

Fiscal Analysis of New Mexico's Health Security Plan: Technical Supplement

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About KNG Health Consulting, LLC

KNG Health Consulting, LLC, is a health economics and policy consulting company assisting clients across all sectors of the healthcare industry. The company's work focuses on two main practice areas: Healthcare Reform and Payment Innovation (HRPI); and Evaluation and Health Economics (EHE). In the HRPI practice, KNG Health's experts work with our clients to estimate the effects of a wide range of healthcare reform and payment innovation policies, ranging from modeling innovative state and federal proposals to reduce health insurance premiums to facilitating learning systems for providers on alternative payment models. In the EHE practice, KNG Health's experts conduct studies on the efficiency, effectiveness, and value of medical interventions using big and small data, applying careful research designs, and translating findings into actionable results.

KNG Health is a small, woman- and minority-owned business located in the Washington, DC metropolitan area.

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I. Overview

This technical supplement describes KNG Health Consulting LLC (KNG Health) development of the analytic file used to conduct its analysis of New Mexico’s Health Security Act (HSA) as introduced in the 2019 New Mexico Legislature. The HSA would create a state health insurance plan (“Health Security Plan”), with the goal of providing universal health insurance coverage and access to affordable, high-quality health coverage for all state residents. The Final Report can be found at <https://www.knghealth.com/fiscal-analysis-of-the-new-mexico-health-security-act-plan/>.

We created a comprehensive analytic file that combines information on New Mexican residents (resident dataset) and employers (synthetic firm dataset). The resident dataset includes baseline estimates for demographic information, chronic conditions, spending patterns, and utilization rates. Then, we used the resident dataset to project individual’s weights to our assumed initial year of the HSP (2024) and the four subsequent years. We grouped employed New Mexicans from the resident dataset into a set of synthetic firms. Finally, we combined the resident and the synthetic firm datasets into an analytic file to complete our fiscal analysis of the Health Security Plan (HSP).

II. Data Preparation

A. American Community Survey Sample

The American Community Survey (ACS) is a large annual household survey conducted by the U.S. Census Bureau (U.S. Census).¹ Each year of data includes three million respondents covering more than one million households. This is an approximately 1% representative sample of the United States population. We relied on a variety of information from the file, including:

- Geography: State and Public Use Microdata Area (PUMA)²;
- Demographics: Age, Sex, Race, Ethnicity;
- Insurance coverage status (e.g. covered by employer, Medicaid, uninsured, etc.);
- Relationships to other members of the household;
- Employment status, industry, and occupation;
- Income by source;
- Education; and
- Disability status (e.g. vision, hearing, ambulation, cognitive, self-care, and independent living).

We obtained 2016 through 2018 ACS data from IPUMS-USA.³ We combined the three years of data into a single file and divided population weights by 3 (i.e. the number of years of data). We inflated income for 2016 and 2017 respondents into 2018 dollars using the Consumer Price Index for All Urban Consumers (CPI-U).

The ACS, which provides a large, nationally representative sample, is the foundation of our analytic file.^{4,5} We combined 2016, 2017, and 2018 ACS data and included individuals residing in New Mexico only. We excluded individuals on Medicare, individuals residing in group quarters, and individuals covered under a military health insurance program. Our final sample includes 41,783 observations, representing individuals residing in New Mexico.

The ACS is designed to oversample certain demographic groups, such as Native Americans, to improve the accuracy of regional estimates for minority sub-populations. Figures 1a, 2a, and 3 show the unweighted and weighted population estimates for ACS respondents in our 3-year pooled file by race, age, and region.

¹ United States Census Bureau. (2017). American Community Survey [Data set]. Available at <https://bit.ly/1M2wMJQ>.

² PUMAs are a custom geographic unit developed by the U.S. Census. PUMAs are defined as collections of counties or census tracts. PUMAs do not cross state lines. There are 2,351 PUMAs and each PUMA contains between 100,000 and 300,000 people.

³ Steven Ruggles, Sarah Flood, Ronald Goeken, Josiah Grover, Erin Meyer, Jose Pacas, and Matthew Sobek. (2018). IPUMS USA: Version 8.0 [dataset]. Minneapolis, MN: IPUMS. Available at <https://doi.org/10.18128/D010.V8.0>.

⁴ KNG Health Consulting. (2019). *KNG Health Reform Model*. Rockville, MD. <https://www.knghealth.com/kng-health-develops-health-reform-model/>

⁵ Saavoss, A. et al. (2019). *The Impact of Medicare for America on the Employer Market: Technical Appendix*. KNG Health Consulting. <http://www.knghealth.com/kngwp/wp-content/uploads/2019/10/KNG-Health-The-Impact-of-Medicare-for-America-Technical-Appendix-10162019.pdf>

We projected the New Mexico population to the 5-year period (2024 through 2028) using data from the U.S. Census. We obtained population projections by age, gender, race/ethnicity, and native-born (nativity) status. We then updated the ACS weights for future years to reflect the changing composition of the New Mexican population. Figures 1b and 2b show the 2024 and 2028 weighted projections by race and age, respectively.

Figure 1a. ACS Respondents Residing in New Mexico – Respondent Counts and Weighted Population Estimates by Race, 2016-2018

Race	ACS Respondents		Weighted Estimate	
	Number	Percent	Population	Percent
White	39,513	69%	1,570,367	75%
Black	939	2%	43,431	2%
Native American	10,287	18%	200,858	10%
Asian	838	1%	33,992	2%
Other Race	4,055	7%	172,603	8%
Two Major Races	1,696	3%	66,920	3%
Total	57,328	100%	2,088,171	100%

Source: KNG Health analysis of the 2016-2018 American Community Survey.

Figure 1b. New Mexico Population Projections – Weighted Population Estimates by Race

Race	2016-2018		2024		2028	
	Population	Percent	Population	Percent	Population	Percent
White	1,570,367	75%	1,635,547	74%	1,636,934	74%
Black	43,431	2%	43,730	2%	42,949	2%
Native American	200,858	10%	207,723	9%	207,306	9%
Asian	33,992	2%	36,613	2%	37,195	2%
Other Race	172,603	8%	194,002	9%	201,808	9%
Two Major Races	66,920	3%	78,687	4%	84,541	4%
Total	2,088,171	100%	2,196,303	100%	2,210,733	100%

Source: KNG Health analysis of the 2016-2018 American Community Survey and national data projections from the U.S. Census.

Figure 2a. ACS Respondents Residing in New Mexico – Respondent Counts and Weighted Population Estimates by Age, 2016-2018

Age	ACS Respondents		Weighted Estimate	
	Number	Percent	Population	Percent
0-17	11,942	21%	484,357	23%
18-29	7,920	14%	342,981	16%
30-39	6,639	12%	270,256	13%
40-49	6,343	11%	239,690	11%
50-59	8,068	14%	261,760	13%
60-64	4,452	8%	136,194	7%
65+	11,964	21%	352,932	17%
Total	57,328	100%	2,088,171	100%

Source: KNG Health analysis of the 2016-2018 American Community Survey.

