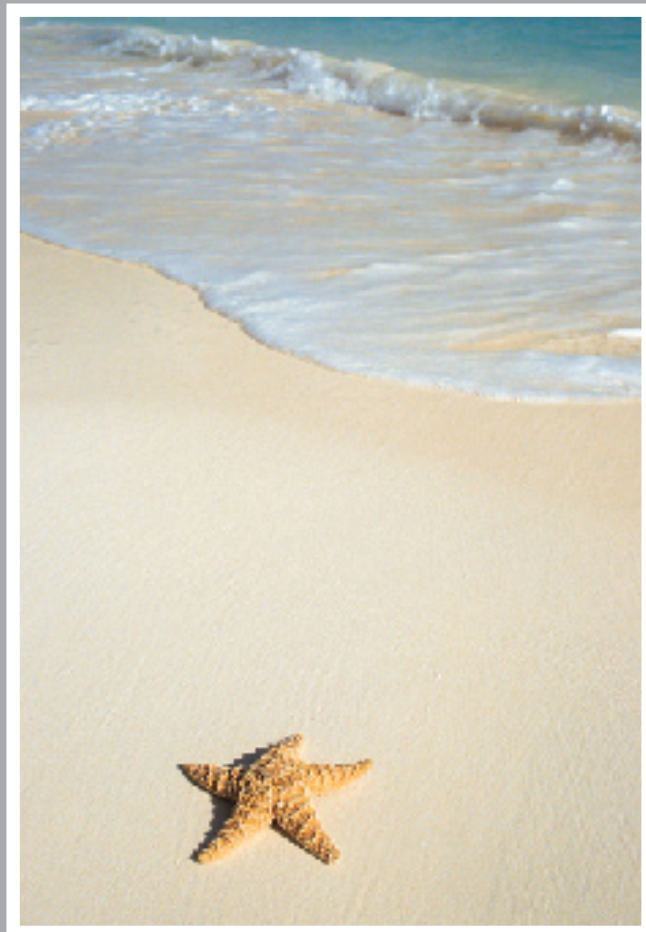


BRFSS

Utah Depression Surveillance Report

2005–2007



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This report is also available on the Internet at:

<http://ibis.health.utah.gov/publications/index/Chronological.html>

BRFSS

Utah Depression Surveillance Report

2005–2007

Office of Public Health Assessment
Center for Health Data
Utah Department of Health

September 2009

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This report describes the burden of major depression in Utah based on findings from the 2005–2007 Utah Behavioral Risk Factor Surveillance System (BRFSS). Major depression, also known as clinical depression or unipolar depression, is characterized by persistent sad mood that interferes with a person's daily activities, health, behavior, and thoughts.¹ These data describe the prevalence of major depression in Utah adults compared to other states, in local areas of Utah, and by demographic factors like age, sex, and race. Other issues such as physical activity, smoking, and health status are also examined.

Data regarding suicide ideation among adults and youth are also presented within this report. Youth data are taken from the Youth Risk Behavior Survey (YRBS).

The data contained within this report contribute to a deeper understanding of the burden of major depression in Utah. This information can be used for state and local planning to help ease this burden through public programs and clinical interventions.

Key Findings

- The age-adjusted prevalence of major depression in Utah adults from 2005–2007 was 4.1%.
- In 2006, the age-adjusted national rate of major depression in adults was 4.2%. This was not statistically different from the Utah rate for the same year (4.2%).
- South Salt Lake had the highest rate (10.4%) of major depression. The combined West Jordan/Copperton and South Jordan area had the lowest rate (1.2%).

Demographics

- Overall, Utah females (5.1%) had a higher rate of major depression compared to Utah males (3.1%).
- Black and Pacific Islander Utahns had lower rates (0.8% and 2.1% respectively) of major depression compared to all Utahns.
- Separated and divorced persons had the highest rates (23.8% and 12.4% respectively) of major depression compared to people in other marital categories.
- Unemployed persons had a higher rate of major depression (21.1%) than those in other employment categories.
- Persons earning less than \$10,000 annually had a higher rate of major depression (19.9%) compared to the overall state rate.

Chronic Diseases

- Persons with a history of heart attack had a higher rate of major depression (10.1%) than those who did not have a history of heart attack (4.0%).
- Persons who reported having had a stroke had a higher rate of major depression (12.0%) than those who had never had a stroke (3.9%).
- Persons who reported having hypertension had a higher rate of major depression than those without hypertension (7.7% vs. 3.6%).
- Persons with asthma had a higher rate of major depression than persons without asthma (8.2% vs. 3.7%).
- Persons with diabetes had a higher rate of major depression than persons without diabetes (6.2% vs. 3.9%).
- Persons with arthritis had a higher rate of major depression than persons without arthritis (7.5% vs. 2.9%).

General Health and Health Behaviors

- Persons who reported having fair or poor health had a higher rate of major depression (17.7%) than those who reported good, very good, or excellent health (2.4%).
- Current smokers had a higher rate of major depression (11.1%) than former smokers or those who had never smoked (3.3%).

- Persons who had a cholesterol test five or more years ago or who never had a cholesterol test (6.2%) had a higher rate of major depression than those who had a cholesterol test within the past five years (3.1%).
- Persons who did not engage in any physical activity (10.0%) had a higher rate of major depression than those who engaged in the recommended amount of physical activity (2.9%).
- Persons who did not consume fruits or vegetables (10.2%) had a higher rate of major depression than persons who had at least one serving of fruits and vegetables each day (2.6%–4.7%).
- Obese persons (5.8%) had higher rates of major depression than those of normal weight (3.8%).

Access to Health Care

- Persons without health insurance had a higher rate of major depression than persons with health insurance (6.3% vs. 3.6%).
- Persons who reported not having a routine check-up in the past five years or never having a routine check-up (6.4%) had a higher rate of major depression than persons who had a check-up in the past five years (3.9%).

Do Utahns With Major Depression Behave Differently?

- Persons with major depression were more than five times more likely to report fair or poor health status, more than twice as likely to be current smokers, nearly twice as likely to report binge drinking, and more than 1.5 times more likely to be obese.
- Persons with major depression were only about half as likely to engage in the recommended amount of physical activity.

Suicide Ideation

- The age-adjusted prevalence of suicide ideation, or thoughts about suicide, within the past two weeks among adults was 4.5%.
- According to Utah YRBS data, 15.9% of youth seriously considered suicide in the past 12 months.

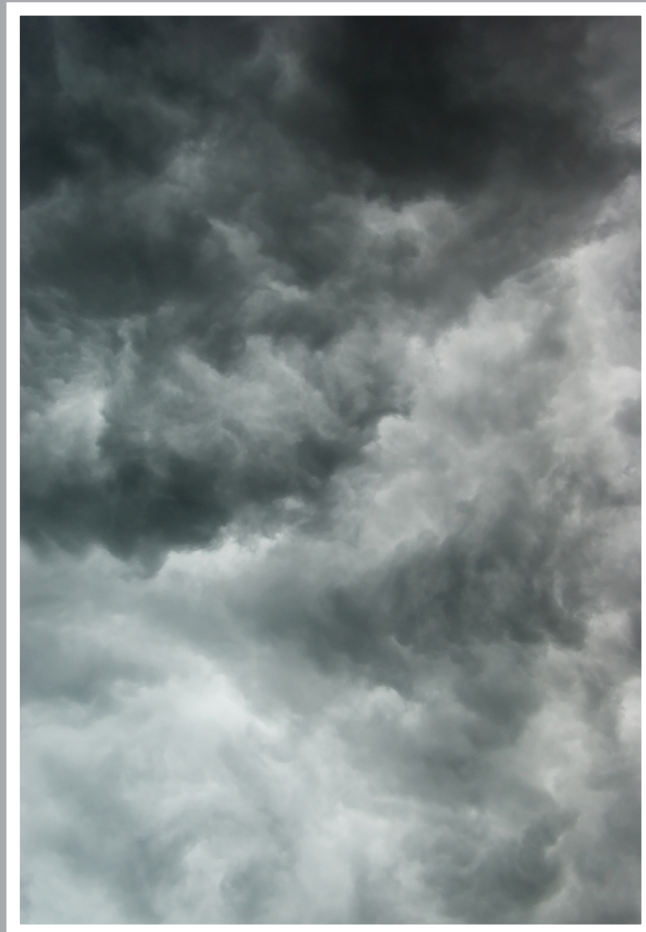
Mental health is a vital aspect of a healthy life. The U.S. Department of Health and Human Services defines mental health as “a state of successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and cope with adversity.”² Mental illness, in all its forms, leads to a heavy societal and public health burden. Depression is one of the most common mental illnesses.

Major depression is the third leading cause of burden of any disease worldwide and ranks first place in high-income countries like the United States.³ The economic burden of depression in the United States was estimated to be \$83.1 billion in 2000.⁴ If the economic burden of depression in Utah is proportionate to Utah’s percentage of the population, Utah’s cost can be estimated to be at least \$760 million.⁵

Depression is associated with poor health behaviors and chronic illness. In a national study, adults with depression were found to be more likely to be smokers, obese, physically inactive, and binge drinkers compared to adults without depression.⁶ Data have shown that there is an increased prevalence of chronic illness in those with mental illness and that the presence of depression might contribute to the cause, affect the course, and complicate the treatment of chronic diseases.⁷ Depression also increases the risk of mortality from chronic diseases, such as cardiovascular disease⁸ and diabetes.⁹ Finally, depression can lead to suicide, which was the 11th leading cause of death in the United States in 2005.¹⁰

Depression can be classified in many ways. A more serious variety of depression is major depression. According to national data from 2005, approximately 16.6% of people in the United States have ever been diagnosed with major depression,¹¹ and 6.7% of people have suffered from major depression in the past year.¹² In an effort to calculate the percentage of Utah’s population that suffers from major depression, the Patient Health Questionnaire (PHQ-9) was added to Utah’s Behavioral Risk Factor Surveillance System (BRFSS) in 2005–2007 (see *Appendix B: Methods and Procedures* for more information regarding these surveys). The PHQ-9 is a validated instrument used to help diagnose depression. For this report, the PHQ-9 was analyzed in order to estimate major depression. This report describes the results of these data, including the prevalence of major depression in Utah and the association between major depression and other health issues and behaviors.

Current Major Depression in Utah

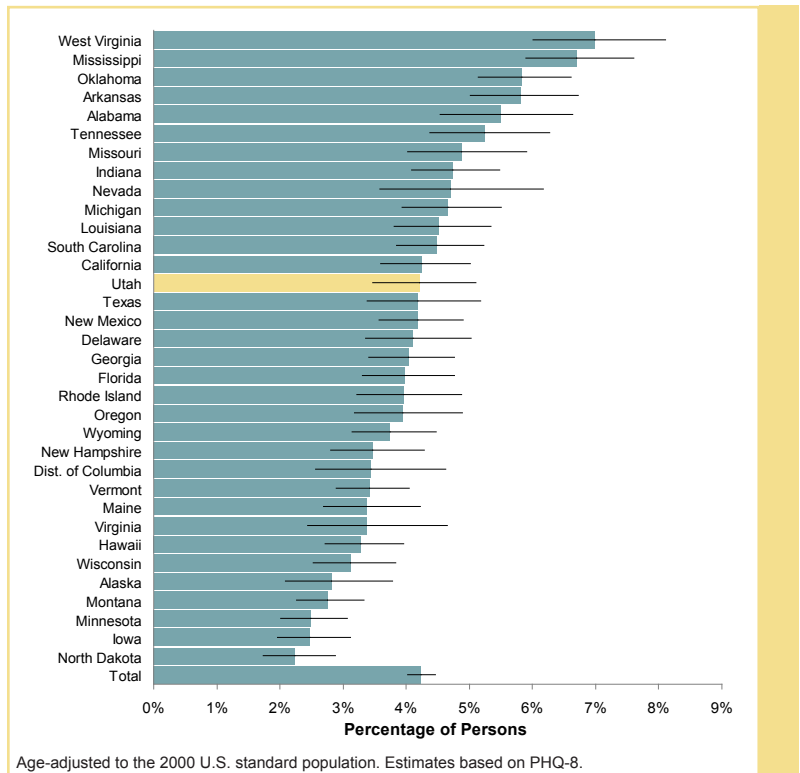


Utah vs. U.S.

