

Estimates of Prevalence of Behavioral Health Disorders in Alaska

What is prevalence? Why measure it?

Quick Facts: Prevalence is a measure of how many people experience the measured disorder at a given time. There are many tools to estimate prevalence.

The prevalence of a disorder is the total number of people who experience that disorder at a given time. The prevalence rate is the percentage of the population who experience that disorder. The way to get the best prevalence data for Alaska would be to assess every Alaskan on the variable we were interested in, for instance to do a clinical interview with every Alaskan to determine whether or not they had a mental illness diagnosis. Obviously, this is not possible, so we use other means to *estimate* how many people experience a disorder. Prevalence estimates are useful for a number of reasons:

- They help us see how well we are doing in meeting the need for services and to plan for future services.
- They let us know if things are improving or becoming more of a problem (this may take a long time to track within a large population).
- Sometimes, they let us look at regions within the state or specific population groups and identify differential needs for service.

In looking at prevalence of behavioral health problems, we have access to several tools. At the Advisory Board on Alcoholism and Drug Abuse and the Alaska Mental Health Board, we use these in policy development, advocacy, and planning. We thought it would be useful to explain a little more about what these estimating tools are, how they differ, and some of the prevalence estimates they produce. Because these are all *estimates*, it is useful to use several tools to hone in on the best guess of actual population need.

Useful Prevalence Measures

Quick Facts: Surveys are often used to estimate prevalence. There are a number of surveys that we can use that either are conducted in Alaska or use Alaskan demographics to estimate prevalence.

Some of the tools we are using to assess prevalence include:

Alaska Behavioral Health Prevalence Report (McGee/Holzer):¹ This report provides prevalence estimates of serious behavioral health disorders in Alaskan households. These estimates are derived by applying the data from the NCS-R (see below) to an Alaska population based on census statistics.

Pros: The prevalence estimates use Alaskan census data to take age, gender, location, and income level into account while estimating prevalence. This gives us a chance to look at some of the variables that affect behavioral health problems. The survey has all of the strengths of the NCS-R.

Cons: These estimates have the same shortcomings as the NCS-R on which they are based (see below). They rely on data from the lower 48 and apply that data to Alaskan populations. Our small population requires a good deal of extrapolation to arrive at numbers for small segments of the population. For statewide data, there is more sureness of the results.

National Comorbidity Survey – Revised (NCS-R):² This survey is being used by the Division of Behavioral Health in cooperation with WICHE to make synthetic prevalence estimates of behavioral health disorders in Alaska. The McGee/Holzer study uses the data from the NCS-R to identify prevalence of serious mental illness and substance use disorders within specified demographic groups and then maps that data onto the demography of Alaska. For instance, if it was found that young people had a higher incidence of substance use disorders than older people, the percentage estimated to experience such disorders in Alaska would be higher than the national average because we have more young people. There are strengths and weaknesses in using this data:

Pros: This data is based on extensive, clinically based interviews. The diagnostic categories are well defined based on the DSM-IV, the manual used by most behavioral health providers for diagnostic guidelines. There is a lot of research being done with this data.

Cons: The NCS-R wasn't conducted in Alaska, so we are looking only at lower 48 data. The survey as used in our synthetic prevalence data looks only at households, not at those living in group quarters, including treatment or correctional residential settings. The survey had a small number of American Indians/Alaska Natives so probably doesn't fully look at the impact of behavioral health disorders on these populations. The survey underestimates alcohol dependence, especially in women because of some methodological flaws. Only some disorders were assessed, excluding schizophrenia and autism. There was a fairly high percentage of those approached who refused to participate.

National Survey of Drug Use and Health (NSDUH):³ The NSDUH provides annual data on drug use in the United States. It is sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA), an agency of the U.S. Public Health Service and a part of the Department of Health and Human Services (DHHS). The survey provides yearly national and state level estimates of alcohol, tobacco, illicit drug, and non-medical prescription drug use. Other health-related questions also appear from year to year, including questions about mental health. It is conducted with a scientific random sample of households throughout the United States, and a professional field representative makes a personal visit to each selected household. About 850 Alaskans over the age of 12 or their parents are interviewed yearly for this study.

Pros: Another large survey that has been used for many years and includes data gathered in Alaska. It uses technology to ensure confidentiality in face to face interviews.

Cons: Only those living in households are included. The study has a small sample size for most remote areas.

