Clark County Substance Related Deaths 2013

Data from the Office of the Clark County Coroner/Medical Examiner

A Publication of Nevada's Statewide Epidemiological Workgroup, 2015
Prepared by Coop Consulting, Inc.

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March 16, 2015

To: Nevada's Substance Abuse Prevention and Treatment Agency (SAPTA), of the Nevada Mental Health and Developmental Services Division

The responsibility of determining the cause and manner of unexpected deaths in Clark County, Nevada is one that the Clark County Office of the Coroner/Medical Examiner (CCOCME) staff takes very seriously. While many regard the CCOCME as being primarily concerned with the circumstances surrounding the end of life, our office is equally concerned with the preservation of life.

In 2013, there were 15,265 deaths in Clark County. The Coroner/Medical Examiner's Office was contacted regarding 12,197 of these deaths of which 3,568 required a complete medicolegal death investigation and 3,395 deaths required a forensic examination performed by a Forensic Pathologist. The results of these investigations provide valuable information, which is used by public health personnel, the criminal justice system, families of the deceased, and other concerned parties.

Substance use and abuse continues to be more prevalent nationally as well as in Clark County with a total of 894 deaths in 2013 determined to be substance use or abuse related. There were between 1 to 14 different substances and/or compounds discovered in toxicological analyses in the substance-related deaths. The most rapidly growing segment of our population consists of people over the age of sixty whom on average are taking about 8 different prescriptions daily. During the past 10 years, CCOCME observed a 700% increase of accidental prescription and alcohol related deaths of individuals over the age of 60 years. Substance abuse and misuse of prescription drugs affects over 15% of our aging population, and the substance abuse problems is expected to double by 2020.

On behalf of the Clark County Office of the Coroner/Medical Examiner, I would like to thank SAPTA, SAMHSA Center for Substance Abuse Prevention, and Coop Consulting, Inc. for their support of the CCOCME by providing this valuable information to the citizens and stakeholders of Nevada. It is my pleasure to present *Clark County Substance Related Deaths 2013*.

Respectively,

P. Michael Murphy, Coroner

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Introduction

Clark County Substance Related Deaths 2013 is a publication of Nevada's Substance Abuse Prevention and Treatment Agency (SAPTA), of the Nevada Division of Public and Behavioral Health. SAPTA coordinates the Statewide Epidemiological Workgroup (SEW), which represents multiple Nevada stakeholders and agencies to focus on how data can be used for planning and accountability related to the impact of substance use across the state. The SEW uses multiple data sources to construct an annual profile of substance use in Nevada, and to bring attention to trends and emerging substance use patterns in the state.

The population estimate for Nevada State in July 2013 was 2,790,136; of this approximately 73% (2,027,868 Nevadans) reside in Clark County (U.S. Census, 2013 Population Estimates American Fact Finder). This publication uses data from deaths that occurred in 2011, 2012 and 2013 in Clark County. The data were obtained from the Office of the Clark County Coroner/Medical Examiner, and represent only incidents "processed" by the Coroner's Office, of deaths that occurred within Clark County. The Clark County Coroner's Office handles other incidents that occurred in nearby counties that are not included in this report. This comprehensive report focuses on 2013 data with comparisons of 2011 and 2012 data.

This report was supported by SAPTA through funding from the Center for Substance Abuse Prevention (CSAP), a division of the Substance Abuse and Mental Health Services Administration (SAMHSA). Coop Consulting, Inc., a research and evaluation firm that provides program support to the SEW, created this report with the assistance of William Gazza, J.D., M.F.S. (Coroner Investigative Forensic Supervisor) and the Office of the Clark County Coroner/Medical Examiner.

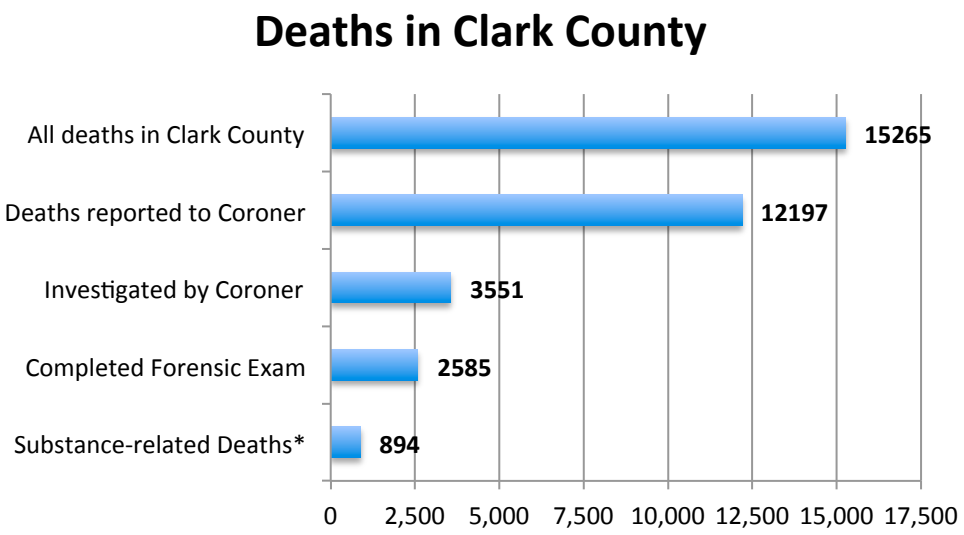
The Office of the Clark County Coroner/Medical Examiner's initial database contained data for natural alcohol related deaths*, all suicide deaths, accident deaths including alcohol related, alcohol and drug related, alcohol and medication, drug related, inhalant related, medication and motor vehicle deaths, and undetermined deaths including alcohol related, alcohol drug related, drug related and medication deaths. There were originally 7,800 entries (1097 unique cases). There were multiple entries for most cases, as each toxicology screen substance was listed as a separate entry.

The database was culled to 894 unique deaths. These cases include all incidents that occurred in Clark County, Nevada that involve alcohol, drugs, or medication between January 1, 2013 and December 31, 2013. Some deaths labeled as medication related deaths in this report may not have been caused by medication misuse or overdose. For example, some toxicology screens found legal medications in the deceased. These medications may not have been lethal and could have been taken as directed or in some cases administered by a hospital.

*Natural deaths are those who died due to natural consequences (not in an accident or suicide). Natural alcohol related deaths are deaths caused by liver disease, pancreatitis, hepatic failure or other similar alcohol related consequences.

Deaths included in this Report

This report includes a selection of deaths that are substance-related. In 2013, there were 15,265 deaths in Clark County, Nevada; 79.9% of these deaths (n=12,197) were reported to the Office of the Clark County Coroner/Medical Examiner; 29.1% of the deaths reported to the Office of the Clark County Coroner/Medical Examiner (n= 3,551) were investigated by the Coroner; of those deaths investigated 72.8% had a forensic exam (i.e. autopsies, medical examinations, and head posts; n=2,585); and 34.6% of the deaths that had a forensic exam are included in this report as substance-related deaths (n=894).



*Deaths that are included in this report

The Office of the Clark County Coroner/Medical Examiner investigates deaths based on the legal authority of statutory obligation, which functions under two statues; the Nevada Revised Statutes (NRS) and the Clark County NV Code:

NRS 259.050 Investigation into cause of death; inquest.

1. When a coroner or the coroner's deputy is informed that a person has been killed, has committed suicide or has suddenly died under such circumstances as to afford reasonable ground to suspect that the death has been occasioned by unnatural means, the coroner shall make an appropriate investigation.

2. In all cases where it is apparent or can be reasonably inferred that the death may have been caused by a criminal act, the coroner or the coroner's deputy shall notify the district attorney of the county where the inquiry is made, and the district attorney shall make an investigation with the assistance of the coroner. If the sheriff is not ex officio the coroner, the coroner shall also notify the sheriff, and the district attorney and sheriff shall make the investigation with the assistance of the coroner.

3. The holding of a coroner's inquest is within the sound discretion of the district attorney or district judge of the county. An inquest need not be conducted in any case of death manifestly occasioned by natural cause, suicide, accident or when it is publicly known that the death was caused by a person already in custody, but an inquest must be held unless the district attorney or a district judge certifies that no inquest is required.

4. If an inquest is to be held, the district attorney shall call upon a justice of the peace of the county to preside over it. The justice of the peace shall summon three persons qualified by law to serve as jurors, to appear before the justice of the peace forthwith at the place where the body is or such other place within the county as may be designated by him or her to inquire into the cause of death.

5. A single inquest may be held with respect to more than one death, where all the deaths were occasioned by a common cause.

[3:107:1909; A 1919, 60; 1949, 152; 1943 NCL § 11427]—(NRS A 1977, 666; 1979, 1369)

Clark County NV Code 2.12.060 - Duties.

It shall be the duty of the county coroner to determine the cause of death of any person reported to him as having been killed by violence; has suddenly died under such circumstances as to afford reasonable grounds to suspect or infer that death has been caused or occasioned by the act of another by criminal means; has committed suicide; and to determine the cause of all deaths as to which applicable state law makes it the duty of the coroner to sign certificates of death.

The county coroner, or his assigned deputy, shall go to the scene of the dead person or persons and investigate all deaths as hereinabove generally described, and also inclusive of deaths as follows:

1. Unattended deaths.
2. Deaths wherein the deceased has not been attended by a physician in the ten days before death. A previously attending physician shall, however, certify the cause of death to the best of his knowledge.
3. Deaths related to or following known or suspected self-induced or criminal abortion.
4. Known or suspected homicide, suicide or accidental poisoning.
5. Deaths known or suspected as resulting in whole or in part from or related to accident or injury occurring within one year.
6. Deaths due to drowning, fire, hanging, gunshot, stabbing, cutting, exposure, starvation, strangulation or aspiration.
7. Death in whole or in part occasioned by criminal means.
8. Deaths in prison or in part occasioned by criminal means.
9. Deaths under such circumstances as to afford a reasonable ground to suspect that the death was caused by the criminal act of another, or any deaths reported by physicians or other persons having knowledge of death for inquiry by coroner.

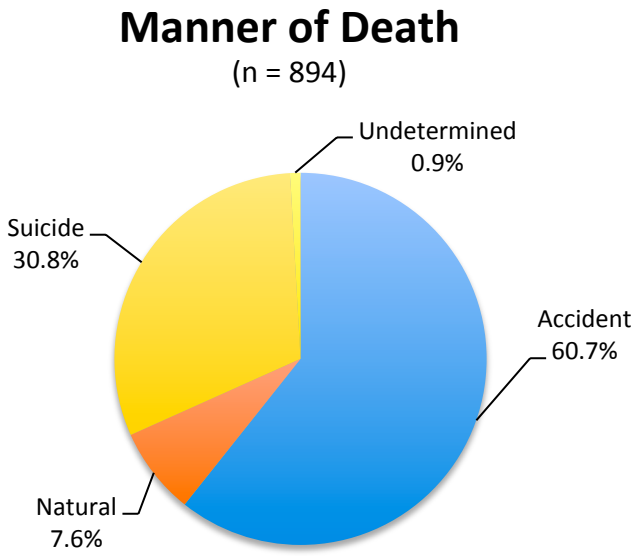
(Ord. 2667 § 1, 2001: Ord. 262 § 6, 1967)

Using this Report

Due to the sample sizes and unknown toxin levels generalizing the results to the greater population of Nevada should be done with caution. The total number of deaths is labeled on each graph. This is to increase the reader's awareness of the sample size and the limited applicability to the greater population.

All Substance Related Deaths

This report includes data from 894 substance related deaths in Clark County, Nevada during 2013. The following graph and table describe the manner of the deaths.

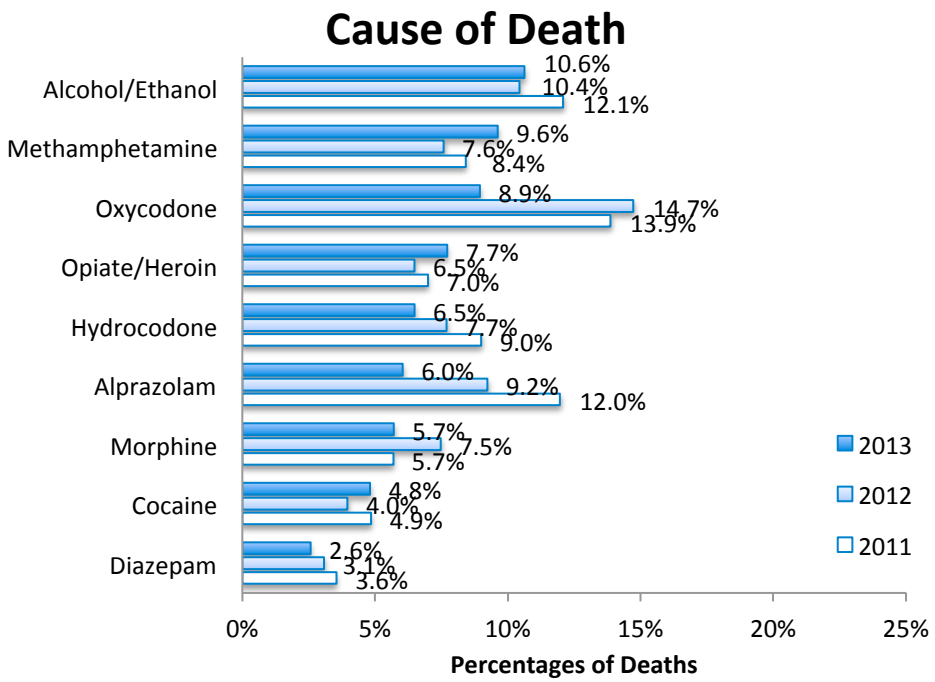


	Number			Percent		
	2011	2012	2013	2011	2012	2013
Accident	551	556	543	65.3%	61.1%	60.7%
Natural	53	60	68	6.3%	6.6%	7.6%
Suicide	238	292	275	28.2%	32.1%	30.8%
Undetermined	2	2	8	0.2%	0.2%	0.9%
Total	844	910	894	100.0%	100.0%	100.0%

Definitions of Manner of Death:

- **Natural**: death solely or nearly totally to natural disease and/or aging process.
- **Accident**: death due to an unplanned and unforeseeable sequence of events incurring an injury or poisoning causing death and there is little or no evidence that the injury or poisoning occurred with intent to harm or cause death. In essence, the fatal outcome was unintentional.
- **Suicide**: death due to an injury or poisoning as a result of an intentional, self-inflicted act intended to do self-harm or cause the death of one's self.
- **Homicide**: death due to a volitional act committed by another person to cause fear, harm, or death.
- **Undetermined or "could not be determined"**: is a classification used when the information pointing to one manner of death is no more compelling than one or more other compelling manners of death in thorough consideration of all available information.

The graph below shows most of the common toxicological compounds and the percentage of deaths that were caused by that substance.



*Each drug in the graph above accounts for all cases (in 2011 n=844; 2012 n=910; 2013 n=894), for example in 2013, 9.6% of all cases had methamphetamine as a cause of death. Some deaths may be represented more than once if the combination of any of the substances on this list led to the same death.

Manner Type*	**Number**			**Percent**		
Description	**2011**	**2012**	**2013**	**2011**	**2012**	**2013**
Alcohol Related	69	78	82	8.2%	8.6%	9.2%
Alcohol-Drug Related	19	15	15	2.3%	1.6%	1.7%
Alcohol/Medication	30	25	24	3.6%	2.7%	2.7%
Asphyxia	10	14	3	1.2%	1.5%	0.3%
Carbon Monoxide	7	8	3	0.8%	0.9%	0.3%
Cutting/Stabbing	4	9	7	0.5%	1.0%	0.8%
Drug Related	233	183	200	27.6%	20.1%	22.4%
Fire	2	2	1	0.2%	0.2%	0.1%
Firearms**	100	130	133	11.8%	14.3%	14.9%
Hanging	30	34	41	3.6%	3.7%	4.6%
Inhalant Related	2	3	1	0.2%	0.3%	0.1%
Jumping	7	12	6	0.8%	1.3%	0.7%
Medical	1	-	-	0.1%	-	-
Medication	233	266	247	27.6%	29.2%	27.6%
Medication/Drugs	24	30	31	2.8%	3.3%	3.5%
Motor Vehicle	65	93	94	7.7%	10.2%	10.5%
Poisoning	2	2	1	0.2%	0.2%	0.1%
Suffocation	2	3	4	0.2%	0.3%	0.4%
Toxicology	4	3	1	0.5%	0.3%	0.1%

(con't) Description	Number			Percent		
	2011	2012	2013	2011	2012	2013
Age Group						
0-6	5	12	6	0.6%	1.3%	0.7%
7-14	-	2	2	-	0.2%	0.2%
15-20	44	32	18	5.2%	3.5%	2.0%
21-25	69	60	61	8.2%	6.6%	6.8%
26-29	48	49	89	5.7%	5.4%	10.0%
30-39	154	142	141	18.2%	15.6%	15.8%
40-49	197	218	207	23.3%	24.0%	23.2%
50-59	187	235	222	22.2%	25.8%	24.8%
60-69	105	121	103	12.4%	13.3%	11.5%
70-79	17	30	35	2.0%	3.3%	3.9%
80+	15	9	10	1.8%	1.0%	1.1%
Missing	3	-	-	0.4%	-	-
Gender						
Male	562	594	624	66.6%	65.3%	69.8%
Female	281	315	270	33.3%	34.6%	30.2%
Unknown	1	1	-	0.1%	0.1%	-
Incident Occur at Work						
Yes	19	3	4	2.3%	0.3%	0.4%
No	825	907	890	97.7%	99.7%	99.6%
Homeless						
Yes	14	28	44	1.7%	3.1%	4.9%
No	830	882	850	98.3%	96.9%	95.1%
Veteran						
Yes	43	43	43	5.1%	4.7%	4.8%
No	801	867	851	94.9%	95.3%	95.2%
Marital Status						
Single	368	324	348	43.6%	35.6%	38.9%
Married	210	227	191	24.9%	24.9%	21.4%
Divorced	154	198	179	18.2%	21.8%	20.0%
Widowed	40	57	42	4.7%	6.3%	4.7%
Unknown	71	104	134	8.4%	11.4%	15.0%
Missing	1	-	-	0.1%	-	-

*Manner types that are not directly related to substance use were associated with a toxicology finding that included drug, alcohol, or medication use. The cause of death for many of these cases is substance related. However, some deaths may not have been fully attributable to a substance.

