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Abstract

The major components of the Affordable Care Act (ACA) were implemented in 2014, including the rollout of the Health Insurance Marketplace, Medicaid expansions, and the individual mandate. Kentucky stands out as one of the few southern states to expand Medicaid, and earlier work has demonstrated that Kentucky experienced some of the largest gains in health insurance coverage. The goal of the current study is to further explore the sources that individuals used to gain coverage in Kentucky using a large, publicly available dataset, the American Community Survey (ACS). Several findings emerge. First, overall health insurance coverage increased by 5.7 percentage points, from 85.1 percent to 90.8 percent, from 2013 to 2014. Roughly 269,000 individuals in Kentucky gained coverage, the overwhelming majority (85%) of whom were adults aged 19–64 (229,000 individuals). Gains were extremely modest for both children and the elderly. Among adults, roughly 80 percent of the gains were from Medicaid coverage, with most of the rest coming from individual coverage. Using income reported by the ACS respondents, approximately 38 percent of new adult Medicaid recipients had incomes exceeding the Medicaid eligibility threshold (roughly $33,000 for a family of four). This translates into 73,000 ineligible, new Medicaid participants. Almost all ineligible, new participants would appear to qualify for private, nongroup coverage with subsidies through the premium tax credit. A variety of sensitivity checks suggest at least 36,000 ineligible, new participants on Medicaid due to the expansions, including more than 13,000 with incomes exceeding 250 percent of the FPL. Possible explanations are explored and ineligible participants are characterized.

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How Did the ACA Affect Health Insurance Coverage in Kentucky?

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The Patient Protection and Affordable Care Act (ACA) is the most sweeping change to the health insurance landscape since the implementation of Medicare and Medicaid in the 1960s. The most important provisions impacted private, nongroup (individual) coverage and public Medicaid coverage. Provisions related to private insurance include the introduction of the Health Insurance Marketplace (i.e., the exchange), guaranteed issue and community rating reforms, and subsidies via the premium tax credit for individuals with incomes from 100 to 400 percent of the federal poverty level (FPL) ($23,850 to $95,400 for a family of four in 2014). In addition, states were given the option to expand Medicaid, and by the end of 2015, 29 states and the District of Columbia had done so in some form (Hu et al. 2016). Almost all individuals were compelled to obtain health insurance coverage due to the individual mandate or to pay a penalty.[2]

With the passage of the ACA, Kentucky has stood out for a several reasons. As figure 1 shows, adoption of the Medicaid expansion was largely confined to the northeastern, midwestern, and western states—Kentucky was one of the few southern states to adopt the optional Medicaid expansions in 2014. The Medicaid expansion, combined with a backdrop of relatively low per-capita income and low existing insurance coverage rates, left open the

[2] In 2014 (2016), the penalty for not purchasing was the higher of 1 percent (2.5%) of household income up to the total yearly premium for the national average price of a bronze plan sold through the marketplace, or $95 ($695) per adult and $47.50 ($347.50) per child under 18 to a maximum of $285 ($2,085). In 2015, the average bronze plan was $2,484 per year for an individual (and scaled up proportionally by family size and capped at $12,240 per year for a family with five or more members). See https://www.irs.gov/affordable-care-act/individuals-and-families/aca-individual-shared-responsibility-provision-calculating-the-payment. For coverage exemptions from the individual mandate, see IRS form 8965: https://www.irs.gov/pub/irs-pdf/i8965.pdf.

possibility for sizable gains in health insurance coverage in Kentucky.[3] Indeed, Courtemanche, Marton, and Yelowitz (2016) find that Kentucky experienced the largest gain in coverage out of all the states, primarily from gains in Medicaid. Benitez, Creel, and Jennings (2016) find that gains in insurance coverage in Kentucky led to declines in "unmet medical needs."[4] Sommers et al. (2016a) find that Kentucky's Medicaid program was associated with significant increases in outpatient utilization, preventive care, improved health care quality, reductions in emergency department use, and improved self-reported health. However, it is unclear whether Kentucky's experience with the ACA can be extrapolated to other states in the South that didn't expand Medicaid.

In 1994, Kentucky conducted an unsuccessful experiment with guaranteed issue and community rating in the individual market (Wachenheim and Leida 2012). As a consequence, more than 40 insurers left the individual market by January 1998 (Clark and Wilson 1998). In addition, Kentucky adopted Medicaid managed care in 1997 in the area surrounding Louisville (Marton, Yelowitz, and Talbert 2014; Marton and Yelowitz 2015; Marton et al. 2015), and the remainder of the state shifted to Medicaid managed care in 2011 (Marton, Yelowitz, and Talbert 2016).

Because of Kentucky's unique history, its recent experience has been examined by numerous commentators. Artiga, Tolbert, and Rudowitz (2016) argue that "Kentucky has had one of the most successful ACA implementation experiences among states." Rosenbaum, Schmucker, and Rothenberg (2016) note that "among states that have implemented the

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[3] For recent state-by-state income and insurance estimates, see:
https://www.bea.gov/newsreleases/regional/spi/2014/pdf/spi0314.pdf and http://www2.census.gov/programs-surveys/demo/visualizations/p60/250/figure03.pdf.
[4] The authors use the Behavioral Risk Factor Surveillance System (BRFSS) question: "Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?"

Affordable Care Act's Medicaid expansion, Kentucky has been singular in its success." Atkin

and Israel (2015) call Kentucky "the nation's most unlikely Obamacare success story." This

sentiment is echoed in other contexts, especially with respect to possible changes to the Medicaid

program (Yetter 2015; Willard 2015; Goodnough 2016). Often front and center in commentary is

a discussion of the large drop in the adult uninsured rate, the role of Medicaid, and the lack of

access to insurance if the expansion were rolled back (Kaiser Family Foundation 2016). A

Deloitte (2015) report showing that Medicaid enrollment exceeded expectations is typically

cited.[5] Remarkably, the report notes that first-year Medicaid expansion enrollment in Kentucky

exceeded estimates of the entire pool of potentially eligible enrollees.

One of the principal goals of this study is to analyze how this happened. Although some

commentaries define "success" solely in terms of reducing the number of uninsured individuals,

a more nuanced definition of success is whether the ACA was carried out in the way it was

intended. The intent of the ACA, as written, was clearly to provide different sources of health

insurance coverage and different subsidies based on a person's economic circumstances. Lower-

income individuals were meant to get larger subsidies. Medicaid generally provides more heavily

subsidized coverage in comparison to subsidies gained through the ACA marketplace and was

targeted to those with incomes under 138 percent of the FPL in Medicaid expansion states (Joint

Economic Committee 2016). Higher-income individuals were meant to get smaller subsidies.

Private coverage, with less generous subsidies, was targeted to those with incomes at or above

138 percent of the FPL in both expansion and nonexpansion states.

The goals of this study are twofold. First, using credible, arms-length, publicly available

data, I document how the ACA impacted insurance coverage in Kentucky and in several

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[5] See http://www.kentucky.com/living/health-and-medicine/article44553699.html, which also notes that the report
produced for the Commonwealth by Deloitte cost approximately $140,000.

neighboring states that either adopted or did not adopt the Medicaid expansions in 2014. I find that the vast majority of the gains in coverage in Kentucky were for nonelderly adults, and the pathway for gaining coverage was through the new adult Medicaid expansions. Patterns in other states varied, depending on whether they implemented Medicaid expansions in 2014. Second, given the outsized role of Medicaid in expanding insurance coverage among adults in Kentucky, I examine whether such adults appear to be eligible for Medicaid. This examination addresses the issues of whether the targeting of (1) heavily subsidized Medicaid coverage to individuals with incomes under 138 percent of the FPL and (2) less generous private coverage to individuals with higher incomes was carried out in practice.

I find that 73,000 of the individuals who gained coverage appear to be ineligible for Medicaid based on their incomes and would have instead qualified for private, nongroup coverage with subsidies from the premium tax credit. This finding persists after the group is pared down based on Supplemental Security Income (SSI) participation, participation in other public assistance programs, and factors that proxy for instability or nonnuclear families. In short, the reason why Medicaid enrollment in Kentucky in 2014 vastly exceeded forecasts is that thousands of ineligible individuals signed up.

Finally, I discuss some possible reasons why ineligible individuals might be receiving Medicaid instead of private insurance. One plausible reason—echoed in longstanding literature on effective tax rates in welfare programs (Ziliak 2007)—is that the way the rules are implemented on the ground differs from the rules on the books. In practice, issues of prospectively forecasting income for the next calendar year (perhaps too conservatively) along with anticipating possible deductions (perhaps too aggressively) in order to compute modified

adjusted gross income (MAGI) could lead to ineligible individuals receiving Medicaid instead of private coverage.

The Pre-ACA Landscape in Kentucky

Prior to the 2014 ACA reforms, Kentuckians had a number of avenues to obtain health insurance coverage. The elderly—those 65 and over—virtually all had coverage through Medicare, and potentially additional coverage through Medicaid, current or former employment, or privately purchased Medigap policies. More than 99 percent of the elderly in Kentucky reported having coverage.

For the nonelderly, the main avenue to obtain health insurance was private, employer-sponsored health insurance (ESHI). The majority of children and adults in Kentucky had ESHI in 2013 (shown in table 1). One early provision in the ACA—dependent coverage mandates for employers that allow children up to age 26 to stay on a parent's plan—contributed to ESHI take-up from 2010 through 2013 (Akosa Antwi, Moriya, and Simon 2013).[6] The nongroup (individual) market for the nonelderly was extremely small prior to 2014, with just 6 percent of children and 8 percent of adults obtaining coverage. A small percentage of individuals involved with the armed forces obtained private insurance through the military, called Tricare.

In addition to private sources, public health insurance was available through the Medicaid program for some children and adults. Kentucky Medicaid covered 39 percent of children and 11 percent of adults prior to the major ACA reforms in 2014. Medicaid and State Children's Health Insurance Program (SCHIP) expansions from the 1980s and 1990s allowed children with household incomes under certain multiples of the FPL to obtain public coverage at minimal cost

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[6] Another provision, employer mandates for full-time workers in large firms, was not effective until January 2015.

regardless of family structure (Yelowitz 1995). Under Medicaid, newborns were eligible up to

185 percent of the FPL, children aged 1–5 were eligible up to 133 percent of the FPL, and

children aged 6–18 were eligible up to 100 percent of the FPL. All children with household

incomes exceeding those limits but under 200 percent of the FPL were eligible for the Kentucky

Children's Health Insurance Program (KCHIP), which provides health insurance coverage at

little or no cost to uninsured children who qualify.[7]

In addition, pregnant women with incomes below 185 percent of the FPL were eligible

for Medicaid. The disabled could potentially qualify for Medicaid through SSI, with an income

limit of approximately 77 percent of the FPL.[8] Parents or caretakers could qualify up to 33–57

percent of the FPL (Kaiser Family Foundation 2013). In addition, foster care children up to age

26, individuals in the Breast and Cervical Cancer Treatment Program, Medically Needy (Spend

Down) Program, Transitional Medical Assistance program, and Nursing Facility Services

program also received Medicaid. In many states, including Kentucky, childless adults did not

qualify for Medicaid.

The Post-ACA Landscape in Kentucky

The ACA provided a number of reforms, primarily to the nongroup (individual) market and to

the Medicaid program. As illustrated in figure 1, roughly half of the states, including Kentucky,

expanded their Medicaid programs to 138 percent of the FPL.[9] This Medicaid expansion largely

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[7] See http://chfs.ky.gov/tempDelete/oldKCHIP/kchipfaq.htm. Children in families with incomes of 150%–200% of the FPL may pay monthly premiums; for evidence on premium impacts, see Marton (2007); Kenney et al. (2007a, b); Marton, Ketsche, and Zhou (2010); Marton, Searcy, and Ghandhi (2010); Marton and Talbert (2010); and Marton et al. (2015).

[8] This assumes that a single, nonworking individual is potentially eligible for a $733 monthly SSI benefit, takes a $20 monthly disregard for unearned income, and faces a poverty threshold of $11,670 in 2014.

[9] Most states expanded Medicaid on January 1, 2014. Michigan expanded on April 1, 2014, and New Hampshire on August 15, 2014. Indiana, Pennsylvania, and Alaska expanded Medicaid in 2015. Montana and Louisiana expanded Medicaid in 2016.

