Ranking America's Mental Health:
An Analysis of Depression Across the States

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Table of Contents

Executive Summary

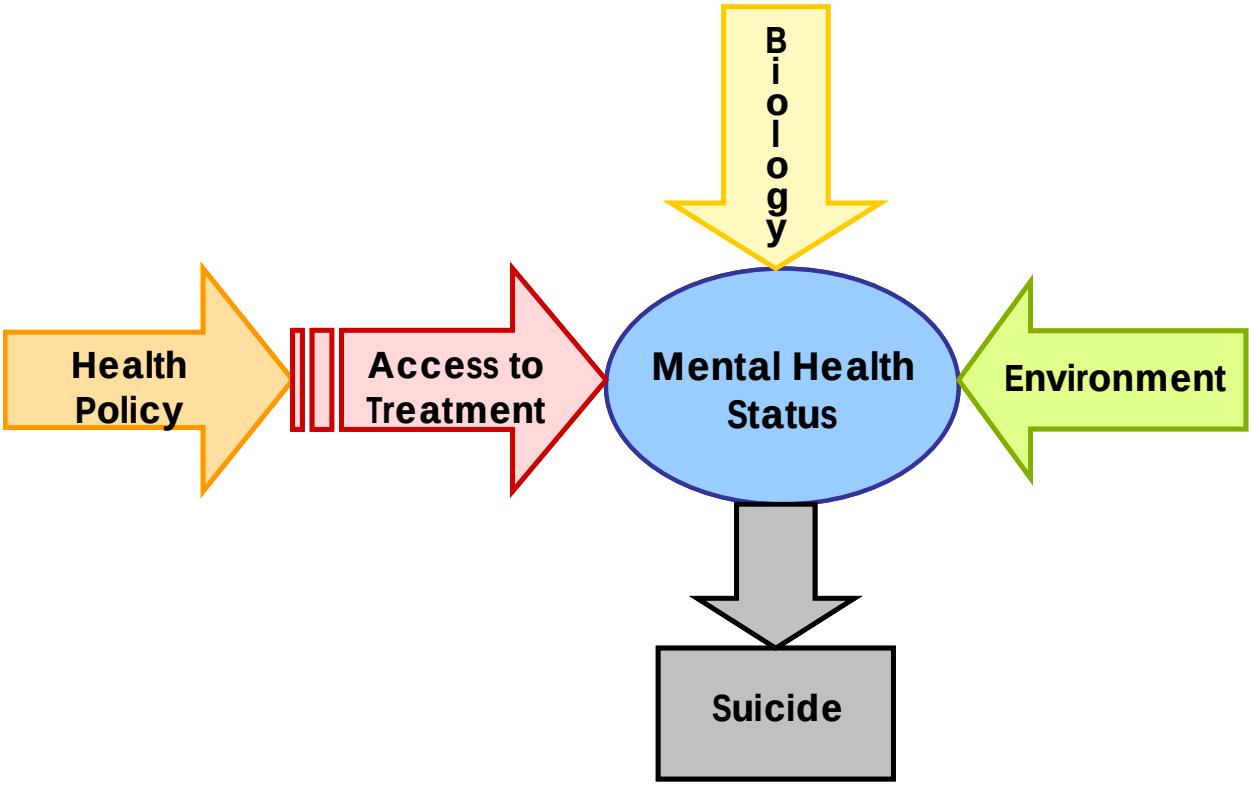
Introduction

Depression is a chronic illness that exacts a significant toll on America's health and productivity. This illness is the leading cause of disability in the United States for individuals ages 15 to 44 (World Health Organization, 2004). Lost productive time among U.S. workers due to depression is estimated to be in excess of $31 billion per year (Steward et al., 2003). Depression frequently co-occurs with a variety of medical illnesses such as heart disease, cancer, and chronic pain and is associated with poorer health status and prognosis (Munce, 2007; Blumenthal et al., 2007, Moussavi, 2007). Tragically, each year, roughly 30,000 Americans take their lives, while hundreds of thousands make suicide attempts (Centers for Disease Control and Prevention). In 2004, suicide was the 11th leading cause of death in the United States (Centers for Disease Control and Prevention), third among individuals 15-24.

Despite significant gains in the availability of effective depression treatment over the past decade, the level of unmet need for treatment remains high. Reducing depression within the U.S. population must be an essential priority.

Mental illness, disability, and suicide are ultimately the result of a combination of biology, environment, and access to and utilization of mental health treatment. Public health policies can influence access and utilization, which in turn may improve mental health status and help to ameliorate the negative consequences of depression and its associated disability (Figure 1).

Figure 1. Factors That Influence State Mental Health Status and Suicide Rates



In this report, depression levels and suicide rates among all 50 states and the District of Columbia are compared. Then they are analyzed to identify variables that are associated with lower rates of depression and suicide, thereby highlighting strategies that states can pursue to improve their population's mental health status and reduce suicide rates.

The purpose of this report is two-fold: 1) to inaugurate the development of a public health surveillance system to monitor the mental health of Americans, and 2) to stimulate action by communities, public health professionals, federal and state policy makers, and others to reduce depression and suicide.

Methods

Four different measures of depression and mental health status were used to develop one composite measure of the level of depression in a given state. The data for these measures came from representative surveys conducted in each state (and the District of Columbia) by the federal government. Specifically, the data came from the National Household Survey on Drug Use and Health (NSDUH) conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA) and the Behavioral Risk Factor Surveillance System (BRFSS) conducted by the Centers for Disease Control and Prevention in conjunction with the states.

The four measures of depression status were: (1) the percentage of the adult population experiencing at least one major depressive episode in the past year, (2) the percentage of the

adolescent population experiencing at least one major depressive episode in the past year, (3) the percentage of adults experiencing serious psychological distress, and (4) the average number of days in the last 30 days in which the population reported that their mental health was not good.

In addition to reporting on the level of depression in each state, age-adjusted suicide rates are also examined since suicide is the most significant negative outcome of depression.

After reporting on depression status and suicide rates, the association between depression prevalence and suicide rates and several state characteristics is examined. Five types of state characteristics are analyzed — state mental health policies, mental health treatment resources, the prevalence of barriers to access, use of mental health therapies, and socioeconomic characteristics. Those factors that are significantly associated with depression status and suicide are highlighted in this report.

Results

Hawaii, Illinois, Maryland, and New Jersey were ranked in the top ten healthiest states in terms of both relative depression status and suicide rates. Idaho, Nevada, Utah, West Virginia, and Wyoming were ranked in the bottom ten ranking in terms of relative depression status and suicide rates.

South Dakota was the healthiest state with respect to depression status. Hawaii ranked second; New Jersey ranked third. Among adults in South Dakota, 7.31 percent had a major depressive episode in the past year and 11.16 percent experienced serious psychological distress. Among adolescents in South Dakota, 7.4 percent had a major depressive episode in the past year. On average, individuals in South Dakota reported having 2.41 poor mental health days in the past 30 days.

Utah ranked 51st in depression status, West Virginia was 50th, and Kentucky was 49th. Among adults in Utah, 10.14 percent experienced a depressive episode in the past year and 14.58 percent experienced serious psychological distress. Among adolescents in Utah, 10.14 experienced a major depressive episode in the past year. Individuals in Utah reported having on average 3.27 poor mental health days in the past 30 days.

The District of Columbia had the lowest age-adjusted suicide rates in 2004, followed by New York and Massachusetts. Alaska had the highest age-adjusted suicide rate, followed by Nevada and New Mexico.

What changes might states make to reduce the level of depression and suicide among their citizens? We find the following factors to be significantly associated with better depression status and lower suicide rates:

- **Mental health resources** — On average, the higher the number of psychiatrists, psychologists, and social workers per capita in a state, the lower the suicide rate.
- **Barriers to treatment** — The lower the percentage of the population reporting that they could not obtain healthcare because of costs, the lower the suicide rate and the better the

state's depression status. In addition, the lower the percentage of the population that reported unmet mental healthcare needs, the better the state's depression status.

- **Mental health treatment utilization** — Holding the baseline level of depression in the state constant, the higher the percentage of the population receiving mental health treatment, the lower the suicide rate.
- **Socioeconomic characteristics** — The more educated the population and the greater the percentage with health insurance, the lower the suicide rate. The more educated the population, the better the state's depression status.

In addition, we find the following factor is significantly associated with the level of mental health service utilization in a state:

- **Mental health policy** — The more generous a state's mental health parity coverage, the greater the number of people in the population that receive mental health services.

Although this study is not designed to draw causal links, these analyses suggest some roads to reducing depression and its negative consequences, namely:

- Improving access to mental health professionals
- Reducing cost and other barriers to mental health treatment
- Encouraging appropriate utilization of mental health therapies
- Providing a richer socioeconomic environment by improving education levels, economic status, and health insurance coverage
- Addressing discrimination in private and public health insurance by legislating parity in coverage between mental healthcare and general healthcare treatments

1. Introduction

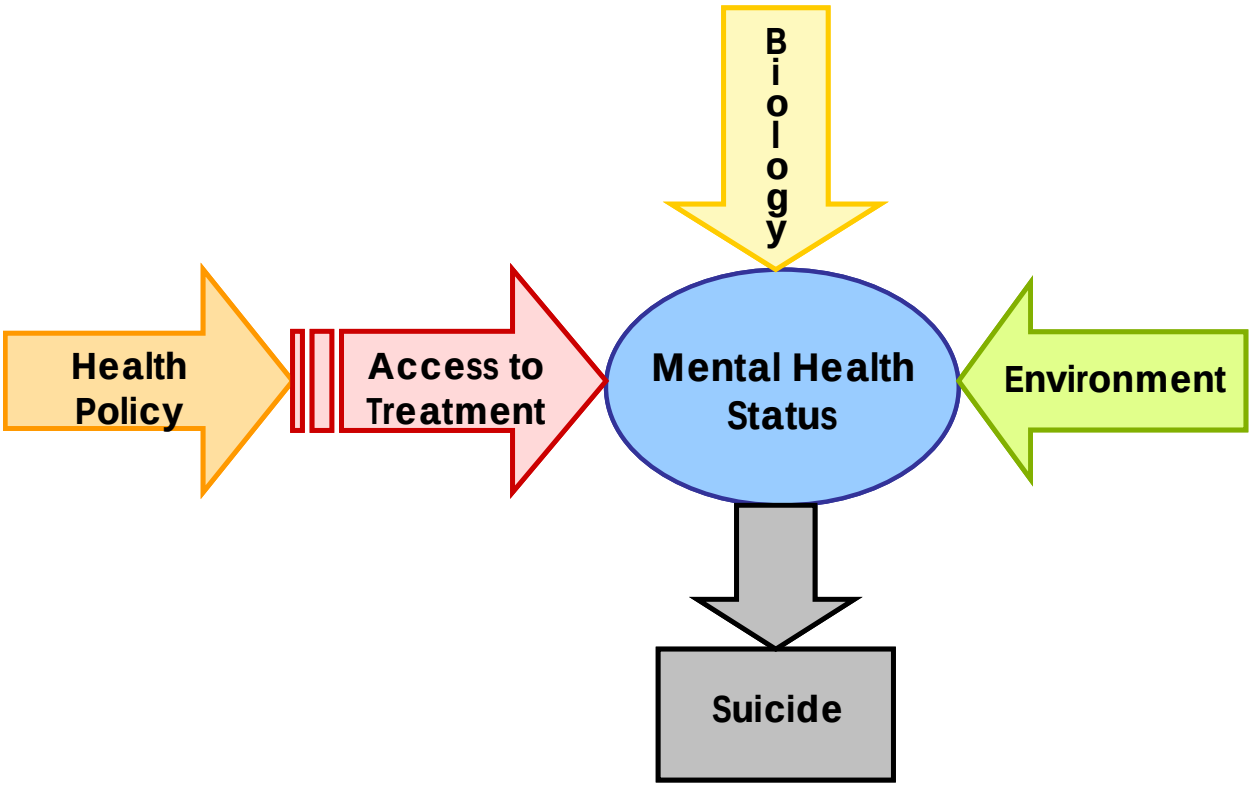
The World Health Organization defines mental health as a state of well-being in which an individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community. Mental illnesses can dramatically impact the overall state of health – decreasing community participation, productivity, and personal well being. Mental illnesses should be a particular concern in the United States since the U.S. has the highest annual prevalence rates (26 percent) for mental illnesses among a comparison of 14 developing and developed countries (Demyttenaere et al, 2004). Given these prevalence rates, access to effective care is a particular concern. While approximately 80 percent of all people in the United States with a mental disorder eventually receive some form of treatment, on the average persons do not access care until nearly a decade following the development of their illness, and less than one-third of people who seek help receive minimally adequate care (Wang et al., 2005a,b).

Depression is among the most common of the mental illnesses and can be associated with severe discomfort and disability if untreated. In fact, depression is the leading cause of disability in the United States for individuals ages 15 to 44 (World Health Organization, 2004). Lost productive time among U.S. workers due to depression is estimated to be in excess of $31 billion per year (Stewart et al., 2003). Depression frequently co-occurs with a variety of medical illnesses such as heart disease, cancer, and chronic pain and is associated with poorer health status and prognosis (Munce, 2007; Blumenthal et al., 2007, Moussavi, 2007).

Suicide is the most devastating consequence of depression. Each year, roughly 30,000 Americans take their lives, while hundreds of thousands make suicide attempts (Centers for Disease Control and Prevention). In 2004, suicide was the 11th leading cause of death in the United States (Centers for Disease Control and Prevention) and the third leading cause among 15-24 year olds. Depression, therefore, is one of the most significant public health concerns. Strategies to reduce its prevalence and consequences are badly needed.