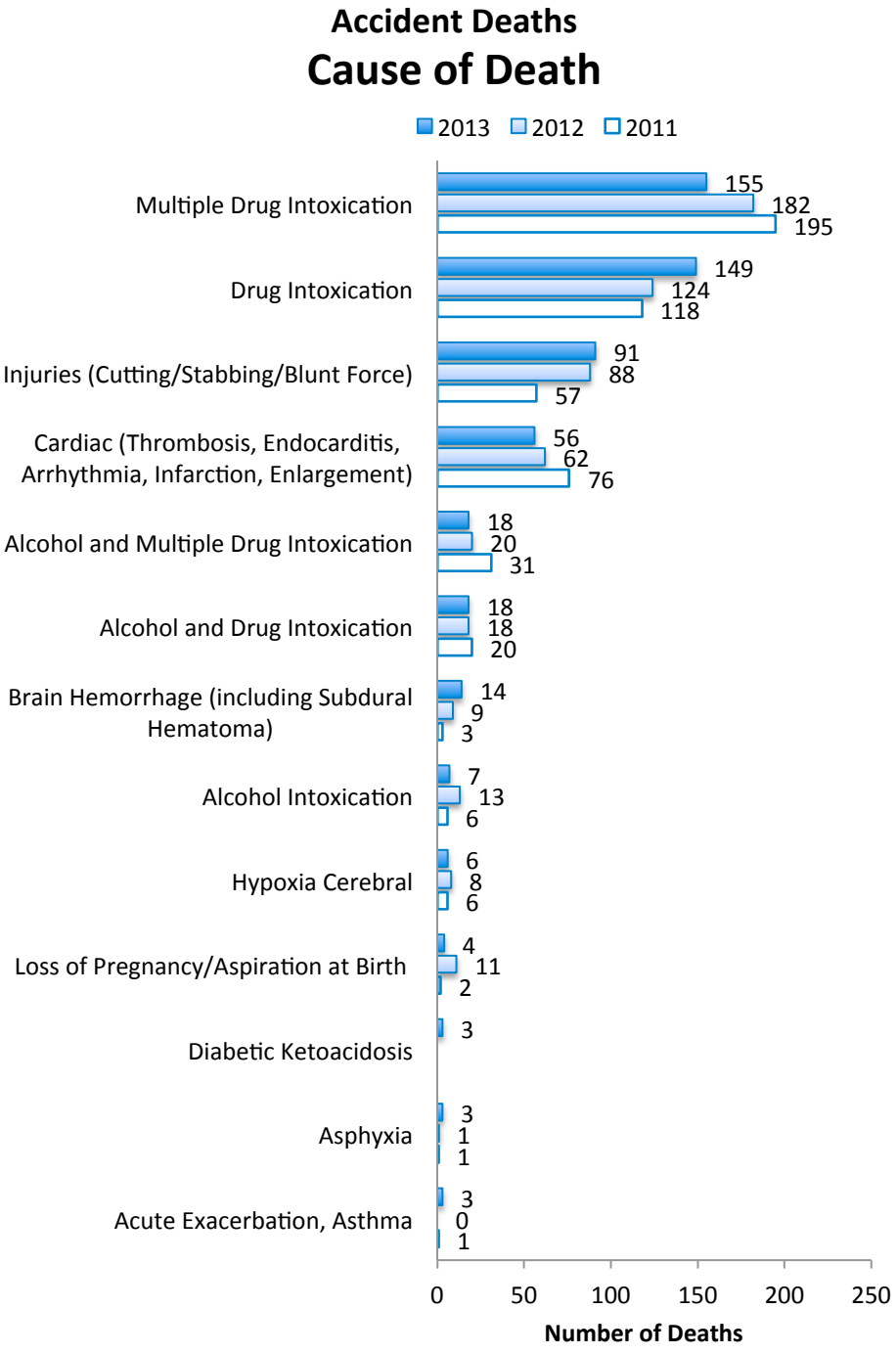
** In the next few sections there are details related to manner type and cause of death, which are closely related. The differences between the two are related to the data categorization. Only one manner type can be selected to describe the manner of death, while cause of death is a broader definition that includes up to four causes of death. While manner type and cause of death are related, the cause of death provides additional details and specifics about each death. In rare cases, using the different categories may result in slightly different results, such as the firearm deaths reported above and on page 15.

Substance Related Accident Deaths

There were 543 substance related deaths classified as accident deaths in 2013. The majority of cases were drug and medication related. Deaths not attributable to these manner types were found to have drug or medication in their toxicology screens. The deceased ranged from age 0 to 92. The majority of the deceased were male (66.1%).

Description	Number			Percent		
	2011	2012	2013	2011	2012	2013
Manner Type						
Alcohol Related	15	18	12	2.7%	3.2%	2.2%
Alcohol-Drug Related	14	13	13	2.5%	2.3%	2.4%
Alcohol/Medication	28	20	22	5.1%	3.6%	4.1%
Drug Related	210	170	191	38.1%	30.6%	35.2%
Inhalant Related	2	3	1	0.4%	0.5%	0.2%
Medication	200	214	181	36.3%	38.5%	33.3%
Medication/Drugs	19	27	31	3.4%	4.9%	5.7%
Motor Vehicle	63	91	92	11.4%	16.4%	16.9%
Age Group						
0-6	5	12	6	0.9%	2.2%	1.1%
7-14	-	1	1	-	0.2%	0.2%
15-20	29	26	13	5.3%	4.7%	2.4%
21-25	48	44	42	8.7%	7.9%	7.7%
26-29	38	33	48	6.9%	5.9%	8.8%
30-39	111	84	91	20.1%	15.1%	16.8%
40-49	143	137	129	26.0%	24.6%	23.8%
50-59	117	137	140	21.2%	24.6%	25.8%
60-69	45	67	56	8.2%	12.1%	10.3%
70-79	7	13	14	1.3%	2.3%	2.6%
80+	6	2	3	1.1%	0.4%	0.6%
Missing	2	-	-	0.4%	-	-
Gender						
Male	353	348	359	64.1%	62.6%	66.1%
Female	197	207	184	35.8%	37.2%	33.9%
Unknown	1	1	-	0.2%	0.2%	-

(con't) Description	Number			Percent		
	2011	2012	2013	2011	2012	2013
Death Location						
Airport	-	1	-	-	0.2%	-
Alley	2	1	-	0.4%	0.2%	-
Bathroom	3	-	1	0.5%	-	0.2%
Business	2	-	2	0.4%	-	0.4%
Care Center	1	1	-	0.2%	0.2%	-
Casino	1	-	-	0.2%	-	-
Desert Area	12	8	8	2.2%	1.4%	1.5%
Garage	-	-	1	-	-	0.2%
Homeless Shelter	-	-	1	-	-	0.2%
Hospice	3	5	2	0.5%	0.9%	0.4%
Hospital	136	100	96	24.7%	18.0%	17.7%
Hospital ER	-	69	60	-	12.4%	11.0%
Hotel/Motel	17	25	24	3.1%	4.5%	4.4%
Park	2	-	-	0.4%	-	-
Parking Lot	7	7	10	1.3%	1.3%	1.8%
Residence	335	292	275	60.8%	52.5%	50.6%
Roadway/Street	25	39	54	4.5%	7.0%	9.9%
Sidewalk	-	2	3	-	0.4%	0.6%
Storm Drain	1	1	-	0.2%	0.2%	-
Vehicle	2	4	5	0.4%	0.7%	0.9%
Work Site	1	-	-	0.2%	-	-
Yard	1	1	1	0.2%	0.2%	0.2%
Incident Occur at Work						
Yes	15	1	4	2.7%	0.2%	0.7%
No	536	555	539	97.3%	99.8%	99.3%
Homeless						
Yes	12	21	33	2.2%	3.8%	6.1%
No	539	535	510	97.8%	96.2%	93.9%
Veteran						
Yes	24	16	23	4.4%	2.9%	4.2%
No	527	540	520	95.6%	97.1%	95.8%
Marital Status						
Single	246	221	219	44.6%	39.7%	40.3%
Married	133	124	107	24.1%	22.3%	19.7%
Divorced	102	115	106	18.5%	20.7%	19.5%
Widowed	24	31	26	4.4%	5.6%	4.8%
Unknown	46	65	85	8.3%	11.7%	15.7%



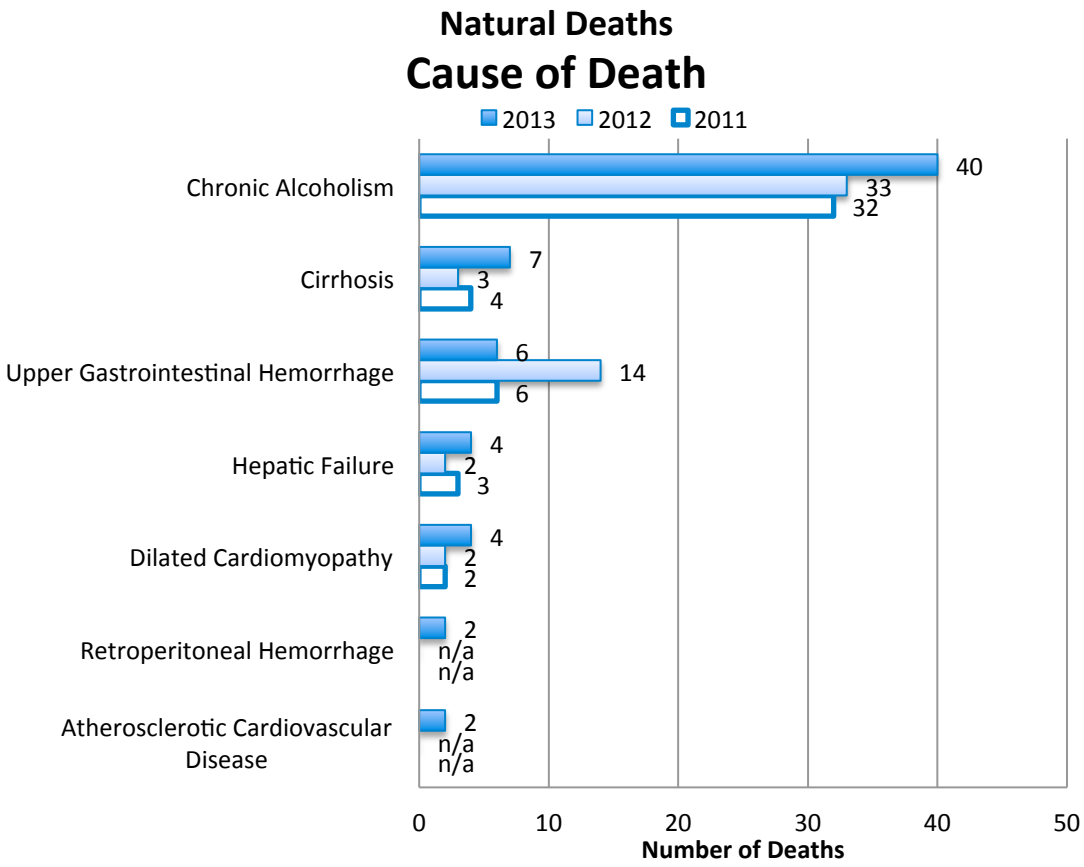
*This graph excludes 22 causes of death and 16 cases from 2013 data. These causes of death were excluded from this graph since each represents 2 or few cases. These causes of death and cases are reflected in the table that follows. Additionally, all data on cause of death from 2011 and 2012 is included in the following table.

Accident Deaths: Cause of Death	Number			Percent		
	2011	2012	2013	2011	2012	2013
Acute and Chronic Alcohol Abuse	4	-	-	0.7%	-	-
Acute Exacerbation, Asthma	1	-	3	0.2%	-	0.6%
Acute Pancreatitis	-	-	1	-	-	0.2%
Alcohol and Drug Intoxication	20	18	18	3.6%	3.2%	3.3%
Alcohol and Multiple Drug Intoxication	31	20	18	5.6%	3.6%	3.3%
Alcohol Intoxication	6	13	7	1.1%	2.3%	1.3%
Anaphylaxis	1	-	1	0.2%	-	0.2%
Asphyxia	1	1	3	0.2%	0.2%	0.6%
Brain Hemorrhage (including Subdural Hematoma)	3	9	14	0.5%	1.6%	2.6%
Cardiac (Thrombosis, Endocarditis, Arrhythmia, Infarction, Enlargement)	76	62	56	13.8%	11.2%	10.3%
Dehydration	1	-	-	0.2%	-	-
Diabetic Ketoacidosis	-	-	3	-	-	0.6%
Drug Intoxication	118	124	149	21.4%	22.3%	27.4%
End-Stage Liver Disease	1	1	1	0.2%	0.2%	0.2%
Exsanguination	-	-	1	-	-	0.2%
Gastrointestinal Bleed	1	-	2	0.2%	-	0.4%
Hemopericardium	1	1	-	0.2%	0.2%	-
Hemoperitoneum	1	-	1	0.2%	-	0.2%
Hypotension and Bradycardia	-	-	1	-	-	0.2%
Hypoxia Cerebral	6	8	6	1.1%	1.4%	1.1%
Injuries (Cutting/Stabbing/Blunt Force)	57	88	91	10.3%	15.8%	16.8%
Kidney Failure	-	4	1	-	0.7%	0.2%
Loss of Pregnancy/Aspiration at Birth	2	11	4	0.4%	2.0%	0.7%
Metastatic Pulmonary Adenocarcinoma	1	-	-	0.2%	-	-
Motor Vehicle Collision	2	-	-	0.4%	-	-
Multi-System Organ Failure	1	-	-	0.2%	-	-
Multiple Congenital Anomalies	1	-	-	0.2%	-	-
Multiple Drug Intoxication	195	182	155	35.4%	32.7%	28.5%
Pneumonia (including Aspiration Pneumonia)	11	5	2	2.0%	0.9%	0.4%
Poisoning	-	3	-	-	0.5%	-
Pulmonary (Emboli, Infarction, COPD)	6	2	1	1.1%	0.4%	0.2%
Respiratory Failure	1	-	-	0.2%	-	-
Ruptured Aortic Aneurysm	2	-	-	0.4%	-	-
Sepsis	-	3	2	-	0.5%	0.4%
Sudden Unexpected Death in Epilepsy (SUDEP)	-	1	2	-	0.2%	0.4%
Total	**551**	**556**	**543**	**100%**	**100%**	**100%**

Substance Related Natural Deaths

There were 68 deaths related to substance abuse that were classified as natural deaths in 2013. All of these cases were alcohol related. In 2013, the deceased ranged from age 28 to 92. The highest percentage of deaths (33.8%) were between 50-59 years old and 77.9% of the deceased were male.

Description	Number			Percent		
	2011	2012	2013	2011	2012	2013
Manner Type						
Alcohol Related	53	60	68	100%	100%	100%
Age Group						
20-29	1	-	2	1.9%	-	2.9%
30-39	6	4	8	11.3%	6.7%	11.8%
40-49	13	20	17	24.5%	33.3%	25.0%
50-59	14	22	23	26.4%	36.7%	33.8%
60-69	18	9	13	34.0%	15.0%	19.1%
70-79	-	3	3	-	5.0%	4.4%
80+	1	2	2	1.9%	3.3%	2.9%
Gender						
Male	34	42	53	64.2%	70.0%	77.9%
Female	19	18	15	35.8%	30.0%	22.1%
Injury Description						
Unknown	53	60	68	100.0%	100.0%	100.0%
Death Location						
Airport	-	-	1	-	-	1.5%
Business	1	-	1	1.9%	-	1.5%
Desert Area	-	3	2	-	5.0%	2.9%
Hospice	-	1	1	-	1.7%	1.5%
Hospital	9	2	5	16.9%	3.3%	7.4%
Hospital ER	-	2	4	-	3.3%	5.9%
Hotel/Motel	2	3	6	3.8%	5.0%	8.8%
Parking Lot	-	2	2	-	3.3%	2.9%
Residence	40	46	44	75.5%	76.7%	64.7%
Sidewalk	-	-	1	-	-	1.5%
Vehicle	-	1	1	-	1.7%	1.5%
Yard	1	-	-	1.9%	-	-
Incident Occur at Work						
Yes	1	-	-	1.9%	-	-
No	52	60	68	98.1%	100%	100%
Homeless						
Yes	2	3	6	3.8%	5.0%	8.8%
No	51	57	62	96.2%	95.0%	91.2%
Veteran						
Yes	4	6	1	7.5%	10%	1.5%
No	49	54	67	92.5%	90%	98.5%
Marital Status						
Single	19	17	27	35.8%	28.3%	39.7%
Married	10	11	11	18.9%	18.3%	16.2%
Divorced	12	21	14	22.6%	35.0%	20.6%
Widowed	2	3	5	3.8%	5.0%	7.4%
Unknown	10	8	11	18.9%	13.3%	16.2%



*This graph excludes 10 causes of death (6 cases from 2011; 6 cases from 2012; and 3 cases from 2012). These causes of death were excluded from this graph since each represents 2 or fewer cases. These causes of death and cases are reflected in the table on the next page (page 13).

