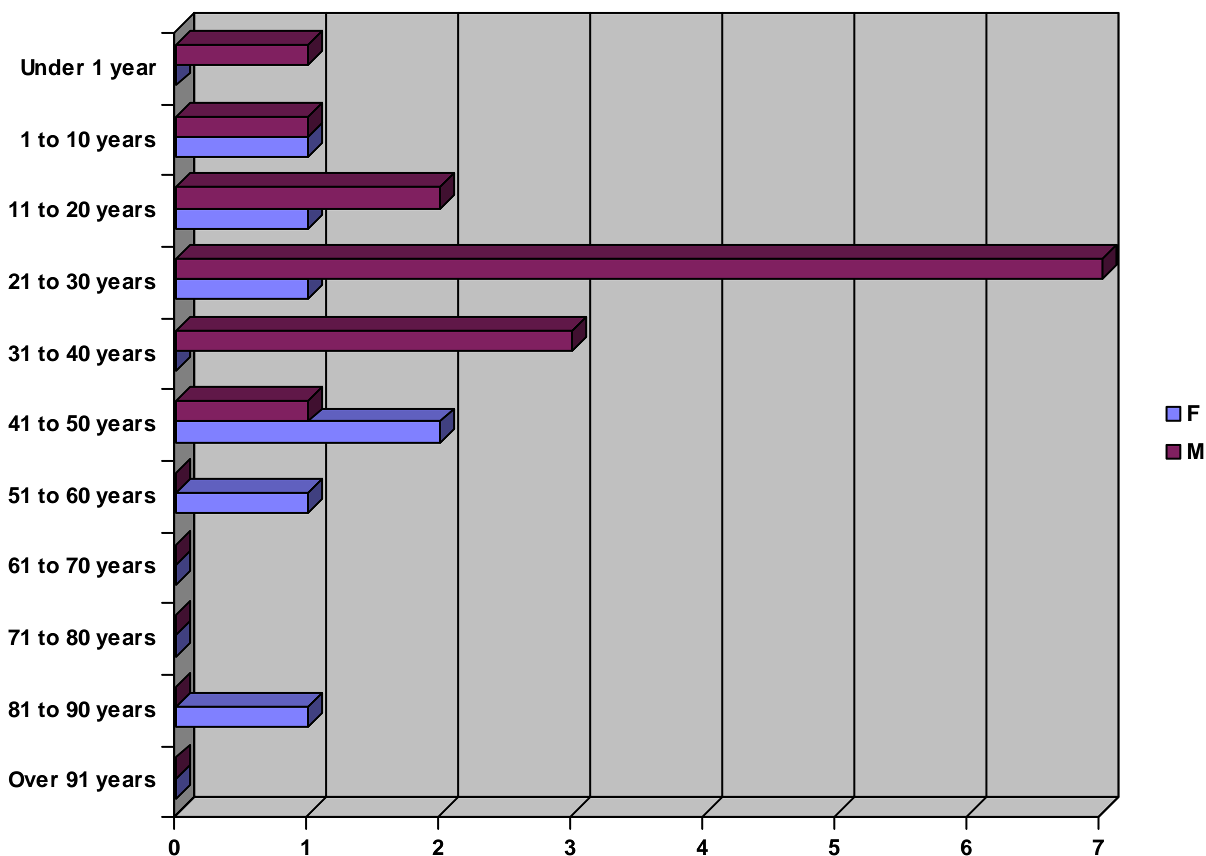


FIGURE 15: HOMICIDES — BY AGE

HOMICIDES — BY RACE

Race	Males	Female	Total
Asian	1	1	2
Black	9		9
Caucasian	4	5	9
Hispanic	1	1	2
Total	**15**	**7**	**22**

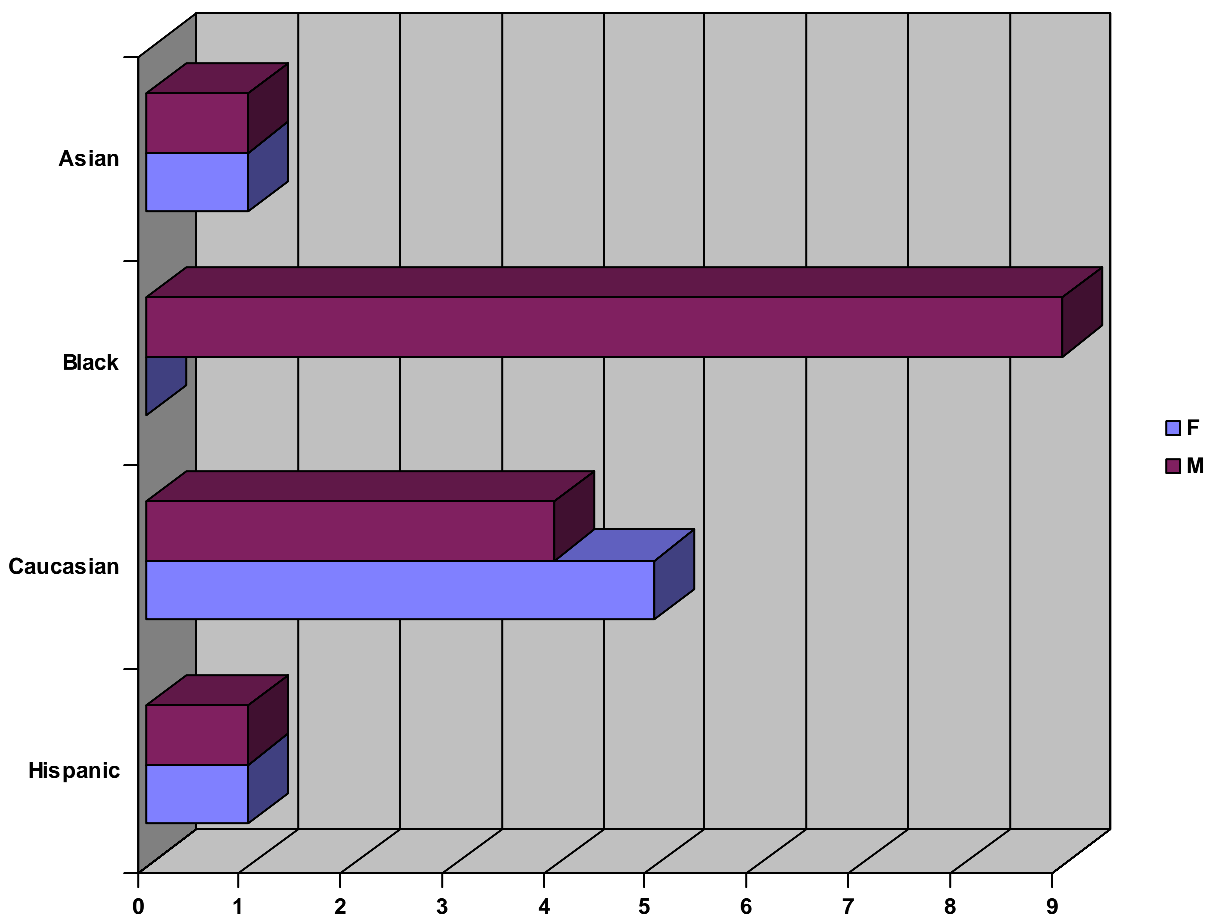


FIGURE 16: HOMICIDES — BY RACE

HOMICIDES — BY BLOOD ALCOHOL

Blood Ethanol (g/dl)	Males	Female	Total
Negative	1	2	3
Less than 0.050			
0.051 to 0.100			
0.101 to 0.150			
0.151 and above	1		1
Not done	13	5	18
Total	**15**	**7**	**22**

