

## **Overview of Sources of Existing Data on Behavioral Health**

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This overview was produced to assist the work of the National Academies of Sciences, Engineering, and Medicine Standing Committee on Integrating New Behavioral Health Measures into the Substance Abuse and Mental Health Services Administration's Data Collection Programs. Opinions and statements included in the paper are solely those of the individual author, and are not necessarily adopted, endorsed, or verified as accurate by the National Academies of Sciences, Engineering, and Medicine. Support for the Standing Committee was provided by a contract between the National Academy of Sciences and the U.S. Department of Health and Human Services.

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The National Academies Standing Committee on Integrating New Behavioral Health Measures into SAMHSA's Data Collection Programs is assisting SAMHSA with its responsibilities to expand behavioral health data collections in four areas: serious emotional disturbance in children, specific mental illness diagnoses with functional impairment in adults, trauma, and recovery from a substance use or mental disorder. Options for expanding SAMHSA's behavioral health data collection in these areas include: adding new measures to existing surveys, adding follow-on data collections to existing surveys, initiating new data collections, or taking advantage of existing data sources, either directly or by implementing model-based estimation procedures, in the event that primary data collection methods are cost-prohibitive or not necessary.

This document provides an overview of existing data sources that might provide access to the variables of interest to SAMHSA in the four topic areas, as shown in Table 1 below. It summarizes the strengths and limitations of the most relevant data sources, with the caveat that the characteristics and the availability of these data are constantly evolving. The Appendix (starting on page 19) includes detailed notes and references related to the most relevant data sources and others that could be explored further. This compilation of information was developed to provide SAMHSA with a starting point for identifying possible options that may be worth exploring further or monitored for changes that could make them more conducive for use in the future.

**TABLE 1. SAMHSA Data Requirements in the Four Topic Areas**

<b>PRIMARY DATA REQUIRED BY SAMHSA</b>	<b>LEVEL OF GEOGRAPHY</b> (i.e., for national or state estimates)	<b>PERIODICITY</b>	<b>KEY COVARIATES</b>
<b>1. To estimate serious emotional disturbance in children (SED):</b>			
- Diagnosis of mental, behavioral, or emotional disorder of sufficient duration to meet diagnostic criteria	State	- Annual for allocation of states' block grant funds - Can be model-based estimates, based on multi-year rolling samples or any other method - Direct estimates generated not less than every two to three years	Measure of significant global functional impairment (however defined), gender, age, medical conditions, health insurance status
<b>2. To directly estimate adult mental illness diagnoses with functional impairment:</b>			
- Diagnoses and impairment associated with each disorder	State	- Not less than every five years	Language spoken, race/ethnicity, gender, age, education, income, medical conditions, health insurance status
<b>3. To obtain national estimates of exposure to trauma and post-traumatic stress symptoms, including subclinical and clinical PTSD:</b>			
SAMHSA's definition of trauma includes exposure and symptoms as indicated by 3 concepts <sup>1</sup> : - <u>Events</u> : actual or extreme threat	National	Every 3 to 5 years	- Mental health/substance use problems (to determine associations with trauma exposure and symptoms)

<sup>1</sup> <http://store.samhsa.gov/shin/content/SMA14-4884/SMA14-4884.pdf> (p. 7-8)

<p>of physical or psychological harm or severe, life-threatening neglect for a child that imperils healthy development.</p> <p>- <u>Experience of Event</u>: determines whether the event is traumatic—how the individual labels, assigns meaning to, and is disrupted physically and psychologically by an event.</p> <p>- <u>Effect</u>: adverse experiences resulting from trauma exposure that may occur acutely or have a delayed-onset (duration may be short or long term).</p>			<p>- Language spoken, race/ethnicity, gender, age, education, income, medical conditions, health insurance status.</p>
<b>4. To measure recovery from substance use and mental disorders, and understand the associated covariates:</b>			
<p>SAMHSA defines recovery as a process of change through which individuals improve their health and wellbeing, live a self-directed life, and strive to reach their full potential. It includes the following components<sup>2</sup>:</p> <p>- <u>Health</u> (overcoming or managing one's disease(s) or symptoms—for example, abstaining from use of alcohol, illicit drugs, and non-prescribed medications if one has an addiction problem—and for everyone in recovery, making informed, healthy choices that support physical and emotional wellbeing).</p> <p>- <u>Home</u> (a stable and safe place to live)</p> <p>- <u>Purpose</u> (meaningful daily activities, such as a job, school, volunteerism, family caretaking, or creative endeavors, and the independence, income and resources to participate in society)</p> <p>- <u>Community</u> (relationships and social networks that provide support, friendship, love, and hope)</p>	National	Undetermined	<p>- Substance use/mental health disorders, level of functioning</p> <p>- Language spoken, race/ethnicity, gender, age, education, income, medical conditions, health insurance status</p>

Several sources of data were reviewed to identify whether they contain information that would meet SAMHSA's data requirements in the 4 topic areas listed above in Table 1. The

<sup>2</sup> <http://blog.samhsa.gov/2012/03/23/definition-of-recovery-updated/#.V-rQ7DAVB74>

Appendix contains a full compilation of data sources that were reviewed (with references and links to websites), which include population surveys, administrative data sources, commercial data bases, and practice-based data sources. It does not include SAMHSA's own National Survey on Drug Use and Health (SAMHSA, 2014), other national epidemiological surveys such as the National Comorbidity Survey-Replication (Kessler et al., 2005) that are not conducted periodically and were completed more than ten years ago, or longitudinal studies of youth that have only followed one cohort of youth to date, such as the National Longitudinal Study of Adolescent Health.<sup>3</sup>

The following sections of the paper are organized by each of SAMHSA's four topic areas. Each section briefly describes what data SAMHSA already collects in each topic area, then summarizes the specific data sources identified that have variables and characteristics that partially or fully meet SAMHSA's data requirements and how these sources address the requirements related to primary data, key covariates, geographical coverage, and periodicity.

### **TOPIC I. Possible Sources of Existing Data for Estimating the Prevalence of Serious Emotional Disturbance in Children**

SAMHSA is mandated to provide funds to state agencies to support services for children with serious emotional disturbance. The definition of serious emotional disturbance includes:

" children from birth to 18 years of age who currently or any time during the past year have had a diagnosable mental, behavioral, or emotional disorder of sufficient duration to meet diagnostic criteria specified within the DSM-3 which has resulted in functional impairment which substantially interferes with or limits the child's role or functioning in family, school, or community activities". (May 20, 1993 Federal Register, vol. 57, no. 96, p. 29425 [<http://www.samhsa.gov/sites/default/files/federal-register-notice-58-96-definitions.pdf>])

Estimates of SED in children are currently derived through SAMHSA's Uniform Reporting System, which is based on data for children and youth aged 9 to 17 years that are reported annually by states.<sup>4</sup> However, the URS reports only on children served by state public mental health systems rather than all children who may need services. Table 2 shows population surveys that have existing data on children's mental health conditions that have potential to address SAMHSA's data requirements. The Appendix describes additional data sources that were deemed less promising in terms of meeting SAMHSA's data requirements, and much more detailed information on each of the data sources than are provided in the thumbnail sketches in Table 2.

The first row in the table shows SAMHSA data requirements in this topic area. Although SAMHSA's data requirements primarily specified geographical characteristics and the periodicity of survey administration, the table also provides information about each data source's target population, sample size, and the person who is providing the responses about the children. If the size of the original sample that was drawn from the target population was not available for some data sources, the final number of households or persons that completed the survey was provided.

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<sup>3</sup> <http://www.cpc.unc.edu/projects/addhealth>

<sup>4</sup> <http://www.dasis.samhsa.gov/dasis2/urs.htm>

**Table 2.** Potential Sources that Address SAMHSA Data Requirements for Estimating SED in Children

	PRIMARY DATA	KEY COVARIATES	KEY CHARACTERISTICS
<b>SAMHSA's Data Requirements</b>	Diagnosis of mental, behavioral, or emotional disorder of sufficient duration to meet diagnostic criteria	<u>Functional impairment</u>  <u>Other Covariates:</u> age, gender, medical conditions, health insurance	<u>Geography</u> - State-level estimates  <u>Periodicity</u> - Annual
<b>National Health Interview Survey (NHIS)</b>  Sponsor: CDC	Includes children aged 17 years and younger.  No diagnoses are determined. Disorders are identified through questions about whether the sample child: - Has ever been told by a healthcare professional that he/she had: ADHD, autism. - In past 12 months: had depression; was anxious, nervous, worried, stressed - Had during past 6 months: emotional or behavioral problems (per short form of SDQ) - For at least 3 months, has taken medication for a condition, and - In past 12 months, has received any of a wide array of mental health services for the disorders	<u>Functioning</u> - Days of school lost during past 12 months  <u>Other Covariates</u> - All	<u>Geography</u> - National  <u>Periodicity</u> - Annual  <u>Target Population</u> - Civilian noninstitutionalized persons residing in the US at the time of the interview. Excludes persons in long-term care institutions, correctional facilities, and Active-duty Armed Forces personnel unless at least one other family member is a civilian eligible for the survey  <u>Child Sample Size</u> - 14,672 eligible for 2014 survey  <u>Respondent</u> - Adult who is knowledgeable about the child's health
<b>National Health and Nutrition Examination Survey (NHANES)</b> Sponsor: CDC	For children 12 years and older:  Data on depression is collected using PHQ-9 screen.  Time frame is last two weeks	<u>Functioning</u> - Disability component (serious difficulty concentrating, remembering, or making decisions)  <u>Other Covariates</u> - All	<u>Geography</u> - National  <u>Periodicity</u> - Continuous, but data are combined and released on a 2-year cycle  <u>Target Population</u> - Noninstitutionalized civilian resident population and those residing in group quarters. Excludes persons in supervised care or custody in institutional settings, active-duty military personnel, active-duty family members living overseas, and US citizens residing outside the 50 states and DC.  <u>Child Sample Size</u> - In 2013-14, the total number of all persons selected was 14,332, which includes 5,555 persons 19 years of age and under.  <u>Respondent</u> - Typically parent or guardian for children under 16, self-report for those over 16.

	PRIMARY DATA	KEY COVARIATES	KEY CHARACTERISTICS
<b>National Survey of Children's Health (NSCH)</b> <sup>5</sup>  Sponsor: DHHS (Maternal and Child Health Bureau of HRSA)	<p>Children aged 0 - 17 years</p> <p>Screening item asks about ANY medical, behavioral, or other health condition (and related medication, duration, treatment or services, limitation).</p> <p>No diagnostic interviews but structured questions on: depression, anxiety, conduct disorders, ADD or ADHD, autism or autism spectrum disorders:</p> <ul style="list-style-type: none"> <li>- Health care provider ever told you child had the condition</li> <li>- Currently has the condition</li> <li>- Duration of condition</li> <li>- Severity of condition</li> </ul>	<p><u>Functioning</u> - Screening item (prior to listing conditions) asks if child is limited or prevented in any way in ability to do the things most children of the same age can do because of ANY medical, behavioral, or other health condition</p> <p><u>Other Covariates</u> - all</p>	<p><u>Geography</u> - State</p> <p><u>Periodicity</u> - Every 4 to 5 years (In 2016/17 it will be combined with the National Survey of Children with Special Health Care Needs (NS-CSHCN and administered annually going forward)</p> <p><u>Target Population</u> - Non-institutionalized children aged 0 to 17 years in the US and in each state.</p> <p><u>Child Sample Size</u> - 187,422 households with age-eligible children in 2011-2012 survey</p> <p><u>Respondent</u> - A parent or guardian with knowledge of the health and health care of the children in the household</p>
<b>National Survey of Children with Special Health Care Needs (NS-CSHCN)</b> <sup>6</sup>  Sponsor: DHHS (Maternal and Child Health Bureau of HRSA)	<p>Children aged 0 - 17 years</p> <p>Same screening item as NSCH (above) that asks about ANY medical, behavioral, or other health condition (and related medication, duration, treatment or services, limitations).</p> <p>For one child identified with special needs:</p> <ul style="list-style-type: none"> <li>- No diagnostic interviews but structured questions on: depression, anxiety, conduct disorders, ADD or ADHD, autism or autism spectrum disorders (same as above for NSCH)</li> </ul>	<p><u>Functioning</u> - More detailed questions (than NSCH) on limitations in ability to do age appropriate activities; difficulty in paying attention, communicating; feeling anxious, depressed; behavior problems; making friends.</p> <p><u>Other covariates</u> - All</p>	<p><u>Geography</u> - State</p> <p><u>Periodicity</u> - Every 4 to 5 years (In 2016/17 it will be combined with the NSCH and administered annually going forward)</p> <p><u>Target Population</u> - Households with children under 18 years of age in the U.S.</p> <p><u>Child Sample Size</u> - 196,159 households with children for the 2009-2010 survey</p> <p><u>Respondent</u> - Parent or guardian in the households who were knowledgeable about the health and health care of the children under 18 years of age</p>
<b>Medical Expenditure Panel Survey</b>  Sponsor: DHHS AHRQ	<p>Includes all ages</p> <p><u>Past Year Mental Health Conditions</u> - treated conditions reported by family respondent and recorded by interviewers as verbatim text, which are then coded to fully specified ICD-9-CM codes.</p>	<p><u>Functional</u> - Columbia Impairment Scale composed of 13 items assessing problems with the following:</p> <ul style="list-style-type: none"> <li>getting along with parents, other adults, siblings, other children;</li> <li>feeling sad, nervous, or afraid; having fun,</li> </ul>	<p><u>Geography</u> - National</p> <p><u>Periodicity</u> - Annual</p> <p><u>Target Population</u> - U.S. civilian non-institutionalized population</p> <p><u>Child Sample Size</u> - Number in public use data file for 2013 survey = 9, 900 children aged 0-</p>

<sup>5</sup> Note: This description of the NSCH refers to the survey before 2016 when changes were made to its methodology, content, and data availability [<http://childhealthdata.org/learn/NSCH>]

<sup>6</sup> This description refers to the NS-CSHCN before it was integrated into the 2016 National Survey of Children's Health [<http://www.childhealthdata.org/learn/NS-CSHCN>]

	PRIMARY DATA	KEY COVARIATES	KEY CHARACTERISTICS
		<p>schoolwork, getting involved in sports or hobbies, behavior at home, staying out of trouble</p> <p><u>Other covariates</u> - All</p>	<p>17 years</p> <p><u>Respondent</u> - Adult who completed survey for the household</p>

## Data Available on Diagnoses and Duration

Out of these five existing data sources shown in Table 2, only the Medical Expenditure Survey Panel (MEPS) meets SAMHSA's primary data requirements of having a range of diagnoses of mental, behavioral, or emotional conditions. However, the diagnoses are not derived through a standardized measure with diagnostic criteria; rather they are reported by the parent respondent during the interview as having been a focus of care, and the parent's description of the condition is then translated into ICD-9-CM code. These data could be limited by recall bias. Because the question is asked in an open-ended format, there are no restrictions on the mental health conditions covered in the MEPS. However, the question only captures treated conditions.

Among the other sources, only the National Health and Nutrition Examination Survey (NHANES) has data on the specific disorder of depression; this is based on the PHQ-9 (Kroenke et al., 2001). The other three sources--National Health Interview Survey (NHIS), National Survey of Children's Health (NSCH), and the National Survey of Children with Special Health Care Needs (NS-CSHCN)--ask respondents whether the sample child has had, over varying time periods, (e.g., ever, in last twelve months, in last six months, in last two weeks) certain conditions. But these are not linked to specific diagnoses through other methods such as coding open-ended responses about specific disorders, as in the MEPS, or clinical record review. Though they are not based on clinical diagnoses, the NHIS does ask about the history and presence of various conditions including ADHD, autism, depression, anxiety (i.e., ever been told by a healthcare provider). The NHIS also inquires more generally about emotional or behavioral problems through the short form of the Strengths and Difficulties Questionnaire (Goodman, 1997; NCHS, 2015, p. 102). Similarly, the NSCH and the NS-CSHCN ask about these same disorders as well as conduct disorders.

With regard to duration of the conditions, this is covered in the screening questions of the NSCH, NS-CSHCN, and the MEPS which appear to be the same set of items used across these three surveys ("Has condition lasted or expected to last 12 months or longer?"). The NHIS asks whether the child has been on medication for the condition for at least three months. The NHANES, which only asks about depression, does not appear to have a duration variable.

## Key Covariates

The MEPS contains data on functional impairment which is based on a standardized questionnaire, the Columbia Impairment Scale (Bird et al., 1996). The NHIS asks about days of school lost. The screening questions of the NSCH, the NS-CSHCN, and the MEPS have a question about limitations linked to each condition: Is the child limited or prevented in any way in ability to do the things most children of the same age can do?

All of these surveys contained variables to address SAMHSA's key demographics of age and gender. Since these five surveys were primarily health related they all contained variables on other physical medical conditions and health insurance.

## **Key Characteristics**

All of the surveys shown in Table 2 are national in scope and have data collection in all 50 states. However, not all of the surveys are designed with the goal of producing state-level estimates. In some cases state level estimates may be obtained through combining data over years or by conducting special analyses. The NSCH and NS-CSHCN do produce estimates at state and national levels <sup>7</sup>. Other national surveys (though not covered in Table 2) that provide state estimates are SAMHSA's National Survey on Drug Use and Health, the CDC Behavioral Risk Factor Surveillance System (BRFSS), and the CDC Youth Risk Behavior Surveillance System (YRBSS).

In terms of periodicity, SAMHSA's goals are to provide data for annual allocation of states' block grant funds. If using an existing data source, the agency would need direct estimates to be generated not less than every two to three years. Model-based estimates could be more flexible and based on multi-year rolling samples or another method. As shown in Table 2, the NHIS and MEPS are annual. The NHANES is administered continuously, but is limited in only covering the condition of depression. The NSCH/NS-CSHCN are administered every four to five years.

In summary, none of the sources listed in Table 2 fully meet SAMHSA's data requirements, but the MEPS came closest in containing: data on many psychiatric diagnoses, standardized data on functional impairment, all of the other covariates needed by SAMHSA, and annual data collection. However, estimates are not designed to be produced at the state level.

## **Other Data Sources**

Several other data sources are summarized in the Appendix, but were not included in Table 2. Other previous reviews of existing population-based survey sources of data on child mental health (CDC, 2013; Eaton et al. 2012) referred to other child population surveys, but these did not appear to cover mental health disorders sufficiently to be considered as potential data sources for SAMHSA. For example, with regard to diagnoses, CDC's Youth Risk Behavior Surveillance System (YRBSS) that primarily surveys high school aged students (and some middle school aged students) asks questions about behaviors and thoughts related to depression and suicide only. NIDA's Monitoring the Future study of 8th, 10th, and 12th grade students has some questions on reasons for alcohol and drug use that relate to coping with negative affect, and some questions on interpersonal relationships and personality. Most of the other sources of existing data summarized in the Appendix are derived from healthcare treatment and service claims. These include:

- 1) *Administrative databases* of healthcare claims submitted to federal insurance programs of Medicaid and Medicare;

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<sup>7</sup> <http://childhealthdata.org/browse/rankings>



2) *Commercial databases* of healthcare claims submitted primarily to various private insurance companies that have been integrated by private data firms such the IMS Pharmetrics Plus Database, Healthcare Cost Institute (HCCI) Database, and Truven Marketscan Databases; and

3) *Public practice-based databases*, as Mark Olfson referred to them in the workshop on Measuring Specific Mental Illness with Functional Impairment (National Academies of Sciences, Engineering, and Medicine, 2016). This last set is composed of the data from surveys of healthcare providers (physician office visits; hospital outpatient, inpatient departments, and emergency departments) who submit sample data on visits to, or discharges from, the various types of facilities. For example, The CDC-sponsored National Ambulatory Medical Care Survey (NAMCS) and the National Hospital Ambulatory Medical Care Survey (NHAMCS) sample *visits* to non-federal healthcare facilities. The AHRQ-sponsored Health Care Utilization Project (HCUP) samples *discharges* from community hospitals with individuals covered by Medicare, Medicaid, or private insurance, as well as those who are uninsured. The HCUP has three surveys with data covering inpatient discharges for all ages, inpatient discharges just for children, and emergency department events.

Most of these administrative healthcare databases have rich information on patients including demographics, diagnoses, and receipt of medication, treatments, and services. Yet they were not designed for estimating the prevalence of mental disorders in the population (Olfson in National Academies of Sciences, Engineering, and Medicine, 2016). Most importantly, unlike most of the household surveys, the healthcare databases only reflect the population that accesses treatment. This is particularly important because relatively large proportions of people in need do not access treatment. Results of a recent analysis of MEPS data (Olfson, Druss, & Marcus, 2015) showed that 44% of children with *more severe* impairment<sup>8</sup> accessed services in 2010–2012. Results of the 2013 NSDUH showed somewhat similar results for adults where 45% of persons with *any* mental illness received mental health services in the past year (SAMHSA, 2014, p. 21). Both of these studies did show increases in service receipt over time. Of course there are many reasons why people do not access treatment for mental health problems including: cost of treatment, not thinking one needs treatment, not knowing where to go for services (SAMHSA, 2014, p. 26), and stigma at individual, social, and structural levels that keep people from seeking care (Corrigan, Druss, & Perlick, 2014).

At the 2016 workshop, Olfson remarked that persons included in claims databases are not representative of the population because they tend to have more severe conditions, co-occurring disorders, and to possess other characteristics that are positively related to help-seeking (National Academies of Sciences, Engineering, and Medicine, 2016).

Another limitation of these databases is that the diagnoses (Olfson in National Academies of Sciences, Engineering, and Medicine, 2016) are determined by clinicians and may not have the same reliability as diagnoses determined through structured diagnostic interviews for research. The overall quality of administrative claims databases has to be questioned because the data are not standardized across states and other settings, and they require much cleaning and testing to increase their usability (Hoagwood et al, 2016). However, research is now being conducted to advance statistical methods for combining multiple data sources, such as claims and

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<sup>8</sup> The *more severe* category was determined to be a score of 16 or greater on the 0-52 point Columbia Impairment Scale. The *less severe* category of this dichotomous indicator included the range of scores less than 16 to 0 or *no impairment*.

survey data, in order to maximize the utility of these data in the future (Lohr & Raghunathan, 2016).

