

**ESTIMATING THE NEED FOR TREATMENT FOR SUBSTANCE
ABUSE AMONG ADULTS IN MINNESOTA:**

Results of the 2010 Minnesota Survey on Adult Substance Use

Submitted to Eunkyung Park, Ph.D.

Minnesota Department of Human Services
Performance Measurement and Quality Improvement

July, 2011

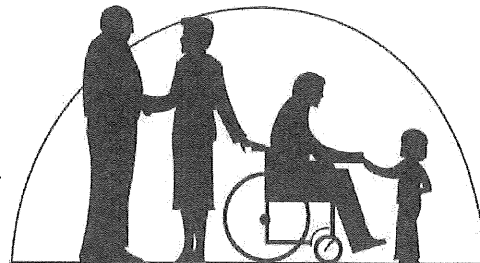
Submitted by:

Donna D. McAlpine, Ph.D.¹
Michel Boudreaux, M.S.¹
Kathleen Call, Ph.D.¹
Timothy Beebe, Ph.D.²

¹Division of Health Policy and Management, School of Public Health, University of Minnesota

²Survey Research Center, Department of Health Sciences Research, Mayo Clinic College of Medicine

UNIVERSITY
OF MINNESOTA
**School of
Public Health**



Minnesota Department of **Human Services**

For more information, please contact
Eunkyung Park, Ph.D., Project Manager, 651-431-2628, Eunkyung.park@state.mn.us or
Donna McAlpine, Ph.D., Principal Investigator, 612-625-9919, mcalp004@umn.edu

Acknowledgements

We would like to acknowledge the support of the Minnesota Department of Human Services who funded this study. A special thank you goes to Dr. Eunkyung Park for her insights and guidance throughout the project.

The staff at Social Science Research Solutions (SSRS), who conducted the survey, deserves our thanks for their expertise and advice during all stages of the survey. We are particularly grateful to the interviewers for their professionalism and hard work engaging Minnesotans in the telephone interviews.

Most importantly, we are truly appreciative to the 16,296 residents of Minnesota who took the time to complete the survey. Without their willingness to talk to us, this project would not have been possible.

Thank you.

Table of Contents

Acknowledgements.....	i
Executive Summary.....	v
I. Introduction.....	1
Project goals.....	1
How was the study conducted?.....	1
Who was surveyed?.....	1
What was asked?.....	3
How was the analysis conducted?.....	3
Who responded?.....	4
II. Substance Use and Mental Health.....	6
Cigarette Use.....	6
Alcohol Use.....	7
Illegal Drug Use.....	12
Nonmedical Use of Prescription Drugs.....	17
Twelve-month Prevalence of Substance Abuse or Dependence.....	20
Mental Health.....	23
Co-Morbidity of Mental Health and Substance Use.....	25
Treatment for Substance Use.....	27
Defining Need for Substance Abuse Treatment.....	28
Mental Health Treatment.....	30
III. Multivariate Results.....	31
IV. Summary and Conclusions.....	37
References.....	43
Appendix A: Technical Appendix.....	44
Appendix B: English Version of the Survey.....	48
Appendix C: Summary of Measures.....	90

LIST OF TABLES

Table 1	Number of Interviews Completed for Subgroups.....	2
Table 2.	Characteristics of the Sample and the Adult Population in Minnesota	5
Table 3.	Cigarette Use by Demographic Characteristics	6
Table 4.	Alcohol Use by Demographic Characteristics.....	8
Table 5.	Binge Drinking and Heavy Drinking by Demographic Characteristics	9
Table 6.	Marijuana Use by Demographic Characteristics	14
Table 7.	Lifetime and Past Year Use of Illegal Drugs by Demographic Characteristics	16
Table 8.	Lifetime and Past Year Non-Medical Use of Prescription Medications	18
Table 9.	Lifetime and Past Year Use of Any Illicit Drugs.....	19
Table 10.	Past Year Substance Abuse/Dependence by Demographic Characteristics	22
Table 11.	Depressive Symptoms and Serious Psychological Distress (SPD) by Demographics	24
Table 12.	Receipt of Treatment among Adults with a Substance Use Disorder.....	27
Table 13.	Need for Treatment for Substance Use by Demographic Characteristics	29
Table 14.	Receipt of Treatment in Past Year among Adults with a Mental Health Problem by Demographic Characteristics	30
Table 15.	Unadjusted and Adjusted Odds Ratios for Alcohol Use disorder	34
Table 16.	Unadjusted and Adjusted Odds Ratios for Drug Use disorder	35
Table 17.	Unadjusted and Adjusted Odds Ratios for Substance Use Disorder	36
Table 18.	Comparisons of Key Estimates of Substance Use, Need for Treatment and Mental Health among Adults in Minnesota: 2004/2005 and 2010	38

LIST OF FIGURES

Figure 1. Drinking Among Young Adults 18-20.....	1
Figure 2. Perceived Risk Associated with Drinking Alcohol.....	11
Figure 3. Past Year Binge Drinking by Stress Level.....	12
Figure 4. Lifetime Use of Illegal Drugs.....	12
Figure 5. Past Year Use of Illegal Drugs.....	13
Figure 6. Lifetime Nonmedical Use of Prescription Drugs.....	17
Figure 7. Past Year Nonmedical Use of Prescription Drugs.....	17
Figure 8. Past Year Use of Illicit Drugs by Stress Level.....	20
Figure 9. Prevalence of Substance Use Disorders.....	21
Figure 10. Prevalence of Substance Use Disorders by Stress Level.....	23
Figure 11. Prevalence of Depression by Stress Level.....	25
Figure 12. Prevalence of Substance Use Disorders by Depression.....	25
Figure 13. Prevalence of Substance Use Disorders by Serious Psychological Distress (SPD)...	26
Figure 14. Percent of Adults Very/Somewhat Unlikely to Seek Treatment if had a Substance Use Disorder.....	27
Figure 15. Percent of Adults Very/Somewhat Unlikely to Seek Treatment if had a Mental Health Problem.....	31

Executive Summary

The Minnesota Department of Human Services (DHS) is responsible for defining a statewide response to drug and alcohol abuse. The most recent estimates of rates of substance use and abuse were obtained in 2004/2005. The purpose of this study was to provide more current estimates. DHS uses estimates of the need for substance abuse treatment to facilitate precise targeting of available resources and to improve the design of programs to help people with addiction problems.

This report presents results of the 2010 Minnesota Survey on Adult Substance Use. The study was conducted through a random landline and cell phone survey of 16,296 adults in Minnesota. The survey was administered in English and Spanish. The response rate was 45.2%. The survey gathered information about cigarette, drug and alcohol use and mental health. It focused on symptoms of alcohol and drug dependence and abuse. In order to determine the social groups at risk for substance use problems and who may need treatment, the survey gathered basic demographic information such as the gender, age, race, ethnicity and region of residence. The survey asked about treatment experiences, attitudes and mental health. Key findings are summarized below.

Cigarette Use:

- 45% of adults in Minnesota had smoked cigarettes sometime in their life; 20% smoked in the past month.
- Men, younger persons, American Indians, and those born in the US are more likely to have smoked cigarettes than women, older persons, other race/ethnic groups or foreign-born persons.
- The rate of past month smoking declined by 2.9 percentage points between 2004/2005 and 2010 (from 22.7% of the population to 19.8%).

Alcohol Use:

- Overall, approximately 77% of Minnesota adults have used alcohol in their lifetimes, 67% used in the past year, and 57% had at least one drink in the past month.
- Lifetime, yearly and monthly drinking rates have slightly declined since 2004//2005 (by 3.7, 3.6, and 3.1 percentage points respectively).
- Approximately 32% of the population acknowledge binge drinking in the past year (4+ drinks for women, 5+ drinks for men on one occasion), 18% binge drank in the past month, and 5% report heavy drinking (binge drinking on at least 5 occasions) in the past month.

- Rates of past year binge drinking are 3.2 percentage points lower in 2010 than in 2004/2005.
- Rates of past month binge and heavy drinking are similar to that found in 2004/2005.
- Male, younger and US-born persons have higher rates of all types of drinking than their female, older and immigrant counterparts.
- Whereas rates of lifetime, past year, and past month use of alcohol are highest among whites, rates of binge drinking and heavy drinking are highest among American Indians and those from multiple or other racial backgrounds.
- Alcohol use is high among adults not yet of legal age to drink (18 to 20 year olds); 46% reported drinking in the past year; 38% binge drank in the past year; 27% binge drank in the past month; and 8% reported heavy drinking in the past month.
- Adults who felt that there was no/slight risk associated with high levels of alcohol consumption were much more likely to engage in excessive drinking (past year binge, past month binge, and past month heavy drinking) than those who thought there was a great risk.

Illegal Drug Use:

- 44% of the adult population reported using an illegal drug in their life; 8% did so in the last year.
- The most commonly used illegal drug is marijuana; 44% of adults ever used, and 8% used in the past year.
- Rates of past year use are higher among men and younger persons than women or older persons.
- American Indian adults and those from multiple and other racial groups have the highest rates of past year use, while Asian/Pacific Islander adults have the lowest rates.
- Adults born in the US have higher rates of lifetime and past-year use than foreign-born adults.
- The Metro and Northeast regions of the state have higher rates of lifetime and past year use of illegal drugs than do the other regions.

Prescription Drug Use:

- Just over 10% of adults misused prescription drugs in their lifetime, and 4% did so in the past year.
- Pain relievers are the most commonly misused prescription drug (6% ever misused; 4% misused in past year).
- Men and younger persons have higher lifetime and past-year use than women or older persons.
- American Indian adults and those from multiple and other racial groups have the highest rates of use among the racial/ethnic groups studied.
- Foreign-born adults have lower lifetime rates of use than US-born adults, but there are not significant differences in past year use.

Past year Substance Abuse and Dependence:

- 2.5% of the population meet the criteria for alcohol dependence, with an additional 5.6% meeting the criteria for alcohol abuse.
- Alcohol use disorders are more common than drug use disorders, 8.1% and 1.7% of the population respectively.
- Overall, 8.8% of the adult population meet the criteria for having a substance abuse or dependence problem in the past year.
- Men and younger persons are more likely to have alcohol and/or drug use disorders than women and older individuals.
- Rates of alcohol and/or drug use disorders are also higher among American Indians and persons of multiple or other races and lowest among Asians/Pacific Islanders.
- US-born adults are more likely to meet the criteria for an alcohol or a drug use disorder (9.1%) than are their counterparts who were not born in the US (5.0%).
- Adjusting for demographic differences between groups, African American adults are less likely than White adults to have a substance use disorder

Mental Health:

- Approximately 8% of adults in Minnesota have significant symptoms of depression, and 3% have symptoms of serious psychological distress (SPD).
- Women are more likely than men to have a mental health problem.

- Persons aged 65 or older are less likely than younger persons to have depressive symptoms or SPD.
- American Indian adults and those from other or multiple racial backgrounds are more likely to experience depression than adults from other cultural groups.
- African Americans and those from other or multiple racial backgrounds are more likely to experience SPD than adults from other cultural groups.
- Persons born in the US are more likely to experience significant depressive symptoms than foreign-born adults, but the groups are equally likely to experience SPD.
- Adults with a mental health problem are more likely to have a substance use disorder than adults without a mental health problem; about 20% of persons experiencing SPD also have a substance use problem compared to 8% of persons not experiencing SPD.

Stress, Mental Health and Substance Abuse:

- Many Minnesotans worry or feel stress about having enough money to buy health care (12%), housing (13%) or healthy food (9%).
- Stress in these areas is associated with binge and heavy drinking and the use of illegal and prescription drugs.
- Substance use disorders are more common among people who feel stress always or usually about paying for health care (13%), housing (17%) or healthy foods (15%) than people who report they never worry about costs in these areas (8%, 6% and 6% respectively).
- Depression is between 8 and 12 times more common among people who usually or always feel stress related to the costs of health care, housing or healthy food compared to people who never feel stress in these areas.

Treatment:

- Overall, only 6% of adults with a substance use disorder received specialty treatment in the past year.
- Rates of treatment are higher among persons with a drug use disorder (13%) than among persons with an alcohol use disorder (4%).
- Approximately 9% of the population is estimated to be in need of substance abuse treatment (8% needed treatment for alcohol and 2% for drugs).

- Men are twice as likely as women to need treatment for a substance use disorder and need for treatment decreases with age.
- American Indians and persons from multiple or other racial groups have the highest level of treatment need for a substance use disorder, while African American and Asian/Pacific Islander adults have the lowest level of need.
- Persons born in the US have higher levels of treatment need than persons not born in the US.
- Attitudes towards treatment are discouraging. Individuals with an alcohol use disorder are more than twice as likely as their counterparts without such a disorder to say they would not seek care if they thought they had a problem with alcohol use. Persons with a drug use disorder are almost four times more likely to say they would not seek care than their counterparts without such a disorder.
- Only 35% of those with a mental health problem reported receiving specialty care in the past year.
- Only 25% of persons with a mental health problem who did not receive treatment felt they needed treatment. Moreover, 20% of adults with either depression or SPD said that if they felt they had a mental health problem they would be unlikely to seek treatment.

Need for Treatment:

- Need for treatment related to a substance use disorder is defined as either meeting the criteria for substance abuse or dependence in the past year, or using specialty substance use treatment services in the past year.
- Need for treatment for an alcohol use disorder (8.3%) is much higher than need for treatment for a drug disorder (2%).
- Overall, 9% of the adult population meet the criteria for needing substance use treatment.
- Need for treatment is about twice as high for men (12%) as women (6%) and significantly declines with age.
- Among the cultural groups studied, need for substance use treatment is lowest for Asian/Pacific Islander adults (5%) and African Americans (7%) and highest for American Indians (23%) and adults from multiple or other races (22%).
- Need for substance use services is higher among adults born in the US (9%) than for those not born in the US (5%).

Conclusions:

The prevalence of alcohol and drug abuse and dependence among adults in Minnesota remained relatively stable between 2004/2005 and 2010. Yet, the vast majority adults with a substance use disorder do not receive treatment. Changing attitudes toward treatment may be one avenue for intervention. Moreover, better understanding of the factors that put people at risk for engaging in unhealthy behaviors, such as stress, may help in program planning. The estimates presented in this report serve as a starting point for program planners and policy makers focused on helping persons with addiction problems.

I. Introduction

Project goals

The main goal of this study was to obtain current estimates of the number of adults in the general population in Minnesota who are abusing or dependent on alcohol or drugs and are in need of treatment. A secondary objective was to collect the information necessary to allow for detailed analyses about specific subpopulations as defined by gender, age group, race/ethnicity, US-born and foreign-born individuals, and region of residence. Finally, we also examine the correlates of substance use and treatment, such as attitudes, stress and mental health problems.

The Minnesota Department of Human Services (DHS) is responsible for defining a statewide response to drug and alcohol abuse. The most recent estimates of rates of substance use and abuse were obtained in 2004/2005. The purpose of this study was to provide more current estimates. DHS uses estimates of the need for substance abuse treatment to facilitate precise targeting of available resources and to improve the design of programs to help people with addiction problems.

How was the study conducted?

A telephone survey was conducted with a random sample of adults living in Minnesota. Because many people in the state only use cell phones, we included both a cell phone and a landline sample. The telephone survey was conducted in English and Spanish. Appendix A provides technical details about the study.

Who was surveyed?

The population we wanted to reach for this study was adults living in the community in

Minnesota. We randomly choose landline phone numbers, and then randomly choose one adult from each household to participate. We also randomly choose cell phone numbers; all adults reached by cell phone who said they took all or almost all of their calls on their cell phone were invited to participate.

It was important to represent each region of Minnesota and different cultural groups in the final results. We did this by dividing (or stratifying) the sample so that we could over-sample in specific regions and particular cultural groups. Over-sampling ensures that there are enough people in each sub-group to be able to draw meaningful conclusions based on their answers to the survey questions.

Table 1 shows the number of interviews conducted in each group. Overall, 17% of the interviews were conducted by cell phone. The overall response rate was 45% and the cooperation rate was 77%. The overall weighted response rate was 47%.

	Landline	Cell phone	Total
Northwest	734	321	1055
Northeast	785	315	1100
West Central	742	217	959
East Central	807	269	1076
Southwest	719	242	961
Southeast	774	319	1093
Metropolitan ¹	4304	1164	5468
Geographic regions with high density Black/African Americans	1174		1174
Geographic regions with high density American Indians	1290		1290
Hispanic Surnames	1075		1075
Asian Surnames	1045		1045
TOTAL	13449	2847	16296

¹During data collection we added a sub-stratum to oversample areas in the metro region with a high density of African American and Asian respondents

What was asked?

The main focus of the survey was questions about use of drugs and alcohol. It was important to include measures of alcohol and drug dependence and abuse based on criteria for each disorder found in the Diagnostic and Statistical Manual of Mental Disorder (DSM-IV), which provides clinical definitions of mental disorders in the United States. Individuals are classified as dependent on a substance if they continue to use despite the problems associated with using drug or alcohol. Dependence may be associated with physiological symptoms such as feeling sick when one stops using or needing more to feel the effects of the alcohol or the drug. Substance abuse describes a pattern of using alcohol or drugs over a period of time that does not meet the threshold for dependence, but involves continued use despite negative consequences such as trouble with the law or problems with family. The English version of the survey instrument is included in Appendix B. The specific questions used in the survey to define abuse and dependence are included in Appendix C.

In addition, the survey asked basic information about the respondent such as age, gender, race/ethnicity and place of birth. We asked a variety of questions about attitudes and experiences with treatment. Because people with addiction problems often have other mental health difficulties, we also asked about symptoms of depression and psychological health. Finally, the survey included questions about possible correlates of substance use and treatment such as stress, and attitudes towards seeking treatment.

How was the analysis conducted?

Prior to analysis, the data were weighted to correct for unequal probabilities of individuals being selected into the sample and non-response. The weighted data result in the final sample reflecting the actual distribution of the civilian, noninstitutionalized adult population

in Minnesota in terms of characteristics such as gender, age, and racial/ethnic makeup. Unless otherwise noted, the results presented in this report, are weighed estimates. Standard errors (SE) for all the weighted estimates are also provided in the tables. Standard errors tell us the error in the estimate that is due to sampling. A large standard error means that the estimate is not very precise. Standard errors can be used to calculate confidence intervals around estimates. When the standard error is more than 30% of the estimate, or the sample size is below 30 cases the estimate may not be reliable. We highlight when this occurs (with a ^), and encourage readers to be cautious in interpreting estimates with large standard errors or which are based on small sample sizes.

Who responded?

Table 2 describes the sample included in the study. The weighted percents closely resemble the adult population in Minnesota. The remainder of the report presents weighted estimates.

As shown, the population is approximately equally split between women (51%) and men (49%). Approximately 16% of the Minnesota adult population is 65 years or older. The majority of adults in Minnesota identify as White (88%). African Americans, Hispanics and Asian/Pacific Islanders make up between 3 to 4 percent of the adult population in Minnesota. About 8% of the Minnesota adult population is foreign-born. The majority of the adult population (54%) lives in the Twin Cities metropolitan region of Minnesota.

		THE SAMPLE		THE POPULATION	
		Frequency Unweighted	Percent Unweighted	Percent Weighted	Standard Error
Gender					
	Male	7564	46.4	49.1	0.52
	Female	8724	53.5	50.8	0.52
	Transgender ¹	7	0.04	0.1	0.02
Age (in years)					
	18-24	1036	6.4	12.1	0.40
	25-44	4483	27.7	35.5	0.51
	45-64	7001	43.3	36.3	0.47
	65+	3654	22.6	16.1	0.31
Race/Ethnicity					
	White	13414	83.8	87.6	0.35
	Hispanic	968	6.1	3.3	0.16
	African American	500	3.1	3.7	0.22
	Asian/Pacific Islander	483	3.0	3.5	0.22
	American Indian	424	2.6	0.9	0.07
	Multiple & Other	215	1.3	1.0	0.09
Foreign Born					
	No	14715	91.2	92.2	0.29
	Yes	1424	8.8	7.8	0.29
Region					
	Metro	7904	48.5	54.3	0.33
	Northeast	1548	9.5	5.3	0.12
	Northwest	1644	10.1	4.5	0.11
	East Central	1318	8.1	10	0.25
	West Central	1332	8.2	6.1	0.16
	Southeast	1265	7.8	9.2	0.18
	Southwest	1285	7.9	10.5	0.21
Total		16296	100.0	100.0	

Note: Sample sizes do not always add to total due to missing cases

¹The sample size of people who identify as transgender is too small to allow further analysis for this group

II. Substance Use and Mental Health

Cigarette Use

We examine lifetime rates of smoking cigarettes (having smoked at least 100 cigarettes at some time in one's life) and recent smoking (having smoked at least one cigarette in the past month). As shown in Table 3, approximately 45% of all adults reported smoking at some time in their lives; while about 20% reported smoking in the past month.

Use of cigarettes significantly varies by demographic characteristics. Men are much more likely to be lifetime smokers than are women (49% vs. 42%). However, examining past month smoking shows that the gender gap has significantly closed (21% vs. 19%).

