

Alcoholism In New Mexico

New Mexico
Supercomputing Challenge
Final Report
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Team 15
Capital High School

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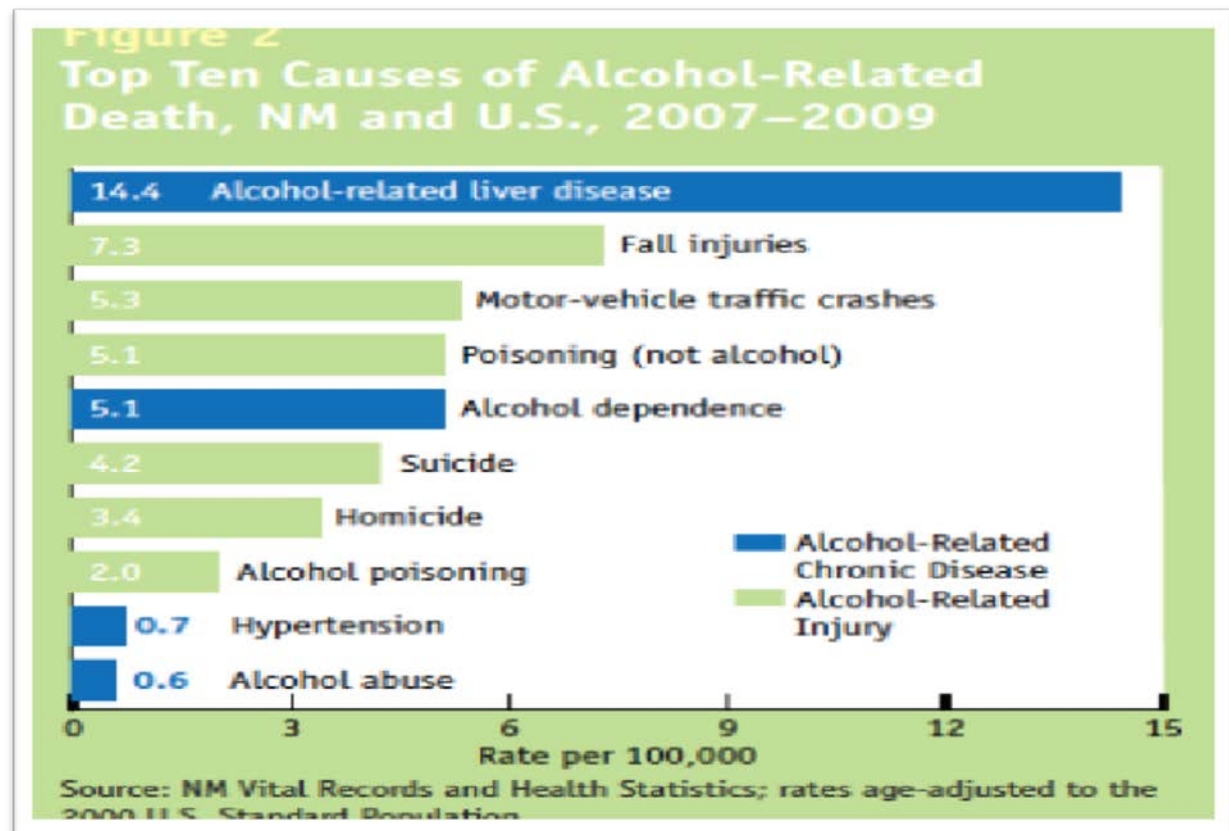
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1. Executive Summary

Excessive alcohol consumption in the United States is the third leading preventable cause of death, and responsible for more than 75,000 deaths per year. According to the Community Prevention Services, in 2006, the cost of such expense consumption was \$223. 4 billion. However, New Mexico's alcohol related death rates are higher than the nation's. Initially, people consume alcohol to feel cheerful and relaxed but excessive alcohol consumption can lead to heavy drinking, binge drinking and drinking by pregnant women and youth. It also contributes to many health problems that arise overtime. Chronic heavy drinking often results in alcohol-related chronic diseases such as Osteoporosis, Cirrhosis, stroke and more. Binge drinking is linked to alcohol-related injuries like vehicle crashes, homicides, suicides, DWIs', falls and more. Overall alcohol can harm one's health, social relationships, job, lifestyle and the ability to function well in society.

This data of Alcohol-related health problems can result from either chronic or acute abuse of alcohol.



2. Introduction

2.1 WHAT IS ALCOHOLISM?

Alcoholism is a broader term for problems with alcohol and it is usually refer as alcohol dependence or alcohol addiction. Such non-discriminatory disease is the most severe stage of drinking problem that begins with binge drinking and alcohol abuse. It seems unlikely that alcoholism is considered a disease but it is one, and a deadly one if left untreated.

In addition, individuals with this chronic and often progressive disease have a strong urge to drink and find it hard to restrain themselves from drinking. Alcoholism involves all the symptoms of alcohol abuse and physical dependence on alcohol. Most of all it includes tolerance or withdrawal from the alcohol substance. Something to note is that alcoholism and alcohol dependence are two different forms of problem drinking.

An alcoholic person may feel nauseous, sweaty, shaky and anxious when they go without a drink. In the first stage of alcoholism the want to drink is no longer for social reasons but for the psychological escape of stress, problems and tension. The second stage of alcoholism is when the need to drink become more intense and the drinker begin to drink early in the day. The third stage is when individual had lost control over drinking and is unable to drink in accordance with his or her intentions.

2.2 WHAT IS ALCOHOL ABUSE?

Alcohol abuse differs from alcoholism in that drinking leads to problems but not physical addiction like alcoholism. In other words, a person with alcohol abuse doesn't present all alcoholism symptoms and surely doesn't need an increase in their alcohol consumption to feel satisfied. However, alcohol abuse can lead to alcoholism.

Note:

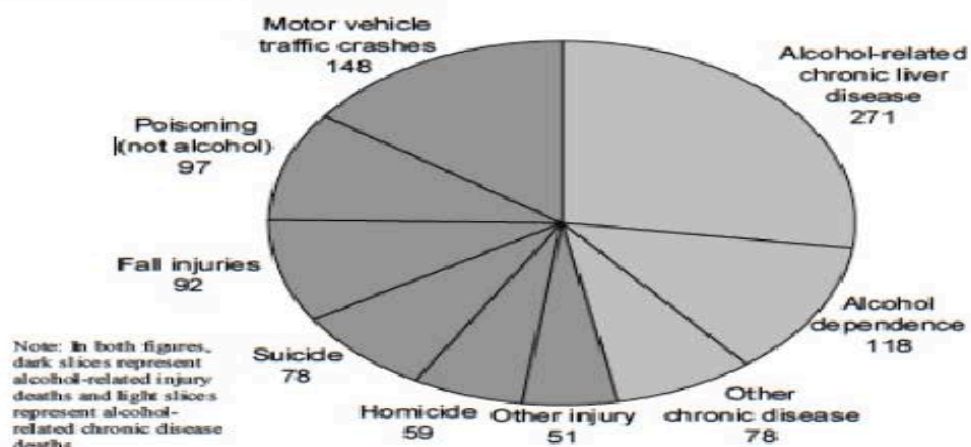
In both figures, dark slices represent alcohol-related injury deaths and light slices represent alcohol related chronic disease deaths.

The New Mexico Epidemiology estimates that around 1,000 deaths in New Mexico were related to alcohol in 2006 and it represents more than 27,000 years of potential life lost.

Alcohol use and misuse is the third leading cause of preventable death in the United States.

