



# Impact of the Affordable Care Act's Medicaid Expansion on Medicare Enrollees' Access to Physician Services

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Coverage expansions under the Affordable Care Act have raised concerns that newly insured individuals will sharply increase demand for medical services, straining or even overwhelming the delivery system in some areas. Some have argued that this could have negative spillovers and worsen access among the previously insured (Anderson 2018; Holtz-Eakin and Ramlet 2010). Popular media outlets also voiced worries that doctors would not accept Medicare patients before congressional legislation permanently repealed Medicare's sustainable growth rate formula and prevented significant payment cuts for physician services.<sup>1</sup>

However, empirical evidence suggests that these concerns over access among Medicare patients might be overstated. Findings from the Medicare Payment Advisory Commission (MedPAC) indicate that Medicare beneficiary access to physician services was similar to access among privately insured individuals ages 50 to 64 and remained relatively stable between 2010 and 2017 (MedPAC 2018). An analysis of the 2015 Kaiser Family Foundation/Commonwealth Fund National Survey of Primary Care Providers also found that the vast majority (93 percent) of nonpediatric primary care doctors accepted Medicare patients. This rate is comparable to the share of primary care physicians that accepted private insurance (94 percent) and substantially higher than the share that accepted Medicaid (67 percent) (Boccuti et al. 2015).

Some empirical evidence also suggests coverage expansions do not have negative spillover effects on the Medicare population. An analysis of Medicare claims data from 2004 to 2009 found no evidence that the 2006 Massachusetts health reform had a negative spillover effect on preventable hospitalizations among previously insured Medicare patients (Joynt et al. 2013). Moreover, an analysis

of Medical Expenditure Panel Survey (MEPS) data from 2008 to 2014 also found that increases in health insurance coverage in local-level areas did not affect access to care across eight measures (including receipt of preventive care) for continuously insured adults living in the same areas (Abdus and Hill).

This study has two main objectives. The first is to assess trends in physicians' acceptance of Medicare patients from 2011 to 2016, capturing the period before, during, and after the major Affordable Care Act (ACA) coverage expansions. This study analyzes trends within states and counties, and within groups of states that expanded Medicaid and groups that did not. The second objective is to estimate the impact of the ACA's Medicaid expansion on physician acceptance of Medicare by using a difference-in-differences approach to compare outcomes in Medicaid expansion states with those in nonexpansion states. For both objectives, this study also compares Medicare acceptance rates with physicians' acceptance of Medicaid and privately insured patients.

This analysis draws on two physician surveys, each with advantages and disadvantages, to examine changes in Medicare patients' access to physicians and assess the impact of the ACA Medicaid expansion. The first survey—the National Ambulatory Medical Care Survey-National Electronic Health Records Survey (NAMCS-NEHRS)—is a nationally representative mixed-mode survey of office-based physicians that collects rich information on physician and practice characteristics but does not have a large enough sample size to generate sub-state estimates. Therefore, this analysis supplements that survey with the SK&A physician database, a census of ambulatory health care sites with a large enough sample size to produce statistically reliable estimates of physicians' willingness to accept Medicare patients at the county level. An interactive map that includes 2011 and 2016 county-level physician access data from the SK&A can be found on the Urban Institute website.<sup>2</sup>

This analysis finds that physician availability—overall and at the state and county levels—remained roughly the same in most areas after the ACA coverage expansion. It also finds that physicians' acceptance of new Medicare patients did not change, or slightly increased, in states that expanded Medicaid compared with states that did not. This finding is important for states that have not expanded Medicaid and might be concerned that doing so could have negative spillover effects on other insured populations.

## Methods

### NAMCS-NEHRS

The NAMCS-NEHRS is a large-scale, high-response-rate physician survey conducted by the Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS). The survey is an annual, nationally representative mixed-mode survey of office-based physicians that collects information on physician and practice characteristics. In 2010, the survey sample size was increased fivefold to allow for state-level estimates. Sampled physicians can complete the survey online, through the mail, and via phone.

The NAMCS-NEHRS uses the American Medical Association (AMA) Masterfile as a sampling frame that includes nonfederal office-based patient care physicians, excluding anesthesiologists, radiologists, and pathologists. The AMA Masterfile begins capturing extensive information about physicians when they enter medical school, and includes professional certification information gathered from state licensing boards as they enter practice. Physicians are not required to update their contact information, although the AMA attempts to verify and update such information (DesRoches et al. 2015). The 2013 NAMCS-NEHRS included a national sample of 10,302 physicians, with an unweighted response rate of 70 percent (67 percent weighted) (DesRoches et al. 2015). The NAMCS-NEHRS data are available at the NCHS Research Data Center.

