



## Health Insurance Coverage for People Under Age 65: Definitions and Estimates for 2015 to 2018

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 years for which historical outcomes are available serve as the starting points for CBO's projections of health insurance coverage. This report provides details about those starting points. 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;
- Describes the individual data sources CBO uses to compile preliminary estimates of historical outcomes, and the limitations of those sources; and

- Compares preliminary estimates of historical outcomes with CBO's integrated estimates of coverage (that are consistent with each other and that sum to accurately depict the total population) for 2015 to 2018.

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.

CBO's definition of private insurance coverage covers plans that must comply with the regulations governing the group and nongroup markets as well as coverage that is exempt from such regulations but that nonetheless provides comprehensive major medical coverage. For example, short-term, limited-duration policies are exempt from regulations governing the nongroup market, but some are included in CBO's definition of private insurance if they provide major medical coverage. The definition may also include plans with very high deductibles. The desirability or adequacy of such coverage will vary on the basis of people's preferences, income, and assets, but that does not change CBO's definition of coverage.

CBO's definition of private insurance coverage excludes policies that do not provide comprehensive major medical coverage. Examples include the following: policies with limited insurance benefits (known as mini-med plans); some types of short-term, limited-duration policies; "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 predetermined, lump-sum payment in the event of an illness or hospitalization; health care sharing ministries that are not insurance but rather cooperatives through which members pay one another's bills; and single-service plans, such as dental-only or vision-only policies.

In its estimates of health insurance coverage, CBO includes people with private insurance obtained in the large-group or small-group markets in the category of employment-based coverage. People with nongroup coverage are placed in a separate category.

If the laws or regulations governing health insurance markets were amended, CBO would continue to use the same widely accepted definition of private health insurance. Accordingly, the agency would continue to exclude from its definition plans that did not provide the minimum benefits afforded by comprehensive major medical coverage.

### **How Does CBO Define Public and Other 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 noncitizens who are not

lawfully present in this country who receive only emergency services. In addition, the agency defines people as publicly insured who are covered under the Basic Health Program, which provides some federal funding for states to establish an alternative to marketplace coverage, primarily for people with income between 138 percent and 200 percent of the federal poverty guidelines. CBO also defines as publicly insured disabled adults under age 65 who are covered by Medicare.

CBO considers people who use the Veterans Health Administration (VHA) and 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). Although they are publicly insured, the agency includes those people in the category of employment-based coverage because their employer is their source of coverage.

Additionally, CBO defines as publicly insured people who use the Indian Health Service (IHS). The agency groups those people in a broad category of other miscellaneous sources of coverage. That category also includes people who are covered by student health plans and foreign sources.

### **What Data Sources Does CBO Use to Estimate Historical Outcomes?**

To estimate the number of people with and without health insurance coverage for the most recent years for which historical outcomes are available, CBO combines data from household and employer surveys with administrative data about government programs (when available). CBO primarily 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 primarily on data from administrative records to count people with public insurance coverage through Medicaid, CHIP, and Medicare. Similarly, 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. (For additional details, see the information about individual data sources in the appendix.)

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, studies have shown that some survey respondents misreport their sources of coverage, and most surveys' measurements of coverage do not match administrative totals. Survey data are necessary, however, 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—Household Component (MEPS-HC); and the Current Population Survey (CPS). In particular, CBO uses the CPS for the base data in the new version of its health insurance simulation model, HISIM2. The agency also uses data from one employer survey, the Medical Expenditure Panel Survey—Insurance Component (MEPS-IC), and data from CMS's Medical Loss Ratio reports and the National Association of Insurance Commissioners.

### 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 and different reference periods (the time period for which statistical information is collected) in different surveys, and
- A lack of information on the depth and extent of private insurance coverage.

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.

### Errors in the Reporting of Coverage Status and Different Reference Periods

The potential for respondents to err 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 listed above substantially undercount the number of people with coverage through Medicaid and CHIP because of misreporting. Research on survey methods suggests that one reason for the undercount is that some respondents confuse those public insurance programs with other types of coverage, such as private insurance.

