Michigan Community Epidemiological Profile

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Michigan Department of Community Health
Bureau of Substance Abuse and Addiction Services
State Epidemiology Outcomes Workgroup

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Introduction

The prevention and treatment of substance abuse and gambling addictions are provided through 16 regional coordinating agencies (CAs), whose responsibilities include planning, administering, funding, and maintaining the provision of substance abuse treatment and prevention services for 83 counties in Michigan. CAs cover either single or multi-county regions. Most of the single-county regions are located in urban areas, while multiple-counties CAs tend to be rural and include less populated counties. Based on the service delivery system and structure in Michigan, and for the purpose of improving substance abuse prevention and treatment services, CAs will be used to define community for this profile.

Various indicators were prioritized and chosen to address epidemiological issues at the community level, with a focus on the prevention of substance abuse and mental illness. In addition, other social and health indicators (e.g. obesity, infant mortality, violent crime, and health insurance coverage) were chosen based on Governor Rick Snyder's Dashboard for Michigan and the Michigan Department of Community Health (MDCH) strategic priorities. The key indicators were identified based on the Substance Abuse and Mental Health Services Administration's (SAMHSA) initiative for the prevention of substance abuse and mental illness. The indicators used in the preliminary analysis include alcohol and binge drinking by youth, adult problem drinking, alcohol-involved fatality and serious injury, nonmedical use of pain relievers, psychological distress, major depressive episodes, and suicide deaths. All 16 CAs were ranked from lowest to highest for the prevalence of these selected key indicators, and were divided into three categories (i.e. high, medium, and low) based on the cumulative score of these indicators. Five CAs with the highest score based on this preliminary analysis were included in this report. Those CAs are: Bay Arenac Behavioral Health (BABH)/Riverhaven Coordinating Agency; Kalamazoo Community Mental Health and Substance Abuse Services; Mid-South Substance Abuse Commission; Pathways to Healthy Living; and Western Upper Peninsula Substance Abuse Services.

This report is one of a series of community epidemiological profiles on substance use and mental health in Michigan. It is the intention of the Bureau of Substance Abuse and Addition Services (BSAAS) and the State Epidemiology Outcomes Workgroup (SEOW) to complete similar Community Epidemiological Profiles for all 16 CAs before the end FY 2011.

The community profile of each CA describes the nature and magnitude of alcohol, tobacco, and drug use indicators and related consequences, as well as mental health indicators. In addition, a core set of measures for demographic, social and economic contexts for each community were included in this document in accordance with overall established state-level priorities. The Community Epidemiological Profile is intended to provide information on these various indicators based on federal and state data sources, to identity prevention priorities for future planning efforts, and to monitor changes over time.

Data Sources and Indicators

Data for this report are based on multiple resources:
- Community Context indicators - U.S. Census Bureau, American Community Survey.
- Alcohol, Tobacco, and Other Drug (ATOD) consumption - National Survey on Drug Use and Health (NSDUH) and Michigan Behavioral Risk Factor Survey (MiBRFS).
- Mental health indicators - NSDUH and MiBRFS.

- ATOD consequences and intervening factors - Michigan State Police, Criminal Justice Information Center; Michigan Department of Community Health, Division for Vital Records and Health Statistics; and SAMHSA, NSDUH.

Data Sources	Indicators
U.S. Census American Community Survey, 2005-2009	Demographic characteristics Economic characteristics Social characteristics
Michigan Uniform Crime Report, 2005-2009	Violent crime rate
Michigan Resident Birth and Death File, 2005-2009	Infant mortality rate
Michigan Behavioral Risk Factor Survey (MiBRFS), 2006-2008	Health insurance coverage Obesity based on self-reported height and weight Self-reported physical health Self-reported mental health Self-reported alcohol consumption in past month Self-reported heavy drinking in past month Self-reported binge drinking in past month
Crash Statistics, Michigan State Police, Criminal Justice Information Center, 2005-2009	Alcohol-involved deaths or serious injuries
Michigan Resident Death File, 2005-2009	Drug-induced death rate Alcohol-induced death rate Lung cancer death rate Suicide rate
Michigan Resident Cancer Incidence File, 2003-2007	Lung cancer incidence rate
National Survey on Drug Use and Health, 2006-2008	Self-reported alcohol use in past month Self-reported binge alcohol use in past month Perceptions of risk of excessive alcohol use Self-reported cigarette use in past month Self-reported tobacco product use in past month Perceptions of risk excessive smoking cigarette Self-reported use of cocaine, marijuana, nonmedical use of pain relievers Average annual rate of first use of marijuana Perceptions of smoking marijuana
National Survey on Drug Use and Health, 2004-2006	Serious psychological distress in past year Major depressive episode in past year

Measure Description

The following table provides descriptions/definitions of measures that were used in this report. In most cases, it was necessary to combine multiple years of data to provide a more accurate assessment and capture a larger sample size for each region. Measures not listed in the table are either self-explanatory (e.g., population and median household income) or defined in the text with associated graphical representation of data.

Areas of Topic	Measures	Descriptions
Economic Characteristics	Percent unemployed	Proportion of unemployed people 16 years and over in civilian labor force
Social Characteristics	Percent of adults with bachelor's degree or higher	Proportion of people 25 years and over having bachelor's degree or higher
	Percent of adults with obesity	Proportion of respondents whose body mass index was greater than or equal to 30.0
	Percent with no health care coverage	Proportion who reported having no health care coverage, including health insurance, prepaid plans such as HMOs, or government plans, such as Medicare
	Infant mortality rate	Rate of infant deaths per 1,000 births
	Violent crime rate	Rate of violent crime (i.e., murder, rape, robbery, aggravated assault) per 1,000 population
Alcohol Consequences	Alcohol-impaired fatality or serious injury rate in motor vehicle crashes	Rate of persons killed or seriously injured in motor vehicle crashes per 100,000 population in which at least one driver had been drinking alcohol
	Alcohol-induced death	Deaths due to alcohol psychoses, alcohol dependence syndrome, non-dependent abuse of alcohol, alcohol-induced chronic liver disease and cirrhosis, and alcohol poisoning, excluding deaths due to alcohol-related injury, such as motor vehicle crashes
	Alcohol-induced death rate	Age-adjusted rate of alcohol –induced death per 100,000 population
Alcohol Intervening Factors	Needing, but not receiving, treatment for alcohol use in past year	Proportion of population who meet the criteria for abuse of, or dependence on, alcohol according to the DSM-IV as needing, but not receiving, treatment for an alcohol problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], or mental health centers)
Tobacco Consequences	Lung cancer incidence	Age-adjusted rate of lung cancer incidence per 100,000 population
	Lung cancer mortality	Age-adjusted rate of death from lung cancer per 100,000 population
Tobacco Consumption	Tobacco product use	Proportion of population who reported use of cigarettes, smokeless tobacco, cigars, or pipe tobacco in the past month

Areas of Topic	Measures	Descriptions
Drug Use Consequences	Drug-induced death	Deaths due to dependent and non-dependent use of legal, illegal drugs, and poisoning from medically prescribed and other drugs, excluding unintentional injuries, homicides, and other causes indirectly related to drug use, newborn deaths due to mother's drug use
	Drug-induced death rate	Age-adjusted drug-induced death rate per 100,000 population
Drug Use Intervening Factors	Average annual rate of first use of marijuana	Rate of marijuana initiates per 1,000 potential new users annually
	Illicit drug use	Proportion of population that reported marijuana/hashish, cocaine (includes crack), or prescriptive-type psychotherapeutics used nonmedically in the past year
	Needing, but not receiving, treatment for illicit drug use in past year	Proportion of population who meet the criteria for abuse of, or dependence on, illicit drugs according to the DSM-IV as needing, but not receiving, treatment for illicit drug problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], or mental health centers) in the past year
Mental Health Indicators	Percent with perceived poor physical health	Proportion of population who reported 14 or more days of poor physical health, which includes physical illness and injury, during the past 30 days
	Percent with perceived poor mental health	Proportion of population who reported 14 or more days of poor mental health, which includes stress, depression, and problems with emotions, during the past 30 days
	Suicide rate	Age-adjusted rate of death from suicide per 100,000 population
	Psychological distress	Using the Kessler 6 (K6) scale, proportion of the population with any score greater than or equal to 13

Areas of Topic	Measures	Descriptions
	Major depressive episode	Proportion of the population reporting at least one period two weeks or longer of either a depressed mood or loss of interest or pleasure in the past year, and at least four other symptoms that reflect a change in functioning such as problems with sleep, eating, energy, concentration, and self-image

Bay Arenac Behavioral Health (BABH)/Riverhaven Coordinating Agency

The BABH/Riverhaven Coordinating Agency serves six counties including Arenac, Bay, Huron, Montcalm, Shiawassee, and Tuscola counties, and includes the city of Bay City.

Community Context

Demographic Characteristics

In the region, twenty-three percent of the population was under 18 years of age and 15.2 percent was 65 years of age and older. These were comparable to the state. The population was less diverse in the region than the state as a whole. There were fewer non-whites in the region (6.4%) vs. the state (22.5%).

Table 1. Region: Demographic Characteristics, 2005-2009		
Demographic Characteristics	Region	State
Total population	348,081	10,039,208
Population under age 18	81,493 (23.4%)	2,438,971 (24.3%)
Population over age 65	52,873 (15.2%)	1,292,048 (12.9%)
% Hispanic or Latino	2.9	4.0
% White	93.6	77.5
% Black of African American	1.2	13.9
% Native American	0.4	0.5
% Asian	0.4	2.3
% Hawaiian and Pacific Islander	0.0	0.0
% Other	0.0	0.1
% Multiple Races	1.4	1.6

Source: U.S. Census Bureau, American Community Survey, 2005-2009

Economic Characteristics

Based on U.S. Census data from 2005-2009, the median income of households in the region was $43,185. Overall, the indicators of economic stability were comparable to the state.

Table 2. Region: Economic Characteristics, 2005-2009		
Economic Characteristics	Region	State
Median household income	$43,185	$48,700
% Unemployed	10.4	10.4
% Family below poverty level	10.3	10.3

Table 2. Region: Economic Characteristics, 2005-2009		
Economic Characteristics	Region	State
% Individuals below poverty level	13.9	14.5
% Under age 18 in poverty	19.5	19.8

Source: U.S. Census Bureau, American Community Survey, 2005-2009

Social Characteristics

Table 3 includes some indicators of education, health, and public safety in this region, as compared to the state as a whole. For adults 25 or older, the percentage of people having a bachelor's degree or higher was lower in the region compared to the state. The infant mortality rate and the violent crime rate were significantly lower in the region than in the state.

Table 3. Region: Social Characteristics, 2005-2009		
Social Characteristics	Region (95% CI)	State (95% CI)
% Adults with Bachelor's degree or higher[1]	14.7	24.5
% Adults with obesity[2]	29.4 (25.8-33.3)	29.2 (28.4-30.0)
% No health insurance coverage[2]	12.3 (9.2-16.1)	14.2 (13.4-14.9)
Infant mortality rate (per 1,000) [3]	5.9 (4.8-7.0)	7.6 (7.4-7.8)
Violent crime rate (per 1,000) [4]	2.1 (2.1-2.2)	5.1 (5.1-5.2)

Source: [1]U.S. Census Bureau, American Community Survey, 2005-2009 [2]Michigan BRFS, 2006-2008 [3]Michigan Resident Birth and Death Files, 2005-2009, Division for Vital Records and Health Statistics [4]Michigan Uniform Crime Report, 2005-2009

Alcohol Use
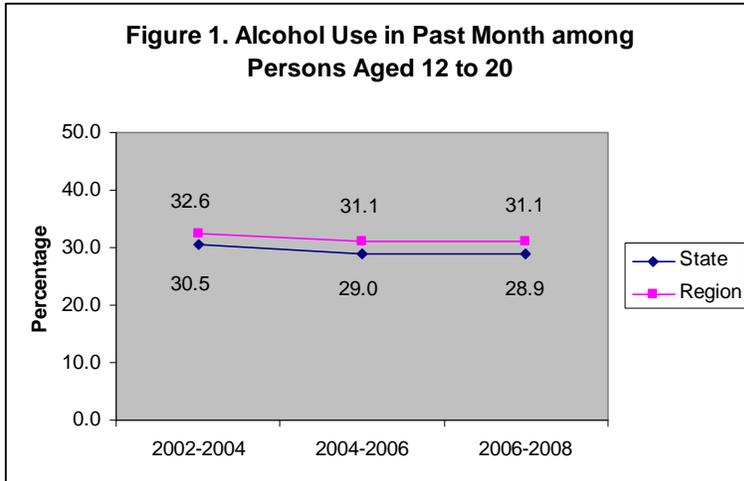
Alcohol Consequences

The rate of alcohol-impaired fatalities or serious injuries in motor vehicle crashes was significantly higher in the region than in the state.

Table 4. Alcohol: Consequences, 2005-2009		
Alcohol Consequences	Region (95% CI)	State (95% CI)
Alcohol-impaired fatality or serious injury rate (per 100,000)[1]	25.0 (22.7-27.4)	16.6 (16.2-16.9)
Alcohol-induced death rate (per 100,000) [2]	6.1 (5.0-7.2)	6.8 (6.6-7.0)

Source: [1]Crash Statistics, Michigan State Police, Criminal Justice Information Center [2]Michigan Resident Death File, Michigan Department of Community Health, Division for Vital Records and Health Statistics

Alcohol Consumption

Figure 1 shows the prevalence estimates of self-reported alcohol use in the past month for persons 12 to 20 years of age between 2002 and 2008. Among persons 12 to 20 years of age, one out of five reported binge alcohol use between 2006 and 2008 (Figure 2). Binge drinking is defined as consuming five or more drinks per occasion (for men), or four or more drinks per occasion (for women), in the previous month.

