



Obstetricians and gynecologists' opinions about the Affordable Care Act and their expectations about how it will impact their practice

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ABSTRACT

As the primary healthcare providers for women, obstetrician-gynecologists' (OB/GYNs) experiences with and opinions about the Affordable Care Act (ACA) are important to understand. An online survey was sent to 1000 randomly selected OB/GYNs who were members of the American College of Obstetricians and Gynecologists (ACOG) in 2014. Of those, 523 opened the email and 163 responded (31% participation rate). Data were collected August 2014–October 2014 and analyzed in 2015–2016. Support for the ACA was widely distributed, with the largest subset of the sample (about 21%) in the “very supportive” category. Opinions of the ACA were more supportive than they were in a previous study conducted in 2011. When given a list of possible positive and negative impacts of the ACA on their practice, roughly 1 in 5 reported that the ACA increased work-related stress (28%), decreased total profits (22%), and lowered career satisfaction (22%), whereas 8.6% reported that the ACA increased quality of care. Around half of the providers thought that their newly insured patients would have the same level of education (42%) and numeric ability (55%) as their current patients. Almost all respondents (87%) indicated that it is at least slightly important for patients to understand their numeric likelihood of risk (such as numeric risk information from medications, treatments, and other procedures you might prescribe) —31% think it is extremely important and 44% think it is moderately important.

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1. Introduction

Since the Affordable Care Act (ACA) was implemented in 2012, women have benefited from the increased access to healthcare (*The ACA is Working for Women*, hhs.gov). Millions of women were able to become insured, many of them through provisions that expanded coverage through parents' insurance for dependents age 26 and under. With Medicaid covering 48% of all live births, the states that expanded Medicaid increased an important safety net for women. We wanted to assess how the ACA is perceived by and affects obstetrician-gynecologists (OB/GYNs), the primary healthcare providers for women.

The primary goal of this study is to examine OB/GYNs opinions about the ACA and how they anticipate their practices will be affected by the ACA in the future. This study builds on previous research with OB/GYNs conducted from 2010 to 2011 that found that 13% fully supported the ACA and 16% were not at all supportive. When asked in this earlier

study whether the ACA would affect their practice on a scale from 0 (no impact) to 10 (significant impact), the mean response was 6. A total of 35% indicated that they knew how the ACA would affect their practice (Anderson et al., 2014).

Our secondary goal was to assess providers' perception of their newly insured patients' ability to use information to make health decisions, including their ability to use and understand numbers to make health decisions (referred to as numeracy). This is important because the newly insured population is not necessarily well equipped for the challenge of navigating the healthcare system (Barcellos et al., 2014). One study of a national sample of individuals found that the uninsured had lower financial literacy and less accurate knowledge of the ACA (Barcellos et al., 2014). Another study (Peters et al., 2014a) estimated that the newly insured individuals are less numerate than the already insured and, in fact, that the newly insured do not have sufficient numeracy skills needed for medical decision making—the authors estimate that 28.8% of the uninsured population are at a below-basic level of numeracy, 33.4% are at a basic level, 29.3% are at an intermediate level, and only 8.6% are at a proficient level of numeric literacy. Of the insured population, it is estimated that only 18.2% are at the below basic level, 31.9%

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are at the basic level, 35.3% are at the intermediate level, and 14.6% are at the proficient level. Research that evaluates physicians' expectations of the numeric ability among their newly insured patient population is lacking. Because the newly insured population has less knowledge of and experience in the healthcare system and lower numeracy, physicians may need to be prepared to provide information to their new patients in different ways to meet their needs.

The present study assesses physicians' evolving opinions and knowledge of the ACA by asking similar questions as those asked in a previous study conducted just prior to the implementation of the ACA. New questions about providers' perception of the newly insured patient populations were also asked. Finally, providers were asked about what impacts they anticipated the ACA would have on their practice in the future.

2. Methods

2.1. Survey development and administration

The survey was developed by the authors and included questions based on a previous survey administered from 2010 to 2011 (Anderson et al., 2014). Additional questions were created for this study to assess how the ACA has influenced OB/GYNs' practices and perceptions of their patients' education and numeric abilities. The survey was first pilot tested by a small group of OB/GYNs. Once the instrument was finalized, it was programmed and administered via Magnet Mail software. Institutional Review Board exemption was obtained from the University of Washington.

Participants were emailed an invitation to participate in the online survey in August of 2014. The email included information about the study and a link to access the survey. Because the study was only relevant to those who currently practice obstetrics and gynecology, the email invitation also included a link to opt-out of the study if it was not relevant to their practice (i.e., the respondent was retired). A total of 6 reminder emails, each sent within approximately 1 week of the previous one, were sent to those who had not completed or opted-out of the survey. Data collection was completed in October 2014.