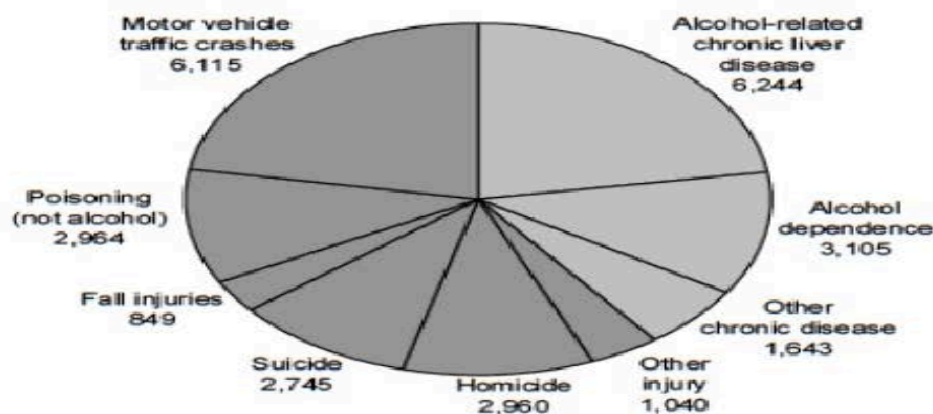
Jim Roeber, MSPH
Epidemiology and Response Division
New Mexico Department of Health

Figure 1. Alcohol-attributable Deaths by Cause New Mexico, 2006



Source: NMDOH BVRHS death file; CDC ARDI alcohol attributable fractions

Figure 2. Average Annual Alcohol-attributable Years of Potential Life Lost* by Cause, New Mexico 2001-05



Source: CDC ARDI

* Years of potential life lost (YPLLs) estimate the average years a person would have lived if he or she had not died prematurely.

Table represents Economic Cost of Alcohol Abuse, New Mexico, 2006

In 2007 the economic cost of alcohol abuse in New Mexico was estimated to be \$2.8 billion or more than \$1,400 for every person in the state. Representing an 11% increase in both per capital costs over the cost reported for the year 2006. This increase was due to an increase in New Mexico's alcohol-related death rate. In 2006 48.8 death per 100,000 were reported and in 2007 54.2 deaths per 100,000 were reported. This information was gathered from the Substance Abuse Epidemiology Program, Injury and Behavior Epidemiology Bureau Epidemiology and Response Division, New Mexico Department of Health. The distribution of this cost is described by category in the following table.

Cost Component	Costs (\$ In Millions)*	Percent of Costs
HEALTH CARE COSTS		
Alcohol-related prevention and treatment services	\$81	3%
Medical consequences of alcohol consumption	\$334	13%
	\$415	16%
PRODUCTIVITY COSTS (LOST EARNINGS)		
Lost future earnings due to premature alcohol-related deaths	\$493	20%
Lost earnings due to alcohol-related illness	\$1,183	47%
Lost earnings due to alcohol-related crime (incarceration and victimization)	\$110	4%
	\$ 1,786	71%
OTHER SOCIAL COSTS		
Crimes -- criminal justice and property damage	\$79	3%
Social welfare program administration	\$8	0%
Motor vehicle crashes -- property damage	\$215	9%
Fires -- property damage	\$15	1%
	\$318	13%
TOTAL COSTS	\$2, 519	100%
* 2006 dollars Source: New Mexico Department of Health, Epidemiology and Response Division		

2.3 FACTORS THAT MORE LIKELY LEAD TO ALCOHOLISM AND ALCOHOL ABUSE

- Peer pressure
- Depression (ex: bipolar disorder, anxiety disorder, schizophrenia).
- Easy access to alcohol
- Low self-esteem
- Relationship problems
- Stressful lifestyles
- Culture or religious beliefs
- History of childhood abuse

2.4 ALCOHOL ABUSE SYMPTOMS

Alcohol abuse have to some degree a limit to how much they alcohol they intake. The main concern with alcohol abusers is that they are self-destructive and harmful to themselves or others.

- Constantly neglecting ones responsibilities at work, home or school because of drinking.
- Putting oneself to physical danger such as driving while intoxicated, mixing alcohol with medications.
- Repeated legal problems that have to do with drinking. Ex: DWI
- Continuation to drink though alcohol use is causing problems in one's relationship
- Drinking as a way to de-stress or relax

2.5 ALCOHOLISM SYMPTOMS

Relying on alcohol to function or feel physically urged to drink. This is considered being an alcoholic.

Tolerance symptoms: Tolerance symptoms are the first main warning signs of alcoholism.

- The need to drink greater amounts of alcohol once drinking has begun.
- Drinking more drinks than other people without getting drunk.

It all means that over time one needs more and more alcohol to feel the same effects.

Withdrawal symptoms: Withdrawal symptoms are the second major warning signs of alcoholism.

- Drinking to control the body shakes in the mornings.
- Drinking to relieve or avoid withdrawal symptoms.
- Loss control over drinking
- Not knowing how to quit
- Alcohol taking a great deal of energy and focus

Withdrawal symptoms include

- Anxiety or jumpiness
- Shakiness or trembling
- Nausea and vomiting
- Insomnia (sleeplessness)
- Depression
- Irritability
- Fatigue
- Loss of appetite
- Headaches
- In severe cases it can include hallucinations, seizures, confusions fever and agitation.

The following questions are used by the National Institute on Alcohol Abuse and Alcoholism to screen for alcohol abuse or dependence:

- ❖ Do you ever drive when you have been drinking?
- ❖ Do you have to drink more than before to get drunk or feel the desired effect?
- ❖ Have you felt that you should cut down on your drinking?
- ❖ Have you ever had any blackouts after drinking?
- ❖ Have you ever missed work or lost a job because of drinking?
- ❖ Is someone in your family worried about your drinking?

2.6 CONSEQUENCES OF DRINKING TOO MUCH

Alcohol enters the bloodstream as soon as one begins to drink. In other words, the first sip one takes. Alcohol appears in the blood within 10 minutes of consumption and as one drinks the amount of blood alcohol concentration (BAC) level in the blood increases. BAC is the amount of alcohol present in one's bloodstream. The higher the level the more impaired one becomes by alcohol's effects.

Such effects include:

- Slurred speech
- Confusion
- Memory problems
- Coma
- Death
- Breathing problems
- Motor impairment
- Slurred speech
- Concentration problems

Other risks of drinking may include:

- Car crashes and other accidents
- Risky behavior
- Suicide and homicide
- Violent behavior

Alcohol's Effects on the body

Drinking too much on a single occasion or overtime can cause serious health problems to the following body parts: Brain, Heart, Liver, Pancreas, cancer and immune system.

2.7 TREATMENT?

A healthcare provider will perform a physical exam along with above questions of the National Institute on Alcohol Abuse. Other tests that might be done are liver function test, blood count test and magnesium blood test. Liver function tests are common tests that are used to see how well the liver is working. Such test includes Albumin, Alpha-1 antitrypsin, ALP and more. Complete blood count test measures the number of red blood cells, the number of white blood cells, the total amount of hemoglobin in the blood and the hematocrit in the blood. The serum magnesium test is a measurement of how much magnesium there is in the blood.

The best treatment for the use of alcohol is to completely stop the consumption of it. However, at first it might be difficult but simply reducing the intake of alcohol can make a difference. There are a couple of medications that can aid as well as support groups. Treatment will depend on whether or not a person can stop drinking. Since drinking problems are also linked to social, economic and health problems.

2. 8 MODERATION AND BINGE DRINKING

According to the National Institute On Alcohol and Alcoholism, it states that research shows people who drink moderately are less likely to suffer from alcohol Use Disorder (AUD).

Men should drink no more than 4 drinks on a day and no more than 14 drinks per week.

