

Who Gets Needed Mental Health Care? Use of Mental Health Services among Adults with Mental Health Need in California

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Abstract

Background and Purpose. Timely and appropriate treatment could help reduce the burden of mental illness. This study describes mental health services use among Californians with mental health need, highlights underserved populations, and discusses policy opportunities. **Methods.** Four years of California Health Interview Survey data (2011, 2012, 2013, 2014) were pooled and weighted to the 2013 population to estimate mental health need and unmet need (n=82,706). Adults with mental health need had “unmet need” if they did not use prescription medication and did not have at least four or more mental health visits in the past year. Multivariable logistic regression analysis was performed to predict the probability adults with mental health need did not receive past-year treatment (n=5,315). **Results.** Seventy-seven percent of Californians with mental health need received no or inadequate mental health treatment in 2013. Men, Latinos, Asians, young people, older adults, people with less education, uninsured adults, and individuals with limited English proficiency were significantly more likely to have unmet need. Cost of treatment and mental health stigma were common reasons for lack of care. **Conclusion.** Unmet mental health need is predominant in California. Policy recommendations include continued expansion of mental health coverage, early identification, and ensuring that treatment is culturally and linguistically appropriate.

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Keywords: mental health need, mental health services use, unmet need, barriers to care, underserved populations

Introduction

Untreated mental health conditions can have a detrimental impact on the physical, social, and economic functioning of adults (Hendriks et al., 2015; Kessler & Frank, 1997; Wells et al., 1989). Mental health disorders are also among the top contributors of disability in the U.S. and are associated with a median 10 year reduction in life expectancy (Murray, 2013; Walker, McGee, & Druss, 2015). The financial cost of mental health disorders amounted to \$467 billion in 2012 (Insel, 2015). This estimate did not account for costs related to homelessness, incarceration, comorbid conditions, and premature death associated with serious mental illness. Timely and appropriate treatment could help reduce the burden of mental illness on individuals and families. However, fewer than half of U.S. residents with serious psychological distress recently received some form of mental

health treatment in 2010 (National Survey on Drug Use and Health 2010).

The Current Study

This study analyzed four years of California Health Interview Survey data (CHIS) to describe mental health services use among California residents with mental health need, identify underserved populations most likely to have unmet need, and examine barriers that prevent adults from seeking or obtaining treatment. The study provides reliable estimates of unmet need in California at the population-level, and supports program planning and legislative efforts. As a result of CHIS’s sample design and inclusion of underrepresented groups, study results also reflect the state’s diverse population. Key program and policy opportunities to increase access to care and improve the mental health of Californians are discussed.

Methods

Study Design

Each year, more than 20,000 California households complete the California Health Interview Survey (CHIS) and share information about their physical health, mental health, environment, and behaviors. Cross-sectional data from four years of CHIS (2011, 2012, 2013, 2014) were combined in this descriptive study to obtain statistically reliable estimates of mental health need and unmet need among adult residents (California Health Interview Survey, 2011, 2012, 2013, 2014).

Data Source

Conducted by the UCLA Center for Health Policy Research, CHIS is the largest state health survey in the nation (UCLA Center for Health Policy Research, 2012a). Data collection and protection protocols are approved by UCLA IRB (IRB#11-000068) and the California Committee for the Protection of Human Subjects (00-04-04). Households with landlines or cell phones only in 44 geographic sampling strata are randomly selected through random-digit-dialing (UCLA Center for Health Policy Research, 2012c). CHIS oversamples Vietnamese and Korean respondents and added a supplemental sample of American Indians and Alaska Natives in 2011 and 2012. CHIS is administered through a computer-assisted telephone interview (CATI) system and is conducted in English, Spanish, Cantonese, Mandarin, Korean, Tagalog (beginning 2014) and Vietnamese. In 2011-2012, 32% of households in the landline sample and 33% of households in the cell phone sample completed screening for the survey (California Health Interview Survey, 2016a). Of those, 47% of adults in the land line sample and 54% of adults in the cell phone sample completed the interview. The screener response rate was 29% for the landline sample and 31% for the cell phone sample in 2013-2014; 45% of adults in the landline sample and 52% of adults in the cell phone sample completed the interview (California Health Interview Survey, 2016c). Missing values are imputed using logical imputation followed by model-based hot-deck imputation without replacement (California Health Interview Survey, 2016b).

