# Kentucky Needs Assessment Project 2004 Adult Household Survey Report

Prepared for: Kentucky Cabinet for Health and Family Services Department of Mental Health and Mental Retardation Services Division of Mental Health and Substance Abuse

Prepared by: Center on Drug and Alcohol Research University of Kentucky

October 2005

1



# cdar.uky.edu

Needs Assessment Staff

J. Matthew Webster Principal Investigator

Carl Leukefeld Co-Principal Investigator

**Robert Walker Co-Principal Investigator** 

Thomas Garrity Co-Principal Investigator

> David Clark Study Director

Caitlin Powell Research Assistant

#### TABLE OF CONTENTS

# **Table of Contents**

Executive Summary 1	.1
Purpose and Objective	7
Purpose1	9
Objective	9
Study Design	9
Principal Findings	20
Acknowledgements	20
Methods2	21
Measures	23
Approach	25
Section One: Demographics	31
Section Two: Nicotine	37
Section Three: Alcohol 4	9
Section Four: Marijuana6	51
Section Five: Drug Use6	57
Part A: Stimulants	59
Part B: Inhalants, Hallucinogens, Sedatives, & Tranquilizers7	/4
Part C: Opiates	19
Part D: All Illicit Drugs	34
Section Six: DSM-IV-TR Criteria	39
Section Seven: Treatment Utilization	<b>)</b> 7
Section Eight: Physical and Mental Health 10	)5
Section Nine: Treatment Need11	5
Section Ten: Comparison to the Kentucky Needs Assessment 1999 Adult Household	
Report12	23
Section Eleven: Regional Comparison13	31
Section Twelve: Jefferson and Fayette Counties	13
Concluding Remarks	19
References15	;3
Appendix15	;5

### List of Figures

Figure		Page
C	Section One: Demographics	C
1.1	Race	34
	Section Two: Nicotine	
2.1	Percent of adults who ever smoked all or part of a cigarette	39
2.2	Age of first cigarette use	40
2.3	Percent of adults who smoked at least 100 cigarettes	41
2.4	Time since last cigarette use	42
2.5	Percent of age group that reported smoked cigarettes every day over the past month	43
2.6	Average number of cigarettes smoked per day reported by adults who smoked every day over the past month	44
2.7	Percent of adults who smoked cigarettes every day over the past month by race	44
2.8	Percent of adults who smoke cigarettes daily by household income range	45
2.9	Percent of adults who smoked cigarettes daily over the past 30 days by highest level of education attained	46
2.10	Percent of adults who used other forms of tobacco within the past 12 months Section Three: Alcohol	47
31	Percent of adults who drank at least one alcoholic beverage in their life	51
3.2	Percent who drank at least 12 drinks in the same year	52
3.3	<i>Cumulative percent of adults by age of first drink</i>	53
3.4	Time since last alcohol for all adult Kentuckians	54
3.5	Percent of adults who used alcohol in combination with other drugs (excluding tobacco) by age range	56
3.6	Percent of adults who used alcohol in combination with other drugs (excluding tobacco) by race	57
3.7	Percent of adults who used alcohol in combination with other drugs (excluding tobacco) by household income levels	58
3.8	Percent of adults who used alcohol in combination with other drugs (excluding tobacco) by highest education attained	58
3.9	Percent of adults who thought alcohol was a problem at some point in their life	59
	Section Four: Marijuana	
4.1	Percent of adults who used marijuana at least once in their life	63
4.2	Average age of first use of marijuana by race/ethnicity	64
4.3	Time since last marijuana use for adults who ever used marijuana	65
4.4	Percent of adults who used marijuana and considered marijuana to have ever been a problem in their life	66

#### TABLE OF CONTENTS

Figure		Page
_	Section Five: Drug Use	_
5.1	Percent of adults who ever used stimulants	69
5.2	Percent of adults who ever used stimulants by age group	71
5.3	Percent of adults who ever used stimulants by highest education attained	72
5.4	Percent of adults who ever used inhalants/hallucinogens/sedatives/tranquilizers	74
5.5	Percent of adults who ever used inhalants/hallucinogens/sedatives/tranquilizers by age group	76
5.6	Percent of adults who ever used inhalants/hallucinogens/sedatives/tranquilizers by highest level of education attained	77
5.7	Percent of adults who ever used opiates	79
5.8	Percent of adults who ever used opiates by age group	81
5.9	Percent of adults who ever used opiates by highest education attained	82
5.10	Percent of adults who ever used an illicit drug	84
5.11	Percent of adults who ever used an illicit drug by age group	85
5.12	<i>Percent of adults who ever used an illicit drug by highest education attained</i>	86
5.13	Percent of adults who considered their illicit drug to ever be a problem by recency of use	87
	Section Six: DSM-IV-TR Criteria	
6.1	Lifetime prevalence of adults with alcohol abuse or alcohol dependence	91
6.2	Past year prevalence of adults with alcohol abuse or alcohol dependence	92
6.3	Lifetime prevalence of adults with drug abuse or drug dependence	93
6.4	Past year prevalence of adults with drug abuse or drug dependence	94
6.5	Lifetime prevalence of adults with any substance abuse or substance dependence	95
	Section Seven: Treatment Utilization	
7.1	<i>Percent of adults who ever received treatment or counseling for alcohol/drugs</i>	99
7.2	<i>Time since last treatment or counseling for alcohol/drugs</i>	100
7.3	Reason for treatment/counseling	100
7.4	How treatment concluded for the most recent treatment	101
7.5	Percentage of adults who ever attended a 12-step meeting	103
7.6	Number of 12-step meetings attended lifetime	104
7.7	Last 12-step meeting attended	104

#### TABLE OF CONTENTS

Figure		Page
	Section Eight: Physical and Mental Health	
8.1	Average number of times seen for physical health problems in the past 12 months	107
8.2	Physical health self-ratings	108
8.3	Percent of adults who ever experienced serious depression	109
8.4	Percent of adults who ever experienced serious anxiety or tension	110
8.5	Percent of adults who were ever prescribed medication for psychological or emotional problems	111
8.6	Mental health self-ratings	112

# List of Tables

Table		Page
	Section One: Demographics	
1.1	Gender	33
1.2	Age	33
1.3	Mental Health/MentalRetardation Regions	33
1.4	Marital Status	34
1.5	Employment Rates	35
1.6	Reason for Not Working	35
1.7	KNAP Household Income Ranges	35
1.8	2000 US Census KY Household Income Ranges	35
1.9	Highest Level of School Completed	36
	Section Two: Nicotine	
2.1	<i>Estimated number of adult Kentuckians who smoked all or part of a cigarette</i>	39
2.2	Estimated number of adult Kentuckians who smoked at least 100 cigarettes	41
2.3	Estimated number of adult Kentuckians who smoked cigarettes within the past 30 days	42
2.4	Estimated number of adult Kentuckians who smoke cigarettes daily Section Three: Alcohol	42
3.1	Estimated number of adult Kentuckians who drank at least one alcoholic beverage in their lifetime	51
3.2	Estimated number of adult Kentuckians who drank at least 12 alcoholic beverages in the same year	52
3.3	Average age of first drink by race/ethnicity	53
3.4	Estimated number of adult Kentuckians who drank alcohol within the past year	54
3.5	Estimated number of adult Kentuckians who drank alcohol within the past 30 days	54
3.6	Estimated number of adult Kentuckians who drank at least one alcoholic beverage every day in the past month	55
3.7	Estimated number of adult Kentuckians who reported at least on binge drinking episode in their life	55
3.8	Estimated number of adult Kentuckians who believe that alcohol has ever been a problem in their life	59
	Section Four: Marijuana	
4.1	Estimated number of adult Kentuckians who used marijuana at least once in their life	63
4.2	Estimated number of adult Kentuckians who used marijuana in the past 30 days	65

Table		Page
4.3	Estimated number of adult Kentuckians who used marijuana in the past 12 months	65
4.4	<i>Estimated number of adult Kentuckians who used marijuana every day in the past 30 days</i>	66
	Section Five: Drug Use	
5.1	Estimated number of adult Kentuckians who ever used stimulants	69
5.2	Percent of persons who used stimulants in the past year (of those who have used that stimulant)	70
5.3	Estimated number of adult Kentuckians who used stimulants within the past year	70
5.4	<i>Estimated number of adult Kentuckians who considered stimulants to have ever been a problem in their life</i>	73
5.5	<i>Percent of persons who ever used stimulants and considered that stimulant to ever be a problem in their life</i>	73
5.6	Estimated number of adult Kentuckians who ever used inhalants/hallucinogens/sedatives/tranquilizers	74
5.7	Estimated number of adult Kentuckians who used inhalants/ hallucinogens/sedatives/tranquilizers within the past year	75
5.8	Estimated number of adult Kentuckians who considered inhalants/hallucinogens/sedatives/tranquilizers to have ever been a problem	78
5.9	Percent of persons who ever used inhalants/hallucinogens/sedatives/tranquilizers and considered that drug to have ever been a problem	78
5.10	Estimated number of adult Kentuckians who ever used opiates	79
5.11	<i>Estimated number of adult Kentuckians who reported using opiates within the past year</i>	80
5.12	<i>Estimated number of adult Kentuckians who consider opiates to be a problem in their lifetime</i>	83
5.13	Percent of adults who ever used opiates and considered that opiate to ever be a problem in their life	83
5.14	Estimated number of adult Kentuckians who ever used an illicit drug	84
5.15	<i>Estimated number of adult Kentuckians who used an illicit drug within the past year</i>	87
5.16	<i>Estimated number of adult Kentuckians who consider their illicit drug use to be a problem in their life</i>	87
	Section Six: DSM-IV-TR Criteria	
6.1	Estimated number of adult Kentuckians who met alcohol abuse or alcohol dependence in their life	91

#### TABLE OF CONTENTS

Table		Page
6.2	Estimated number of adult Kentuckians who met alcohol abuse or dependence in the past year	92
6.3	<i>Estimated number of adult Kentuckians who met drug abuse or drug dependence in their life</i>	93
6.4	<i>Estimated number of adult Kentuckians who met drug abuse or dependence in the past year</i>	94
6.5	<i>Estimated number of adult Kentuckians who met any substance abuse or substance dependence in their life</i>	95
	Section Seven: Treatment Utilization	
7.1	<i>Estimated number of adult Kentuckians who ever received treatment or counseling for alcohol/drugs</i>	99
7.2	Location where most recent treatment was received	102
7.3	Estimated number of adult Kentuckians who ever attended a 12- step meeting	104
	Section Eight: Physical and Mental Health	
8.1	Estimated number of adult Kentuckians who ever experienced serious depression	109
8.2	<i>Estimated number of adult Kentuckians who ever experienced serious anxiety or tension</i>	110
8.3	<i>Estimated number of adult Kentuckians who were ever prescribed a medication for psychological or emotional problems</i>	111
8.4	<i>Percent of adults who believe they have a 50% or greater chance of contracting HIV/AIDS</i>	113
	Section Nine: Treatment Need	
9.1	Estimated number of adult Kentuckians who needed and tried to obtain treatment in the past year but did not receive treatment	117
9.2	<i>Estimated number of adult Kentuckians who met DSM-IV-TR criteria for abuse or dependence in the past year but did not receive treatment</i>	117
9.3	Estimated number of adult Kentuckians who engaged in risky behaviors in the past year but did not receive treatment	118
9.4	Estimated number of adult Kentuckians who considered drugs/alcohol to be a problem and used a substance in the past 30 days	119
9.5	Estimated number of adult female Kentuckians who used drugs or alcohol during pregnancy	120
9.6	<i>Estimated number of adult Kentuckians currently in need of alcohol/drug treatment</i>	121

Table		Page
	Section Ten: Comparison to the Kentucky Needs Assessment 1999 Adult Household Report	
10.1	Cigarettes	125
10.2	Alcohol	125
10.3	Illicit drugs	126
10.4	Marijuana	126
10.5	Cocaine	127
10.6	Hallucinogens	127
10.7	Past year alcohol dependence	128
10.8	Past year alcohol abuse	128
10.9	Past year drug dependence	129
10.10	Past year drug abuse	129
10.11	Treatment Need	130
	Section Eleven: Regional Comparison	
11.1	Estimated number of adult Kentuckians who ever smoked a cigarette by region	133
11.2	Estimated number of adult Kentuckians who ever drank by region	134
11.3	<i>Estimated number of adult Kentuckians who ever used illicit drugs by region</i>	135
11.4	Estimated number of adult Kentuckians who ever used marijuana by region	136
11.5	<i>Estimated number of adult Kentuckians who ever used cocaine by region</i>	137
11.6	Estimated number of adult Kentuckians who ever used hallucinogens by region	138
11.7	Estimated number of adult Kentuckians who met alcohol abuse and dependence in the past year by region	139
11.8	Estimated number of adult Kentuckians who met drug abuse and dependence in the past year by region	140
11.9	<i>Estimated number of adult Kentuckians in current need of alcohol/drug treatment by region</i>	141
	Section Twelve: Jefferson and Fayette Counties	
12.1	<i>Demographic variables</i>	145
12.2	Lifetime use of cigarettes and alcohol	145
12.3	Lifetime use of illicit drugs	146
12.4	Lifetime DSM-IV-TR criteria	147
12.5	Current treatment need	147

# **Executive Summary**

The Kentucky Needs Assessment 2004 Adult Household Survey Report includes estimates of nicotine, alcohol, and illicit drug use by adult Kentuckians 18 years and older as well as estimates of substance use treatment need. These estimates were developed from data collected during confidential and anonymous telephone interviews with 4,210 adults randomly sampled from households across Kentucky. Interviews were conducted by the University of Kentucky Survey Research Center from May to September 2004. Summaries of survey findings for different drugs and treatment need are described below.

# Nicotine

An estimated 716,741 adult Kentuckians (23%) smoked cigarettes daily. Threefourths of males and two-thirds of females had their first cigarette before the legal age of 18. Daily cigarette smoking was negatively correlated to education and income such that those with more education or with more annual income were less likely to smoke daily. Hispanics (18.3%) were less likely to smoke cigarettes daily than Whites (22.9%) or African-Americans (24.4%).

# Alcohol

An estimated 1,112,156 adult Kentuckians (35.6%) drank alcohol within the past 30 days, and an estimated 197,880 (6.3%) drink alcohol everyday. Almost 88% of males and 80% of females have their first drink of alcohol before the legal age of 21. African-Americans start drinking later (18.1 years old) than Whites (17.1 years old) or Hispanics (16.4 years old) but are more likely to use alcohol in combination with other drugs. An estimated 268,197 adult Kentuckians (8.6%) believe that alcohol was a problem for them at some point in their life, with males three times more likely than females to believe this.

# Marijuana

An estimated 979,568 adult Kentuckians (31%) used marijuana in their lifetime and 133,968 (4.2%) used in the past year. Of the estimated 92,959 adult Kentuckians (2.9%) who used marijuana in the past 30 days, 19.6% of males and 17.1% of females reported using marijuana every day. The average age of first use of marijuana was 18 years old. An estimated 106,773 adult Kentuckians believe that marijuana has been a problem for them at some point in their life.

# Cocaine

An estimated 229,231 adult Kentuckians (7.3%) used cocaine in their lifetime. Males were estimated to be twice as likely as females to have used cocaine (150,663 vs. 78,568). Most people who used cocaine were less than fifty years of age, and only 1 in 4 of these users believed that cocaine was a problem for them at some point in their life. An estimated 31,895 adult Kentuckians (1%) have used cocaine in the past year. Cocaine users in the past year were slightly more likely to be male (17,812) than female (14,083).

# Methamphetamine

An estimated 81,603 adult Kentuckians (2.6%) illicitly used methamphetamine in their lifetime. Males were estimated to be three times more likely than females to have used this stimulant (60,859 vs. 20,744). Among those who used methamphetamine, more than half of male users (56.6%) and 25% of female users believed the drug was a problem in their life. Younger aged adults were more likely to report lifetime use of methamphetamine than older aged adults. Only 10% of people who have used methamphetamine report using it in the past year, but the ratio of male users to female users remained at 3 to 1 (6,680 vs. 2233).

