



Office for
Oregon Health Policy and Research

How Many Oregonians Are Uninsured?
A Technical Guide to Understanding the Estimates

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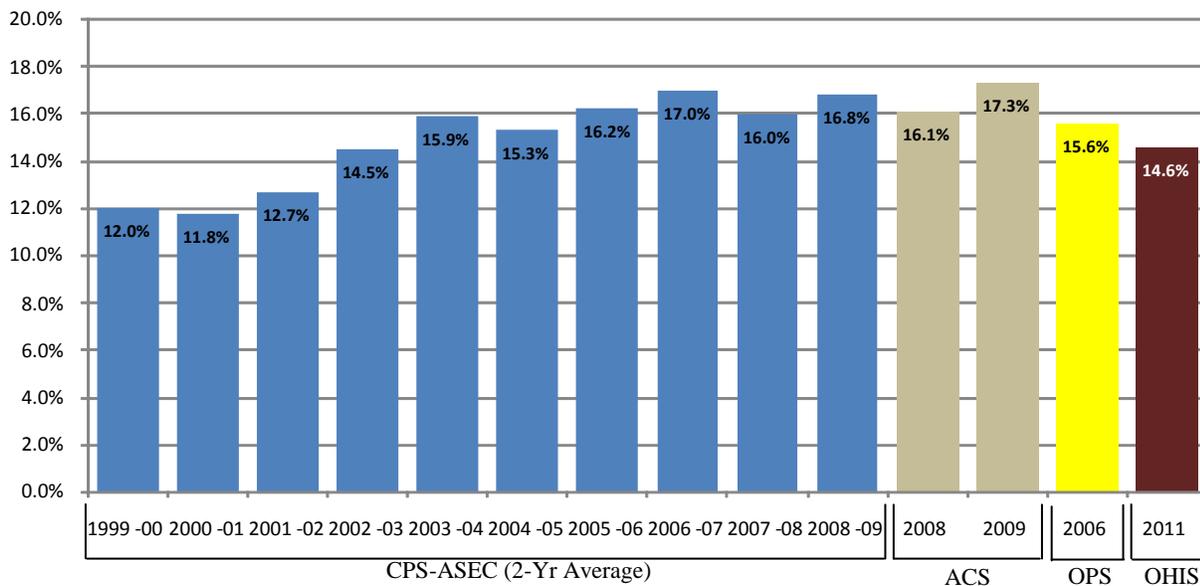
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How Many Oregonians Are Uninsured? A Technical Guide to Understanding the Estimates¹

How many people are uninsured in Oregon? As with so many questions, no single ‘right’ answer exists. Uninsured or ‘uninsurance’ estimates are often obtained by conducting a random and representative survey of the intended population. Surveys offer the most cost effective and efficient way to gather information from large numbers of people. Each survey that gathers uninsurance information differs in purpose, structure, and method. This technical brief offers an overview of the major health insurance and uninsurance estimates for Oregon. Our intent is to assist policymakers and interested Oregonians in understanding how best to use each estimate and how these estimates differ.

Estimated rates of uninsurance vary and as with any survey information, a degree of uncertainty exists. Figure 1 provides uninsurance estimates across a number of years for Oregon from a variety of survey sources. Included are the Current Population Survey (CPS-ASEC); the American Community Survey (ACS); The Oregon Population Survey (OPS); and the Oregon Health Insurance Survey (OHIS). Figure 1 presents a number of commonly used surveys but is not a complete list of surveys producing estimates of uninsurance. Each of these surveys has a unique approach and purpose, which influences the uninsurance estimate produced.

Figure 1: Recent Estimates of Uninsurance/Uninsured in Oregon



Source: OHPR analysis of: Current Population Survey enhanced data from the State Health Access Data Assistance Center (SHADAC); the American Community Survey Public Use Micro Sample (ACS-PUMS), the Oregon Population Survey (OPS), and the Oregon Health Insurance Survey (OHIS).

¹ This report borrows substantially from the Colorado Health Institutes’ Technical Brief: “How Many Coloradans are Uninsured? A Guide to the Estimates” [<http://www.coloradohealthinstitute.org/Publications/2009/02/Technical-Brief-How-Many-Coloradans-are-Uninsured.aspx>]

Where Do Estimates Come From?