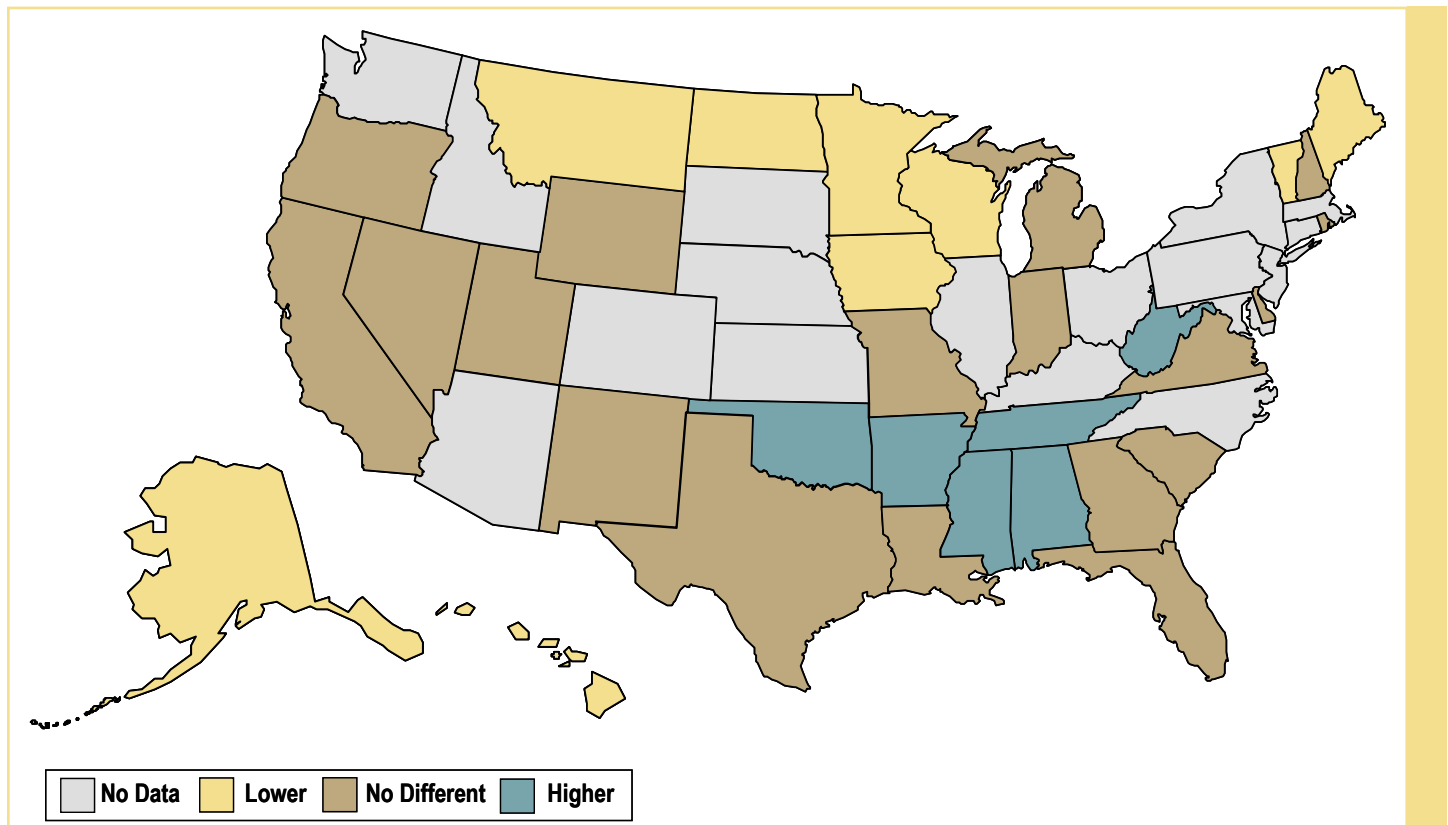
A total of 34 states included the PHQ-8 in their 2006 state BRFSS questionnaire (see *Appendix B: Methods and Procedures*). The age-adjusted prevalence of major depression among adults varied from a high of 7.0% in West Virginia to a low of 2.2% in North Dakota. The prevalence of major depression in Utah was 4.2% (95% CI: 3.5%–5.1%). This prevalence rate was no different from the U.S. rate of 4.2%, calculated using data from all 34 states.

The states with prevalence rates lower than the U.S. rate tended to be in the Midwest or the West, and states with prevalence rates higher than the U.S. rate tended to be in the South.

Major Depression by State, U.S., 2006



Major Depression by State, U.S., 2006



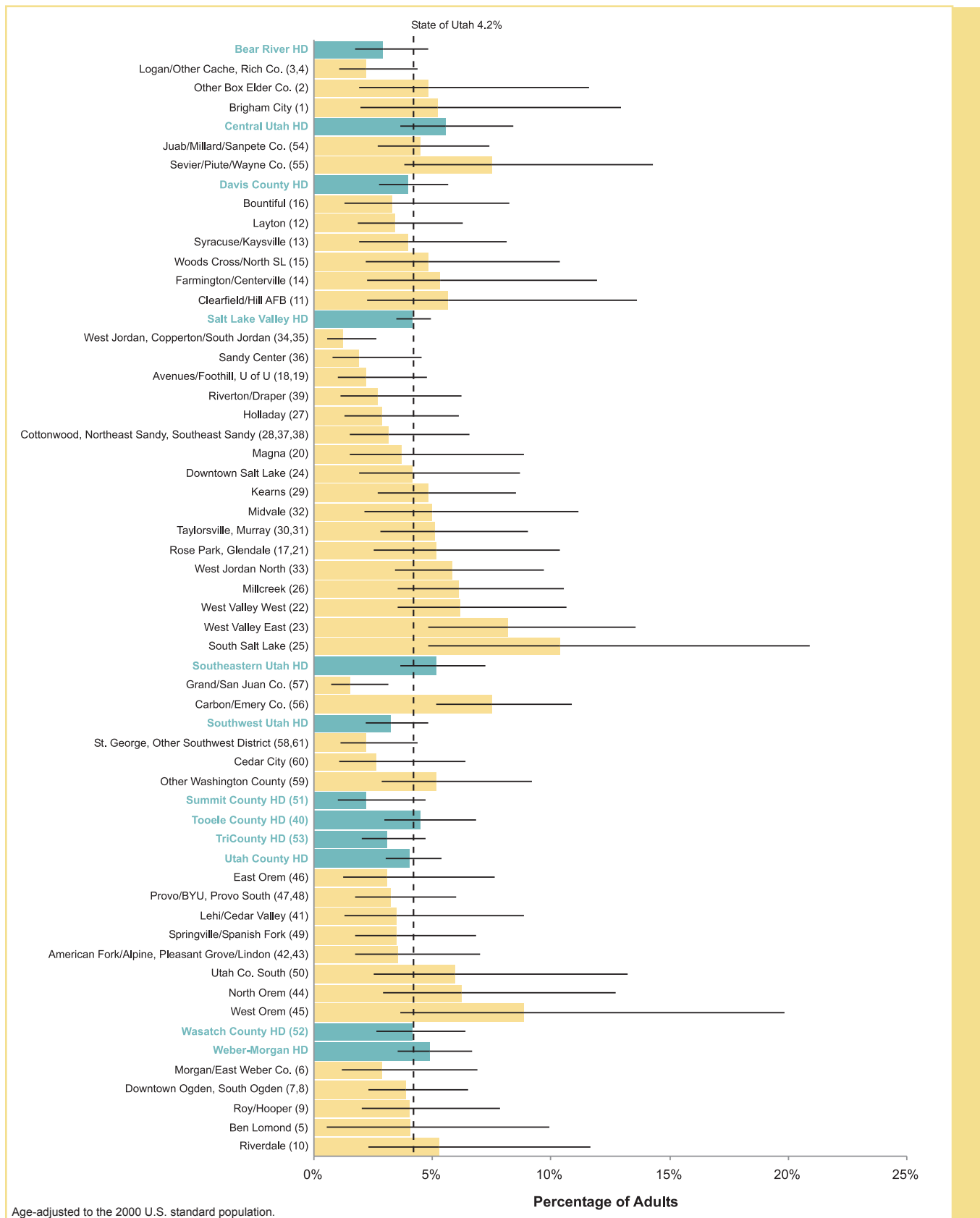
Utah Depression Surveillance Report	
Current Major Depression in Utah	

From 2005–2007, Utah added the PHQ-9 to the BRFSS. The following analyses for Utah adults are based on the PHQ-9 for those years. See *Appendix B: Methods and Procedures*, *Appendix C: Depression Modules*, and *Appendix D: PHQ-9 Instrument*.

Local Health Districts and Small Areas

The age-adjusted rate of major depression among adults in Utah from 2005–2007 was estimated at 4.1%. The percentage of adults with major depression varied by local health district (LHD). Central Utah LHD had the highest rate of major depression (5.6%) while Summit County LHD had the lowest rate (2.2%). However, neither of these rates were statistically different from the overall state rate of major depression. Looking at small areas within LHDs, data from 2005–2007 show that adults in South Salt Lake had the highest rate of major depression (10.4%) followed by West Orem (8.8%) and West Valley East (8.2%). The lowest rates of major depression were found in the combined West Jordan/Copperton and South Jordan small areas (1.2%), Grand/San Juan Counties (1.5%) and Sandy Center (1.9%). The West Orem and Sandy Center rates were not statistically different from the state rate. (For more information about small area analysis, please see *Appendix B: Methods and Procedures*.)

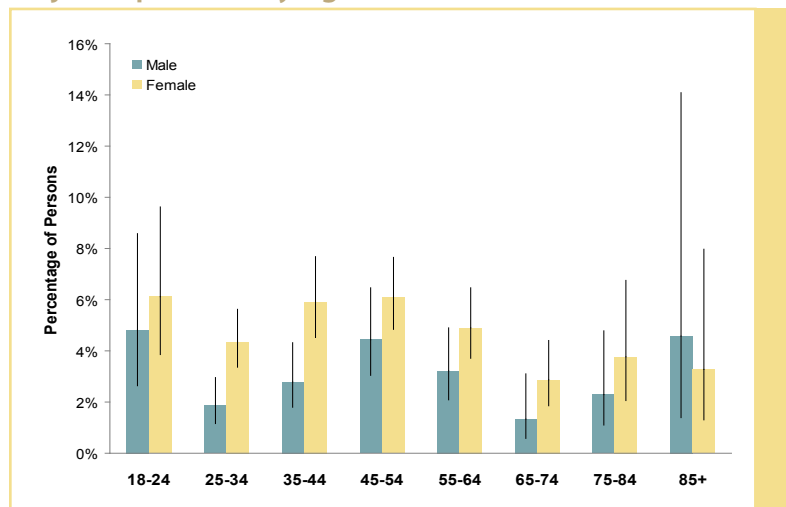
Major Depression by Local Health District and Small Area, Utah, 2005–2007



Demographics and Socioeconomic Characteristics

There appears to be an association between mental disorders, such as major depression, and socioeconomic characteristics.¹² Studies have shown that persons with a low socioeconomic status, such as low education and low income, have a higher chance of being depressed.¹³

Major Depression by Age and Sex, Utah, 2005–2007



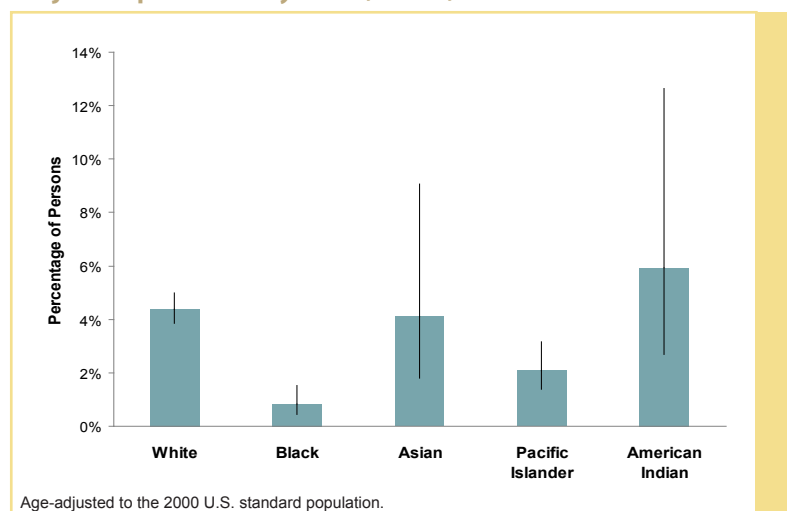
Sex and Age

Overall, more Utah adult females had major depression compared to Utah males (5.1% and 3.1%, respectively). Females aged 25 to 34 years and 35 to 44 years had a statistically higher rate of major depression compared to males. The apparent differences between sexes for the other age groups were not statistically significant.

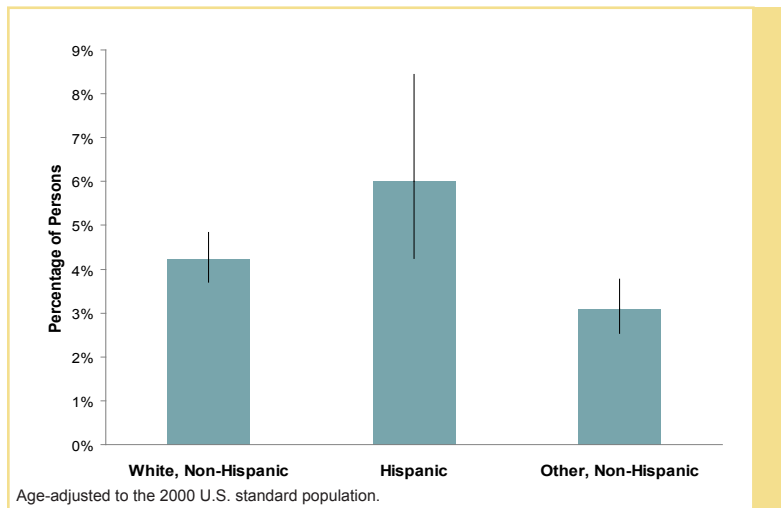
Race

Black and Pacific Islander Utahns (0.8% and 2.1%, respectively) had a statistically lower percentage of major depression compared to all Utahns (4.1%).

Major Depression by Race, Utah, 2005–2007



Major Depression by Ethnicity, Utah, 2005–2007



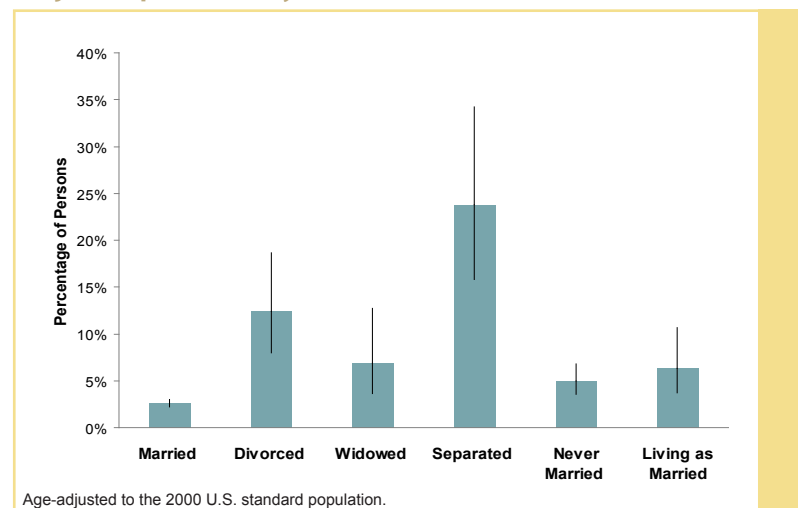
Ethnicity

There were no statistically significant differences in rates of major depression across ethnicity.