Figure 1: Medicaid Expansion Status by State, 2014
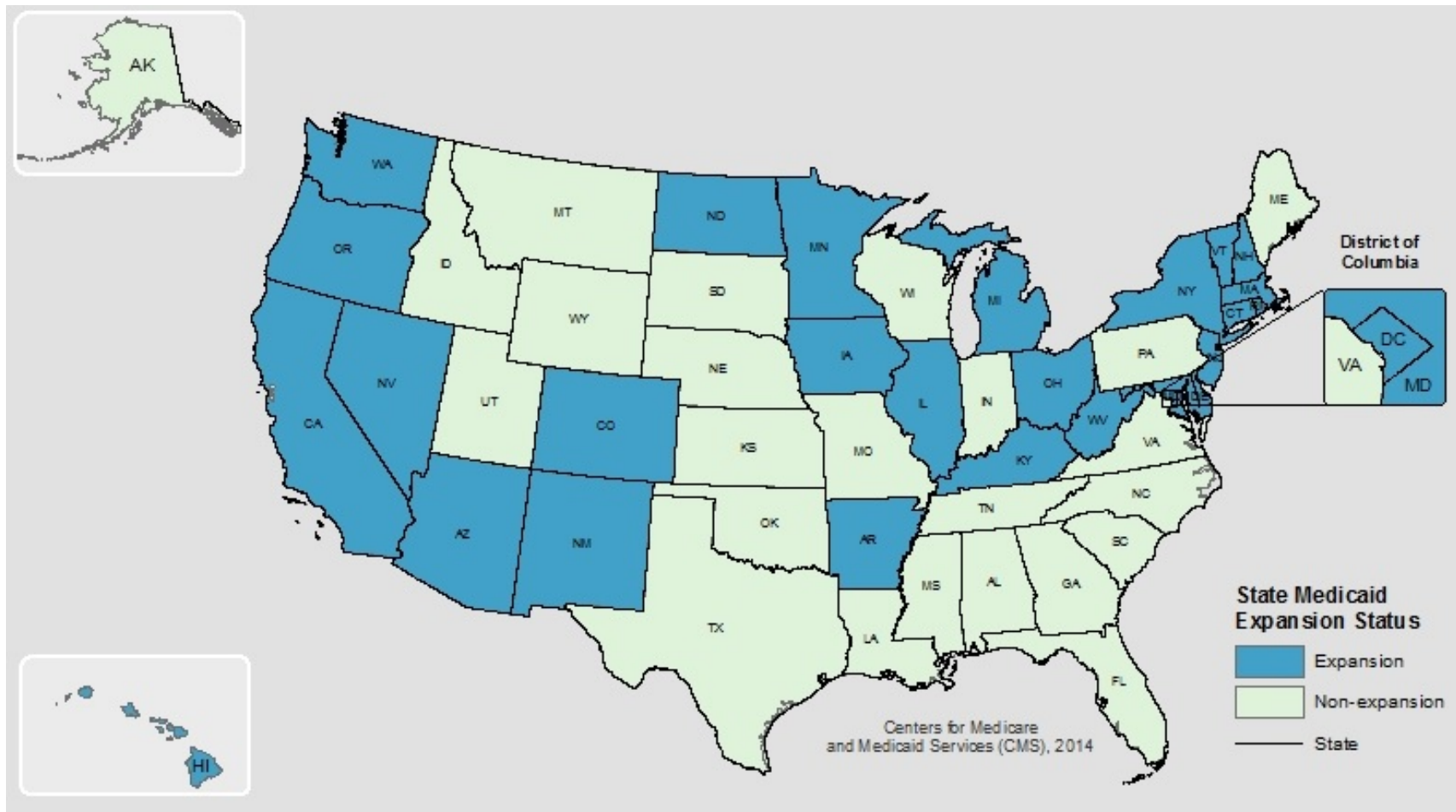
Source: U.S. Census Bureau, https://www.census.gov/did/www/sahie/data/files/F2_Map.jpg, accessed August 27, 2016.

overlaps with existing Medicaid coverage for children, and as a consequence, it should have very little impact on them. However, the individual mandate—which compels individuals to take up health insurance coverage or to pay a penalty—should induce nonparticipating but eligible children (and adults) to enroll in Medicaid. In states that did not expand Medicaid, most children are still covered by prior Medicaid or SCHIP expansions, and the individual mandate should increase coverage among eligible nonparticipants.

The eligibility rules for adults are more involved and are illustrated in appendix table 1. For adults in Medicaid expansion states, the vast majority of uninsured individuals (except for the disabled, pregnant women, and those on public assistance) became newly eligible for Medicaid in 2014 if their incomes ranged from 0 to 99 percent or 100 to 138 percent of the FPL. For a single-person household, 100 percent and 138 percent of the FPL in 2014 corresponded to income thresholds of $11,670 and $16,105, respectively. The corresponding income thresholds for a four-person household were $23,850 and $32,913. Relative to private coverage, Medicaid generally provides more generous subsidies with respect to copayments and deductibles and has no monthly premiums (Marton 2007; Joint Economic Committee 2016). In nonexpansion states, adults with incomes from 0 to 99 percent of the FPL can purchase private health insurance via the exchange, but premiums are unsubsidized, meaning that these adults do not receive the premium tax credit.[10] Adults with incomes of 100 to 138 percent of the FPL can voluntarily purchase highly subsidized private insurance via the exchange.[11]

In all states, adults with incomes of 138 to 400 percent of the FPL are eligible to purchase private, nongroup health insurance via the exchange, with a sliding-scale subsidy from the

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[10] The health insurance is still community rated and guaranteed issue, thereby providing implicit subsidies to those with high medical expenses.

[11] In nonexpansion states, individuals under 138 percent of the FPL can claim a coverage exemption and not pay the penalty. See https://www.irs.gov/pub/irs-pdf/i8965.pdf, p. 3.

premium tax credit. Various cost-sharing provisions from the marketplace plans are less generous once income exceeds 250 percent of the FPL. Importantly, such individuals—including those in Kentucky—were generally not eligible for Medicaid if their incomes exceeded 138 percent of the FPL. Those with incomes above 400 percent of the FPL can purchase unsubsidized insurance from the exchange.

The individual mandate should also increase coverage for both children and adults through ESHI, to the extent that such coverage was offered but not initially taken up. In addition to expanding eligibility categories for both public insurance and private insurance, and compelling coverage via the individual mandate, Kentucky established an online marketplace called Kynect that offers consumer assistance and outreach through health care navigators.

ACS Data

I use data from the American Community Survey (ACS), conducted by the U.S. Census Bureau, to examine changes in insurance coverage from 2013 to 2014. The ACS is an excellent data source because of its large sample size (nearly 90,000 Kentucky respondents in the two years covered), mandatory respondent participation, breadth of questions on sources of insurance, focus on contemporaneous coverage, and uniformity of questions over time. The ACS focuses explicitly on current coverage, leading to less confusion than the Current Population Survey (CPS), which asks respondents to recall coverage in the previous calendar year.[12] The CPS question is sometimes misinterpreted by respondents as asking about current coverage. Importantly, the CPS insurance questions were redesigned in 2014, increasing the difficultly in making comparisons over time.

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[12] Klerman et al. (2009) argue that the retrospective nature of the CPS questions may make it difficult for individuals to recall whether they were on Medicaid during the past year.

The ACS is continuously fielded during the year. One drawback with the public version of the ACS is that the respondent's interview date within the year is unknown. However, virtually all changes from the ACA occur on January 1, limiting the need for precise interview timing. The continuous fielding of the ACS means that the 2014 estimates reflect an average over the year, including early months when marketplace and Medicaid enrollment for the first open enrollment period were ramping up. Because open enrollment for 2014 ended on March 31, 2014,[13] the ACS (especially in 2014 relative to subsequent years) may understate the number of insured individuals. In addition, ACS respondents may report more than one source of coverage, and the statistics in the tables below reflect their reporting. Having multiple sources of coverage will not affect the calculation of overall insurance gains and is more important for the elderly, who often have supplemental insurance in addition to Medicare.

One confounding factor when connecting health insurance gains to the ACA is that the economy was improving. A healthier economy could also lead to gains in insurance coverage. For example, an improving labor market could lead to gains in employer-provided coverage. Kentucky's unemployment rate fell from 8.1 to 5.4 percent from January 2013 to December 2014, a larger drop than for the national economy as a whole.[14] However, Courtemanche et al. (forthcoming) show that the ACA, rather than improved economic conditions, was principally responsible for the gains.

Several limitations to measuring health insurance coverage with the ACS should be noted. Prior work has shown that private, nongroup coverage is overstated in the ACS, both as a sole type of comprehensive coverage and as reported in combination with other coverage types. Substantive differences in individual coverage exist between survey estimates and administrative

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[13] See https://www.irs.gov/affordable-care-act/time-may-be-running-out-march-31-is-an-important-deadline.
[14] See http://data.bls.gov/timeseries/LASST210000000000003?data_tool=XGtable.

counts from the National Association of Insurance Commissioners (Abraham, Karaca-Mandic, and Boudreaux 2013). Mach and O'Hara (2011) find that the population that reports nongroup health insurance coverage in combination with other sources is small, but it seems to be misreported, especially in combination with employer-based insurance. As shown below, gains in nongroup coverage were small in Kentucky from 2013 to 2014, and these studies suggest that even those small gains may be overstated due to reporting.

More important, the ACS survey instrument does not include any state-specific names for Medicaid, and the survey instrument was not updated to reflect newly available marketplace coverage. Thus, there is concern that ACS respondents may be confused about their coverage type, leading to additional misreporting on household surveys in 2014, after the major ACA provisions were implemented. In studying California's 2011 implementation of the Low-Income Health Program (LIHP), Sommers et al. (2016b) estimate an increase in net public insurance enrollment of 111,000 with the ACS from the LIHP, which they note "is nearly within the 95 percent confidence interval" of the 200,000-enrollee increase in administrative data sources. They conclude, "The ACS can be used for reasonably precise and valid estimates of within-state changes in coverage, both at the population level and for subgroups that likely could not be studied with alternative surveys containing much smaller sample sizes." The issue of program confusion and misreporting is examined below.

Basic Findings

Using publicly available data from the ACS (with consistently worded questions on health insurance over time), table 1 demonstrates that the overall uninsured rate in Kentucky dropped from 14.9 percent in 2013 to 9.2 percent in 2014, a decline of 5.7 percentage points. These

Table 1: Health Insurance Coverage in Kentucky, 2013–2014

Age	Year	Population	Any coverage	Uninsured	Private sources			Public sources		
					ESHI	Non-group	Tricare	Medicaid	Medicare	VA
	2013	4,395,295	3,739,782	655,513	2,332,853	493,656	136,072	815,426	790,411	126,037
			(11,244)	(11,244)	(15,501)	(9,042)	(6,093)	(12,021)	(6,061)	(4,054)
			85.1%	14.9%	53.1%	11.2%	3.1%	18.6%	18.0%	2.9%
	2014	4,413,457	4,008,582	404,875	2,341,774	540,209	136,226	1,042,310	826,088	114,164
			(8,556)	(8,556)	(16,455)	(9,220)	(5,462)	(14,669)	(5,292)	(3,411)
			90.8%	9.2%	53.1%	12.2%	3.1%	23.6%	18.7%	2.6%
	2013	1,073,565	1,004,957	68,608	546,778	62,369	31,865	419,529	4,750	1,240
			(4,469)	(4,469)	(7,260)	(3,554)	(2,825)	(7,913)	(1,000)	(713)
			93.6%	6.4%	50.9%	5.8%	3.0%	39.1%	0.4%	0.1%
	2014	1,074,434	1,025,780	48,654	538,634	68,625	28,156	449,671	6,431	604
			(3,621)	(3,621)	(7,895)	(4,135)	(2,435)	(8,294)	(1,198)	(320)
			95.5%	4.5%	50.1%	6.4%	2.6%	41.9%	0.6%	0.1%
	2013	2,685,822	2,101,918	583,904	1,556,235	221,464	66,129	293,293	164,944	61,114
			(10,093)	(10,093)	(11,515)	(5,783)	(3,703)	(6,791)	(5,445)	(2,820)
			78.3%	21.7%	57.9%	8.2%	2.5%	10.9%	6.1%	2.3%
	2014	2,685,057	2,330,570	354,487	1,567,311	253,684	70,416	488,312	179,100	52,173
			(6,767)	(6,767)	(9,120)	(6,335)	(3,382)	(8,485)	(4,774)	(2,550)
			86.8%	13.2%	58.4%	9.4%	2.6%	18.2%	6.7%	1.9%
	2013	635,908	632,907	3,001	229,840	209,823	38,078	102,604	620,717	63,683
			(714)	(714)	(4,657)	(4,924)	(2,361)	(3,153)	(1,517)	(2,544)
			99.5%	0.5%	36.1%	33.0%	6.0%	16.1%	97.6%	10.0%
	2014	653,966	652,232	1,734	235,829	217,900	37,654	104,327	640,557	61,387
			(453)	(453)	(5,289)	(4,248)	(2,247)	(3,420)	(1,201)	(2,800)
			99.7%	0.3%	36.1%	33.3%	5.8%	16.0%	97.9%	9.4%

Source: Author's tabulation of 2013 and 2014 American Community Survey data.
Notes: Individuals can report more than one coverage source; thus, the sum of private and public sources does not equal "any coverage." There are 44,997 and 44,868 unweighted observations in the 2013 and 2014 ACS, respectively. Standard errors, computed using ACS replicate weights, are in parentheses.

estimates for the two years are based on a sample of 89,865 respondents of all ages living in

Kentucky (representing approximately 4.4 million Kentuckians per year when using sample

weights), who were required to fill out the ACS questionnaire during each calendar year either

by mail, with a computer-assisted telephone interview, or online.[15] During this time, 268,800

Kentuckians gained health insurance coverage (while the population itself grew by 18,162). As

noted by Courtemanche, Marton, and Yelowitz (2016), Kentucky's percentage point decline was

the largest of all the states.

The bottom three panels of table 1 break out Kentucky's population by age group.

Among children aged 0–18, the uninsured rate fell from 6.4 percent to 4.5 percent, roughly 2

percentage points. Children had very high baseline insurance coverage rates, both in Kentucky

and elsewhere, in part because of earlier expansions in the Medicaid program. Nongroup

coverage rose by 0.6 percentage points, and Medicaid rose by 2.8 percentage points. There were

modest declines in the coverage of children through ESHI and Tricare. Overall, approximately

21,000 children gained health insurance from 2013 to 2014, with much of that growth coming

from Medicaid. Although Kentucky expanded Medicaid, it is likely that much of the increase for

children was from nonparticipating but eligible children. Among the elderly aged 65 and over,

fewer than 0.5 percent were uninsured in either 2013 or 2014. In both years, nearly 98 percent

report having Medicare coverage, and most other supplemental sources remain virtually identical

between the years.