While older persons are more likely than younger persons ever to have smoked cigarettes, younger persons are more likely to be current smokers. Indeed, almost one-

	Lifetime Use		Past Month Use	
	%	SE	%	SE
Gender		***		**
Male	48.8	0.76	20.9	0.64
Female	41.8	0.71	18.7	0.58
Age (in years)		***		***
18-24	30.6	1.74	23.7	1.59
25-44	41.9	0.94	23.7	0.82
45-64	50.4	0.79	20.0	0.65
65+	51.6	1.06	7.9	0.58
Race/Ethnicity		***		***
White	46.2	0.56	19.2	0.46
Hispanic	38.1	2.47	18.3	2.04
African American	36.0	2.88	26.3	2.72
Asian/Pacific Islander	24.2	2.85	11.8	2.67
American Indian	78.1	3.12	58.9	3.76
Multiple & Other	60.1	4.69	38.4	4.70
Foreign Born		***		***
No	46.6	0.54	20.4	0.45
Yes	28.3	1.74	13.0	1.36
Region		***		***
Metro	42.8	0.73	17.7	0.58
Northeast	53.1	1.67	25.6	1.56
Northwest	51.7	1.62	23.3	1.42
East Central	49.9	1.72	22.8	1.47
West Central	50.4	1.82	22.4	1.62
Southeast	43.5	1.72	18.9	1.44
Southwest	45.1	1.71	22.1	1.46
Total	45.2	0.52	19.8	0.43

*p≤.05 **p≤.01 ***p≤.001

quarter (24%) of adults ages 18 to 44 smoked in the past month, compared to only 8% of persons aged 65 or older.

Comparing differences by race/ethnicity, both lifetime and past month cigarette smoking is highest among American Indian adults and lowest among Asian/Pacific Islander adults. More than three-quarters of American Indian adults reported smoking in their lifetimes, and almost 60% smoked in the past month. Recent smoking rates are also quite high (26%) among African Americans. Adults born in the US are significantly more likely to have smoked cigarettes ever or recently compared to foreign-born adults.

There are also modest regional differences in rates of smoking. Adults living in the Northeast and Northwest report the highest rates of lifetime or current smoking, while adults in the metro region report the lowest.

Alcohol Use

Adults who indicated that they had 12 or more drinks in a single year were categorized as having drunk alcohol in their lifetimes. Persons who said that they had a drink in the twelve months prior to the survey were categorized as having used alcohol in the past year, while those who said they had a drink in the past 30 days were categorized as having used alcohol in the past month.

As shown in Table 4, about three-quarters of adult Minnesotans have ever drunk alcohol, 67% drank in the past year and 57% had at least one drink in the past month. For each time period, alcohol use is more common among men than among women. For example, almost two-thirds of men reported drinking in the past month, compared to about one-half of women.

The lowest rates of drinking are observed for the youngest (age 18 to 24 years) and oldest age groups (age 65 or over). About one-half of young adults 18-24 and 41% of people aged 65 years or older reported drinking in the past month.

Persons who self-identify as White are the racial group most likely to report drinking in their lifetime, past year and past month; African Americans, Asian/Pacific Islanders, and Hispanics are least likely.

Persons who were not born in the US are significantly less likely to report using alcohol than persons born in the US.

While just over one-third of immigrants drank alcohol in the past month, almost 60% of non-immigrants did so. There are modest regional differences.

Table 4. Alcohol Use by Demographic Characteristics

	Lifetime Use		Past Year Use		Past Month Use	
	%	SE	%	SE	%	SE
Gender		***		***		***
Male	83.8	0.59	72.9	0.68	63.9	0.73
Female	71.0	0.65	62.2	0.69	49.8	0.72
Age (in years)		***		***		***
18-24	65.4	1.80	63.6	1.82	51.4	1.88
25-44	82.1	0.73	74.9	0.82	62.8	0.92
45-64	82.3	0.61	69.3	0.73	59.5	0.77
65+	64.4	1.03	49.9	1.06	40.9	1.03
Race/Ethnicity		***		***		***
White	81.1	0.44	71.0	0.50	60.1	0.55
Hispanic	55.1	2.52	46.5	2.53	31.7	2.30
African American	42.4	2.96	36.2	2.87	30.0	2.77
Asian/Pacific Islander	44.0	3.26	39.0	3.19	32.8	3.06
American Indian	66.2	3.82	49.4	3.93	33.4	3.73
Multiple & Other	77.3	3.87	66.6	4.37	51.0	4.77
Foreign Born		***		***		***
No	79.8	0.44	69.6	0.50	58.7	0.54
Yes	48.0	1.96	42.7	1.94	34.0	1.85
Region		*		**		***
Metro	78.2	0.61	69.2	0.68	59.3	0.72
Northeast	78.0	1.39	66.6	1.54	55.8	1.65
Northwest	76.6	1.36	63.1	1.57	49.5	1.62
East Central	76.7	1.50	66.1	1.64	55.0	1.72
West Central	77.2	1.53	65.7	1.69	56.0	1.78
Southeast	76.4	1.45	66.4	1.62	54.6	1.73
Southwest	73.6	1.51	63.9	1.65	50.9	1.72
Total	77.3	0.44	67.4	0.49	56.7	0.52

*p≤.05 **p≤.01 ***p≤.001

Persons in the metro region have the highest rates of lifetime, past year and past month use of alcohol, although most of the regional differences are quite small.

Table 5 examines the prevalence of binge drinking or heavy drinking, both of which may lead to adverse consequences. Binge drinking is defined as consuming 4 or more drinks for women and 5 or more drinks for men on the same occasion. Past month heavy drinking is defined as binge drinking on at least 5 occasions in the past 30 days. Heavy drinkers are a subset of binge drinkers; they engage in the same high-quantity consumption, but do so more frequently. As shown, about 18% of the adult population reported binge drinking in the past month, and just under one-third did so in the past year. While less common, 5% of the adult population report heavy drinking in the past month.

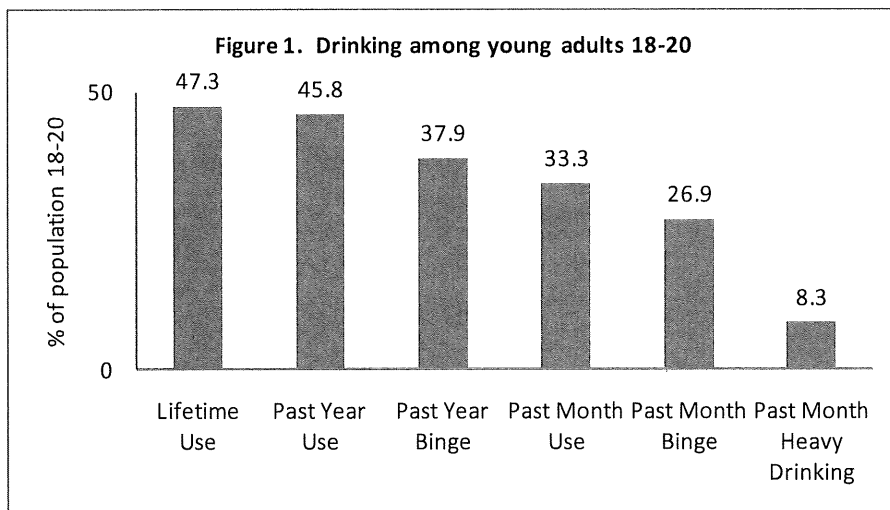
Men, young adults, and persons born in the US are more likely to engage in these drinking behaviors than are women, older persons, or those not born in the US. American Indians, Whites and persons from other and multiple racial backgrounds have the highest rates of binge drinking, while Asians/Pacific Islanders are the group with the lowest rates.

		Past Year Binge Drinking		Past Month Binge Drinking		Past Month Heavy Drinking	
		%	SE	%	SE	%	SE
Gender			***		***		***
	Male	38.0	0.75	23.4	0.67	7.2	0.41
	Female	25.7	0.67	13.3	0.54	3.6	0.30
Age (in years)			***		***		***
	18-24	51.8	1.88	33.4	1.78	11.6	1.22
	25-44	43.3	0.95	25.4	0.85	6.61	0.48
	45-64	25.1	0.69	13.2	0.54	4.1	0.31
	65+	6.0	0.49	2.53	0.32	0.8	0.18
Race/Ethnicity			***		***		***
	White	32.8	0.54	19.0	0.47	5.4	0.27
	Hispanic	28.1	2.27	14.9	1.80	6.0	1.28
	African American	18.9	2.40	11.5	2.02	4.6	1.33
	Asian/Pacific Islander	18.0	2.63	5.8	1.62	1.0	0.68
	American Indian	36.1	3.93	20.3	3.23	7.4	2.22
	Multiple & Other	47.1	4.82	29.8	4.7	15.5	4.12
Foreign Born			***		***		***
	No	32.6	0.52	19.0	0.45	5.6	0.27
	Yes	20.7	1.61	9.1	1.56	2.4	0.59
Region							***
	Metro	31.4	0.71	18.2	0.61	4.8	0.34
	Northeast	34.6	1.64	19.9	1.44	9.1	1.17
	Northwest	31.6	1.59	18.5	1.36	3.9	0.63
	East Central	33.6	1.66	20.0	1.45	5.7	0.8
	West Central	33.4	1.77	19.2	1.50	7.6	1.13
	Southeast	31.2	1.64	17.1	1.36	5.5	0.88
	Southwest	30.1	1.60	16.4	1.33	5.2	0.8
Total		31.8	0.50	18.2	0.43	5.4	0.25

*p≤.05 **p≤.01 ***p≤.001

The only significant regional difference is for past month heavy drinking. The prevalence of such behavior is highest in the Northeast (9.1%) and lowest in the Northwest region (3.9%).

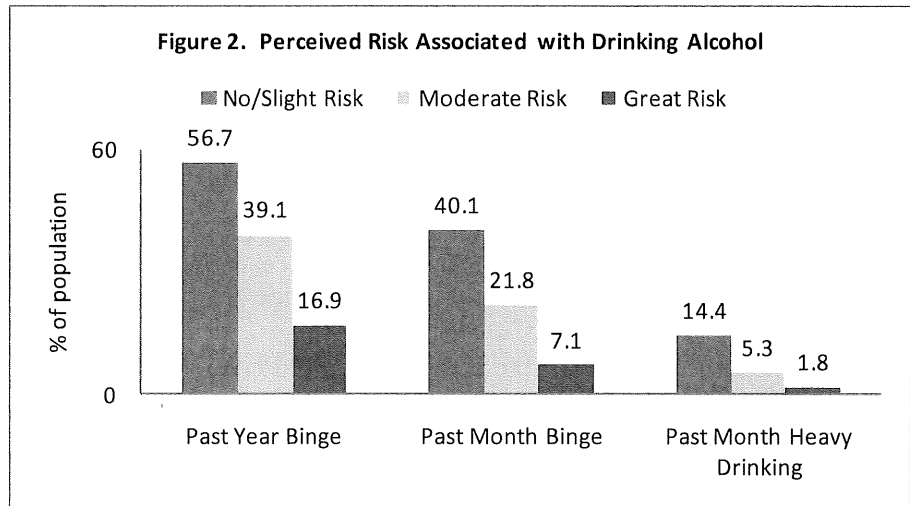
We also examined drinking among young people (ages 18-20) who are under the legal age for use of alcohol. As shown in Figure 1, almost one-half of underage adults acknowledge that they drank alcohol in their lifetime. Fully one-third of young adults drank in the past month, and 27% meet the criteria for binge drinking in the past month. Approximately 8% of young adults report heavy drinking (binge drinking 5 or more times in the past month). This means that in 2011¹, there are about 60,000 underage binge drinkers in a month, and 19,000 heavy drinkers.



¹ Based on estimated population on July 1 in Minnesota (total adult population=4,161,018; persons 18-20=227,186) from the Minnesota Demography Office, <http://www.demography.state.mn.us/a2z.html#Population%20forecasting>

We examined whether perceived risk related to drinking was associated with drinking behavior. Respondents were asked how much they thought people risked harming themselves physically and in other ways when they had five or more drinks once or twice a week.

As shown on Figure 2, people who believe that there is a great risk of harm associated with such drinking behavior are much less likely to engage in binge or heavy drinking than their



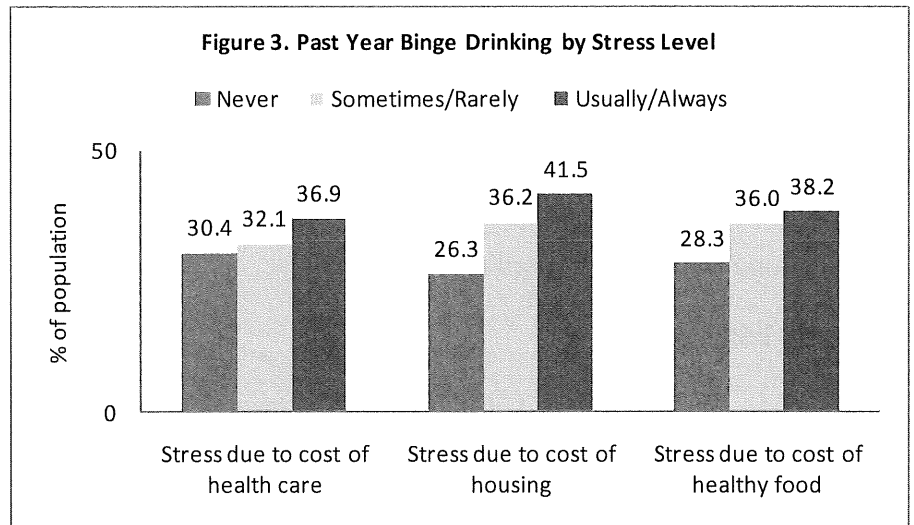
counterparts who feel such drinking brings no or only a slight risk. For example, 14% of people who feel there is no or a slight risk associated with a high level of alcohol consumption engaged in heavy drinking in the past month, compared to under 2 percent of people who feel there was a great risk to such behavior.

We also examined whether stress was associated with drinking behavior. Respondents were asked about how often in the past year they felt worried or stressed about: 1) having enough money to get the health care they or their family needed; 2) having enough money to pay rent or mortgage; and 3) having enough money to pay for healthy foods. Overall, 12% of the population said they usually or always felt worried about having money to get the health care they or their family needed, 13% felt stress over having enough money for mortgage or rent, and 9% felt such stress over being able to afford healthy food (data not tabled).

Level of stress is associated with the likelihood of drinking excessive amounts.

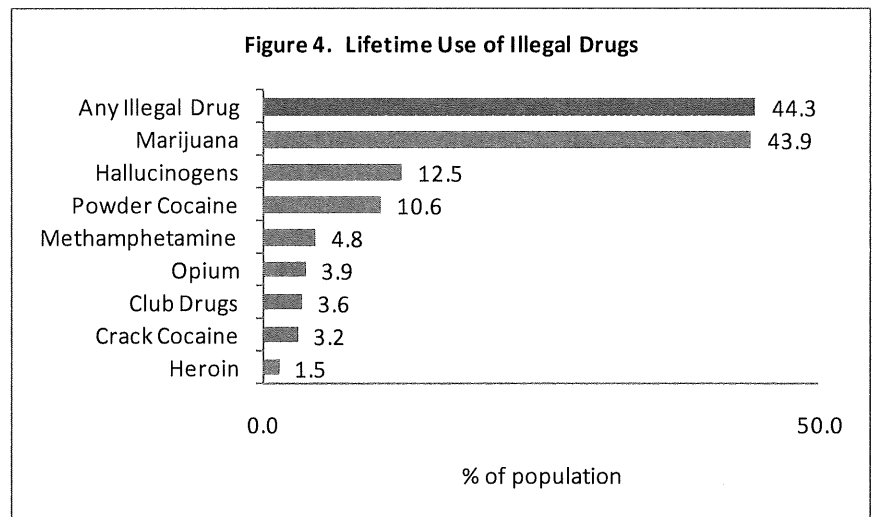
Figure 3 shows the association between the experiences of these types of stress and binge drinking in the past year. As shown, individuals who say they usually/always worry

about the costs of health care, housing or healthy food are more likely to have binge drunk than are their counterparts who experience these types of stress sometimes, rarely or never. The same positive associations are observed between stress and binge drinking in the past month or heavy drinking, although these results are not presented.



Illegal Drug Use

Respondents were asked if they had ever used 8 types of illegal drugs: marijuana or hash, powder cocaine, crack cocaine, heroin, methamphetamine, hallucinogens, club drugs (such



as ecstasy and GHB), or opium. People who indicated any use of a drug were asked further questions about how recently and how often they used the drug.

As shown in Figure 4, about 44% of people used an illegal drug at sometime in their life. The most commonly used drug is marijuana, with almost 44% of the population reporting that they used this drug at some time in their lives. Hallucinogens (13%) and powder cocaine (11%) are the next most commonly used drugs. Between 1.5% and 5% percent of the population indicate that they used methamphetamine, opium, club drugs, heroin, or crack cocaine in their lifetime.

Past year use of illegal drugs is much less common than lifetime use, suggesting that many people may have tried illegal drugs, but are not current users (see Figure 5).

Approximately 8% of the adult population in Minnesota reported using marijuana in the past year and 1% or less

reported use of any other specific illegal drug. Overall, these results suggest that approximately 350,000 adults in Minnesota used an illegal drug in 2011.

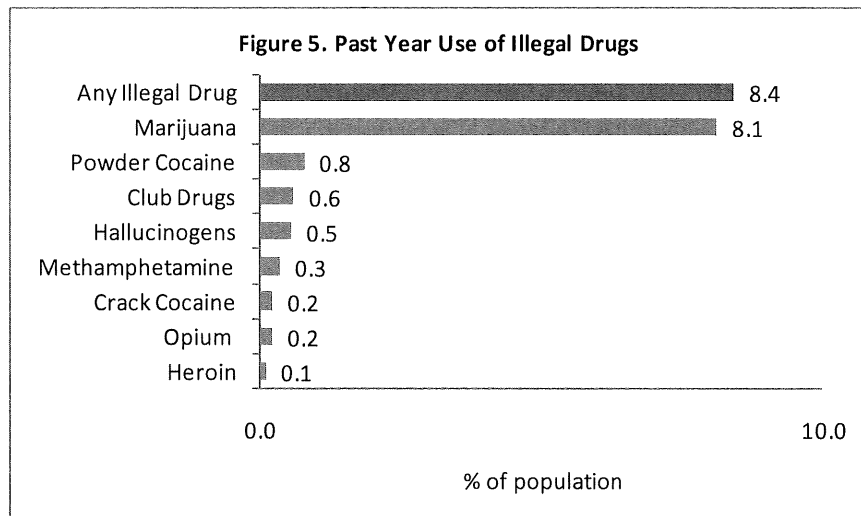


Table 6 examines the demographic correlates of lifetime and past year use of marijuana, the most common illegal drug used in Minnesota. As shown, men are more likely than women to have used marijuana either in past year (11% vs. 6%) or at some time in their lifetime (49% vs. 39%). Older persons are less likely than younger persons to have used marijuana. Past-year

marijuana use is particularly high in the youngest age group; almost one-quarter of young adults (ages 18-24) report having used marijuana in the past year.

Use of marijuana is more common among American Indians and persons who report multiple or other races, and less common among the Asian/Pacific Islanders. Rates of marijuana use for adults born in the US are more than double that of foreign-born adults. Finally, marijuana use is more common in the metro and Northeast regions, and less common in the Southwest region of the state.

We next examined use of any illegal drug by demographic characteristics (see Table 7). The sample sizes for specific drug categories other than marijuana are too small for separate analysis; therefore, estimates are presented with and without including marijuana use.

Looking first at use of any illegal drug, men are more likely than women to have ever used an illegal drug. Men have almost double the rate of use in the past year compare to women. Lifetime use of illegal

drugs is similar for persons aged 18 through 64, but recent use is much higher among young

Table 6. Marijuana Use by Demographic Characteristics

	Lifetime Use		Past Year Use	
	%	SE	%	SE
Gender		***		***
Male	49.3	0.76	10.5	.51
Female	38.7	0.71	5.7	.39
Age (in years)		***		***
18-24	47.7	1.89	23.2	1.60
25-44	49.0	0.95	9.8	.59
45-64	53.1	0.78	4.9	.34
65+	10.0	0.63	0.5 ^	.17
Race/Ethnicity		***		***
White	45.2	0.56	7.9	.34
Hispanic	30.6	2.35	7.1	1.44
African American	42.4	2.98	12.1	2.11
Asian/Pacific Islander	17.9	2.57	4.0 ^	1.32
American Indian	62.6	3.8	20.5	3.61
Multiple & Other	63.4	4.45	24.8	4.50
Foreign Born		***		***
No	46.0	0.54	8.6	.34
Yes	20.8	1.59	2.7	.70
Region		***		**
Metro	47.9	0.74	9.0	.46
Northeast	47.1	1.66	10.3	1.19
Northwest	35.7	1.56	6.3	.93
East Central	43.4	1.71	6.5	.96
West Central	36.9	1.75	6.6	1.07
Southeast	39.7	1.70	8.0	1.08
Southwest	33.7	1.64	5.4	.87
Total	43.9	0.52	8.1	.32

^estimate may not be reliable

*p≤.05 **p≤.01 ***p≤.001

adults compared to the other groups. This suggests that while many adults may have tried an illegal drug at least once in their lives, most are no longer users.