Figure 2b. New Mexico Population Projections – Weighted Population Estimates by Age

Age	2016-2018		2024		2028	
	Population	Percent	Population	Percent	Population	Percent
0-17	484,357	23%	486,941	22%	482,373	22%
18-29	342,981	16%	355,313	16%	354,613	16%
30-39	270,256	13%	278,937	13%	269,769	12%
40-49	239,690	11%	258,543	12%	269,255	12%
50-59	261,760	13%	252,922	12%	241,719	11%
60-64	136,194	7%	134,898	6%	124,475	6%
65+	352,932	17%	428,750	20%	468,529	21%
Total	2,088,171	100%	2,196,303	100%	2,210,733	100%

Source: KNG Health analysis of the 2016-2018 American Community Survey and national data projections from the U.S. Census.

Figure 3. ACS Respondents Residing in New Mexico – Respondent Counts and Weighted Population Estimates by Region, 2016-2018

Region	ACS Respondents		Weighted Estimate	
	Number	Percent	Population	Percent
Northwest New Mexico--Navajo Nation	7,353	13%	129,132	6%
San Juan County (Northeast)--Farmington, Bloomfield & Aztec Cities	2,406	4%	94,585	5%
North Central New Mexico	3,822	7%	122,257	6%
Eastern Plains New Mexico	3,084	5%	100,879	5%
Santa Fe County	5,598	10%	149,133	7%
Sandoval County	4,817	8%	143,270	7%
Valencia, Bernalillo (East Mountains) Counties & Isleta Pueblo	2,387	4%	101,175	5%
Albuquerque City (Far Northeast Heights)	2,356	4%	102,577	5%
Albuquerque City (Near Northeast Heights)	2,823	5%	100,920	5%
Albuquerque City (Southeast Heights)	2,123	4%	107,557	5%
Albuquerque City (Central) & Bernalillo County (North Valley)	2,298	4%	100,900	5%
Albuquerque City (Northwest Mesa), Paradise Hills & Navajo Nation-Tohajiilee Chapter	2,908	5%	125,433	6%
Albuquerque City (Southwest Mesa) & Bernalillo County (Southwest Mesa & South Valley)	2,145	4%	114,430	5%
Southwest New Mexico	2,648	5%	102,118	5%
Doña Ana County (Outer)	2,170	4%	106,601	5%
Doña Ana County (Central)--Las Cruces, Mesilla Cities & University Park	2,033	4%	109,562	5%
Central Southeast New Mexico	3,536	6%	150,628	7%
Far Southeast New Mexico	2,821	5%	127,014	6%
Total	57,328	100%	2,088,171	100%

Source: KNG Health analysis of the 2016-2018 American Community Survey.

B. Program Eligibility

For each ACS respondent, we evaluated Medicaid eligibility and eligibility for subsidies on New Mexico’s Marketplace (i.e. Marketplace coverage). We compared each family’s income to fixed program-specific eligibility thresholds. Medicaid has varying eligibility thresholds based on income and family size. For example, infants can qualify for Medicaid at higher incomes than adults, and Marketplace subsidies are only available within certain income ranges and decrease as family income increases.

1. Health Insurance Units

The federal government uses program-specific family definitions when assessing income-based eligibility. These family definitions are complex. For example, Medicaid uses different family definitions depending on whether the family files a tax return. We defined families using computer code released by the State Health Access Data Assistance Center (SHADAC).⁶ We modified the SHADAC code to account for same-sex marriages and to vary family definitions based on program-specific rules. For example, we did not consider parental income for 22- and 23-years old college students when assessing Medicaid eligibility. However, we did consider parental income for 22- and 23-year-old college students when assessing Marketplace subsidies.

2. Modified Adjusted Gross Income

Federal law requires the use of modified adjusted gross income (MAGI) when assessing program eligibility. MAGI is similar to adjustable gross income, with the main difference being that MAGI includes non-taxable Social Security income. We approximated MAGI in the ACS using the following formula:

$$\begin{aligned}
 \text{MAGI} &= \text{Wage and Salary Income} \\
 &+ 92.35\% \text{ of Business and Farm Income} \\
 &+ \text{Interest, dividend, and rental income} \\
 &+ \text{Retirement Income} \\
 &+ \text{Social Security Income}
 \end{aligned}$$

In calculating MAGI, we excluded income for family members under 16 years old. Each family’s MAGI was divided by the Federal Poverty Level (FPL) to determine the family’s FPL ratio. The FPL ratio for each family is compared to specific thresholds to determine program eligibility and/or subsidy level.

3. Assigning Individuals to Eligibility Groups

We assigned individuals to Medicaid eligibility groups. Different eligibility groups have different Medicaid eligibility income thresholds. We had seven eligibility groups: (1) infants, (2) young children, (3) other children, (4) parents, (5) pregnant women, (6) other adults, and (7) elderly and disabled. Most eligibility group assignments are straightforward using data reported in the ACS, such as respondent’s age and family composition.

⁶ Using SHADAC Health Insurance Unit (HIU) and Federal Poverty Guideline (FPG) Microdata Variables. State Health Access Data Assistance Center (SHADAC). <https://bit.ly/2tkYHAT>. We modified the SHADAC programs to allow for same-sex marriages and to combine college students with their parents.

The ACS does not report pregnancy status, but female respondents report fertility (i.e. whether they had a child in the prior year). We used a logistic regression with state fixed effects to predict fertility in the ACS as a function of age, race, and ethnicity. Using this model, we predicted a fertility rate for each female ACS respondent between the ages of 19 and 45. We reduced the fertility rate so that the national rate matched the percentage of female adults between 19 and 45 that report being currently pregnant in the 2016 National Health Interview Survey, and imputed pregnancy status based on this adjusted rate.⁷

4. Medicaid Eligibility Thresholds

Medicaid eligibility thresholds are state-specific and vary by eligibility group. The Kaiser Family Foundation publishes state-specific income eligibility thresholds for children, parents, pregnant women, and other adults.⁸ If an individual’s assigned FPL ratio is below the eligibility threshold corresponding to that individual’s eligibility group, that individual is deemed Medicaid-eligible. Medicaid eligibility thresholds are provided in Figure 4.

Figure 4. New Mexico Medicaid Eligibility Thresholds

Eligibility Group	Federal Poverty Level Ratio
Infants (Ages 0-1)	3.05
Young Children (Ages 1-5)	3.05
Other Children (Ages 6-18)	2.45
Parents	1.38
Pregnant Women	2.55
Other Adults	1.38
Elderly and Disabled	See Note

Source: Kaiser Family Foundation

Note: Medicaid-eligibility for elderly and disabled individuals is not based on MAGI-based thresholds. Eligibility for these groups is based on the same standards used to assess eligibility for Supplemental Security Income (SSI). If any respondent reported any SSI income, we assumed that respondent was Medicaid-eligible.