The group that experienced the most significant change was adults aged 19–64 (hereafter,

"adults"). In both years, there were approximately 2.9 million adults in Kentucky, and the

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[15] The ACS survey is mandatory because it is part of the decennial census, replacing the long form that previously was sent to a percentage of households once every 10 years. See http://www.census.gov/programs-surveys/acs/about/survey-is-mandatory.html.

uninsured rate among them fell from 21.7 percent to 13.2 percent from 2013 to 2014, an 8.5

percentage point decline. This decline in the uninsured rate among adults mirrors statistics

produced by Gallup, where Kentucky experienced a drop in uninsured individuals from 20.4

percent in 2013 to 11.9 percent in mid-year 2014, or an 8.5 percentage point decline (Deloitte

2015).[16] In addition, the National Health Interview Survey (NHIS) found a decline from 24.1

percent in 2013 to 15.6 percent in 2014 in Kentucky, a 7.2 percentage point decline among adults

aged 18–64.[17]

Figure 2: Insurance Gains in Kentucky by Age Group, 2013–2014
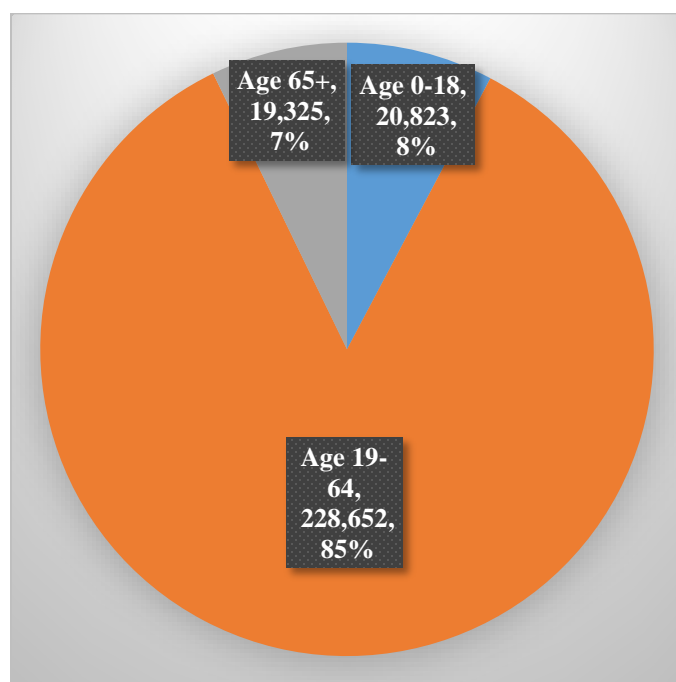
Source: Author's tabulation of 2013 and 2014 ACS data for Kentucky (see table 1).

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[16] Gallup further produced an estimate of the uninsured rate in 2015 for Kentucky of 7.5 percent. Data from the CPS show Kentucky's uninsured rate falling from 14.3 percent in 2013, to 8.5 percent in 2014, and to 6.0 percent in 2015 (Barnett and Vornovitsky 2016). The ACS data from calendar year 2015 will not be available until October 2016, so no comparison can be made at this point. There are several advantages of relying on the ACS data rather than Gallup. First, the ACS has much larger sample sizes (approximately 10 times as many adult respondents). Second, the ACS allows researchers to distinguish between source of coverage and to examine the socioeconomic characteristics of the respondents. Finally, Gallup data do not appear to be publicly available for analysis.
[17] See http://www.cdc.gov/nchs/data/nhis/earlyrelease/insur201605.pdf, table 17.

Overall, figure 2 shows that nearly 229,000 adults gained coverage, and they comprised 85 percent of the overall gain in health insurance coverage from 2013 to 2014. Examining the sources of coverage in figure 3, the role of Medicaid becomes apparent. The ACS data show that 195,073 adults gained Medicaid coverage, from 293,239 in 2013 to 488,312 in 2014. Overall, Medicaid coverage among adults rose by 7.3 percentage points, from 10.9 percent to 18.2 percent. Nearly 80 percent of the overall increase in adult coverage was due to the Medicaid program. ESHI rose by 0.5 percentage points, and nongroup coverage rose by 1.2 percentage points. The ACS data show a smaller rise in Medicaid from 2013 to 2014 than the NHIS data (where public coverage rose by 8.8 percentage points, from 20.7% to 29.5%) and a larger rise in private coverage (where private coverage fell by 1.1 percentage points, from 57.7% to 56.6%, compared to the overall 1.7 percentage point rise in the ACS).

Figure 3: Source of Insurance Gains for Kentucky Adults Aged 19–64, 2013–2014
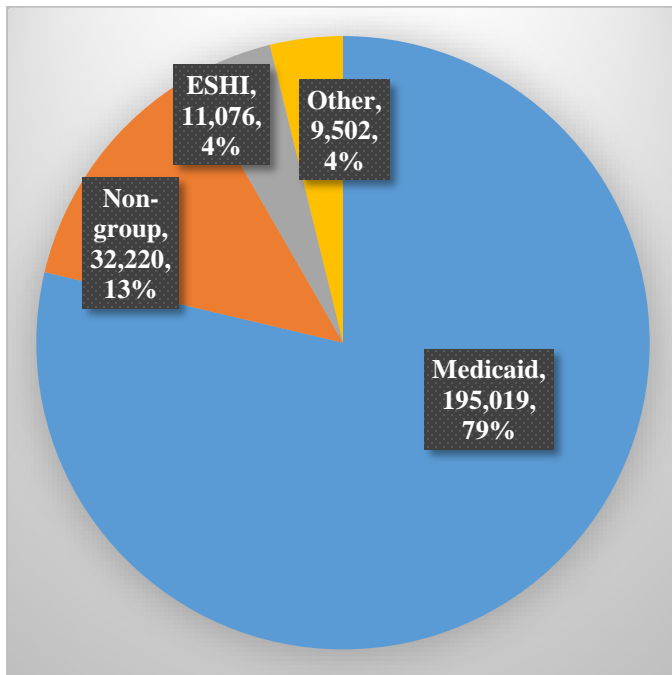
Source: Author's tabulation of 2013 and 2014 ACS data for Kentucky, adults aged 19–64 only (see table 1).

Given the importance of the Medicaid expansions for adults in contributing to the gains in insurance coverage, it is important to ask how the Medicaid figures in the ACS compare to administrative sources. Table 2, using data collected through the Medicaid Budget and Expenditure System (MBES), shows monthly counts of Medicaid enrollment and new adult (Title VIII) enrollment in Kentucky. Given that the ACS is a rolling survey over the calendar year, it is appropriate to compare the ACS enrollment to average enrollment across the months from the MBES. Across all months, MBES data show that there were 1,113,775 Medicaid enrollees in 2014, somewhat larger than the 1,042,310 estimated by the ACS (in table 1). The MBES data show 300,151 new adult enrollees per month on average, compared with an ACS estimate of 195,019 (see figure 3).[18] Overall, comparisons between the ACS and administrative data show very similar patterns for Medicaid enrollment. As is typical with population surveys of health insurance, to varying degrees, Medicaid enrollment is underreported, which is known as the Medicaid undercount (Call et al. 2008). However, across a variety of categories, the ACS figures are reasonably close to the figures from administrative sources. In the aggregate, there may be some underreporting of Medicaid coverage, perhaps due to stigma, embarrassment, or confusion about program names (Klerman, Ringel, and Roth 2005).

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[18] In addition, the CMS publication "Medicaid & CHIP: January 2015 Monthly Applications, Eligibility Determinations and Enrollment Report" (March 20, 2015) provides figures for a variety of subgroups. It reports total Medicaid enrollment in Kentucky in December 2014 of 1,073,384 (CMS, table 1, column I), while the ACS data show 97.1 percent of the administrative count for the full population. CMS reports 606,805 Kentuckians enrolled in July–Sept. 2013, while the ACS data show 815,426 enrollees in 2013. CMS (table 2) also reports that child enrollment averaged 457,493 for August–December 2014. This compares with 449,671 children aged 0–18 from the ACS for 2014. See https://web.archive.org/web/20160104162214/https://www.medicaid.gov/medicaid-chip-program-information/program-information/downloads/medicaid-and-chip-january-2015-application-eligibility-and-enrollment-data.pdf.

Table 2: Kentucky Medicaid Enrollment in 2014, Full Program and New Adults

Month	Total Medicaid enrollees	Total VIII group enrollees
Jan 2014	950,515	161,540
Feb 2014	997,084	197,850
Mar 2014	1,060,566	247,899
Apr 2014	1,088,515	269,075
May 2014	1,101,231	287,506
Jun 2014	1,108,768	301,103
Jul 2014	1,133,157	319,642
Aug 2014	1,142,933	330,128
Sep 2014	1,146,192	337,869
Oct 2014	1,197,172	370,046
Nov 2014	1,209,927	382,372
Dec 2014	1,229,241	396,777
Average across 12 months	**1,113,775**	**300,151**

Source: https://www.medicaid.gov/medicaid-chip-program-information/program-information/medicaid-and-chip-enrollment-data/medicaid-enrollment-data-collected-through-mbes.html.

Table 3 breaks out the gains by all insurance sources and income levels for adults. Presented sequentially are panels for all income levels, income under 138 percent of the FPL, and then income-bounded levels (0%–99%, 100%–137%, 138%–249%, 250%–399%, and 400% or higher).[19] Adults with incomes under 138 percent of the FPL are assumed to be Medicaid eligible given Kentucky's Medicaid expansion, while all others are assumed to be Medicaid ineligible. Individuals with income from 0 to 99 percent of the FPL would not be eligible for subsidies from the exchange if the Medicaid expansion were rolled back, while those with incomes of 138 to 400 percent of the FPL would receive subsidies (with more generous cost-sharing provisions for those under 250% of the FPL). This modeling assumption—in separating eligible and ineligible individuals based on the FPL—is similar to that used by Families USA to

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[19] A small percentage of individuals in the ACS do not have a FPL percentage assigned to them. They are grouped in the "<138%" group (or "<100%" group, when a distinction is made between 0%–99% and 100%–137% of the FPL).

Table 3: Nonelderly Adults by Poverty Level in Kentucky, 2013–2014

Income bin	Year	Population	Any coverage	Uninsured	Private sources			Public sources		
					ESHI	Non-group	Tricare	Medicaid	Medicare	VA
All	2013	2,685,822	2,101,918 (10,093) 78.3%	583,904 (10,093) 21.7%	1,556,235 (11,515) 57.9%	221,464 (5,783) 8.2%	66,129 (3,703) 2.5%	293,293 (6,791) 10.9%	164,944 (5,445) 6.1%	61,114 (2,820) 2.3%
	2014	2,685,057	2,330,570 (6,767) 86.8%	354,487 (6,767) 13.2%	1,567,311 (9,120) 58.4%	253,684 (6,335) 9.4%	70,416 (3,382) 2.6%	488,312 (8,485) 18.2%	179,100 (4,774) 6.7%	52,173 (2,550) 1.9%
<138% FPL	2013	732,362	424,659 (5,681) 58.0%	307,703 (5,681) 42.0%	146,211 (4,292) 20.0%	43,661 (3,057) 6.0%	13,408 (1,170) 1.8%	206,516 (5,449) 28.2%	77,049 (3,451) 10.5%	13,572 (1,186) 1.9%
	2014	732,797	564,085 (4,250) 77.0%	168,712 (4,250) 23.0%	152,163 (4,228) 20.8%	62,345 (3,165) 8.5%	16,661 (1,640) 2.3%	328,303 (5,948) 44.8%	87,159 (3,584) 11.9%	11,967 (1,219) 1.6%
0%–99% FPL	2013	535,997	306,680 (4,720) 57.2%	229,317 (4,720) 42.8%	95,560 (3,381) 17.8%	31,967 (2,400) 6.0%	11,154 (913) 2.1%	161,818 (4,664) 30.2%	51,731 (2,871) 9.7%	8,663 (912) 1.6%
	2014	540,848	408,571 (3,560) 75.5%	132,277 (3,560) 24.5%	96,016 (4,129) 17.8%	46,368 (2,696) 8.6%	11,326 (1,041) 2.1%	253,447 (5,142) 46.9%	59,890 (2,819) 11.1%	7,185 (1,029) 1.3%
100%–137% FPL	2013	196,365	117,979 (3,398) 60.1%	78,386 (3,398) 39.9%	50,651 (2,475) 25.8%	11,694 (1,330) 6.0%	2,254 (566) 1.1%	44,698 (2,660) 22.8%	25,318 (2,053) 12.9%	4,909 (734) 2.5%
	2014	191,949	155,514 (2,891) 81.0%	36,435 (2,891) 19.0%	56,147 (2,954) 29.3%	15,977 (2,081) 8.3%	5,335 (1,110) 2.8%	74,856 (3,548) 39.0%	27,269 (2,085) 14.2%	4,782 (732) 2.5%

Table 3 (continued)

Income bin	Year	Population	Any coverage	Uninsured	Private sources			Public sources		
					ESHI	Non-group	Tricare	Medicaid	Medicare	VA
138%–249% FPL	2013	537,354	395,378	141,976	282,165	42,915	13,255	52,032	43,753	15,976
			(4,188)	(4,188)	(5,071)	(2,288)	(1,716)	(2,680)	(2,695)	(1,454)
			73.6%	26.4%	52.5%	8.0%	2.5%	9.7%	8.1%	3.0%
	2014	555,525	457,836	97,689	298,048	56,308	12,404	96,546	46,069	10,143
			(3,551)	(3,551)	(4,802)	(2,713)	(1,776)	(3,893)	(2,624)	(1,228)
			82.4%	17.6%	53.7%	10.1%	2.2%	17.4%	8.3%	1.8%
250%–399% FPL	2013	577,529	495,048	82,481	420,843	52,411	15,561	23,060	26,213	15,079
			(3,879)	(3,879)	(4,661)	(3,188)	(1,803)	(1,967)	(2,031)	(1,473)
			85.7%	14.3%	72.9%	9.1%	2.7%	4.0%	4.5%	2.6%
	2014	576,235	520,290	55,945	423,146	55,567	17,600	39,694	30,136	13,562
			(3,588)	(3,588)	(4,583)	(3,226)	(1,917)	(2,981)	(2,103)	(1,613)
			90.3%	9.7%	73.4%	9.6%	3.1%	6.9%	5.2%	2.4%
400%+ FPL	2013	838,577	786,833	51,744	707,016	82,477	23,905	11,685	17,929	16,487
			(3,236)	(3,236)	(5,044)	(3,801)	(2,373)	(1,590)	(1,784)	(1,519)
			93.8%	6.2%	84.3%	9.8%	2.9%	1.4%	2.1%	2.0%
	2014	820,500	788,359	32,141	693,954	79,464	23,751	23,769	15,736	16,501
			(3,256)	(3,256)	(5,180)	(3,429)	(1,997)	(1,974)	(1,354)	(1,446)
			96.1%	3.9%	84.6%	9.7%	2.9%	2.9%	1.9%	2.0%

Source: Author's tabulation of 2013 and 2014 American Community Survey data.