This analysis uses the 2011–15 NAMCS–NEHRS surveys to analyze trends in the share of physicians who accept new Medicare patients, and to assess the impact of the ACA Medicaid expansion on these trends in expansion versus nonexpansion states. The NAMCS-NEHRS asks physicians if they are currently accepting new patients and, if so, what type of payment they accept. For comparison, this study also includes estimates on the share of physicians who accept new Medicaid/CHIP and privately insured patients.

This study assesses geographic variation in physician acceptance of new Medicare patients across states to identify areas where access-related problems could arise. The NAMCS-NEHRS can yield statistically reliable estimates at the state level.

The sample for the NAMCS-NEHRS analysis includes all office-based physicians, excluding pediatricians.

## **SK&A**

Findings from prior research shows that the AMA Masterfile (the sampling frame for the NAMCS-NEHRS) has lower contact information accuracy and a higher percentage of unconfirmed physicians compared with two other sampling frames: the SK&A physician database and the National Provider and Plan Enumeration System (DesRoches et al. 2015).

To address these possible gaps and to produce county-level estimates, this study also uses data from the SK&A physician database, which includes information on the practice sizes, specialties, and specific geographic locations of more than 95 percent of US physician firms. The SK&A database includes more than 775,000 office-based physicians in 285,000 offices, and is designed to comprise a census of ambulatory health care sites and provide a large enough sample size to produce statistically reliable estimates at the county level. Information on the office sites and their providers are gathered from a range of sources, including the National Provider Identifier database, state licensing data, and administrative data from insurers and medical device and pharmaceutical vendors. All sites are contacted twice a year by phone and asked to confirm information on practice location, the providers who work at the site, and other site characteristics. The target respondent is the office manager (King, Furukawa, and Buntin 2013).

The SK&A survey also includes information on physicians' acceptance of Medicare and Medicaid patients. However, it does not ask physicians if they accept new Medicare or Medicaid patients, as the NAMCS-NEHRS does. The SK&A survey also does not include information on physician acceptance of privately insured patients.

Because the SK&A sampling frame starts at the office level, physicians practicing in more than one office each year are included in the database multiple times. This analysis excludes duplicative physician observations within a county, but includes more than one observation (for a given physician in a given year) if the physician practices across multiple counties. We include all unique physician-county observations because SK&A does not identify which office is the primary location (or how much time the physician works in each office), and the SK&A analysis focuses on physician availability at the county level. Similar to the NAMCS-NEHRS analysis, the SK&A analysis excludes all pediatric physician specialties.

We analyze 2011–14 and 2016 SK&A data. We were unable to obtain the 2015 SK&A because of costs. Overall, there are 793,353 observations on the 2016 SK&A database and 726,630 after excluding pediatric specialties. The 2016 sample size includes 614,630 nonpediatricians after removing duplicative observations within counties. The findings from this analysis are insensitive to the removal of these duplicative observations.

The web-based interactive map<sup>2</sup> shows the share of office-based physicians that accepted Medicare patients by county in 2011 and 2016. Counties with fewer than 10 office-based physicians were excluded from the county-level maps. Nine hundred twenty-one counties (30.5 percent of all counties) were excluded in 2011 and 952 counties (31.6 percent) were excluded in 2016.

## Statistical Analysis

This study uses linear probability difference-in-differences models to compare physician acceptance rates in Medicaid expansion states with those in nonexpansion states. The dependent variables in the NAMCS-NEHRS models are indicators for accepting new Medicare patients, new Medicaid patients, and new privately insured patients. The dependent variables in the SK&A models are indicators for accepting Medicare patients and Medicaid patients.

The key independent variables in all models include an indicator set to one for physicians who practice in Medicaid expansion states (Medicaid), a variable set to one for all observations in 2014 or after (Post), and an interaction term (Post\*Medicaid) that measures the change in the outcome in expansion states relative to the change in nonexpansion states.