As opposed to being used to determine prevalence of disorders, Olfson noted that these databases are most helpful for studying in-depth information on populations in treatment who have more serious mental illnesses and may be hard to reach in surveys, and for analyzing important trends in services and costs.

## **TOPIC 2. Possible Sources of Existing Data for Estimating Specific Mental Illness Diagnoses with Functional Impairment in Adults**

For estimates of the prevalence of mental disorders in adults, SAMHSA currently produces annual *direct estimates* of major depressive episodes and suicidal thoughts and behaviors; these are based on data collected from all adult NSDUH respondents. Data are also collected from all respondents on psychological distress, using the K-6 (Kessler et al., 2003), and on impairment, using the World Health Organization Disability Assessment Scale (WHODAS). *Statistical modeling* is used to derive annual estimates of any mental illness and serious mental illness. The modeling is based on certain variables collected from all respondents (as above), and on data from a subset of NSDUH respondents who participated in a follow-up clinical study between 2008 and 2012 that was titled the Mental Health Surveillance Study (MHSS). The MHSS used the Structured Clinical Interview for DSM-IV-TR Axis I Disorders (SCID) to identify a wide range of DSM-4 diagnoses and the Global Assessment of Functioning (GAF) as an additional measure of impairment. (See SAMHSA, 2014 for detailed discussion of these methods).

In this second topic area SAMHSA's goal is to consider expanded data collection that would produce *direct national estimates and state estimates* for a wider variety of adult mental disorders and, if possible, with associated disorder-specific functional impairment.

Table 3 shows a subset of the data sources reviewed that have data on adult mental health disorders, are collected through population surveys, and have potential to address SAMHSA's data requirements in this topic area.

**Table 3.** Potential Sources that Address SAMHSA Data Requirements for Estimating Specific Mental Illness Diagnoses with Functional Impairment in Adults

	PRIMARY DATA	KEY COVARIATES	KEY CHARACTERISTICS
<b>SAMHSA's Data Requirements</b>	Diagnoses and Impairment Associated with Each Disorder	Language spoken, race/ethnicity, gender, age, education, income, medical conditions, health insurance status	<u>Geography</u> - State  <u>Periodicity</u> - Not less than every five years
<b>National Epidemiologic Survey on Alcohol and Related Conditions (NESARC-III)</b>  Sponsor: NIAAA	For adults 18 years and older  - 12-month and lifetime DSM-5 Diagnoses: Uses the Alcohol Use Disorder and Associated Disabilities Interview Schedule-5: <u>Mood disorders</u> - persistent depression (dysthymia), major depressive, bipolar I, and bipolar II disorders. <u>Anxiety disorders</u> - panic disorder,	<u>Language</u> - The NESARC III is available in English, Spanish, Korean, Vietnamese, Cantonese, and Mandarin  <u>Other Covariates</u> - All	<u>Geography</u> - National  <u>Periodicity</u> - NESARC III collected in 2012-13. Earlier waves were collected in 2001-2002 and 2004-2005. No planning for NESARC IV underway yet.  <u>Target Population</u> -Nationally representative sample of the

	PRIMARY DATA	KEY COVARIATES	KEY CHARACTERISTICS
	<p>agoraphobia, generalized anxiety disorder, and social and specific phobias.  <u>Personality disorders</u> - antisocial, borderline, and schizotypal  <u>Trauma</u>: - Posttraumatic stress disorder  <u>Eating Disorders</u> - anorexia nervosa, bulimia nervosa, and binge-eating disorder.</p> <p>- For diagnoses, incorporates impairment measure by asking about how the disorder interferes or restricts activities, engagement.</p> <p>- Severity - Assesses disorder by mild, moderate, severe</p> <p>- Functioning/Disability measure - Uses the 12-Item Short Form Health Survey, version 2 (SF-12v2) includes Mental Health, Social Functioning, and Role Emotional subscales and the Mental Component Summary</p>		<p>civilian noninstitutionalized population of the United States aged 18 and older, including persons residing in group quarters such as college dormitories, group homes, group quarters, and dormitories for workers</p> <p><u>Sample Size</u> - 44,931</p>
<p><b>National Health Interview Survey (NHIS)</b></p> <p>Sponsor: CDC</p>	<p>- Includes a few items on degree of physical and social/recreational limitations associated with depression/anxiety/emotional problems</p> <p>- Duration of the condition of depression/anxiety/emotional problems (Response is open-ended)</p> <p>Measure of Psychological Distress - (K-6) Past 30 days: sad, nervous, restless or fidgety, hopeless, everything was an effort, worthless?</p>	<p><u>Language</u> - English language proficiency consists of a variable that provides information on how well persons aged 5 years and over speak English</p> <p>Survey is offered in English and Spanish</p> <p><u>Other Covariates</u> - All</p>	<p><u>Geography</u> - National</p> <p><u>Periodicity</u> - Annual</p> <p><u>Target Population</u> - Civilian noninstitutionalized persons residing in the US at the time of the interview. Excludes persons in long-term care institutions, correctional facilities, and Active-duty Armed Forces personnel unless at least one other family member is a civilian eligible for the survey</p> <p><u>Sample Size</u> - In the 2014 survey, the number of eligible sample adults was 45,563</p>
<p><b>Behavioral Risk Factor Surveillance System (BRFSS)</b></p> <p>Sponsor: CDC</p>	<p>Adults 18 years and older</p> <p>CORE ITEMS</p> <p>Past 30 days:</p> <p>- was your mental health not good?</p> <p>- for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?</p> <p>Health professional ever told you have a depressive disorder, including depression, major depression, dysthymia, or minor depression?</p> <p>Are you limited in any way in any activities because of physical, mental, or</p>	<p><u>Language</u> - The survey is offered in English and Spanish. Individual states may translate into other languages for their own populations.</p> <p><u>Other Covariates</u> - All</p>	<p><u>Geography</u> - State</p> <p><u>Periodicity</u> - Annual</p> <p><u>Target Population</u> - Noninstitutionalized adult population aged 18 years or older who reside in the United States</p> <p><u>Sample Size</u> - There were separate samples for households with landlines and those with cell phones, and every state had its own samples:</p> <p>- Landline sample size - For the 2014 survey, the median total</p>

	PRIMARY DATA	KEY COVARIATES	KEY CHARACTERISTICS
	<p>emotional problems?  - difficulty concentrating, remembering, or making decisions?  - difficulty doing errands alone such as visiting a doctor's office or shopping?</p> <p>OPTIONAL ITEMS</p> <p>Past 30 days,  - felt sad, blue, or depressed  - felt worried, tense, or anxious.</p> <p>Measure of Psychological Distress (used in 2013 only) - (K-6) Past 30 days: sad, nervous, restless or fidgety, hopeless, everything was an effort, worthless?</p>		<p>sample size by state was 100,856 households; and the median number of completions by state was 4,973.</p> <p>- Cell phone sample size - For the 2014 survey, the median total sample size by state was 35,790 households; and the median number of completions by state was 2,868.</p>
<p><b>National Health and Nutrition Examination Survey (NHANES)</b></p> <p>Sponsor: CDC</p>	<p>Ages 12 and over</p> <p>Assesses Depression only using the PHQ-9:</p> <p>- Over the last 2 weeks, how often have you been bothered by the following problems: little interest or pleasure in doing things; feeling down, depressed, or hopeless; trouble falling or staying asleep, or sleeping too much; feeling tired or having little energy; poor appetite or overeating; feeling bad about yourself; trouble concentrating; moving slowly or being fidgety; thoughts that you would be better off dead or about hurting yourself</p> <p>- How difficult have these problems made it for you to do your work, take care of things at home, or get along with people?</p> <p>Functioning - "Disability" component  Serious difficulty:  - concentrating, remembering, or making decisions  - doing errands alone such as visiting a doctor's office or shopping?</p>	<p><u>Language</u> - Survey available in: English, Spanish, Chinese (traditional/Mandarin, simplified/Mandarin, traditional/Cantonese), Korean, and Vietnamese</p> <p><u>Other Covariates</u> - All</p>	<p><u>Geography</u>- National</p> <p><u>Periodicity</u> - Continuous, but data are combined and released on a 2-year cycle</p> <p><u>Target Population</u> - Noninstitutionalized civilian resident population and those residing in non-institutional group quarters. Excludes persons in supervised care or custody in institutional settings, active-duty military personnel, active-duty family members living overseas, and US citizens residing outside the 50 states and DC.</p> <p><u>Sample Size</u> - In 2013-14, the total number of all persons selected was 14,332</p>
<p><b>Medical Expenditure Panel Survey</b></p> <p>Sponsor: DHHS AHRQ</p>	<p>Includes all ages</p> <p><u>Past Year Mental Health Conditions</u> - reported by respondents and recorded by interviewers as verbatim text, which are then coded to fully specified ICD-9-CM codes.</p> <p>Measure of Depression from PHQ-2: Over the last 2 weeks, how often have you been bothered by the following problems: little interest or pleasure in doing things; feeling down, depressed, or hopeless?</p> <p>Measure of Psychological Distress -</p>	<p><u>Language</u> - Family members' origin and preferred languages are collected in the Access to Care (AC).</p> <p><u>Other Covariates</u> - All</p>	<p><u>Geography</u> - National</p> <p><u>Periodicity</u> - Annual</p> <p><u>Target Population</u> - U.S. civilian non-institutionalized population</p> <p><u>Sample Size</u> - Number in public use data file for 2013 survey was 35,068 persons</p>

	PRIMARY DATA	KEY COVARIATES	KEY CHARACTERISTICS
	<p>(K-6) Past 30 days: sad, nervous, restless or fidgety, hopeless, everything was an effort, worthless?</p> <p>Disability - SF-12 - data on disability which is described as a subjective assessment of inability to carry out work, family, or other social roles that individuals are generally expected to be able to do because of limitations in physical or mental functioning caused by impairments, or physical or mental health conditions.</p>		

### Data Available on Diagnoses and Impairment Associated with Each Disorder

Comparing the variables covered in the five data sources shown in Table 3 and SAMHSA's primary data requirements of having a range of diagnoses with associated impairment, none of the existing sources are a perfect match. However, the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC-III) comes closest in having a range of DSM-5 diagnoses that are determined through a standardized interview schedule. In addition, questions related to functioning appear to accompany each set of diagnostic criteria (i.e., mood disorders, anxiety disorders, etc.), which addresses SAMHSA's need for diagnoses with associated impairment measures. Functioning is also assessed across disorders with the 12-item Short Form Health Survey (SF-12v2) (Grant et al., 2016; Ware, Kosinski, and Keller, 1996).

The next closest match to SAMHSA's data requirements for adults is the Medical Expenditure Panel Survey (MEPS) because it has mental health conditions reported by household members in response to an open-ended question which is then coded as ICD-9-CM codes. In addition, the MEPS includes the PHQ-2 as a measure of depression, the K-6 as a measure of psychological distress (Kessler et al., 2003), and the SF-12 as a functional measure (Ware, Kosinski, and Keller, 1996), although it is not disorder-specific.

The NHANES assesses depression only using the PHQ-9 (Kroenke et al., 2001), and it has items on limitations associated with depression. The NHIS and BRFSS do not cover specific diagnoses. However, they both have incorporated the K-6 (Kessler et al., 2003) as a measure of psychological distress and include items on limitations associated with the generic category of "depression/anxiety/emotional problems" (NHIS) or "physical, mental, or emotional problems" (BRFSS<sup>9</sup>).

### Key Covariates

In the topic area of Specific Mental Illness Diagnoses with Functional Impairment in adults, SAMHSA is looking for the following key covariates: language spoken, race/ethnicity, gender, age, education, income, medical conditions, and health insurance status. Of the existing data sources in Table 3, the MEPS asks about "language preferred" on the Access to Health Care

<sup>9</sup> The K-6 was used as an optional item that states could choose to include as part of the 2013 BRFSS.

component, and the NHIS has an item on "English language proficiency". All of the other sources on Table 3 appear to offer the survey in several different languages, and that information may be available from the sponsoring agency.

All of the other covariates required by SAMHSA, including race/ethnicity, gender, age, education, income, medical conditions, and health insurance status, appear to be covered in all of the existing sources in Table 3.

### **Geography and Periodicity**

SAMHSA requires state-level data that are collected not less than every five years. From among the existing data sources shown in Table 3, only the BRFSS produces state-level estimates.

It was stated above that the data on diagnoses and impairment contained in the NESARC-III and the MEPS come closest to meeting SAMHSA's data requirements. Looking at the periodicity of these two sources, the MEPS produces annual data. The NESARC, however, is not administered on a regular periodic basis. Earlier waves were collected in 2001-2002 (NESARC I) and 2004-2005 (NESARC II). The NESARC II was actually a follow-up with 34,653 of the original 43,093 respondents from NESARC I (Hasin & Grant, 2015). The NESARC-III was administered in 2012-13 to a fresh sample. According to Hasin and Grant (2015), there is no planning underway yet for a NESARC IV.

The NHIS, which does not cover specific diagnoses, but does incorporate a measure of psychological distress and items on limitations, is administered annually.

### **Other Existing Data Sources**

The other main sources of existing data are those that were mentioned previously in the first topic area of Serious Emotional Disturbance in Children. These included: administrative databases of healthcare claims submitted to Medicaid and Medicare; commercial databases of healthcare claims submitted primarily to various private insurance companies; and public practice-based databases. The advantages and disadvantages of these data sources, as discussed above, apply the same to this topic area of adults, especially with regard to the absence of information on untreated individuals with mental disorders. For adults, the Veterans Healthcare Administration also has healthcare claims databases on inpatient and outpatient treatment, but these have the same major limitations.

## **Topic 3. Trauma**

SAMHSA collected data related to trauma events and PTSD as part of the Mental Health Surveillance Survey, which was a clinical follow up to the NSDUH from 2008 to 2012. However that survey is no longer being conducted. SAMHSA's current goal in this topic area is to obtain national estimates of exposure to trauma and post-traumatic stress disorder symptoms, including subclinical and clinical PTSD. SAMHSA's definition of trauma includes the following concepts: Events - actual or extreme threat of physical or psychological harm or severe, life-threatening neglect for a child that imperils healthy development (consistent with DSM-5 definition of trauma exposure).

Experience of Event - determines whether the event is traumatic—how the individual labels, assigns meaning to, and is disrupted physically and psychologically by an event.

Effect - adverse experiences resulting from trauma exposure that may occur acutely or have a delayed-onset (duration may be short or long term).<sup>10</sup>

The agency considers these data to be important because of the relationships between trauma and substance use and mental disorders, and the implications of these for service needs. In fact, one of SAMHSA's strategic initiatives on "Trauma and Justice" calls for the creation of a surveillance strategy for trauma and its association with mental and substance use disorders. As in the other topic areas the agency is considering various ways to produce estimates in this area, including exploring whether there are existing data sources they might be able to utilize.

No table of existing data sources is presented for this topic area because the only survey with nationally representative data, besides SAMHSA's own Mental Health Surveillance Study, is the National Epidemiologic Survey on Alcohol and Related Conditions III (NESARC).

## **Data Available**

The NESARC III appears to have the primary data required. Through a structured interview the diagnosis of post-traumatic stress disorder (PTSD) can be determined and appears to have detailed data on the event, experience, and effect. First, a series of items ask about events "that people sometimes have following an extremely stressful or traumatic event (i.e., an event that caused or threatened death, serious injury, or sexual violation)". The events include: serious or life-threatening injury, serious or life-threatening illness, saw a dead body or body part, injured in a terrorist attack, natural disaster, like flood, fire, earthquake, hurricane; sexually abused before age 18, sexually assaulted as an adult, physically abused before age 18, beaten up by spouse/romantic partner, beaten up by someone else, kidnapped/held hostage, stalked, mugged, held up, threatened with a weapon or assaulted in any other way, active military combat, peacekeeper/relief worker, civilian in war zone/place of terror, refugee, prisoner of war, juvenile detention or jail.

Next, the respondent is asked for each event endorsed:

- whether the event ever happened to them personally, ever personally witnessed; ever been repeatedly exposed; ever learn or hear these happened to a relative or close friend?
- which did they experience and which, among all, was most stressful or upsetting?

A series of questions are then asked about symptoms after the event, and in the last 12 months. For example, after that worst event, did you keep remembering; have distressing memories, dreams; feel you were reliving the event,...{up to 25 more symptoms}? If the symptoms are endorsed, follow up questions about these are asked including when they developed, age, duration; and impact of the symptoms/reactions on the person's life, functioning, emotions, responsibilities, relationships; and frequency.

## **Key Covariates, Geography, and Periodicity**

With regard to other data requirements in this topic area, for key covariates SAMHSA would require data on mental health/substance use problems in order to determine associations with trauma exposure and symptoms; as well as demographics including: language spoken,

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<sup>10</sup> <http://store.samhsa.gov/shin/content/SMA14-4884/SMA14-4884.pdf> (p. 7-8)

race/ethnicity, gender, age, education, income, medical conditions, health insurance status. The data need to be national in geographic scope and collected every 3 to 5 years.

The NESARC III collects data on use of alcohol, prescribed medications with potential for misuse, and drugs of abuse; and a wide range of psychiatric diagnoses as described above in the topic of Specific Mental Illness Diagnoses with Functional Impairment. Also as noted in Table 3 under the previous section, the NESARC III is available in six languages and data are collected on the other demographic covariates required by SAMHSA. The NESARC III data are national in scope, but the survey has not been regularly administered. The NESARC III was collected in 2012-13. Earlier waves were collected in 2001-2002 and 2004-2005. No planning for NESARC IV is yet underway.

#### **Topic 4. Recovery from Substance Use and Mental Disorders**

SAMHSA defines recovery from mental disorders and/or substance use disorders as: “a process of change through which individuals improve their health and wellbeing, live a self-directed life, and strive to reach their full potential.” and includes the following components:

- Health - overcoming or managing one's disease(s) or symptoms—for example, abstaining from use of alcohol, illicit drugs, and non-prescribed medications if one has an addiction problem—and for everyone in recovery, making informed, healthy choices that support physical and emotional wellbeing.
- Home - a stable and safe place to live;
- Purpose - meaningful daily activities, such as a job, school, volunteerism, family caretaking, or creative endeavors, and the independence, income and resources to participate in society; and
- Community - relationships and social networks that provide support, friendship, love, and hope.”<sup>11</sup>

SAMHSA would like to be able to provide national estimates of recovery from substance use and mental disorders, and to understand the covariates associated with recovery. The agency does not currently collect data on recovery, but has undertaken initiatives to develop a definition and to conduct a pilot study. Though the main focus of their developmental work is on the challenges of conceptualizing and measuring recovery in preparation for data collection, SAMHSA would also like to consider the option of using existing data sources.

SAMHSA's primary data requirements stem from the agency's definition of recovery, which is composed of constructs of health, home, purpose, and community. Of all the data sources reviewed, the only one that had some data on recovery and the key covariates of data on substance use and mental disorders was, again, the NESARC III. However, there are no specific recovery variables on the NESARC III questionnaire that match SAMHSA's definitional constructs. The concept of recovery has been analyzed using NESARC III variables that indicate degrees of *abstinence* from substance use (Dawson et al., 2012) and as *persistence* or *remission* of symptoms for psychiatric disorders (Blanco et al, 201; Garcia-Toro, et al., 2013).

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<sup>11</sup> <http://blog.samhsa.gov/2012/03/23/definition-of-recovery-updated/#.V-rQ7DAVB74>



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## APPENDIX

### NOTES ON ALL DATA SOURCES REVIEWED

This appendix contains notes describing elements of all of the data sources reviewed. The information was compiled from the websites of the sponsoring organizations responsible for the data collections and from the papers that are cited.