Notes: Individuals can report more than one coverage source; thus, adding all sources does not equal "any coverage." All numbers are weighted using ACS weights. There are 26,706 and 26,552 unweighted observations in the 2013 and 2014 ACS, respectively. Standard errors are in parentheses and computed using ACS replicate weights. Approximately 3 percent of adults did not have a poverty line measure; they are included in the 0–99 percent of FPL category.

forecast 262,000 potentially eligible adult participants.[20] Using a five-year sample of ACS data from 2008 through 2012, Families USA restricted the sample to "individuals with a household income below 138 percent of poverty, who were between ages 18 and 64, and who were uninsured."[21] That is, their forecast did not anticipate or model Medicaid take-up from ineligible adults—those with incomes at or above 138 percent of the FPL.

Coverage went up most dramatically for the roughly 540,000 adults living under 100 percent of the FPL and 190,000 adults with incomes from 100 to 137 percent of the FPL. Each group experienced an approximately 20 percentage point reduction in the uninsured rate, corresponding to roughly 97,000 (42,000) adults with incomes under 100 percent (100%–137%) of the FPL obtaining insurance. For poor adults, nearly 92,000 obtained Medicaid, overwhelmingly making it the most important coverage source from the ACA reforms. In contrast, for adults earning 100 to 137 percent of the FPL, Medicaid enrollment went up by more than 30,000, and it was responsible for approximately three-quarters of the gains in coverage.

Across all income bins, the ACS data show overall gains in Medicaid coverage of 195,000 for adults, from 293,000 to 488,000. In 2014, roughly 62 percent of adults who gained coverage reported incomes under 138 percent of the FPL (see figure 4). The gains for this income-eligible group are 121,787 new enrollees. Around 47 percent who gained coverage had incomes of 0 to 99 percent of the FPL, meaning if Kentucky had not expanded Medicaid and absent any other behavioral response, they would likely lose Medicaid and not qualify for subsidized coverage from the exchange. Another 15 percent of those who gained coverage under

[20] See http://familiesusa.org/product/50-state-look-medicaid-expansion.
[21] See http://familiesusa.org/sites/default/files/product_documents/FUSA_INFOGRAPHIC_50state-medicaid-expansion_methodology_0.pdf.

the Medicaid expansion would likely qualify for highly subsidized coverage from the exchange via the premium tax credit absent the Medicaid expansion.

Figure 4: Growth by Income Category for Medicaid Adults Aged 19–64 in Kentucky, 2013–2014
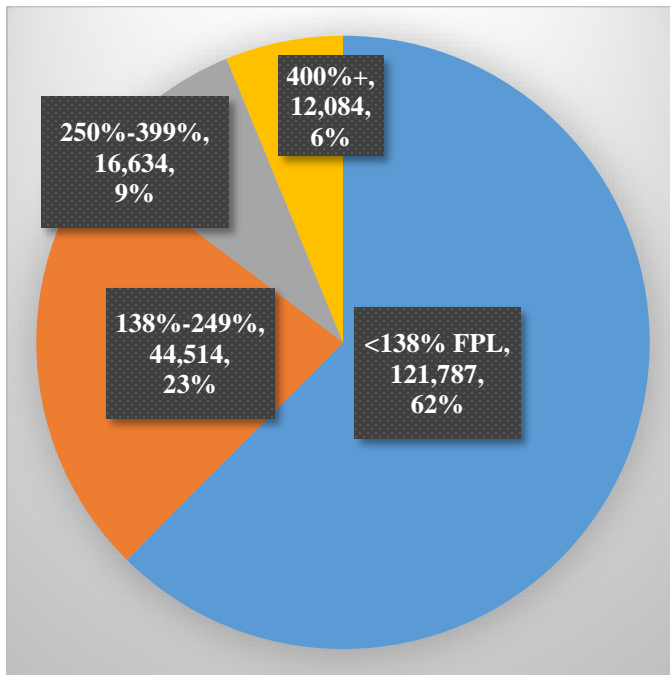
Source: Author's tabulation of 2013 and 2014 ACS data for Kentucky Medicaid adults aged 19–64.
Note: Adults without a poverty line measure are included in the <138 percent of FPL category.

In 2013, prior to the expansion, 86,777 adults reported Medicaid coverage who had incomes above 138 percent of the FPL. In 2014, this figure rose to 160,009, meaning an additional 73,232 individuals who appeared to be income ineligible were reporting Medicaid coverage. Around 38 percent of newly covered adults appeared to be income ineligible for Medicaid; approximately 83 percent of them would qualify for the premium tax credit because their income was from 138 to 400 percent of the FPL.

On the surface, the numbers in table 3 seem to contrast with the Kaiser Family Foundation's analysis, which states that "without the expansion, the large majority (more than

eight in ten) of these new enrollees would have been uninsured and without a coverage pathway because their income is below poverty."[22] Table 3 shows, consistent with this statement, that roughly three-quarters of *Medicaid eligible* adults had incomes under 100 percent of the FPL, and another one-quarter had incomes from 100 to 137 percent of the FPL. However, the ACS also shows that Medicaid *ineligible* adults—those with incomes at or above 138 percent of the FPL—comprise 38 percent of the total who gained Medicaid coverage. Overall, without the Medicaid expansion, roughly half of Medicaid recipients who gained coverage—those under 100 percent of the FPL and those at or above 400 percent of the FPL—would not be eligible for subsidized private coverage from the exchange.

Numerous sources have emphasized that Kentucky's Medicaid expansion "exceeded expectations." This outcome is most forcefully highlighted in the Deloitte (2015) report, which notes that "both the total annual enrollment and pace of enrollment materially exceeded the 2013 Whitepaper projections, suggesting that assumptions about the number of individuals that would enroll (the take up rate) were low and that there was pent up demand for health care coverage among Kentucky's expansion population." The report notes that Deloitte had earlier estimated that 147,634 newly eligible individuals would enroll in the Medicaid expansion group, and that first-year Medicaid expansion enrollment exceeded Census-based estimates of potential eligible enrollees.

The current analysis using the 2013 and 2014 ACS—where the patterns of insurance growth closely mimic both the Gallup Survey and NHIS—suggests a possible explanation for why the forecasts of Medicaid enrollment were inaccurate. Although there were certainly substantial gains among the Medicaid-eligible population under 138 percent of the FPL, take-up

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[22] See http://kff.org/medicaid/fact-sheet/whats-at-stake-in-the-future-of-the-kentucky-medicaid-expansion/.

among eligible individuals was not close to 100 percent. As of 2014, 23 percent of Medicaid-eligible adults were still uninsured. Although there were substantial Medicaid enrollment gains among the Medicaid-eligible population, there appear to be substantial Medicaid enrollment gains among the ineligible population, too. In fact, the 121,787 who gained Medicaid coverage among the eligible population (moving from 206,516 to 328,303) is much closer to the original estimate of 147,634 from the first Deloitte report. The actual gains among Medicaid-eligible individuals are likely higher than 121,787, due to the Medicaid undercount in household surveys (Call et al. 2008).

Sensitivity of Basic Findings

The results from table 3 suggest that more than 73,000 newly covered adults on Medicaid (roughly 38 percent of all newly covered adults) were ineligible for coverage. Table 4 examines the sensitivity of this finding. The first two columns replicate the total number of adults and adults on Medicaid from the previous table. The final five columns narrow down the sample of adults, with the emphasis being on Medicaid coverage among adults with incomes at or above 138 percent of the FPL. The first screen excludes any adult who reported receiving at least $1 from public assistance or SSI. Although the statutory rules would imply that relatively few adults qualify for such programs if their incomes exceed 138 percent of the FPL, many adults reporting participation in SSI or public assistance would likely report participating in Medicaid. In addition, the income concept used under the ACA, MAGI, does not include SSI payments.[23] The number of ineligible participants falls by 9.2 percent, from 73,232 to 66,462.

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[23] See https://www.healthcare.gov/glossary/modified-adjusted-gross-income-magi/.

The next column excludes individuals who moved in the previous year. Moving could be associated with other lifecycle events (such as changing employment, graduating from school, or changing family configuration). Some movers may also have faced eligibility rules that were different at the time of open enrollment relative to the time they answered the ACS survey (i.e., living in another state). In addition, moving expenses are deductible under the MAGI definition.[24] Excluding movers leaves 53,235 ineligible, new Medicaid participants. Related to this, the next column excludes individuals who reported that they got married, divorced, or became widowed in the previous 12 months. As with moving, concerns about accurately measuring family structure and family income at time of open enrollment relative to the ACS survey suggest that individuals in volatile, transitory situations may appear ineligible. After excluding these changes in family structure, there are 51,336 ineligible, new Medicaid participants.

The Medicaid pregnancy coverage expansions from the 1980s and 1990s dramatically raised the income threshold for pregnant women (to 185% of the FPL, substantially above the 138% of FPL threshold from the ACA). The next column excludes women who reported having a baby in the past 12 months. Such women may have qualified for Medicaid above the 138 percent threshold even absent the ACA expansion. After this exclusion, 49,800 ineligible new Medicaid participants remain.

The final column only includes adults whose entire household consists of members of the nuclear family. That is, it restricts the sample to households where every individual reports being either the reference person, the husband or wife, biological son or daughter, adopted son or

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[24] See http://laborcenter.berkeley.edu/pdf/2013/MAGI_summary13.pdf.

Table 4: Sensitivity of Medicaid Coverage for Nonelderly Adults by Poverty Level in Kentucky, 2013–2014

Income bin	Year	Nonelderly adult population	Medicaid	Adds SSI or public assistance exclusion	Adds movers exclusion	Adds family structure exclusion	Adds pregnancy exclusion	Adds nonnuclear families exclusion
All	2013	2,685,822	293,293	164,339	124,036	119,356	114,324	68,712
			(6,791)	(5,016)	(4,303)	(4,276)	(4,287)	(3,566)
	2014	2,685,057	488,312	354,971	270,488	261,766	252,636	157,719
			(8,485)	(7,076)	(6,305)	(6,167)	(6,011)	(5,631)
<138% FPL	2013	732,362	206,516	102,511	75,998	72,586	69,485	43,854
			(5,449)	(3,877)	(3,291)	(3,276)	(3,200)	(2,529)
	2014	732,797	328,303	221,363	167,547	161,988	156,192	97,606
			(5,948)	(4,698)	(4,229)	(4,085)	(3,975)	(3,503)
138%– 249% FPL	2013	537,354	52,032	26,212	20,910	20,592	20,370	9,501
			(2,680)	(2,071)	(1,600)	(1,590)	(1,596)	(1,105)
	2014	555,525	96,546	67,028	52,516	51,290	49,667	31,946
			(3,893)	(3,691)	(3,255)	(3,138)	(3,088)	(2,633)
250%– 399% FPL	2013	577,529	23,060	10,426	8,162	7,822	7,822	5,035
			(1,967)	(1,158)	(1,010)	(1,000)	(996)	(757)
	2014	576,235	39,694	25,319	19,833	19,106	19,106	12,109
			(2,981)	(2,461)	(1,721)	(1,714)	(1,707)	(1,478)
400%+ FPL	2013	838,577	11,685	4,458	3,682	3,546	3,546	2,641
			(1,590)	(848)	(664)	(671)	(670)	(537)
	2014	820,500	23,769	15,211	13,640	12,900	12,765	9,363
			(1,974)	(1,665)	(1,586)	(1,543)	(1,539)	(1,337)

Notes: Author's tabulation of 2013 and 2014 American Community Survey data. There are 26,706 and 26,552 unweighted observations in the 2013 and 2014 ACS for nonelderly adults in Kentucky, respectively. Standard errors in parentheses, computed using ACS replicate weights. Adults without a poverty line measure are included in the <138 percent of FPL category.

daughter, or stepson or stepdaughter. Excluded are households where any individual reports

being the brother/sister, father/mother, grandchild, parent-in-law, son/daughter-in-law,

roomer/boarder, housemate/roommate, unmarried partner, foster child, or other nonrelative or

where any individual reports living in institutionalized or noninstitutionalized group quarters. As

noted by the State Health Access Data Assistance Center (SHADAC) (2012), the census

definition of a family includes related members (i.e., members of the nonnuclear family, such as

grandparents), and this definition in turn can affect the FPL measurement, which is based on

household size. After restricting the sample to nuclear families, the number of ineligible new

Medicaid participants is 36,241.

The above screens take into account some of the most plausible reasons why the ACS

would estimate approximately 73,000 new ineligible Medicaid participants. Even with such

screens, more than 36,000 ineligible participants remain. With all of these exclusions, there are

13,796 ineligible new participants with incomes exceeding 250 percent of the FPL ($29,175 for

an individual or $59,512.50 for a family of four). In addition, there are 6,722 ineligible new

participants with incomes exceeding 400 percent of the FPL ($46,680 for an individual or

$95,400 for a family of four).

Comparisons with Adults in Neighboring States

Tables 5, 6, and 7 examine health insurance coverage gains for adults in the neighboring states of

West Virginia, Indiana, and Tennessee. Like Kentucky, West Virginia expanded Medicaid in

2014. Indiana expanded Medicaid in 2015 (through a Medicaid expansion waiver) and

Tennessee has not expanded Medicaid. Thus, I asked whether the patterns in 2014 look similar in

Kentucky and West Virginia (or Indiana and Tennessee), and when the 2015 ACS becomes

available, whether Indiana's patterns then look more like Kentucky's and West Virginia's.[25] The Deloitte (2015) report notes that "11 of the 28 states that expanded Medicaid also surpassed census estimates of potential Medicaid expansion eligibles," which suggests that the patterns seen in Kentucky may emerge elsewhere.

Table 5 shows that West Virginia, which also expanded Medicaid, saw a 6.8 percentage point increase in overall insurance coverage among adults, from 78.9 percent to 85.7 percent, slightly smaller than Kentucky's 8.5 percentage point increase. Much like Kentucky, virtually all the growth for adults was in Medicaid participation, which rose from 13.4 percent to 20.3 percent. In fact, nongroup coverage remained constant at 5.9 percent in both years. Overall, nearly 75,000 adults gained Medicaid coverage from 2013 to 2014, and approximately 44 percent of new enrollees appear to be ineligible. Thus, the patterns that emerge after the Medicaid expansion in Kentucky also appear in West Virginia.