Regardless of income, we assumed that undocumented immigrants are ineligible for Medicaid coverage. The Pew Research Center (Pew) publishes state-specific estimates for the percent of the foreign-born population that is unauthorized.⁹ Pew estimates that in 2016, 29% of immigrants in New Mexico were unauthorized. Following this estimate, we randomly classified 29% of immigrant respondents as undocumented immigrants, and therefore ineligible for Medicaid benefits.

⁷ National Center for Health Statistics. National Health Interview Survey [Data Set]. Available at <https://www.cdc.gov/nchs/nhis/index.htm>.

⁸ Kaiser Family Foundation. Medicaid/CHIP Eligibility Limits. <https://www.kff.org/state-category/medicaid-chip/medicaidchip-eligibility-limits/>.

⁹ Pew Research Center. U.S. unauthorized immigrant population estimates by state, 2019. <http://www.pewhispanic.org/interactives/u-s-unauthorized-immigrants-by-state/>

5. Marketplace Subsidies

We also assessed eligibility for federal subsidies on the Marketplace. To be eligible for the subsidies, an individual must have an FPL ratio between 100% and 400%, must not be eligible for Medicaid, must not have access to employer coverage, and must not be an undocumented immigrant. For those with FPL ratios between 100% and 400%, we assigned each family a premium cap. The premium cap is a parameter used to determine each family's Marketplace subsidy. Specifically, a family's Marketplace subsidy is equal to the difference between the regional premium level (i.e. the second-lowest cost Silver Plan) and the family's premium cap. The premium cap is set using a percentage of the family's MAGI. This percentage increases monotonically as a piece-wise linear function of family income. In 2019, the premium cap was 2.08% for families at 100% FPL and 9.86% for families at 400% FPL.¹⁰

Families with incomes between 100% and 250% FPL are also eligible for cost-sharing reduction (CSR) subsidies. CSR-subsidized enrollees can enroll in health insurance plans with reduced cost-sharing. Though the federal government stopped funding CSR subsidies in 2017, health insurers continue to offer reduced cost-sharing plans on the Marketplace. For example, in 2019, about 1/3 of Marketplace enrollees in New Mexico received CSR subsidies. We assumed Marketplace actuarial values¹¹ of 94%, 87%, and 73% for families with FPL ratios between 100-150% FPL, 150-200% FPL, and 200-250% FPL, respectively.

6. Results of Program Eligibility Simulation

Figure 5 shows the results of our program eligibility simulation. We found that 46% of non-elderly New Mexican residents are eligible for Medicaid, 28% are eligible for Marketplace premium subsidies, and 12% are eligible for Marketplace CSR subsidies. We classified 17% of respondents who report having Medicaid coverage as ineligible for Medicaid. Other researcher have observed similar discrepancies in survey data, and have offered several potential explanations.^{12,13} In addition, we found that about 46% of self-reported uninsured respondents appear eligible for Medicaid, which is higher than an estimate recently reported by the Urban Institute (30%).¹⁴ There are a number of methodological reasons why our numbers may not match the Urban Institute's estimate, including differences in timeframe references. However, we note that our estimated number of uninsured in 2024 (188 thousand) is similar to the Urban Institute's estimate for 2019 in New Mexico (187 thousand).

¹⁰ Kaiser Family Foundation. (2020). *Explaining Health Care Reform: Questions about Health Insurance Subsidies*. <https://bit.ly/2IMFSKO>.

¹¹ HealthCare.gov defines Actuarial Value as the percentage of total average costs for covered benefits that a plan will cover. For example, if a plan has an actuarial value of 70%, on average, you would be responsible for 30% of the costs of all covered benefits. However, you could be responsible for a higher or lower percentage of the total costs of covered services for the year, depending on your actual health care needs and the terms of your insurance policy.

¹² Lynch, V., Kenney, G. M., Haley, J., & Resnick, D. M. (2011). *Improving the validity of the Medicaid/CHIP estimates on the American Community Survey: The role of logical coverage edits*. Submitted to the US Census Bureau.

¹³ Blase, B., & Yelowitz, A. (2019). *The ACA's Medicaid Expansion: A Review of Ineligible Enrollees and Improper Payments*. Mercatus Research Paper.

¹⁴ Bantnin, J. S., Buettgens, M., Blumberg, L. J., Wang, R., & Pan, C. W. (2019). *The Uninsured in New Mexico*. Washington, DC: The Urban Institute. https://www.urban.org/sites/default/files/publication/101427/the_uninsured_in_new_mexico_final_v3.pdf.

Figure 5. Non-Elderly ACS Respondents Residing in New Mexico - Simulated Medicaid and Marketplace Eligibility for Non-Elderly New Mexican Residents, 2016-2018

Original ACS Coverage Response	Population Estimate	Eligible for Medicaid	Eligible for Marketplace Premium Subsidies	Eligible for Marketplace CSR Subsidies
Health insurance through employer/union	786,701	20%	37%	12%
Health insurance purchased directly	137,944	30%	36%	16%
Health insurance through Medicaid	630,439	83%	14%	9%
No health insurance coverage	194,349	46%	31%	19%
All respondents	1,735,239	46%	28%	12%

Source: KNG Health analysis of program eligibility in the 2016-2018 ACS.

Note: The sum of columns can exceed 100% because individuals can be eligible for both premium and CSR subsidies. Population estimates by coverage are based on original self-report in the ACS and differ significantly from both administrative benchmarks and the calibrated coverage estimates used in the simulation. This table should only be used for purposes of understanding our program eligibility simulation.

C. Health Care Usage and Spending

1. Health Status and Chronic Conditions

Knowledge of health status and chronic conditions influences a significant amount of both geographic and individual variation in health care usage and spending. The ACS, our primary source for population attributes, only collects information on disability, not general health status or chronic conditions. To address this, we used the Behavioral Risk Factor Surveillance System (BRFSS) to develop models that could simulate health status and chronic conditions for New Mexican ACS respondents as a function of their demographics and self-reported disability information.

The BRFSS is a telephone survey administered by the Centers for Disease Control and Prevention (CDC). Each year, the survey collects health information from about 6,000 New Mexico respondents on demographics, chronic conditions, disability status, and health status. Our models include adjustments to reflect differences in rates of chronic conditions between New Mexican residents and the rest of the nation. More detail on our methodology for simulating health status and chronic conditions are provided in Module 3 of a previously published technical report.¹⁵ The results of our chronic condition simulation by age and race are provided in Figures 6 and 7.