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# I. POPULATION SURVEYS

## NESARC III

<b>Survey Name</b>	<b>National Epidemiologic Survey on Alcohol and Related Conditions (NESARC-III)</b>
<b>Sponsor/How to Access</b>	National Institute on Alcohol Abuse and Alcoholism (NIAAA) [ <a href="http://www.niaaa.nih.gov/research/nesarc-iii/nesarc-iii-data-access">http://www.niaaa.nih.gov/research/nesarc-iii/nesarc-iii-data-access</a> ]
<b>Description</b>	A national survey on alcohol, drug use, and mental disorders, related risk factors, and associated physical and mental disabilities. [ <a href="http://www.niaaa.nih.gov/research/nesarc-iii">http://www.niaaa.nih.gov/research/nesarc-iii</a> ]
<b>Years available</b>	- NESARC III was collected in 2012-13 - Earlier waves were NESARC I, collected in 2001-2002 and NESARC II collected in 2004-2005  NESARC II was a follow up with 34,653 of the original 43,093 respondents from NESARC I. There is no planning underway yet for NESARC IV (Hasin & Grant, 2015)
<b>Population</b>	"Nationally representative sample of the civilian noninstitutionalized population of the United States aged 18 and older, (the 50 states and the District of Columbia), including persons residing in noninstitutionalized group quarters such as college dormitories, group homes, group quarters, and dormitories for workers." [ <a href="https://www.niaaa.nih.gov/sites/default/files/NESARC_Final_Report_FINAL_1_8_15.pdf">https://www.niaaa.nih.gov/sites/default/files/NESARC_Final_Report_FINAL_1_8_15.pdf</a> ]
<b>Age range</b>	18 years and older
<b>Sampling Design and Methods</b>	"Probability sampling was used to select respondents randomly. Primary sampling units were individual counties or groups of contiguous counties; secondary sampling units were groups of US Census-defined blocks; and tertiary sampling units were households within the secondary sampling units. Finally, eligible adults within sampled households were randomly selected. (Grant et al, 2016, p. E2)". Black, Hispanic, and Asian adults were sampled at higher rates than other population groups for reliability in estimates for these groups. [ <a href="http://www.niaaa.nih.gov/sites/default/files/NESARC_Final_Report_FINAL_1_8_15.pdf">http://www.niaaa.nih.gov/sites/default/files/NESARC_Final_Report_FINAL_1_8_15.pdf</a> ].  "There were 44,931 sample persons selected to participate in the NESARC-III. Of these 44,931 sample persons, 1,567 were ineligible for interview (e.g., currently serving in the military, severe mental and/or physical disability). Of the remaining 43,364 eligible sample persons, 36,309 participated in the NESARC-III." [ <a href="http://www.niaaa.nih.gov/sites/default/files/NESARC_Final_Report_FINAL_1_8_15.pdf">http://www.niaaa.nih.gov/sites/default/files/NESARC_Final_Report_FINAL_1_8_15.pdf</a> (p. 5-7)]
<b>Data Collection Method</b>	Trained interviewers using computer-assisted personal interviewing (CAPI). Saliva samples were also collected.
<b>Geography</b>	National
<b>Periodicity</b>	Occasional
<b>Mental Health Topics Covered</b>	Diagnoses, severity, disability, treatment received
<b>Specific Mental Health Items (Adult)</b>	Diagnoses - "Items designed to measure 12-month and lifetime DSM-5 mood, anxiety, trauma-related, eating, and personality disorder diagnoses. Mood disorders include persistent depression and major depressive, bipolar I, and bipolar II disorders. Anxiety disorders include panic disorder, agoraphobia, generalized anxiety disorder, and social and specific phobias. Also assessed are: Posttraumatic stress disorder, anorexia nervosa, bulimia nervosa, and binge-eating disorder. Personality disorders included antisocial, borderline, and schizotypal". (Grant et al., 2015, p. E3).  Also assesses: - Comorbidity with alcohol and other substance use disorders - Disorder by mild, moderate, severe - Treatment seeking - physician, other professional, emergency room hospital, support group  [ <a href="http://www.niaaa.nih.gov/research/nesarc-iii/questionnaire">http://www.niaaa.nih.gov/research/nesarc-iii/questionnaire</a> ]
<b>Specific Mental Health Items (Child)</b>	NA
<b>Instrument used for MH Disorder/Diagnosis</b>	Alcohol Use Disorder and Associated Disabilities Interview Schedule – 5 [AUDADIS-5] [ <a href="http://www.niaaa.nih.gov/research/nesarc-iii/questionnaire">http://www.niaaa.nih.gov/research/nesarc-iii/questionnaire</a> ]
<b>Instrument used for MH Functional</b>	12-Item Short Form Health Survey, version 2 (SF-12v2) (Ware et al., 1996; Grant et al, 2016) includes Mental Health, Social Functioning, and Role Emotional subscales and the Mental Component Summary. (Appears to be

<b>Impairment</b>	<p>incorporated into Background Sections of AUDADIS)</p> <p>Associated functional impairment - on each set of items for the various diagnoses, items on functioning are incorporated. For example on the social anxiety component  <a href="http://www.niaaa.nih.gov/sites/default/files/section%207_Final_2_13_15.pdf">[http://www.niaaa.nih.gov/sites/default/files/section%207_Final_2_13_15.pdf]</a>, see questions 15 b, c, d, e on</p> <ul style="list-style-type: none"> <li>- Interfere with your relationships with other people like arguing with them or avoiding them?</li> <li>- Interfere with doing things you were supposed to do like working, doing your schoolwork, or taking care of your home or family?</li> <li>- Restrict your usual activities in any way?</li> <li>- Keep you from doing something you wanted to do?</li> </ul> <p>On other components these questions are a bit different and appear to relate to the diagnosis  <a href="http://www.niaaa.nih.gov/research/nesarc-iii/questionnaire">[http://www.niaaa.nih.gov/research/nesarc-iii/questionnaire]</a></p>
<b>Specific Trauma Items</b>	<p>12 month and lifetime PTSD per DSM-5</p> <p><u>Section 12 on traumatic experiences</u> - Series of items about experiences that people sometimes have following an extremely stressful or traumatic event, that is, an event that caused or threatened death, serious injury, or sexual violation. Referencing specific types of events (flash card 45a - see below), items include: 1. ever happened to you personally, ever personally witnessed; ever been repeatedly exposed? 2. ever learn or hear these happened to a relative or close friend? 3. of all these, which did you experience? 4. which, among all, was most stressful or upsetting? 5. after that worst event, did you keep remembering, have distressing memories, dreams? feel you were reliving the event, etc up to... 25 more symptoms? 6. if symptoms (reactions) above are endorsed follow up questions about these re: when they developed, age, duration? (no Item 7) 8. impact of the symptoms/reactions on the person's life, functioning, emotions, responsibilities, relationships; frequency; to help get over those reactions to the event, ever see a professional, support group, hospital, emergency room, prescribed medication.  <a href="https://www.niaaa.nih.gov/sites/default/files/section%2012_Final_11_17_14.pdf">[https://www.niaaa.nih.gov/sites/default/files/section%2012_Final_11_17_14.pdf]</a></p> <p><u>Referencing specific types of events (flash card 45a), items include:</u>          Serious or life-threatening injury, Serious or life-threatening illness, Saw a dead body or body part, Injured in a terrorist attack, Natural disaster, like flood, fire, earthquake, hurricane; Sexually abused before age 18, Sexually assaulted as an adult, Physically abused before age 18, Beaten up by spouse/romantic partner, Beaten up by someone else, Kidnapped/held hostage, Stalked, Mugged, held up, threatened with a weapon or assaulted in any other way, Active military combat, Peacekeeper/relief worker, Civilian in war zone/place of terror, Refugee, Prisoner of war, Juvenile detention or jail <a href="http://www.niaaa.nih.gov/research/nesarc-iii/flashcard-booklet">[http://www.niaaa.nih.gov/research/nesarc-iii/flashcard-booklet]</a></p> <p><u>Co-morbidity:</u> Per analyses of NESARC III data, " Any and severe lifetime alcohol use disorders were associated with PTSD ". (Grant et al, 2015, p. E7)</p>
<b>Instrument used for Trauma Items</b>	AUDADIS <a href="https://www.niaaa.nih.gov/sites/default/files/section%2012_Final_11_17_14.pdf">[https://www.niaaa.nih.gov/sites/default/files/section%2012_Final_11_17_14.pdf]</a>
<b>Specific Recovery items</b>	<p>No specific recovery variables can be found on the NESARC questionnaire, but through analyses, recovery has been classified as:</p> <p><u>Recovery for substance use:</u> According to analysis of the Wave 2 follow up interview (Dawson et al., 2012), recovery from alcohol dependence was measured by:</p> <ul style="list-style-type: none"> <li>- Positive for abstinence recovery (AR) if they did not consume any alcohol during period (past year)</li> <li>- Positive for non-abstinence recovery (NR) if they consumed alcohol but did not endorse any Wave 2 past year DSM-IV alcohol dependence or abuse symptoms or severe headaches when getting over drinking; and did not exceed the NIAAA low risk drinking limits.</li> </ul> <p><u>Recovery from psychiatric disorder:</u>          At Wave 2 NESARC, meeting criteria (Persistence) or not meeting criteria (Remission) for a DSM-IV diagnosis (Garcia-Toro, et al, 2013 on topic of major depressive disorder; Blanco et al, 2011 on topic of social anxiety disorder)</p>
<b>Instrument used for Recovery Items</b>	AUDADIS (Same as for substance use disorder and mental health diagnoses)
<b>COVAR: Language</b>	Interview is available in English, Spanish, Korean, Vietnamese, Cantonese, and Mandarin
<b>COVAR: Race/Ethnicity</b>	Yes
<b>COVAR: Gender</b>	Yes
<b>COVAR: Age</b>	Yes
<b>COVAR: Education</b>	Yes
<b>COVAR: Income</b>	Yes (personal and household from employment and other sources)

<b>COVAR: Medical Conditions</b>	Yes, 31 health conditions other than AUD, SUD, and mental health
<b>COVAR: Health Insurance Status</b>	Yes, all types

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# National Health Interview Survey

<b>Survey Name</b>	<b>National Health Interview Survey (NHIS)</b>
<b>Sponsor/How to Access</b>	Centers for Disease Control and Prevention (CDC) [ <a href="http://www.cdc.gov/nchs/nhis/nhis_2014_data_release.htm">http://www.cdc.gov/nchs/nhis/nhis_2014_data_release.htm</a> ]
<b>Description</b>	A national survey covering a broad range of health topics to track national health objectives, various health problems, barriers to accessing and using appropriate health care, and Federal health programs [ <a href="ftp://ftp.cdc.gov/pub/health_statistics/nchs/dataset_documentation/nhis/2014/srvydesc.pdf">ftp://ftp.cdc.gov/pub/health_statistics/nchs/dataset_documentation/nhis/2014/srvydesc.pdf</a> (p. 8)]
<b>Years available</b>	- 2014 data available on survey website - Annually since 1997
<b>Population</b>	Civilian noninstitutionalized population residing in the US at the time of the interview. Excluded are persons in long-term care institutions, correctional facilities, and Active-duty Armed Forces personnel unless at least one other family member is a civilian eligible for the survey. [ <a href="ftp://ftp.cdc.gov/pub/health_statistics/nchs/dataset_documentation/nhis/2014/srvydesc.pdf">ftp://ftp.cdc.gov/pub/health_statistics/nchs/dataset_documentation/nhis/2014/srvydesc.pdf</a> (p. 9)]
<b>Age range</b>	Adults 18 years and older; Children 17 years and younger
<b>Sampling Design and Methods</b>	<p>" Multistage area probability design with primary sampling units drawn from geographically defined PSUs , with some PSUs in each of the 50 states and the District of Columbia." [<a href="ftp://ftp.cdc.gov/pub/health_statistics/nchs/dataset_documentation/nhis/2014/srvydesc.pdf">ftp://ftp.cdc.gov/pub/health_statistics/nchs/dataset_documentation/nhis/2014/srvydesc.pdf</a> (p. 9)]</p> <p>"The normal annual sample size (i.e., the number of households and/or persons for whom data are collected and publicly released) for the 2006–2015 sample design is about 35,000 households containing about 87,500 persons In 2011–2014. The NHIS sample size was augmented in 32 states and the District of Columbia to increase the number of states for which reliable state-level estimates can be made. In 2011, the sample size was augmented by approximately 13%; in 2012, by approximately 21%; in 2013, by approximately 18% ; and in 2014, by approximately 28%."[<a href="ftp://ftp.cdc.gov/pub/health_statistics/nchs/dataset_documentation/nhis/2014/srvydesc.pdf">ftp://ftp.cdc.gov/pub/health_statistics/nchs/dataset_documentation/nhis/2014/srvydesc.pdf</a> (p. 16)]:</p> <p>In the 2014 survey, the number eligible to complete the survey were (from Survey Description link above, p. 16 and p. 84, Table III):  Number of eligible households - 60,347  Number of eligible families - 46,068  Number of eligible sample children - 14,672  Number of eligible sample adults 45,563</p>
<b>Data Collection Method</b>	Face to face computer assisted personal interview, or telephone secondarily.
<b>Geography</b>	National
<b>Periodicity</b>	Annual
<b>Mental Health Topics Covered</b>	<p>4 Cores: Household, Family, Sample Adult (18 yr. or older), Sample Child</p> <p>- Topics on the family core include socio-demographic characteristics, basic indicators of health status, activity limitations, injuries, health insurance coverage, and access to and utilization of health care services.</p> <p>- Topics on the adult and child sample cores include health status, health care services, and health-related behaviors. [<a href="ftp://ftp.cdc.gov/pub/health_statistics/nchs/dataset_documentation/nhis/2014/srvydesc.pdf">ftp://ftp.cdc.gov/pub/health_statistics/nchs/dataset_documentation/nhis/2014/srvydesc.pdf</a> (p. 11)]</p> <p>- The child mental health services supplement was dropped in 2014 (see introduction at <a href="ftp://ftp.cdc.gov/pub/health_statistics/nchs/dataset_documentation/nhis/2014/srvydesc.pdf">ftp://ftp.cdc.gov/pub/health_statistics/nchs/dataset_documentation/nhis/2014/srvydesc.pdf</a> (p. 7)). However, supplements to the child and adult cores in 2014 included expanded content on health care access, utilization, and questions to measure mental health. Data on the child is collected from an adult knowledgeable about the child's health. [<a href="ftp://ftp.cdc.gov/pub/health_statistics/nchs/dataset_documentation/nhis/2014/srvydesc.pdf">ftp://ftp.cdc.gov/pub/health_statistics/nchs/dataset_documentation/nhis/2014/srvydesc.pdf</a> (p. 12)]</p>
<b>Specific Mental Health Items (Adult)</b>	<p><u>Section on Adult Health Status and Limitation of Activity Section</u> [<a href="ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Survey_Questionnaires/NHIS/2014/English/qadult.pdf">ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Survey_Questionnaires/NHIS/2014/English/qadult.pdf</a>] includes items on degree of physical and social/recreational limitations associated with depression/anxiety/emotional problems:</p> <p>- By yourself, and without using any special equipment, how difficult is it for you to... (p. 107-108 of pdf)  ...Go out to things like shopping, movies, or sporting events?  ...Participate in social activities such as visiting friends, attending clubs and meetings, going to parties?  ...Do things to relax at home or for leisure (reading, watching TV, sewing, listening to music)?</p> <p>- What condition or health problem causes you to have difficulty with (above)  ...Depression/anxiety/emotional problem (all in one response) (p. 109 of pdf; item, 17)</p> <p>- How long have you had depression, anxiety, or an emotional problem? (Respondent can reply in number of days,</p>

	<p>weeks, months, years, since birth) (p. 128 of pdf)</p> <p><u>Section on Health Care Access and Utilization</u> (during last 12 months) has items on having talked to psychiatrist, psychologist, psychiatric nurse, clinical social worker. (p. 187 of pdf)</p> <p><u>Adult Selected Items section</u> has items on current mental or emotional health. (starts on p. 230 of pdf)</p> <p>- <u>Measure of Psychological Distress (This is from K-6)</u> (p. 244 - 247 of pdf):  Now I am going to ask you some questions about feelings you may have experienced over the PAST 30 DAYS  ...So sad that nothing could cheer you up?  ...Nervous?  ...Restless or fidgety?  ...Hopeless?  ...That everything was an effort?  ...Worthless?</p> <p>We just talked about a number of feelings you had during the PAST 30 DAYS. Altogether, how MUCH did these feelings interfere with your life or activities: a lot, some, a little, or not at all?</p> <p><u>Adult Functioning and Disability Supplement</u> has items on affect (worry, nervous, anxious, depressed). These latter items are for testing improved measures of functioning.  [ftp://ftp.cdc.gov/pub/health_statistics/nchs/dataset_documentation/nhis/2014/srvydesc_funcdisb.pdf]</p>
<b>Specific Mental Health Items (Child)</b>	<p><u>Section on Child Conditions, Limitation of Activity and Health Status Section (CHS)</u>  [http://childhealthdata.org/docs/default-source/nhis/gttq_2011-amp-2012_samplechild.pdf?sfvrsn=2]</p> <ul style="list-style-type: none"> <li>- Includes items on ADHD, Autism, Depression; days of school loss, and has prescription for medication for condition.</li> <li>- Mental Health Indicator for Children aged 2-3 is included in the Child Health Status section. Items are based on Achenbach's Child Behavior Checklist.</li> </ul> <p><u>Questionnaire From Sample Child Core 2011 and 2012</u></p> <ul style="list-style-type: none"> <li>- Has a doctor or health professional ever told you that [child's name] had: ADHD....Autism (among a host of other developmental and physical disorders)?</li> <li>- DURING THE PAST 12 MONTHS, has a doctor or other health professional told you that [child's name] had Depression (among other disorders)?</li> <li>- DURING THE PAST 12 MONTHS, has [child's name] had any of the following conditions  Anxious, nervous, worried; stressed?</li> <li>- Compared with 12 months ago, would you say child's health is now better, worse, or about the same?</li> <li>- DURING THE PAST 12 MONTHS about how many days did child miss school because of illness or injury?</li> <li>- Does child NOW have a problem for which [he/she] has regularly taken prescription medication for AT LEAST 3 MONTHS?</li> <li>- DURING THE PAST 6 MONTHS, was child prescribed medication or taking prescription medication for difficulties with emotions, concentration, behavior, or being able to get along with others?</li> </ul> <p><u>Section of Sample Child Core on Child Mental Brief Questionnaire (Short form of the SDQ, same link as above p.8)</u>  I am going to read a list of items that describe children. For each item, please tell me if it has been NOT TRUE, SOMEWHAT TRUE, or CERTAINLY TRUE for child:  DURING THE PAST SIX MONTHS...</p> <ul style="list-style-type: none"> <li>- is generally well behaved, usually does what adults request.</li> <li>- has many worries, or often seems worried.</li> <li>- is often unhappy, depressed or tearful.</li> <li>- gets along better with adults than with other [children/youth].</li> <li>- has good attention span, sees chores or homework through to the end.</li> </ul> <p>Overall, do you think that child has difficulties in any of the following areas: emotions, concentration, behavior, or being able to get along with other people?</p> <p>Extensive questions on child mental health services received in Sample Child Core</p>
<b>Instrument used for MH Disorder/Diagnosis</b>	<p><u>Children</u>  No diagnoses are determined, just reported and indicated disorders as described above.</p> <p>SDQ (Robert Goodman)- NHIS used the short form with 5 items (generally obedient, many worries, often unhappy,</p>



	<p>gets along better, sees tasks through).  <a href="ftp://ftp.cdc.gov/pub/health_statistics/nchs/dataset_documentation/nhis/2014/srvydesc.pdf">[ftp://ftp.cdc.gov/pub/health_statistics/nchs/dataset_documentation/nhis/2014/srvydesc.pdf]</a> (p. 102 for description of NHIS use of the short form of the SDQ)</p> <p>CBCL items (Achenbach)- 4 items for each gender for children aged 2-3 to discriminate need for referral from non-referral (male - uncooperative, trouble sleeping, speech problems, unhappy or depressed); female - temper tantrums, speech problems, nervous or high-strung, unhappy or depressed. [See survey description as above, p. 100]</p>
<b>Instrument used for MH Functional Impairment</b>	<p>Health status and limitation of activity</p> <p>From Sample Child Core:  DURING THE PAST 12 MONTHS about how many days did child miss school because of illness or injury?</p>
<b>COVAR: Language</b>	English Language Proficiency consists of a variable, that provides information on how well persons aged 5 years and over speak English. Survey is offered in English and Spanish.
<b>COVAR: Race/Ethnicity</b>	Yes
<b>COVAR: Gender</b>	Yes
<b>COVAR: Age</b>	Yes
<b>COVAR: Education</b>	Yes
<b>COVAR: Income</b>	Yes - employment, estimated earnings
<b>COVAR: Medical Conditions</b>	Yes (All that would be covered in a typical medical history)
<b>COVAR: Health Insurance Status</b>	Yes - all types

## References

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- Goodman, R. (1997). *The Strengths and Difficulties Questionnaire: A research note*. Journal of Child Psychology and Psychiatry 38(5), 581–586.