# MDMA (ecstasy)

An estimated 69,713 adult Kentuckians (2.2%) used MDMA in their lifetime, 57% of which were males. The majority of those who used MDMA were less than 30 years of age. An estimated 8,904 adult Kentuckians (< 1%) used MDMA in the past year. Similar to methamphetamine, approximately three-fourths of those who reported using MDMA in the past year were male.

# **Other Stimulants**

An estimated 221,819 adult Kentuckians (7.1%) used other stimulants (e.g., methylphenidate or other specific drug if known) in their lifetime, 68% of which were males. The largest proportion of lifetime users of other stimulants was adult Kentuckians between 40 and 49 years of age. Approximately 20% of males and 10% of females believe the use of stimulants other than cocaine, methamphetamine, and MDMA was a problem in their life. Of the estimated 25,977 adults in Kentucky (< 1%) who used other stimulants in the past year, most of them were male (80%).

# Inhalants

An estimated 62,320 adult Kentuckians (2%) used inhalants in their lifetime. Approximately 2.5 times as many males (44,531) than females (17,789) have used inhalants. Nineteen percent of males and 12.5% of females who used inhalants ever considered it a problem in their life. Consistent with previous needs assessment studies, inhalant use tends to cease after adolescence and very few adult Kentuckians (< 1%) report using inhalants in the past year.

# Hallucinogens

An estimated 207,810 adult Kentuckians (6.7%) used hallucinogens in their lifetime. Nearly three of every four persons reporting hallucinogen use were male. Younger aged adults were more likely to report lifetime use of hallucinogens than older adults. Less than 10% of those who used hallucinogens ever considered them

to be a problem in their life. An estimated 10,388 adult Kentuckians (< 1%) have used hallucinogens in the past year and use is predominantly by males (8,906).

### Sedatives

An estimated 139,453 adult Kentuckians (4.5%) illicitly used sedatives in their lifetime. Persons between the ages of 18 and 29 most frequently reported sedative use. Although more males were estimated to have used sedatives, the estimated number of sedative users was more evenly distributed across gender than most other drugs (80,898 males vs. 58,555 females). A higher percentage of females (16.3%) than males (12.4%) reported that sedatives had been a problem in their life. An estimated 57,860 adult Kentuckians used sedatives during the past year, and these again were more evenly distributed across gender than most other drugs (34,883 males vs. 22,977 females).

# Tranquilizers

An estimated 205,507 adult Kentuckians (6.6%) illicitly used tranquilizers in their lifetime. Similar to hallucinogen use, nearly three of every four persons reporting tranquilizer use were male. Only 13.7% of those who used tranquilizers ever believed they were a problem in their life. An estimated 48,240 adult Kentuckians (1.5%) used tranquilizers in the past year with the estimated number of male users (34,157) being about 2.5 times as many as the estimated number of female tranquilizer users (14,083).

# Heroin

An estimated 30,425 adult Kentuckians (1%) used heroin in their lifetime. Although a low number of male heroin users (15.9%) reported ever believing heroin was a problem in their life, almost half of the females (48.3%) believed it was a problem. Very few respondents to the survey reported heroin use in the past year; therefore, estimates of recent heroin users could not be calculated.

# Oxycodone

An estimated 60,829 adult Kentuckians (1.9%) used oxycodone for non-medical use in their lifetime. Persons between the ages of 18 and 29 most frequently reported oxycodone use. Approximately 1 in 5 oxycodone users reported thinking the drug was a problem in their life. An estimated 20,028 adult Kentuckians (< 1%) used oxycodone in the past year. Males accounted for 59.3% of these recent users while females accounted for 40.7%.

# **Other Non-OTC Pain Medication**

An estimated 207,684 adult Kentuckians (6.7%) used illicitly other non-over-thecounter pain medications. Fifteen percent of those who reported illicit non-OTC pain medication use believed it was ever a problem. Persons between the ages of 18 and 29 most frequently reported the illicit use of other non-OTC pain

medications. An estimated 53,411 adult Kentuckians (1.7%) used other non-OTC pain medications for non-medical use in the past year. Males accounted for 62.5% of these recent users while females accounted for 37.5%.

### Any Illicit Drug

An estimated 1,052,348 adult Kentuckians (33.7%) used at least one illicit drug in their lifetime. Persons 50 years of age and older were less likely to have used an illicit drug in their lifetime than younger persons (16% vs. 44%). An estimated 179,858 adult Kentuckians (5.8%) have considered illicit drug use to ever be a problem in their life. An estimated 213,560 adult Kentuckians (6.8%) used at least one illicit drug in the past year. Males accounted for 63.9% of recent users while females accounted for 36.1%.

### **Alcohol Abuse and Dependence**

An estimated 342,162 adult Kentuckians (11%) met DSM-IV-TR criteria for alcohol abuse and/or dependence in their lifetime. An estimated 136,559 adult Kentuckians (4.4%) met DSM-IV-TR criteria for alcohol abuse and/or dependence in the past year.

### Drug Abuse and Dependence

An estimated 65,291 adult Kentuckians (2.1%) met DSM-IV-TR criteria for drug abuse and/or dependence in their lifetime. An estimated 50,446 (1.6%) met DSM-IV-TR criteria for drug abuse and/or dependence in the past year.

#### Substance Abuse Treatment Utilization

An estimated 116,399 adult Kentuckians (3.7%) received treatment or counseling for their use of alcohol and/or drugs in their lifetime.

#### Substance Abuse Treatment Need

An estimated 374,884 adult Kentuckians (12%) need substance abuse treatment but are not receiving it.

# Comparison to the 1999 Kentucky Adult Household Survey

When comparing to the 1999 Kentucky Adult Household Survey, notable declines in past year use of cigarettes (32.4% vs. 28.9%) and marijuana (5.9% vs. 4.3%) were found. Cocaine use, however, increased (0.6% vs. 1.0%), as did the overall prevalence of illicit drug in the past year from 6.1% (1999) to 6.8% (2004). Although the overall treatment need stayed roughly the same (12.6% in 1999 and 12.0% in 2004), the need for substance abuse treatment changed by gender. The estimated percentage of males who need substance abuse treatment declined from 21.3% to 17.5%, whereas the estimated percentage of females who need substance abuse treatment increased from 4.7% to 6.9%.

#### **Regional Comparison**

Variability in substance use and treatment need was found across Kentucky's 14 MHMR regions. The regions with the highest percentage of adults who used illicit drugs in their lifetime were in Seven Counties (37.1%), Communicare (37.1%), and Bluegrass (36.6%). The regions with the lowest percentage of adults who used illicit drugs in their lifetime included Mountain (24.9%), Adanta (28.1%), and River Valley (29.0%). The percentage of adults with current substance abuse treatment needs was highest in Seven Counties (17.2%), North Key (13.5%) and Bluegrass (12.0%) and was lowest in River Valley (6.8%), Mountain (7.1%) and Pathways (9.0%).

### Jefferson and Fayette Counties

A larger percentage of adults who live in Jefferson (40.6%) and Fayette (39.9%) used illicit drugs in their lifetime than adults in the remaining 118 counties (30.9%). Despite this large discrepancy in illicit drug use between the two most populous counties and the rest of state, the rates of lifetime use of certain drugs such as methamphetamine and non-OTC pain medication are higher in the less populated areas. The current need for substance abuse treatment for Jefferson and Fayette Counties was estimated at 18.1% and 11.3%, respectively, whereas the current treatment need for the rest of the state was estimated at 10.6%.

This page intentionally left blank

# PURPOSE AND OBJECTIVE

#### PURPOSE AND OBJECTIVE

This page intentionally left blank

#### PURPOSE

The Kentucky Department of Mental Health and Mental Retardation Services, Division of Mental Health and Substance Abuse contracts with the University of Kentucky Center on Drug and Alcohol Research to survey Kentucky households on the prevalence of substance use and treatment utilization. This study is undertaken to meet the Center on Substance Abuse Treatment (CSAT) Substance Abuse Prevention and Treatment Block Grant requirement. The purpose of this study is to provide information to state health planners in estimating the overall need for substance abuse treatment in Kentucky and with treatment and prevention planning at statewide and regional levels.

# OBJECTIVE

The Kentucky Needs Assessment Project 2004 Adult Household Survey is developed to estimate substance use levels and substance abuse treatment needs of Kentuckians 18 years of age and older. This study examined the prevalence of substance abuse for tobacco, alcohol, cocaine, methamphetamines, MDMA, inhalants, hallucinogens, sedatives, tranquilizers, heroin, and other non-over-the-counter pain medications using a telephone survey of Kentucky households. In addition, the study develops estimates for the prevalence of alcohol dependence and poly-substance dependence. Respondents were asked questions related to the criteria defined in the Diagnostic and Statistical Manual, Fourth Edition Text Revision (DSM-IV-TR, American Psychiatric Association, 2000) for substance abuse and dependence. In order for respondents to be classified as needing substance abuse treatment, one of several criteria had to be met: (1) A self-report of need for treatment; (2) Meeting the DSM-IV-TR criteria for substance abuse or dependence in the past 12 months; (3) Continued use of substances in the past 12 months in spite of self-reported problems related to substance use; (4) Engaging in high risk behavior related to substance use in the past 12 months; and (5) Using substances in the past 30 days during pregnancy. While these criteria support a need for interventions, they do not suggest the same level of treatment need. The results of this survey suggest an overall estimate of persons needing treatment. Risk factors were also examined to provide information for prevention services planning in Kentucky.

The study also provides region substance abuse levels and treatment need estimates for each of the 14 state mental health planning districts. Regional-level data can be used for planning.

#### STUDY DESIGN

The 2004 Adult Household Survey is a descriptive study of past 12 month substance dependence, substance abuse, and related behaviors that also included lifetime and past 30 day measures.

#### PRINCIPAL FINDINGS

Results of the survey indicate that 12%, or over 374,000, of the adults in Kentucky need substance abuse treatment based on reported substance use and problems within the past 12 months. About one-third of Kentucky adults used at least one illicit drug in their lifetime. More than 119,000 adults (3.8% of the state population) are considered dependent on alcohol with about 334,000 (10.7%) abusing alcohol. About 34,000 (1.1%) adults, within the past 12 months, meet criteria for dependence on an illicit drug, with 60,000 (1.9%) meeting criteria for abuse of an illicit drug.

#### ACKNOWLEDGEMENTS

This study was supported by contract number M-03088391 under the State Treatment Needs Assessment Program administered by the Kentucky Cabinet for Health and Family Services, Department of Mental Health and Mental Retardation Services, Division of Mental Health and Substance Abuse.

# **METHODS**

This page intentionally left blank.

#### <u>Measures</u>

This study examines drug and alcohol use by asking specific questions on each substance. The questions include items from the National Survey on Drug Use and Health survey instrument, the DSM-IV-TR, and Kentucky-specific items.

Data analyses focused on estimating the number of Kentucky adults for:

- The past 12-month prevalence of cigarette, smokeless tobacco, alcohol, and illicit drugs;
- The need for and use of substance abuse treatment; and
- Past 12-month abuse or dependence on alcohol or other drugs.

It should be noted "illicit drugs" includes both the commonly known "street drugs" as well as drugs legally obtained by prescriptions but used outside the intended dose or purpose.

Specific estimates for sixty-nine measures of substance use and problems are presented in this report. The survey instrument can be seen in Appendix A. Many tables and figures presented in this report indicate the specific question(s) the respondent was asked. References include the page number in the appendix and question number. To better understand the background for this survey, existing methodologies for surveying and estimating prevalence are presented. Several epidemiological methods have been used to estimate the prevalence of substance abuse problems.

#### Reliability and Validity of Telephone Interviews

The Kentucky Needs Assessment Project (KNAP) 2004 Adult Household Survey used phone interviews across the state of Kentucky in order to determine the prevalence of drug/alcohol abuse or dependence and to determine treatment needs.

The main advantages of telephone surveys over face-to-face interviews are that telephone surveys have lower costs, stricter interview control, greater security and privacy, more efficient sampling, and easier administration<sup>1,2</sup>. Consequently, telephone surveys have become a well established method of estimating drug and alcohol use over the past two decades for the state-wide, national, and international estimates<sup>3</sup>.

Overall, it has been shown that telephone interviews provide high quality data<sup>4,5</sup>. Although validity tends to be slightly lower in telephone interviews than in face-to-face interviews, several studies have shown that telephone interviews provide good internal consistency and reliability<sup>6</sup>. For example, a study comparing phone and computer-assisted self interviews to assess HIV risk among teens found no difference between the two methods on comfort level, response bias, and truthfulness<sup>7</sup>. In addition, a longitudinal study of alcoholism diagnoses done with veterans in a large national telephone survey showed strong support for the validity and reliability of assessment using the telephone<sup>8</sup>. Advances in methodology have also worked to improve the accuracy and validity of

survey estimates in general, as well as for telephone interviews<sup>9,2</sup>. Telephone interviews are a widely used, cost-effective way in which to collect data, and, in general, they remain a highly viable method for researchers today to gather information.

#### The National Survey on Drug Use and Health

The National Survey on Drug Use and Health<sup>10</sup> (NSDUH) study is a national survey which includes some measures of prevalence for certain drugs, substance abuse, and treatment need. Names and addresses of persons were obtained, and potential participants were sent a recruitment letter followed by a screening contact at the person's home. If criteria were met for study participation, interviewers recruited up to 2 persons per household for participation in a computerized interview. Interviewers entered participant responses in a laptop computer and participants answered sensitive questions by directly entering their own answers in the computer. Participants who lived in group homes, shelters, halfway houses, college dormitories, migratory workers' camps and civilians living on military bases were included as potential participants.

The 2003 National Survey on Drug Use and Health (NSDUH) reported higher prevalence rates for drug and alcohol use as well as prevalence rates for of substance abuse and dependence than the Kentucky Needs Assessment Project (KNAP) 2004 Adult Household Survey. There are several key differences between these surveys which may account for the difference in estimates. First, the NSDUH used a face-to-face interview where selected individuals were contacted by letter, and then interviewed. The participants were then paid for their time. In the KNAP 2004 Adult Household Survey, participants were not contacted before their interview call, nor were they paid for their survey participation.

The higher prevalence rate for face-to-face interviews such as the NSDUH is supported by other research that has shown, in general, that individuals tend to underreport drug or alcohol use over the telephone than in face-to-face interviews<sup>11</sup>. There are several potential reasons for these differences. Face-to-face contact often allows interviewers to probe for more complete answers. In addition, the anonymity of phone interviews may free participants from feeling the obligation to be truthful<sup>12</sup>. Finally, a participant may be put more at ease about the confidentiality of their responses in a face-to-face setting<sup>13</sup>. Reporting differences between the two interview styles have usually been shown to be small to non-significant<sup>2</sup>. However, the NSDUH provided monetary compensation (\$30 per respondent) which may have increased motivation as well as providing a higher response rate<sup>14</sup>. The weighted interview response rate for the NSDUH was 76% compared to the 34% response rate in this survey. Additionally, the number of adult subjects used in the 2003 NSDUH Kentucky estimates was 602 respondents compared to the 4,210 respondents stratified across the 14 MHMR regions used in this report. In the NSDUH up to two respondents were used per household.

Despite showing lower prevalence rates than the national survey would suggest, the KNAP 2004 Adult Household Survey showed virtually identical results when compared to the KNAP 1999 Adult Household Survey (See Section 10, Tables 1-11). This suggests

consistent patterns of prevalence in the state of Kentucky, as well as supports the methodology's overall reliability. In addition, the Needs Assessment interview is based largely on the CSAT protocol, which has shown good validity and comparability with the 1999 Kentucky Needs Assessment Survey. The CSAT questionnaire was developed by the Substance Abuse and Mental Health Services Administration (SAMHSA) Center for Substance Abuse Treatment. The similarity of the current survey with past results, as well as the validity of the survey's source material, provides strong support for the 2004 Kentucky Needs Assessment results.