Each NAMCS-NEHRS model also controls for physicians' urban-rural classification (large central metro, large fringe metro, medium metro, small metro, micropolitan nonmetro, and noncore nonmetro); gender; specialty (general/family medicine, internal medicine, general surgery, obstetrics and gynecology, orthopedic surgery, cardiovascular diseases, dermatology, urology, psychiatry, neurology, ophthalmology, otolaryngology, and other); physician age (under 35 years, 35 to 44, 45 to 54, 55 to 64,

and 65 or older); specialty and practice size (single specialty, multispecialty, and solo practice); provider setting (private solo or group practice, freestanding clinic/urgicenter, community health center, mental health center, nonfederal clinic, family planning clinic, HMO or other prepaid practice, and faculty practice plan); and year and state fixed effects.

Regression models using SK&A data have fewer control variables than the NAMCS-NEHRs model because of limited information on the SK&A database. The SK&A model controls for specialty fixed effects (86 unique specialty codes), practice size (solo, 2, 3–5, 6–10, 11–30, 31–100, 100 or more), and year and county fixed effects.

The main sample in the NAMCS-NEHRs and SK&A models includes office-based physicians in all states, excluding pediatricians. Physicians practicing in states that expanded Medicaid before July 2015 are categorized as Medicaid expansion states, while physicians in states that expanded after July 2015 (Alaska, Louisiana, Maine, Montana, and Virginia) are categorized as nonexpansion states.

To formally test for differences in trends leading up to the ACA, this analysis includes models in which a 2010–13 linear time trend is interacted with the Medicaid expansion dummy variable. This analysis also considers differential impacts by estimating models among primary care versus nonprimary care physicians and physicians in metro and nonmetro areas.

## Results

This section describes trends in physician acceptance rates overall, by state, and by county. It is important to note that because of the large sample size on the SK&A database, many changes over time are statistically significant, even those with very small magnitudes. The description of the SK&A results in this section focuses on changes that are statistically significant and appear to be meaningful in terms of magnitude.

### Overall Acceptance Rates

Between 2011 and 2015, the share of office-based physicians on the NAMCS-NEHRs that accepted new Medicare patients remained constant at approximately 88 percent (figure 1). Though there was a statistically significant 2.4 percentage point increase from 2011 (88.3 percent) to 2012 (90.7 percent), there were no other statistically significant year-to-year changes during this period.

Figure 1 also shows estimates from the SK&A on the share of office-based physicians that accepted Medicare patients in 2011–14 and 2016. In each year, the share of physicians that accept Medicare patients on the SK&A is close to the share that accept new Medicare patients on the NAMCS-NEHRs. Even though the SK&A and NAMCS-NEHRs outcome definitions and survey methods drastically differ, the changes in these Medicare acceptance rate measures over time are generally consistent across both surveys. For example, similar to the NAMC-NEHRs, the share of office-based physicians on the SK&A that accepted Medicare patients significantly increased from 2011 to 2012, from 86.9 percent to 90.1 percent. In both surveys, the changes in acceptance rates in subsequent years were smaller in magnitude compared

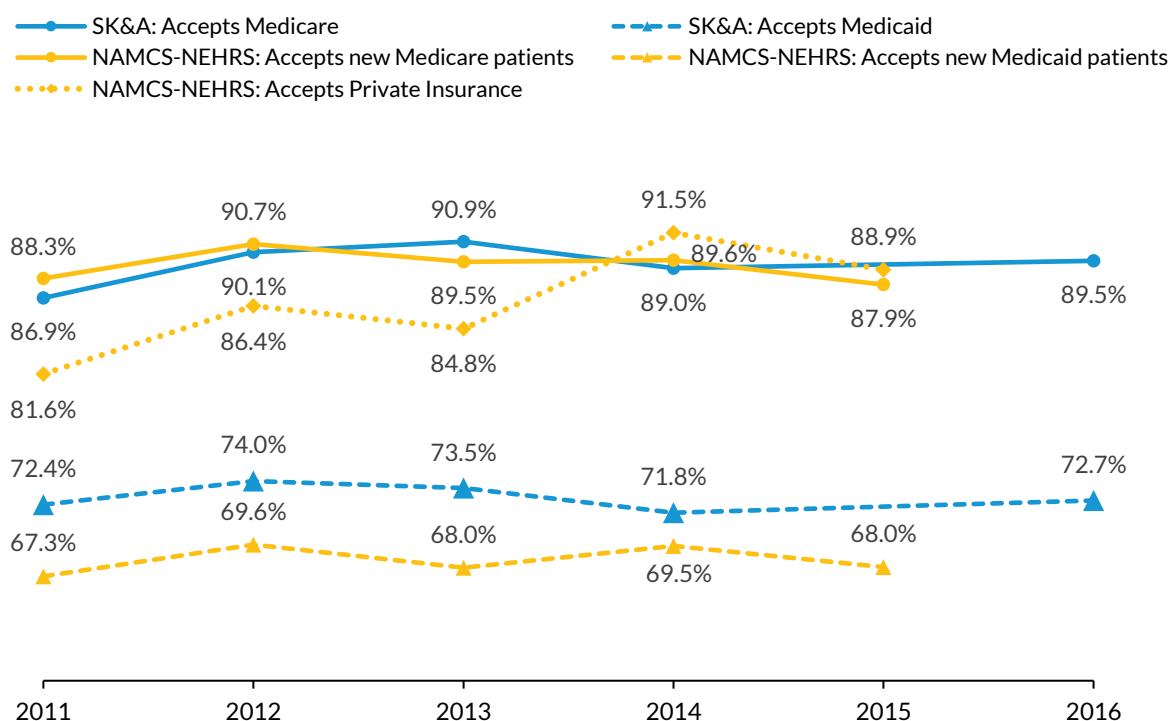
with the change from 2011 to 2012, although all year-to-year changes were statistically significant on the SK&A, likely owing to the survey's large sample size.