Participants

The analytic sample included 82,706 respondents aged 18 and over who completed the survey on their own, of whom 5,315 had mental health need. Given the CHIS cross-sectional sampling frame, respondents are deemed unique, although it is possible but highly unlikely that some respondents answered the survey more than one year.

Measures

The Kessler 6 (K6) is a series of six survey questions designed to estimate the prevalence of adults with non-specific psychological distress within a population (Kessler et al., 2002). Questions ask respondents to reflect on the past 30 days and indicate how often they felt nervous, hopeless, restless or fidgety, worthless, that nothing could cheer them up, and that everything was an effort. See Table 1 for survey questions and response categories. A score of 13 and above has been classified as an optimal cut-point (Kessler et al., 2003) and was used to identify adults with serious mental illness. These individuals likely had a Diagnostic and Statistical Manual (DSM)-classified mental disorder such as generalized anxiety disorder and major depressive disorder. The K6 does not screen for substance-related disorders. Individuals with “mental health need” were defined as those with serious mental illness, as defined by the K6, and at least a moderate level of impairment in one or more life domains (e.g., chores, work, or social life).

Development of the “minimally adequate treatment” (MAT) variable was guided by evidence-based guidelines for treating patients with mental disorders, which recommended 1) four or more visits with a physician and at least two months of appropriate medication or 2) eight or more visits of psychotherapy (Grant et al., 2011; Wang et al., 2005). CHIS does not collect information on the duration of prescription medication use.

Table 1.

Kessler 6 California Health Interview Survey Questions

1. About how often during the past 30 days did you feel nervous—Would you say all of the time, most of the time, some of the time, a little of the time, or none of the time?
2. During the past 30 days, about how often did you feel hopeless—all of the time, most of the time, some of the time, a little of the time, or none of the time?
3. During the past 30 days, about how often did you feel restless or fidgety?
4. How often did you feel so depressed that nothing could cheer you up?
5. During the past 30 days, about how often did you feel that everything was an effort?
6. During the past 30 days, about how often did you feel worthless?

Response categories: All of the time, Most of the time, Some of the time, A little of the time, None of the time, Refused, Don't know

Source: California Health Interview Survey, 2014

Therefore, among adults with mental health need, individuals who had four or more visits with a health professional in the past 12 months and used prescription medication for mental health problems in the past 12 months were defined as having received “minimally adequate treatment.” People with mental health need who did not meet these service thresholds were considered to have “unmet need.”

CHIS respondents with mental health need who indicated that they needed help with a mental health or alcohol or drug problem in the past year were considered to have perceived a need for mental health treatment. Among those who had perceived need but did not receive treatment, respondents were also asked whether they did not see a health professional because they were “concerned about the cost of treatment,” “did not feel comfortable talking with a professional about [their] personal problems,” “were concerned about what would happen if someone found out [they] had a problem,” and “had a hard time getting an appointment.” Respondents who indicated that they did not feel comfortable speaking with a professional or were concerned about someone finding out that they had a problem were defined to have stigma-related barriers.

Procedures

The percentages reported in this study represent the annual average for the 2011 to 2014 study

period, which includes full implementation of the Affordable Care Act (ACA) in 2014. Given that most interviews in the sample were completed prior to 2014, estimates were weighted to the population size in 2013 and represent the most recent pre-ACA numbers of mental health need and unmet need.