Regardless of time frame, American Indian adults and people from multiple or other racial backgrounds have the highest rates of illegal drug use. About two-thirds of American Indians reported using an illegal drug in their lifetime, and one-in-five used in the past year. Asians/Pacific Islanders have the lowest rates of lifetime and recent use. Persons born in the US have more than twice the rate of lifetime and past-year use of illegal drugs than persons not born in the US.

There are also regional differences in the use of illegal drugs. Lifetime and past-year prevalence is highest in the metro and Northeast regions and lowest in Southwest.

The final two columns in Table 7 present parallel analysis for the use of any illegal drug except marijuana. The results are very similar to those for any illegal drug use. Men, young people, American Indians, persons with other and multiple racial backgrounds, US-born adults and those from the metro and Northeast regions are at highest risk for illegal drug use.

Table 7. Lifetime and Past Year Use of Illegal Drugs by Demographic Characteristics

	ILLEGAL DRUGS INCLUDING MARIJUANA				ILLEGAL DRUGS EXCLUDING MARIJUANA			
	Lifetime Use		Past Year Use		Lifetime Use		Past Year Use	
	%	SE	%	SE	%	SE	%	SE
Gender		***		***		***		***
Male	49.8	0.76	11.0	0.52	20.7	0.62	2.4	0.26
Female	39.1	0.71	6.0	0.39	13.1	0.51	1.0	0.18
Age (in years)		***		***		***		**
18-24	48.0	1.89	23.7	1.61	14.1	1.32	5.4	0.88
25-44	49.5	0.95	10.2	0.60	21.0	0.79	2.0	0.29
45-64	53.5	0.78	5.2	0.35	20.5	0.64	0.8	0.15
65+	10.2	0.64	0.5 ^	0.18	1.8	0.29	0.0	0.00
Race/Ethnicity		***		***		***		**
White	45.5	0.56	8.2	0.35	17.1	0.44	1.5	0.16
Hispanic	32.2	2.38	7.7	1.48	17.5	1.97	3.1 ^	1.06
African American	42.6	2.98	12.9	2.17	15.3	2.17	2.2 ^	1.01
Asian/Pacific Islander	19.2	2.66	4.6	1.44	5.0	1.44	0.9 ^	0.65
American Indian	63.0	3.80	20.7	3.61	29.4	3.71	4.0 ^	2.03
Multiple & Other	63.6	4.45	25.5	4.51	29.2	4.56	6.6 ^	2.85
Foreign Born		***		***		***		*
No	46.3	0.54	8.9	0.35	17.7	0.43	1.8	0.17
Yes	21.9	1.63	3.1	0.75	6.9	0.98	0.4 ^	0.27
Region		***		***		***		
Metro	48.3	0.74	9.5	0.48	19.4	0.59	2.0	0.23
Northeast	47.6	1.66	10.6	1.20	18.3	1.35	1.5 ^	0.58
Northwest	36.0	1.56	6.6	0.96	10.7	0.98	1.4 ^	0.49
East Central	43.7	1.71	6.6	0.96	16.2	1.32	1.4 ^	0.46
West Central	37.3	1.75	6.7	1.07	11.7	1.19	1.3 ^	0.46
Southeast	40.1	1.70	8.0	1.08	14.0	1.25	1.5 ^	0.53
Southwest	34.3	1.64	5.6	0.9	11.2	1.12	1.0 ^	0.40
Total	44.3	0.52	8.4	0.32	16.8	0.40	1.7	0.16

^estimate may not be reliable

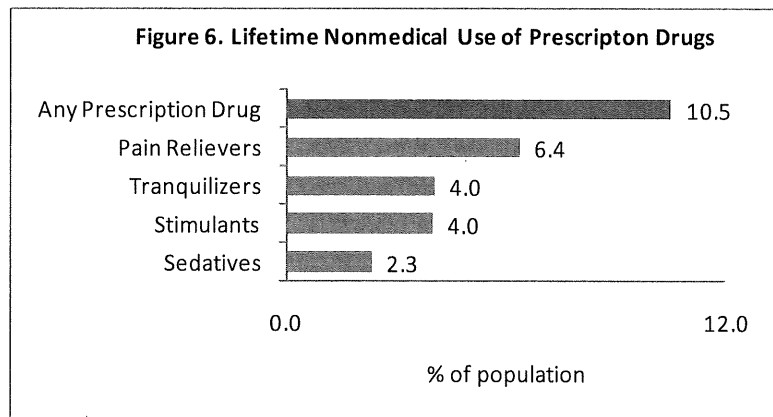
*p≤.05 **p≤.01 ***p≤.001

Nonmedical Use of Prescription Drugs

To measure potential prescription drug abuse, respondents were asked if they ever used four types of prescription drugs (pain relievers, tranquilizers, sedatives or sleeping pills, or stimulants) “on your own – that is, either outside prescribed use or that you took for the experience or the feeling they caused.” Individuals were also asked about how frequently and recently they last used such drugs.

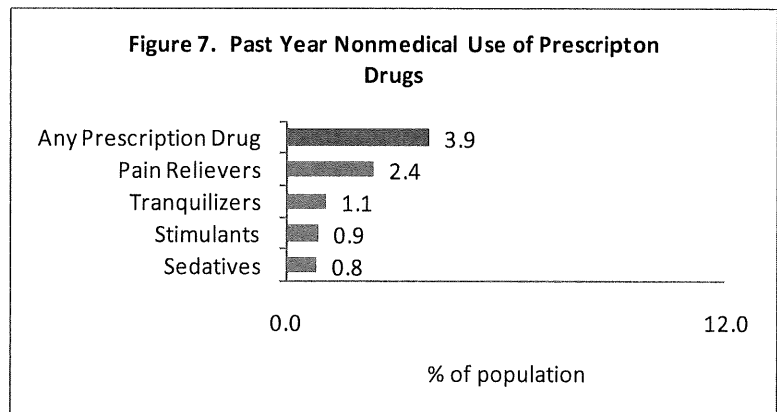
Rates of lifetime and past year nonmedical use of specific types of prescription drugs are shown in Figures 6 and 7.

Approximately 6% of the population indicated that they have used pain relievers, 4% have used tranquilizers or stimulants, and 2% have used sedatives for nonmedical reasons at some point



in their lives. Overall, approximately 11% of the population ever misused prescription drugs.

Consistent with the results for lifetime use, pain relievers were the most commonly misused prescription drug in the past year (Figure 7), followed by tranquilizers and stimulants. Combining all medications, almost 4% of the adult



population has misused prescription drugs in the past year. This translates into approximately 162,000 adults who misused prescription drugs in 2011.

The demographic correlates of misuse of prescription drugs are presented in Table 8. Men are significantly more likely than women to report nonmedical use of prescription drugs. Misuse of prescription drugs decreases steadily with age: the highest rates of prescription drug abuse are among those aged 18 to 24 years and the lowest are among those 65 years or older. The cultural groups with highest rates of lifetime and past year abuse of prescription drugs are American Indians and persons from multiple and other racial backgrounds. Lifetime and past year prevalence of non-medical use of prescription medication is lowest for the Asian/Pacific Islander population.. There is a modest regional difference in lifetime use; with the highest rates in the metro and Northeast regions.

As shown on Table 9, 46% of the adult population reported lifetime use of any illicit drugs (illegal or non- medical use of prescriptions) and 10% reported use of an illicit drug in the past year. In

Table 8. Lifetime and Past Year Non-Medical Use of Prescription Medication

	Lifetime Use		Past Year Use	
	%	SE	%	SE
Gender				

Male	12.4	0.52	4.26	0.33
Female	8.8	0.43	3.51	0.30
Age (in years)				
		***		***
18-24	17.7	1.44	10.2	1.15
25-44	11.9	0.63	4.2	0.39
45-64	9.8	0.47	2.4	0.25
65+	3.9	0.41	1.6	0.29
Race/Ethnicity				
		***		***
White	10.6	0.37	3.6	0.23
Hispanic	9.3	1.51	6.8	1.41
African American	10.0	1.88	3.6	1.11
Asian/Pacific Islander	6.8	1.75	3.1 ^	1.20
American Indian	20.5	3.67	10.7	3.14
Multiple & Other	19.5	3.98	10.8	3.03
Foreign Born				
		**		
No	10.9	0.36	3.9	0.23
Yes	6.7	1.04	2.9	0.66
Region				
		*		
Metro	11.4	0.49	3.8	0.31
Northeast	11.0	1.15	4.4	0.84
Northwest	8.0	0.94	4.1	0.75
East Central	10.5	1.11	4.5	0.79
West Central	9.9	1.17	3.6	0.80
Southeast	9.3	1.04	3.8	0.72
Southwest	8.4	1.00	3.6	0.69
Total	10.5	0.34	3.9	0.22

^estimate may not be reliable

*p≤.05 **p≤.01 ***p≤.001

2011, that translates to 1.9 million adult Minnesotans who have used illicit drugs sometime in their lives, while 430,000 have done so in the past year.

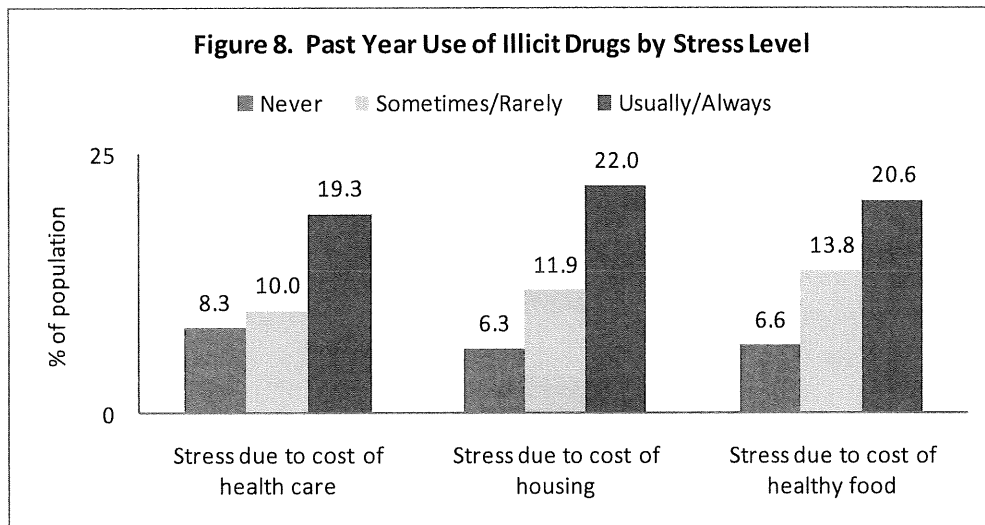
Lifetime and past year use of illicit drugs is higher among men than women. Younger persons are much more likely to have used illicit drugs in the past year than are persons aged 65 or older. Among the cultural groups studied, illicit drug use (both life time and past year) is highest among the American Indian population and among persons from other and multiple racial backgrounds. Adults born in the US are almost twice as likely to report lifetime and past year use of illicit drugs as are their US-born counterparts. Finally, the prevalence of illicit drug use is highest in the metropolitan and Northeast regions.

We also examined the use of illegal or prescription drugs by perceived stress. As shown in Figure 8, adults who reported usually or always worrying about having to pay for health care, housing or healthy food are more likely to have used illegal or prescription drugs in the past year to get high than those who never had such worries.

Table 9. Lifetime and Past Year Use of Any Illicit Drugs

	Lifetime Use		Past Year Use	
	%	SE	%	SE
Gender		***		***
Male	51.1	0.77	12.6	0.54
Female	41.4	0.71	8.1	0.44
Age (in years)		***		***
18-24	50.4	1.89	26.2	1.66
25-44	51.1	0.95	12.2	0.65
45-64	54.6	0.78	6.7	0.40
65+	13.3	0.72	2.1	0.33
Race/Ethnicity		***		***
White	47.1	0.56	9.8	0.37
Hispanic	34.9	2.43	11.6	1.79
African American	47.3	3.03	15.2	2.28
Asian/Pacific Islander	22.8	2.83	7.5	1.83
American Indian	63.3	3.80	22.4	3.65
Multiple & Other	64.6	4.4	27.3	4.56
Foreign Born		***		***
No	48.0	0.54	10.7	0.37
Yes	25.3	1.72	5.6	0.96
Region		***		***
Metro	49.9	0.74	11.3	0.50
Northeast	49.1	1.66	12.3	1.27
Northwest	37.7	1.58	8.9	1.07
East Central	45.2	1.71	9.2	1.11
West Central	39.9	1.78	8.0	1.13
Southeast	41.6	1.71	9.5	1.13
Southwest	37.2	1.67	7.9	1.02
Total	46.1	0.52	10.3	0.35

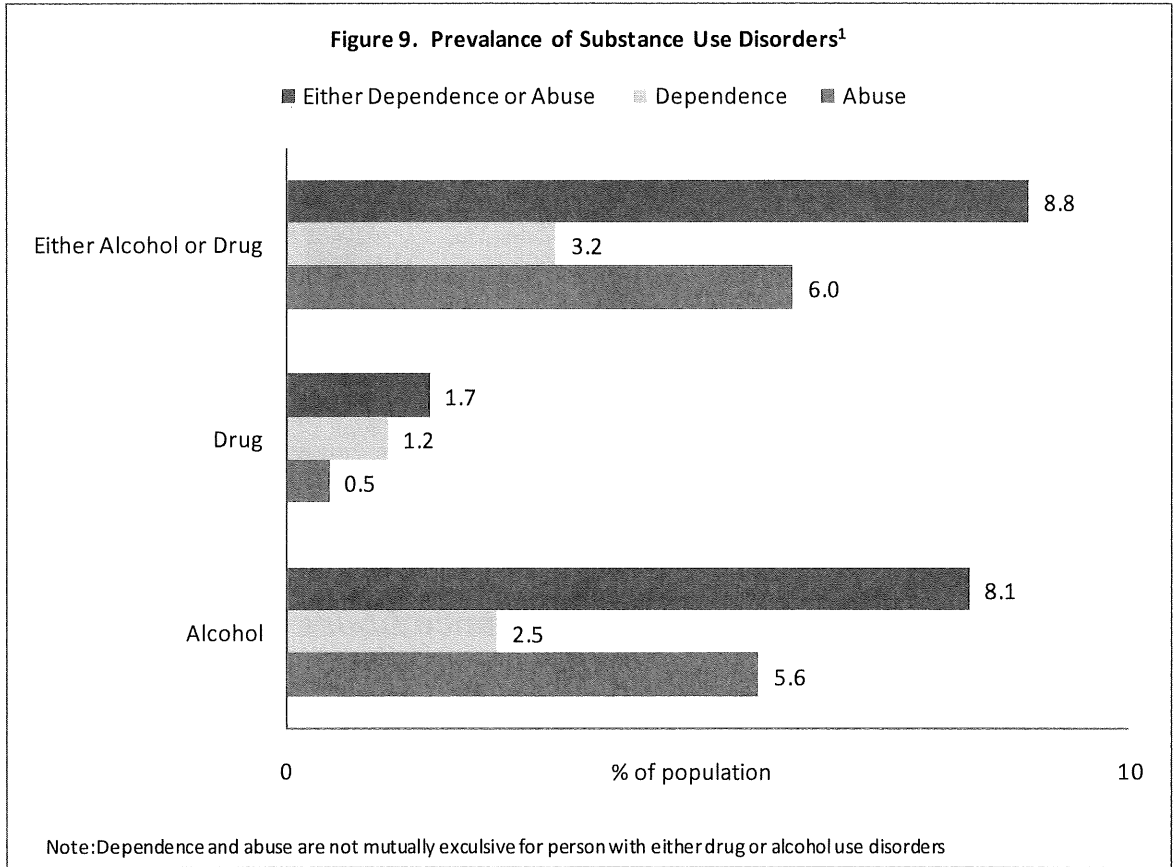
*p≤.05 **p≤.01 ***p≤.001



Twelve-month Prevalence of Substance Abuse or Dependence

Substance abuse or dependence was defined consistent with criteria from the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV). DSM-IV is a compilation of diagnostic criteria for various mental disorders. It distinguishes between substance dependence and abuse, with dependence being the more severe form of disorder. Measures of alcohol and drug abuse and dependence were computed separately. Substance abuse was defined as either alcohol or drug abuse. Substance dependence was defined as either alcohol or drug dependence. Finally, an alcohol use disorder was defined as either alcohol dependence or abuse and a drug use disorder as meeting the definition of either drug abuse or dependence.

Estimates of alcohol and drug dependence or abuse in the past year are shown in Figure 9. Approximately 2.5% of the population meet the criteria for alcohol dependence and 5.6% meet the criteria for alcohol abuse. Therefore, in 2011 approximately 340,000 (8.1%) adults in Minnesota have an alcohol use disorder according to DSM-IV criteria.



Drug use disorders are less common than alcohol use disorders. About 1.2% of the population meet the criteria for drug dependence, and an additional .5% met the criteria for drug abuse. Overall, 1.7% of the population, or approximately 71,000 adults in Minnesota in 2010, have a drug use disorder.

The prevalence of alcohol and drug use disorders by demographic characteristics is shown on Table 10. Males are consistently more likely than females to report symptoms that constitute alcohol and/or drug use disorders. The likelihood of a substance use disorder decreases with age. American Indians are the cultural group most likely to experience these disorders, while Asian/Pacific Islander adults are the least likely. Persons born in the US are

more likely to have an alcohol use disorder or a drug use disorder than foreign-born persons.

There are no significant regional differences in the likelihood of having a substance use disorder.

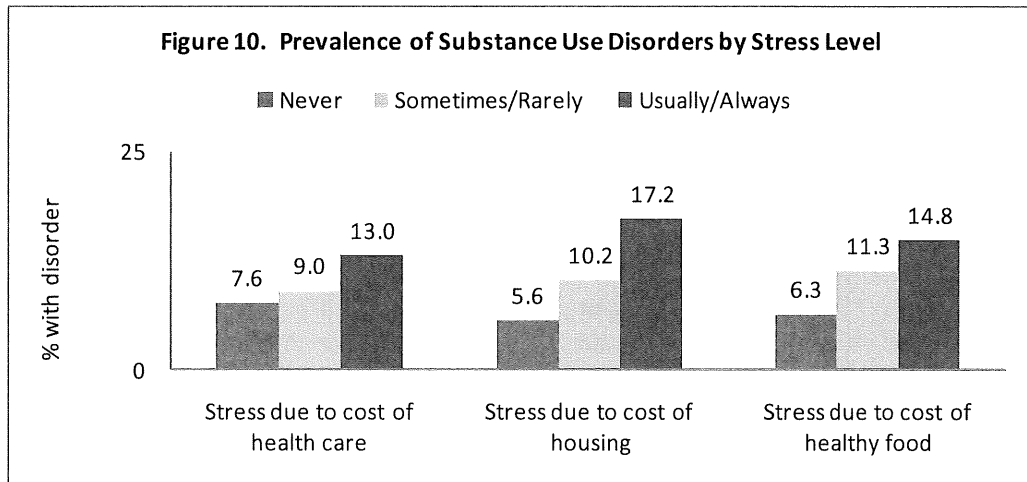
Table 10. Past Year Substance Abuse/Dependence by Demographic Characteristics

	Alcohol Disorder		Drug Disorder		Alcohol or Drug Disorder	
	%	SE	%	SE	%	SE
Gender		***		**		***
Male	10.9	0.49	2.4	0.25	11.70	0.50
Female	5.4	0.36	1.0	0.17	5.90	0.38
Age (in years)		***		***		***
18-24	16.6	1.40	6.0	0.88	18.10	1.45
25-44	10.8	0.60	1.8	0.25	11.50	0.61
45-64	5.9	0.36	0.7	^ 0.13	6.40	0.37
65+	1.0	0.21	0.3	^ 0.15	1.30	0.26
Race/Ethnicity		***		***		***
White	8.2	0.33	1.4	0.16	8.70	0.34
Hispanic	7.8	1.29	3.7	1.14	9.10	1.45
African American	4.4	1.19	2.4	0.76	5.90	1.29
Asian/Pacific Islander	4.3	1.47	0.2	0.12	5.00	1.60
American Indian	19.4	3.63	11.1	3.21	22.30	3.75
Multiple & Other	19.1	3.75	4.8	1.80	21.60	3.91
Foreign Born		***		*		***
No	8.4	0.32	1.7	0.16	9.08	0.33
Yes	4.7	0.82	0.5	^ 0.28	5.00	0.87
Region						
Metro	8.1	0.43	1.6	0.20	8.80	0.45
Northeast	9.3	1.09	2.6	0.66	10.44	1.14
Northwest	8.4	1.02	2.1	0.54	9.30	1.06
East Central	7.6	0.94	1.7	0.52	8.32	0.99
West Central	9.9	1.21	1.2	^ 0.36	10.36	1.23
Southeast	6.5	0.93	1.5	^ 0.49	6.89	0.94
Southwest	8.1	0.98	1.6	^ 0.50	8.70	1.00
Total	8.1	0.30	1.7	0.15	8.80	0.31

^estimate may not be reliable

*p≤.05 **p≤.01 ***p≤.001

We also examined the relationship between having a substance use disorder and experiencing stress. As shown in Figure 10, risk of having a substance use disorder increases with stress in each of the three areas. The highest rates of substance use disorder (17%) are among people who indicated that they usually or always worry about paying their mortgage or rent.