# BRFSS

<b>Survey Name</b>	<b>Behavioral Risk Factor Surveillance System (BRFSS)</b>
<b>Sponsor/How to Access</b>	Centers for Disease Control and Prevention (CDC) Population Health Surveillance Branch, under the Division of Population Health at the National Center for Chronic Disease Prevention and Health Promotion [ <a href="http://www.cdc.gov/brfss/annual_data/annual_2014.html">http://www.cdc.gov/brfss/annual_data/annual_2014.html</a> ]
<b>Description</b>	<p>"An ongoing surveillance system designed to collect uniform, state-specific data on preventive health practices and risk behaviors that are linked to chronic diseases, injuries, and preventable infectious diseases that affect the adult population."</p> <p>"Many questions are taken from established national surveys, such as the National Health Interview Survey or the National Health and Nutrition Examination Survey". [<a href="http://www.cdc.gov/brfss/annual_data/2014/pdf/overview_2014.pdf">http://www.cdc.gov/brfss/annual_data/2014/pdf/overview_2014.pdf</a> (p. 2)]</p>
<b>Years available</b>	Annual data is available as far back as 1984. States have begun to participate in different years.
<b>Population</b>	Noninstitutionalized adult population who reside in the United States (Same link as above from 2014 Overview, p. 3)
<b>Age range</b>	Adults 18 years and older
<b>Sampling Design and Methods</b>	<p>"Probability sample of all households with telephones in the state. Fifty-one projects used a disproportionate stratified sample (DSS) design for their landline samples. Guam and Puerto Rico used a simple random-sample design." (Overview, p. 6)</p> <p>"Sample size refers to the number of telephone numbers that must be called within a given period of time. The BRFSS goal is to support at least 4,000 interviews per state each year. Factors influencing sample size include the cost involved in data collection for a larger sample and the states' need for obtaining estimates for subpopulations within states." [<a href="http://www.cdc.gov/brfss/data_documentation/pdf/userguidejune2013.pdf">http://www.cdc.gov/brfss/data_documentation/pdf/userguidejune2013.pdf</a>]</p> <p>There were separate samples for households with landlines and those with cell phones, and every state had its own samples:</p> <p><u>Landline sample size</u> - For the 2014 survey, the median total sample size by state was 100,856 households; and the median number of completions by state was 4,973.</p> <p><u>Cell phone sample size</u> - For the 2014 survey, the median total sample size by state was 35,790 households; and the median number of completions by state was 2,868.</p> <p>[<a href="https://www.cdc.gov/brfss/annual_data/2014/pdf/2014_dqr.pdf">https://www.cdc.gov/brfss/annual_data/2014/pdf/2014_dqr.pdf</a> (Tables 4A and 4B, p. 12-16)]</p>
<b>Data Collection Method</b>	"Since 2011, BRFSS conducts both landline telephone- and cellular telephone-based surveys. In conducting the BRFSS landline telephone survey, interviewers collect data from a randomly selected adult in a household. In conducting the cellular telephone version of the BRFSS questionnaire, interviewers collect data from an adult who participates by using a cellular telephone and resides in a private residence or college housing." (Same link as above from 2014 Overview, p. 2)
<b>Geography</b>	<p>State</p> <p>"Today, all 50 states, the District of Columbia, Puerto Rico, and Guam collect data annually; American Samoa, Federated States of Micronesia, and Palau collect survey data over a limited point- in-time (usually one to three months)". (Same link as above from 2014 Overview, p. 2)</p>
<b>Periodicity</b>	Annual
<b>Mental Health Topics Covered</b>	<p><u>3 Main Parts:</u></p> <ul style="list-style-type: none"> <li>- Core component (fixed, rotating, emerging)</li> <li>- Optional modules (Developed by CDC and states can elect to use, such as: excess sun exposure, cancer survivorship, mental illness, and stigma),</li> <li>- State added questions (Developed by states for their own use). (Same link as above from 2014 Overview, p. 4)</li> </ul> <p>A mental illness and stigma module was used by only 5 states in 2013: Colorado, Minnesota, Nevada, Tennessee, Washington.</p>
<b>Specific Mental Health Items (Adult)</b>	<p><u>Core Items:</u></p> <p>Core Item 2.2. 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?</p> <p>Core Item 2.3. During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?</p> <p>Core Item 6.10 (Ever told) you have a depressive disorder, including depression, major depression, dysthymia, or</p>

	<p>minor depression?</p> <p>Core Item 8.23. Are you limited in any way in any activities because of physical, mental, or emotional problems?</p> <p>Core Item 8.26 Because of a physical, mental, or emotional condition, do you have serious difficulty concentrating, remembering, or making decisions?</p> <p>Core Item 8.29 Because of a physical, mental, or emotional condition, do you have difficulty doing errands alone such as visiting a doctor's office or shopping?</p> <p><u>Optional Module 3</u>. Item 2. During the past 30 days, for about how many days have you felt sad, blue, or depressed? Optional Module 3. Item 3. During the past 30 days, for about how many days have you felt worried, tense, or anxious?</p> <p>[<a href="http://www.cdc.gov/brfss/questionnaires/pdf-ques/2014_brfss.pdf">http://www.cdc.gov/brfss/questionnaires/pdf-ques/2014_brfss.pdf</a>]</p> <p><u>Optional Module 17</u> on Mental Illness and Stigma has 8 items on how often feel (in last 30 days): nervous, hopeless, restless/fidgety, depressed, everything is an effort, worthless (from K-6 Measure of Psychological Distress - same as NHIS). This module is on the 2013 Questionnaire, but not on 2014:</p> <p>[<a href="http://www.cdc.gov/brfss/questionnaires/pdf-ques/2013-brfss_english.pdf">http://www.cdc.gov/brfss/questionnaires/pdf-ques/2013-brfss_english.pdf</a>]</p> <p>Number of days a mental health condition or emotional problem limited work or other activities; now taking medicine or receiving treatment from MD or other professional for this. Also there are two more items on attitudes toward mental illness and its treatment.</p>
<b>Specific Mental Health Items (Child)</b>	No
<b>Instrument used for MH Disorder/Diagnosis</b>	No
<b>Instrument used for MH Functional Impairment</b>	No
<b>COVAR: Language</b>	English and Spanish. Individual states may translate into other languages for their own populations.
<b>COVAR: Race/Ethnicity</b>	Yes
<b>COVAR: Gender</b>	Yes
<b>COVAR: Age</b>	Yes
<b>COVAR: Education</b>	Yes
<b>COVAR: Income</b>	Yes
<b>COVAR: Medical Conditions</b>	Yes - all common
<b>COVAR: Health Insurance Status</b>	Yes - all types

# NHANES

<b>Survey Name</b>	<b>National Health and Nutrition Examination Survey (NHANES)</b>
<b>Sponsor/How to Access</b>	National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC) [ <a href="http://www.cdc.gov/nchs/nhanes.htm">http://www.cdc.gov/nchs/nhanes.htm</a> ]  Questionnaires, datasets, and related documentation: [ <a href="http://www.cdc.gov/nchs/nhanes/nhanes_questionnaires.htm">http://www.cdc.gov/nchs/nhanes/nhanes_questionnaires.htm</a> ]
<b>Description</b>	A national survey of the health and nutritional status of adults and children in the United States, using interviews and physical examinations, and focusing on different population groups or health topics to meet emerging needs.[ <a href="http://www.cdc.gov/nchs/nhanes/about_nhanes.htm">http://www.cdc.gov/nchs/nhanes/about_nhanes.htm</a> ]
<b>Years available</b>	Most recent: 2013-2014
<b>Population</b>	Noninstitutionalized civilian resident population and those residing in non-institutional group quarters. Excludes persons in supervised care or custody in institutional settings, active-duty military personnel, active-duty family members living overseas, and US citizens residing outside the 50 states and DC. (Johnson et al., 2014, p. 1)
<b>Age range</b>	All ages from birth
<b>Sampling Design and Methods</b>	A 4 stage sampling design with first stage selecting PSUs (counties), second stage selecting area segments, third stage selecting dwelling units, and fourth stage selecting persons within occupied households. Sampling frame includes all 50 states. (Johnson et al., 2014, p. 4).  "Expected annual sample size at the design stage is: Households to be screened - 11,500, Sampled persons - 6,888 Examined persons - 5,000". (Johnson et al., 2014, p. 5). "Out of the examined sample of 5,000 persons per year, approximately 1,000 persons are aged 12–19 years." (Centers for Disease Control and Prevention. (2013, p. 22).  In 2013-2014, 14,332 persons were selected for NHANES from 30 different study locations. This includes 5,555 persons 19 and under. Of all persons selected, 10,175 completed the interview and 9,813 were examined. [ <a href="https://www.cdc.gov/nchs/data/nhanes/response_rates_cps/2013_2014_response_rates.pdf">https://www.cdc.gov/nchs/data/nhanes/response_rates_cps/2013_2014_response_rates.pdf</a> ]
<b>Data Collection Method</b>	"Data collection for NHANES consists of a household screener, an interview, and an examination including selected objective measures of health status. The primary objective of the household screener is to determine whether any household members are eligible for the interview and examinations. The interview collects person-level demographic, health, nutrition information as well as information about the household. It includes physical measurements such as blood pressures, dental exam, collection of blood and urine specimens for laboratory testing." (Johnson et al., 2014, p. 1, Abstract)
<b>Geography</b>	National
<b>Periodicity</b>	Continuous, but data are combined and released on a 2-year cycle
<b>Mental Health Topics Covered</b>	From 1999 to 2004 data were collected on a range of child and adult diagnoses, but the 2013-14 survey assesses depression only
<b>Specific Mental Health Items (Adult)</b>	Depression for ages 12 years and over with full sample using PHQ–9 screen (from brochure with items from 1999-2016. [ <a href="https://www.cdc.gov/nchs/data/nhanes/survey_content_99_16.pdf">https://www.cdc.gov/nchs/data/nhanes/survey_content_99_16.pdf</a> ])  <u>Questionnaire for depression screening:</u> Over the last 2 weeks, how often have you been bothered by the following problem: little interest or pleasure in doing things; feeling down, depressed, or hopeless; trouble falling or staying asleep, or sleeping too much; feeling tired or having little energy; poor appetite or overeating; feeling bad about yourself; trouble concentrating; moving slowly or being fidgety; thoughts that you would be better off dead or about hurting yourself. - How difficult have these problems made it for you to do your work, take care of things at home, or get along with people? [ <a href="https://www.cdc.gov/nchs/data/nhanes/nhanes_13_14/DPQ_CAPI_H.pdf">https://www.cdc.gov/nchs/data/nhanes/nhanes_13_14/DPQ_CAPI_H.pdf</a> ]  <u>Two items on 2013-2014 survey also have a "Disability" component:</u> - Because of a physical, mental, or emotional condition, {do you/does he /does she } have serious difficulty concentrating, remembering, or making decisions? ...have difficulty doing errands alone such as visiting a doctor's office or shopping? [ <a href="https://www.cdc.gov/nchs/data/nhanes/nhanes_13_14/DLQ_H.pdf">https://www.cdc.gov/nchs/data/nhanes/nhanes_13_14/DLQ_H.pdf</a> ]  (Survey in 2015-16 is adding a disability item re: depression and anxiety)
<b>Specific Mental Health Items (Child)</b>	Same as for adults above as it pertains to depression screening for children 12 years and older. It appears that respondent is the child aged 12 or older (Interviewer Procedures Manual, 2013, under MEC Health section p. 8-7 [ <a href="http://www.cdc.gov/nchs/data/nhanes/nhanes_13_14/Intrvwr_Proc_Manual.pdf">http://www.cdc.gov/nchs/data/nhanes/nhanes_13_14/Intrvwr_Proc_Manual.pdf</a> ])
<b>Instrument used for MH</b>	PHQ-9 for depression

<b>Disorder/Diagnosis</b>	
<b>Instrument used for MH Functional Impairment</b>	No
<b>COVAR: Language</b>	In addition to the English and Spanish versions, the 2011-2014 MEC ACASI questionnaire was translated into Chinese (traditional/Mandarin, simplified/Mandarin, and traditional/Cantonese), Korean, and Vietnamese for use with participants 20 years and older when necessary. The respondent chooses their preferred language. [http://www.cdc.gov/nchs/nhanes/nhanes2013-2014/quexdoc_h.htm]
<b>COVAR: Race/Ethnicity</b>	Yes
<b>COVAR: Gender</b>	Yes
<b>COVAR: Age</b>	Yes
<b>COVAR: Education</b>	Yes
<b>COVAR: Income</b>	Yes
<b>COVAR: Medical Conditions</b>	Yes
<b>COVAR: Health Insurance Status</b>	Yes

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# MEPS

<b>Survey Name</b>	<b>Medical Expenditure Panel Survey</b>
<b>Sponsor/How to Access</b>	U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality (AHRQ) [ <a href="http://meps.ahrq.gov/mepsweb/">http://meps.ahrq.gov/mepsweb/</a> ]
<b>Description</b>	" Large-scale surveys of families and individuals, their medical providers (doctors, hospitals, pharmacies, etc.), and employers across the United States. Data covers the specific health services used, frequency, cost of services, and payment methods, as well as data on the cost, scope, and breadth of health insurance." [ <a href="https://meps.ahrq.gov/mepsweb/about_meps/survey_back.jsp">https://meps.ahrq.gov/mepsweb/about_meps/survey_back.jsp</a> ]
<b>Years available</b>	- Selected data tables and files available for 2014 and 2015. - Household Full Year Consolidated Data File available for 2013. [ <a href="https://meps.ahrq.gov/mepsweb//data_stats/download_data_files.jsp">https://meps.ahrq.gov/mepsweb//data_stats/download_data_files.jsp</a> ]
<b>Population</b>	U.S. civilian non-institutionalized population
<b>Age range</b>	All ages
<b>Sampling Design and Methods</b>	"The Household Component collects data from a sample of families and individuals in selected communities across the United States, drawn from a nationally representative subsample of households that participated in the prior year's National Health Interview Survey (conducted by the National Center for Health Statistics). " [ <a href="https://meps.ahrq.gov/mepsweb/about_meps/survey_back.jsp">https://meps.ahrq.gov/mepsweb/about_meps/survey_back.jsp</a> ]  Sample size in public use data file for 2013 survey = 35,068 persons. The number of children aged 0-17 years within that total = 9,900. [ <a href="https://meps.ahrq.gov/mepsweb/survey_comp/hc_sample_policy_group.jsp?year=2013&amp;puf=HC%2D163">https://meps.ahrq.gov/mepsweb/survey_comp/hc_sample_policy_group.jsp?year=2013&amp;puf=HC%2D163</a> ]
<b>Data Collection Method</b>	Household interviews. "The panel design of the survey, which features several rounds of interviewing covering two full calendar years, makes it possible to determine how changes in respondents' health status, income, employment, eligibility for public and private insurance coverage, use of services, and payment for care are related." [ <a href="https://meps.ahrq.gov/mepsweb/about_meps/survey_back.jsp">https://meps.ahrq.gov/mepsweb/about_meps/survey_back.jsp</a> ].  "Using computer assisted personal interviewing (CAPI) technology, information about each household member is collected, and the survey builds on this information from interview to interview." [ <a href="https://meps.ahrq.gov/mepsweb/survey_comp/hc_data_collection.jsp">https://meps.ahrq.gov/mepsweb/survey_comp/hc_data_collection.jsp</a> ]  "All data for a sampled household are reported by a single household respondent". [ <a href="https://meps.ahrq.gov/data_files/publications/mr23/mr23.pdf">https://meps.ahrq.gov/data_files/publications/mr23/mr23.pdf</a> ]
<b>Geography</b>	National
<b>Periodicity</b>	Annual
<b>Mental Health Topics Covered</b>	During the household interviews, MEPS collects detailed information for each person in the household on the following: demographic characteristics, health conditions, health status, use of medical services, charges and source of payments, access to care, satisfaction with care, health insurance coverage, income, and employment.
<b>Specific Mental Health Items (Adult)</b>	<u>Description of Questionnaire sections:</u> [ <a href="http://meps.ahrq.gov/mepsweb/survey_comp/survey_results_ques_sections.jsp?Section=CE&amp;Year1=2014&amp;Submit22=Submit">http://meps.ahrq.gov/mepsweb/survey_comp/survey_results_ques_sections.jsp?Section=CE&amp;Year1=2014&amp;Submit22=Submit</a> ]  1. Condition Enumeration section - " A summary assessment of each person's physical and mental health. It then identifies specific physical and mental health conditions, accidents, or injuries affecting each person. Using this information, this section creates a roster of conditions and health problems reported for each family member. Later in the interview, this roster links with health care utilization and disability days information."  "Now we are going to focus on health problems that have actually bothered anyone in the family {since {START DATE}/between {START DATE} and {END DATE}}. Health problems include physical conditions, accidents, or injuries that affect any part of the body as well as mental or emotional health conditions, such as feeling sad, blue, or anxious about something." (Note: Looks like past year in questionnaire, but date is affected by what round they are in) [ <a href="https://meps.ahrq.gov/survey_comp/hc_survey/2014/CE111214.pdf">https://meps.ahrq.gov/survey_comp/hc_survey/2014/CE111214.pdf</a> ; p. 4]  2. Conditions section: This section collects additional information about physical and mental health conditions identified through medical events or disability days. Mental Health Conditions, like all others, are reported by respondents, recorded by interviewers as verbatim text, and then coded to fully specified ICD-9-CM codes. These

	<p>codes are "regrouped in clinically homogenous categories known as CCS codes (for mental health). A crosswalk of ICD-9 codes and CCS codes is available in the documentation file of the Medical Conditions File." [http://meps.ahrq.gov/mepsweb/data_files/publications/st440/stat440.pdf. (p. 2)]. Additional information on crosswalk between ICD-9 codes and CCS codes: [http://www.hcup-us.ahrq.gov/toolssoftware/ccs/ccs.jsp]</p> <p>3. Health Status (and Limitations). Because of an impairment or a physical or mental health problem, do you:</p> <ul style="list-style-type: none"> <li>- Receive help or supervision using the telephone, paying bills, taking medications, preparing light meals, doing laundry or going shopping?</li> <li>- Receive help or supervision bathing, dressing, or getting around the house</li> <li>- Limited in any way in the ability to work at a job, do housework, or go to school</li> <li>- Limited in participating in social, recreational, or family activities</li> <li>- Have serious difficulty concentrating, remembering, or making decisions</li> </ul> <p>[https://meps.ahrq.gov/survey_comp/hc_survey/2014/HE111214.pdf]</p> <p>Three other measures are described on the paper version of the Adult Self-Administered Questionnaire: [http://meps.ahrq.gov/survey_comp/hc_survey/paper_quest/2014/2014_SAQ_ENG.pdf]</p> <p>4. Measure of Psychological Distress (K-6) - Past 30 days: sadness, nervous, restless or fidgety, hopeless, everything was an effort, worthless?</p> <p>5. Measure of Depression (PHQ-2)- Over the last 2 weeks, how often have you been bothered by the following problems: little interest or pleasure in doing things; feeling down, depressed, or hopeless?</p> <p>6. Measure of Disability (SF-12) - described as a subjective assessment of inability to carry out work, family, or other social roles that individuals are generally expected to be able to do because of limitations in physical or mental functioning caused by impairments, or physical or mental health conditions.</p>
<b>Specific Mental Health Items (Child)</b>	<p><u>Mental Health Conditions:</u> Same as above for adults</p> <p><u>Questions in Child Preventive Health Section:</u></p> <p>The next questions are about {your/{PERSON}'s} health needs and whether {you/he/she} {have/has} a health condition. A health condition can be physical, mental or behavioral. Health conditions may affect a child's development, daily functioning or need for services.</p> <ul style="list-style-type: none"> <li>- {Do/Does} {you/{PERSON}} currently need or use medicine prescribed by a doctor, other than vitamins?</li> </ul> <p>Is this because of any medical, behavioral or other health condition?</p> <p>Is this a condition that has lasted or is expected to last for at least 12 months?</p> <ul style="list-style-type: none"> <li>- {Do/Does} {you/{PERSON}} need or use more medical care, mental health or educational services than is usual for most children of the same age?</li> </ul> <p>Is this because of any medical, behavioral or other health condition?</p> <p>Is this a condition that has lasted or is expected to last for at least 12 months?</p> <ul style="list-style-type: none"> <li>- {Are/Is} {you/PERSON}} limited or prevented in any way in {your/his/her} ability to do the things most children of the same age can do?</li> </ul> <p>Is this because of any medical, behavioral or other health condition?</p> <p>Is this a condition that has lasted or is expected to last for at least 12 months?</p> <ul style="list-style-type: none"> <li>- {Do/Does} {you/{PERSON}} need or get special therapy such as physical, occupational or speech therapy?</li> </ul> <p>Is this because of any medical, behavioral or other health condition?</p> <p>Is this a condition that has lasted or is expected to last for at least 12 months?</p> <ul style="list-style-type: none"> <li>- {Do/Does} {you/{PERSON}} have any kind of emotional, developmental or behavioral problem for which {you/he/she} need{s} or get{s} treatment or counseling?</li> </ul> <p>Is this a condition that has lasted or is expected to last for at least 12 months?</p> <p>[http://meps.ahrq.gov/mepsweb/survey_comp/hc_survey/2014/CS111214.htm]</p>
<b>Instrument used for MH Disorder/Diagnosis</b>	PHQ-2 (Depression)
<b>Instrument used for MH Functional Impairment</b>	<p><u>Adults</u> - SF-12</p> <p><u>Children</u> - Columbia Impairment Scale (reported in Olfson, Druss, and Marcus (2015).</p> <p>Rate on a scale of 0 to 4 where 0 indicates no problem and 4 indicates a very big problem, how much of a problem</p>

	<p>you think {you/he/she} {have/has} with (ACTIVITY).</p> <p>a. Getting along with {your/his/her} mother?</p> <p>b. Getting along with {your/his/her} father?</p> <p>c. Feeling unhappy or sad?</p> <p>d. {Your/His/Her} behavior at school?</p> <p>e. Having fun?</p> <p>f. Getting along with other adults?</p> <p>g. Feeling nervous or afraid?</p> <p>h. Getting along with brothers and sisters?</p> <p>i. Getting along with other kids?</p> <p>j. Getting involved in activities like sports or hobbies?</p> <p>k. {Your/His/Her} schoolwork?</p> <p>l. {Your/His/Her} behavior at home</p> <p>m. Staying out of trouble?</p> <p>[<a href="http://meps.ahrq.gov/mepsweb/survey_comp/hc_survey/2014/CS111214.htm">http://meps.ahrq.gov/mepsweb/survey_comp/hc_survey/2014/CS111214.htm</a> (Item CS08)]</p>
<b>COVAR: Language</b>	Yes. Access to health care information is collected in the Access to Care (AC) section of the MEPS-HC questionnaire. Topics include family members' origin and preferred languages
<b>COVAR: Race/Ethnicity</b>	Yes
<b>COVAR: Gender</b>	Yes
<b>COVAR: Age</b>	Yes
<b>COVAR: Education</b>	Yes
<b>COVAR: Income</b>	Yes
<b>COVAR: Medical Conditions</b>	Yes
<b>COVAR: Health Insurance Status</b>	Yes