NIAAA National Epidemiological Survey on Alcohol and Related Conditions:⁴ In 2001/2002, the National Institute on Alcohol Abuse and Alcoholism (NIAAA) conducted this survey which was the largest and most ambitious comorbidity study ever conducted. It looked at

alcohol and drug use as well as major mental health problems. It was conducted by face to face interviews. It included Alaska in its sampling frame.

Pros: The survey uses accepted standards (DSM-IV diagnosis) of assessing alcohol and drug abuse and dependence. It also looked at co-occurring anxiety, mood, and personality disorders. The survey had a large sample size and a high response rate from those asked to participate.

Cons: This study still uses primarily national data and we have to apply that to an Alaskan population to estimate prevalence.

Behavior Risk Factor Surveillance Survey (BRFSS):⁵ The National Centers for Disease Control and Prevention (CDC) developed the Behavioral Risk Factor Surveillance System (BRFSS) to monitor state-level prevalence of the major behavioral risks among adults associated with premature morbidity and mortality. This survey has been used yearly in Alaska since 1991. 2500 Alaskans over the age of 17 are interviewed by phone over the course of a year.

Pros: We have many continuous years of data. Most questions have been shown to be reliable and valid. The data can be compared to all 54 states and territories. This is the longest running and largest telephone health survey in the world.

Cons: Only those living in households and with a phone are surveyed. Self report data can be biased.

Prevalence Estimates

Quick Facts: Prevalence estimates can vary greatly, even when talking about the same population. It depends on how the data is gathered, how the disorder is defined, and what population is included in the sample. Looking at more than one prevalence estimate helps assure that the estimates are a good reflection of the actual population.

The best way to estimate prevalence of a disorder is to look at a number of prevalence estimates, rather than relying on just one. These are then compared to common sense knowledge and any other available data to arrive at the best estimate. Below, we compare prevalence estimates of behavioral health problems arrived at by the survey tools explained above. These estimates are not always comparable because they look at different age group breakouts or use somewhat different definitions of what they are measuring, but they can help us see the range of prevalence they estimate.

As can be seen from the following data, some prevalence estimates are similar across studies. This is particularly true for the estimate of the percentage of the population who have experienced major depressive disorder. This is a well defined behavioral health problem and the clarity of this diagnosis helps arrive at similar results across studies. When there is less agreement as to a definition of a disorder or groups of people, such as the disagreement about what constitutes serious mental illness or how to diagnose a substance use disorder, this lack of agreement is reflected in the disparity of the data.

Substance Use Disorder Prevalence Estimates:

McGee/Holzer Prevalence Study - Substance Use Disorder

4.5% of people 18 and over

NCS-R (national data) – Substance Dependence or Abuse:

3.8% of people 18 and older

NSDUH (2004-5)- Substance Dependence or Abuse:

10.08% of Alaskans 18 and older

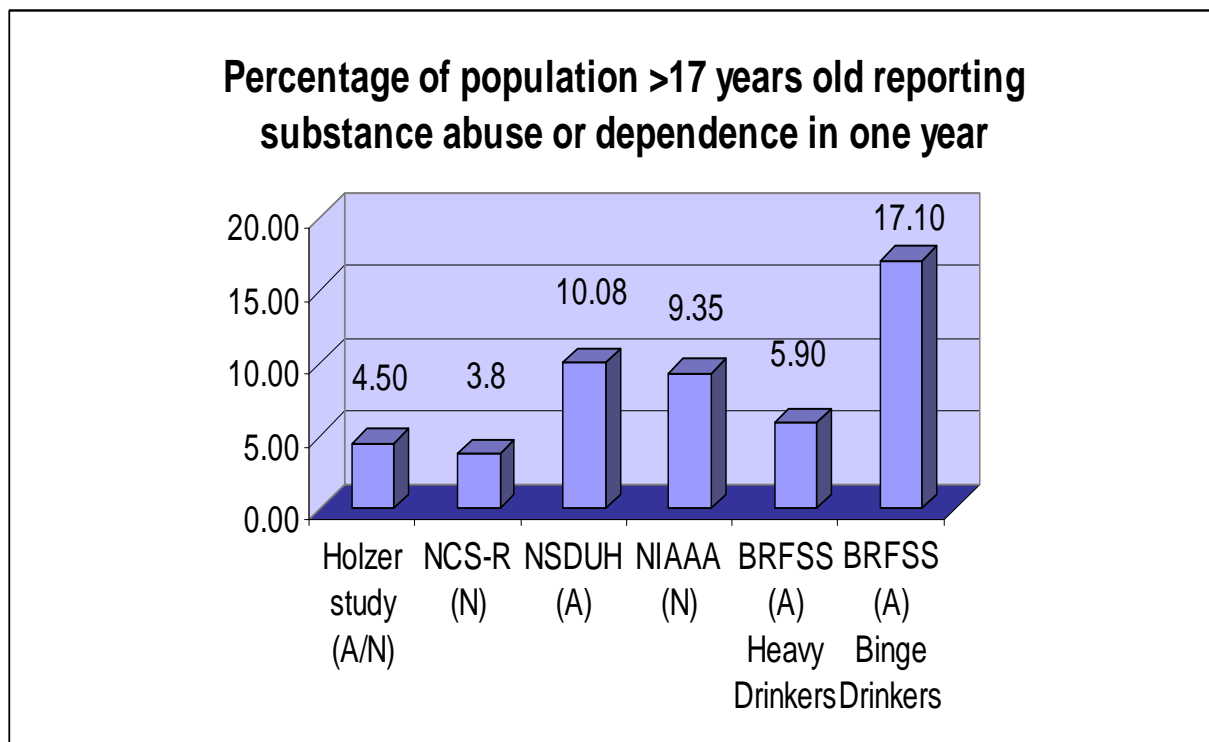
Binge Drinking: 19% of Alaskans 18 or older