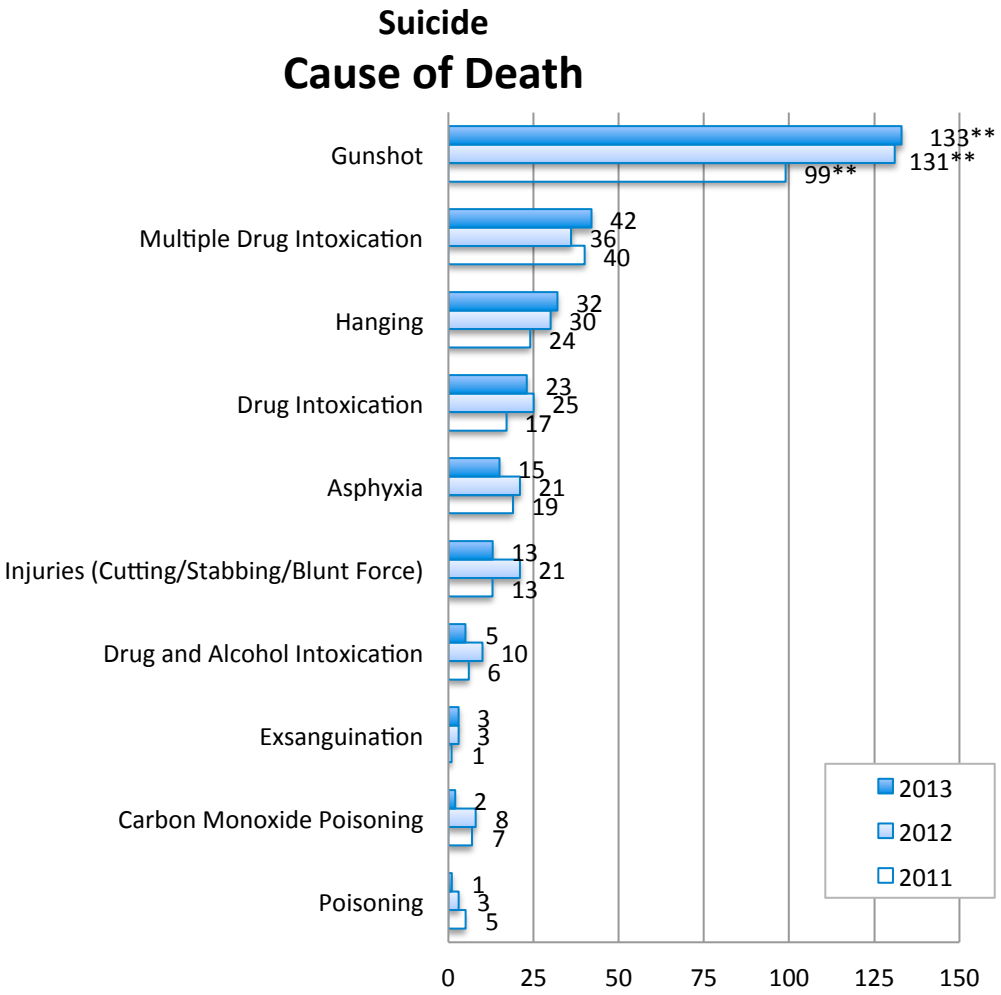
Natural Deaths: Cause of Death	Number			Percent		
	2011	2012	2013	2011	2012	2013
Acute Alcohol Intoxication	1	-	-	1.9%	-	-
Acute Pancreatitis	1	2	-	1.9%	3.3%	-
Alcoholic Ketoacidosis	-	-	1	-	-	1.5%
Atherosclerotic Cardiovascular Disease	-	-	2	-	-	2.9%
Chronic Alcoholism	32	33	40	60.4%	55.0%	58.8%
Cirrhosis	4	3	7	7.5%	5.0%	10.3%
Dilated Cardiomyopathy	2	2	4	3.8%	3.3%	5.9%
Exsanguination	1	1	-	1.9%	1.7%	-
Hepatic Encephalopathy	2	-	-	3.8%	-	-
Hepatic Failure	3	2	4	5.7%	3.3%	5.9%
Hepatic Steatosis (Fatty Liver)	1	1	-	1.9%	1.7%	-
Low Salt Syndrome (Hyponatremia)	-	1	-	-	1.7%	-
Meningitis	-	1	-	-	1.7%	-
Pneumonia	-	-	1	-	-	1.5%
Retroperitoneal Hemorrhage	-	-	2	-	-	2.9%
Sepsis	-	-	1	-	-	1.5%
Upper Gastrointestinal Hemorrhage	6	14	6	11.3%	23.3%	8.8%
Total	53	60	68	100%	100%	100%

Substance Related Suicide Deaths

There were 275 substance-related deaths that were classified as suicides in 2013. Deaths that were not classified as related to alcohol, drugs, or medication were found to have drugs or medication in their toxicology screens. Firearms were the primary manner type (48.4%) of the suicides in 2013. The deceased ranged from age 14 to 85. Over one-third (37.1%) of the deceased were under 39 years old and 42.5% were between 40 and 59 years old. More males died by suicide than females (75.6% compared to 24.4%).

Description		Number			Percent		
		2011	2012	2013	2011	2012	2013
Manner Type							
	Alcohol Related	1	-	2	0.4%	-	0.7%
	Alcohol-Drug Related	5	2	1	2.1%	0.7%	0.4%
	Alcohol/Medication	2	5	2	0.8%	1.7%	0.7%
	Asphyxia	10	14	3	4.2%	4.8%	1.1%
	Carbon Monoxide	7	8	3	2.9%	2.7%	1.1%
	Cutting/Stabbing	4	9	7	1.7%	3.1%	2.5%
	Drug Related	23	12	7	9.7%	4.1%	2.5%
	Fire	2	2	1	0.8%	0.7%	0.4%
	Firearms	100	130	133	42.0%	44.5%	48.4%
	Hanging	30	34	41	12.6%	11.6%	14.9%
	Jumping	7	12	6	2.9%	4.1%	2.2%
	Medical	1	-	-	0.4%	-	-
	Medication	31	51	61	13.0%	17.5%	22.2%
	Medication/Drugs	5	3	-	2.1%	1.0%	-
	Motor Vehicle	2	2	2	0.8%	0.7%	0.7%
	Poisoning	2	2	1	0.8%	0.7%	0.4%
	Suffocation	2	3	4	0.8%	1.0%	1.5%
	Toxicology	4	3	1	1.7%	1.0%	0.4%
Age Group							
	7-14	0	1	1	0%	0.3%	0.4%
	15-20	15	6	5	6.3%	2.1%	1.8%
	21-25	21	16	17	8.8%	5.5%	6.2%
	26-29	9	16	39	3.8%	5.5%	14.2%
	30-39	37	53	40	15.5%	18.2%	14.5%
	40-49	39	60	60	16.4%	20.5%	21.8%
	50-59	56	76	57	23.5%	26.0%	20.7%
	60-69	42	45	33	17.6%	15.4%	12.0%
	70-79	10	14	18	4.2%	4.8%	6.5%
	80+	8	5	5	3.4%	1.7%	1.8%
	Missing	1	-	-	0.4%	-	-
Gender							
	Male	173	203	208	72.7%	69.5%	75.6%
	Female	65	89	67	27.3%	30.5%	24.4%

(con't) Description	Number			Percent		
	2011	2012	2013	2011	2012	2013
Death Location						
Bar/Lounge	-	-	1	-	-	0.4%
Bathroom	-	3	1	-	1.0%	0.4%
Business	2	2	1	0.8%	0.7%	0.4%
Care Center	1	1	1	0.4%	0.3%	0.4%
Casino	2	2	-	0.8%	0.7%	-
Church	-	-	1	-	-	0.4%
Desert Area	9	7	4	3.8%	2.4%	1.5%
Garage/Shed	2	3	3	0.8%	1.0%	1.1%
Hospice	1	2	2	0.4%	0.7%	0.7%
Hospital	43	29	33	18.1%	9.9%	12.0%
Hospital ER	-	13	6	-	4.5%	2.2%
Hotel/Motel	15	21	11	6.3%	7.2%	4.0%
Jail	-	1	1	-	0.3%	0.4%
Lake	-	2	1	-	0.7%	0.4%
Park	1	-	-	0.4%	-	-
Parking Lot	7	7	7	2.9%	2.4%	2.5%
Railroad	-	-	1	-	-	0.4%
Residence	137	182	189	57.6%	62.3%	68.7%
Roadway/Street	4	6	5	1.7%	2.1%	1.8%
Sidewalk	-	1	-	-	0.3%	-
Tunnel	-	1	-	-	0.3%	-
Vehicle	12	5	1	5.0%	1.7%	0.4%
Work Site	-	1	1	-	0.3%	0.4%
Yard	2	3	4	0.8%	1.0%	1.5%
Unknown	-	-	1	-	-	0.4%
Incident Occur at Work						
Yes	3	2	0	1.3%	0.7%	0%
No	235	290	275	98.7%	99.3%	100%
Homeless						
Yes	-	4	5	-	1.4%	1.8%
No	238	288	270	100.0%	98.6%	98.2%
Veteran						
Yes	15	21	18	6.3%	7.2%	6.5%
No	223	271	257	93.7%	92.8%	93.5%
Marital Status						
Single	102	85	98	42.9%	29.1%	35.6%
Married	67	91	72	28.2%	31.2%	26.2%
Divorced	39	62	57	16.4%	21.2%	20.7%
Widowed	14	23	11	5.9%	7.9%	4.0%
Unknown	15	31	37	6.3%	10.6%	13.5%
Missing	1	-	-	0.4%	-	-



*This graph excludes 10 causes of death (7 cases from 2011; 4 cases from 2012; and 6 cases from 2013). These causes of death were excluded from this graph since each represents 2 or fewer cases. These causes of death and cases are reflected in the table on the next page.

Suicide Deaths: Cause of Death	Number			Percent		
	2011	2012	2013	2011	2012	2013
Alcohol Intoxication	-	-	1	0.4%	0.7%	0.4%
Anoxic Encephalopathy	1	2	1	0.4%	0.7%	0.4%
Asphyxia	19	21	15	8.0%	7.2%	5.5%
Aspiration pneumonia	1	-	2	0.4%	-	0.7%
Carbon Monoxide Poisoning	7	8	2	2.9%	2.7%	0.7%
Chronic Obstructive Pulmonary Disease	1	-	-	0.4%	-	-
Dilated Cardiomyopathy	-	1	-	-	0.3%	-
Drowning	2	-	1	0.8%	-	0.4%
Drug and Alcohol Intoxication	6	10	5	2.5%	3.4%	1.8%
Drug Intoxication	17	25	23	7.1%	8.6%	8.4%
Exsanguination	1	3	3	0.4%	1.0%	1.1%
Fulminant Hepatic Necrosis	1	-	-	0.4%	-	-
Gunshot**	99	131	133	41.6%	44.9%	48.4%
Hanging	24	30	32	10.1%	10.3%	11.6%
Injuries (Cutting/Stabbing/Blunt Force)	13	21	13	5.5%	7.2%	4.7%
Multiple Drug Intoxication	40	36	42	16.8%	12.3%	15.3%
Poisoning	5	3	1	2.1%	1.0%	0.4%
Severe Hypoglycemia	1	-	-	0.4%	-	-
Sudden Unexpected Death in Epilepsy	-	1	-	-	0.3%	-
Thermal Injuries	-	-	1	-	-	0.4%
Total	238	292	275	100%	100%	100%

** Manner type and cause of death are closely related in this report. The differences between the two are related to the data categorization. Only one manner type can be selected as the manner of death. Cause of death is a broader definition that includes up to four causes of death. This information has been condensed into categories. While manner type and cause of death are related, the cause of death provides additional details and specifics about each death. For example, it is possible a death could be labeled with the manner type of medication, while under cause of death there would be details of the medication or other details, such as car accident, or other injuries related to cause of death. This classification system resulted in data in this table, for cause of death, that are slightly different from similar data reported on page 6 for manner type of death.

Substance Related Undetermined Deaths

The eight deaths classified as undetermined are outlined below by manner type, cause of death, age range, gender, injury description, death location, and marital status. The deceased ranged from age 23 to 64. None of the deceased were homeless.

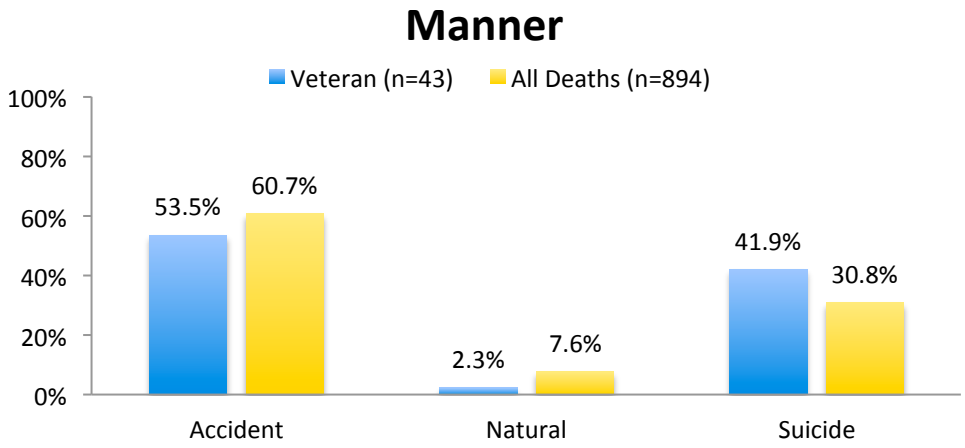
Description	Number			Percent		
	2011	2012	2013	2011	2012	2013
Manner Type						
Alcohol-drug related	-	-	1	-	-	12.5%
Drug Related	-	1	2	-	50.0%	25.0%
Medication	2	1	5	100.0%	50.0%	62.5%
Age Group						
21-25	-	-	2	-	-	25.0%
30-39	-	1	2	-	50.0%	25.0%
40-49	2	1	1	100.0%	50.0%	12.5%
50-59	-	-	2	-	-	25.0%
60-69	-	-	1	-	-	12.5%
Gender						
Male	2	1	4	100.0%	50.0%	50.0%
Female	-	1	4	-	50.0%	50.0%
Injury Description						
Consumed ethanol and prescription drugs	-	-	1	-	-	12.5%
Consumed prescription drugs	2	-	1	100.0%	-	12.5%
Ingestion of drug and medication	-	1	1	-	50.0%	12.5%
Medication use	-	1	3	-	50.0%	37.5%
Methadone use	-	-	1	-	-	12.5%
Unknown	-	-	1	-	-	12.5%
Death Location						
Residence	2	1	7	100.0%	50.0%	87.5%
Swimming Pool	-	1	-	-	50.0%	-
Park	-	-	1	-	-	12.5%
Incident Occur at Work						
Yes	-	-	-	-	-	-
No	2	2	8	100.0%	100.0%	100.0%
Homeless						
Yes	-	-	-	-	-	-
No	2	2	8	100.0%	100.0%	100.0%
Veteran						
Yes	-	-	1	-	-	12.5%
No	2	2	7	100.0%	100.0%	87.5%
Marital Status						
Single	1	1	4	50.0%	50.0%	50.0%
Married	-	1	1	-	50.0%	12.5%
Divorced	1	-	2	50.0%	-	25.0%
Unknown	-	-	1	-	-	12.5%

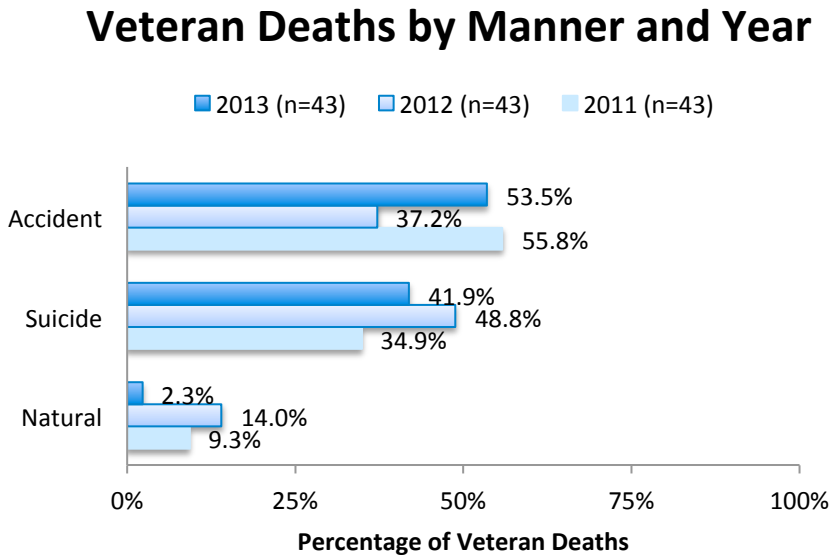
Undetermined Deaths: Cause of Death	Number			Percent		
	2011	2012	2013	2011	2012	2013
Acute Cocaine and Hydrocodone Toxicity	-	1	-	-	50.0%	-
Alprazolam and Alcohol Intoxication	-	1	-	-	50.0%	-
Combined Alprazolam, Hydrocodone, & Carisoprodol Intoxication	2	-	-	100%	-	-
Ethanol and Gabapentin Intoxication	-	-	1	-	-	12.5%
Methadone Intoxication	-	-	1	-	-	12.5%
Mixed Drug Intoxication	-	-	1	-	-	12.5%
Morphine Intoxication	-	-	1	-	-	12.5%
Opiate and Acetaminophen Intoxication	-	-	1	-	-	12.5%
Tramadol and Alprazolam Intoxication	-	-	1	-	-	12.5%
Unknown	-	-	1	-	-	12.5%
Venlafaxine Intoxication	-	-	1	-	-	12.5%

Special Populations - Substance Related Deaths

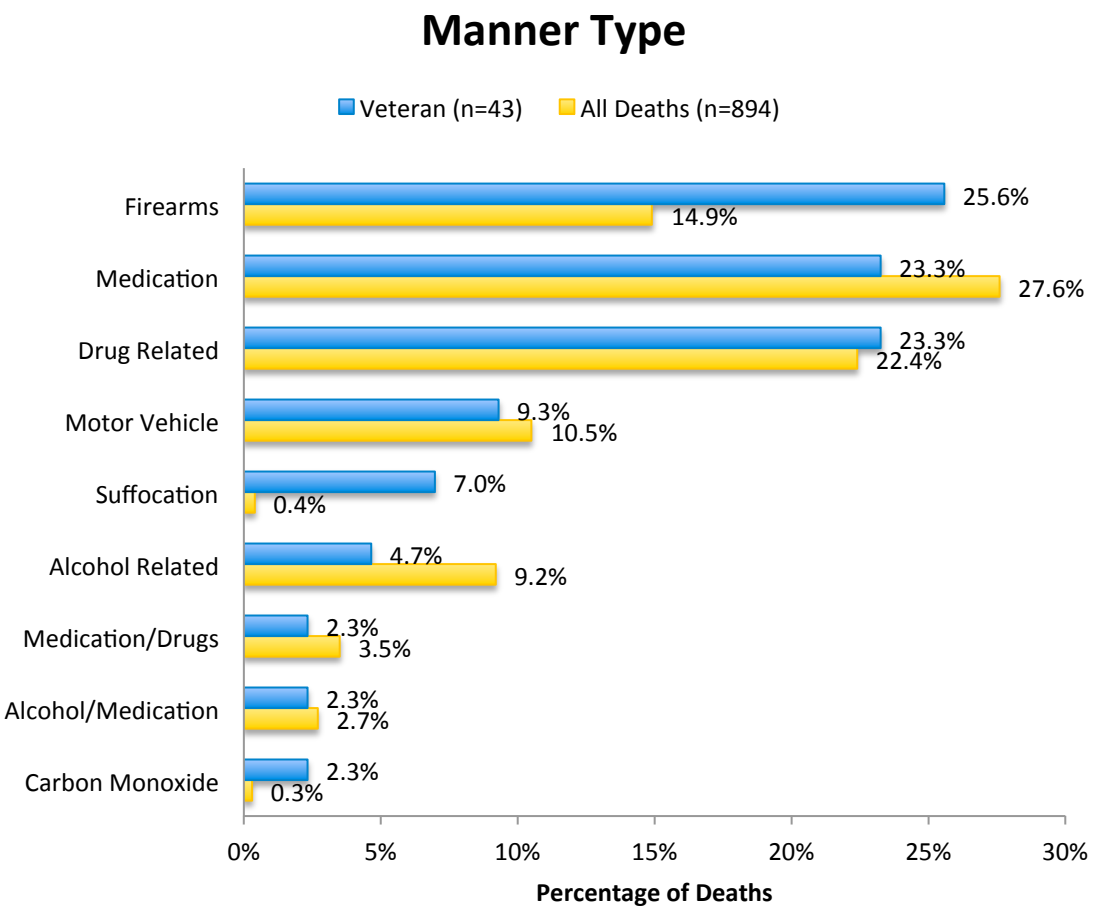
Veterans

There were 43 Veteran substance-related deaths recorded by the Office of the Clark County Coroner/Medical Examiner in 2013. Of these deaths, 41.9% were suicides.