Figure 1 also shows that physician acceptance rates for Medicaid patients are significantly lower than acceptance rates for Medicare patients, but remained stable over the analysis period. In each year, the Medicaid acceptance rate is 20 to 22 percentage points lower than the Medicare acceptance rate on the NAMCS-NEHRS and 15 to 17 percentage points lower on the SK&A. In terms of trends, the Medicaid acceptance rate remained roughly constant between 2011 (67.3 percent) and 2015 (68.0 percent) on the NAMCS-NEHRS, although there were some modest year-to-year fluctuations in these estimates. There were also some modest (but statistically significant) year-to-year fluctuations in Medicaid acceptance rates on the SK&A, but the overall rate did not change between 2011 (72.4 percent) and 2016 (72.7 percent).

**FIGURE 1**

**Physician Acceptance of Medicare, Medicaid, and Privately Insured Patients**

*NAMCS-NEHRS and SK&A physician database, 2011–16*



Finally, figure 1 shows that physician acceptance rates for new privately insured patients on the NAMCS-NEHRS significantly increased and became as high as the acceptance rate for new Medicare patients. The acceptance rate for privately insured patients was 6.7 percentage points lower than the acceptance rate for Medicare patients in 2011 (88.3 percent for Medicare versus 81.6 percent for private). However, the acceptance rate for privately insured patients increased roughly 10 percentage points between 2011 and 2014 and was slightly higher than the acceptance rate for Medicare patients by 2014 (91.5 percent versus 89.6 percent). The acceptance rate for new Medicare and new privately insured

populations both declined by 2 to 3 percentage points from 2014 to 2015, but these changes were not statistically significant.

## State- and County-Level Acceptance Rates

Table 1 shows changes in state-level Medicare acceptance rates on the NAMCS-NEHRS and SK&A before and after the ACA coverage expansions. In both surveys, the pre-expansion period includes pooled 2011–13 data. The postexpansion period includes 2014 and 2015 data on the NAMCS-NEHRS and 2014 and 2016 data on the SK&A. These estimates are also grouped by Medicaid expansion and nonexpansion states.

The overwhelming majority of office-based physicians in Medicaid expansion and nonexpansion states accepted new Medicare patients before and after the 2014 ACA coverage expansions. In both the NAMCS-NEHRS and SK&A, nearly 90 percent of office-based physicians in Medicaid expansion and nonexpansion states accepted Medicare patients in 2011–13. The Medicare acceptance rate on the NAMCS-NEHRS remained constant in 2014–15 in expansion states (a change of 0.1 percentage points) and decreased by 2.1 percentage points ( $p$ -value=0.06) in nonexpansion states. The share of office-based physicians that accepted Medicare patients on the SK&A did not meaningfully change from 2011–13 to 2014/2016—0.2 percentage points in expansion states and 0.5 percentage points in nonexpansion states—but these changes were statistically significant.