The reference period often varies between surveys. 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 length of 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, different reference periods 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 response to surveys that ask about coverage at any time during the year or over a certain period, some respondents may report more than one type of coverage (such as employment-based coverage and Medicaid). That approach can generate higher estimates for specific coverage categories because many people may have different sources of coverage or temporary lapses in coverage throughout the year, such as when they are between jobs.

To correct for various measurement problems, CBO uses administrative data to count enrollees in Medicaid, CHIP, the marketplaces, the Basic Health Program, and Medicare.

### **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 amount and structure of cost sharing, and the actuarial value of plans. Although household-specific information is lacking, some overall 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-IC (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.

### **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 date the data are made available. 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 have the potential to misreport or overstate coverage. For example, 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 may be counted twice.

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

CBO uses data from the MEPS-IC 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-IC do not include federal agencies). CBO uses the MEPS-IC because it is based on employers' responses rather than households' responses, and employers are more likely than households to accurately report information about health insurance, in the agency's assessment. CBO supplements those data with an estimate of the average number of dependents covered

by each employment-based policy from the MEPS-HC. In future years, CBO may incorporate administrative data from tax form 1095, which counts the number of people with employment-based coverage.

For the nongroup market, CBO combines data from CMS's Medical Loss Ratio reports and data from the National Association of Insurance Commissioners to estimate the total number of people enrolled in the nongroup market. The agency uses data from CMS's effectuated marketplace enrollment reports to estimate the number of nongroup enrollees who obtained coverage through the health insurance marketplaces. Nongroup enrollment outside of the marketplaces is estimated as the difference between total nongroup enrollment and marketplace enrollment.

CBO estimates the number of people whose private nongroup coverage meets CBO's definition of coverage. That definition covers plans that must comply with the regulations governing the nongroup market as well as coverage that is exempt from some of the regulations but that nonetheless provides comprehensive major medical coverage. Examples of nongroup plans that are exempt from regulations governing the nongroup market include plans that were in effect before 2014, those purchased by individuals through an association, and some types of short-term, limited-duration policies.

### **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 (supplemented with additional data from California). 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 CPS.

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 CBO does not count those enrollees as having insurance through Medicaid—because their limited benefits do not meet the agency's definition of insurance—the agency counts

them in its baseline projections for Medicaid because they generate Medicaid spending.

Furthermore, CBO counts only people who are actually enrolled in Medicaid and CHIP when estimating coverage through 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 are not covered for the costs of medical services unless they enroll and, in many cases, they are unaware of their eligibility.

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 age 65.

CBO's estimates of the number of people enrolled in health insurance through the Basic Health Program are based on information published by the state governments of Minnesota and New York, which are the only states that have used the program.

To estimate the number of people with coverage through TRICARE or VHA, and not through another source of employment-based health insurance, CBO uses data from the CPS. Data from that survey are also used to estimate coverage through IHS and other miscellaneous sources. To assess the accuracy of those estimates, the agency compares them with the NHIS and MEPS-HC.

### **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 some other surveys, and, because they are generated from a larger sample, they provide more reliable estimates of the uninsured. 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. As a result, 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 with estimates from the MEPS-HC 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.

### **How Do CBO's Estimates of Historical Outcomes From Individual Sources Compare With Its Integrated Estimates?**

Once CBO has compiled preliminary estimates of the number of people under age 65 with different types of insurance using various data sources, it must adjust those estimates slightly to develop integrated estimates that are consistent with each other and that sum accurately to depict the total population. The adjustments incorporate results produced by HISIM2 and other models. Those integrated estimates of historical outcomes are used as inputs into CBO's baseline projections of health insurance coverage and federal subsidies.

The preliminary estimates derive from individual data sources that have used different measurement conventions, so, without adjustment, those estimates will not yield an accurate total. Numbers from surveys of employers, for instance, count workers with two jobs once for each job, so adding up the numbers would double count those workers.

Consider a simplified example in which a total population is estimated to be 100 and people have two types of health insurance coverage. Data about that population's insurance coverage come from three individual data sources. As estimated from an employer survey, 66 people have employment-based coverage. As estimated from a household survey, 31 have public insurance and 11 are uninsured. As estimated from a second household survey, 6 people have both types of coverage. To create an internally consistent set of numbers that sum to the population total of 100, CBO might estimate that 5 people have both types of coverage, 60 have only employment-based coverage, 25 have only public coverage, and 10 are uninsured.

