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How CBO Defines and Estimates Health Insurance Coverage for People Under Age 65

In the United States, most people under age 65 are covered by private health insurance that they or their family members obtain through their employers (referred to as employment-based, or group, coverage). A smaller number of people buy private health insurance individually (through what is known as the nongroup market). Nongroup policies are available through the health insurance marketplaces established under the Affordable Care Act (ACA) or outside of them, through brokers or directly from insurers. Two of the major sources of public insurance coverage for people under 65 are Medicaid and the Children's Health Insurance Program (CHIP).

The federal government subsidizes private and public insurance coverage through various tax preferences and federal programs. Because those subsidies affect the federal budget in many ways, defining what constitutes coverage and estimating health insurance coverage for people under 65 are important steps in the process of preparing the Congressional Budget Office's baseline budget projections. The most recent year for which actual coverage data are available serves as the starting point for CBO's projections of health insurance coverage. This report provides details about that starting point. Specifically, the report:

- Describes how CBO defines health insurance coverage (private and public) for people under 65 who are not institutionalized and who are not members of the active-duty military;
- Explains how the agency estimates the number of insured and uninsured people in that population for the most recent year for which data on actual coverage exist; and
- Describes where CBO obtains the data to estimate coverage, the limitations of those sources, and how the agency adjusts its estimates because of those limitations.

(For a discussion of related work by CBO and other researchers, see the Appendix.)

How Does CBO Define Private Insurance Coverage?

Health insurance policies vary widely, ranging from those that offer substantial coverage for a variety of health care services to those that are limited in scope or offer a small amount of coverage. Therefore, in preparing any estimate of the number of people covered by health insurance, it is useful and important to identify where to draw the line when distinguishing between policies that provide comprehensive coverage and those that do not.

An important function of insurance is to provide financial protection against high-cost, low-probability events (such as car accidents, fires, or floods). Consistent with that notion, in the context of health care costs, CBO broadly defines private health insurance coverage as a policy that, at a minimum, covers high-cost medical events and various services, including those provided by physicians and hospitals. This type of coverage is often referred to as comprehensive major medical coverage. The agency grounds its coverage estimates on that widely accepted definition, which encompasses most private health insurance plans offered in the group and nongroup markets. The definition may include some short-term, limited-duration policies that provide comprehensive major medical coverage for a specified period and plans with very high deductibles. The desirability or adequacy of such coverage will vary on the basis of

people's preferences and income but that does not change CBO's definition of coverage. The definition excludes the following: policies with limited insurance benefits (known as mini-med plans); some types of short-term, limited-duration policies and long-term policies that do not provide comprehensive major medical coverage; "dread disease" policies that cover only specific diseases; supplemental plans that pay for medical expenses that another policy does not cover; fixed-dollar indemnity plans that pay a certain amount per day for illness or hospitalization; and single-service plans, such as dental-only or vision-only policies.

When specific requirements are established in law, CBO takes into account those definitions to further determine what policies count as private insurance coverage. To define coverage under the ACA, CBO relies on provisions in that law that established detailed requirements governing the benefits of private insurance coverage in the large-group market, which is generally defined as employers with more than 50 employees.

CBO also takes into account separate provisions of the ACA that define the requirements governing plans offered in the small-group market (generally defined as employers with up to 50 employees) and the nongroup market. Since 2014, new plans sold in those markets must cover 10 categories of health care benefits that the ACA defines as essential. Other provisions require that those plans' actuarial value (a summary measure of the depth of coverage) fall into specified categories (an actuarial value of 60 percent, 70 percent, 80 percent, or 90 percent). In limited circumstances, plans with an actuarial value of less than 60 percent—known as catastrophic plans—can be sold to certain individuals. (A plan with an actuarial value of 60 percent means that, for an average population, the plan will pay for 60 percent of covered health care expenses; enrollees are responsible for 40 percent of their health care expenses through some combination of deductibles, copayments, and coinsurance.) Some plans that existed before 2014 and are still being offered are exempt from those requirements or from certain ACA regulations. CBO counts those noncompliant plans and catastrophic plans as private insurance coverage because they typically provide comprehensive major medical coverage and are permitted under the ACA in limited circumstances.