## National Survey of Children's Health

<b>Survey Name</b>	<b>National Survey of Children's Health</b>
<b>Sponsor/How to Access</b>	<p>Maternal and Child Health Bureau (MCHB) of the Health Resources and Services Administration (HRSA), Department of Health and Human Services, with secondary funding from the Office of the Assistant Secretary for Planning and Evaluation of the Department of Health and Human Services</p> <p>Survey description and how to access data:  <a href="ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/slits/nsch_2011_2012/01_Frequently_asked_questions/NSCH_2011_2012_FAQs.pdf">[ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/slits/nsch_2011_2012/01_Frequently_asked_questions/NSCH_2011_2012_FAQs.pdf]</a></p> <p>Data files: <a href="ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/slits/nsch_2011_2012/03_Dataset/">[ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/slits/nsch_2011_2012/03_Dataset/]</a></p>
<b>Description</b>	<p>National survey that examines the physical and emotional health of children with emphasis on factors related to well-being, including medical homes, family interactions, parental health, school and after-school experiences, and safe neighborhoods. <a href="http://www.cdc.gov/nchs/slits/nsch.htm">[http://www.cdc.gov/nchs/slits/nsch.htm]</a></p> <p>Report reference: U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau, The Health and Well-Being of Children: A Portrait of States and the Nation, 2011-2012. Rockville, Maryland: U.S. Department of Health and Human Services, 2014. <a href="http://mchb.hrsa.gov/nsch/2011-12/health/pdfs/nsch11.pdf">[http://mchb.hrsa.gov/nsch/2011-12/health/pdfs/nsch11.pdf]</a></p> <p>Note: This description of the NSCH refers to the survey before 2016 when changes were made to its methodology, content, and data availability.<a href="http://childhealthdata.org/learn/NSCH">[http://childhealthdata.org/learn/NSCH]</a></p>
<b>Years available</b>	<p>2011-2012</p> <p>2007</p> <p>2003</p>
<b>Population</b>	Non-institutionalized children aged 0 to 17 years in the US and in each state and the Virgin Islands (FAQ, link above, p. 5)
<b>Age range</b>	0-17 years
<b>Sampling Design and Methods</b>	<p>" Cross-sectional telephone survey (landlines only) of households with at least one resident child aged 0 to 17 years at the time of the interview. Complex survey design, with stratification by state and sample type (landline or cell-phone). The NSCH used the same sampling frame as the CDC's National Immunization Survey (NIS) and immediately followed the NIS interview in selected households, using the NIS sample for efficiency and economy." (FAQ, link above, p. 1)</p> <p>Sample Size: 847,881 households were screened and 187,422 had age-eligible children. Completed 95,677 child-level interviews. (FAQ, link above, p. 3)</p>
<b>Data Collection Method</b>	<ul style="list-style-type: none"> <li>- State and Local Area Integrated Telephone Survey (SLAITS)</li> <li>- Respondent: a parent or guardian with knowledge of the health and health care of the children in the household</li> <li>- "The average interview length for landline sample was 33 minutes, 6 seconds, and the median time was 31 minutes, 43 seconds. The average interview length for cell phone sample cases was 34 minutes, 14 seconds, and the median time was 32 minutes, 54 seconds.</li> <li>- The NSCH interview followed the NIS interview in NIS-eligible households. The length of the NSCH interview was shorter for these households because some demographic and household questions were administered as part of the NIS and not repeated during the NSCH. The times above are for households that were not eligible for the NIS." (FAQ, link above, p. 3)</li> </ul>
<b>Geography</b>	National and state
<b>Periodicity</b>	Administered every 4 - 5 years
<b>Mental Health Topics Covered</b>	Conditions of depression, anxiety, conduct disorders, ADD or ADHD, autism or autism spectrum disorders; severity of conditions, related medications, related limitations, duration of conditions
<b>Specific Mental Health Items (Adult)</b>	Not applicable
<b>Specific Mental Health Items (Child)</b>	<p>From Guide to topics:</p> <p>Does child...</p> <ul style="list-style-type: none"> <li>- Prescription medicine because of ANY medical, behavioral, or other health condition?</li> <li>- Condition lasted or expected to last 12 months or longer?</li> <li>- Need or use more medical care, mental health, or educational services than is usual for most children of the same</li> </ul>

	<p>age?</p> <ul style="list-style-type: none"> <li>- Use of these services for ANY medical, behavioral, or other health condition?</li> <li>- Limitation in abilities to do the things most children of the same age can do because of ANY medical, behavioral, or other health condition?</li> <li>- Have any kind of emotional, developmental, or behavioral problem for which [he/she] needs treatment or counseling? Lasted 12 months or longer?</li> <li>- Derived variable for child with special health care needs.</li> </ul> <p>Has doctor ever told you that (child) has learning disability.....ADD or ADHD.....depression.....anxiety problems.....behavioral problems such as oppositional defiant disorder or conduct disorder.....autism, Asperger's disorder, pervasive developmental disorder, or other autism spectrum disorder?</p> <ul style="list-style-type: none"> <li>- Does [CHILD'S NAME] currently have condition?</li> <li>- How old was child when doctor told you he/she had ____? (for array of disorders above)</li> <li>- Would you describe problem as mild, moderate, or severe? (for array of disorders above)</li> <li>- Did autism or autism spectrum disorder condition go away, or was diagnosis changed? Reasons?</li> </ul> <p>[<a href="http://www.childhealthdata.org/docs/drc/2011-12-guide-to-topics-questions-draft.pdf?sfvrsn=4">http://www.childhealthdata.org/docs/drc/2011-12-guide-to-topics-questions-draft.pdf?sfvrsn=4</a>]</p>
<b>Instrument used for MH Disorder/Diagnosis</b>	None
<b>Instrument used for MH Functional Impairment</b>	None
<b>COVAR: Language</b>	Primary language in household. Derived variable for interview conducted in other than English
<b>COVAR: Race/Ethnicity</b>	Yes
<b>COVAR: Gender</b>	Yes
<b>COVAR: Age</b>	Yes
<b>COVAR: Education</b>	Grades repeated by child
<b>COVAR: Income</b>	Yes
<b>COVAR: Medical Conditions</b>	Other chronic conditions including learning disability, intellectual disability, cerebral palsy, speech problems, Tourette Syndrome, asthma, diabetes, epilepsy, hearing vision, bone/joint/muscle problems, brain injury
<b>COVAR: Health Insurance Status</b>	Yes

## National Survey of Children with Special Health Care Needs

<b>Survey Name</b>	<b>National Survey of Children with Special Health Care Needs (NS-CSHCN)</b>
<b>Sponsor/How to Access</b>	Maternal and Child Health Bureau (MCHB) of the Health Resources and Services Administration (HRSA), Department of Health and Human Services [ <a href="http://www.childhealthdata.org/help/dataset">http://www.childhealthdata.org/help/dataset</a> ]
<b>Description</b>	<p>Survey on the prevalence of children with special health care needs in the Nation and in each State, including demographic characteristics, types of health and support services needed, and access to and the quality of the care received. [<a href="http://www.childhealthdata.org/learn/NS-CSHCN">http://www.childhealthdata.org/learn/NS-CSHCN</a>]</p> <p>Note: The MCHB defines children with special health care needs (CSHCN) as:            "...those who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally." One of the major goals of the NS-CSHCN is to determine the proportion of children (from birth through 17 years of age), nationally and in each State, who meet this definition. [<a href="http://www.cahmi.org/wp-content/uploads/2014/06/CSHCNS-whoarecshcn_revised_07b-pdf.pdf">http://www.cahmi.org/wp-content/uploads/2014/06/CSHCNS-whoarecshcn_revised_07b-pdf.pdf</a>]</p> <p>Update: The survey is currently being integrated into the National Survey of Children's Health, but will still provide the same in-depth look at the lives of children with special health care needs. See the MCHB website for more information on the 2016 National Survey of Children's Health administration, methodology, survey content, and data availability. [From: <a href="http://www.childhealthdata.org/learn/NS-CSHCN">http://www.childhealthdata.org/learn/NS-CSHCN</a>]</p> <p><u>Report:</u> U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. The National Survey of Children with Special Health Care Needs Chartbook 2009–2010. Rockville, Maryland: U.S. Department of Health and Human Services, 2013. [<a href="http://mchb.hrsa.gov/cshcn0910/more/pdf/nscshcn0910.pdf">http://mchb.hrsa.gov/cshcn0910/more/pdf/nscshcn0910.pdf</a>]</p> <p><u>Technical Appendix:</u> [<a href="http://mchb.hrsa.gov/cshcn0910/more/pdf/ta.pdf">http://mchb.hrsa.gov/cshcn0910/more/pdf/ta.pdf</a>]</p>
<b>Years available</b>	2009-2010 2005-2006 2001
<b>Population</b>	Households with children under 18 years of age in the U.S.
<b>Age range</b>	0-17 years
<b>Sampling Design and Methods</b>	<p>"The NS-CSHCN - uses the same large-scale random-digit-dial sampling frame as the CDC's National Immunization Survey. Over 7 million telephone numbers were randomly generated for inclusion. Separate random-digit-dial samples were generated for landline and cell-phone numbers. After eliminating numbers that were determined to be nonresidential or nonworking, the remaining numbers were called to identify households with children under 18 years of age. In addition, when cell phones were called, respondents were considered eligible only if they reported that they did not have a landline telephone or if they said they were unlikely to be reached through a landline. When households with children were identified, all children in the household were screened for special health care needs. In households where two or more children were identified as having special needs, one child was randomly sampled to be the subject of the detailed interview." (Technical Appendix, p. 1, link above)</p> <p>"The goal was to complete approximately 750 interviews regarding a sampled child with special health care needs in each of the 50 States and the District of Columbia....."From 196,159 households with children, 372,698 children were screened for special health care needs and 40,242 interviews were completed. " (Technical Appendix, p. 1, link above)</p>
<b>Data Collection Method</b>	"Fielded using the State and Local Area Integrated Telephone Survey (SLAITS) mechanism. A computer-assisted telephone interviewing system was used to collect the data. Respondents were the parents or guardians in the households who were knowledgeable about the health and health care of the children under 18 years of age. Data collection began on July 7, 2009 and ended on March 2, 2011. " (Technical Appendix, p. 1, link above)
<b>Geography</b>	National and state
<b>Periodicity</b>	Every 4-5 years
<b>Mental Health Topics Covered</b>	Conditions, limitations, service use
<b>Specific Mental Health Items</b>	--

<b>(Adult)</b>	
<b>Specific Mental Health Items (Child)</b>	<p>Both the NS-CSHCN and NSCH surveys use the same CSHCN Screener but apply and administer it differently. [https://childhealthdata.org/learn/faq#topics]</p> <p><u>Screening of all children in home:</u></p> <ul style="list-style-type: none"> <li>- Does child currently need or use medicine prescribed by a doctor, other than vitamins? Is [his/her] need for prescription medicine because of ANY medical, behavioral or other health condition? Is this a condition that has lasted or is expected to last 12 months or longer?</li> <li>- Does child need or use more medical care, mental health or educational services than is usual for most children of the same age? Is [his/her] need for medical care, mental health, or educational services because of ANY medical, behavioral or other health condition? Is this a condition that has lasted or is expected to last 12 months or longer?</li> <li>- Is child limited or prevented in any way in [his/her] ability to do the things most children of the same age can do? Is [his/her]'s limitation in abilities because of ANY medical, behavioral or other health condition? Is this a condition that has lasted or is expected to last 12 months or longer?</li> <li>- Does child need or get special therapy such as physical, occupational, or speech therapy? Is [his/her] need for special therapy because of ANY medical, behavioral or other health condition? Is this a condition that has lasted or is expected to last 12 months or longer?</li> <li>- Does child have any kind of emotional, developmental or behavioral problem for which he/she needs treatment or counseling? Has [his/her]'s emotional, developmental, or behavioral problem lasted or expected to last for 12 months or longer?)</li> </ul> <p><u>Detailed items for one child in home with identified child with special health care needs:</u></p> <p><u>Health and Functional Status</u></p> <ul style="list-style-type: none"> <li>- How often does health condition affect ability to do age appropriate things?</li> <li>- Do health care needs change?</li> <li>- How much difficulty in breathing, swallowing, circulation, pain, seeing, hearing?</li> <li>- How much difficulty in self-care, coordination, using hands, paying attention, communicating, feeling anxious or depressed, behavior problems, making friends</li> <li>- For the following list of conditions, has a doctor or other health care provider ever told you that [CHILD'S NAME] had the condition, even if [he/she] does not have the condition now? If yes, does [CHILD'S NAME] currently have the condition? Is that condition mild, moderate, or severe? ADD or ADHD; depression; anxiety problems; behavioral or conduct problems; autism, Asperger's disorder, pervasive developmental disorder, or other autism spectrum disorder; developmental delay; intellectual disability or mental retardation; other medical see below.</li> </ul> <p><u>Access to care-</u> Use of services and unmet needs including mental health care and counseling, special education</p> <p>[http://www.childhealthdata.org/docs/cshcn/guide_to_topic_questions_asked_09_10_nscshcn_apr_2011-pdf.pdf?sfvrsn=5]</p>
<b>Instrument used for MH Disorder/Diagnosis</b>	None
<b>Instrument used for MH Functional Impairment</b>	None
<b>COVAR: Language</b>	Yes
<b>COVAR: Race/Ethnicity</b>	Yes
<b>COVAR: Gender</b>	Yes
<b>COVAR: Age</b>	Yes
<b>COVAR: Education</b>	Yes
<b>COVAR: Income</b>	Yes - household
<b>COVAR: Medical Conditions</b>	Other conditions such as: speech problems, Tourette Syndrome, asthma, diabetes, epilepsy, migraine or frequent headaches, head injury, heart problem, blood problem, cystic fibrosis, hearing vision, bone/joint/muscle problems, brain injury, cerebral palsy, muscular dystrophy, Down Syndrome, arthritis, allergies
<b>COVAR: Health Insurance Status</b>	Yes

## Youth Risk Behavior Surveillance System (YRBSS)

<b>Survey Name</b>	<b>Youth Risk Behavior Surveillance System (YRBSS)</b>
<b>Sponsor/How to Access</b>	Centers for Disease Control and Prevention  Data files and documentation: [ <a href="http://www.cdc.gov/healthyyouth/data/yrbs/data.htm">http://www.cdc.gov/healthyyouth/data/yrbs/data.htm</a> ] Data are also available through an online query system at <a href="https://nccd.cdc.gov/youthonline/App/Default.aspx">https://nccd.cdc.gov/youthonline/App/Default.aspx</a>
<b>Description</b>	On-going school-based national, state, tribal, and large urban school district surveys of high school students. This description primarily pertains to the national survey that "monitors six categories of priority health-risk behaviors among youths and young adults: 1) behaviors that contribute to unintentional injuries and violence; 2) sexual behaviors that contribute to human immunodeficiency virus (HIV) infection, other sexually transmitted diseases, and unintended pregnancy; 3) tobacco use; 4) alcohol and other drug use; 5) unhealthy dietary behaviors; and 6) physical inactivity." [ <a href="http://www.cdc.gov/healthyyouth/data/yrbs/overview.htm">http://www.cdc.gov/healthyyouth/data/yrbs/overview.htm</a> ]  Link for survey description: [ <a href="http://www.cdc.gov/healthyyouth/data/yrbs/index.htm">http://www.cdc.gov/healthyyouth/data/yrbs/index.htm</a> ]  Reference for methods: Centers for Disease Control and Prevention. (2013). Methodology of the Youth Risk Behavior Surveillance System 2011. MMWR 2013; v62(1). [ <a href="http://www.cdc.gov/mmwr/pdf/rr/rr6201.pdf">http://www.cdc.gov/mmwr/pdf/rr/rr6201.pdf</a> ]
<b>Years available</b>	2015 data to be released mid August 2016. 2013 Surveys have been conducted biennially since 1991
<b>Population</b>	"The target population comprises all public and private school students in grades 9–12 in the 50 states and the District of Columbia. U.S. territories are not included in the sampling frame." [ <a href="http://www.cdc.gov/mmwr/pdf/rr/rr6201.pdf">http://www.cdc.gov/mmwr/pdf/rr/rr6201.pdf</a> (p. 11)]
<b>Age range</b>	12 years or younger to 18 years or older
<b>Sampling Design and Methods</b>	"The national YRBSS uses a three-stage, cluster sample design to obtain a nationally representative sample of U.S. students in grades 9–12. The national YRBSS sample is designed to produce estimates that are accurate within $\pm 5\%$ at a 95% confidence level. The first-stage sampling frame for each national survey includes primary sampling units (PSUs) consisting of large-sized counties or groups of smaller, adjacent counties. In the second stage of sampling, schools are selected from PSUs. The final stage of sampling consists of randomly selecting one or two entire classes in each chosen school and in each of grades 9–12." [ <a href="http://www.cdc.gov/mmwr/pdf/rr/rr6201.pdf">http://www.cdc.gov/mmwr/pdf/rr/rr6201.pdf</a> (p. 11)]  "Since 1991, the national YRBSS has been conducted 11 times with an average sample size of 14,517 and average school, student, and overall response rates of 78%, 86%, and 71%, respectively." Sample size is defined as "the number of usable questionnaires after data-editing protocols were applied". [ <a href="http://www.cdc.gov/mmwr/pdf/rr/rr6201.pdf">http://www.cdc.gov/mmwr/pdf/rr/rr6201.pdf</a> (p. 12-13 and Table 3)]
<b>Data Collection Method</b>	"YRBSS questionnaires are self-administered, and students record their responses on a computer-scannable questionnaire booklet or answer sheet. For the national survey and for the majority of state, territorial, tribal, and large urban school district surveys, trained data collectors travel to each participating schools to administer the questionnaires to students. [ <a href="http://www.cdc.gov/mmwr/pdf/rr/rr6201.pdf">http://www.cdc.gov/mmwr/pdf/rr/rr6201.pdf</a> (p. 13)]
<b>Geography</b>	National
<b>Periodicity</b>	Conducted biennially
<b>Mental Health Topics Covered</b>	"The 2013 standard YRBSS questionnaire includes five questions that assess demographic information; 23 questions related to unintentional injuries and violence; 10 on tobacco use; 18 on alcohol and other drug use; seven on sexual behaviors; 16 on body weight and dietary behaviors, including height and weight; five on physical activity; and two on other health-related topics (i.e., asthma and sleep)." [ <a href="http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6201a1.htm">http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6201a1.htm</a> ]  Questionnaires: [ <a href="http://www.cdc.gov/healthyyouth/data/yrbs/questionnaires.htm">http://www.cdc.gov/healthyyouth/data/yrbs/questionnaires.htm</a> ]
<b>Specific Mental Health Items (Adult)</b>	--
<b>Specific Mental Health Items (Child)</b>	One set of questions ask about sad feelings and attempted suicide: - During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities? - During the past 12 months, did you ever seriously consider attempting suicide? - During the past 12 months, did you make a plan about how you would attempt suicide? - During the past 12 months, how many times did you actually attempt suicide? - If you attempted suicide during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse?

	[ <a href="ftp://ftp.cdc.gov/pub/data/yrbs/2013/2013_hs_questionnaire.pdf">ftp://ftp.cdc.gov/pub/data/yrbs/2013/2013_hs_questionnaire.pdf</a> (p. 7-8)]
<b>Instrument used for MH Disorder/Diagnosis</b>	None
<b>Instrument used for MH Functional Impairment</b>	None
<b>COVAR: Language</b>	Cannot locate
<b>COVAR: Race/Ethnicity</b>	Yes
<b>COVAR: Gender</b>	Yes
<b>COVAR: Age</b>	Yes
<b>COVAR: Education</b>	Yes - current grade level
<b>COVAR: Income</b>	No
<b>COVAR: Medical Conditions</b>	As may be related to some of the behaviors addressed in the survey, and one specific question about asthma.
<b>COVAR: Health Insurance Status</b>	No

## Monitoring the Future

<b>Survey Name</b>	<b>Monitoring the Future</b>
<b>Sponsor/How to Access</b>	<p>National Institute on Drug Abuse</p> <p>Publicly available Monitoring the Future microdata from the cross-sectional in-school surveys may be obtained through the National Addiction &amp; HIV Data Archive Program (NAHDAP), a part of the Inter-university Consortium for Political and Social Research (ICPSR).</p> <p><u>2014 data for 8th and 10th graders:</u>  <a href="http://www.icpsr.umich.edu/icpsrweb/NAHDAP/series/35/studies/36149?archive=NAHDAP&amp;fundingAgency[0]=United+States+Department+of+Health+and+Human+Services.+National+Institutes+of+Health.+National+Institute+on+Drug+Abuse&amp;q=&amp;paging.rows=25&amp;sortBy=5">[http://www.icpsr.umich.edu/icpsrweb/NAHDAP/series/35/studies/36149?archive=NAHDAP&amp;fundingAgency[0]=United+States+Department+of+Health+and+Human+Services.+National+Institutes+of+Health.+National+Institute+on+Drug+Abuse&amp;q=&amp;paging.rows=25&amp;sortBy=5]</a></p> <p><u>2014 data for 12th graders:</u>  <a href="http://www.icpsr.umich.edu/icpsrweb/NAHDAP/series/35/studies/36263?archive=NAHDAP&amp;fundingAgency[0]=United+States+Department+of+Health+and+Human+Services.+National+Institutes+of+Health.+National+Institute+on+Drug+Abuse&amp;q=&amp;paging.rows=25&amp;sortBy=5">[http://www.icpsr.umich.edu/icpsrweb/NAHDAP/series/35/studies/36263?archive=NAHDAP&amp;fundingAgency[0]=United+States+Department+of+Health+and+Human+Services.+National+Institutes+of+Health.+National+Institute+on+Drug+Abuse&amp;q=&amp;paging.rows=25&amp;sortBy=5]</a></p>
<b>Description</b>	<p>"Ongoing study of the behaviors, attitudes, and values of American secondary school students, college students, and young adults. Each year, a total of approximately 50,000 8th, 10th and 12th grade students are surveyed in public and private schools. In addition, annual follow-up questionnaires are mailed to a sample of each graduating class for a number of years after their initial participation." [http://www.monitoringthefuture.org/]</p> <p>Description and report of 2014 findings: Johnston, L. D., O'Malley, P. M., Miech, R. A., Bachman, J. G., &amp; Schulenberg, J. E. (2014). Monitoring the Future national survey results on drug use: 1975-2013: Overview, key findings on adolescent drug use. Ann Arbor: Institute for Social Research, The University of Michigan, 84pp. [http://www.monitoringthefuture.org/pubs/monographs/mtf-overview2014.pdf]</p>
<b>Years available</b>	<p>Data tables available for 2015 data</p> <p>Data files available for 2014 and back to 1997</p>
<b>Population</b>	8th, 10th, 12th graders in the U.S.
<b>Age range</b>	See above
<b>Sampling Design and Methods</b>	<p>"A multi-stage random sampling procedure (i.e., geographic area, schools within areas, classes within schools) is used for securing the nationwide sample of students each year at each grade level." "Each year's data collection takes place in approximately 420 public and private high schools and middle schools selected to provide an accurate representative cross section of students throughout the coterminous United States at each grade level... Within each school, up to 350 students may be included. In schools with fewer students, the usual procedure is to include all of them in the data collection. In larger schools, a subset of students is selected either by randomly sampling entire classrooms or by some other random method that is judged to be unbiased." [http://www.monitoringthefuture.org/purpose.html#Sampling]</p>
<b>Data Collection Method</b>	<p>"MTF respondents are 8th, 10th, and 12th grade students who participate by completing self-administered, machine-readable questionnaires in their normal classrooms, administered by University personnel. The questionnaires are group administered in classrooms during a normal class period whenever possible; however, circumstances in some schools require the use of larger group administrations." [http://www.monitoringthefuture.org/purpose.html#Sampling]</p>
<b>Geography</b>	National
<b>Periodicity</b>	Annual
<b>Mental Health Topics Covered</b>	<p>Questions about mental or emotional health do not appear to be asked directly, but the following topics are included:</p> <ul style="list-style-type: none"> <li>- Drugs. Drug use and related attitudes and beliefs, drug availability and exposure, surrounding conditions and social meaning of drug use. Views of significant others regarding drugs.</li> <li>- Interpersonal Relationships. Qualitative and quantitative characteristics of cross age and peer relationships, and interpersonal conflict.</li> <li>- Other Personality Variables. Attitudes about self (including self-esteem), locus of control, loneliness, risk-taking, optimism, trust in others, importance placed on various life goals.</li> </ul> <p>[http://www.icpsr.umich.edu/files/NAHDAP/33902-User_guide.pdf (p. 5-7)]</p>
<b>Specific Mental Health Items (Adult)</b>	--