2.2. Sample

A total of 1000 practicing OB/GYNs who were randomly selected to participate in the online survey; 700 were members of the Collaborative Ambulatory Research Network (CARN) and 300 were randomly selected from the ACOG membership who do not belong to CARN. CARN and non-CARN selected participants did not differ by age or gender, so they were combined for analyses. A total of 16 of the 1000 randomly selected OB/GYNs did not have valid email addresses. Of the remaining 984, a total of 523 opened at least one of the emails about the study. Of the 523 who were reached, 2 responded that their practice structure was not relevant to the study. These 2 were considered ineligible to participate in the study, thus producing a final sample of 521 eligible providers who had been reached. Of those, 176 participated in the online survey, but 13 submissions were removed for being mostly incomplete (defined as a submission less than 60% complete). Thus, data analyses reflect the responses of 163 participants (a 31% participation rate).

2.3. Statistical analysis

Descriptive analyses were conducted. T-tests were conducted to test for significant mean differences between groups, and chi-square analyses were used to test for significant differences among groups. Pearson's r was used to test for significant correlations. Stepwise linear regression analyses were conducted to identify predictors of respondents' support for the ACA and perceived impact of the ACA. In each case, the following variables were included in regression analyses as potential predictors: whether the provider currently had patients who were newly covered

by the ACA, whether the practice was a private or public practice, whether the OB/GYN's state had expanded Medicaid, whether he or she had new patients who were newly insured by the ACA, patient volume, and the percentage of patients with private insurance.

3. Results

3.1. Sample characteristics

The sample was 61.3% female with the majority (69.3%) practicing general obstetrics and gynecology, 57.7% in private practice, and 51.5% in a small-single or multi-specialty practice. A total of 55.2% of the respondents were in a state that expanded Medicaid as of Oct. 2014 (AZ, AR, CA, CO, CT, DE, DC, HI, IL, IA, KY, MD, MA, MI, MN, NV, NH, NJ, NM, ND, OH, OR, PA, RI, VT, WA, WV). Male physicians were significantly older than female physicians, with the mean year of birth for men being 1955 (SD = 7.4) and for women, it was 1964 (SD = 9.6) ($p < .001$). A total of 68.1% of respondents reported having patients who were newly covered through the ACA and 55.8% reported having new patients who were previously uninsured but now have coverage through the ACA. The majority indicated that the size of their practice has stayed the same (63.2%), but 18.4% indicated that their practice was somewhat larger, and 10.4% indicated it was somewhat smaller.

To assess the subjective numeracy of physicians, we asked "In general, how easy or hard do you find it to understand medical statistics?" Response options were very easy, easy, average, hard, or very hard. ($n = 146$). Only 18 respondents (11.0%) indicated very easy; 33 (20.2%) indicated easy; 72 (44.2%) indicated average; 20 (12.3%) indicated hard and 3 (1.8%) indicated very hard. When asked whether they strongly disagree, disagree, neither agree nor disagree, agree, or strongly agree with the following, "I am confident that I can make sense of medical statistics" ($n = 148$), about two-thirds (66.9%) agreed that they were. Finally, when asked whether they strongly disagree, disagree, neither agree nor disagree, agree, or strongly agree with the following "I feel like I do not know how to interpret medical statistics", two-thirds (66.3%) disagreed or strongly disagreed.

To assess objective numeracy, we asked OB/GYNs to solve three medical statistics problems; 58.5% responded correctly to the first question, 28.8% responded correctly to the second question, and 27.0% responded correctly to the third question. Correct responses were added to obtain a measure of objective numeracy. Of the 3 possible, the proportion who responded to 3, 2, 1, or 0 problems correctly was, respectively, 6.7%, 29.4%, 27.0%, and 23.3%; 13.5% declined to answer any of the questions.

4. Physicians and the affordable care act

4.1. Support for ACA

Significant variation existed in support for the ACA (see Fig. 1), with 9.8% being not at all supportive and 20.9% indicating that they are very supportive. There were no significant predictors of support for the ACA.

4.2. Self-reported knowledge of the ACA

When asked how well they think they understand the ACA on a scale from 0 (not at all) to 10 (very well), responses were widely distributed: 27.6% indicated 0 to 4, 18.4% indicated 5, and 51.0% indicated 6 to 10. Self-reported understanding was not associated with whether the practice was private or public or with whether the OB/GYN's practice was in an expansion state. Nor was such understanding correlated with the percentage of patients with private insurance. Greater perceived understanding was, however, weakly correlated with smaller practice volume ($r = -.20$, $p = .012$), greater support for the ACA ($r = .25$, $p = .002$), and greater perceived knowledge of how the ACA affects their practice ($r = .28$, $p = .001$).