Figure 1. Alcohol Use in Past Month among Persons Aged 12 to 20

Source: SAMHSA, National Survey on Drug Use and Health

Figure 2. Binge Alcohol Use in Past Month among Persons Aged 12 to 20
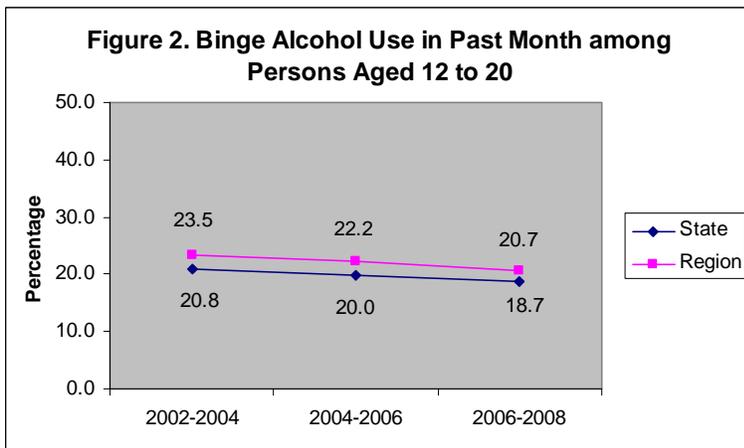
Source: SAMHSA, National Survey on Drug Use and Health

For those 18 years of age and older, the proportion of binge alcohol use and the proportion of heavy drinking, defined as consuming an average of more than two alcohol drinks per day for men, or more than one per day for women, in the previous month, were close to the state's proportion (Figure 3).
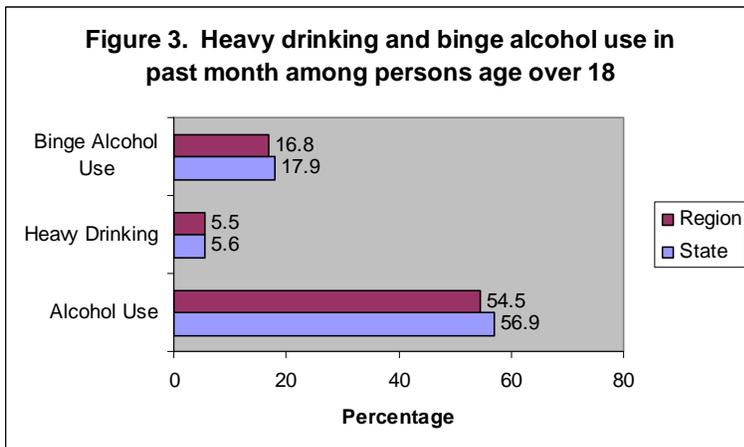
Figure 3. Heavy drinking and binge alcohol use in past month among persons age over 18

Source: Michigan BRFS, 2006-2008

Alcohol Intervening Factors

The percent of persons 12 years of age or older who reported that they saw heavy drinking as a risk and the percent of people who met the criteria for treatment of an alcohol problem, but not receiving, treatment in the past year, were comparable to the state proportions.
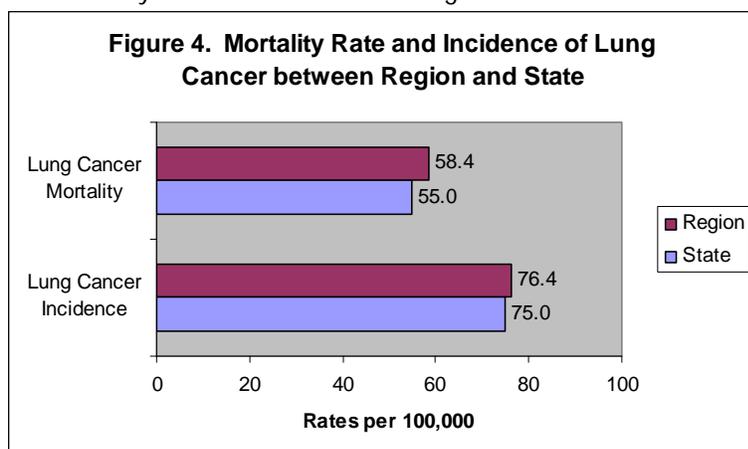
Table 5. Alcohol Consumption Intervening Factor, 2006-2008		
	Region (95% CI)	State (95% CI)
% Reporting a perception of great risk in having five or more drinks of an alcoholic beverage once or twice a week	35.1 (31.3-39.2)	38.4 (37.1-39.6)
% Reporting needing, but not receiving, treatment for alcohol use in past year	7.1 (5.6-9.0)	7.4 (6.8-8.0)

Source: SAMHSA, National Survey on Drug Use and Health, 2006-2008

Tobacco Use

Tobacco Consequences

The mortality rate and incidence of lung cancer were similar to state levels.

Figure 4. Mortality Rate and Incidence of Lung Cancer between Region and State

	Region	State
Lung Cancer Mortality	58.4	55.0
Lung Cancer Incidence	76.4	75.0

Rates per 100,000

Source: Michigan Resident Cancer Incidence File, Includes cases diagnosed in 2003 - 2007 and deaths in 2005-2009, processed by the Michigan Department of Community Health, Division for Vital Records and Health Statistics

Tobacco Consumption

For self-reported cigarette and tobacco product use in the past month, on average 30 percent of persons 12 years of age and older in the region smoked cigarette and 35 percent of them smoked other tobacco products between 2006 and 2008. The tobacco consumption prevalence in the region has remained relatively steady in the region from 2002 to 2008, while the tobacco consumption among all Michigan adults has decreased slightly over the same period of time.
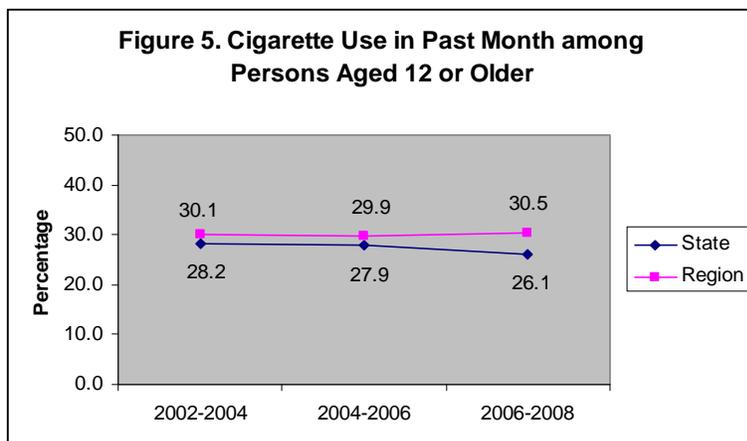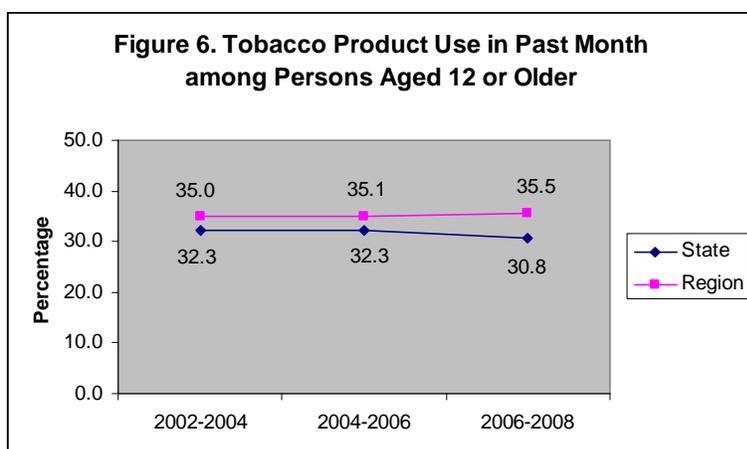
Figure 5. Cigarette Use in Past Month among Persons Aged 12 or Older

	2002-2004	2004-2006	2006-2008
Region	30.1	29.9	30.5
State	28.2	27.9	26.1

Source: SAMHSA, National Survey on Drug Use and Health

Figure 6. Tobacco Product Use in Past Month among Persons Aged 12 or Older

	2002-2004	2004-2006	2006-2008
Region	35.0	35.1	35.5
State	32.3	32.3	30.8

Source: SAMHSA, National Survey on Drug Use and Health

Tobacco Intervening Factor

The percent of people who saw heavy smoking as a risk was significantly lower in the region than the state.

Table 6. Tobacco Intervening Factor, 2006-2008		
	Region (95% CI)	State (95% CI)
% Reporting a perception of great risk of smoking one or more packs of cigarettes per day	66.7 (62.9-70.3)	71.6 (70.4-72.8)

Source: SAMHSA, National Survey on Drug Use and Health, 2006-2008

Drug Use

Drug Use Consequences

Between 2005 and 2009, drug use contributed about 14 deaths per 100,000 people in the region. The drug-induced morality rate in the region was not significantly different from the state's.

Table 7. Drug Use Consequences, 2005-2009		
	Region (95% CI)	State (95% CI)
Drug-induced mortality (per 100,000)	13.8 (12.0-15.6)	15.4 (15.1-15.7)

Source: Michigan Resident Death File, MDCH, Division for Vital Records and Health Statistics

Drug Use Consumption

Among people 12 years of age and older, the prevalence estimates of self-reported marijuana use have decreased both in the region and in the state since 2002. The prevalence in the region was slightly, but not significantly, lower than the state's rate between 2006 and 2008. The prevalence of self-reported cocaine use and nonmedical use of pain relievers in the past year were comparable in the region to the state between 2002 and 2008.
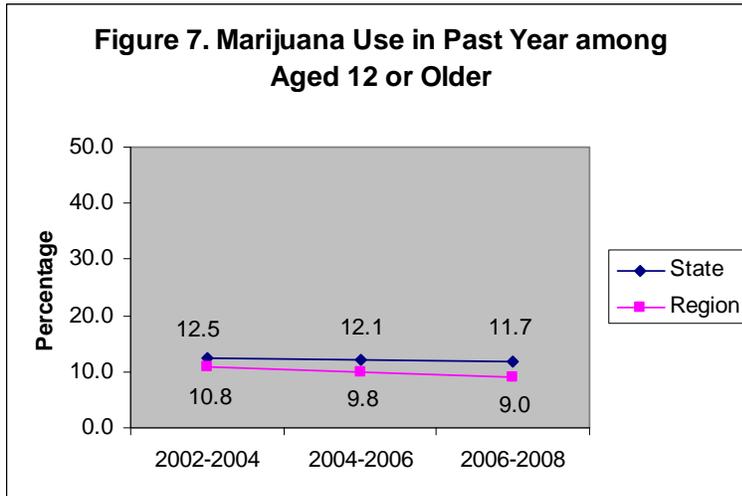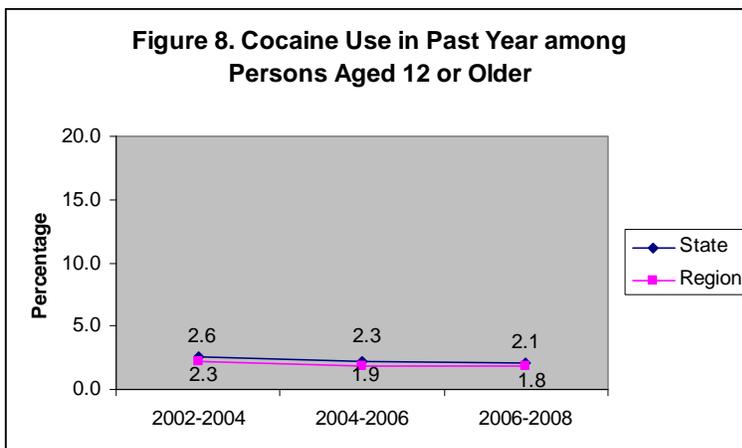
Figure 7. Marijuana Use in Past Year among Aged 12 or Older

Source: SAMHSA, National Survey on Drug Use and Health

Figure 8. Cocaine Use in Past Year among Persons Aged 12 or Older

Source: SAMHSA, National Survey on Drug Use and Health

Figure 9. Nonmedical Use of Pain Relievers in Past Year among Persons Aged 12 or Older

	2002-2004	2004-2006	2006-2008
State (above line)	5.5	5.5	5.6
Region (below line)	5.3	5.6	5.3

Y-axis: Percentage (0.0 – 20.0)

Legend: State, Region
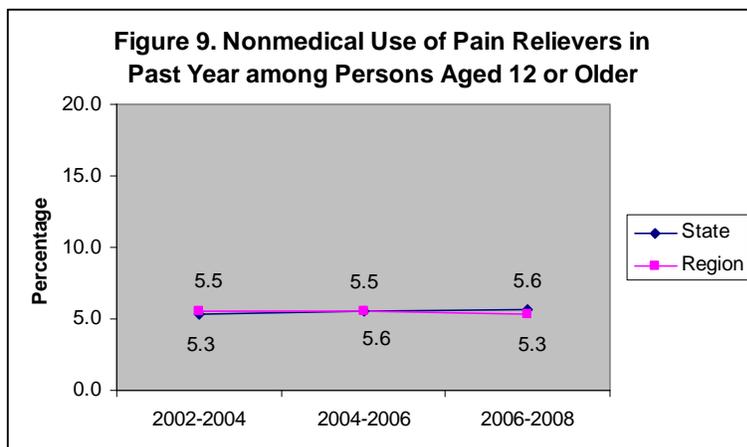
Source: SAMHSA, National Survey on Drug Use and Health

Drug Use Intervening Factors

The percent of people who met the criteria for treatment of an illicit drug use problem, but not receiving, treatment in the past year was comparable to the state.

Table 8. Drug Use Intervening Factors, 2006-2008		
	Region (95% CI)	State (95% CI)
Average annual rate of first use of marijuana per 1,000 potential new users	1.5 (1.2-1.9)	1.9 (1.8-2.1)
% Reporting a perception of great risk of smoking marijuana once a month	37.8 (32.8-43.1)	34.4 (33.1-35.7)
% Reporting needing, but not receiving, treatment for Illicit drug use in past year	2.1 (1.5-3.1)	2.5 (2.3-2.8)

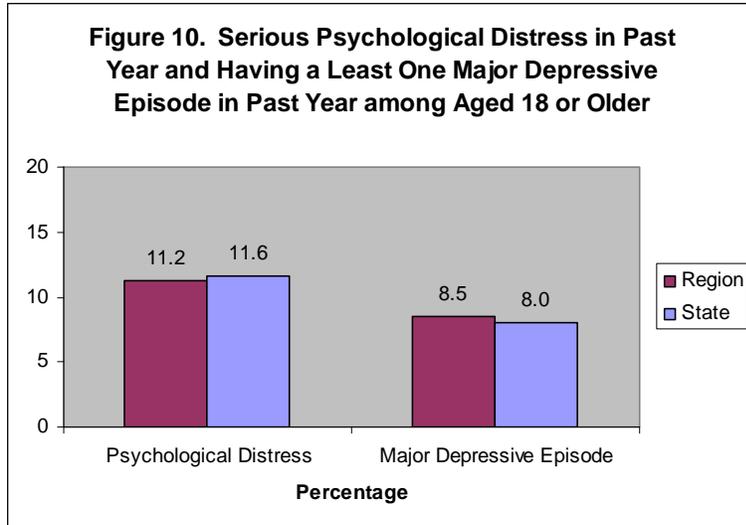Source: SAMHSA, National Survey on Drug Use and Health, 2006-2008

Mental Health Indicators

Between 2005 and 2009, the region's age-adjusted suicide rate was significantly higher than the state's rate.

Table 9. Mental Health Indicators, 2006-2008 (2005-2009[2])		
	Region (95% CI)	State (95% CI)
% Perceiving self in poor physical health[1]	9.6 (7.8-11.8)	10.9 (10.5-11.4)
% Perceiving in poor mental health[1]	10.8 (8.5-13.6)	10.8 (10.3-11.3)
Suicide rate, age-adjusted[2]	14.4 (12.6-16.2)	11.1 (10.8-11.4)

Source: [1]Michigan BRFS, 2006-2008 [2]MDCH, Division for Vital Records and Health Statistics, 2005-2009

The prevalence estimates of psychological distress and having a least one major depressive episode in the past year among people 18 years of age or older in the region were comparable to state estimates.