Understanding the data sources for uninsured figures is central to correctly interpreting the statistics. Organizations and agencies use different data sources and methods to estimate the uninsurance rate and number. Oregon, along with a number of states, conducts its own household survey, which gathers health insurance information along with information on a number of other health related topics. Federal agencies conduct, by far, the most surveys that gather health insurance statistics. However, most federal surveys are designed to obtain a representative sample of U.S. residents and often lack detailed state level data. Federally sponsored surveys that include health insurance questions include: the Medical Expenditure Panel Survey (MEPS), the National Health Interview Survey (NHIS), the Survey of Income and Program Participation (SIPP), the Behavioral Risk Factor Surveillance System (BRFSS), and the previously mentioned CPS-ASEC and ACS. Below describes the surveys providing uninsurance estimates included in Figure 1.

The Current Population Survey – Annual Social and Economic Supplement

The longest ongoing measure of uninsurance nationally is the Current Population Survey Annual Social and Economic Supplement (CPS-ASEC). The Census Bureau and Bureau of Labor Statistics conduct the survey jointly every March. The CPS is primarily the monthly national survey of employment and the unemployed. However, in March the survey includes the Annual Social and Economic Supplement, which asks a number of additional questions including health insurance status.²

The strength of the CPS health insurance and uninsurance estimate is its consistency through time. While the survey has made minor changes to the questionnaire and its design, data is primarily comparable across a number of years.³ Additionally, the CPS is the source for the official national uninsured rate and the data from the survey is used in the yearly Census report on income, poverty, and health insurance coverage.⁴

A weakness of the CPS is its survey sample size. The survey collects information on a relatively few households at the state level. To account for this, the Census recommends that two years of data are combined when measuring state health insurance estimates through time and three years

² SHADAC Issue Brief covers the changes in the CPS over time. [<http://www.shadac.org/publications/historical-changes-in-current-population-survey-health-insurance-coverage-items>]

³ Standardized CPS data allows for consistence across time. SHADAC provide access to summary CPS health insurance statistics through their online data center. [<http://www.shadac.org/datacenter>]

⁴ Income, Poverty, and Health Insurance Coverage in the United States: 2009 (P60-238). U.S. Census Bureau [<http://www.census.gov/hhes/www/hlthins/hlthins.html>]

are combined when comparing across states.⁵ This means estimates of uninsurance are for two-year increments. An additional concern with the CPS estimates is the health insurance question reference period. The question requires individuals to recall their health insurance status up to a year and a half prior to answering the questionnaire.⁶

The American Community Survey

The U.S. Census Bureau's American Community Survey (ACS) is a nationwide survey designed to replace the Decennial Census long form. The survey interviews roughly 23,000 Oregon households and group quarters annually throughout the year. Health insurance questions have been included in the survey since 2008. Due to the sample size of the survey, estimates at levels smaller than the state are available. For counties with populations larger than 65,000, yearly estimates are available, while counties with smaller populations have estimates of 3 and 5-year intervals. These estimates are rolling and will continue to supply data year-over-year.

The weakness of the ACS revolves around its relative newness – the survey began in the mid-2000's. The lack of historical data limits how results can be interpreted. Additionally, the newness means researchers have not completely vetted and explored the idiosyncrasies of the survey and the health insurance questions. (The CPS has decades of research exploring the survey's methods, questions, and results.)

The Oregon Population Survey

The Oregon Population Survey (OPS) provided uninsured estimates every two years from 1990 through 2006. This survey produced the official uninsurance statistics for Oregon while providing estimates for eight sub-state regions.⁷ This telephone survey of Oregon households varied in sample size and design depending on the year of the survey.

The weakness of the OPS was the variability of the survey through the years. As an omnibus survey with many state partners, the survey questionnaire gathers information on a wide variety of topics besides health insurance. The wide variety of topics and variations on how the questions are asked from year to year can be a challenge to data quality. In addition, as cell phones became more prevalent, simple RDD (Random Digit Dialing) surveys of landline telephones were insufficient to estimate uninsurance status, leading to higher surveying costs.

⁵ Additional sampling issues exist in the CPS that decreases the power of multi-year estimates. This issue of 'common households' included in multi-year estimates is further described in the CPS methodology report.

[\[http://www.census.gov/prod/2002pubs/tp63rv.pdf\]](http://www.census.gov/prod/2002pubs/tp63rv.pdf)

⁶ SHADACs "Comparing Federal Government Surveys that Count the Uninsured"

[\[http://www.shadac.org/publications/comparing-federal-government-surveys-count-uninsured\]](http://www.shadac.org/publications/comparing-federal-government-surveys-count-uninsured)

⁷ The 2007 Office for Oregon Health Policy and Research report details the last OPS health insurance results along with uninsurance rates across time. [\[http://www.oregon.gov/OHA/OHPR/RSCH/docs/uninsuredprofile.pdf\]](http://www.oregon.gov/OHA/OHPR/RSCH/docs/uninsuredprofile.pdf)

The Oregon Health Insurance Survey

The 2011 Oregon Health Insurance Survey (OHIS) is specifically designed to measure health related information of Oregonians. The survey uses a wide variety of methods to survey households unlike traditional phone surveys. Along with providing detailed uninsurance estimates, the survey explores a number of health related topics. Health insurance estimates, along with sub-state statistics, are available at 15 sub-state regions, eight of which are counties.