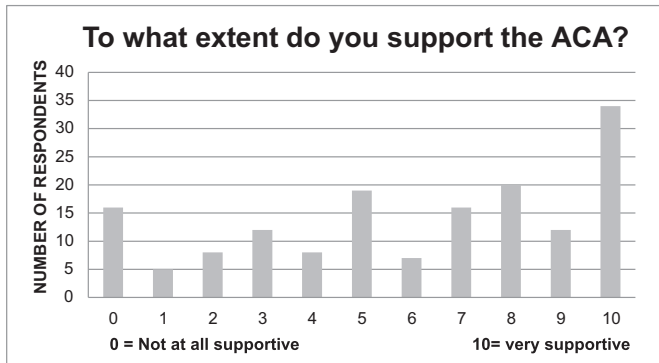


Fig. 1. Distribution of response frequency to the question: “To what extent do you support the Affordable Care Act? Please select a number that best reflects your answer on a scale from 0 (not at all supportive) to 10 (very supportive).” $N = 157$ Data were collected in 2014 by the American College of Obstetricians and Gynecologists.

4.3. Opinions about the influence and effects of the ACA on their practice

Fig. 2 shows the wide distribution of responses regarding how much the ACA has influenced their practice on an 11-point scale. No factors predicted the extent of the ACA's impact on an OB/GYN's practice.

When asked whether the ACA has negatively or positively influenced their practice, 28.1% indicated that the ACA's influence was negative, 27.6% indicated that the influence was neither positive nor negative, and 38.7% indicated it was positive (5.5% did not respond). **Table 1** shows the specific ways in which respondents perceived that the ACA has influenced their practice. The most commonly selected response was that the act had no influence (32.5%); the second most common response was that the ACA increased work-related stress (28.2%).

Respondents who indicated that the ACA had the following negative impacts were more likely to indicate that the act has had an overall negative effect on their practice: lowered career satisfaction ($\chi^2 = 13.5$, $p < .001$), decreased total profits ($\chi^2 = 13.5$, $p < .001$), lowered the quality of care provided ($\chi^2 = 6.5$, $p = .011$), and increased work-related stress ($\chi^2 = 6.7$, $p = .010$). Respondents who indicated that the ACA has had no effect on their practice were less likely to indicate that the ACA has had a negative effect on their practice ($\chi^2 = 11.5$, $p = .001$).

4.4. Anticipated influence of ACA in the future

Most respondents anticipate that the ACA will influence their practice in the future (**Fig. 3**). On a scale from 0 (no influence) to 10 (very significant influence), 67.5% indicated 5 to 10. A total of 9.2% indicated 9 or 10. No factors predicted the extent to which physicians anticipated

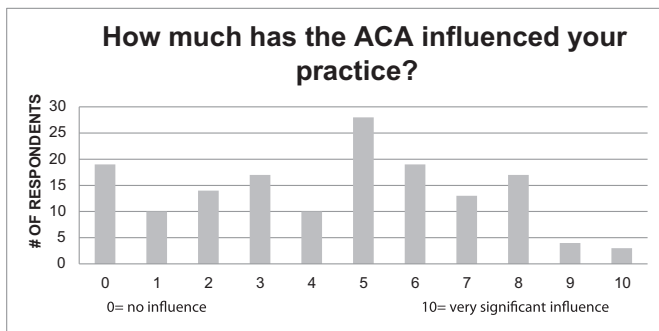


Fig. 2. Distribution of response frequency to the question: “How much has the Affordable Care Act influenced your practice? Please select a number that best reflects your answer on a scale from 0 (no influence) to 10 (very significant influence).” $N = 154$ Data were collected in 2014 by the American College of Obstetricians and Gynecologists.

Table 1

Responses to the question “How has the Affordable Care Act (ACA) influenced you and your practice? (Check all that apply)”. $N = 157$ Data were collected in 2014 by the American College of Obstetricians and Gynecologists.

32.5%	It has had no influence on me or my practice
28.2%	Increased work-related stress
22.1%	Decreased total profits in the practice
22.1%	Lowered my career satisfaction
16.6%	Other
14.1%	My salary is lower
8.6%	We provide lower quality of care because of changes due to the ACA
8.6%	We provide higher quality of care because of changes due to the ACA
6.1%	Raised my career satisfaction
5.5%	Increased total profits in the practice
2.5%	My salary is higher
1.2%	Decreased work-related stress

that the ACA would have an impact on their practice in a regression analysis.