Figure 10. Serious Psychological Distress in Past Year and Having a Least One Major Depressive Episode in Past Year among Aged 18 or Older

Source: SAMHSA, National Survey on Drug Use and Health, 2004-2006

Kalamazoo Community Mental Health and Substance Abuse Services

The Kalamazoo Community Mental Health and Substance Abuse Services serves seven counties including Barry, Branch, Calhoun, Cass, Kalamazoo, St. Joseph, and Van Buren counties in southwest Michigan, and includes the cities of Kalamazoo and Battle Creek.

Community Context

Demographic Characteristics
In the region, about twenty-four percent of the population was under 18 years of age and 13 percent was 65 years of age and older. These were comparable to the state.

Table 1. Region: Demographic Characteristics, 2005-2009		
Demographic Characteristics	Region	State
Total population	677,361	10,039,208
Population under age 18 (%)	162,222 (23.9%)	2,438,971 (24.3%)
Population over age 65 (%)	87,933 (13.0%)	1,292,048 (12.9%)
% Hispanic or Latino	4.4	4.0
% White	84.8	77.5
% Black of African American	6.9	13.9
% Native American	0.5	0.5
% Asian	1.3	2.3
% Hawaiian and Pacific Islander	0.0	0.0
% Other	0.1	0.1
% Multiple Races	1.8	1.6

Source: U.S. Census Bureau, American Community Survey, 2005-2009

Economic Characteristics

Based on U.S. Census data from 2005-2009, the median income of households in the region was $44,678. Between 2005 and 2009, 15.9 percent of individuals in the region were in poverty. About twenty percent of related children under 18 years of age were below the poverty level, while 10.8 percent of all families had incomes below the poverty level. Overall, the indicators of economic stability were comparable to the state.

Table 2. Region: Economic Characteristics, 2005-2009		
Economic Characteristics	Region	State
Median household income	$44,678	$48,700
% Unemployed	10.2	10.4
% Family below poverty level	10.8	10.3
% Individuals below poverty level	15.9	14.5
% Under age 18 in poverty	20.2	19.8

Source: U.S. Census Bureau, American Community Survey, 2005-2009

Social Characteristics

Table 3 includes some indicators measuring performance in education, health, and public safety. The violent crime rate was significantly lower in the region than in the state.

Table 3. Region: Social Characteristics, 2005-2009		
Social Characteristics	Region (95% CI)	State (95% CI)
% Adults with Bachelor's degree or higher[1]	22.4	24.5
% Adults with obesity[2]	28.5 (25.6-31.7)	29.2 (28.4-30.0)
% No health insurance coverage[2]	12.5 (10.3-15.2)	14.2 (13.4-14.9)
Infant mortality rate (per 1,000) [3]	8.2 (7.4-9.0)	7.6 (7.4-7.8)
Violent crime rate (per 1,000) [4]	4.1 (4.0-4.1)	5.1 (5.1-5.2)

Source: [1]U.S. Census Bureau, American Community Survey, 2005-2009 [2]Michigan BRFS, 2006-2008 [3]Michigan Resident Birth and Death Files, 2005-2009, Division for Vital Records and Health Statistics [4]Michigan Uniform Crime Report, 2005-2009
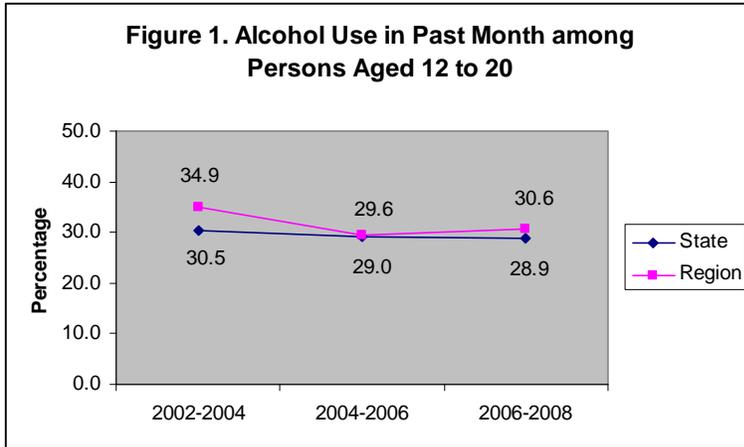
Alcohol Use

Alcohol Consequences

The rate of alcohol-impaired fatalities or serious injuries in motor vehicle crashes was higher in the region than in the state. The region also had a significantly higher rate of deaths from alcohol-attributable conditions compared to the state as a whole.

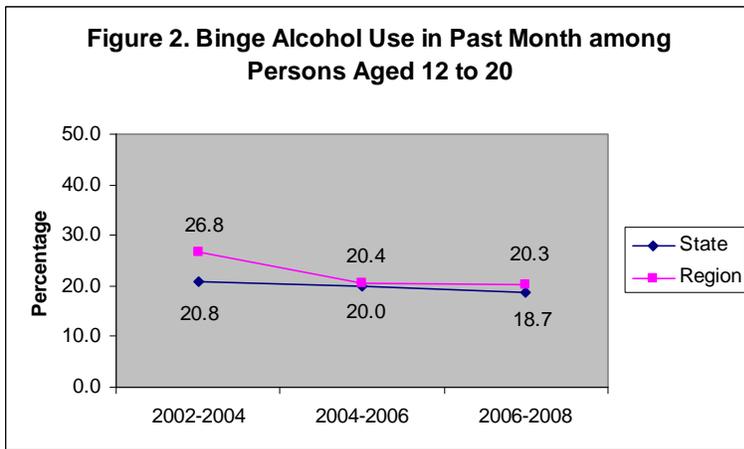| Table 4. Alcohol: Consequences, 2005-2009		
Alcohol Consequences	Region (95% CI)	State (95% CI)
Alcohol-impaired fatality or serious injury rate (per 100,000)[1]	22.7 (21.1-24.3)	16.6 (16.2-16.9)
Alcohol-induced death rate (per 100,000) [2]	8.4 (7.5-9.3)	6.8 (6.6-7.0)

Source: [1]Crash Statistics, Michigan State Police, Criminal Justice Information Center [2]Michigan Resident Death File, Michigan Department of Community Health, Division for Vital Records and Health

Alcohol Consumption

Among people 12 to 20 years of age, the prevalence estimates of self-reported alcohol and binge drinking in the past month were not significantly different from the state (Figure 1 and Figure 2) except binge drinking between 2002 and 2004. Binge drinking is defined as consuming five or more drinks per occasion (for men), or four or more drinks per occasion (for women), in the previous month.
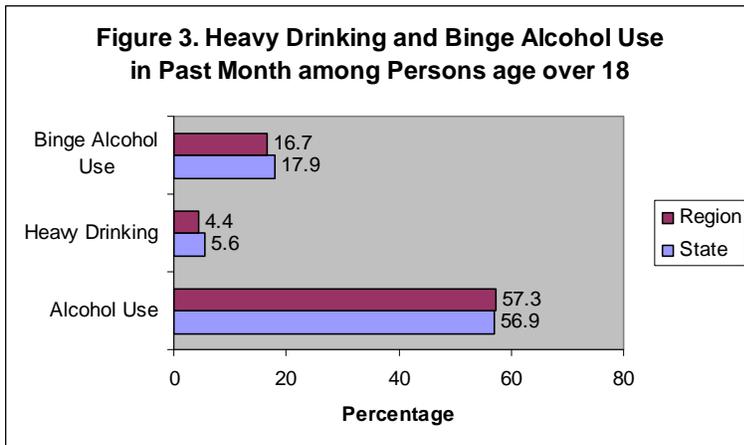
Figure 1. Alcohol Use in Past Month among Persons Aged 12 to 20

	2002-2004	2004-2006	2006-2008
Region	34.9	29.6	30.6
State	30.5	29.0	28.9

Source: SAMHSA, National Survey on Drug Use and Health

Figure 2. Binge Alcohol Use in Past Month among Persons Aged 12 to 20

	2002-2004	2004-2006	2006-2008
Region	26.8	20.4	20.3
State	20.8	20.0	18.7

Source: SAMHSA, National Survey on Drug Use and Health

For those 18 years of age and older, the proportion of binge alcohol use and the proportion of heavy drinking, defined as consuming an average of more than two alcohol drinks per day for men, or more than one per day for women, in the previous month, were close to state proportions (Figure 3).

Figure 3. Heavy Drinking and Binge Alcohol Use in Past Month among Persons age over 18

	Region	State
Binge Alcohol Use	16.7	17.9
Heavy Drinking	4.4	5.6
Alcohol Use	57.3	56.9

Source: Michigan BRFS, 2006-2008

Alcohol Intervening Factors

There were no significant differences between the region and the state for the percent of persons who saw heavy drinking as a risk and the percent of people needing but not receiving, treatment for an alcohol problem in the past year.

Table 5. Alcohol Consumption Intervening Factor, 2006-2008		
	Region (95% CI)	State (95% CI)
% Reporting a perception of great risk in having five or more drinks of an alcoholic beverage once or twice a week	37.6 (34.4-40.9)	38.4 (37.1-39.6)
% Reporting needing, but not receiving, treatment for alcohol use in past year	7.5 (6.1-9.2)	7.4 (6.8-8.0)

Source: SAMHSA, National Survey on Drug Use and Health, 2006-2008
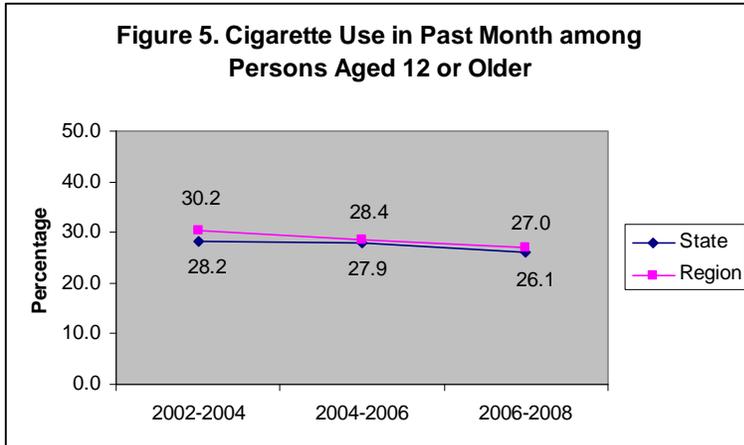
Tobacco Use

Tobacco Consequences

The rate of lung cancer deaths in the region was significantly higher than in the state, while the incidence of lung cancer was comparable to the state's prevalence.
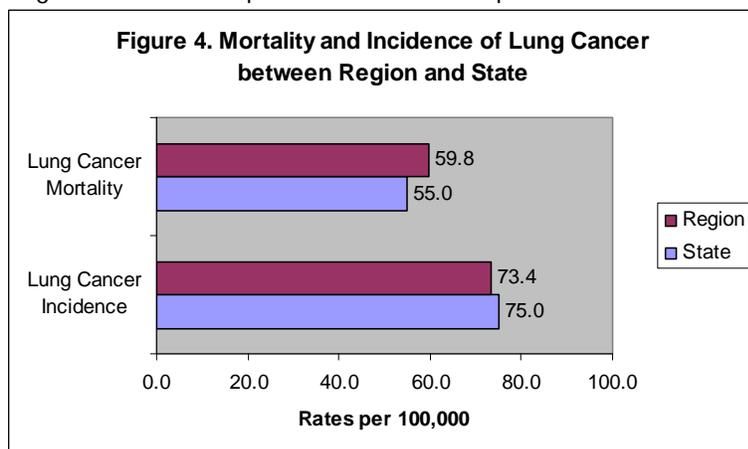
Figure 4. Mortality and Incidence of Lung Cancer between Region and State
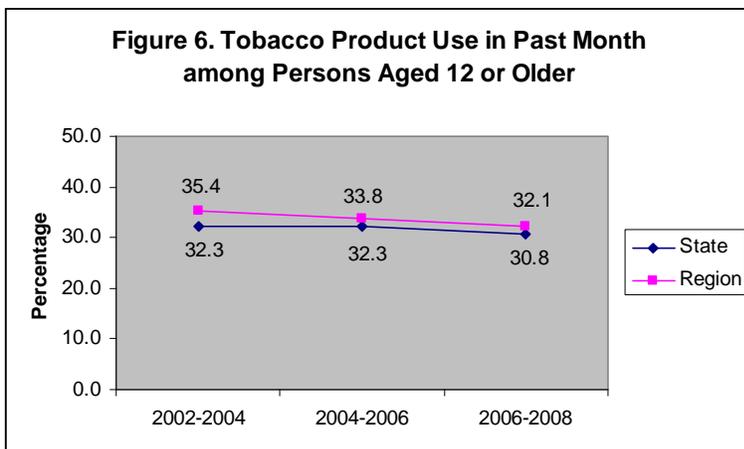
Source: Michigan Resident Cancer Incidence File, Includes cases diagnosed in 2003 - 2007 and deaths in 2005-2009, processed by the Michigan Department of Community Health, Division for Vital Records and Health Statistics

Tobacco Consumption

For self-reported cigarette and tobacco product use in the past month, the prevalence estimates were comparable to the state.

Figure 5. Cigarette Use in Past Month among Persons Aged 12 or Older

Percentage

- 2002-2004: Region 30.2, State 28.2
- 2004-2006: Region 28.4, State 27.9
- 2006-2008: Region 27.0, State 26.1

Legend: ◆ State, ■ Region

Source: SAMHSA, National Survey on Drug Use and Health

Figure 6. Tobacco Product Use in Past Month among Persons Aged 12 or Older

Percentage

- 2002-2004: Region 35.4, State 32.3
- 2004-2006: Region 33.8, State 32.3
- 2006-2008: Region 32.1, State 30.8

Legend: ◆ State, ■ Region

Source: SAMHSA, National Survey on Drug Use and Health

Tobacco Intervening Factor

The percent of people who saw heavy smoking as a risk was comparable to the state.

Table 6. Tobacco Intervening Factor, 2006-2008		
	Region (95% CI)	State (95% CI)
% Reporting a perception of great risk of smoking one or more packs of cigarettes per day	70.0 (66.9-73.0)	71.6 (70.4-72.8)

Source: SAMHSA, National Survey on Drug Use and Health, 2006-2008
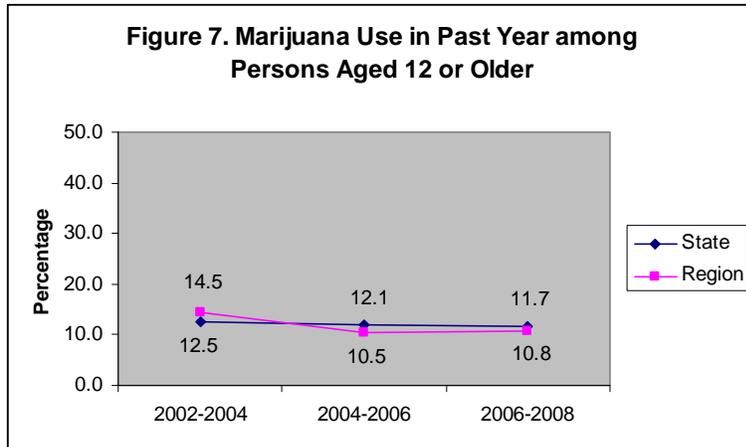
Drug Use

Drug Use Consequences

Between 2005 and 2009, the drug-induced death rate in the region was slightly, but not significantly, lower than the state's rate.

