Health Insurance Coverage for Americans with Pre-Existing Conditions: The Impact of the Affordable Care Act

January 5, 2017

The Affordable Care Act (ACA) put in place a range of nationwide protections for Americans with pre-existing health conditions. Under the ACA, insurance companies cannot deny coverage or charge higher premiums based on a person's medical history or health status. In addition, policies cannot exclude coverage for treating a pre-existing condition, must include limits on out-of-pocket spending, cannot include limits on annual or lifetime coverage, and, in the case of most individual and small group market policies, must cover essential health benefits.

In 2011, prior to the implementation of the ACA's major health insurance reforms in 2014, ASPE examined the impact of the ACA's pre-existing conditions protections.[1] The 2011 analysis found that between 50 and 129 million non-elderly Americans had pre-existing health conditions and would gain new protections under the ACA reforms.[2]

This analysis updates that earlier study. It confirms that a large fraction of non-elderly Americans have pre-existing health conditions: at least 23 percent of Americans (61 million people) using a narrow definition based on eligibility criteria for pre-ACA state high-risk pools, or as many as 51 percent (133 million people) using a broader definition closer to the underwriting criteria used by insurers prior to the ACA. Any of these 133 million Americans could have been denied coverage, or offered coverage only at an exorbitant price, had they needed individual market health insurance before 2014. This analysis also offers a first look at how health insurance coverage for people with pre-existing conditions actually changed when the ACA's major insurance market reforms took effect in 2014. It finds that, between 2010 and 2014, the share of Americans with pre-existing conditions who went without health insurance all year fell by 22 percent, a drop of 3.6 million people. The ACA's individual market reforms appear to have played a key role in these gains.

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[1] Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation, *At Risk: Pre-Existing Conditions Could Affect 1 in 2 Americans*. January 2011, available at https://aspe.hhs.gov/sites/default/files/pdf/76376/index.pdf.

[2] Non-elderly are defined as individuals age 0 to 64 who did not have Medicare coverage in any month.

After dropping by about a quarter between 2010 and 2014, the uninsured rate for all non-elderly Americans has fallen an additional 22 percent through the first half of 2016.[3] While data for Americans with pre-existing conditions are available only through 2014, it is likely that this group has also seen continued gains in access to coverage and care over the past two years.

Key Findings:

- Up to 133 million non-elderly Americans—just over half (51 percent) of the non-elderly population—may have a pre-existing condition. This includes 67 million women and girls and 66 million men and boys.
- The likelihood of having a pre-existing condition increases with age: up to 84 percent of those ages 55 to 64—31 million individuals—have at least one pre-existing condition.
- Among the most common pre-existing conditions are high blood pressure (46 million people), behavioral health disorders (45 million people), high cholesterol (44 million people); asthma/chronic lung disease (34 million people), heart conditions (16 million people), diabetes (13 million people), and cancer (11 million people).
- Between 2010 and 2014, when the ACA's major health insurance reforms first took effect, the share of Americans with pre-existing conditions who went uninsured all year fell by 22 percent, meaning 3.6 million fewer people went uninsured.
- Tens of millions of Americans with pre-existing conditions experience spells of uninsurance. About 23 percent (31 million) experienced at least one month without insurance coverage in 2014, and nearly one-third (44 million) went uninsured for at least one month during the two-year period beginning in 2013.

How the ACA Reformed Coverage for People with Pre-Existing Conditions

A pre-existing condition is a health condition that predates a person applying for or enrolling in a new health insurance policy. Before the ACA, insurers generally defined what types of conditions could constitute a pre-existing condition. Their definitions frequently encompassed both serious conditions, such as cancer or heart disease, and less severe and more common conditions, such as asthma, depression, or high blood pressure.

Before the ACA, individual insurers in the vast majority of states could collect information on demographic characteristics and medical history, and then deny coverage, charge higher premiums, and/or limit benefits to individuals based on pre-existing conditions. An industry survey found that 34 percent of individual market applicants were charged higher-than-standard rates based on demographic characteristics or medical history.[4] Similarly, a 2009 survey found

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[3] Emily P. Zammitti, Robin A. Cohen, and Michael E. Martinez, *Health Insurance Coverage: Early Release of Estimates from the National Health Insurance Survey, January-June 2016*, p. A1. National Center for Health Statistics, November 2016, available at https://www.cdc.gov/nchs/data/nhis/earlyrelease/insur201611.pdf.
[4] AHIP Center for Policy Research (AHIP), *Individual Health Insurance 2009: A Comprehensive Survey of Premiums, Availability, and Benefits,* October 2009.

that, among adults who had individual market coverage or shopped for it in the previous three years, 36 percent were denied coverage, charged more, or had exclusions placed on their policy due to pre-existing conditions.[5] A report by the Government Accountability Office estimated that, as of early 2010, the denial rate among individual market applications was 19 percent, and the most common reason for denial was health status.[6]

While some states attempted to offer some protection to people with pre-existing conditions, these efforts were generally not effective at ensuring access to affordable coverage.[7] For example:

- Some states required that coverage be offered to people with pre-existing conditions, but imposed no restrictions on how much insurers could increase premiums based on health status.