This study has added more criteria for estimating treatment need. Previous studies have only indicated treatment need as being if a person meets the requirements for abuse or dependence, or has sought treatment. This may not be adequate in defining where treatment needs exist. By including populations such as pregnant women that have used drugs or alcohol in the past 30 days, or people who use drugs or alcohol despite admitting to having a problem with it, this survey can reflect treatment need more accurately and comprehensively.

#### The National Comorbidity Survey Replication

The National Comorbidity Survey Replication (NCS-R) is another national study using a structured face-to-face interview<sup>15</sup>. The NCS-R was conducted from 2001 to 2003. Results from this survey are more similar to the findings in the KNAP 2004 Adult Household Survey than the NSDUH<sup>16,17</sup>. The instrument used for the NCS-R took an average of 2.5 hours to complete and respondents were paid \$50 for a completed interview. The limitations of the NCS-R survey are similar to those of the NSDUH.

# APPROACH

The KNAP 2004 Adult Household Survey was based on the last KNAP Adult Household Survey conducted in 1999. This survey used trained interviewers at the University of Kentucky Survey Research Center (UK-SRC) to conduct telephone interviews with respondents in personal households using random digit dialing. This sample excluded group homes, halfway houses, shelters and other group living facilities that were included in the National Survey on Drug Use and Health. This study excluded those sites because they were considered treatment facilities or facilities for persons with identified risk since surveying persons in these settings would over estimate prevalence. The interview content was very similar to that used in the 1999 survey to examine experiences with tobacco, alcohol, marijuana, and other drugs. A stratified sampling plan was followed.

# Sampling Design

Kentucky substance use treatment services are administered throughout Kentucky's 14 Mental Health and Mental Retardation Regions (MHMR). Each of these regions was considered a primary sampling unit. In order to obtain a cost-effective sample, sample sizes were determined in order to make valid estimates of treatment need in each region. Like the 1999 survey, the 2004 survey distributed calls equally among the 14 MHMR regions.

The target population of the survey was a sample of 4,210 adults 18 years old and older. A minimum of 286 completed assessments were obtained from each region. The 286 interviews were targeted for each of the 14 regions to facilitate developing direct estimates of treatment need at the regional level. Over sampling of Fayette and Jefferson counties, Kentucky's most populated areas, were completed to reach a minimum of 286 subjects for these two counties. Specific comparisons between Fayette and Jefferson Counties can be found in Section Eleven.

The original sample consisted of 4,200 participants. Of those participants, five were excluded by the interviewer for the quality of the interview. Fifteen other interviews of Spanish-speaking persons were completed, with the assistance of a translator. This resulted in a final sample of 4,210 completed interviews.

4,200	Original Sample
+ 15	Spanish-speaking
- 5	Excluded
4,210	

Kentucky households in each region were contacted using random-digit dialing. This ensured that every residential phone, listed or unlisted, had an equal probability of being selected. Only one person per household was included. In the case where there was more than one eligible participant, the person with the most recent birthday was asked to complete the survey. The interviews were designed so that equally reliable calculations could be made in each region. However, the demographics for each region are not equal. In order to compensate for this difference standard weighting was used to more accurately depict the regional population of Kentucky.

# Weighting

Standard weights were based on region, age, and gender. For each group, the estimated percentage of persons who met those criteria was divided by the percentage of persons who met those criteria in the survey. For example, in developing the weight of subjects for 30 to 39 year old males in the Seven Counties region, the estimated number of 30 to 39 year old males in Seven Counties was divided by the estimated number of adults living in Kentucky. This result was then divided by the percentage of 30 to 39 year old males in the survey that were residents of Seven Counties region, which was computed by taking the number of 30 to 39 year old male subjects living in the Seven Counties region who participated in the survey divided by the total number of subjects in the survey as:

Demographic Population Estimate / Total State Adult Population Demographic Number in Sample / Total Sample The resulting weighted distribution of subjects used in the survey was identical to the distribution of these variables in the state population. State estimates were derived from the US Census 2003 population estimates for Kentucky<sup>18</sup>. This method of estimation has been shown to be accurate, and comparable to results provided by direct samples<sup>19</sup>. In a study done by Ciarlo and Tweed<sup>20</sup>, similarly weighted estimates were shown to be highly correlated with ecological and census indicators for a study on alcohol abuse and dependence in Colorado and Delaware.

# Data Collection

The KNAP 2004 Adult Household Survey generally followed the CSAT protocol. This was used because of comparability to the 1999 KNAP Adult Household Survey and to other state needs assessment studies, and to its validity. The 1999 survey was a modified version of that used in the 1995 KNAP Adult Household Survey and the National Technical Center for Substance Abuse Needs Assessment (NTC). However, questions were eliminated. This was to decrease the interview time and therefore decrease the number of incomplete interviews. A copy of the instrument is attached as Appendix A. The instrument included:

- An introduction that gave the study purpose, provided for confidentiality and consent, and effected random selection of an eligible respondent when more than one adult resided in the home;
- Demographics including date of birth, gender, race/ethnicity, educational attainment, employment status, public assistance status, marital status, household income, past year pregnancy status (for females < 45 years old); self-assessed physical and emotional health; and treatment history for emotional problems.
- Lifetime, past year, and past month use of tobacco, alcohol, marijuana, hallucinogens, cocaine/crack, heroin/opiates, and other substances;
- Questions to assess dependence or abuse of drugs and/or alcohol;
- Substance abuse treatment history;
- Unmet demand for treatment; and,
- Interviewer assessments of respondent attitude (suspicious, nervous, impatient), honesty of respondent and overall quality of the interview.

Telephone interviews were conducted from May 13, 2004 through September 9, 2004. The University of Kentucky Survey Research Center, which has collected data for each of the surveys conducted for the Kentucky Needs Assessment Project, used a computerassisted telephone interview (CATI) format to collect survey data. After pilot testing, UK-SRC interviewers called and screened randomly selected households using random lists of telephone numbers for each sampling unit (MHMR Region) that had been prescreened to reduce the proportion of non-working and non-residential numbers. Eligible respondents were permanent residents of Kentucky who were at least 18 years old and who lived in a randomly selected household. In situations where more than one member of the household was eligible for the survey, the interviewer asked to speak to the adult who had the most recent birthday. This process helped assure random selection of adults within the selected households. When necessary, the interviewer arranged callbacks. Interviews were primarily obtained from English speaking persons. Interviews were conducted in Spanish for the 45 households that did not speak English. Of the 45 Spanish speaking households, 15 agreed to participate in the survey. There was only one household contacted in which no one spoke English or Spanish.

The study was explained to each respondent and questions were answered. Verbal consent was obtained. Maintaining confidentiality was stressed to protect the respondent's right to privacy and to assure data quality. If the interviewer was not certain the conversation could be conducted in private, the interview was terminated and the data discarded.

The interviewers from the University of Kentucky Survey Research Center (UK-SRC) who conducted the survey received extensive training in standardized interviewing techniques. During the initial interviews, work was monitored closely until satisfactory performance was achieved. At the beginning of the study, interviewers were required to attend a four-hour project orientation in which goals were clarified, questions were read aloud and discussed, and every interviewer conducted mock interviews until all questions were answered. Extra supervisors were hired during the initial calling shifts to help provide monitoring until all interviewers completed several interviews.

Data were entered directly in the CATI system at the time of the interview which allowed for constant productivity and quality monitoring. After data were coded at the end of each survey week, data were sent to the UK Center on Drug and Alcohol Research where preliminary analyses were conducted using SPSS v13.0. In the early stages of data collection, these preliminary analyses focused on identifying unexpected answer patterns that might indicate potential problems with question wording or other issues that could interfere with data collection.

Non-response is an ongoing concern for any survey. In order to maximize participation among eligible potential subjects, procedures were used to enhance cooperation. Interviewers were trained to be sensitive to the concerns of respondents about the study goals. Up to 15 attempts were made. In addition, up to 10 scheduled call-backs were made to those reached at an inconvenient time. If an eligible respondent refused a second time, the household was not contacted again. The interview response rate was about 34%.

#### Data Analysis

Data analyses were conducted following an estimation study design to develop detailed demographic distributions of prevalence estimates. The analyses were conducted using statistical software (SPSS v13.0). The approach used to develop these demographic distributions is summarized below.

#### Statistical Methods for Determining Prevalence Estimates

The integrity of the dataset was initially examined. The dataset had no missing values, because all interview data were recorded electronically at the time of the interview and all

#### METHODS

items were completed. Demographics for age and gender by regional total were developed. Each of the 69 core variables was examined looking at their frequencies in terms of the appropriate demographics. For example, lifetime use of cigarettes was examined. Participants were asked if they had ever smoked a cigarette in their lifetime. These data were stratified by gender, so the percentage of males who smoked in their lifetime was compared to the percentage of lifetime use for females. A frequency that was stratified by age is the analysis of the variable that examined lifetime alcohol and drug use in combination. In that question, participants were asked if they had ever used alcohol and drugs in combination. The sample was initially partitioned into males and females of different ages: 18 to 29, 30 to 39, 40 to 49, 50 to 59, 60 and older. This allowed for the examination of drug and alcohol combination among the different age groups, as well as by gender.

#### Limitations

Prevalence estimates of substance abuse and dependence and of certain drug-related behaviors and attitudes among adults in Kentucky that are presented in this report can be useful for policy for planning adult substance abuse services. However, limitations should be considered when interpreting findings. Specifically, only respondents in residential households were sampled and included. Consequently, the findings from this study can only be generalized to adults residing in Kentucky households, and not to those in institutional, dormitory or group home settings. Since it isn't possible to determine the county of origin for group setting residents, the weighting described above included all persons of residence for that county as listed by the US Census.

A potential source of bias in any survey is the understatement or overstatement of actual behaviors. The validity of self-report data depends on the honesty, memory, and understanding of the respondents. While individuals generally underreport behavior that they perceive as sensitive or unacceptable, respondents may exaggerate or boast about certain behaviors. Although the protocol for this survey was designed to encourage truthfulness, some over-reporting or under-reporting could have occurred. Overall, the prevalence estimates from this survey are expected to be conservative.

U.S. Census Bureau population estimates that were used are subject to error, especially toward the end of the decade. Also, it should be noted that the cross-sectional nature of the data limits the capability to infer causal relationships. Despite these limitations, this kind of survey is the only practical method for estimating the prevalence of these kinds of behaviors.

This page intentionally left blank

# **Section One: Demographics**

This page intentionally left blank

**Weighting Variables** - The following three tables describe the demographic characteristics of the survey participants. The weighted\* distribution of survey participants mirrors 2003 Kentucky populations estimates for Gender, Age, and MHMR regions. For example, the estimated percent of adult males in Kentucky is 48.3%. The percent of males in the weighted sample is also 48.3%. Tables 1.1 through 1.3 present these data. The estimated number of adult Kentuckians (18 and older) for 2003 is 3,122,455.

Table	1.1:	Gender	(question	∆4-A2)
-------	------	--------	-----------	--------

	Survey	Census
MALE	48.2%	48.3%
FEMALE	51.8%	51.7%

Table 1.2: Age (question ∆4-A1)

	Survey	Census
18 to 29	21.9%	21.9%
30 to 39	18.9%	18.8%
40 to 49	20.4%	20.4%
50 to 59	16.5%	16.5%
60 to 69	10.7%	10.7%
70 to 79	7.4%	7.3%
80 and older	4.2%	4.3%

Table 1.3: Mental Health/Mental Retardation Regions (question Δ26-H10)

	Survey	Census	
Adanta	4.9%	4.9%	
Bluegrass	17.4%	17.4%	
Communicare	5.9%	5.9%	
Comprehend	1.4%	1.4%	
Cumberland	5.8%	5.8%	
Four Rivers	5.1%	5.1%	
Kentucky River	2.9%	2.9%	
Lifeskills	6.4%	6.4%	
Mountain	3.9%	3.9%	
North Key	9.6%	9.6%	
Pathways	5.3%	5.3%	
Pennyroyal	4.9%	4.9%	
River Valley	5.0%	5.0%	
Seven Counties	21.5%	21.5%	

\* An explanation of weighting can be found on page 26

#### DEMOGRAPHICS

**Race** – The race distribution in the sample is very similar to the 2003 population estimates. Figure 1.1 presents the distribution of the survey sample by race. This figure includes Hispanic as a race rather than origin in order to better compare to the 1999 Adult Household Survey. Data is based on self-report to the question "Which group best describes you?"



Figure 1.1 – Race (questions  $\Delta$ 5-A4, A5)

**Marital Status** – The survey is representative of the 2000 US Census estimates for marital status for Kentucky residents. Table 1.4 presents the distribution of persons by marital status for the survey participants and the 2000 estimate.

Table 1.4:	Marital	Status	(question $\Delta 25$ -H3)
------------	---------	--------	----------------------------

	Survey	Census*
Married	55.9%	57.3%
Living as married	2.6%	n/a
Never married	18.5%	22.7%
Divorced or separated	14.8%	12.8%
Widowed	8.2%	7.2%

\* Census estimate is based on Kentucky residents 15 years of age and older.

#### DEMOGRAPHICS

**Employment Status** – The employment rate is very similar to the 2000 US Census estimate for Kentucky. Table 1.5 presents the distribution of reported employment for the Adult Household Survey. The percentage of employed versus unemployed persons from the 2000 Census was 60.9% employed and 39.1% unemployed for persons aged 16 years and older. The Census did not distinguish between full-time and part-time employment. Persons who were not employed at the time of survey were asked for the primary reason for not working (see Table 1.6).

Table 1.5: Employment Rates (question △26-H5)

Working Full-Time ( <u>&gt;</u> 35 hours/week)	51.2%
Working Part-Time (<35 hours/week)	9.6%
Not Working	39.2%

Table 1.6: Reason for not working (question △26-H5a)

Retired	44.7%
Disabled	19.7%
Full-Time Homemaker	17.9%
School	7.2%
Seasonal Worker	0.5%
Other	9.9%

**Household Income** – The distribution of household income reported on the KNAP household survey is similar to the 2000 US Census report of income received in 1999 for Kentucky households. Table 1.7 presents the distribution of reported income levels. With different scales, a direct comparison to the Census data is not possible. However, Table 1.8 presents the Census distribution for comparison purposes.

Table 1.7: KNAP Household Income Ranges (guestion  $\Delta 27$ -H12)

0	
Under \$5,000	3.1%
\$5-\$7,500	2.9%
\$7,500-\$10,000	2.9%
\$10-\$12,500	3.2%
\$12,500-\$15,000	3.6%
\$15-\$20,000	6.0%
\$20-\$25,000	6.4%
\$25-\$30,000	6.6%
\$30-\$40,000	12.9%
\$40-\$50,000	11.9%
\$50-\$70,000	15.1%
\$70-\$90,000	10.8%
\$90-\$120,000	7.3%
Over \$120.000	7.3%

#### Table 1.8: 2000 US Census KY Household Income Ranges

	U
Under \$10,000	13.9%
\$10-\$15,000	8.4%
\$15-\$25,000	15.4%
\$25-\$35,000	13.8%
\$35-\$50,000	16.4%
\$50-\$75,000	17.2%
\$75-\$100,000	7.7%
\$100-\$150,000	4.6%
Over \$150,000	2.6%

#### DEMOGRAPHICS

**Health Insurance Coverage** – The majority of survey respondents (85.5%) report having current health insurance coverage. (question  $\Delta 24$ -G18)

**Education** – 12.2% of persons surveyed report they are currently enrolled in school. Table 1.9 presents the highest level of school completed. There were differences between the survey results and the 2000 US Census. The Adult Household Survey showed a higher percentage of persons with some college or college degrees.