¹⁵ KNG Health Consulting, LLC. (2019). *KNG Health Reform Model: Technical Report. Version 1.2. Module 3.* https://www.knghealth.com/kngwp/wp-content/uploads/2019/04/KNG-Health-Reform-Model-Technical-Report-V12_04172019.pdf#page=9

Figure 6. Non-Elderly Adult ACS Respondents Residing in New Mexico - Simulated Health Status and Chronic Conditions by Race, 2016-2018

	White	Black	Native American	Asian	Other Race	Two Major Races
% with fair or poor health status	12%	11%	12%	8%	17%	9%
% ever smoked	41%	36%	58%	24%	35%	42%
% ever diagnosed with obesity	30%	36%	34%	12%	33%	27%
% ever diagnosed with diabetes	6%	7%	8%	5%	8%	4%
% ever diagnosed with asthma	15%	18%	20%	9%	14%	15%
% ever diagnosed with skin cancer	2%	0%	2%	0%	1%	2%
% ever diagnosed with other cancer	3%	1%	4%	4%	2%	4%
% ever diagnosed with heart attack	2%	2%	3%	1%	2%	2%
% ever diagnosed with angina	1%	0%	1%	1%	1%	1%
% ever diagnosed with stroke	1%	3%	2%	0%	1%	1%

Source: KNG Health analysis of the 2016 BRFSS and the 2016-2018 ACS

Figure 7. Non-Elderly ACS Respondents Residing in New Mexico - Simulated Health Status and Chronic Conditions by Age, 2016-2018

	0-17	18-29	30-39	40-49	50-59	60-64
% with fair or poor health status		13%	15%	18%	20%	20%
% ever smoked		41%	44%	39%	43%	45%
% ever diagnosed with obesity		26%	30%	32%	33%	31%
% ever diagnosed with diabetes	Did not simulate health status or chronic conditions for minors	2%	5%	7%	10%	12%
% ever diagnosed with asthma		16%	16%	15%	16%	15%
% ever diagnosed with skin cancer		0%	1%	2%	2%	5%
% ever diagnosed with other cancer		2%	2%	3%	4%	5%
% ever diagnosed with heart attack		1%	1%	3%	3%	5%
% ever diagnosed with angina		0%	1%	1%	2%	3%
% ever diagnosed with stroke		1%	1%	2%	2%	2%

Source: KNG Health analysis of the 2016 BRFSS and the 2016-2018 ACS

2. Health Care Usage Rates

The ACS does not collect information on health care usage. We used the 2014-2016 Medical Expenditure Panel Survey (MEPS) to develop regression models that could predict health care usage for ACS respondents. The MEPS tracks health care usage, along with demographics, chronic conditions, and health status from more than 30,000 respondents each year.¹⁶ The MEPS allows for regional estimates

¹⁶ Agency for Healthcare Research and Quality. (2016-2018) Medical Expenditure Panel Survey [Data set]. <https://meps.ahrq.gov/mepsweb/>

(e.g., hospitalization rates in the western U.S.), but not state-specific estimates (e.g., hospitalization rates in New Mexico).

The prediction models allow usage rates to vary by demographics, disability, family structure, general health status, healthy behavior, and chronic conditions. We model five categories of healthcare utilization:

- Hospitalizations;
- Outpatient hospital visits;
- Emergency room (ER) visits;
- Physician visits; and
- Prescription drug fills and refills.

For each service category, we assumed utilization counts followed a zero-inflated Poisson (ZIP) distribution. ZIP distributions are useful for representing count variables when there are a disproportionately high number of zero values. We estimated these parameters using regression models for each service category. Our regression sample was limited to MEPS respondents who were (1) between the ages of 18 and 64, (2) had consistent health insurance coverage throughout the year, (3) were enrolled in private insurance coverage (employer or non-group), and (4) had non-missing responses for all variables used as outcomes or covariates. We accounted for the complex multistage sampling design of the MEPS using person-level weight, variance for primary survey unit, and variance for strata.

Each model included the survey year and the following covariates:

Demographics	Sex, age, race, and geographic region
Disability	Difficulty with vision, hearing, ambulation, cognitive, self-care, and/or independent living
Family Structure	Family size and marital status
General health status	Reported general health as excellent, very good, good, fair, or poor
Healthy Behavior	Smoking status
Chronic conditions	A medical diagnosis of obesity, diabetes, asthma, heart attack, angina, stroke, skin cancer, other cancer

We used these models to assign preliminary usage rates to all non-elderly adult ACS respondents residing in New Mexico. As children in the MEPS sample generally had very low utilization in many of the service categories, we relied on utilization estimates for children by age from the Health Care Cost Institute (HCCI). The results of our health care usage simulation for New Mexico ACS respondents by race and age are provided in Figures 8 and 9.

Figure 8. Non-Elderly Adult ACS Respondents Residing in New Mexico - Preliminary Simulated Health Care Usage Rates by Race – Per 1,000 Beneficiaries, 2016-2018

	Hospital Stays	Outpatient Visits	ED Visits	Physician Office Visits	Prescription Drug Fills
White	55	329	157	6,174	8,867
Black	61	242	185	4,128	6,714
Native American	72	419	265	5,839	8,304
Asian	41	199	83	4,551	4,979
Other Race	58	310	168	5,643	8,090
Two Major Races	69	330	210	5,630	6,789
Overall	57	332	169	5,999	8,560

Source: KNG Health analysis of the 2016 BRFSS, 2014-2016 MEPS and 2016-2018 ACS.

Note: This table shows the preliminary usage rates assigned based on our MEPS adjustments. These usage rates do not reflect a series of adjustments to better reflect unique patterns of care in New Mexico, the coverage mix in New Mexico, and lower rates of usage among Native Americans.

Figure 9. Non-Elderly ACS Respondents Residing in New Mexico - Preliminary Simulated Health Care Usage Rates by Age – Per 1,000 Beneficiaries

	Hospital Stays	Outpatient Visits	ED Visits	Physician Office Visits	Prescription Drug Fills
0-17	Did not use MEPS to simulate health care usage rates for minors				
18-29	40	167	155	3,809	4,234
30-39	75	220	160	5,825	5,916
40-49	51	332	168	5,938	8,067
50-59	59	509	167	7,471	12,870
60-64	71	630	230	9,137	17,286
Overall	57	332	169	5,999	8,560

Source: KNG Health analysis of the 2016 BRFSS, 2014-2016 MEPS and 2016-2018 ACS.

Note: This table shows the preliminary usage rates assigned based on our MEPS adjustments. These usage rates do not reflect a series of adjustments to better reflect unique patterns of care in New Mexico, the coverage mix in New Mexico, and lower rates of usage among Native Americans.