- Some states required that coverage be offered to people with pre-existing conditions, but allowed insurers to exclude treatment for the pre-existing condition. Thus, a cancer survivor could have obtained coverage, but that coverage would not have paid for treatment if the cancer re-emerged.

- Some states required that coverage be offered to people with pre-existing conditions, but only to those who met continuity of coverage requirements. In practice, a high fraction of people with pre-existing conditions go uninsured for at least short spells due to job changes, other life transitions, or periods of financial difficulty. About 23 percent of percent of Americans with pre-existing conditions (31 million people) experienced at least one month without insurance coverage in 2014. In the two-year period beginning in 2013, nearly one-third (44 million) of individuals with pre-existing conditions went uninsured for at least one month. About 93 percent of those who were ever uninsured went without coverage for a spell of two months or more, and about 87 percent went without coverage for a spell of three months or more.[8]

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[5] Michelle M. Doty, Sara R. Collins, Jennifer L. Nicholson, and Sheila D. Rustgi, *Failure to Protect: Why the Individual Insurance Market is not a Viable Option for Most US Families,* The Commonwealth Fund, July 2009, available at http://www.commonwealthfund.org/~/media/Files/Publications/Issue%20Brief/2009/Jul/Failure%20to%20Protect/1300_Doty_failure_to_protect_individual_ins_market_ib_v2.pdf.

[6] U.S. Government Accountability Office, *Private Health Insurance: Data on Applications and Coverage Denials*, Report to the Secretary of Health and Human Services and the Secretary of Labor, March 16, 2011, available at http://www.gao.gov/assets/320/316699.pdf.

[7] For a comparison of states' pre-ACA rules, see National Conference of State Legislatures, "Individual Health Insurance and States: Chronologies of Care," Updated August 2015, http://www.ncsl.org/research/health/individual-health-insurance-in-the-states.aspx.

[8] HHS analysis of 2013 and 2014 MEPS.

- A few states sought to require that people with pre-existing conditions be offered coverage at the same price as other Americans. But without accompanying measures to ensure that healthy residents also continued to buy insurance, these states saw escalating premiums that made health insurance unaffordable for sick and healthy residents alike.[9]

In contrast, the ACA implemented a nationwide set of reforms in the individual health insurance market. The law requires individual market insurers to offer comprehensive coverage to all enrollees, on common terms, regardless of medical history. Meanwhile, the ACA also includes measures to ensure a balanced risk pool that keeps coverage affordable. To directly improve affordability while encouraging individuals to buy coverage, the ACA offers financial assistance for eligible taxpayers with household incomes up to 400 percent of the federal poverty level to reduce their monthly premium payments.[10] The law also includes an individual shared responsibility provision that requires people who can afford coverage to make a payment if they instead elect to go without it.[11]

Prevalence of Pre-Existing Conditions

Estimating the Number of Americans with Pre-Existing Conditions

This analysis updates earlier ASPE estimates of the number of non-elderly Americans potentially benefitting from the ACA's pre-existing conditions protections. As in the earlier study, we consider two definitions of pre-existing conditions. The narrower measure includes only conditions identified using eligibility guidelines from state-run high-risk pools that pre-dated the ACA. These programs were generally intended to cover individuals who would be outright rejected for coverage by private insurers. The broader measure includes additional common health conditions (for example, arthritis, asthma, high cholesterol, hypertension, and obesity) and behavioral health disorders (including alcohol and substance use disorders, depression, and Alzheimer's) that could have resulted in denial of coverage, exclusion of the condition, or higher premiums for individuals seeking individual market coverage before the ACA protections applied.[12]

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[9] Former insurance commissioners in Rhode Island and Washington described the problems created by partial reforms in their states. See, for example, Christopher Koller, "Why Republican Health Insurance Reform Ideas Are Likely to Fail," Politico, December 7, 2016, http://www.politico.com/agenda/story/2016/12/republican-health-reform-ideas-obamacare-unlikely-work-000252, and Harris Meyer, "What It Will Take to Stop Insurers From Fleeing After ACA Repeal," Modern Health Care, December 5, 2016, http://www.modernhealthcare.com/article/20161205/NEWS/161209962. The exception was Massachusetts, which enacted its own version of the ACA's insurance market reforms, subsidies, and individual responsibility provision in 2006.