Analyses

Survey-weighted multivariable logistic regression analysis was conducted to predict the odds of not receiving past-year treatment among adults with mental health need ($n=5,315$; weighted= $2,225,853$). Covariates included age category, gender, race/ethnicity, marital status, and indicators for more than a high school education, low household income, low English proficiency, “poor” or “fair” self-reported health, and the 2013-2014 survey period. Odds ratios were calculated and presented. Statistically significant associations were evaluated at $p < .05$, unless otherwise stated. Descriptive statistics were calculated using SAS 9.4.3, and regression analyses were performed using Stata 14.

Results

In 2013, approximately 2.2 million (8%) adults had mental health need in California. These adults had serious mental illness and impaired daily living function—and therefore likely needed mental health treatment. Younger adults

aged 18-24 (11%; 411,000) were slightly more likely to have mental health need than the general population, as were people with low income (11%; 1,136,000), unmarried adults (11%; 1,295,000), and people who had non-continuous health insurance coverage (12%; 187,000). Sexual minorities, adults who identified as lesbian, gay, or bisexual, were among those most affected by serious mental illness and impaired functioning; approximately 16 percent (196,000) of this population had mental health need in 2013. Across racial/ethnic identities, adults who identified as American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, or mixed race or multiracial (13%; 104,000) were more likely to have mental health need than the general population; Asian adults (5%; 183,000) were less likely than the general population to have mental health need.

Consistent with national data, only half (51%; 1,109,000) of approximately 2.2 million California adults with mental health need reported seeing a health professional for a mental health or substance use problem within the past year. Among those who did see a provider, the median number of visits was 5.3. Fewer than half (41%; 893,000) of adults with mental health need took prescription medication daily for emotional or personal problems, and only one of four (23%; 508,000) adults received minimally adequate treatment; thus, roughly 1,689,000 adults had unmet need in 2013.

When asked why they did not see a health professional in the past year, a majority (64%; 354,000) of adults with mental health need who felt they needed help endorsed cost of treatment as a reason; 47% (261,000) indicated that they “did not feel comfortable talking with a health professional” or were concerned if “someone found out [they] had a problem;” and one of five (20%; 109,000) adults said they had difficulty getting an appointment.

To examine the associations between sociodemographic characteristics and unmet need, we performed survey-weighted multivariable logistic regression analyses. The model predicts the probability that a CHIS respondent with mental health need did not see a professional for mental health or substance use issues, and therefore had unmet need. Odds ratios and risk differences are presented in Table 2. Among adults with mental health need, Asians had twice the odds (OR=2.0; 95% CI [1.3, 3.1]) and Latinos had 1.5 (95% CI [1.1, 2.1]) times the odds of not seeing a health professional in the past year, compared to non-Latino Whites. African Americans had 1.4 times the odds of not seeing a health professional compared to non-Latino Whites, but the estimate was not statistically significant. Respondents who spoke English “not well” or “not at all” had twice the odds (OR=2.1; 95% CI [1.4, 3.4]) of having unmet need than respondents who only spoke English, and women were less likely to have unmet need than men.

Adults aged 65 and over (OR=1.7; 95% CI [1.1, 2.6]) and younger adults aged 18 to 24 (OR=1.3; 95% CI [1.0, 1.8]) with mental health need had greater odds of having unmet need relative to middle-aged adults. Adults who had a college degree (e.g., Associate degree or higher) had lower odds (OR=0.7; 95% CI [0.6, 0.9]) of unmet need compared to similar adults with fewer years of education. However, household income was not independently and significantly related to mental health services use.

Finally, results from the regression model indicate that adults with mental health need with “poor” or “fair” health had 20% lower odds (OR=0.8; 95% CI [0.6, 1.0]) of unmet need compared to similar adults with “good,” “very good,” or “excellent” health, and adults who had continuous, uninterrupted health insurance coverage in the past 12 months had significantly lower odds (OR=0.5; 95% CI [0.4, 0.7]) of having unmet need compared to adults who were uninsured during that period.

Table 2.