These usage rates have three important limitations. First, they predict an expected level of utilization a person would have if they had private insurance coverage, regardless of their actual source of coverage. In reality, whether a person has health insurance coverage and their coverage type likely has significant causal impacts on health care usage patterns. Due to potential omitted variable bias, we cannot use the MEPS to estimate these causal effects. Instead, we initially assigned rates based on a privately insured population and then adjusted utilization rates for coverage differences using estimates from the literature. More details on these adjustments are provided in subsequent sections.

Second, as the MEPS is not limited to New Mexico, the usage rates do not reflect unique patterns of care in the state. To account for this, we used a variety of state-specific resources to ensure our usage estimates are consistent with reliable benchmarks. More details on these adjustments are provided in subsequent sections.

Third, while our MEPS-based health care usage rates vary by some races, they do not specifically vary for Native Americans. Figure 8 shows that our models produced above-average health care usage rates for Native Americans, which reflects their higher rate of chronic conditions. However, actual health care usage patterns show lower Native American utilization. We made an explicit adjustment to correct for this limitation. More details on this adjustment are provided in subsequent sections.

3. Health Care Usage and Pricing Benchmarks for Employer-Based Insurance

We based private health insurance prices on data from the HCCI. The HCCI collects data from four major insurers: Aetna, Humana, Kaiser Permanente, and UnitedHealthcare. These data include information for more than 25% of employer-sponsored insurance beneficiaries nationally. HCCI assembles data from all 50 states and the District of Columbia.

We used aggregate tables from the annual HCCI report to obtain employer-based prices and to adjust our health care usage and spending estimates.¹⁷ Figures 10 through 14 present information we calculated from the HCCI reports. Figure 10 shows national unit prices for our modeled service categories by age and gender. Figure 11 shows national usage rates per 1,000 members for our modeled service categories by age and gender. Using these tables, we assigned national age-, gender-, and service-specific prices and usage rates to each New Mexican ACS respondent enrolled in employer coverage.

Figure 10. Average National Employer Coverage Prices, 2018

Age	Sex	Hospital Stays	Outpatient Visits	ED Visits	Physician Office Visits	Prescription Drug Fills
0-3	Female	\$13,023	\$4,279	\$1,217	\$119	\$131
	Male	\$14,648	\$4,586	\$1,250	\$119	\$139
4-8	Female	\$29,982	\$4,822	\$1,310	\$117	\$168
	Male	\$28,686	\$4,945	\$1,340	\$118	\$175
9-13	Female	\$26,492	\$5,402	\$1,525	\$120	\$205
	Male	\$29,703	\$5,421	\$1,554	\$120	\$210
14-18	Female	\$19,864	\$6,091	\$1,871	\$120	\$113
	Male	\$24,164	\$6,461	\$1,842	\$120	\$256
19-25	Female	\$12,933	\$4,284	\$1,957	\$119	\$88
	Male	\$20,492	\$5,539	\$1,952	\$120	\$218
26-44	Female	\$14,224	\$4,975	\$2,233	\$123	\$107
	Male	\$26,370	\$5,007	\$2,192	\$123	\$170
45-54	Female	\$26,924	\$4,770	\$2,518	\$124	\$102
	Male	\$31,397	\$4,477	\$2,594	\$122	\$117
55-64	Female	\$29,081	\$4,408	\$2,654	\$122	\$94
	Male	\$33,313	\$4,715	\$2,857	\$122	\$100

Source: KNG Health analysis of the 2018 HCCI Annual Report.

¹⁷ Health Care Cost Institute. (2018). *Health Care Cost and Utilization Report*. <https://healthcostinstitute.org/health-care-cost-and-utilization-report/annual-reports>

Figure 11. Average National Employer Coverage Usage Rates per 1,000 Members, 2018

Age	Sex	Hospital Stays	Outpatient Visits	ED Visits	Physician Office Visits	Prescription Drug Fills
0-3	Female	206	57	249	6,081	1,257
	Male	212	85	296	6,435	1,464
4-8	Female	8	39	137	2,785	1,302
	Male	10	47	163	2,879	1,761
9-13	Female	11	29	122	2,535	1,853
	Male	10	31	134	2,548	2,600
14-18	Female	29	50	201	3,243	5,289
	Male	20	47	155	2,496	2,958
19-25	Female	55	72	271	2,969	7,243
	Male	24	41	166	1,472	2,278
26-44	Female	86	139	231	3,796	9,341
	Male	21	72	151	2,119	5,036
45-54	Female	43	246	204	4,623	16,461
	Male	42	183	158	3,134	13,221
55-64	Female	65	322	182	5,282	24,116
	Male	78	303	162	4,260	22,833

Source: KNG Health analysis of the 2018 HCCI Annual Report.

Figure 12 shows how employer-based coverage prices and usage in the Albuquerque Metropolitan Area compared to the national median. Figure 13 shows how overall New Mexico spending varies by category of service.

Figure 12. 2016 Relative Prices and Health Care Usage in Albuquerque Metropolitan Area

	% of National Median		Index	
	Price	Use	Price	Use
Inpatient	0.93	0.61	1.03	0.43
Outpatient	1.00	0.83	1.06	0.62
Professional	1.05	0.81	1.05	0.57

Source: KNG Health analysis of the 2016 Healthy Market Index

Figure 13. Average New Mexico Health Spending per Enrollee Compared to Median across States, 2018

	New Mexico	Median Across U.S. States
Inpatient	\$1,043	\$1,090
Outpatient	\$1,908	\$1,712
Professional	\$1,684	\$1,852
Prescription	\$930	\$1,156
Total	\$5,565	\$5,798

Source: KNG Health analysis of the 2018 HCCI Annual Report.

The service categories in Figure 13 offers a comprehensive classification of health benefit spending (i.e., the sum of categories is equal to total spending). In contrast, our five modeled service categories (shown in Figures 8 through 11) are not comprehensive. For example, we did not capture laboratory, radiology, anesthesia, administration of drugs, and ambulance services within our modeled service categories. Almost all health benefits not captured by our modeled service categories would be classified as either outpatient or professional services in the classification taxonomy for Figure 13. For this reason, we estimated other spending (i.e. spending for non-modeled services) by multiplying an “other spending factor” by total spending across physician visits, emergency department visits, and outpatient department visits. These other spending factors, which we calculated using HCCI data, are summarized in Figure 14.

Figure 14. Other Spending Adjustments by Age and Gender, 2018

Age	Female	Male
0-3	1.379	1.398
4-8	1.063	1.369
9-13	1.305	1.348
14-18	1.274	1.329
19-25	1.259	1.272
26-44	1.520	1.291
45-54	1.450	1.408
55-64	1.618	1.558

Source: KNG Health analysis of the 2018 HCCI Annual Report.

Note: We multiplied these adjustment factors by the sum of spending on physician visits, ED visits, and outpatient visits. This produced an estimate for all benefit spending not accounted for within hospital stays, outpatient visits, ED visits, physician office visits, and prescription drug fills.