[10] Office of the Assistant Secretary for Planning and Evaluation, *Health Plan Choice and Premiums in the 2017 Health Insurance Marketplace*, October 24, 2016, available at https://aspe.hhs.gov/sites/default/files/pdf/212721/2017MarketplaceLandscapeBrief.pdf.

[11] For an extended discussion of the ACA's insurance market reforms, see https://www.whitehouse.gov/sites/default/files/page/files/20161213_cea_record_healh_care_reform.pdf.

[12] These conditions were selected based on underwriting guidelines identified using internet searches in the pre-ACA period.

We focus primarily on the broader measure, because individuals with any of these conditions were at risk of higher premiums and/or coverage carve-outs, if not outright coverage denials if they sought individual market health insurance before the ACA protections applied. The narrower measure is similar to that used in a recent Kaiser Family Foundation (KFF) analysis, which finds that 52 million non-elderly adults would have been "uninsurable" in the individual market in most states before the ACA. The KFF study notes that its analysis does not attempt to include "people with other health conditions that wouldn't necessarily cause a denial, but could lead to higher insurance costs based on underwriting."[13]

Both our narrow and broad estimates are based on the 2014 Medical Expenditure Panel Survey (MEPS), the most recent data available that provide both coverage and detailed health status information. The appendix provides a more detailed description of our methodology and supplemental tables.[14]

The Prevalence of Pre-Existing Conditions in 2014

As shown in Table 1, we find that the ACA is protecting between 23 and 51 percent of non-elderly Americans--61 to 133 million people--with some type of pre-existing health condition from being denied coverage, charged significantly higher premiums, subjected to an extended waiting period, or having their health insurance benefits curtailed should they need individual market health insurance coverage.

Certain groups are more likely than others to have pre-existing conditions. In particular, as people age, their likelihood of having—or ever having had—a pre-existing health condition increases steadily. Americans between ages 55 and 64 are particularly at risk: 49 to 84 percent of people in this age range—up to 31 million people—have some type of pre-existing condition. By comparison, 6 to 24 percent of Americans under the age of 18 have some type of pre-existing condition (see Figure 1). Approximately 56 percent of Non-Hispanic whites and individuals with family incomes above 400 percent of the federal poverty level have some type of pre-existing condition.

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[13] The authors also note that their analysis excludes certain conditions that likely would have led to coverage denials, including such as Hepatitis C and HIV/AIDS. See Gary Claxton, Cynthia Cox, Anthony Damico, Larry Levitt, and Karen Pollitz, *Pre-Existing Conditions and Medical Underwriting in the Individual Market Prior to the ACA*, Kaiser Family Foundation, December 2016 (available at http://files.kff.org/attachment/Issue-Brief-Pre-existing-Conditions-and-Medical-Underwriting-in-the-Individual-Insurance-Market-Prior-to-the-ACA).

[14] All estimates cover individuals age 0 to 64 who did not have Medicare coverage in any month. In addition to describing our methodology, the Appendix explains technical changes that account for the substantial revision to our lower-bound estimate from the 2011 brief.

Table 1: Prevalence of Pre-Existing Conditions, 2014				
	Number with Pre-Existing Condition (Millions)		Share with Pre-Existing Condition	
	Narrow Definition	Broad Definition	Narrow Definition	Broad Definition
All non-elderly	61	133	23%	51%
Male	26	66	20%	50%
Female	35	67	26%	51%
Under age 18	4	17	6%	24%
18-24	5	11	15%	37%
25-34	8	20	19%	46%
35-44	10	23	26%	59%
45-54	16	31	38%	75%
55-64	18	31	49%	84%
<=138% of poverty	13	27	24%	48%
139-400% of poverty	23	51	21%	47%
>400% of poverty	25	55	25%	56%
Hispanic	8	20	15%	39%
Non-Hispanic White	42	85	28%	56%
Non-Hispanic Black	7	17	20%	52%
Non-Hispanic Asian	2	5	14%	34%
Other race	2	5	21%	47%

Source: HHS analysis of the 2014 MEPS.
Note: Narrow Definition based on criteria for state high risk pools before the ACA; Broad Definition based on pre-ACA underwriting criteria used by insurers.