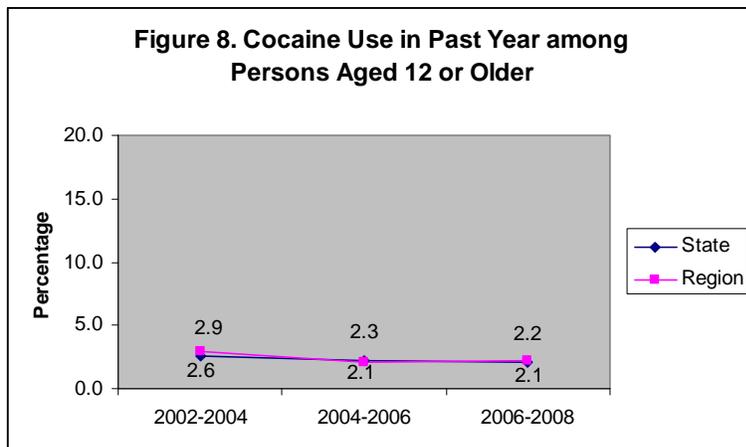| Table 7. Drug Use Consequences, 2005-2009		
	Region (95% CI)	State (95% CI)
Drug-induced mortality (per 100,000)	13.9 (12.6-15.2)	15.4 (15.1-15.7)

Source: Michigan Resident Death File, 2005-2009, MDCH, Division for Vital Records and Health Statistics
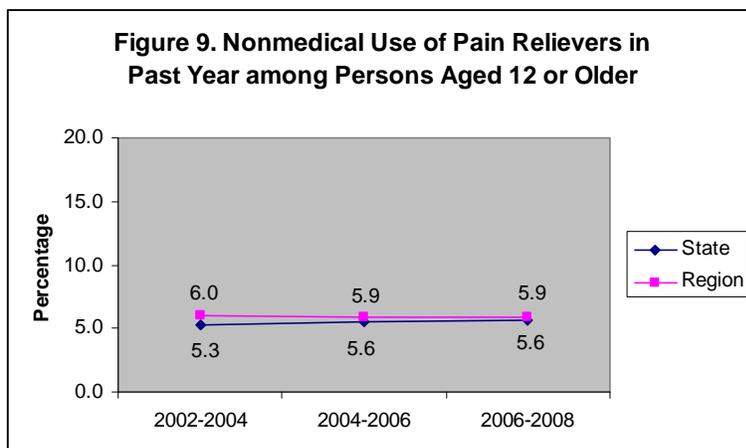
Drug Use Consumption

Among people 12 years of age and older, the prevalence estimates of self-reported marijuana use, cocaine use and nonmedical use of pain relievers in the past year were comparable to the state between 2002 and 2008.

Figure 7. Marijuana Use in Past Year among Persons Aged 12 or Older

Source: SAMHSA, National Survey on Drug Use and Health

Figure 8. Cocaine Use in Past Year among Persons Aged 12 or Older

Source: SAMHSA, National Survey on Drug Use and Health

Figure 9. Nonmedical Use of Pain Relievers in Past Year among Persons Aged 12 or Older

Source: SAMHSA, National Survey on Drug Use and Health

Drug Use Intervening Factors

Average annual rate of first use of marijuana was close to the state rate. The percent of people who saw smoking marijuana once a month as risky was similar in both region and the state.

Table 8. Drug Use Intervening Factors, 2006-2008		
	Region (95% CI)	State (95% CI)
Average annual rate of first use of marijuana per 1,000 potential new users	1.8 (1.4-2.2)	1.9 (1.8-2.1)
% Reporting a perception of great risk of smoking marijuana once a month	34.1 (30.5-38.0)	34.4 (33.1-35.7)
% Reporting needing, but not receiving, treatment for Illicit drug use in past year	1.9 (1.4-2.7)	2.5 (2.3-2.8)

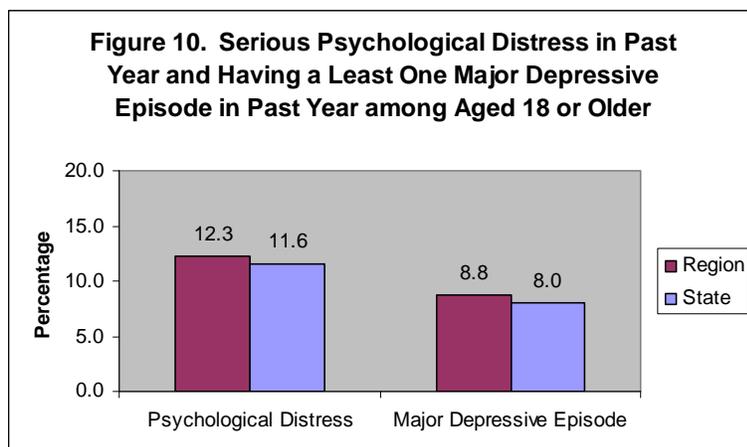Source: SAMHSA, National Survey on Drug Use and Health, 2006-2008

Mental Health Indicators

Between 2005 and 2009, the age-adjusted suicide rate was significantly higher in the region than in the state.

Table 9. Mental Health Indicators, 2006-2008 (2005-2009[2])		
	Region (95% CI)	State (95% CI)
% Perceiving self in poor physical health[1]	12.1 (10.3-14.3)	10.9 (10.5-11.4)
% Perceiving in poor mental health[1]	11.5 (9.6-13.7)	10.8 (10.3-11.3)
Suicide rate, age-adjusted[2]	13.8 (12.6-15.0)	11.1 (10.8-11.4)

Source: [1]Michigan BRFS, 2006-2008 [2]MDCH, Division for Vital Records and Health Statistics, 2005-2009

The prevalence estimates of psychological distress and having a least one major depressive episode in past year among people 18 years of age or older in the region were comparable to the state's prevalence estimates.

Figure 10. Serious Psychological Distress in Past Year and Having a Least One Major Depressive Episode in Past Year among Aged 18 or Older

Source: SAMHSA, National Survey on Drug Use and Health, 2004-2006

Mid-South Substance Abuse Commission

The Mid-South Substance Abuse Commission (MSSAC) serves nine counties including Clinton, Eaton, Gratiot, Hillsdale, Ingham, Ionia, Jackson, Lenawee, and Newaygo counties, in the middle of Michigan's Lower Peninsula, and includes the city of Lansing.

Community Context

Demographic Characteristics
In the region, twenty-three percent of the population was under 18 years of age and 12 percent was 65 years of age and older. These were comparable to the state.

Table 1. Region: Demographic Characteristics, 2005-2009		
Demographic Characteristics	Region	State
Total population	918,968	10,039,208
Population under age 18	215,096 (23.4%)	2,438,971 (24.3%)
Population over age 65	111,660 (12.2%)	1,292,048 (12.9%)
% Hispanic or Latino	4.6	4.0
% White	85.1	77.5
% Black of African American	6.1	13.9
% Native American	0.3	0.5
% Asian	1.8	2.3
% Hawaiian and Pacific Islander	0.0	0.0
% Other	0.1	0.1
% Multiple Races	2.0	1.6

Source: U.S. Census Bureau, American Community Survey, 2005-2009

Economic Characteristics
Based on U.S. Census data from 2005-2009, the median income of households in the region was $48,291. Overall, the indicators of economic stability were comparable to the state.

Table 2. Region: Economic Characteristics, 2005-2009		
Economic Characteristics	Region	State
Median household income	$48,291	$48,700
% Unemployed	8.8	10.4
% Family below poverty level	9.8	10.3
% Individuals below poverty level	14.7	14.5
% Under age 18 in poverty	18.2	19.8

Source: U.S. Census Bureau, American Community Survey, 2005-2009

Social Characteristics
Table 3 includes some indicators measuring performance in education, health, and public safety. The percent with no health insurance was significantly lower in the region than in the state. In addition, the infant mortality rate and the violent crime rate were lower than the state's rates.

Table 3. Region: Social Characteristics, 2005-2009		
Social Characteristics	Region (95% CI)	State (95% CI)
% Adults with Bachelor's degree or higher[1]	22.9	24.5

Table 3. Region: Social Characteristics, 2005-2009		
Social Characteristics	Region (95% CI)	State (95% CI)
% Adults with obesity[2]	30.1 (27.6-32.7)	29.2 (28.4-30.0)
% No health insurance coverage[2]	9.9 (8.2-11.8)	14.2 (13.4-14.9)
Infant mortality rate (per 1,000) [3]	6.5 (5.8-7.2)	7.6 (7.4-7.8)
Violent crime rate (per 1,000) [4]	3.3 (3.3-3.4)	5.1 (5.1-5.2)

Source: [1]U.S. Census Bureau, American Community Survey, 2005-2009 [2]Michigan BRFS, 2006-2008 [3]Michigan Resident Birth and Death Files, 2005-2009, Division for Vital Records and Health Statistics [4]Michigan Uniform Crime Report, 2005-2009

Alcohol Use
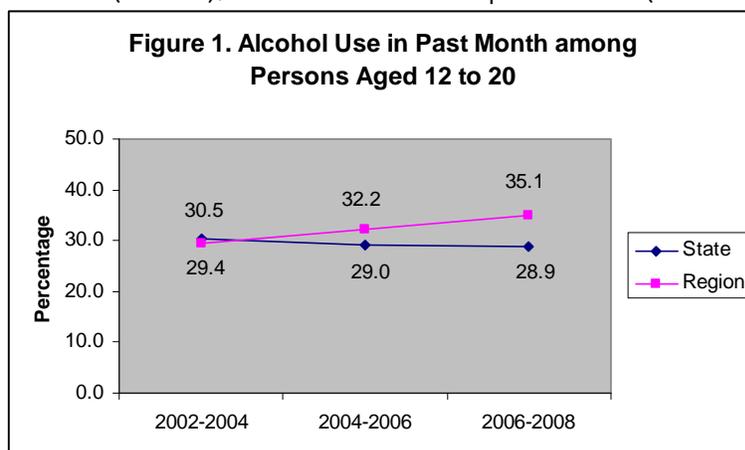
Alcohol Consequences

The rate of alcohol-impaired fatality or serious injury in motor vehicle crashes was significantly higher in the region than in the state.

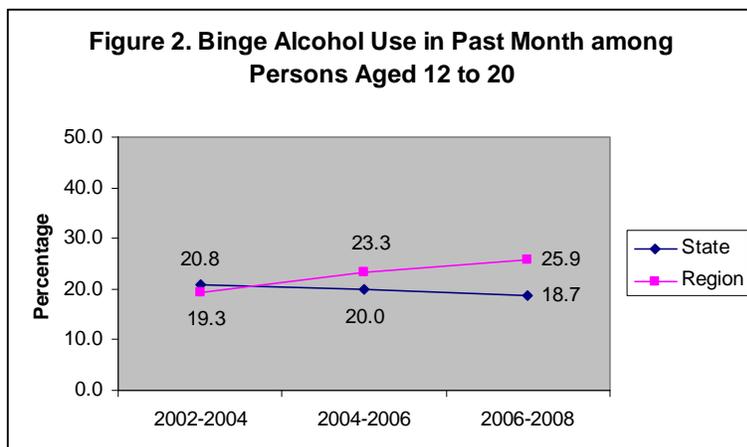| Table 4. Alcohol: Consequences, 2005-2009		
Alcohol Consequences	Region (95% CI)	State (95% CI)
Alcohol-impaired fatality or serious injury rate (per 100,000)[1]	18.8 (17.6-20.1)	16.6 (16.2-16.9)
Alcohol-induced death rate (per 100,000) [2]	6.2 (5.5-6.9)	6.8 (6.6-7.0)

Source: [1]Crash Statistics, Michigan State Police, Criminal Justice Information Center [2]Michigan Resident Death File, Michigan Department of Community Health, Division for Vital Records and Health Statistics

Alcohol Consumption

Among youth 12 to 20 years of age in the region, the prevalence estimates of self-reported alcohol and binge drinking in the past month have been increasing in the region since 2002 (Figure 1 and Figure 2), while the prevalence of alcohol and binge alcohol use among Michigan youth remained rather consistent. Between 2006 and 2008, the prevalence estimates of both alcohol and binge drinking in the region were significantly higher than the state's. Binge drinking is defined as consuming five or more drinks per occasion (for men), or four or more drinks per occasion (for women), in the previous month.
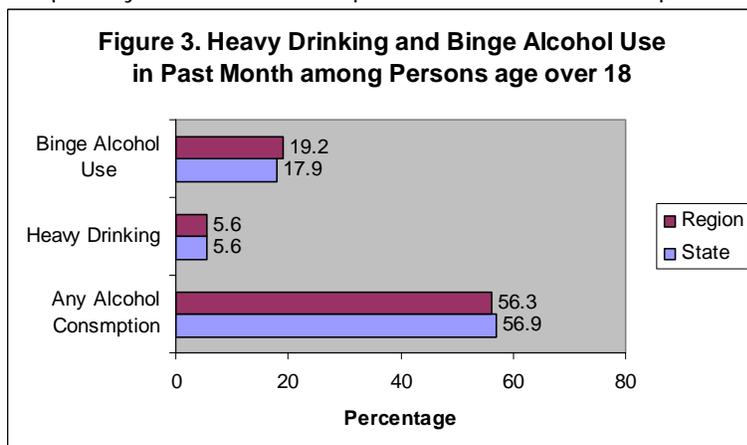

Figure 1. Alcohol Use in Past Month among Persons Aged 12 to 20

Source: SAMHSA, National Survey on Drug Use and Health

Figure 2. Binge Alcohol Use in Past Month among Persons Aged 12 to 20

Year	State	Region
2002-2004	20.8	19.3
2004-2006	20.0	23.3
2006-2008	18.7	25.9

Source: SAMHSA, National Survey on Drug Use and Health

For those 18 years of age and older, the proportion of binge alcohol use and the proportion of heavy drinking, defined as consuming an average of more than two alcohol drinks per day for men, or more than one per day for women, in the previous month, were comparable to state proportions (Figure 3).