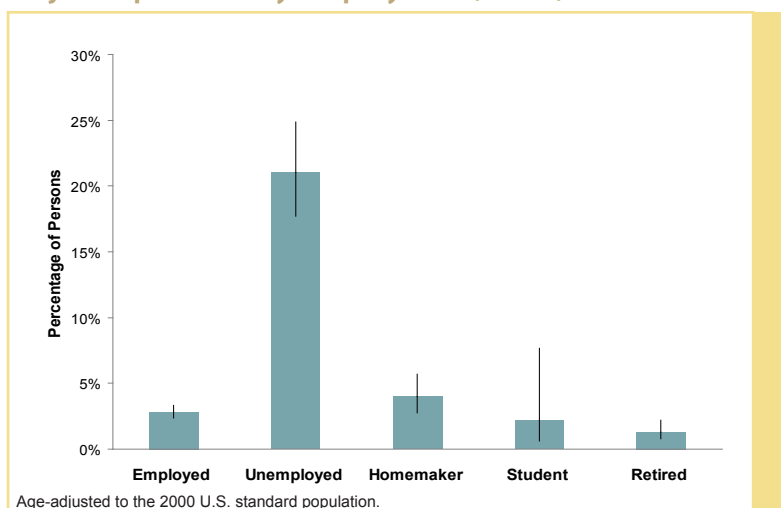
Marital Status

Married persons (2.6%) had a lower rate of major depression compared to all other marital categories (4.9%–23.8%). Separated persons (23.8%) had the highest rate of major depression followed by divorced persons (12.4%); these rates were statistically higher than the rates for married persons.

Major Depression by Marital Status, Utah, 2005–2007



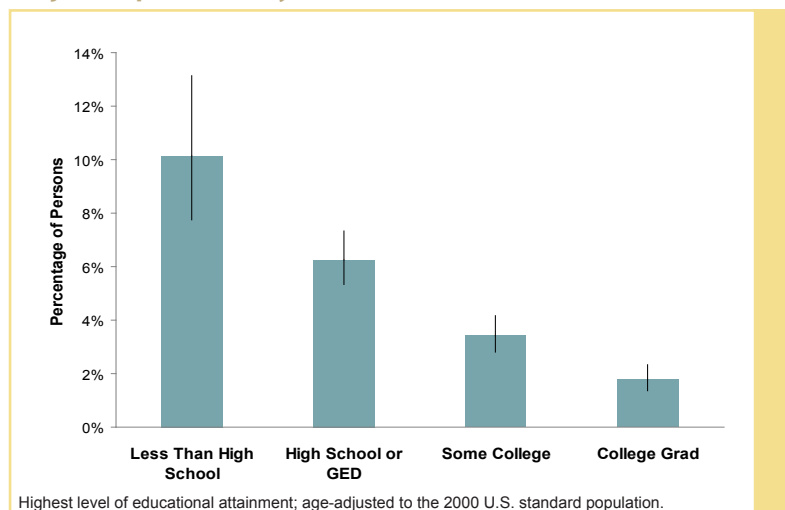
Major Depression by Employment, Utah, 2005–2007



Employment Status

The highest rate of major depression was for unemployed persons (21.1%) while the lowest rate was among retired persons (1.3%). Employed persons (2.8%) had a statistically lower rate of major depression compared to the overall state rate of 4.1%.

Major Depression by Education Level, Utah, 2005–2007



Education Level*

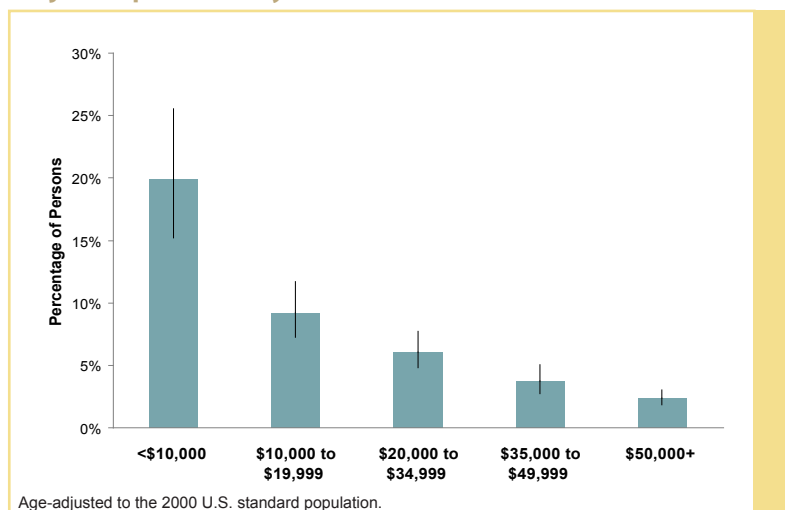
Persons with less than a high school diploma (10.1%) and persons with a high school diploma or a GED certificate (6.3%) had statistically higher rates of major depression compared to the overall state rate of 4.1%. Persons with at least a college degree (1.8%) had a statistically lower rate of major depression compared to the overall state rate.

* Highest level of educational attainment.

Income

Persons with annual household incomes less than \$10,000 (19.9%), between \$10,000–\$19,999 (9.2%), and between \$20,000–\$34,999 (6.1%) all had significantly higher major depression rates compared to the overall state rate of 4.1%. Though there were no statistically significant differences between the major depression rates for the groups with annual household incomes between \$10,000–\$19,999 and \$20,000–\$34,999, both these groups had significantly lower rates compared to the group with household incomes less than \$10,000 annually. Persons with annual household incomes of \$50,000 or more (2.4%) had a statistically lower rate of major depression compared to all groups except for those with household incomes between \$35,000–\$49,999.

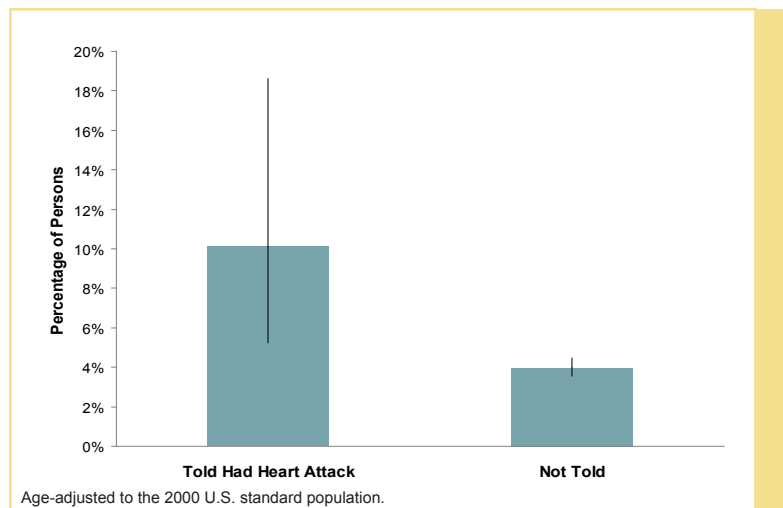
Major Depression by Household Income, Utah, 2005–2007



Chronic Diseases

There appears to be an association between major depression and chronic diseases. Depression might lead to chronic disease and chronic disease can worsen the symptoms of depression. People with depression are less likely to seek or follow through with treatment for their chronic diseases. Thus, timely diagnosis and treatment of major depression could positively impact the course and treatment of chronic disease(s).⁷

Major Depression by Told Had Heart Attack, Utah, 2005–2007



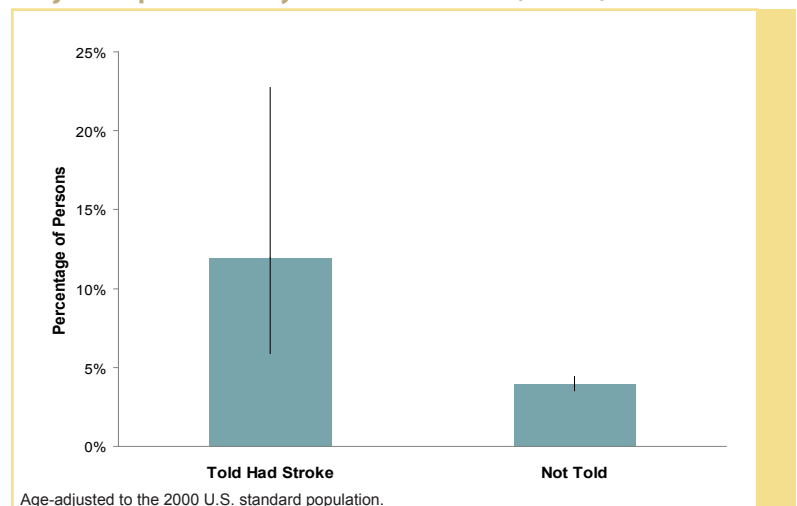
Heart Attack

Of those persons who had been told by a doctor that they had a heart attack, 10.1% had major depression, and of those persons that had not been told that they had a heart attack, 4.0% had major depression. These rates were statistically significantly different.

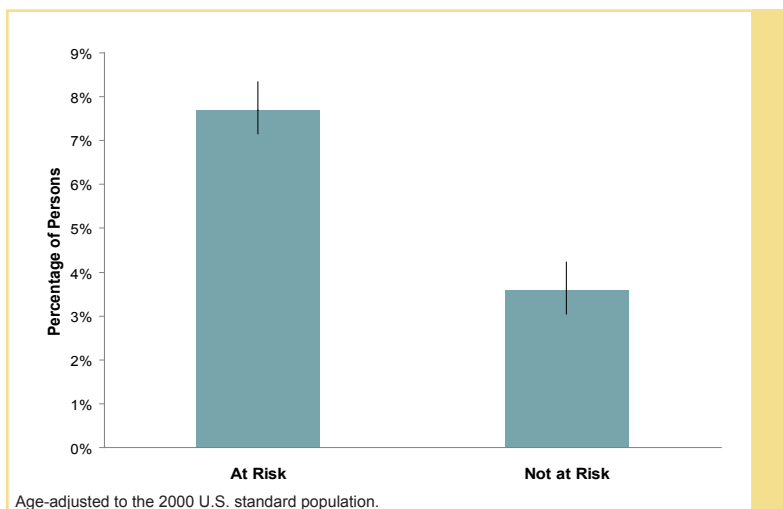
Stroke

Of those persons who had been told by a doctor that they had a stroke, 12.0% had major depression, and of those persons who had not been told that they had a stroke, 3.9% had major depression. These rates were statistically significantly different.

Major Depression by Told Had Stroke, Utah, 2005–2007



Major Depression by Told Have Hypertension, Utah, 2005 and 2007



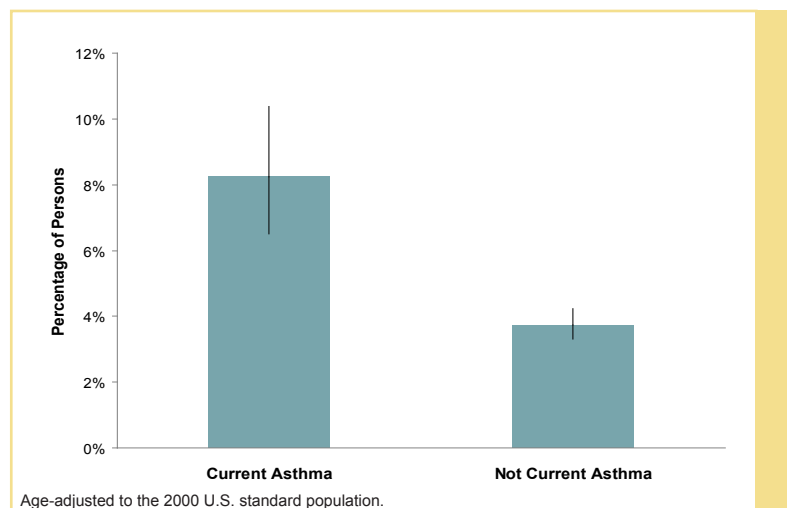
Hypertension

Of those persons who had been told by a doctor that they had high blood pressure (hypertension), 7.7% had major depression, and of those persons who had not been told that they had high blood pressure, 3.6% had major depression. These rates were statistically significantly different.

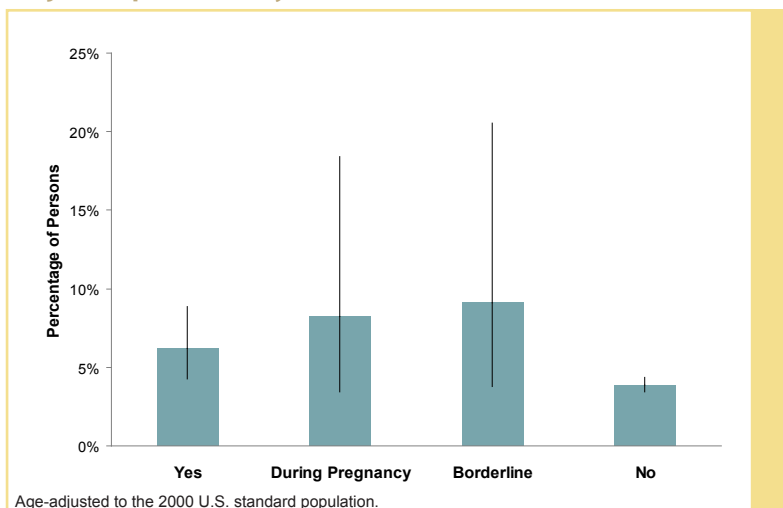
Asthma

Of those persons who reported current asthma, 8.2% had major depression. Of those persons who did not report current asthma, 3.7% had major depression. These rates were statistically significantly different.

Major Depression by Current Asthma, Utah, 2005–2007



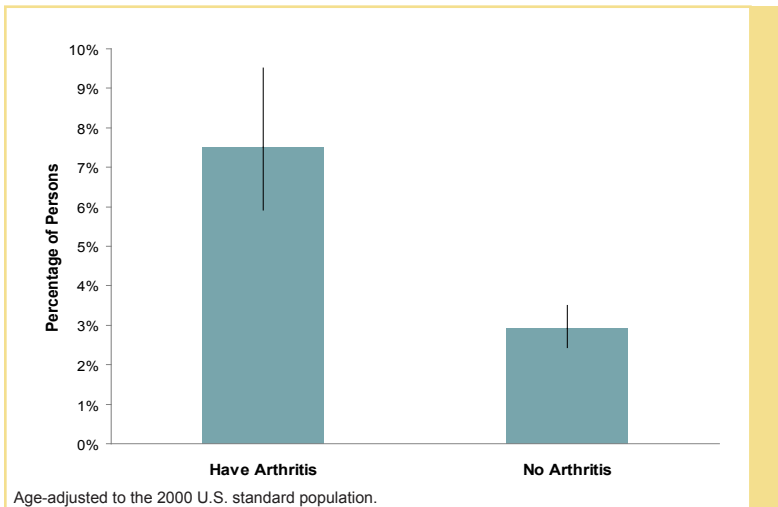
Major Depression by Diabetes, Utah, 2005–2007



Diabetes

Of those persons who had been told by a doctor that they had diabetes, 6.2% had major depression. Of those persons who had not been told that they had diabetes, 3.9% had major depression. These rates were statistically significantly different.