Figure 1: Americans with Pre-Existing Conditions by Age, 2014
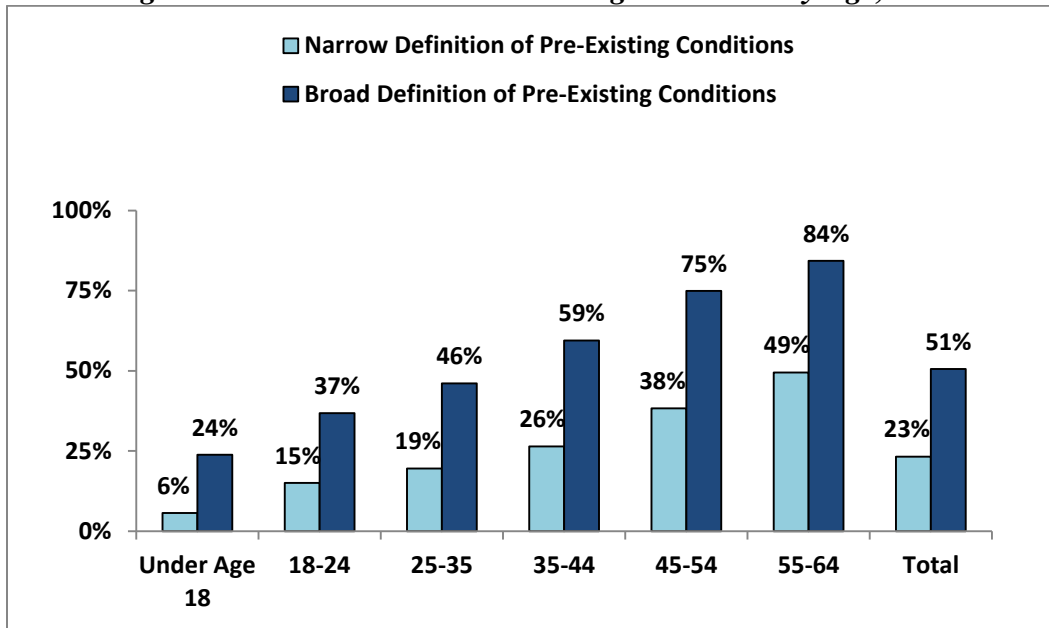
Source: HHS analysis of the 2014 MEPS.

Common Pre-Existing Conditions Facing Americans

As shown in Table 2, we also examine the prevalence of specific pre-existing conditions faced by Americans (focusing on the broader insurer definition). The table lists the eleven conditions with prevalence of 1 million or more among non-elderly individuals with no Medicare enrollment during 2014. These conditions are listed from most to least prevalent, although differences between ranks may not be statistically significant.

Table 2: Number of Americans with Specific Pre-Existing Conditions, 2014	
	Number (Millions)
Hypertension (high blood pressure)	46
Behavioral health disorders	45
Hyperlipidemia (high cholesterol)	44
Asthma/chronic lung disease	34
Osteoarthritis or other non-traumatic joint disorders	34
Obesity	23
Heart conditions/heart disease	16
Diabetes mellitus	13
Cancer	11
Cerebrovascular disease	3
Infectious diseases	1
Source: HHS Analysis of the 2014 MEPS. Notes: Estimates based on broad definition of pre-existing conditions. A single individual can have multiple pre-existing conditions. Differences in the estimated number of individuals with specific conditions are not necessarily statistically significant.	

Among the most common pre-existing conditions for non-elderly Americans are high blood pressure, high cholesterol, behavioral health disorders (including, for example, alcohol and substance use disorders, depression, and Alzheimer's), asthma, arthritis, and obesity. Millions of Americans also have diabetes (13 million), heart conditions or heart disease (16 million), or have at some point been diagnosed with cancer (11 million).

The Impact of the ACA's Protections in 2014

As described above, the ACA put in place a range of new protections designed to give individuals with pre-existing conditions, along with other Americans, increased access to affordable health insurance. The 2014 MEPS data show that this is being borne out in practice, with significant improvements in health insurance coverage for Americans with pre-existing conditions.

As shown in Table 3, between 2010 and 2014, the share of Americans with pre-existing conditions who went uninsured all year fell from 13.8 percent to 10.7 percent, a drop of 22 percent. These gains translated into 3.6 million fewer individuals with pre-existing conditions without health insurance.

Table 3: Percent and Number of Non-Elderly Americans with Pre-Existing Conditions that Lacked Health Insurance All Year, 2010 and 2014

|	Percent of People Without Coverage			Number of People Without Coverage (Millions)		
	2010	2014	Percent Change	2010	2014	Change
Total	13.8	10.7	-22	17.9	14.3	-3.6
Male	14.5	11.5	-23	9.4	7.5	-1.8
Female	13.1	10.0	-21	8.5	6.7	-1.8
Hypertension (high blood pressure)	15.3	12.8	-17	7.1	5.9	-1.1
Hyperlipidemia (high cholesterol)	11.6	10.1	-13	5.2	4.4	-0.8
Behavioral health disorders	11.7	8.5	-27	4.6	3.8	-0.7
Osteoarthritis	13.7	10.7	-22	4.3	3.6	-0.8
Asthma/chronic lung disease	11.9	8.7	-27	4.1	3.0	-1.2

Source: HHS Analysis of the 2010 and 2014 MEPS.
Notes: Estimates based on broad definition of pre-existing conditions. A single individual can have multiple pre-existing conditions. Differences in the estimated number of individuals with specific conditions are not necessarily statistically significant.