Women should drink no more than 3 drinks on a day and no more than 7 drinks per week.

To avoid AUD one must stay within the limits and both on a single-day and weekly limits.

However, even with staying within this limits one can have health problems. Therefore, it is suggested that one should drink slowly and eat enough while drinking. This is an exception for certain groups such as pregnant women.

Heavy drinking

Means the consumption of the moderate levels suggested by the National Institute of Health as described above. This is why heavy drinking is consuming more than the single-day or weekly amounts of alcohol. It is estimated that one in four people who drink above these levels already had alcohol dependence or alcohol abuse problems.

Binge Drinking

Binge drinking means the over consumption of alcohol within two hours that raises the BAC level to reach 0.08g/dL. For men this occurs after 5 rinks and 4 for women. Individuals who drink in this manner are more at risk for car crashes and injuries. Over time it can cause liver and other organ damage.

2.9 WHAT IS A STANDARD DRINK?

A standard Drink varies. For instance, a light beer wine, malt liquor can have very different amounts of alcohol content. Many light beers have almost as much alcohol as regular beer-about 85% as much.

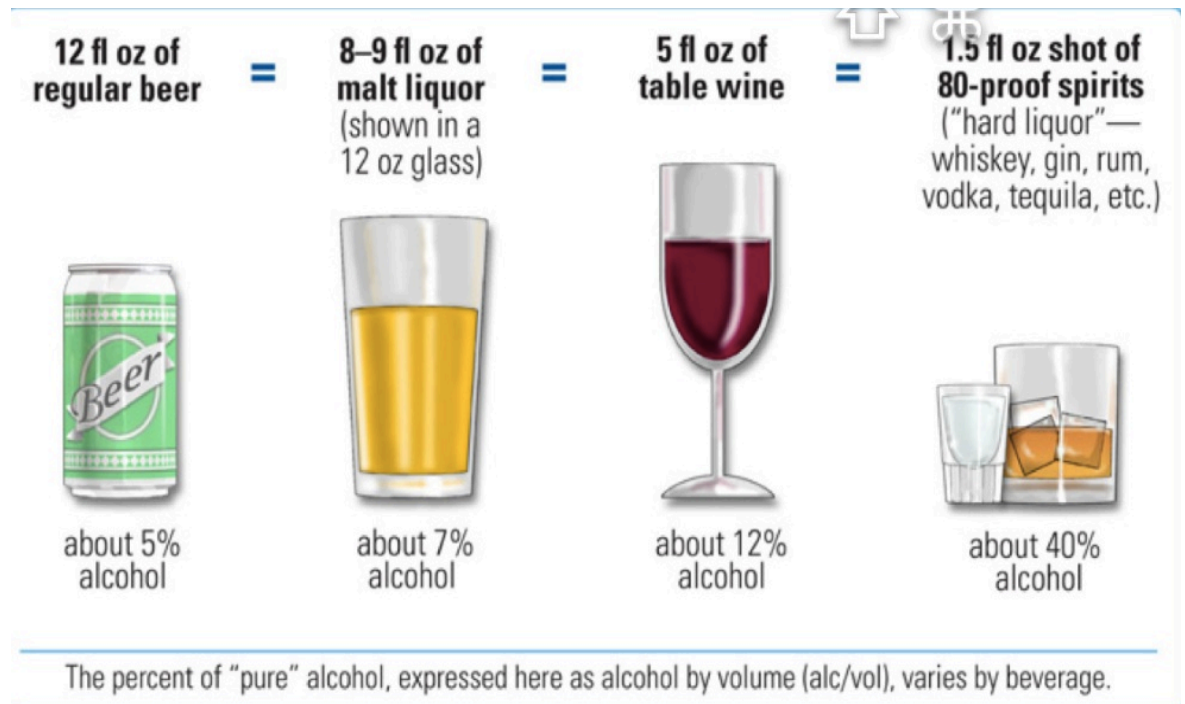
Regular beer: 5% alcohol content

Some light beers: 4.2 alcohol content

One standard drink in the United States contains about 14 grams of pure alcohol, which is found in:

- ❖ 12 ounces of regular beer, which is usually about 5% alcohol
- ❖ 5 ounces of wine, which is about 12% alcohol
- ❖ 1.5 ounces of distilled spirits, which is about 40% alcohol

This “standard” drink does not reflect the customary serving sizes. Ex: A single mixed drink made with hard liquor can contain 1 to 3 more standard drinks. Which depends on the type of recipe.



3. PROJECT DESCRIPTION

Alcohol in the United States is the third leading preventable cause of death, and responsible for more than 75,000 deaths per year. New Mexico's alcohol related death rates are higher than the nation's. Therefore our main focus was to conduct a research project in which we could define variables that had a correlation between each other. Such variables or factors would help us determine what might be the cause of the high rate of alcoholism. Targeting such factors can reduce the number of alcoholics, deaths and the high rate of alcohol. In order to do this we conducted a research in which three different surveys were created. The surveys asked for drinking questions and factors that we thought might have to do with this dilemma our state is facing. The first survey we created was for the students than for the staff at Capital High School. We initially planned to also distribute the student surveys to Santa Fe High School but we never got an approval to do so. The staff survey was also created to ask the staff at our school about alcohol. Later on, we created the community survey in which we surveyed people from different locations in Santa Fe.

THE FOLLOWING PAGES CONTAIN A SAMPLE OF THE SURVEYS WE CONDUCTED.

Student Survey

Below is a copy of the student survey we handed to students at our school. This surveyed helped us focus on the factors that mattered the most. We got 125 students surveys back and data was collected and gathered. Data was put on an Excel spread sheet. Out of these surveys 63 students said they drink out of 165 surveys, According to the New Mexico Epidemiology in 2007, among New Mexico high school students 34.8 percent of 9th graders and 49.0 percent of 12th graders reported consuming alcohol.

Super Computing Challenge

Please no names. This is anonymous.

Student Alcoholism Survey

- 1) Please circle one ...
 - a. Male
 - b. Female
- 2) What is your average physical activity?
 - a. Light
 - b. Medium
 - c. Hard
- 3) What is your age? _____
- 4) What is your average weight? _____lb
- 5) What is your ethnicity?
 - a. Hispanic/Latino
 - b. Indian/native
 - c. Caucasian
 - d. Pacific Islander
 - e. African American
 - f. Asian
 - g. Prefer not to specify
 - h. Other please write in _____
- 6) Do you drink?
 - a. Yes
 - b. No (please skip to question 12)
- 7) How often do you drink alcohol?
 - a. Daily
 - b. Weekly
 - c. Monthly
 - d. Only during special events
- 8) When you drink alcohol, what do you drink?
 - a. Wine
 - b. Beer
 - c. Hard liquor
 - d. Other _____
- 9) When you drink alcohol how much do you drink? (Circle all that apply)
 - a. 1 8oz cup
 - b. 2 8oz cups
 - c. 3 8oz cups
 - d. 4 or more 8oz cups
 - e. 1 shot
 - f. 2 shots
 - g. 3 shots
 - h. 4 or more shots
- 10) How do you get the alcohol?
 - a. Personal parent or guardian
 - b. Other parent or guardian
 - c. Friendly store clerk
 - d. Steal it
 - e. Friends over **21**
- 11) Do you or have you ever had a criminal record?
 - a. Yes
 - b. No
- 12) Have you ever engaged in criminal activity and not been caught?
 - a. Yes
 - (a) Fighting
 - (b) Speeding
 - (c) DWI
 - (d) Shoplifting
 - (e) Disturbing the peace
 - (f) Graffiti
 - (g) Trespassing
 - (h) Breaking and entering
 - (i) Domestic violence
 - (j) Out past state curfew (11:00pm)
 - (k) Vandalism
 - (l) Other _____
 - b. No