If the provisions of the ACA that govern the definition of private insurance coverage were amended or if changes in regulations allowed more noncompliant plans to be sold, CBO would take those new laws and regulations into account when defining coverage. But the agency would continue to exclude plans that did not provide the minimum benefits afforded by comprehensive major medical coverage. In the absence of any definition, CBO would revert to the widely accepted definition of private insurance coverage—comprehensive major medical coverage with a minimum level of benefits, as described above. That definition of private insurance coverage is in keeping with what the agency has used to estimate coverage in the past.

How Does CBO Define Public Insurance Coverage?

CBO defines as publicly insured people who receive full Medicaid or CHIP benefits. The agency's definition of publicly insured does not include people who receive partial Medicaid benefits—such as women who receive only family planning services or unauthorized immigrants who receive only emergency services. CBO also defines as publicly insured disabled adults under age 65 who are covered by Medicare. Additionally, CBO considers TRICARE policyholders and their dependents to be publicly insured (although active-duty military personnel are not included in the population for which CBO estimates insurance coverage). Moreover, CBO defines as publicly insured people who use the Indian Health Service (IHS) or the Veterans Health Administration (VHA). Lastly, CBO defines other miscellaneous sources of coverage, including student health plans and coverage from foreign sources, as health insurance.

What Data Sources Does CBO Use to Estimate Coverage?

To estimate the number of people with and without health insurance coverage, CBO combines data from household and employer surveys with administrative data about the operation of government programs (when available). CBO currently uses survey data as the basis for estimating employment-based private insurance coverage. The agency also uses survey data to estimate the number of people without coverage because no administrative data on the uninsured are available. By contrast, CBO relies on administrative data from the Centers

for Medicare & Medicaid Services (CMS) to estimate the number of people with private insurance coverage in the health insurance marketplaces. Similarly, CBO relies primarily on data from administrative records to count people with public insurance coverage through Medicaid, CHIP, and Medicare.

Certain administrative records, such as those that record program participation, are generally more accurate than reports from household surveys because they are based on complete tabulations instead of a sample and program funding is based on them. In addition, survey respondents typically misreport their sources of coverage to some degree. Survey data, however, are used to determine the demographic and income characteristics of Medicaid and CHIP enrollees because that information is lacking in administrative data. Survey data can thus fill in the gaps by providing estimates for types of coverage that are not included in administrative data or by showing how coverage varies on the basis of demographic variables, such as income and age.

To estimate the number of people with private insurance coverage or without coverage, CBO uses data from several household surveys: the National Health Interview Survey (NHIS); the Medical Expenditure Panel Survey (MEPS)—Household Component; and the Current Population Survey (CPS). The agency also uses data from one employer survey, the MEPS—Insurance Component. All of those surveys are used to estimate how public insurance coverage varies on the basis of demographic variables. In addition, CBO uses the Census Bureau's Survey of Income and Program Participation (SIPP) as the base data in its Health Insurance Simulation Model (HISIM). (In the next generation of its microsimulation model, now under development, CBO will use the CPS as its base data.)

CBO uses the SIPP as the base data in HISIM because it includes detailed information about individuals and families, such as demographic characteristics, income, health status, employment status, insurance coverage, and employers' offers of insurance. That detailed information allows CBO to make coverage projections for current and future years, and it supports the simulation of behavioral responses of individuals and families to changes in policy and the resulting changes in coverage.

The SIPP data alone, however, do not accurately indicate the extent of current insurance coverage. That is because survey respondents can misreport their sources of coverage and more recent data on insurance coverage are available from other sources. As a result, CBO adjusts the SIPP data to match coverage estimates developed from a combination of administrative data and other household and employer surveys (as discussed below). CBO takes that step so that its estimates of historical coverage reflect the most recent year for which data on actual coverage distributions exist; the estimates serve as the starting point for the development of future projections.

What Are the Challenges in Using Survey Data to Estimate Coverage?

The main challenge in using household survey data to estimate the number of people with and without health insurance coverage involves measurement. Important aspects include the following:

- Errors in the reporting of coverage status,
- Different reference periods (or reporting windows) across surveys, and
- A lack of information on the depth and extent of private insurance coverage.

Errors in the Reporting of Coverage Status

The potential for error on the part of respondents in reporting their insurance coverage is always present in household surveys, but it can depend, in part, on the way the survey questions are structured. For example, some surveys ask whether anyone in the household had coverage, whereas others ask whether each person in the household (by name) had coverage.