About one-third (34.3%) anticipated that the ACA would have a negative effect, and 43.5% anticipated it would have a positive effect (14.7% anticipated no effect). Little consensus emerged about whether changes caused by the ACA would affect relationships with patients: 33.1% anticipated a negative effect, 25.8% anticipated no effect, and 34.3% anticipated a positive effect. With regard to the impact of the ACA on the size of their practice, the majority anticipated that their practice size would stay the same (44.2%) or grow larger (33.8%).

4.5. Comparing perceptions of ACA-insured patients with previous patients

Comparing perceptions of newly insured patients to their past patients, 52.8% of OB/GYNs indicated that their new patients have about the same level of formal education (26.4% indicated their new patients had less or somewhat less formal education, 1.2% indicated they had more formal education, 16.0% indicated they did not have any newly insured patients, and 3.7% did not answer). When asked to think about their future ACA patients, 42.3% indicated that they anticipated their new patients would have the same level of education, and 34.4% anticipated that the new ACA patients would have somewhat less education (4.3% indicated much less, 6.1% somewhat more, and 6.7% did not respond). There were no significant differences in support for the ACA, knowledge of the ACA, or influence of the ACA associated with responses to those questions.

Over half (54.6%) of respondents indicated that their new patients have about the same numeric ability as their previous patients (19.7% indicated their new patients had less ability, 3.1% indicated their patients had more ability, 15.3% indicated that they did not have newly insured patients, and 7.4% did not answer). When asked about their future



Fig. 3. Distribution of response frequency to the question: “How much do you anticipate the Affordable Care Act will influence your practice in the future? Please select a number that best reflects your answer on a scale from 0 (no influence) to 10 (very significant influence).” $N = 152$ Data were collected in 2014 by the American College of Obstetricians and Gynecologists.

ACA patients, 52.1% anticipated that their new ACA patients would have about the same numeric ability, and 29.4% anticipated that their patients would have somewhat less numeric ability. (6.1% anticipated that their new patients would have much less ability, 4.3% indicated that they would have somewhat more ability, and 8.0% did not indicate having any expectations about the numeric ability of their future patients). There were no significant differences in support for the ACA, knowledge of the ACA, or influence of the ACA associated with responses to these questions.

OB/GYNs were asked to estimate the percentage of their patient population who could answer the following numeracy question:

John forgot to take his medication before lunch at 12:00 noon and now has to figure out when to take it. His prescription bottle says: “Take one tablet on an empty stomach one hour before a meal or two to three hours after a meal unless otherwise directed by your doctor. What is the earliest time he can take it in the afternoon?”

Respondents estimated that 59% (SD = 21%) of their patients would answer this numeracy question correctly. When estimating the percentage of their newly insured patients who would be able to answer the same question, the mean response was 50% (SD = 24%). Peters et al. (2014a) estimated that about 38% of the ACA population could solve this problem.

5. Importance of providing numeric information

When asked “In general, how important do you think it is for your patients to understand their numeric likelihood of risks (e.g. numeric information from medications, treatments, and other procedures you might prescribe”, almost all respondents indicated that it is at least slightly important for their patients to understand their numeric likelihoods of risk; 30.7% indicated it was extremely important, 44.2% indicated it was moderately important, and 11.7% indicated it was slightly important. Only 4.2% indicated slightly, moderately, or extremely unimportant; 9.2% did not respond or indicated that it was neither important nor unimportant for their patients to understand the numeric likelihood of risk).

6. Discussion

The ACA is the most significant piece of legislation to affect the healthcare landscape in decades. It has made healthcare affordable for millions of women and has thus dramatically affected the practice of obstetrics and gynecology. However, the ACA is a complicated piece of legislation. In this small nationwide sample of predominantly generalist OB/GYNs, the majority supported the ACA. When compared to a similar study conducted in 2010–2011, opinions were more positive; for example, only 13% were very supportive of the ACA in the earlier study whereas 21% were very supportive in the present study.

The present survey was conducted only a few years after the implementation of the ACA, and before the Supreme Court ruling. It is not surprising that the respondents indicated that the ACA had more negative impacts than positive during this time of transition and legal uncertainty. The areas of greatest concern for the respondents were increased work-related stress, decreased total profits, and lowered career satisfaction, although a small percentage indicated that they believed the ACA increased the quality of care. It may be, in fact, that this period marked the greatest period of stress for physicians. When asked about the future, however, the number of OB/GYNs who anticipated that the ACA would have a positive impact was greater than the number of those who thought that impact would be negative.