Table 1 also shows little variation in Medicare acceptance rates across states. In 2014–15, Medicare acceptance rates on the NAMCS-NEHRS ranged from less than 85 percent (but more than 79 percent) in 9 states to more than 90 percent in 21 states, with no discernable patterns by Medicaid expansion status. On the SK&A, only 4 states had Medicare acceptance rates below 85 percent and 24 states had acceptance rates above 90 percent in 2014/2016.

An overwhelming majority of office-based physicians in all states accepted new privately insured patients in 2014–15, while there was significant variation across states in the share that accepted new Medicaid patients. The share of office-based physicians accepting new Medicaid patients remained unchanged in all but five states, with significant increases in three states and a significant decrease in one state. In contrast, the share of office-based physicians accepting new privately insured individuals significantly increased in 29 states between 2011–13 and 2014–15, with no states experiencing a significant decrease (data not shown).

Overall, the county-level distribution has shifted toward higher Medicare acceptance rates over time, consistent with the national trend shown in figure 1. Based on the SK&A data, from 2011 to 2016, Medicare acceptance rates increased in 59 percent of counties, decreased in 31 percent, and remained constant in 10 percent. These estimates are among 2,021 counties that had 10 or more physicians in both 2011 and 2016. The interactive county map sample offers the following county-level data:<sup>2</sup>

- 18.9 percent had Medicare acceptance rates below 85 percent in 2011 versus 8.9 percent in 2016
- 23.1 percent had Medicare acceptance rates between 85 and 90 percent in 2011 versus 15.2 percent in 2016

- 25.1 percent had Medicare acceptance rates between 90 and 95 percent in 2011 versus 30.9 percent in 2016
- 35.8 percent had Medicare acceptance rates at or above 95 percent in 2011 versus 45.0 percent in 2016

**TABLE 1**

**Physician Acceptance of Medicare Patients by State and Medicaid Expansion Status**

*NAMCS-NEHRS and SK&A physician database, pre- and post-2014*

	NAMCS-NEHRS: Physician acceptance of new Medicare patients			SK&A: Physician acceptance of Medicare patients		
	2011–2013	2014 & 2015	Difference	2011–2013	2014 & 2016	Difference
Overall	89.5%	88.8%	-0.7%	89.3%	89.3%	-0.1%*
<b>Medicaid expansion states</b>	<b>89.0%</b>	<b>89.1%</b>	<b>0.1%</b>	<b>89.4%</b>	<b>89.6%</b>	<b>0.2%***</b>
AZ	91.0%	89.6%	-1.4%	89.0%	88.6%	-0.3%
AR	94.4%	89.2%	-5.2%	90.9%	89.9%	-1.0%**
CA	84.4%	87.0%	2.6%	84.7%	85.6%	0.9%***
CO	82.3%	86.3%	4.0%	85.4%	83.7%	-1.7%***
CT	92.4%	81.3%	-11.2%***	87.8%	86.9%	-0.9%***
DE	92.9%	89.2%	-3.8%	89.3%	87.5%	-1.8%***
DC	81.9%	79.4%	-2.5%	84.2%	85.6%	1.4%**
HI	83.4%	82.1%	-1.2%	81.3%	82.8%	1.4%**
IL	91.5%	93.0%	1.5%	91.3%	89.6%	-1.7%***
IN	89.8%	85.1%	-4.6%	92.4%	93.2%	0.8%***
IA	91.0%	91.6%	0.6%	94.3%	93.2%	-1.0%***
KY	93.1%	85.8%	-7.3%*	92.2%	93.3%	1.0%***
MD	85.3%	84.7%	-0.7%	88.0%	88.4%	0.4%
MA	89.8%	90.7%	0.8%	91.8%	92.3%	0.5%**
MI	91.3%	92.5%	1.1%	92.8%	93.0%	0.3%
MN	93.3%	95.1%	1.8%	95.4%	95.1%	-0.3%
NV	86.0%	87.1%	1.1%	87.7%	88.4%	0.6%
NH	89.6%	90.5%	0.9%	91.2%	93.1%	1.9%***
NJ	92.0%	90.7%	-1.4%	89.2%	90.0%	0.8%***
NM	84.8%	89.0%	4.2%	90.0%	89.8%	-0.2%
NY	89.6%	87.2%	-2.5%	88.5%	89.1%	0.6%***
ND	96.1%	95.4%	-0.7%	95.9%	95.4%	-0.5%



