By Pinar Karaca-Mandic, Andrew Wilcock, Laura Baum, Colleen L. Barry, Erika Franklin Fowler, Jeff Niederdeppe, and Sarah E. Gollust

The Volume Of TV Advertisements During The ACA's First Enrollment Period Was Associated With Increased Insurance Coverage

DOI: 10.1377/hlthaff.2016.1440 HEALTH AFFAIRS 36, NO. 4 (2017): 747-754 ©2017 Project HOPE— The People-to-People Health Foundation Inc.

ABSTRACT The launch of the Affordable Care Act was accompanied by major insurance information campaigns by government, nonprofit, political, news media, and private-sector organizations, but it is not clear to what extent these efforts were associated with insurance gains. Using county-level data from the Census Bureau's American Community Survey and broadcast television airings data from the Wesleyan Media Project, we examined the relationship between insurance advertisements and county-level health insurance changes between 2013 and 2014, adjusting for other media and county- and state-level characteristics. We found that counties exposed to higher volumes of local insurance advertisements during the first open enrollment period experienced larger reductions in their uninsurance rates than other counties. State-sponsored advertisements had the strongest relationship with declines in uninsurance, and this relationship was driven by increases in Medicaid enrollment. These results support the importance of strategic investment in advertising to increase uptake of health insurance but suggest that not all types of advertisements will have the same effect on the public.

he Affordable Care Act (ACA) established state-based and federal insurance Marketplaces and expanded Medicaid in twenty-four states in 2014. Estimates indicate that more than 8.0 million people selected coverage from a Marketplace and that 4.8 million enrolled in Medicaid during the first open enrollment period from October 1, 2013, through March 31, 2014.^{1,2} The introduction of new insurance options was accompanied by massive media marketing campaigns from federal and state governments, nonprofit organizations, and insurance companies selling products to potential health plan enrollees. These marketing campaigns aimed to inform consumers about the existence of these new Marketplaces and insurance products. During the same time period, political campaign advertisements provided information

about the ACA-albeit with specific political perspectives-in high volumes in many areas of the country.3 Almost 1,000 distinct insurance advertisements were aired more than 605,000 times on local and national broadcasting, while 255 unique ACA-related political advertisements were aired almost 85,000 times during the six months of the first open enrollment period.4 In addition to the high levels of insurance product advertisements and political advertisements airing during the first open enrollment period, a high volume of news media coverage also described the insurance Marketplaces and products available under the ACA to the American public. Local television news constitutes the dominant information source for Americans,5 and research indicates that there were high volumes of ACA coverage on local television news during this period.6

Pinar Karaca-Mandic

(pkmandic@umn.edu) is an associate professor in the Division of Health Policy and Management, School of Public Health, University of Minnesota, in Minneapolis.

Andrew Wilcock is a doctoral student in the Division of Health Policy and Management, School of Public Health, University of Minnesota.

Laura Baum is project manager of the Wesleyan Media Project in the Department of Government at Wesleyan University, in Middletown, Connecticut.

Colleen L. Barry is the Fred and Julie Soper Professor and Chair in the Department of Health Policy and Management at the Johns Hopkins Bloomberg School of Public Health, in Baltimore, Maryland.

Erika Franklin Fowler is an associate professor in the Department of Government at Wesleyan University.

Jeff Niederdeppe is an associate professor in the Department of Communication at Cornell University, in Ithaca, New York.

Sarah E. Gollust is an associate professor in the Division of Health Policy and Management, School of Public Health, University of Minnesota.

It is well known that media messages, including news coverage and advertising, can generally influence the public's attitudes and behaviors, and emerging evidence indicates that media shaped the public's attitudes during ACA implementation.8 However, the influence of ACA-related media on health plan enrollment in the new Marketplaces created by the ACA is unknown. There has been very limited prior research exploring this question, although one study did show a relationship between Medicaid enrollment and television advertising of a toll-free hotline for enrollment assistance.9 Based on this research and our theoretical expectations, we anticipated that higher volumes of media messages during the first open enrollment period would be related to higher health insurance enrollment, since increased media exposure would heighten the public's awareness of their choices.