Figure 3. Heavy Drinking and Binge Alcohol Use in Past Month among Persons age over 18

Category	Region	State
Binge Alcohol Use	19.2	17.9
Heavy Drinking	5.6	5.6
Any Alcohol Consmption	56.3	56.9

Source: Michigan BRFS, 2006-2008

Alcohol Intervening Factors

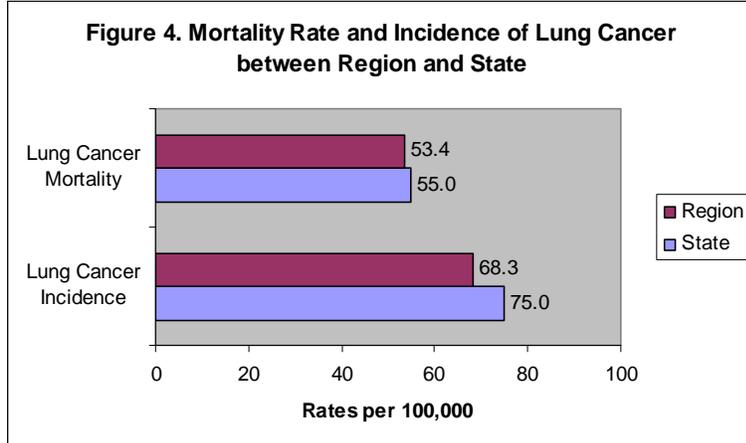There were no significant differences between the region and the state for these alcohol intervening factors.

Table 5. Alcohol Consumption Intervening Factor, 2006-2008		
	Region (95% CI)	State (95% CI)
% Reporting a perception of great risk in having five or more drinks of an alcoholic beverage once or twice a week	35.5 (32.6-38.4)	38.4 (37.1-39.6)
% Reporting needing, but not receiving, treatment for alcohol use in past year	8.4 (7.2-9.8)	7.4 (6.8-8.0)

Source: SAMHSA, National Survey on Drug Use and Health, 2006-2008
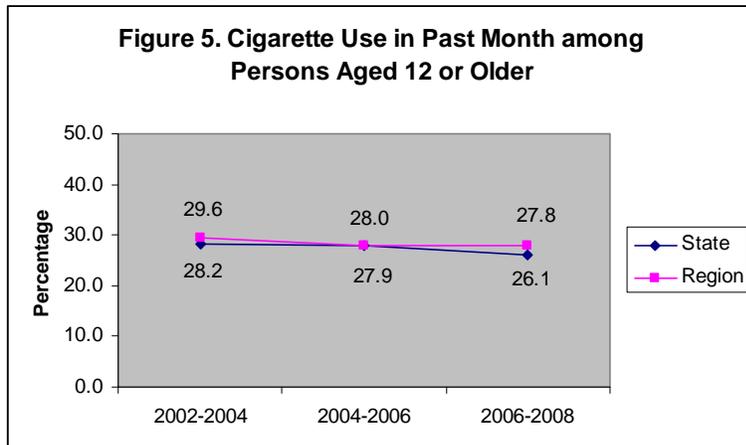
Tobacco Use

Tobacco Consequences

The lung cancer death rate in the region was comparable to the state's rate, while the incidence of lung cancer in the region was significantly lower than the state's prevalence estimate.

Figure 4. Mortality Rate and Incidence of Lung Cancer between Region and State

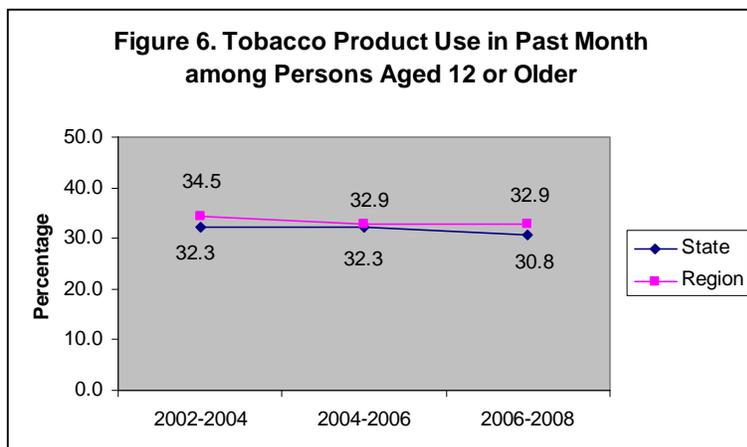| Category	Region	State
Lung Cancer Mortality	53.4	55.0
Lung Cancer Incidence	68.3	75.0

Rates per 100,000

Source: Michigan Resident Cancer Incidence File, Includes cases diagnosed in 2003 - 2007 and deaths in 2005-2009, processed by the Michigan Department of Community Health, Division for Vital Records and Health Statistics

Tobacco Consumption

For self-reported cigarette and tobacco product use in the past month, the prevalence estimates in the region were not significantly different from the state's estimate between 2002 and 2008.

Figure 5. Cigarette Use in Past Month among Persons Aged 12 or Older

	2002-2004	2004-2006	2006-2008
Region	29.6	28.0	27.8
State	28.2	27.9	26.1

Source: SAMHSA, National Survey on Drug Use and Health

Figure 6. Tobacco Product Use in Past Month among Persons Aged 12 or Older

Source: SAMHSA, National Survey on Drug Use and Health

Tobacco Intervening Factor

Between 2006 and 2008, the percent of people who saw heavy smoking as a risk in the region was comparable to the state.

Table 6. Tobacco Intervening Factor, 2006-2008		
	Region	State
% Reporting a perception of great risk of smoking one or more packs of cigarettes per day	70.9 (68.1-73.5)	71.6 (70.4-72.8)

Source: SAMHSA, National Survey on Drug Use and Health, 2006-2008
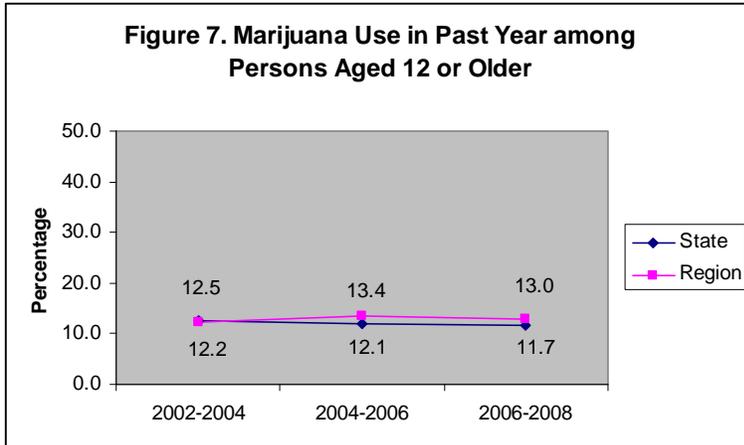
Drug Use

Drug Use Consequences

Between 2005 and 2009, the drug-induced death rate in the region was significantly lower than the state's rate.

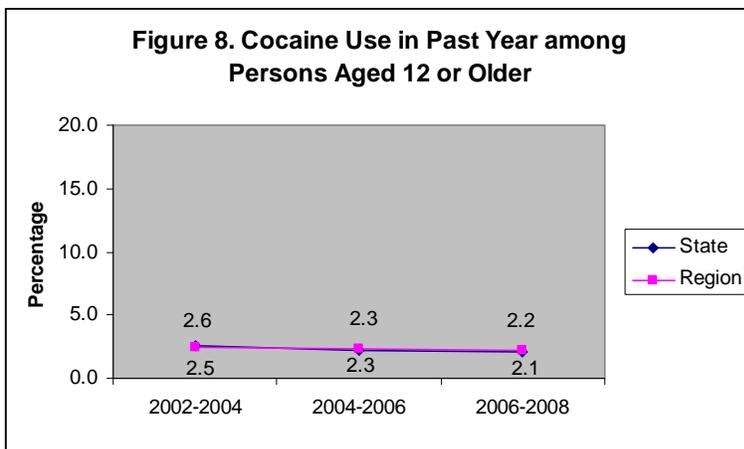| Table 7. Drug Use Consequences, 2005-2009		
	Region (95% CI)	State (95% CI)
Drug-induced mortality (per 100,000)	10.9 (9.9-11.9)	15.4 (15.1-15.7)

Source: Michigan Resident Death File, MDCH, Division for Vital Records and Health Statistics
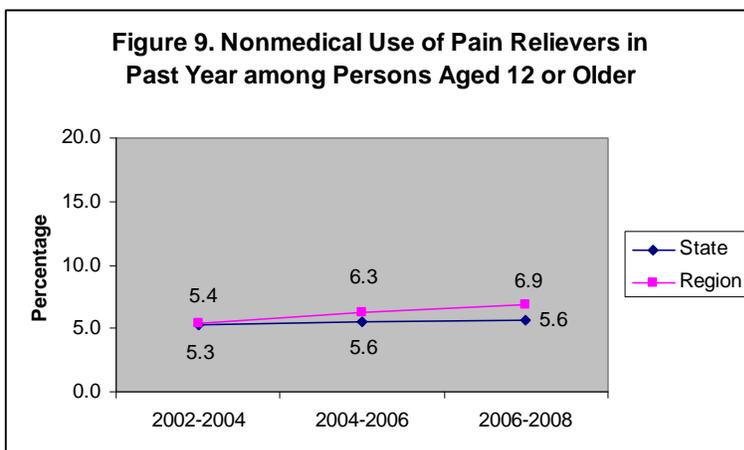
Drug Use Consumption

Among people 12 years of age and older, the prevalence of self-reported marijuana use and cocaine use in the past year were comparable to the state during 2002 to 2008. The prevalence estimate of self-reported nonmedical use of pain relievers increased from 5.4 percent during 2002 to 2004 to 6.9 percent during 2006 to 2008.

Figure 7. Marijuana Use in Past Year among Persons Aged 12 or Older

Source: SAMHSA, National Survey on Drug Use and Health

Figure 8. Cocaine Use in Past Year among Persons Aged 12 or Older

Source: SAMHSA, National Survey on Drug Use and Health

Figure 9. Nonmedical Use of Pain Relievers in Past Year among Persons Aged 12 or Older

Source: SAMHSA, National Survey on Drug Use and Health

Drug Use Intervening Factors

Average annual rate of first use of marijuana was close to the state rate. The percent of people who saw smoking marijuana once a month as risky was comparable to the state.

Table 8. Drug Use Intervening Factors, 2006-2008		
	Region (95% CI)	State (95% CI)
Average annual rate of first use of marijuana per 1,000 potential new users	2.4 (2.0-2.8)	1.9 (1.8-2.1)
% Reporting a perception of great risk of smoking marijuana once a month	32.5 (29.5-35.7)	34.4 (33.1-35.7)
% Reporting needing, but not receiving, treatment for Illicit drug use in past year	2.7 (2.1-3.4)	2.5 (2.3-2.8)

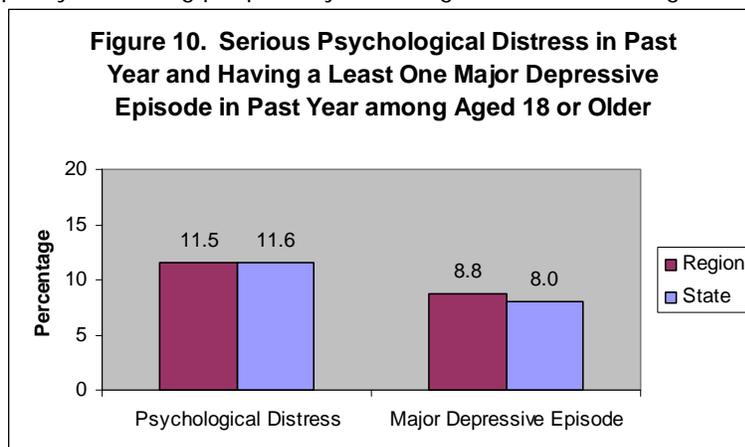Source: SAMHSA, National Survey on Drug Use and Health, 2006-2008

Mental Health Indicators

Overall, the mental health prevalence estimates and suicide rate in the region were close to the state estimates and rate.

Table 9. Mental Health Indicators, 2006-2008 (2005-2009[2])		
	Region (95% CI)	State (95% CI)
% Perceiving self in poor physical health[1]	9.6 (8.3-11.1)	10.9 (10.5-11.4)
% Perceiving in poor mental health[1]	10.5 (9.0-12.2)	10.8 (10.3-11.3)
Suicide rate, age-adjusted[2]	11.5 (10.5-12.5)	11.1 (10.8-11.4)

Source: [1]Michigan BRFS, 2006-2008 [2]MDCH, Division for Vital Records and Health Statistics, 2005-2009

The prevalence estimates of psychological distress and having a least one major depressive episode in past year among people 18 years of age or older in the region were comparable to state estimates.

Figure 10. Serious Psychological Distress in Past Year and Having a Least One Major Depressive Episode in Past Year among Aged 18 or Older

Source: SAMHSA, National Survey on Drug Use and Health, 2004-2006

Pathways to Healthy Living

The Pathways to Healthy Living serves as the coordinating agency for Alger, Chippewa, Delta, Luce, Mackinac, Marquette, Menominee, and Schoolcraft counties, in the eastern half of Michigan's Upper Peninsula (U.P.), and includes the cities of Marquette and Sault Ste. Marie.

Community Context

Demographic Characteristics

In the region, the percent of children was slightly lower, while the percent of older adults was slightly higher in the region than in the state.

Table 1. Region: Demographic Characteristics, 2005-2009		
Demographic Characteristics	Region	State
Total population	201,082	10,039,208
Population under age 18	39,527 (19.7%)	2,438,971 (24.3%)
Population over age 65	32,774 (16.3%)	1,292,048 (12.9%)
% Hispanic or Latino	1.2	4.0
% White	88.4	77.5
% Black of African American	2.7	13.9
% Native American	4.5	0.5
% Asian	0.6	2.3
% Hawaiian and Pacific Islander	0.1	0.0
% Other	0.1	0.1
% Multiple Races	2.5	1.6

Source: U.S. Census Bureau, American Community Survey, 2005-2009

Economic Characteristics

Based on US Census data from 2005 to 2009, the median income of households in the region was $41,630. Overall, the indicators of economic stability were comparable to the state.

Table 2. Region: Economic Characteristics, 2005-2009		
Economic Characteristics	Region	State
Median household income	$41,630	$48,700
% Unemployed	8.4	10.4
% Family below poverty level	9.1	10.3
% Individuals below poverty level	14.1	14.5
% Under age 18 in poverty	17.0	19.8

Source: U.S. Census Bureau, American Community Survey, 2005-2009

Social Characteristics

Table 3 includes some indicators measuring performance in education, health, and public safety comparing the state of Michigan to the region. The infant mortality rate and the violent crime rate were significantly lower in the region than in the state.