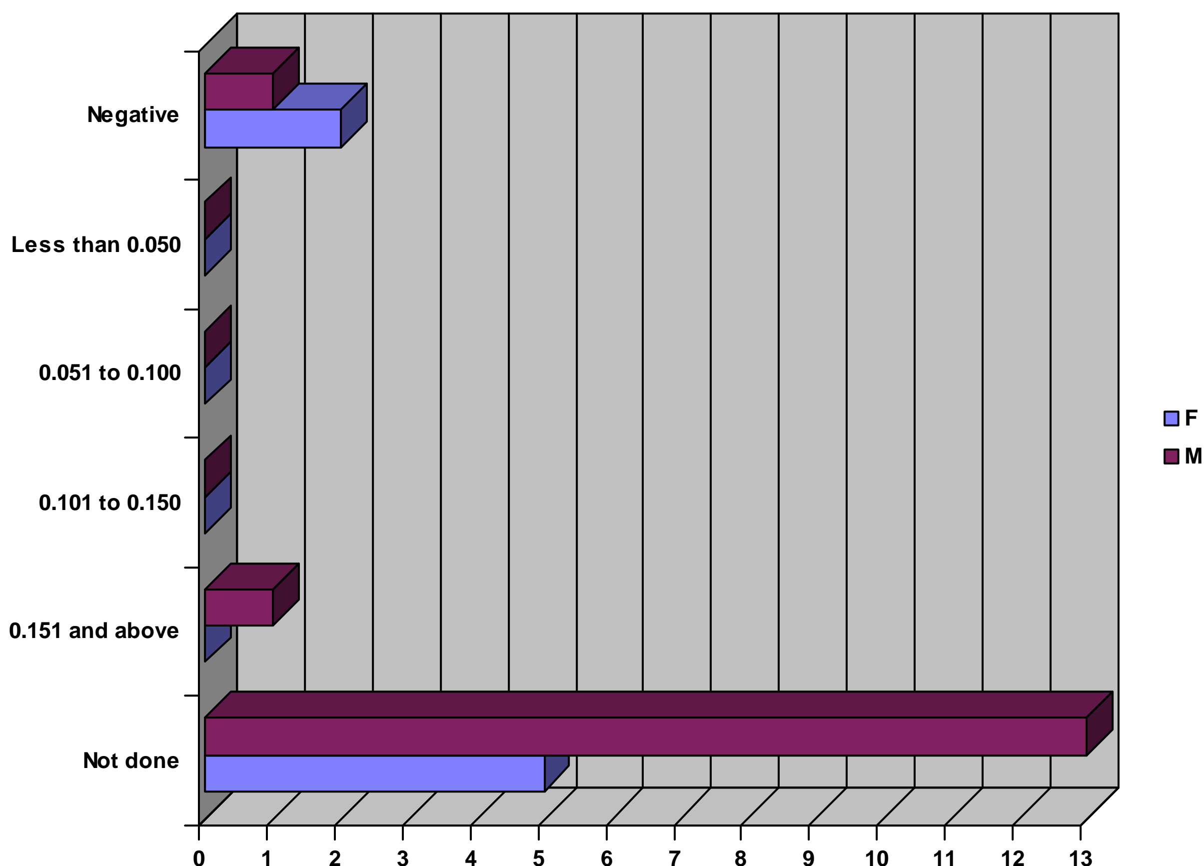


FIGURE 17: HOMICIDES — BY BLOOD ETHANOL

HOMICIDES — BY MARITAL STATUS

Marital Status	Males	Female	Total
Married	3	2	5
Single	10	3	13
Unknown	2	1	3
Widowed		1	1
Total	**15**	**7**	**22**

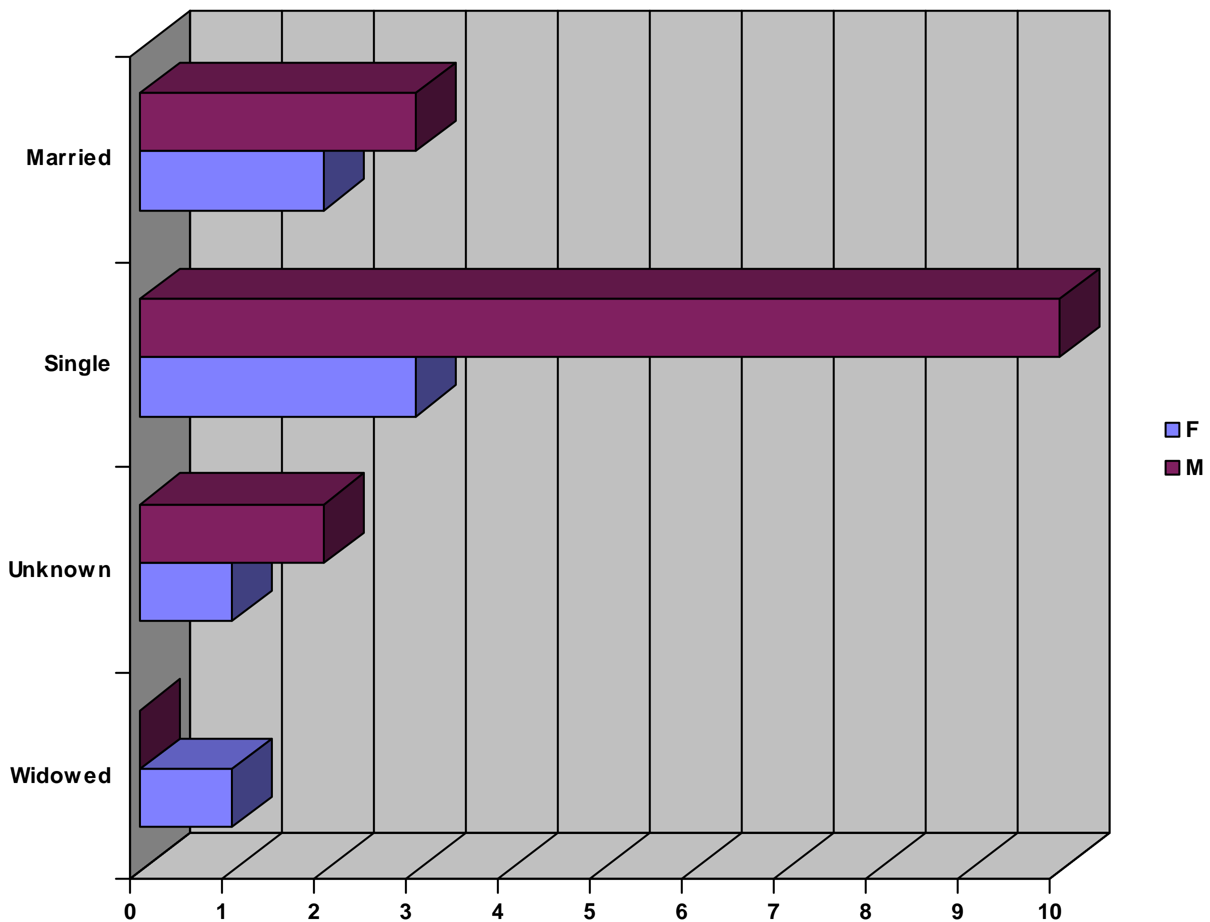


FIGURE 18: HOMICIDES — BY MARITAL STATUS

HOMICIDES — BY SETTING

Setting	Males	Female	Total
Commercial		1	1
N/A	1	1	2
Outdoors	6	1	7
Residence	4	2	6
Unknown	1	1	2
Vehicle	3	1	4
Total	**15**	**7**	**22**