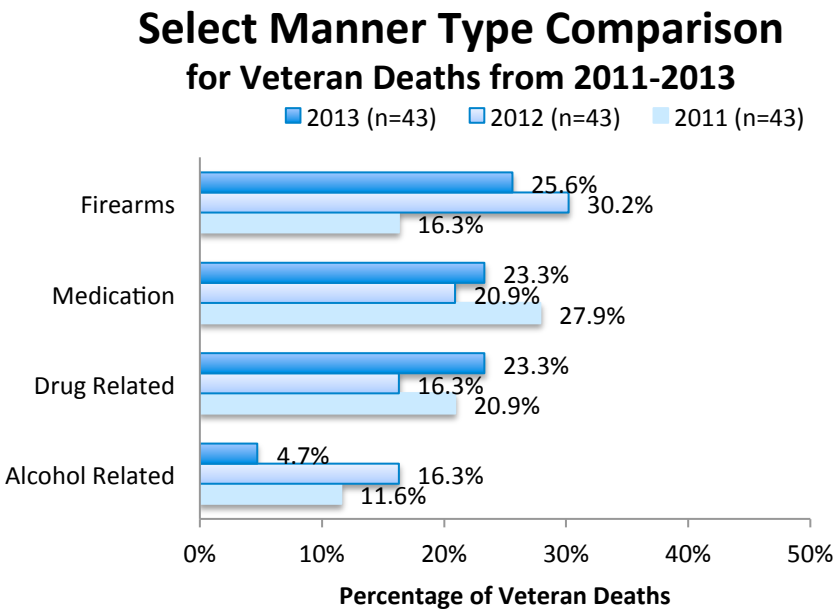




The following graph displays the manner type of death for Veterans compared to the average.

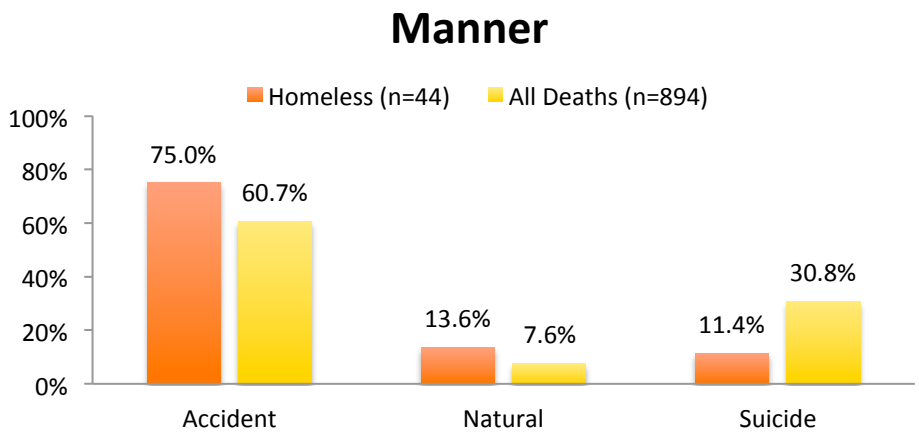


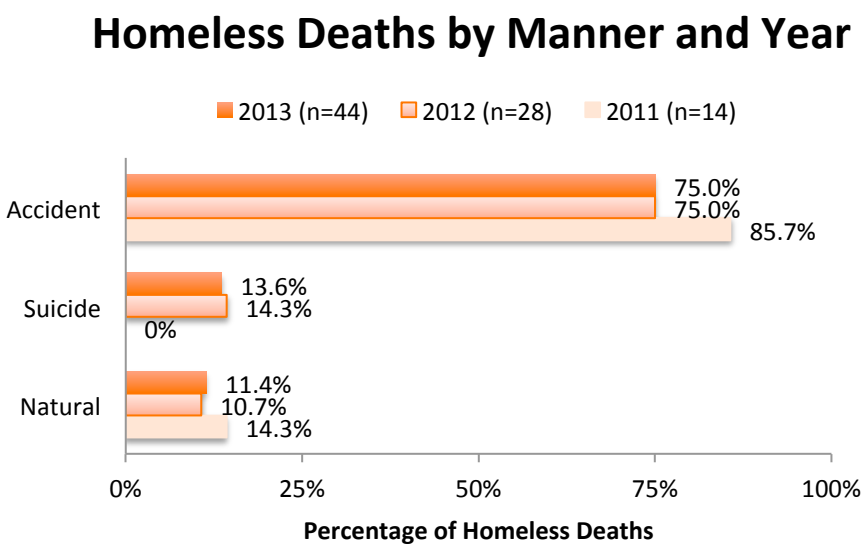
Manner Type for Veteran Deaths	Veteran (n=43)	All Deaths (n=894)
Alcohol Related	4.7%	9.2%
Alcohol/Medication	2.3%	2.7%
Carbon Monoxide	2.3%	0.3%
Drug Related	23.3%	22.4%
Firearms	25.6%	14.9%
Medication	23.3%	27.6%
Medication/Drugs	2.3%	3.5%
Motor Vehicle	9.3%	10.5%
Suffocation	7.0%	0.4%


Select Manner Type Comparison
for Veteran Deaths from 2011-2013
2013 (n=43)
2012 (n=43)
2011 (n=43)
Firearms
Medication
Drug Related
Alcohol Related
25.6%
30.2%
16.3%
23.3%
20.9%
27.9%
23.3%
16.3%
20.9%
4.7%
16.3%
11.6%
0%
10%
20%
30%
40%
50%
Percentage of Veteran Deaths

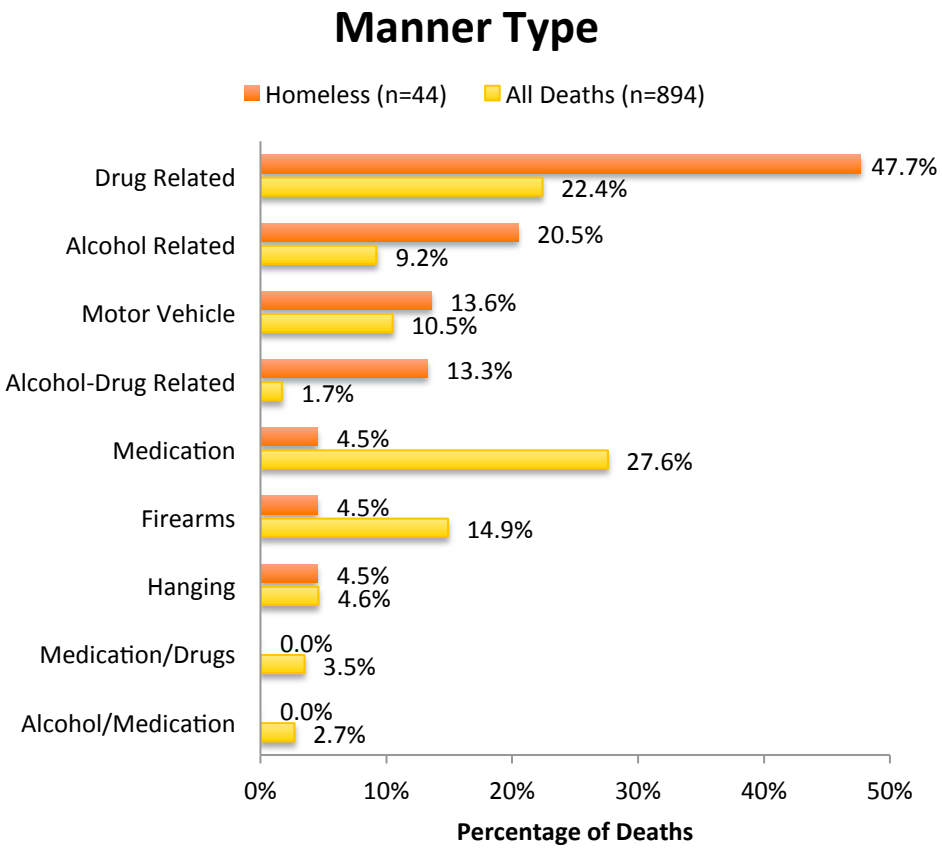
Homeless

There were 44 substance-related homeless people whose deaths were recorded by the Clark County Coroner's Office in 2013. Of these deaths, 75.0% were accident deaths and 47.7% of homeless deaths were drug related.

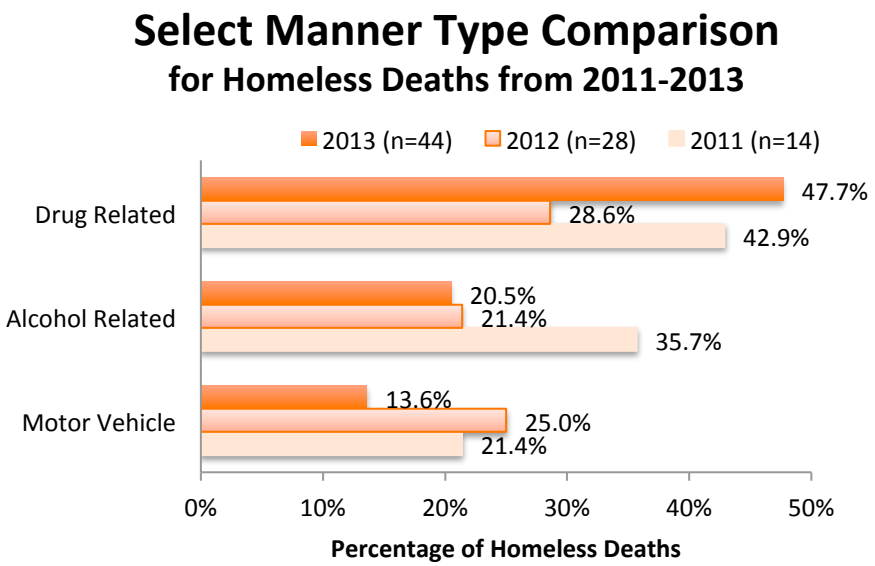




The following graph displays the manner type of death for homeless persons compared to the average.

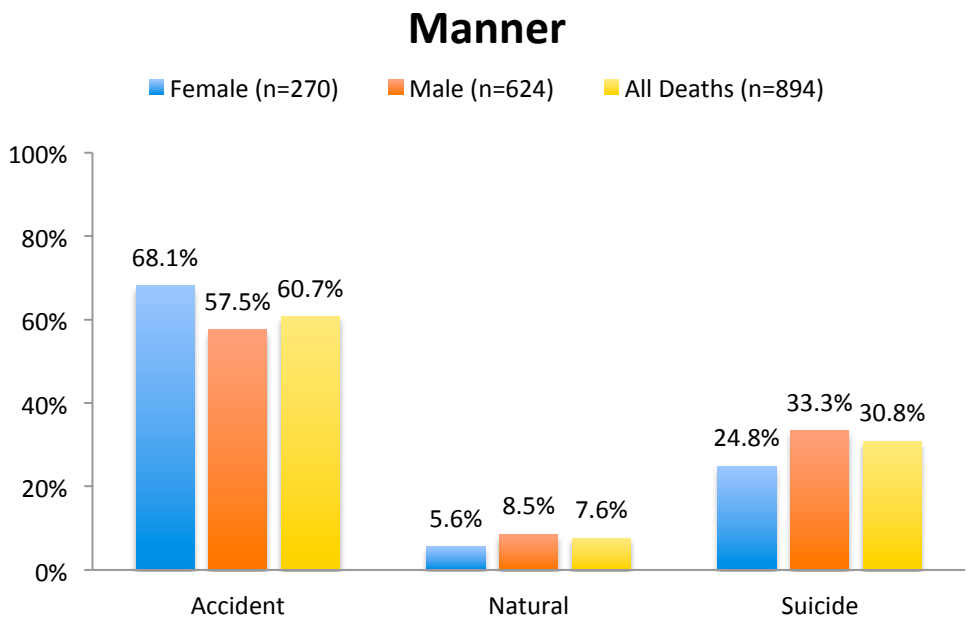


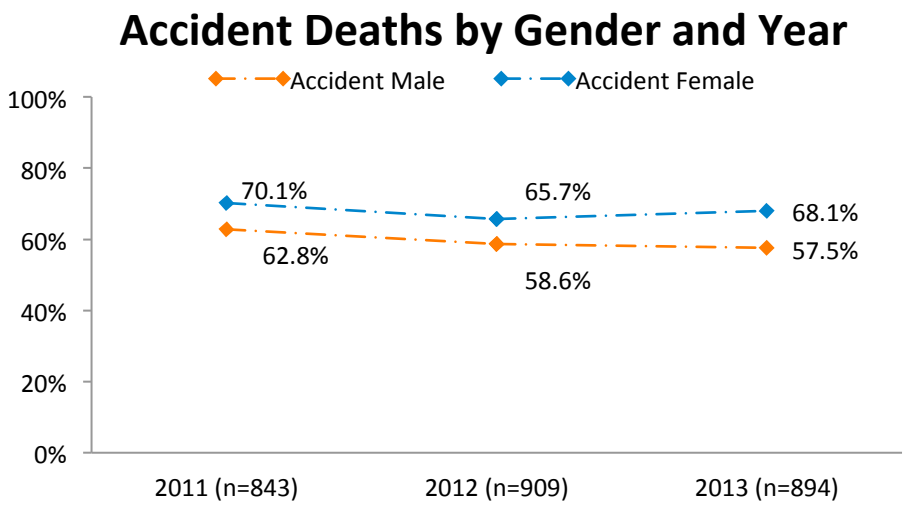
Manner Type for Homeless Deaths	Homeless (n=44)	All Deaths (n=894)
Alcohol Related	20.5%	9.2%
Alcohol-Drug Related	13.3%	1.7%
Alcohol/Medication	0.0%	2.7%
Drug Related	47.7%	22.4%
Firearms	4.5%	14.9%
Hanging	4.5%	4.6%
Medication	4.5%	27.6%
Medication/Drugs	0.0%	3.5%
Motor Vehicle	13.6%	10.5%

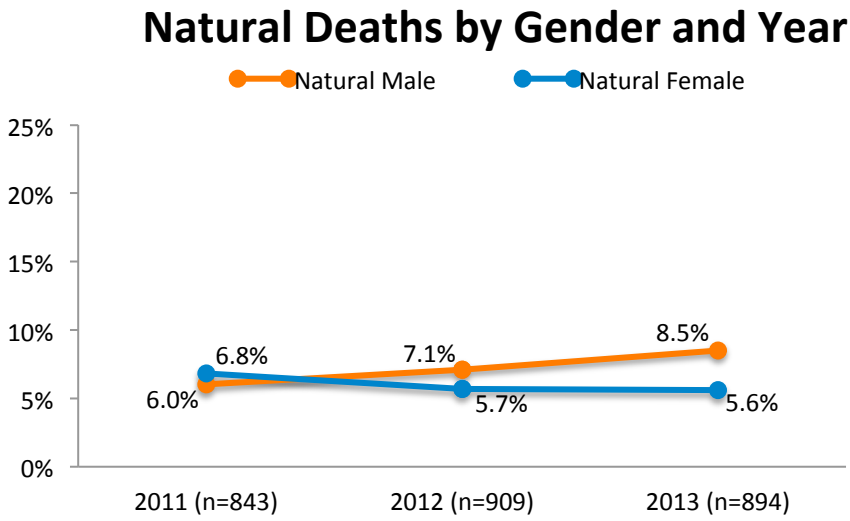

Select Manner Type Comparison
for Homeless Deaths from 2011-2013
2013 (n=44)
2012 (n=28)
2011 (n=14)
Drug Related
47.7%
28.6%
42.9%
Alcohol Related
20.5%
21.4%
35.7%
Motor Vehicle
13.6%
25.0%
21.4%
0%
10%
20%
30%
40%
50%
Percentage of Homeless Deaths

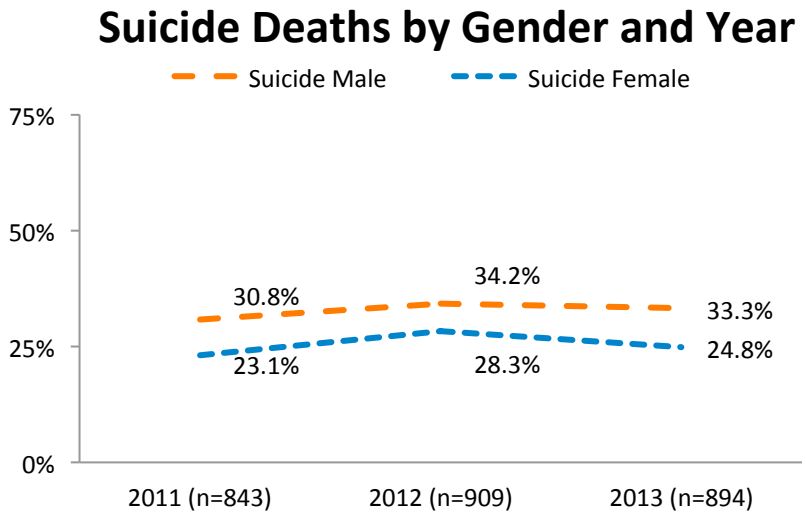
Gender

There were 270 females and 624 males whose substance-related deaths were recorded by the Clark County Coroner's Office in 2013. Males were more likely to commit suicide (33.3%) than females (24.8%), while females were more likely to die as an accident (68.1%) compared to males (57.5%).