Neither Indiana (table 6) nor Tennessee (table 7) expanded Medicaid in 2014. Both states saw smaller overall gains in insurance coverage among adults—increases of 2.7 percentage points. In both states, the key avenue for insurance growth was private coverage. In Indiana, ESHI grew by 1.4 percentage points, and nongroup coverage grew by 0.7 percentage points. In contrast, Medicaid grew by only 0.3 percentage points, making it a less important factor in overall gains. Moreover, the growth in Medicaid among adults in Indiana was concentrated among those with incomes under 138 percent of the FPL, where it is expected that the individual mandate will compel nonparticipating eligible individuals to take up coverage. In Tennessee, there was no growth in ESHI (there was actually a reduction of 0.2 percentage points), large

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[25] Indiana's 2015 Medicaid expansion waiver, estimated to affect 357,000 adults, requires most newly eligible adults to make monthly contributions of $1–$27. Failure to do so would result in a more limited benefits package and point of service copayments for those with incomes below 100 percent of the FPL. And it would result in a six-month lockout from Medicaid eligibility for those with incomes above 100 percent of the FPL (Smith et al. 2015).

Table 5: Nonelderly Adults by Poverty Level in West Virginia, 2013–2014

Income bin	Year	Population	Any coverage	Uninsured	Private sources			Public sources		
					ESHI	Non-group	Tricare	Medicaid	Medicare	VA
All	2013	1,127,155	889,553	237,602	658,347	67,022	16,442	150,912	87,482	30,421
			(6,784)	(6,784)	(8,243)	(3,480)	(1,778)	(5,219)	(3,705)	(2,222)
			78.9%	21.1%	58.4%	5.9%	1.5%	13.4%	7.8%	2.7%
	2014	1,112,798	953,296	159,502	657,000	66,083	15,798	225,887	78,265	28,688
			(5,253)	(5,253)	(8,603)	(2,947)	(1,914)	(7,079)	(3,131)	(2,349)
			85.7%	14.3%	59.0%	5.9%	1.4%	20.3%	7.0%	2.6%
<138% FPL	2013	309,457	197,681	111,776	67,944	17,732	2,142	102,924	39,539	6,213
			(3,420)	(3,420)	(3,443)	(1,551)	(603)	(3,889)	(1,969)	(1,089)
			63.9%	36.1%	22.0%	5.7%	0.7%	33.3%	12.8%	2.0%
	2014	313,017	243,329	69,688	73,579	18,479	3,169	145,001	35,170	6,661
			(3,342)	(3,342)	(3,664)	(1,831)	(954)	(4,042)	(1,994)	(1,058)
			77.7%	22.3%	23.5%	5.9%	1.0%	46.3%	11.2%	2.1%
138%–249% FPL	2013	228,418	160,711	67,707	118,332	10,866	3,147	23,706	20,748	7,402
			(3,582)	(3,582)	(3,614)	(1,227)	(950)	(1,602)	(2,052)	(1,142)
			70.4%	29.6%	51.8%	4.8%	1.4%	10.4%	9.1%	3.2%
	2014	218,190	175,077	43,113	112,421	12,992	1,630	49,328	20,039	5,041
			(2,900)	(2,900)	(3,977)	(1,264)	(518)	(3,228)	(2,079)	(769)
			80.2%	19.8%	51.5%	6.0%	0.7%	22.6%	9.2%	2.3%
250%–399% FPL	2013	237,777	202,333	35,444	172,255	13,991	4,214	15,195	15,831	8,375
			(2,538)	(2,538)	(3,733)	(1,736)	(941)	(1,722)	(1,543)	(1,181)
			85.1%	14.9%	72.4%	5.9%	1.8%	6.4%	6.7%	3.5%
	2014	257,617	227,384	30,233	190,668	13,010	5,463	21,486	15,507	9,493
			(2,677)	(2,677)	(3,999)	(1,242)	(1,179)	(2,033)	(1,513)	(1,239)
			88.3%	11.7%	74.0%	5.1%	2.1%	8.3%	6.0%	3.7%

Table 5 (continued)

Income bin	Year	Population	Any coverage	Uninsured	Private sources			Public sources		
					ESHI	Non-group	Tricare	Medicaid	Medicare	VA
400%+ FPL	2013	351,503	328,828	22,675	299,816	24,433	6,939	9,087	11,364	8,431
			(2,018)	(2,018)	(2,957)	(2,334)	(1,190)	(1,516)	(1,434)	(1,117)
			93.5%	6.5%	85.3%	7.0%	2.0%	2.6%	3.2%	2.4%
	2014	323,974	307,506	16,468	280,332	21,602	5,536	10,072	7,549	7,493
			(1,849)	(1,849)	(2,885)	(2,152)	(1,086)	(1,255)	(988)	(1,324)
			94.9%	5.1%	86.5%	6.7%	1.7%	3.1%	2.3%	2.3%

Source: Author's tabulation of 2013 and 2014 ACS data.
Notes: West Virginia expanded Medicaid in 2014. Individuals can report more than one coverage source; thus, adding all sources does not equal "any coverage." All numbers are weighted. There are 10,774 and 10,520 unweighted observations in the 2013 and 2014 ACS, respectively. Standard errors, computed using ACS replicate weights, are in parentheses. Adults without a poverty line measure are included in the <138 percent of FPL category.

Table 6: Nonelderly Adults by Poverty Level in Indiana, 2013–2014

Income bin	Year	Population	Any coverage	Uninsured	Private sources			Public sources		
					ESHI	Non-group	Tricare	Medicaid	Medicare	VA
All	2013	3,967,216	3,171,451	795,765	2,476,618	343,564	43,180	377,930	174,245	64,119
			(12,389)	(12,389)	(14,969)	(6,845)	(3,103)	(9,015)	(5,885)	(2,927)
			79.9%	20.1%	62.4%	8.7%	1.1%	9.5%	4.4%	1.6%
	2014	3,974,145	3,283,546	690,599	2,535,903	373,613	42,411	388,886	186,163	67,104
			(11,595)	(11,595)	(13,536)	(7,124)	(2,437)	(8,527)	(4,791)	(3,434)
			82.6%	17.4%	63.8%	9.4%	1.1%	9.8%	4.7%	1.7%
<138% FPL	2013	954,816	574,138	380,678	235,124	82,641	8,240	248,710	81,828	13,985
			(6,136)	(6,136)	(6,007)	(3,239)	(1,253)	(5,647)	(3,911)	(1,409)
			60.1%	39.9%	24.6%	8.7%	0.9%	26.0%	8.6%	1.5%
	2014	923,057	601,022	322,035	239,452	89,606	7,673	260,292	86,283	19,514
			(7,037)	(7,037)	(7,101)	(3,636)	(914)	(6,171)	(3,595)	(1,710)

Table 6 (continued)

Income bin	Year	Population	Any coverage	Uninsured	Private sources			Public sources		
					ESHI	Non-group	Tricare	Medicaid	Medicare	VA
			65.1%	34.9%	25.9%	9.7%	0.8%	28.2%	9.3%	2.1%
138%–249%	2013	758,128	548,690	209,438	409,516	59,688	8,635	75,379	44,177	17,751
			(5,124)	(5,124)	(6,092)	(3,288)	(1,506)	(4,227)	(2,936)	(1,661)
			72.4%	27.6%	54.0%	7.9%	1.1%	9.9%	5.8%	2.3%
	2014	776,970	590,678	186,292	435,238	75,946	7,137	75,831	45,379	13,648
			(6,150)	(6,150)	(6,833)	(3,102)	(1,157)	(3,610)	(2,539)	(1,498)
			76.0%	24.0%	56.0%	9.8%	0.9%	9.8%	5.8%	1.8%
250%–399%	2013	940,463	810,470	129,993	707,999	75,343	10,461	34,648	26,679	17,800
			(4,751)	(4,751)	(6,008)	(3,986)	(1,437)	(2,725)	(1,772)	(1,738)
			86.2%	13.8%	75.3%	8.0%	1.1%	3.7%	2.8%	1.9%
	2014	913,701	797,731	115,970	687,809	85,830	9,964	29,559	31,912	16,431
			(5,332)	(5,332)	(6,957)	(3,511)	(1,413)	(2,475)	(2,029)	(1,558)
			87.3%	12.7%	75.3%	9.4%	1.1%	3.2%	3.5%	1.8%
400%+	2013	1,313,809	1,238,153	75,656	1,123,979	125,892	15,844	19,193	21,561	14,583
			(4,453)	(4,453)	(6,737)	(4,875)	(1,716)	(1,787)	(1,591)	(1,296)
			94.2%	5.8%	85.6%	9.6%	1.2%	1.5%	1.6%	1.1%
	2014	1,360,417	1,294,115	66,302	1,173,404	122,231	17,637	23,204	22,589	17,511
			(4,512)	(4,512)	(6,885)	(4,618)	(1,565)	(2,240)	(1,833)	(1,536)
			95.1%	4.9%	86.3%	9.0%	1.3%	1.7%	1.7%	1.3%

Source: Author's tabulation of 2013 and 2014 ACS data.
Notes: Indiana didn't expand Medicaid until 2015. Individuals can report more than one coverage source; thus, adding all sources does not equal "any coverage." All numbers are weighted. There are 39,324 and 39,243 unweighted observations in the 2013 and 2014 ACS, respectively. Standard errors, computed using ACS replicate weights, are in parentheses. Adults without a poverty line measure are included in the <138 percent of FPL category.

Table 7: Nonelderly Adults by poverty level in Tennessee, 2013–2014

| Income bin | Year | Population | Any coverage | Uninsured | Private sources | | | Public sources | | |
					ESHI	Non-group	Tricare	Medicaid	Medicare	VA
All	2013	3,966,852	3,148,954 (11,824) 79.4%	817,898 (11,824) 20.6%	2,248,896 (12,952) 56.7%	374,155 (8,326) 9.4%	124,710 (5,264) 3.1%	486,387 (9,319) 12.3%	213,604 (5,372) 5.4%	78,530 (3,358) 2.0%
	2014	3,982,039	3,270,538 (10,826) 82.1%	711,501 (10,826) 17.9%	2,251,641 (15,614) 56.5%	451,933 (9,995) 11.3%	117,522 (4,911) 3.0%	535,446 (10,327) 13.4%	213,096 (5,358) 5.4%	89,721 (3,779) 2.3%
<138% FPL	2013	1,039,141	643,254 (7,254) 61.9%	395,887 (7,254) 38.1%	222,474 (6,168) 21.4%	73,739 (3,806) 7.1%	15,256 (1,612) 1.5%	328,387 (6,842) 31.6%	97,607 (4,105) 9.4%	17,274 (1,692) 1.7%
	2014	1,050,363	703,389 (6,834) 67.0%	346,974 (6,834) 33.0%	224,894 (6,365) 21.4%	95,252 (4,421) 9.1%	19,119 (1,893) 1.8%	354,975 (7,320) 33.8%	105,122 (3,678) 10.0%	22,641 (1,854) 2.2%
138%–249%	2013	815,003	588,845 (5,963) 72.3%	226,158 (5,963) 27.7%	402,423 (6,625) 49.4%	72,520 (3,817) 8.9%	24,089 (2,621) 3.0%	97,104 (4,046) 11.9%	58,505 (2,630) 7.2%	18,875 (1,652) 2.3%
	2014	821,942	628,801 (5,622) 76.5%	193,141 (5,622) 23.5%	416,087 (7,430) 50.6%	92,865 (3,806) 11.3%	23,657 (2,271) 2.9%	107,543 (4,922) 13.1%	48,628 (2,663) 5.9%	19,518 (2,054) 2.4%
250%–399%	2013	878,506	755,544 (4,842) 86.0%	122,962 (4,842) 14.0%	623,215 (7,208) 70.9%	83,909 (3,447) 9.6%	34,722 (2,926) 4.0%	38,465 (2,848) 4.4%	31,938 (2,284) 3.6%	18,689 (1,543) 2.1%
	2014	862,541	755,175 (5,194) 87.6%	107,366 (5,194) 12.4%	605,820 (6,088) 70.2%	101,446 (4,400) 11.8%	26,491 (2,510) 3.1%	45,192 (2,769) 5.2%	33,348 (2,235) 3.9%	17,579 (1,672) 2.0%

Table 7 (continued)

Income bin	Year	Population	Any coverage	Uninsured	Private sources			Public sources		
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400%+	2013	1,234,202	1,161,311	72,891	1,000,784	143,987	50,643	22,431	25,554	23,692
			(4,401)	(4,401)	(6,176)	(5,498)	(3,174)	(1,693)	(2,011)	(1,722)
			94.1%	5.9%	81.1%	11.7%	4.1%	1.8%	2.1%	1.9%
	2014	1,247,193	1,183,173	64,020	1,004,840	162,370	48,255	27,736	25,998	29,983
			(3,785)	(3,785)	(6,860)	(6,451)	(3,204)	(2,281)	(1,701)	(2,151)
			94.9%	5.1%	80.6%	13.0%	3.9%	2.2%	2.1%	2.4%

Source: Author's tabulation of 2013 and 2014 ACS data.
Notes: Tennessee did not expand Medicaid. Individuals can report more than one coverage source; thus, adding all sources does not equal "any coverage." All numbers are weighted. There are 38,840 and 38,680 unweighted observations in the 2013 and 2014 ACS, respectively. Standard errors, computed using ACS replicate weights, are in parentheses. Adults without a poverty line measure are included in the <138 percent of FPL category.

growth in nongroup coverage (1.9 percentage points), and moderate growth in Medicaid (1.1 percentage points). The moderate growth in Medicaid occurred among both the under-138 percent of FPL group (2.2 percentage points) and the higher-income groups (anywhere from 0.4 to 1.2 percentage points). When compared with the Medicaid expansion states, it is clear in both Indiana and Tennessee that there were far fewer gains in public coverage throughout the income distribution, including among income-eligible adults. Figure 5 illustrates the importance of various coverage sources for gains in insurance coverage in all four states.