This study examined the relationship between broadcast health insurance advertisements and the changing uninsurance rate among individuals younger than age sixty-five between 2013 and 2014, adjusting for other contemporaneous ACA-related media messaging and market-level demographic factors.

Study Data And Methods

OUTCOME VARIABLES: UNINSURANCE AND MEDICAID ENROLLMENT RATES We extracted county-level data on uninsurance and Medicaid enrollment rates for people younger than age sixty-five from the Census Bureau's American Community Survey (ACS) one-year estimates in 2013 and 2014. Because ACS one-year data are available only for areas with populations of 65,000 residents or more, only 700 counties had measured county-level uninsurance rates in 2013 and only 712 in 2014. Consequently, between the two years there were 629 counties in which we were able to evaluate changes in the percentages of people who were uninsured and who were enrolled in Medicaid between 2013 and 2014.

KEY EXPLANATORY VARIABLES: MEDIA VOLUME We constructed three key measures of media volume at the Nielsen Designated Market Area (DMA) level for the first open enrollment period: insurance advertisements (both the total and broken down by sponsor type: private, state, federal, other); news attention to the ACA as measured by ACA-related keyword "hits" of closed-caption searches from television news programs; and political advertisements that referenced the ACA negatively. A DMA is a geographic region within which the population can view the same television content, and each is composed of counties (counties do not span more than one DMA). Our sample included 185 DMAs. There

are 210 DMAs in the United States.

▶ INSURANCE ADVERTISEMENTS: We obtained data on the volume of health insurance product advertisements from Kantar Media/Campaign Media Analysis Group through the Wesleyan Media Project. This category included all advertisements from health insurers promoting their products as well as advertisements from the Department of Health and Human Services, state Marketplaces, and other groups and organizations encouraging enrollment.¹⁰ Our project team viewed and coded all unique advertisements for type of sponsor: federal, private, state, or other. The other category included advertising sponsored by entities outside of health insurance companies or government (for example, nonprofit organizations, hospitals or health care systems, or television stations) and included public service announcement-style advertisements.

We aggregated these insurance advertisement volume numbers across the four types of sponsors for the open enrollment period of October 1, 2013, to March 31, 2014, and included advertisements aired until April 15, 2014, to encompass the Special Enrollment Period. To partially account for the targeting of insurance advertisements, we also constructed a measure of preopen enrollment period insurance advertisement volume by aggregating the total volume of insurance advertisements shown in the first nine months of 2013 in each DMA.

- ▶ NEWS COVERAGE: We included the DMA-level volume of local television news coverage of the ACA (ascertained from the Wesleyan Media Project) to adjust for other television broadcast information disseminated at the same time as health insurance advertisements. The volume of ACA news coverage included counts of ACA-related keywords¹¹ in the closed captioning of local television news programming (evening local news on all major networks) over the study period.
- ▶ POLITICAL ADVERTISEMENTS: The volume of ACA political advertisements (also ascertained from the Wesleyan Media Project) was measured as a count of all advertisements from political sponsors (that is, candidates and political organizations) that referenced the ACA. We included all anti-ACA advertisements in the analysis; these constituted 95.2 percent of all ACA-related political advertisements aired during this time.¹²

STATISTICAL ANALYSES The unit of analysis was the county-year. Our principal outcome measure was the percentage of uninsured people younger than age sixty-five. We estimated a multivariate regression model that related the percentage of uninsured people to media volume in the DMA corresponding to the county, an indicator for whether the period was post-ACA (year

2014), and interactions of media volume measures and the post-ACA indicator. Media volume included a vector of all three types of media measures described above. The estimate on the post-ACA indicator captured the average change in the uninsurance rate from 2013 to 2014. The interaction terms of post-ACA with media measures captured the differential change in the uninsurance rate from 2013 to 2014 by each media measure. We also controlled for pre-open enrollment period media volume and county- and state-level characteristics, described in online Appendix Exhibit A1.13 Standard errors were clustered at the state level. We estimated models with and without state fixed effects and present results from both specifications.