We combined data from the above tables with our ACS data sample to develop HCCI-based usage and price benchmarks. We assigned these service-specific prices to each respondent in our sample, based on the respondent’s age, gender, and residence. We also scaled our MEPS-based health care usage estimates to match these health care usage benchmarks. Figures 15 and 16 provide average spending by age, race, and service category, as estimated in our ACS sample after applying our HCCI-based scaling adjustments.

Figure 15. New Mexico per Enrollee Benefit Spending for Employer Coverage Enrollees by Age, 2018*Estimated just after HCCI scaling*

Age	Hospital Stays	Outpatient Visits	ED Visits	Physician Office Visits	Prescription Drug Fills	Other Spending	Total
0-17	\$727	\$235	\$253	\$379	\$344	\$1,140	\$3,077
18-29	\$642	\$311	\$418	\$272	\$498	\$1,329	\$3,470
30-39	\$892	\$469	\$403	\$354	\$751	\$1,759	\$4,628
40-49	\$826	\$809	\$443	\$397	\$1,064	\$2,367	\$5,906
50-59	\$1,562	\$1,208	\$425	\$502	\$1,549	\$3,244	\$8,490
60-64	\$2,304	\$1,506	\$560	\$611	\$2,139	\$4,257	\$11,377
Overall	\$1,043	\$667	\$396	\$401	\$930	\$2,127	\$5,565

Source: KNG Health analysis of the 2018 ACS, supplemented with adjusted MEPS-based usage rates and HCCI prices.

Note: Total spending matches per enrollee spending in New Mexico as reported in 2018 HCCI file (see Figure 13). Spending for hospital stays also aligns with inpatient spending and prescription drug fills aligns with spending. Total spending for outpatient visits, ED visits, physician office visits, and other spending aligns with the sum of spending for both outpatient and professional services. We applied more scaling to these data prior to incorporation into the simulation models. This table should only be used for purposes of understanding the effects of our HCCI scaling adjustment.

Figure 16. New Mexico per Enrollee Benefit Spending for Employer Coverage Enrollees by Race, 2018*Estimated just after HCCI scaling*

Race	Hospital Stays	Outpatient Visits	ED Visits	Physician Office Visits	Prescription Drug Fills	Other Spending	Total
White	\$1,021	\$676	\$381	\$411	\$965	\$2,137	\$5,590
Black	\$1,144	\$575	\$477	\$301	\$840	\$1,933	\$5,271
Native American	\$1,367	\$825	\$596	\$399	\$871	\$2,647	\$6,705
Asian	\$894	\$434	\$239	\$315	\$547	\$1,410	\$3,839
Other Race	\$1,036	\$595	\$413	\$366	\$886	\$1,983	\$5,278
Two Major Races	\$1,048	\$573	\$427	\$371	\$663	\$1,939	\$5,021
Overall	\$1,043	\$667	\$396	\$401	\$930	\$2,127	\$5,565

Source: KNG Health analysis of the 2018 ACS, supplemented with adjusted MEPS-based usage rates and HCCI prices.

Note: Total spending matches per enrollee spending in New Mexico as reported in 2018 HCCI file (see Figure 13). Spending for hospital stays also aligns with inpatient spending and prescription drug fills aligns with spending. Total spending for outpatient visits, ED visits, physician office visits, and other spending aligns with the sum of spending for both outpatient and professional services. We applied more scaling to these data prior to incorporation into the simulation models, as described in the main report. This table should only be used for purposes of understanding the effects of our HCCI scaling adjustment.

The spending estimates in Figure 16 show significantly above-average spending levels for Native Americans. This finding is driven by disproportionately high rates of chronic conditions observed among Native Americans in New Mexico (see Figure 6). However, potentially due to disparities in access to care, Native Americans as a group consume less health care relative to their health needs. Using the MEPS, we compared Native American spending to average health care spending nationally by age and sex. We used these comparisons to further adjust Native American spending to account for observed differences in patterns of care.

We obtained the New Mexico State Inpatient Database (SID) from the Agency for Healthcare Research and Quality. AHRQ constructed the SID from hospital inpatient discharge files received from the New Mexico Health Policy Commission, New Mexico Department of Health. We combined these hospitalization counts with ACS-based population estimates to develop inpatient utilization rates by age, sex, and residence. We further adjusted our ACS file to match these inpatient utilization rates. We also obtained aggregated data on New Mexico ED utilization rates directly from the Department of Health and scaled to these estimates as well.

Figure 17. New Mexico Inpatient Utilization Rates by Age, Residence, and Sex, 2017

Age	Albuq. Metro. Area Resident	Sex	Hospital Stays	Population	Rate per 1,000 People
0	No	Female	6,154	7,628	807
		Male	6,658	7,391	901
	Yes	Female	5,196	5,119	1,015
		Male	5,628	4,952	1,137
1-17	No	Female	2,722	135,611	20
		Male	2,219	139,480	16
	Yes	Female	2,664	94,387	28
		Male	2,382	98,945	24
18-44	No	Female	19,617	197,679	99
		Male	8,354	212,827	39
	Yes	Female	16,410	159,362	103
		Male	7,155	161,770	44
45-64	No	Female	10,143	144,720	70
		Male	11,751	135,606	87
	Yes	Female	9,208	114,306	81
		Male	10,316	105,898	97

Source: KNG Health analysis of the 2017 New Mexico State Inpatient Database.

As a final scaling adjustment, we compared our spending estimates to New Mexico employer premiums reported in the Medical Expenditure Panel Survey Insurance Component (MEPS-IC).¹⁸ MEPS-IC is a large survey of private and public sector employers that collects data on annual premiums, and report estimates specific to New Mexico. In 2018, MEPS-IC reported that average single premiums for employer coverage in New Mexico were \$6,624. This amount includes administrative costs as well as benefit spending. Elsewhere, we assumed an administrative loading factor of 12% for employer coverage (see subsequent sections for relevant discussion). Thus, we expected 88% of this premium, or \$5,829, as benefit spending. Moreover, out-of-pocket benefit spending was not included in the premium. Elsewhere, we assumed an actuarial value of 83% for employer coverage (see subsequent sections for

¹⁸ Average total single premium (in dollars) per enrolled employee at private-sector establishments that offer health insurance by firm size and State: United States, 2018. Medical Expenditure Panel Survey Insurance Component. 2018. https://meps.ahrq.gov/data_stats/summ_tables/insr/state/series_2/2018/tiic1.htm.

relevant discussion). Adjusting for this actuarial value assumption, the MEPS-IC premium implies \$7,022 in per-person spending for the employer coverage risk pool. This is considerably higher than the spending estimate reported by HCCI. We scaled employer coverage spending so that our premium estimates matches premiums reported in MEPS-IC.