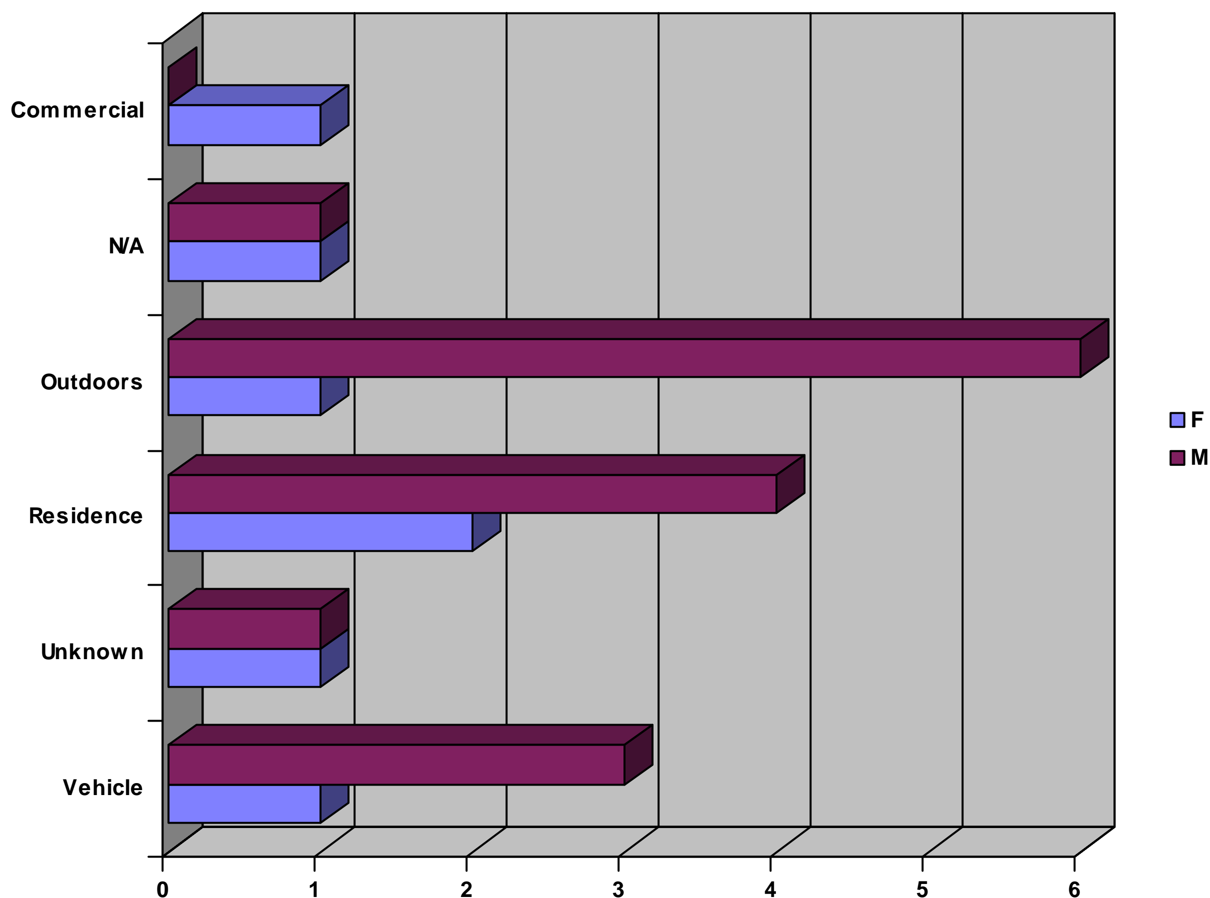


FIGURE 19: HOMICIDES — BY SETTING

HOMICIDES — BY DAY OF WEEK

Day of Week	Males	Female	Total
Sunday	2		2
Monday	1	3	4
Tuesday	2	2	4
Wednesday	2		2
Thursday	3	1	4
Friday	2		2
Saturday	3	1	4
Total	**15**	**7**	**22**

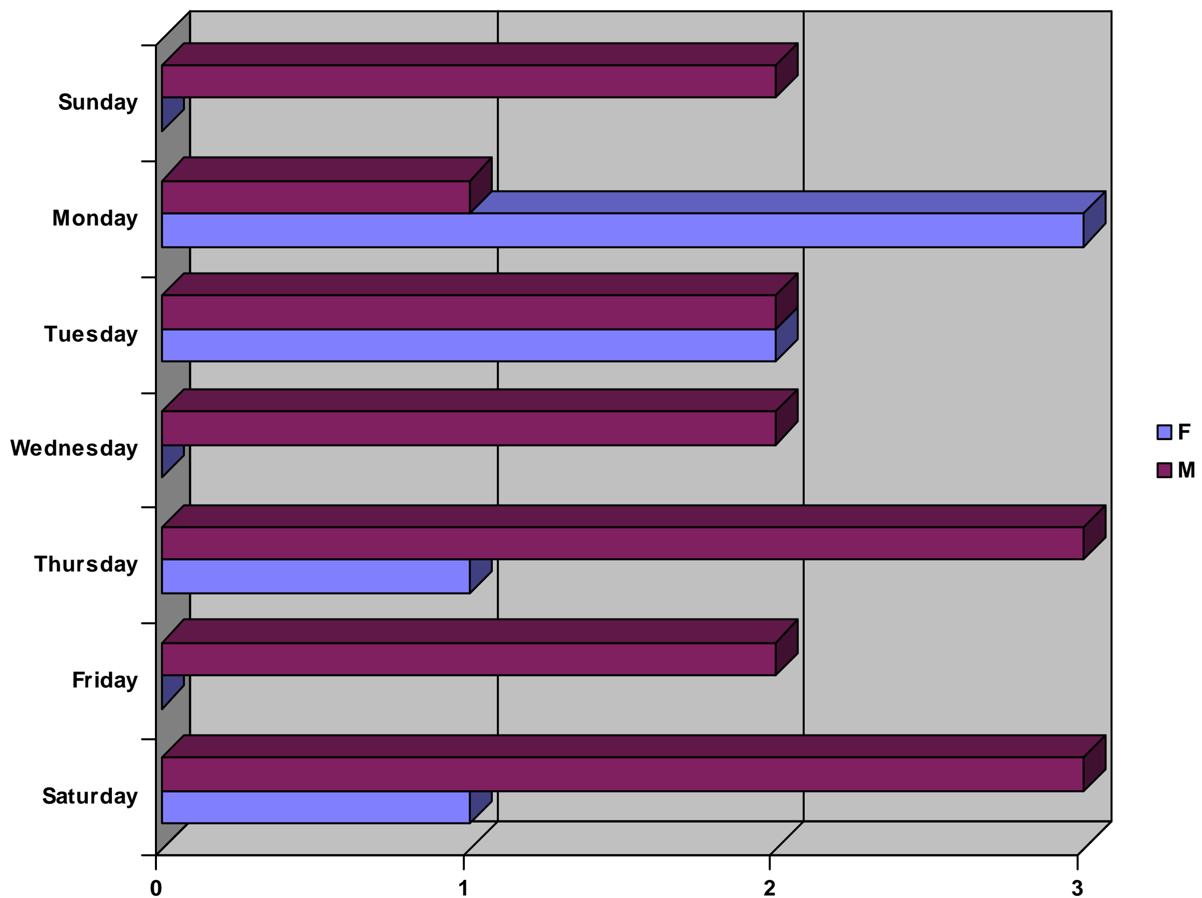


FIGURE 20: HOMICIDES — BY DAY OF WEEK

HOMICIDES — BY TIME OF DAY

Time of Day	Males	Female	Total
6:01 A.M. to 12:00	4	1	5
12:01 P.M. to 6:00	4	2	6
6:01 P.M. to Midnight	5	3	8
Midnight to 6:00 A.M.	2	1	3
Total	**15**	**7**	**22**