Major Depression by Doctor-diagnosed Arthritis, Utah, 2005 and 2007



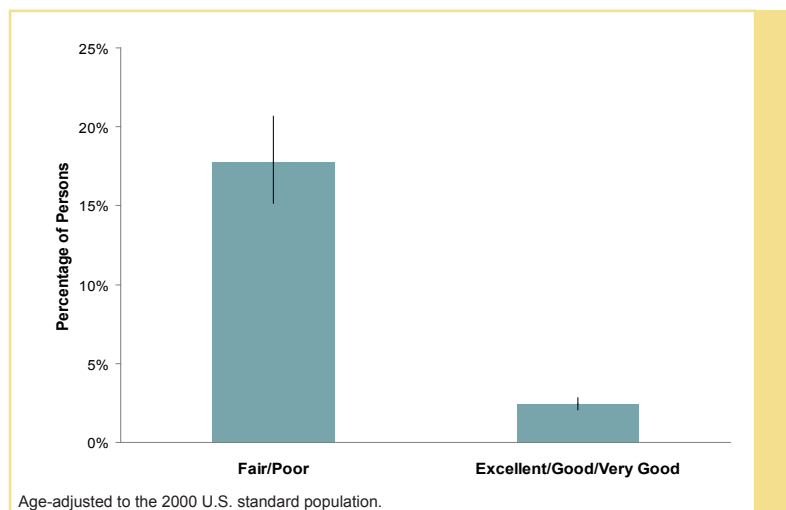
Arthritis

Of those persons who had been told by a doctor that they had arthritis, 7.5% had major depression. Of those persons who had not been told that they had arthritis, 2.9% had major depression. These rates were statistically significantly different.

General Health and Health Behaviors

Previous analysis of BRFSS data has shown an association between major depression and smoking, body size (as measured by BMI), physical inactivity, and binge and heavy drinking.⁶ In a recent study to determine what factors among depressed patients led to worse outcomes, it was shown that the worse outcomes were associated with poor health-related behaviors like physical inactivity.¹⁵

Major Depression by Fair or Poor Health Status, Utah, 2005–2007



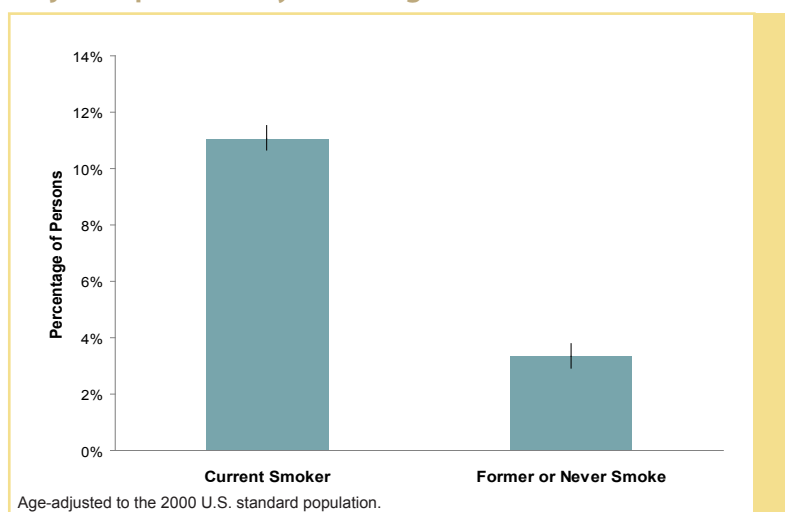
Health Status

Of those persons who stated that their health status was fair or poor, 17.7% had major depression. Of those persons who stated that their status was excellent, very good, or good, 2.4% had major depression. These rates were statistically significantly different.

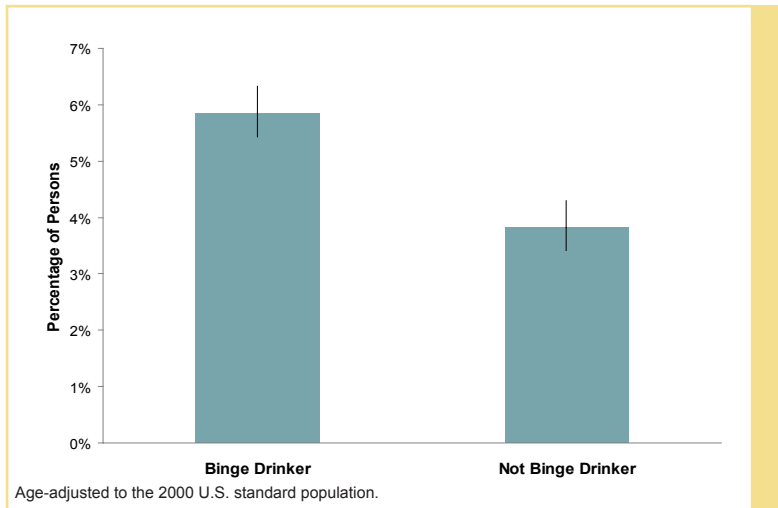
Smoking

Of those persons who were current smokers, 11.1% had major depression. Of those persons who reported never smoking or formerly smoking, 3.3% had major depression. These rates were statistically significantly different.

Major Depression by Smoking Status, Utah, 2005–2007



Major Depression by Drinking Status, Utah, 2005–2007



Binge Drinking

Of those persons who reported binge drinking* in the past 30 days, 5.9% had major depression. Of those persons who did not report binge drinking, 3.8% had major depression. These rates were statistically significantly different.

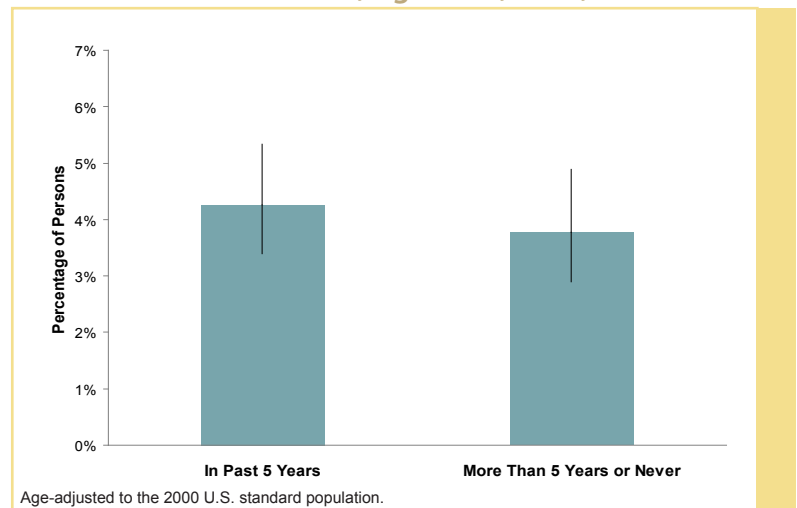
* Binge drinking is defined as consuming five or more drinks of alcohol on an occasion one or more times during the past 30 days. A drink of alcohol is 1 can or bottle of beer, 1 glass of wine, 1 can or bottle of wine cooler, 1 cocktail, or 1 shot of liquor.

Screenings

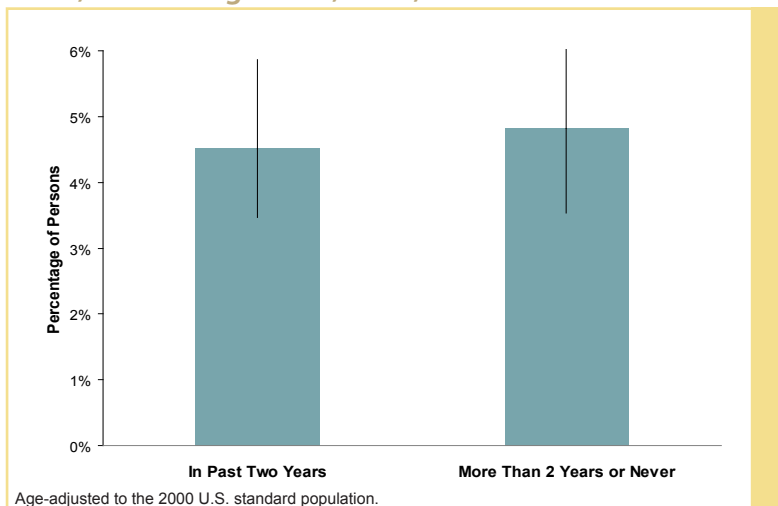
Sigmoidoscopy/colonoscopy

There was no difference in the rate of major depression by colonoscopy test status (within the last five years or more than five years/never).

Major Depression by Sigmoidoscopy or Colonoscopy Test in the Past Five Years, Ages 50+, Utah, 2005–2007

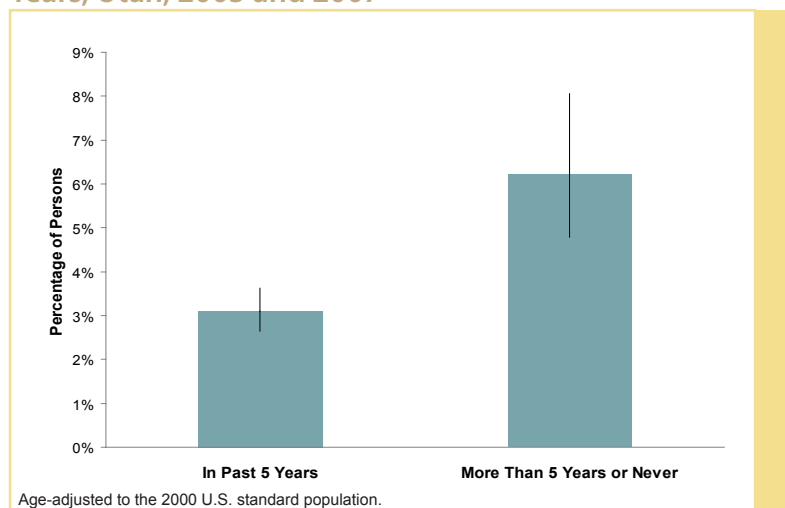


Major Depression by Mammogram in the Past Two Years, Women Ages 40+, Utah, 2006–2007

Mammography

There was no difference in the rate of major depression among women aged 40 and over who had a mammogram within the last two years.

Major Depression by Cholesterol Test in the Past Five Years, Utah, 2005 and 2007



Cholesterol Test

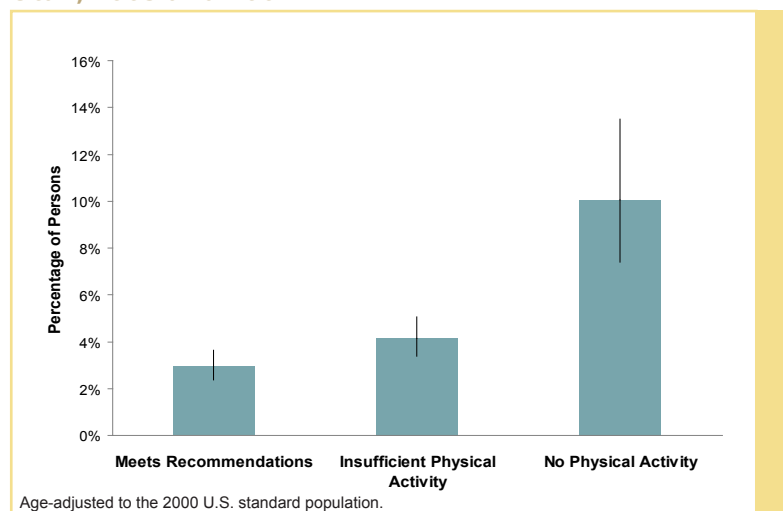
Of those persons who had a cholesterol test within the past five years, 3.1% had major depression. Of those persons whose last cholesterol test was more than five years ago or never, 6.2% had major depression. These rates were statistically significantly different.

Physical Activity

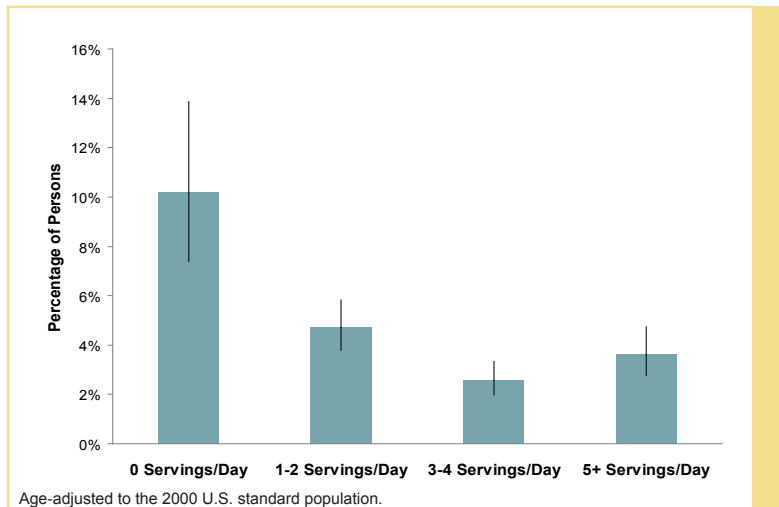
There was an inverse relationship between the amount of physical activity and major depression. Individuals who engaged in physical activity that meet the recommendations* had the lowest rate of major depression (2.9%). Those who engaged in some physical activity but not enough to meet the recommendations had a higher major depression rate (4.1%), but this rate was not statistically different from the rate for those who met the recommendations for physical activity. Persons who engaged in no physical activity had a statistically higher rate of major depression (10.0%).