	NAMCS-NEHS: Physician acceptance of new Medicare patients			SK&A: Physician acceptance of Medicare patients		
	2011- 2013	2014 & 2015	Difference	2011- 2013	2014 & 2016	Difference
OH	90.6%	91.2%	0.6%	92.2%	92.2%	0.0%
OR	80.5%	82.7%	2.2%	87.9%	86.5%	-1.5%***
PA	93.6%	96.1%	2.6%	92.0%	92.6%	0.6%***
RI	85.5%	85.8%	0.4%	91.1%	91.4%	0.3%
VT	82.1%	89.6%	7.5%*	92.2%	91.5%	-0.7%
WA	88.2%	89.2%	1.1%	87.4%	87.4%	0.0%
WV	86.9%	88.8%	1.9%	91.9%	92.5%	0.6%
<b>Nonexpansion States</b>	<b>90.3%</b>	<b>88.2%</b>	<b>-2.1%*</b>	<b>89.2%</b>	<b>88.8%</b>	<b>-0.5%***</b>
AL	88.6%	90.5%	1.9%	90.4%	91.1%	0.7%**
AK	77.0%	83.4%	6.4%	82.0%	79.5%	-2.5%**
FL	94.2%	89.6%	-4.6%	89.4%	89.0%	-0.4%***
GA	86.8%	86.0%	-0.8%	88.1%	87.6%	-0.5%**
ID	90.1%	90.6%	0.4%	87.2%	88.7%	1.5%***
KS	86.8%	91.9%	5.1%	91.1%	91.5%	0.4%
LA	87.3%	88.5%	1.3%	89.0%	87.8%	-1.2%***
ME	83.8%	85.4%	1.7%	91.6%	92.8%	1.2%***
MS	91.9%	93.6%	1.7%	93.1%	92.3%	-0.7%**
MO	93.5%	90.7%	-2.8%	93.1%	92.7%	-0.4%*
MT	90.4%	88.7%	-1.7%	90.2%	88.7%	-1.4%**
NE	93.1%	92.3%	-0.9%	93.9%	94.5%	0.6%*
NC	89.2%	84.6%	-4.6%	90.6%	89.8%	-0.8%***
OK	85.5%	88.2%	2.7%	89.2%	89.3%	0.2%
SC	90.9%	95.3%	4.3%	90.8%	91.2%	0.4%
SD	95.8%	95.4%	-0.3%	95.6%	94.2%	-1.4%***
TN	91.1%	84.6%	-6.5%	88.9%	89.2%	0.3%
TX	89.1%	84.7%	-4.4%	84.8%	83.5%	-1.3%***
UT	91.2%	87.3%	-3.9%	89.6%	88.7%	-0.8%**
VA	89.0%	90.6%	1.6%	88.6%	88.6%	0.0%
WI	93.3%	92.4%	-0.9%	94.2%	94.1%	-0.2%
WY	95.6%	90.4%	-5.2%*	91.6%	94.5%	2.9%***

Sources: NAMCS-NEHS, 2011–14; SK&A Physician Database, 2011–14, 2016.

Note: Sample excludes pediatricians. Asterisks indicate whether the change from pre- to post-2014 is statistically significant with  $p < 0.10$  (\*),  $p < 0.05$  (\*\*), and  $p < 0.01$  (\*\*\*).

## Difference-in-Differences Results

Table 2 shows sample characteristics from the NAMCS-NEHRS office-based physicians in expansion states and nonexpansion states in 2010–13. Physicians in expansion states are more likely to be in urban areas than those in nonexpansion states. Other key differences are that those in expansion states are more likely to be female, practice internal medicine, and work in multispecialty practices, and less likely to be in a private solo or group practice and freestanding clinic than those in nonexpansion states.