NIAAA – Substance Dependence or Abuse:

9.35% of people 18 and older

BRFSS (2006) – Heavy Drinking: 5.9% of Alaskans 18 and older

Binge Drinking: 17.1% of Alaskans 18 and older



Serious Mental Illness Prevalence Estimates:

McGee/Holzer Prevalence Study – Serious Mental Illness in Last Year:

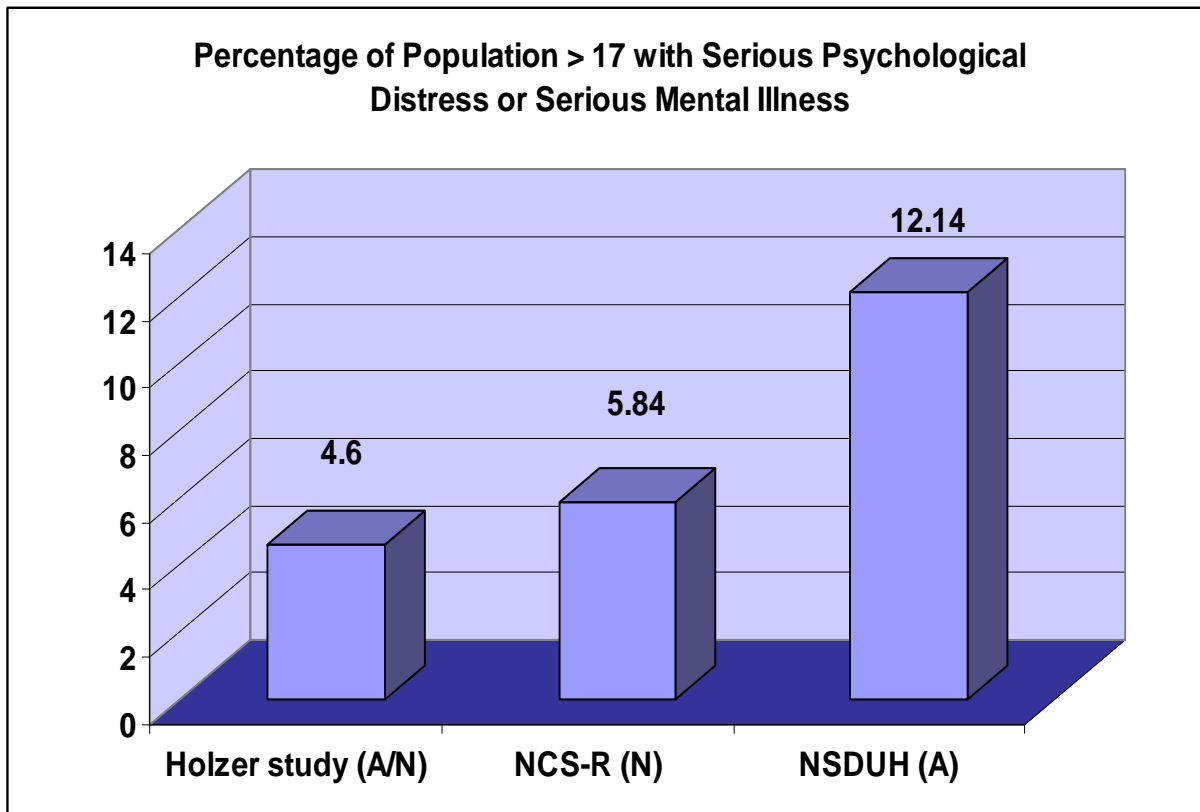
4.60% of people 18 and older

NCS-R (national data)- Serious Behavioral Health Problem in Last Year:

5.84% of people 18 and older

NSDUH (2004-5)- Alaskans Reporting Serious Psychological Distress:

12.14% of Alaskans 18 and older



Major Depressive Disorder Prevalence Estimates:

NCS-R (national data) – Major Depressive Disorder in last year:

6.7% of people 18 and older

NSDUH (2004-5)- Major Depressive Disorder in last year:

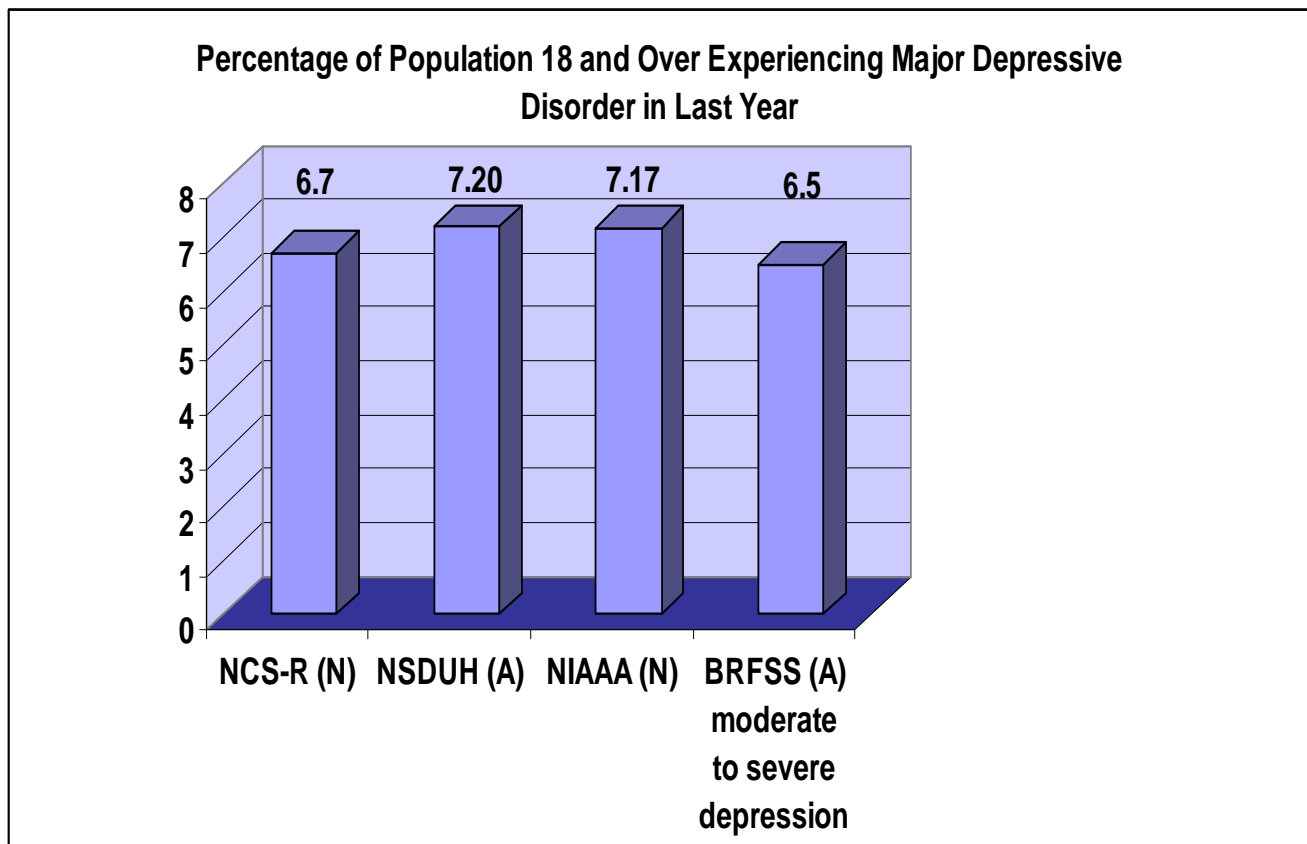
7.2% of Alaskans 18 and older

NIAAA – Major Depressive Disorder in last year:

7.17% of people 18 and older

BRFSS (2006) – Moderate to Severe Depression in last year:

Approx. 6.5%



What can we conclude about the prevalence of behavioral health disorders in Alaska from these surveys?:

Quick Facts: Using a number of prevalence studies, we can estimate that in a given year:

- 6.5% to 7% of Alaskan adults experience a major depressive disorder
- 9.5% of Alaskan adults experience a substance abuse or dependence disorder
- 5% of Alaskan adults experience a serious mental illness that results in significant functional impairment for at least 30% of the time.
- Less severe mental illness occurs in another 7 to 10% of the Alaskan adult population.

When surveys produce similar results, it is easy to make estimates. For instance, we can say with some certainty that about 6.5% to 7% of Alaskan adults experienced a major depressive disorder in the last year. Whether the data was collected from Alaskans by phone or face-to-face interviews or derived from data from the lower 48, we get about the same result.

If there is more discrepancy among surveys, it becomes harder to make a single estimate. In most cases, it is important to look more specifically at the diagnostic criteria and the population that were used in the survey. This helps us learn how to apply the numbers to the population of interest. For instance, we learn that criteria for substance use disorders varied significantly among surveys. Both the NSDUH and the NIAAA survey used DSM-IV criteria for substance abuse and dependence to identify those disorders. Both also used Alaska as part of their sample. They came up with similar estimates and we can use those numbers to say that about 9.5% of Alaskan adults experience a substance abuse or dependence disorder in a year. The NCS-R and the McGee/Holzer study both use a more restrictive definition of substance abuse and dependence, and this is reflected in the lower numbers. The McGee/Holzer study has the advantage of using Alaskan census data to derive its numbers, but the definition of alcohol abuse leaves us with a quite different number than the Alaskan surveys.

Finally, the most complex area is that of mental illness. When we look at reasons for the discrepancies between these numbers, we see that definitions vary significantly. The NSDUH survey uses five questions to identify serious psychological distress. To qualify for serious psychological distress the respondent has to experience a variety of symptoms for most of 30 days. However, there is no assessment of functional impairment included in this survey (functional impairment is an assessment of how the disorder affects a person's ability to function in everyday life). Both the NCS-R and the McGee/Holzer study derived from it require a person to have significant functional impairment for at least 120 days of the past year as well as a diagnosable serious mental health condition to qualify as experiencing serious mental illness. This is conservative estimate, excluding a number of people who would be included by other definitions. By this definition, we can say that about 5% of Alaskan adults experienced serious mental illness in the last year.

The NSDUH points us to another population, those who experience serious psychological distress, but who don't experience sufficient functional impairment to be identified by the Holzer study. For instance, a person with serious depression who reports that she feels bad much of the time, but who goes to work three days a week will not be included in a definition of serious mental illness. Using the data from the NCS-R, we learn that in the general population about

10% of people experience moderate mental illness. This is defined as a disorder that significantly disrupts daily life, but that is not totally disabling. So we can guess that about 7% to 10% of Alaskan adults experience moderate mental illness.

Once we have these numbers, we can sometimes further break them out into estimates by age, gender, location, or race. However, as we move to smaller parts of the population, the estimates become less robust. It is so useful to have population numbers to work with that there is a temptation to overuse or over interpret the information. Comparing prevalence estimates to other data sources, such as records of those served, people who go through the justice and health systems and local common sense, all help us be sure that our numbers are valid.

Conclusion: The Advisory Board on Alcoholism and Drug Abuse and the Alaska Mental Health Board applaud the use of prevalence estimates to guide policy and planning. However, as demonstrated above, this is an inexact science. We urge caution in relying on any one estimate in the decision making process. We welcome the chance to continue to engage with all stakeholders to find ways to best allocate dollars, assess and improve services, and plan for future program development.

Endnotes

¹ 2006 Behavioral Health Prevalence Estimates in Alaska: Serious Behavioral Health Disorders by Household, WICHE Mental Health Program, Department of Health and Social Services, December, 2006.

² http://www.hcp.med.harvard.edu/ncs/ncs_data.php

³ <http://oas.samhsa.gov/NSDUH.htm#NSDUHinfo>

⁴ <http://pubs.niaaa.nih.gov/publications/arh29-2/toc29-2.htm>

⁵ <http://www.cdc.gov/brfss/>