The weakness of the survey, not unlike numerous other state surveys of uninsurance, is its inability to be directly compared to other surveys and their historical estimates. This means we cannot be statistically certain of changes across time or across geographies for uninsurance rates among different surveys.

Why Are Estimates Different?

Differences in estimates are due to numerous decisions made in planning, implementation, and analysis of a survey. Decisions can be defined as differences in methods, definitions, and reporting periods. As mentioned, this report focuses on existing surveys and will refer to the surveys used in Figure 1.

1. Methods

The purpose and objectives of each survey largely determine the methods by which survey data is collected. Agencies that administer surveys differ on the population from which they draw their random sample, the methods by which they administer the survey and the design of the survey questionnaire. For example, the national CPS, along with the state-level OPS and OHIS, survey only the *non-institutionalized population* consisting of primary residencies such as homes and apartments, whereas the ACS includes people *living in group quarters* such as dormitories, nursing homes and military bases. A number of health insurance surveys, such as the OHIS, typically calculate an uninsurance rate based on a sample comprising *one randomly selected person per household*, whereas uninsurance rates from the CPS and ACS typically include *all members of the household* when calculating the uninsurance rate.

Furthermore, the way a survey gathers information can deviate greatly. For instance, the federal ACS mails its surveys to a sample of random households, then follows up with phone calls, and finally in-person visits to select households not completing the phone surveys. The OHIS mails introductory letters inviting respondents to take the survey online or through a 1-800 number while still randomly calling selected households that have not completed the survey; sending a written survey only to those not completing the survey electronically or via the telephone.

All of these choices specifically balance how best to gather information using the least intrusive manner within the allocated budget. For instance, the Oregon Health Insurance Survey (OHIS) is designed to gather information on health insurance and health access. Decisions on how to draw the sample, organize the questionnaire, and analyze the results all revolve around this

general theme. Divergently, the national ACS and previous state-run OPS are omnibus surveys. These surveys gather information on a wide range of topics and are generally designed with less specificity in mind.

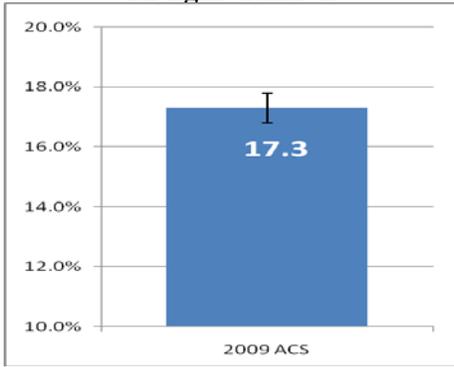
2. Definitions

How the terms “insured” and “uninsured” are defined is another area of subjectivity in surveying. The definitions at first seem clear enough, but upon closer examination can be quite murky. One murky aspect is the timeframe the respondent is being asked about their health insurance status. Is the survey asking about health insurance status at the time of the survey, referred to as a point-in-time estimate, or is the survey asking about health insurance status during a time-period in the past, usually the past 12 months? The CPS asks questions specifically about being uninsured for the entire past year, whereas the OHIS and ACS ask about health insurance at the time the survey is administered. Research has explored the CPS uninsurance estimates obtained through this look-back method and concluded that it more closely approximates the point-in-time estimate than an uninsured-all-year estimate.⁸

Another aspect to explore further is whether the health insurance question(s) identify specific types of insurance available. For example in Oregon, most Medicaid clients are on the Oregon Health Plan (OHP) and surveys asking about public insurance might refer to this coverage as either Medicaid or OHP. The ACS, a national survey uniform across all states, asks generally about Medicaid or other government-assisted health insurance, while the OHIS and CPS specifically ask if the respondent has coverage through the Oregon Health Plan (OHP).

The use of an uninsurance verification question is another variation among surveys. This

Three Ways of Displaying a Margin of Error:



Method	Display
1) Line on the Bar Chart	Vertical error bar on the bar
2) 17.3% ± .5%	Percentage plus or minus the margin of error
3) 16.8% to 17.8%	Range that includes the estimates

What is a Margin of Error?