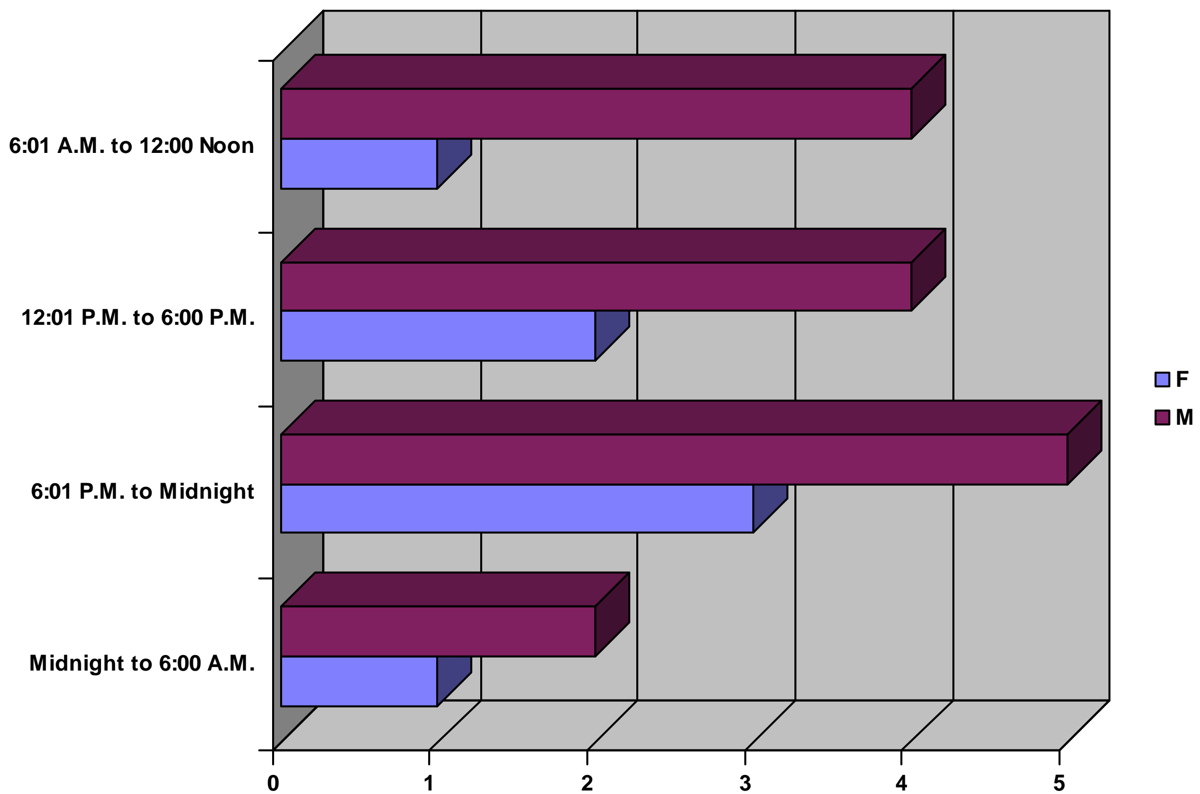


FIGURE 21: HOMICIDES — BY TIME OF DAY

SUICIDE

Suicides are those deaths caused by self-inflicted injuries. During 2005 in Arapahoe County there were 73 suicidal deaths, accounting for 18% (73/397) of deaths investigated by the Coroner's office. Examination of the actual number of suicides from the past ten years shows a gradual increase in absolute numbers in recent years.

Forty-nine percent (36/73) of the 2005 suicidal deaths resulted from the use of firearms. The most frequent site of gunshot wound entrance was in the head 91% (33/36). The remaining deaths involved drug overdoses, 18% (13/73), exsanguinations 1% (1/73) and hangings 20% (15/73). Four cases of carbon monoxide asphyxia were seen. Male victims predominated, accounting for 85% (62/73) of the deaths in this category. The mode of death is analyzed by sex in the accompanying tables and figures. Suicidal deaths involving drugs and poisons are also analyzed.

Considering the age distribution of suicidal deaths, a peak between the ages of 41 to 50 is seen for males with a minor peak at ages 21 to30 and 31 to 40 years. In females, the peak incidence is between the ages of 41 to 50. Suicide notes were found in 42% (31/73) of the cases. Forty-eight percent of individuals in this category were single and twenty-seven percent were married.

Other variables (presence of ethanol, as well as the day of the week and day of the distribution) are also depicted in the tables and figures.

SUICIDES — BY MODE

Cause	Males	Females	Total
Asphyxiation/plastic bag	2		2
Carbon Monoxide Poisoning	2	2	4
Drug Overdose	7	6	13
Exsanguination - cut wrists	1		1
Gunshot wound to chest	2		2
Gunshot wound to head	32	1	33
Hanging	15	2	17
Shotgun wound to head	1		1
Total	**62**	**11**	**73**

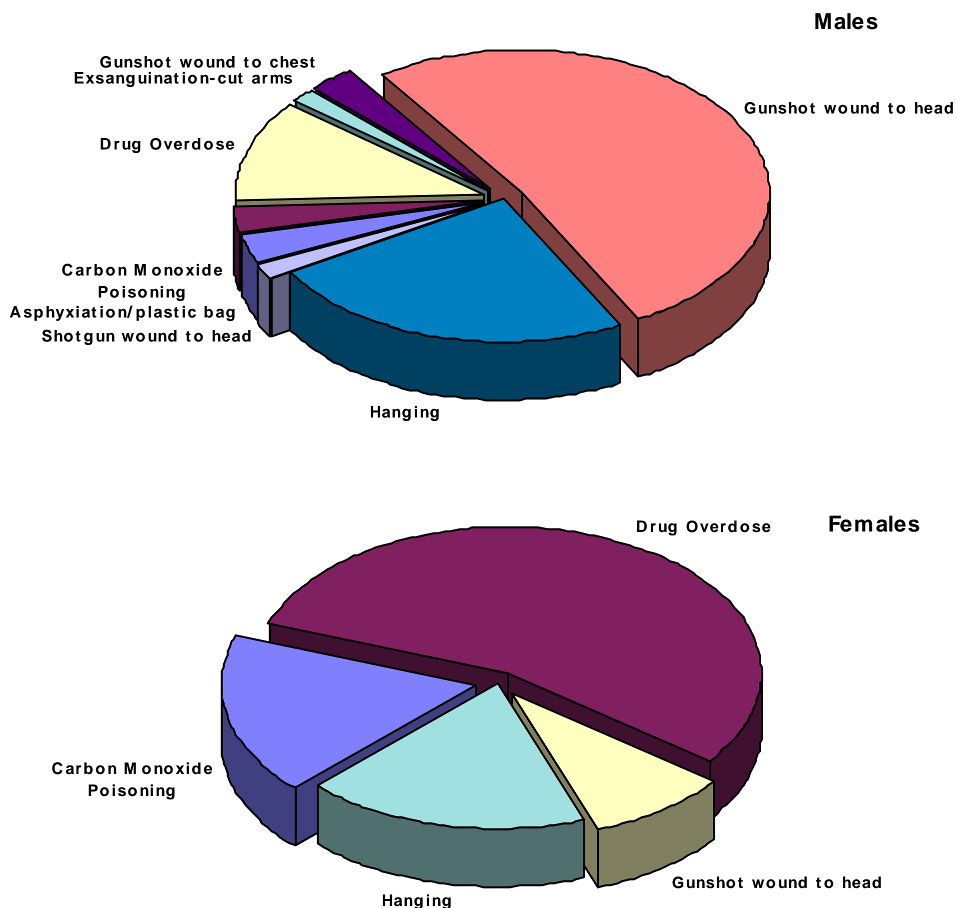


FIGURE 22: SUICIDES — BY MODE

SUICIDES — BY MODE BY GENDER

Cause		JAN	FEB	MA	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
Asphyxiation/plastic	Male	1						1						2
bag	Female													
Carbon Monoxide	Male	1					1							2
Poisoning	Female					1	1							2
Drug Overdose	Male	1		1	2	1			1			1		7
	Female				1	1	1		1				2	6
Exsanguination - cut	Male												1	1
wrists	Female													
Gunshot wound to	Male		1					1						2
chest	Female													
Gunshot wound to	Male	3	1	4	3	1	7	4	1	1		4	3	32
head	Female							1						1
Hanging	Male	1	3	1	1	4	1	2		1	1			15
	Female						1		1					2
Shotgun wound to	Male						1							1
head	Female													
Total		**7**	**5**	**6**	**7**	**8**	**13**	**9**	**4**	**2**	**1**	**5**	**6**	**73**

FIGURE 23: SUICIDES — BY MODE BY GENDER

SUICIDES: GUNSHOT WOUNDS — BY SITE OF ENTRANCE

Site of Entrance	Males	Female	Total
Chest	2		2
Head	33	1	34
Total	**35**	**1**	**36**