<b>Specific Mental Health Items (Child)</b>	Indirect as above
<b>Instrument used for MH Disorder/Diagnoses</b>	NA
<b>Instrument used for MH Functional Impairment</b>	NA
<b>COVAR: Language</b>	Cannot locate
<b>COVAR: Race/Ethnicity</b>	Yes
<b>COVAR: Gender</b>	Yes
<b>COVAR: Age</b>	Yes
<b>COVAR: Education</b>	Yes, grade level
<b>COVAR: Income</b>	No
<b>COVAR: Medical Conditions</b>	No
<b>COVAR: Health Insurance Status</b>	No



## National Longitudinal Survey of Youth

<b>Survey Name</b>	<b>National Longitudinal Survey of Youth</b>
<b>Sponsor/How to Access</b>	US Bureau of Labor Statistics  <a href="https://www.nlsinfo.org/content/getting-started/accessing-data">[https://www.nlsinfo.org/content/getting-started/accessing-data]</a>
<b>Description</b>	"The National Longitudinal Survey of Youth 1997 (NLSY97) Cohort is a longitudinal project that follows the lives of a sample of American youth born between 1980-84. This ongoing cohort has been surveyed 16 times to date and is now interviewed biennially." <a href="https://www.nlsinfo.org/content/cohorts/nlsy97">[https://www.nlsinfo.org/content/cohorts/nlsy97]</a>
<b>Years available</b>	- For the NLSY 97 Cohort, data are available for Round 1 (1997-98) to Round 16 (2013-14). - Data are also available for the NLSY 1979 and other adult cohorts. <a href="https://www.nlsinfo.org/content/cohorts/nlsy97">[https://www.nlsinfo.org/content/cohorts/nlsy97]</a>
<b>Population</b>	Youth in U.S. as they mature into adulthood. "The sampling universe for the NLSY97 cohort included persons aged 12 - 16 residing in all housing units within the land area of the 50 States and the District of Columbia. The universe explicitly excluded all group quarters structures, (e.g., prisons, college dormitories, military barracks, and nursing homes)." <a href="https://www.nlsinfo.org/sites/nlsinfo.org/files/attachments/121221/TechnicalSamplingReport.pdf">[https://www.nlsinfo.org/sites/nlsinfo.org/files/attachments/121221/TechnicalSamplingReport.pdf</a> (p. 12)]
<b>Age range</b>	12-17 years (Round 1) to 28-33 years (Round 16)
<b>Sampling Design and Methods</b>	The target sample size for the NLSY97 cohort was 10,000 <a href="https://www.nlsinfo.org/sites/nlsinfo.org/files/attachments/121221/TechnicalSamplingReport.pdf">[https://www.nlsinfo.org/sites/nlsinfo.org/files/attachments/121221/TechnicalSamplingReport.pdf</a> (p. 14)]  The final number of respondents included: - a cross-sectional sample of 6,748 respondents designed to be representative of people living in the United States during the initial survey round and born between January 1, 1980, and December 31, 1984. - a supplemental sample of 2,236 respondents designed to oversample Hispanic or Latino and black people living in the United States during the initial survey round and born during the same period as the cross-sectional sample." [From <a href="https://www.nlsinfo.org/content/cohorts/nlsy97/intro-to-the-sample/nlsy97-sample-introduction-0">https://www.nlsinfo.org/content/cohorts/nlsy97/intro-to-the-sample/nlsy97-sample-introduction-0</a> ]
<b>Data Collection Method</b>	One parent of the youth respondent was selected to provide information via a Parent Questionnaire in the first round. In rounds 2 through 5, a parent answered questions via a Household Income Update. After round 5, parents did not answer questions in the NLSY97. [From <a href="https://www.nlsinfo.org/content/cohorts/nlsy97/intro-to-the-sample/interview-methods/page/0/2/#parentdata">https://www.nlsinfo.org/content/cohorts/nlsy97/intro-to-the-sample/interview-methods/page/0/2/#parentdata</a> ]  <u>Round 1:</u> Round 1 procedures which involved many steps not needed in subsequent rounds are available at: <a href="https://www.nlsinfo.org/content/cohorts/nlsy97/intro-to-the-sample/interview-methods">[https://www.nlsinfo.org/content/cohorts/nlsy97/intro-to-the-sample/interview-methods]</a>  <u>Rounds 2 through present:</u> The interviews are conducted each round using a CAPI (computer-assisted personal interview) instrument, administered by an interviewer with a laptop computer. During sensitive portions of the interview, a self-administered ACASI is used. <a href="https://www.nlsinfo.org/content/cohorts/nlsy97/intro-to-the-sample/interview-methods">[https://www.nlsinfo.org/content/cohorts/nlsy97/intro-to-the-sample/interview-methods]</a>
<b>Geography</b>	National
<b>Periodicity</b>	Longitudinal administration is annually between 1997 and 2013-2014, but after that biennially. New cohorts were 18 years apart (1979 and 1997).
<b>Mental Health Topics Covered</b>	Topical guide: <a href="https://www.nlsinfo.org/content/cohorts/nlsy97/topical-guide">[https://www.nlsinfo.org/content/cohorts/nlsy97/topical-guide]</a>
<b>Specific Mental Health Items (Adult)</b>	In subsequent administrations, adult subjects are asked the same questions below as they were in earlier rounds as youth.
<b>Specific Mental Health Items (Child)</b>	The round 1 parent interview provided information about the youth's general health and any past or present medical condition(s) that limited the youth's ability to attend school regularly, to do regular school work, or to work at a job for pay. The survey specifically asked whether the youth suffered from any of the following conditions, including: emotional or mental conditions. For each health condition, the responding parent was asked how old the youth was when the condition was first noticed and whether the youth was currently limited by the condition. Data on the youth's health insurance coverage were also collected from the responding parent. <a href="https://www.nlsinfo.org/content/cohorts/nlsy97-children/topical-guide/health">[https://www.nlsinfo.org/content/cohorts/nlsy97-children/topical-guide/health]</a> .  <u>Mental Health Measures.</u> "Rounds 4, 6, 8, 10-12 and 14 (and in round 13 in the Health Age 29 section) included a

	question series concerning how often the respondent felt certain ways during the month before the interview date. These questions are a five-item short version of the Mental Health Inventory (MHI-5), developed by Veit and Ware. Respondents reported the frequency of being nervous, feeling calm and peaceful, feeling downhearted and blue, being happy, and feeling so down in the dumps that nothing could cheer them up. Respondents used a four-point scale to rate the frequency of their feelings. This series is located in the self-administered section of the questionnaire in questions YSAQ-282B through YSAQ-282G. In round 13, respondents answered questions about the number of times they had been treated by a mental health professional and the number of times they had missed activities (such as work or school) because of an emotional, mental or psychiatric problem." [https://www.nlsinfo.org/content/cohorts/nlsy97/topical-guide/health]
<b>Instrument used for MH Disorder/Diagnoses</b>	Five-item short version of the Mental Health Inventory (MHI-5), developed by Veit and Ware.
<b>Instrument used for MH Functional Impairment</b>	NA
<b>COVAR: Language</b>	Cannot locate
<b>COVAR: Race/Ethnicity</b>	Yes
<b>COVAR: Gender</b>	Yes
<b>COVAR: Age</b>	Yes
<b>COVAR: Education</b>	Yes
<b>COVAR: Income</b>	Yes
<b>COVAR: Medical Conditions</b>	Yes - general health and long standing problems
<b>COVAR: Health Insurance Status</b>	Yes

#### References:

Veit, C., Ware, J. (1983). The structure of psychological distress and well-being in general populations. *Journal of Consulting and Clinical Psychology*, 51, 730-732.

## II. ADMINISTRATIVE DATABASES

### Medicaid

<b>Data Source Name</b>	<b>Medicaid Analytic eXtract (MAX)</b>
<b>Sponsor/How to Access</b>	Centers for Medicare & Medicaid Services "MAX data are derived from MSIS (raw database of all Medicaid claims), and because it is necessary to allow for the delay between service delivery dates and claims adjudication dates, the availability of MAX data for a particular time period lags behind that of the MSIS data." [ <a href="https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidDataSourcesGenInfo/index.html?redirect=/medicaiddatasourcesgeninfo/04_mdmancrenrlrep.asp">https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidDataSourcesGenInfo/index.html?redirect=/medicaiddatasourcesgeninfo/04_mdmancrenrlrep.asp</a> ]
<b>Description</b>	"A set of person-level data files on Medicaid eligibility, service utilization, and payments. The MAX data are created to support research and policy analysis. The MAX data are extracted from the Medicaid Statistical Information System (MSIS). The MAX development process combines MSIS initial claims, interim claims, voids, and adjustments for a given service into final action events. Unlike fiscal-based MSIS quarterly files, MAX data are organized into annual calendar year files." [http://www.medicaid.gov/medicaid-chip-program-information/by-topics/data-and-systems/max/max-general-information.html]
<b>Years available</b>	MAX 2011 data are now available for all states and DC except Colorado
<b>Population</b>	All eligible -varies with states
<b>Age range</b>	All eligible
<b>Sampling Design and Methods</b>	NA/Encounter data
<b>Data Collection Method</b>	States send invoices electronically to CMS
<b>Geography</b>	45 States for most recent data available in 2011
<b>Periodicity</b>	Every encounter billed, but MAX files are three years backlogged.
<b>Mental Health Topics Covered</b>	All psychiatric diagnoses; psychiatric service utilization data; and payment data in five types of records: PS-Person summary record layout; IP - Inpatient record layout; LT - Long term care record layout; OT - Other services record layout; RX - Drug record layout
<b>Specific Mental Health Items (Adult)</b>	<p>Information in this section was pulled from various files of a zip folder called MAX Data 2011 that was found under the Downloads Section of this page: [<a href="https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidDataSourcesGenInfo/MAXGeneralInformation.html">https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidDataSourcesGenInfo/MAXGeneralInformation.html</a>]</p> <p>All psychiatric diagnoses; all mental health services. Fields in each of the five record types include:</p> <p><u>1. PS - Person summary record layout</u> - demographics, total services received, total payments, includes: Region, MSIS ID; State; MAX year date; SSN; State Case Num; Medicare claim num -only in these data if dual eligible for Medicare and Medicaid; DOB; Age; Sex; Race; Ethnicity; Residence County and Zip code; Eligibility code; Months of eligibility; Private insurance months; TANF group (temporary assistance for needy families); CHIP code group (child health insurance program); Inpatient utilization summary; Institutional long term care summary (LTC mental hospital for aged covered day count and LTC inpatient psychiatric facility (age &lt; 21) covered day count)</p> <p>[NOTE: Medicaid excludes coverage of long term psychiatric care for people aged 22 - 64, "the Medicaid IMD exclusion", but Medicare covers this service called Institutions for Mental Diseases (IMD).]</p> <p>Claims Payment Summary Group; Total Medicaid record count and payment amount; Total Medicaid fee for service claim count and payment amount; Total Medicaid fee pre-paid plan record count and payment amount; Total Medicaid fee encounter record count; Total Medicaid payment amount and charge amount; Total third party payment amount; Program Type Summary Group; Other service records and payment; Prescription drug records; Type of Service Group MAX TOS; Medicaid community-based long term care payment summary group; Medicaid home and community-based long term care payment summary.</p> <p><u>2. IP - Inpatient record layout</u> - Contains individual inpatient hospital encounters with basic demographics, eligibility, and payment data as above in the personal summary record, but for every encounter contains admission date,</p>

	<p>service beginning and ending date, and principal diagnoses and other diagnoses (ICD 9 and 10 codes, up to 8); procedure codes (HCPCS-Health Care Common Procedure Coding, up to 6), Medicaid payment amount, Medicaid covered days.</p> <p><u>3. LT - Long term care record layout</u> - Contains individual long term care encounters with basic demographics, eligibility, and payment data as above in the personal summary record, but for every encounter contains admission date, service beginning and ending date, and principal diagnoses and other diagnoses (ICD 9 and 10 codes, up to 5); number of days in care, Medicaid payment amount, Medicaid covered days.</p> <p><u>4. OT - Other services record layout</u> - Contains individual service encounters with basic demographics, eligibility, and payment data as above in the personal summary record, but for every encounter contains type of service (Including MH and related: other practitioners, outpatient hospital, clinic, capitated payments to HMO, prepaid health plans, primary care case management, transportation services, targeted case management, rehabilitation services), provider code, principal diagnoses and other diagnoses (ICD 9 and 10 codes, up to 8); standard procedure codes (HCPCS-Health Care Common Procedure Coding, up to 6), Medicaid payment amount.</p> <p><u>5. RX - Drug record layout</u></p>
<b>Specific Mental Health Items (Child)</b>	Same as adult
<b>Instrument used for MH Disorder/Diagnosis</b>	NA
<b>Instrument used for MH Functional Impairment</b>	NA
<b>COVAR: Language</b>	Code indicating the language SSA uses for beneficiary notices. Codes include languages in Chinese, German, English, French, Greek, Italian, Japanese, Norwegian, Polish, Russians, Spanish, Swedish, Serbo-Croatian
<b>COVAR: Race/Ethnicity</b>	Yes
<b>COVAR: Gender</b>	Yes
<b>COVAR: Age</b>	0 - 85 years and older
<b>COVAR: Education</b>	No
<b>COVAR: Income</b>	No
<b>COVAR: Medical Conditions</b>	Yes, all diagnoses
<b>COVAR: Health Insurance Status</b>	Yes

# Medicare

<b>Data Source Name</b>	<b>Medicare</b>
<b>Sponsor/How to Access</b>	<p>Centers for Medicare and Medicaid Services</p> <p>About Data Requests: [<a href="http://www.resdac.org/cms-data/request/cms-data-request-center">http://www.resdac.org/cms-data/request/cms-data-request-center</a>]</p> <p>Data are available in 3 file types [<a href="http://www.resdac.org/resconnect/articles/148">http://www.resdac.org/resconnect/articles/148</a>]:</p> <p><u>"Research Identifiable files (RIF)"</u> contain beneficiary level protected health information (PHI). Requests for RIF data require a Data Use Agreement (DUA) and are reviewed by CMS's Privacy Board to ensure that the beneficiary's privacy is protected and the need for identifiable data is justified. The Researchers page of the CMS website provides the criteria for the release of these data.</p> <p><u>Limited Data Set (LDS)</u> files contain beneficiary level protected health information; however, selected variables within the files are encrypted, blanked, or ranged. LDS requests require a DUA, but do not go through a Privacy Board review. The DUA-Limited Data Sets (LDS) page on the CMS website describes the ways in which the LDS files may be used.</p> <p><u>Public Use Files (PUFs), also called Non-Identifiable Data Files</u>, have been edited and stripped of all information that could be used to identify individuals. In general the PUFs contain aggregate level information on Medicare beneficiary or provider utilization.</p>
<b>Description</b>	<p>"The Medicare Claims Files contain information collected by Medicare to pay for health care services provided to a Medicare beneficiary. Data are available for each institutional and non-institutional claim type. [<a href="http://www.resdac.org/cms-data/file-family/Medicare-Claims">http://www.resdac.org/cms-data/file-family/Medicare-Claims</a>]</p>
<b>Years available</b>	Varies depending on type of data file (RIF, LDS, PUF). As an example, many RIF files from 1999-2014 are to be released December 2016 [ <a href="http://www.resdac.org/cms-data/file-availability">http://www.resdac.org/cms-data/file-availability</a> ]
<b>Population</b>	All Medicare eligible. Primarily adults aged 65 and older, plus adults with disabilities
<b>Age range</b>	Adults 65 years and older, and younger disabled adults
<b>Sampling Design and Methods</b>	NA
<b>Data Collection Method</b>	Claims submitted to CMS by providers
<b>Geography</b>	US
<b>Periodicity</b>	On-going
<b>Mental Health Topics Covered</b>	<p><u>"The Medicare Claims Files"</u> contain information collected by Medicare to pay for health care services provided to a Medicare beneficiary. Data are available for each institutional and non-institutional claim type, with each record being a claim. Some of the information contained within these utilization files includes:</p> <ul style="list-style-type: none"> <li>- procedure and diagnosis information</li> <li>- dates of service</li> <li>- revenue center detail</li> <li>- payment and charge amounts</li> <li>- beneficiary demographic information</li> <li>- limited professional provider and facility data.</li> </ul> <p>Types of claims files: Skilled Nursing Facility, Outpatient, Inpatient, Hospice, Home Health Agency, Durable Medical Equipment, Carrier RIF. " [<a href="http://www.resdac.org/cms-data/file-family/Medicare-Claims">http://www.resdac.org/cms-data/file-family/Medicare-Claims</a>]</p> <p><u>"The Medicare Provider and Analysis Review (MedPAR) Files"</u> contain inpatient hospital and/or skilled nursing facility (SNF) final action stay records for all Medicare beneficiaries. MedPAR files contain the following information:</p> <ul style="list-style-type: none"> <li>- procedures, diagnoses, and DRGs</li> <li>- length of stay</li> <li>- beneficiary and Medicare payment amounts</li> <li>- summarized revenue center charge amounts"</li> </ul> <p>[From <a href="http://www.resdac.org/cms-data/file-family/MedPAR">http://www.resdac.org/cms-data/file-family/MedPAR</a>]</p> <p><u>"The Master Beneficiary Summary File includes several segments."</u></p> <ul style="list-style-type: none"> <li>- <u>Base (A/B/D) segment</u>: This segment includes beneficiary enrollment information, such as the beneficiary unique identifier, state and county codes, zipcode, date of birth, date of death, sex, race, age, monthly entitlement</li> </ul>

	<p>indicators (A/B/D), reasons for entitlement, and monthly managed care indicators (yes/no). As of 2006, it also includes variables specific to enrollment in Part D. Availability: CY 1999 -2013 Next Release Date: December, 2015.</p> <p>- <u>Chronic Conditions segment</u>: This segment includes 27 chronic condition data warehouse flags called CCW Flags. This includes 6 new chronic conditions in addition to the 21 chronic conditions previously defined. For more information about the CCW Flags, please see the CCW User Guide*. (March 2015 Users Guide includes depression). Availability: CY 1999 -2013 Next Release Date: December, 2015.</p> <p>- <u>Other Chronic or Potentially Disabling Conditions segment</u>: The Other Chronic or Potentially Disabling Conditions segment of the MBSF contains 9 mental health and tobacco use conditions, 15 developmental disorder and disability-related conditions, and 9 other chronic physical and behavioral health conditions which were developed by CMS specifically to enhance research of the Medicare-Medicaid dually enrolled population. (March 2015 Users Guide includes anxiety disorders, autism spectrum disorder, bipolar disorder, conduct disorders and hyperkinetic syndrome, depressive disorders, PTSD, schizophrenia, schizophrenia and other psychotic disorder, traumatic brain injury and nonpsychotic mental disorders due to brain damage.) Availability: CY 2000 -2013 Next Release Date: December, 2015.</p> <p>- <u>Cost &amp; Utilization segment</u>: This segment includes summarized information about the service utilization and Medicare payment amounts by file type. Availability: CY 1999 -2013 Next Release Date: December, 2015."</p> <p>[<a href="http://www.resdac.org/cms-data/files/mbsf">http://www.resdac.org/cms-data/files/mbsf</a>]</p>
<b>Specific Mental Health Items (Adult)</b>	As above
<b>Specific Mental Health Items (Child)</b>	As above
<b>Instrument used for MH Disorder/Diagnosis</b>	NA
<b>Instrument used for MH Functional Impairment</b>	NA
<b>COVAR: Language</b>	No
<b>COVAR: Race/Ethnicity</b>	Yes
<b>COVAR: Gender</b>	Yes
<b>COVAR: Age</b>	Yes
<b>COVAR: Education</b>	No
<b>COVAR: Income</b>	No
<b>COVAR: Medical Conditions</b>	Yes
<b>COVAR: Health Insurance Status</b>	Yes