Figure 2 shows the source of these gains. While the share of Americans with pre-existing conditions who had coverage through an employer remained roughly constant, the share with coverage through Medicaid rose, and the share with individual market coverage increased substantially as pre-ACA underwriting practices were phased out and Marketplace subsidies became available (see Appendix Table 5).[15]

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[15] Insurance category is assigned by an ever-on hierarchy based on coverage in any month. Individuals with employer-sponsored coverage in any month, for example, were assigned to that category, even if they had months of enrollment in Medicaid/CHIP, individual market coverage, or other public coverage, or were ever uninsured. Because people move across sources of coverage in a year, more individuals may have had Medicaid/CHIP, individual market coverage, or other public coverage than shown in Figure 2. Individual market coverage for 2014 includes both Marketplace and off-Marketplace coverage. Individuals categorized as uninsured were without coverage in any survey month.

Figure 2: Coverage Status of Americans with Pre-Existing Conditions, 2010 and 2014
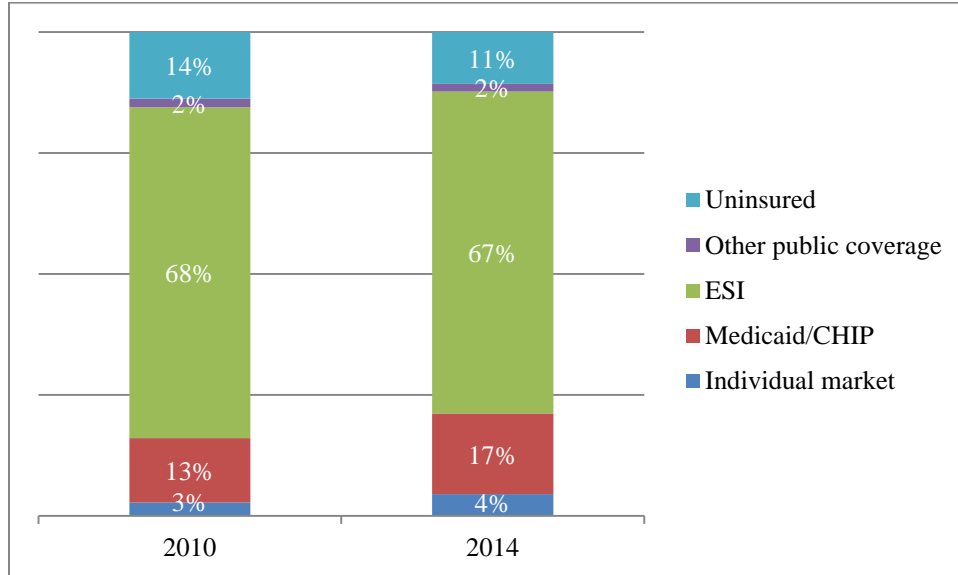
Source: HHS analysis of the 2010 and 2014 MEPS.

Figure 3 provides further confirmation that the ACA is eliminating barriers in the individual market for Americans with pre-existing conditions. In 2010, 54 percent of people with employer coverage had pre-existing conditions, similar to their share of the overall population. But in the individual market, only 46 percent of people had a pre-existing condition. By 2014, the composition of the individual market had shifted to nearly mirror the employer market, consistent with a market where insurers can no longer deny coverage based on health history.