In additional analyses, we distinguished advertising volume by type of advertising sponsor (federal, private insurance company, state, or other). We also replicated all analyses with the percentage of people younger than age sixty-five enrolled in Medicaid as the outcome variable.

LIMITATIONS This study had a number of limitations. First, our analyses were limited to 629 counties with uninsurance and key demographic data available both in 2013 and 2014. Nevertheless, these counties represented more than 80 percent of the US population.¹⁴ In Appendix Exhibit A2, we provide detailed descriptive statistics on the counties included in the study.¹³

Second, we did not have measures of individuals' actual exposure to insurance product advertisements, so we relied on ecological-level measures (that is, measures at an aggregate, instead of individual or person level) of the maximum volume to which individuals would have been plausibly exposed.¹⁵

Third, we recognized that insurance marketers and local media might have targeted their messages to particular areas. To account for this media targeting by local economic and demographic characteristics, we included the preopen enrollment period volume of health insurance product advertisement in our statistical models. In addition, we estimated a series of models in which we used variables correlated with the media measures and uncorrelated with study outcomes as instrumental variables to account for this potential targeting effect and to provide causal support to our estimates. Finally, we conducted a sensitivity analysis repeating our analyses including only counties that were less likely to be targeted within each DMA.

Study Results

VARIATION OF INSURANCE ADVERTISEMENTS On average, 3,206 insurance advertisements were aired in all DMAs, with an interquartile range

of 549 advertisements (twenty-fifth percentile) to 4,469 advertisements (seventy-fifth percentile) (Exhibit 1). A given DMA had an average of 1,480 advertisements with private sponsors, 883 advertisements with federal sponsors, and 800 advertisements with state sponsors. In addition, an average DMA had 378 political advertisements aired and 778 ACA-related keyword hits in local evening news aired during the open enrollment period. The distribution of advertisements was uneven, with many DMAs having no advertisements shown in the tenth and twenty-fifth percentiles of distribution.

The volume of insurance product advertisements aired during the first open enrollment period also varied substantially across DMAs throughout the United States, with the largest advertisement volumes occurring in the Southwest (Appendix Exhibit A3).13 For instance, 18,747 insurance advertisements aired in the Albuquerque, New Mexico, media market, of which the majority (62.4 percent) were sponsored by the State of New Mexico, followed by advertisements sponsored by private health insurers (36.7 percent). DMAs in the Upper Mountain region and the West North Central region had consistently low insurance product advertisement volume during this time period. In the East North Central region, advertisement volume varied substantially across the DMAs. Within some states, there was substantial variation in advertisement volume at the DMA

EXHIBIT 1

Distribution of media measures across Nielsen Designated Market Areas during the first enrollment period established by the Affordable Care Act

			Percentile				
Type of media	Average	SD	10th	25th	50th	75th	90th
Insurance advertisements							
Overall Private Federal State	3,206 1,480 883 800	3,802 1,856 1,822 1,981	114 0 0 0	549 176 0	1,730 967 6 0	4,469 1,987 318 806	8,630 3,504 4,106 2,134
Other Political	41	103	0	0	0	24	135
advertisements	378	603	0	0	81	549	1,047
Local news coverage	778	395	320	536	726	938	1,402
Pre-open enrollment period 1 insurance advertisements (first 9 months of 2013)	255	456	0	7	81	274	748

SOURCE Authors' analysis of data from the Kantar Media/Campaign Media Analysis Group, open enrollment period of October 1, 2013, to March 31, 2014, and of included advertisements aired up until April 15, 2014, to encompass the special enrollment period. **NOTES** N = 185 Designated Market Areas. SD is standard deviation.

level. For example, in Texas, the Waco media market had zero insurance product advertisements aired, while in the Dallas market, 14,755 advertisements aired during the enrollment period.