Data of New Mexico's Indicator-based Information System (NM-IBIS)

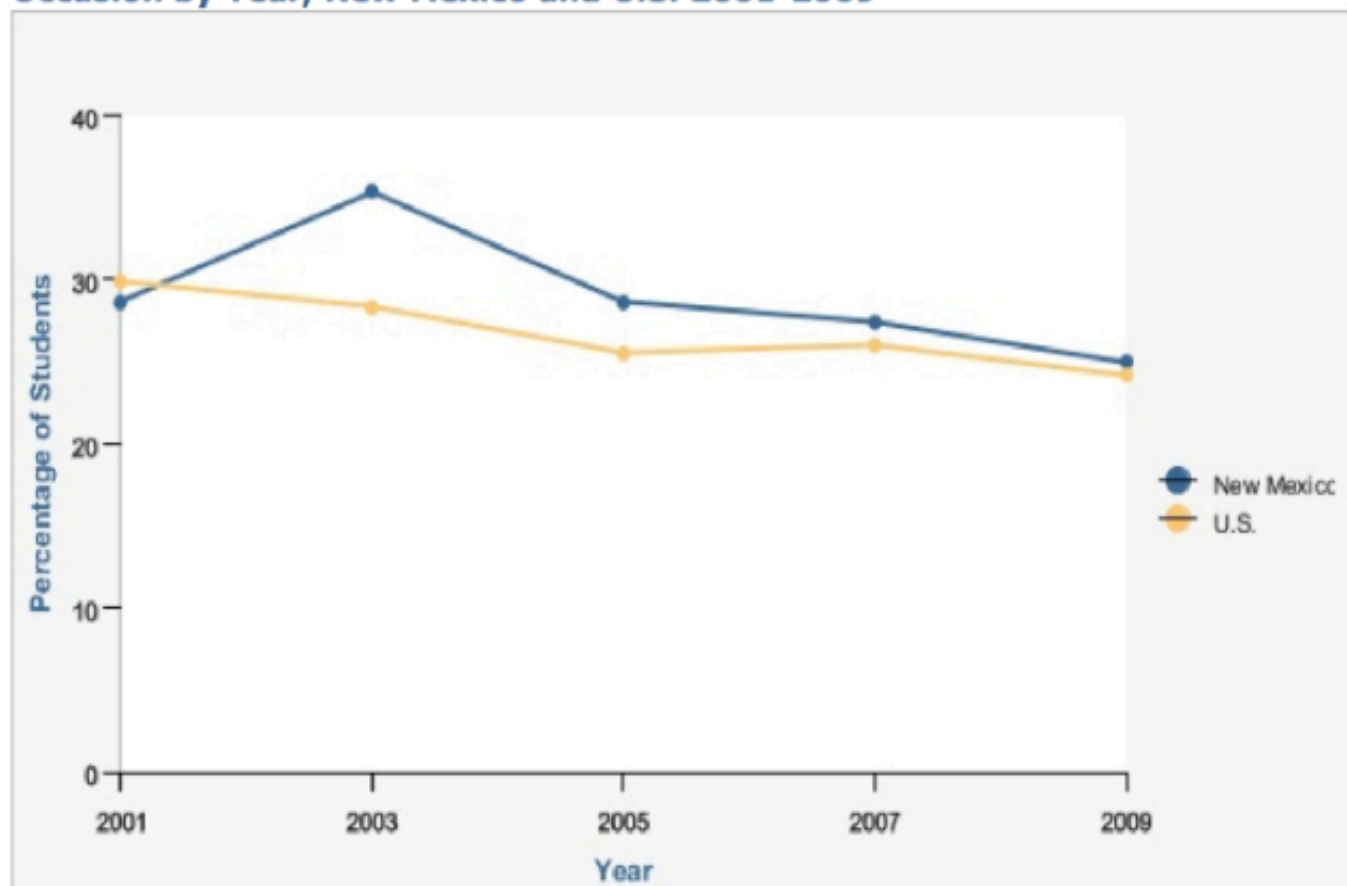
NM Health Department Reported the following data graph.

Section 1.01 How We Calculated the Rates

Numerator: Number of surveyed students who had five or more drinks of alcohol in a row, that is, within a couple of hours, on one or more of the past 30 days

Denominator: Number of high school students in the sample from the Youth Risk & Resiliency Survey

Percentage of Students Who Had Five or More Drinks of Alcohol on a Single Occasion by Year, New Mexico and U.S. 2001-2009



Staff Survey

A copy of the staff survey was sent to all the staff at the high school. Only 23 surveys were returned back to us and the data was small that we couldn't work with such data.

Super Computing Challenge

CHS Staff Alcoholism Survey

Please no names. This is
anonymous.

1) What is your gender?

- a. Male
- b. Female

2) What is income roughly per year?

- a. Less than 20,000
- b. Between 20,000-60,000
- c. Prefer not to respond

3) What is your average physical activity?

- a. Light
- b. Average
- c. Hard

4) What is your age? _____

5) What is your average weight?

_____lb.

6) What is your ethnicity?

- a. Hispanic/Latino
- b. Irish/Scottish
- c. Caucasian
- d. Pacific Islander
- e. African American
- f. Asian
- g. Prefer not to specify
- h. Other please write in

7) Do you or have you ever had a criminal record?

- a. Yes
- b. No

8) Have you ever engaged in criminal activity and not been caught?

A. Yes (if yes, circle below all that apply) _____ B. No

- (a) Fighting
- (b) Speeding
- (c) DWI
- (d) Disturbing the peace
- (e) Trespassing
- (f) Breaking and entering
- (g) Domestic violence

9) Do you smoke tobacco?

- a. Yes
- b. No

10) Have you ever consumed alcohol?

- a. Yes
- b. No

11) How often do you drink alcohol? (Circle only)

Once

- a. Daily
- b. Weekly
- c. Monthly
- d. Only during special events

12) When you drink alcohol, what do you drink? (Circle only one)

- a. Wine
- b. Beer
- c. Hard liquor
- d. Other _____

13) Do you engage in binge drinking? (5 or more drinks in a sitting)

- a. Yes
- b. No

14) How far do you drive to buy alcohol?

- a. Less than a mile
- b. 1 to 3 miles
- c. More than 3 miles

15) Do you ever mix recreational drugs and alcohol?

- a. Yes
- b. No

16) In the past month you went to work under the influence of alcohol?

- a. Once

Community survey

In the following community survey we investigating which surveys we had both in the staff and student survey. Then we determined which factors we wanted to find a correlation. Such correlations that we aimed to search depended on possible influential factors that might cause a person to drink and possibly become alcohol dependent overtime. In order to prevent further deaths and health complications of drinking, this survey below was conducted to see if such correlation exists. We hoped to find a few or correlations. The first correlation we intent to find is a correlation in the level of education of the individual and whether or not they drink. Another correlation we seek to find is a correlation in the distance of alcohol selling business and how far apart they are from each other. Lastly, the third correlation we hope to find is a correlation in the amount of money an individual spends on alcohol and the income they make. All three correlations might or not have a correlation but in order to figure this out we compiled all the factors that were more likely to lead us to the results/correlations we desire to find.