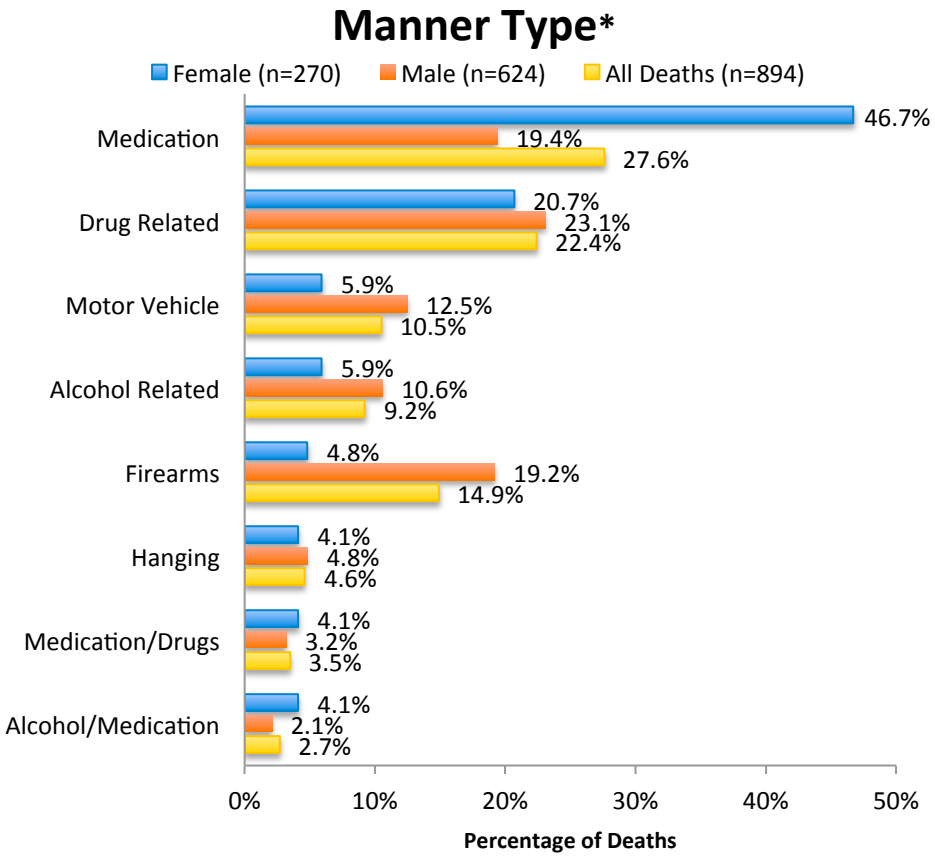



Accident Deaths by Gender and Year
Accident Male
Accident Female
100%
80%
60%
40%
20%
0%
70.1%
65.7%
68.1%
62.8%
58.6%
57.5%
2011 (n=843)
2012 (n=909)
2013 (n=894)


Natural Deaths by Gender and Year
Natural Male
Natural Female
25%
20%
15%
10%
5%
0%
6.8%
7.1%
8.5%
6.0%
5.7%
5.6%
2011 (n=843)
2012 (n=909)
2013 (n=894)


Suicide Deaths by Gender and Year
Suicide Male
Suicide Female
75%
50%
25%
0%
30.8%
34.2%
33.3%
23.1%
28.3%
24.8%
2011 (n=843)
2012 (n=909)
2013 (n=894)

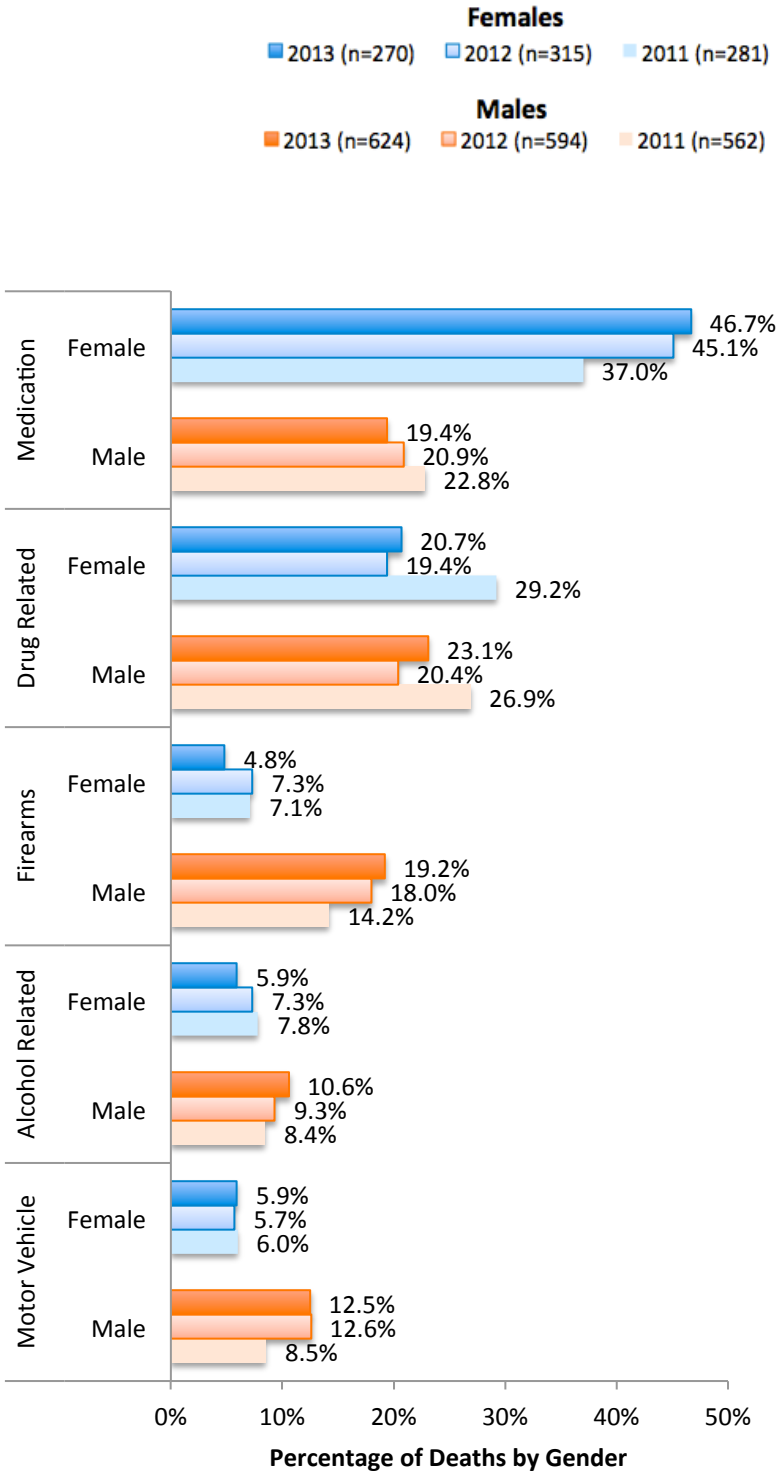
The following graph displays manner types of death by gender compared to the average.



*Only 852 (95.3%) of the 894 deaths are represented on this graph. Manner types under 2% are not displayed.

Manner Type by Gender	Female (n=270)	Male (n=624)	All Deaths (n=894)
Alcohol Related	5.9%	10.6%	9.2%
Alcohol-Drug Related	1.5%	1.8%	1.7%
Alcohol/Medication	4.1%	2.1%	2.7%
Asphyxia	0.0%	0.5%	0.3%
Carbon Monoxide	0.0%	0.5%	0.3%
Cutting/Stabbing	0.4%	1.0%	0.8%
Drug Related	20.7%	23.1%	22.4%
Fire	0.0%	0.2%	0.1%
Firearms	4.8%	19.2%	14.9%
Hanging	4.1%	4.8%	4.6%
Inhalant Related	0.4%	0.0%	0.1%
Jumping	0.7%	0.6%	0.7%
Medication	46.7%	19.4%	27.6%
Medication/Drugs	4.1%	3.2%	3.5%
Motor Vehicle	5.9%	12.5%	10.5%
Poisoning	0.4%	0.0%	0.1%
Suffocation	0.4%	0.5%	0.4%
Toxicology	0.0%	0.2%	0.1%

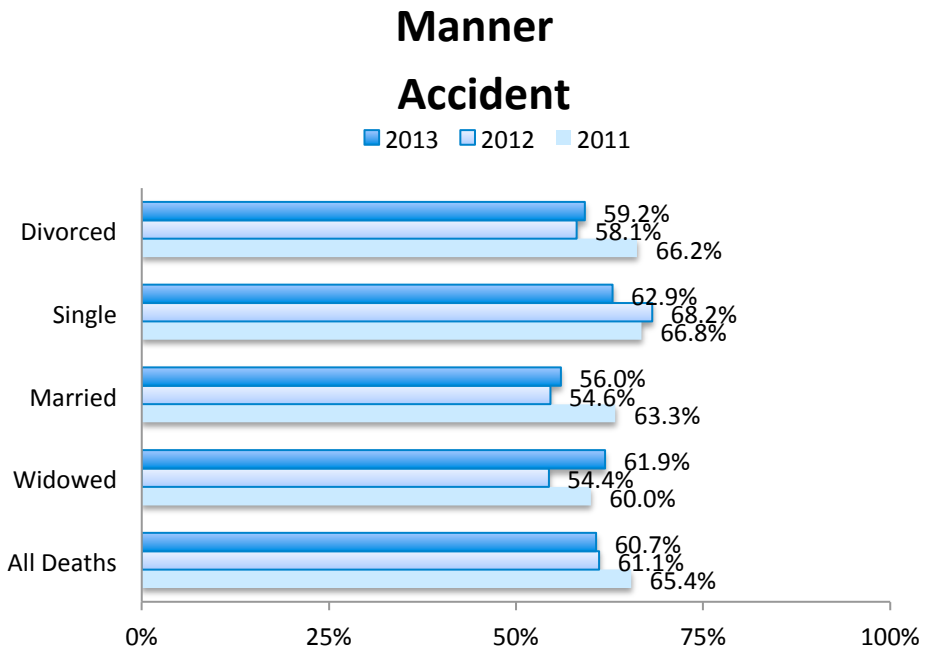
Top 5 Manner Type Comparison
for Deaths by Gender from 2011-2013

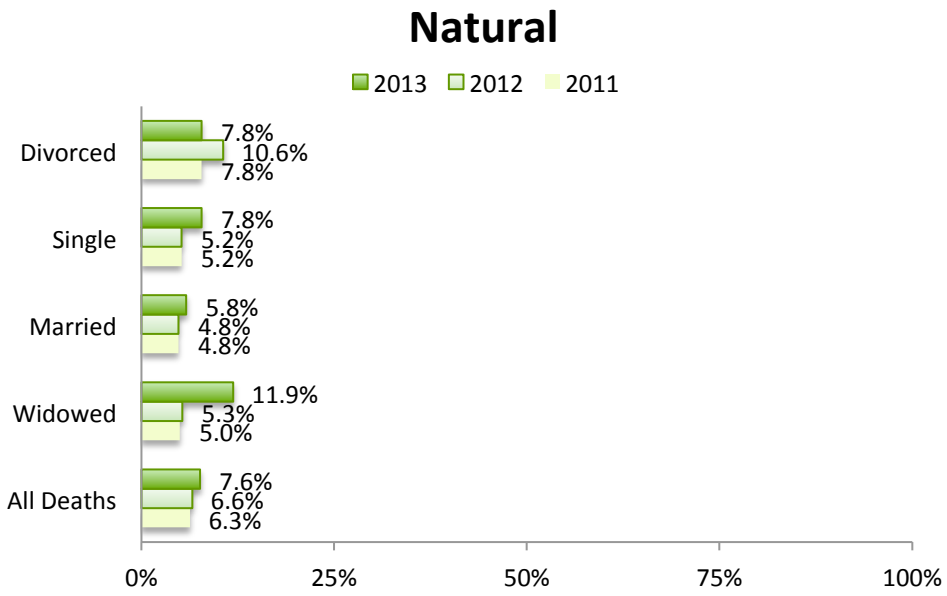


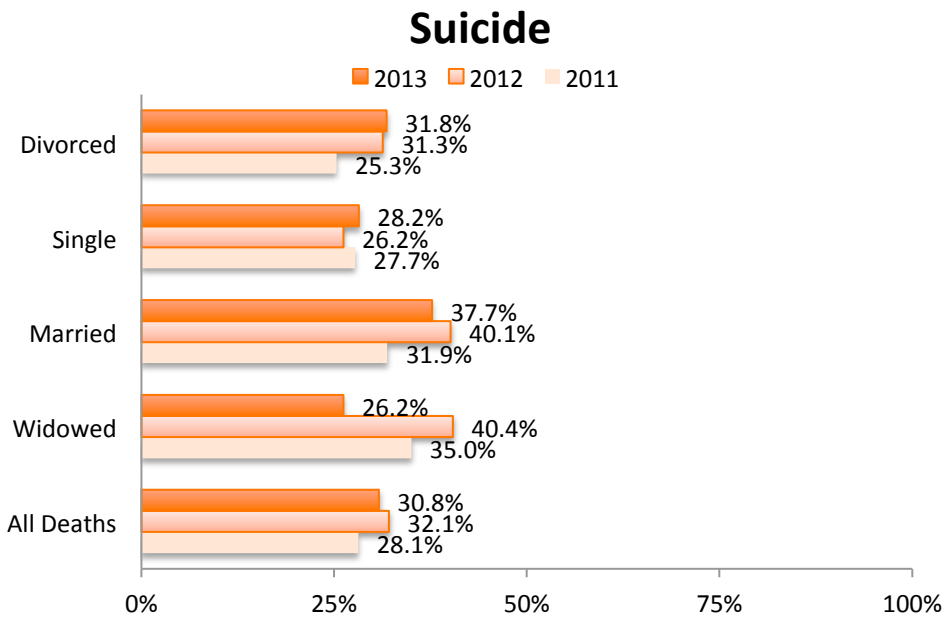
Marital Status

There were 348 single, 191 married, 179 divorced, 42 widowed, and 134 persons with unknown marital status whose substance-related deaths were recorded by the Clark County Coroner's Office in 2013.

Accident deaths account for 62.9% of deceased singles, 11.9% of those who were widowed were natural deaths, 31.8% of those who were divorced committed suicide, and 37.7% of married deaths were suicides.







Marital Status by Manner

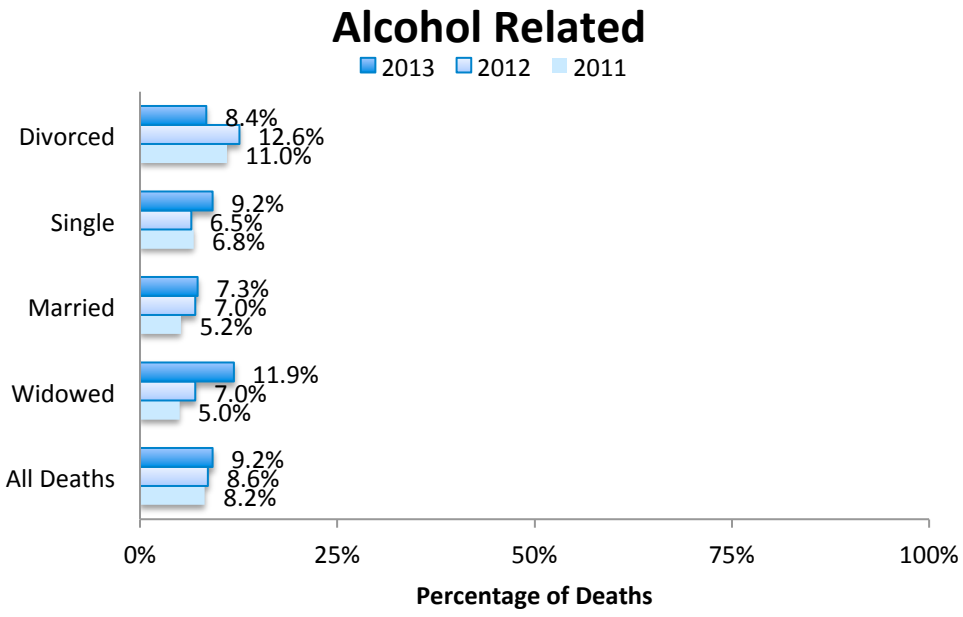
	Year	Accident	Natural	Suicide
Divorced	**2011** (n=154)	66.2%	7.8%	25.3%
	2012 (n=198)	58.1%	10.6%	31.3%
	2013 (n=179)	59.2%	7.8%	31.8%
Single	**2011** (n=368)	66.8%	5.2%	27.7%
	2012 (n=324)	68.2%	5.2%	26.2%
	2013 (n=348)	62.9%	7.8%	28.2%
Married	**2011** (n=210)	63.3%	4.8%	31.9%
	2012 (n=227)	54.6%	4.8%	40.1%
	2013 (n=191)	56.0%	5.8%	37.7%
Widowed	**2011** (n=40)	60.0%	5.0%	35.0%
	2012 (n=57)	54.4%	5.3%	40.4%
	2013 (n=42)	61.9%	11.9%	26.2%
All Deaths	**2011** (n=844)	65.4%	6.3%	28.1%
	2012 (n=910)	61.1%	6.6%	32.1%
	2013 (n=894)	60.7%	7.6%	30.8%