* Recommended activity includes 30 minutes of moderate physical activity 5 or more days per week or 20 minutes of vigorous physical activity 3 or more days per week.

Major Depression by Recommended Physical Activity, Utah, 2005 and 2007



Major Depression by Fruit and Vegetable Consumption, Utah, 2005 and 2007



Nutrition

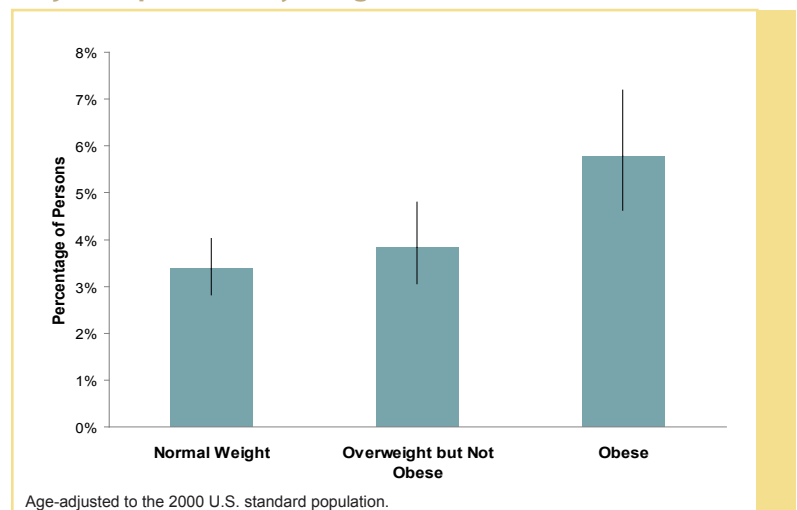
Of the four categories for fruit or vegetable consumption, those persons who consumed no fruits or vegetables daily had the highest rate of major depression (10.2%) among all groups. Among persons who consumed 1–2 daily servings of fruit and vegetables, 4.7% had major depression. Those who consumed 3–4 daily servings (2.6%) or 5 or more daily servings (3.6%) had the lowest rates of major depression. The rate for the 5 or more daily servings was not statistically different from the 3–4 daily servings or 1–2 daily servings categories.

Obesity

Obese persons (5.8%) had statistically higher rates of major depression than those of normal weight (3.8%).*

* Normal weight is defined as a Body Mass Index (BMI) of less than 25; overweight is defined as a BMI of 25 to <30; obese is defined as a BMI of 30 or more. BMI is calculated by dividing weight in kilograms by the square of height in meters.

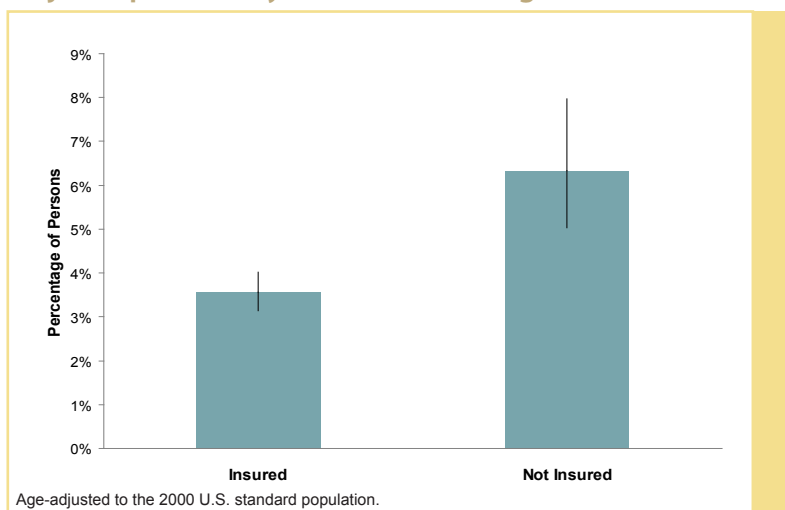
Major Depression by Weight Status, Utah, 2005–2007



Access to Health Care

According to the 1999 Report, *Mental Health: A Report of the Surgeon General*, adequate mental health treatment resources for large population groups require a wide range of services in a variety of settings, with sufficient flexibility to permit movement to the appropriate level of care. Private and public insurance policies have been pieced together to meet the public's need for mental health services.¹⁶

Major Depression by Insurance Coverage, Utah, 2005–2007



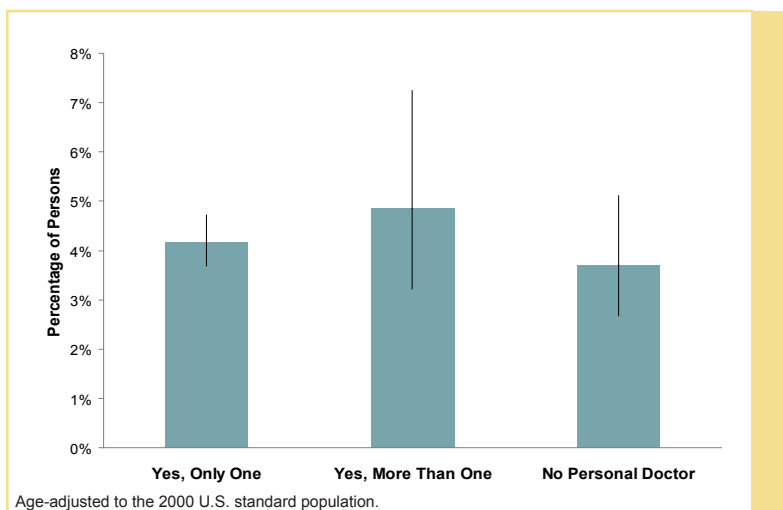
Insurance Coverage

Of those persons who reported not having health insurance, 6.3% had major depression. Of those persons who reported having health insurance, 3.6% had major depression. These rates were statistically significantly different.

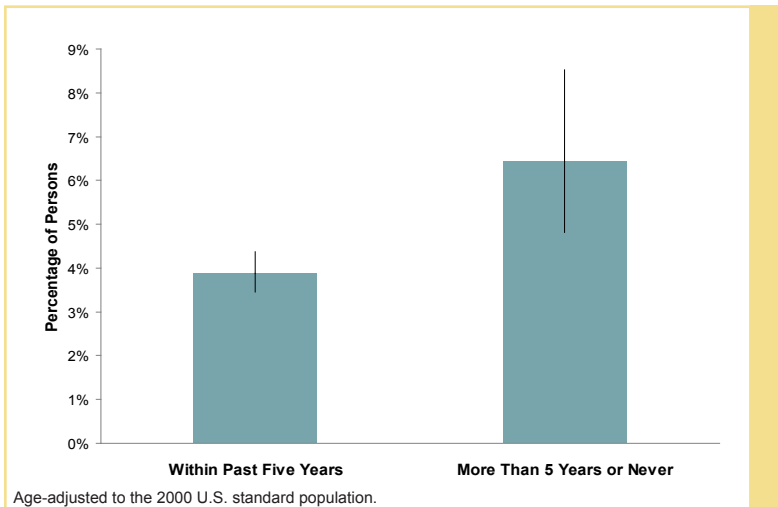
Primary Care Provider

There was no difference in the percentage of individuals with major depression based on personal doctor categories (3.7% for having no personal doctor, 4.2% for having one personal doctor, and 4.9% for having more than one personal doctor).

Major Depression by Having a Personal Doctor, Utah, 2005–2007



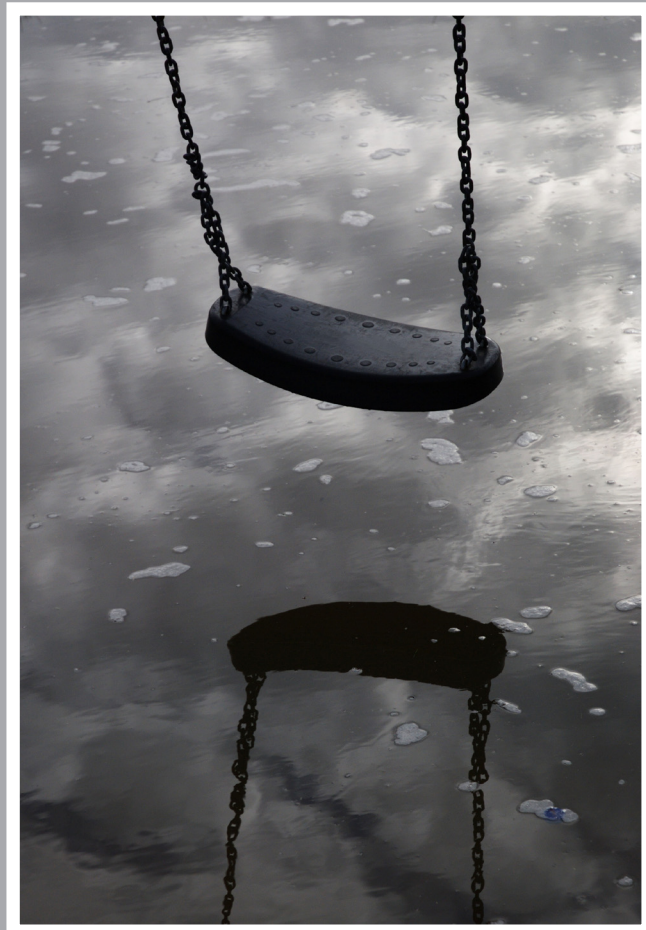
Major Depression by Routine Checkup in the Past Five Years, Utah, 2005–2007



Recent Routine Medical Checkup

Of those persons who reported not having a routine checkup in the past five years or never having a routine checkup, 6.4% had major depression. Of those persons who reported having a routine checkup in the past five years, 3.9% had major depression. These rates were statistically significantly different.

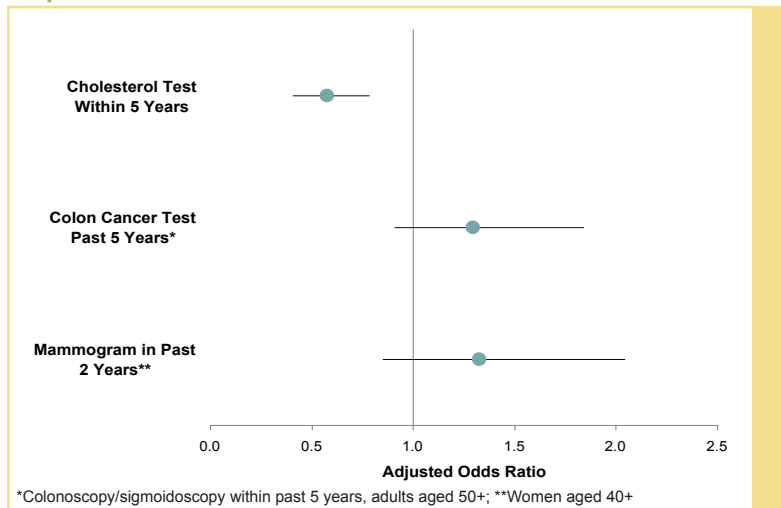
Do Utahns With Major Depression Behave Differently?



Multivariate Analysis

A multivariate analysis was performed to determine if certain health behaviors were different for Utah adults who had major depression compared to those who were not classified as having major depression. The analysis was performed adjusting for age, sex, race, education, and employment as individual logistic regression models for each of the health-related behaviors.

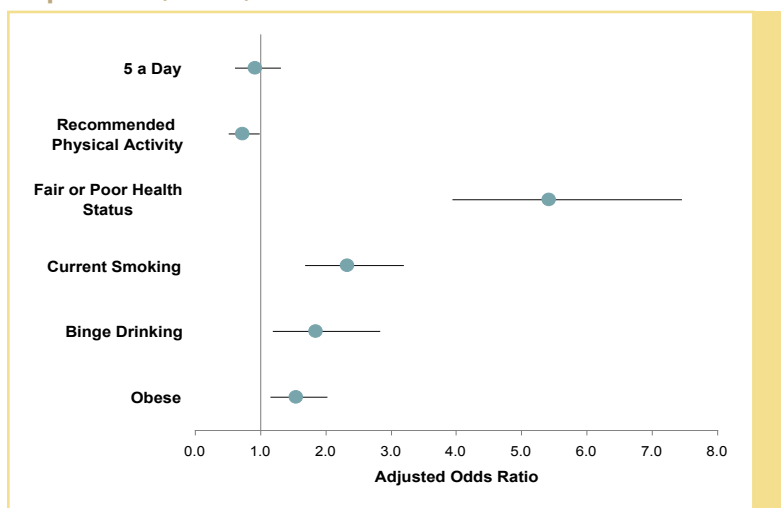
Odds of Health Care Utilization for Persons With Major Depression, Utah, 2005-2007



Health Care Utilization

Adults who had major depression were only about half as likely to have had a cholesterol test within the past five years. Major depression was not related to the likelihood of colon or breast cancer screening.

Odds of Lifestyle Behaviors for Persons With Major Depression, Utah, 2005-2007



Lifestyle Behaviors

Persons who had major depression were more than five times more likely to report fair or poor health status, more than twice as likely to be current smokers, nearly twice as likely to report binge drinking, and more than 1.5 times more likely to be obese. They were only about half as likely to engage in the recommended amount of physical activity. Major depression was not related to the consumption of fruits and vegetables.