Figure 3: Percent of Americans with Employer and Individual Market Coverage with Pre-Existing Conditions, 2010 and 2014
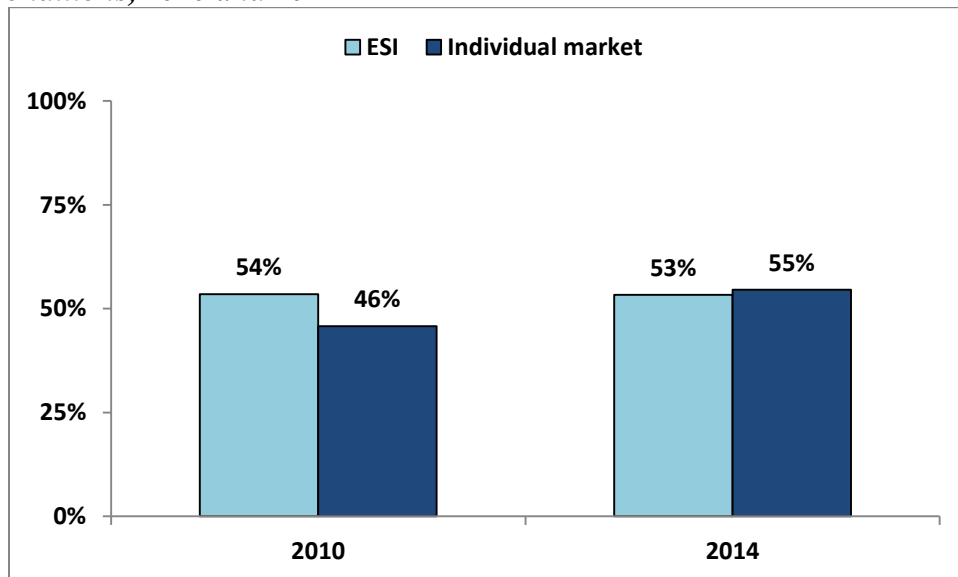
Source: HHS analysis of the 2010 and 2014 MEPS.

Conclusion

With data available only through 2014, this analysis provides a preliminary picture of how the ACA is helping individuals with pre-existing conditions. The uninsured rate for all Americans, which fell by 27 percent between 2010 and 2014, fell another 22 percent between 2014 and 2016, and people with pre-existing conditions have likely seen similar additional progress. Nonetheless, this initial snapshot confirms that the ACA's insurance market reforms are providing important protections to the up to half of Americans whose medical history previously put them at risk of being denied access to affordable health care.

APPENDIX: METHODOLOGY

We used the 2014 Medical Expenditure Panel Survey (MEPS) to identify individuals who would likely been denied coverage due to a pre-existing condition if they were to apply for coverage in the individual market without the protections provided by the Affordable Care Act. A multi-pronged approach was used to identify conditions that would certainly or likely exclude individuals from being offered coverage. A list of pre-existing conditions was generated from two sources: eligibility guidelines from 19 pre-Affordable Care Act high-risk pools and underwriting guidelines from seven major insurance carriers.[16] The MEPS was used to identify whether individuals had a medical visit for any of these conditions, experienced any disability days (for the 2008 and 2010 data, as this information is no longer available in the 2014 data) as a result of any of these conditions, or reported that they were bothered by any of these conditions in the past year. Additional questions regarding whether individuals had ever been diagnosed with a smaller set of conditions from these lists were used to further refine our measure.

Two estimates of the share of non-elderly individuals with pre-existing conditions are presented. The first includes only conditions that were identified using eligibility guidelines from high-risk pools; the second includes five additional common conditions (arthritis, asthma, high cholesterol, hypertension, and obesity) and a number of common behavioral health conditions that would have resulted in an automatic decline, exclusion of the condition, or higher premiums according to the seven pre-Affordable Care Act insurer guidelines examined. The first estimate includes conditions that would have been very likely to cause an applicant to be denied coverage, and should be considered a lower bound estimate. The second estimate includes conditions that might result in a denial of coverage, but also might have resulted in a rate-up (that is, a higher premium) or a coverage rider (that is, a policy that excludes coverage for a pre-existing condition).

Analyses of the prevalence of particular conditions employ the categories used in the Clinical Classification Software (CCS) developed for the Healthcare Cost and Utilization Project (HCUP). A crosswalk between ICD-9 and CCS categories is available at https://meps.ahrq.gov/data_stats/download_data/pufs/h170/h170app3.html.

Appendix Tables 1-4 present the full set of estimates by age and insurance status for 2010 and 2014, using both pre-existing conditions measures. Appendix Table 5 shows the change between 2010 and 2014 in the distribution of insurance coverage among individuals with pre-existing conditions (broad definition only).

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[16] For a list of the included conditions and more detailed explanation of methods, please see the Methodology section of: *"At Risk: Pre-Existing Conditions Could Affect 1 in 2 Americans"*; US Department of Health & Human Services, January 2011. Available online at: https://aspe.hhs.gov/sites/default/files/pdf/76376/index.pdf.

Appendix Table 1: Pre-Existing Conditions by Age, based on MEPS 2010

Age Category	Total Population	Narrow Definition of Pre-Existing Conditions	Broad Definition of Pre-Existing Conditions	Narrow Definition of Pre-Existing Conditions	Broad Definition of Pre-Existing Conditions
<18	74,397,000	4,439,000	17,113,000	6%	23%
18-24	29,713,000	4,342,000	10,528,000	15%	35%
25-34	41,007,000	7,333,000	18,407,000	18%	45%
35-44	38,879,000	10,579,000	23,080,000	27%	59%
45-54	42,190,000	15,652,000	30,758,000	37%	73%
55-64	34,617,000	17,633,000	29,750,000	51%	86%
Total	**260,803,000**	**59,979,000**	**129,635,000**	**23%**	**50%**

Source: HHS analysis of the 2010 MEPS.
Note: All estimates rounded to thousands.