Table 3. Region: Social Characteristics, 2005-2009		
Social Characteristics	Region (95% CI)	State (95% CI)
% Adults with Bachelor's degree or higher[1]	20.1	24.5
% Adults with obesity[2]	29.6 (25.1-34.5)	29.2 (28.4-30.0)
% No health insurance coverage[2]	16.7 (12.7-21.8)	14.2 (13.4-14.9)
Infant mortality rate (per 1,000)[3]	5.7 (4.2-7.2)	7.6 (7.4-7.8)
Violent crime rate (per 1,000)[4]	1.5 (1.4-1.6)	5.1 (5.1-5.2)

Source: [1]U.S. Census Bureau, American Community Survey, 2005-2009 [2]Michigan BRFS, 2006-2008 [3]Michigan Resident Birth and Death Files, 2005-2009, Division for Vital Records and Health Statistics [4]Michigan Uniform Crime Report, 2005-2009
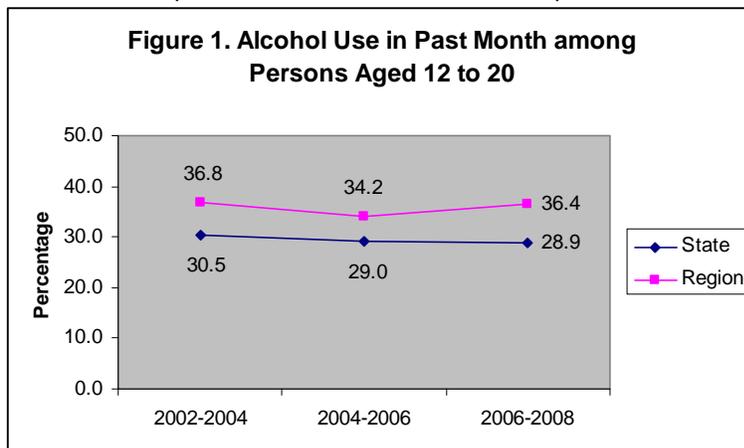
Alcohol Use

Alcohol Consequences

The rate of alcohol-impaired fatality or serious injury rate in motor vehicle crashes and the alcohol-induced death rate were significantly higher in the region than in the state.

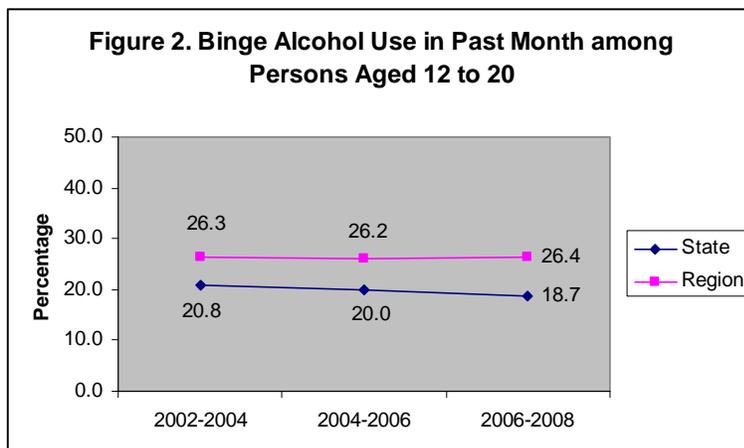| Table 4. Alcohol: Consequences, 2005-2009		
Alcohol Consequences	Region (95% CI)	State (95% CI)
Alcohol-impaired fatality or serious injury rate (per 100,000)[1]	28.7 (25.4-32.1)	16.6 (16.2-16.9)
Alcohol-induced death rate (per 100,000) [2]	11.4 (9.5-13.3)	6.8 (6.6-7.0)

Source: [1]Crash Statistics, Michigan State Police, Criminal Justice Information Center [2]Michigan Resident Death File, Michigan Department of Community Health, Division for Vital Records and Health Statistics

Alcohol Consumption

Among people 12 to 20 years of age, the prevalence estimates of self-reported alcohol use in the past month in the region were significantly higher than in the state except between 2004 and 2006, while binge drinking prevalence in the region remained significantly higher than the state estimates since 2002 (Figure 1 and Figure 2). Binge drinking is defined as consuming five or more drinks per occasion (for men), or four or more drinks per occasion (for women), in the previous month.
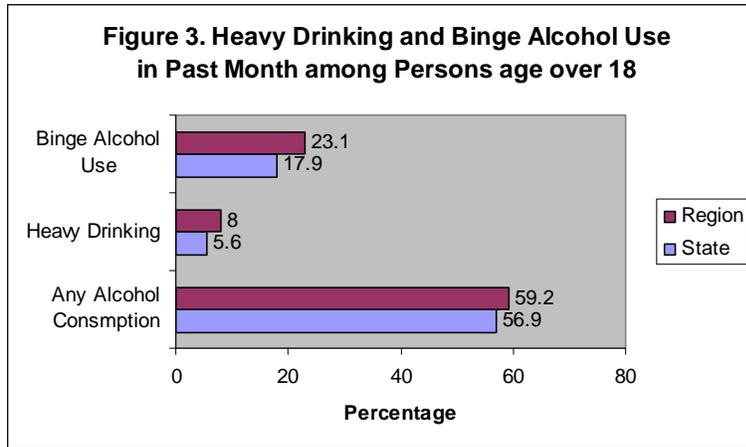

Figure 1. Alcohol Use in Past Month among Persons Aged 12 to 20

Source: SAMHSA, National Survey on Drug Use and Health

Figure 2. Binge Alcohol Use in Past Month among Persons Aged 12 to 20

Source: SAMHSA, National Survey on Drug Use and Health

For those 18 years of age and older, the proportion of binge drinking and the proportion of heavy drinking, defined as consuming an average of more than two alcohol drinks per day for men, or more than one per day for women, in the previous month, were not significantly different from state proportions (Figure 3).

Figure 3. Heavy Drinking and Binge Alcohol Use in Past Month among Persons age over 18

Category	Region	State
Binge Alcohol Use	23.1	17.9
Heavy Drinking	8	5.6
Any Alcohol Consmption	59.2	56.9

Source: Michigan BRFS, 2006-2008

Alcohol Intervening Factors

The percent of persons 12 years of age or older who saw heavy drinking as a risk was slightly, but not significantly, lower than the state's proportion.
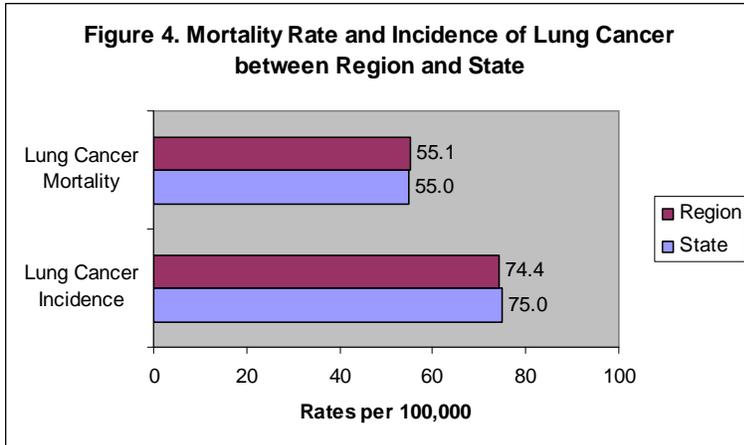
Table 5. Alcohol Consumption Intervening Factor, 2006-2008		
	Region (95% CI)	State (95% CI)
% Reporting a perception of great risk in having five or more drinks of an alcoholic beverage once or twice a week	33.5 (29.8-37.4)	38.4 (37.1-39.6)
% Reporting needing, but not receiving, treatment for alcohol use in past year	7.7 (6.2-9.6)	7.4 (6.8-8.0)

Source: SAMHSA, National Survey on Drug Use and Health, 2006-2008
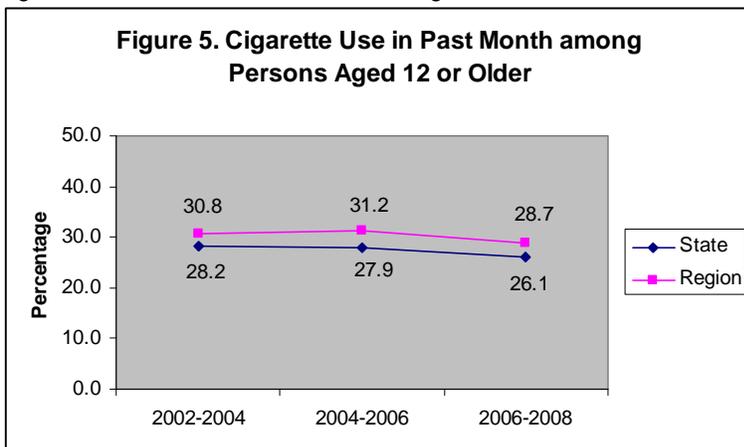
Tobacco Use

Tobacco Consequences

The lung cancer death rate and the incidence of lung cancer were comparable in the region and the state.

Figure 4. Mortality Rate and Incidence of Lung Cancer between Region and State

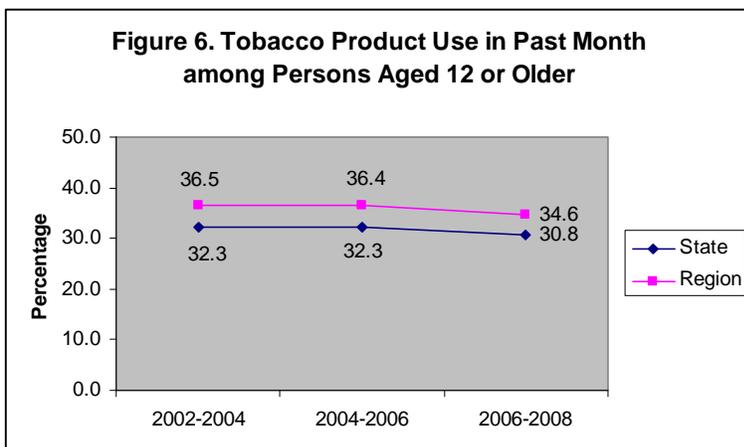|	
Lung Cancer Mortality	Region: 55.1 / State: 55.0
Lung Cancer Incidence	Region: 74.4 / State: 75.0

Rates per 100,000

Legend: Region, State

Source: Michigan Resident Cancer Incidence File, Includes cases diagnosed in 2003 - 2007 and deaths in 2005-2009, processed by the Michigan Department of Community Health, Division for Vital Records and Health Statistics

Tobacco Consumption

For self-reported cigarette and tobacco product use in the past month, the tobacco use prevalence estimates have been higher in the region than in the state since 2002. However, there were no statistical significant differences between the region's estimates and the state's.

Figure 5. Cigarette Use in Past Month among Persons Aged 12 or Older

	2002-2004	2004-2006	2006-2008
Region	30.8	31.2	28.7
State	28.2	27.9	26.1

Source: SAMHSA, National Survey on Drug Use and Health

Figure 6. Tobacco Product Use in Past Month among Persons Aged 12 or Older

	2002-2004	2004-2006	2006-2008
Region	36.5	36.4	34.6
State	32.3	32.3	30.8

Source: SAMHSA, National Survey on Drug Use and Health

Tobacco Intervening Factor

The percent of people who saw heavy smoking as a risk was comparable to the state.

Table 6. Tobacco Intervening Factor, 2006-2008		
	Region (95% CI)	State (95% CI)
% Reporting a perception of great risk of smoking one or more packs of cigarettes per day	69.2 (65.6-72.5)	71.6 (70.4-72.8)

Source: SAMHSA, National Survey on Drug Use and Health, 2006-2008
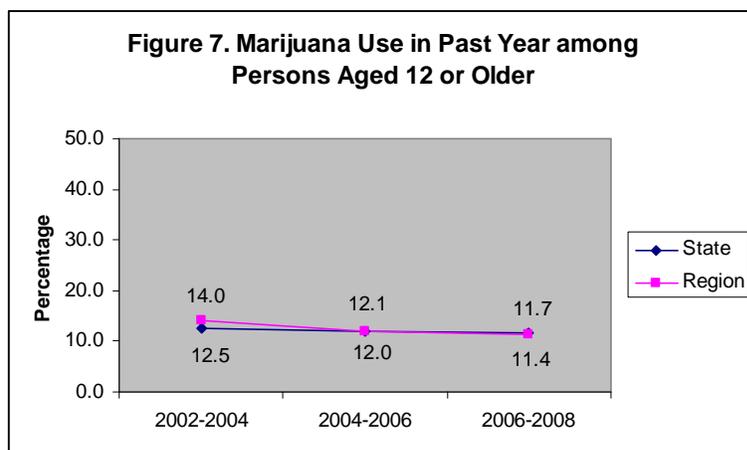
Drug Use

Drug Use Consequences

Between 2005 and 2009, the drug-induced death rate in the region was significantly lower than the state's rate.

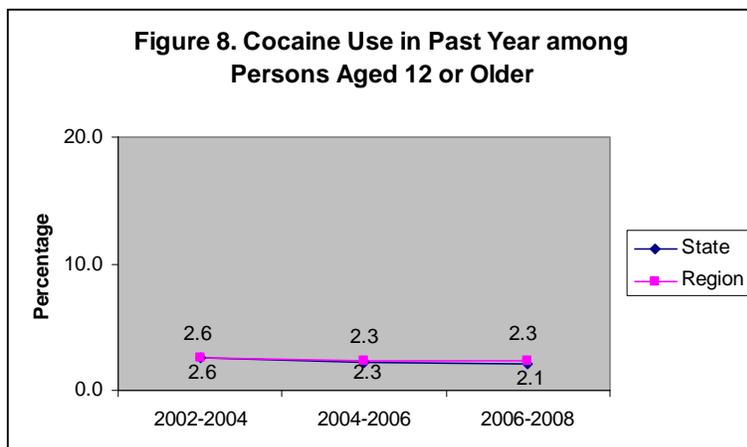| Table 7. Drug Use Consequences, 2005-2009		
	Region (95% CI)	State (95% CI)
Drug-induced mortality (per 100,000)	10.9 (8.9-12.9)	15.4 (15.1-15.7)

Source: Michigan Resident Death File, MDCH, Division for Vital Records and Health Statistics
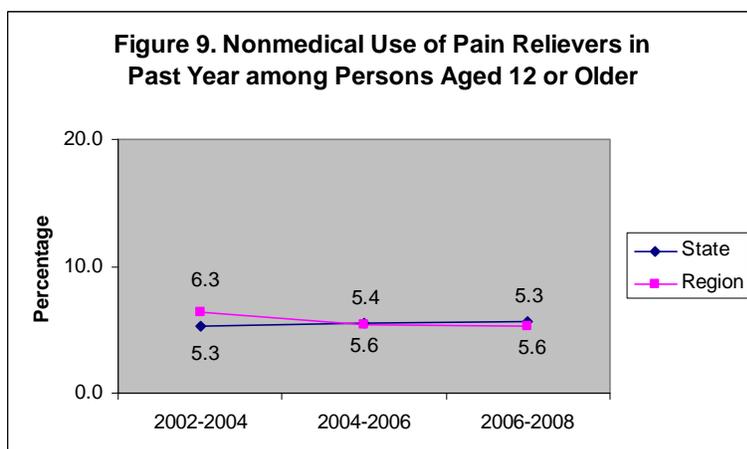
Drug Use Consumption

Among people 12 years of age and older, the prevalence estimates of self-reported marijuana use, cocaine use and nonmedical use of pain relievers in the past year were comparable to the state between 2002 and 2008.