ASSOCIATION BETWEEN MEDIA VOLUME AND PERCENTAGE UNINSURED In the first model. which used aggregate insurance advertisement volume, estimates found that the uninsured population younger than age sixty-five decreased by 2.9 percentage points in 2014 relative to 2013, on average, in the included counties (Exhibit 2). Counties with larger advertisement volumes experienced a larger decline in uninsurance. A 1,000-unit increase in insurance advertisements was associated with a 0.1-percentage-point reduction in uninsurance (coefficient estimate on the interaction of post-ACA and insurance advertisements). This finding held when we included state fixed effects to account for timeinvariant differences across states (full estimates on all covariates are presented in Appendix Exhibit A4).13

The estimates suggested that increasing in-

surance advertisements from 549 (twenty-fifth percentile across DMAs) to 4,469 (seventy-fifth percentile across DMAs)—a difference of 3,920 advertisements—would be associated with a 0.392-percentage-point reduction in the percentage uninsured in 2014 (Exhibit 3). Also, in 2014 the uninsurance rate was lower at all points in the advertisement volume distribution compared to 2013. A key finding was the widening gap between 2013 and 2014, which reflected greater gains in insurance coverage as advertisement volume increased.

We found no evidence that higher volumes of political advertisements or news keywords were associated with larger declines in uninsurance between 2013 and 2014 (Exhibit 2). Pre-open enrollment period volume of insurance advertisements shown in the first nine months of 2013 had a positive and significant association with uninsurance. Among other county and state characteristics, specification without state fixed effects indicated that having a larger fraction of elderly (ages sixty-five and older), black, and Latino populations; having higher poverty rates;

EXHIBIT 2

Association of advertising volume with percentage of uninsured people younger than age sixty-five, 2013-14

	Model 1		Model 2	
Variable	Base	State fixed effects	Base	State fixed effects
Post-ACA (year 2014)	-2.920***	-2.921***	-2.843***	-2.834***
Insurance ads Post-ACA \times insurance ads	0.0404 -0.106**	0.0887** -0.107**		
Privately sponsored insurance ads Post-ACA × private ads Federally sponsored insurance ads Post-ACA × federal ads State-sponsored insurance ads Post-ACA × state ads Other-sponsored insurance ads Post-ACA × other ads			-0.0755 0.0252 0.0900 -0.0297 0.0843 -0.233*** 2.018 -2.635	0.103 0.0252 0.0197 -0.0269 0.0469 -0.235**** 0.861 -2.637
Political ads Post-ACA × political ads News keywords Post-ACA × news keywords Pre-open enrollment period 1 insurance ads (first 9 months of 2013)	0.264 0.0970 0.629 0.471	-0.424*** 0.0939 -0.000812 0.488 0.520***	0.254 -0.120 0.629 0.328	-0.325 -0.131 0.120 0.351
Observations R-squared	1,258 0.760	1,258 0.627	1,258 0.763	1,258 0.632

SOURCE Authors' analysis of the analytic data (constructed from the Census Bureau's American Community Survey and Kantar Media/ Campaign Media Analysis Group data and other data sets listed in this study, 2013–14). NOTES Estimates reported from multivariate regression models in which the outcome variable was percentage of uninsured nonelderly people (younger than age sixty-five). The unit of analysis was the county-year. Model 1 used aggregate insurance advertisement volume (across all advertisement sponsors: private, federal, state, other), while model 2 included a breakdown of insurance advertisements by sponsor type. In models, media volume included was in 1,000s of advertisements (for example, 3,000 advertisements were included as 3). We present each model first without state fixed effects (base) and next with state fixed effects. Other covariates included in both models but not reported were county characteristics, percentage who voted for Barack Obama in 2012, and state and rating area characteristics. Standard errors were clustered at the state level. Pre-open enrollment period 1 insurance advertisements included insurance advertisement volume in the first nine months of 2013 in each Designated Market Area. ACA is Affordable Care Act. ***p < 0.05 ****p < 0.01

having a lower percentage who voted for Barack in 2012; and being in a non–Medicaid expansion state were positively associated with uninsurance. In the specification with state fixed effects, black population and percentage who voted for Obama were no longer associated with uninsurance (Appendix Exhibit A4).¹³ In a sensitivity analysis, we found that the key result of the association of insurance advertisements with uninsurance also held when we allowed the time-invariant county and state characteristics to vary in their associations in 2013 and 2014 (Appendix Exhibit A5).¹³