Mental Health

Two measures of mental health were included in the survey: a) a screener for possible depression, and b) a measure of serious psychological distress. The eight-item Patient Health Questionnaire (PHQ-8) was used as the depression screener (Kroenke et al. 2009). The questions ask respondents how many days in past two weeks they had experienced symptoms that characterize depression such as feeling down, depressed or hopeless, feeling tired, or having trouble concentrating. For serious psychological distress (SPD), the K6 was included (Kessler et al. 2003). Sample questions include how often one felt nervous, worthless, or depressed over the past 30 days.

As shown in Table 11, 8.4% of the adult population experienced significant depressive symptoms in the past two weeks, and 3% of the population reported symptoms of serious psychological distress in the past month. This translates to about 350,000 adult Minnesotans in 2011 with significant depressive symptoms and 125,000 with symptoms suggestive of serious psychological distress (although the groups are not mutually exclusive).

Women are more likely than men to experience depressive symptoms, although the gender difference in SPD is not as large. Elevated depressive symptoms (5.6%) and SPD (1.5%) are lowest among people aged 65 or older.

Race and ethnicity are significantly associated with depressive symptoms and SPD. Asian/Pacific Islander adults have the lowest rates of both types of mental health problems. American Indians and persons from multiple or other racial backgrounds have the highest rates of

depression. African Americans and persons from multiple and other racial backgrounds have the highest rates of SPD.

Table 11. Depressive Symptoms and Serious Psychological Distress (SPD) by Demographics

	Depressive Symptoms		SPD	
	%	SE	%	SE
Gender		***		**
Male	6.9	0.39	2.6	.24
Female	9.9	0.44	3.5	.27
Age (in years)		***		**
18-24	9.8	1.14	2.5	.58
25-44	8.2	0.52	3.4	.35
45-64	9.5	0.46	3.5	.29
65+	5.6	0.51	1.5	.30
Race/Ethnicity		***		***
White	7.9	0.31	2.6	.18
Hispanic	10.2	1.50	5.3	1.18
African American	14.6	2.16	8.8	1.77
Asian/Pacific Islander	5.7	1.62	1.7	.68
American Indian	21.0	3.33	6.8	2.10
Multiple & Other	25.0	4.37	10.7	2.74
Foreign Born		*		
No	8.7	0.31	3.0	.19
Yes	5.8	0.92	2.9	.58
Region				**
Metro	8.3	0.42	3.0	.25
Northeast	10.6	1.04	3.8	.64
Northwest	10.3	1.09	1.9	.36
East Central	7.8	0.93	3.2	.61
West Central	9.4	1.11	4.1	.87
SouthEast	7.4	0.90	3.3	.66
SouthWest	8.3	0.96	2.0	.48
Total	8.4	.30	3.0	.18

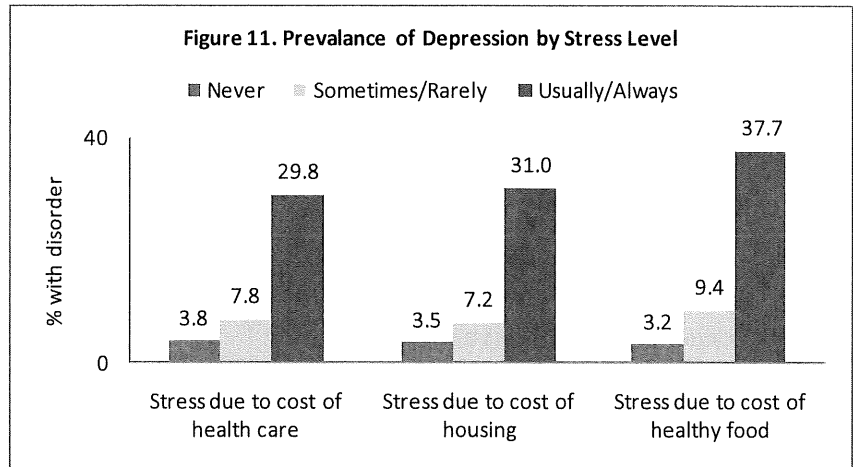
*p≤.05 **p≤.01 ***p≤.001

Persons born in the US are more likely to experience significant depressive symptoms than foreign-born adults. Rates of SPD are lowest in the Northwest and highest in Northeast regions.

Figure 11 shows the relationship between mental health problems and stress. As shown, stress related to the costs of

health care, housing or healthy food significantly increases risk for depression. Indeed, more than one-third of people who said they usually or always worry about having enough money to buy healthy foods

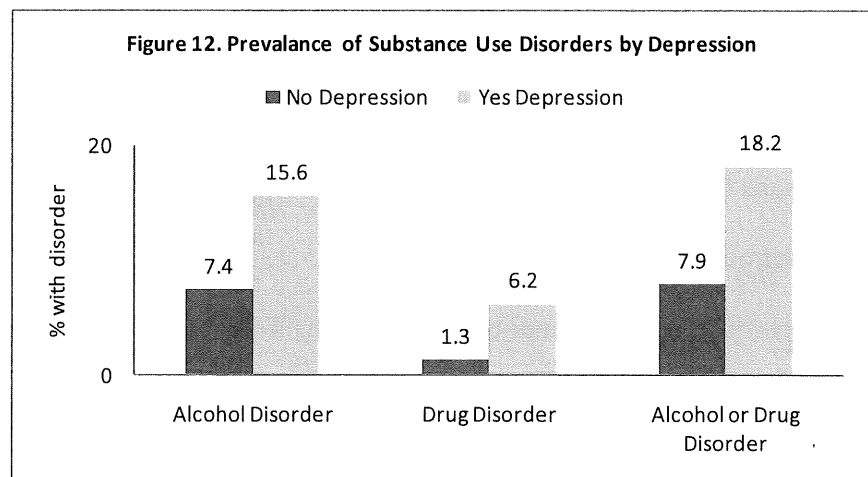
also experience significant symptoms of depression. Although not shown in the figure, the same pattern is observed for the relationship between SPD and stress.



Co-Morbidity of Mental Health and Substance Use

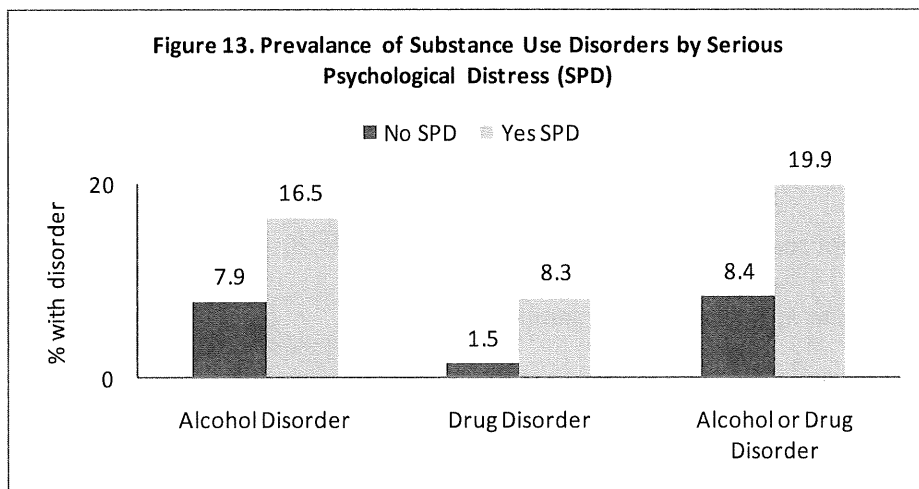
Persons with substance use disorders often have other mental health problems such as depression. As shown in

Figure 12, persons with depression are much more likely to have each type of substance use disorder than persons without



depression. For example, 18% of persons with depression had either an alcohol or drug use disorder in the past year, compared to 8% of persons who do not have depression.

Similarly, as shown on Figure 13, persons with serious psychological distress are more likely to have an alcohol and/or drug use disorders than those without serious psychological distress. Indeed, about 17% of person with SPD also report an alcohol or drug use disorder, compared to 9% of persons without SPD.



Treatment for Substance Use

Respondents were asked if they received treatment (other than self-help groups) for alcohol or drug problems, and, if so, how recently they received treatment. Most people with a substance use disorder do not receive treatment. As shown in Table 12, only 4% of adults with an alcohol use disorder received treatment during the past year. While treatment receipt rates are higher for those with a drug use disorder (13%), still almost 9 out of every ten people with the symptoms of a drug use disorder did not receive any treatment in the past year. There are not sufficient sample sizes of people who received treatment to be able to examine demographic correlates of treatment receipt.

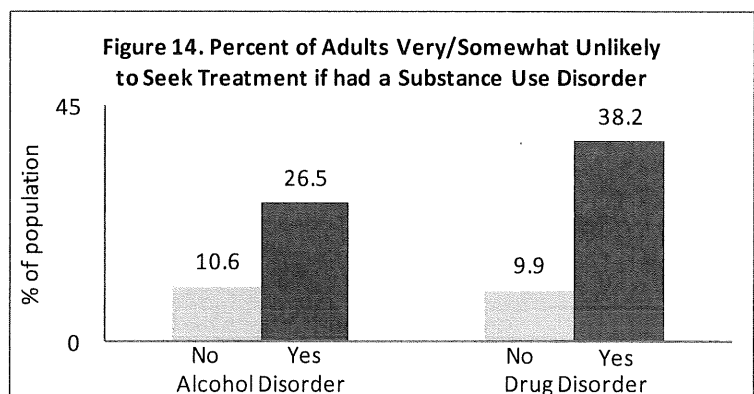
Table 12. Receipt of Treatment Among Adults with a Substance Use Disorder

	Treatment Past Year	
	%	SE
Alcohol		
Abuse	1.5 ^	0.62
Dependence	11.2	2.16
Abuse or Dependence	4.4	0.80
Drug		
Abuse	8.4 ^	4.49
Dependence	14.4	3.73
Abuse or Dependence	12.9	2.96
Alcohol or Drug		
Abuse	2.2 ^	0.67
Dependence	12.5	2.00
Abuse or Dependence	5.6	0.86

*p≤.05 **p≤.01 ***p≤.001

^estimate may not be reliable

Respondents were asked how likely they would be to seek out treatment if they thought they had an alcohol or drug problem. As shown in Figure 14, individuals with an alcohol use disorder are more than twice as likely to say they would not seek out care as their counterparts who do not have an alcohol use disorder. The difference is even more striking for individuals with a drug use disorder; persons with a drug use disorder are almost 4 times



more likely to say they would not seek out treatment than those without such a disorder.

We also asked respondents if they needed treatment for an alcohol/drug use disorder in the past year but did not receive it. Of adults with an alcohol use disorder who did not receive treatment in the past year, only 4% feel they needed treatment and did not receive it. Of those with a drug use disorder who did not receive treatment, only 15% perceive that they needed treatment. Overall, only 4% of persons with a substance use disorder who did not receive care felt that they needed treatment but did not receive it in the past year.

Defining Need for Substance Abuse Treatment

Need for substance abuse treatment was defined in a manner consistent with the measure used in the National Survey of Drug Use and Health (SAMSHA, 2005) and includes persons who either met the criteria for substance abuse or dependence in the past year or who used specialty treatment services in the past year. Specialty treatment services exclude self-help groups such as Alcoholics Anonymous or Narcotics Anonymous.

As shown on Table 13, about 9% of the population were estimated to be in need of substance abuse treatment; 8% needed treatment for alcohol and 2% needed treatment for drugs (the total of these two percentages exceeds 9% because some individuals needed treatment for both alcohol and other drugs). These percentages translate to an estimate of 375,000 adult Minnesotans being in need of treatment for alcohol or drug use disorders in 2011.

Men are twice as likely to need treatment for a substance use disorder as women. Need for treatment decreases with age. American Indians and persons from multiple and other racial groups have the highest level of treatment need for a substance use disorder, while African American and Asian/Pacific Islander adults have the lowest level of need (although the estimate for the later group may be unreliable due to small sample sizes). Persons born in the US have

higher levels of treatment need than persons not born in the US. There are no significant regional differences in need for treatment.

		Alcohol Disorder		Drug Disorder		Alcohol or Drug Disorder	
		%	SE	%	SE	%	SE
Gender			***		***		***
	Male	11.2	0.50	2.5	0.26	12.0	0.51
	Female	5.5	0.37	1.1	0.17	6.1	0.38
Age (in years)			***		**		***
	18-24	16.6	1.40	6.2	0.90	18.2	1.45
	25-44	11.0	0.60	1.9	0.26	11.7	0.62
	45-64	6.2	0.37	0.8	0.14	6.7	0.38
	65+	1.0	0.21	0.3 ^	0.15	1.3	0.26
Race/Ethnicity			***		***		***
	White	8.3	0.33	16.0	0.16	8.9	0.34
	Hispanic	7.9	1.29	3.7	1.44	9.2	1.46
	African American	5.2	1.28	2.7	0.77	6.7	1.37
	Asian/Pacific Islander	4.3	1.48	0.9 ^	0.65	5.0 ^	1.59
	American Indian	19.6	3.63	12.8	3.38	22.5	3.75
	Multiple & Other	20.1	3.80	5.5 ^	1.90	22.0	3.92
Foreign Born			***				***
	No	8.6	0.33	1.9	0.16	9.3	0.34
	Yes	4.7	0.82	0.8 ^	0.40	5.1	0.87
Region							
	Metro	8.3	0.44	1.7	0.21	9.0	0.45
	Northeast	9.6	1.11	2.7	0.66	10.8	1.16
	Northwest	8.5	1.02	2.5	0.59	9.7	1.08
	East Central	7.6	0.95	2.0	0.55	8.4	1.00
	West Central	10.3	1.23	1.5	0.39	10.9	1.25
	Southeast	6.7	0.93	1.7	0.50	7.1	0.95
	Southwest	8.3	0.98	1.8	0.52	8.8	1.01
Total		8.3	0.31	1.8	0.15	9.0	0.32

*p≤.05 **p≤.01 ***p≤.001

^estimate may not be reliable

Mental Health Treatment

Respondents were also asked if they had ever seen a ‘mental health provider, such as a psychiatrist, psychologist, social worker, psychiatric nurse or counselor for emotional or mental health problems’ They were then asked how recently they received such help.

Table 14 shows rates of treatment by demographic characteristics for adults who reported either depressive symptoms or SPD. Only 35% of adults with a mental health problem received specialty mental health treatment in the past year. Women are more likely to have received treatment than men, but the difference is not statistically significant. Adults 65 years and older are less likely than younger people to have received treatment in past year. Adults who are Asian/Pacific Islander with mental health problems have lower rates of treatment than the other cultural groups, but the estimate may be unreliable. Among the cultural groups studied, persons from multiple or other racial backgrounds report the highest rates of treatment (64%). Adults with mental health problems who live in the Northeast are the most likely to have received treatment, while their counterparts who live in the Northwest are the least likely to receive treatment.

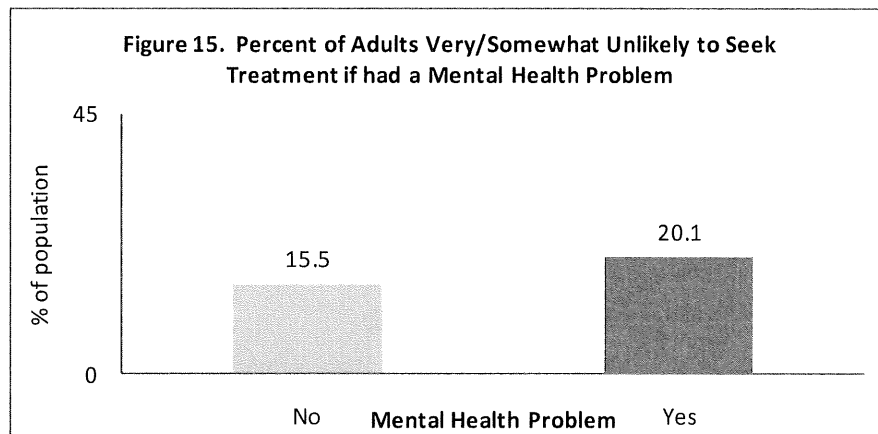
Table 14. Receipt of Treatment in Past Year among Adults with a Mental Health Problem by Demographic Characteristics

	Received Treatment	
	%	SE
Gender		
Male	31.8	2.60
Female	36.4	2.19
Age (in years)		**
18-24	29.3	5.17
25-44	40.0	3.11
45-64	36.4	2.37
65+	15.8	3.46
Race/Ethnicity		***
White	34.4	1.89
Hispanic	25.8	5.69
African American	35.7	6.80
Asian/Pacific Islander	9.7 [^]	4.73
American Indian	39.3	8.50
Multiple & Other	64.3	9.53
Foreign Born		
No	35.2	1.75
Yes	25.1	5.81
Region		**
Metro	38.1	2.46
Northeast	48.4	5.15
Northwest	21.6	4.14
East Central	28.7	5.37
West Central	32.5	5.80
Southeast	28.1	5.42
Southwest	26.2	5.10
Total	35.0	1.67

*p≤.05 **p≤.01 ***p≤.001

[^]estimate may not be reliable

Respondents were asked if in the past year they needed treatment for a mental health problem but did not receive it. They were also asked how likely they would be to seek mental health treatment if they thought they had a mental health problem. Only 25% of persons with a mental health problem who did not receive treatment in the last year reported that they needed treatment but did not receive it. Moreover, as shown on Figure 15, one-fifth of persons with a mental health problem said that, if they felt they had a mental health problem, they would be unlikely to seek treatment.



III. Multivariate Results

Using multivariate analysis, we examine the association between demographic characteristics and substance use disorders taking into account other variables that may be important. Both the unadjusted odds ratios and the adjusted odds ratios are presented. The unadjusted odds ratios represent the relationship between the demographic characteristic and disorder, without taking into account other factors. The adjusted odds ratios represent the relationship after controlling for all other variables listed on the table in addition to marital status, employment, average income per adult in the household and education.

Tables 15 through 17 present the relationships between demographic characteristics and alcohol, drug and substance use disorders. By comparing the odds ratios presented in Model I and Model II in each table, we can assess whether initial group differences may be due to differences in other demographic characteristics that are controlled for in the second model.

As shown in Model II in Table 15, controlling for other demographics, women have 54% lower odds of having an alcohol use disorder than men. The lower rates of alcohol use disorder for people 45 and older compared to young adults (18-24) remains significant after controlling for demographic differences between the groups. Compared to Whites, African Americans and Asians/Pacific Islanders have lower odds of having an alcohol use disorder, while American Indians and persons of multiple and other races have higher odds. Even after controlling for other demographic differences between groups, foreign-born adults have 40% lower odds of having an alcohol use disorder compared to US-born adults.

Table 16 presents parallel results for drug use disorders. In the adjusted model, women and persons 25 years of age or older have lower risk for disorder compared to men and younger persons. Compared to White adults, American Indian adults have higher odds of having a drug use disorder. Foreign-born adults have about 77% lower odds of having a drug use disorder than US- born adults.

Table 17 presents the results for any substance use disorder (alcohol or drug). The results mirror those in Table 15 and 16 with regard to men, young adults aged 18-24 and persons born in the US having higher risk for a substance use disorder compared to women, older adults and foreign-born persons. Adjusting for demographic differences, African American adults have lower odds of having a substance use disorder compared to Whites. American Indian adults and

persons who have multiple or other racial backgrounds have higher odds of having a substance use disorder compared to Whites.