Figure 7. Marijuana Use in Past Year among Persons Aged 12 or Older

Source: SAMHSA, National Survey on Drug Use and Health

Figure 8. Cocaine Use in Past Year among Persons Aged 12 or Older

Source: SAMHSA, National Survey on Drug Use and Health

Figure 9. Nonmedical Use of Pain Relievers in Past Year among Persons Aged 12 or Older

Source: SAMHSA, National Survey on Drug Use and Health

Drug Use Intervening Factors

Average annual rate of first use of marijuana was close to the state rate. The percent of people who saw smoking marijuana once a month as risky was comparable to the state.

Table 8. Drug Use Intervening Factors, 2006-2008		
	Region (95% CI)	State (95% CI)
Average annual rate of first use of marijuana per 1,000 potential new users	2.0 (1.6-2.6)	1.9 (1.8-2.1)
% Reporting a perception of great risk of smoking marijuana once a month	34.3 (29.6-39.4)	34.4 (33.1-35.7)
% Reporting needing, but not receiving, treatment for Illicit drug use in past year	2.7 (1.9-3.8)	2.5 (2.3-2.8)

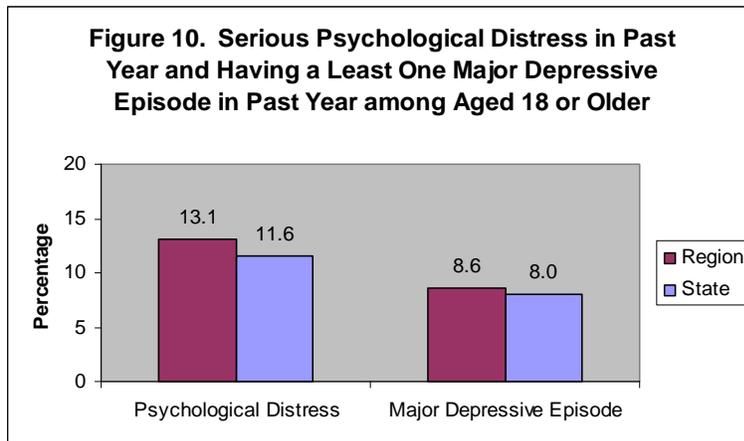Source: SAMHSA, National Survey on Drug Use and Health, 2006-2008

Mental Health Indicators

Between 2005 and 2009, the age-adjusted suicide rate in the region was significantly higher than the state's rate.

Table 9. Mental Health Indicators, 2006-2008 (2005-2009[2])		
	Region (95% CI)	State (95% CI)
% Perceiving self in poor physical health[1]	10.2 (7.9-13.1)	10.9 (10.5-11.4)
% Perceiving in poor mental health[1]	11.0 (7.9-15.1)	10.8 (10.3-11.3)
Suicide rate, age-adjusted[2]	15.8 (13.4-18.2)	11.1 (10.8-11.4)

Source: [1]Michigan BRFS, 2006-2008 [2]MDCH, Division for Vital Records and Health Statistics, 2005-2009

Between 2004 and 2006, the prevalence estimates of psychological distress and having a least one major depressive episode in past year among people 18 years of age or older in the region were comparable to state estimates.

Figure 10. Serious Psychological Distress in Past Year and Having a Least One Major Depressive Episode in Past Year among Aged 18 or Older

Source: SAMHSA, National Survey on Drug Use and Health, 2004-2006

Western Upper Peninsula Substance Abuse Services

The Western Upper Peninsula Substance Abuse Services (WUPSAS) CA serves Baraga, Dickinson, Gogebic, Houghton, Iron, Keweenaw, and Ontonagon counties, in the western half of the Michigan's Upper Peninsula (U.P.), and includes the city of Iron Mountain.

Community Context

Demographic Characteristics
The population in the region was less diverse than the state as a whole. There were fewer non-whites in the region (7.1%) compared to state (22.5%). The percentage of older adults was higher in the region than the state's proportion.

Table 1. Region: Demographic Characteristics, 2005-2009		
Demographic Characteristics	Region	State
Total population	108,114	10,039,208
Population under age 18	21,456 (19.8%)	2,438,971 (24.3%)
Population over age 65	20,469 (18.9%)	1,292,048 (12.9%)
% Hispanic or Latino	1.0	4.0
% White	92.9	77.5
% Black of African American	1.7	13.9
% Native American	2.1	0.5

Table 1. Region: Demographic Characteristics, 2005-2009		
Demographic Characteristics	Region	State
% Asian	0.9	2.3
% Hawaiian and Pacific Islander	0.0	0.0
% Other	0.1	0.1
% Multiple Races	1.3	1.6

Source: U.S. Census Bureau, American Community Survey, 2005-2009

Economic Characteristics

Based on US Census data from 2005 to 2009, the median income of households in the region was $35,463, which is lower than the state's median household income of $48,700. Overall, the indicators of economic stability were relatively similar to the state.

Table 2. Region: Economic Characteristics, 2005-2009		
Economic Characteristics	Region	State
Median household income	$35,463	$48,700
% Unemployed	7.7	10.4
% Family below poverty level	9.2	10.3
% Individuals below poverty level	15.4	14.5
% Under age 18 in poverty	19.3	19.8

Source: U.S. Census Bureau, American Community Survey, 2005-2009

Social Characteristics

Table 3 includes some indicators of education, health, and public safety in the region compared to the state as a whole. The percent of adults with bachelor's degree or higher was lower than the state's. The violent crime rate was also significantly lower in the region than in the state.

Table 3. Region: Social Characteristics, 2005-2009		
Social Characteristics	Region (95% CI)	State (95% CI)
% Adults with Bachelor's degree or higher[1]	18.2	24.5
% Adults with obesity[2]	33.0 (26.8-39.8)	29.2 (28.4-30.0)
% No health insurance coverage[2]	11.6 (7.6-17.3)	14.2 (13.4-14.9)
Infant mortality rate (per 1,000)[3]	6.2 (4.1-8.3)	7.6 (7.4-7.8)
Violent crime rate (per 1,000)[4]	1.1 (1.0-1.1)	5.1 (5.1-5.2)

Source: [1]U.S. Census Bureau, American Community Survey, 2005-2009 [2]Michigan BRFS, 2006-2008 [3]Michigan Resident Birth and Death Files, 2005-2009, Division for Vital Records and Health Statistics [4]Michigan Uniform Crime Report, 2005-2009
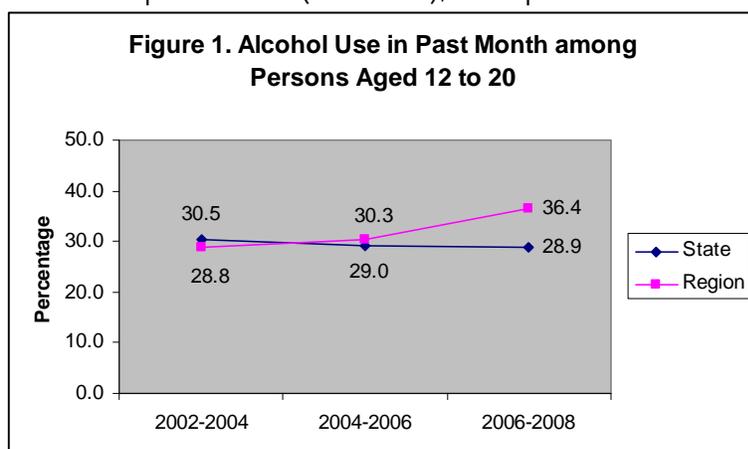
Alcohol Use

Alcohol Consequences

Between 2005 and 2009, the rate of alcohol-impaired fatality or serious injury in motor vehicle crashes was significantly higher in the region than in the state, with the regions' rate over two times higher than the state's rate. The alcohol-induced death rate was also significantly higher in the region than the state.

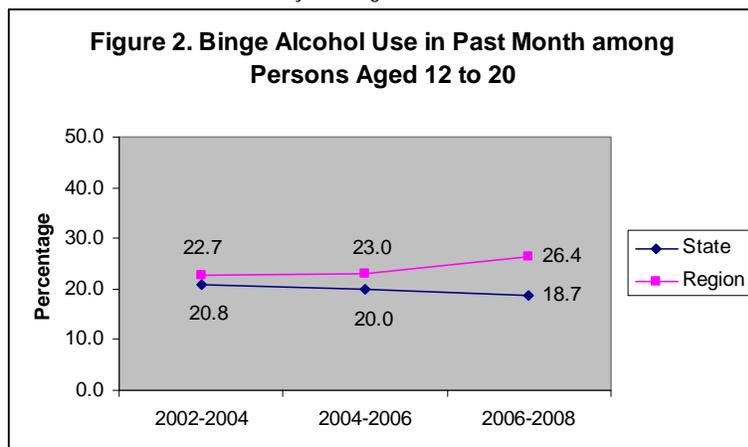| Table 4. Alcohol: Consequences, 2005-2009		
Alcohol Consequences	Region (95% CI)	State (95% CI)
Alcohol-impaired fatality or serious injury rate (per 100,000)[1]	35.0 (30.0-39.9)	16.6 (16.2-16.9)
Alcohol-induced death rate (per 100,000) [2]	10.3 (7.8-12.8)	6.8 (6.6-7.0)

Source: [1]Crash Statistics, Michigan State Police, Criminal Justice Information Center [2]Michigan Resident Death File, Michigan Department of Community Health, Division for Vital Records and Health Statistics

Alcohol Consumption

Among people 12 to 20 years of age, the prevalence estimates of self-reported alcohol and binge drinking in the past month were significantly higher in the region than in the state between 2006 and 2008 (Figure 1 and Figure 2). Binge drinking is defined as consuming five or more drinks per occasion (for men), or four or more drinks per occasion (for women), in the previous month.
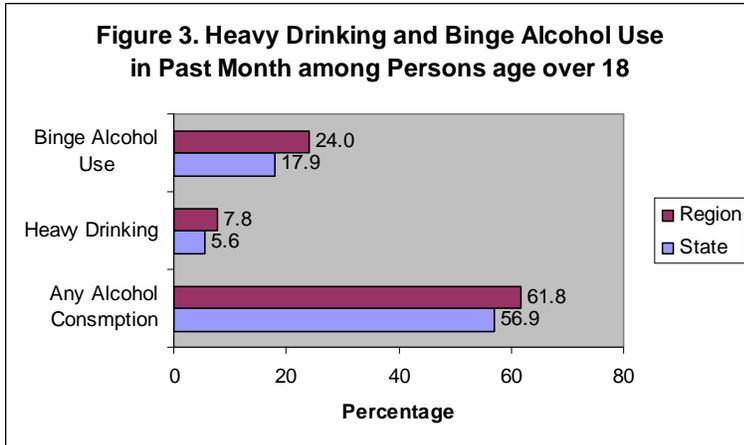

Figure 1. Alcohol Use in Past Month among Persons Aged 12 to 20

Source: SAMHSA, National Survey on Drug Use and Health

Figure 2. Binge Alcohol Use in Past Month among Persons Aged 12 to 20

Source: SAMHSA, National Survey on Drug Use and Health

For those 18 years of age and older, the proportion of binge alcohol use and the proportion of heavy drinking, defined as consuming an average of more than two alcohol drinks per day for men, or more than one per day for women, in the previous month, were not significantly different from the state's proportions (Figure 3).

**Figure 3. Heavy Drinking and Binge Alcohol Use
in Past Month among Persons age over 18**

Binge Alcohol Use: Region 24.0, State 17.9
Heavy Drinking: Region 7.8, State 5.6
Any Alcohol Consmption: Region 61.8, State 56.9

Legend: Region, State

Percentage (0, 20, 40, 60, 80)

Source: Michigan BRFS, 2006-2008

Alcohol Intervening Factors

The percent of persons 12 years of age or older who saw heavy drinking as a risk was slightly, but not significantly, lower than the state's rate.
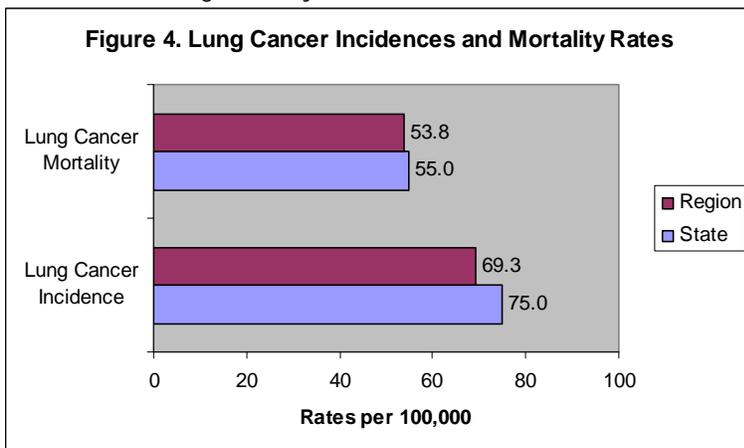
Table 5. Alcohol Consumption Intervening Factor, 2006-2008		
	Region (95% CI)	State (95% CI)
% Reporting a perception of great risk in having five or more drinks of an alcoholic beverage once or twice a week	33.5 (29.8-37.4)	38.4 (37.1-39.6)
% Reporting needing, but not receiving, treatment for alcohol use in past year	7.7 (6.2-9.6)	7.4 (6.8-8.0)

Source: SAMHSA, National Survey on Drug Use and Health, 2006-2008
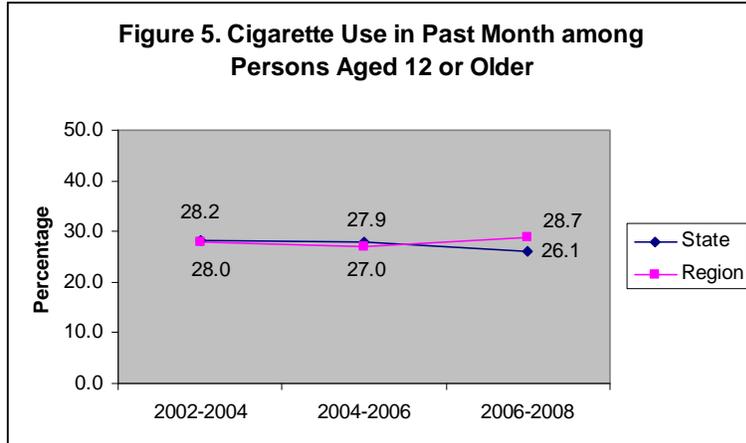
Tobacco Use

Tobacco Consequences

The lung cancer death rate in the region was comparable to the state's rate, and the incidence of lung cancer was not significantly different from the state's incidence.