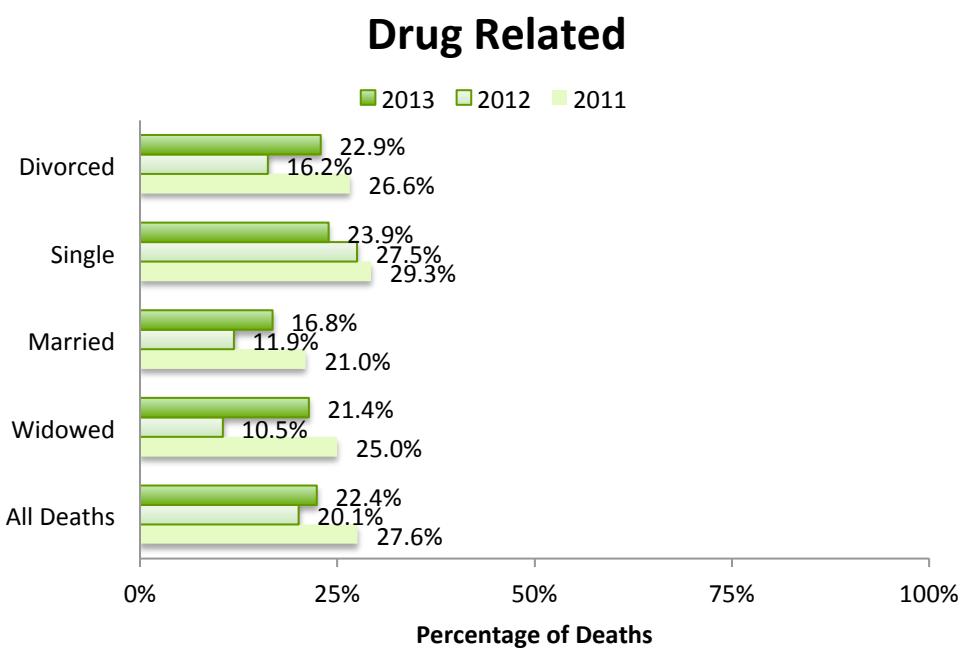
Manner Type*

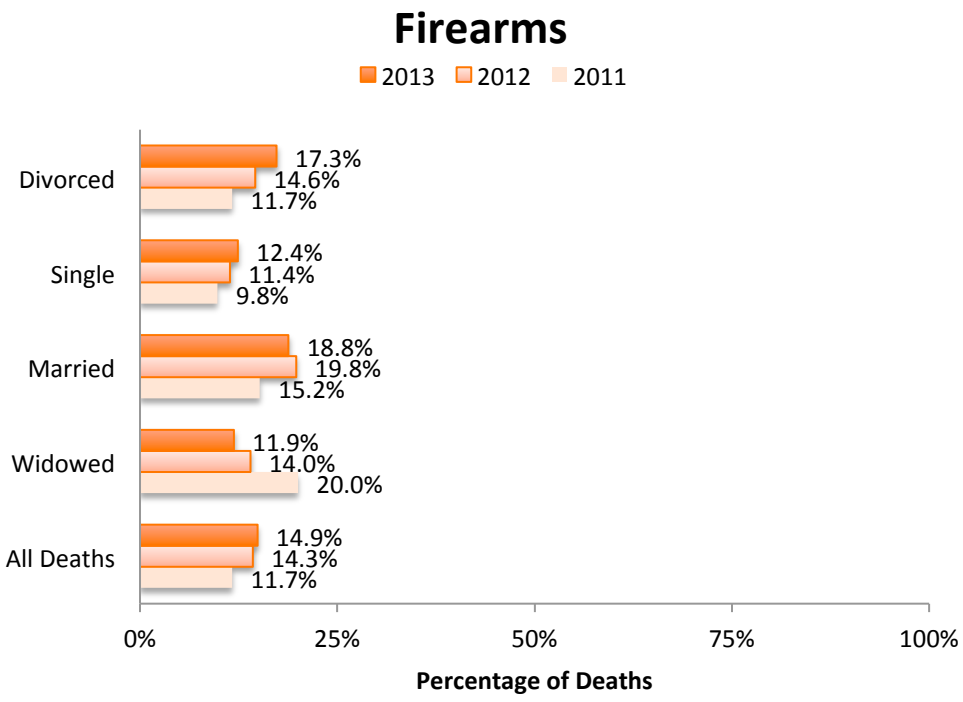
	Divorced (n=179)	Single (n=348)	Married (n=191)	Widowed (n=42)	All Deaths (n=894)
Alcohol Related	8.4%	9.2%	7.3%	11.9%	9.2%
Alcohol/Medication	2.8%	2.6%	2.6%	2.4%	2.7%
Drug Related	22.9%	23.9%	16.8%	21.4%	22.4%
Firearms	17.3%	12.4%	18.8%	11.9%	14.9%
Hanging	1.7%	5.5%	6.3%	0.0%	4.6%
Medication	34.1%	25.9%	31.4%	45.2%	27.6%
Medication/Drugs	3.9%	4.3%	2.6%	0.0%	3.5%
Motor Vehicle	5.6%	12.1%	7.9%	7.1%	10.5%

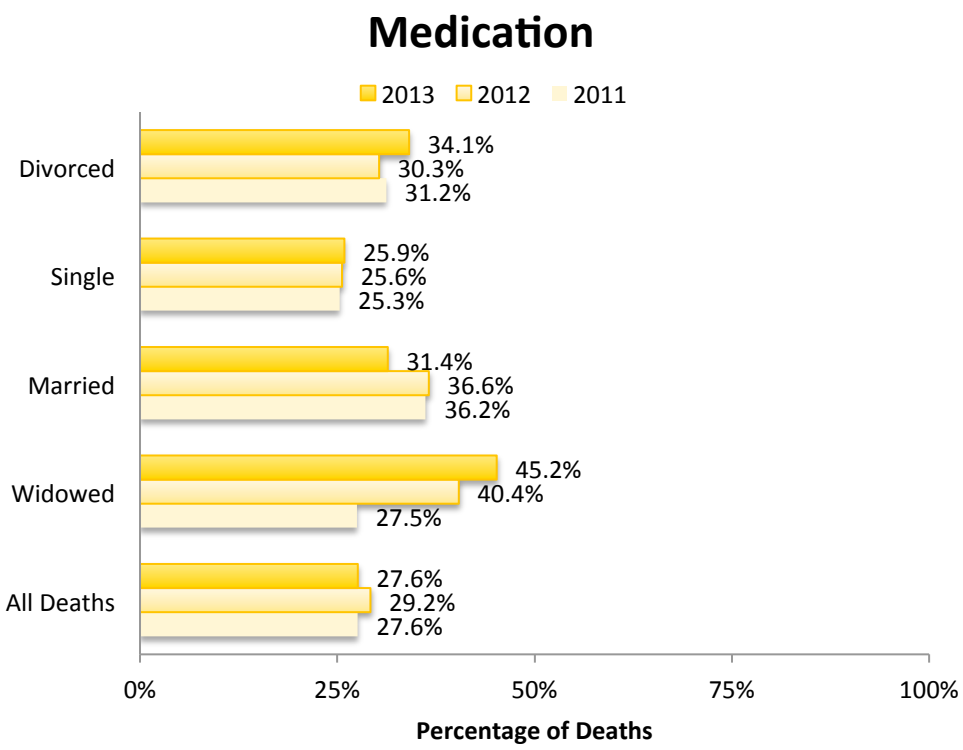
*Only 852 (95.3%) of the 894 deaths are represented on this table. Manner types under 2% are not displayed.

Selected manner type graphs by marital status are below. In 2013, of those who were single 9.2% were alcohol-related deaths, 22.9% of those who were divorced were drug related deaths, 18.8% of married deaths and 17.3% of divorcee deaths were firearm related, and of those who were widowed 45.2% of deaths were medication related.



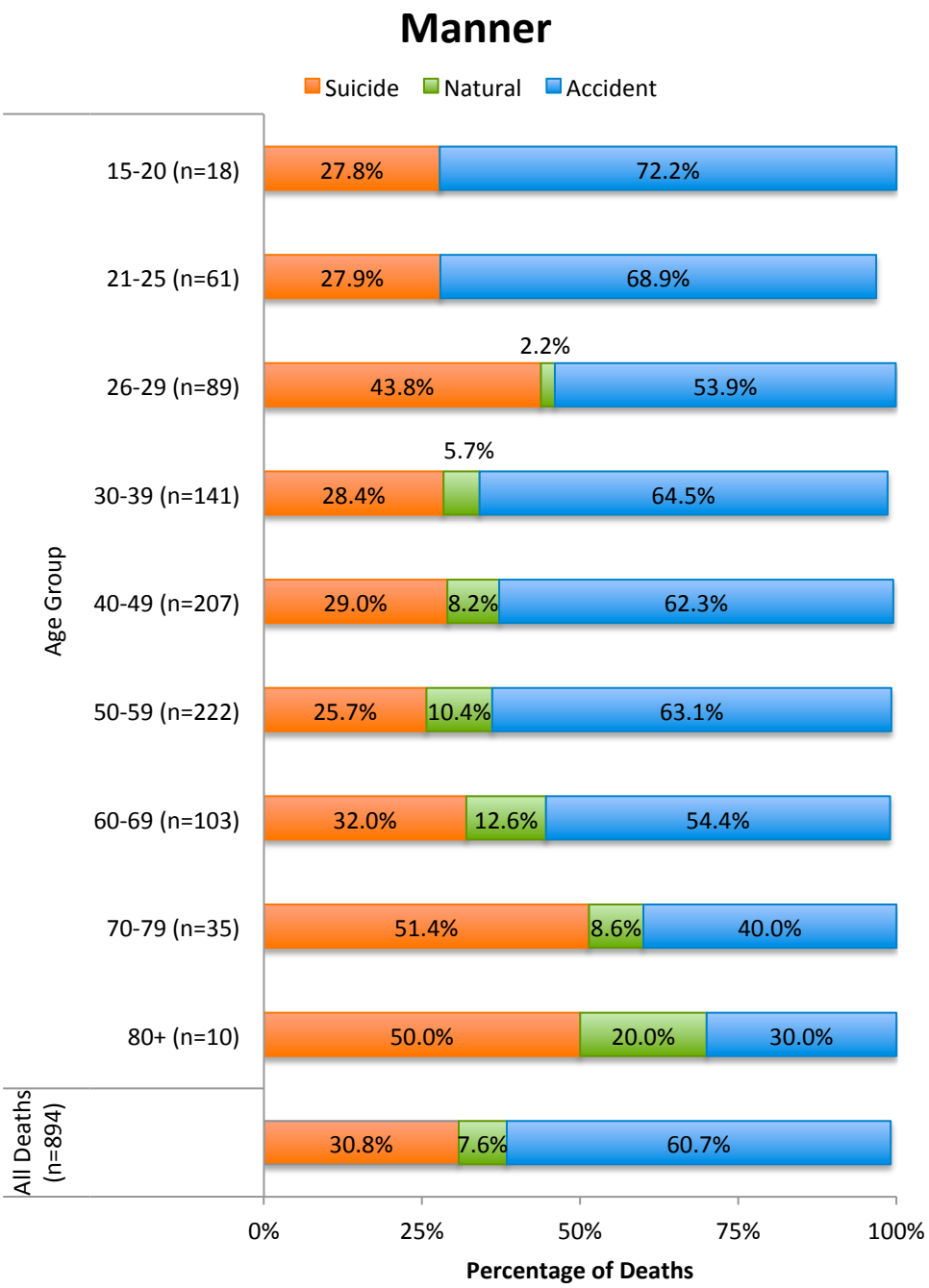

Drug Related
2013
2012
2011
Divorced
22.9%
16.2%
26.6%
Single
23.9%
27.5%
29.3%
Married
16.8%
11.9%
21.0%
Widowed
21.4%
10.5%
25.0%
All Deaths
22.4%
20.1%
27.6%
0%
25%
50%
75%
100%
Percentage of Deaths

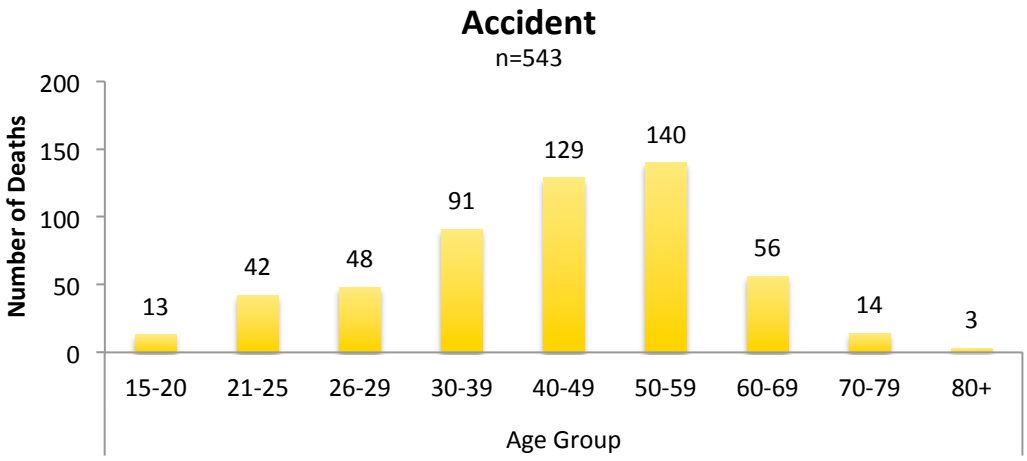

Firearms
2013
2012
2011
Divorced
17.3%
14.6%
11.7%
Single
12.4%
11.4%
9.8%
Married
18.8%
19.8%
15.2%
Widowed
11.9%
14.0%
20.0%
All Deaths
14.9%
14.3%
11.7%
0%
25%
50%
75%
100%
Percentage of Deaths

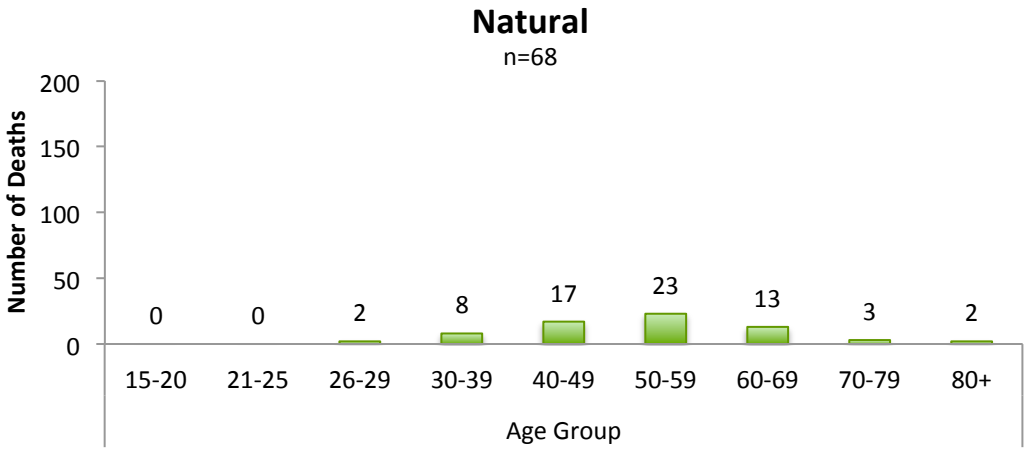

Medication
2013
2012
2011
Divorced
34.1%
30.3%
31.2%
Single
25.9%
25.6%
25.3%
Married
31.4%
36.6%
36.2%
Widowed
45.2%
40.4%
27.5%
All Deaths
27.6%
29.2%
27.6%
0%
25%
50%
75%
100%
Percentage of Deaths

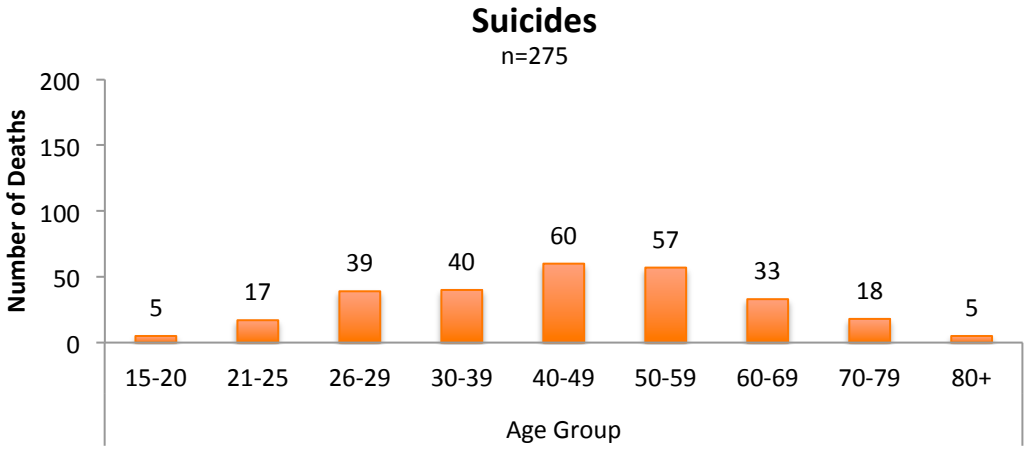
Age Groups

The following graphs are broken into age groups. The deaths of those 14 and under (n=8) are not included on the following graphs, only one of these deaths was classified as a suicide and the other 7 deaths were classified as accident manner type.




Accident
n=543
Number of Deaths
200
150
100
50
0
13
42
48
91
129
140
56
14
3
15-20
21-25
26-29
30-39
40-49
50-59
60-69
70-79
80+
Age Group


Natural
n=68
Number of Deaths
200
150
100
50
0
0
0
2
8
17
23
13
3
2
15-20
21-25
26-29
30-39
40-49
50-59
60-69
70-79
80+
Age Group


Suicides
n=275
Number of Deaths
200
150
100
50
0
5
17
39
40
60
57
33
18
5
15-20
21-25
26-29
30-39
40-49
50-59
60-69
70-79
80+
Age Group

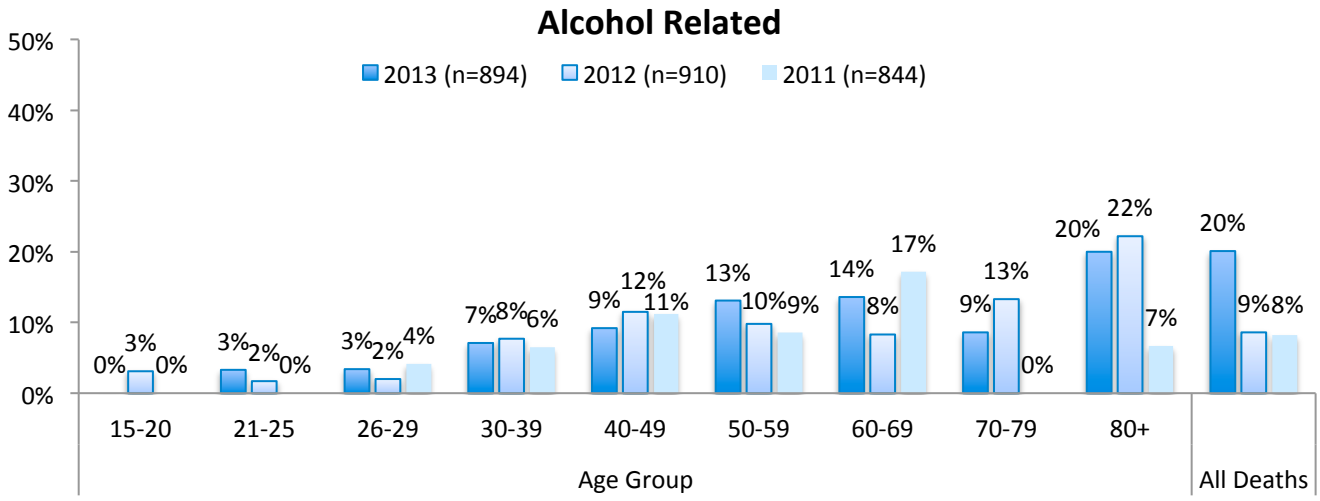
Manner Type*

Age Group	0-14 (n=8)	15-20 (n=18)	21-25 (n=61)	26-29 (n=89)	30-39 (n=141)	40-49 (n=207)	50-59 (n=222)	60-69 (n=103)	70-79 (n=35)	80+ (n=10)	All Deaths (n=894)
Alcohol Related	-	-	3.3%	3.4%	7.1%	9.2%	13.1%	13.6%	8.6%	20.0%	9.2%
Alcohol/Medication	-	-	3.3%	1.1%	2.1%	1.9%	4.1%	3.9%	2.9%	-	2.7%
Drug Related	75.0%	16.7%	23.0%	18.0%	21.3%	27.5%	25.2%	13.6%	8.6%	10.0%	22.4%
Firearms	-	16.7%	13.1%	27.0%	12.1%	9.7%	13.1%	19.4%	25.7%	30.0%	14.9%
Hanging	-	-	4.9%	9.0%	6.4%	6.3%	3.6%	-	-	-	4.6%
Medication	12.5%	5.6%	14.8%	18.0%	36.9%	27.1%	25.7%	35.9%	45.7%	20.0%	27.6%
Medication/Drugs	-	-	1.6%	2.2%	3.5%	3.9%	4.5%	4.9%	-	-	3.5%
Motor Vehicle	12.5%	50.0%	29.5%	18.0%	6.4%	8.7%	6.8%	3.9%	5.7%	20.0%	10.5%