Mental illness and its negative consequences, such as disability and suicide, are ultimately the result of a combination of biology, environment, and access to and utilization of mental health treatment, which in turn may improve mental health status and its negative consequences (Figure 1).

Figure 1. Factors That Influence State Mental Health Status and Suicide Rates



Public policies can influence access and utilization. Clearly, access to early intervention and effective treatment are among the leading strategies to reduce rates of depression and its attendant death and disability. Despite significant gains in the availability of effective depression treatment over the past decade, the level of unmet need for treatment remains high for many reasons, including ongoing ignorance regarding depression's signs and symptoms, continuing discrimination in insurance coverage, shame and stigma associated with mental illnesses, and under-recognition and under-treatment in primary care settings, as well as other attitudinal and economic barriers. Reducing depression within the United States population must be a critical public health priority.

In this report, we compare depression levels and suicide rates among all 50 states and the District of Columbia. Within the framework elaborated in Figure 1, we then analyze existing national data systems to determine which of these strategies may be related to improved depression status and reduction in negative consequences of depression at the state level. Through these analyses we hope to highlight strategies that states can pursue to improve their population's mental health status and reduce suicide rates.

The purpose of this work is two-fold: 1) To inaugurate the development of a public mental health surveillance system to monitor the mental health of Americans through examining depression and the state policies that may impact it, and, 2) To stimulate action by communities, public health professionals, federal and state policy makers, and others to address depression in their populations.

2. Methods

The project began with a review of available data sources that reported on state-level measures in the following domains: depression prevalence, mental health status, mental health service utilization, mental health access, mental health policy, and mental health provider resources. To identify available data, we reviewed relevant federal government surveys, such as those conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA), the Centers for Disease Control and Prevention (CDC), and the Agency for Healthcare Research and Quality (AHRQ). We also conducted a literature search of PubMed to find studies that have examined the association between mental health resources, access, policy, and outcomes. Finally, we conducted a general internet search of key terms such as "state mental health policy," "state mental health indicators," "state mental health access."

We identified nine different data sources. The data sources were the following:

1. Behavioral Risk Factor Surveillance System
2. National Survey on Drug Use and Health
3. National Vital Statistics System
4. Area Resource File
5. United States Census
6. IMS Health National Prescription Drug Audit
7. Survey of Mental Health Organizations
8. National Association of State Mental Health Program Directors Research Institute, Inc. State Profiles
9. State laws pertaining to mental health insurance benefits

The data sources are diverse and include federal household surveys, census surveys, mortality statistics, state laws, prescription sales data, provider census data, and financial data from state mental health programs. Each data source is further described in Appendix A.

A composite indicator of depression status was created. The indicator comprised four items: (1) the percentage of the adult population experiencing at least one major depressive episode in the past year, (2) the percentage of the adolescent population (ages 12 to 17) experiencing at least one major depressive episode in the past year, (3) the percentage of the adult population experiencing serious psychological distress, and (4) the average number of days in the past 30 days in which the population reported that their mental health was not good.

A major depressive episode was defined as a period of at least two weeks of depressed mood or loss of interest or pleasure in daily activities, and that included symptoms meeting the criteria for major depressive disorder as described in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)* (American Psychiatric Association; 1994). Data for the measure came from the National Household Survey on Drug Use and Health (NSDUH) conducted by SAMHSA (Substance Abuse and Mental Health Services Administration; 2006).

Serious Psychological distress was measured using the K6 scale. The K6 consists of six questions that ask respondents how frequently they experienced psychological distress during the one-month period in the past year when they were at their worst emotionally. Data for the Serious Psychological Distress measure also came from the NSDUH.

The measure of poor mental health days came from the Behavioral Risk Factor Surveillance System (BRFSS) conducted by the CDC (http://www.cdc.gov/mentalhealth/prevelance_data.htm).

The composite measure of depression status was created by summing up the four standardized measures of depression and mental health status available for each state and the District of Columbia. The items were standardized by subtracting the state mean from the value for the individual state and dividing by the standard deviation. Cronbach's alpha indicated reasonable intraclass correlation among the depression measures used in this scale.

In addition to the depression status measure, each state was ranked on its age-adjusted suicide rate. Data on age-adjusted suicide rates came from The National Vital Statistics System (NVSS), which collects and disseminates statistics from the jurisdictions (50 states, two cities, and five territories) responsible for maintaining registries of vital events. The NVSS is part of the CDC. At the time of this study, the most recent suicide data available were for 2004.

The possible determinants of depression status or suicide were divided into four domains:

1. Mental health treatment utilization
2. Treatment access and unmet mental health treatment need
3. Mental health provider resources
4. Population characteristics

The variables examined within each domain and their sources are shown in the Tables 2.1 through 2.4 below. The association between these variables and the composite depression measure and suicide rates were then evaluated using univariate linear regression. The exception was the association between utilization and suicide rates which was estimated controlling for the depression status in the state. Finally, the association between mental health policy (in particular, the presence and comprehensiveness of state parity laws) and barriers to treatment and treatment utilization was examined using univariate regression.

Table 2.1. Mental Health Service Utilization

Variable Description	Data Source	Year
Antidepressant prescriptions per capita	IMS Health National Prescription Drug Audit	08/2006–07/2007
Percentage of persons in state who received mental health treatment	National Household Survey on Drug Use and Health	2002–2006

Table 2.2. Barriers to Treatment

Variable Description	Data Source	Year
Percentage of the population reporting that they could not obtain healthcare in the past year because of cost	Behavioral Risk Factor Surveillance System	2006
Percentage of state population with self-reported unmet mental healthcare need	National Household Survey on Drug Use and Health	2002–2006

Table 2.3. Mental Health Resources

Variable Description	Data Source	Year
Number of psychiatrists per capita	Area Resource File	2004
Number of psychologists per capita	Area Resource File	2000
Number of social workers per capita	Area Resource File	2000
Number of mental health specialty organizations providing 24-hour care per capita	Substance Abuse and Mental Health Services Administration Survey of Mental Health Organizations	2002
Number of mental health specialty organizations providing less than 24-hour care per capita	Substance Abuse and Mental Health Services Administration Survey of Mental Health Organizations	2002
State mental health authority expenditures per capita	National Association of State Mental Health Program Directors, NRI, Inc.	2004

Table 2.4. Socioeconomic Characteristics

Variable Description	Data Source	Year
Median income per capita	U.S. Census	2004–2005
Percentage with bachelor's degrees or higher	U.S. Census	2006
Percentage of population with health insurance	U.S. Census	2006

3. Results

3.1 State Ranking on Depression Status

Table 3.1 shows the state rankings of depression status. The top ten healthiest states in terms of depression status are shown in red and the bottom ten states are shown in blue. Table 3.2 shows the values of the four component measures that made up the composite score for each state as well as the composite score.

Figures 3.1 through 3.4 presents a graphic depiction of the prevalence of depression and serious psychological distress in each state. The average percentage of adolescents with a depressive episode across all the states was 8.95 percent. The average percent of adults with a major depressive episode was 8.05 percent. The average percentage of the adult population with serious psychological distress was 11.63 percent. The average number of poor mental health days was 3.31 days.

South Dakota was the healthiest state with respect to depression status. Hawaii ranked second; New Jersey ranked third. Among adults in South Dakota, 7.31 percent had a major depressive episode in the past year and 11.16 percent experienced serious psychological distress. Among adolescents in South Dakota, 7.4 percent had a major depressive episode in the past year. On average, individuals in South Dakota reported having 2.41 poor mental health days in the past 30 days.

Utah ranked 51st in depression status, West Virginia was 50th, and Kentucky was 49th. Among adults in Utah, 10.14 percent experienced a depressive episode in the past year and 14.58 percent experienced serious psychological distress. Among adolescents in Utah, 10.14 experienced a major depressive episode in the past year. Individuals in Utah reported having on average 3.27 poor mental health days in the past 30 days.

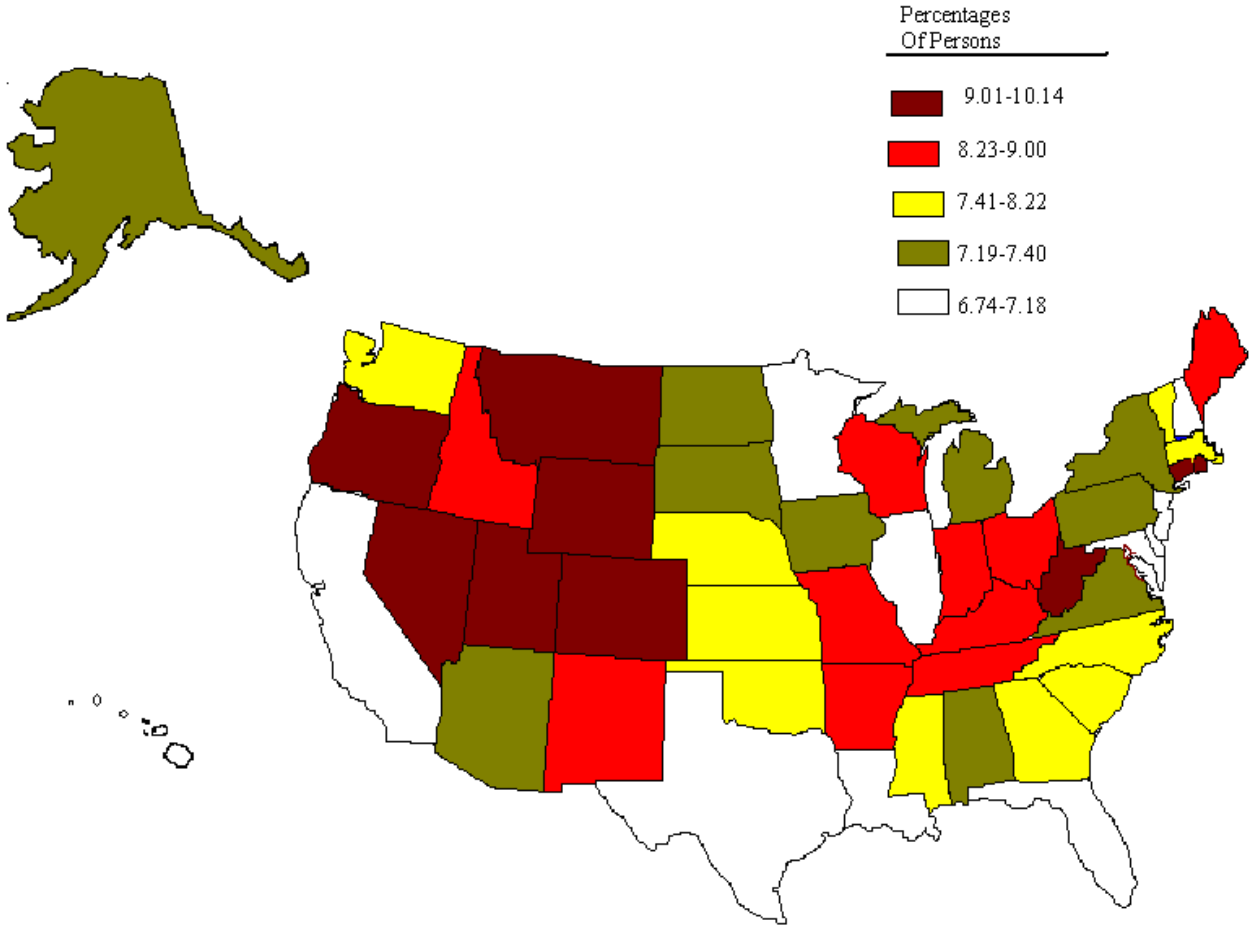
Table 3.1 State Ranking on Depression Status

	Ranking by Depression Status Composite Measure
SOUTH DAKOTA	1
HAWAII	2
NEW JERSEY	3
IOWA	4
MARYLAND	5
MINNESOTA	6
LOUISIANA	7
ILLINOIS	8
NORTH DAKOTA	9
TEXAS	10
GEORGIA	11
VERMONT	12
NEBRASKA	13
FLORIDA	14
CALIFORNIA	15
MASSACHUSETTS	16
PENNSYLVANIA	17
VIRGINIA	18
NEW YORK	19
NEW HAMPSHIRE	20
ALASKA	21
MICHIGAN	22
DISTRICT OF COLUMBIA	23
DELAWARE	24
ARIZONA	25
ALABAMA	26
NORTH CAROLINA	27
SOUTH CAROLINA	28
KANSAS	29
WISCONSIN	30
TENNESSEE	31
MONTANA	32
MISSISSIPPI	33
COLORADO	34
WASHINGTON	35
NEW MEXICO	36
OREGON	37
CONNECTICUT	38
INDIANA	39
ARKANSAS	40
MAINE	41
WYOMING	42
OHIO	43
MISSOURI	44
IDAHO	45
OKLAHOMA	46
NEVADA	47
RHODE ISLAND	48
KENTUCKY	49
WEST VIRGINIA	50
UTAH	51