Uninsured estimates are based on surveys from a sample of a population. A survey draws a representative random sample of a population and a margin of error measures the accuracy of an estimate calculated from that sample. A margin of error is the range within which an estimate is expected to fall 95% of the time if additional random samples of the same population were taken multiple times. This 95% is referred to as the confidence level. Two estimates are not statistically different from each other if their margins of error overlap.

For example, a margin of error of plus or minus 5% means for 95 samples out of 100, the true measure for the population would fall somewhere between 5% below and 5% above the sample estimate.

To the left is an example from the 2009 ACS uninsurance estimate as to the major ways margin of error are displayed. 1) a vertical line on a graph, 2) a percentage plus or minus the margin of error, or 3) A range that includes the estimates.

question, asked only of those not identifying as having insurance via a phone or internet questionnaire, asks if the respondent or other house member is indeed uninsured. Evidence suggests that such a verification question lowers uninsurance estimates.⁹

3. Reporting period

Unrelated to full-year or point-in-time uninsurance estimates is the reporting period used to calculate the estimate of the uninsurance rate. For example, is the estimate from a single year of survey data or from an average of multiple survey years? Researchers often take an average of multiple years of data to increase the overall survey sample size and thus reduce the margin of error. A single year estimate, for smaller survey sample sizes, tends to fluctuate more than two- and three-year averages.

The table below uses CPS-based uninsurance estimates for the 2007-09 timeframe as an example. As more years are included in the estimate, the rate becomes more stable and the margin of error estimates decrease. (See the blue callout box on the preceding page for more on margins of error.)

Table 1: CPS Health Insurance Estimates 2007-2009

3-year	Year Period	<u>2007-2009</u>		
	Estimated Number Uninsured	644,000		
	+/- Margin of Error (95%)	+/-55,920		
2-year	Year Period	<u>2007-2008</u>		<u>2008-2009</u>
	Estimated Number Uninsured	626,000		649,000
	+/- Margin of Error (95%)	+/-66,080		+/-64,470
Single year	Year Period	<u>2007</u>	<u>2008</u>	<u>2009</u>
	Estimated Number Uninsured	632,000	621,000	678,000
	+/- Margin of Error (95%)	+/-86,270	+/-77,020	+/-81,930

The method, definition, and reporting periods are important considerations when using estimates derived from surveys. They are not, however, the only factors that should be considered in assessing when and how to use the data. For example, research comparing actual enrollment data from the Centers for Medicare and Medicaid Services has suggested that the CPS consistently undercounts the number of people enrolled in Medicaid. The discrepancy between counts of enrollees from administrative records and those reported in survey data may be due to

⁹ SHADAC explored data from before and after the verification question was added to the CPS [http://www.shadac.org/files/CPSVerifQuestionImpact_Aug2001.pdf]

survey respondents misreporting their coverage, flaws with survey design, duplicative counting within administrative data, or a combination of all of these.¹⁰ Undercounting the Medicaid population may have the effect of overestimating the privately insured and uninsured populations. Understanding such realities are important when interpreting and utilizing estimates across any survey data.

Conclusions

Given all the estimates available to users, it is not surprising to see discrepancies in rates and figures of Oregonians in various materials and publications. Rates across surveys for the same year can fluctuate often with state conducted surveys (such as the OHIS) producing lower estimates.¹¹ These differences can often confound and confuse consumers of health insurance statistics around what is in fact the rate of uninsurance. Conveying the choices and reasons why one uses which statistic is therefore extremely important in any materials produced.

For Oregon and the Oregon Health Authority, the reasons for producing an independent survey of health insurance and access far outweighed any concerns of disparate statistics. Producing the in-depth Oregon Health Insurance Survey allowed Oregon to explore in detail those who are uninsured and what characteristics are associated with uninsurance as well as the health needs of Oregonians of different circumstances. Knowing these details as Oregon moves further into federal health reform allows the state to accurately plan for future needs and requirements while tracking our progress, successes, and failures.

For more information on surveys producing health insurance estimates, the Oregon Health Insurance Survey, please visit the Oregon Office for Health Policy and Research (OHPR) [Oregon Health Insurance Coverage webpage](#), or contact us at OHPR.info@state.or.us or 503-373-1779.

¹⁰ Medicaid Undercount Project reports are available on the U.S. Census website: [<http://www.census.gov/did/www/snacc/>]

¹¹ Kathleen Thiede Call, Michael Davern, and Lynn A. Blewett. Health Affairs 26, no. 1 (2007): 269-278; [<http://www.healthaffairs.org/RWJ/Call.pdf>]