Although some respondents think that their newly insured patients will have lower numeracy skills than their previous patients, the majority estimated that both education and numeracy levels in their newly insured populations would be about the same as their previous patient

population. Thus, physicians, on average, overestimated the education and numeric ability of ACA patients. This overestimation may reflect the common finding that communicators overestimate how much knowledge their listeners have (Nickerson, 1999). To our surprise, however, greater physician numeracy was unrelated to greater perceived patient numeracy. These findings suggest that providers may be unaware of the unique needs of their new patients, but also that simply telling them to estimate lower will not be sufficient (Barcellos et al., 2014; Peters et al., 2014a). As more patients become insured, studies need to examine whether OB/GYNs and other physicians communicate information to their patients in a way that equips those newly insured patients to use that information in their decision making. Although some experts argue that less numerate patients may not need to be provided with numeric information (Schwartz, 2011), other studies have found that providing numbers helps patients (even less numerate patients) more accurately understand risks (Peters et al., 2014b). Almost all respondents reported that they thought it was important for patients to understand numeric risks; however, only about two-thirds were confident that they themselves could make sense of medical statistics.

We found that two-thirds agreed with the statement “I am confident that I can make sense of medical statistics” while at the same time two-thirds disagreed or strongly disagreed with the statement “I feel like I do not know how to interpret medical statistics.” Thought it seems contradictory, it is possible that physicians believed that they could interpret (make sense of) the medical statistics well enough to do their job while simultaneously realizing that they did not understand precisely how to interpret them. It is also possible that these responses are due to the fact that the questions had the same response options but one was worded positively (that they were confident that they could make sense of medical statistics) and one was worded negatively (that they did not know how to interpret medical statistics)."

There are many directions for future research. First, since data were collected from August–October 2014, further research should be conducted to assess OB/GYNs' experiences with and opinions about the ACA once it has been further implemented and the individual mandate (which began in January 2014) has been in effect for a longer period of time. Future research should also be done to identify which experiences or factors are most associated with OB/GYNs' perspectives of the ACA. It would also be interesting to examine experiences and opinions regarding Medicaid patients compared to patients with exchange-based private insurance that they have purchased. Finally, future studies should examine differences in opinions and experiences among providers whose patient populations included a large proportion of uninsured women prior to the ACA implementation compared to those who did not.

The importance of studying the ACA and how it affects the physicians practicing within its boundaries is clear. Data such as these can help inform practitioners and patients. The data can also inform future assessments of both groups as they adapt to the ACA. Future studies are needed to continue monitoring OB/GYNs' opinions and expectations regarding the ACA as well as their perceptions of how the ACA influences their practices, as well as their thoughts on competing or replacement legislation. In particular, it would be helpful to identify how the ACA is perceived to increase ob-gyn stress. Programs that reduce work-related stress due to the ACA could be beneficial.

Conflict of interest

No conflicts of interest were reported by the authors of this paper.

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Transparency document

The [Transparency document](#) associated with this article can be found, in online version.

References

- Anderson, B.L., Urban, R.R., Pearlman, M., Schulkin, J., 2014. Obstetrician-gynecologists' knowledge and opinions about the United States Preventive Services Task Force (USPSTF) committee, the Women's Health Amendment, and the Affordable Care Act: National study after the release of the USPSTF 2009 Breast Cancer Screening Recommendation Statement. *Prev. Med.* 59, 79–82.
- Barcellos, S.H., Wuppermann, A.C., Carman, K.G., et al., 2014. Preparedness of Americans for the affordable care act. *Proc. Natl. Sci.* 111 (15), 5497–5502.
- Department of Health and Human Services, d. The ACA is Working for Women <http://www.hhs.gov/healthcare/facts-and-features/fact-sheets/aca-working-women/index.html> (Accessed 7/9/2016).
- Nickerson, R.S., 1999. How We Know—and Sometimes Misjudge—What Others Know: Imputing One's Own Knowledge to Others. *Psychol. Bull.* 125 (6), 737–759.
- Peters, E., Hart, P.S., Tusler, M., Fraenkel, L., 2014a. Numbers matter to informed patient choices a randomized design across age and numeracy levels. *Med. Decis. Mak.* 34 (4), 430–442.
- Peters, E., Meilleur, L., Tompkins, M.K., 2014b. Numeracy and the Affordable Care Act: opportunities and challenges. Appendix A. IOM (Institute of Medicine). *Health Literacy and Numeracy: Workshop Summary*. The National Academies Press, Washington, DC.
- Schwartz, P.H., 2011. Questioning the quantitative imperative decision aids, prevention, and the ethics of disclosure. *Hast. Cent. Rep.* 41 (2), 30–39.