Table 3.2. Components of State Depression Status Indicator

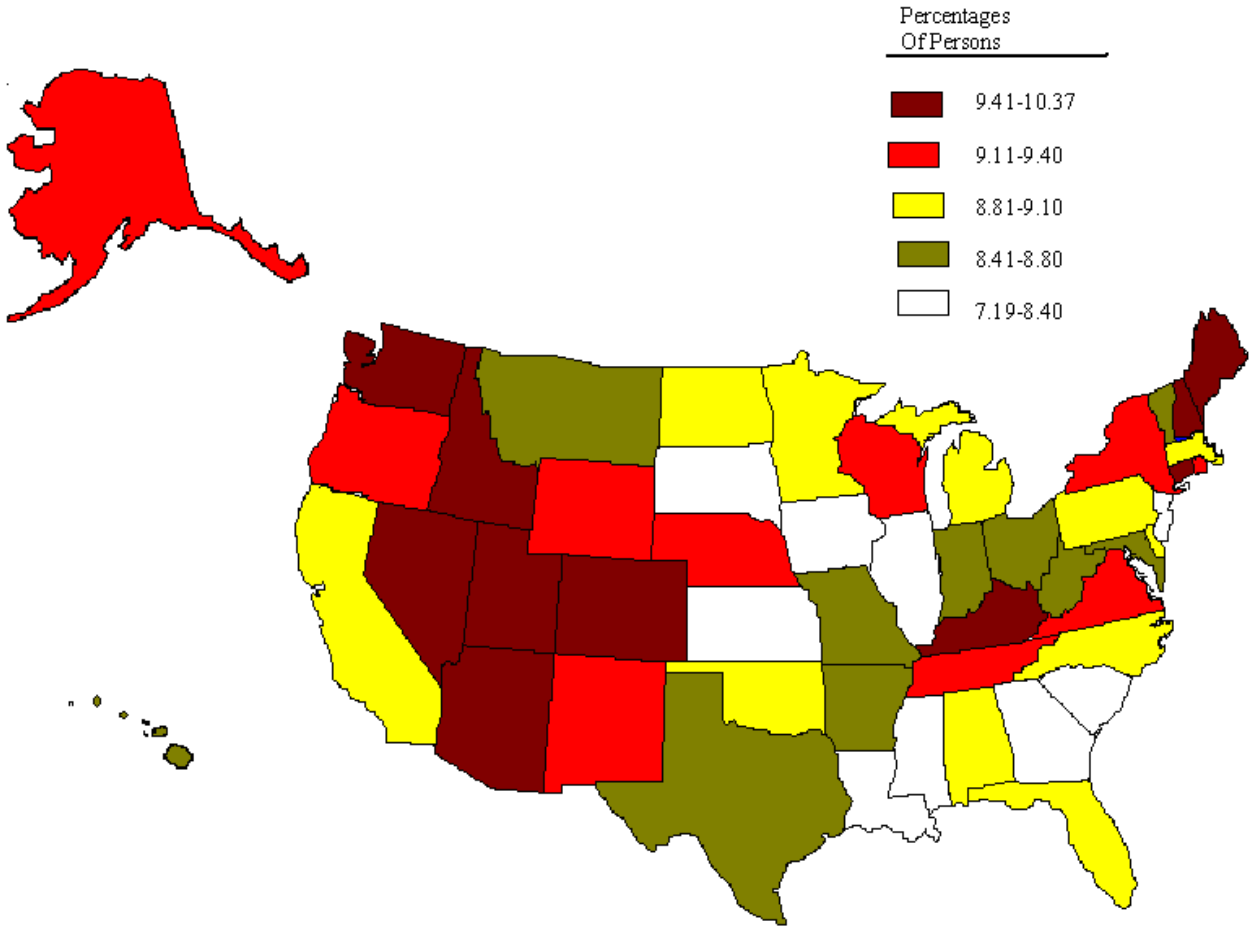
	Percent of Adolescents with Major Depressive Episode (2004 - 2005)	Percent of Adults with Major Depressive Episode (2004 - 2005)	Percent of Adults with Serious Psychological Distress (2004 - 2005)	Poor Mental Health Days (2006)	Composite Depression Index
Average Among States	8.95%	8.05%	11.63%	3.31 days	
ALABAMA	8.88	7.39	10.61	4.14	-0.36
ALASKA	9.22	7.22	11.93	3.23	-0.76
ARIZONA	9.43	7.38	11.65	3.27	-0.44
ARKANSAS	8.68	8.39	12.84	3.91	1.88
CALIFORNIA	8.82	6.88	10.69	3.83	-1.55
COLORADO	9.73	9.42	11.4	2.82	1.08
CONNECTICUT	10.15	9.17	11.46	2.88	1.59
DELAWARE	8.87	7.55	11.6	3.59	-0.45
DISTRICT OF COLUMBIA	7.95	9.01	12.12	3.16	-0.65
FLORIDA	8.89	6.98	11.12	3.40	-1.85
GEORGIA	7.71	7.96	11.51	3.40	-2.16
HAWAII	8.78	6.74	9.81	2.68	-4.85
IDAHO	10.37	8.47	11.98	3.57	3.01
ILLINOIS	8.29	7.13	11.01	3.06	-3.33
INDIANA	8.8	8.9	12.52	3.67	1.85
IOWA	8.01	7.35	11.75	2.52	-3.96
KANSAS	8.26	8.22	13.64	2.98	-0.11
KENTUCKY	9.66	8.53	14.68	4.33	5.90
LOUISIANA	7.19	7.03	12.21	3.35	-3.42
MAINE	10.08	8.98	11.84	3.23	2.32
MARYLAND	8.51	6.99	10.43	3.10	-3.59
MASSACHUSETTS	8.94	7.75	10.92	3.25	-1.43
MICHIGAN	9.05	7.4	11.11	3.61	-0.75
MINNESOTA	8.92	7.16	11.41	2.37	-3.44
MISSISSIPPI	8.26	7.76	12.04	4.46	1.02
MISSOURI	8.8	8.6	14.06	3.74	2.98
MONTANA	8.75	9.28	12.46	2.97	0.71
NEBRASKA	9.12	7.92	11.24	2.64	-1.93
NEVADA	10.28	9.8	12	3.49	4.16
NEW HAMPSHIRE	9.72	7.18	11.56	3.00	-0.85
NEW JERSEY	8.19	6.81	10.31	3.24	-4.07
NEW MEXICO	9.18	8.37	12.75	3.36	1.40
NEW YORK	9.17	7.34	11.46	3.24	-1.08
NORTH CAROLINA	8.99	7.65	11.93	3.39	-0.30
NORTH DAKOTA	8.86	7.32	11.82	2.53	-2.67
OHIO	8.54	9	12.81	4.03	2.56
OKLAHOMA	9.1	7.98	13.26	4.32	3.24
OREGON	9.28	9.52	12.3	2.92	1.51
PENNSYLVANIA	9	7.3	11.21	3.38	-1.31
RHODE ISLAND	9.26	9.88	14.21	3.39	4.47
SOUTH CAROLINA	8.4	7.7	12.91	3.46	-0.12
SOUTH DAKOTA	7.4	7.31	11.16	2.41	-5.62
TENNESSEE	9.15	8.25	12.43	3.23	0.70
TEXAS	8.76	7.04	11.43	3.02	-2.47
UTAH	10.14	10.14	14.58	3.27	6.11
VERMONT	8.46	8	11.5	2.96	-1.94
VIRGINIA	9.33	7.39	10.77	3.28	-1.31
WASHINGTON	9.84	7.86	12.59	3.21	1.36
WEST VIRGINIA	8.6	9.48	15.29	4.42	6.09
WISCONSIN	9.4	8.41	11.77	3.05	0.29
WYOMING	9.15	9.3	13.33	3.21	2.55

Figure 3.1. Having At Least One Major Depressive Episode in Past Year among Persons Aged 18 or Older, by State: Percentages, Annual Averages Based on 2004 and 2005 NSDUH



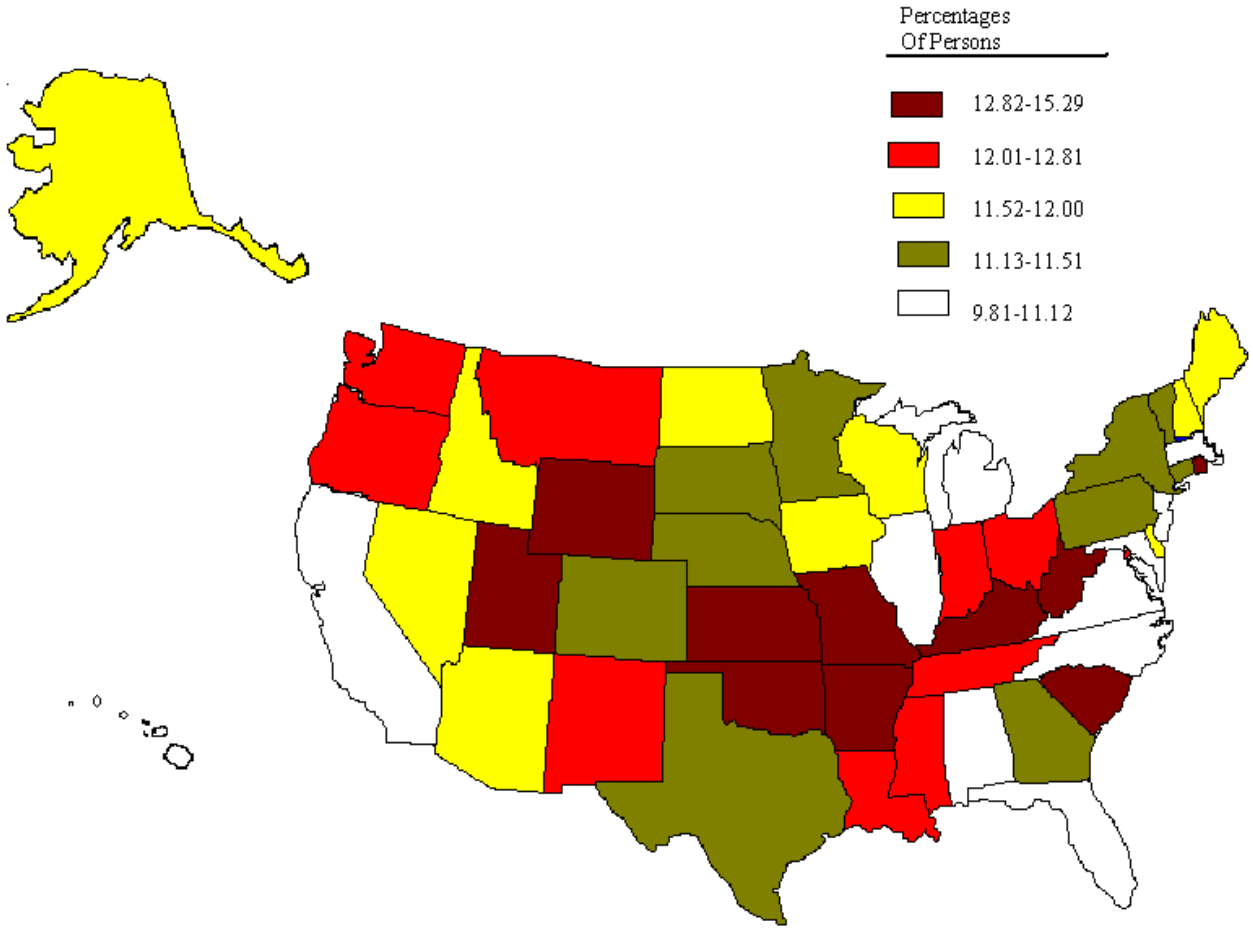
Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004 and 2005.

Figure 3.2. Having At Least One Major Depressive Episode in Past Year among Youths Aged 12 to 17, by State: Percentages, Annual Averages Based on 2004 and 2005 NSDUH



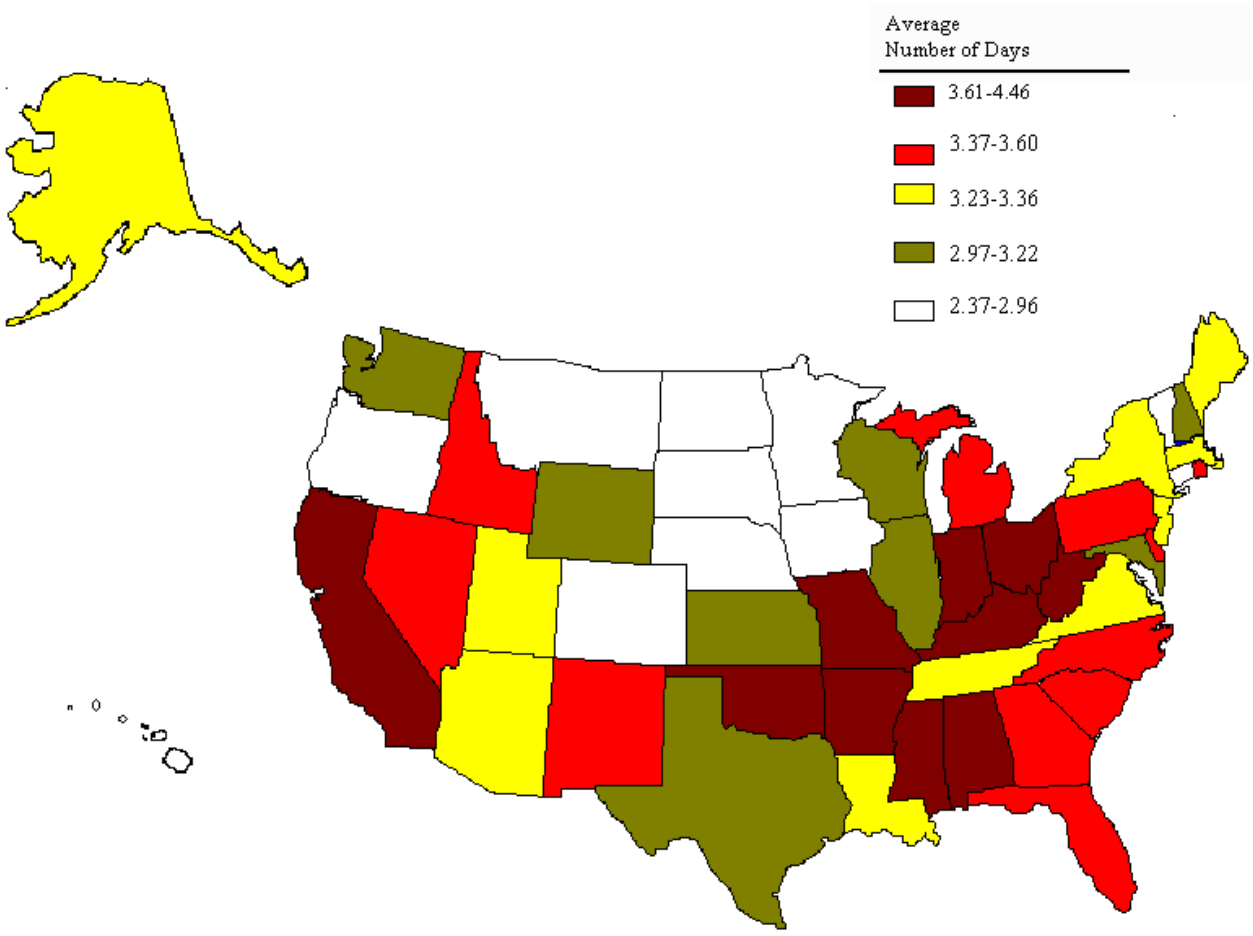
Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004 and 2005.