Figure 5: Sources for Gains in Health Insurance Coverage for Adults, by State
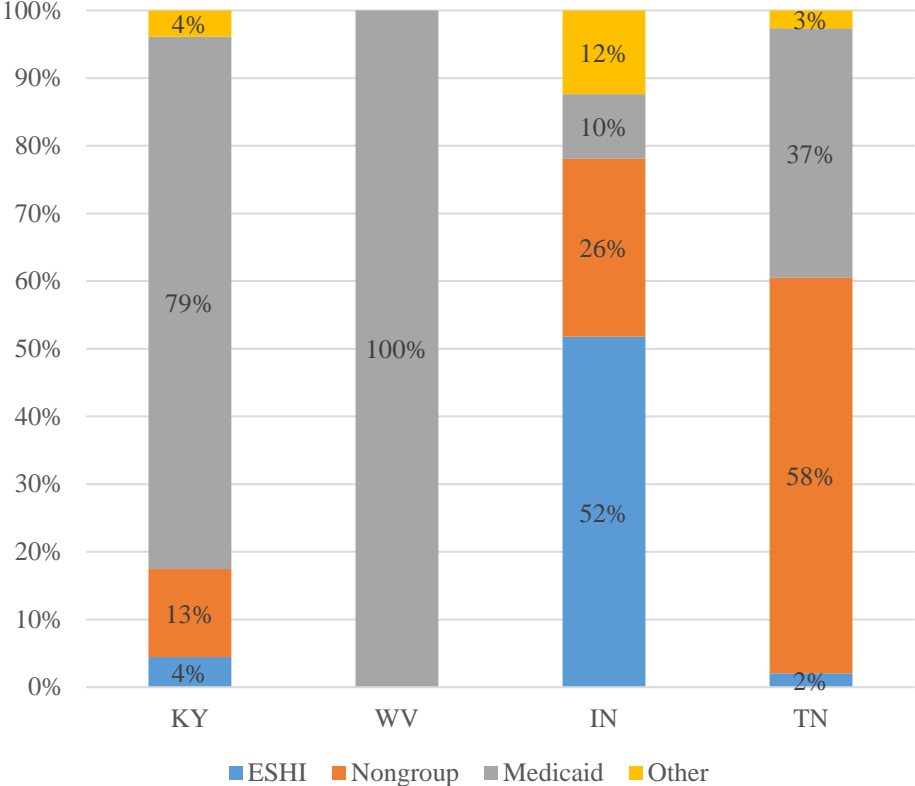
Notes: West Virginia saw declines in coverage for sources other than Medicaid; hence, its entire gain is attributed to Medicaid.

West Virginia, another state that expanded Medicaid, exhibited the same pattern of ineligible, new participants as Kentucky, while states that did not expand Medicaid—Indiana and Tennessee—did not see a rise in ineligible Medicaid participants. The finding of Medicaid coverage among ineligibles would help explain higher-than-expected enrollment and is consistent with recent revisions from the Congressional Budget Office (2016), which "boosted its projections of federal outlays for Medicaid to reflect higher-than-expected spending and enrollment for newly eligible beneficiaries under the Affordable Care Act."

Characterizing Participating Noneligibles

Table 8 examines factors determining Medicaid participation in Kentucky among adults with incomes above the Medicaid threshold who might be characterized as ineligible. Overall, there were 39,093 adults aged 19 to 64 with incomes at or above 138 percent of the FPL. In principle, if the ACS data accurately measured income and health insurance coverage sources and the Medicaid statutory rules were fully enforced, we would not expect Medicaid participation among this group. In practice, the previous sections demonstrated that this was not the case, and the goal here is to isolate the factors that are related to Medicaid participation among this group. I estimate linear probability models of the form:

$$MEDICAID_i = \beta_0 + \beta_1 POST_{it} + \beta_2 X_{ijt} + \delta_j + \varepsilon_{ijt} \tag{1}$$

where $MEDICAID_i$ is a dummy variable equal to one if respondent i participated in Medicaid (and zero otherwise) and $POST_{it}$ is a dummy variable equal to one post-ACA reforms in 2014 (and zero otherwise). The vector X_{ijt} includes individual and household characteristics: age, gender, education, race/ethnicity, difficulty with English, citizenship, foreign born, marital status, family transitions in the previous 12 months, military service, mover status, disability,

work hours, income sources, survey response mode, home ownership, and internet access. The vector δ_j is an indicator for the eight geographic rating regions in Kentucky.[26] In all specifications, standard errors are clustered for nonnested, two-way clustering by region and year (Cameron, Gelbach, and Miller 2011). All models are weighted.

Columns 1 and 2 present, successively, models that exclude and include individual characteristics for the full sample of *ineligible* adults. In looking at column 1, baseline Medicaid participation among the ineligible population prior to the ACA reforms was 4.4 percent in 2013, and the ACA reforms increased participation by an additional 3.8 percentage points. Including individual characteristics—some of which are highly predictive of Medicaid participation—has very little impact on the rise in participation from 2013 to 2014; column 2 reveals a rise of 3.7 percentage points among ineligibles. Some individual characteristics—especially the presence of SSI income, public assistance income, or disability status—are extremely important determinants of Medicaid participation for this group of apparently ineligible adults. Other factors that are linked to sizable increases in Medicaid participation include lack of a high school diploma and being a recent mover. The Deloitte (2015) report notes that "the largest concentration of counties that exceed the census-estimated potential enrollees is located in eastern Kentucky, which borders one expansion state, West Virginia, and two non-expansions states, Virginia and Tennessee." Consistent with this observation, there is also a noticeable increase in Medicaid participation in regions 7 and 8, which comprise counties in eastern Kentucky.[27]

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[26] See https://www.cms.gov/CCIIO/Programs-and-Initiatives/Health-Insurance-Market-Reforms/ky-gra.html. The ACS micro data divide Kentucky into 34 localities called Public Use Microdata Areas (PUMAs). Twenty-nine of the PUMAs mapped directly into a rating region; the remaining five were assigned to the rating region where the largest proportion of residents would go.

[27] Region 7 consists of the following counties: Bath, Boyd, Bracken, Carter, Elliott, Fleming, Greenup, Lawrence, Lewis, Mason, Menifee, Morgan, Robertson, and Rowan. Region 8 consists of Bell, Breathitt, Clay, Floyd, Harlan, Johnson, Knott, Knox, Laurel, Lee, Leslie, Letcher, Magoffin, Martin, Owsley, Perry, Pike, Whitley, and Wolfe counties.

Columns 3 and 4 divide the sample into the 10,147 respondents from 138 to 249 percent of the FPL and the 28,946 respondents at or above 250 percent of the FPL. The marginal impact of the ACA reforms in 2014 was to raise Medicaid participation by 7.7 percentage points for those from 138 to 249 percent of the FPL and to raise it by 2.0 percentage points for those at or above 250 percent of the FPL. Both are large increases relative to the baseline participation rate in 2013 (as reflected by the constant term). Many of the same factors—educational attainment, mover status, disability, and various forms of transfer income—all increase Medicaid participation for both samples. However, the rise in Medicaid participation in regions 7 and 8 largely manifests itself in the 138–249 percent of FPL range, not in the 250 percent or more of FPL range.

Table 8: Linear Probability Model—Determinants of Ineligible Medicaid Participation

Sample	All	All	138%–249% FPL	250%+ FPL
Post-ACA Reform (0/1)	0.038***	0.037***	0.077***	0.020***
	(0.002)	(0.004)	(0.006)	(0.004)
Age		0.001	–0.001	0.001
		(0.010)	(0.018)	(0.004)
$Age^2/100$		0.002	0.007	0.000
		(0.024)	(0.042)	(0.011)
$Age^3/10000$		–0.006	–0.012	–0.003
		(0.019)	(0.031)	(0.008)
Male (0/1)		0.002	0.001	0.000
		(0.002)	(0.006)	(0.002)
High school dropout (0/1)		0.036***	0.029***	0.027**
		(0.009)	(0.011)	(0.012)
High school graduate/GED (0/1)		0.019	0.016	0.016
		(0.013)	(0.014)	(0.010)
White (0/1)		–0.008	–0.012	–0.011
		(0.018)	(0.019)	(0.019)
Black (0/1)		0.013	0.007	0.010
		(0.016)	(0.022)	(0.016)
Hispanic (0/1)		–0.029	–0.070	–0.009
		(0.030)	(0.055)	(0.016)

Table 8 (continued)

Sample	All	All	138%–249% FPL	250%+ FPL
English difficulty (0/1)		0.004	0.000	0.004
		(0.004)	(0.018)	(0.012)
Noncitizen (0/1)		–0.020*	–0.009	–0.021*
		(0.011)	(0.018)	(0.012)
Foreign born (0/1)		0.001	0.020	–0.004
		(0.010)	(0.028)	(0.010)
Currently married (0/1)		–0.017*	–0.012*	–0.016
		(0.010)	(0.007)	(0.011)
Got married in past 12 months (0/1)		0.010	0.011	0.013
		(0.007)	(0.027)	(0.012)
Got divorced in past 12 months (0/1)		–0.003	–0.015	0.005
		(0.007)	(0.021)	(0.017)
Became widowed in past 12 months (0/1)		–0.020	–0.023	–0.024
		(0.012)	(0.075)	(0.031)
Gave birth (0/1)		0.023*	0.062	–0.002
		(0.012)	(0.041)	(0.012)
Served in military (0/1)		–0.007	–0.005	–0.006
		(0.008)	(0.009)	(0.010)
Mover (0/1)		0.017**	0.023**	0.011***
		(0.007)	(0.012)	(0.003)
Disabled (0/1)		0.052***	0.082***	0.027***
		(0.006)	(0.014)	(0.005)
Annual hours of work (0/1)		0.000	0.000	0.000
		(0.000)	(0.000)	(0.000)
Any Social Security income (0/1)		0.055***	0.050	0.051***
		(0.016)	(0.059)	(0.014)
Any wage income (0/1)		–0.023	–0.051***	–0.011
		(0.014)	(0.017)	(0.013)
Any earned income (0/1)		-0.004	0.011	-0.003
		(0.012)	(0.017)	(0.016)
Any interest income (0/1)		–0.013***	–0.027**	–0.009**
		(0.004)	(0.013)	(0.004)
Any other income (0/1)		0.005	–0.005	0.010
		(0.003)	(0.019)	(0.007)
Any public assistance income (0/1)		0.344***	0.362***	0.311***
		(0.086)	(0.091)	(0.066)
Any retirement income (0/1)		–0.025*	–0.046	–0.010
		(0.014)	(0.033)	(0.009)
Any self-employment income (0/1)		0.008	0.011	0.006
		(0.006)	(0.016)	(0.008)
Any SSI income (0/1)		0.805***	0.725***	0.877***
		(0.049)	(0.081)	(0.018)

Table 8 (continued)

Sample	All	All	138%–249% FPL	250%+ FPL
Region 2		0.003	0.014	–0.004
		(0.007)	(0.013)	(0.016)
Region 3		–0.004	0.010	–0.010
		(0.009)	(0.011)	(0.016)
Region 4		0.007***	0.037	–0.010
		(0.002)	(0.028)	(0.013)
Region 5		–0.005	0.013*	–0.011
		(0.013)	(0.007)	(0.018)
Region 6		–0.006*	0.006	–0.010
		(0.004)	(0.021)	(0.011)
Region 7		0.017**	0.038***	0.006
		(0.007)	(0.012)	(0.004)
Region 8		0.020***	0.045	0.002
		(0.007)	(0.029)	(0.007)
Respond to ACS by Mail		0.013***	0.022***	0.008**
		(0.004)	(0.007)	(0.003)
Respond to ACS by CATI		–0.004***	–0.006	–0.006**
		(0.002)	(0.006)	(0.002)
Home owner		–0.007	0.002	0.000
		(0.007)	(0.008)	(0.003)
Internet access		–0.015*	–0.012	–0.013***
		(0.009)	(0.014)	(0.005)
Constant Term	0.044***	0.074	0.104	0.047***
	(0.004)	(0.066)	(0.188)	(0.006)

Notes: Overall sample size of 39,093 adults aged 19–64 in Kentucky with incomes at or above 138 percent of the FPL in 2013 or 2014.

Possible Explanations

Approximately 73,000 adults in Kentucky who newly gained Medicaid coverage in 2014 appear to be ineligible based on their incomes. This finding persists after the group is pared down based on SSI participation, participation in other public assistance programs, and factors that proxy for instability or nonnuclear families. Regression models suggest that, in addition to receiving public assistance, factors such as low levels of educational attainment or living in eastern Kentucky contribute to Medicaid participation among those who appear to be ineligible.

This section examines a number of reasons that may partially explain the findings. Two factors have to do with measurement issues in household surveys, and four factors have to do with the underlying institutional design of the ACA.

Measurement Issue 1: Health Insurance Reporting in the ACS

Recent work recognizes that the line between public and private coverage is becoming increasingly blurry. For example, some states offer public programs that charge a premium, while other states offer marketplace coverage (which is considered private) that is completely subsidized (Pascale et al. 2016). Thus, individuals may be confused by program names and either report public insurance as private or private insurance as public.

The possibility for confusion can be seen in the company and plan names that provided either Medicaid or private insurance in Kentucky. In 2014, the Medicaid plans were referred to as Anthem, Coventry, Humana, Passport, and Wellcare. Passport had been well-established in the state (especially the region around Louisville) since 1997. Both Wellcare and Coventry (which is now called Aetna Better Health of Kentucky) started up in 2011.[28]

Also, in 2014, there were 118 different private individual plans (not all of which were offered on Kynect).[29] Overall, there were 15 catastrophic, 37 bronze, 33 silver, 18 gold, and 15 platinum private plans. Not all private plans were offered in every county or rating area.[30] Humana Health Plan, Inc., which also serves Medicaid recipients, offered 45 of the 118 plans,

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[28] See https://web.archive.org/web/20140719173359/http:/chfs.ky.gov/NR/rdonlyres/8055AD06-0297-442A-8214-1F923A098F7A/0/SidebySide2014non3153014.pdf, accessed August 29, 2016.