	Survey	Census*
None	0.6%	n/r
1st through 8th grade	3.0%	11.7%
Some high school, but no diploma	7.7%	14.2%
High school graduate or GED	25.8%	33.6%
Some college, but no degree	23.9%	18.5%
Associate degree	6.9%	4.9%
College graduate	18.0%	10.3%
Advanced degree	14.1%	6.9%
Some college, but no degree Associate degree College graduate Advanced degree	23.8% 23.9% 6.9% 18.0% 14.1%	18.5% 4.9% 10.3% 6.9%

Table 1.9: Highest Level of School Completed (question Δ25-H2)

\* Census data is based on persons aged 25 years and older

**Country of Birth** – 96.5% of respondents report they were born in the United States. Of those persons born outside of the United States, 16.6% were from Great Britain, 16.4% from Germany, and 16.3% from Italy. Of those persons in the survey born in other countries the average length of time living in the United States is 21.1 years. However, one-third (34.6%) of those born abroad had been living in the U.S. for five or fewer years. (question  $\Delta$ 25-H4)
## **Section Two: Nicotine**

This page intentionally left blank

**Ever Smoked** – The percent of Kentuckians aged 18 years or older who reported ever smoking all or part of a cigarette is higher for males than females. Figure 2.1 presents the percent who reported ever smoking all or part of a cigarette. Table 2.1 presents the estimated number of adult Kentuckians who smoked all or part of a cigarette.





Table 2.1: Estimated number of adult Kentuckians who reported ever smoking all or part of a cigarette (question  $\Delta$ 7-B1)

MALES	FEMALES	TOTAL
1,116,231	953,903	2,070,134

**Age of First Cigarette** – Of persons who reported ever smoking all or part of a cigarette, males tend to begin smoking at an earlier age than females. 74.8% of males and 66.0% of females report their first cigarette at age 17 or younger. The average age of first cigarette use was 15.2 for males and 16.8 for females. Approximately 10% of males who ever smoked reported smoking their first cigarette by 10 years of age. Figure 2.2 presents the cumulative percent of the age of first cigarette by gender.





**Smoked 100 or More** – Of those who smoked all or part of a cigarette in their lifetime, approximately the same percent of males smoked at least 100 cigarettes as females. Of persons who have ever smoked all or part of a cigarette, figure 2.3 presents the percent who smoked at least 100 cigarettes. Table 2.2 presents the estimated number of adult Kentuckians who smoked at least 100 cigarettes in their lifetime.





Table 2.2: Estimated number of adult Kentuckians who smoked at least 100 cigarettes (question  $\Delta$ 7-B2a)

MALES	FEMALES	TOTAL
853,146	708,132	1,561,278

**Time Since Last Smoked** – Of those persons who smoked all or part of a cigarette and smoked at least 100 cigarettes in their lifetime, the percent of persons who smoked within the past 30 days is slightly higher than the percentage of persons who did not smoke in over 12 months. Very few persons in this group smoked within the past year but not smoke within the last 30 days. Figure 2.4 presents the distribution of when persons last smoked. Table 2.3 presents the estimated number of adult Kentuckians who smoked within the past 30 days. For those who smoked in the past 30 days, between 85% and 90% smoked every day. Table 2.4 presents the estimated number of adult Kentuckians who currently smoke daily.



Figure 2.4: Time since last cigarette use (question  $\Delta$ 7-B3)

Table 2.3: Estimated number of adult Kentuckians who smoked cigarettes within the past 30 days (question  $\Delta$ 7-B3)

MALES	FEMALES	TOTAL
423,474	409,439	832,913

Table 2.4: Estimated number of adult Kentuckians who smoke cigarettes daily (question  $\Delta$ 7-B4)

MALES	FEMALES	TOTAL
357,447	359,294	716,741

**Daily Cigarette Use** - For those persons who reported smoking every day in the past month, there was a trend for younger persons to be more likely to smoke daily than older persons. Figure 2.5 presents the percent of each age group that reported daily smoking in the past month. The majority of persons smoking every day report smoking at least 1 pack per day. Figure 2.6 (page 44) presents the average number of cigarettes smoked per day by those who reported daily smoking. There were some minor differences in the percent of persons who reported smoking every day by race. Figure 2.7 (page 44) presents the percent of daily smoking every day by race.

Figure 2.5: Percent of age group that smoked cigarettes every day over the past month (question  $\Delta$ 7-B4)







Figure 2.7: Percent of adults who reported smoked cigarettes every day over the past month by race (question  $\Delta 8-B5$ )



The percent of persons who reported cigarette smoking daily was lower for persons who reported higher household incomes. Persons who reported a household income of \$90,000 or more for the previous year were significantly less likely to smoke daily than all other income ranges. Figure 2.8 presents the percent of persons who reported daily smoking by household income range.





The percent of persons who reported daily smoking over the past month was generally lower for persons with more education. Persons who attended or completed graduate school reported a significantly lower percentage of daily smokers than those who have not attended graduate school. Figure 2.9 presents the percent of persons who reported daily smoking over the past 30 days by highest level of education attained.

For this report, highest level of education attained includes persons who attended but did not complete that level of education. For example, persons who dropped out of high school are included with persons who graduated high school but never attended college.



Figure 2.9: Percent of adults who smoked cigarettes daily over the past 30 days by highest level of education attained (question  $\Delta 8$ -B5)

**Other Tobacco** – Adult males used other forms of tobacco significantly more than adult females. Figure 2.10 presents the percent of adults in Kentucky who used other forms of tobacco in the past year. Table 2.5 presents the estimated number of adult Kentuckians who used other forms of tobacco in the past year.

Figure 2.10: Percent of adults who used other forms of tobacco within the past 12 months (question  $\Delta 8$ -B6)



Table 2.5: Estimated number of adult Kentuckians who used other forms of tobacco within the past 12 months (question  $\Delta 8$ -B6)

Smokeless		
Tobacco	Cigar	Pipe
220,623	287,022	65,899

This page intentionally left blank

## **Section Three: Alcohol**

This page intentionally left blank

**Alcohol Use** – Significantly more adult males drank at least one alcoholic beverage in their lifetime than adult females. Figure 3.1 presents the percent of adult persons who drank at least one alcoholic beverage in their lifetime. Table 3.1 presents the estimated number of adult Kentuckians who drank at least one alcoholic beverage in their lifetime.

Figure 3.1: Percent of adults who drank at least one alcoholic beverage in their life (question  $\Delta$ 9-C1)





MALES	FEMALES	TOTAL
1.333.122	1.219.703	2.552.825

**Twelve Drinks in the Same Year** – Adult males were significantly more likely to drink 12 or more drinks in the same year than adult females. Figure 3.2 presents the percent of adults who reported drinking at least 12 drinks in a single year. Of those persons who reported alcohol use, 86.7% of males and 67.0% of females also reported drinking 12 or more alcoholic beverages in the same year. Table 3.2 presents the estimated number of adult Kentuckians who have drank at least 12 alcoholic beverages in the same year.



Figure 3.2: Percent who drank at least 12 drinks in the same year (question △9-C1a)

Table 3.2: Estimated number of adult Kentuckians who drank at least 12 alcoholic beverages in the same year (question Δ9-C1a)

MALES	FEMALES	TOTAL
1,149,789	815,306	1,965,095

#### ALCOHOL

**Age of First Drink** – Of those persons who reported drinking 12 or more alcoholic beverages in the same year, males tended to take their first drink at an earlier age than females. The average age of first drink for males was 16.5 years and 17.9 years of age for females. 87.9% of males and 79.3% of females reported having their first alcoholic beverage by age 20. Figure 3.3 presents the cumulative percent of persons by age of first drink. There were no significant differences in age of first drink between highest level of education attained. There were some minor racial differences. African Americans tended to experience their first alcoholic beverage later than other groups. Table 3.3 presents the average age of first drink by race.



Figure 3.3: Cumulative percent of adults by age of first drink (question  $\triangle 9$ -C2)

Table 3.3: Average age of first drink by race/ethnicity (question  $\Delta 9$ -C2)

	Average Age
White	17.1
African American	18.1
Hispanic	16.4
Other	14.9

**Last Use of Alcohol** – Of those persons who reported drinking at least 12 drinks in a single year, over half of respondents reported their last alcoholic beverage was within the past 30 days. For all adult Kentuckians, about 36% of persons surveyed reported drinking an alcoholic beverage within the past 30 days. Males were significantly more likely to drink an alcoholic beverage within the past 30 days than females. Figure 3.4 presents the distribution of reported last drink. Tables 3.4 and 3.5 present the estimated number of adult Kentuckians who have drank alcohol within the past 30 days.



Figure 3.4: Time since last alcohol for all adult Kentuckians (question  $\Delta$ 9-C3)

Table 3.4: Estimated number of adult Kentuckians who drank alcohol within the past year (question  $\Delta$ 9-C3)

MALES	FEMALES	TOTAL
858,945	609,795	1,468,740

Table 3.5: Estimated number of adult Kentuckians who drank alcohol within the past 30 days (question  $\Delta$ 9-C3)

MALES	FEMALES	TOTAL
669,821	442,335	1,112,156

#### ALCOHOL

**Frequency of Drinking** – Of those persons who reported drinking more than 12 alcoholic beverages in the same year and drinking alcohol within the past 30 days, the average number of days alcohol was used over the past month was 9.8 days for males and 5.3 days for females. For those persons who reported drinking within the past 30 days, 51.5% of males reported drinking an average of 4 or fewer days per month and 52.2% of females report drinking within the past month, 14.6% of males and 3.9% of females reported they drank at least one alcoholic beverage every day. For all Kentucky adults, 11.0% of males and 1.9% of females report daily alcohol intake. Table 3.6 presents the estimated number of adult Kentuckians who reported consuming at least one alcoholic beverage every day. Of those persons who reported daily drinking, 48.4% of males average 4 drinks or fewer per day and 71.7% of females report drinking 3 or fewer drinks per day.

Table 3.6 Estimated number of adult Kentuckians who drank at least one alcoholic beverage every day in the past month (question  $\Delta$ 9-C4)

MALES	FEMALES	TOTAL
166,738	31,142	197,880

**Binge Drinking** – Binge drinking is defined as 5 or more drinks on one occasion for males and 4 or more drinks on one occasion for females. For persons who reported consuming 12 drinks or more in the same year, 84.1% of males reported consuming 5 or more drinks on one occasion and 76.1% of females reported consuming 4 or more drinks on one occasion. Table 3.7 presents the estimated number of adult Kentuckians who reported at least one binge drinking episode in their lifetime.

Table 3.7: Estimated number of adult Kentuckians who reported at least one binge drinking episode in their life (question  $\Delta 10$ -C6)

MALES	FEMALES	TOTAL
702,453	501,982	1,204,435

#### ALCOHOL

**Alcohol in Combination with Other Drugs** – Of persons who had more than 12 drinks during a one year period, 22.7% of males and 17.2% of females reported using alcohol in combination with another drug (other than tobacco). For those who drank at least 12 drinks in a one year period, younger persons were generally more likely to have used alcohol with other drugs than older persons. Persons over 60 years of age were significantly less likely to have used alcohol with other drugs than ge were less likely to have used alcohol with other drugs than females 18 to 29 years old. Males over 50 years of age were less likely to have used alcohol with other drugs than males 18 to 49 years old. Significant gender differences were found for the 30 to 39, 40 to 49, and 50 to 59 age groups. For these age groups, females were significantly less likely to have used alcohol in combination with other drugs than males. Figure 3.5 presents the percent of adult Kentuckians who drank at least 12 alcoholic beverages in a single year and who reported using alcohol in combination with other drugs in their lifetime.

Figure 3.5: Percent of adults who used alcohol in combination with other drugs (excluding tobacco) by age range (question  $\Delta$ 11-C8)



For persons who drank at least 12 alcoholic beverages in the same year, there were no significant differences between races, household income, or school completed for persons reporting using alcohol with other drugs excluding tobacco. Figure 3.6 presents the percent of persons who drank at least 12 alcoholic beverages in a single year and who reported ever using alcohol in combination with other drugs by race. Figure 3.7 (page 58) presents the percent of persons who drank at least 12 alcoholic beverages in one year and who reported ever using alcohol in combination with other drugs by household income. Figure 3.8 (page 58) presents the percent of persons who reported ever using alcohol in combination with other drugs by household income. Figure 3.8 (page 58) presents the percent of persons who drank at least 12 alcoholic beverages in a single year and who reported ever using alcohol in combination with other drugs by household income. Figure 3.8 (page 58) presents the percent of persons who drank at least 12 alcoholic beverages in a single year and who reported ever using alcohol in combination with other drugs by household income. Figure 3.8 (page 58) presents the percent of persons who drank at least 12 alcoholic beverages in a single year and who reported ever using alcohol in combination with other drugs by highest level of education attained.

Figure 3.6: Percent of adults who used alcohol in combination with other drugs (excluding tobacco) by race (question  $\Delta$ 11-C8)





Figure 3.7: Percent of adults who used alcohol in combination with other drugs (excluding tobacco) by household income levels (question  $\Delta$ 11-C8)

Figure 3.8: Percent of adults who used alcohol in combination with other drugs (excluding tobacco) by highest education attained (question  $\Delta$ 11-C8)



#### ALCOHOL

**Thought Alcohol a Problem** – Of all persons in Kentucky, adult males reported that they thought alcohol was a problem at some point in their life significantly more than adult females. Figure 3.9 presents the percent of persons who ever thought that alcohol was a problem in their life. Of those persons who reported drinking every day in the past month, 38.1% reported that alcohol was a problem at some point in their life. Table 3.8 presents the estimated number of all adult Kentuckians who believe that alcohol was a problem at some point in their life.

Figure 3.9: Percent of adults who thought alcohol was a problem at some point in their life (question  $\Delta$ 11-C9)



Table 3.8:	Estimated	number of	adult Ken	tuckians	who	believe	that alo	cohol h	as
ever been	a problem	in their life	(question $\Delta$	11-C9)					

MALES	FEMALES	TOTAL	
197,527	70,670	268,197	

This page intentionally left blank

# Section Four: Marijuana

This page intentionally left blank

**Ever Used Marijuana** – A higher percentage of adult males used marijuana at least once in their lifetime than adult females. Figure 4.1 presents the percent of adults in Kentucky who used marijuana. Table 4.1 presents the estimated number of adult Kentuckians who used marijuana at least once in their lifetime.





Table 4.1 Estimated number of adult Kentuckians who used marijuana at least once in their life (question  $\Delta$ 12-D1)

MALES	FEMALES	TOTAL
584,808	394,760	979,568

#### MARIJUANA

**Age of First Use** – The average age of first use of marijuana for adult Kentuckians was 18.0 years old, 17.7 for males, 18.4 for females. Persons who described their race/ethnicity as Asian smoked marijuana at an earlier age than other races. Figure 4.2 presents the average age of first use by race. No differences were noted for age of first use between income levels.





**Time Since Last Use** – Of those adult persons who reported ever smoking marijuana, a large majority did not use marijuana in the past year. Figure 4.3 presents the distribution of time since last use for those who reported ever using marijuana. There were no significant differences between gender for persons who reported their last use at least one year before, however, males were more likely to smoke marijuana in the last 30 days than females. Tables 4.2 and 4.3 present the estimated number of adult Kentuckians who used marijuana in the past 30 days and past 12 months. Of those persons who reported using it every day. Table 4.4 (page 66) presents the estimated number of adult Kentuckians who used marijuana every day in the past 30 days.





Table 4.2: Estimated number of adult Kentuckians who used marijuana in the past 30 days (question  $\Delta$ 12-D3)

MALES	FEMALES	TOTAL
67,720	25,239	92,959

Table 4.3: Estimated number of adult Kentuckians who used marijuana in the past 12 months (question  $\Delta$ 12-D3)

MALES	FEMALES	TOTAL
89,894	44,074	133,968

Table 4.4: Estimated number of adult Kentuckians who used marijuana every day in the past 30 days (question  $\Delta$ 12-D5)

MALES	FEMALES	TOTAL
13,168	4,371	17,539

**Ever Thought Marijuana a Problem** – Of those persons who reported ever using marijuana, males were more likely than females to have ever thought that marijuana was a problem. Figure 4.4 presents the percent of persons who used marijuana who thought marijuana was a problem at some point in their life. Of persons who reported using marijuana every day in the past 30 days, 29.2% have ever thought that marijuana was a problem. Of those persons who considered marijuana a problem at some point in their life, 81.6% did not use marijuana in at least one year.