Survey-Weighted Logistic Regression Results - Odds Ratios of Unmet Need among Adults with Mental Health Need (n=5,315; weighted=2,225,853)

	OR	SE	95% CI	
Age - Ref: 40-64				
18-24	1.341	0.213	0.978	1.839
25-39	1.134	0.140	0.887	1.450
65+	1.702*	0.369	1.105	2.620
Gender - Reference: Male				
Female	0.635*	0.079	0.495	0.813
Race/Ethnicity - Reference: Non-Hispanic White				
Latino/Hispanic	1.503*	0.237	1.100	2.058
African American	1.400	0.337	0.867	2.262
Asian	2.034*	0.430	1.335	3.100
American Indian or Alaska Native, Native Hawaiian or Pacific Islander, Two or more races	1.073	0.244	0.683	1.688
Health Coverage - Reference: Currently uninsured				
Insured any time past 12 months	0.634*	0.144	0.403	0.998
Insured all past 12 months	0.529*	0.073	0.402	0.696
Education - Reference: High school diploma/GED or less				
More than high school education	0.731*	0.085	0.581	0.921
Household Income - Reference: 200% of poverty threshold level or more				
Less than 200% poverty threshold level	0.985	0.106	0.794	1.220
Marital Status - Reference: Married				
Widowed/separated/divorced	0.942	0.128	0.719	1.234
Never married	1.128	0.136	0.887	1.435
Health Status - Reference: Good/very good/excellent health				
Fair/poor health	0.797*	0.083	0.649	0.980
English Proficiency - Reference: Speak only English				
Very well/well	0.971	0.139	0.731	1.290
Not well/not at all	2.143*	0.486	1.364	3.366
Survey Year - Reference: 2011-2012				
2013-2014	1.045	0.110	0.849	1.287
Constant	1.628	0.273	1.165	2.274

* p < .05. Source: California Health Interview Survey, 2011, 2012, 2013, 2014

Discussion

In the years leading up to health coverage expansion under the Affordable Care Act, most Californians with mental health need received inadequate mental health treatment or did not receive treatment. Men, Latinos, Asians, young people, older adults, people with less education,

uninsured adults, and individuals with limited English proficiency have and continue to represent underserved groups more likely to have unmet need (Burnett-Zeigler, Zivin, Islam, & Ilgen, 2012; Kessler et al., 2005; Prins, Verhaak, Bensing, & van der Meer, 2008; Wang et al., 2005). Research has consistently shown that people of color are less likely to receive

treatment for mental health conditions than Whites. Not perceiving a need for mental health treatment could partially explain lower mental health service use among Asians and Latinos. Compared to other racial/ethnic groups, Asian respondents with mental health need were least likely to report needing help (57%; 103,000), followed by Latinos (67%; 577,000). Latino and Asian respondents were also more likely to cite stigma-related reasons for not receiving mental health treatment than non-Latino White respondents.

Californians with limited English proficiency (LEP) were also more likely to have unmet mental health need. While LEP may be an additional driver of lower treatment use among Asians and Latinos—two groups with large immigrant populations, the LEP findings apply to all racial/ethnic groups. Moreover, its significance suggests that language barriers wield considerable obstacles to care that are independent of race/ethnicity-related barriers. Study results reflect findings from Phase 1 Population Reports of the California Reducing Disparities Project, which concluded lack of linguistically and culturally appropriate mental health services acts as a barrier to mental health care for Asians and Latinos/Hispanics in California (Aguilar-Gaxiola et al., 2012; Pacific Clinics, 2013). Community-defined strategies for reducing mental health disparities in these communities include provider-, agency-, and systems-level efforts to provide high-quality mental health care that acknowledges and respects consumers' beliefs and practices.

For California adults aged 65 and over, lower perceived need for mental health treatment may explain their higher rate of unmet need. This population was least likely, relative to all other age groups, to report that they needed help for an emotional or drug related problem in the year prior (47%; 60,000). In addition, mental health stigma may contribute to lower prevalence of treatment among this older adult group (Wang et al., 2005). Although studies suggest younger adults are less concerned about stigma, they may have lower propensities to perceive a need for treatment and seek it (Mackenzie, Gekoski, & Knox, 2006; Meadows et al., 2002; Prins et al.,

2008). In the CHIS sample, 67 percent of young adults aged 18 to 24 with mental health need reported that they needed help for an emotional or drug related problem compared to 75 percent of adults aged 25 to 39. Similarly, men may less readily recognize that they have mental health need than women (Kessler, Brown, & Broman, 1981; Mackenzie et al., 2006).