Figure 3.3. Serious Psychological Distress in Past Year among Persons Aged 18 or Older, by State: Percentages, Annual Averages Based on 2004 and 2005 NSDUH



Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004 and 2005.

Figure 3.4. Average Number of Poor Mental Health Days in Past 30 Days among Persons Aged 18 or Older, by State



Source: 2006 Behavioral Risk Factor Surveillance System.

3.2 State Ranking on Suicide Rates

Table 3.3 presents state rankings in terms of age-adjusted suicide rates. The actual age-adjusted and crude suicide rates per 100,000 are also displayed. The ten states highlighted in red have the lowest suicide rates and the ten states highlighted in blue have the highest suicide rates. Figure 3.5 describes suicide rates at the state level graphically.

The lowest suicide rate was in the District of Columbia, followed by New York and Massachusetts. The highest suicide rate was in Alaska. The second highest was Nevada, followed by New Mexico.

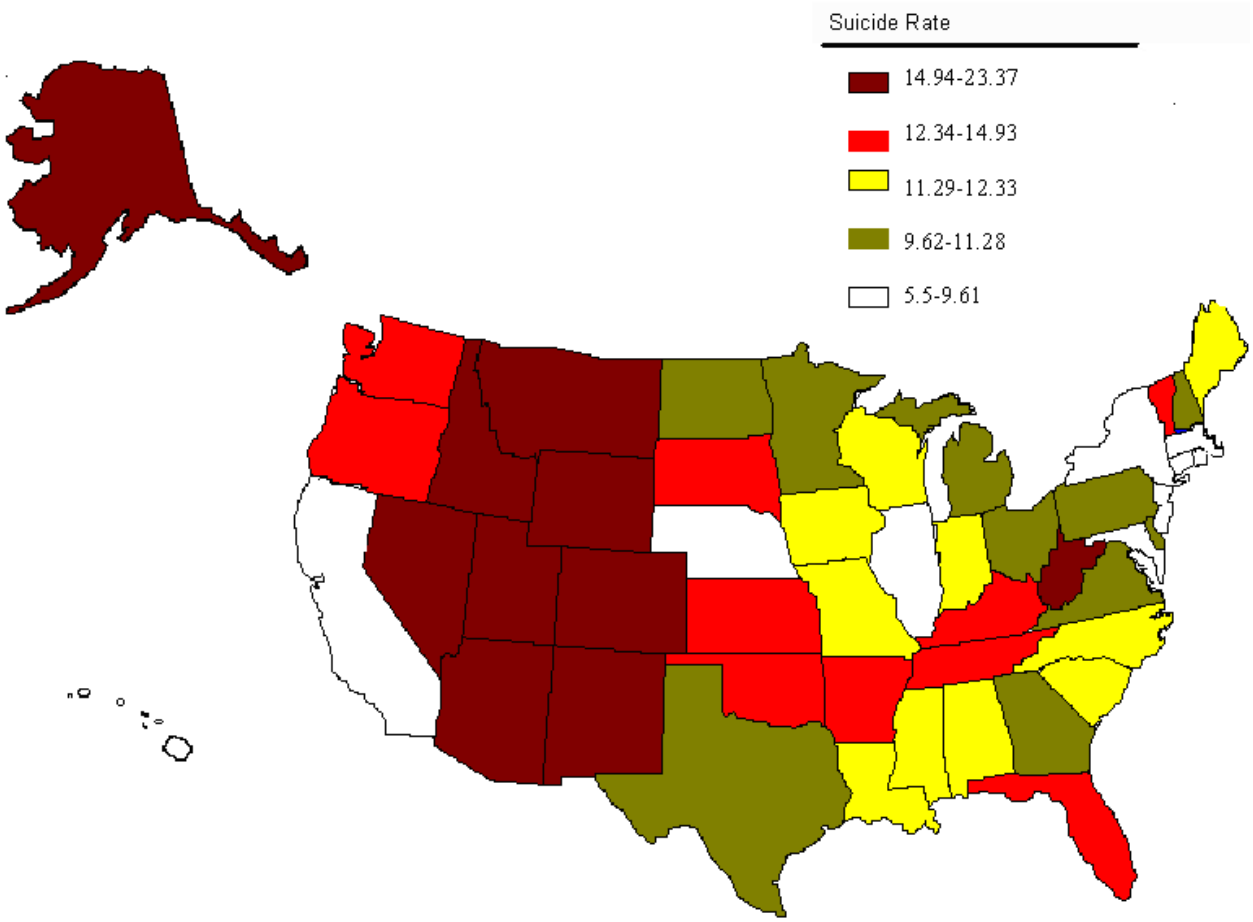
Hawaii, Illinois, Maryland, and New Jersey were in the top ten ranking in terms of both relative depression status and suicide rates. Idaho, Nevada, Utah, West Virginia, and Wyoming were in the bottom ten ranking in terms of relative depression status and suicide rates.

Table 3.3. State Ranking on Suicide Rates

State	Number of Suicide Deaths	State Population	Crude Suicide Rate	Age-Adjusted Suicide Rate	Rank
Total	32,439	293,638,158	11.05		
District of Columbia	33	579,720	5.69	5.32	1
New York	1187	19,291,526	6.15	5.99	2
Massachusetts	425	6,435,995	6.6	6.38	3
New Jersey	597	8,675,879	6.88	6.77	4
Rhode Island	85	1,078,930	7.88	7.53	5
Illinois	1028	12,713,548	8.09	8.04	6
Connecticut	294	3,493,893	8.41	8.17	7
Maryland	500	5,553,249	9	8.84	8
Hawaii	116	1,259,299	9.21	8.9	9
Nebraska	166	1,746,980	9.5	9.54	10
California	3368	35,841,254	9.4	9.59	11
New Hampshire	133	1,297,961	10.25	9.77	12
Minnesota	524	5,094,304	10.29	10.1	13
Texas	2300	22,517,901	10.21	10.57	14
Michigan	1098	10,093,398	10.88	10.77	15
Virginia	828	7,472,448	11.08	10.87	16
Delaware	93	828,762	11.22	11.04	17
Pennsylvania	1410	12,377,381	11.39	11.07	18
Georgia	973	8,935,151	10.89	11.09	19
North Dakota	73	635,848	11.48	11.15	20
Indiana	704	6,223,329	11.31	11.31	21
Ohio	1319	11,461,347	11.51	11.31	22
South Carolina	482	4,194,694	11.49	11.32	23
Iowa	343	2,953,679	11.61	11.46	24
Alabama	541	4,517,442	11.98	11.75	25
Wisconsin	662	5,498,807	12.04	11.85	26
North Carolina	1027	8,531,040	12.04	11.9	27
Louisiana	537	4,495,706	11.94	12.08	28
Mississippi	350	2,892,668	12.1	12.16	29
Missouri	715	5,752,861	12.43	12.36	30
Maine	171	1,313,921	13.01	12.42	31
Arkansas	361	2,746,823	13.14	13	32
Florida	2389	17,366,593	13.76	13.02	33
Kentucky	560	4,140,427	13.53	13.18	34
Tennessee	792	5,885,597	13.46	13.19	35
Washington	830	6,205,535	13.38	13.21	36
Kansas	370	2,738,356	13.51	13.53	37
Vermont	93	620,795	14.98	14.23	38
Oklahoma	506	3,522,827	14.36	14.41	39
South Dakota	112	770,188	14.54	14.85	40
Oregon	555	3,589,168	15.46	14.89	41
West Virginia	285	1,810,906	15.74	15.36	42
Arizona	880	5,745,674	15.32	15.57	43
Colorado	797	4,598,507	17.33	17.08	44
Utah	377	2,421,500	15.57	17.11	45
Idaho	236	1,394,524	16.92	17.53	46
Wyoming	88	505,534	17.41	17.64	47
Montana	175	926,345	18.89	18.73	48
New Mexico	356	1,900,620	18.73	18.78	49
Nevada	440	2,332,484	18.86	19.03	50
Alaska	155	656,834	23.6	23.06	51

Data Source: NCHS Vital Statistics System for numbers of deaths. Bureau of Census for population estimates.
http://webappa.cdc.gov/cgi-bin/broker.exe

Figure 3.5. Age-Adjusted Suicide Rate in Each State per 100,000, 2004



Source: Centers for Disease Control and Prevention, National Injury Mortality Data.

4. State Characteristics Correlated with Depression Status and Suicide Rates

This chapter includes a description of the associations between state characteristics and the prevalence of depression in a state and suicide rates. It also examines the association between mental health policies and barriers to treatment and use of mental health treatment. The actual values of the state characteristic variables examined in this chapter can be found in Appendix B.

4.1 State Characteristics Associated with Depression Status

Table 4.1 describes the state characteristics examined and their association with state depression status. The following factors were statistically significantly associated with state levels of depression:

- **Barriers to treatment—**Barriers to treatment were measured as the percentage of the population reporting that they could not obtain healthcare because of costs and the percentage reporting unmet mental healthcare need in the past year. The higher the percentage of the population reporting that they could not obtain care because of costs, the worse the state's depression status ($p = 0.004$). The higher the percentage of the population that reported unmet mental healthcare need, the worse the state's depression status ($p < 0.001$). Multiple regression analyses were also conducted and it was found that the barrier measures remained significant predictors of depression status even after controlling for median per capita income (not shown in tables).
- **Utilization**—Utilization was measured as (1) antidepressant prescriptions per capita in the state, and (2) the percentage of the adult population who received mental health treatment in the past year in the state. Mental health treatment was defined as having received inpatient care or outpatient care or having used prescription medication for problems with "emotions, nerves, or mental health." Antidepressant prescriptions were positively correlated with depression status ($p = 0.024$). In addition, the percentage receiving mental health treatment was positively correlated with depression status ($p < 0.001$).
- **Socioeconomic characteristics**—The socioeconomic characteristics included in the analysis were per capita income, the percentage of the population with a college degree, and the percentage of the population with health insurance. The analyses demonstrated that the more educated the population, the better the population's depression status ($p = 0.004$); the higher the median per capita income in the state, the lower the prevalence of depression ($p = 0.023$) (i.e., higher income, less depression).

  These results are consistent with other studies that have found that higher levels of poor mental health days are associated with lower socioeconomic status (Centers for Disease Control, 2004). They are also consistent with studies that show adults with serious psychological distress were more likely to have dropped out of high school, live in poverty, and use more medical and mental health services (Pratt et al., 2007).