Figure 4.4: Percent of adults who used marijuana and considered marijuana to have ever been a problem in their life (question  $\Delta$ 13-D6)



## **Section Five: Other Drugs**

This page intentionally left blank

### **Part A: Stimulants**

**Ever Used Stimulants** - Stimulants include Cocaine, Methamphetamines, MDMA, and "Other Stimulants". MDMA or "ecstasy" represents a group of methamphetamines which includes methylene-dioxymethamphetamine (MDMA), methylene-dioxyethyl-amphetamine (MDEA), methylene-dioxyamphetamine (MDA), and dimethoxy-bromo-amphetamine (DOB). These drugs produce subjective effects that resemble a combination of amphetamine and hallucinogens and can be considered in their own class of drugs. For purposes of this report, MDMA and all sub-types are being placed in the stimulant category. Adult males were more likely to have ever used cocaine, methamphetamines, and other stimulants than adult females. Figure 5.1 presents the percent of adults who reported ever used stimulants. Table 5.1 presents the estimated number of adult Kentuckians who ever used stimulants.





Table 5.1: Estimated number of adult Kentuckians who ever used stimulants (question  $\Delta$ 12-D1)

	MALES	FEMALES	TOTAL
Cocaine	150,663	78,568	229,231
Methamphetamines	60,859	20,744	81,603
MDMA	40,078	29,635	69,713
Other Stimulants	151,405	70,414	221,819

#### OTHER DRUGS

**Use within the past year** – Of those who reported ever using cocaine, females were more likely to have used cocaine in the past year than males. Males who reported ever using MDMA or other stimulants were more likely to have used these substances in the past year than females. Overall, between 10% and 14% of persons who ever used stimulants also used them within the past year. Table 5.2 presents, of those who reported ever using stimulants, the percent of persons who used that stimulant in the past year. Table 5.3 presents the estimated number of adult Kentuckians who used stimulants within the past year.

Table 5.2: Percent of persons who used stimulants in the past year (of those who have used that stimulant) (question  $\Delta 12$ -D3)

	MALES	FEMALES	TOTAL
Cocaine	11.8%	17.9%	13.9%
Methamphetamines	10.8%	10.7%	10.8%
MDMA	16.7%	7.7%	12.9%
Other Stimulants	14.1%	6.3%	11.6%

Table 5.3: Estimated number of adult Kentuckians who used stimulants within the past year (question  $\Delta$ 12-D3)

	MALES	FEMALES	TOTAL
Cocaine	17,812	14,083	31,895
Methamphetamines	6,680	2,223	8,903
MDMA	6,680	2,224	8,904
Other Stimulants	20,791	5,186	25,977

#### OTHER DRUGS

**Stimulant Use by Age Group** – Persons 50 years of age and older were significantly less likely to have used cocaine, methamphetamines, and other stimulants than all other age groups. No other age differences were noted other than 18-29 year olds were more likely to have ever used MDMA than older age groups. Figure 5.2 presents the percent of adult persons who ever used stimulants by age group.





#### OTHER DRUGS

**Stimulant Use by Education** – There was a trend for persons with more education to have been more likely to have ever used stimulants. This trend was reversed for persons who attended graduate school. Persons who attended graduate school tended to be less likely to have ever used stimulants than persons whose highest level of education attained was college. Figure 5.3 presents the percent of persons who ever used stimulants compared to the highest level of education attained.




**Ever Thought Stimulant Use a Problem** – Males were more likely to consider stimulant use a problem than females. This may be partially due to a higher number of males reporting stimulant use than females. Table 5.4 presents the estimated number of adult Kentuckians who ever considered stimulant use to be a problem. For persons who ever used a particular stimulant, a higher percentage of males considered methamphetamines, MDMA, and other stimulants to be a problem than females. Females who ever used cocaine were slightly more likely to have considered cocaine a problem than males. Table 5.5 presents the percent of persons who ever used stimulant to have ever been a problem.

Table 5.4: Estimated number of adult Kentuckians who considered stimulants to have ever been a problem in their life (question △13-D6)

	MALES	FEMALES	TOTAL
Cocaine	34,883	21,495	56,378
Methamphetamines	34,883	5,186	40,069
MDMA	7,422	e	7,422
Other Stimulants	29,702	7,412	37,114
	to colo lota		

e - estimate too small to calculate accurately

Table 5.5: Percent of persons who ever used stimulants and considered that stimulant to ever be a problem in their life (question  $\Delta$ 13-D6)

	MALES	FEMALES
Cocaine	23.2%	27.1%
Methamphetamines	56.6%	25.0%
MDMA	18.5%	е
Other Stimulants	19.4%	10.5%

e - estimate too small to calculate accurately

### Part B: Inhalants, Hallucinogens, Sedatives, & Tranquilizers

Ever Used Inhalants/Hallucinogens/Sedatives/Tranquilizers - Inhalants include any volatile substance that is ingested through fumes to achieve intoxication. Hallucinogens include LSD, Peyote, and Psilocybin. Sedatives and Tranquilizers include prescription non-opiates taken beyond the prescribed amount or for the express purpose of achieving intoxication. Adult males were significantly more likely to ever use inhalants, hallucinogens, and tranquilizers than adult females. Figure 5.4 presents the percent of adults who reported ever using inhalants/hallucinogens/sedatives/tranquilizers. Table 5.6 the estimated number of adult Kentuckians who presents ever used inhalants/hallucinogens/sedatives/tranguilizers.



Figure 5.4: Percent of adults who ever used inhalants/hallucinogens/ sedatives/tranquilizers (question △12-D1)

Table 5.6: Estimated number of adult Kentuckians who ever used inhalants/ hallucinogens/sedatives/tranquilizers (question  $\Delta$ 12-D1)

-	MALES	FEMALES	TOTAL
Inhalants	44,531	17,789	62,320
Hallucinogens	150,737	57,073	207,810
Sedatives	80,898	58,555	139,453
Tranquilizers	146,952	58,555	205,507

**Use within the past year** – Of those who reported ever using, females were more likely to use inhalants in the past year than males. Table 5.7 presents the estimated number of adult Kentuckians who used inhalants/hallucinogens/sedatives/tranquilizers within the past year.

Table 5.7: Estimated number of adult Kentuckians who used inhalants/ hallucinogens/sedatives/tranquilizers within the past year (question  $\Delta$ 12-D3)

	MALES	FEMALES	TOTAL
Inhalants	е	741	-
Hallucinogens	8,906	1,482	10,388
Sedatives	34,883	22,977	57,860
Tranquilizers	34,157	14,083	48,240

e - estimate too small to calculate accurately

**Inhalants/Hallucinogens/Sedatives/Tranquilizers Use by Age Group** – Persons aged 50 and older were less likely to have ever used inhalants, hallucinogens, and tranquilizers than younger age groups. No other differences were noted between any age groups. Figure 5.5 presents the percent of adult persons who ever used inhalants, hallucinogens, sedatives, and tranquilizers by age group.

Figure 5.5: Percent of adults who ever used inhalants/hallucinogens/ sedatives/tranquilizers by age group (question  $\Delta$ 12-D1)



Inhalants/Hallucinogens/Sedatives/Tranquilizers Use by Education - There was a trend for persons with more education to be more likely to use inhalants/hallucinogens/sedatives/tranquilizers. This trend was reversed for persons who attended graduate school. Persons who attended graduate school tended to be less likely to use inhalants/hallucinogens/sedatives/tranquilizers than persons who attended and/or completed an undergraduate degree. Figure 5.6 presents the percent of persons who ever used inhalants/hallucinogens/sedatives/tranquilizers compared to the highest level of education attained.



Figure 5.6: Percent of adults who ever used inhalants/hallucinogens/ sedatives/tranguilizers by highest level of education attained (question △12-D1) **Ever Thought Inhalants/Hallucinogens/Sedatives/Tranquilizers Were a Problem** – More males considered inhalants and hallucinogens a problem than females. Table 5.8 presents the estimated number of adult Kentuckians who ever considered inhalants/hallucinogens/sedatives/tranquilizers to be a problem. When looking at persons who ever used inhalants/hallucinogens/sedatives/tranquilizers a higher percentage of males considered inhalants to be a problem than females. Females who ever used sedatives were slightly more likely to consider sedatives a problem than males. Table 5.9 presents the percent of persons who ever used inhalants/hallucinogens/ sedatives a problem than males. Table 5.9 presents the percent of persons who ever used inhalants/hallucinogens/ sedatives/ tranquilizers and considered that drug to be a problem.

Table 5.8: Estimated number of adult Kentuckians who considered inhalants/hallucinogens/sedatives/tranquilizers to have ever been a problem (question  $\Delta$ 13-D6)

	MALES	FEMALES	TOTAL
Inhalants	8,164	2,223	10,387
Hallucinogens	13,359	4,447	17,806
Sedatives	10,391	9,636	20,027
Tranquilizers	21,523	6,671	28,194

Table 5.9: Percent of persons who ever used inhalants/hallucinogens/ sedatives/tranquilizers and considered that drug to have ever been a problem (question  $\Delta$ 13-D6)

	MALES	FEMALES	TOTAL
Inhalants	19.0%	12.5%	17.1%
Hallucinogens	8.9%	7.8%	8.6%
Sedatives	12.4%	16.3%	14.0%
Tranquilizers	14.5%	11.5%	13.7%

### Part C: Opiates

**Ever Used Opiates** - Opiates include heroin, oxycodone, and other non over-the-counter (OTC) pain medications. For prescription opiates, use beyond the prescribed amount or use for the purpose of intoxication is included in this section. Non-OTC pain medication may include some non-opiates. Adult males were significantly more likely to ever use heroin and non-OTC pain medications than adult females. Figure 5.7 presents the percent of adults who reported ever using opiates. Table 5.10 presents the estimated number of adult Kentuckians who used opiates.



Figure 5.7: Percent of adults who ever used opiates (question Δ12-D1)

Table 5.10: Estimated number of adult Kentuckians who ever used opiates (question  $\Delta$ 12-D1)

	MALES	FEMALES	TOTAL
Heroin	26,719	3,706	30,425
Oxycodone	38,593	22,236	60,829
Non-OTC Pain	136,561	71,123	207,684

**Use within the past year** – Table 5.11 presents the estimated number of adult Kentuckians who used opiates within the past year. Males were slightly more likely to use Oxycodone or Non-OTC pain medications that females. Of the males who participated in this survey none reported using heroin within the past year.

Table 5.11: Estimated number of adult Kentuckians who reported using opiates within the past year (question  $\Delta$ 12-D3)

	MALES	FEMALES	TOTAL
Heroin	е	1,482	-
Oxycodone	11,875	8,153	20,028
Non-OTC Pain	33,398	20,013	53,411

e – estimate too small to calculate accurately

**Opiate Use by Age Group** – No age differences were noted for heroin. 18-29 year olds were more likely to have ever illicitly used Oxycodone and non-OTC pain medications than older age groups. Persons 50 or more years old were less likely to illicitly use non-OTC pain medications than younger persons. Figure 5.8 presents the percent of adult persons who used opiates by age group.





**Opiate Use by Education** – There was a trend for persons with more education to use heroin and Non-OTC pain medications. However, there were no significant differences between any of the education levels. Figure 5.9 presents the percent of persons ever used opiates compared to the highest level of education attained.





**Ever Thought Opiates a Problem** – More males were likely to consider opiates a problem than females. Table 5.12 presents the estimated number of adult Kentuckians who considered opiates to be a problem. When only persons who ever used opiates are examined, a higher percentage of females considered heroin and Non-OTC pain medications to be a problem than males. Males who used Oxycodone were slightly more likely to consider opiates a problem than females. Table 5.13 presents the percent of persons who ever used opiates and considered that opiate use to be a problem.

Table 5.12: Estimated number of adult Kentuckians who consider opiates to be a problem in their lifetime (question  $\Delta$ 13-D6)

	MALES	FEMALES	TOTAL
Heroin	4,323	2,215	6,538
Oxycodone	8,797	4,040	12,837
Non-OTC Pain	19,134	13,198	32,332

Table 5.13: Percent of adults who ever used opiates and considered that opiate to ever be a problem in their life (question  $\Delta$ 13-D6)

	MALES	FEMALES	TOTAL
Heroin	15.9%	48.3%	20.5%
Oxycodone	23.2%	18.3%	21.4%
Non-OTC Pain	13.8%	18.2%	15.3%

### Part D: All Illicit Drugs

**Ever Used Any Illicit Drug** – "Any Illicit Drug" includes marijuana and the substances listed in parts A through C. Illicit drugs also includes legal drugs used outside the prescribed amount or for the express purpose of achieving intoxication. Adult males were more likely to have ever used illicit drugs than adult females. Figure 5.10 presents the percent of adults who reported ever using illicit drugs. Table 5.14 presents the estimated number of adult Kentuckians who ever used illicit drugs and Table 5.15 presents the estimated number of adult Kentuckians who used illicit drugs within the past year.



Figure 5.10: Percent of adults who ever used an illicit drug (question ∆12-D1)

Table 5.14: Estimated number of adult Kentuckians who ever used an illicit drug (question  $\Delta$ 12-D1)

MALES	FEMALES	TOTAL
621,729	430,619	1,052,348

Table 5.15: Estimated number of adult Kentuckians who used an illicit drug within the past year (question  $\Delta 12$ -D1)

MALES	FEMALES	TOTAL
136,365	77,195	213,560

**Illicit Drug Use by Age** – Persons 50 years of age and older were less likely to use an illicit drug than younger persons. No age differences were noted between the other age groups. Figure 5.11 presents the percent of adult persons who used illicit drugs by age group.





**Drug Use by Education** – Persons whose highest level of education attained was grade school were significantly less likely to ever used illicit drugs. However, there were no other differences between any of the education groups. Figure 5.12 presents the percent of persons who used drugs compared to the highest level of education attained.

Figure 5.12: Percent of adults who ever used an illicit drug by highest education attained (question  $\Delta$ 12-D1)



**Ever Thought Illicit Drugs a Problem** – Males were more likely to consider illicit drugs a problem than females. Figure 5.13 presents the percent of adults who considered drugs to ever be a problem in their life based on last use of an illicit substance. Persons who used illicit drugs more recently are more likely to have ever considered their drug use to be problematic. Table 5.16 presents the estimated number of adult Kentuckians who consider their illicit drug use to be a problem.





Table 5.16: Estimated number of adult Kentuckians who consider their illicit drug use to ever be a problem in their life (question  $\Delta$ 13-D6)

MALES	FEMALES	TOTAL
128,799	51,059	179,858

This page intentionally left blank

## Section Six: DSM-IV-TR Criteria

This page intentionally left blank

Alcohol Abuse and Dependence\* Lifetime – A higher percentage of males reported DSM-IV-TR criteria for abuse in their lifetime than females. Figure 6.1 presents the percent of persons who reported alcohol abuse or dependence criteria in their lifetime. Table 6.1 presents the estimated number of adult Kentuckians who met DSM-IV-TR criteria for alcohol abuse and/or dependence in their lifetime.



Figure 6.1: Lifetime prevalence of adults with alcohol abuse or alcohol dependence (question  $\Delta$ 15-A)

# Table 6.1: Estimated number of adult Kentuckians who met alcohol abuse or alcohol dependence in their life (question $\Delta$ 15-A)

	MALES	FEMALES	TOTAL
Abuse	253,826	80,050	333,876
Dependence	92,773	26,683	119,456
Abuse and/or Dependence	258,406	83,756	342,162

\* The term dependence in this report is not a formal diagnosis. For lifetime reports, any person who reported three or more DSM-IV-TR criteria in their life was included as dependent. There is no guarantee that an individual who reported three or more dependence criteria met at least three of these criteria within the same 12-month period.

Alcohol Abuse and Dependence\* Past Year – Males were more likely than females to report abuse and/or dependence criteria within the past year. Figure 6.2 presents the percent of persons who met alcohol abuse or dependence criteria in the past year. Table 6.2 presents the estimated number of adult Kentuckians who met DSM-IV-TR criteria for alcohol abuse and/or dependence in the past year.