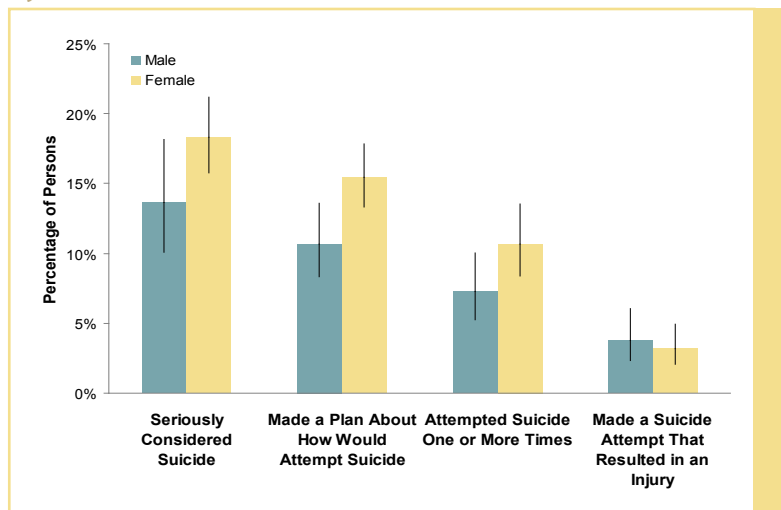
Suicide Ideation



Adults

Suicide ideation and attempts are more common than completed suicide. There is approximately one suicide for every 25 attempts.¹⁷ In 2005, there was a suicide every 16 minutes or approximately 11 suicides per 100,000 population in the U.S. Suicide is the second leading cause of death among 25–34 year olds.¹⁸ Men are more likely to commit suicide than women, but women attempt suicide 2 to 3 times as often as men.¹⁹ The most common psychiatric disorders associated with completed suicide are major depression and alcohol abuse.²⁰ Rates of suicide are higher among certain populations: White males over 75, Native Americans, certain professions (e.g., health professionals, police), and among people living in rural areas.¹⁷ Among Utah males, men 75 years and older have the highest rate of suicide. Among Utah females, women 35–44 have the highest rate of suicide.²¹ According to 2005–

Suicide Ideation During Past 12 Months Among Youth by Sex, Utah, 2005 and 2007



2007 Utah BRFSS data for one PHQ-9 question regarding suicide ideation, the prevalence of adult suicide ideation (for one or more days in the past two weeks) was 4.5% (male 4.0% and female 4.9%; not statistically different).

Youth

Adolescence tends to be a stressful time for individuals, filled with body changes, changes in thoughts, and changes in feelings. For some teenagers, normal developmental changes compounded by other stressful events can be upsetting and even overwhelming. As many as 12 to 25 percent of older children and adolescents experience some suicidal ideation at one time or another. The strongest risk factors for attempted suicide in youth are depression, substance abuse, and aggressive or disruptive

behaviors. The CDC reports the following regarding youth suicide: males are four times more likely to die from suicide than females; females are more likely to attempt suicide than males; and firearms are used in more than half of youth suicides.²²

According to Utah Youth Risk Behavior Survey data, 15.9% of youth seriously considered suicide during the past 12 months; 27.1% felt so sad or hopeless almost every day for two weeks that they stopped their usual activities; 13.0% made a plan about how they would attempt suicide in the past 12 months; 9.0% attempted suicide one or more times during the past 12 months; and 3.5% made a suicide attempt that resulted in an injury in the past 12 months. There were no statistically significant differences by sex for the suicide ideation questions.

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Appendices



Table 1. Current Major Depression: Utah vs. U.S.
Percentage of Adults Reporting Current Major Depression by State, U.S., 2006

State	Total 2006 Adult (18+) Population ¹	Survey Estimates of Adults With Current Major Depression				
		Estimated Number of Adults ^{3,4}	Crude Rate	Percentage of Adults ²		
				Age- adjusted Rate	95% Confidence Bounds	
					Lower	Upper
Total U.S.	225,633,342	9,645,100	4.3%	4.2%	4.0%	4.5%
State						
Alabama	3,483,362	192,200	5.5%	5.5%	4.5%	6.6%
Alaska	490,366	13,900	2.8%	2.8%	2.1%	3.8%
Arkansas	2,117,836	120,800	5.7%	5.8%	5.0%	6.7%
California	26,926,503	1,170,900	4.3%	4.3%	3.6%	5.0%
Delaware	649,740	26,700	4.1%	4.1%	3.4%	5.0%
District of Columbia	466,700	16,400	3.5%	3.4%	2.6%	4.6%
Florida	14,071,245	538,600	3.8%	4.0%	3.3%	4.8%
Georgia	6,911,716	285,400	4.1%	4.0%	3.4%	4.8%
Hawaii	988,265	32,300	3.3%	3.3%	2.7%	4.0%
Indiana	4,733,923	227,500	4.8%	4.7%	4.1%	5.5%
Iowa	2,267,565	56,100	2.5%	2.5%	2.0%	3.1%
Louisiana	3,198,771	146,600	4.6%	4.5%	3.8%	5.3%
Maine	1,039,702	33,700	3.2%	3.4%	2.7%	4.2%
Michigan	7,618,222	359,300	4.7%	4.7%	3.9%	5.5%
Minnesota	3,909,171	97,300	2.5%	2.5%	2.0%	3.1%
Mississippi	2,151,613	143,600	6.7%	6.7%	5.9%	7.6%
Missouri	4,420,284	214,900	4.9%	4.9%	4.0%	5.9%
Montana	726,534	20,900	2.9%	2.7%	2.3%	3.3%
Nevada	1,861,082	87,300	4.7%	4.7%	3.6%	6.2%
New Hampshire	1,017,217	35,200	3.5%	3.5%	2.8%	4.3%
New Mexico	1,444,249	61,500	4.3%	4.2%	3.6%	4.9%
North Dakota	492,255	10,700	2.2%	2.2%	1.7%	2.9%
Oklahoma	2,684,026	156,400	5.8%	5.8%	5.1%	6.6%
Oregon	2,843,141	111,500	3.9%	3.9%	3.2%	4.9%
Rhode Island	830,163	33,200	4.0%	4.0%	3.2%	4.9%
South Carolina	3,282,383	145,000	4.4%	4.5%	3.8%	5.2%
Tennessee	4,591,753	242,400	5.3%	5.2%	4.4%	6.3%
Texas	17,004,929	710,400	4.2%	4.2%	3.4%	5.2%
Utah	1,805,589	79,300	4.4%	4.2%	3.5%	5.1%
Vermont	490,004	16,900	3.4%	3.4%	2.9%	4.1%
Virginia	5,837,331	201,000	3.4%	3.4%	2.4%	4.7%
West Virginia	1,428,249	98,900	6.9%	7.0%	6.0%	8.1%
Wisconsin	4,241,563	132,600	3.1%	3.1%	2.5%	3.8%
Wyoming	394,074	15,100	3.8%	3.8%	3.1%	4.5%
Total, All 34 states reporting	136,419,526	5,831,500	4.3%	4.2%	4.0%	4.5%

1 Population estimates from 2006 American Community Survey; Utah population estimate based on 2008 baseline projections (revised 7-23-2008), Governor's Office of Planning and Budget.

2 Asymmetric confidence bounds were calculated using the logit transformation.

3 Rounded to the nearest 100 persons.

4 Figures in these columns may not sum to the total because of data weighting and missing values on the grouping variables.

Note: Figures in this table based on PHQ-8 for 2006 only. Figures in subsequent tables are based on PHQ-9 for 2005-2007. See Appendix B: Methods and Procedures.

Source: 2006 Behavioral Risk Factor Surveillance System

Table 2. Current Major Depression: Local Health Districts and Small Areas

Percentage of Adults Reporting Current Major Depression by Local Health District and Small Area, Utah, 2005-2007

Health District/Small Area	Number of Adults ¹	Survey Estimates of Adults With Current Major Depression				
		Estimated Number of Adults ^{3,4}	Crude Rate	Percentage of Adults ²		
				Age- adjusted Rate	95% Confidence Bounds	
					Lower	Upper
2006 Utah Population, Adults 18+	1,805,589	75,100	4.2%	4.1%	3.7%	4.6%
Bear River Health District	104,556	3,100	3.0%	2.9%	1.8%	4.8%
Brigham City (1)	15,488	600	3.9%	5.2%	2.0%	13.0%
Logan (3) & Other Cache/Rich Counties (4)	73,320	1,900	2.6%	2.2%	1.1%	4.4%
Other Box Elder County (2)	15,748	600	3.9%	4.8%	1.9%	11.6%
Central Utah Health District	50,436	2,600	5.3%	5.6%	3.6%	8.4%
Juab/Millard/Sanpete Counties (54)	33,718	1,500	4.6%	4.5%	2.7%	7.4%
Sevier/Piute/Wayne Counties (55)	16,718	1,100	6.5%	7.5%	3.8%	14.3%
Davis County Health District	194,220	7,900	4.1%	4.0%	2.8%	5.7%
Bountiful (16)	36,061	900	2.5%	3.3%	1.3%	8.2%
Clearfield/Hill AFB (11)	42,239	2,400	5.6%	5.7%	2.3%	13.6%
Farmington/Centerville (14)	21,114	1,000	4.5%	5.3%	2.3%	11.9%
Layton (12)	51,644	1,800	3.4%	3.4%	1.8%	6.3%
Syracuse/Kaysville (13)	27,453	800	2.9%	4.0%	1.9%	8.1%
Woods Cross/North Salt Lake (15)	15,714	1,100	6.8%	4.8%	2.2%	10.4%
Salt Lake Valley Health District	698,817	29,400	4.2%	4.1%	3.5%	4.9%
Avenues (18) & Foothill/U of U (19)	38,411	900	2.4%	2.2%	1.0%	4.8%
Cottonwood (28) & Sandy, NE (37) & Sandy, SE (38)	77,405	2,500	3.3%	3.2%	1.5%	6.5%
Downtown Salt Lake (24)	44,356	2,400	5.4%	4.1%	1.9%	8.7%
Holladay (27)	38,090	1,100	2.9%	2.8%	1.3%	6.1%
Kearns (29)	45,182	2,400	5.3%	4.8%	2.7%	8.5%
Magna (20)	16,686	600	3.7%	3.7%	1.5%	8.9%
Midvale (32)	22,464	1,000	4.5%	5.0%	2.2%	11.1%
Millcreek (26)	45,545	2,400	5.4%	6.1%	3.5%	10.5%
Riverton/Draper (39)	45,864	1,400	3.1%	2.7%	1.1%	6.2%
Rose Park (17) & Glendale (21)	43,614	2,400	5.5%	5.2%	2.5%	10.4%
Sandy Center (36)	38,080	900	2.3%	1.9%	0.8%	4.5%
South Salt Lake (25)	18,813	1,800	9.7%	10.4%	4.8%	20.9%
Taylorsville (30) & Murray (31)	53,430	2,600	4.9%	5.1%	2.8%	9.0%
West Jordan North (33)	33,239	2,100	6.4%	5.8%	3.4%	9.7%
West Jordan/Copperton (34) & South Jordan (35)	52,570	600	1.2%	1.2%	0.6%	2.6%
West Valley East (23)	37,259	2,900	7.7%	8.2%	4.8%	13.5%
West Valley West (22)	47,798	2,600	5.4%	6.2%	3.5%	10.6%
Southeastern Utah Health District	38,391	1,900	5.1%	5.1%	3.6%	7.2%
Carbon/Emery Counties (56)	21,713	1,500	7.0%	7.5%	5.2%	10.9%
Grand/San Juan Counties (57)	16,678	300	1.7%	1.5%	0.7%	3.2%
Southwest Utah Health District	140,508	4,700	3.3%	3.2%	2.2%	4.8%
Cedar City (60)	25,951	700	2.9%	2.6%	1.1%	6.4%
Other Washington County (59)	40,898	2,200	5.4%	5.2%	2.8%	9.2%
St. George (58) & Other Southwest District (61)	73,660	1,700	2.3%	2.2%	1.1%	4.4%
Summit County Health District (51)	27,190	500	2.0%	2.2%	1.0%	4.7%
Tooele County Health District (40)	36,534	1,500	4.2%	4.5%	3.0%	6.8%
TriCounty Health District (53)	30,424	1,000	3.1%	3.1%	2.0%	4.7%
Utah County Health District	312,969	13,300	4.2%	4.0%	3.0%	5.4%
American Fork/Alpine (42) & Pleasant Grove/Lindon (43)	58,203	1,900	3.3%	3.5%	1.7%	7.0%
East Orem (46)	16,661	600	3.4%	3.1%	1.2%	7.7%
Lehi/Cedar Valley (41)	21,157	500	2.1%	3.5%	1.3%	8.9%
North Orem (44)	28,064	1,100	3.8%	6.2%	2.9%	12.7%
Provo/BYU (47) & Provo South (48)	99,537	4,700	4.8%	3.2%	1.7%	6.0%
Springville/Spanish Fork (49)	45,861	1,900	4.1%	3.5%	1.8%	6.8%
Utah County South (50)	19,157	800	4.2%	5.9%	2.5%	13.2%
West Orem (45)	24,326	2,700	11.1%	8.8%	3.7%	19.8%

Table 2 (continued). Current Major Depression: Local Health Districts and Small Areas
Percentage of Adults Reporting Current Major Depression by Local Health District and Small Area, Utah, 2005-2007

Health District/Small Area	Number of Adults ¹	Survey Estimates of Adults With Current Major Depression				
		Estimated Number of Adults ^{3,4}	Crude Rate	Percentage of Adults ²		
				Age- adjusted Rate	95% Confidence Bounds	
					Lower	Upper
Wasatch County Health District (52)	14,599	600	3.9%	4.1%	2.6%	6.4%
Weber-Morgan Health District	156,945	7,400	4.7%	4.9%	3.5%	6.7%
Ben Lomond (5)	34,880	2,600	7.4%	8.0%	4.5%	13.9%
Downtown Ogden (7) & South Ogden (8)	50,257	2,000	4.0%	3.9%	2.3%	6.5%
Morgan/East Weber Counties (6)	26,565	900	3.3%	2.9%	1.2%	6.9%
Riverdale (10)	16,341	1,000	6.0%	5.3%	2.3%	11.7%
Roy/Hooper (9)	28,900	1,000	3.4%	4.0%	2.0%	7.9%

1 Population estimates based on 2008 baseline projections (revised 7-23-2008), Governor's Office of Planning and Budget.

2 Asymmetric confidence bounds were calculated using the logit transformation.

3 Rounded to the nearest 100 persons.

4 Figures in these columns may not sum to the total because of data weighting and missing values on the grouping variables.