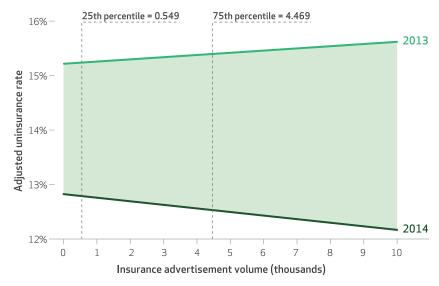
In an instrumental variables approach, we identified variables that were associated with our key media measures but not insurance enrollment (for example, non-ACA related political ads and a competition index of local television stations) and then reestimated the mediaenrollment relationship. Consistent with other results, the coefficient estimate on the interaction of insurance advertisement volume with post-ACA indicators was negative and significant in these models, providing causal support for the finding that larger insurance advertisement volume led to larger declines in the uninsurance rate between 2013 and 2014 (detailed methodology and results are presented in Appendix Exhibit A6). 13 For example, these models indicated that the uninsured population younger than age sixty-five decreased, on average, by 3.8 percentage points in 2014 relative to 2013, and larger insurance advertisement volume led to larger declines in the uninsurance rate. A 1,000-unit increase in insurance advertisements was associated with a 0.24-percentage-point further reduction in uninsurance.

When we distinguished among the insurance advertisements by type of sponsor (Exhibit 2, model 2), state-sponsored advertisements were associated with a differential reduction in uninsurance between 2013 and 2014. An increase in aired state-sponsored advertisements of 1,000 reduced uninsurance further by 0.23 percentage point. As before, the pre-open enrollment period volume of insurance advertisements shown in the first nine months of 2013 had a positive and significant association with uninsurance, but this association disappeared when we controlled for state fixed effects. This finding is not surprising, as pre-open enrollment insurance advertisements at least partially capture media targeting of areas with higher uninsurance rates, and state fixed effects also adjust for some of this geographic targeting.

An additional sensitivity analysis that included only counties that were less likely to be targeted within each DMA based on their baseline characteristics (uninsurance rate, target popula-

EXHIBIT 3

Adjusted percentage of uninsured people younger than age sixty-five, by insurance advertisement volume in 2013 and 2014



SOURCE Authors' analysis of the analytic data (constructed from the Census Bureau's American Community Survey and Kantar Media/Campaign Media Analysis Group data, and other data sets listed in this study, 2013–14). **NOTES** The exhibit shows estimated adjusted uninsurance rates separately in 2013 and 2014 corresponding to different values of the number of overall advertisements aired during the first open enrollment period (based on model 1 in Exhibit 2). The difference between the lines can be interpreted as the gains in insurance at each volume level of advertisement airings—showing greater gains (or a larger decline in uninsurance) at a higher volume of ads.

tion size, and poverty rate) also supported the finding that insurance advertising, primarily through state-sponsored advertising, was associated with reductions in uninsurance (detailed methodology and results are presented in Appendix Exhibit A7).¹³ For example, in counties with populations that were likely to be low targets for insurers within their DMA because they had below-median uninsurance rates, below-median percentages of the population ages 18-64, and below-median percentages of the population with incomes of 125 percent to 400 percent of the federal poverty level, an increase in state-sponsored advertisements of 1,000 reduced uninsurance further by 0.19 percentage point.