Figure 6.2: Past year prevalence of adults with alcohol abuse or alcohol dependence (question  $\Delta$ 15-A)

Table 6.2: Estimated number of adult Kentuckians who met alcohol abuse or dependence in the past year (question  $\Delta$ 15-A)

	MALES	FEMALES	TOTAL
Abuse	94,257	35,578	129,835
Dependence	40,078	14,824	54,902
Abuse and/or Dependence	98,016	38,543	136,559

**Drug Abuse and Dependence\* Lifetime** – Males were more likely to meet criteria for drug abuse or dependence than females. "Drugs" includes any illicit substance or legal medication taken beyond the recommended does or purpose but does not include alcohol. Figure 6.3 presents the percent of persons who reported lifetime drug abuse or dependence criteria. Table 6.3 presents the estimated number of adult Kentuckians who met lifetime DSM-IV-TR criteria for drug abuse and/or dependence.





# Table 6.3: Estimated number of adult Kentuckians who met drug abuse or drug dependence in their life (question $\Delta$ 15-A)

	MALES	FEMALES	TOTAL
Abuse	44,553	15,565	60,118
Dependence	25,234	8,894	34,128
Abuse and/or Dependence	49,726	15,565	65,291

**Drug Abuse and Dependence\* in the Past Year** – Males were more likely to meet criteria for drug abuse or dependence than females in the past year. Figure 6.4 presents the percent of persons who reported drug abuse or dependence criteria in the past year. Table 6.4 presents the estimated number of adult Kentuckians who met DSM-IV-TR criteria for drug abuse and/or dependence in the past year.



Figure 6.4: Past year prevalence of adults with drug abuse or drug dependence (question  $\Delta$ 15-A)

Table 6.4: Estimated number of adult Kentuckians who met drug abuse or dependence in the past year (question  $\Delta$ 15-A)

	MALES	FEMALES	TOTAL
Abuse	34,883	12,595	47,478
Dependence	23,008	8,153	31,161
Abuse and/or Dependence	37,851	12,595	50,446

**Any Substance Abuse or Dependence\*** – Males were more likely to meet abuse or dependence criteria for drugs including alcohol in their lifetime than females. Figure 6.5 presents the percent of persons who reported substance abuse or dependence criteria. Table 6.5 presents the estimated number of adult Kentuckians who met DSM-IV-TR criteria for substance abuse and/or dependence. The large majority of persons who met lifetime criteria also met criteria within the past year. Of those persons who met substance abuse or dependence criteria in their lifetime, only 48.3% indicated that they thought drugs or alcohol were ever a problem.

Figure 6.5: Lifetime and past year prevalence of adults with any substance abuse or substance dependence (question  $\Delta$ 15-A)



Table 6.5: Estimated number of adult Kentuckians who met any substance abuse
or substance dependence in their life (question $\Delta$ 15-A)

	MALES	FEMALES	TOTAL
Past Year	117,265	42,990	160,255
Lifetime	269,412	91,168	360,580

This page intentionally left blank

# Section Seven: Treatment and Self-Help Utilization

This page intentionally left blank

**Treatment/Counseling** – Males were more likely to receive treatment or counseling for drugs/alcohol than females. Treatment and counseling does not include attendance or participation in 12-step groups but includes detoxification services. Figure 7.1 presents the percentage of persons who have received treatment or counseling. More than twice as many males received treatment or counseling than females. Table 7.1 presents the estimated number of adult Kentuckians who received treatment or counseling.

Figure 7.1: Percent of adults who ever received treatment or counseling for alcohol/drugs (question  $\Delta$ 19-G2)



Table 7.1: Estimated number of adult Kentuckians who ever received treatment
or counseling for alcohol/drugs (question ∆19-G2)

MALES	FEMALES	TOTAL
84,426	31,973	116,399

For those persons who participated in treatment or counseling for alcohol/drugs, over 80% of persons attended their last session over 12 months ago. Figure 7.2 presents the distribution of time since last treatment/counseling. Also for those who reported receiving treatment/counseling, about half of respondents received services for alcohol only. Figure 7.3 presents the distribution of primary reason for services.

Figure 7.2: Time since last treatment or counseling for alcohol/drugs (question  $\Delta$ 19-G2b)



Figure 7.3: Reason for treatment/counseling (question  $\triangle 20$ -G4)



Of those who reported ever receiving treatment/counseling, over 80% successfully completed their most recent treatment. Figure 7.4 presents the distribution of how the most recent treatment concluded. For those who indicated that their last treatment ended early, respondents were asked why treatment ended early. 27.3% of persons who left treatment early stated it was due to problems with their treatment provider. 18.2% stated it was because they had resumed using drugs/alcohol. 9.1% stated they left treatment early because they could not afford it.

Figure 7.4: How treatment concluded for the most recent treatment (question  $\Delta 20-G5$ )



**Payment of Services** – Of those who participated in alcohol/drug treatment or counseling, 34.2% of respondents reported that private health insurance paid for at least part of their services. 22.0% of respondents reported that Medicare or another public program funded all or part of their services. (question  $\Delta 21$ -G6)

**Place of Treatment or Counseling** – The most common place respondents reported receiving their last treatment or counseling for alcohol/drugs was a residential facility. Table 7.2 presents the distribution of facilities where respondents reported receiving treatment or counseling. As noted above, treatment may include detoxification services.

Table 7.2: Location where most recent treatment was received (question △20-G3)

Hospital as Inpatient	12.1%
Residential Alcohol/Drug Rehabilitation Facility	25.5%
Outpatient Alcohol/Drug Rehabilitation Program	19.1%
Outpatient Mental Health Center	11.5%
Private Therapist or Doctor's Office	20.4%
Prison or jail	0.6%
Other	10.8%

**Self-Help Groups** – Subjects were asked if they have ever attended a 12-step group such as Alcoholics Anonymous or Narcotics Anonymous because they thought they might have a problem. Males were more likely to attend a 12-step meeting than females. Figure 7.5 presents the percentage of persons who reported ever attending a 12-step meeting. Table 7.3 presents the estimated number of Kentuckians who ever attended a 12-step meeting.





Table 7.3: Estimated number of adult Kentuckians who ever attended a 12-step meeting (question  $\Delta$ 19-G1)

MALES	FEMALES	TOTAL
120,874	41,844	162,718

Of those who attended a 12-step meeting, about one third attended less than 10 total meetings, one third attended 10 to 100 meetings, and the remaining one third attended more than 100 meetings in their life. Figure 7.6 presents the distribution of 12-step meetings that persons attended. Of those ever attended a 12-step meeting, over half attended their last meeting over one year before. Figure 7.7 presents the distribution of participants last 12-step meeting.

Figure 7.6: Number of 12-step meetings attended lifetime (question  $\Delta$ 19-G1a)



Figure 7.7: Last 12-step meeting attended (question Δ19-G1b)



## **Section Eight: Physical and Mental Health**

### PHYSICAL & MENTAL HEALTH

This page intentionally left blank

**Times Seen for Physical Health Problems** – Females were seen in the past year by a health professional for physical health problems slightly more often than males. Figure 8.1 presents the average number of times persons were seen by a health professional for physical health problems in the past 12 months.

Figure 8.1: Average number of times seen for physical health problems in the past 12 months (question  $\Delta 22$ -G11)



**Physical Health Self-Rating** – Males generally rated their physical health higher than females. Figure 8.2 presents the distribution of physical health self-ratings by gender.



Figure 8.2: Physical health self-ratings (question  $\triangle$ 22-G11a)
**Depression** – Respondents were asked if they experienced a serious depression lasting for at least two weeks and not a direct result of drug/alcohol use. Females were more likely to report experiencing lifetime depression than males. Figure 8.3 presents the percent of persons who reported experiencing a serious depression in their lifetime and within the past 30 days. Table 8.1 presents the estimated number of adult Kentuckians who ever experienced serious depression.



Figure 8.3: Percent of adults who ever experienced serious depression (question  $\Delta 22$ -G12a)

Table 8.1: Estimated number of adult Kentuckians who ever experienced serious	;
depression (question ∆22-G12a)	

	MALES	FEMALES	TOTAL
Lifetime Estimate	271,143	421,990	693,133
Past 30 Days Estimate	95,239	142,741	237,980

**Anxiety/Tension** - Respondents were asked if they experienced serious anxiety or tension lasting at least two weeks and not as a direct result of drug/alcohol use. Females were more likely to report experiencing lifetime and past 30 day anxiety/tension than males. Figure 8.4 presents the percent of persons who reported experiencing serious anxiety or tension in their lifetime and within the past 30 days. Table 8.2 presents the estimated number of adult Kentuckians who reported experiencing serious anxiety or tension.

Figure 8.4: Percent of adults who ever experienced serious anxiety or tension (question  $\Delta 23$ -G12b)





	MALES	FEMALES	TOTAL
Lifetime Estimate	244,485	374,075	618,560
Past 30 Days Estimate	98,539	177,267	275,806

**Medications** – Respondents were asked if they had been prescribed any medication for psychological or emotional problems in the last 30 days, not including medications used for drug/alcohol treatment. Females were significantly more likely to report being prescribed a medication for psychological or emotional problems in their lifetime and within the past 30 days than males. Figure 8.5 presents the percent of persons who were prescribed a medication for a psychological or emotional problem in their lifetime and within the past 30 days. Table 8.3 presents the estimated number of adult Kentuckians who were prescribed a medication for psychological or emotional problem in their lifetime and within the past 30 days. Table 8.3 presents the estimated number of adult Kentuckians who were prescribed a medication for psychological or emotional problems in their lifetime.



Figure 8.5: Percent of adults who were ever prescribed medication for psychological or emotional problems (question  $\Delta 23$ -G12c)

Table 8.3: Estimated number of adult Kentuckians who were ever prescribed a medication for psychological or emotional problems (question △23-G12c)

	MALES	FEMALES	TOTAL
Lifetime Estimate	136,693	284,589	421,282
Past 30 Days Estimate	77,963	152,952	230,915

**Mental Health Self-Rating** – Males generally self-rated their mental health as better than females. Figure 8.6 presents the distribution of mental health self-ratings by gender.



Figure 8.6: Mental health self-ratings (question  $\triangle$ 23-G16)



**Pregnancy** -1.4% of female survey respondents reported they were pregnant and another 4.9% reported they were pregnant within the past year. Of those who reported they were pregnant at the time of the interview, 9.7% reported they used an illicit substance within the past 30 days. (questions  $\triangle 26$ -H7 to H8)

HIV/AIDS - Survey participants were asked to rate their chances of contracting HIV/AIDS. The majority (88.7%) indicated they had no chance of contracting the disease and only 1.8% of participants said they had a 50% or greater chance of contracting HIV/AIDS. There were no gender differences. African Americans were more likely to believe they had a 50% or greater chance of contracting HIV/AIDS than whites at 5.4% and 1.5% respectively. Persons aged 18 to 29 years old and persons aged 40 to 49 were more likely than other age groups to say they had a 50% or greater chance of contracting HIV/AIDS. Table 8.4 presents the percent of persons who believe they have a 50% or greater chance of contracting HIV/AIDS for selected groups.

Table 8.4: Percent of adults who believe they have a 50% or greater chance of contracting HIV/AIDS (question ∆24-G17)

	Percent
Age Group	
18 to 29	2.8%
30 to 39	0.9%
40 to 49	2.6%
50 to 59	1.2%
60 to 69	1.6%
70 to 79	0.6%
80 and older	е
Race	

Race
------

White	1.5%
African American	5.4%
Native American	7.5%
Asian	е
Hispanic	е

#### **Education Completed**

Grade School	7.8%
High School	1.7%
College	1.6%
Graduate School	1.5%

e - estimate too small to calculate accurately

This page intentionally left blank

# **Section Nine: Treatment Need**

## TREATMENT NEED

This page intentionally left blank

**Need Treatment But Not Received It** – Participants were asked if they needed but did not receive drug/alcohol treatment in the past year. Table 9.1 presents the estimated number of adult Kentuckians who reported they needed treatment in the past 12 months but did not receive treatment.

Table 9.1: Estimated number of adult Kentuckians who needed and tried to obtain treatment in the past year but did not receive treatment (questions  $\Delta$ 21-G8, G9)

	MALES	FEMALES	TOTAL
Needed but not received treatment	9,648	12,595	22,243

**DSM-IV-TR Criteria** – There were few persons who met abuse or dependence criteria in the past year and also received treatment in the past year. Table 9.2 presents the estimated number of adult Kentuckians who met drug/alcohol abuse and/or dependence criteria in the past year but did not receive drug/alcohol treatment in the past year.

Table 9.2: Estimated number of adult Kentuckians who met DSM-IV-TR criteria for abuse or dependence in the past year but did not receive treatment

	MALES	FEMALES	TOTAL
Abuse or Dependence	117,265	42,990	160,255

#### TREATMENT NEED

**Risky Behavior** – Persons who engaged in risky behaviors due to drug/alcohol use in the past 12 months but did not receive treatment can be considered being in need of treatment. Risky behaviors include:

- Continued use despite medical or psychological problems caused or exacerbated by using
- Self-reported to be more likely to engage in risky behaviors due to drug/alcohol use
- Engaged in physical fights after using drugs/alcohol
- Drove after using drugs/alcohol
- Arrested for DUI
- Any other self-identified risky behaviors engaged in while under the influence

Driving after consuming alcohol or drugs was reported by 6.2% of respondents. Of those who reported driving after using, only 6.7% were ever arrested for DUI. Of those persons who drove after using in the past year, 43.1% considered alcohol or drugs as a problem. Of those persons arrested for a DUI in the past year, only 58.8% considered alcohol or drugs a problem.

At least one of these risky behaviors must have been reported during the past 12 months and the person was not receiving drug/alcohol treatment to be included here. Table 9.3 presents the estimated number of adult Kentuckians with risky behaviors in the past year but did not receive drug/alcohol treatment.

Table 9.3: Estimated number of adult Kentuckians who engaged in risky behaviors in the past year but did not receive treatment

MALES	FEMALES	TOTAL
176,726	64,485	241,211

#### TREATMENT NEED

**Recent Use Despite Considering Drugs or Alcohol a Problem** – Persons who considered themselves as having a problem with drugs or alcohol and used drugs or alcohol within the past 30 days can be considered as needing treatment. Table 9.4 presents the estimated number of adult Kentuckians who considered drugs/alcohol to be a problem in their life and used substances within the past 30 days. It is interesting to note that the number of persons who used any drugs or alcohol (after considering any drug or alcohol to have been a problem in their life) is greater than those who thought alcohol was a problem but used alcohol and those who thought drugs were a problem but used drugs. This is an indication that persons who consider themselves as having a problem with alcohol continue to use drugs and visa versa.

Table 9.4: Estimated number of adult Kentuckians who considered drugs/alcohol to be a problem and used a substance in the past 30 days

	MALES	FEMALES	TOTAL
Alcohol Use	98,016	29,648	127,664
Drug Use	45,273	13,342	58,615
Any Use	154,374	51,143	205,517

**Pregnancy and Use** – Women who are pregnant and used drugs or alcohol within the past 30 days could need treatment. Table 9.5 presents the estimated number of adult female Kentuckians who are pregnant and used alcohol or drugs in the past 30 days.

Table 9.5: Estimated number of adult female Kentuckians who used drugs or alcohol during pregnancy

Used within the past 30 days while pregnant



#### TREATMENT NEED

**Overall Treatment Need** – When considering the indicators of substance abuse treatment need, there are individuals who meet multiple treatment need criteria. To make an overall determination for Kentucky drug/alcohol treatment need, a respondent is included as needing treatment if he/she indicated any of the following: (1) A self-report of need for treatment; (2) Meeting the DSM-IV-TR criteria for substance abuse or dependence in the past 12 months; (3) Continued use of substances in the past 12 months in spite of self-reported problems related to substance use; (4) Engaging in high risk behavior related to substance use in the past 12 months; and (5) Using substances in the past 30 days during pregnancy. Table 9.6 presents the estimated total number of adult Kentuckians who would need drug/alcohol treatment services.