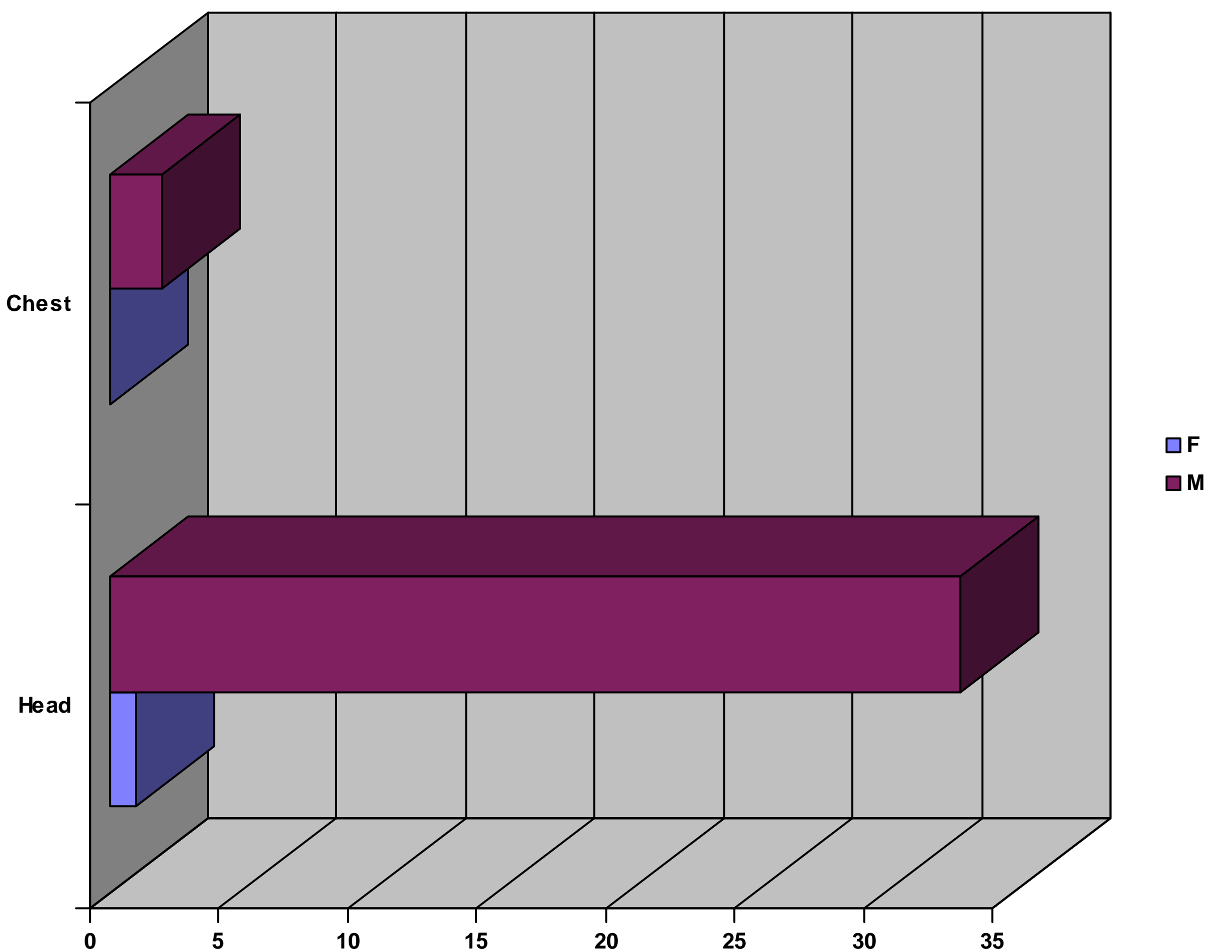


FIGURE 24: SUICIDES: GUNSHOT WOUNDS — BY SITE OF ENTRANCE

SUICIDES — BY DRUGS AND POISONS

Drugs/Poisons	Males	Female	Total
Acetaminophen	2		2
Benzodiazepine	1		1
Bupropion		1	1
Cocaine	1		1
Codeine		1	1
Combined Drug Toxicity	4	2	6
Diphenhydraqmine	1		1
Fentanyl	1		1
Nortriptyline		1	1
Propoxyphene	1		1
Total	**11**	**5**	**16**

FIGURE 25: SUICIDES — BY DRUGS AND POISONS

SUICIDES — BY DRUG BY GENDER

Cause		JAN	FEB	MA	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
Acetaminophen	Male	1			1									2
	Female													
Benzodiazepine	Male						1							1
	Female													
Bupropion	Male													
	Female					1								1
Cocaine	Male							1						1
	Female													
Codeine	Male													
	Female												1	1
Combined Drug	Male			1	1	1	1							4
Toxicity	Female				1		1							2
Diphenhydraqmine	Male								1					1
	Female													
Fentanyl	Male											1		1
	Female													
Nortriptyline	Male													
	Female												1	1
Propoxyphene	Male	1												1
	Female													
Total		**2**		**1**	**3**	**2**	**3**	**1**	**1**			**1**	**2**	**16**

FIGURE 26: SUICIDES — BY DRUG BY GENDER

SUICIDES — BY AGE

Age	Males	Female	Total
Under 1 year			
1 to 10 years			
11 to 20 years	9	1	10
21 to 30 years	10	2	12
31 to 40 years	10	2	12
41 to 50 years	13	3	16
51 to 60 years	8	1	9
61 to 70 years	6		6
71 to 80 years	3		3
81 to 90 years	3	2	5
Over 91 years			
Total	**62**	**11**	**73**

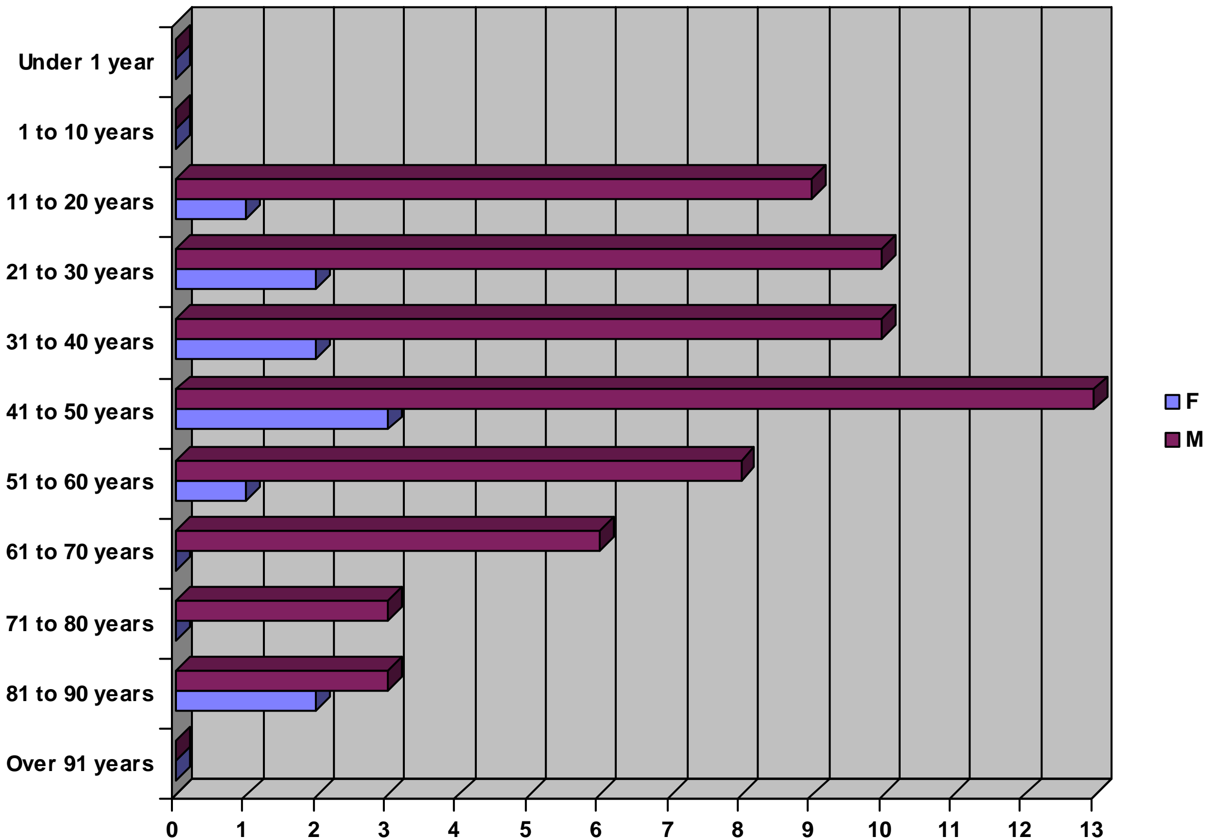


FIGURE 27: SUICIDES — BY AGE

SUICIDES — BY SUICIDE NOTE

Note	Males	Female	Total
Absent	34	5	39
Present	25	6	31
Unknown	3		3
Total	**62**	**11**	**73**