Table 15. Unadjusted and Adjusted Odds Ratios for Alcohol Disorder				
	Model I		Model II	
	Unadjusted		Adjusted	
	OR	[95% CI]	OR	[95% CI]
Gender				
Male	Reference		Reference	
Female	0.46***	[0.39, 0.55]	0.48***	[0.40, 0.58]
Age (in years)				
18-24	Reference		Reference	
25-44	0.59***	[0.47, 0.75]	0.81	[0.61, 1.08]
45-64	0.32***	[0.25, 0.40]	0.43***	[0.31, 0.57]
65+	0.05***	[0.03, 0.08]	0.07***	[0.04, 0.13]
Race/Ethnicity				
White	Reference		Reference	
Hispanic	0.96	[0.67, 1.38]	1.00	[0.64, 1.59]
African American	0.52*	[0.30, 0.91]	0.40**	[0.22, 0.73]
Asian/Pacific Islander	0.51	[0.25, 1.04]	0.42*	[0.19, 0.95]
American Indian	2.71***	[1.69, 4.35]	2.38***	[1.47, 3.85]
Multiple & Other	2.55***	[1.56, 4.18]	1.94*	[1.15, 3.26]
Foreign Born				
No	Reference		Reference	
Yes	0.55**	[0.38, 0.80]	0.60*	[0.37, 0.97]
Region				
Metro	Reference		Reference	
Northeast	1.16	[0.87, 1.54]	1.15	[0.85, 1.55]
Northwest	1.05	[0.79, 1.40]	1.05	[0.77, 1.43]
East Central	0.93	[0.70, 1.24]	0.93	[0.68, 1.27]
West Central	1.25	[0.93, 1.67]	1.35	[0.98, 1.87]
Southeast	0.78	[0.57, 1.08]	0.77	[0.55, 1.08]
Southwest	1.01	[0.76, 1.34]	1.08	[0.80, 1.46]

*p≤.05 **p≤.01 ***p≤.001

Model II controls for education, per-person household income, marital status, and employment

	Model I		Model II	
	Unadjusted		Adjusted	
	OR	[95% CI]	OR	[95% CI]
Gender				
Male	Reference		Reference	
Female	0.42***	[0.28, 0.62]	0.36***	[0.24, 0.55]
Age (in years)				
18-24	Reference		Reference	
25-44	0.28***	[0.19, 0.43]	0.48**	[0.28, 0.83]
45-64	0.11***	[0.07, 0.18]	0.17***	[0.09, 0.32]
65+	0.03***	[0.01, 0.08]	0.02***	[0.01, 0.08]
Race/Ethnicity				
White	Reference		Reference	
Hispanic	2.61**	[1.34, 5.09]	2.46	[0.95, 6.34]
African American	1.66	[0.85, 3.24]	0.81	[0.36, 1.79]
Asian/Pacific Islander	0.58	[0.12, 2.77]	0.42	[0.09, 2.00]
American Indian	8.84***	[4.54, 17.21]	4.96***	[2.38, 10.36]
Multiple & Other	2.75*	[1.16, 6.53]	1.36	[0.50, 3.69]
Foreign Born				
No	Reference		Reference	
Yes	0.47	[0.17, 1.26]	0.23*	[0.06, 0.87]
Region				
Metro				
Northeast	1.57	[0.88, 2.80]	1.09	[0.57, 2.11]
Northwest	1.33	[0.75, 2.35]	0.88	[0.47, 1.68]
East Central	1.09	[0.57, 2.09]	0.98	[0.49, 1.97]
West Central	0.75	[0.39, 1.44]	0.65	[0.32, 1.33]
Southeast	0.95	[0.48, 1.89]	0.81	[0.40, 1.63]
Southwest	0.89	[0.44, 1.80]	0.75	[0.37, 1.56]

*p≤.05 **p≤.01 ***p≤.001

Model II controls for education, per-person household income, marital status, and employment

	Model I		Model II	
	Unadjusted		Adjusted	
	OR	[95% CI]	OR	[95% CI]
Gender				
Male	Reference		Reference	
Female	0.47***	[0.40, 0.56]	0.48***	[0.40, 0.57]
Age (in years)				
18-24	Reference		Reference	
25-44	0.57***	[0.46, 0.72]	0.81	[0.62, 1.08]
45-64	0.31***	[0.24, 0.39]	0.43***	[0.32, 0.57]
65+	0.05***	[0.03, 0.08]	0.07***	[0.04, 0.12]
Race/Ethnicity				
White	Reference		Reference	
Hispanic	1.07	[0.75, 1.52]	1.11	[0.70, 1.75]
African American	0.66	[0.41, 1.05]	0.48**	[0.29, 0.81]
Asian/Pacific Islander	0.56	[0.29, 1.10]	0.49	[0.23, 1.02]
American Indian	3.03***	[1.95, 4.71]	2.47***	[1.56, 3.91]
Multiple & Other	2.80***	[1.75, 4.48]	2.06**	[1.25, 3.40]
Foreign Born				
No	Reference		Reference	
Yes	0.54**	[0.38, 0.79]	0.52**	[0.33, 0.84]
Region				
Metro				
Northeast	1.20	[0.92, 1.57]	1.16	[0.87, 1.55]
Northwest	1.08	[0.83, 1.42]	1.06	[0.79, 1.42]
East Central	0.95	[0.72, 1.25]	0.94	[0.70, 1.26]
West Central	1.21	[0.91, 1.61]	1.29	[0.94, 1.76]
Southeast	0.77	[0.56, 1.04]	0.74	[0.54, 1.03]
Southwest	0.97	[0.74, 1.28]	1.02	[0.76, 1.37]

*p≤.05 **p≤.01 ***p≤.001

Model II controls for education, per-person household income, marital status, and employment

IV. Summary and Conclusions

The most recent estimates of the prevalence of substance use and mental health problems available to DHS were collected in 2004/2005. Table 18 compares key estimates from the 2004/2005 survey to the results from the 2010 survey. As with most surveys, we relied upon a random sample of respondents; therefore, we know that that the estimates do not precisely reflect the true values in the population. The 95% confidence interval (CI) describes the range that the true value in the population is likely to fall for each period. As shown, across the 5 to 6 years since the prior survey, the prevalence rates for most measures remained stable. The largest change is in cigarette smoking; past month smoking declined by 2.9 percentage points (a 12% decline). This suggests that some former smokers have successfully quit. Lifetime, past year and past month alcohol use as well as past year binge drinking and are slightly lower in 2010 than in the prior period, but the differences are not substantively large. The estimates of lifetime illegal drug use as well as past year use of illicit drugs are higher in 2010 than in 2004/2005.

There has not been an increase in the prevalence of alcohol or drug dependence or abuse. While the rate of overall substance dependence is slightly higher in 2010 than in 2004/2005, the difference is small. The percentage of the adult population in need of treatment for a substance use disorder is similar between the two time period. However, a substantial number of adults in Minnesota experience problems with alcohol or drug use. Approximately 8.8% of the population meet the criteria for a substance use disorder, which involves continued use of alcohol or drugs despite negative health and social consequences. This translates to about 366,000 adults in Minnesota in 2011 with a substance use disorder.

Combined with the group of adults who reported the use of specialty treatment services within the past year (the definition of treatment need used in the analysis), about 9.0% of

Minnesota adults are estimated to be in need of substance abuse treatment. Need for alcohol treatment is about four times higher than need for drug treatment.

	2004/2005		2010	
	%	[95% CI]	%	[95% CI]
Cigarette Use				
Lifetime	47.3	[46.2-48.4]	45.2	[44.2,46.3]
Past Month	22.7	[21.8-23.7]	19.8	[19.0,20.6]
Alcohol Use				
Lifetime	81.0	[80.1-81.8]	77.3	[76.4,78.2]
Past Year	71.0	[70.0-72.0]	67.4	[66.5,68.4]
Past Month	59.8	[58.7-60.8]	56.7	[55.7,57.7]
Past Year Binge Drinking	35.0	[33.9-36.1]	31.8	[30.8,32.8]
Past Month Binge Drinking	18.8	[17.8-19.7]	18.2	[17.4,19.1]
Past Month Heavy Drinking	4.4	[3.9-4.9]	5.4	[4.9,5.9]
Drug Use				
Lifetime Illegal Drugs	40.5	[39.4-41.6]	44.3	[43.3,45.3]
Past Year Illegal Drugs	7.2	[6.5-7.9]	8.4	[7.8,9.1]
Past Year Marijuana	6.7	[6.1-7.3]	8.1	[7.5-8.7]
Lifetime Prescription Drugs	8.5	[7.8-9.2]	10.5	[9.9,11.2]
Past Year Prescription Drugs	3.0	[2.6-3.4]	3.9	[3.4,4.3]
Past Year Illicit Drugs	8.8	[8.1-9.5]	10.3	[9.6-11.0]
Substance Use Disorder				
Alcohol Abuse	4.8	[4.3-5.3]	5.6	[5.1,6.2]
Alcohol Dependence	3.3	[2.8-3.7]	2.5	[2.1,2.8]
Alcohol Disorder	8.0	[7.4-8.7]	8.1	[7.5,8.7]
Drug Abuse	0.6	[0.4-0.8]	0.5	[0.4,0.7]
Drug Dependence	1.7	[1.3-2.0]	1.2	[0.9,1.4]
Drug Disorder	2.2	[1.8-2.6]	1.7	[1.4,2.0]
Substance Abuse	5.1	[4.6-5.7]	6.0	[5.5,6.5]
Substance Dependence	4.4	[3.9-5.0]	3.2	[2.8,3.6]
Substance Disorder	9.1	[8.4-9.8]	8.7	[8.1,9.4]
Treatment Need for Substance Use Disorder				
Alcohol Disorder	8.3	[7.7-9.0]	8.3	[7.7-8.9]
Drug Disorder	2.4	[2.0-2.8]	1.8	[1.5,2.1]
Alcohol or Drug Disorder	9.4	[8.7-10.2]	9.0	[8.3-9.5]
Mental Health				
Depression	7.7	[7.1-8.2]	8.4	[7.9-9.0]
Serious Psychological Distress	2.3	[2.0-2.7]	3.0	[2.7-3.4]

While many adults in Minnesota meet the diagnostic criteria for having a substance use disorder, few receive specialty alcohol or drug treatment. Overall, only 4% of adults with an alcohol use disorder received such treatment in the past year. While rates of treatment receipt were higher for persons with a drug use disorder (13%), the vast majority of people with such problems do not receive any specialty treatment. Overall, only about 6% of people with a substance use disorder received treatment in the past year.

The reasons for the large gap between treatment need and receipt are complex. While investigating the full array of factors that may account for differences in help seeking behavior were beyond the scope of this report, the results suggest that attitudes do matter. People who believe that excessive alcohol consumption is not a great risk are much more likely to engage in such drinking behavior. Of course, the causal link between attitudes and excessive drinking is not clear. It may be that not knowing the risks associated with high alcohol consumption leads one to drink more. It is also plausible that drinking to excess shapes one's perception that drinking is not a risky behavior.

Attitudes also matter for treatment seeking behavior. Almost 40% of people with a drug use disorder indicated that they would be somewhat or very unlikely to seek treatment if they thought they had a disorder. Of those with a substance use disorder who did not receive treatment, only 4% perceived a need. Making services available and more accessible is clearly important for addressing the gap between treatment need and receipt. But these results suggest that changing attitudes toward treatment is essential. If people are reluctant to seek out help, availability of services can have little impact on addressing unmet need for treatment.

It can be also argued that reaching the diagnostic threshold for a substance use disorder (or any mental health disorder) is a poor measure of need for treatment (Mechanic, 2001). People who reach the threshold for having a disorder, but are not in treatment, may not be

sufficiently disabled or impaired to require formal help. Others may try to resolve their problems on their own, or seek help from friends or family, religious leaders, or support groups.

The findings demonstrate that problems with substance use are not evenly distributed across the population. For example, risk of alcohol and drug use disorders were consistently and significantly associated with gender and age where males and those aged 18 to 24 years had the highest rates of use, abuse, and treatment need.

Race and ethnicity were also found to be associated with alcohol use and use of illicit drugs. While rates of lifetime and past year alcohol use were high for both Whites and American Indians (with Whites being higher), the rate of heavy alcohol use and use of illegal drugs among American Indians outstrips Whites. It is difficult to draw inferences from the findings that people from multiple or other racial backgrounds use substances at relatively high levels because the racial and ethnic composition of this group is so varied. However, fully 66% of persons classified in this study as multiple or other races identify as American Indian; thus, the high rates of use may parallel those found in the American Indian community.

Overall, Asian/Pacific Islander adults in Minnesota appear to have the lowest risk of substance abuse and dependence among the cultural groups studied. Taking into account demographic differences between groups, African Americans have lower risk of substance use disorder than Whites.

Rates of alcohol and drug use are lower among immigrants than the US-born population. Immigrants are also less likely than the US-born population to meet the diagnostic criteria for substance abuse or dependence, or to be in need of treatment for substance use problems. However, the immigrant population is diverse, and further analyses of possible differences in alcohol and drug behavior within this group are warranted.

Mental health problems continue to be a concern in Minnesota. According to the survey, about 8% of adult residents have recently experienced significant depressive symptoms, and 3% have symptoms suggestive of serious psychological distress. The groups most likely to experience depression include women, young (18-24) and middle-aged (45-64) adults. In addition, African Americans, American Indians and those from multiple or other racial groups report elevated depressive symptoms. Adults ages 25 to 64, African Americans and people who identify multiple or other racial backgrounds are also at risk for serious psychological distress. Unfortunately, of the population with a mental health problem, about two-thirds did not receive treatment.

Mental health problems are also significantly associated with substance abuse or dependence. Persons who reported depressive symptoms were about 2 times more likely to report a problem with alcohol and 5 times more likely to report a drug use disorder than people who did not report significant symptoms of depression. The same pattern of results was observed for the relationship between serious psychological distress and substance use disorders.

The direction of causality between substance use disorders and other mental health problems is not clear. It may be that people are using drugs and alcohol as self-medication to deal with symptoms of depression or psychological distress. It is also possible that addictions and mental health problems have a common etiology; For example, people living in poverty and those with high levels of stress may be at risk for multiple problems including substance use and depression (Swendsen and Merikangas 2009).

Our results clearly point to the importance of stress as a correlate of both mental health and substance use problems. Many Minnesotans reported that they worried about how to pay for health care (12%), housing (13%) or healthy food (9%). Persons experiencing these types of

stress are also at higher risk for excessive drinking and using illicit drugs. They are also more likely to experience symptoms of depression or serious psychological distress. Understanding the context of people's lives that puts them at risk for unhealthy behavior or emotional problems warrants further study.

Finally, the results of the survey must be qualified by the limitations to the methodology employed in the conduct of the study. Most importantly, the estimates rely on self-reports of the use of substances. It is likely that respondents under-report their use of alcohol, and especially their use of drugs in surveys like this (Johnson 2004).

In sum, a significant number of adults in Minnesota, about 9%, are defined as needing treatment for substance use. Further efforts to understand variation in attitudes and help-seeking behaviors within this group are needed. We need to better understand who in this group would benefit from treatment in order to better target resources.

References

The American Association for Public Health Research. (2004) Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys. 3rd edition. Lenexa, Kansas: AAPOR

American Psychiatric Association. (2000). *Diagnostic and Statistical Manual of Mental Disorders, 4th edition Text Revisions DSM-IV-TR*. Washington DC: American Psychiatric Association.

Johnson TP, Hougland J., Clayton R (1989). Obtaining reports of sensitive behaviors: A comparison of substance use reports from telephone and face-to-face interviews. *Social Science Quarterly*, 70, 174-183.

Kessler RC, Barker PR, Colpe LJ, Epstein JF, Gfroerer JC, Hiripi E, Howes MJ, Normand SL, Manderscheid RW, Walters EE, Zaslavsky AM. (2003). Screening for serious psychological distress in the general population. *Archives of General Psychiatry*, 60(2),184-189.

Kroenke, K, Strine TW, Spitzer RL, Williams JBW, Berry JT, Mokdad AH. (2008). The PHQ-8 as a measure of current depression in the general population. *Journal of Affective Disorders*, 114,163-173.

Mechanic D. 2003. "Is the prevalence of mental disorders a good measure of the need for services?" *Health Affairs* 22(5):8-20, 2003.

Appendix A: Technical Appendix

I. Survey Period

Table 1 summarizes the period that the survey was fielded. Interviews were conducted with 16,560 respondents. In total, 264 interviews were classified as partial interviews because they did not complete enough of the survey to be able to determine the value for the alcohol or drug screen. The final sample size was 16,296 (13,449 landline and 2,847 cell phone interviews; 15,796 English and 500 Spanish). Interviews ranged in length from 5 to 73 minutes, with the average time being 19.8 minutes. The survey was conducted by Social Science Research Solutions (SSRS), a leading survey research field with expertise in both landline and cell surveys.

Survey	Date
English Landline	May 10, 2010
Cell	May 17, 2010
Spanish Cell and Landline	May 26, 2010
Out of Field	December 15, 2010

II. Sampling

The project team did not sample individuals, but rather it sampled phone numbers. Phone numbers consist of three pieces: XXX-YYY-ZZZZ. The XXX is called an “area code”, the YYY is called an “exchange”, and the ZZZZ is called a “stem”. The Landline RDD samples were drawn from phone numbers that are in active area codes plus exchange groupings within the state of Minnesota.

To account for the fact that a growing portion of the Minnesota population has cell-phones, but not landlines, we also included a random sample of cell phone numbers to reduce coverage error. We limited the cell phone sample to those who used cell phones ‘all’ or ‘most of the time’. Cell phone strata were defined by cellular switch points. A Switch Point (also called central office) can be thought of as the geography defined by all of the wire line households and businesses that are wired to a single point. A switch point contains the telephony switches that route outgoing calls onto the US telephone network and route incoming calls to the individual residence or business. New cellular telephone numbers are assigned to individuals based on the wire center where the phone activation takes place. Most (but not all) people will purchase a cellular telephone near where they live. This provides the ability to define cellular sample frames smaller than state or area code. An advantage of doing this is increased efficiency of cellular samples. However, the sample will exclude people who may reside in these target wire centers who have a cellular telephone number that is “homed” to a wire center outside of the target geography. In addition, people may be contacted that no longer live in the target geography but have kept their cellular telephone number. The concordance between the predicted region (strata) based on switch point and self-reported region range from 89% for the Southwest to 59% in the East Central strata.

The project team was interested in obtaining estimates of treatment need for a representative sample of non-institutionalized adults living in Minnesota. Estimates were needed at the state level, for 7 geographic regions, and for African Americans, American Indians, Hispanics and Asian/Pacific Islanders. A stratified random sample design was employed. Both the cell phone and landline samples were stratified by region: the Northwest, Northeast, West Central, East Central, Southwest, Southeast, Metropolitan region. An additional stratum for the landline sample was added during data collection that oversampled areas in the metro region with a high density of African American or Asian respondents. In addition the landline sample was stratified by geographic regions with a high density of African Americans and geographic regions with a high density of American Indians. Finally, the landline sample included two surname oversamples: telephone numbers associated with Hispanic or Asian surnames (see Table 2 in report for number of completes for each group).

III. Within Household Selection

All adults reached by cell phone were invited to participate if they said they used their cell phone for all or most of their calls. Unlike landline telephones, cell phones are generally tied to an individual not a household. Moreover, it is unrealistic to expect a cell phone respondent to pass off their personal phone to another member of the household who might be randomly selected.

For persons reached by landline, the survey randomly chose an adult to participate. The survey was fielded using the 'next birthday' method to randomly select an adult respondent within a household. Using this method, the person who answers the phone is asked which adult in the household has the next birthday and that individual is the person who is chosen to conduct the interview.

During the process of tracking while the survey was in the field, it was evident that older persons and females were disproportionately represented. This may have been because they are more likely to be home or more likely to participate in a survey. Two screeners were introduced to try to correct the problem.

We began screening for age, such that if the household had no adults under the age of 65, we terminated the call (and recorded the disposition as "No One in HH under Age 65."). If there was at least one adult under the age of 65, the household was eligible and we randomly selected an adult by using the 'next birthday' method. Note, persons in the household 65 years or older were still eligible for selection.

We also introduced a gender screener. For 3 out of 4 calls when we reached an eligible household, we randomly chose the male with the next birthday. If the household had no eligible males we randomly choose between the adults in the household. For 1 out of 4 calls when we reached an eligible household, we randomly choose the female with the next birthday. If no eligible female was in the household, we randomly choose between eligible adults using the 'next birthday' method. In September, we changed the probabilities such that we were asking the screener for males 2/3 of the time, and the screener for females 1/3 of the time.

IV. Weighting

The aim of weighting survey data is to make the selected respondents representative of the population. This is accomplished by weighting respondents relative to their probability of selection into the sample. This process is made more difficult by the fact that not all the respondents had the same probability of inclusion. The probability of selection varied by: (1) stratum (i.e., African-American over-sample area, Hispanic surname, Asian/Pacific Islander surname, American Indian over-sample area, Asians/Pacific Islanders and African American oversample in the metropolitan region and other geographic areas), (2) number of phone lines in the household, (3) the number of adults living in a household, and (4) the interaction of the phone types available in a household and the dual frame sampling design. Weighting the respondents relative to their probability of selection into the sample accomplishes two key goals: (1) having the sampled respondents represent the population of Minnesota, and (2) controlling for the fact that the respondents did not all have the same probability of selection into the sample.

Because some cell-phone users also have landlines and could potentially be sampled in the RDD sample, the probability of selection varies by the respondent's possession of landline and/or cell-phone and their propensity to use their landline compared to their cell-phone. The weights were adjusted to accurately reflect this variation.

Post-stratifying the basic person weights adjusts for differential survey non-response by making the sum of person weights equal to known population distributions. For this study we set the population total to the 2009 American Community Survey estimate for the Minnesota civilian household population age 18 and over: 3,864,212². Post-stratification was used to adjust the data for region, gender, age, race/ethnicity, education, presence of a phone in the household, age by education, and race by region, and the distribution of phone use preferences.