## U.S. Department of Veterans Affairs

<b>Data Source Name</b>	<b>Multiple databases: PTF, OPC, NPCD, NMHDS</b>
<b>Sponsor/How to Access</b>	<p>U.S. Department of Veterans Affairs</p> <p>Access to any of the administrative databases, or even detailed information about the databases, appears to be only allowed through collaboration with VA researchers. The databases are not described in detail on the VA or VIREC web pages. Summary information can be obtained about the main databases on the federal data.gov website (not VA specific) and through published articles.</p>
<b>Description</b>	<p>According to <i>The Researchers Guide to VA Data</i> at: <a href="http://www.virec.research.va.gov/">http://www.virec.research.va.gov/</a>, "The Department of Veterans Affairs (VA) maintains patient health information and other data, which can be used by VA researchers in IRB approved studies. The VA Information Resource Center (VIREC) provides guidance to VA researchers on VA data sources, tools, and topics", through their Intranet site. (NOTE: To find out about the VA datasets, we were informed that we would have to establish a collaboration with a VA researcher.)</p> <p>However, based on a 2004 article that reviewed the VA claims datasets [Maynard C, Chapko C: Data resources in the Department of Veterans Affairs. <i>Diabetes Care</i> 2004; 27 (suppl 2): B22-B26.], two main datasets appear to be used for epidemiology analyses: the Patient Treatment File (PTF) and the Outpatient Care File. Others were then located on the federal data.gov website as described below.</p> <ol style="list-style-type: none"> <li>1. <u><b>Patient Treatment File (PTF)</b></u> (Inpatient) Updated information: Aug 21, 2015          "This database is part of the National Medical Information System (NMIS). The Patient Treatment File (PTF) contains a record for each inpatient care episode provided under VA auspices in VA and non-VA facilities nationwide. Each episode contains data on admission, diagnosis, procedures, surgical episodes, and disposition (discharge) information and Diagnostic Related Group (DRG). Each transfer is recorded to allocate days of care properly to the service(s) responsible for that care. Recurring and special purpose reports are used for studies on patient movement trends, diagnostic frequency, workload, budget preparation, Diagnostic Related Group (DRG) assignment and accreditation requirements. Reports are available for online access via Roger's Software Development's (RSD) Online Report Viewing. Several large data files are installed on-line at the Austin Information Technology Center for remote access. Selected data can be downloaded to perform end user processing, including report generation. Information is received from a variety of modules in Veterans Health Information Systems and Technology Architecture. This batch system is written in Common Business Oriented Language and ALC. Processing is done on a daily, weekly, and monthly basis." [<a href="https://catalog.data.gov/dataset/patient-treatment-file-ptf">https://catalog.data.gov/dataset/patient-treatment-file-ptf</a>]</li> <li>2. <u><b>Outpatient Care File (OPC)</b></u> - contains information on all patients seen in VA outpatient clinics, emergency departments, and outpatient visits in hospitals. Data elements include: demographic, clinic visit information, diagnoses, procedure code. These files contain over 30 million records per year. (Maynard et al, 2004; and 2009-2010 VIREC Database and Methods Cyber Seminar Series at: [<a href="http://www.hsrd.research.va.gov/for_researchers/cyber_seminars/archives/vdm-060109.pdf">http://www.hsrd.research.va.gov/for_researchers/cyber_seminars/archives/vdm-060109.pdf</a>])</li> <li>3. <u><b>The National Patient Care Database (NPCD)</b></u>, Updated information: Aug 21, 2015 - located at the Austin Information Technology Center, is part of the National Medical Information Systems (NMIS). The NPCD collects integrated patient care data from all Veterans Health Information Systems and Technology Architecture (Vista) IT systems. (<i>ASIDE NOTE from Maynard et al 2004, VISTA data are extensive local outpatient data that have more detail than the PTF and OPC files. For example there is data on other clinical visits such as dentistry, dietetics, laboratory, mental health, nursing, pharmacy, radiology, oncology, social work, medicine, surgery.</i>) Data recorded in the Vista Patient Care Encounter (PCE) package, which captures clinical data resulting from ambulatory care patient encounters is transmitted to the NPCD using the Ambulatory Care Reporting (ACR) Module of the Vista Patient Information Management System (PIMS) package. The Ambulatory Care Reporting Module provides necessary information on patient treatment, what services were rendered to patients, who provided the services, and whether services reported were synchronized with the VA medical center database. Directive 2006-026 (05/05/2006) required the inclusion to patient care data capture requirements the capture of inpatient encounters for patients seen in outpatient clinics and inpatient billable professional services. Additionally, NPCD includes Vista Spinal Cord Dysfunction (SCD) package and Primary Care Management Module (PCMM) data. The SCD central registry in NPCD is used to provide VA-wide review of patient demographics, clinical aspects of injury and disease, and resource utilization involved in providing care to patients. As of October 2010, data for the Spinal Cord Dysfunction is being maintained in the Spinal Cord Injury and Disorders Outcomes (SCIDO) database; current SCD data in NPCD is residual data only. The data load and extraction process for SCD data in NPCD will be discontinued in FY12. The PCMM data in NPCD includes primary care patient to provider assignments and provider utilization data. The NPCD is used by Veterans Health Administration (VHA) program offices for a wide variety of tasks to include research and budget allocation to medical centers. [<a href="https://catalog.data.gov/dataset/national-patient-care-">https://catalog.data.gov/dataset/national-patient-care-</a></li> </ol>

	<p>database-npcd]</p> <p>4. <u>National Mental Health Database System (NMHDS)</u>  The NMHDS stores data about Veterans who are treated for PTSD in specialized outpatient PTSD programs located in 168 locations across the country. PTSD patients new to these outpatient clinics are administered a 50 item interview by a clinician. Answers are recorded onto electronic forms and transmitted by secure transfer to the Northeast Program Evaluation Center (NEPEC). NEPEC uses the information to provide programs with feedback and to describe the demographic and clinical characteristics of PTSD patients. Due to the sensitive nature of the data, access is limited to a specific end user. [<a href="https://catalog.data.gov/dataset/national-mental-health-database-system-nmhds">https://catalog.data.gov/dataset/national-mental-health-database-system-nmhds</a>]</p>
<b>Years available</b>	Varies with databases
<b>Population</b>	All Veterans in US
<b>Age range</b>	Adults
<b>Sampling Design and Methods</b>	Varies with databases
<b>Data Collection Method</b>	Varies with databases
<b>Geography</b>	Varies with databases
<b>Periodicity</b>	Varies with databases
<b>Mental Health Topics Covered</b>	<p><u>Notes From Mark Olfson:</u>  "The Department of Veterans Affairs maintains a large number of databases on the nearly 10 million veterans who use Veterans Health Administration services. An important limitation of the national hospital and outpatient data files is that they do not include pharmacy data. However, the VA maintains national registries of veterans with various conditions including depression, dementia, and psychosis that include administrative data covering pharmacy and medical services of veterans with the index conditions who receive services from VA outpatient clinics. Strengths of these databases include their relatively large size and coverage of full range of health services paid for by the Department of Veterans Affairs. Limitations include absence of services provided to veterans outside of the VA system, demographic and clinical differences between the veteran and general populations, and informational constraints common to all claims databases including the absence of information on untreated individuals with mental disorders."</p>
<b>Specific Mental Health Items (Adult)</b>	Varies with databases
<b>Specific Mental Health Items (Child)</b>	NA
<b>Instrument used for MH Disorder/Diagnosis</b>	Varies with databases
<b>Instrument used for MH Functional Impairment</b>	Varies with databases
<b>COVAR: Language</b>	Varies with databases
<b>COVAR: Race/Ethnicity</b>	Varies with databases
<b>COVAR: Gender</b>	Varies with databases
<b>COVAR: Age</b>	Varies with databases
<b>COVAR: Education</b>	Varies with databases
<b>COVAR: Income</b>	Varies with databases
<b>COVAR: Medical Conditions</b>	Varies with databases
<b>COVAR: Health Insurance Status</b>	Varies with databases



### III. COMMERCIAL DATABASES

#### IMS PharMetrics

<b>Survey Name</b>	<b>IMS PharMetrics Plus Database</b>
<b>Sponsor/How to Access</b>	IMS Health [ <a href="http://www.imshealth.com/portal/site/imshealth">http://www.imshealth.com/portal/site/imshealth</a> ] [ <a href="http://www.bridgetodata.org/node/824">http://www.bridgetodata.org/node/824</a> ]
<b>Description</b>	Claims data for Inpatient and Outpatient, Emergency Room, Other (Inpatient and Outpatient Hospital, Pharmacy, Office, ER/ED, Home Health, Pathology, Radiology, Clinic)  "IMS PharMetrics Plus Database includes data on patient's prescriptions, in-patient hospital, and outpatient medical claims. The database consists primarily of commercial PPO plans and includes approximately 150 Million patients with a medical benefit, and a subset of 95 Million patients with both medical and pharmacy benefits." [ <a href="http://www.bridgetodata.org/node/824">http://www.bridgetodata.org/node/824</a> ]
<b>Years available</b>	Data are available from 2006 to the present time
<b>Population</b>	All US
<b>Age range</b>	All age ranges, but limited for 65 years and older
<b>Sampling Design and Methods</b>	NA
<b>Data Collection Method</b>	Medical Insurance Claims
<b>Geography</b>	U.S. Census Regions - East, Southeast, Midwest, West. Now available at the state and the 3-digit ZIP code level.
<b>Periodicity</b>	Ongoing
<b>Mental Health Topics Covered</b>	"Data include: - Diagnoses (ICD-9-CM); - Procedures (CPT, HCPCS, ICD-9-CM); - Diagnostic & lab tests ordered.  Also included are data on: - Enrollment, Adverse events, Hospitalizations, Office visits, ER visits, Home care, Cost & Date of treatment, On/off formulary status; Co-pays / Deductibles, Complete medical and pharmacy costs." [ <a href="http://www.bridgetodata.org/node/824">http://www.bridgetodata.org/node/824</a> ]
<b>Specific Mental Health Items (Adult)</b>	Psychiatric diagnoses
<b>Specific Mental Health Items (Child)</b>	Psychiatric diagnoses
<b>Instrument used for MH Disorder/Diagnosis</b>	NA
<b>Instrument used for MH Functional Impairment</b>	Na
<b>COVAR: Language</b>	No
<b>COVAR: Race/Ethnicity</b>	Yes
<b>COVAR: Gender</b>	Yes
<b>COVAR: Age</b>	Yes
<b>COVAR: Education</b>	No
<b>COVAR: Income</b>	No
<b>COVAR: Medical Conditions</b>	Yes
<b>COVAR: Health Insurance Status</b>	Yes

## Health Care Cost Institute (HCCI)

<b>Survey Name</b>	<b>HCCI Database</b>
<b>Sponsor/How to Access</b>	Health Care Cost Institute [ <a href="http://www.healthcostinstitute.org/">http://www.healthcostinstitute.org/</a> ]
<b>Description</b>	A database of de-identified healthcare claims data voluntarily provided by three of the nation's largest insurers (Aetna, Human, United Healthcare, and Kaiser coming on).  <i>2014 Health Care Cost and Utilization Report, Analytic Methodology, V4.0</i> , October 29, 2015 describes in detail the methods used to transform raw claims into descriptive statistics for the 2014 report. Available at: <a href="http://www.healthcostinstitute.org/files/HCCI%202014%20Methodology%20v4.0_0.pdf">http://www.healthcostinstitute.org/files/HCCI%202014%20Methodology%20v4.0_0.pdf</a>
<b>Years available</b>	2007-2014
<b>Population</b>	"As of October 2015, HCCI held commercial claims representing the health care activity of more than 50 million individuals per year for the years 2007 through 2014. The claims used in the 2014 report (approximately 4.5 billion claim lines) represent the health care activity of over 25 percent of all individuals younger than 65 and having ESI." [ <a href="http://www.healthcostinstitute.org/methodology">http://www.healthcostinstitute.org/methodology</a> ]
<b>Age range</b>	0 - 64 years
<b>Sampling Design and Methods</b>	Analytic methods: [ <a href="http://www.healthcostinstitute.org/files/HCCI%202014%20Methodology%20v4.0_0.pdf">http://www.healthcostinstitute.org/files/HCCI%202014%20Methodology%20v4.0_0.pdf</a> ]
<b>Data Collection Method</b>	Data are shared with HCCI, in compliance with privacy laws, both for reports and for making data more available to researchers to study what influences use and costs of health care services in the United States.
<b>Geography</b>	Four US census regions (West, Northeast, Midwest, and South) in nine US census divisions (New England, Mid-Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain, Pacific)
<b>Periodicity</b>	Ongoing
<b>Mental Health Topics Covered</b>	" <u>Inpatient claims</u> : Includes Acute, Skilled Nursing and Hospice claims - Enrollment information, age, gender, year of birth, state, geography, plan type and coverage (including mental health flag), service dates, length of stay, diagnoses, procedure codes, revenue, place of service, provider code <u>Outpatient claims</u> : Includes regular visits, ER, and outpatient surgery - service dates, charge amounts, diagnoses, procedure codes, revenue, place of service, provider category code that indicates specialty <u>Professional procedure claims</u> - includes psychiatry <u>Prescription drugs claims</u> " [ <a href="http://www.healthcostinstitute.org/files/HCCI%202014%20Methodology%20v4.0_0.pdf">http://www.healthcostinstitute.org/files/HCCI%202014%20Methodology%20v4.0_0.pdf</a> (p. 7 - 12)]  "Chronic Conditions Categorization: <u>Mental health/substance use</u> - HCCI identified individuals with MHSU conditions on the basis of CCS codes, after consultation with subject matter experts. In 2013, HCCI added an MHSU flag to the insured data. For each year between 2007 and 2013, HCCI reflagged insureds as MHSU. If there was a diagnosis for (1) two professional services during the year, (2) one or more ER visits, or (3) one or more inpatient admissions fell into a CCS MHSU category, the insured was flagged as having an MHSU condition in that year. An MHSU flag for a particular insured could change from year to year." [ <a href="http://www.healthcostinstitute.org/files/HCCI%202014%20Methodology%20v4.0_0.pdf">http://www.healthcostinstitute.org/files/HCCI%202014%20Methodology%20v4.0_0.pdf</a> ; p. 13]
<b>Specific Mental Health Items (Adult)</b>	Psychiatric diagnoses and procedures. All mental health or substance use service codes (CPT/HCPCS/DRG Codes): [ <a href="http://www.healthcostinstitute.org/files/HCCI%202014%20Methodology%20v4.0_0.pdf">http://www.healthcostinstitute.org/files/HCCI%202014%20Methodology%20v4.0_0.pdf</a> ]Appendix Table 4.7)]
<b>Specific Mental Health Items (Child)</b>	Same as adult for child psychiatric diagnoses and procedures
<b>Instrument used for MH Disorder/Diagnosis</b>	NA
<b>Instrument used for MH Functional Impairment</b>	NA
<b>COVAR: Language</b>	No
<b>COVAR: Race/Ethnicity</b>	Yes
<b>COVAR: Gender</b>	Yes
<b>COVAR: Age</b>	Yes
<b>COVAR: Education</b>	No

<b>COVAR: Income</b>	No
<b>COVAR: Medical Conditions</b>	Yes
<b>COVAR: Health Insurance Status</b>	Yes

## Truven Health Analytics

<b>Survey Name</b>	<b>MarketScan Commercial Claims and Encounters Database</b> <b>MarketScan Medicare Supplemental Database</b> <b>MarketScan Medicaid Multi-State Database</b>
<b>Sponsor/How to Access</b>	Truven Health Analytics [ <a href="http://truvenhealth.com/your-healthcare-focus/life-sciences/data-databases-and-online-tools">http://truvenhealth.com/your-healthcare-focus/life-sciences/data-databases-and-online-tools</a> ]
<b>Description</b>	<p><u>Main source of information:</u> Truven Health Analytics White Paper: Health Research Data for the Real World: The MarketScan Databases by Jody Butler Quint, January 2015. (Pdf sent to author):</p> <p>"The Truven Health MarketScan® Research Databases are a family of databases that fully integrate individual-level health (medical, drug, and dental), productivity (workplace absence, short- and long-term disability, and workers' compensation), laboratory results, health risk assessment, and hospital discharge and death data into de-identified datasets. The data are submitted by large employers, managed care organizations, hospitals, and Medicare and Medicaid programs." (Executive Summary, p. 3)</p> <p>There are 14 databases, but the main ones appear to be:</p> <ol style="list-style-type: none"> <li>1. <u>"The MarketScan Commercial Claims and Encounters Database</u> (Commercial Database) consists of medical and drug data from employers and health plans. It contains data for several million individuals annually, encompassing employees, their spouses, and dependents who are covered by employer-sponsored private health insurance. Healthcare for these individuals is provided under a variety of fee-for-service (FFS), fully capitated, and partially capitated health plans. These include PPOs and exclusive provider organizations (EPOs), POS plans, indemnity plans, HMOs, and consumer-directed health plans. Medical claims are linked to outpatient prescription drug claims and person-level enrollment information." (White Paper, p. 7)</li> <li>2. <u>MarketScan Medicare Supplemental Database</u>- same types of claims (inpatient, outpatient, drug) for employer-paid supplemental health insurance for retirees. (White Paper, p. 8)</li> <li>3. <u>MarketScan Medicaid Multi-State Database</u> - contains the medical, surgical, and prescription drug experience of more than 36.6 million Medicaid enrollees from multiple states. It includes records of inpatient services, inpatient admissions, outpatient services, and prescription drug claims, as well as information about long-term care and other medical care. Data on eligibility (by month), service, and provider type are also included." (White Paper, p. 9)</li> </ol> <p>Limitations of the Data (per White Paper) - "The MarketScan claims databases are based on a large convenience sample. Because the sample is not random, it may contain biases or fail to generalize well to other populations. However, these data can complement other datasets or be used as benchmarks against them. The data mostly come from large employers; medium and small firms are underrepresented." (White Paper, p. 4)</p>
<b>Years available</b>	"Since 1995. The MarketScan Commercial Database and Medicare Supplemental Database are updated on a quarterly and annual basis. Quarterly releases include Early View and Standard Updates. The Annual File is a calendar-year release. The Multi-State Medicaid Database is released semi-annually. The Hospital Drug Database is updated quarterly." (White Paper, p. 15)
<b>Population</b>	All US individuals covered by the various participating insurers.
<b>Age range</b>	Appears to cover all ages
<b>Sampling Design and Methods</b>	NA
<b>Data Collection Method</b>	<p>"Truven Health constructs the MarketScan claims databases by collecting data from employers, health plans, and state Medicaid agencies. Data comprise service-level claims for inpatient and outpatient services and outpatient prescription drugs. All claims have been paid and adjudicated. They standardize financial, clinical, and demographic fields and then add contributor-specific fields. Drug detail (e.g., therapeutic class, therapeutic group, manufacturer's average wholesale price, and a generic product identifier) and clinical detail (e.g., disease episode grouper) are also added."</p> <p>"A unique enrollee identifier is assigned to each individual in a MarketScan claims database. This identifier is created by encrypting information provided by data contributors. The information includes the employee identifier, the relationship of the enrollee to the contract holder, and the enrollee's gender and date of birth. We then combine the standardized fields of the individual databases and create links between years of data and across all data types. The data are collected for the MarketScan annual databases when nearly 100 percent of claims have</p>

	been paid; this eliminates the need for completion factors and improves the reliability and accuracy of the data." (White Paper, p. 5)
<b>Geography</b>	Appears to cover all states and regions.
<b>Periodicity</b>	Ongoing
<b>Mental Health Topics Covered</b>	All 3 data bases have these elements: age, gender, employment status, geographic location, industry, admission, diagnoses, procedure codes, length of stay, place of service, quantity of services, financial data on payments, drug codes.
<b>Specific Mental Health Items (Adult)</b>	Diagnoses include all psychiatric. Medicaid multi-state data base also has variables on chronic conditions including schizophrenia.
<b>Specific Mental Health Items (Child)</b>	As above for adults
<b>Instrument used for MH Disorder/Diagnosis</b>	NA
<b>Instrument used for MH Functional Impairment</b>	NA
<b>COVAR: Language</b>	No
<b>COVAR: Race/Ethnicity</b>	Yes
<b>COVAR: Gender</b>	Yes
<b>COVAR: Age</b>	Yes
<b>COVAR: Education</b>	No
<b>COVAR: Income</b>	Yes
<b>COVAR: Medical Conditions</b>	Yes
<b>COVAR: Health Insurance Status</b>	Yes