CBO adjusts its preliminary estimates of the number of people covered by each type of insurance to varying degrees depending upon the reliability of the source. Examination of those adjustments allows the agency to assess how closely its integrated estimates for historical outcomes are calibrated with preliminary estimates from individual data sources. That process of checking the estimates against a large collection of external data helps validate CBO's baseline projections.

For some categories of coverage—Medicaid and CHIP, Medicare, and coverage purchased through marketplaces and the Basic Health Program—CBO assesses the administrative data to be of high quality because they are based on actual enrollment figures. Therefore, there is little variation between CBO's estimate of actual outcomes and the administrative totals for 2015 through 2018. For example, Medicaid and CHIP enrollment was 69.4 million in 2018, according to administrative data, and that same total is the estimated historical outcome used as input into CBO's spring 2019 baseline (see Table 1).

Estimates of employment-based coverage are not as clear-cut. For example, in 2017, CBO's preliminary estimate of employment-based coverage among people under age 65, which was derived from surveys, showed that such coverage increased from its 2016 level by 1.9 million, to 159.4 million. Much of that increase probably occurred because people switched from nongroup coverage to employment-based coverage: The number of people who purchased nongroup coverage fell by 1.5 million between those two years, according to CBO's integrated estimates. However, CBO's estimate of the total decrease in the number of people who were either uninsured or enrolled in coverage other than employment-based health insurance was only about 0.9 million over the same period

(and thus not consistent with an increase of 1.9 million in employment-based coverage). The agency constructed its integrated estimate of the number of people with employment-based health insurance to reflect an increase of 1.3 million from 2016 to 2017—with increases in population and in the number of people with multiple sources of coverage accounting for the difference between that number and 0.9 million. That 2017 adjustment may reflect some measurement error in the individual data sources. Although it was the largest adjustment CBO made in absolute terms, it was small in percentage terms.

The number of uninsured people is difficult to measure, in CBO's assessment, because it is the largest category for which the agency relies exclusively on information from household surveys. In addition, respondents' errors in the reporting of coverage status can make survey results inconsistent with information from other sources. In most years, there is little variation between CBO's estimate of historical outcomes and the preliminary survey-based estimate, but the agency's integrated estimate of the number of uninsured people in 2017 was 27.8 million, 0.4 million less than CBO's preliminary estimate from individual sources. That adjustment for the uninsured was smaller than the adjustment that CBO made for employment-based coverage in 2017 in absolute terms, but it was larger in percentage terms.

CBO's estimates of the number of people with multiple sources of insurance ranged from 11 million to 12 million depending on the year. CBO does not report a comparison of that estimate with a preliminary number derived from individual data sources for each year because there are multiple sources of similar quality for that information and those sources use incompatible definitions.

Table 1.

### CBO's Integrated Estimates of Health Insurance Coverage for People Under Age 65 Compared With Preliminary Estimates from Individual Data Sources

Millions of People	2015 Estimates		2016 Estimates		2017 Estimates		2018 Estimates	
	Preliminary	Integrated	Preliminary	Integrated	Preliminary	Integrated	Preliminary	Integrated
Employment-Based Coverage	157.1	157.0	157.5	157.5	159.4	158.8	n.a.	159.7
Medicaid and CHIP <sup>a</sup>								
Made eligible for Medicaid by the ACA	9.8	9.8	11.3	11.3	12.0	12.0	12.0	12.0
Otherwise eligible for Medicaid	51.1	51.1	51.4	51.4	50.8	50.8	50.3	50.3
CHIP	6.0	6.0	6.4	6.4	6.8	6.8	7.1	7.1
Subtotal	66.9	66.9	69.2	69.2	69.6	69.5	69.4	69.4
Nongroup Coverage and Basic Health Program								
Nongroup coverage purchased through marketplaces <sup>b</sup>								
Subsidized	7.9	7.9	8.4	8.3	8.2	8.3	8.4	8.4
Unsubsidized	1.5	1.5	1.6	1.6	1.5	1.5	1.3	1.3
Subtotal	9.4	9.4	10.0	9.9	9.8	9.8	9.7	9.7
Nongroup coverage purchased outside of marketplaces	8.2	8.0	7.4	7.4	6.0	6.0	4.9	4.9
Subtotal, Nongroup Coverage	17.5	17.3	17.4	17.3	15.7	15.8	14.6	14.7
Coverage through the Basic Health Program <sup>c</sup>	0.3	0.3	0.6	0.6	0.8	0.8	0.8	0.8
Medicare <sup>d</sup>	8.6	8.6	8.5	8.5	8.4	8.4	8.3	8.3
Other Coverage <sup>e</sup>	3.0	2.9	3.1	2.9	3.1	2.8	3.1	3.0
Uninsured <sup>f</sup>	28.3	28.3	27.5	27.5	28.3	27.8	28.9	28.9