Data in the household surveys used by CBO and listed above substantially undercount the number of people with coverage through Medicaid and CHIP because of misreporting. Methodological research suggests that the reason for the undercount is that some respondents confuse those public insurance programs with other types of coverage, such as private insurance. Also, some people appear not to report having public insurance coverage because of the stigma associated with receiving public assistance. To correct for those measurement problems, CBO uses administrative data to count enrollees in Medicaid and CHIP.

Different Reference Periods

The reference period also varies across the surveys listed above. Some surveys ask respondents about their coverage at a particular *point in time*, such as on the date of the interview or during the previous few months. Other surveys ask respondents about their coverage at *any time* during the previous calendar year. The length of the reference period and the time that has elapsed since that reference period (the recall period) can affect the accuracy of respondents' answers. The more time that has passed since the reference period, the more difficult it is for respondents to correctly recall their coverage status.

Furthermore, the different reference periods might affect estimates of the number of people with and without coverage. For example, the number of people who are uninsured at any time during the year is generally higher than the number of people uninsured at a specific point during the year, which, in turn, is higher than the number of people uninsured for the entire year.

A related issue is that different reference periods might affect estimates of the number of people with specific types of coverage. In surveys that ask about coverage at any time during the year or over a certain period, respondents have the potential to report more than one type of coverage (such as employment-based coverage or Medicaid). That approach can generate higher estimates for specific types of coverage because many people may have different sources of coverage or temporary lapses in coverage throughout the year, such as between jobs.

Lack of Information on Private Insurance Coverage

Another challenge with household survey data is that they provide very little information on the depth and extent of private insurance coverage—in terms of the scope of benefits, the level and structure of cost sharing, and the actuarial value of plans. Although that information is lacking for households, some total statistics on the depth and extent of private insurance coverage in the employment-based market are available. The Agency for Healthcare Research and Quality has begun to publish such data from the MEPS—Insurance Component (a survey of private and state and local government employers). For policies in the health insurance marketplaces, detailed information about the scope of benefits, the amount and structure of cost sharing, and the actuarial value of plans is publicly available.

In addition to those measurement challenges, there is often a delay between when survey data are collected and when they are made available. The delay can be even longer if respondents are asked to report on their insurance coverage for a time before the date of collection, such as the previous year.

What Are the Challenges in Using Administrative Data to Estimate Coverage?

Using administrative data to estimate the number of people with health insurance coverage presents three main challenges. The first is the delay between the measurement period and the availability of the data. The second is that most sources of administrative data lack detailed information about a person's demographic characteristics, such as income and employment status. The third is that administrative data from multiple sources have the potential to misreport or overstate coverage. For example, the data might double-count people who have more than one insurance policy within a state or who sign up for coverage in more than one state during a given year.

How Does CBO Estimate the Number of People With Private Insurance Coverage?

CBO uses data from the MEPS—Insurance Component as a benchmark to estimate the number of employment-based private insurance policyholders. CBO then adjusts that benchmark to incorporate federal employees' health care coverage (because data from the MEPS—Insurance Component do not include federal agencies). CBO uses the MEPS—Insurance Component because it is based on employer responses rather than household responses. CBO supplements those data with an estimate of the average number of dependents covered by each employment-based policy from the MEPS—Household Component. In future years, CBO may incorporate administrative data from 1095 tax forms that count the number of people with employment-based coverage.

Estimating private insurance coverage for the nongroup market has become much easier following enactment of the ACA. Since the establishment of the health insurance marketplaces, CMS has collected administrative data that CBO uses as a benchmark of total enrollment in the marketplaces. To estimate enrollment in the nongroup market outside of the marketplaces, CBO primarily uses administrative data from insurance filings with CMS and similar data compiled by the National Association of Insurance Commissioners.

How Does CBO Estimate the Number of People With Public Insurance Coverage?

CBO uses data from two sources to estimate public insurance coverage provided through Medicaid and CHIP. To count enrollees in those programs, CBO uses administrative data submitted by the states to CMS. Those data provide the most accurate counts of public insurance coverage because people often misreport that coverage in household surveys. To determine the demographic and income characteristics of those Medicaid and CHIP enrollees, CBO uses household survey data from the SIPP.

CBO then adjusts the administrative data to better match its definition of public insurance coverage. For example, CBO excludes people who receive only partial Medicaid benefits. But even though those enrollees are not considered covered by Medicaid—as defined by CBO for purposes of determining public insurance coverage—they are included in CBO's counts of total Medicaid enrollment and spending.