Community Alcoholism Survey Supercomputing Challenge

1. What is your age?

2. What is your gender?

- a. Female
b. Male

3. What is your ethnicity?

- a. Black, Non-Hispanic
b. American Indian/ Alaskan Native
c. Asian/ Pacific Islander
d. Hispanic
e. Caucasian
f. Other _____

4. How far do you live from a place that sells alcohol?
_____ Miles

5. What is your highest level of education?

- a. Less than high school
b. High school graduate/GED
c. Some college, no degree or certificate
d. Certificate Program
e. Associate's degree (2 years)
f. Bachelor's degree (4 years)
g. Masters degree (1 or 2 years of study)
h. Doctorate or Professional Degree

6. Please estimate your total income

- a. \$20,000 or less
b. about \$20,000 to \$30,000
c. about \$30,000 to \$40,000
d. about \$40,000 to \$60,000
e. about \$60,000 to \$100,000
f. \$100,000 or above

Anonymous Survey

8. Have you ever consumed alcohol?

- a. Yes
b. No
c. Used to

If applicable, at what age did you began consuming alcohol?

*If you answered yes to question 8,
then answer the rest of the questions.
If not, thank you for participating.*

9. On average how many serving per day do you drink?

_____ Servings Type of serving _____

According to the National Institute On Alcohol Abuse And Alcoholism (NIAAA) a standard drink contains 14 grams of pure alcohol.

- ✓ One serving of regular beer is 12 fl.oz.
✓ One serving of malt liquor is 8-9 fl.oz.
✓ One serving of table wine is 5 fl.oz.
✓ One serving of hard liquor (shot of 80-proof spirits such as vodka, tequila...etc) 1.5 fl.oz.

10. Do you consume alcohol with or without meals?

- a. With meals as a beverage instead of juice, soda...etc
b. Alone without food products

11. Specify what Alcohol beverage you drink?

12. Do you engage in binge drinking?
(5 or more drinks in a sitting)

- a. Yes b. No

13. Do you ever drive after drinking?

- a. Yes a. No

14. Do you drink to escape pain, either physical or emotional?

- a. Yes b. No

15. Have you ever become violent while drinking?

- a. Yes b. No

16. Have you ever lost a relationship with a friend, family member, girlfriend/ boyfriend due to alcohol?

- a. Yes b. No

17. Why did you start consuming alcohol? Pick one

- a. Peer Pressure
b. Curiosity
c. Influence of an adult
d. Other _____

18. Do you or anyone in your family suffers from

- a. Liver Damage
b. Heart Disease
c. Kidney Disease
d. Psychological Disturbances
e. Other _____

Do you think it is related to the fact that you or your family member drinks?

19. Have you ever gotten into trouble at work because of drinking?

- a. Yes b. No

20. Have you ever been arrested for drunk driving? (DWI)

- a. Yes b. No

Thank you

Supercomputing Challenge

Team 15

4. METHODS

The first correlation we intent to find is in the level of education of the individuals and whether or not they drink.

We researched a couple of studies were the results were contradicting each other in the correlation factors that we seek to find. For instance, a study case we analyzed from the American Public Health Association indicated that a case study was done in 1980 and 1984, in which high school dropouts and college dropouts were compared to college graduates on alcohol abuse. This study was based on surveys and most likely some form of observational study. The sample size of each group was 3000 adults that were followed up the following year. The results of this experiment showed that individuals who had dropped out of high school were 6.34 times more likely to develop alcohol abuse than individuals with a college degree. For college dropouts the estimated relative risk was 3.01. This study shows that the lower education an individual has is an increase factor for alcohol abuse.

In the surveys we conducted we found out that individuals with a low education would spend more money on alcohol.

The second correlation we hope to find is a correlation in the amount of money an individual spends on alcohol and the income they make.

The greater amount of money an individual make the more likely the individual is to purchase alcohol drinks. The greater amount of money they make the more they spend on alcohol drinks like a wine, beer, whiskey, margarita and so on.

The third correlation we intent to find is in the distance of alcohol selling business and how far apart they are from each other.

- **7 & 7** 607 Franklin Place, Hatch NM
- **77 Liquors** 914 S Pacific Street, Las Vegas NM
- **Abc Liquors Inc** 1020 Juan Tabo Boulevard NE, Albuquerque NM
 - **Abc Liquors Inc** 4800 San Mateo Boulevard NE, Albuquerque NM
- **Alegria Liquors** 2797 Agua Fria Street, Santa Fe NM
- **Al's Mini Mart & Liquor Shoppe** 101 S Main Street, Belen NM
 - **Amigo Petroleum Inc** 5501 E Main Street, Farmington NM
 - **Anasazi Inn** 903 W Main Street, Farmington NM
 - **Andy & Rick's Bar & Package** 704 N Broadway Street, Truth or Consequences NM
 - **Army And Air Force Exchange Service**
- 649 Holloman Air Force Base, Holloman Air Force Base NM
 - **Arturo Package Liquor** (Arturo's Package Liquor) 1411 Camino Del Pueblo, Bernalillo NM
 - **Astro Discount Liquors** 521 N Dal Paso Street, Hobbs NM
 - **Belen Discount Kelly Liquors** 300 N Main Street, Belen NM
 - **Berts** (El Toro Liquors) 235 N Guadalupe

Total Number of Liquor Stores in the U.S. 42,941

There are 164 Liquor stores or companies in New Mexico.

5. Results:

Our statistical results are not significant because the data is too scattered and the results show no correlation between the factors we plan to find. However, the statistician we worked with found other correlation that did not make sense. A reason why this happened might have been the lack of data collected from the surveys and the high population of Hispanics in New Mexico. We could have also surveyed only the people that consume alcohol. This could have been done outside alcohol selling businesses that hold licenses to sell alcohol.

The following are the results from the data we collected from our community surveys.

Education r ²	Average	Distance	Cost
Caucasian 0.7255	Caucasian	2.375	39.75
Female 0.6219	Female	2.047368421	50.26315789
Male 0.8479	Male	2.853846154	24.38461538
Hispanic 0.4047	Hispanic	2.997076923	32.73846154
Female 0.285	Female	2.870882353	15.88235294
Male 0.3991	Male	3.135483871	51.22580645

6. Conclusion:

Our Data does not show any strong correlation on the correlation we hoped to find. However, the only correlations our data had was between education an income. The data suggested that Hispanics make twice as much money as Caucasian for the same educational level. Another correlation the data showed was that the females make 20% less income than males for the same level of education. This is very interesting and further research would have to be conducted to prove this right.