4. Health Care Usage and Pricing Benchmarks for Medicaid Enrollees

We also obtained data on Medicaid Managed Care Organization (MCO) utilization and spending from the New Mexico Human Services Department. As most New Mexico Medicaid enrollees are enrolled with MCOs, these data offer a good measure for health care usage patterns in the state’s Medicaid program. Using the HSD data, we created similar Medicaid benchmarks to what we had for the employer coverage population through the HCCI data. Figure 18 shows our HSD-based utilization and price benchmarks by service category and age. Figure 19 shows per enrollee spending, member months, and total spending for Medicaid MCO enrollees in New Mexico. We used the data in Figure 19 to develop a Medicaid-specific “other spending adjustment,” analogous to what we reported in Figure 14 for employer coverage enrollees.

Figure 18. New Mexico Utilization Rates and Prices for Medicaid MCO Enrollees, 2018

Utilization per 1,000 Members				
Age	Hospital Stays	Outpatient Visits	ED Visits	Prescription Drug Fills
0-20	67	68	380	3,236
21-49	85	58	619	7,302
50-64	153	85	494	18,709
Price				
Age	Hospital Stays	Outpatient Visits	ED Visits	Prescription Drug Fills
0-20	\$10,691	\$3,849	\$342	\$54
21-49	\$12,477	\$9,383	\$497	\$74
50-64	\$14,293	\$13,896	\$556	\$74

Source: KNG Health analysis of 2018 New Mexico Medicaid MCO Expenditure reports provided by HSD.

Figure 19. New Mexico per Enrollee and Total Spending for Medicaid MCO Enrollees, 2018

Age	Per Enrollee Spending	Member Months	Total Spending
0-20	\$2,843	3,711,757	\$879,274,762
21-49	\$4,754	2,884,072	\$1,142,643,098
50-64	\$8,837	716,945	\$527,995,965
Overall	\$4,184	7,312,774	\$2,549,913,826

Source: KNG Health analysis of 2018 New Mexico Medicaid MCO Expenditure reports provided by HSD.

Note: Spending does include the fee-for-service Medicaid population, the dual-eligible Medicaid population, or long-term services & support (LTSS) spending.

We assumed that, on average, patterns of care and spending for fee-for-service Medicaid enrollees will be comparable to Medicaid-MCO enrollees in the same age category. In our preliminary report, we based the level of spending on the Medicaid MCO data we received from HSD, adjusted to account for the omitted fee-for-service population. We received comments indicating that our Medicaid spending estimates were too low. For the final report, we applied additional scaling to match the totals reported in New Mexico's CMS-64 expenditure report.

The CMS-64 Expenditure report is a standard resource used for state-level Medicaid expenditures and is regularly relied upon in analyses conducted by CMS, the Congressional Budget Office, and the Medicaid and CHIP Payment and Access Commission. For fiscal year 2018, New Mexico reported about \$5.1 billion in Medicaid spending in its CMS-64 report. We reduced this estimate by 29% to remove spending for dual-eligible beneficiaries and LTSS services; and divided by non-dual Medicaid enrollment to calculate a per-enrollee benchmark of \$5,937. We scaled Medicaid spending to this benchmark.

5. Health Care Usage and Pricing Benchmarks for Non-Group and Uninsured Enrollees

For non-group enrollees, we assumed usage and price levels would be similar to employer-sponsored insurance, after controlling for differences in population characteristics. For uninsured enrollees, we based price and usage rate assumptions on estimates from the literature. Specifically, the Oregon Health Insurance Experiment estimated these effects in a randomized controlled experiment and found that acquiring Medicaid resulted in the following effects: hospitalizations increased by 30%, ED visits increased by 40%, physician office visits increased by 50%, and prescription drugs used increased by 15%.¹⁹ We interpreted these effects as the extent to which uninsured utilization is suppressed due to a lack of health insurance coverage. We estimated health care usage rates for uninsured individuals by first treating them as if they had health insurance coverage (i.e. by running them through our MEPS usage models), and then reducing their utilization by the estimated coverage effects from the Oregon study.

There is limited research on prices paid for uninsured patients. A *Health Affairs* study found that uninsured patients paid similar prices to Medicare patients for hospital services.²⁰ Another study published in the *Journal of Health Economics* found that physician prices paid for the uninsured were comparable, or even higher, than prices paid for insured patients.²¹ Our own previously unpublished analysis of financial data from the AHA Annual Survey showed similar hospital payment-to-cost ratios for uninsured and Medicare patients. Based on this analysis and the studies we reviewed, we assumed the uninsured paid Medicare prices for hospital care and commercial prices for physician care.

¹⁹ Katherine Baicker, Sarah Taubman, Heidi Allen, Mira Bernstein, Jonathan Gruber, Joseph P. Newhouse, Eric Schneider, Bill Wright, Alan Zaslavsky, Amy Finkelstein, and the Oregon Health Study Group. 2013. The Oregon Experiment – Effects of Medicaid on Clinical Outcomes. *New England Journal of Medicine* 368(18): 1713-1722.

²⁰? Melnick GA, Fonkych K. (2008). Hospital Pricing And The Uninsured: Do The Uninsured Pay Higher Prices. *Health Affairs*. <https://www.healthaffairs.org/doi/full/10.1377/hlthaff.27.2.w116>.

²¹ Gruber J, Roriguez R. (2007). How much uncompensated care do doctors provide? *Journal of Health Economics*. <https://economics.mit.edu/files/6423>.

D. Baseline Coverage

1. Definitions

We initially defined five categories of health coverage:

- **Employer coverage.** People who obtain health coverage through an employer or union.
- **Medicaid coverage.** People who obtain health coverage through Medicaid or the Children's Health Insurance Program.
- **Non-group coverage.** People who obtain health coverage through the state health insurance Marketplaces or off-Marketplace direct purchase coverage.
- **Uninsured.** People who do not have comprehensive health insurance coverage.
- **Other coverage.** People obtain coverage through TRICARE, the Department of Veterans Affairs, or Medicare.

In the ACS, individuals can report multiple sources of coverage. In our analytic file, among New Mexicans under the age of 65, 92% of insured respondents reported only one source of coverage. Our model did not account for multiple sources of coverage. For respondents with multiple sources of coverage, we assigned each respondent to a single coverage category using the following hierarchy: (1) Medicaid, (2) ESI, (3) Non-Group, and (4) Other. For example, we classified a respondent who reported both Medicaid and non-group coverage as a Medicaid enrollee.