The cost of mental health care can prevent individuals with mental health need from accessing and utilizing mental health services, and health insurance coverage can help mitigate these cost barriers (Mojtabai, 2005). CHIS respondents with uninterrupted health insurance were less likely to have unmet need. Moreover, cost of treatment (64%; 356,000) was the most common reason adults with mental health need who felt they needed help did not receive treatment. These estimates relied upon three CHIS survey years prior to the 2014 implementation of many cost sharing reforms under ACA. These reforms expanded health coverage and increased access to mental health services to millions of Californians. In 2014 only, the number of uninsured Californians ages 64 and under fell 16% from 5.32 million in 2012 to 4.46 million in 2014 (Charles et al., 2017). Although recent efforts to repeal and replace the ACA have not succeeded, Californians stand to be greatly affected by legislation that limits coverage for mental health services. Any gains in mental health coverage and treatment may fall to levels reported in this study.

Mental health parity is a separate but complementary challenge to receiving adequate mental health treatment. Although individuals may have coverage for mental health services, other barriers such as high co-pays and deductibles, spending limits, and maximum visits or hospital stays limit their access to mental healthcare. Over the past two decades, legislation such as the California Mental Health Parity Act, the federal Mental Health Parity and Addiction Equity Act, and the Affordable Care Act were enacted to increase mental health parity or equal coverage for mental and physical health conditions. Under equal coverage, coverage levels for mental health conditions (e.g., number of visits, co-payments, etc.) must

mirror coverage levels for physical health conditions. Although mental health parity violations are relatively few, patients and advocates claim that health plans are using non-quantifiable treatment limitations such as utilization reviews and inadequate provider networks to avoid compliance (*Health Policy Brief: Enforcing Mental Health Parity*, 2015). Persistent enforcement of mental health laws and continued expansion of coverage for mental health treatment are important to ensuring that treatment is affordable and adequate.

Policies and programmatic rules that prioritize early identification and treatment of mental health conditions can help prevent long-term disability. Half of all lifetime cases of mental illness begin by age 14, and 75% manifest by age 24 (National Alliance on Mental Illness). National organizations such as the National Alliance on Mental Illness support early mental health screening of young people as part of routine visits with primary care doctors. Medicaid, which insures 43% of children in California, requires periodic developmental and behavioral screening of all children enrolled (Centers for Medicare & Medicaid Services; Kaiser Family Foundation, 2014). Medicaid's enforcement of this requirement is recommended. In addition, schools and pediatricians play an important role in promoting early screening and should receive the required resources and training to identify and link children with mental health need to care and cause little to no harm.

By integrating mental health, substance use, and primary care services, providers can reduce barriers related to navigating multiple care systems and more effectively care for people with multiple health needs. Integrated care, the systematic coordination of physical and behavioral health care, can be implemented in the primary care setting, in behavioral health care settings, or in health homes or patient-centered medical homes (PCMHs) (SAMHSA-HRSA Center for Integrated Solutions). The SAMHSA-HRSA Center for Integrated Solutions offers tools and training to primary care and behavioral health organizations interested in providing integrated care. In

support of integrated care, in January 2016, the U.S. Preventive Services Task Force (Task Force) recommended all adults should be screened for depression (Siu et al., 2016). Task Force members found evidence that depression screening in settings with adequate systems in place to accurately diagnose and effectively treat clients can improve clinical outcomes. These settings could include primary care facilities that have nurse specialists for depression assessment and education or facilities that have trained in-house therapists. The Task Force recommends collaborative care for treating major depression in adults.