Furthermore, CBO counts only people who are actually enrolled in Medicaid and CHIP when estimating coverage in those programs. Some people argue that individuals who are eligible for, but not enrolled in, public programs should be counted as insured because those people could enroll at any time. CBO does not count as covered people who are eligible for, but not enrolled in, Medicaid and CHIP because they do not generate federal spending for those programs.

CBO uses administrative data from CMS and the Social Security Administration to estimate the number of people under age 65 who have Medicare coverage. Those data include counts of Medicare enrollees by age group and eligibility category, which allows the agency to estimate the number of enrollees who are under the age of 65.

To estimate the number of people with coverage through TRICARE, IHS, VHA, and other miscellaneous sources, CBO also uses data from the SIPP. However, to assess the accuracy of those estimates, the agency compares them with the NHIS and MEPS—Household Component.

How Does CBO Estimate the Number of People Without Health Insurance Coverage?

The only reliable information about the number of people without health insurance coverage comes from federal surveys, and there is no single, definitive survey for measuring that population. For a variety of reasons, CBO uses data from the NHIS as its primary benchmark for estimates of the number of people who are uninsured. Those data are available more quickly than data from other surveys; and, because they are generated from a larger sample, they provide more reliable estimates of the uninsured. (Previously, CBO placed greater weight on the MEPS—Household Component.) Also, because the NHIS samples households continuously throughout the year and includes a question about insurance status on the day each household is surveyed, it produces the most accurate measure of the average number of people uninsured over the course of the year. The data more closely correspond to the concept of average enrollment that underlies CBO's projections.

Although CBO uses the NHIS as its primary benchmark for the uninsured, the agency also compares that benchmark to estimates from the MEPS—Household Component and the CPS, taking into account the strengths and weaknesses of those surveys, to continually evaluate the accuracy of the NHIS and better understand trends over time in the number of uninsured.

Appendix: Related Research

From the Congressional Budget Office

For CBO's most recent projections of health insurance coverage for people under age 65, see Congressional Budget Office, *Federal Subsidies for Health Insurance Coverage for People Under Age 65: 2017 to 2027* (September 2017), www.cbo.gov/publication/53091.

For a discussion of the ways in which CBO would estimate health insurance coverage under alternative proposals, see Susan Yeh Beyer and Jared Maeda, "Challenges in Estimating the Number of People With Nongroup Health Insurance Coverage Under Proposals for Refundable Tax Credits," *CBO Blog* (December 20, 2016), www.cbo.gov/publication/52351.

For more information about the methods that CBO uses to make its projections of health insurance coverage, see Congressional Budget Office, "The Health Insurance Simulation Model Used in Preparing CBO's 2018 Baseline" (February 2018), www.cbo.gov/publication/53592; and *How CBO and JCT Analyze Major Proposals That Would Affect Health Insurance Coverage* (February 2018), www.cbo.gov/publication/53571.

For a discussion of various aspects of the private health insurance market, including the minimum value standard used to govern benefits in the large-group market, see Congressional Budget Office, *Private Health Insurance Premiums and Federal Policy* (February 2016), www.cbo.gov/publication/51130.

This report is an update to a previous blog post on this topic. See Jared Maeda and Susan Yeh Beyer, "How Does CBO Define and Estimate Health Insurance Coverage for People Under Age 65?" *CBO Blog* (December 20, 2016), www.cbo.gov/publication/52352. For related earlier discussion, see Congressional Budget Office, *How Many People Lack Health Insurance and For How Long?* (May 2003), www.cbo.gov/publication/14426.

From Other Sources

The following studies discuss issues in estimating public and private insurance coverage using survey and administrative data.

Jean M. Abraham, Pinar Karaca-Mandic, and Michael Boudreaux, "Sizing Up the Individual Market for Health Insurance: A Comparison of Survey and Administrative Data Sources," *Medical Care Research and Review*, vol. 70, no. 4 (August 2013), pp. 418–433, https://tinyurl.com/y7kea80g.

Frederic Blavin and others, "An Early Look at Changes in Employer-Sponsored Insurance Under the Affordable Care Act," *Health Affairs,* vol. 34, no. 1 (January 2015), pp. 170–177, https://tinyurl.com/yd57mbho.