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8. ACKNOWLEDGMENTS

Irina Cislaru, Sponsoring Teacher

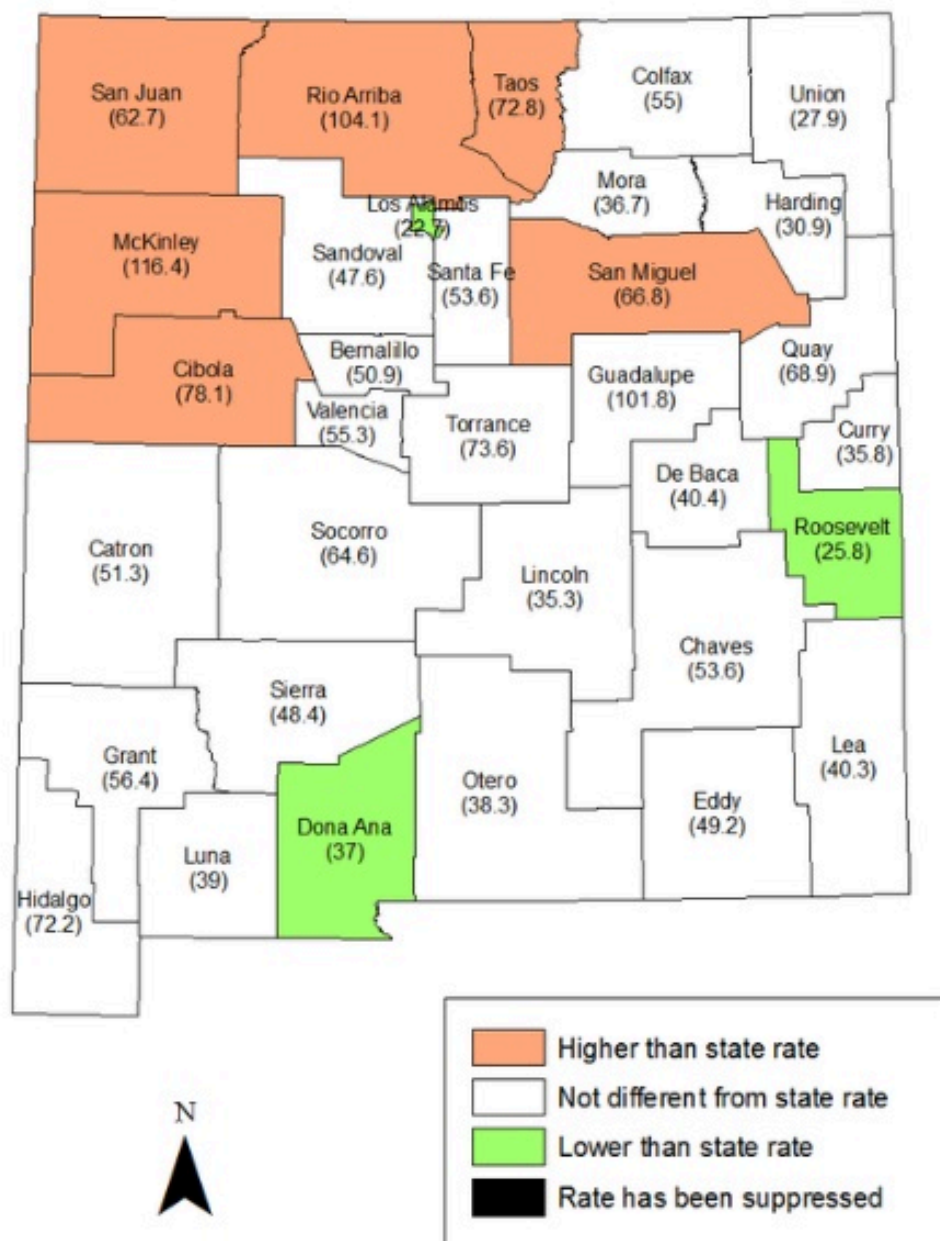
Jenifer Hooten, Teacher who helped us with the data.

Harry Henderson, Helped with the data analysis

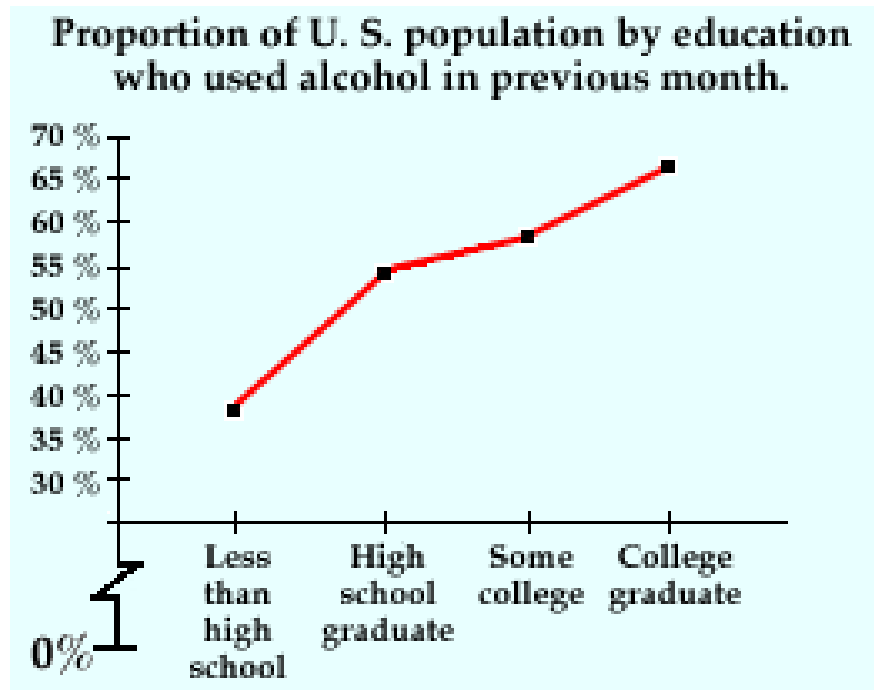
Channell Wilson-Segura, Principal

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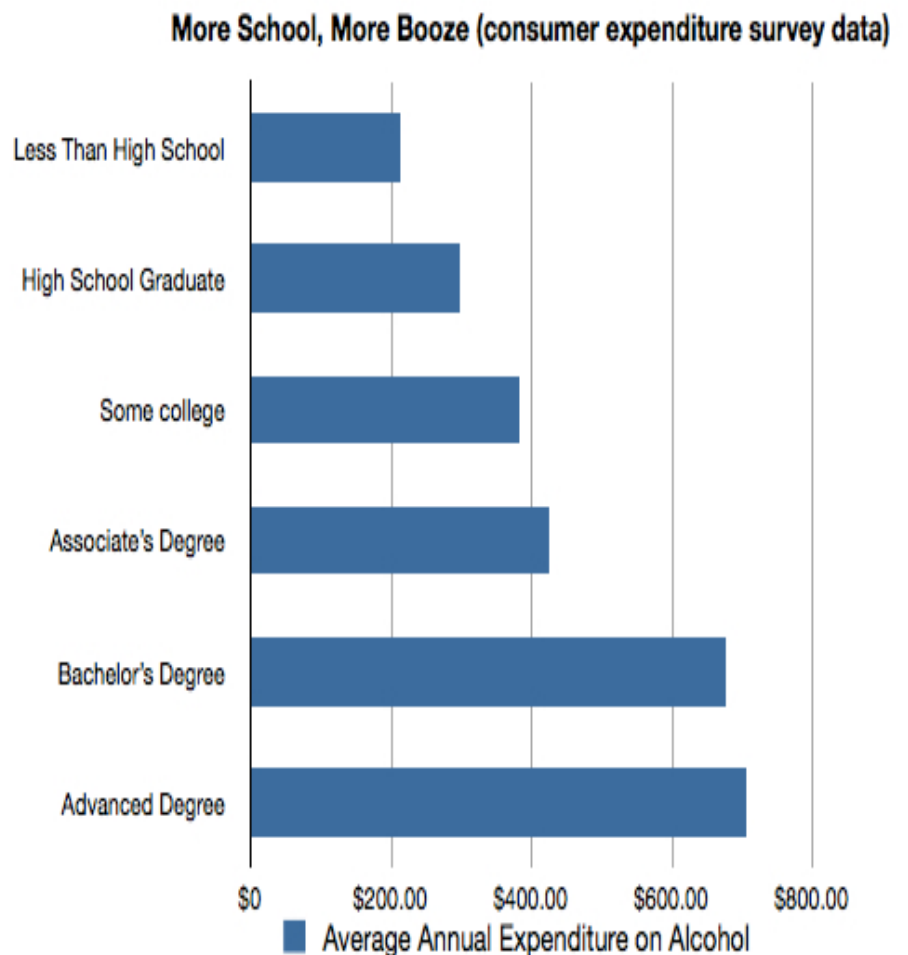
Alcohol- related Deaths per 100,000 Population by County, New Mexico, 2007-2009



This graph shows a correlation between Alcohol Consumption and the Level of education.