Overall, the percentage of the population younger than age sixty-five enrolled in Medicaid in our sample counties increased by 1.3 percentage points between 2013 and 2014 (Exhibit 4). Although there was no significant association between the volume of advertisement airings aggregated by type and Medicaid enrollment (model 1), there was a relationship between advertisement airings and enrollment when the advertisements were broken out by type. Specifically, the volume of private-sponsored advertisements was associated with a reduction in county Medicaid enrollment between 2013 and 2014,

EXHIBIT 4

Association of media volume with percentage of people younger than age sixty-five enrolling in Medicaid, 2013-14

	Model 1		Model 2	
Variable	Base	State fixed effects	Base	State fixed effects
Post-ACA (year 2014)	1.338***	1.345***	1.267***	1.259***
Insurance ads Post-ACA \times insurance ads	-0.0397 0.0340	-0.00892 0.0372		
Privately sponsored insurance ads Post-ACA × private ads Federally sponsored insurance ads Post-ACA × federal ads State-sponsored insurance ads Post-ACA × state ads Other-sponsored insurance ads Post-ACA × other ads			0.0235 -0.143*** -0.0526 -0.0663 -0.0783 0.227*** -0.686 2.545**	0.0820 -0.143**** 0.0739 -0.0611 -0.169 0.230**** -2.096**** 2.648***
Political ads Post-ACA × political ads News keywords Post-ACA × news keywords Pre-open enrollment period 1 insurance ads (first 9 months of 2013)	0.121 -0.453** -0.543 0.327	0.190 -0.469*** -0.166 0.289	0.0431 -0.143 -0.494 0.481	-0.0111 -0.160 -0.224 0.439
Observations R-squared	1,258 0.815	1,258 0.825	1,258 0.819	1,258 0.829

SOURCE Authors' analysis of the analytic data (constructed from the Census Bureau's American Community Survey and Kantar Media/ Campaign Media Analysis Group data and other data sets listed in this study, 2013–14). NOTES In models, media volume included was in 1,000s of advertisements (for example, 3,000 advertisements were included as 3). Estimates reported from multivariate regression models in which the outcome variable was percentage uninsured nonelderly people (younger than age sixty-five) enrolling in Medicaid. The unit of analysis was the county-year. Model 1 used aggregate insurance advertisement volume (across all advertisement sponsors: private, federal, state, other), while model 2 included a breakdown of insurance advertisements by sponsor type. We present each model first without state fixed effects (base) and next with state fixed effects. Other covariates included in both models but not reported were county characteristics, percentage who voted for Barack Obama in 2012, and state and rating area characteristics. Standard errors were clustered at the state-level. Pre-open enrollment period 1 insurance advertisements include insurance advertisement volume in the first nine months of 2013 in each Designated Market Area. ACA is Affordable Care Act. ***p < 0.05 ****p < 0.01

while the volume of state-sponsored advertisements was associated with an increase in county Medicaid enrollment between 2013 and 2014. The volume of other advertisements (for example, enrollment advocate and public service announcements) was also associated with increases in Medicaid enrollment. These advertisement sponsor–specific findings held up even with the fixed effects model specification, which means that the findings were not driven by state characteristics, such as differences in state Medicaid expansion status.

Finally, we found that higher numbers of anti-ACA political advertisements were associated with declines in Medicaid enrollment (Exhibit 4, model 1); however, the coefficients were not statistically significant in the models that broke out insurance advertisement types (model 2).

The sensitivity analysis that included only counties that were less likely to be targeted within each DMA demonstrated results similar to those of the main analyses: Insurance advertising, primarily through state-sponsored advertising, was associated with increased Medicaid

enrollment from 2013 to 2014 (Appendix Exhibit A7).¹³

Discussion

Numerous researchers, commentators, and journalists have reported on the significant gains in health insurance achieved after the first few years of the implementation of the ACA between 2014 and 2016.16-18 The financial investment in outreach and marketing to the uninsured population was considerable,3 and for good reason: The stability of the health insurance Marketplaces created by the ACA depended upon ample enrollees, and federal and state governments had strong political incentives to promote the new health insurance options to the public and gain enrollees (and possibly new supporters of the law). While other researchers have described insurance gains and in which subgroups those coverage gains accrued, 19 ours is the first study to link insurance changes following the 2014 implementation of the ACA period with the efforts of federal, state, and nonprofit

Consumers are responsive to persuasive messages about health insurance, but the type of advertisement might matter.

sponsors to market their products.