Finally, mental health stigma contributes to unmet need. Nearly half (47%; 262,000) of adults with mental health need who felt they needed help did not seek professional health because they were not comfortable with seeking treatment or were worried about others finding out. Reluctance to seek mental health care may be influenced by stigma, which has two forms. Self-stigma refers to the negative beliefs or prejudices people with mental illness feel about themselves (Corrigan & Watson, 2002). These negative thoughts can lead to low self-esteem and prevent individuals from seeking opportunities. Public stigma, on the other hand, describes how the general population reacts to people with mental illness, and can result in prejudice and discriminatory actions against people with mental illness (Corrigan & Watson, 2002).

Reducing public stigma can ease self-stigma for some individuals and improve the lives of people with mental illness. In addition to funding statewide prevention and early intervention programs such as the Student Mental Health Initiative, the California Mental Health Services Authority (CalMHSA) also supports stigma reduction initiatives like the Each Mind Matters movement (<http://www.eachmindmatters.org/>). This initiative aims to improve mental health and end mental health stigma through increased awareness and education. Other strategies for changing public stigma include messages to stop reproducing and believing negative representations of people with mental illness and

increased interpersonal contact between members of the general public and people with mental illness (Corrigan & Watson, 2002).

Limitations

The study has several limitations. The California Health Interview Survey is a cross-sectional survey. Therefore, caution should be exercised when interpreting significant associations with factors where temporality cannot be established. For example, it is unclear whether being uninsured reduces a person's likelihood to receive treatment or whether not receiving treatment contributes to being uninsured. All measures in CHIS are self-reported, which may be subject to recall bias, social desirability bias, and respondents' stress levels (Drapeau, Boyer, & Diallo, 2011; Rhodes & Fung, 2004). However, most of the measures used in this study did not require demanding recall from respondents. Response rates for the California Health Interview Survey are comparable to other telephone surveys conducted in California, such as the California Behavioral Risk Factor Surveillance System survey (California Health Interview Survey, 2016c). Although non-response bias may influence study results, analysis of CHIS data from earlier years detected few differences between respondents and non-respondents after data is adjusted (UCLA Center for Health Policy Research, 2012b).

References

- Aguilar-Gaxiola, S., Iloja, G., Méndez, I., Sala, M., Concilio, L. M. H., & Akamoto, J. (2012). *Community-Defined Solutions for Latino Mental Health Care Disparities: California Reducing Disparities Project*. Retrieved from Sacramento, CA: UC Davis.
- Burnett-Zeigler, I., Zivin, K., Islam, K., & Ilgen, M. A. (2012). Longitudinal predictors of first time depression treatment utilization among adults with depressive disorders. *Social Psychiatry and Psychiatric Epidemiology*, 47(10), 1617-1625. doi:10.1007/s00127-011-0465-6.
- California Health Interview Survey. (2011, 2012, 2013, 2014). *Adult Confidential Data Files*.
- California Health Interview Survey. (2016a). *CHIS 2011-2012 Methodology Series: Report 4 – Response Rates*. Retrieved from Los Angeles, CA: UCLA Center for Health Policy Research.
- California Health Interview Survey. (2016b). *CHIS 2013-2014 Methodology Series: Report 3 – Data Processing Procedures*. Retrieved from Los Angeles, CA: UCLA Center for Health Policy Research.
- California Health Interview Survey. (2016c). *CHIS 2013-2014 Methodology Series: Report 4 – Response Rates*. Retrieved from Los Angeles, CA: UCLA Center for Health Policy Research.

The definition of “minimally adequate treatment” applies a common service threshold to all adults with mental health need. Recommended treatment plans vary by individuals, their type of diagnosis, and stage of recovery. Without this information, the “minimally adequate treatment” and “unmet need” variables are imperfectly measured, and estimates of unmet need may have wider ranges than reported. Finally, CHIS only interviews respondents in residential settings, which does not include homeless individuals and people living in group quarters such as group homes, dormitories, jails, and prisons. Results from this study are generalizable to all California adults in households but may not reflect the experiences of these populations.