Table 4.1 Association Between Depression Status and State Characteristics

		Association Between Depression Status and	
		Coefficient (SE)[1]	P-Value
RESOURCES	State Mental Health Authority expenditures per capita	-0.0081 (0.0058)	0.170
	Number of mental health specialty organizations providing inpatient care per 100,000 population	-0.1825 (0.4152)	0.662
	Number of mental health specialty organizations providing outpatient care per 100,000 population	-0.1469 (0.3857)	0.705
	Number of psychiatrists per 100,000 population	-0.0607 (0.0507)	0.237
	Number of psychologists per 100,000 population	-0.0117 (0.0137)	0.398
	Number of social workers per 100,000 population	-0.0022 (0.0048)	0.657
BARRIERS	Percent of population reporting that they could not obtain health care because of costs	0.3329 (0.1110)**	0.004
	Percent of population reporting unmet mental health care need	1.8636 (0.3291)**	< 0.001
UTILIZATION	Antidepressant prescriptions per capita	5.0195 (2.1487)*	0.024
	Number of people receiving mental health treatment per 100	0.6926 (0.1973)**	< 0.001
SOCIOECONOMICS	Median income per capita	-0.0001 (0.0001)*	0.023
	Percent of populaton with a college degree	-0.1819 (0.0608)**	0.004
	Percent of population with health insurance	-0.1411 (0.1089)	0.201

* significant at 5%; ** significant at 1%

1 Coefficients are estimated from a univariate linear regression

4.2 State Characteristics Associated with Suicide Rates

Table 4.2 describes state characteristics associated with state age-adjusted suicide rates. The following factors were significantly associated with suicide rates:

- **Mental health resources** — The more mental health professionals in the state (specifically, the higher the number of psychiatrists, psychologists, or social workers per capita), the lower the suicide rate ($p < 0.001$). Figure 4.1 describes graphically the association between the psychiatrists per capita and the suicide rate. The line slopes downward indicating a negative relationship.
- **Barriers to treatment** — The analyses indicate that the greater the percentage of the population reporting that they could not obtain healthcare because of costs, the higher the suicide rate ($p = 0.006$). The portion of the population reporting unmet mental healthcare need was positively associated with suicide rates but the association did not quite reach conventional levels of statistical significance ($p = 0.085$). Figure 4.2 describes graphically the association between the percentage of the population that could not obtain healthcare because of costs and the suicide rate.
- **Mental health utilization** — Holding the level of depression in the state constant, the higher the percentage of the population receiving mental health treatment, the lower the suicide rate ($p = 0.038$). Mental health treatment was defined as having received inpatient care or outpatient care or having used prescription medication for problems with "emotions, nerves, or mental health." In addition, the number of antidepressant prescriptions per capita was negatively associated with the state's age-adjusted suicide rate, although the association did not quite reach conventional levels of statistical significance ($p = 0.057$).
- **Socioeconomic characteristics**—The more educated the population, the lower the suicide rate ($p < 0.001$). The greater the percentage of the population with health insurance, the lower the suicide rate ($p=0.002$). Median income was negatively associated with suicide rates but the association did not quite reach conventional levels of statistical significance ($p = 0.068$).

These findings are consistent with those of Tondo and colleagues (2006). They compared age-adjusted suicide rates for men and women with demographic, socioeconomic, and other indices of access to healthcare, by state (N = 51, including the District of Columbia). They found positive bivariate associations with state suicide rates (all p < or = .05) ranked as follows: male sex, Native American ethnicity, and higher proportion of uninsured residents. Negative bivariate associations (all p < or = .02) were ranked as follows: higher population density, higher annual per capita income, higher population density of psychiatrists, higher population density of physicians, higher federal aid for mental health, and higher proportion of African Americans.

The finding that higher rates of antidepressant prescribing is associated with lower rates of suicide has also been found in other studies (Mann et al., 2005, Hall et al., 2006).

Table 4.2 Association Between State Characteristics and Suicide Rate

		Association With Suicide Rates	
		Coefficient (SE)[1]	P-value
RESOURCES	State Mental Health Authority expenditures per capita	-0.0126 (0.0076)	0.106
	Number of mental health specialty organizations providing inpatient care per 100,000 population	0.5621 (0.5436)	0.306
	Number of mental health specialty organizations providing outpatient care per 100,000 population	0.6905 (0.5006)	0.174
	Number of psychiatrists per 100,000 population	-0.2620 (0.0567)**	< 0.001
	Number of psychologists per 100,000 population	-0.0716 (0.0151)**	< 0.001
	Number of social workers per 100,000 population	-0.0247 (0.0053)**	< 0.001
BARRIERS	Percent of population reporting that they could not obtain health care because of costs	0.4276 (0.1473)**	0.006
	Percent of population reporting unmet mental health care need	0.9546 (0.5423)	0.085
UTILIZATION[2]	Antidepressant prescriptions per capita	-5.6133 (2.8708)	0.057
	Number of people receiving mental health treatment per 100	-0.6445 (0.3017)*	0.038
SOCIOECONOMICS	Median income per capita	-0.0001 (0.0001)	0.068
	Percent of population with a college degree	-0.2970 (0.0763)**	< 0.001
	Percent of population with health insurance	-0.4311 (0.1326)**	0.002

* significant at 5%; ** significant at 1%

1 Coefficients were estimated using linear regression

2 Percentage of adults with major depressive episode and percentage of adolescents with major depressive episode are controlled for in the regression of suicidality on utilization.

Figure 4.1. Association between Suicides per 100,000 Population and Number of Psychiatrists per 100,000 Population

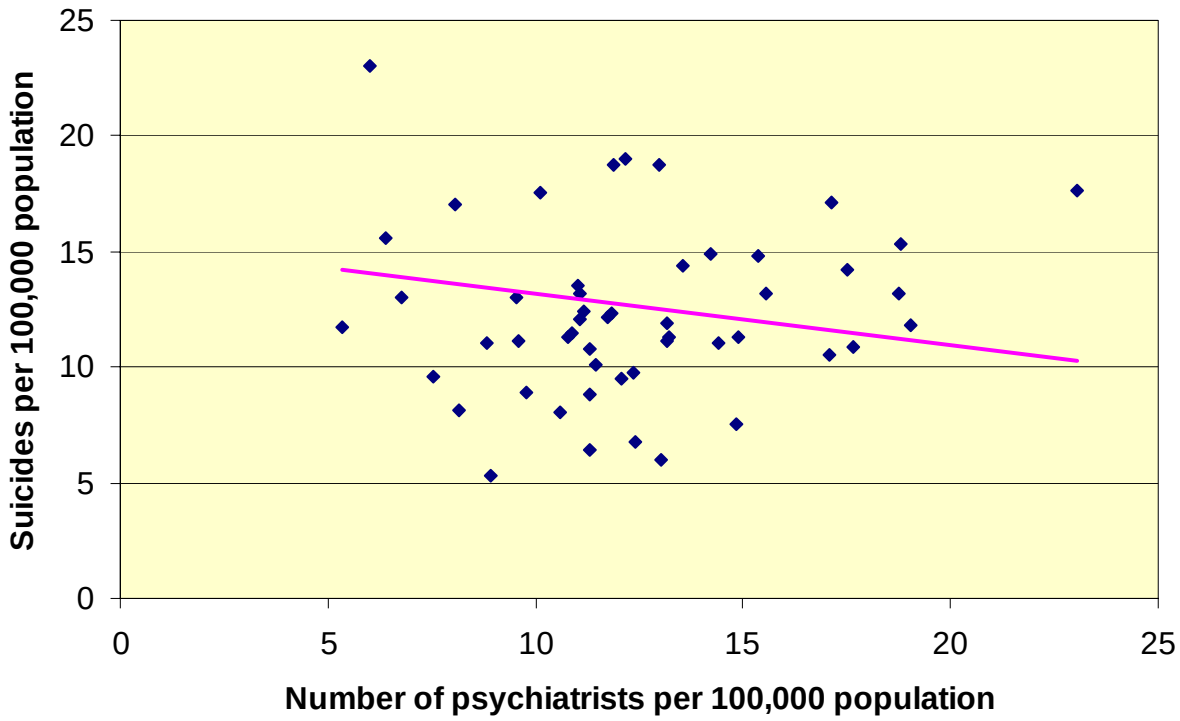
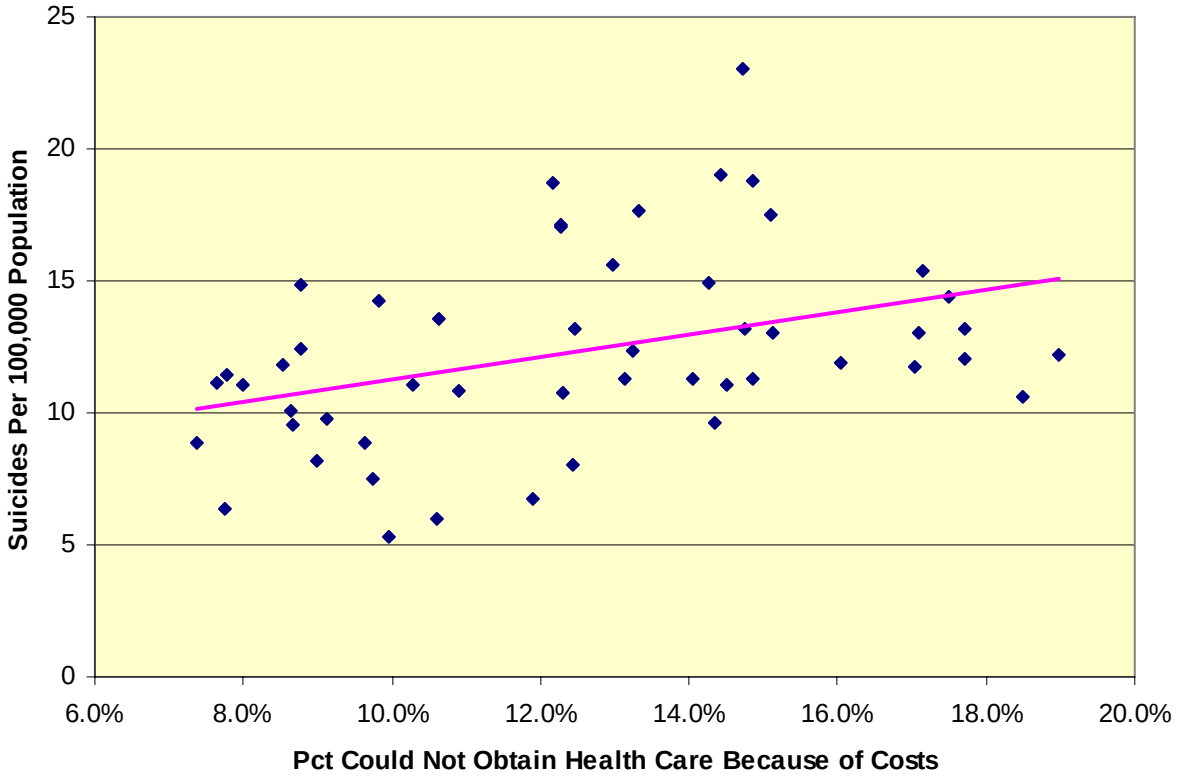


Figure 4.2. Association Between Suicide Rates and Percent of the Population Who could not obtain care because of costs



4.3 State Mental Health Policy Characteristics Associated with Mental Health Treatment Barriers and Utilization

This section describes the results of the analyses examining the association between mental health insurance parity laws and barriers and utilization measures. The parity laws in each state were described on a five point scale, from most comprehensive parity laws to no parity laws. The parity legislation rating of each state was then correlated with the following variables: (1) the percentage of people in the state receiving mental health treatment, (2) the percentage of the state population reporting unmet mental healthcare need, (3) the percentage of the population reporting that they could not obtain healthcare because of costs, and (4) antidepressant prescriptions per capita. The results are shown in Table 4.3 below.

It became apparent that the more comprehensive a state's parity coverage, the greater the percentage of the population that reporting receiving mental health treatment. Mental health treatment was defined as having received inpatient care or outpatient care or having used prescription medication for problems with "emotions, nerves, or mental health."

Table 4.3 Association Between State Parity Laws and Utilization and Barriers

	Association with State Mental Health Policy	
Dependent variables	Coefficient (SE)	P-value
Number persons that received mental health treatment per 100 population	0.5657 (0.2544)*	0.0308
Percent of population reporting unmet mental health care need	0.0302 (0.1371)	0.8266
Percent of population reporting that they could not obtain health care because of costs	-0.5468 (0.4744)	0.2547
Antidepressant prescriptions per capita	0.0288 (0.0253)	0.2603

* significant at 5%; ** significant at 1%

1 Coefficients are estimated from univariate linear regressions.

Table 4.4 describes the percent of people in each state that received mental health treatment relative to the comprehensiveness of those states' parity laws. The table indicates that in states with comprehensive parity laws or full parity laws, two percent more people use mental health services as compared to states with limited parity laws. To put this number in perspective, for a state such as Idaho, with a population of about 1.4 million people, moving from no parity to comprehensive parity could increase the number of people receiving mental health treatment by 28,000 (i.e., two percent of 1.4 million).

These findings are consistent with those of a recent study by Harris and colleagues (2006). Harris and colleagues used a quasi-experimental research design to measure the effect of state parity laws on the utilization of mental healthcare in the past year. They pooled cross-sectional data from the 2001, 2002, and 2003 NSDUH. They found that parity increased the probability of using any mental healthcare in the past year by as much as 1.2 percentage points ($P<0.01$) for the lower distress group and by as much as 1.8 percentage points ($P<0.05$) for the middle distress group. They found no statistically significant changes in service use for the upper distress group.

Table 4.4 The Average Percent of the Population Receiving Mental Health Treatment Relative to the Comprehensiveness of State Mental Health Parity Laws

Parity Grade	Percent of State Population Who Received Mental Health Treatment
Comprehensive Parity Laws or Full Parity Laws (3,4). *Comprehensive laws* use a broad definition of mental illness, include substance abuse, and have no exemptions. *Full Parity Laws* use broad definitions of mental illness, with one or two exemptions such a	15.8%
Limited Parity Laws (2) - Law limits protections to certain diagnoses or certain populations. Often includes other exemptions, such as small business exemptions, cost increase caps or addresses only certain types of discrimination. *Mental Health Mandate Laws (1)* - Mandated Benefit Offering - Requires sellers to offer certain mental health or substance abuse coverage, with the decision of whether to purchase coverage left to the buyer. Minimum Mandated Benefit - States mandate coverage that is less than equal to that for physical illnesses, including different visit limits, copayments, deductibles, and annual and lifetime limits. Mandated if Offered - If the insurer offers mental health coverage, the coverage must comply with parity provisions. *No Parity or Mandate Laws* (0) - No laws requiring mental health parity	13.4%

5. Study Limitations

This study must be understood in light of its limitations, including the following:

- The data that comprised the composite depression status indicator are based on national household surveys. These surveys include only noninstitutionalized individuals and in some cases only include persons in households with telephones (i.e., the BRFSS). Thus, the measures of depression prevalence may exclude persons who are homeless or institutionalized who tend to have very poor mental health.
- Because the data are from cross-sectional surveys, it is uncertain whether the characteristics studied (e.g., barriers to care, utilization, socioeconomic characteristics) affect depression status or whether depression affects these characteristics.
- The sample size for conducting the analyses comprised only 50 states and the District of Columbia. Because of the relatively small sample size, some of the relationships that are marginally statistically insignificant might actually be significant if we had a larger sample.
- The composite measure of depression status is based on a broad definition of depression, which includes poor mental health days as measured by the BRFSS and serious psychological distress as measured by the NSDUH. All the mental health measures that made up the composite measure were self-reported and were not validated by clinical diagnostic examination.
- The data represent snapshot depictions of the states during varying time periods (i.e., 2004 – 2006) and are not analyzed temporally. Events that may have altered depression levels in particular states during this period, such as Hurricane Katrina in August 2005, will not be fully reflected in the data.