Source: 2005-2007 Behavioral Risk Factor Surveillance System

Table 3. Current Major Depression in Utah: Demographics**Percentage of Adults Reporting Current Major Depression by Selected Demographics, Utah, 2005-2007**

Demographic Subgroup	Number of Adults ¹	Survey Estimates of Adults With Current Major Depression				
		Percentage of Persons ²				
		Estimated Number of Adults ^{3,4}	Crude Rate	Age- adjusted Rate	95% Confidence Bounds	
					Lower	Upper
2006 Utah Population, Adults 18+	1,805,589	75,100	4.2%	4.1%	3.7%	4.6%
Sex						
Male	898,070	28,300	3.2%	3.1%	2.5%	3.8%
Female	907,519	46,700	5.2%	5.1%	4.5%	5.8%
Total, All Utahns Aged 18+	1,805,589	75,100	4.2%	4.1%	3.7%	4.6%
Age Group						
18-24	333,144	18,200	5.5%	-	3.8%	7.8%
25-34	422,704	13,000	3.1%	-	2.5%	3.9%
35-44	320,717	13,900	4.3%	-	3.4%	5.4%
45-54	302,683	15,900	5.3%	-	4.3%	6.5%
55-64	205,851	8,400	4.1%	-	3.2%	5.2%
65-74	119,880	2,600	2.1%	-	1.4%	3.2%
75-84	75,616	2,400	3.1%	-	1.9%	5.0%
85+	24,994	900	3.7%	-	1.8%	7.6%
Total, All Utahns Aged 18+	1,805,589	75,100	4.2%	4.1%	3.7%	4.6%
Sex and Age						
Males, 18 to 24	163,446	7,900	4.8%	-	2.6%	8.6%
Males, 25 to 34	217,530	4,100	1.9%	-	1.2%	3.0%
Males, 35 to 44	164,142	4,600	2.8%	-	1.8%	4.3%
Males, 45 to 54	151,884	6,700	4.4%	-	3.0%	6.4%
Males, 55 to 64	101,723	3,300	3.2%	-	2.1%	4.9%
Males, 65 to 74	57,017	800	1.3%	-	0.6%	3.1%
Males, 75 to 84	33,444	800	2.3%	-	1.1%	4.8%
Males, 85 and Over	8,884	400	4.6%	-	1.4%	14.1%
Females, 18 to 24	169,698	10,400	6.1%	-	3.8%	9.6%
Females, 25 to 34	205,174	8,900	4.4%	-	3.4%	5.6%
Females, 35 to 44	156,575	9,200	5.9%	-	4.5%	7.7%
Females, 45 to 54	150,799	9,200	6.1%	-	4.8%	7.7%
Females, 55 to 64	104,128	5,100	4.9%	-	3.7%	6.5%
Females, 65 to 74	62,863	1,800	2.9%	-	1.9%	4.4%
Females, 75 to 84	42,172	1,600	3.8%	-	2.1%	6.8%
Females, 85 and Over	16,110	500	3.3%	-	1.3%	8.0%
Total, All Utahns Aged 18+	1,805,589	75,100	4.2%	4.1%	3.7%	4.6%
Race						
White	1,706,658	76,300	4.5%	4.4%	3.9%	5.0%
Black	19,935	500	2.6%	0.8%	0.4%	1.5%
Asian	41,566	1,700	4.0%	4.1%	1.8%	9.1%
Pacific Islander	13,143	500	4.2%	2.1%	1.4%	3.2%
American Indian	24,287	1,300	5.5%	5.9%	2.7%	12.7%
Total, All Utahns Aged 18+	1,805,589	75,100	4.2%	4.1%	3.7%	4.6%
Ethnicity						
White, Non-Hispanic	1,533,938	64,300	4.2%	4.2%	3.7%	4.8%
Hispanic	181,964	14,900	8.2%	6.0%	4.2%	8.4%
Other, Non-Hispanic	89,687	2,700	3.1%	3.1%	2.5%	3.8%
Total, All Utahns Aged 18+	1,805,589	75,100	4.2%	4.1%	3.7%	4.6%

Table 3 (continued). Current Major Depression in Utah: Demographics
Percentage of Adults Reporting Current Major Depression by Selected Demographics, Utah, 2005-2007

Demographic Subgroup	Number of Adults ¹	Survey Estimates of Adults With Current Major Depression				
		Percentage of Persons ²				
		Estimated Number of Adults ^{3,4}	Crude Rate	Age-adjusted Rate	95% Confidence Bounds	
					Lower	Upper
Marital Status						
Married	1,237,400	33,000	2.7%	2.6%	2.2%	3.0%
Divorced	116,500	13,200	11.3%	12.4%	8.0%	18.6%
Widowed	70,400	3,600	5.2%	6.9%	3.6%	12.7%
Separated	19,300	5,300	27.4%	23.8%	15.8%	34.2%
Never Married	319,000	16,800	5.3%	4.9%	3.6%	6.8%
Living as Married	43,200	4,100	9.6%	6.3%	3.7%	10.7%
Total, All Utahns Aged 18+	1,805,600	75,100	4.2%	4.1%	3.7%	4.6%
Employment Status						
Employed	1,191,500	39,000	3.3%	2.8%	2.4%	3.3%
Unemployed	106,000	20,500	19.4%	21.1%	17.7%	24.9%
Homemaker	223,000	8,400	3.8%	4.0%	2.8%	5.7%
Student	89,400	3,300	3.7%	2.2%	0.6%	7.7%
Retired	195,900	4,800	2.5%	1.3%	0.8%	2.2%
Total, All Utahns Aged 18+	1,805,600	75,100	4.2%	4.1%	3.7%	4.6%
Education Level⁵						
Less Than High School	139,400	14,800	10.6%	10.1%	7.8%	13.2%
High School or GED	515,300	31,700	6.2%	6.3%	5.3%	7.3%
Some College	600,900	19,900	3.3%	3.4%	2.8%	4.2%
College Grad	549,800	10,500	1.9%	1.8%	1.4%	2.3%
Total, All Utahns Aged 18+	1,805,600	75,100	4.2%	4.1%	3.7%	4.6%
Annual Household Income						
Under \$10,000	65,400	10,000	15.3%	19.9%	15.2%	25.6%
\$10,000 to <\$20,000	169,700	14,700	8.7%	9.2%	7.2%	11.7%
\$20,000 to <\$35,000	358,800	18,600	5.2%	6.1%	4.8%	7.7%
\$35,000 to <\$50,000	335,500	11,600	3.5%	3.7%	2.8%	5.1%
\$50,000 and Over	876,100	21,900	2.5%	2.4%	1.8%	3.1%
Total, All Utahns Aged 18+	1,805,600	75,100	4.2%	4.1%	3.7%	4.6%

1 Population estimates of sex, age, race, and ethnicity based on 2008 baseline projections (revised 7-23-2008), Governor's Office of Planning and Budget; all others based on the 2006 BRFSS and rounded to the nearest 100 persons.

2 Asymmetric confidence bounds were calculated using the logit transformation.

3 Rounded to the nearest 100 persons.

4 Figures in these columns may not sum to the total because of data weighting and missing values on the grouping variables.

5 Highest level of educational attainment.

Source: 2005-2007 Behavioral Risk Factor Surveillance System

Table 4. Current Major Depression in Utah: Chronic Diseases
Percentage of Adults Reporting Current Major Depression by Selected Chronic Diseases, Utah,
2005-2007

Chronic Disease Subgroup	Number of Adults ¹	Survey Estimates of Adults With Current Major Depression				
		Percentage of Persons ²				
		Estimated Number of Adults ^{3,4}	Crude Rate	Age-adjusted Rate	95% Confidence Bounds	
					Lower	Upper
2006 Utah Population, Adults 18+	1,805,589	75,100	4.2%	4.1%	3.7%	4.6%
Heart Attack						
Told Had Heart Attack	49,700	3,500	7.0%	10.1%	5.2%	18.6%
Not Told	1,755,900	71,100	4.1%	4.0%	3.5%	4.4%
Total, All Utahns Aged 18+	1,805,600	75,100	4.2%	4.1%	3.7%	4.6%
Stroke						
Told Had Stroke	34,300	3,000	8.6%	12.0%	5.9%	22.7%
Not Told	1,771,300	71,600	4.0%	3.9%	3.5%	4.4%
Total, All Utahns Aged 18+	1,805,600	75,100	4.2%	4.1%	3.7%	4.6%
Hypertension ⁵						
At Risk	344,900	19,800	5.8%	7.7%	5.3%	11.0%
Not at Risk	1,460,700	52,400	3.6%	3.6%	3.0%	4.2%
Total, All Utahns Aged 18+	1,805,600	75,100	4.2%	4.1%	3.7%	4.6%
Asthma						
Current Asthma	147,500	12,300	8.3%	8.2%	6.5%	10.4%
Not Current Asthma	1,658,100	62,700	3.8%	3.7%	3.3%	4.2%
Total, All Utahns Aged 18+	1,805,600	75,100	4.2%	4.1%	3.7%	4.6%
Diabetes						
Yes	102,700	6,700	6.5%	6.2%	4.3%	8.9%
During Pregnancy	18,600	2,000	10.6%	8.2%	3.5%	18.4%
Borderline	12,600	900	6.9%	9.1%	3.8%	20.6%
No	1,671,400	65,900	3.9%	3.9%	3.4%	4.4%
Total, All Utahns Aged 18+	1,805,600	75,100	4.2%	4.1%	3.7%	4.6%
Arthritis ⁵						
Have Arthritis	401,200	27,200	6.8%	7.5%	5.9%	9.5%
No Arthritis	1,404,400	45,400	3.2%	2.9%	2.4%	3.5%
Total, All Utahns Aged 18+	1,805,600	75,100	4.2%	4.1%	3.7%	4.6%

1 Total Utah population estimate based on 2008 baseline projections (revised 7-23-2008), Governor's Office of Planning and Budget; all others based on the 2006 BRFSS and rounded to the nearest 100 persons.

2 Asymmetric confidence bounds were calculated using the logit transformation.

3 Rounded to the nearest 100 persons.

4 Figures in these columns may not sum to the total because of data weighting and missing values on the grouping variables.

5 Data reported for 2005 and 2007.

Source: 2005-2007 Behavioral Risk Factor Surveillance System

Table 5. Current Major Depression in Utah: General Health and Health Behaviors
Percentage of Adults Reporting Current Major Depression by General Health and Health Behaviors,
Utah, 2005-2007

General Health and Health Behavior Subgroup	Number of Adults ¹	Survey Estimates of Adults With Current Major Depression				
		Percentage of Persons ²				
		Estimated Number of Adults ^{3,4}	Crude Rate	Age- adjusted Rate	95% Confidence Bounds	
					Lower	Upper
2006 Utah Population, Adults 18+	1,805,589	75,100	4.2%	4.1%	3.7%	4.6%
General Health Status						
Fair/Poor	220,500	36,500	16.6%	17.7%	15.1%	20.7%
Excellent/Good/Very Good	1,585,100	41,400	2.6%	2.4%	2.1%	2.8%
Total, All Utahns Aged 18+	1,805,600	75,100	4.2%	4.1%	3.7%	4.6%
Smoking Status						
Current Smoker	198,800	21,500	10.8%	11.1%	8.9%	13.7%
Former or Never Smoke	1,606,800	54,000	3.4%	3.3%	2.9%	3.8%
Total, All Utahns Aged 18+	1,805,600	75,100	4.2%	4.1%	3.7%	4.6%
Drinking Status						
Binge Drinker ⁵	162,100	12,500	7.7%	5.9%	4.3%	7.9%
Not Binge Drinker	1,643,400	62,300	3.8%	3.8%	3.4%	4.3%
Total, All Utahns Aged 18+	1,805,600	75,100	4.2%	4.1%	3.7%	4.6%
Colonoscopy Test (Ages 50+)						
In Past Five Years	304,800	11,800	3.9%	4.3%	3.4%	5.3%
More Than Five Years or Never	264,900	9,900	3.7%	3.8%	2.9%	4.9%
Total, All Utahns Aged 50+	569,800	21,800	3.8%	4.0%	3.4%	4.7%
Mammography (Women Ages 40+) ⁶						
In Past Two Years	308,300	14,600	4.7%	4.5%	3.5%	5.9%
More Than Two Years or Never	145,100	7,100	4.9%	4.8%	3.5%	6.6%
Total, All Utah Women Aged 40+	453,400	21,700	4.8%	4.7%	3.9%	5.7%
Cholesterol Test ⁷						
In Past Five Years	1,163,000	37,300	3.2%	3.1%	2.6%	3.6%
More Than Five Years or Never	642,600	35,200	5.5%	6.2%	4.8%	8.1%
Total, All Utahns Aged 18+	1,805,600	75,100	4.2%	4.1%	3.7%	4.6%
Recommended Physical Activity ^{7,8}						
Meets Recommendations	1,003,900	30,800	3.1%	2.9%	2.4%	3.6%
Insufficient Physical Activity	674,600	28,300	4.2%	4.1%	3.4%	5.1%
No Physical Activity	127,100	12,500	9.9%	10.0%	7.4%	13.5%
Total, All Utahns Aged 18+	1,805,600	75,100	4.2%	4.1%	3.7%	4.6%
Fruit and Vegetable Consumption ⁷						
0 Servings/Day	106,900	10,600	9.9%	10.2%	7.4%	13.9%
1-2 Servings/Day	688,800	31,800	4.6%	4.7%	3.8%	5.8%
3-4 Servings/Day	604,900	15,700	2.6%	2.6%	2.0%	3.3%
5+ Servings/Day	405,000	14,500	3.6%	3.6%	2.8%	4.8%
Total, All Utahns Aged 18+	1,805,600	75,100	4.2%	4.1%	3.7%	4.6%

Table 5 (continued). Current Major Depression in Utah: General Health and Health Behaviors
Percentage of Adults Reporting Current Major Depression by General Health and Health Behaviors, Utah, 2005-2007

General Health and Health Behavior Subgroup	Number of Adults ¹	Survey Estimates of Adults With Current Major Depression				
		Estimated Number of Adults ^{3,4}	Crude Rate	Percentage of Persons ²		
				Age-adjusted Rate	95% Confidence Bounds	
					Lower	Upper
Body Mass Index (BMI) ⁹						
Normal Weight	788,000	27,400	3.5%	3.4%	2.8%	4.0%
Overweight but Not Obese	623,700	23,500	3.8%	3.8%	3.1%	4.8%
Obese	394,000	23,000	5.8%	5.8%	4.6%	7.2%
Total, All Utahns Aged 18+	1,805,600	75,100	4.2%	4.1%	3.7%	4.6%

1 Total population estimates based on 2008 baseline projections (revised 7-23-2008), Governor's Office of Planning and Budget; all others based on the 2006 BRFSS and rounded to the nearest 100 persons.