[29] See https://www.cms.gov/CCIIO/Resources/Data-Resources/health_plan_finder_data.html; "Preliminary Comprehensive Plan List 2014 RBIS."

[30] See
http://healthbenefitexchange.ky.gov/Documents/Individual%20QHP%20and%20SADP%20on%20kynect%20for%202016%20with%20maps.pdf and
http://healthbenefitexchange.ky.gov/Documents/Individual%20Medical%20Plans%20offered%20on%20kynect%20in%202015.pdf.

with names such as Humana Connect and Humana Preferred. Anthem Blue Cross Blue Shield, which served Medicaid recipients as well, offered 24 of the plans, with names such as Anthem Bronze, Anthem Essential, and so forth. Assurant Health offered 42 plans, with names such as Catastrophic 1, CoreMed–Bronze, and CoreMed–Silver. Kentucky Health Cooperative offered six plans, with names such as KY Health Cooperative Bronze, Silver, or Gold. And Celtic Insurance Company offered one plan called Celtic Health Plan.

Although these names might sound similar, none of the private plan names suggests Medicaid or public insurance. In fact, the Medicaid plans might be mistaken for private plans. To contrast 2014 with 2016, the Anthem public plan in 2016 was called Anthem Blue Cross and Blue Shield Medicaid, which may elicit less confusion than plan names in earlier years. Although confusion may exist, it logically would lead to an undercount, not an overcount, in the reporting of Medicaid in the ACS. Therefore, such confusion is unlikely to explain ineligible participants. Consistent with this hypothesis is literature documenting a Medicaid undercount (Klerman et al. 2009; Call et al. 2008). The reporting in the ACS supports the idea that Medicaid is, if anything, modestly underreported. Growth from January 2014 through December 2014 in MBES administrative data (which includes an initial surge in new adult enrollees from the start of open enrollment in late 2013) shows 278,726 enrollees, somewhat larger than the 2013 to 2014 overall growth in the ACS of 226,884.

In summary, program confusion is unlikely to explain why ineligible participants would overreport Medicaid, but it could lead to eligible participants underreporting Medicaid.

Measurement Issue 2: Income Reporting in the ACS

All household surveys are known to have measurement errors in income, and the ACS is no

exception (Moore, Stinson, and Welniak, Jr. 1997; Czajka 2012; Czajka and Denmead 2014).

Comparisons of survey income data with benchmarks constructed from administrative records

show that surveys tend to understate total income for most sources.

Of the five surveys examined by Czajka and Denmead (2008) that cover the general

population and are conducted by the federal government, the CPS Annual Social and Economic

Supplement (ASEC) captured the most total income. Yet the ACS, working with a much more

limited set of income questions, captured 98 percent as much income as the CPS ASEC.

The key finding from studies like these is that income tends to be underreported, in part

because individuals are not queried on every possible source. Underreporting of income would

suggest that the ACS misclassifies some ineligible individuals as Medicaid eligible (thus

lowering Medicaid take-up among the under 138 percent of FPL group). It would also suggest

that the finding of 73,000 ineligible new participants understates, not overstates, the magnitude

of participating ineligible individuals.

Institutional Feature 1: ACS Income versus MAGI

The ACS questionnaire asks each individual a series of questions about income in the past 12

months, with sources including wages, salaries, commissions, bonuses, or tips; self-employment

income from own nonfarm businesses or farm businesses, including proprietorships and

partnerships; interest, dividends, net rental income, or income from estates and trusts; Social

Security or railroad retirement; SSI; public assistance or welfare payments; retirement, survivor,

or disability pensions; other sources (such as VA payments, unemployment compensation, child support, or alimony); and total income.[31]

The ACS definition of total income—which is the sum of each of those components—differs from ACA concept of MAGI.[32] MAGI includes most of what is included in the more familiar adjusted gross income (AGI): wages; salaries; tips; taxable interest; the taxable amount of pension, annuity, or IRA distributions and Social Security benefits; business income; farm income; capital gains; other gains (or losses); unemployment compensation; ordinary dividends; alimony received; rental real estate; royalties; partnerships; S corporations; trusts; taxable refunds, credits, or offsets of state and local income taxes; and other income. It also includes some deductions: certain self-employment expenses, student loan interest, traditional IRA contributions, moving expenses, penalties on the early withdrawal of savings, health savings account contributions, alimony paid, domestic production activities, and certain business expenses of reservists, performing artists, and fee-basis government officials. In addition to the components that enter into AGI, MAGI includes untaxed foreign income, nontaxable Social Security benefits, and tax-exempt interest.

Several differences are noteworthy. First, MAGI does not include SSI, while the ACS definition of total income does. As noted in the sensitivity checks above, this calculation reduced the number of new, ineligible participants from 73,232 to 66,462. Second, MAGI involves a number of deductions, including those for moving expenses. Excluding movers further reduces the number of new, ineligible participants to 53,235. Third, neither AGI nor MAGI includes a number of above-the-line deductions, such as pretax contributions for child care, commuting,

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[31] See https://www2.census.gov/programs-surveys/acs/methodology/questionnaires/2014/quest14.pdf. See Questions 47a-47h and 48.
[32] See https://www.healthcare.gov/glossary/modified-adjusted-gross-income-magi/ and http://laborcenter.berkeley.edu/pdf/2013/MAGI_summary13.pdf.

employer-sponsored health insurance, flexible spending accounts, and retirement plans such as 401(k) and 403(b) accounts.[33] The extent to which these above-the-line deductions factor into differences between income in the ACS and MAGI is impossible to ascertain without additional data. Nonetheless, most of those pre-tax contributions are associated with jobs that have generous benefits, meaning that the need for an individual to avail themselves of the exchange is reduced. In summary, the sensitivity checks show a nontrivial reduction by excluding some income sources, but still leave 36,000 ineligible, new Medicaid participants.

Institutional Feature 2: Family Structure Definition

A Health Insurance Unit (HIU) is a group of individuals who would likely be considered a family unit in determining eligibility for either private or public coverage. The HIU is often quite different from the census definition of a family or a household (SHADAC 2012). The census definition would include related members of a household (such as grandparents, adult siblings, aunts/uncles, nieces/nephews, or cousins), while the HIU definition is often narrower.

In an analysis of the 2010 ACS using the HIU definition, SHADAC found around 16 million more adults with incomes at or below 138 percent of the FPL compared to the census family definition. In looking across states, the number of adults eligible for Medicaid is up to 12 percentage points higher using the HIU definition. In Kentucky, the number of adults at or below 138 percent of the FPL was 640,656 using the census family definition and 848,365 using the HIU definition. It should be noted that such definitions reflect all adults with incomes under 138 percent of the FPL regardless of insurance status; thus, the number who would take up Medicaid would be substantially lower.

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[33] See http://laborcenter.berkeley.edu/pdf/2013/MAGI_summary13.pdf.

To address this concern, the sensitivity checks above limited the sample of ineligible, new Medicaid participants to those who live in nuclear families (i.e., husband/wife and own children, but excluding any adult who lives with related/unrelated adults). By doing so, issues about differences in the definition of family unit are likely to be trivial. Even with this restriction—along with the other sensitivity checks—there were still more than 36,000 ineligible, new Medicaid participants.

Institutional Feature 3: Income Forecasting

A number of commentators have noted that the ACA subsidies operate on the honor system (Jacobs 2013; Yelowitz 2015). For example, an individual applying during the open enrollment period in late 2013 would forecast their 2014 income, and subsidies such as the premium tax credit would be advanced ahead of time based on their forecast. If an applicant's claimed income is significantly lower than data from Social Security records indicate, additional documentation is required. However, in 2014, the exchanges could limit the documentary verification requirement to a statistically valid sample of applicants and accept attestation from the rest (Jost 2013).

As explained by Yelowitz (2015) in the context of the premium tax credit, such income reporting potentially creates incentives to underreport income because the premium tax credit is *advanced* for premium payments, but if the individual ultimately earns a higher income, then the advance may not have to be fully paid back. As long as an individual ultimately earned less than 400 percent of the FPL in 2014, the repayment limit was capped at $1,250. In fact, in nonexpansion states, individuals earning under 100 percent of the FPL ($11,670 for a single individual in 2014) had an incentive to overreport claimed income, because the premium tax

credit only applied at 100 to 400 percent of the FPL. In some instances, individuals could receive (unintended) subsidies of nearly $4,000 even after repayment penalties. Ultimately, for many individuals, such an honor system creates incentives to underreport income in order to qualify for more highly subsidized Medicaid coverage.

The extent to which individuals in Kentucky—which expanded Medicaid—have an incentive to misreport the following year's income is impossible to ascertain in the ACS. Given the discussion in Jost (2013), such incentives should be diminished in subsequent years, because enforcement of income verification is supposed to be more rigorous.

Institutional Feature 4: Medicaid Eligibility besides ACA

As noted in the Pre-ACA Landscape section, Kentucky Medicaid offered several pathways for eligibility prior to the 2014 ACA reforms. Although some of these avenues had income limits above the new ACA threshold of 138 percent of the FPL, almost all such avenues were restricted to children, not adults. Children could qualify with family incomes up to 200 percent of the FPL through Medicaid or KCHIP.

Among adults, pregnant women could qualify for Medicaid with incomes up to 185 percent of the FPL, but the sensitivity checks demonstrated that this cutoff had little impact on the number of ineligible, new Medicaid participants. People who obtained Medicaid though the other principal avenues—SSI or parents/caretakers—had income limits substantially below 138 percent of the FPL. Nonetheless, the sensitivity checks, which also excluded individuals receiving any SSI income or public assistance income, show more than 36,000 ineligible, new Medicaid participants after such exclusions.

Conclusion

This study used the ACS to examine gains in Medicaid participation in Kentucky as a result of the 2014 ACA reforms. Kentucky witnessed dramatic gains in health insurance coverage, principally through adults on the Medicaid program. An analysis of the ACS suggests 73,000 ineligible, new Medicaid participants. Although a variety of sensitivity checks reduces that number, even accounting for a host of factors leaves more than 36,000 ineligible, new participants. Although recent commentary in the *Wall Street Journal* has discussed soaring fraudulent payments in Medicaid, the ACS data are too coarse to determine whether this pattern of ineligible enrollment is fraud.[34]

These ineligible individuals would qualify for private coverage in the exchange. Nonetheless, such misclassification into Medicaid is not without consequence. Over time, Kentucky's share of cost for new Medicaid recipients eventually rises from 0 percent from 2014 through 2016, to 5 percent in 2017, 6 percent in 2018, 7 percent in 2019, and 10 percent from 2020 onward. Some argue that multiplier effects—increases in economic activity due to government subsidies such as federal Medicaid dollars—will stimulate the state economy (Chernew 2016). However, the new, ineligible participants from the 2014 expansion would overwhelmingly receive highly subsidized private insurance from the federal premium tax credit, meaning the infusion of federal dollars would continue.

Importantly, the consumer faces a different set of cost-sharing rules under Medicaid and qualified health plans in the exchange (Baumrucker and Fernandez 2013). With certain exceptions, Medicaid is generally not allowed to charge premiums to Medicaid beneficiaries

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[34] "ObamaCare's 'Improper' Failure – Mistaken or Fraudulent Payments Are Soaring for Medicaid," *Wall Street Journal*, September 6, 2016. Accessed from: http://www.wsj.com/article_email/obamacares-improper-failure-1473204648-lMyQjAxMTA2NjEwMjAxNTIwWj.

with incomes at or below 150 percent of the FPL (Smith et al. 2015). In Kentucky, Medicaid outpatient services were $3–$4 per visit, inpatient stays were $50, and prescription drug copayments varied from $1 to $4 per script for generics and preferred brand name drugs.[35] Medicaid currently has no monthly premiums, although the Kentucky HEALTH proposal would impose premiums of $1–$15 per month.[36] In contrast, consider a 40-year-old in a family of four earning $50,000 per year in 2016, living in Louisville.[37] The 21 silver plans had unsubsidized monthly premiums ranging from $203 to $324, the median primary care physician copayment was $20 per visit, deductibles ranged from $2,000 to $4,500 per year, and median prescription drug copayments were $15 for generics and $40 for preferred brands. The out-of-pocket maximum averaged $6,136 across the plans. Thus, Medicaid recipients faced far less cost-sharing than those in private plans, which in turn could lead to both greater financial security and greater health care utilization. Offsetting these cost-sharing advantages, Medicaid has well-known access-to-care issues and limited provider networks.[38]

Ultimately, the ACS analysis suggests that further investigation and reconciliation with administrative data would be valuable. Some aspects of determining eligibility—such as what sources count as income or deductions under the MAGI definition—have presented states with challenges for enrollments and renewals (Smith et al. 2015). Much like earlier literature on effective tax rates in welfare programs, it is possible that the way programmatic rules are enforced in practice diverges from the statutory rules (Ziliak 2007). Although the ACS results are not the only possible data source to document these patterns, the findings illustrate high

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[35] See http://c.ymcdn.com/sites/www.kphanet.org/resource/resmgr/imported/Cost%20Sharing%20Notice.pdf.
[36] See http://chfs.ky.gov/NR/rdonlyres/84330EB3-3471-4285-816B-6FC3D9A6A850/0/62216KentuckyHEALTHFrequentlyAskedQuestions.pdf.
[37] See https://web.archive.org/web/20151104134056/https://kynect.ky.gov/PreScreening/YouandYourHouseHold.
[38] See https://www.medicaid.gov/medicaid-chip-program-information/by-topics/access-to-care/access.html.

enrollment among ineligible individuals fairly high up the income distribution, without a

singular, unifying explanation.

References

Abraham J. M., P. Karaca-Mandic, and M. Boudreaux. 2013. "Sizing Up the Individual Market for Health Insurance: A Comparison of Survey and Administrative Data Sources." *Medical Care Research and Review*, 70(4): 418–433.