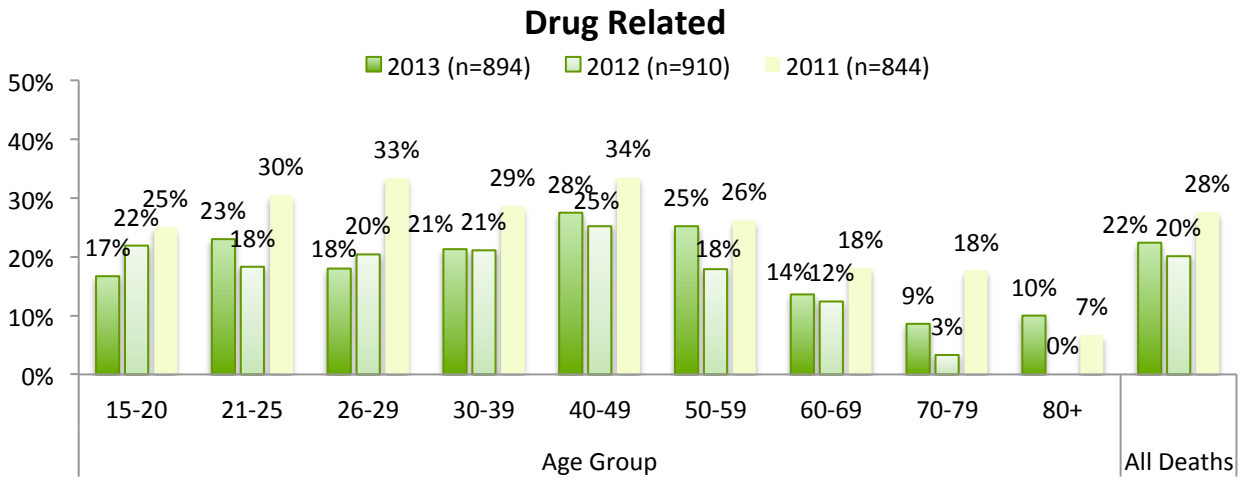
*Only 852 (95.3%) of the 894 deaths are represented on this table. Manner types under 2% are not displayed.

Select Manner Type Graphs

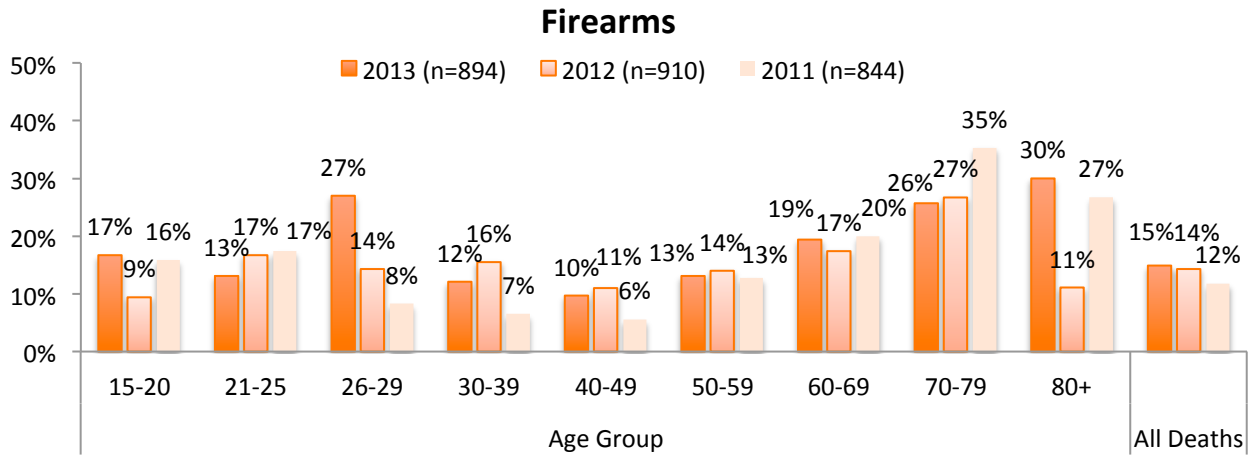
In 2013, 9.2% of deaths were alcohol related compared to 8.2% in 2011 and 8.6% in 2012.



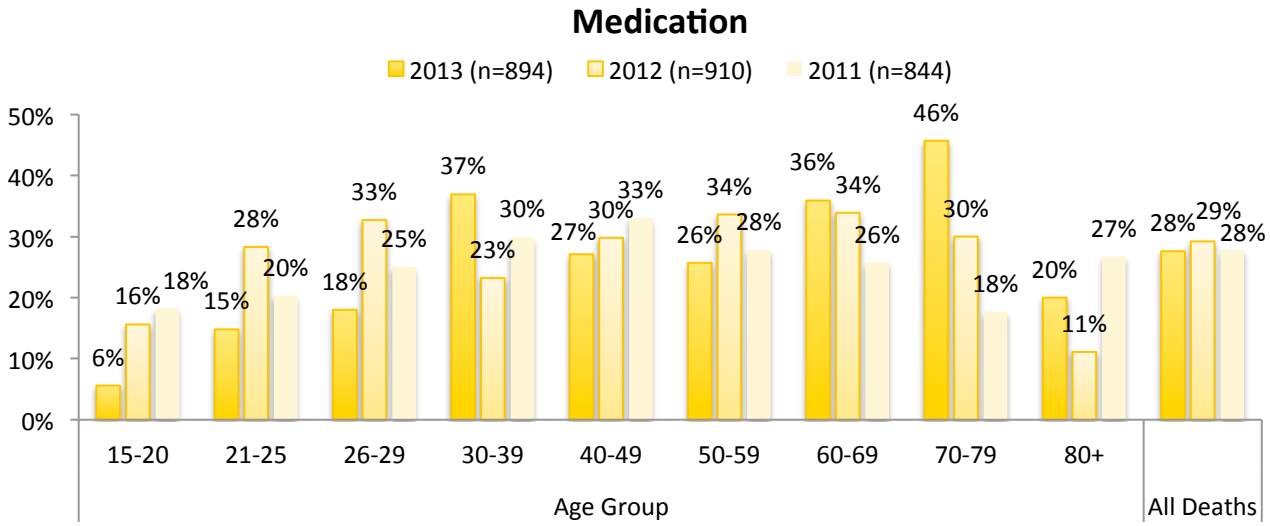
In 2013, 22.4% of deaths were drug related compared to 27.6% in 2011 and 20.1% in 2012.



In 2013, 14.9% of deaths were due to firearms compared to 11.8% in 2011 and 14.3% in 2012.

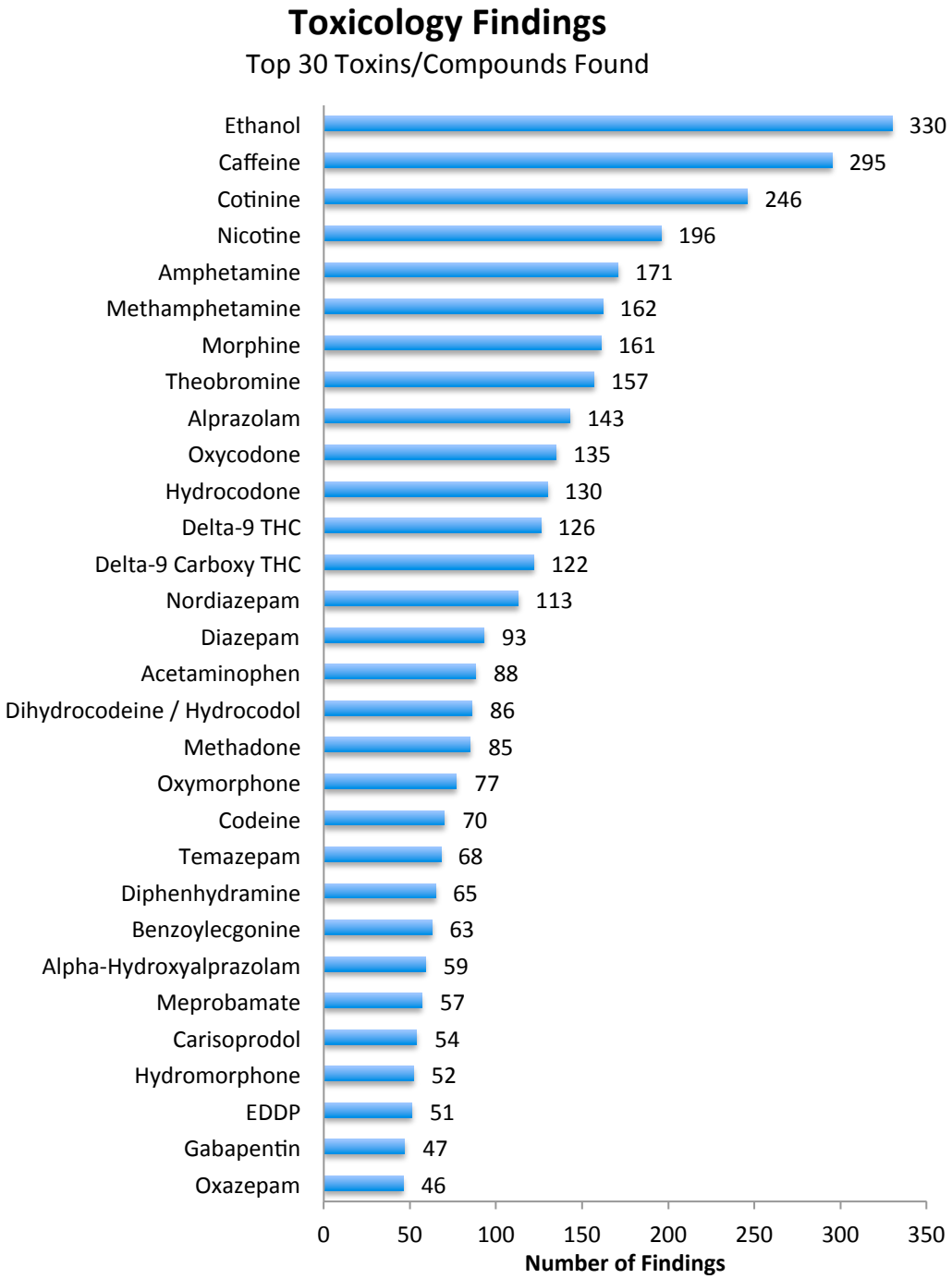


In 2013, 27.6% of deaths were due to medication compared to 27.7% in 2011 and 29.2% in 2012.



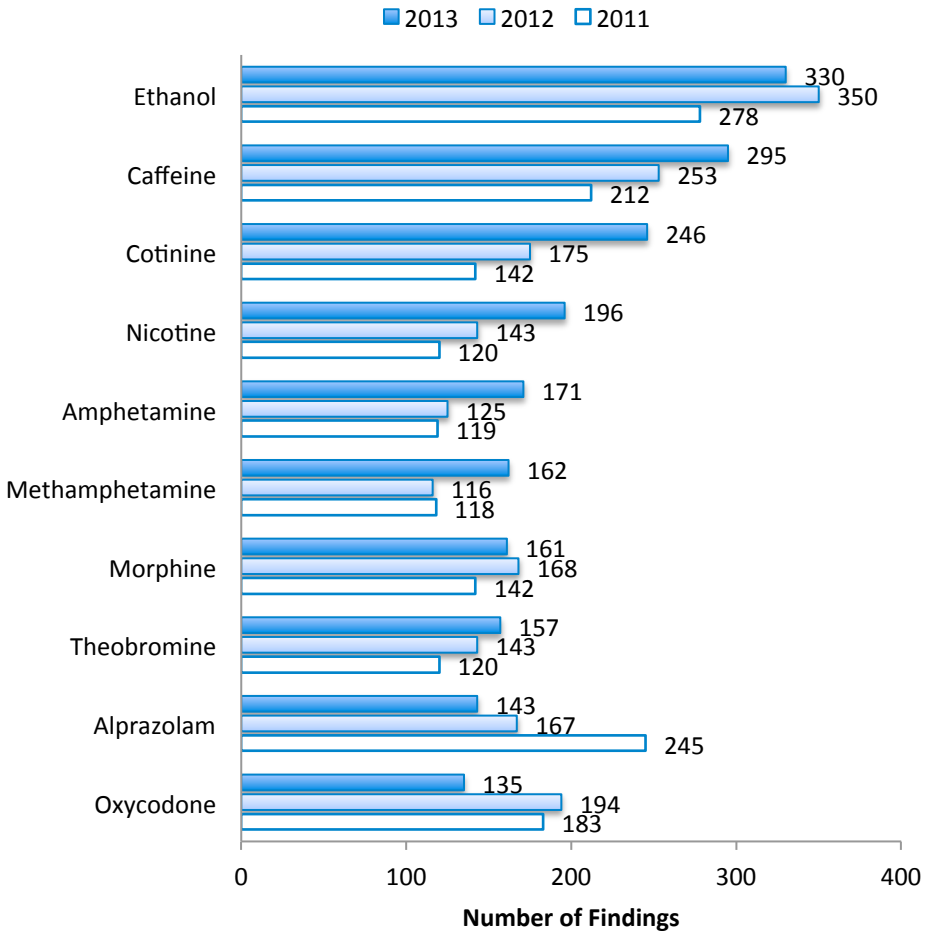
Toxicology Findings

The following section has the toxicology findings for the 894 deaths analyzed in this report. Toxicology screens often found more than one compound (up to as many as 25 toxins) in the decedents. Some of the toxins contributed to death, while others were not necessarily at lethal levels. The following graph has the top 30 toxins found in the toxicology findings (for details about the top 30 toxins see Appendix B).



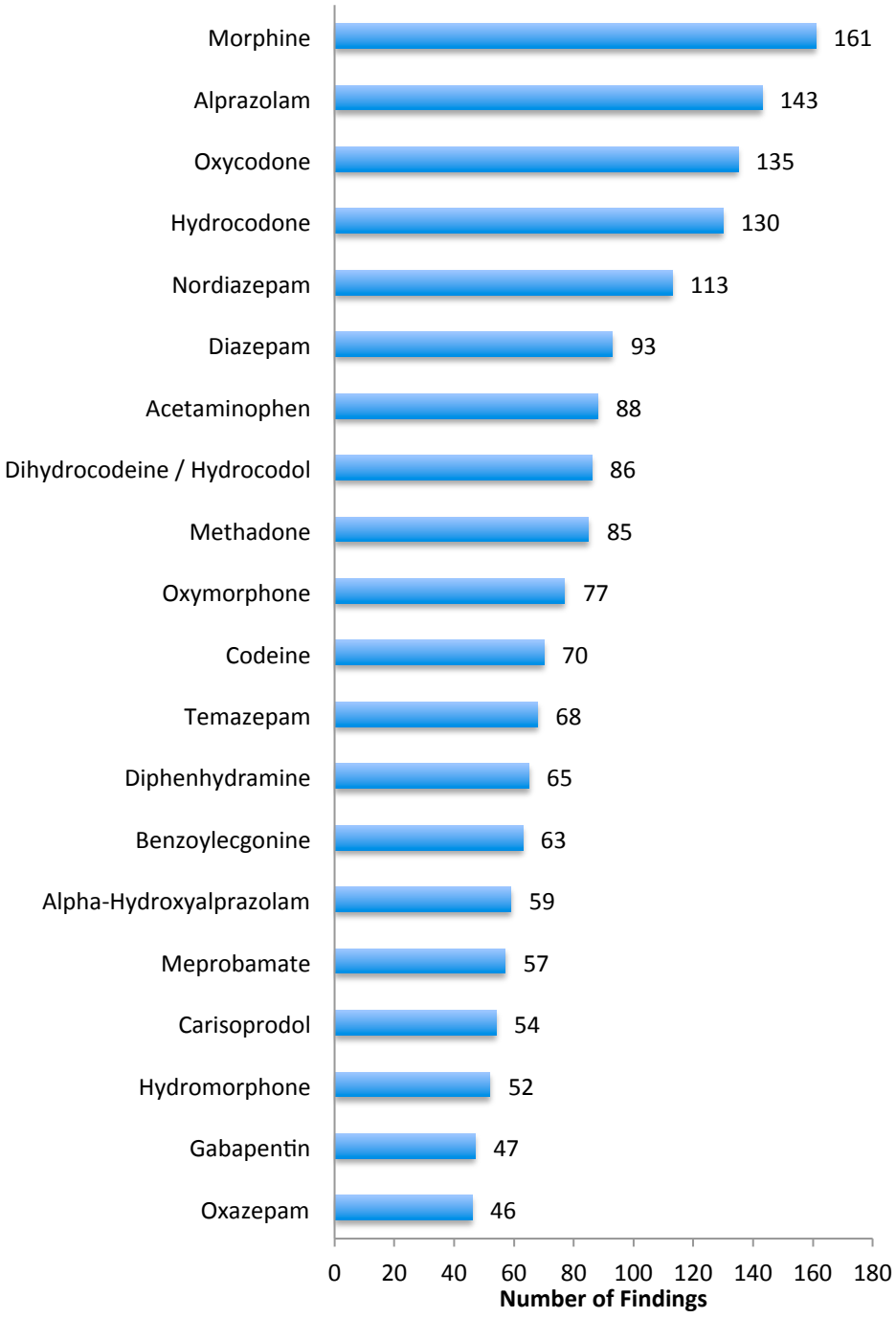
Top 10 Toxins from 2013

Compared with 2011 and 2012 Toxicology Findings



Top Toxicological Compounds including Prescriptions

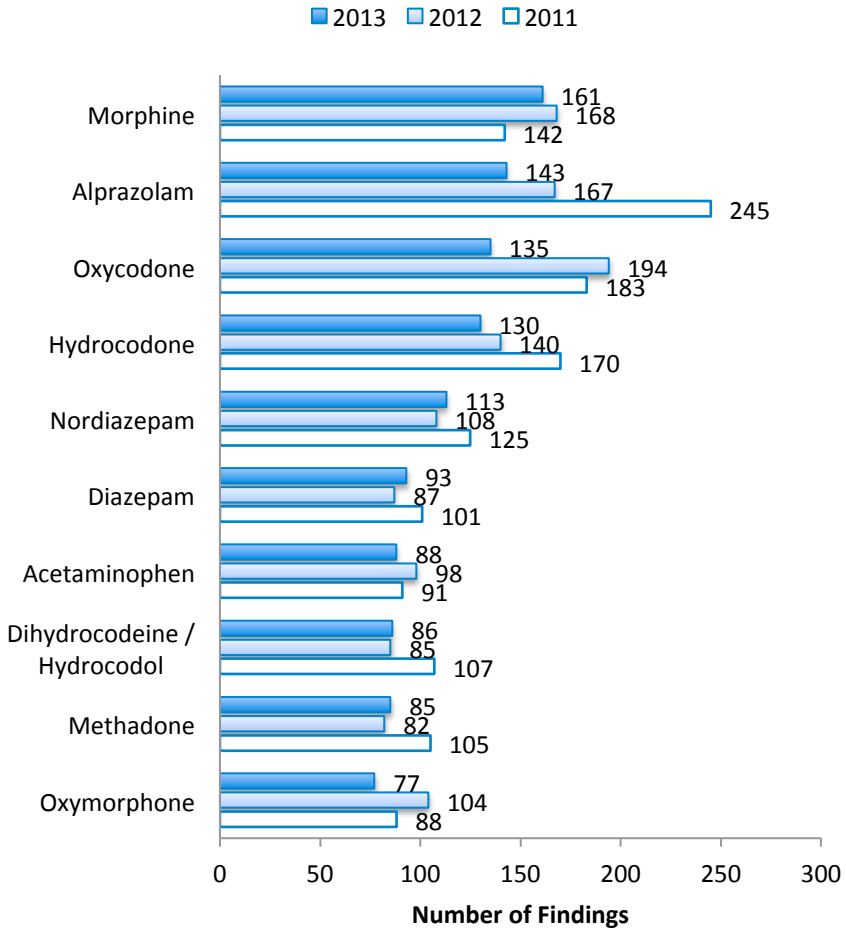
(Excerpted from previous graph)