2 Asymmetric confidence bounds were calculated using the logit transformation.

3 Rounded to the nearest 100 persons.

4 Figures in these columns may not sum to the total because of data weighting and missing values on the grouping variables.

5 Binge drinking is defined as consuming five or more drinks of alcohol on an occasion one or more times during the past 30 days. A drink of alcohol is 1 can or bottle of beer, 1 glass of wine, 1 can or bottle of wine cooler, 1 cocktail, or 1 shot of liquor.

6 Data reported for 2006-2007.

7 Data reported for 2005 and 2007.

8 Recommended physical activity includes 30 minutes of moderate physical activity 5 or more days per week or 20 minutes of vigorous physical activity 3 or more days per week.

9 Normal weight is defined as a Body Mass Index (BMI) of less than 25; overweight is defined as a BMI of 25 to <30; obese is defined as a BMI of 30 or more. BMI is calculated by dividing weight in kilograms by the square of height in meters.

Source: 2005-2007 Behavioral Risk Factor Surveillance System

Table 6. Current Major Depression in Utah: Access to Health Care
Percentage of Adults Reporting Current Major Depression by Access to Health Care, Utah, 2005-2007

Access to Health Care Subgroup	Number of Adults ¹	Survey Estimates of Adults With Current Major Depression				
		Estimated Number of Adults ^{3,4}	Crude Rate	Percentage of Persons ²		
				Age- adjusted Rate	95% Confidence Bounds	
					Lower	Upper
2006 Utah Population, Adults 18+	1,805,589	75,100	4.2%	4.1%	3.7%	4.6%
Insurance Coverage						
Insured	1,531,900	53,500	3.5%	3.6%	3.1%	4.0%
Not Insured	273,700	21,600	7.9%	6.3%	5.0%	8.0%
Total, All Utahns Aged 18+	1,805,600	75,100	4.2%	4.1%	3.7%	4.6%
Personal Doctor						
Yes, Only One	1,269,100	53,000	4.2%	4.2%	3.7%	4.7%
Yes, More Than One	115,600	5,700	4.9%	4.9%	3.2%	7.2%
No Personal Doctor	421,100	16,300	3.9%	3.7%	2.7%	5.1%
Total, All Utahns Aged 18+	1,805,600	75,100	4.2%	4.1%	3.7%	4.6%
Last Routine Checkup						
Within Past Five Years	1,534,800	60,600	4.0%	3.9%	3.4%	4.4%
More Than Five Years or Never	270,800	14,700	5.4%	6.4%	4.8%	8.5%
Total, All Utahns Aged 18+	1,805,600	75,100	4.2%	4.1%	3.7%	4.6%

1 Total population estimates based on 2008 baseline projections (revised 7-23-2008), Governor's Office of Planning and Budget; all others based on the 2006 BRFSS and rounded to the nearest 100 persons.

2 Asymmetric confidence bounds were calculated using the logit transformation.

3 Rounded to the nearest 100 persons.

4 Figures in these columns may not sum to the total because of data weighting and missing values on the grouping variables.

Source: 2005-2007 Behavioral Risk Factor Surveillance System

Table 7. Suicide Ideation**Percentage of Adults and Youth Reporting Suicide Ideation During Past 12 Months by Degree of Ideation, Utah, 2005-2007**

	Male			Female			Both Sexes		
	95% Confidence			95% Confidence			95% Confidence		
Degree of Ideation	Percentage of Persons	Bounds ¹ Lower	Upper	Percentage of Persons	Bounds ¹ Lower	Upper	Percentage of Persons	Bounds ¹ Lower	Upper
Adults									
Suicide Ideation in Past Two Weeks	4.0%	3.4%	4.7%	4.9%	4.3%	5.6%	4.5%	4.0%	5.0%
Youth									
Seriously Considered Suicide	13.6%	10.1%	18.2%	18.3%	15.8%	21.2%	15.9%	14.1%	17.9%
Made a Plan About How Would Attempt Suicide	10.7%	8.3%	13.6%	15.4%	13.3%	17.8%	13.0%	11.4%	14.9%
Attempted Suicide One or More Times	7.3%	5.2%	10.0%	10.7%	8.4%	13.5%	9.0%	7.7%	10.5%
Made a Suicide Attempt That Resulted in an Injury	3.8%	2.4%	6.0%	3.2%	2.0%	4.9%	3.5%	2.5%	4.9%

¹ Asymmetric confidence bounds were calculated using the logit transformation.

Source: Adults - 2005-2007 Behavioral Risk Factor Surveillance System, age-adjusted; Youth - 2005 and 2007 Youth Risk Behavior Survey

The Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) is a random-digit dialed health survey that is administered each year by the Centers for Disease Control and Prevention (CDC) in collaboration with participating states and territories. Utah has participated in the BRFSS since its inception in 1984. Interviews are collected monthly from the Utah Department of Health (UDOH) Survey Center by professional interviewers. The Survey Center uses a Computer-Assisted Telephone Interviewing (CATI) system to administer the appropriate questions and record respondent answers in the survey directly to a computerized database. Data are weighted to account for differences in the probability of selection and to adjust the sample to the age-sex distribution and geographic location of the population of Utah. The SAS® statistical package with SAS-callable SUDAAN® computer software was used to compute prevalence estimates (both crude and age-adjusted) and associated 95 percent confidence intervals. Logistic regression was used to obtain the adjusted odds-ratios used in the report.

Patient Health Questionnaire (PHQ-9)

The Patient Health Questionnaire (PHQ) was developed for making criteria-based diagnoses of depressive disorders commonly encountered in primary care. The PHQ-9 is comprised of nine criteria upon which the diagnosis of DSM-IV (Diagnostic and Statistical Manual of Mental Disorders) depressive disorders is based. The PHQ-9, developed to be used in a clinical setting, can establish depressive disorders diagnoses and grade the severity of depressive symptoms. This three-page questionnaire is self-administered by the patient, with subsequent review by a clinician. The clinician verifies the response and applies a diagnostic algorithm to determine one of eight diagnoses which are divided into threshold disorders and sub-threshold disorders. The PHQ-9 score ranges from 0 to 27; since each of the nine items can be scored from 0 (not at all) to 3 (nearly every day). The results of the PHQ-9 are categorized into mild or minimal depressive disorder, other depressive disorder, and major depressive disorder. The PHQ-9 instrument has been validated to be carried out over the telephone.²³

2005 Utah BRFSS Questionnaire

The PHQ-9 was included as a series of state-added questions for the 2005 BRFSS questionnaire (see *Appendix C: Depression Modules*). The nine questions were answered with the original PHQ response categories of: “not at all,” “several days,” “more than half the days,” and “nearly every day.” If the respondent answered by specifying the number of days in the past two weeks, interviewers coded according to the following rule: 0–1 days = “not at all,” 2–6 days = “several days,” 7–11 days = “more than half the days,” and 12–14 days = “nearly every day.”

2006–2007 Utah BRFSS Questionnaire

The PHQ-9 was made available as an optional module for state BRFSS surveys in 2006. It was included in the 2006 and 2007 Utah BRFSS surveys (see *Appendix C: Depression Modules*). The response categories in the CDC optional module required the respondent to identify the number of days in the past two weeks for each of the nine questions.

Scoring the PHQ-9

For the 2005 instrument, scores were assigned as 0, 1, 2, and 3 to the response categories of: “not at all,” “several days,” “more than half the days,” and “nearly every day,” respectively. For the 2006 and 2007 instruments, scores were assigned as 0, 1, 2, and 3 when the responses fell into the following ranges: 0–1 day, 2–6 days, 7–11 days,

and 12–14 days, respectively. An individual was categorized with major depression if five or more of the nine questions have a score ≥ 2 (or ≥ 1 for question 9 on suicide ideation). See *Appendix D: PHQ-9 Instrument*.

The PHQ-8

In 2006, 34 states included some version of the PHQ-9 in the survey. However, due to the sensitive nature of question 9 on suicide ideation, most states did not include this question. The resulting eight questions were considered as the “PHQ-8.” In order to be consistent among all the participating states, the analysis by state was done with only the eight questions. A statistical comparison between the PHQ-9 and the PHQ-8 showed no significant difference in rates of major depression in Utah. Major depression as measured by the PHQ-9 in 2006 was 4.4%. The PHQ-8 estimate was 4.2%. However it should be noted that the PHQ was validated as a nine-question instrument and removing one question does not necessarily result in a validated eight-question instrument.

2005 Utah BRFSS Questionnaire: State-added Mental Health Questions

STMH1: Now I am going to ask you some questions about your mood.

Over the last 2 weeks, how often have you had little interest or pleasure in doing things? Would you say 'Not at all,' 'Several days,' 'More than half the days' or 'Nearly every day'?

1. Not at all
2. Several days
3. More than half the days
4. Nearly every day
7. Don't know/Not sure
9. Refused

STMH2: Over the last 2 weeks, how often have you felt down, depressed, or hopeless? Would you say 'Not at all,' 'Several days,' 'More than half the days' or 'Nearly every day'?

1. Not at all
2. Several days
3. More than half the days
4. Nearly every day
7. Don't know/Not sure
9. Refused

STMH3: (Over the last 2 weeks), how often have you had trouble falling asleep or staying asleep or sleeping too much?

(Would you say 'Not at all,' 'Several days,' 'More than half the days' or 'Nearly every day'?)

1. Not at all
2. Several days
3. More than half the days
4. Nearly every day
7. Don't know/Not sure
9. Refused

STMH4: (Over the last 2 weeks), how often have you felt tired or had little energy?

(Would you say 'Not at all,' 'Several days,' 'More than half the days' or 'Nearly every day'?)

1. Not at all
2. Several days
3. More than half the days
4. Nearly every day
7. Don't know/Not sure
9. Refused

STMH5: (Over the last 2 weeks), how often have you had a poor appetite or eaten too much?

(Would you say 'Not at all,' 'Several days,' 'More than half the days' or 'Nearly every day'?)

1. Not at all
2. Several days
3. More than half the days
4. Nearly every day
7. Don't know/Not sure
9. Refused

STMH6: (Over the last 2 weeks), how often have you felt bad about yourself – or that you were a failure or had let yourself or your family down?

(Would you say 'Not at all,' 'Several days,' 'More than half the days' or 'Nearly every day'?)

1. Not at all
2. Several days
3. More than half the days
4. Nearly every day
7. Don't know/Not sure
9. Refused

STMH7: (Over the last 2 weeks), how often have you had trouble concentrating on things, such as reading the newspaper or watching TV?

(Would you say 'Not at all,' 'Several days,' 'More than half the days' or 'Nearly every day'?)

1. Not at all
2. Several days
3. More than half the days
4. Nearly every day
7. Don't know/Not sure
9. Refused

STMH8: (Over the last 2 weeks), how often have you moved or spoken so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you were moving around a lot more than usual?

(Would you say 'Not at all,' 'Several days,' 'More than half the days' or 'Nearly every day'?)

1. Not at all
2. Several days
3. More than half the days
4. Nearly every day
7. Don't know/Not sure
9. Refused

STMH9: (Over the last 2 weeks), how often have you had thoughts that you would be better off dead or of hurting yourself in some way?

(Would you say 'Not at all,' 'Several days,' 'More than half the days' or 'Nearly every day'?)

1. Not at all
2. Several days
3. More than half the days
4. Nearly every day
7. Don't know/Not sure
9. Refused

2006–2007 Utah BRFSS Questionnaire: State-added Mental Health Questions (PHQ-9)

STMH1: Now I am going to ask you some questions about your mood. When answering these questions, please think about how many days each of the following has occurred in the past 2 weeks.

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

— —	01–14 days
8 8	None
7 7	Don't know/Not sure
9 9	Refused

STMH2: Over the last 2 weeks, how many days have you felt down, depressed or hopeless?

— —	01–14 days
8 8	None
7 7	Don't know/Not sure
9 9	Refused

STMH3: Over the last 2 weeks, how many days have you had trouble falling asleep or staying asleep or sleeping too much?

— —	01–14 days
8 8	None
7 7	Don't know/Not sure
9 9	Refused

STMH4: Over the last 2 weeks, how many days have you felt tired or had little energy?

— —	01–14 days
8 8	None
7 7	Don't know/Not sure
9 9	Refused

STMH5: Over the last 2 weeks, how many days have you had a poor appetite or eaten too much?

— —	01–14 days
8 8	None
7 7	Don't know/Not sure
9 9	Refused

STMH6: Over the last 2 weeks, how many days have you felt bad about yourself or that you were a failure or had let yourself or your family down?

— —	01–14 days
8 8	None
7 7	Don't know/Not sure
9 9	Refused

STMH7: Over the last 2 weeks, how many days have you had trouble concentrating on things, such as reading the newspaper or watching the TV?

— —	01–14 days
8 8	None
7 7	Don't know/Not sure
9 9	Refused

STMH8: Over the last 2 weeks, how many days have you moved or spoken so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you were moving around a lot more than usual?

— —	01–14 days
8 8	None
7 7	Don't know/Not sure
9 9	Refused

STMH9: Over the last 2 weeks, how often have you had thoughts that you would be better off dead or of hurting yourself in some way?

— —	01–14 days
8 8	None
7 7	Don't know/Not sure
9 9	Refused

PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

NAME: _____

DATE: _____

Over the *last 2 weeks*, how often have you been bothered by any of the following problems?
(use “✓” to indicate your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself in some way	0	1	2	3

add columns:

 + +

(Healthcare professional: For interpretation of TOTAL, please refer to accompanying scoring card.)

TOTAL:

10. If you checked off *any* problems, how *difficult* have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all _____

Somewhat difficult _____

Very difficult _____

Extremely difficult _____

PHQ-9 is adapted from PRIME MD TODAY, developed by Drs Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke, and colleagues, with an educational grant from Pfizer Inc. For research information, contact Dr Spitzer at rls8@columbia.edu. Use of the PHQ-9 may only be made in accordance with the Terms of Use available at <http://www.pfizer.com>. Copyright ©1999 Pfizer Inc. All rights reserved. PRIME MD TODAY is a trademark of Pfizer Inc.