6. Discussion

These data indicate significant variation among the states in the levels of depression and in its most tragic consequence, suicide. Rates of depression among the states vary from around seven percent in the least depressed states to over 10 percent in states where residents report the highest levels of depression. This represents nearly 40 percent variation from the least to most depressed state. Even more dramatic differences are noted in suicide rates. The state with the lowest suicide rate, New York, loses approximately six persons per 100,000 citizens per year while Alaska loses over 23 individuals per 100,000 residents, representing a nearly 300 percent difference in rates.

While many factors likely contribute to these differences which are not represented in the state summary data employed in these analyses, a clear and compelling theme emerges from the data included. The availability of and access to mental health services improves mental health outcomes. This is particularly true for suicide, where less difficulty in obtaining needed care, actual utilization of services, and the availability of a professional workforce are all related to decreased rates of death. Similarly, access to health insurance – a key variable in obtaining care – is also related to decreased rates of suicide.

As would be expected, states with greater rates of depression also had greater utilization of mental health treatment and pharmacy services. Where individuals reported fewer barriers to accessing care and lower levels of unmet needs, the rates of depression were lower than in states where individuals reported more difficulty receiving care.

Assuring access and resource availability, therefore, are two areas where public policy must be focused. Current efforts in many states to expand the availability of health insurance as well as discussions of universal coverage in the presidential campaigns may represent important opportunities to improve Americans' mental health status and, thereby, improve the productivity and well being of the nation. In that vein, it is critical that parity in the coverage of mental health services with general health services accompany the expansion of insurance coverage. These analyses indicate that states with comprehensive or full parity coverage had access rates that exceeded those with limited or no parity by about 20 percent (i.e., 11.4 percent utilization versus 9.4 percent). Since greater access is associated with lower suicide rates, these differences may be translated into lives saved. The study results suggest full insurance coverage with a mental health benefit at parity with general health as two critical policy options.

A related policy concern involves the availability of a professional workforce to address these issues. Federal funds for training mental health professionals have been dramatically reduced during the last decade. Severe workforce shortages of specific disciplines (e.g., child psychiatrists), as well as overall shortages of the professional workforce are predicted during the next decade. These data would argue for a federal strategy to ensure an adequate workforce that meets diverse needs across the country to assure that the beneficial effects of an available workforce be more equitably distributed across the states thereby improving the mental health status and reducing suicide rates across the nation.

Numerous studies have highlighted the deleterious effects of depression on population health and productivity. Persons who are depressed miss more work, are less productive at work, and do more poorly in school and at home than persons who are not depressed. Persons with other chronic illnesses like diabetes, hypertension, or cardiac disease in addition to their depression have much poorer courses of illness, have much greater costs of care, and ultimately experience poorer outcomes – including excess rates of mortality. Depression robs peoples' lives of both quality and quantity. However, effective treatments are available and these data argue that when individuals can more easily access care, the personal and social damage wrought by depression can be controlled. We must demand equity in access to care and in the availability of mental health professionals across the United States in order to reduce the wide variations among states in depression and suicide.

Despite the fact that some states do better than others on rates of depression and suicide, no state can be satisfied with their current status. All of these rates can be driven lower by improving insurance coverage, ending discriminatory practices in insurance, providing public education to encourage needed service use, and assuring that qualified professionals are available to serve everyone in need. We cannot be satisfied with the status quo in any state. It is in the interest of every American to assure the mental health of all Americans.

Working with its nationwide affiliate field and partner organizations, Mental Health America plans to educate and demand action from federal and state policymakers on these supportive policies that clearly improve the mental health of all Americans.

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Appendix A: Description of Data Sources

Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) in an ongoing, state-based, random-digit-dialed telephone survey of non-institutionalized civilian adults aged 18 years and older. Conducted by the 50 state health departments as well as those in the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands with support from the CDC, BRFSS provides state-specific information about issues such as asthma, diabetes, health care access, alcohol use, hypertension, obesity, cancer screening, nutrition and physical activity, tobacco use, and more.

CDC developed a standard core questionnaire for states to use to provide data that could be compared across states. Information from the survey is used to improve the health of the American people. Data are collected from more than 350,000 adults per year. The data used in this report are for 2006.

Table A.1 describes the questions that were selected for inclusion from the BRFSS. We selected questions that focused on mental health status and that were available for the majority of the states. Since 1993, the BRFSS has obtained over 1.2 million responses to the question, "Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?" (http://www.cdc.gov/mentalhealth/prevelance_data.htm).

One question on access to care that was not specific to mental health treatment was also selected for inclusion in this report. Specifically, the question included was: “Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?”

Table A.1. Behavioral Risk Factor Surveillance System

Variable	Measure	Year Used
Unhealthy mental health days	“Now, thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?”	2006
Cost barriers to access	“Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?”	2006

National Survey on Drug Use and Health

The National Survey on Drug Use and Health (NSDUH), formerly the National Household Survey on Drug Abuse (NHSDA), provides quarterly and annual estimates of drug use prevalence and correlates among a civilian, non-institutionalized population of the United States aged 12 and older. In addition to questions related to drug use, NSDUH includes questions about treatment for substance abuse and mental illness, income, healthcare access, and insurance coverage. Examples of mental health measures include serious psychological distress and depression.

Starting in 1999, the NSDUH sample was expanded to produce state-level estimates. The samples in each state were selected to represent proportionately the geography and demography of that state.

Nationally in 2004–2005, approximately 264,000 addresses were screened for the NSDUH and about 136,100 persons responded within the screened addresses. The survey is conducted from January through December each year. The screening response rate for 2004–2005 combined averaged 91.1 percent, and the interviewing response rate averaged 76.6 percent, for an overall response rate of 69.8 percent. The state overall response rates for 2004–2005 ranged from 59.5 percent in New York to 78.7 percent in Utah. NSDUH estimates were adjusted to reflect the probability of selection, unit nonresponse, post-stratification to known benchmarks, item imputation, and other aspects of the estimation process.

Serious Psychological Distress

Table A.3 presents the 2004-2005 serious psychological distress measures by state and the 95 percent prediction interval.

Serious psychological distress is measured using the K6, a six-item screening instrument. From the NSDUH Codebook, Appendix E, the K6 questions are as follows:

1. “Most people have periods when they are not at their best emotionally. Think of one month in the past 12 months when you were the most depressed, anxious, or emotionally stressed. If there was no month like this, think of a typical month. During that month, how often did you feel nervous?”
2. “During that same month when you were at your worst emotionally… how often did you feel hopeless?
3. “During that same month when you were at your worst emotionally… how often did you feel restless or fidgety?
4. “During that same month when you were at your worst emotionally… how often did you feel so sad or depressed that nothing could cheer you up?
5. “During that same month when you were at your worst emotionally… how often did you feel that everything was an effort?
6. “During that same month when you were at your worst emotionally… how often did you feel down on yourself, no good, or worthless?

Major Depressive Episode

Table A.3 presents the 2004-2005 major depressive episode measures by state and the 95 percent prediction interval.

Beginning in 2004, a module was included in the NSDUH questionnaire that was related to having a major depressive episode (MDE); it was derived from the criteria specified for major depression in the *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition (DSM-IV) (American Psychiatric Association [APA], 1994). These questions permit estimates to be calculated for lifetime and past year prevalence of MDE, treatment for MDE, and role impairment resulting from MDE.

According to DSM-IV, a person is defined as having had MDE in his or her lifetime if he or she has had at least five or more of the following nine symptoms nearly every day in the same two-week period (where at least one of the symptoms is a depressed mood or loss of interest or pleasure in daily activities) (APA, 1994): (1) depressed mood most of the day; (2) markedly diminished interest or pleasure in all or almost all activities most of the day; (3) significant weight loss when not sick or dieting, or weight gain when not pregnant or growing, or decrease or increase in appetite; (4) insomnia or hypersomnia; (5) psychomotor agitation or retardation; (6) fatigue or loss of energy; (7) feelings of worthlessness; (8) diminished ability to think or concentrate or indecisiveness; and (9) recurrent thoughts of death or suicidal ideation.

From the 2005 NSDUH Codebook, Appendix F, the following questions were used to assess incidence of a major depressive episode (MDE) for adults, defined as the presence of at least five of the following nine attributes: depressed mood (1a-b); anhedonia (2a-b); weight change (3a-f); insomnia or hypersomnia (4a-b); psychomotor agitation or retardation (5a-b); fatigue or loss of energy (6a); feelings of worthlessness (7a-b); diminished ability to think or concentrate or indecisiveness (8a-c); and recurrent thoughts of death or suicidal ideation (9a-c). All questions refer to the worst or most recent period of time when the respondent experienced any or all of the following:

1a. "… did you feel sad, empty, or depressed most of the day nearly every day?"

1b. "…did you feel discouraged about how things were going in your life most of the day nearly every day?"

2a. "…did you lose interest in almost all things like work and hobbies and things you like to do for fun?"

2b. "…did you lost the ability to take pleasure in having good things happen to you, like winning something or being praised or complimented?"

3a. "Did you have a much smaller appetite than usual nearly every day during that time?

3b. "Did you have a much larger appetite than usual nearly every day?"

3c. "Did you gain weight without trying to during that [worst/most recent] period of time?

…because you were growing?

...because you were pregnant?"

3d. "How many pounds did you gain?"

3e. “Did you lose weight without trying to?

…because you were sick or on a diet?”

3f. “How many pounds did you lose?”

4a. “Did you have a lot more trouble than usual falling asleep, staying asleep, or waking too early nearly every night during that [worst/most recent] period of time?”

4b. “During that [worst/most recent] period of time, did you sleep a lost more than usual nearly every night?”

5a. “Did you talk or move more slowly than is normal for you nearly every day?

Did anyone else notice that you were talking or moving slowly?”

5b. “Were you so restless or jittery nearly every day that you paced up and down or couldn’t sit still?

Did anyone else notice that you were restless?”

6a. “During that [worst/most recent] period of time, did you feel tired or low in energy nearly every day even when you had not been working very hard?”

7a. “Did you feel that you were not as good as other people nearly every day?”

7b. “Did you feel totally worthless nearly every day?”

8a. “During that [worst/most recent] time period, did your thoughts come much more slowly than usual or seem confused nearly every day?”

8b. “Did you have a lot more trouble concentrating than usual nearly every day?”

8c. “Were you unable to make decisions about things you ordinarily have no trouble deciding about?”

9a. “Did you often think about death, either your own, someone else’s, or death in general?”

9b. “During that period, did you ever think it would be better if you were dead?”

9c. “Did you think about committing suicide?

Did you make a suicide plan?

Did you make a suicide attempt?”

Perceived Unmet Mental Health Need

A variable measuring perceived unmet mental healthcare need was calculated at the state level by SAMHSA for the study. Unmet need for mental health treatment/counseling is defined as a perceived need for treatment that was not received. Some respondents who received treatment may report unmet need, suggesting that the treatment they received was not sufficient to address their perceived need. Respondents with unknown unmet need information were excluded.

Receipt of Mental Health Treatment/Counseling

A variable measuring the percentage of the population receiving mental health treatment/counseling in the past year was calculated at the state level by SAMHSA for the study. Mental health treatment/counseling is defined as having received inpatient care or outpatient care or having used prescription medication for problems with emotions, nerves, or mental health.

Respondents were not to include treatment for drug or alcohol use. Respondents with unknown treatment/counseling information were excluded. Estimates were based only on responses to items in the Adult Mental Health Service Utilization module.