The overall treatment need stayed about the same in 2004 (12.0%) when compared to 1999 (12.6%). However, the need for substance abuse treatment did change by gender. The estimated percentage of males who need substance abuse treatment declined from 21.3% to 17.5%, whereas the estimated percentage of females who need substance abuse treatment increased from 4.7% to 6.9%.

	Treatment Need	Percent of Group
Kentucky	374,884	12.0%
Males	263,310	17.5%
Females	111,574	6.9%
18 to 29	146,485	21.4%
30 to 39	68,868	11.7%
40 to 49	90,064	14.1%
50 and older	69,467	5.7%

Table 9.6: Estimated number of adult Kentuckians currently in need of alcohol/drug treatment

## TREATMENT NEED

This page intentionally left blank

# Section Ten: Comparison to the Kentucky Needs Assessment 1999 Adult Household Report

This page intentionally left blank

**Comparison with the 1999 Adult Household Survey** – Estimates from the 1999 Kentucky Needs Assessment Adult Household Survey are very similar in most respects to the 2004 household survey. Tables 10.1 through 10.11 present comparisons of estimates between the 1999 survey and this survey.

**Cigarettes** – There was a decrease in cigarette smoking at all levels. Females showed the largest decrease for lifetime cigarette use from 72.2% down to 59.0%. Table 10.1 presents the comparison of cigarette smoking from 1999 to 2004.

.

	1999		2004	
	#	%	#	%
Lifetime	2,276,392	77.3%	2,070,134	66.3%
Past Year	953,946	32.4%	902,522	28.9%
Past 30 Days	884,729	30.0%	832,913	26.7%
Gender (lifetime	use)			
Males	1,161,449	82.9%	1,116,231	74.1%
Females	1,114,943	72.2%	953,903	59.0%
Age Group (lifet	ime use)			
18 to 24	278,956	70.4%	274,981	67.0%
25 to 44	916,853	77.8%	756,285	63.8%
45 to 64	721,013	82.1%	696,855	68.8%
65+	359,570	73.0%	342,013	66.8%

## Table 10.1: Cigarettes

**Alcohol** – There was a decrease in drinking at all levels. Females showed the largest decrease for past year drinking from 56.8% down to 47.0%. Table 10.2 presents the comparison of drinkers from 1999 to 2004.

#### Table 10.2: Alcohol

	1999		2004	
	#	%	#	%
Lifetime	2,614,604	88.7%	2,552,825	81.7%
Past Year	1,674,411	56.8%	1,468,740	47.0%
Past 30 Days	1,097,301	37.2%	1,112,156	35.6%
Gender (lifetime	use)			
Males	1,318,547	94.1%	1,333,122	88.4%
Females	1,296,057	83.9%	1,219,703	75.5%
Age Group (lifet	ime use)			
18 to 24	347,808	87.7%	329,679	80.3%
25 to 44	1,091,740	92.6%	1,024,046	86.4%
45 to 64	784,068	89.2%	838,846	82.7%
65+	390,988	79.3%	356,255	69.5%

**Illicit Drugs** – The percent of persons who use illicit drugs increased. The percent who reported using within the past 30 days increased from 3.4% to 4.6%. Table 10.3 presents the comparison of illicit drug users from 1999 to 2004.

## Table 10.3: Illicit drugs

	1999		2004	
	#	%	#	%
Lifetime	962,911	32.7%	1,052,348	33.7%
Past Year	179,113	6.1%	213,560	6.8%
Past 30 Days	99,881	3.4%	145,017	4.6%
Gender (lifetime	use)			
Males	565,693	40.4%	621,729	41.3%
Females	397,218	25.7%	430,619	26.7%
Age Group (lifetime use)				
18 to 24	164,930	41.6%	175,459	42.7%
25 to 44	562,091	47.7%	542,539	45.7%
45 to 64	204,939	23.3%	313,249	30.9%
65+	30,951	6.3%	21,101	4.1%

**Marijuana** – The percent of persons who use marijuana in 2004 was similar to the percent of persons who used marijuana in 1999. Table 10.4 presents the comparison of marijuana users from 1999 to 2004.

#### Table 10.4: Marijuana

	1999		2004	
	#	%	#	%
Lifetime	962,911	32.7%	979,568	31.4%
Past Year	173,737	5.9%	133,968	4.3%
Past 30 Days	96,600	3.3%	92,959	3.0%
Gender (lifetime	use)			
Males	565,693	40.4%	584,808	38.8%
Females	397,218	25.7%	394,760	24.4%
Age Group (lifet	ime use)			
18 to 24	164,930	41.6%	164,991	40.2%
25 to 44	562,091	47.7%	512,960	43.2%
45 to 64	204,939	23.3%	284,872	28.1%
65+	30,951	6.3%	16,745	3.2%

**Cocaine** – The percent of persons who use cocaine in 2004 was similar to the percent of persons who used cocaine in 1999. There was a slight increase for females. Table 10.5 presents the comparison of cocaine users from 1999 to 2004.

## Table 10.5: Cocaine

	1999		2004	
	#	%	#	%
Lifetime	210,564	7.1%	229,231	7.3%
Past Year	16,930	0.6%	31,895	1.0%
Past 30 Days	6,536	0.2%	8,786	0.3%
Gender (lifetime	use)			
Males	143,934	10.3%	150,663	10.0%
Females	66,630	4.3%	78,568	4.9%
Age Group (lifet	ime use)			
18 to 24	27,619	7.0%	36,393	8.8%
25 to 44	128,068	10.9%	130,551	11.0%
45 to 64	52,501	6.0%	61,465	6.0%
65+	2,376	0.5%	822	0.1%

**Hallucinogens** – There was a decrease in hallucinogen use from 1999 to 2004. Table 10.6 presents the comparison of hallucinogen users from 1999 to 2004.

#### Table 10.6: Hallucinogens

	1999		2004	
	#	%	#	%
Lifetime	250,849	8.5%	207,810	6.7%
Past Year	24,003	0.8%	10,388	0.3%
Past 30 Days	7,288	0.2%	е	е
Gender (lifetime	use)			
Males	179,648	12.8%	150,737	10.0%
Females	71,201	4.6%	57,073	3.6%
Age Group (lifet	ime use)			
18 to 24	47,298	11.9%	35,286	8.6%
25 to 44	135,551	11.5%	108,414	9.2%
45 to 64	60,458	6.9%	61,973	6.1%
65+	7,542	1.5%	2,137	0.4%

e - estimate too small to calculate accurately

Alcohol Dependence and Abuse – There was a notable decrease in the percent of persons who met DSM-IV criteria for Alcohol Dependence and Alcohol Abuse within the past year. The percent of persons meeting dependence in 1999 was identical to the percent of persons meeting abuse in 1999. In 2004, the percent of persons meeting abuse. Females and persons 18 to 24 years old meeting lifetime criteria for abuse showed the smallest change from 1999 to 2004. Tables 10.7 and 10.8 present the comparison for persons meeting alcohol abuse and alcohol dependence from 1999 to 2004.

	1999		2004	
	#	%	#	%
	198,381	6.7%	54,902	1.8%
Gondor				
Genuer				
Males	161,922	11.6%	40,078	2.7%
Females	36,459	2.4%	14,824	0.9%
Age Group				
18 to 24	44,011	11.1%	23,117	5.7%
25 to 44	95,085	8.1%	22,637	2.0%
45 to 64	52,181	5.9%	9,148	1.0%
65+	7,104	1.4%	е	е

#### Table 10.7: Past year alcohol dependence

e - estimate too small to calculate accurately

#### Table 10.8: Past year alcohol abuse

	1999		2004	
	#	%	#	%
	198,263	6.7%	129,835	4.2%
Gender		-		
Males	157,582	11.2%	94,257	6.3%
Females	40,681	2.6%	35,578	2.2%
Age Group				
18 to 24	42,535	10.7%	43,518	10.7%
25 to 44	98,507	8.4%	54,784	4.7%
45 to 64	47,981	5.5%	28,615	2.9%
65+	9,240	1.9%	2,918	0.7%

Drug Dependence and Abuse – There was little change for persons meeting criteria for drug dependence in the past year. The percent of females meeting criteria for drug dependence in the past year doubled from 1999 to 2004. The percent of persons meeting criteria for drug abuse increased from 0.6% in 1999 to 1.5% in 2004. The largest increase for abuse was for persons aged 25 to 44 years old. Tables 10.9 and 10.10 present the comparison of persons who met drug dependence and abuse from 1999 to 2004.

100010101011000	your unug uopo	laonoo	_	
	199	9	2004	
	#	%	#	%
Kentucky	28,014	1.0%	31,161	1.0%
Gender				
Males	24,514	1.7%	23,008	1.5%
Females	3,500	0.2%	8,153	0.5%
Age Group				
18 to 24	12,259	3.1%	8,743	2.1%
25 to 44	9,900	0.8%	17,892	1.5%
45 to 64	4,315	0.5%	4,526	0.5%
65+	1,540	0.3%	е	е

#### Table 10.9: Past year drug dependence

e – estimate too small to calculate accurately

#### Table 10.10: Past year drug abuse

	1999		2004	
	#	%	#	%
Kentucky	16,264	0.6%	47,478	1.5%
Gender				
Males	13,286	0.9%	34,883	2.3%
Females	2,978	0.2%	12,595	0.8%
Age Group				
18 to 24	7,438	1.9%	15,425	3.8%
25 to 44	4,085	0.3%	23,339	2.0%
45 to 64	3,040	0.3%	8,714	0.9%
65+	1,701	0.3%	е	е

e - estimate too small to calculate accurately

**Treatment Need** – The percent of persons in need of treatment in 2004 was similar to the percent of persons needing treatment in 1999. More females and fewer males needed treatment in 2004 compared to 1999. Table 10.11 presents the comparison of persons needing treatment from 1999 to 2004.

#### Table 10.11: Treatment need

	1999		2004	
	#	%	#	%
Kentucky	371,282	12.6%	374,884	12.0%
Gender				
Males	298,938	21.3%	263,310	17.5%
Females	72,344	4.7%	111,574	6.9%
Age Group				
18 to 24	84,387	21.3%	92,051	22.6%
25 to 44	180,497	15.3%	167,146	14.3%
45 to 64	91,211	10.4%	98,663	9.9%
65+	15,187	3.1%	17,025	3.5%

# **Section Eleven: Regional Comparison**

This page intentionally left blank

**Lifetime Cigarette Use** – Kentucky River and Four Rivers showed the highest lifetime prevalence for smoking cigarettes. The Mountain region had the lowest lifetime prevalence for smoking. Table 11.1 presents the estimated number and percent of adult Kentuckians who smoke cigarettes by region.

Table 11.1: Estimated number of adult Kentuckians who ever smoked a cigarette by region

<del>#</del>	%
2,070,134	66.3%
103,732	68.4%
343,092	63.3%
113,583	61.1%
28,831	68.0%
124,404	68.4%
112,256	70.9%
64,367	70.0%
129,368	65.1%
74,086	60.6%
202,460	67.6%
108,558	65.4%
102,558	67.3%
106,933	67.8%
455,906	67.8%
	# <b>2,070,134</b> 103,732 343,092 113,583 28,831 124,404 112,256 64,367 129,368 74,086 202,460 108,558 102,558 106,933 455,906

**Lifetime Alcohol Use** – The North Key and Seven Counties regions showed the highest lifetime prevalence of alcohol use. The lowest region was Mountain. There seems to be a correlation between the population density of a region and the percent of persons who use illicit drugs. Table 11.2 presents the estimated number and percent of adult Kentuckians who use illicit drugs by region.

Table 11.2: Estimated	d number	of adult	Kentuckians	who ever	drank by	region
		~ ~ ~				

	#	%
Kentucky	2,552,825	81.7%
Adanta	121,968	80.4%
Bluegrass	455,287	84.0%
Communicare	148,494	79.9%
Comprehend	33,185	78.2%
Cumberland	126,109	69.3%
Four Rivers	125,247	79.1%
Kentucky River	63,825	69.4%
Lifeskills	146,363	73.7%
Mountain	83,110	67.9%
North Key	263,797	88.1%
Pathways	128,473	77.3%
Pennyroyal	127,960	84.0%
River Valley	129,731	82.3%
Seven Counties	599,276	89.1%

**Lifetime Illicit Drug Use** – The Communicare, Seven Counties, and Bluegrass regions showed the highest lifetime prevalence of drug use. The lowest region was Mountain. Similar to alcohol, there seems to be a correlation between the population density of a region and the percent of persons who use illicit drugs. Table 11.3 presents the estimated number and percent of adult Kentuckians who use illicit drugs by region.

Table 11.3: Estimated number of adult Kentuckians who ever used illicit drugs by region

-	#	%
Kentucky	1,052,348	33.7%
Adanta	42,675	28.1%
Bluegrass	198,601	36.6%
Communicare	68,841	37.1%
Comprehend	12,559	29.6%
Cumberland	54,874	30.2%
Four Rivers	54,447	34.4%
Kentucky River	31,175	33.9%
Lifeskills	58,536	29.5%
Mountain	30,478	24.9%
North Key	106,908	35.7%
Pathways	51,097	30.8%
Pennyroyal	46,995	30.8%
River Valley	45,669	29.0%
Seven Counties	249,493	37.1%

**Lifetime Marijuana Use** – The Bluegrass, Seven Counties, and North Key regions still rank high in percent of lifetime prevalence of marijuana use, however, other less populated regions like Four Rivers also rank higher. Table 11.4 presents the estimated number and percent of adult Kentuckians who smoke marijuana by region.

Table 11.4: Estimated number of adult Kentuckians who ever used marijuana by region

	Ŧ	%
Kentucky	979,568	31.4%
Adanta	36,405	24.0%
Bluegrass	181,572	33.5%
Communicare	60,882	32.8%
Comprehend	11,597	27.3%
Cumberland	49,391	27.1%
Four Rivers	53,283	33.7%
Kentucky River	28,262	30.7%
Lifeskills	56,209	28.3%
Mountain	27,504	22.5%
North Key	99,017	33.1%
Pathways	48,471	29.2%
Pennyroyal	39,467	25.9%
River Valley	44,963	28.5%
Seven Counties	242,545	36.1%

**Lifetime Cocaine Use** – The percent of persons who use cocaine appear to be distributed equitably throughout the state. Table 11.5 presents the estimated number and percent of adult Kentuckians who use cocaine.

Table 11.5: Estimated number of adult Kentuckians who ever used cocaine by region

	#	%
Kentucky	229,231	7.3%
Adanta	10,898	7.2%
Bluegrass	39,655	7.3%
Communicare	14,254	7.7%
Comprehend	2,229	5.3%
Cumberland	10,894	6.0%
Four Rivers	13,111	8.3%
Kentucky River	8,044	8.8%
Lifeskills	12,109	6.1%
Mountain	6,078	5.0%
North Key	25,138	8.4%
Pathways	12,575	7.6%
Pennyroyal	8,716	5.7%
River Valley	9,324	5.9%
Seven Counties	56,206	8.4%

**Lifetime Hallucinogen Use** – The highest concentration of lifetime prevalence of hallucinogen use seems to be concentrated in the North-Central part of the state. Table 11.6 presents the estimated number and percent of adult Kentuckians who use hallucinogens.

Table 11.6: Estimated number of adult Kentuckians who ever used hallucinogens by region

Ħ	%
207,810	6.7%
7,869	5.2%
43,324	8.0%
16,755	9.0%
2,238	5.3%
8,571	4.7%
7,998	5.1%
4,005	4.4%
9,443	4.8%
4,603	3.8%
23,047	7.7%
12,405	7.5%
4,509	3.0%
8,721	5.6%
54,322	8.1%
	# <b>207,810</b> 7,869 43,324 16,755 2,238 8,571 7,998 4,005 9,443 4,603 23,047 12,405 4,509 8,721 54,322

**Past Year Alcohol Abuse and Dependence** – The Seven Counties and Pennyroyal regions had the highest percent of persons who met criteria for alcohol abuse and alcohol dependence in the past year. The River Valley and Comprehend regions had the lowest percent of persons who met criteria for alcohol abuse in the past year. The Lifeskills, North Key, and River Valley regions had the lowest percentages for dependence. Table 11.7 presents the estimated number and percent of adult Kentuckians who met criteria for alcohol abuse or alcohol dependence in the past year.