Conclusion

Untreated or inadequately treated serious mental illness levies a heavy burden on individuals with mental health need, their families, and society. In California, a large majority of adults with mental health need received inadequate care or did not receive treatment. Increasing access and expanding mental health treatment for groups at greatest risk for unmet need and all Californians requires coordinated policies and programs that lower the cost of treatment, increase mental health awareness and screening, and reduce mental health stigma in all communities.

- Centers for Medicare & Medicaid Services. Early and Periodic Screening, Diagnostic, and Treatment. *Medicaid.gov*. Retrieved from <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Benefits/Early-and-Periodic-Screening-Diagnostic-and-Treatment.html>.
- Charles, S. A., Becker, T., Jacobs, K., Pourat, N., Ebrahim, R., & Kominski, G. F. (2017). *The State of Health Insurance in California: Findings from the 2014 California Health Interview Survey*. Retrieved from Los Angeles, CA: UCLA Center for Health Policy Research.
- Corrigan, P. W., & Watson, A. C. (2002). Understanding the impact of stigma on people with mental illness. *World Psychiatry, 1*(1), 16-20.
- Drapeau, A., Boyer, R., & Diallo, F. B. (2011). Discrepancies between survey and administrative data on the use of mental health services in the general population: findings from a study conducted in Quebec. *BMC Public Health, 11*, 837. doi:10.1186/1471-2458-11-837.
- Grant, D., Padilla-Frausto, D. I., Aydin, M., Streja, L., Aguilar-Gaxiola, S., & Caldwell, J. (2011). *Adult Mental Health Needs in California: Findings from the 2007 California Health Interview Survey*. Retrieved from Los Angeles, CA: UCLA Center for Health Policy Research.
- Health Policy Brief: Enforcing Mental Health Parity*. (2015). Retrieved from Health Affairs website: http://www.healthaffairs.org/healthpolicybriefs/brief.php?brief_id=147.
- Hendriks, S. M., Spijker, J., Licht, C. M. M., Hardevel, F., de Graaf, R., Batelaan, N. M., . . . Beekman, A. T. F. (2015). Long-term work disability and absenteeism in anxiety and depressive disorders. *Journal of Affective Disorders, 178*, 121-130. doi:10.1016/j.jad.2015.03.004
- Insel, T. (2015). Mental Health Awareness Month: By the Numbers. *Director's Blog*. Retrieved from <http://www.nimh.nih.gov/about/director/2015/mental-health-awareness-month-by-the-numbers.shtml>.
- Kaiser Family Foundation. (2014). Health Insurance Coverage of Children 0-18. In State Health Facts (Ed.). Retrieved from <http://kff.org/other/state-indicator/children-0-18/>.
- Kessler, R. C., Andrews, G., Colpe, L. J., Hiripi, E., Mroczek, D. K., Normand, S. L., . . . Zaslavsky, A. M. (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological Medicine, 32*(6), 959-976.
- Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., Hiripi, E., . . . Zaslavsky, A. M. (2003). Screening for serious mental illness in the general population. *Archives of General Psychiatry, 60*(2), 184-189.
- Kessler, R. C., Brown, R. L., & Broman, C. L. (1981). Sex differences in psychiatric help-seeking: evidence from four large-scale surveys. *Journal of Health and Social Behavior, 22*(1), 49-64.
- Kessler, R. C., Demler, O., Frank, R. G., Olfson, M., Pincus, H. A., Walters, E. E., . . . Zaslavsky, A. M. (2005). Prevalence and treatment of mental disorders, 1990 to 2003. *New England Journal of Medicine, 352*(24), 2515-2523. doi:10.1056/NEJMsa043266.
- Kessler, R. C., & Frank, R. G. (1997). The impact of psychiatric disorders on work loss days. *Psychological Medicine, 27*(4), 861-873. doi:10.1017/s0033291797004807.
- Mackenzie, C. S., Gekoski, W. L., & Knox, V. J. (2006). Age, gender, and the underutilization of mental health services: the influence of help-seeking attitudes. *Aging & Mental Health, 10*(6), 574-582. doi:10.1080/13607860600641200.
- Meadows, G., Burgess, P., Bobevski, I., Fossey, E., Harvey, C., & Liaw, S. T. (2002). Perceived need for mental health care: influences of diagnosis, demography and disability. *Psychological Medicine, 32*(2), 299-309. doi:10.1017/s0033291701004913.
- Mojtabai, R. (2005). Trends in contacts with mental health professionals and cost barriers to mental health care among adults with significant psychological distress in the United States: 1997-2002. *American Journal of Public Health, 95*(11), 2009-2014. doi:10.2105/ajph.2003.037630.
- Murray, C. J. L. (2013). The State of US Health, 1990-2010. *Journal of the American Medical Association, 310*(6), 591. doi:10.1001/jama.2013.13805.
- National Alliance on Mental Illness. (n.d.) Mental Health Facts - Children and Teens. Retrieved from <https://www.nami.org/getattachment/Learn-More/Mental-Health-by-the-Numbers/childrenmhfacts.pdf>.