Table A.2. National Survey on Drug Use and Health Variables

Variable	Measure	Year Used
MDE in the past year, ages 18+	Adult depression module	2004–2005
MDE in the past year, ages 12–17	Adolescent depression module	2004–2005
Serious psychological distress in the past year, ages 18+	K6 module	2004–2005
Unmet mental healthcare need	Questions on Adult Mental Health Service Utilization Module	2002–2006
Receipt of mental health treatment	Questions on Adult Mental Health Service Utilization Module	2002–2006

Table A.3. Components of State Depression Status Indicator

	Percent of Adolescents with Major Depressive Episode (2004 - 2005)	95% Prediction Interval	Percent of Adults with Major Depressive Episode (2004 - 2005)	95% Prediction Interval	Percent of Adults with Serious Psychological Distress (2004 - 2005)	95% Prediction Interval
Average Among States	8.95%		8.05%		11.63%	
ALABAMA	8.88	(5.23 - 9.31)	7.39	(5.79 - 9.38)	10.61	(9.03 - 12.43)
ALASKA	9.22	(7.47 - 11.31)	7.22	(5.67 - 9.15)	11.93	(10.10 - 14.04)
ARIZONA	9.43	(7.68 - 11.51)	7.38	(5.88 - 9.22)	11.65	(9.91 - 13.64)
ARKANSAS	8.68	(7.11 - 10.56)	8.39	(6.60 - 10.61)	12.84	(11.04 - 14.90)
CALIFORNIA	8.82	(7.81 - 9.95)	6.88	(5.93 - 7.96)	10.69	(9.63 - 11.86)
COLORADO	9.73	(7.96 - 11.85)	9.42	(7.57 - 11.67)	11.4	(9.75 - 13.29)
CONNECTICUT	10.15	(8.44 - 12.17)	9.17	(7.18 - 11.64)	11.46	(9.66 - 13.55)
DELAWARE	8.87	(7.21 - 10.87)	7.55	(6.02 - 9.44)	11.6	(9.89 - 13.56)
DISTRICT OF COLUMBIA	7.95	(6.34 - 9.92)	9.01	(7.10 - 11.38)	12.12	(10.38 - 14.11)
FLORIDA	8.89	(7.89 - 10.00)	6.98	(6.04 - 8.05)	11.12	(10.04 - 12.31)
GEORGIA	7.71	(6.21 - 9.54)	7.96	(6.28 - 10.04)	11.51	(9.81 - 13.47)
HAWAII	8.78	(7.00 - 10.98)	6.74	(5.09 - 8.87)	9.81	(8.16 - 11.76)
IDAHO	10.37	(8.43 - 12.69)	8.47	(6.84 - 10.46)	11.98	(10.36 - 13.81)
ILLINOIS	8.29	(7.32 - 9.37)	7.13	(6.18 - 8.20)	11.01	(10.00 - 12.12)
INDIANA	8.8	(7.20 - 10.71)	8.9	(7.23 - 10.90)	12.52	(10.77 - 14.51)
IOWA	8.01	(6.47 - 9.87)	7.35	(5.83 - 9.23)	11.75	(10.04 - 13.71)
KANSAS	8.26	(6.66 - 10.22)	8.22	(6.57 - 10.23)	13.64	(11.71 - 15.84)
KENTUCKY	9.66	(8.01 - 11.61)	8.53	(6.82 - 10.61)	14.68	(12.67 - 16.94)
LOUISIANA	7.19	(5.80 - 8.87)	7.03	(5.64 - 8.74)	12.21	(10.50 - 14.15)
MAINE	10.08	(8.28 - 12.23)	8.98	(7.03 - 11.40)	11.84	(10.14 - 13.78)
MARYLAND	8.51	(6.97 - 10.34)	6.99	(5.46 - 8.90)	10.43	(8.79 - 12.33)
MASSACHUSETTS	8.94	(7.33 - 10.87)	7.75	(6.09 - 9.81)	10.92	(9.40 - 12.65)
MICHIGAN	9.05	(8.09 - 10.11)	7.4	(6.46 - 8.48)	11.11	(10.11 - 12.20)
MINNESOTA	8.92	(7.32 - 10.82)	7.16	(5.75 - 8.89)	11.41	(9.82 - 13.23)
MISSISSIPPI	8.26	(6.78 - 10.02)	7.76	(6.19 - 9.69)	12.04	(10.38 - 13.93)
MISSOURI	8.8	(7.31 - 10.54)	8.6	(6.90 - 10.67)	14.06	(12.15 - 16.22)
MONTANA	8.75	(7.21 - 10.59)	9.28	(7.33 - 11.68)	12.46	(10.64 - 14.55)
NEBRASKA	9.12	(7.45 - 11.11)	7.92	(6.30 - 9.91)	11.24	(9.61 - 13.10)
NEVADA	10.28	(8.38 - 12.55)	9.8	(7.66 - 12.47)	12	(10.19 - 14.07)
NEW HAMPSHIRE	9.72	(7.99 - 11.78)	7.18	(5.65 - 9.07)	11.56	(9.96 - 13.39)
NEW JERSEY	8.19	(6.63 - 10.08)	6.81	(5.30 - 8.71)	10.31	(8.71 - 12.17)
NEW MEXICO	9.18	(7.53 - 11.16)	8.37	(6.68 - 10.44)	12.75	(10.91 - 14.85)
NEW YORK	9.17	(8.12 - 10.34)	7.34	(6.29 - 8.55)	11.46	(10.39 - 12.61)
NORTH CAROLINA	8.99	(7.39 - 10.90)	7.65	(6.01 - 9.69)	11.93	(10.09 - 14.05)
NORTH DAKOTA	8.86	(7.28 - 10.75)	7.32	(5.87 - 9.10)	11.82	(10.16 - 13.70)
OHIO	8.54	(7.59 - 9.60)	9	(7.89 - 10.24)	12.81	(11.75 - 13.94)
OKLAHOMA	9.1	(7.42 - 11.11)	7.98	(6.38 - 9.93)	13.26	(11.51 - 15.23)
OREGON	9.28	(7.61 - 11.28)	9.52	(7.66 - 11.77)	12.3	(10.55 - 14.29)
PENNSYLVANIA	9	(8.04 - 10.06)	7.3	(6.27 - 8.49)	11.21	(10.17 - 12.34)
RHODE ISLAND	9.26	(7.53 - 11.34)	9.88	(7.70 - 12.58)	14.21	(12.15 - 16.54)
SOUTH CAROLINA	8.4	(6.94 - 10.14)	7.7	(6.14 - 9.63)	12.91	(11.17 - 14.88)
SOUTH DAKOTA	7.4	(5.91 - 9.22)	7.31	(5.76 - 9.25)	11.16	(9.48 - 13.09)
TENNESSEE	9.15	(7.57 - 11.04)	8.25	(6.60 - 10.27)	12.43	(10.61 - 14.50)
TEXAS	8.76	(7.77 - 9.85)	7.04	(6.08 - 8.15)	11.43	(10.44 - 12.51)
UTAH	10.14	(8.39 - 12.20)	10.14	(8.23 - 12.43)	14.58	(12.71 - 16.66)
VERMONT	8.46	(6.96 - 10.24)	8	(6.37 - 10.00)	11.5	(9.80 - 13.46)
VIRGINIA	9.33	(7.62 - 11.37)	7.39	(5.84 - 9.32)	10.77	(9.19 - 12.59)
WASHINGTON	9.84	(8.13 - 11.85)	7.86	(6.25 - 9.85)	12.59	(10.84 - 14.58)
WEST VIRGINIA	8.6	(7.00 - 10.54)	9.48	(7.63 - 11.73)	15.29	(13.17 - 17.68)
WISCONSIN	9.4	(7.71 - 11.42)	8.41	(6.78 - 10.38)	11.77	(10.13 - 13.63)
WYOMING	9.15	(7.49 - 11.14)	9.3	(7.51 - 11.46)	13.33	(11.52 - 15.37

National Vital Statistics System

The National Vital Statistics System (NVSS) collects and disseminates statistics from the jurisdictions (50 states, two cities, and five territories) responsible for maintaining registries of vital events. The most recent data available for this report were for 2004.

NVSS defines suicide by International Classification of Disease-10th Revision (ICD-10) codes for "intentional self-harm" (X60-X84) or "sequelae of intentional self-harm" (Y87.0) as cause of death. From 1981–1998, NVSS used the International Classification of Disease-9th Revision (ICD-9) to code mortality data. In 1999, NVSS began using ICD-10 to code mortality data. External cause of injury codes are classified as supplemental codes in ICD-9, but are included in the primary alphanumeric classification system in ICD-10.

According to the National Center for Health Statistics, the completeness and quality of the NVSS data is very high, with the exception of race/ethnicity data, which are not self-reported. Although the data are collected by different jurisdictions, standard forms and coding procedures are used.

Table A.4. National Vital Statistics System Variable

Variable	Measure	Years Used
Suicide mortality rate	"intentional self-harm" or "sequelae of intentional self-harm" as an underlying cause of death	2004

Area Resource File

The Area Resource File (ARF) comprises county-level health-related data on codes/classifications, environment, expenditures, facilities, population, professionals, professional training, and utilization. Data are collected from various sources. The data on the number of psychiatrists, psychologists, and social workers per capita were collected by the American Medical Association.

Table A.5. Area Resource File Variables

Variable Description	Year Used
Number of psychiatrists per capita	2004
Number of psychologists per capita	2000
Number of social workers per capita	2000

United States Census

The Census is conducted every ten years by surveying the entire population of the United States. Questions about age, sex, race, and ethnicity are asked of the entire population; questions about family, social, economic, financial, and housing characteristics are asked of a sub-sample. The U.S. Census also published estimates for years between the ten year census.

Table A.6. United States Census Variables

Variable Description	Year Used
Median income per capita	2004–2005
Percentage with bachelor's degrees or higher	2006
Percentage of population with health insurance	2006

National Prescription Drug Audit Data from IMS Health, Inc.

IMS Health is a private, for-profit, market intelligence company serving the pharmaceutical and healthcare industries. IMS collects data from drug manufacturers, retail and mail-order pharmacies, and healthcare service delivery organizations. IMS monitors 90 percent of prescription drug sales in the United States.

Table A.7. IMS Health National Prescription Drug Audit Variable

Variable	Year Used
Antidepressant prescription rates in each state per capita	08/2006–07/2007

Survey of Mental Health Organizations

The Survey of Mental Health Organizations (SMHO) is a two-part biennial survey. The first part surveys 100 percent of all specialty mental health organizations and separate psychiatric services of non-federal general hospitals, collecting information on type of organization, ownership, number of additions and end-of-year resident patients, number of episodes, and number of staffed beds. The second part surveys a sample in greater detail, collecting information on the number and types of services, bed capacity, service volume of services, staffing, expenditures, and revenue sources.

SMHO is the continuation of a series of biennial inventories. The series began as three inventories: (1) the Inventory of General Hospital Mental Health Services, (2) the Inventory of Mental Health Organizations, and (3) the Inventory of Comprehensive Federally Funded Community Mental Health Centers. In 1986, the series shifted to the Inventory of Mental Health Organizations and General Hospital Mental Health Services, in order to simplify data collection

procedures and reduce response burden. In 1998, the series shifted to its current form, the SMHO.

Table A.8. Survey of Mental Health Organization Variables

Variable	Year Used
Number of specialty mental health organizations providing 24-hour care	2002
Number of specialty mental health organizations providing less than 24-hour care	2002

National Association of State Mental Health Program Directors Research Institute, Inc.

NASMHPD Research Institute, Inc. (NRI) is the research ally of the National Association of State Mental Health Program Directors (NASMHPD), the organization representing state mental health commissioners/directors and their agencies. NRI was formed in 1987 as a not-for-profit 501(c)(3) organization, strictly nonpartisan and independent from NASMHPD, to ascertain, develop, and distribute information, data, statistics, performance measures, and knowledge about public and private mental health service delivery systems and mental health services for the education of the public generally and for the education and training of public mental health administrators.

The NASMPHD Research Institutes' State Profiles System provides the latest and most complete information on the activities of the State Mental Health Agencies (SMHA). The Profiles provide descriptions of each SMHA's organization and structure, services, eligible populations, emerging policy issues, numbers of consumers served, fiscal resources, consumer issues, information management systems, and the research and evaluation they conduct. Data on State Mental Health Agency (SMHA) Expenditures used in this study were collected by NASMHPD NRI as part of the State Profiles System. The data capture "SMHA-controlled expenditures for mental health services."