Akosa Antwi, Y., A. S. Moriya, and K. Simon. 2013. "Effects of Federal Policy to Insure Young Adults: Evidence from the 2010 Affordable Care Act's Dependent-Coverage Mandate." *American Economic Journal: Economic Policy*, 5(4): 1–28.

Artiga, S., J. Tolbert, and R. Rudowitz. 2016. "Implementation of the ACA in Kentucky: Lessons Learned to Date and the Potential Effects of Future Changes." Kaiser Family Foundation Issue Brief. Accessed from: http://files.kff.org/attachment/issue-brief-implementation-of-the-aca-in-kentucky-lessons-learned-to-date-and-the-potential-effects-of-future-changes.

Atkin, E., and J. Israel. 2015. "Kentucky Is Obamacare's Undeniable Success Story. This Man Is Trying to Burn It All Down." Accessed from: https://thinkprogress.org/kentucky-is-obamacares-undeniable-success-story-this-man-is-trying-to-burn-it-all-down-56c7d60933ac#.olltoebkd.

Barnett, J. C., and M. S. Vornovitsky. 2016. "Health Insurance Coverage in the United States: 2015." Current Population Reports Working Paper P60–257. Accessed from: http://www.census.gov/content/dam/Census/library/publications/2016/demo/p60-257.pdf.

Baumrucker, E. P., and B. Fernandez. 2013. "Comparing Medicaid and Exchanges: Benefits and Costs for Individuals and Families." Congressional Research Service. Accessed from: https://www.fas.org/sgp/crs/misc/R42978.pdf.

Benitez, J. A., L. Creel, and J. Jennings. 2016. "Kentucky's Medicaid Expansion Showing Early Promise on Coverage and Access to Care." *Health Affairs*, 35(3): 528–534.

Call, K. T., G. Davidson, M. Davern, and R. Nyman. 2008. "Medicaid Undercount and Bias to Estimates of Uninsurance: New Estimates and Existing Evidence." *Health Services Research*, 43(3): 901–914.

Cameron, A. C., J. B. Gelbach, and D. L. Miller. 2011. "Robust Inference with Multiway Clustering." *Journal of Business & Economic and Statistics*, 29(2): 238–249.

Chernew, M. 2016. "The Economics of Medicaid Expansion." Accessed from: http://healthaffairs.org/blog/2016/03/21/the-economics-of-medicaid-expansion/.

Clark, M., and G. Wilson. 1998. "Status of the Health Insurance Market in Kentucky." Legislative Research Commission Research Memorandum No. 480. Accessed from: http://www.lrc.state.ky.us/lrcpubs/Rm480.pdf.

Congressional Budget Office. 2016. "An Update to the Budget and Economic Outlook: 2016 to 2026." Accessed from: https://www.cbo.gov/sites/default/files/114th-congress-2015-2016/reports/51908-2016_Outlook_Update-2.pdf.

Courtemanche, C., J. Marton, and A. Yelowitz. 2016. "Who Gained Insurance Coverage in 2014, the First Year of Full ACA Implementation?" *Health Economics*, 25(6): 778–784.

Courtemanche, C., J. Marton, B. Ukert, A. Yelowitz, and D. Zapata. Forthcoming. "Impacts of the Affordable Care Act on Health Insurance Coverage in Medicaid Expansion and Non-Expansion States." *Journal of Policy Analysis and Management*.

Czajka, J. L. 2012. "Measuring Income Simply: Observations from a Comparative Analysis of Survey Income Data." Accessed from: http://www.ncvhs.hhs.gov/wp-content/uploads/2014/05/120308p12.pdf.

Czajka, J. L., and G. Denmead. 2008. "Income Data for Policy Analysis: A Comparative Assessment of Eight Surveys." Final report. Washington, DC: Mathematica Policy Research. Accessed from: https://aspe.hhs.gov/sites/default/files/pdf/75721/report.pdf.

Czajka, J. L., and G. Denmead. 2014. "Getting More from Survey Income Measures: Empirically-Based Recommendations for Improving Accuracy and Efficiency." Accessed from: https://fcsm.sites.usa.gov/files/2014/05/Czajka_2012FCSM_III-D.pdf.

Deloitte Development LLC. 2015. "Commonwealth of Kentucky Medicaid Expansion Report: 2014." Accessed from: http://jointhehealthjourney.com/images/uploads/channel-files/Kentucky_Medicaid_Expansion_One-Year_Study_FINAL.pdf.

Goodnough, A. 2016. "With Health Care Switch, Kentucky Ventures into the Unknown." *New York Times*, January 14. Accessed from: http://www.nytimes.com/2016/01/14/us/affordable-care-act-kentucky-insurance-exchange.html.

Hu, L., R. Kaestner, B. Mazumder, S. Miller, and A. Wong. 2016. "The Effect of the Patient Protection and Affordable Care Act Medicaid Expansions on Financial Well-Being." NBER Working Paper 22170, Cambridge, MA. Accessed from: http://www.nber.org/papers/w22170.

Jacobs, C. 2013. "How the Obamacare 'Honor System' Will Encourage Fraud." Accessed from: http://dailysignal.com/2013/07/29/how-the-obamacare-honor-system-will-encourage-fraud/.

Joint Economic Committee. 2016. "The 2016 Joint Economic Report." Accessed from: http://www.jec.senate.gov/public/_cache/files/0db793da-5e90-4f9d-ad9e-487f28652c7a/3-2-2016-joint-economic-report-w-minority-views-final.pdf.

Jost, T. 2013. "Implementing Health Reform: Final Rule on Premium Tax Credit, Medicaid, and CHIP Eligibility Determinations (Part 1)." Accessed from: http://healthaffairs.org/blog/2013/07/07/implementing-health-reform-final-rule-on-premium-tax-credit-medicaid-and-chip-eligibility-determinations-part-1/.

Kaiser Family Foundation. 2013. "Medicaid Eligibility for Adults as of January 1, 2014." Kaiser Family Foundation Fact Sheet. Accessed from: https://kaiserfamilyfoundation.files.wordpress.com/2013/10/8497-medicaid-eligibility-for-adults-as-of-january-1-2014.pdf.

Kaiser Family Foundation. 2016. "What's at Stake in the Future of the Kentucky Medicaid Expansion?" Accessed from: http://kff.org/medicaid/fact-sheet/whats-at-stake-in-the-future-of-the-kentucky-medicaid-expansion/.

Kenney, G., R. A. Allison, J. Costich, J. Marton, and J. McFeeters. 2007a. "The Effects of Premium Increases on Enrollment in SCHIP Programs: Findings from Three States." *Inquiry*, 43(4): 378–392.

Kenney, G., J. Marton, J. McFeeters, and J. Costich. 2007b. "Assessing Potential Enrollment and Budgetary Effects of SCHIP Premiums: Findings from Arizona and Kentucky." *Health Services Research*, 42(6 pt. 2), 2354–2372.

Klerman, J. A., J. S. Ringel, and B. Roth. 2005. "Under-Reporting of Medicaid and Welfare in the Current Population Survey." Working Paper. RAND, Santa Monica, CA, March. Accessed from: http://www.acf.hhs.gov/sites/default/files/opre/under_reporting.pdf.

Klerman, J. A., M. Davern, V. Lynch, and J. Ringel. 2009. "Understanding the Current Population Survey's Insurance Estimates and the Medicaid Undercount." *Health Affairs*, 28(6): 991–1001.

Mach, A., and B. O'Hara. 2011. "Do People Really Have Multiple Health Insurance Plans? Estimates of Nongroup Health Insurance in the American Community Survey." Accessed from: https://www.census.gov/content/dam/Census/library/working-papers/2011/demo/SEHSD-WP2011-28.pdf.

Marton, J. 2007. "The Impact of the Introduction of Premiums into a SCHIP Program." *Journal of Policy Analysis and Management*, 26(2): 261–279.

Marton, J., P. Ketsche, A. B. Snyder, E. K. Adams, and M. Zhou. 2015. "Estimating Premium Sensitivity for Public Health Insurance Coverage: Selection but No Death Spiral." *Health Services Research*, 50(2), 579–598.

Marton, J., P. Ketsche, and M. Zhou. 2010. "SCHIP Premiums, Enrollment, and Expenditures: A Two State, Competing Hazard Analysis." *Health Economics*, 19(7): 772–791.

Marton, J., C. S. Searcy, and J. Ghandhi. 2010. "Disparate Effects of CHIP Premiums on Disenrollment for Minorities," in *Current Issues in Health Economics*, vol. 290, edited by D. Slottje and R. Tchernis. United Kingdom: Emerald Group.

Marton, J., and J. Talbert. 2010. "SCHIP Premiums, Health Status, and the Insurance Coverage of Children." *Inquiry*, 47(3), 199–214.

Marton, J., and A. Yelowitz. 2015. "Health Insurance Generosity and Conditional Coverage: Evidence from Medicaid Managed Care in Kentucky." *Southern Economic Journal*, 82(2): 535–555. Accessed from: http://dx.doi.org/10.1002/soej.12064.

Marton, J., A. Yelowitz, M. Shores, and J. Talbert. 2016. "Does Medicaid Managed Care Help Equalize Racial and Ethnic Disparities in Utilization?" *Health Services Research*, 51(3): 872–891. Accessed from: http://dx.doi.org/10.1111/1475-6773.12396.

Marton, J., A. Yelowitz, and J. Talbert. 2014. "A Tale of Two Cities? The Heterogeneous Impact of Medicaid Managed Care." *Journal of Health Economics*, 36(1): 47–68. Accessed from: http://dx.doi.org/10.1016/j.jhealeco.2014.03.001.

Marton, J., A. Yelowitz, and J. Talbert. 2016. "Medicaid Auto-Assignment and Participant Inertia." In Progress.

Moore, Jeffrey C., Linda L. Stinson, and Edward J. Welniak, Jr. 1997. "Income Measurement Error in Surveys: A Review." Statistical Research Report. Washington DC: U.S. Census Bureau.

Pascale, J., K. Call, A. Fertig, and D. Oellerich. 2016. "Validating Self-Reported Health Insurance Coverage: Preliminary Results on the CPS and ACS." Accessed from: https://www.census.gov/content/dam/Census/newsroom/press-kits/2016/Validating%20Self-Reported%20Health%20Insurance%20Coverage-%20Pascale.pdf.

Rosenbaum, S., S. Schmucker, and S. Rothenberg. 2016. "Will Kentucky Roll Back Its Medicaid Expansion?" Accessed from: http://www.commonwealthfund.org/publications/blog/2016/jul/will-kentucky-roll-back-its-medicaid-expansion.

Smith, V. K., K. Gifford, E. Ellis, R. Rudowitz, L. Snyder, and E. Hinton. 2015. "Medicaid Reforms to Expand Coverage, Control Costs and Improve Care: Results from a 50-State Medicaid Budget Survey for State Fiscal Years 2015 and 2016." Kaiser Family Foundation Report. Accessed from: http://files.kff.org/attachment/report-medicaid-reforms-to-expand-coverage-control-costs-and-improve-care-results-from-a-50-state-medicaid-budget-survey-for-state-fiscal-years-2015-and-2016.

Sommers, B. D., R. J. Blendon, E. Orav, and A. M. Epstein. 2016a. "Changes in Utilization and Health among Low-Income Adults after Medicaid Expansion or Expanded Private

Insurance." *JAMA Internal Medicine*. Accessed from: http://archinte.jamanetwork.com/article.aspx?articleid=2542420.

Sommers, B. D., K. P. Chua, G. M. Kenney, S. K. Long, and S. McMorrow. 2016b. "California's Early Coverage Expansion under the Affordable Care Act: A County-Level Analysis." *Health Services Research*, 51(3): 825–845.

State Health Access Data Assistance Center (SHADAC). 2012. "Defining 'Family' for Studies of Health Insurance Coverage." Issue Brief #27. Minneapolis: University of Minnesota. Accessed from: http://www.shadac.org/sites/default/files/publications/SHADAC_Brief27.pdf.

Wachenheim, L., and H. Leida. 2012. "The Impact of Guaranteed Issue and Community Rating Reforms on States' Individual Insurance Markets." Working Paper. Accessed from: http://www.statecoverage.org/files/Updated-Milliman-Report_GI_and_Comm_Rating_March_2012.pdf.

Willard, P. 2015. "Kentucky Shouldn't Turn Its Back on Affordable Care Act Success." *Families USA* (blog). Accessed from: http://familiesusa.org/blog/2015/12/kentucky-shouldnt-turn-its-back-affordable-care-act-success.

Yelowitz, A. 1995. "The Medicaid Notch, Labor Supply and Welfare Participation: Evidence from Eligibility Expansions." *Quarterly Journal of Economics*, 110(4): 909–939.

Yelowitz, A. 2015. "The Obamacare Reporting Loophole." Accessed from: http://www.cato.org/blog/obamacare-reporting-loophole.

Yetter, D. 2015. "Beshear to Bevin: Keep Health Care Expansion." *Louisville Courier Journal*, November 13. Accessed from: http://www.courier-journal.com/story/news/politics/2015/11/13/beshear-defends-success-kynect-medicaid/75666858/.

Ziliak, J. 2007. "Making Work Pay: Changes in Effective Tax Rates and Guarantees in U.S. Transfer Programs, 1983–2002." *Journal of Human Resources*, 42(3): 619–642.

Appendix Table 1: Paths for Health Insurance Coverage for Uninsured Adults Aged 19–64 in 2014 and Beyond

Income bin	Medicaid expansion states	Nonexpansion states
Income 0%–99% of FPL	Eligible for Medicaid	Eligible for private coverage with no PTC or CSR
Income 100%–137% of FPL	Eligible for Medicaid	Eligible for private coverage with PTC and CSR
Income 138%–249% of FPL	Eligible for private coverage with PTC and CSR	
Income 250%–399% of FPL	Eligible for private coverage with PTC	
Income at or above 400% of FPL	Eligible for private coverage with no PTC or CSR	

Notes: FPL stands for federal poverty level, PTC stands for premium tax credit, and CSR stands for cost-sharing reductions.