**TABLE 2**

### Characteristics of Office-Based Physicians on the NAMCS-NEHRS

*Expansion versus nonexpansion states, 2011–13*

	Expansion 2011–13	Nonexpansion 2011–13
<b>Sample size</b>	6,224	5,192
<b>Urban-rural classification</b>		
Large central metro	37.2%	26.7%***
Large fringe metro	26.6%	20.1%***
Medium metro	19.5%	25.6%***
Small metro	8.2%	13.4%***
Micropolitan (nonmetro)	6.5%	9.8%***
Noncore (nonmetro)	2.0%	4.4%***
<b>Gender</b>		
Female	27.5%	23.9%***
Male	72.5%	76.1%***
<b>Detailed specialty</b>		
General/family practice	21.1%	22.4%
Internal medicine	15.0%	11.8%***
General surgery	4.3%	4.3%
Obstetrics & gynecology	7.6%	9.2%***
Orthopedic surgery	5.6%	5.7%
Cardiovascular diseases	4.3%	3.8%
Dermatology	2.9%	2.5%
Urology	1.9%	2.2%
Psychiatry	6.3%	4.9%*
Neurology	2.6%	2.6%
Ophthalmology	4.9%	4.5%
Otolaryngology	2.0%	2.4%
Other specialties	21.5%	23.8%*
<b>Age</b>		
Under 35 years	2.6%	2.6%
35–44 years	21.8%	22.9%
45–54 years	29.8%	31.9%
55–64 years	30.6%	29.9%
65–84 years	15.3%	12.7%**

	Expansion	Nonexpansion
	2011–13	2011–13
<b>Practice type</b>		
Single specialty	44.7%	48.0%**
Multispecialty	26.8%	22.2%***
Solo practice	28.5%	29.8%
<b>Setting</b>		
Private solo or group practice	79.6%	85.2%***
Freestanding clinic/urgicenter	4.4%	5.9%**
Community health center	3.6%	2.1%***
Mental health center	0.9%	0.8%
Nonfederal clinic	1.5%	1.5%
Family planning clinic	0.1%	0.1%
HMO or other prepaid practice	3.6%	0.5%***
Faculty practice plan	6.2%	3.9%***

Source: NAMCS–NEHRS.

Note: Sample excludes pediatricians. Asterisks indicate whether estimates are statistically difference in expansion and nonexpansion states, with  $p < 0.10$  (\*),  $p < 0.05$  (\*\*), or  $p < 0.01$  (\*\*\*).

The difference-in-differences findings from both surveys show that the Medicaid expansion had no impact, or a slightly positive impact, on physicians' acceptance of Medicare patients (table 3). The adjusted difference-in-differences estimates show that Medicaid expansion was associated with a statistically insignificant 2.2-percentage-point increase in the probability of accepting new Medicare patients (NAMCS) and a small but statistically significant 0.5-percentage-point increase in the probability of accepting Medicare patients (SK&A). The direction of this coefficient is largely driven by small declines in physicians' acceptance of Medicare patients in nonexpansion states.

Findings from NAMCS-NEHRS and SK&A also show that the Medicaid expansion had little to no impact on physicians' acceptance of Medicaid patients. The unadjusted estimates show no significant changes over time in the acceptance of new Medicaid patients in Medicaid expansion states and nonexpansion states. The adjusted difference-in-differences estimates indicate that Medicaid expansion was associated with a statistically insignificant 2.7-percentage-point increase in the probability of accepting new Medicaid patients (NAMCS-NEHRS) and a statistically significant 1.2-percentage-point increase in the probability of accepting Medicaid patients (SK&A). These estimated effects are driven by small increases in physicians' acceptance of Medicaid patients in expansion states and small declines in nonexpansion states.

TABLE 3

### Difference-in-Differences in Physician Acceptance Rates in Medicaid Expansion versus Nonexpansion States

NAMCS-NEHRS and SK&A physician database, pre- and post-2014

	Pre-ACA	Post-ACA	Differences between periods	Unadjusted Difference-in-Differences	Adjusted Difference-in-Differences
<b>NAMCS-NEHRS</b>					
<i>Accept new Medicare patients</i>					
Expansion states	0.890	0.891	0.001		
Nonexpansion states	0.903	0.882	-0.021*	0.022	0.022
<i>Accept new Medicaid patients</i>					
Expansion states	0.675	0.690	0.015		
Nonexpansion states	0.696	0.685	-0.011	0.026	0.027
<i>Accept new privately insured patients</i>					
Expansion states	0.836	0.898	0.062***		
Nonexpansion states	0.855	0.911	0.056***	0.006	0.005
<b>SK&amp;A</b>					
<i>Accept Medicare patients</i>					
Expansion States	0.894	0.896	0.002***		
Nonexpansion States	0.892	0.888	-0.005***	0.007***	0.005***
<i>Accept Medicaid patients</i>					
Expansion states	0.728	0.722	-0.006***	0.013***	0.012***
Nonexpansion states	0.742	0.723	-0.019***	0.013***	0.012***

Sources: (1) National Ambulatory Medical Care Survey–National Electronic Health Records Survey (NAMCS–NEHRS), 2011–2014 (2) SK&A Physician Database, 2011–2014, 2016

Note: Sample excludes pediatricians.  $p < 0.10$  (\*),  $p < 0.05$  (\*\*), or  $p < 0.01$  (\*\*\*).