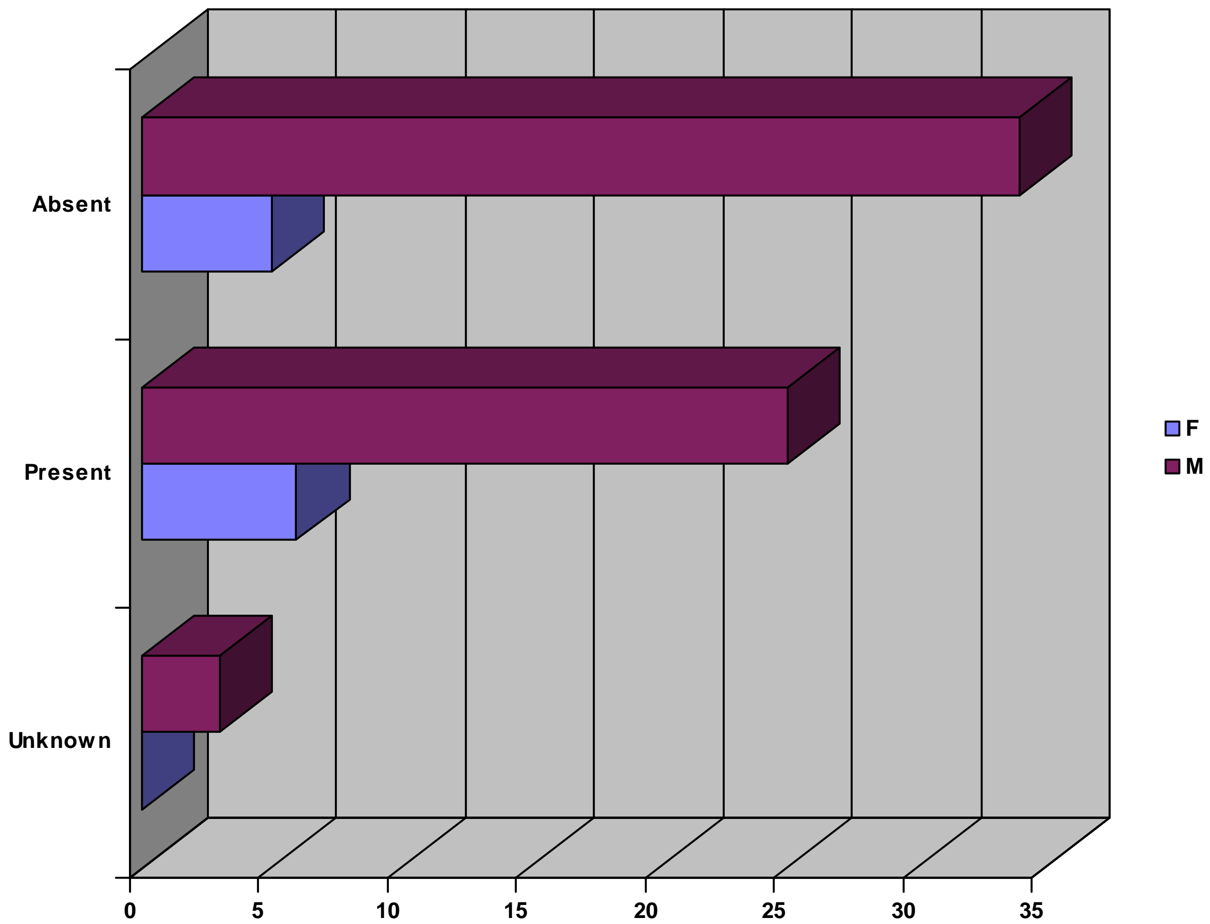


FIGURE 28: SUICIDES — BY SUICIDE NOTE

SUICIDES — BY BLOOD ALCOHOL

Blood Ethanol (g/dl)	Males	Female	Total
Negative	4	1	5
Less than 0.050			
0.051 to 0.100			
0.101 to 0.150	1	1	2
0.151 and above	4	1	5
Not done	53	8	61
Total	**62**	**11**	**73**

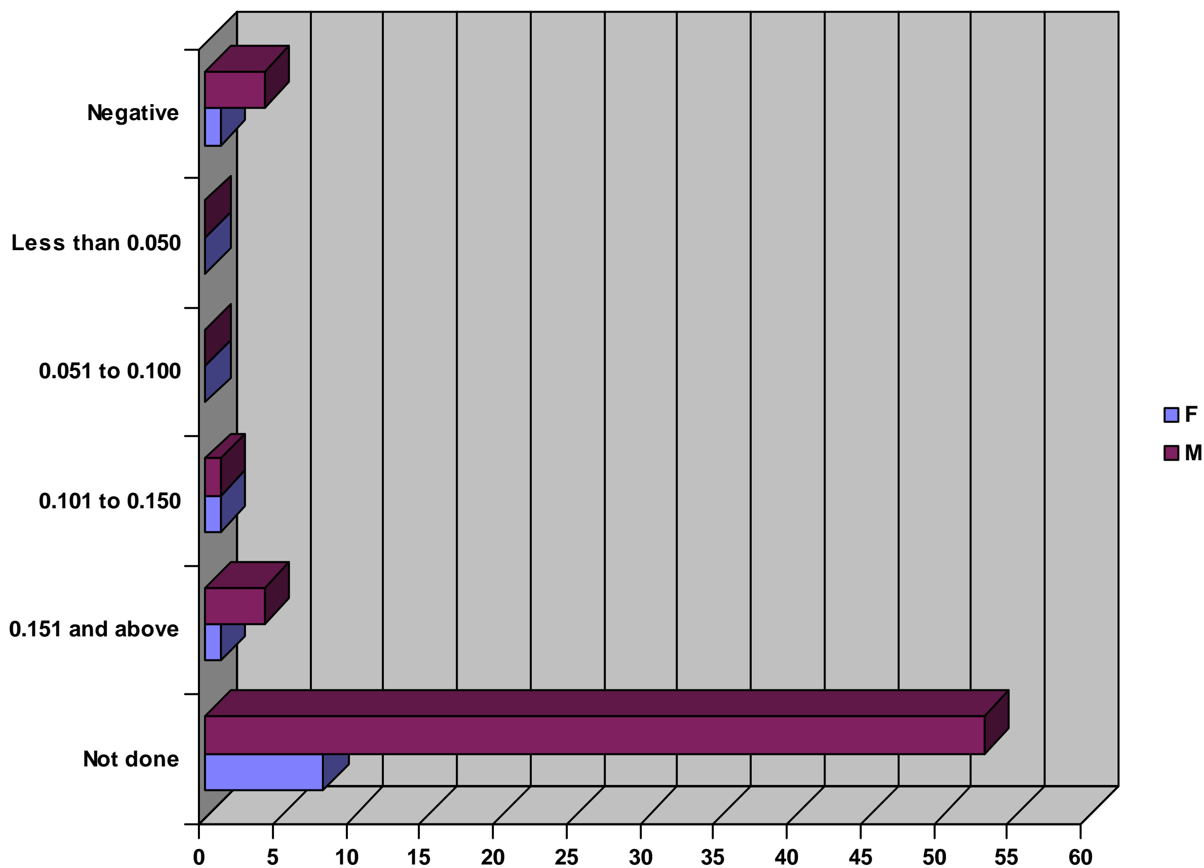


FIGURE 29: SUICIDES — BY BLOOD ETHANOL

SUICIDES — BY MARITAL STATUS

Marital Status	Males	Female	Total
Common-law	1		1
Divorced	7	2	9
Married	16	4	20
Single	33	2	35
Unknown	1		1
Widowed	4	3	7
Total	**62**	**11**	**73**