People with an increasing income due to their high level of education are likely to drink more since social outings require so as well as trading cheap beer for more expensive beer, wine cocktails and so on in bars or restaurants and are impacted by stress. Family relationships and the environment can also affect how much alcohol they may consume.



The following Data was gathered from New Mexico Department of Health regarding alcohol²⁸ consumption.

<http://www.health.state.nm.us/ERD/HealthData/documents/NMDOH-ERD-HBAC-2011-BRFSS-Report.pdf>

ALCOHOL CONSUMPTION — BINGE

Table 82. Percentage of adults who binged at least once in the past 30 days (males ≥ 5 drinks on one occasion or females ≥ 4 drinks), New Mexico, 2011.

Demographic Characteristics	Total Number Who Responded to the Question*	At Least One Binge Occasion in Past 30 Days			
		Total Number Reporting 1+ Binge in Past 30 Days	Weighted Percent (%) [§]	95% Confidence Interval [‡]	
				Lower	Upper
TOTAL	8,592	952	16.4	15.2	17.6
SEXUAL ORIENTATION					
Heterosexual	8,123	893	16.4	15.2	17.7
LGBT	209	39	21.1	14.6	29.4
AGE					
18-24	391	95	24.6	20.0	29.8
25-34	887	231	30.1	26.5	33.9
35-44	1,037	182	19.8	17.0	22.9
45-54	1,503	192	13.7	11.7	15.9
55-64	2,031	155	8.5	7.0	10.3
65-74	1,515	74	5.3	4.1	6.9
75+	1,168	20	1.7	1.0	2.7
RACE/ETHNICITY					
American Indian	550	70	14.5	11.1	18.6
Asian NHOPI**	68	9	18.1	7.4	37.8
Black/AA**	116	10	12.0	6.0	22.5
Hispanic	2,981	413	19.2	17.3	21.3
White	4,750	440	14.3	12.7	16.0
EDUCATION					
Less than High School Graduate	960	96	15.5	12.5	19.0
High School Graduate or G.E.D.	2,392	278	17.5	15.3	19.9
Some College	2,284	296	18.9	16.7	21.3
College Graduate	2,942	282	12.3	10.8	14.1
INCOME					
Less than \$10,000	564	67	18.2	14.1	23.2
\$10-19,999	1,277	147	17.6	14.6	21.0
\$20-49,999	3,021	333	17.4	15.4	19.6
\$50,000 or more	2,714	345	17.0	15.0	19.3
EMPLOYMENT					
Employed	3,954	622	21.3	19.6	23.2
Unemployed/Unable to Work	1,260	153	17.7	14.8	21.1
Homemaker/Student	986	82	11.7	9.2	14.9
Retired	2,374	94	4.0	3.2	5.1
Geographic Region[○]					
Northwest	2,386	212	13.3	11.3	15.5
Northeast	1,494	151	13.5	11.1	16.5
Bernalillo County	1,717	231	17.8	15.6	20.3
Southeast	1,350	138	15.5	12.9	18.5
Southwest	1,577	210	19.9	17.1	23.0

* Those who responded "don't know/not sure" or who refused to respond are excluded. Consequently, the sample sizes may not add to 9,417 across some categories for some variables.

§ For a discussion of the reasons for using weighted estimates, see Appendix I at the end of this report.

‡ 95% of the time, the "true point estimate" will fall between the lower and upper bounds of the 95% Confidence Interval.

○ For a list of the counties in each geographic region, see Appendix II at the end of this report.

** Estimates based on small sample size may not be reliable and may change significantly from year to year.

HEAVY DRINKING — MALES

Table 85. Percentage of adult males who reported heavy drinking (more than 2 drinks per day, on average in past month), New Mexico, 2011.

Demographic Characteristics	Total Number Who Responded to the Question*	Heavy Drinking Among Adult Men: >2 Drinks/Day			
		Total Number Who Reported Heavy Drinking	Weighted Percent (%) [§]	95% Confidence Interval [‡]	
				Lower	Upper
TOTAL	3,455	203	6.6	5.5	7.8
SEXUAL ORIENTATION					
Heterosexual	3,250	188	6.7	5.6	8.0
LGBT**	101	10	5.2	2.6	10.3
AGE					
18-24	181	12	6.7	3.4	12.9
25-34	383	40	12.1	8.7	16.6
35-44	417	27	6.1	4.1	9.2
45-54	594	40	5.5	3.9	7.7
55-64	854	41	4.1	2.9	5.8
65-74	591	29	4.0	2.6	6.0
75+	416	13	3.1	1.7	5.6
RACE/ETHNICITY					
American Indian	201	12	6.1	3.2	11.3
Asian NHOPI**	32	-	-	-	-
Black/AA**	50	2	3.5	0.9	13.3
Hispanic	1,190	73	6.0	4.5	7.9
White	1,912	110	7.4	5.7	9.5
EDUCATION					
Less than High School Graduate	363	20	6.8	3.9	11.6
High School Graduate or G.E.D.	995	64	6.7	5.0	9.0
Some College	855	60	7.8	5.8	10.5
College Graduate	1,237	59	4.6	3.4	6.1
INCOME					
Less than \$10,000**	184	15	6.6	3.3	12.6
\$10-19,999	465	26	6.9	4.4	10.8
\$20-49,999	1,213	73	6.3	4.7	8.3
\$50,000 or more	1,289	80	7.8	5.8	10.5
EMPLOYMENT					
Employed	1,806	123	8.0	6.4	9.9
Unemployed/Unable to Work	547	31	5.9	3.9	9.0
Homemaker/Student**	102	6	3.9	1.6	9.4
Retired	992	43	3.6	2.5	5.0
Geographic Region[Ⓞ]					
Northwest	913	54	6.8	4.8	9.6
Northeast	610	34	5.6	3.0	10.2
Bernalillo County	740	42	5.9	4.2	8.1
Southeast	519	27	5.6	3.5	8.8
Southwest	645	43	8.6	6.0	12.2

* Those who responded "don't know/not sure" or who refused to respond are excluded. Consequently, the sample sizes may not add to 9,417 across some categories for some variables.

§ For a discussion of the reasons for using weighted estimates, see Appendix I at the end of this report.

‡ 95% of the time, the "true point estimate" will fall between the lower and upper bounds of the 95% Confidence Interval.

Ⓞ For a list of the counties in each geographic region, see Appendix II at the end of this report.

** Estimates based on small sample size may not be reliable and may change significantly from year to year.

† Among Males, 90% were at least.

HEAVY DRINKING — FEMALES

Table 87. Percentage of adult females who reported heavy drinking (more than 1 drink per day, on average, in past month), New Mexico, 2011.