Findings from the NAMCS-NEHRS also show that the Medicaid expansion had no impact on physicians' acceptance of privately insured patients. The share of office-based physicians that accepted new privately insured patients significantly increased by approximately 6 percentage points in both expansion and nonexpansion states. However, the adjusted difference-in-differences estimates show that Medicaid expansion had no significant effect (0.5 percentage points) on the probability of accepting new privately insured patients (NAMCS-NEHRS). Full regression results for each model from the NAMCS-NEHRS are available upon request.

The difference-in-differences estimates are similar to those from the main model when the sample is limited to primary care physicians and those located in non-metropolitan statistical areas (data not shown). There is also no evidence of differential trends in physician availability outcomes in expansion and nonexpansion states before 2013 in the NAMCS-NEHRS, which offers support for our study design (table 4). The interaction terms between expansion states and years are statistically significant in the

SK&A Medicare and Medicaid models, likely owing to the large sample sizes (though the magnitudes are small).

**TABLE 4**

**Test for Differential Trends in Medicaid Expansion versus Nonexpansion States**

*2011–13 NAMCS-NEHRS and SK&A physician database*

	Interaction between Expansion Status and Year			
	NAMCS-NEHRS	P	SK&A	P
Medicare	0.000		0.007	***
Medicaid	0.022		0.006	***
Privately insured	0.006		N/A	N/A

**Note:** Sample excludes pediatricians. Asterisks indicate whether the interaction term is statistically significant with  $p < 0.10$  (\*),  $p < 0.05$  (\*\*), and  $p < 0.01$  (\*\*\*).

## Discussion

This study assessed trends in physicians' acceptance of Medicare patients, Medicaid patients, and privately insured individuals from 2011 to 2016, capturing the period before, during, and after the major ACA coverage expansions. Combining evidence from two separate physician surveys, this analysis finds that physician availability—overall and across states and counties—did not worsen in most areas after implementation of the ACA coverage expansion.

This analysis assessed the impact of the ACA's Medicaid expansion on physician acceptance of Medicare patients by using a difference-in-differences approach to compare acceptance rates in Medicaid expansion states with those in nonexpansion states. Despite some concerns that coverage expansions under the ACA could worsen access to care for the Medicare population, this study finds no adverse effects of the Medicaid expansion on physician acceptance of new Medicare patients. This analysis also finds no evidence that the Medicaid expansion worsened physician acceptance of new Medicaid or privately insured patients.

This research provides important new information about Medicare enrollees' access to physician care, a pressing concern at older ages when health problems become more common. This information will be valuable to policymakers—particularly in states that have not yet expanded Medicaid—as they assess options to expand health care access in the wake of health reform. Most notably, and consistent with the existing literature, this study finds that expanding coverage will be unlikely to have negative spillover effects on access to physicians for those who are already insured.

# Notes

- <sup>1</sup> Renee Ellmers, “Medicare: Time for Congress to Repeal and Replace the ‘Sustainable Growth Rate’ Formula,” *Fox News*, March 16, 2015, <http://www.foxnews.com/opinion/2015/03/16/medicare-time-for-congress-to-repeal-and-replace-sustainable-growth-rate.html>; Richard S. Pieters, “A Chance to Fix Medicare Payments to Physicians,” *Boston Globe*, March 20, 2015, <https://www.bostonglobe.com/opinion/2015/03/20/chance-fix-medicare-payments-physicians/nrO83zoQdfYmhbb6AmFzhK/story.html>; Kevin Brady, “Taking the First Step to Save Medicare,” *The Courier*, March 18, 2015, <https://www.yourconroenews.com/neighborhood/moco/opinion/article/Taking-the-first-step-to-save-Medicare-9473623.php>.
- <sup>2</sup> Fredric Blavin, “Percent of Office-Based Physicians Who Accept Medicare Patients, 2011 and 2016 SK&A Physician Database,” Urban Institute, <https://www.urban.org/research/publication/effect-affordable-care-act-medicare-enrollees-access-physician-services>.

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## About the Author

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