2. Calibration

We compared New Mexico Medicaid enrollment and non-group enrollment in the ACS to enrollment reported in several administrative data sources.^{22,23} In the ACS, Medicaid enrollment was lower than enrollment counts reported in the CMS monthly Medicaid enrollment reports. Conversely, non-group enrollment was higher than enrollment estimates from the Medical Loss Ratio Public Use Files. Similar discrepancies in the ACS have been observed by other researchers.²⁴

To improve concordance with these administrative benchmarks, we reclassified some non-group enrollees to having Medicaid coverage in the baseline. When reclassifying respondents to Medicaid coverage, we prioritized those respondents who are Medicaid-eligible and preserved the ratio of adults to children in each program. We also reclassified a small number of Medicaid-eligible individuals from other coverage categories into Medicaid. In reclassifying, to the extent possible, we tried to maintain the age distribution of enrollees within each coverage program. Figure 20 shows the initial New Mexico coverage estimates (using our mutually exclusive coverage definitions) in the ACS compared to administrative benchmarks.

²² Center for Medicare & Medicaid Services. (2018). *Medical Loss Ratio Public Use File* [Data set]. Available at <https://www.cms.gov/CCIIO/Resources/Data-Resources/mlr>

²³ Kaiser Family Foundation. (2018) *Total Monthly Medicaid and CHIP Enrollment* [Data Set]. Available at <https://www.kff.org/health-reform/state-indicator/total-monthly-medicaid-and-chip-enrollment>

²⁴ Lynch, V. et al. (2011). *Improving the validity of the Medicaid/CHIP estimates on the American Community Survey: The role of logical coverage edits*. U.S. Census Bureau. <https://www.census.gov/content/dam/Census/library/working-papers/2011/demo/improving-the-validity-of-the-medicaid-chip-estimates-on-the-acs.pdf>

Figure 20. New Mexico Coverage – Impact of our Coverage Calibration, 2018

Coverage	Original ACS	Benchmark	Calibrated ACS
	Coverage Estimate		Coverage Estimate
Employer	740,794		740,387
Medicaid	630,439	676,169	676,085
Non-Group	100,329	61,140	66,630
Uninsured	194,349		184,693
Other Coverage	69,329		67,443
Total	1,735,239		1,735,239

Source: KNG Health analysis of the American Community Survey and administrative enrollment benchmarks from the Centers for Medicare & Medicaid Services.

E. Marginal Tax Rates

Since premiums for some categories of coverage are tax-deductible, marginal tax rates can influence the attractiveness of different coverage options. We estimated marginal tax rates by running each ACS family through the NBER TAXSIM model.²⁵ Specifically, we estimated Federal tax rates, state and local income tax rates, and payroll tax rates. The NBER model accounts for state and local tax rules specific to New Mexico.

F. Employer Data

The ACS provides limited information about the characteristics of employers for employed respondents. Information provided in the ACS includes the class of worker (e.g. Federal, state, private-sector, etc.), industry, and location of the workplace. We imputed additional characteristics about a worker’s firm including firm size and health insurance coverage offer status (offer status). Then, we used this information to group workers into synthetic firms. Synthetic firm groupings affect our risk pools, particularly in the large-group employer market, thereby influencing our premium calculations.

1. Synthetic Firms

The ACS indicates whether respondents are employed but does not include information on the size of the firm where they are employed. Because employer insurance varies significantly by firm size, we used the Current Population Survey (CPS, 2016-2018) data to impute firm size. Firms were classified into 5 firm size categories: (1) fewer than 10 workers; (2) 10 to 49 workers; (3) 50 to 100 workers; (4) 100 to 999 workers; and (5) more than 1,000 workers. We started by running a multinomial logistic regression and estimated how the following characteristics affect the size of the firm where each of the CPS respondents works:

- Age and Age-squared
- Citizen Status
- Disabled

²⁵ Feenberg, Daniel Richard, and Elizabeth Coutts. 1993. An Introduction to the TAXSIM Model, *Journal of Policy Analysis and Management*: 12(1): 189-194.

- Educational Attainment Category
- Gender
- Household income
- Industry and Occupation
- Firm State Location
- Marital Status
- Personal Income and Personal Income-squared
- Race and Nationality
- Year of survey

We then used the estimated coefficients from this model to impute firm size for the observations in the ACS. We calibrated the imputed ACS private sector firm size to match the distribution for New Mexico in the MEPS-Insurer/Employer Component (IC).

We assigned each ACS worker’s initial firm offer status using various MEPS-IC tables (by firm size, industry, and income quartile) and made adjustments as necessary to ensure consistency between ESI offer and ESI enrollment. Next, we combined the ACS workers into synthetic firms based on the following hierarchy of characteristics: offer status, firm size, industry, region, and state. We populated each ASC synthetic firm until it has the midpoint of the firm size category number of employees. We treated all federal government employees as working for the same firm. We treated other government employees residing in New Mexico as being employed by the same firm. We also assumed that all local, state, and federal government employees have access to ESI coverage and work in a firm with more than 1,000 employees. Figures 21 and 22 include descriptive statistics on our synthetic firms.

Figure 21. New Mexico Synthetic Firm Share of Premium Support, 2018

	Private Sector <50 Employees	Private Sector 50+ Employees	Public Sector
Number of workers	200,509	422,799	204,581
Percent of single premium covered by fully-insured firms	79%	79%	NA
Percent of single premium covered by self-insured firms	79%	79%	79%
Percent of family premium covered by fully-insured firms	68%	70%	NA
Percent of family premium covered by self-insured firms	67%	74%	75%

Source: KNG Health analysis of the American Community Survey and MEPS-IC.

Notes: NA = Not Applicable

Figure 22. New Mexico Firm Characteristics in Synthetic Firm File, 2018

	# of Firms	% of Firms in Category	# of Employees	% Employees Across Firms in Category	% Take up ESI	Total Employer Premium Contribution	Total Employer Payroll
No Coverage							
Private Sector < 50	19,294	97%	98,136	86%	0%	\$0	\$3,116,414,319
Private Sector 50+	654	3%	15,828	14%	0%	\$0	\$457,101,580
Subtotal	19,948	100%	113,964	100%	0%	\$0	\$3,573,515,899
Fully Insured							
Private Sector < 50	12,062	90%	87,212	35%	46%	\$393,813,546	\$3,731,826,196
Private Sector 50+	1,357	10%	164,228	65%	56%	\$717,871,227	\$8,476,991,039
Subtotal	13,419	100%	251,440	100%	52%	\$1,111,684,773	\$12,208,817,235
Self-Insured							
Private Sector < 50	1,918	69%	15,161	3%	52%	\$75,105,400	\$701,335,316
Private Sector 50+	837	28%	242,743	52%	62%	\$1,390,021,649	\$12,235,778,112
Public Sector	68	3%	204,581	44%	71%	\$1,466,126,281	\$10,891,625,977
Subtotal	2,823	100%	462,485	100%	66%	\$2,931,253,330	\$23,828,739,405
Total	36,190	100%	827,889	100%	53%	\$4,042,938,103	\$39,611,072,539

Source: KNG Health analysis of the American Community Survey and MEPS-IC.