V. Response Rates

Disposition codes and calculation of response rates are consistent with those outlined by the American Association for Public Research (AAPOR). Table 2 shows the response rates (AAPOR4) for the landline and cell samples. The highest response rates for the landline sample were achieved in the Northwest and West Central regions, and for the American Indian

Table 2. Response Rates by Strata

	Landline	Cell phone
1) Northwest	55.7%	36.6%
2) Northeast	47.0%	37.4%
3) West Central	55.8%	32.5%
4) East Central	48.6%	35.8%
5) Southwest	52.5%	39.6%
6) Southeast	50.5%	36.4%
7) Metro	49.2%	37.1%
8) Black/African American Over sample	46.8%	
9) American Indian Oversample	55.8%	
10) Hispanic Surname Oversample	38.1%	
11) Asian/Pacific Islander Surname Oversample	35.2%	
Total Unweighted	48.6%	36.7%
TOTAL Weighted	50.2%	33.9%

² Estimates were generated by the authors from the U.S. Census Bureau's 2009 American Community Survey Public Use Micro Data Sample.

oversample. The lowest response rates were for the Asian/Pacific Islander and Hispanic surname oversamples. Consistent with other work, response rates for the cell phone sample are lower than for the landline sample. The highest response rate was achieved in the Southwest and the lowest in the West Central region.

Table 3 provides response rates and measures of participation for the combined landline and cell samples. The combined response rate (AAPOR4) was 45.2% with a cooperation rate of 77.4%.

Efforts were made to maximize response rates including increasing the number of callbacks (for landline this was up to 20); having rest periods between calls; having bilingual interviewers call persons with Hispanic surnames; varying the time of days and days of the week that callbacks were placed; scheduling callbacks at the respondents convenience; and the use of a \$10 incentive for cell phone respondents.

Table 3. Rates for Final Sample (Landline and Cell Combined)			
Response Rate 1: $I / (I+P) + (R+NC+O) + (UH+UO)$	22.8%	Refusal Rate 1: $R / ((I+P) + (R+NC+O) + UH + UO)$	6.8%
Response Rate 2: $(I+P) / ((I+P) + (R+NC+O) + (UH+UO))$	23.1%	Refusal Rate 2: $R / ((I+P) + (R+NC+O) + e(UH + UO))$	13.2%
Response Rate 3: $I / ((I+P) + (R+NC+O) + e(UH+UO))$	44.5%	Refusal Rate 3: $R / ((I+P) + (R+NC+O))$	21.6%
Response Rate 4: $(I+P) / ((I+P) + (R+NC+O) + e(UH+UO))$	45.2%		
Cooperation Rate 1: $I / (I+P) + R + O$	75.6%	Contact Rate 1: $(I+P) + R + O / (I+P) + R + O + NC + (UH + UO)$	30.1%
Cooperation Rate 2: $(I+P) / ((I+P) + R + O)$	76.8%	Contact Rate 2: $(I+P) + R + O / (I+P) + R + O + NC + e(UH+UO)$	58.9%
Cooperation Rate 3: $I / ((I+P) + R)$	76.1%	Contact Rate 3: $(I+P) + R + O / (I+P) + R + O + NC$	96.1%
Cooperation Rate 4: $(I+P) / ((I+P) + R)$	77.4%		

Appendix B: English Version of the Survey

AA. Gender

RECORD GENDER – ASK ONLY IF NEEDED

AA1. Are you male or female?

(IF NECESSARY, ASK: Just to confirm, are you male or female?)

- 1 Male
- 2 Female
- 3 (DO NOT READ) Transexual/Transgender
- R (DO NOT READ) Refused

A. HEALTH

A1. During the past 12 months, would you say your physical health has been...?
(READ LIST. ENTER ONE ONLY)

- 1 Excellent
- 2 Very Good
- 3 Good
- 4 Fair, or
- 5 Poor
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

A2. During the past 12 months, would you say your emotional or psychological health has been ...?
(READ LIST. ENTER ONE ONLY)

- 1 Excellent
- 2 Very Good
- 3 Good
- 4 Fair
- 5 Poor
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

A3. Are you limited in any way in any activities because of physical, mental, or emotional problems?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know/Not sure
- R (DO NOT READ) Refused

A4. Do you have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone?
(INTERVIEWER NOTE: INCLUDE OCCASIONAL USE OR USE IN CERTAIN CIRCUMSTANCES)

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know/Not sure
- R (DO NOT READ) Refused

A5a. Over the last 2 weeks, how many days have you had little interest or pleasure in doing things?

- _____ DAYS (VALID: 01-14)
- 00 None
 - DD (DO NOT READ) Don't know/Not sure
 - RR (DO NOT READ) Refused

A5b. Over the last 2 weeks, how many days have you felt down, depressed or hopeless?

- _____ DAYS (VALID: 01-14)
- 00 None
 - DD (DO NOT READ) Don't know/Not sure
 - RR (DO NOT READ) Refused

A5c. Over the last 2 weeks, how many days have you had trouble falling asleep or staying asleep or sleeping too much?

- _____ DAYS (VALID: 01-14)
- 00 None
 - DD (DO NOT READ) Don't know/Not sure
 - RR (DO NOT READ) Refused

A5d. Over the last 2 weeks, how many days have you felt tired or had little energy?

- _____ DAYS (VALID: 01-14)
- 00 None
 - DD (DO NOT READ) Don't know/Not sure
 - RR (DO NOT READ) Refused

A5e. Over the last 2 weeks, how many days have you had a poor appetite or eaten too much?

- _____ DAYS (VALID: 01-14)
- 00 None
 - DD (DO NOT READ) Don't know/Not sure
 - RR (DO NOT READ) Refused

A5f. Over the last 2 weeks, how many days have you felt bad about yourself or that you were a failure or had let yourself or your family down?

_____ DAYS (VALID: 01-14)

00 None

DD (DO NOT READ) Don't know/Not sure

RR (DO NOT READ) Refused

A5g. Over the last 2 weeks, how many days have you had trouble concentrating on things, such as reading the newspaper or watching TV?

_____ DAYS (VALID: 01-14)

00 None

DD (DO NOT READ) Don't know/Not sure

RR (DO NOT READ) Refused

A5h. Over the last 2 weeks, how many days have you moved or spoken so slowly that other people could have noticed? Or the opposite –been so fidgety or restless that you were moving around a lot more than usual?

_____ DAYS (VALID: 01-14)

00 None

DD (DO NOT READ) Don't know/Not sure

RR (DO NOT READ) Refused

A6a. I am going to read you a list of different types of insurance. Please tell me if you currently have any of the following:

(READ EACH TYPE)

1 Yes ASK Q.A6aa

2 No ASK ABOUT NEXT COVERAGE TYPE

D (DO NOT READ) Don't know/Not sure

R (DO NOT READ) Refused

- a. Medicare (Medicare is the health insurance for persons 65 years old and over or persons with disabilities. This is a red, white, and blue card)
- b. Veterans Affairs, Military Health, TRICARE or CHAMPUS
- c. One of Minnesota's Health Care Programs such as Medicaid, Medical Assistance, MinnesotaCare, or General Assistance Medical Care
- d. Health insurance through your work or union or through someone else's work
- e. Health insurance bought directly by you or a family member (includes COBRA - this is insurance you purchase temporarily for full cost through a former employer)
- f. Some other type of health insurance (include Indian Health Service and MCHA)
[SPECIFY] _____

(ASK Q.A6a AND Q.A6aa IN A SERIES FOR EACH ITEM (a-e) IN Q.A6a THAT IS "YES")

(ASK Q.A6aa AFTER EACH "YES" IN Q.A6a(a-e))

A6aa. Besides this do you have any other type of health insurance coverage?

- 1 Yes
 - 2 No
 - D (DO NOT READ) Don't know
 - R (DO NOT READ) Refused
- CONTINUE WITH NEXT ITEM IN A6a

(ASK Q.A6b IF Q.A6a ITEMS a-f = 2, D, OR R TO ALL)

A6b. According to the information you provided, you do not have any insurance coverage. Does anyone else pay for your bills when you go to a doctor or hospital?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.A6bb IF Q.A6b = 1)

A6bb. And who is that?

(READ LIST IF NECESSARY, ENTER ALL THAT APPLY)

- 01 Medicare
- 02 Veteran's Affairs, Military Health, TRICARE or CHAMPUS
- 03 One of Minnesota's Health Care programs such as Medicaid, Medical Assistance, MinnesotaCare or General Assistance Medical Care
- 04 Health insurance through your work or union or through someone else's work
- 05 Health insurance bought directly by you or a family member (includes COBRA)
- 06 Some other type of insurance (includes Indian Health Service and MCHA)
[SPECIFY] _____
- 07 Worker's compensation for specific illness/injury
- 08 Employer pays for bills, but not an insurance policy
- 09 Respondent/family member pays out of pocket for any bills
- 10 Other non-insurance payment source
- DD (DO NOT READ) Don't know
- RR (DO NOT READ) Refused

(ASK EVERYONE)

(SCRAMBLE Qs.A7a-A7c)

(ROTATE 1-5/5-1)

A7a. How often in the past 12 months would you say you were worried or stressed about having enough money to get the health care you or your family needed? Would you say you were worried or stressed (READ LIST)?

(ENTER ONE ONLY)

- 1 Always
- 2 Usually
- 3 Sometimes
- 4 Rarely
- 5 Never
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ROTATE 1-5/5-1 IN THE SAME ORDER AS Q.A7a)

A7b. How often in the past 12 months would you say you were worried or stressed about having enough money to pay your rent or mortgage? Would you say you were worried or stressed (READ LIST)?

(ENTER ONE ONLY)

- 1 Always
- 2 Usually
- 3 Sometimes
- 4 Rarely
- 5 Never
- 6 (DO NOT READ) I don't pay rent/mortgage
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ROTATE 1-5/5-1 IN THE SAME ORDER AS Q.A7a)

A7c. How often in the past 12 months would you say you were worried or stressed about having enough money to buy healthy food? Would you say you were worried or stressed (READ LIST)?

(ENTER ONE ONLY)

- 1 Always
- 2 Usually
- 3 Sometimes
- 4 Rarely
- 5 Never
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

B. Tobacco Use

READ: The next few questions ask about use of tobacco.

B1. Have you smoked at least 100 cigarettes in your entire life?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.B2 IF Q.B1 = 1, D, OR R)

B2. Do you now smoke cigarettes every day, some days, or not at all?

- 1 Everyday
- 2 Some days
- 3 Not at all
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.B2a IF Q.B2 = 3, D, OR R)

B2a. How long has it been since you last smoked a cigarette? Would you say...?
(READ LIST. ENTER ONE ONLY)

- 1 Within the past 30 days
- 2 More than 30 days ago but within the past 12 months
- 3 More than 12 months ago
- 4 (DO NOT READ) Never smoked regularly
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.B3 IF Q.B2 = 1, D, OR R)

B3. On the average, about how many cigarettes a day do you smoke?

- _____ CIGARETTES
- 00 Less than 1 a day
 - DD (DO NOT READ) Don't know
 - RR (DO NOT READ) Refused

(ASK Q.B4 IF Q.B2 = 2 OR B2a = 1, D OR R)

(P.N – IF Q.B2a = 1, THEN CODE “00” IS NOT A VALID ANSWER)

B4. During the past 30 days, on how many days did you smoke cigarettes?

- _____ DAYS (VALID: 01-30)
- 00 None
 - DD (DO NOT READ) Don't know/Not sure
 - RR (DO NOT READ) Refused

(ASK Q.B5 IF Q.B2 = 1 OR 2)

B5. During the past 12 months, have you stopped smoking for one day or longer because you were trying to quit smoking?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

C. Use of Alcohol

(READ TO EVERYONE:) My next questions are about alcohol. For these questions consider a drink to be a can or bottle of beer, a glass of wine or a wine cooler, a shot glass of liquor or a mixed drink. (IF NECESSARY: DO NOT COUNT SIPS OR TASTES)

C1. Have you ever had a drink of any type of alcoholic beverage?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.C2 IF Q.C1 = 1, D, OR R)

C2. Have you ever had twelve or more drinks in the same year?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.C3 IF Q.C2 = 1, D, OR R)

C3. How long has it been since you last drank an alcoholic beverage?

- 1 Within the past 30 days
- 2 More than 30 days ago but within the past 12 months
- 3 More than 12 months ago
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.C4 IF Q.C3 = 1, D, OR R)

C4. Do you usually have a drink...?
(READ LIST. ENTER ONE ONLY)

- 1 Almost every day
- 2 A few times a week
- 3 Once a week
- 4 2 to 3 times a month
- 5 Once a month, or
- 6 Less often than that
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

NOW SKIP TO Q.C5

(ASK Q.C4a IF Q.C3 = 2)

C4a. At the time you were most recently drinking, did you usually have a drink...?
(READ LIST)

- 1 Almost every day
- 2 A few times a week
- 3 Once a week
- 4 2 to 3 times a month
- 5 Once a month, or
- 6 Less often than that
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.C5 IF Q.C3 = 1, 2, D, OR R)

C5. On the days that you drink, how many drinks do you usually have?
(INTERVIEWER NOTE: At the time you were most recently drinking...)

- DD (DO NOT READ) Don't know
- RR (DO NOT READ) Refused

(ASK Q.C6 IF Q.C3 = 1, 2, D, OR R AND [Q.AA1 = 1 AND (Q.C5 <5 or DD or RR] OR
[Q.AA1=2 AND (Q.C5 <4 or DD or RR)])

IF MALE INSERT "5"; IF FEMALE INSERT "4"

C6. During the last 12 months did you ever have (4/5) or more drinks on the same occasion?
By occasion, we mean within several hours.

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.C6a IF Q.C6 = 1, D, OR R OR [Q.AA1 = 1 AND Q.C5 = 5+] OR [Q.AA1=2 AND Q.C5 = 4+]

IF MALE INSERT "5"; IF FEMALE INSERT "4"

(P.N. – DISPLAY VERBIAGE IN PARENS IF Q.C6 NOT ANSWERED)

C6a. How long has it been since you had (4/5) or more drinks on the same occasion? (By occasion, we mean within several hours.)

- 1 Within the past 30 days, or
- 2 More than 30 days ago
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.C6a1 IF Q.C6a = 1, D, OR R)

IF MALE INSERT "5"; IF FEMALE INSERT "4"

C6a1. In the past 30 days, on how many days did you have (4/5) or more drinks on the same occasion?

_____ DAYS (VALID: 01-30)

DD (DO NOT READ) Don't know/Not sure

RR (DO NOT READ) Refused

(ASK Q.C7 IF Q.C1 = 1, D, OR R AND Q.C2 NE 2)

C7. At any time in your life, have you ever, even once, gone on a binge where you kept drinking for a couple of days or more without sobering up?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.C7a IF Q.C7 = 1, D, OR R)

C7a. When was the last time this happened?

- 1 Within the past 30 days
- 2 More than 30 days ago but within the past 12 months
- 3 More than 12 months ago
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.C8 IF Q.C1 =1, D, OR R AND Q.C2 NE 2)

C8. Have you ever thought that you might have a problem with alcohol?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

D. Use of other substances

READ TO EVERYONE: Now I'd like to ask you about your experiences with **medicines** you may have used on your own – that is, either outside its prescribed use or that you took only for the experience or the feeling they caused. **Do not include over-the-counter drugs.**

(SCRAMBLE ITEMS)

D1. Have you ever, even once used (INSERT) outside their prescribed use or that you took only for the experience or the feeling they caused?

(INTERVIEWER NOTE: ONLY READ DESCRIPTION IN PARENS IF NECESSARY)

(DO NOT INCLUDE OVER THE COUNTER DRUGS)

- 1 Yes
 - 2 No
 - D (DO NOT READ) Don't know
 - R (DO NOT READ) Refused
-
- a. Pain relievers or other opiates such as vicodin (**VIGH**-code-in) or oxycontin (**OCK**-see-**CON**-tin)
(codeine [**KOH**-deen], Percocet [**PER**-koh-set] codeine [**KOH**-deen] – containing products such as Tylenol with codeine [**KOH**-deen], Darvocet [**DAR**-voh-set], Darvon [**DAR**-von], Dilaudid [dye-**LAW**-did], Fioricet [fee-**OR**-i-set], Fiorinal [fee-**OR**-in-all], Lorcet [**LORE**-set], Lortab [**LORE**-tab], Methadone [**METH**-uh- doan], Morphine [**MORE**-feen], Demerol [**DEM**-er-all], Percodan [**PER**-koh-dan], Stadol [**STAY**-doll], Talacen [**TAL**-uh-sin], Talwin [**TALL**-win], Talwin NX [**TALL**-win NX], Tylox [**TIE**-locks], Ultram [**UL**-trum])
 - b. Tranquilizers (**TRANG**-kwuh-lie-zers) or pills to relax you like Xanax (**ZAN**-acks) or valium (**VAL**-ee-um)
(such as Atarax [**AT**-uh-racks], Ativan [**AT**-i-van], Buspar [**BYOO**-spar], Equanil [**EH**-kwah-nill], Flexeril [**FLECK**-suh-rill], Klonopin [**KLAW**-nuh-pin], Librium [**LIB**-ree-um], Limbitrol [**LIM**-bi-trall], Rohypnol [ro-**HIP**-nol], Serax [**SEER**-racks], Soma [**SO**-muh], Tranxene [**TRAN**-zeen], Vistaril [**VIS**-tah-rill])
 - c. Sedative “downers” or sleeping pills like ambient (**AM**-bee-in), or lunesta (lou-**NEST**-a)
(such as Amytal [**AM**-ih-tall], Butisol [**BYOO**-ti-zall], Chloral Hydrate [**KLOR**-all **HIGH**-drate], Dalmane [**DOLL**-main], halcyon [**HAL**-see-on], Nembutal [**NEM**-byoo-tall], Phenobarbital [**FEE**-no-**BAR**-bit-all], Restoril [**RES**-toh-rill], Seconal [**SEH**-kuh-nall], Tuinal [**TWO**-in-all])
 - d. Stimulants or “uppers” such as Adderall (**ADD**-er-all) or Ritalin (**RIT**-a-lin) (such as speed – Benzedrine [**BEN**-ze-drine], Didrex [**DIE**-drecks], Fastin [**FASS**-tin], Dexedrine [**DECKS**-a-drin], Cylert [**SIGH**-lert], Ionamin [eye-**OWN**-uh-min], Plegine [pleh-**JEEN**], , Tenuate [**TEN**-you-ate])

(ASK Q.D3 THRU Q.D5 IN A SERIES IMMEDIATELY AFTER EACH "1" IN Q.D1)
(SCRAMBLE ITEMS IN SAME ORDER AS D1)

D3. How long has it been since you last used (INSERT)?
(READ LIST. ENTER ONE ONLY)

- 1 Within the past 30 days
- 2 More than 30 days ago but within the past 12 months
- 3 More than 12 months ago (ASK ABOUT NEXT DRUG)
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

- a. Pain relievers or other opiates
- b. Tranquilizers or pills to relax you
- c. Sedative "downers" or sleeping pills
- d. Stimulants or "uppers"

(ASK Q.D4 IF Q.D3 = 1, D, OR R)
(SCRAMBLE ITEMS IN SAME ORDER AS D1)

D4. During the past 12 months, how often did you have any (INSERT)?
(READ LIST. ENTER ONE ONLY)

- 1 Once a week or more
- 2 2 to 3 times a month
- 3 Once a month
- 4 Less often than that
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

- a. Pain relievers or other opiates
- b. Tranquilizers or pills to relax you
- c. Sedative "downers" or sleeping pills
- d. Stimulants or "uppers"

(NOW SKIP TO INSTRUCTION ABOVE Q.D5)

(ASK Q.D4a IF Q.D3 = 2)

(SCRAMBLE ITEMS IN SAME ORDER AS D1)

D4a. At the time you were most recently using (INSERT), how often did you have any (INSERT)?

(READ LIST. ENTER ONE ONLY)

- 1 Once a week or more
- 2 2 to 3 times a month
- 3 Once a month
- 4 Less often than that
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

- a. Pain relievers or other opiates
- b. Tranquilizers or pills to relax you
- c. Sedative "downers" or sleeping pills
- d. Stimulants or "uppers"

(ASK Q.D5 IF Q.D3 = 1)

(SCRAMBLE ITEMS IN SAME ORDER AS D1)

D5. During the past 30 days, on how many days did you have any (INSERT)?

_____ # OF DAYS (VALID: 01-30)

- DD (DO NOT READ) Don't know
- RR (DO NOT READ) Refused

- a. Pain relievers or other opiates
- b. Tranquilizers or pills to relax you
- c. Sedative "downers" or sleeping pills
- d. Stimulants or "uppers"

DRUG PREVALENCE

READ TO EVERYONE: Now I'm going to ask you about some other drugs people use for a variety of reasons.

(SCRAMBLE ITEMS. ITEM A SHOULD ALWAYS BE ASKED FIRST)

DD1. Have you ever, even once, used or even just tried (INSERT)?

(INTERVIEWER NOTE: READ VERBIAGE IN PARENS IF NECESSARY)

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

- a. Marijuana or hash (includes hashish (**HASH**-eesh) and hash oil, may also be called pot, grass, reefer, and many other street names)
- b. Powder cocaine (includes freebase and coca paste)
- c. Crack cocaine (includes rock or chunk form)
- d. Heroin
- e. Methamphetamine (**METH**-am-fe-ta-**MEAN**) or crank (may also be called crystal, or ice)
- f. Hallucinogens (ha-**LOO**-sin-oh-jins), such as mushrooms, PCP or LSD (may also be called acid, phenecyclidine (fen-**SIGH**-kluh-deen) or angel dust, peyote (pay-**YO**-tee), mescaline (**MESS**-ka-lin), psilocybin (**SILL**-oh-**SIGH**-bin))
- g. Club drugs such as Ecstasy or GHB (includes also Rohypnol (ro-**HIP**-nol), MDMA, Ketamine (**KET**-a-mean))
- h. Opium

(ASK Q.DD3 THRU Q.DD5 IMMEDIATELY AFTER Q.DD1 IN A SERIES FOR EACH "1" IN Q.DD1)

(SCRAMBLE ITEMS IN SAME ORDER AS DD1)

DD3. How long has it been since you last used (INSERT)?