Figure 4. Lung Cancer Incidences and Mortality Rates

Lung Cancer Mortality: Region 53.8, State 55.0
Lung Cancer Incidence: Region 69.3, State 75.0

Legend: Region, State
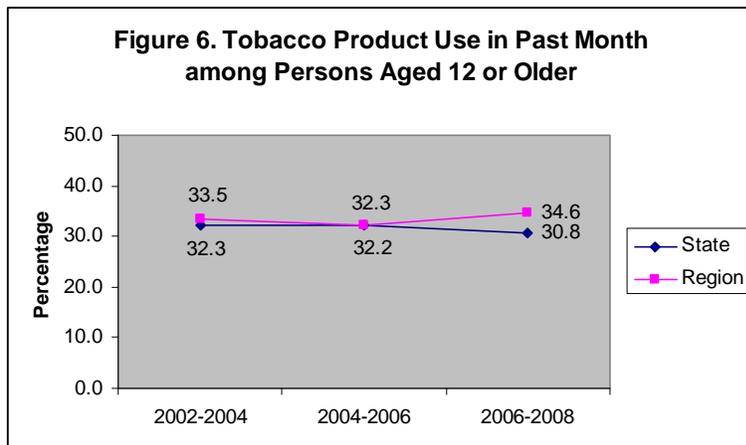
Rates per 100,000 (0, 20, 40, 60, 80, 100)

Source: Michigan Resident Cancer Incidence File, Includes cases diagnosed in 2003 – 2007 and deaths in 2005-2009, processed by the Michigan Department of Community Health, Division for Vital Records and Health Statistics

Tobacco Consumption

The prevalence estimate of self-reported tobacco consumption in the past month in the region had a slight but non-significant increase from 27.0 percent during 2004 to 2006 to 28.7 percent during 2006 to 2008, while the prevalence estimate for the state showed a slight but non-significant decrease over the same period of time. Overall, there were no statistical differences in prevalence estimates between the region and the state from 2006 to 2008.

Figure 5. Cigarette Use in Past Month among Persons Aged 12 or Older

Source: SAMHSA, National Survey on Drug Use and Health

Figure 6. Tobacco Product Use in Past Month among Persons Aged 12 or Older

Source: SAMHSA, National Survey on Drug Use and Health

Tobacco Intervening Factor

Between 2006 and 2008, the percent of people who saw heavy smoking as a risk was comparable to the state.

Table 6. Tobacco Intervening Factor, 2006-2008		
	Region (95% CI)	State (95% CI)
% Reporting a perception of great risk of smoking one or more packs of cigarettes per day	69.2 (65.6-72.5)	71.6 (70.4-72.8)

Source: SAMHSA, National Survey on Drug Use and Health, 2006-2008
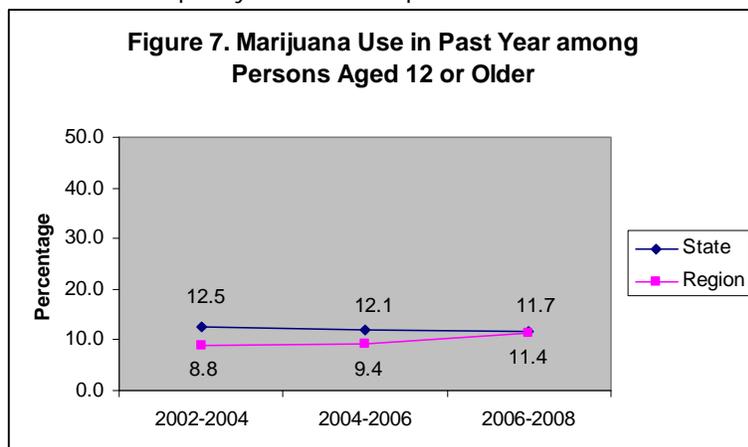
Drug Use

Drug Use Consequences

Between 2005 and 2009, the drug-induced death rate in the region was significantly lower than the state's rate.

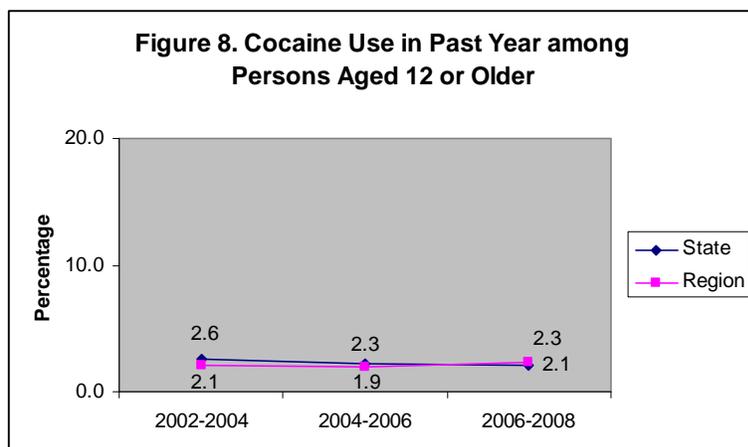| Table 7. Drug Use Consequences, 2005-2009		
	Region (95% CI)	State (95% CI)
Drug-induced mortality (per 100,000)	8.9 (6.3-11.5)	15.4 (15.1-15.7)

Source: Michigan Resident Death File, MDCH, Division for Vital Records and Health Statistics
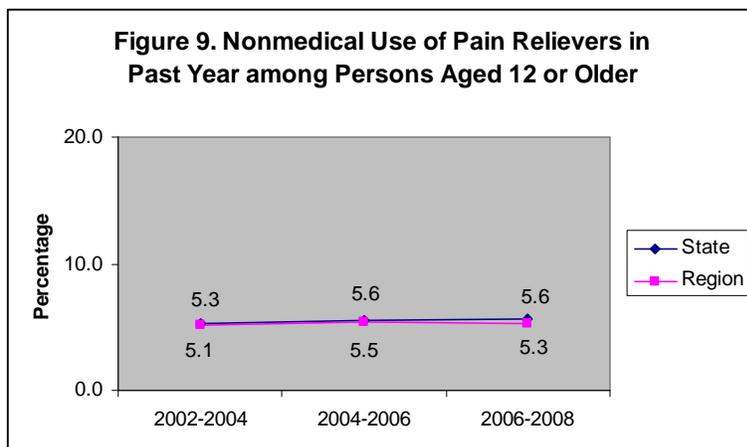
Drug Use Consumption

Among people 12 years of age and older, the prevalence estimate of self-reported marijuana use in the past year was significantly lower in the region than in the state between 2002 and 2004, however, the prevalence estimates became close to the state's afterward. The cocaine use and nonmedical use of pain relievers in the past year were comparable to the state between 2002 and 2008.

Figure 7. Marijuana Use in Past Year among Persons Aged 12 or Older

Source: SAMHSA, National Survey on Drug Use and Health

Figure 8. Cocaine Use in Past Year among Persons Aged 12 or Older

Source: SAMHSA, National Survey on Drug Use and Health

Figure 9. Nonmedical Use of Pain Relievers in Past Year among Persons Aged 12 or Older

Source: SAMHSA, National Survey on Drug Use and Health

Drug Use Intervening Factors

Average annual rate of first use of marijuana was close to the state rate. The percent of people who saw smoking marijuana once a month as risky was comparable to the state.

Table 8. Drug Use Intervening Factors, 2006-2008		
	Region (95% CI)	State (95% CI)
Average annual rate of first use of marijuana per 1,000 potential new users	2.0 (1.6-2.6)	1.9 (1.8-2.1)
% Reporting a perception of great risk of smoking marijuana once a month	34.3 (29.6-39.4)	34.4 (33.1-35.7)
% Reporting needing, but not receiving, treatment for Illicit drug use in past year	2.7 (1.9-3.8)	2.5 (2.3-2.8)

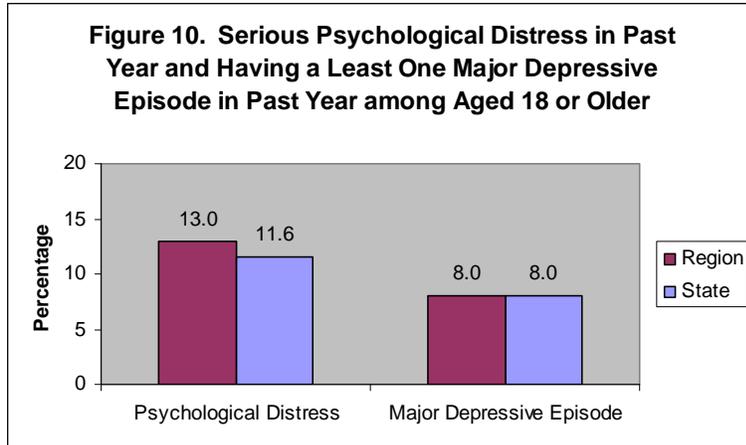Source: SAMHSA, National Survey on Drug Use and Health, 2006-2008

Mental Health Indicators

Between 2005 and 2009, the age-adjusted suicide rate in the region was significantly higher than the state's rate.

Table 9. Mental Health Indicators, 2006-2008 (2005-2009[2])		
	Region (95% CI)	State (95% CI)
% Perceiving self in poor physical health[1]	13.5 (9.4-19.0)	10.9 (10.5-11.4)
% Perceiving in poor mental health[1]	6.7 (4.1-10.8)	10.8 (10.3-11.3)
Suicide rate, age-adjusted[2]	15.4 (12.2-18.6)	11.1 (10.8-11.4)

Source: [1]Michigan BRFS, 2006-2008 [2]MDCH, Division for Vital Records and Health Statistics

The prevalence estimates of psychological distress and having a least one major depressive episode in past year among people 18 years of age or older in the region were comparable to the state estimates between 2004 and 2006.

Figure 10. Serious Psychological Distress in Past Year and Having a Least One Major Depressive Episode in Past Year among Aged 18 or Older

Source: SAMHSA, National Survey on Drug Use and Health, 2004-2006

Summary

The following table provides comparisons for each region to the state for the 24 ATOD and mental health indicators and 4 social and health indicators. Only significant differences between the indicators for the regions and state are listed below, which are based on 95% confidence intervals.

CA	Region Indicator is Better than State Indicator	Region Indicator is Worse than State Indicator
BABH/Riverhaven	Infant mortality Violent crime	Alcohol-impaired fatality or serious injury in a motor vehicle crash Perception of great risk of smoking one or more packs of cigarettes per day Suicide deaths
Kalamazoo	Violent crime	Alcohol-induced deaths Binge alcohol use among persons aged 12 to 20 (2002-2004 only) Lung cancer deaths Suicide deaths
Mid-South	Health insurance coverage Infant mortality Violent crime Incidence of lung cancer Drug-induced deaths	Alcohol-impaired fatality or serious injury in a motor vehicle crash Alcohol and binge alcohol use among persons aged 12 to 20 (2006-2008 only)
Pathways	Infant mortality Violent crime Drug-induced deaths	Alcohol-impaired fatality or serious injury in a motor vehicle crash Alcohol-induced deaths Alcohol (2002-2004 and 2006-2008) and binge alcohol use (2002-2008) among persons aged 12 to 20 Suicide deaths

CA	Region Indicator is Better than State Indicator	Region Indicator is Worse than State Indicator
Western U. P.	Violent crime Drug-induced deaths Use of marijuana (2002-2004 only)	Alcohol-impaired fatality or serious injury in a motor vehicle crash Alcohol-induced deaths Alcohol and binge alcohol use among persons aged 12 to 20 (2006-2008 only) Suicide deaths

Data Limitations and Gaps

As is the case in many states, information gaps exist in alcohol, tobacco, other drug (ATOD) and mental health data available within Michigan at the state and local level. These gaps in information may limit the ability to address a complete profiling of population needs, resources, and readiness. The SEOW has identified these information gaps, which are primarily the result of systems issues. Subsequently, these gaps may have impacted the formulation of statewide and local community indicators and need statements, and what has been included in this document.

When assessing data, the SEOW looked at measure, availability, analysis and frequency of data collection as a first tier consideration of whether to include specific data sets. This contributed to the level of confidence in what the data appeared to be showing. Other considerations related to data gaps and limitations included:

- Limited use of available tools in communities. One example of this was the limited number of school districts using the Michigan Profile for Healthy Youth (MiPHY). Through efforts of the SEOW, community coalitions, CAs, the Michigan Department of Education and other stakeholders, attention has been given to community readiness and responsiveness to conducting the MiPHY, and the number of school districts now participating has increased substantially.
- Limited data being collected on specific drugs (e.g. methamphetamine, prescription and over-the-counter drugs, etc.) or specific correlations (e.g. the link between child health and maternal alcohol consumption related to fetal alcohol spectrum disorders [FASD] or potential mental health indicators, the link between substance use/abuse and child abuse and neglect cases, etc.)
- The need for substance use disorder treatment data that is not limited to publicly funded programs (and a disclaimer to be added to current data on this limitation).
- Limitations in data sources available to assess mental health issues in communities, and the link to risk and protective factors, life stressors, and other potential indicators.
- Local level risk and protective factor data related to environment/access, school, community and individual domains, as well as specific populations (e.g., college students, adjudicated youth, the elderly, etc.).

The above examples of gaps in data are acknowledged, and are important for the reader to consider when reviewing this document. Although accomplishments have been achieved in developing and accessing more data in recent years, there is still work to be done. It is expected that as the SEOW work proceeds additional indicators will be added in future reports as data is identified and new linkages are made. The SEOW views this as one of its primary roles. The assistance and support of the Michigan Department of Community Health will be invaluable to this process.

Conclusion

SAMHSA has identified the prevention of substance abuse and mental illness as one of its eight Strategic Initiatives to guide their work from 2011 through 2014. This entails creating communities where individuals, families, schools, faith-based organizations and workplaces take action to promote emotional health and reduce the likelihood of mental illness, substance abuse, including tobacco, and suicide. More information on this initiative can be found at www.samhsa.gov. SAMHSA's initiative aligns with the BSAAS mission to promote wellness, strengthen communities and facilitate recovery.

In order to implement the BSAAS mission, effective prevention efforts are needed and require a thorough understanding of the community to appropriately target intervention efforts. Valuable data is critical to this step, as well as supporting an overall Strategic Planning Framework process. Assessing and understanding contributing consumption and consequence patterns, other relevant conditions, and intervening variables will allow the state and communities to effectively prioritize problems. This information will also assist the state and communities in choosing targeted interventions, and use of appropriate programs, policies and practices to address efforts related to promoting emotional health and the prevention of substance abuse disorders and mental illness.

This document was created to assist in these efforts to assure a data driven process, grounded in a public health foundation, and implemented across the state for statewide planning and decision- making.

It is the intention of BSAAS that CAs will utilize the Community Epidemiology Profile as a starting point for local efforts. CAs and community coalitions are encouraged to further extrapolate data for each county in their respective region on these same indicators and to use the information to collect additional data at the local level. In doing so, local collaborative planning efforts will be enhanced and partnerships strengthened in order to plan for prevention prepared communities.