Source: Congressional Budget Office.

Numbers may not add up to totals because of rounding.

Estimates are for calendar years.

Estimates include noninstitutionalized civilian residents of the 50 states and the District of Columbia who are younger than 65. CBO and the Joint Committee on Taxation estimate that in most years, 11 million to 12 million people (or about 5 percent of insured people) have multiple sources of coverage, such as employment-based coverage and Medicaid.

Estimates reflect average monthly enrollment over the course of a year and include spouses and dependents covered under family policies.

ACA = Affordable Care Act; CHIP = Children's Health Insurance Program; n.a. = not available.

a. Includes only noninstitutionalized enrollees with full Medicaid benefits. Estimates are adjusted to account for people enrolled in more than one state.

b. Under the ACA, many people can purchase subsidized health insurance coverage through marketplaces, which are operated by the federal government, state governments, or partnerships between the federal and state governments.

c. The Basic Health Program, created under the ACA, allows states to establish a coverage program primarily for people with income between 138 percent and 200 percent of the federal poverty guidelines. To subsidize that coverage, the federal government provides states with funding equal to 95 percent of the subsidies for which those people would otherwise have been eligible through a marketplace.

d. Includes noninstitutionalized Medicare enrollees under age 65. Most Medicare-eligible people under age 65 qualify for Medicare because they participate in the Social Security Disability Insurance program.

e. Includes people with other kinds of insurance, such as student health plans, coverage provided by the Indian Health Service, and coverage from foreign sources.

f. Includes noncitizens who are not lawfully present in this country, who are ineligible either for marketplace subsidies or for most Medicaid benefits; people who are ineligible for Medicaid because they live in a state that has not expanded coverage under the ACA; people who are eligible for Medicaid but do not enroll; and people who do not purchase insurance through an employer, through the marketplaces, or directly from an insurer.

# Appendix:

## Sources of Information

This report draws upon three types of information sources:

- Other work published by the Congressional Budget Office about estimates of health insurance coverage,
- Individual data sources (survey and administrative) about health insurance coverage, and
- Research studies that discuss issues in estimating insurance coverage.

This appendix provides citations to the specific sources of information.

### CBO Publications

For technical details about the input data underlying CBO's spring 2019 baseline projections of health insurance coverage, see Jessica Banthin and others, *Sources and Preparation of Data Used in HISIM2—CBO's New Health Insurance Simulation Model*, Working Paper 2019-04 (Congressional Budget Office, April 2019), [www.cbo.gov/publication/55087](http://www.cbo.gov/publication/55087).

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: 2018 to 2028* (May 2018), [www.cbo.gov/publication/53826](http://www.cbo.gov/publication/53826). Projections for 2019 to 2029 are scheduled to be published early in May 2019.

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](http://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, "HISIM2—The Health

Insurance Simulation Model Used in Preparing CBO's Spring 2019 Baseline" (April 2019), [www.cbo.gov/publication/55097](http://www.cbo.gov/publication/55097); and *How CBO and JCT Analyze Major Proposals That Would Affect Health Insurance Coverage* (February 2018), [www.cbo.gov/publication/53571](http://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](http://www.cbo.gov/publication/51130).

This report is an update to previous publications on this topic. See Congressional Budget Office, *How CBO Defines and Estimates Health Insurance Coverage for People Under Age 65* (May 2018), [www.cbo.gov/publication/53822](http://www.cbo.gov/publication/53822). For related earlier discussion, 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](http://www.cbo.gov/publication/52352); and Congressional Budget Office, *How Many People Lack Health Insurance and For How Long?* (May 2003), [www.cbo.gov/publication/14426](http://www.cbo.gov/publication/14426).