- 1 Within the past 30 days
 - 2 More than 30 days ago but within the past 12 months
 - 3 More than 12 months ago (ASK ABOUT NEXT DRUG)
 - D (DO NOT READ) Don't know
 - R (DO NOT READ) Refused
- a. Marijuana or hash
 - b. Powder cocaine
 - c. Crack cocaine
 - d. Heroin
 - e. Methamphetamine
 - f. Hallucinogens
 - g. Club drugs
 - h. Opium

(ASK Q.DD4 IF Q.DD3 = 1, D, OR R)

(SCRAMBLE ITEMS IN SAME ORDER AS DD1)

DD4. During the past 12 months, how often did you have any (INSERT)?
(READ LIST. ENTER ONE ONLY)

- 1 Once a week or more
- 2 2 to 3 times a month
- 3 Once a month
- 4 Less often than that
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

- a. Marijuana or hash
- b. Powder cocaine
- c. Crack cocaine
- d. Heroin
- e. Methamphetamine
- f. Hallucinogens
- g. Club drugs
- h. Opium

(NOW SKIP TO INSTRUCTION ABOVE Q.DD5)

(ASK Q.DD4a IF Q.DD3 = 2)

(SCRAMBLE ITEMS IN SAME ORDER AS DD1)

DD4a. At the time you were most recently using (INSERT), how often did you have any (INSERT)?

(READ LIST. ENTER ONE ONLY)

- 1 Once a week or more
- 2 2 to 3 times a month
- 3 Once a month
- 4 Less often than that
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

- a. Marijuana or hash
- b. Powder cocaine
- c. Crack cocaine
- d. Heroin
- e. Methamphetamine
- f. Hallucinogens
- g. Club drugs
- h. Opium

(ASK Q.DD5 IF Q.DD3 = 1)

(SCRAMBLE ITEMS IN SAME ORDER AS DD1)

DD5. During the past 30 days, on how many days did you have any (INSERT)?

_____ # OF DAYS (VALID: 01-30)

DD (DO NOT READ) Don't know

RR (DO NOT READ) Refused

- a. Marijuana or hash
- b. Powder cocaine
- c. Crack cocaine
- d. Heroin
- e. Methamphetamine
- f. Hallucinogens
- g. Club drugs
- h. Opium

(ASK EVERYONE)

D6. Have you ever injected any drug in order to get high, even just once?

1 Yes

2 No

D (DO NOT READ) Don't know

R (DO NOT READ) Refused

(ASK Q.D6a IF Q.D6 = 1, D, OR R)

D6a. How long has it been since you last injected a drug to get high?

(READ LIST. ENTER ONE ONLY)

1 Within the past 30 days

2 More than 30 days ago but within the past 12 months

3 More than 12 months ago

D (DO NOT READ) Don't know

R (DO NOT READ) Refused

DE. PERCEIVED RISK

READ TO EVERYONE:

We are interested in your opinion about the effects of drinking in the following situation.

(Q.DE1 DELETED)

(ASK EVERYONE)

(ROTATE 1-4/4-1)

DE2 (DE4). In your opinion, how much do people risk harming themselves physically and in other ways when they have five or more drinks of an alcohol beverage once or twice a week?

(READ LIST. ENTER ONE ONLY)

- 1 No risk
- 2 Slight risk
- 3 Moderate risk
- 4 Great risk
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(Q.DE3 AND Q.DE4 DELETED)

E. ALCOHOL AND DRUG PROBLEM INDEX

P.N. – ASK SECTION E ONLY IF

- (Q.C3 = 1 OR 2 AND Q.C4 = 1-3 OR Q.C4a = 1-3) AND (Q.C7a = 1 OR 2 OR Q.C8 = 1) OR
- IF Q.AA1 = 2 AND (Q.C5 = 3+ OR Q.C6a = 1 OR 2 OR Q.C6=1) OR
- IF Q.AA1 = 1 AND (Q.C5 = 4+ OR Q.C6a = 1 OR 2 OR Q.C6=1)

IF ASK ALCOHOL QUESTIONS IN PROBLEM INDEX

ALC_SCRN 0 = NO
ALC_SCRN 1 = YES

P.N. – ASK SECTION EE ONLY ONCE AND ONLY IF

- Q.D4 OR Q.DD4 = 1-3 FOR ANY OR Q.D4a OR Q.DD4a = 1-3 FOR ANY

IF ASK DRUG QUESTIONS IN PROBLEM INDEX

DRG_SCRN 0 = NO
DRG_SCRN 1 = YES

E. Diagnostic Questions

(P.N. – IF ALC_SCRN = 1 AND DRG_SCRN = 1, ROTATE Q.E1 THRU Q.E10 WITH Q.EE1 THRU Q.EE10)

(ASK SECTION E IF ALC_SCRN = 1)

READ: My next questions are about things that might have happened as a result of your using alcohol in the past year.

E1. In the last twelve months did you spend a lot of time using alcohol (PAUSE), getting over its effects, (PAUSE) or obtaining it?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

E2. In the last twelve months, did you use alcohol more often (~~pause~~) or in larger amounts than you intended to?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

E3. In the last twelve months did using the same amount of alcohol have less effect than before, (PAUSE) or did it take more alcohol to feel the same effect?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

E4. In the last twelve months, has your use of alcohol often kept you from either working, (PAUSE) going to school, (PAUSE) taking care of children, (PAUSE) or taking part in recreational activities?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

E5. In the last twelve months did your use of alcohol cause you to have emotional or psychological problems – such as feeling uninterested in things, depressed, suspicious of people or paranoid?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.E5a IF Q.E5 = 1)

E5a. Did you continue to drink in spite of this?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.E6 IF ALC_SCRN = 1)

E6. In the last twelve months, did your use of alcohol cause you to have physical health problems?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.E6a IF Q.E6 = 1)

E6a. Did you continue to drink in spite of this?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.E7 IF ALC_SCRN = 1)

E7. In the last twelve months did you want to stop drinking, (pause) or cut down on alcohol more than once, but found that you couldn't?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

E8. In the last twelve months, did you make rules about where, when or how much you would use alcohol, and then broke the rules more than once?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

E9. In the past twelve months did you ever have a time when you stopped, cut down or went without using alcohol and then experienced symptoms like vomiting and nausea, trouble sleeping, eating more or less than usual, fatigue, the shakes or anxiety?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK EVERYONE)

E10. Did you drink alcohol to prevent or cure these problems?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK SECTION EE1 IF DRG_SCRN = 1)

(P.N. – IF ALC_SCRN = 1 AND DRG_SCRN = 1, ROTATE Q.E1 THRU Q.E10 WITH Q.EE1 THRU Q.EE10)

READ: My next questions are about things that might have happened as a result of your using drugs in the past year.

EE1. In the last twelve months did you spend a lot of time using drugs, (PAUSE), getting over their effects (PAUSE), or obtaining them?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

EE2. In the last twelve months, did you use drugs more often (~~pause~~) or in larger amounts than you intended to?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

EE3. In the last twelve months did using the same amount of drugs have less effect than before, (PAUSE) or did it take more drugs to feel the same effect?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

EE4. In the last twelve months, has your use of drugs often kept you from working, (PAUSE) going to school, (PAUSE) taking care of children, (PAUSE) or taking part in recreational activities?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

EE5. In the last twelve months did your use of drugs cause you to have emotional or psychological problems – such as feeling uninterested in things, depressed, suspicious of people or paranoid?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.EE5a IF Q.EE5 = 1)

EE5a. Did you continue to use in spite of this?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.EE6 IF DRG_SCRN = 1)

EE6. In the last twelve months, did your use of drugs cause you to have physical health problems?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.EE6a IF Q.EE6 = 1)

EE6a. Did you continue to use in spite of this?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.EE7 IF DRG_SCRN = 1)

EE7. In the last twelve months did you want to stop using (PAUSE) or cut down on drugs more than once, but found that you couldn't?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

EE8. In the last twelve months, did you make rules about where, when or how much you would use drugs, and then broke the rules more than once?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

EE9. In the past twelve months did you ever have a time when you stopped, cut down or went without using drugs and then experienced symptoms like vomiting and nausea, trouble sleeping, eating more or less than usual, fatigue, the shakes or anxiety?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK EVERYONE)

EE10. Did you use drugs to prevent or cure these problems?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

F. OTHER BEHAVIORS

P.N:

- IF ALC_SCRN = 0 AND DRG_SCRN = 0, SKIP TO Q.G1
- IF ALC_SCRN = 1 AND DRG_SCRN = 0, GO TO STATEMENT BEFORE Q.F1
- IF ALC_SCRN = 0 AND DRG_SCRN = 1, SKIP TO STATEMENT BEFORE Q.F1a
- IF ALC_SCRN = 1 AND DRG_SCRN = 1, GO TO STATEMENT BEFORE Q.F1b

(READ:) Sometimes people who drink alcohol have serious problems at home, work, or school – such as neglecting their children, missing work or school, doing a poor job at work or school, losing a job or dropping out of school.

F1. During the past 12 months, did drinking alcohol cause you to have serious problems like this either at home, work or school.

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

F2. During the past 12 months did you regularly drink alcohol and then do something where being drunk might have put you in physical danger?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

F3. During the past 12 months, did drinking alcohol cause you to do things that repeatedly got you in trouble with the law?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

F4. During the past 12 months, did you have any problems with family or friends that were probably caused by your drinking?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(IF Q.F4 = 2, D, R SKIP TO INSTRUCTIONS ABOVE SECTION F1a)

(ASK Q.F41 IF Q.F4 = 1)

F41. Did you continue to drink alcohol even though you thought it caused problems with family or friends?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

NOW SKIP TO Q.F5

(ASK Q.F1a THRU Q.F4a1 IF ALC_SCRN = 0 AND DRG_SCRN = 1)

(READ:) Sometimes people who use drugs have serious problems at home, work, or school – such as neglecting their children, missing work or school, doing a poor job at work or school, losing a job or dropping out of school

F1a. During the past 12 months, did using drugs cause you to have serious problems like this either at home, work or school.

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

F2a. During the past 12 months did you regularly use drugs and then do something where using drugs might have put you in physical danger?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

F3a. During the past 12 months, did using drugs cause you to do things that repeatedly got you in trouble with the law?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

F4a. During the past 12 months, did you have any problems with family or friends that were probably caused by your use of drugs?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(IF Q.F4a = 2, D, R SKIP TO INSTRUCTIONS ABOVE Q.Fb1)

(ASK Q.F4a1 IF Q.F4a = 1)

F4a1. Did you continue to use drugs even though you thought it caused problems with family or friends?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

NOW SKIP TO Q.F5

(ASK Q.F1b THRU Q.F4c1 IF ALC_SCRN = 1 AND DRG_SCRN = 1)

(READ:). Sometimes people who drink alcohol or use drugs have serious problems at home, work, or school – such as neglecting their children, missing work or school, doing a poor job at work or school, losing a job or dropping out of school

(PN: FOR EACH RESPONDENT ALL ALCOHOL QUESTIONS SHOULD BE ASKED FIRST OR ALL DRUG QUESTIONS SHOULD BE ASKED FIRST)

(ROTATE Q.F1b AND Q.F1c)

F1b. During the past 12 months, did **drinking alcohol** cause you to have serious problems like this either at home, work or school?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ROTATE Q.F1b AND Q.F1c)

F1c. During the past 12 months, did **using drugs** cause you to have serious problems like this either at home, work or school?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ROTATE Q.F2b AND Q.F2c)

F2b. During the past 12 months did you regularly **drink alcohol** and then do something where being drunk might have put you in physical danger?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ROTATE Q.F2b AND Q.F2c)

F2c. During the past 12 months did you regularly **use drugs** and then do something where using drugs might have put you in physical danger?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ROTATE Q.F3b AND Q.F3c)

F3b. During the past 12 months, did **drinking alcohol** cause you to do things that repeatedly got you in trouble with the law?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ROTATE Q.F3b AND Q.F3c)

F3c. During the past 12 months, did **using drugs** cause you to do things that repeatedly got you in trouble with the law?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ROTATE Q.F4b AND Q.F4b1 WITH Q.F4c AND Q.F4c1)

F4b. During the past 12 months, did you have any problems with family or friends that were probably caused by your **drinking**?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.F4b1 IF Q.F4b = 1)

F4b1. Did you continue to **drink alcohol** even though you thought it caused problems with family or friends?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.F4c IF ALC_SCRN = 1 AND DRG_SCRN = 1)

(ROTATE Q.F4b AND Q.F4b1 WITH Q.F4c AND Q.F4c1)

F4c. During the past 12 months, did you have any problems with family or friends that were probably caused by your **use of drugs**?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.F4c1 IF Q.F4c = 1)

F4c1. Did you continue to **use drugs** even though you thought it caused problems with family or friends?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.F5 IF ALC_SCRN = 1 OR DRG_SCRN = 1)

F5. During the past 12 months, did you drive at all after drinking or using drugs when you thought you shouldn't have?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

G. TREATMENT HISTORY

(IF [Q.C1 = 2 OR Q.C2 = 2] AND [Q.D1 = 2 AND Q.DD1 = 2 FOR ALL DRUGS], SKIP TO Q.G3)

READ: The next questions are about counseling or treatment for alcohol or drugs, but not cigarettes or other tobacco products. Do not include educational classes in any of your answers.

G1. Have you ever attended a support group such as Alcoholics Anonymous or Narcotics Anonymous?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.G1a IF Q.G1 = 1)

G1a. Was that for yourself or for a family member or friend?

(IF NECESSARY: We are asking about whether you attended an Alcoholics Anonymous or Narcotics Anonymous support group for help addressing your own alcohol or drug problems or those of a family member or friend.)

- 1 Self
- 2 Family member or friend
- 3 Both
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK G1b IF Q.G1 = 1)

G1b. When was the last time you attended such a support group. Was it...?
(READ LIST. ENTER ONE ONLY)

- 1 Within the past year, or
- 2 More than one year ago
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

G2. Not including support groups or educational classes, have you ever received any treatment or counseling for alcohol or drug problems?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.G2a IF Q.G2 = 1)

G2a. When was the last time you received such treatment or counseling? Was it...?
(READ LIST. ENTER ONE ONLY)

- 1 Within the past year, or
- 2 More than one year ago
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.G2b IF Q.G2a = 1)

G2b. During the past 12 months when you received treatment, was the treatment for?
(READ LIST. ENTER ONE ONLY)

- 1 Alcohol use
- 2 Drug use, or
- 3 Both alcohol and drug use
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(PN: QUESTION NUMBERS HAVE CHANGED FOR Qs.G3-G10)

(ASK EVERYONE)

(ROTATE Q.G3 AND Q.G4)

(ROTATE 1-4/4-1)

G3. If you thought you had an alcohol problem, how likely is it that you would seek out treatment? Would you say...?
(READ LIST. ENTER ONE ONLY)

- 1 Very unlikely
- 2 Somewhat unlikely
- 3 Somewhat likely
- 4 Very likely
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ROTATE 1-4/4-1)

G4. If you thought you had a drug problem, how likely is it that you would seek out treatment? Would you say...?
(READ LIST. ENTER ONE ONLY)

- 1 Very unlikely
- 2 Somewhat unlikely
- 3 Somewhat likely
- 4 Very likely
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(PN: IF [Q.C1 = 2 OR Q.C2 = 2] AND [Q.D1 = 2 AND Q.DD1 = 2 FOR ALL DRUGS],
SKIP TO Q.G7)

G5. During the past 12 months, did you **need** treatment or counseling for your use of alcohol or drugs but did not receive it?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.G6 IF Q.G5 = 1)

G6. What were the **main** reasons you did not get the treatment you thought you needed?
(DO NOT READ LIST. ENTER ALL THAT APPLY)

- 01 Could handle the problem without treatment
- 02 Could not find out where to go for help
- 03 Couldn't afford it
- 04 Couldn't get an appointment soon enough
- 05 Didn't think you could be helped
- 06 Insurance wouldn't pay
- 07 Might have negative effect on job
- 08 Not ready to stop using
- 09 You were embarrassed/worried that someone else might find out
- 10 You were scared to go
- 97 Other (SPECIFY) _____
- DD (DO NOT READ) Don't know
- RR (DO NOT READ) Refused

(ASK EVERYONE)

(ROTATE 1-4/4-1)

G7. If you thought you had an emotional problem such as depression, how likely is it that you would seek out treatment?
(READ LIST. ENTER ONE ONLY)

- 1 Very unlikely
- 2 Somewhat unlikely
- 3 Somewhat likely
- 4 Very likely
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK EVERYONE)

G8. During the past 12 months, did you **need** treatment or counseling for **emotional or psychological problems** but did not receive it? Please do not include alcohol or drug problems.

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK G9 IF G8 = 1)

G9. What were the main reasons you did not get the treatment you thought you needed?
(DO NOT READ LIST. ENTER ALL THAT APPLY)

- 01 Could handle the problem without treatment
- 02 Could not find out where to go for help
- 03 Couldn't afford it
- 04 Couldn't get an appointment soon enough
- 05 Didn't think you could be helped
- 06 Insurance wouldn't pay
- 07 Might have negative effect on job
- 09 You were embarrassed/worried that someone else might find out
- 10 You were scared to go
- 97 Other (SPECIFY) _____
- DD (DO NOT READ) Don't know
- RR (DO NOT READ) Refused

(ASK EVERYONE)

G10. Have you **ever** seen a mental health provider, such as a psychiatrist, psychologist, social worker, psychiatric nurse or counselor for an emotional or mental health problem?
Please do not include visits for alcohol or drug use.

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.G10a IF Q.G10 = 1)

G10a. When was the last time you received such treatment? Would you say...?

(READ LIST. ENTER ONE ONLY)

- 1 Within the past year, or
- 2 More than one year ago
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

H. PSYCHOLOGICAL DISTRESS

(READ:) The next questions ask about how you have been feeling during the past 30 days.

(SCRAMBLE Q.H1 THRU Q.H6)

(ROTATE 1-5/5-1)

(P.N. – WHEN ROTATING THE CODES, THEY SHOULD ALWAYS GO IN THE SAME ORDER THRU Q.H1-Q.H6)

H1. About how often during the past 30 days did you feel **nervous**? Would you say...?

(READ LIST. ENTER ONE ONLY)

- 1 All of the time
- 2 Most of the time
- 3 Some of the time
- 4 A little of the time
- 5 None of the time
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ROTATE 1-5/5-1)

H2. During the past 30 days, about how often did you feel **hopeless**? Would you say...?

(READ LIST. ENTER ONLY ONE)

(ENTER ONE ONLY)

- 1 All of the time
- 2 Most of the time
- 3 Some of the time
- 4 A little of the time
- 5 None of the time
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ROTATE 1-5/5-1)

H3. During the past 30 days, about how often did you feel **restless or fidgety**? Would you say...?

(READ LIST. ENTER ONE ONLY)

- 1 All of the time
- 2 Most of the time
- 3 Some of the time
- 4 A little of the time
- 5 None of the time
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ROTATE 1-5/5-1)

H4. During the past 30 days, how often did you feel so **depressed** that nothing could cheer you up? Would you say...?

(READ LIST. ENTER ONE ONLY)

- 1 All of the time
- 2 Most of the time
- 3 Some of the time
- 4 A little of the time
- 5 None of the time
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ROTATE 1-5/5-1)

H5. During the past 30 days, about how often did you feel **that everything was an effort**? Would you say...?

(READ LIST. ENTER ONE ONLY)

- 1 All of the time
- 2 Most of the time
- 3 Some of the time
- 4 A little of the time
- 5 None of the time
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ROTATE 1-5/5-1)

H6. During the past 30 days, about how often did you feel **worthless**? Would you say...?
(READ LIST. ENTER ONE ONLY)

- 1 All of the time
- 2 Most of the time
- 3 Some of the time
- 4 A little of the time
- 5 None of the time
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

J. DEMOGRAPHICS

READY: Finally, I have a few general questions about you. These questions will help our staff interpret the results.

(DO NOT ASK IF CELL2, OR Q.S2a IS ANSWERED FOR RESPONDENT)

(P.N. GEN IN RESPONSE FROM Q.CELL2, AND Q.S2a)

J1. What is your age?