Michael H. Boudreaux and others, "Measurement Error in Public Health Insurance Reporting in the American Community Survey: Evidence From Record Linkage," *Health Services Research*, vol. 50, no. 6 (December 2015), pp. 1973–1995, https://tinyurl.com/ycntdo5p.

Kathleen T. Call, "Validating Self-Reported Health Insurance Coverage: Preliminary Results on CPS and ACS (Cross-Post)," *Blog & News* (State Health Access Data Assistance Center, May 2016), http://tinyurl.com/jsbbvbo.

Kathleen T. Call and others, "Medicaid Undercount and Bias to Estimates of Uninsurance: New Estimates and Existing Evidence," *Health Services Research*, vol. 43, no. 3 (June 2008), pp. 901–914, https://tinyurl.com/y9gqh43o.

Joel C. Cantor and others, "The Adequacy of Household Survey Data for Evaluating the Nongroup Health Insurance Market," *Health Services Research*, vol. 42, no. 4 (August 2007), pp. 1739–1757, https://tinyurl.com/yb6mg6oe.

Gary Claxton and others, "Health Benefits in 2014: Stability in Premiums and Coverage for Employer-Sponsored Plans," *Health Affairs,* vol. 33, no. 10 (October 2014), pp. 1851–1860, https://tinyurl.com/yawot5eh.

Gary Claxton and others, *Measuring Changes in Insurance Coverage Under the Affordable Care Act*, Data Note (Henry J. Kaiser Family Foundation, April 2014), http://tinyurl.com/z39wo6b.

Gary Claxton and others, *How Many People Have Nongroup Health Insurance?* Issue Brief (Henry J. Kaiser Family Foundation, December 2013), http://tinyurl.com/jf7penx (PDF, 403 KB).

Michael Davern and others, "An Examination of the Medicaid Undercount in the Current Population Survey: Preliminary Results From Record Linking," *Health Services Research*, vol. 44, no. 3 (June 2009), pp. 965–987, https://tinyurl.com/yc6bgywl.

Michael Davern and others, "Validating Health Insurance Coverage Survey Estimates: A Comparison of Self-Reported Coverage and Administrative Data Records," *Public Opinion Quarterly*, vol. 72, no. 2 (Summer 2008), pp. 241–259, www.jstor.org/stable/25167624.

Katherine Hempstead, *Preliminary Look at Some Carrier Data on Enrollment in the Non-Group Market* (Robert Wood Johnson Foundation, June 2014), https://tinyurl.com/y9qkkon9 (PDF, 417 KB).

Pinar Karaca-Mandic and Jean M. Abraham, *Using Data From the National Association of Insurance Commissioners for Health Reform Evaluation*, State Health Reform Assistance Network Issue Brief (Robert Wood Johnson Foundation, July 2013), http://tinyurl.com/hukzr12 (PDF, 275 KB).

Pinar Karaca-Mandic and others, "Going Into the Affordable Care Act: Measuring the Size, Structure, and Performance of the Individual and Small Group Markets for Health Insurance," in Ana Aizcorbe and others, eds., *Measuring and Modeling Health Care Costs* (University of Chicago Press, 2018), pp. 419–456, http://papers.nber.org/books/aizc13-1.

Jacob A. Klerman and others, "Understanding the Current Population Survey's Insurance Estimates and the Medicaid 'Undercount,'" *Health Affairs*, vol. 28, no. 6 (November/December 2009), pp. w991–w1001, https://tinyurl.com/y944zmoz.

Jacob Klerman, Michael R. Plotzke, and Mike Davern, "CHIP Reporting in the CPS," *Medicare & Medicaid Research Review*, vol. 2, no. 3 (Centers for Medicare & Medicaid Services, 2012), pp. E1–E14, https://go.usa.gov/xQKsM.

Annie Mach and Brett O'Hara, *Do People Really Have Multiple Health Insurance Plans? Estimates of Nongroup Health Insurance in the American Community Survey*, Social, Economic, and Housing Statistics Division Working Paper 2011-28 (Census Bureau, September 2011), http://go.usa.gov/x9cfw (PDF, 770 KB).

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Marina Vornovitsky, "Measuring Health Insurance Coverage With the Current Population Survey and the American Community Survey" (Census Bureau, August 2015), http://go.usa.gov/x8RAm (PDF, 738 KB).

This report was prepared to enhance the transparency of the work of the Congressional Budget Office. In keeping with CBO's mandate to provide objective, impartial analysis, the document makes no recommendations.

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