Appendix Table 2: Pre-Existing Conditions by Age, based on MEPS 2014

Age Category	Total Population	Narrow Definition of Pre-Existing Conditions	Broad Definition of Pre-Existing Conditions	Narrow Definition of Pre-Existing Conditions	Broad Definition of Pre-Existing Conditions
<18	73,522,000	4,148,000	17,499,000	6%	24%
18-24	30,336,000	4,553,000	11,169,000	15%	37%
25-34	42,314,000	8,251,000	19,511,000	19%	46%
35-44	38,910,000	10,289,000	23,146,000	26%	59%
45-54	40,903,000	15,662,000	30,625,000	38%	75%
55-64	36,714,000	18,145,000	30,934,000	49%	84%
Total	**262,699,000**	**61,048,000**	**132,884,000**	**23%**	**51%**

Source: HHS analysis of the 2014 MEPS.
Note: All estimates rounded to thousands to account for impression of estimates.

Appendix Table 3: Pre-Existing Conditions by Insurance Status, based on MEPS 2010

Insurance Category	Total Population	Narrow Definition of Pre-Existing Conditions	Broad Definition of Pre-Existing Conditions	Narrow Definition of Pre-Existing Conditions	Broad Definition of Pre-Existing Conditions
Employment-Based	165,736,000	40,535,000	88,676,000	24%	54%
Medicaid/CHIP	42,825,000	8,358,000	17,182,000	20%	40%
Individual Market	7,900,000	1,547,000	3,619,000	20%	46%
Other Public	4,117,000	1,308,000	2,283,000	32%	55%
Uninsured	40,225,000	8,230,000	17,875,000	20%	44%
Total	**260,803,000**	**59,979,000**	**129,635,000**	**23%**	**50%**

Source: HHS analysis of the 2010 MEPS.
Notes: All estimates rounded to thousands to account for impression of estimates. Insurance category is assigned by an ever-on hierarchy based on coverage in any month. Individuals with employer-sponsored coverage in any month, for example, were assigned to that category, even if they had months of enrollment in Medicaid/CHIP, individual market coverage, or other public coverage, or were ever uninsured. Because people move across sources of coverage in a year, more individuals may have had Medicaid/CHIP, individual market coverage, or other public coverage than shown. Individuals categorized as uninsured were without coverage in any survey month.

Appendix Table 4: Pre-Existing Conditions by Insurance Status, based on MEPS 2014

Insurance Category	Total Population	Narrow Definition of Pre-Existing Conditions	Broad Definition of Pre-Existing Conditions	Narrow Definition of Pre-Existing Conditions	Broad Definition of Pre-Existing Conditions
Employment-Based	165,820,000	39,912,000	88,401,000	24%	53%
Medicaid/CHIP	51,275,000	10,894,000	22,177,000	21%	43%
Individual Market	10,904,000	2,936,000	5,948,000	27%	55%
Other Public	3,637,000	1,003,000	2,089,000	28%	57%
Uninsured	31,063,000	6,304,000	14,269,000	20%	46%
Total	**262,699,000**	**61,048,000**	**132,884,000**	**23%**	**51%**

Source: HHS analysis of the 2014 MEPS.
Notes: All estimates rounded to thousands to account for impression of estimates. Insurance category is assigned by an ever-on hierarchy based on coverage in any month. Individuals with employer-sponsored coverage in any month, for example, were assigned to that category, even if they had months of enrollment in Medicaid/CHIP, individual market coverage, or other public coverage, or were ever uninsured. Because people move across sources of coverage in a year, more individuals may have had Medicaid/CHIP, individual market coverage, or other public coverage than shown. Individual market coverage for 2014 includes both Marketplace and off-Marketplace coverage. Individuals categorized as uninsured were without coverage in any survey month.