- _____ AGE (18-97)
- DD (DO NOT READ) Don't know
 - RR (DO NOT READ) Refused

(ASK Q.J1aa IF Q.J1 = DD OR RR)

J1aa. What age group are you in?
(READ LIST. ENTER ONE ONLY)

- 1 Less than 20
- 2 20 to 29
- 3 30 to 39
- 4 40 to 49
- 5 50 to 59
- 6 60 to 69
- 7 70 and over
- R (DO NOT READ) Refused

(ASK EVERYONE)

J1a. About how tall are you?
(INTERVIEWER NOTE: IF RESPONDENT ANSWERS IN METRIC, ASK FOR INCHES)

- 1 Answer given in FEET (SPECIFY) _____
- 2 Answer given in INCHES (SPECIFY) _____
- 3 Answer given in FEET & INCHES (SPECIFY) _____
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

J1b. About how much do you weigh?
(INTERVIEWER NOTE: IF RESPONDENT ANSWERS IN METRIC, ASK FOR POUNDS)

_____ POUNDS
DD (DO NOT READ) Don't know
RR (DO NOT READ) Refused

J2. Are you currently...?
(READ LIST. ENTER ONE ONLY)

1 Married
2 Living in a marriage-like relationship
3 Widowed
4 Divorced
5 Separated, or
6 Never married
D (DO NOT READ) Don't know
R (DO NOT READ) Refused

J3. Are you a member of any of the following ethnic or cultural groups? What about...?

1 Yes
2 No
D (DO NOT READ) Don't know
R (DO NOT READ) Refused

- a. Hispanic or Latino
- b. Hmong (MAWNG)
- c. Somali (so-MAH-lee)

(IF Q.J3 = 1 TO ANY, READ ALTERNATE VERBIAGE IN PARENS)
(P.N. - DISPLAY CODE NN ONLY IF Q.J3 ITEM a = 1)

J3a. (In addition, which of the following race or races do you consider yourself to be?)
Which of the following race or races do you consider yourself to be?
(READ LIST. ENTER ALL THAT APPLY)

01 American Indian or Alaskan Native
02 Black
03 White
04 Asians/Pacific Islanders
05 Native Hawaiian or other Pacific Islander
07 Some other race (SPECIFY) _____
NN (DO NOT READ) None, Hispanic
DD (DO NOT READ) Don't know
RR (DO NOT READ) Refused

(ROTATE 1-4/4-1)

J4. How strongly do you identify with your ethnic or cultural background?
(READ LIST. ENTER ONE ONLY)

- 1 Not at all
- 2 A little
- 3 Some
- 4 A lot
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

J5a. About what percent of the conversations that you have at home with other family members, friends or guests, are in English?

_____ % (VALID: 0-100%)
DDD (DO NOT READ) Don't know
RRR (DO NOT READ) Refused

J5b. Have you ever served on active duty in the United States Armed Forces?
(IF NECESSARY: Either in the regular military or in the National Guard or military reserve unit? Active duty does not include training for the Reserves or National Guard, but DOES include activation, for example, for the Persian Gulf War.)

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.J5c IF Q.J5b = 1)

J5c. Would you say that you are...?
(READ LIST. ENTER ONE ONLY)

- 1 Now on active duty
- 2 On active duty during the last 12 months, but not now
- 3 On active duty in the past, but not during the last 12 months
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(P.N. - DISPLAY VERBIAGE IN PARENS IF AFTER MAY 2010 OR BEFORE LABOR DAY)

J6. Are you a student? (That is, when school starts in the fall, will you be a student?)

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

J6a. Are you currently...?
(READ LIST. ENTER ONE ONLY)

- 1 Working full-time for pay (35 or more hours a week)
- 2 Working part-time for pay
- 3 Not working for pay at present
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.J6b IF Q.J6a = 3, D, OR R)

J6b. Are you not working because you are ...?
(READ LIST. ENTER ONE ONLY)

- 1 A full-time homemaker
- 2 In school
- 3 A seasonal worker
- 4 Looking for a job
- 5 Retired
- 6 Disabled
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK EVERYONE)

J6c. Did you lose your job in the past 12 months?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

J7. What is the highest grade or level of school you have completed?
(DO NOT READ LIST. ENTER ONE ONLY)

- 01 Never attended school
- 02 Elementary school (grades 1 through 8)
- 03 Some high school (grades 9 through 12)
- 04 High school graduate or GED
- 05 Technical or vocational school
- 06 Some college or associate degree
- 07 Four year college degree (Bachelors)
- 08 Graduate or professional degree
- 97 Other (SPECIFY) _____
- DD (DO NOT READ) Don't know
- RR (DO NOT READ) Refused

J8. Were you born in the United States?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.J8a IF Q.J8 = 2, D, R)

J8a. How long have you lived in the United States?

- _____ YEARS
- LL (DO NOT READ) Less than one year
 - NN (DO NOT READ) Born in the United States
 - DD (DO NOT READ) Don't know
 - RR (DO NOT READ) Refused

(ASK Q.J8b IF Q.J8 = 2, D, R and (J8a=LL, DD, RR or years given)

J8b. What country were you born in? _____ CODE COUNTRY

(ASK EVERYONE)

J9. Including you, how many people aged 18 or older currently live in this household?

- _____ ADULTS
- DD (DO NOT READ) Don't know
 - RR (DO NOT READ) Refused

J10. And thinking about the last 12 months did you have any children under 18 living with you most or all of the time?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.J10a IF Q.J10 = 1)

J10a. During the past 12 months, have any of these children taken a medication prescribed by a doctor for a behavioral disorder?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.J11 IF Q.Q.AA1 = 2 AND Q.J1 = 50 OR LESS OR Q.J1aa = 1-4 OR Q.S2a = 50 OR Q.CELL2 = 50 OR LESS OR LESS FOR RESPONDENT)

J11. Are you pregnant now?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK Q.J11b IF Q.J11 = 2, D, OR R)

J11b. Were you pregnant at any time in the last 12 months?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK EVERYONE)

(PN: IF HH1AA = 001 – 173, GEN IN RESPONSE FROM Q.HH1AA; IF HH1AA=998 OR 999; ASK J12)

J12. What county do you live in? _____ CODE COUNTY

J13. What is your zip code?

- _____ ZIP CODE
- 99998 (DO NOT READ) Don't know
- 99999 (DO NOT READ) Refused

READ: Now I have some questions to determine whether it's possible that this household could be contacted more than once for this study.

(ASK EVERYONE)

PHONE1. Besides the telephone number I reached you on, how many other telephone numbers, if any, does your household have that I could have reached you on? Please note that we are talking about **home** telephone numbers, **excluding** wireless or cell phones.

(PLEASE DO NOT COUNT PHONE LINES THAT ARE DEDICATED TO FAX OR MODEM)

- RR Refused

(ASK Q.PHONE3 THRU Q.PHONE8 IF RDD SAMPLE)

PHONE3. During the past 12 months, has your household ever been without landline telephone service for more than 24 hours?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK PHONE4 IF PHONE3 = 1)

PHONE4. Over the past twelve months, what was the total number of days, weeks, or months your household was without landline telephone service?

- 1 Answer give in DAYS _____ (range: 1-90)
- 2 Answer given in WEEKS _____ (range: 1-52)
- 3 Answer given in MONTHS _____ (range: 1-12)
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK PHONE5 IF PHONE3 = 1)

PHONE5 Of these (INSERT AMOUNT FROM PHONE 4) (INSERT DAYS/WEEKS/MONTHS FROM PHONE 4) how often was a cell phone available for household use? Would you say...?

(P.N. – IF PHONE4 = DD OR RR, DISPLAY: During this time without landline telephone service, how often was a cell phone available for household use? Would you say...?)

(READ LIST. ENTER ONE ONLY)

- 1 Always
- 2 Usually
- 3 Sometimes
- 4 Rarely
- 5 Never
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK ALL RDD SAMPLE)

INSERT "or any other ADULT members of your household" IF J9 = 2+

PHONE6. Do you (or any other ADULT members of your household) currently have a working cell phone?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK PHONE7 IF PHONE6 = 1)

INSERT "or other adults in your household" IF J9 = 2+

PHONE7. How many working cell phones do you (or other adults in your household) have?

(INTERVIEWER NOTE: 1 ADULT WITH 1 WORKING CELL + 1 OTHER ADULT WITH 2 WORKING CELLS = 3 CELL PHONES

_____ (range: 1-10)

DD (DO NOT READ) Don't know

RR (DO NOT READ) Refused

(ASK IF PHONE6 = 1)

(ROTATE OPTIONS 1-3 AND 3-1)

INSERT "and the other people in your household" IF J9 = 2+

PHONE8. Of all the telephone calls that you (and the other people in your household) receive, Are (READ ITEMS)?

(INTERVIEWER: READ ALL RESPONSES (1-3) BEFORE RECODING AN ANSWER)

- 1 All or almost all calls received on a cell phones
- 2 Some received on a cell phones and some on a regular home phones
- 3 All or almost all calls received on a regular home phone
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(Q.CELL5 HAS BEEN DELETED)

(IF CELL PHONE SAMPLE ASK Q.CELL7 THRU Q.CELL9)

CELL7. During the past 12 months, has your household ever been without any telephone service for more than 24 hours?

INTERVIEWER NOTE: THIS MEANS BEING WITHOUT ANY KIND OF TELEPHONE SERVICE SO IF RESPONDENT HAD NO TELEPHONE

SERVICE

AT HOME, NEITHER REGULAR OR CELL PHONE, FOR AT LEAST A DAY,

RECORD AS CODE 1 [YES]

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK IF CELL7 = 1)

CELL8. Over the past twelve months, what was the total number of days, weeks, or months your household was without telephone service?

- 1 Answer give in DAYS _____ (range: 1-90)
- 2 Answer given in WEEKS _____ (range: 1-52)
- 3 Answer given in MONTHS _____ (range: 1-12)
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

INSERT "or other adults in your household" IF J9 = 2+

CELL9. How many working cell phones do you (or other adults in your household) have?

(INTERVIEWER NOTE: 1 ADULT WITH 1 WORKING CELL + 1 OTHER ADULT WITH 2 WORKING CELLS = 3 CELL PHONES

- _____ (range: 1-10)
- DD (DO NOT READ) Don't know
- RR (DO NOT READ) Refused

INCOME. In studies like this, households are often grouped according to income. What was the total income for your household in 2009, before taxes (Include salaries or other earnings, interest, retirement, and so on, for all household members combined?)

(NOTE: IF INCOME 1 MILLION OR ABOVE ENTER 999999)

- _____ (range: \$0 - \$999,999)
- 999999 \$1,000,000 or more
- 9999998 (DO NOT READ) Don't know
- 9999999 (DO NOT READ) Refused

(ASK INCOM2 IF INCOME = 9999998 OR 9999999)

INCOM2. How about if I give you some categories? Would you say your family's gross, pretax income was above \$40,000?

- 1 Yes
- 2 No
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK INCOM3 IF INCOM2 = 2)

INCOM3. Would you say your family's gross, pretax income was...?

(READ LIST. ENTER ONE ONLY)

- 1 Less than \$5,000
- 2 \$5,000 to just under \$10,000
- 3 \$10,000 to just under \$15,000
- 4 \$15,000 to just under \$20,000
- 5 \$20,000 to just under \$25,000
- 6 \$25,000 to just under \$30,000
- 7 \$30,000 to just under \$35,000
- 8 \$35,000 to just under \$40,000
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

(ASK INCOM4 IF INCOM2 = 1)

INCOM4. Would you say your family's gross, pretax income was...?

(READ LIST. ENTER ONE ONLY)

- 1 \$40,000 to just under \$50,000
- 2 \$50,000 to just under \$60,000
- 3 \$60,000 to just under \$75,000
- 4 \$75,000 to just under \$100,000
- 5 \$100,000 to just under \$150,000
- 6 \$150,000 to just under \$200,000
- 7 \$200,000 or more
- D (DO NOT READ) Don't know
- R (DO NOT READ) Refused

Appendix C: Summary of Measures

Demographics:

Demographic information included gender, age, race/ethnicity, education, employment and marital status, region of residence and household income.

Respondents were asked to report their age in years; if they did not, they were asked to report their age in category (less than 20; 20 to 29 etc). For those who did not want to report their age in years, but who answered the categorical question, age was assigned at the midpoint of the interval response.

Consistent with standards used by the Census bureau, questions about ethnicity and race were asked separately. The survey instrument allowed respondents to report multiple racial identities (for example one could identify as African American and White). Responses to questions about ethnicity and race were combined to create mutually exclusive categories. Hispanic ethnicity was assigned first, thus the remainder of the categories (White, African American, Asians/Pacific Islanders, American Indian, and Multiple/Other race denote persons who did not self-identify as Hispanic).

Region was defined based on self-reported county. For missing observations, we estimated the county based on the respondents zip code; if zip code was missing we substituted the county found on the original sampling file.

Northeast : (Aitkin, Carlton, Cook, Itasca, Koochiching Lake, Saint Louis)

East Central: (Benton, Chisago, Isanti, Kanabec, Mille Lacs, Morrison, Pine, Sherburne, Stearns, Wright)

Metro: (Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, Washington)

Southeast: (Dodge Fillmore, Freeborn, Goodhue, Houston, Mower, Olmsted, Rice, Steele, Wabasha, Winona)

Southwest: (Big Stone, Blue Earth, Brown, Chippewa, Cottonwood, Faribault, Jackson, Kandiyohi, Lac Qui Parle, Le Sueur, Lincoln, Lyon, Martin, McLeod, Meeker, Murray, Nicollet, Nobles, Pipestone, Redwood, Renville, Rock, Sibley, Swift, Waseca, Watonwan, Yellow Medicine)

West Central: (Cass, Clay, Crow Wing, Douglas, Grant, Otter Tail, Pope, Stevens, Todd, Traverse, Wadena, Wilkin)

Northwest: (Becker, Beltrami, Clearwater, Hubbard, Kittson, Lake of the Woods, Mahnomen, Marshall, Norman, Pennington, Polk, Red Lake, Roseau)

Income: Respondents were asked to report their 'total household income in 2009, before taxes'. If they did not want to provide their income, they were asked what category it fell in (less than \$5,000, \$5,000 to \$10,000 etc.), and the mid-point of the range was substituted for their income. Income was imputed for the remaining missing cases based on gender, age, race/ethnicity, region, education and household size. For the multivariate analysis we constructed a measure of per adult income in the household. Each adult's total imputed household income was divided by the number of adults living in the household. This measure was used so that large households and small households had comparable measures of financial resources.

Respondents were asked their current marital status. For the purposes of the multivariate analysis respondents were grouped into categories of currently married or living with a marriage like partner, previously married, and never married.

Work status in the multivariate analysis was operationalized as employed (part-time or full-time), unemployed (not working, but looking for work), or not in the labor force. Persons not in the labor force are those that are not currently working and not looking for work.

Education was modeled as less than high school, high school graduate, some college or associate degree, and at least a 4-year college degree.

Cigarette Use:

Respondents who indicated that they had ever smoked at least 100 cigarettes in their life were categorized as meeting the criteria for lifetime cigarette use. Those who indicated that they now smoked every day or smoked at least one cigarette in the past 30 days were categorized as smoking in the past month.

Alcohol Use:

Respondents who indicated that they had ever had twelve or more drinks in any year of their life were categorized as meeting the criteria for lifetime use of alcohol. We also distinguish between respondents who indicated that they last had a drink in the past year and those who last drank in the past month.

Binge Drinking: Binge drinking is defined as consuming 4 or more drinks for women, and 5 or more drinks for men on one occasion. We distinguish between past year, and past month binge drinking

Heavy drinking was defined as having consumed 4 or more drinks for women and 5 or more drinks for men on at least 5 occasions in the past 30 days.

Risk associated with Drinking Alcohol:

An item from the NSDUH was used to measure perceived risk associated with high levels of alcohol consumption. Respondents were asked "how much do people risk harming

themselves physically and in other ways when they have five or more drinks of an alcohol beverage once or twice a week. Responses of 'never or slight risk' were used to define low perceived risk.

Drug Use:

Respondents were asked if they had ever used eight specific types of illegal drugs: marijuana or hash, powder cocaine, crack cocaine, heroin, methamphetamine, hallucinogens, club drugs, or opium. A positive response to any was considered as an indication of illegal drug use. We distinguish between ever using, and use in the past year.

To measure potential prescription drug abuse, respondents were asked about if they ever used four types of prescription drugs (pain relievers, tranquilizers, stimulants or sedatives) "on your own – that is, either outside prescribed use or that you took for the experience or the feeling they caused. We distinguish between ever using, and using in the past year.

Substance Use and Dependence:

Substance abuse or dependence was defined consistent with criteria from the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV). DSM-IV is a compilation of diagnostic criteria for various mental disorders. It distinguishes between substance dependence and abuse, with dependence being the more severe form of disorder.

To be eligible for the questions used to construct the diagnostic measures, respondents had to screen positive on either the alcohol or drug screener. A positive alcohol screen required responding 'yes' to one of the following questions: 1) ever had a problem with alcohol or binged in the past 12 months; 2) averaged 3 or more drinks per occasion or had 4 or more drinks at least once in the past 12 months (for females); 3) averaged 4 or more drinks per occasion or had 5 or more drinks in the past 12 months (if male).

Positive on the drug screening criteria required using any of the illegal or prescription drug once a month or more. Persons who screened positive for alcohol or drugs were then asked a series of questions about symptoms and behaviors that may be indicative of abuse or dependence on the substance.

Meeting the diagnostic criteria for dependence requires meeting three or more of the seven criteria that include symptoms such as tolerance and withdrawal. A diagnosis of abuse requires meeting at least one of the four criteria such as legal problems, in the absence of dependence. The full definition of each is presented in Table 1.

Table 1. Measures Of Substance Abuse And Dependence Based On DSM-IV Criteria	
Dependence (3 or more symptoms)	Abuse (1 or more symptoms and does not meet the dependence criteria)
<ol style="list-style-type: none"> 1. Tolerance: Using same amount had less effect or took more to feel the same effect (E3) 2. Withdrawal: symptoms when drug/alcohol wearing off: (E9 or E10) 3. Take substance in larger amount than intended (E2) 4. Efforts to cut down unsuccessful (E7 or E8) 5. Spent a lot of time using, getting over effects or obtaining substance (E1) 6. Important social, occupational, or recreational activities are given up due to substance use (E4) 7. Continued use despite having physical/emotional problems caused by use (E5a or E6a) 	<ol style="list-style-type: none"> 1. Failure to perform major role obligations Use caused serious problems in work, school etc. (F1) 2. Recurrent use in hazardous situations (Alcohol: Use may have put you in physical danger (F2) or drove while intoxicated (F5) – Drug: Use may have put you in physical danger (F2) or Injected drugs past year (D6) 3. Recurrent substance-related Legal Problems: Use caused repeated problems with law (F3) 4. Continued use despite having persistent social/interpersonal problems: Continued to use despite problems with family or friends caused by use (F4a)

Need for Substance Use Treatment:

Need was defined consistent with the measure used in NSDUH and includes persons who either met the criteria for substance abuse or dependence in the past year or who used specialty treatment services in the past year. Specialty treatment in the past year is defined as any treatment or counseling for alcohol or drug use not including support groups such as Alcoholics Anonymous or Narcotics Anonymous.

Depression:

The eight item version of the Patient Health Questionnaire (PHQ-8) was used (Kroenke et al. 2009) to measure depression (see questions A5A to A5H in the questionnaire). The questions ask respondents how many days in the past two weeks they have experienced symptoms such as feeling depressed, having a trouble sleeping, and difficulty concentrating. For each item, respondent are given a score of 0 if they reported 0-1 days, 1 if they report 2-6 days, 2 if they reported 7-11 days and 3 if they reported more than 11 days. The scores are summed, and a total score of 10 or higher is considered moderate depression.

Serious psychological distress:

The K6 measure of serious psychological distress (SPD) was included (Kessler et al. 2003). The questions ask about how often in the past month (from ‘none of the time’ to ‘all of the time’) respondents felt depressed, hopeless, nervous, that everything was an effort, restless or

worthless (see questions H1 to H6 in the questionnaire) . In the current survey, the 6-item scale has excellent reliability; Cronbach's alpha exceeds .80. As well, factor analysis indicated that the six items loaded on one factor. Items were recoded to a '0-4' scale, with 4 representing the highest score. Items were summed and consistent with guidelines, scores of 13 or above were used to define past-month SPD.

Treatment for Mental Health:

Treatment for mental health disorders was defined as having "seen a mental health provider, such as a psychiatrist, psychologist, social worker, psychiatric nurse or counselor for an emotional or mental health problem." They were then asked when they last sought treatment, and we focus on treatment in the past year.

Attitudes about Treatment:

Respondents were asked how likely they would be to seek treatment if they 'had a problem with alcohol', 'thought you had a problem with drugs', or 'thought you had an emotional problem such as depression. Response options ranged on a four point scale from "very unlikely" to "very likely." Responses of 'very' and 'somewhat' unlikely were combined to indicate reluctance to seek care.

Respondents were also asked if, in the past 12 months, they thought they needed "treatment or counseling for their use of alcohol or drugs but did not receive it" or "treatment or counseling for emotional or psychological problems but did not receive it". Positive responses indicated perceived need for the treatment.

Stress:

Respondents were asked how often in the past 12 months they felt 'worried or stressed' about having enough money in three areas: 1) to get the health care they thought they or their family needed; 2) to pay the rent or mortgage; and 3) to buy healthy foods. Response options were on a five point scale from always to never. For the analysis, responses of "always" or "usually" were combined to capture the highest level of stress, and sometimes/rarely were combined to reflect moderate stress.