Top 10 Toxicological Compounds 2013

including Prescriptions

Compared with 2011 & 2012 Toxicology Findings



The following table has the list of toxicology findings for the 894 substance related deaths, ordered by number of deceased that were found with positive findings for each substance. This list can also be found in Appendix A in alphabetical order.

Toxicology Screen Findings	Number of Positive Findings
Ethanol	330
Caffeine	295
Cotinine	246
Nicotine	196
Amphetamine	171
Methamphetamine	162
Morphine	161
Theobromine	157
Alprazolam	143
Oxycodone	135
Hydrocodone	130
Delta-9 THC	126
Delta-9 Carboxy THC	122
Nordiazepam	113
Diazepam	93
Acetaminophen	88
Dihydrocodeine / Hydrocodol	86
Methadone	85
Oxymorphone	77
Codeine	70
Temazepam	68
Diphenhydramine	65
Benzoylecgonine	63
Alpha-Hydroxyalprazolam	59
Meprobamate	57
Carisoprodol	54
Hydromorphone	52
EDDP	51
Gabapentin	47
Beta-Phenethylamine	46
Oxazepam	46
Cyclobenzaprine	41
7-Amino Clonazepam	40
Ibuprofen	38
Norcyclobenzaprine	37
6-Monoacetylmorphine - Free	35
Citalopram / Escitalopram	35
Cocaine	33
Zolpidem	31

Toxicology Screen Findings (con't)	**Number of Positive Findings**
Desmethylsertraline	28
Lorazepam	28
Nortriptyline	27
Phenylpropanolamine	27
Sertraline	27
Quetiapine	26
Tramadol	26
Trazodone	25
Amitriptyline	25
Cannabinoids	25
Norfluoxetine	24
Noroxycodone	24
Clonazepam	23
O-Desmethyltramadol	23
Atropine	21
Methylecgonine	20
Dextro / Levo Methorphan	18
Fluoxetine	18
Levamisole	18
Acetone	17
Cocaethylene	17
Lidocaine	17
Naproxen	17
Butalbital	16
Chlordiazepoxide	15
Hydroxyzine	15
Amlodipine	14
6-MAM - Free	13
Doxylamine	13
Promethazine	13
Fentanyl	12
Hydroxycotinine	12
Norfentanyl	12
O-Desmethylvenlafaxine	12
Theophylline	12
Topiramate	12
Venlafaxine	12
Norpseudoephedrine	11
Phenobarbital	10
11-Hydroxy Delta-9 THC	9
Hydroxybupropion	9
Lamotrigine	9

Toxicology Screen Findings (con't)	**Number of Positive Findings**
Metoprolol	9
Norbuprenorphine - Free	9
Propoxyphene	9
Bupropion	8
Desmethylmirtazapine	8
Etomidate	8
Isopropanol	8
Midazolam	8
Mirtazapine	8
Monoethylglycinexylidide (MEGX)	8
Olanzapine	8
Phentermine	8
Carboxyhemoglobin	7
Chlorpheniramine	7
Desmethylcitalopram	7
Dextrorphan / Levorphanol	7
Ephedrine	7
Ethylecgonine	7
Levetiracetam	7
Pseudoephedrine	7
Duloxetine	6
Guaifenesin	6
Hydroxyethylflurazepam	6
Trimethoprim	6
Buprenorphine - Free	5
Diltiazem	5
Gamma-Hydroxybutyric Acid	5
Methylephedrine	5
Metoclopramide	5
Phencyclidine	5
Quinine	5
10-Hydroxycarbazepine	4
Doxepin	4
Fluconazole	4
Norcodeine	4
Paroxetine	4
Phenytoin	4
Verapamil	4
1,1-Difluoroethane	3
Carbamazepine	3
Carbamazepine-10, 11 Epoxide	3
Descarboethoxyloratadine	3

Toxicology Screen Findings (con't)	**Number of Positive Findings**
Desmethyldoxepin	3
Donepezil	3
EMDP	3
Loratadine	3
Methocarbamol	3
Norpropoxyphene	3
Oxcarbazepine	3
Pentobarbital	3
Antimony	2
Carbon Monoxide	2
Cyanide	2
Haloperidol	2
Hydroxychloroquine	2
Iron	2
Lead	2
MDA	2
MDMA	2
Metaxalone	2
Normeperidine	2
Opiates	2
Pregabalin	2
Propofol	2
Ropinirole	2
Selenium	2
Tapentadol - Free	2
Triazolam	2
1-Hydroxymidazolam	1
7-Hydroxymitragynine	1
Alpha-Chlordane	1
Atomoxetine	1
Baclofen	1
Benztropine	1
Betahydroxybutyric Acid	1
Bismuth	1
Buspirone	1
Chlorpromazine	1
Clonidine	1
Cyproheptadine	1
Desalkylflurazepam	1
Eszopiclone / Zopiclone	1
Flurazepam	1
Gemfibrozil	1

Toxicology Screen Findings (con't)	**Number of Positive Findings**
Lacosamide	1
Laudanosine	1
Meperidine	1
Methorphan	1
Methoxychlor	1
Mitragynine	1
Nifedipine	1
Orphenadrine	1
Phenazepam	1
Phenmetrazine	1
Prochlorperazine	1
Tadalafil	1
Ticlopidine	1
Warfarin	1

Conclusion

This report describes the substance related deaths in Clark County for the most recent three-year period. The data provided can inform decisions of policy makers, municipal and county planners, and public health advocates. This report aims to assist in appropriately identifying and prioritizing trends and emerging issues in Clark County.

This report also highlights the prevalence of compounds that are prescribed and found in common medications in typical households in every community in the United States. The effects of the misuse of these prescription drugs, and the corresponding rise in deaths due to their misuse, or to their interaction with other legal substances, and sometimes their interaction with illicit substances, continue to impact communities throughout the country. Drug related deaths have been rising steadily over the past two decades and have become the leading cause of injury death in the United States.

Prescription drug use/misuse continues to be a growing epidemic for Clark County - indiscriminate to age, race, social class, economic status, or geographic location; accounting for many of these deaths involving opioid analgesics (prescription painkillers) and benzodiazepines. We hope this publication will help inform Nevada's on-going conversation about what can be done to address this crisis.

Appendix A

Toxicology Screen Findings

Toxicology Screen Findings in alphabetical order

Toxicology Screen Findings	Number of Positive Findings
1-Hydroxymidazolam	1
1,1-Difluoroethane	3
10-Hydroxycarbazepine	4
11-Hydroxy Delta-9 THC	9
6-MAM - Free	13
6-Monoacetylmorphine - Free	35
7-Amino Clonazepam	40
7-Hydroxymitragynine	1
Acetaminophen	88
Acetone	17
Alpha-Chlordane	1
Alpha-Hydroxyalprazolam	59
Alprazolam	143
Amitriptyline	25
Amlodipine	14
Amphetamine	171
Antimony	2
Atomoxetine	1
Atropine	21
Baclofen	1
Benzoylecgonine	63
Benztropine	1
Beta-Phenethylamine	46
Betahydroxybutyric Acid	1
Bismuth	1
Buprenorphine - Free	5
Bupropion	8
Buspirone	1
Butalbital	16
Caffeine	295
Cannabinoids	25
Carbamazepine	3
Carbamazepine-10, 11 Epoxide	3
Carbon Monoxide	2
Carboxyhemoglobin	7
Carisoprodol	54
Chlordiazepoxide	15
Chlorpheniramine	7
Chlorpromazine	1
Citalopram / Escitalopram	35
Clonazepam	23

Toxicology Screen Findings (con't)	**Number of Positive Findings**
Clonidine	1
Cocaethylene	17
Cocaine	33
Codeine	70
Cotinine	246
Cyanide	2
Cyclobenzaprine	41
Cyproheptadine	1
Delta-9 Carboxy THC	122
Delta-9 THC	126
Desalkylflurazepam	1
Descarboethoxyloratadine	3
Desmethylcitalopram	7
Desmethyldoxepin	3
Desmethylmirtazapine	8
Desmethylsertraline	28
Dextro / Levo Methorphan	18
Dextrorphan / Levorphanol	7
Diazepam	93
Dihydrocodeine / Hydrocodol	86
Diltiazem	5
Diphenhydramine	65
Donepezil	3
Doxepin	4
Doxylamine	13
Duloxetine	6
EDDP	51
EMDP	3
Ephedrine	7
Eszopiclone / Zopiclone	1
Ethanol	330
Ethylecgonine	7
Etomidate	8
Fentanyl	12
Fluconazole	4
Fluoxetine	18
Flurazepam	1
Gabapentin	47
Gamma-Hydroxybutyric Acid	5
Gemfibrozil	1
Guaifenesin	6
Haloperidol	2
Hydrocodone	130
Hydromorphone	52
Hydroxybupropion	9

Toxicology Screen Findings (con't)	**Number of Positive Findings**
Hydroxychloroquine	2
Hydroxycotinine	12
Hydroxyethylflurazepam	6
Hydroxyzine	15
Ibuprofen	38
Iron	2
Isopropanol	8
Lacosamide	1
Lamotrigine	9
Laudanosine	1
Lead	2
Levamisole	18
Levetiracetam	7
Lidocaine	17
Loratadine	3
Lorazepam	28
MDA	2
MDMA	2
Meperidine	1
Meprobamate	57
Metaxalone	2
Methadone	85
Methamphetamine	162
Methocarbamol	3
Methorphan	1
Methoxychlor	1
Methylecgonine	20
Methylephedrine	5
Metoclopramide	5
Metoprolol	9
Midazolam	8
Mirtazapine	8
Mitragynine	1
Monoethylglycinexylidide (MEGX)	8
Morphine	161
Naproxen	17
Nicotine	196
Nifedipine	1
Norbuprenorphine - Free	9
Norcodeine	4
Norcyclobenzaprine	37
Nordiazepam	113
Norfentanyl	12
Norfluoxetine	24
Normeperidine	2

Toxicology Screen Findings (con't)	**Number of Positive Findings**
Noroxycodone	24
Norpropoxyphene	3
Norpseudoephedrine	11
Nortriptyline	27
O-Desmethyltramadol	23
O-Desmethylvenlafaxine	12
Olanzapine	8
Opiates	2
Orphenadrine	1
Oxazepam	46
Oxcarbazepine	3
Oxycodone	135
Oxymorphone	77
Paroxetine	4
Pentobarbital	3
Phenazepam	1
Phencyclidine	5
Phenmetrazine	1
Phenobarbital	10
Phentermine	8
Phenylpropanolamine	27
Phenytoin	4
Pregabalin	2
Prochlorperazine	1
Promethazine	13
Propofol	2
Propoxyphene	9
Pseudoephedrine	7
Quetiapine	26
Quinine	5
Ropinirole	2
Selenium	2
Sertraline	27
Tadalafil	1
Tapentadol - Free	2
Temazepam	68
Theobromine	157
Theophylline	12
Ticlopidine	1
Topiramate	12
Tramadol	26
Trazodone	25
Triazolam	2
Trimethoprim	6
Venlafaxine	12
Verapamil	4
Warfarin	1
Zolpidem	31

Appendix B

Toxicology Glossary

Details of substance and usage from the top 30 toxins found in the toxicology findings in alphabetical order (see next page). Schedules were defined using the Nevada Administrative Code (http://www.leg.state.nv.us/nac/NAC-453.html#NAC453Sec510).

Toxicology Glossary				
	Substance	**Schedule**	**Usage**	**Description/Physical Effects**
1	Acetaminophen	Other	Pain relief, fever reducer	Pain relief
2	Alpha-Hydroxyalprazolam	IV	Treats anxiety, panic disorder, insomnia, anxiety caused by depression	Anti-anxiety and sedative-hypnotic drugs. Found in Xanax, Alprazolam
3	Alprazolam	IV	Treats anxiety, panic disorder, insomnia, anxiety caused by depression	Anti-anxiety and sedative-hypnotic drug
4	Amphetamine	II	Performance enhancer	Psychostimulant increases wakefulness, focus, decreases fatigue & appetite
5	Benzoylecgonine	I	In prescription drug Esterom. Topical analgesic	Main metabolite of cocaine
6	Caffeine	Other	Stimulant	Bitter, white crystalline xanthine alkaloid in beverages (coffees, teas)
7	Carisoprodol	IV	Muscle relaxant treats pain, injuries, musculoskeletal conditions	Sedative, muscle relaxant
8	Codeine	I	Treats pain, cough. Opioid. Used recreationally as depressant	Narcotic pain reliever
9	Cotinine	Other	Detect accuracy of self-reported non-smoking. Recreationally snorted, smoked	Alkaloid found in tobacco; metabolite of nicotine
10	Delta-9 Carboxy THC	I	Recreationally smoked, ingested as marijuana	Ingredient of marijuana
11	Delta-9THC	I	Recreationally smoked, ingested as marijuana	Ingredient of marijuana
12	Diazepam	IV	Treats anxiety, muscle spasms, and seizures. Recreationally as depressant	Valium
13	Dihydrocodeine/ Hydrocodol	I-IV based upon dose	Treats pain, severe shortness of breath, cough suppressant	Semi-synthetic opioid analgesic
14	Diphenhydramine	Other	Anticonvulsant, depressant, muscle relaxants, sedatives, antihistamine	Oral: Tranquilizers, sleep inducers, motion sickness, Parkinson's disease, seasonal allergies
15	EDDP	II	Methadone treatment for chronic pain, substance abuse	Primary metabolite in methadone

16	Ethanol	Other	Recreational drinking	Alcohol, ethyl alcohol, pure alcohol, grain alcohol, or drinking alcohol, is a volatile, flammable, colorless liquid
17	Gabapentin	Other	Anti-epileptic, anticonvulsant. Treatment for seizures, nerve pain of herpes, shingles	Active ingredient: Neurontin; oral: nerve pain, seizure control, insomnia, bipolar disorder
18	Hydrocodone	II	Treats moderate to severe pain	Narcotic pain reliever often prescribed with acetaminophen
19	Hydromorphone	II	Treats moderate to severe pain	Oral, injectable; Narcotic pain reliever derived from morphine; also Dilaudid
20	Meprobamate	IV	Treats tension, anxiety, nervousness. Tablets used recreationally	Sedative may cause drowsiness, dizziness, blurred vision
21	Methadone	II	Severe pain. Reduces withdrawal symptoms for heroin, RX painkiller addiction	Opioid pain reliever derived from heroin
22	Methamphetamine	I	Treats ADHD, obesity. Recreationally: intravenous, insufflation, inhalation, suppository	Central nervous system stimulant. Rapid heart rate, shortness of breath, confusion, dizziness
23	Morphine	II	Treats moderate to severe pain. Rapid-release morphine used for immediate pain relief	Narcotic pain reliever
24	Nicotine	Other	Provides nicotine to replace cigarettes (Nicorette, Nicoderm, Nicotrol, Nicorelief, Commit.) Smoked, insufflated, chewed, transdermal, vaporized	Alkaloid from nightshade family of plants acts as a nicotinic acetylcholine receptor agonist.
25	Nordiazepam	IV	Anticonvulsant, anxiolytic, muscle relaxant and sedative properties	Also desoxydemoxepam, and desmethyldiazepam
26	Oxazepam	IV	Anticonvulsant, anti-anxiety, used to treat irritable bowel syndrome	Benzodiazepine; aka Serax. May cause dizziness, drowsiness, irregular heartbeat, breathing difficulty
27	Oxycodone	II	Treats moderate to severe pain. Rapid-release oxycodone used for immediate pain relief. Recreationally as depressant	Narcotic derived from poppy seeds
28	Oxymorphone	II	Treats moderate to severe pain	Narcotic pain reliever, semi-synthetic opioid analgesic
29	Temazepam	IV	Insomnia	Benzodiazepine
30	Theobromine	Other	Diuretic, stimulant, lowers blood pressure, cough medicine	Alkaloid of the cacao plant found in chocolate, tea, cola nuts