Table A.9. National Association of State Mental Health Program Directors Research Institute, Inc. State Profile Variable

Variable	Year Used
State mental health authority expenditures per capita	2004

State Parity Laws

The mental health parity laws in each state were abstracted and categorized into the following categories:

4: *Comprehensive Parity Laws*—Broad definition of mental illness; includes substance abuse, and no exemptions
3: *Full Parity Laws*—Broad definition of mental illness; one or two exemptions, including small business exemptions; exclusion of substance abuse or cost increase caps
2: *Limited Parity Laws*—Law limits protections to certain diagnoses or certain populations; often includes other exemptions, such as small business exemptions, cost increase caps, or addresses only certain types of discrimination.
1: *Mental Health Mandate Laws—Mandated Benefit Offering*: Requires sellers to offer certain mental health or substance abuse coverage, with the decision of whether to purchase coverage left to the buyer. *Minimum Mandated Benefit*: States mandate coverage that is less than equal to that for physical illnesses, including different visit limits, copayments, deductibles, and annual and lifetime limits. *Mandated if Offered*: If the insurer offers mental health coverage, the coverage must comply with parity provisions.
0: *No Parity or Mandate Laws*—No laws requiring mental health parity

Appendix B: State Characteristics

Table B.1. Mental Health Resources

	State Mental Health Authority Expenditures Per Capita	Number of Specialty Mental Health Organizations Providing 24 hour treatment (per 100,000 population)	Number of Specialty Mental Health Organizations Providing less than 24 hour treatment (per 100,000 population)	Psychiatrists (number per 100,000 population)	Psychologists (number per 100,000 population)	Socialworkers (number per 100,000 population)
ALABAMA	$58.78	1.24819	0.95843	6.6664	17.27	100.403
ALASKA	$287.56	2.79596	4.9706	10.5274	32.699	185.028
ARIZONA	$135.64	0.64144	0.76973	9.2099	43.952	168.303
ARKANSAS	$32.95	1.29148	0.99628	7.0115	27.381	111.469
CALIFORNIA	$113.61	0.60371	0.85146	14.7574	78.647	186.424
COLORADO	$69.07	0.93198	0.99855	11.9963	87.997	157.977
CONNECTICUT	$152.09	1.67606	2.48519	25.7735	99.837	320.211
DELAWARE	$84.92	1.85785	2.10556	10.116	49.77	281.394
DISTRICT OF COLUMBIA	$409.92	2.45228	3.85358	57.0889	122.365	301.542
FLORIDA	$35.96	0.72996	0.71201	9.0072	41.414	152.105
GEORGIA	$51.25	0.79436	0.6425	9.2192	32.603	100.776
HAWAII	$147.99	0.80328	1.28525	16.0749	40.444	203.461
IDAHO	$39.55	0.8202	1.49128	4.5218	29.29	107.423
ILLINOIS	$68.51	1.26978	1.47612	11.7118	51.001	208.265
INDIANA	$80.58	1.33137	1.07159	7.4067	18.337	95.223
IOWA	$76.14	1.5323	2.41763	6.7694	22.212	112.94
KANSAS	$23.14	1.03097	1.36236	10.1992	46.496	160.503
KENTUCKY	$49.69	1.29493	0.87957	9.238	20.635	114.801
LOUISIANA	$52.63	1.16003	1.40542	11.2938	15.149	100.47
MAINE	$149.97	2.08581	2.31756	17.8402	54.905	245.897
MARYLAND	$130.66	1.30081	1.24585	22.166	83.829	263.099
MASSACHUSETTS	$103.99	1.89801	1.83578	32.4476	120.962	329.574
MICHIGAN	$90.96	0.89548	1.08453	10.2248	55.824	229.664
MINNESOTA	$121.37	1.17536	1.73316	9.9785	63.218	172.376
MISSISSIPPI	$95.50	1.49733	1.00983	6.7862	15.468	52.203
MISSOURI	$69.33	1.28689	1.09298	9.3316	32.349	173.72
MONTANA	$69.33	1.53939	1.31947	8.3076	29.927	120.816
NEBRASKA	$58.28	1.44577	1.38794	8.5851	35.062	113.659
NEVADA	$54.45	0.59812	0.59812	6.1248	7.507	28.775
NEW HAMPSHIRE	$117.21	2.27441	1.4117	14.3132	62.309	147.679
NEW JERSEY	$133.43	0.95457	1.01277	15.7262	73.208	245.058
NEW MEXICO	$27.78	1.56329	0.97032	12.347	39.746	152.552
NEW YORK	$200.02	1.03354	1.34673	27.8149	97.848	327.406
NORTH CAROLINA	$49.64	1.04565	0.80527	11.3567	37.481	166.039
NORTH DAKOTA	$73.12	2.83862	2.68092	11.3499	14.793	101.215
OHIO	$64.06	1.22578	1.57601	9.9921	39.584	191.181
OKLAHOMA	$39.79	1.23078	1.66012	7.2938	21.271	86.071
OREGON	$60.79	1.27786	2.18656	11.1835	41.796	183.697
PENNSYLVANIA	$186.46	1.516	1.45925	14.944	61.021	244.604
RHODE ISLAND	$92.92	1.77616	1.86964	21.654	95.868	382.994
SOUTH CAROLINA	$67.31	0.70608	0.77912	10.2666	28.29	143.444
SOUTH DAKOTA	$69.46	2.23372	2.36511	7.6536	5.961	26.496
TENNESSEE	$88.16	1.03497	0.72448	8.7104	28.369	103.528
TEXAS	$36.70	0.52801	0.46373	7.4077	28.458	112.412
UTAH	$73.56	0.99298	0.77712	7.3251	40.973	166.132
VERMONT	$165.95	3.08145	2.27055	25.1048	24.638	72.27
VIRGINIA	$69.79	1.12428	1.09686	12.8421	17.094	63.714
WASHINGTON	$93.60	0.79091	1.3017	11.6219	57.752	176.871
WEST VIRGINIA	$59.80	1.66493	1.27645	8.5383	10.23	58.617
WISCONSIN	$94.82	1.19459	2.07675	10.4193	48.456	192.405
WYOMING	$102.44	2.60676	5.013	5.9227	11.949	71.894

Table B.2. Barriers to Access

	Percent of Population Reporting Could not Get Health Care Because of Cost	Percent of Population Reporting Unmet Need for Mental Health Care Treatment/Counseling in the Past Year
ALABAMA	17.0%	4.0%
ALASKA	14.7%	5.4%
ARIZONA	13.0%	5.8%
ARKANSAS	17.1%	6.9%
CALIFORNIA	14.3%	4.6%
COLORADO	12.3%	6.1%
CONNECTICUT	9.0%	4.1%
DELAWARE	8.0%	4.7%
DISTRICT OF COLUMBIA	10.0%	7.5%
FLORIDA	15.1%	4.5%
GEORGIA	14.5%	5.6%
HAWAII	7.4%	3.4%
IDAHO	15.1%	5.9%
ILLINOIS	12.4%	4.6%
INDIANA	14.1%	5.7%
IOWA	7.8%	4.5%
KANSAS	10.6%	5.0%
KENTUCKY	17.7%	6.3%
LOUISIANA	17.7%	5.6%
MAINE	8.8%	6.1%
MARYLAND	9.6%	5.1%
MASSACHUSETTS	7.7%	4.9%
MICHIGAN	12.3%	5.1%
MINNESOTA	8.6%	5.9%
MISSISSIPPI	19.0%	5.8%
MISSOURI	13.2%	7.4%
MONTANA	12.2%	5.7%
NEBRASKA	8.7%	5.3%
NEVADA	14.4%	5.8%
NEW HAMPSHIRE	9.1%	5.6%
NEW JERSEY	11.9%	4.2%
NEW MEXICO	14.9%	5.6%
NEW YORK	10.6%	5.2%
NORTH CAROLINA	16.0%	5.0%
NORTH DAKOTA	7.6%	4.6%
OHIO	13.1%	5.3%
OKLAHOMA	17.5%	6.3%
OREGON	14.3%	6.0%
PENNSYLVANIA	10.3%	4.4%
RHODE ISLAND	9.8%	7.0%
SOUTH CAROLINA	14.9%	5.9%
SOUTH DAKOTA	8.8%	4.6%
TENNESSEE	14.8%	5.0%
TEXAS	18.5%	3.9%
UTAH	12.3%	8.2%
VERMONT	9.8%	5.2%
VIRGINIA	10.9%	4.9%
WASHINGTON	12.5%	5.7%
WEST VIRGINIA	17.2%	5.4%
WISCONSIN	8.5%	5.9%
WYOMING	13.3%	5.4%

Table B.3. Mental Health Utilization Measures

	Antidepressants Prescribed Per Capita	Number in the Population who Received Mental Health Treatment Per Capita	Percent of the Population Who Received Mental Health Treatment
ALABAMA	0.82966	0.08483	11.7%
ALASKA	0.44063	0.07808	12.5%
ARIZONA	0.57663	0.0746	11.30
ARKANSAS	0.81692	0.09938	14.00
CALIFORNIA	0.41557	0.07481	10.90
COLORADO	0.54563	0.1042	15.10
CONNECTICUT	0.81272	0.11393	15.70
DELAWARE	0.72409	0.10629	14.90
DISTRICT OF COLUMBIA	0.67186	0.1151	15.60
FLORIDA	0.57933	0.08662	12.10
GEORGIA	0.63639	0.08483	12.70
HAWAII	0.24353	0.04605	8.20
IDAHO	0.68895	0.10342	15.50
ILLINOIS	0.57566	0.0828	11.60
INDIANA	0.75013	0.1013	14.20
IOWA	0.86599	0.09261	12.60
KANSAS	0.79209	0.09242	13.10
KENTUCKY	0.92281	0.10776	14.90
LOUISIANA	0.7781	0.09194	12.50
MAINE	1.06936	0.1416	18.70
MARYLAND	0.56687	0.08882	12.50
MASSACHUSETTS	0.9057	0.11156	15.00
MICHIGAN	0.66412	0.10122	14.00
MINNESOTA	0.84852	0.11797	16.40
MISSISSIPPI	0.69261	0.08319	11.70
MISSOURI	0.86555	0.10953	15.30
MONTANA	0.72756	0.11556	16.00
NEBRASKA	0.75915	0.09499	13.30
NEVADA	0.46247	0.07369	11.20
NEW HAMPSHIRE	0.91137	0.134	18.30
NEW JERSEY	0.48798	0.08379	11.60
NEW MEXICO	0.53472	0.1021	14.80
NEW YORK	0.58509	0.0954	13.00
NORTH CAROLINA	0.75981	0.09388	13.50
NORTH DAKOTA	1.0653	0.10258	13.90
OHIO	0.72949	0.10093	13.90
OKLAHOMA	0.64407	0.09949	14.50
OREGON	0.73216	0.10618	14.90
PENNSYLVANIA	0.75102	0.09522	12.80
RHODE ISLAND	1.08608	0.13737	18.30
SOUTH CAROLINA	0.71178	0.09165	12.90
SOUTH DAKOTA	0.70017	0.07694	10.90
TENNESSEE	0.91551	0.1065	14.80
TEXAS	0.49815	0.07115	10.70
UTAH	0.75199	0.11006	17.40
VERMONT	0.974	0.13787	18.20
VIRGINIA	0.62007	0.08438	12.10
WASHINGTON	0.68649	0.10468	15.00
WEST VIRGINIA	0.99647	0.12314	16.20
WISCONSIN	0.78124	0.10411	14.30
WYOMING	0.6726	0.10532	14.70

Table B.4. Socioeconomic Characteristics

	Median Income	Percent of the Population with a College Degree	Percent of Population With Health Insurance
ALABAMA	37,502	20.8%	85.5%
ALASKA	56,398	27.7	82.8
ARIZONA	45,279	24.5	80.4
ARKANSAS	36,406	19	82.5
CALIFORNIA	51,312	29.8	81.2
COLORADO	51,518	36.4	83.4
CONNECTICUT	56,889	36	89.1
DELAWARE	50,445	26.2	87.8
DISTRICT OF COLUMBIA	44,949	49.1	86.8
FLORIDA	42,440	27.2	79.8
GEORGIA	44,140	28.1	81.7
HAWAII	58,854	32.3	91.4
IDAHO	45,009	25.1	85.2
ILLINOIS	48,008	31.2	86.3
INDIANA	43,091	21.9	86.4
IOWA	45,671	24.7	91.7
KANSAS	42,233	31.6	89.7
KENTUCKY	36,750	20.2	87.7
LOUISIANA	37,442	21.2	82.3
MAINE	43,317	26.9	89.7
MARYLAND	59,762	35.7	86.6
MASSACHUSETTS	54,888	40.4	90.8
MICHIGAN	44,801	26.1	89.7
MINNESOTA	56,098	33.5	92.1
MISSISSIPPI	34,396	21.1	83.1
MISSOURI	43,266	24.3	88.3
MONTANA	36,202	25.1	84.4
NEBRASKA	46,587	27.2	89.5
NEVADA	48,496	20.8	82.9
NEW HAMPSHIRE	57,850	32.1	90.3
NEW JERSEY	60,246	35.6	85.5
NEW MEXICO	39,916	26.7	79.7
NEW YORK	46,659	32.2	87
NORTH CAROLINA	41,820	25.6	84.7
NORTH DAKOTA	41,362	28.7	89
OHIO	44,349	23.3	88.6
OKLAHOMA	39,292	22.9	82.1
OREGON	43,262	28.3	84.4
PENNSYLVANIA	45,941	26.6	90.3
RHODE ISLAND	49,511	30.9	88.5
SOUTH CAROLINA	40,107	22.6	82.7
SOUTH DAKOTA	42,816	25.3	88.3
TENNESSEE	39,376	22	86.4
TEXAS	42,102	25.5	76.4
UTAH	53,693	27	83.6
VERMONT	49,808	34	88.5
VIRGINIA	52,383	32.1	87.2
WASHINGTON	51,119	31.4	86.7
WEST VIRGINIA	35,467	15.9	83.1
WISCONSIN	45,956	24.6	90.7
WYOMING	45,817	20.8	85.4

Table B.5. State Parity Grade

State	Parity Grade
ALABAMA	1
ALASKA	1
ARIZONA	2
ARKANSAS	2
CALIFORNIA	2
COLORADO	2
CONNECTICUT	4
DELAWARE	2
DISTRICT OF COLUMBIA	1
FLORIDA	1
GEORGIA	1
HAWAII	2
IDAHO	0
ILLINOIS	2
INDIANA	3
IOWA	2
KANSAS	1
KENTUCKY	3
LOUISIANA	2
MAINE	3
MARYLAND	4
MASSACHUSETTS	2
MICHIGAN	1
MINNESOTA	4
MISSISSIPPI	1
MISSOURI	1
MONTANA	2
NEBRASKA	1
NEVADA	2
NEW HAMPSHIRE	2
NEW JERSEY	2
NEW MEXICO	3
NEW YORK	2
NORTH CAROLINA	2
NORTH DAKOTA	1
OHIO	1
OKLAHOMA	2
OREGON	4
PENNSYLVANIA	1
RHODE ISLAND	3
SOUTH CAROLINA	2
SOUTH DAKOTA	2
TENNESSEE	2
TEXAS	2
UTAH	2
VERMONT	4
VIRGINIA	2
WASHINGTON	3
WEST VIRGINIA	2
WISCONSIN	1
WYOMING	0