Our results show strong and stable associations between the volume of insurance advertising and health insurance gains in counties between 2013 and 2014. Specifically, for every 1,000 advertisements shown, we observed an average decline in uninsurance of 0.1 percentage point. Most of these gains in insurance appeared to be driven by the variations in volume of advertisements sponsored by state Marketplaces. In models examining differences in Medicaid enrollment between 2013 and 2014, we found that state-based Marketplace advertisements were associated with larger gains in enrollment, even when we examined only within-state differences in advertisement volume. To put these estimates in context, we estimated that 593,251 insurance advertisements were aired in our sample counties during the first open enrollment period. Of these, 148,120 were state-sponsored advertisements. Moving from the twenty-fifth to the seventy-fifth percentile of state advertisements aired in a DMA would be an increase of about 800 such advertisements. Our models suggest that for that amount of outreach, 2,077 people in a DMA would gain insurance (a decrease in the uninsurance rate from 12.71 percent to 12.56 percent), representing approximately 2.5 people per state-sponsored advertisement. Our models also predicted that doubling statesponsored advertisements from the mean of 800 at the DMA would reduce the uninsurance rate from 12.56 percent to 12.41 percent (a 1.19 percent reduction). These main findings, combined with sensitivity analyses providing additional support for an underlying causal relationship between media volume and enrollment, suggest that the efforts of those involved in marketing health insurance options-and state governments in particular-might have contributed to the uptake in health insurance. Interestingly,

we saw no evidence that advertisements sponsored by private sponsors (health insurance companies themselves) were associated with insurance gains, despite the fact that private companies were the most prominent advertisement sponsor.

These results have implications beyond the initial implementation period of the ACA. The future of the ACA is uncertain as of spring 2017, and proposals by Congress to repeal and replace the ACA are under discussion. Any health insurance system-particularly a system with a strong private-sector role, as articulated in Republican plans—will rely on marketing to attract new consumers. Indeed, this study demonstrates an important finding for health communication and health policy more generally: Consumers are responsive to persuasive health communication messages about health insurance, but the type of advertisement might matter. Our findings support earlier work outside of the ACA context, such as the finding that enrollment in Medicaid increases following advertisements—in our case, state-sponsored advertisements.9 Our finding of null effects of private insurance advertising is also consistent with recent research demonstrating that television advertising for private Medicare Advantage plans is unrelated to the proportion of seniors who choose such plans. 20,21 Of course, the ACA may have provided a favorable environment for health insurance enrollment, given the subsidies provided and penalties for not participating. Without these policy tools, it is not clear what the relationship between advertising and enrollment would be. Future research could unpack the conditions that promote greater or lower responsiveness to health insurance messaging.

We examined only a single type of media, broadcast television, while simultaneously adjusting for two other types of attention to the ACA: local news discussion and political advertisements aired. While we were unable to capture other types of local-level information sources about the ACA from other media (that is, Internet, local newspapers, or radio) or of the activities of enrollment and outreach specialists, this is an area that should be explored in the future. Similarly, our data on the funding provided for consumer assistance was at the state level, and future work could collect and use measures of locally focused enrollment or outreach activities.

Conclusion

We found that the volume of insurance advertisements aired during the open enrollment period of 2013–14 was related to insurance gains, particularly from state-sponsored advertisements

and particularly for Medicaid. Future research should look for opportunities to examine these relationships at the individual level (based on DMA of residence). These results support the importance of strategic investment in advertising to increase uptake of health insurance but suggest that not all types of advertisements have the same effect on the public. ■

This research was previously presented at the American Society of Health Economists' ASHEcon, in Philadelphia, Pennsylvania, June 12–15, 2016 (oral presentation), and at the AcademyHealth Annual Research

Meeting, in Boston, Massachusetts, June 26–28, 2016 (poster presentation). The authors received funding from the Robert Wood Johnson Foundation SHARE program (co-principal investigators Sarah Gollust and Erika Franklin Fowler, Grant No. 72179), Wesleyan University (Laura Baum and Erika Franklin Fowler), and McKnight Land-Grant Professorship, University of Minnesota (Sarah Gollust). [Published online March 15, 2017.]

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- **13** To access the Appendix, click on the Appendix link in the box to the right of the article online.
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