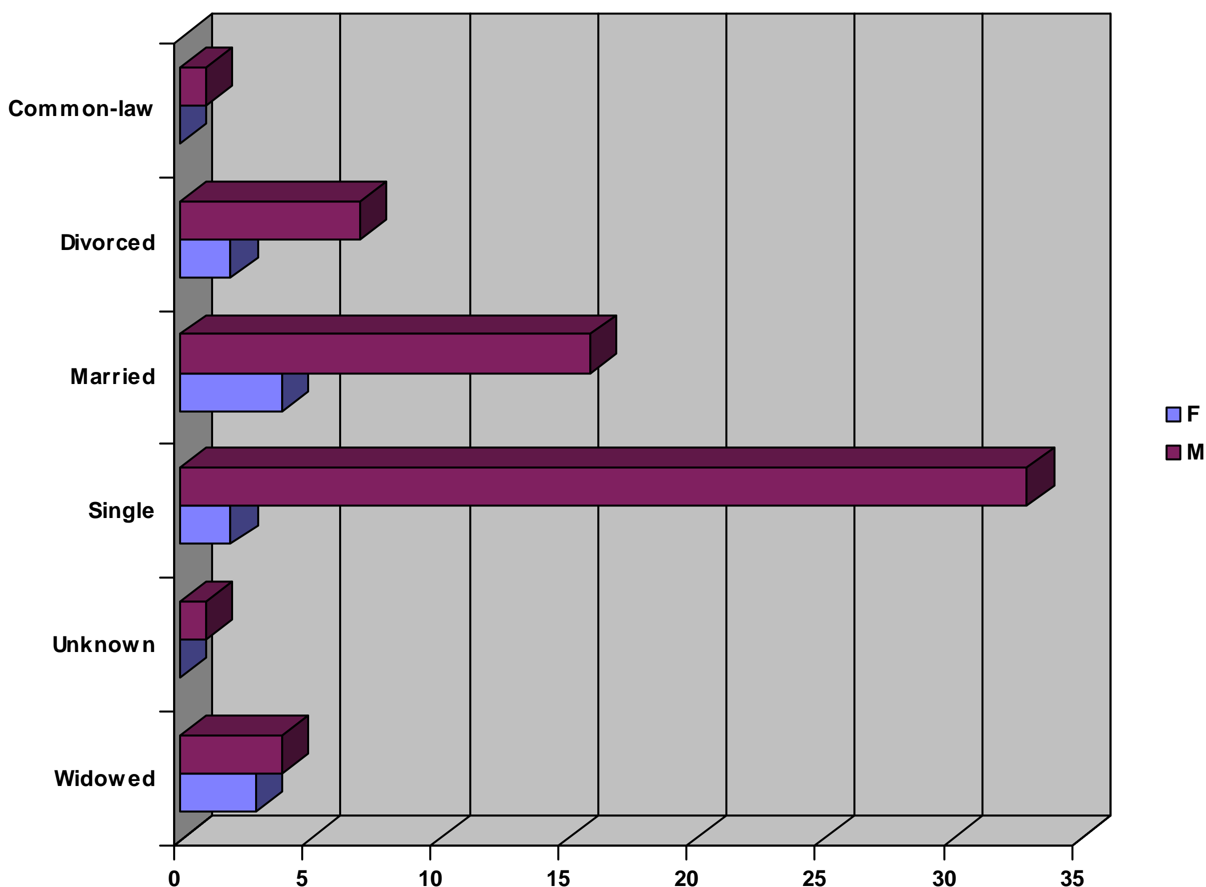


FIGURE 30: SUICIDES — BY MARITAL STATUS

SUICIDES — BY DAY OF WEEK

Day of Week	Males	Female	Total
Sunday	12	1	13
Monday	15	3	18
Tuesday	10	4	14
Wednesday	10	1	11
Thursday	3		3
Friday	9		9
Saturday	3	2	5
Total	**62**	**11**	**73**

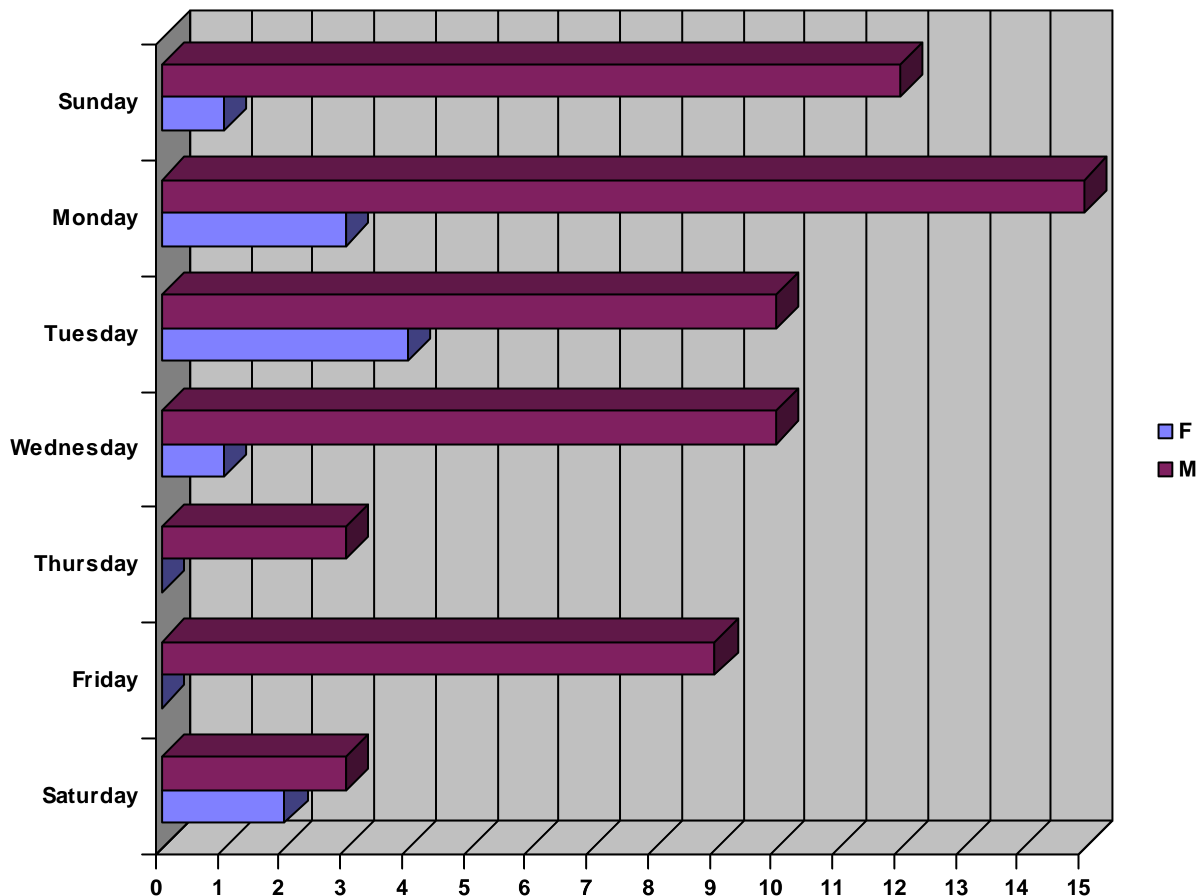


FIGURE 31: SUICIDES — BY DAY OF WEEK

SUICIDES — BY TIME OF DAY

Time of Day	Males	Female	Total
6:01 A.M. to 12:00	14	4	18
12:01 P.M. to 6:00	24	4	28
6:01 P.M. to Midnight	15	3	18
Midnight to 6:00 A.M.	9		9
Total	**62**	**11**	**73**