- National Survey on Drug Use and Health 2010. Analysis ran on 2015-10-28 (06:47 PM EDT) using SDA 3.5: Tables.
- Pacific Clinics. (2013). *In Our Own Words: Asian Pacific Islander (API) Population Report*. Retrieved from Arcadia, Ca: California Reducing Disparities Project.
- Prins, M. A., Verhaak, P. F., Bensing, J. M., & van der Meer, K. (2008). Health beliefs and perceived need for mental health care of anxiety and depression--the patients' perspective explored. *Clinical Psychology Review, 28*(6), 1038-1058. doi:10.1016/j.cpr.2008.02.009.
- Rhodes, A. E., & Fung, K. (2004). Self-reported use of mental health services versus administrative records: care to recall? *International Journal of Methods in Psychiatric Research, 13*(3), 165-175.
- SAMHSA-HRSA Center for Integrated Solutions. What is Integrated Care? Retrieved from <http://www.integration.samhsa.gov/about-us/what-is-integrated-care>.
- Siu, A. L., Bibbins-Domingo, K., Grossman, D. C., Baumann, L. C., Davidson, K. W., Ebell, M., . . . Pignone, M. P. (2016). Screening for Depression in Adults: US Preventive Services Task Force Recommendation Statement. *Journal of the American Medical Association, 315*(4), 380-387. doi:10.1001/jama.2015.18392.
- UCLA Center for Health Policy Research. (2012a). California Health Interview Survey - Overview. Retrieved from <http://healthpolicy.ucla.edu/chis/about/Pages/about.aspx>.
- UCLA Center for Health Policy Research. (2012b). CHIS Data Quality. *California Health Interview Survey*. Retrieved from <http://healthpolicy.ucla.edu/chis/design/Pages/data-quality3.aspx>.
- UCLA Center for Health Policy Research. (2012c). Who does CHIS interview? *California Health Interview Survey*. Retrieved from <http://healthpolicy.ucla.edu/chis/about/Pages/who.aspx>.
- Walker, E. R., McGee, R. E., & Druss, B. G. (2015). Mortality in mental disorders and global disease burden implications: a systematic review and meta-analysis. *JAMA Psychiatry, 72*(4), 334-341. doi:10.1001/jamapsychiatry.2014.2502.
- Wang, P. S., Lane, M., Olfson, M., Pincus, H. A., Wells, K. B., & Kessler, R. C. (2005). Twelve-month use of mental health services in the United States: results from the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*(6), 629-640. doi:10.1001/archpsyc.62.6.629.
- Wells, K. B., Stewart, A., Hays, R. D., Burnam, M. A., Rogers, W., Daniels, M., . . . Ware, J. (1989). The functioning and well-being of depressed patients. Results from the Medical Outcomes Study. *Journal of the American Medical Association, 262*(7), 914-919. doi:10.1001/jama.262.7.914.

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