	Abuse		Depend	lence
	#	%	#	%
Kentucky	129,835	4.2%	54,902	1.8%
Adanta	4,812	3.2%	1,806	1.2%
Bluegrass	19,938	3.7%	6,902	1.3%
Communicare	6,421	3.5%	4,067	2.2%
Comprehend	929	2.2%	1,109	2.6%
Cumberland	6,783	3.7%	1,831	1.0%
Four Rivers	5,094	3.2%	1,997	1.3%
Kentucky River	1,406	1.5%	1,412	1.5%
Lifeskills	7,201	3.6%	1,290	0.6%
Mountain	4,958	4.1%	1,749	1.4%
North Key	13,273	4.4%	1,867	0.6%
Pathways	3,713	2.2%	3,345	2.0%
Pennyroyal	7,890	5.2%	4,904	3.2%
River Valley	2,345	1.5%	1,348	0.9%
Seven Counties	45,072	6.7%	21,275	3.2%

Table 11.7: Estimated number of adult Kentuckians who met alcohol abuse and dependence in the past year by region

**Past Year Drug Abuse and Dependence** – The Pennyroyal region had the highest percent of persons who met criteria for drug abuse and drug dependence in the past year. Table 11.8 presents the estimated number and percent of adult Kentuckians who met criteria for drug abuse or dependence in the past year.

	Abuse		Dependence	
	#	%	#	%
Kentucky	47,478	1.5%	31,161	1.0%
Adanta	1,624	1.1%	1,619	1.1%
Bluegrass	5,612	1.0%	2,225	0.4%
Communicare	2,197	1.2%	2,191	1.2%
Comprehend	1,328	3.1%	225	0.5%
Cumberland	2,954	1.6%	1,120	0.6%
Four Rivers	2,200	1.4%	2,195	1.4%
Kentucky River	2,216	2.4%	2,213	2.4%
Lifeskills	е	е	e	е
Mountain	941	0.8%	936	0.8%
North Key	2,276	0.7%	5,249	1.7%
Pathways	960	0.6%	955	0.6%
Pennyroyal	5,262	3.4%	5,256	3.4%
River Valley	703	0.4%	698	0.4%
Seven Counties	19,205	2.8%	6,279	0.9%

Table 11.8: Estimated number of adult Kentuckians who met drug abuse and dependence in the past year by region

e - estimate too small to calculate accurately

**Treatment Need** – The Seven Counties, North Key and Bluegrass regions had the highest estimated number and highest percent of adult Kentuckians in need of treatment. Table 11.9 presents the estimated number and percent of adult Kentuckians in need of treatment.

	#	%
Kentucky	374,884	12.0%
Adanta	16,546	10.9%
Bluegrass	64,818	12.0%
Communicare	17,810	9.6%
Comprehend	4,523	10.7%
Cumberland	16,585	9.1%
Four Rivers	18,145	11.5%
Kentucky River	8,482	9.2%
Lifeskills	21,781	11.0%
Mountain	8,644	7.1%
North Key	40,516	13.5%
Pathways	14,972	9.0%
Pennyroyal	15,844	10.4%
River Valley	10,693	6.8%
Seven Counties	115,525	17.2%

Table 11.9: Estimated number of adult Kentuckians in current need of alcohol/drug treatment by region

This page intentionally left blank

## Section Twelve: Jefferson and Fayette Counties

## JEFFERSON & FAYETTE COUNTIES

This page intentionally left blank
**Demographics** – Jefferson and Fayette counties were singled out because they are the two most populous Kentucky counties, they have the highest percentage of minorities, and they represent the most urban centers. Table 12.1 presents demographic information for Fayette County, Jefferson County, and all other Kentucky Counties combined. Fayette County is slightly younger. Fayette and Jefferson Counties both had a higher percentage of African Americans than the rest of Kentucky, a higher percentage of persons with a college degree, and a higher percentage of households with income greater than \$50,000/year.

	Fayette	Jefferson	Others
Average Age	42.9	46.3	45.9
% male	46.9%	48.4%	48.4%
% Caucasian	85.4%	85.1%	93.4%
% African American	9.7%	11.9%	2.4%
% with College Degree	52.9%	49.3%	34.0%
% Household Income <u>&gt;</u> \$50,000/yr	47.0%	46.3%	37.9%

Table 12.1: Demographic variables

The following tables do not control for these variables but present the estimates for comparison.

Alcohol and Cigarette Use – Jefferson County had a higher percentage of persons who ever smoked. Fayette and Jefferson Counties had a higher percentage of persons who ever used alcohol. Persons in Fayette and Jefferson Counties tended to start using alcohol and cigarettes at a later age than the rest of Kentucky. Table 12.2 presents cigarette and alcohol use information by county.

Table 12.2: Lifetime use of cigarettes and alcohol

	Fayette	Jefferson	Others
Ever Smoke	63.8%	70.2%	65.7%
Avg Age First Cigarette	16.6	16.0	15.8
Ever Use Alcohol	87.4%	89.9%	78.7%
Avg Age First Drink	17.8	17.3	16.9

**Use of Illicit Drugs** – There are several notable differences between Fayette, Jefferson, and the rest of Kentucky on illicit drug use. In general, persons in Fayette and Jefferson counties were more likely to ever use illicit drugs than other Kentuckians. Persons in Jefferson and Fayette Counties were more likely to ever use marijuana, MDMA, other stimulants, and hallucinogens than other Kentuckians. Persons in Fayette and Jefferson Counties were less likely to use Inhalants. Persons in Jefferson County were more likely than persons in Fayette County to use illicit drugs in all categories. Table 12.3 presents the percent of persons who used illicit drugs by county.

	0		
	Fayette	Jefferson	Others
Marijuana	35.8%	39.4%	28.6%
Cocaine	7.3%	9.0%	6.9%
Methamphetamine	1.0%	2.4%	2.9%
MDMA	2.6%	4.5%	1.6%
Other Stimulants	7.9%	8.5%	6.6%
Inhalants	0.6%	1.8%	2.3%
Hallucinogens	8.1%	8.3%	6.0%
Sedatives	3.0%	5.4%	4.4%
Tranquilizers	6.3%	7.9%	6.3%
Heroin	0.8%	1.2%	0.9%
Oxycodone	1.8%	2.1%	1.9%
Non-OTC Pain	5.9%	6.4%	6.8%
Any Illicit	39.9%	40.6%	30.9%

Table 12.3: Lifetime use of illicit drugs

Table 12.4: Lifetime DSM-IV-TR criteria

**DSM-IV-TR Criteria** – Fayette and Jefferson County residents were more likely to meet criteria for any substance use disorder, alcohol abuse, or drug abuse than other Kentuckians. However, Fayette and Jefferson County residents were less likely to meet three or more criteria for drug dependence\* than the rest of Kentucky. Table 12.4 presents the percent of persons who have ever met DSM-IV-TR criteria for substance use disorders by county.

	Fayette	Jefferson	Others
<u>Alcohol</u>	-		
Abuse	13.3%	14.8%	9.2%
Dependence	2.6%	5.4%	3.6%
Abuse or Dependence	13.3%	14.8%	9.6%
Drugs Abuse	2.2%	3.4%	1.5%
Dependence	0.6%	1.0%	1.2%
Abuse or Dependence	2.2%	3.4%	1.7%
Any Abuse or Dependence	13.7%	15.4%	10.2%

**Treatment Need** – A higher percentage of persons in Jefferson County needed treatment than the persons in Fayette County or other Kentuckians. The percent of persons needing treatment in Fayette County was slightly higher than the percent of persons in need of treatment in the rest of Kentucky (excluding Jefferson County). Table 12.5 presents the percent of persons in need of treatment.

### Table 12.5: Current treatment need

	Fayette	Jefferson	Others
Treatment Need	11.3%	18.1%	10.6%

\* Please see footnote page 91

This page intentionally left blank

# **CONCLUDING REMARKS**

### CONCLUDING REMARKS

This page intentionally left blank

### **Existing Need for Drug/Alcohol Treatment**

There is a gap between the self-perceived need for drug/alcohol treatment and the same need using established criteria. When respondents were asked whether they needed drug/alcohol treatment and had not received it, it is estimated that 22,243 acknowledged a need for treatment. However, when more objective criteria for treatment need were used; DSM-IV-TR criteria for drug abuse or dependence, self-reported risky behavior (e.g., medical problems caused by drug abuse, DUI, physical fights after drug use), recent use despite considering it a problem, and use during pregnancy, the estimated treatment need increased to 374,884 persons.

Although the overall need for treatment did not change significantly from the 1999 Kentucky Needs Assessment (about 12% of the adult population), treatment need for men and women changed in opposite directions. The male need for treatment declined by 3.8% (from 21.3% to 17.5%) during the five year period between surveys, whereas the female need increased 2.2% (from 4.7% to 6.9%). Even though males continue to report substantially greater need for drug abuse treatment, women appear to be moving toward parity, with about a one-third increase.

Cigarette use among adults in Kentucky parallels national trends. In the five-year period from 1999 to 2004 cigarette use in the past 30 days in Kentucky decreased from 30.0% to 26.7%. Lifetime use also decreased more, from 82.9% to 74.1% for males and from 72.2% to 59.0% for females. Nonetheless, nicotine use is sizeable with an estimated 716,741 adult Kentuckians who are daily smokers; among these, two-thirds smoke at least one pack of cigarettes per day.

A notable decrease in the proportion of Kentucky adults who self-reported alcohol "dependence" using DSM-IV criteria was found in the 1999-2004 comparisons. Overall, 6.7% self-reported alcohol dependence in the 1999 survey while only 1.8% did so in the current survey. The greater portion of this reduction was males who decreased from 11.1% in 1999 to 2.7% in 2004. Alcohol abuse criteria also declined from 6.7% in 1999 to 4.2% in 2004. Again, males accounted for the larger part of this decrease, from 11.2% to 6.3%, whereas females decreased from 2.6% to 2.2%.

Overall use of illicit drugs among adults in Kentucky has not shown the same decline as nicotine use and self-reported alcohol dependence and abuse. When illicit drug use was combined, past-year use increased slightly from 6.1% in 1999 to 6.8% in 2004. Among these illicit drugs, only marijuana declined over the period, with past-year use moving from 5.9% in 1999 to 4.3% in 2004.

Despite the current attention on methamphetamine use and production, past year methamphetamine use among adult Kentuckians is less than one-third the use of cocaine. Past year cocaine use has increased slightly from the 1999 to 2004 period from 0.6% to 1.0% of the adult population of Kentucky. Similarly, the intense focus on Oxycodone use among Kentucky adults should not obscure that the illicit use of other prescribed opiate medication is more than twice the level of Oxycodone.

A strength of the Kentucky Needs Assessment Project 2004 Adult Household Survey is that estimates of substance use and treatment need were developed for the State as well as the MHMR regions. These estimates indicate that substance use and treatment needs are not uniformly distributed across Kentucky. While urban areas appear to have higher percentages of substance abusers, less populated areas have higher percentages of methamphetamine and illicit prescription opiate use. These regional differences are important and should be taken into consideration for treatment planning.

### REFERENCES

1. De Leeuw ED., and Joop JH, 2004. "I am not selling anything: 29 experiments in telephone instructions." *International Journal of Public Opinion Research*, 16:4, pp. 464-473.

2. McAuliffe WE, Geller S, LaBrie R, Paletz S, and Fournier E, 1998. "Are telephone surveys suitable for studying substance abuse? Cost, administration, coverage and response rate issues." *Journal of Drug Issues*, 28:2, pp. 455-483.

3. McAuliffe WE., Paletz S, Geller S, and LaBrie R, 1996. *Substance abuse telephone surveys: History, feasibility, and validity.* Cambridge, MA.

4. DeLeeuw, ED, 1992. *Data quality in mail, telephone, and face-to-face surveys*. Amsterdam: TT-publikaties.

5. DeLeeuw, ED, and Van Der Zouwen J, 1988. "Data quality in telephone and face-toface surveys: A comparative meta-analysis." In R. M. Groves et al. (Eds.). *Telephone Survey Methodology* (pp. 283-299). New York: Wiley.

6. Rehm J, Frick U, and Bondy S, 1999. "A reliability and validity analysis of an alcoholrelated harm scale for surveys." *Journal of Studies on Alcohol*, 60:2, pp. 203-208.

7. Ellen JM., Gurvey JE, Pasch L, Tschann J, Nanda J, and Cantania J, 2002. "A randomized comparison of A-CASI and Phone Interviews to Assess STD/HIV-related risk behaviors in teens." *Society for Adolescent Medicine*, 36, pp. 26-30.

8. Slutske WS., True WR, Scherrer JF, Goldburg J, Bucholtz KK, Heath AC, et al, 1998. "Long-term reliability and validity of alcoholism diagnoses and symptoms in a large national telephone interview survey." *Alcoholism: Clinical and Experimental Research*, 22:3, pp. 553-558.

9. Harrison L, and Hughes A, 1997. "The validity of self-reported drug use: Improving the accuracy of survey estimates." *National Institute on Drug Abuse*, 97-4147, pp. 1-17.

10. Office of Applied Studies, 2003. *Results from the 2003 National Survey on Drug Use and Health: Appendix A*. Retrieved May 20, 2005 from http://oas.samhsa.gov/nhsda/2k3nsduh/appa.htm

11. Leifman H, 2002. "The six-country survey of the European comparative alcohol study: Comparing patters and assessing validity." *Contemporary Drug Problems*, 29:3, pp. 477-500.

12. Johnson TP, Hougland JG, and Clayton RR, 2003. "Obtaining reports of sensitive behavior: A comparison of substance use reports from telephone and face-to-face interviews." *Social Science Quarterly*, 70:1, pp. 174-183.

13. Aquilino WS, 1994. "Interview mode effects in surveys of drug and alcohol use." *Public Opinion Quarterly*, 58, pp. 210-240.

14. Gmel G, 2000. "The effect of mode of data collection and non-response on reported alcohol consumption: A split sample study in Switzerland." *Addiction*, 95, pp. 123-134.

15. Kessler RC, Berglund P, Chui WT, Demler O, Heeringa S, Hiripi E, et al, 2004. The US National Comorbidity Survey Replication (NCS-R): design and field procedures. *International Journal of Methods in Psychiatric Research*, 13(2):69-92

16. Kessler RC, Chui WT., Demler O, and Walters EE, 2005. Prevalence, Severity, and Comorbidity of the 12-Month DSM-IV Disorders in the National Comorbidity Survey. *Archives of General Psychiatry*, 62:617-627

17. Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, and Walters EE, 2005. Lifetime Prevalence and Age-of-Onset Distributions of DSM-IV Disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62:593-602

18. United States Census, 2003. Data for population estimates by county retrieved May 25, 2005 from <a href="http://www.census.gov/popest/counties/CO-EST2004-01.html">http://www.census.gov/popest/counties/CO-EST2004-01.html</a>.

19. Wilson RA., and McAuliffe WE (2000). "Synthetic Estimates of the Prevalence of DSM-III-R Alcohol Abuse and Dependence: Issues of Validity and Methodology." In Robert A. Wilson, Mary C Dufour (Eds.), *The Epidemiology of Alcohol Problems in Small Geographic Areas* (pp. 17-36). NIAAA Research Monograph No. 36. Bethesda, MD: U.S. Department of Health and Human Resources.

20. Ciarlo JA, and Tweed DL, 1992. "Implementing indirect needs-assessment models for planning state mental health and substance abuse services." *Evaluation and Program Planning*, 15, pp. 195-210.

## APPENDIX

This page intentionally left blank