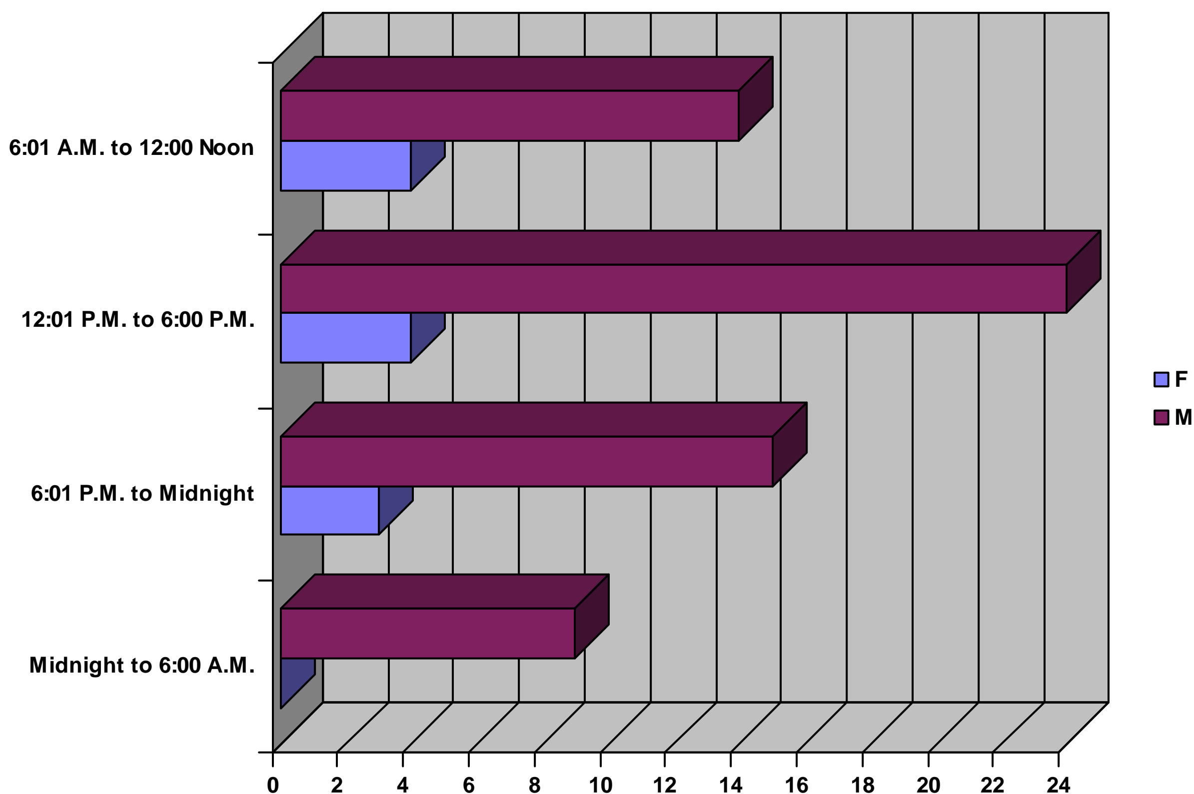


FIGURE 32: SUICIDES — BY TIME OF DAY

NATURAL

A death that is classified as natural comes under the jurisdiction of the Coroner because of the sudden and unexpected nature of the death, when there is no physician who has knowledge and awareness of the decedent's condition, or when circumstances surrounding death arouse suspicion. In these situations, the Coroner becomes responsible for certification of death. It should be stressed that the natural deaths investigated by the Coroner's Office are not representative of all natural deaths in the general population. These jurisdictional considerations introduce a significant sampling bias.

In 2005 there were 176 deaths attributed to natural causes that came under the jurisdiction of the Arapahoe County Coroner, representing 44% (176/397) of the cases investigated. These cases are summarized in the accompanying table. Although listed under various headings (i.e., coronary artery arteriosclerosis, myocardial infarct, etc.), cardiovascular disease accounted for the greatest proportion of natural deaths.

NATURAL DEATHS

Cause	Males	Females	Total
Alcohol withdrawal	3		3
Alzheimer's Dementia	1		1
Aortic aneurysm	1		1
Arteriosclerotic cardiovascular	54	14	68
Asthma	1	1	2
Cancer	2	2	4
Cardiac Arrhythmia	1	4	5
Cardiac dysrhythmia		1	1
Cerebral infarct	1		1
Cerebrovascular Accident	1		1
Chronic Obstructive Pulmonary Disease	2		2
Cirrhosis/Hepatitis C	1		1
Complications of infection		1	1
Congestive Heart Failure	3	1	4
Coronary Artery Atherosclerosis	6	1	7
Diabetes Mellitus		1	1
Diabetic ketoacidosis		1	1
Dilated cardiomyopathy	1		1
Emphysema	1		1
Ethanol withdrawal seizure	1		1
Ethanolism	13	4	17
Gastrointestinal hemorrhage	1	1	2
Hemopericardium	3	2	5
Hemorrhagic infarcts of the brain		1	1
Hypertension	6	3	9
Hypertrophic cardiomyopathy	1		1
Intramyocardial tunnelling		2	2
Meningitis - acute bacterial	1		1
Mitral Valve Prolapse	1		1
Multiple Sclerosis	1	1	2
Muscular Dystrophy	1		1
Myocardial Infarct	2	1	3
Myocarditis	1		1
Pneumonia	4	1	5
Pulmonary embolus	1	4	5
Pulmonary hemorrhage		1	1
Sepsis	3	1	4
Stillborn		1	1
Sudden Infant Death Syndrome	4		4
Sudden unexpected death in childhood	1		1
Sudden unexpected death in Epilepsy	1		1
Wolf-Parkinson-White syndrome	1		1
Total	**126**	**50**	**176**

FIGURE 33: NATURAL DEATHS

UNDETERMINED

Deaths are certified as undetermined (or unclassified) manner of death when serious doubt exists as to whether a person met his or her death intentionally or accidentally. Information concerning the circumstances may be lacking because of the absence of background information or witnesses, or because of a lengthy delay between death and discovery. If an extensive investigation and autopsy cannot clarify the circumstances, the death is placed in this category. Within Arapahoe County, there were six deaths with manner undetermined for the calendar year 2005.

CORONER ACTIVITY

The staff of the Coroner's Office is 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. Members of the Coroner's staff who are familiar with the emotional trauma of an unexpected death communicate directly with the family, as does the Coroner, who reviews the findings with the families in order to clarify the many questions that accompany a sudden loss of life.

Many cases brought to the Coroner's Office are dealt with in a routine manner, because the identity of the deceased is known and next-of-kin can be readily contacted to decide on final arrangements for the deceased and assist in the disposition of personal property associated with the scene of death. However, there are frequent cases which are difficult to resolve. In these deaths at least one of the items above is missing or very difficult to establish: identification of deceased may require tracing of dental, medical or police records; or some individual may have died leaving no next-of-kin or the next-of-kin is 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 toxicological analyses. 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.

The Coroner and investigators provide testimony in court and at depositions. Staff participate in meetings with police, other interested physicians, and attorneys (both prosecuting and defending) in a variety of criminal and civil cases. Autopsy reports and related data from individual investigations are provided to agencies such as police and Labor & Industries, to prosecuting attorneys, and to other agencies including the Drug Enforcement Administration and the Consumer Product Safety Commission. Reports on drug caused deaths are sent to the Drug Abuse Warning Network (DAWN). Case information is entered into annual databases of the Coroner's Office. Our office also works in a cooperative effort with regional organ procurement agencies to facilitate organ and tissue donation for transplantation.

Death investigations require frequent contact between the Coroner's Office and various media personnel. Staff are skilled in responding to media inquiries which occur daily. The Coroner and staff participate in a variety of medical conferences, and provide information on a regular basis to law enforcement and medical personnel on various aspects of the role and function of the Coroner's Office. The Coroner in particular, regularly teaches at local police academies as well as the continuing education programs of the Arapahoe County Sheriff's Office and other law-enforcement agencies. The Coroner also holds a clinical faculty appointment in the Department of Pathology at the University of Colorado School of Medicine and regularly participates in teaching medical students and residents. Plans are also currently underway to establish a

fellowship training program in forensic pathology in cooperation with the Denver Coroner's Office.

The data collected and presented in this and other Coroner reports also provides baseline information for further analysis. Coroner staff analyze data to study relevant death investigation topics which have applications in such fields as law enforcement, medicine, law, social sciences and injury prevention. Examples include teenage suicide, child abuse, effects of position restraint, investigation of vehicular traffic accidents, and investigation of anesthetic and medical therapy related deaths.

GLOSSARY OF TERMS

Blood ethanol level	The concentration of ethanol (alcohol) found in blood following ingestion. Measured in grams per 100 ml of blood or grams/dL. In the State of Colorado, 0.10 grams/dL is considered the legally intoxicated level while driving.
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 Coroner extends to all reportable deaths occurring within the boundaries of Arapahoe County, whether or not the incident leading to the death (such as an accident) occurred within the county. Reportable deaths are defined by CRS 30-10-606 as explained in the "Description and Purpose" section of this report. Not all natural deaths are reportable deaths within the jurisdiction of the Coroner.
Manner	A classification of the way in which the cause of death came about, with special reference to social relationships and personal causation. It is the way in which the cause of death came about, whether by force of natural events, by accidental or suicidal self-infliction or by other external forces.
Manner: Accident	Death other than natural, where there is no evidence of intent, i.e., unintentional. In this report, traffic accidents are identified separately.
Manner: Homicide	Death resulting from intentional harm (explicit or implicit) of one person by another or by grossly reckless behavior.
Manner: Natural	Death caused solely by disease. If natural death is hastened by injury (such as a fall), the manner of death will not be considered natural.
Manner: Suicide	Death as a result of a purposeful action (explicit or implicit) to end one's life.

Manner: Accident Traffic	Unintentional deaths of drivers (automobile, bicycle or motorcycle), passengers, and pedestrians involving motor vehicles on public roadways. Accidents involving motor vehicles on private property (such as driveways) are not included.
Manner: Undetermined	Manner assigned when there is insufficient evidence or information, especially about intent, to assign another manner.
Opiate	Any preparation or derivative of opium, usually heroin.
Poison	Any substance, either taken internally or applied externally, that is injurious to health or dangerous to life, and with no medicinal benefit.

ORGANIZATION OF THE
ARAPAHOE COUNTY CORONER'S OFFICE — 2005