### Information About Individual Data Sources

CBO's estimates for each coverage category of actual outcomes from individual data sources draw upon surveys, administrative data, or both. The agency's estimates are for the noninstitutionalized civilian population under age 65.

**Employment-Based Coverage.** CBO's estimates of the number of people enrolled in military and veterans' health programs—and not enrolled in another type of employment-based health insurance—are based on data from the Census Bureau's Current Population Survey (CPS). CBO's preliminary estimates of the number of other people covered by employment-based health insurance are constructed in two steps. First, CBO uses data from the Medical Expenditure Panel Survey—Insurance Component and from the Office

of Personnel Management on the Federal Employees Health Benefits program to estimate the total number of employment-based health insurance policies.<sup>1</sup> Second, the agency combines that estimate with the average number of dependents per family policy according to the Medical Expenditure Panel Survey—Household Component to estimate the total number of people with employment-based health insurance.<sup>2</sup>

**Medicaid and CHIP.** With one exception, estimated enrollment in Medicaid is based on data regarding monthly enrollment that is submitted by states to the Centers for Medicare & Medicaid Services (CMS) on Form CMS-64.<sup>3</sup> The exception is California: In that state, CBO’s estimates of Medicaid enrollment among people not made eligible by the Affordable Care Act are instead derived from data published by the California Department of Health Care Services.<sup>4</sup> CBO’s estimates for Medicaid that use those data sources are adjusted to exclude enrollees with partial Medicaid benefits and those who are enrolled in more than one state. CBO’s estimates of the number of people covered by the Children’s Health Insurance Program (CHIP) are based on data from the CHIP Statistical Enrollment Data System.<sup>5</sup>

**Nongroup Coverage.** Estimated enrollment in the nongroup market is based on data from CMS’s Medical Loss Ratio reports and data from the National Association of Insurance Commissioners.<sup>6</sup> CBO’s estimates of actual

enrollment through the marketplaces is based on CMS’s effectuated enrollment reports.<sup>7</sup> Nongroup enrollment outside of the marketplaces is estimated from the difference between total nongroup enrollment and marketplace enrollment.

**Basic Health Program.** CBO’s estimates of the number of people who enrolled in coverage through the Basic Health Program are based on information published by the state governments of Minnesota and New York, which are the only states that have used the program.<sup>8</sup>

**Medicare.** 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.<sup>9</sup>

**Other Coverage.** The estimated number of people with alternative sources of coverage (including the Indian Health Service, student health plans, and foreign sources) is based on data from the CPS.

1. See Department of Health and Human Services, Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, “Insurance/Employer Component” (accessed March 26, 2019), <https://go.usa.gov/xm3Md>.
2. See Department of Health and Human Services, Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, “Household Component” (accessed March 26, 2019), <https://go.usa.gov/xm3MG>.
3. See Centers for Medicare & Medicaid Services, “Medicaid Enrollment Data Collected Through MBES” (accessed March 26, 2019), <https://go.usa.gov/xR7jy>.
4. See California Department of Health Care Services, “Medi-Cal Certified Eligibles—Recent Trends” (accessed March 26, 2019) <https://go.usa.gov/xm3MH>.
5. See Centers for Medicare & Medicaid Services, “Reports & Evaluations” (accessed March 26, 2019), [www.medicaid.gov/chip/reports-and-evaluations/index.html](http://www.medicaid.gov/chip/reports-and-evaluations/index.html).
6. CBO accessed data from the Centers for Medicare & Medicaid Services and from the National Association of Insurance Commissioners via the Health Coverage Portal™ by Mark Farrah Associates. See Centers for Medicare & Medicaid