Appendix Table 5: Change in Insurance Coverage of Individuals with Pre-Existing Conditions (Broad Definition), 2010-2014

Insurance Category	2010 Pre-ex Population	2014 Pre-ex Population	Percentage Change	2010 Share of pre-ex population	2014 Share of pre-ex population
Employment-Based	88,676,000	88,401,000	-0.3%	68.4%	66.5%
Medicaid/CHIP	17,182,000	22,177,000	29.1%	13.3%	16.7%
Individual Market	3,619,000	5,948,000	64.3%	2.8%	4.5%
Other Public	2,283,000	2,089,000	-8.5%	1.8%	1.6%
Uninsured	17,875,000	14,269,000	-20.2%	13.8%	10.7%
Total	**129,635,000**	**132,884,000**	**2.5%**	**100.0%**	**100.0%**

Source: HHS analysis of the 2010 and 2014 MEPS.
Notes: All estimates rounded to thousands to account for impression of estimates. Insurance category is assigned by an ever-on hierarchy based on coverage in any month. Individuals with employer-sponsored coverage in any month, for example, were assigned to that category, even if they had months of enrollment in Medicaid/CHIP, individual market coverage, or other public coverage, or were ever uninsured. Because people move across sources of coverage in a year, more individuals may have had Medicaid/CHIP, individual market coverage, or other public coverage than shown. Individual market coverage for 2014 includes both Marketplace and off-Marketplace coverage. Individuals categorized as uninsured were without coverage in any survey month.

Methodological Refinements to 2011 Analysis:

The current analysis includes several methodological improvements relative to our 2011 analysis that improve the precision of our estimates. First, we identified a subset of individuals who had a condition meeting our narrower definition of a pre-existing condition, but who were incorrectly excluded from our estimates due to an error in coding. As a result of this correction, 1,237 unweighted sample observations are newly classified as having a pre-existing condition under our narrower definition. When weighted these records correspond to approximately 13.4 million individuals.

Second, we adjusted the variable we used to define the age of individuals in the MEPS data, from AGE53X to AGE08X, to better capture the age of panel members during the year in which the data was collected. This change adds an additional 13 unweighted sample observations to the non-elderly population, which is eligible for both our first and second measures. When weighted, these observations represent nearly 200,000 additional eligible individuals.

Third, our current analysis uses full 5 digit ICD-9 codes to specify conditions included in our two measures, provides additional precision to our estimates. These codes are not included in the publicly available data file, which provides only 3 digit ICD-9 codes. This change reduces the number of unweighted sample observations included in the lower-bound measure by 230, representing nearly 2.4 million individuals, and 117 in the upper-bound measure, representing just over 1.1 million individuals.

Appendix Table 6 provides revised 2008 estimates of individuals with pre-existing conditions by age and Appendix Table 7 provides revised 2008 estimates by insurance status corresponding to those provided in the 2011 ASPE brief on this subject.

Appendix Table 6: Pre-Existing Conditions by Age, based on MEPS 2008

Age Category	Total Population	Narrow Definition of Pre-Existing Conditions	Broad Definition of Pre-Existing Conditions	Narrow Definition of Pre-Existing Conditions	Broad Definition of Pre-Existing Conditions
<18	73,677,000	4,623,000	17,123,000	6%	23%
18-24	28,501,000	4,263,000	9,715,000	15%	34%
25-35	40,334,000	7,486,000	18,089,000	19%	45%
35-44	40,947,000	10,939,000	23,948,000	27%	58%
45-54	41,512,000	15,862,000	30,301,000	38%	73%
55-64	33,383,000	17,516,000	28,609,000	52%	86%
Total	**258,353,000**	**60,689,000**	**127,785,000**	**23%**	**49%**

Source: HHS analysis of the 2008 MEPS.
Note: All estimates rounded to thousands to account for impression of estimates.

Appendix Table 7: Pre-Existing Conditions by Insurance Status, based on MEPS 2008

Insurance Category	Total Population	Narrow Definition of Pre-Ex Conditions	Broad Definition of Pre-Ex Conditions	Narrow Definition of Pre-Ex Conditions	Broad Definition of Pre-Ex Conditions
Employment-Based	169,467,000	42,213,000	89,536,000	25%	53%
Medicaid/ CHIP	37,059,000	7,787,000	15,027,000	21%	41%
Non-group	7,010,000	1,327,000	3,060,000	19%	44%
Other Public	4,135,000	1,149,000	2,123,000	28%	51%
Uninsured	40,681,000	8,213,000	18,038,000	20%	44%
Total	**258,353,000**	**60,689,000**	**127,785,000**	**23%**	**49%**

Source: HHS analysis of the 2008 MEPS.
Notes: All estimates rounded to thousands to account for impression of estimates. Insurance category is assigned by an ever-on hierarchy based on coverage in any month. Individuals with employer-sponsored coverage in any month, for example, were assigned to that category, even if they had months of enrollment in Medicaid/CHIP, individual market coverage, or other public coverage, or were ever uninsured. Because people move across sources of coverage in a year, more individuals may have had Medicaid/CHIP, individual market coverage, or other public coverage than shown. Individuals categorized as uninsured were without coverage in any survey month.