Demographic Characteristics	Total Number Who Responded to the Question ^a	Heavy Drinking Among Adult Women: > 1 Drink/Day			
		Total Number Who Reported Heavy Drinking	Weighted Percent (%) ^b	95% Confidence Interval ^c	
				Lower	Upper
TOTAL	5,131	241	5.0	4.2	5.9
SEXUAL ORIENTATION					
Heterosexual	4,869	219	4.7	4.0	5.6
LGBT**	107	15	15.4	8.3	26.8
AGE					
18-24	209	10	5.2	2.6	10.1
25-34	503	34	7.0	4.8	10.1
35-44	617	28	5.2	3.4	7.9
45-54	903	45	4.9	3.5	6.9
55-64	1,186	63	5.1	3.7	6.9
65-74	923	35	3.4	2.4	5.0
75+	749	23	2.3	1.4	3.7
RACE/ETHNICITY					
American Indian	348	14	5.1	2.7	9.4
Asian NHOPI**	36	-	-	-	-
Black/AA**	66	1	1.3	0.2	8.6
Hispanic	1,788	43	3.0	2.1	4.3
White	2,834	177	6.9	5.7	8.4
EDUCATION					
Less than High School Graduate	601	12	3.4	1.9	6.1
High School Graduate or G.E.D.	1,396	41	4.0	2.7	5.9
Some College	1,422	52	4.2	2.9	6.0
College Graduate	1,704	136	8.4	6.9	10.2
INCOME					
Less than \$10,000	376	9	4.3	2.0	9.0
\$10-19,999	811	35	5.1	3.4	7.6
\$20-49,999	1,805	72	3.7	2.8	5.0
\$50,000 or more	1,429	104	7.7	5.9	9.9
EMPLOYMENT					
Employed	2,142	132	6.6	5.3	8.2
Unemployed/Unable to Work	710	24	5.1	3.2	8.1
Homemaker/Student	881	21	2.3	1.3	4.0
Retired	1,388	64	4.2	3.1	5.5
Geographic Region^d					
Northwest	1,473	49	3.1	2.2	4.5
Northeast	882	54	5.8	4.2	8.1
Bernalillo County	971	54	5.4	4.0	7.4
Southeast	828	26	3.2	2.0	5.0
Southwest	937	55	6.7	4.6	9.5

^a Those who responded "don't know/not sure" or who refused to respond are excluded. Consequently, the sample sizes may not add to 9,417 across some categories for some variables.

^b For a discussion of the reasons for using weighted estimates, see Appendix I at the end of this report.

^c 95% of the time, the "true point estimate" will fall between the lower and upper bounds of the 95% Confidence Interval.

^d For a list of the counties in each geographic region, see Appendix II at the end of this report.

** Estimates based on small sample size may not be reliable and may change significantly from year to year.

^v Among Females, 87% were homemakers.

ALCOHOL CONSUMPTION — HEAVY

83. Percentage of adults who reported heavy drinking (more than 2 drinks per day for men and drink per day for women, on average, in past month), New Mexico, 2011.

Demographic Characteristics	Total Number Who Responded to the Question*	Heavy Drinking			
		Total Number Who Reported Heavy Drinking	Weighted Percent (%) [§]	95% Confidence Interval [‡]	
				Lower	Upper
TOTAL	8,586	444	5.8	5.1	6.5
SEXUAL ORIENTATION					
Heterosexual	8,119	407	5.7	5.0	6.5
LGBT	208	25	9.5	5.9	15.2
AGE					
18-24	390	22	6.0	3.7	9.7
25-34	886	74	9.7	7.5	12.4
35-44	1,034	55	5.7	4.2	7.6
45-54	1,497	85	5.2	4.1	6.6
55-64	2,040	104	4.6	3.7	5.8
65-74	1,514	64	3.7	2.8	4.9
75+	1,165	36	2.6	1.8	3.9
RACE/ETHNICITY					
American Indian	549	26	5.5	3.5	8.6
Asian NHOPI**	68	2	1.3	0.3	5.5
Black/AA**	116	3	2.5	0.8	7.6
Hispanic	2,978	116	4.5	3.6	5.6
White	4,746	287	7.2	6.1	8.4
EDUCATION					
Less than High School Graduate	964	32	5.1	3.3	7.7
High School Graduate or G.E.D.	2,391	105	5.4	4.3	6.9
Some College	2,277	112	5.8	4.6	7.3
College Graduate	2,941	195	6.5	5.5	7.7
INCOME					
Less than \$10,000	560	24	5.3	3.2	8.6
\$10-19,999	1,276	61	6.0	4.4	8.1
\$20-49,999	3,018	145	5.0	4.0	6.2
\$50,000 or more	2,718	184	7.8	6.4	9.5
EMPLOYMENT					
Employed	3,948	255	7.3	6.3	8.6
Unemployed/Unable to Work	1,257	55	5.6	4.0	7.6
Homemaker/Student	983	27	2.6	1.6	4.2
Retired	2,380	107	3.9	3.1	4.8
Geographic Region[○]					
Northwest	2,386	103	4.9	3.8	6.4
Northeast	1,492	88	5.7	4.1	8.0
Bernalillo County	1,711	96	5.6	4.5	7.1
Southeast	1,347	53	4.4	3.1	6.1
Southwest	1,582	98	7.6	5.9	9.8

* Those who responded "don't know/not sure" or who refused to respond were excluded. Consequently, the sample sizes may not add to 9,417 across some categories for some variables.

§ For a discussion of the reasons for using weighted estimates, see Appendix I at the end of this report.

‡ 95% of the time, the "true point estimate" will fall between the lower and upper bounds of the 95% Confidence Interval.

○ For a list of the counties in each geographic region, see Appendix II at the end of this report.

** Estimates based on small sample size may not be reliable and may change significantly from year to year.

DEMOGRAPHICS OF THE 2011 NEW MEXICO SAMPLE

Table 1. Demographics of the 2011 New Mexico BRFSS Sample.

Demographic Characteristics	2011 BRFSS Data			2011 Claritas Inter-Censal Estimates [§]
	Number in Sample*	Unweighted Percent (%)	Weighted Percent (%)	
TOTAL	9,417	100.0	100.0	
GENDER				
Male	3,807	40.4	49.0	49.0
Female	5,610	59.6	51.0	51.0
SEXUAL ORIENTATION				
LGBT	218	2.4	3.0	NA
Heterosexual	8,904	97.6	97.0	NA
AGE				
18-24	456	4.9	13.1	13.1
25-34	999	10.7	18.7	18.6
35-44	1,117	12.0	16.4	16.3
45-54	1,632	17.5	18.1	18.1
55-64	2,180	23.4	15.7	16.0
65-74	1,657	17.8	9.9	9.8
75+	1,295	13.9	8.2	8.2
RACE/ETHNICITY§				
American Indian	613	6.6	8.0	7.8
Asian or NHOPI	73	0.8	1.4	1.4
Black/AA	132	1.4	1.8	2.2
Hispanic	3,367	36.3	43.4	42.5
White	5,084	54.9	45.4	44.3
EDUCATION				
Less than High School Graduate	1,108	11.8	18.0	18.0
High School Graduate or G.E.D.	2,661	28.3	27.6	27.6
Some College	2,479	26.4	31.7	31.7
College Graduate	3,145	33.5	22.7	22.7
INCOME				
Less than \$10,000	628	7.6	7.8	NA
\$10-19,999	1,410	17.2	18.9	NA
\$20-49,999	3,283	39.9	40.0	NA
\$50,000 or more	2,902	35.3	33.3	NA
EMPLOYMENT				
Employed	4,298	45.8	53.0	NA
Unemployed/Unable to Work	1,395	14.9	16.4	NA
Homemaker/Student	1,090	11.6	14.1	NA
Retired	2,609	27.8	16.5	NA
GEOGRAPHIC REGION[¶]				
Northwest	2,614	28.0	20.5	20.4
Northeast	1,615	17.3	15.1	15.1
Bernalillo County	1,893	20.3	32.4	32.5
Southeast	1,494	16.0	11.9	12.0
Southwest	1,714	16.0	20.1	20.1

* Those who responded "don't know/not sure" or who refused to respond were excluded. Consequently, the sample sizes across categories for some variables may not add to 9,417.

§ Source: U.S. Bureau of the Census. NA indicates that Inter-Censal data were not available for this category.

¶ Due to the complexity of the NM BRFSS sample design, the CDC does not weight by Race/Ethnicity.

○ For a list of the counties in each geographic region, see Appendix II at the end of this report.

SUPERCOMPUTING CHALLENGE TEAM 15

CAPITAL HIGH SCHOOL

ALCOHOLISM IN NEW MEXICO