- Services, “Medical Loss Ratio Data and System Resources” (accessed March 26, 2019), <https://go.usa.gov/xm3e9>; and Mark Farrah Associates, “Health Coverage Portal,” <http://tinyurl.com/yxsd77qx>.
7. See Centers for Medicare & Medicaid Services, “Total Effectuated Enrollment and Financial Assistance by State” (accessed March 26, 2019), <https://go.usa.gov/xR7jv>; “2017 Effectuated Enrollment Snapshot” (accessed March 26, 2019), <https://go.usa.gov/xm3ep> (PDF, 490 KB); “Early 2018 Effectuated Enrollment Snapshot” (accessed March 26, 2019), <https://go.usa.gov/xm3ed> (PDF, 372 KB); and “First Half of 2018 Average Effectuated Enrollment Data” (accessed April 11, 2019), <https://go.usa.gov/xm4Xd> (PDF, 131 KB).
8. See Minnesota Department of Human Services, “Managed Care Enrollment Figures” (accessed March 26, 2019), <http://tinyurl.com/y53ub5de>; and New York State Department of Health, “Basic Health Program Annual Reports” (accessed March 26, 2019), <https://go.usa.gov/xm3eG>; and NY State of Health, “Enrollment Data” (accessed March 26, 2019), <https://info.nystateofhealth.ny.gov/enrollmentdata>.
9. See Centers for Medicare & Medicaid Services, data provided to CBO (March 12, 2019); Social Security Administration, “Annual Statistical Report on the Social Security Disability Insurance Program” (various years), [www.ssa.gov/policy/docs/statcomps/](http://www.ssa.gov/policy/docs/statcomps/); and “Number of Beneficiaries by Age” (accessed March 2019), [www.ssa.gov/OACT/ProgData/byage.html?type=da](http://www.ssa.gov/OACT/ProgData/byage.html?type=da).

**Uninsured.** CBO's estimates of the number of uninsured are based on the number of people that reported being uninsured in the National Health Interview Survey (NHIS). For 2015 to 2017, CBO used the public-use data release of that survey; for 2018, CBO used the early release covering January to September of that year, making a small adjustment for the typical difference between the preliminary and final data. In all cases, CBO adjusted downward the number reported in the NHIS to exclude people with coverage through the Indian Health Service, which the agency considers to be health insurance.<sup>10</sup>

### Related Research

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

Jean M. Abraham, Pinar Karaca-Mandic, and Michel 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>.

Fredric 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>.

Michel 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](http://www.jstor.org/stable/25167624).

Health Insurance Coverage Data Council Workgroup, *Data Council Workgroup Report on DHHS Health Insurance Coverage Estimates: An Evaluation of Existing Capacity, Content, Comparability and Alignment* (Agency for Healthcare Research and Quality working paper, forthcoming).

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).

10. See Emily P. Terlizzi, Robin A. Cohen, and Michael E. Martinez, *Health Insurance Coverage: Early Release of Estimates From the National Health Interview Survey, January–September 2018* (National Center for Health Statistics, February 2019), <https://go.usa.gov/xm3e7> (PDF, 594 KB); and National Center for Health Statistics, "NHIS Data, Questionnaires and Related Documentation" (accessed March 26, 2019), <https://go.usa.gov/xmrde>.

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).

Joanne Pascale, Michel Boudreaux, and Ryan King, “Understanding the New Current Population Survey Health Insurance Questions,” *Health Services Research*, vol. 51, no. 1 (February 2016), pp. 240–261, <https://tinyurl.com/yc3u4xpp>.

Joanne Pascale, Marc Roemer, and Dean Michael Resnick, “Medicaid Underreporting in the CPS: Results From a Record Check Study,” *Public Opinion Quarterly*, vol. 73, no. 3 (Fall 2009), pp. 497–520, [www.jstor.org/stable/40467615](http://www.jstor.org/stable/40467615).

Michael R. Plotzke, Jacob Alex Klerman, and Michael E. Davern, “How Similar Are Different Sources of CHIP Enrollment Data?” *Journal of Economic and*

*Social Measurement*, vol. 36, no. 3 (2011), pp. 213–225, <https://tinyurl.com/ya4aakmn>.

University of Minnesota State Health Access Center and others, *Research Project to Understand the Medicaid Undercount: Phase II Research Results—Examining Discrepancies Between the National Medicaid Statistical Information System (MSIS) and the Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC)* (March 2008), <http://go.usa.gov/x8RAY> (PDF, 4.3 MB).

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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CBO continually seeks feedback to make its work as useful as possible. Please send any feedback to [communications@cbo.gov](mailto:communications@cbo.gov).



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