## IV. PUBLIC PRACTICE-BASED SURVEYS

### National Ambulatory Medical Care Survey and National Hospital Ambulatory Medical Care Survey

<b>Survey Name</b>	<b>National Ambulatory Medical Care Survey (NAMCS) and The National Hospital Ambulatory Medical Care Survey (NHAMCS)</b>
<b>Sponsor/How to Access</b>	Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), within NCHS' Division of Health Care Statistics  <u>NAMCS:</u> - Downloadable datafiles: [ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Datasets/NAMCS/] - Documentation: [ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NAMCS/] <u>NHAMCS</u> - Downloadable datafiles: [ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Datasets/NHAMCS/] - Documentation: [ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NHAMCS/]  <u>Both surveys:</u> - Documentation updates: [http://www.cdc.gov/nchs/ahcd/documentation_updates.htm] - NAMCS and NHAMCS restricted data available at the NCHS Research Data Center: [http://www.cdc.gov/nchs/data/ahcd/Availability_of_NAMCS_and_NHAMCS_Restricted_Data.pdf] - Questionnaire and Methodology (both surveys): [http://www.cdc.gov/nchs/ahcd/ahcd_questionnaires.htm#public_use]
<b>Description</b>	<p>The National Ambulatory Medical Care Survey (NAMCS) is a national survey designed to meet the need for objective, reliable information about the provision and use of <i>ambulatory medical care services</i> in the United States. Findings are based on a sample of visits to non-federal employed office-based physicians who are primarily engaged in direct patient care.</p> <p>The National Hospital Ambulatory Medical Care Survey (NHAMCS) is designed to collect data on the utilization and provision of <i>ambulatory care services in hospital emergency and outpatient departments</i>. Findings are based on a national sample of visits to the emergency departments and outpatient departments of noninstitutional general and short-stay hospitals.</p>
<b>Years available</b>	[http://www.cdc.gov/nchs/ahcd/ for current data availability]
<b>Population</b>	All
<b>Age range</b>	All
<b>Sampling Design and Methods</b>	<p><u>NAMCS</u> - "The basic sampling unit for is the physician-patient encounter or visit. The NAMCS utilizes a multistage probability design that involves probability samples of primary sampling units (PSUs), physician practices within PSUs, and patient visits within practices. The first-stage sample includes 112 PSUs. PSUs are geographic segments composed of counties, groups of counties, county equivalents (such as parishes or independent cities) or towns and townships (for some PSUs in New England) within the 50 States and the District of Columbia. The second stage consists of a probability sample of practicing physicians selected from the master files maintained by the American Medical Association and the American Osteopathic Association. Within each PSU, all eligible physicians were stratified by 15 groups: general and family practice, osteopathy, internal medicine, pediatrics, general surgery, obstetrics and gynecology, orthopedic surgery, cardiovascular diseases, dermatology, urology, <u>psychiatry</u>, neurology, ophthalmology, otolaryngology, and a residual category of all other specialties."</p> <p>"The final stage is the selection of patient visits within the annual practices of sample physicians. This involves two steps. First, the total physician sample is divided into 52 random subsamples of approximately equal size, and each subsample is randomly assigned to 1 of the 52 weeks in the survey year. Second, a systematic random sample of visits is selected by the physician during the reporting week. The sampling rate varies for this final step from a 100 percent sample for very small practices, to a 20 percent sample for very large practices as determined in a presurvey interview." [http://www.cdc.gov/nchs/ahcd/ahcd_scope.htm]</p> <p><u>NHAMCS</u> - "A national probability sample of visits to the emergency and outpatient departments of noninstitutional general and short-stay hospitals, exclusive of Federal, military, and Veterans Administration hospitals in the 50 States and the District of Columbia. The NHAMCS was designed to provide estimates based on the following priority of survey objectives: United States, region, emergency and outpatient departments, and</p>

	type of ownership. The basic sampling unit for the NHAMCS is the patient visit or encounter. The survey uses a four-stage probability design with samples of primary sampling units (PSUs), hospitals within PSUs, clinics and emergency service areas within hospitals, and patient visits within clinics and emergency service areas." [http://www.cdc.gov/nchs/ahcd/ahcd_scope.htm#nhamcs_scope]
<b>Data Collection Method</b>	NAMCS - "The U.S. Bureau of the Census acts as the field data collection agent for the NAMCS. The data collection for NAMCS is expected to be carried out by the physician or the physician's staff, but it is often performed by Census field representatives. More than half of the NAMCS Patient Record forms submitted in 2009 (51.5 percent) were abstracted by Census Bureau staff rather than by the physician or medical office personnel." [http://www.cdc.gov/nchs/ahcd/ahcd_data_collection.htm]  NHAMCS - "The U.S. Bureau of the Census was the data collection agent for the 2009 NHAMCS. Census Headquarters staff were responsible for overseeing the data collection process, training the Census Regional Office staff, and writing the field manual. Regional Office staff were responsible for training the field representatives and monitoring hospital data collection activities. Field representatives inducted the hospitals and trained the hospital staff on visit sampling and completion of the Patient Record forms. Different encounter forms were developed for use in the ED and OPD." [http://www.cdc.gov/nchs/ahcd/ahcd_data_collection.htm#nhamcs_collection]
<b>Geography</b>	US and regions
<b>Periodicity</b>	Every two years, or annual.
<b>Mental Health Topics Covered</b>	<u>NAMCS and NHAMCS for Outpatient Visits:</u> <u>Visit Characteristics:</u> Zip, DOB, age, sex, race, ethnicity, source of payment, vital signs, reason for visit, type of injury, continuity of care, physicians' diagnosis and seriousness, chronic conditions (includes depression, hyperactivity/ADD, services ordered or provided (including depression screening, mental status exam), blood tests, other tests, non-medication treatment, (including Mental health counseling, Psychotherapy/therapeutic listening, Psycho-pharmacotherapy, Psychotherapy), health education/counseling (including for mental health stress management, mental health counseling), medications ordered or provided, type of providers seen, <u>Physician and Practice characteristics:</u> (not applicable to list all here)  <u>NHAMCS for Emergency Dept Visits:</u> Visit characteristics: date, time of visit/duration/discharge, zip code, patient residence, age, race, ethnicity, mode of arrival, source of payment, vital signs, triage, immediacy of need to be seen, presenting pain, urgency of visit, patient reason for visit, physician diagnosis, services ordered or provided, procedures, medications ordered or provided, providers seen (including mental health), visit disposition (including transfer to psychiatric hospital), hospital admission (including to mental health unit)  [http://www.cdc.gov/nchs/data/ahcd/body_namcsopd.pdf]
<b>Specific Mental Health Items (Adult)</b>	See above
<b>Specific Mental Health Items (Child)</b>	See above
<b>Instrument used for MH Disorder/Diagnosis</b>	NA
<b>Instrument used for MH Functional Impairment</b>	NA
<b>COVAR: Language</b>	No
<b>COVAR: Race/Ethnicity</b>	Yes
<b>COVAR: Gender</b>	Yes
<b>COVAR: Age</b>	Yes
<b>COVAR: Education</b>	No
<b>COVAR: Income</b>	No
<b>COVAR: Medical Conditions</b>	Yes
<b>COVAR: Health Insurance Status</b>	Yes

## National Hospital Discharge Survey

<b>Survey Name</b>	<b>National Hospital Discharge Survey (NHDS)</b>
<b>Sponsor/How to Access</b>	Centers for Disease Control and Prevention (CDC)
<b>Description</b>	<p>"The <u>National Hospital Discharge Survey</u> (NHDS), which was conducted annually from 1965-2010, was a national probability survey designed to meet the need for information on characteristics of inpatients discharged from non-Federal short-stay hospitals in the United States.</p> <p>The <u>National Hospital Care Survey</u> (NHCS) is a new survey that integrates inpatient data formerly collected by the NHDS with the emergency department (ED), outpatient department (OPD), and ambulatory surgery center (ASC) data collected by the <u>National Hospital Ambulatory Medical Care Survey</u> (NHAMCS). The integration of these two surveys along with the collection of personal identifiers (protected health information) will allow the linking of care provided to the same patient in the ED, OPD, ASC, and inpatient departments. It will also be possible to link the survey data to the National Death Index and Medicaid and Medicare data to obtain a more complete picture of patient care." (<a href="http://www.cdc.gov/nchs/nhds/index.htm">http://www.cdc.gov/nchs/nhds/index.htm</a>)</p> <p><b>The CDC stopped collecting data as part of the NHDS and the NHCS does not have any data yet.</b></p>
<b>Years available</b>	
<b>Population</b>	
<b>Age range</b>	
<b>Sampling Design and Methods</b>	
<b>Data Collection Method</b>	
<b>Geography</b>	
<b>Periodicity</b>	
<b>Mental Health Topics Covered</b>	
<b>Specific Mental Health Items (Adult)</b>	
<b>Specific Mental Health Items (Child)</b>	
<b>Instrument used for MH Disorder/Diagnosis</b>	
<b>Instrument used for MH Functional Impairment</b>	
<b>COVAR: Language</b>	
<b>COVAR: Race/Ethnicity</b>	
<b>COVAR: Gender</b>	
<b>COVAR: Age</b>	
<b>COVAR: Education</b>	
<b>COVAR: Income</b>	
<b>COVAR: Medical Conditions</b>	
<b>COVAR: Health Insurance Status</b>	



## HCUP Databases (NIS, KID, NEDS)

<b>Survey Name</b>	<b>Nationwide Inpatient Sample (NIS)</b>
<b>Sponsor/How to Access</b>	<p>Agency for Healthcare Research and Quality (AHRQ)</p> <p>Information on how to access databases: HCUP Central Distributor [<a href="https://www.hcup-us.ahrq.gov/tech_assist/centdist.jsp">https://www.hcup-us.ahrq.gov/tech_assist/centdist.jsp</a>]</p> <p>Data documentation: [<a href="https://www.hcup-us.ahrq.gov/db/nation/nis/nisdbdocumentation.jsp">https://www.hcup-us.ahrq.gov/db/nation/nis/nisdbdocumentation.jsp</a>]</p>
<b>Description</b>	<p>PDF Introduction to NIS: [<a href="https://www.hcup-us.ahrq.gov/db/nation/nis/NISIntroduction2013.pdf">https://www.hcup-us.ahrq.gov/db/nation/nis/NISIntroduction2013.pdf</a>]</p> <p>Overview: [<a href="https://www.hcup-us.ahrq.gov/nisoverview.jsp">https://www.hcup-us.ahrq.gov/nisoverview.jsp</a>]</p> <p>"Beginning with the 2012 data year, HCUP's NIS is a 20 percent sample of discharges from all community hospitals participating in HCUP, excluding rehabilitation and long-term acute care hospitals. The NIS covers all patients, including individuals covered by Medicare, Medicaid, or private insurance, as well as those who are uninsured. The NIS is sampled from the State Inpatient Databases (SID), all inpatient data that are currently contributed to HCUP." [<a href="https://www.hcup-us.ahrq.gov/nisoverview.jsp#about">https://www.hcup-us.ahrq.gov/nisoverview.jsp#about</a>]</p> <p>"Beginning with 2012 data, the NIS was redesigned to improve national estimates. To highlight the design change, beginning with 2012 data, AHRQ renamed the NIS from the "Nationwide Inpatient Sample" to the "National Inpatient Sample." The redesign incorporates three major types of changes:</p> <ul style="list-style-type: none"> <li>- Revisions to the sample design—the NIS is now a sample of discharge records from all HCUP-participating hospitals, rather than a sample of hospitals from which all discharges were retained.</li> <li>- Revisions to how hospitals are defined—the NIS now uses the definitions of hospitals and discharges supplied by the statewide data organizations that contribute to HCUP, rather than the definitions used by the AHA Annual Survey.</li> <li>- Revisions to enhance confidentiality—the NIS now eliminates State and hospital identifiers and other data elements that are not uniformly available across States."</li> </ul> <p>[<a href="https://www.hcup-us.ahrq.gov/nisoverview.jsp#about">https://www.hcup-us.ahrq.gov/nisoverview.jsp#about</a>]</p> <p>"Key features of the most recent NIS (2013) include:</p> <ul style="list-style-type: none"> <li>- Drawn from all States participating in HCUP, representing more than 95 percent of the U.S. population.</li> <li>- Approximates a 20-percent stratified sample of discharges from U.S. community hospitals, excluding rehabilitation and long-term acute care hospitals.</li> <li>- Self-weighting design of the new NIS reduces the margin of error for estimates and delivers more stable and precise estimates than previous versions of the NIS.</li> <li>- Protects patient confidentiality because State and hospital identifiers are no longer provided.</li> <li>- New NIS retains a large sample size, which enables analyses of rare conditions, uncommon treatments, and special patient populations."</li> </ul> <p>[<a href="https://www.hcup-us.ahrq.gov/nisoverview.jsp#about">https://www.hcup-us.ahrq.gov/nisoverview.jsp#about</a>]</p>
<b>Years available</b>	1988-2013
<b>Population</b>	US population in 44 states, cases are inpatient discharges
<b>Age range</b>	<p>NIS appears to include ages 0-90</p> <p>[<a href="http://www.hcup-us.ahrq.gov/db/nation/nis/tools/stats/NIS_2012_MaskedStats_Core.PDF">http://www.hcup-us.ahrq.gov/db/nation/nis/tools/stats/NIS_2012_MaskedStats_Core.PDF</a>]</p>
<b>Sampling Design and Methods</b>	<p>"Systematic sample of discharges from all frame hospitals. The new systematic sample is a self-weighted sample design similar to simple random sampling, but it is more efficient. It ensures that the sample is representative of the population on the following critical factors:</p> <ul style="list-style-type: none"> <li>- hospital</li> <li>- census division of hospital</li> <li>- hospital ownership</li> <li>- urban-rural location of hospital</li> <li>- hospital teaching status</li> <li>- number of beds in the hospital</li> <li>- diagnosis-related group (DRG) for the hospital stay</li> <li>- admission month of the hospital stay</li> </ul> <p>[<a href="https://www.hcup-us.ahrq.gov/db/nation/nis/NISIntroduction2013.pdf">https://www.hcup-us.ahrq.gov/db/nation/nis/NISIntroduction2013.pdf</a> (p. 23)]</p>
<b>Data Collection Method</b>	The NIS is a database of hospital inpatient stays derived from billing data submitted by hospitals to statewide data organizations across the U.S. These inpatient data include clinical and resource use information typically available from discharge abstracts. The NIS is sampled from the State Inpatient Databases (SID).

<b>Geography</b>	44 states in 2013 (Varies by participation in HCUP and ability to submit data on time)
<b>Periodicity</b>	Annual
<b>Mental Health Topics Covered</b>	<p>"The NIS contains clinical and resource-use information that is included in a typical discharge abstract. It contains clinical and nonclinical data elements for each hospital stay, including:</p> <ul style="list-style-type: none"> <li>- Admission information</li> <li>- Patient demographic characteristics (e.g., sex, age, race, median household income for ZIP Code)</li> <li>- Payer information</li> <li>- Primary and secondary diagnoses and procedures (ICD-9)</li> <li>- Diagnostic Related Group (DRG) information</li> <li>- Hospital characteristics (e.g., ownership)</li> <li>- Expected payment source</li> <li>- Total charges</li> <li>- Discharge information</li> <li>- Length of stay</li> <li>- Severity and comorbidity measures - includes depression, psychoses</li> <li>- Chronic condition indicator includes mental disorders"</li> </ul> <p>[<a href="https://www.hcup-us.ahrq.gov/db/nation/nis/NISIntroduction2013.pdf">https://www.hcup-us.ahrq.gov/db/nation/nis/NISIntroduction2013.pdf</a> (Appendix III; p. 42 of pdf)]</p>
<b>Specific Mental Health Items (Adult)</b>	Diagnoses and other variables above related to mental condition
<b>Specific Mental Health Items (Child)</b>	NA
<b>Instrument used for MH Disorder/Diagnosis</b>	Clinical determination
<b>Instrument used for MH Functional Impairment</b>	None
<b>COVAR: Language</b>	No
<b>COVAR: Race/Ethnicity</b>	Yes
<b>COVAR: Gender</b>	Yes
<b>COVAR: Age</b>	Yes
<b>COVAR: Education</b>	No
<b>COVAR: Income</b>	No
<b>COVAR: Medical Conditions</b>	Yes
<b>COVAR: Health Insurance Status</b>	Yes

<b>Survey Name</b>	<b>Kids' Inpatient Database (KID)</b>
<b>Sponsor/How to Access</b>	Agency for Healthcare Research and Quality (AHRQ)  Information on how to access databases, obtain training, and complete data use agreements: HCUP Central Distributor [ <a href="https://www.hcup-us.ahrq.gov/tech_assist/centdist.jsp">https://www.hcup-us.ahrq.gov/tech_assist/centdist.jsp</a> ]
<b>Description</b>	"Part of a family of databases and software tools developed for the Healthcare Cost and Utilization Project (HCUP). HCUP inpatient data are based on administrative data—discharge abstracts created by hospitals for billing. The KID is the largest publicly-available all-payer pediatric inpatient care database in the United States. Unweighted, it contains data from approximately 3 million pediatric discharges each year. Weighted, it estimates roughly 7 million hospitalizations." [ <a href="https://www.hcup-us.ahrq.gov/db/nation/kid/kid_2012_introduction.jsp">https://www.hcup-us.ahrq.gov/db/nation/kid/kid_2012_introduction.jsp</a> ] and [ <a href="http://www.hcup-us.ahrq.gov/kidoverview.jsp">http://www.hcup-us.ahrq.gov/kidoverview.jsp</a> ]
<b>Years available</b>	1997 to 2012, every three years
<b>Population</b>	Children aged 20 and younger. Cases are pediatric discharges
<b>Age range</b>	0-20 years
<b>Sampling Design and Methods</b>	"The KID includes a sample of <u>pediatric discharges</u> from all hospitals in the sampling frame. For the sampling, pediatric discharges in all participating States are stratified by uncomplicated in-hospital birth, complicated in-hospital birth, and all other pediatric cases. To further ensure an accurate representation of each hospital's pediatric case-mix, the discharges are sorted by hospital, DRG, and a random number within each DRG. Systematic random sampling is used to select 10% of uncomplicated in-hospital births and 80% of other pediatric cases from each frame hospital." [ <a href="http://www.hcup-us.ahrq.gov/db/nation/kid/KID_2012_Introduction.pdf">http://www.hcup-us.ahrq.gov/db/nation/kid/KID_2012_Introduction.pdf</a> (p. 6-7)]
<b>Data Collection Method</b>	Inpatient stay records submitted by states to State Inpatient Databases
<b>Geography</b>	44 states
<b>Periodicity</b>	Every three years, 1997 - 2012
<b>Mental Health Topics Covered</b>	"The KID contains clinical and resource-use information that is included in a typical discharge abstract. It contains more than 100 clinical and nonclinical data elements for each hospital stay, including: - Primary and secondary diagnoses and procedures (ICD-9) - Discharge status - Patient demographics (e.g., sex, age, race, median income for ZIP Code) - Hospital characteristics (e.g., ownership, size, teaching status, Census region and division) - Expected payment source - Total charges - Length of stay - Severity and comorbidity measures - same comorbidity and severity measures as above in NIS-includes depression and psychoses" - Chronic condition indicator includes mental disorders"  [ <a href="http://www.hcup-us.ahrq.gov/kidoverview.jsp">http://www.hcup-us.ahrq.gov/kidoverview.jsp</a> ]
<b>Specific Mental Health Items (Adult)</b>	NA
<b>Specific Mental Health Items (Child)</b>	Diagnoses and other variables above related to mental condition
<b>Instrument used for MH Disorder/Diagnosis</b>	Clinical determination
<b>Instrument used for MH Functional Impairment</b>	None
<b>COVAR: Language</b>	No
<b>COVAR: Race/Ethnicity</b>	Yes
<b>COVAR: Gender</b>	Yes
<b>COVAR: Age</b>	Yes
<b>COVAR: Education</b>	No
<b>COVAR: Income</b>	No

<b>COVAR: Medical Conditions</b>	Yes
<b>COVAR: Health Insurance Status</b>	Yes

<b>Survey Name</b>	<b>The Nationwide Emergency Department Sample (NEDS) - HCUP</b>
<b>Sponsor/How to Access</b>	Agency for Healthcare Research and Quality (AHRQ)  Information on how to access databases, obtain training, and complete data use agreements: HCUP Central Distributor [ <a href="https://www.hcup-us.ahrq.gov/tech_assist/centdist.jsp">https://www.hcup-us.ahrq.gov/tech_assist/centdist.jsp</a> ]
<b>Description</b>	"The NEDS is the largest all-payer ED database that is publicly available in the United States, containing information from 30 million ED visits at 947 hospitals that approximate a 20-percent stratified sample of U.S. hospital-based EDs. Weights are provided to calculate national estimates pertaining to 135 million ED visits in 2013. The NEDS is drawn from States that provide HCUP with data from ED visits that may or may not have resulted in hospital admission." [ <a href="http://www.hcup-us.ahrq.gov/nedsoverview.jsp#about">http://www.hcup-us.ahrq.gov/nedsoverview.jsp#about</a> ] and [ <a href="http://www.hcup-us.ahrq.gov/db/nation/neds/NEDS2013Introduction.pdf">http://www.hcup-us.ahrq.gov/db/nation/neds/NEDS2013Introduction.pdf</a> (p. 4)]
<b>Years available</b>	2006-2013
<b>Population</b>	US population in 30 states. "The NEDS contains <u>event</u> -level records, not <u>patient</u> -level records. This means that individual patients who visit the ED multiple times in one year may be present in the NEDS multiple times. There is no uniform patient identifier available that would allow a patient-level analysis with the NEDS. In contrast, some HCUP State databases may be used for this type of analysis." [ <a href="http://www.hcup-us.ahrq.gov/db/nation/neds/NEDS2013Introduction.pdf">http://www.hcup-us.ahrq.gov/db/nation/neds/NEDS2013Introduction.pdf</a> (p. 20 under "Limitations")]
<b>Age range</b>	0-90 years or older
<b>Sampling Design and Methods</b>	"The NEDS is built using a 20 percent stratified sample of hospital-based EDs in the United States. The sampling frame of the NEDS is limited to a subset of the universe: hospital-based EDs in the States for which HCUP ED data (SID and SEDD) are available. The list of hospital-based EDs in the frame consists of all AHA community, non - rehabilitation hospitals that report total ED visits in each of the frame States that could be matched to the ED data provided to HCUP.  The following hospital characteristics were used for sample stratification: U.S. Census region, trauma center designation, urban-rural location of the hospital, ownership, teaching status." [ <a href="http://www.hcup-us.ahrq.gov/db/nation/neds/NEDS2013Introduction.pdf">http://www.hcup-us.ahrq.gov/db/nation/neds/NEDS2013Introduction.pdf</a> (p.12)]
<b>Data Collection Method</b>	Data is "sampled from the State Inpatient Databases (SID) and State Emergency Department Databases (SEDD), HCUP's. The SID contain information on patients initially seen in the ED and then admitted to the same hospital. The SEDD capture information on ED visits that do not result in an admission (i.e., treat-and-release visits and transfers to another hospital)". [ <a href="http://www.hcup-us.ahrq.gov/nedsoverview.jsp#about">http://www.hcup-us.ahrq.gov/nedsoverview.jsp#about</a> ]
<b>Geography</b>	30 states
<b>Periodicity</b>	Annual
<b>Mental Health Topics Covered</b>	"The NEDS contains clinical and resource-use information that is included in a typical discharge abstract, with safeguards to protect the privacy of individual patients, physicians, and hospitals (as required by data sources).  More than 100 clinical and nonclinical variables for each hospital stay include: - International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) diagnosis and external cause of injury codes - ICD-9-CM and Current Procedural Terminology, Fourth Edition (CPT®-4) procedure codes - Identification of injury-related ED visits including mechanism, intent, and severity of injury - Admission and discharge status - Patient demographics characteristics (e.g., sex, age, urban-rural designation of residence, national quartile of median household income for patient's ZIP Code) - Expected payment source - Total ED charges (for ED visits) and total hospital charges (for inpatient stays for ED visits that result in admission) - Hospital characteristics (e.g., region, trauma center indicator, urban-rural location, teaching status)" [ <a href="http://www.hcup-us.ahrq.gov/nedsoverview.jsp#data">http://www.hcup-us.ahrq.gov/nedsoverview.jsp#data</a> ]
<b>Specific Mental Health Items (Adult)</b>	Diagnoses and other variables above related to mental condition
<b>Specific Mental Health Items (Child)</b>	Diagnoses and other variables above related to mental condition
<b>Instrument used</b>	Clinical determination

<b>for MH Disorder/Diagnosis</b>	
<b>Instrument used for MH Functional Impairment</b>	None
<b>COVAR: Language</b>	No
<b>COVAR: Race/Ethnicity</b>	Yes
<b>COVAR: Gender</b>	Yes
<b>COVAR: Age</b>	Yes
<b>COVAR: Education</b>	No
<b>COVAR: Income</b>	Yes
<b>COVAR: Medical Conditions</b>	Yes
<b>COVAR: Health Insurance Status</b>	Yes