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Journal
Dermatology Online Journal, 23(1)

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Publication Date
2017

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Healthcare reform literacy among academic dermatologists: What we know and don’t know about the Affordable Care Act

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Abstract

Importance: There have been no attempts to determine the understanding of the Affordable Care Act (ACA) among dermatologists. Objective: Assess knowledge of the ACA among academic dermatologists. Design: A 21-item survey was administered to members of the Association of Professors of Dermatology (APD). The items assessed knowledge and opinions of the ACA, and demographics of the participants. Multivariate regressions were conducted to determine associations between variables. Participants: Members of the Association of Professors of Dermatology. Main Measure: Knowledge of the ACA. Results: One hundred and eight out of 368 APD members completed the survey (29.3%). Ninety-six percent of responders practice in an academic setting. Only 36 (33.3%) rated their knowledge of the ACA as good/great, whereas 67 (62%) believed that the ACA will change their practice. The mean number of knowledge questions correctly answered was 4.5 out of 7 (64.3%). Dermatologists who reported that their knowledge of the bill was good/great (p=0.04) and procedural dermatologists (p= 0.04) answered more questions correctly. Compared to procedural dermatologists, general dermatologists were more likely to support the ACA (p=0.003) but less likely to answer questions correctly. Conclusion: There appears to be knowledge gaps among dermatologists about the ACA and discordance between support for and knowledge about the ACA. The need for educating dermatologists on health care policies may warrant further investigation.

Keywords: Dermatology, Affordable Care Act, ACA, Obamacare

Introduction

Since passage in 2010, the Affordable Care Act (ACA) continues to phase in various laws, mandates, and committees. Many aspects of medicine are affected, including provider compensation, access to health insurance and delivery of healthcare. For example, new payment methods are tied to patient satisfaction questionnaires, the Physician Quality Reporting System (PQRS), accountable care organizations (ACO), and the Independent Payment Advisory Board (IPAB). In addition, eligible Americans now have the opportunity to purchase health insurance online through government-run exchanges. A growing body of literature gauges the implications of the ACA on dermatology [1-5].

Given the scope and effect of this legislation, the medical community should assess not only opinions of the bill, but also knowledge of its contents by healthcare providers, including dermatologists. Academic dermatologists comprise a substantial proportion of the workforce. Their understanding of healthcare policy such as the ACA is far reaching owing to formative interactions with residents, medical students, and other trainees. Therefore, it is important to gauge their opinions and knowledge of the ACA.

Methods

This study was approved by the Emory University School of Medicine Institutional Review Board. A 21-item questionnaire was constructed by the investigators (appendix A). Seven of the 21 items assessed knowledge of the contents of the ACA. These seven questions covered the insurance marketplace, dependency criteria, sustainable growth rate, physician quality reporting system (PQRS), and payment penalties. For example, question three addresses the gap of insurance coverage in states
that opted out of expanding Medicaid eligibility. Residents in these states who fall below the required income level to qualify for the Marketplace, but are in a higher income bracket than is necessary to be eligible for Medicaid, are not able to obtain health insurance through the ACA. As another example, at the time the survey was distributed, melanoma was the only dermatologic disease included in the PQRS. This knowledge was captured by question eight. Of the remaining 14 items, six assessed demographics of responders, one captured the self-assessed knowledge of the ACA, four covered the opinion of different aspects of the ACA, and three assessed other knowledge of Medicaid expansion and accountable care organizations.

Since the mandatory expansion of Medicaid by individual states was ruled unconstitutional by the United States Supreme Court prior to the distribution of this survey, questions covering this topic were analyzed separately (not considered in the general knowledge assessment of the law).

As no validated instrument for knowledge of the ACA exists, face validity of our survey was established by administering the questionnaire to non-medical personnel. Content validity was established via review by dermatologists and policy makers deemed experts in healthcare policy. The questionnaire was modified based on the suggestions by these two groups and a pilot test was conducted. An email with a website link to the survey was distributed to the listserv of the Association of Professors of Dermatology (APD). This was followed by a reminder email sent to the same list serve one month later. Survey responses were collected from September 2013 to March 2014.

Statistical Analysis: Descriptive statistics were reported as either means with standard deviation (SD) for continuous variables and proportions for categorical variables.

Multivariate linear regressions were conducted to determine associations between knowledge, opinions, and demographics. The dependent variable for the first set of regression models included opinions regarding (1) support of ACA legislation and (2) support of Medicaid expansion. Possible predictor variables included self-rating of knowledge, gender, type of practice (academic vs. private practice), practice setting (general, procedural, pediatric, and cosmetic dermatology as well as dermatopathology) and experience (>30 years in practice, 10-30 years, 5-10 years, <5 years, and still in training), self-rating of knowledge (poor/fair vs. good/great), and impact (yes/no opinion on whether the ACA will change the practice of medicine). In the first regression model we also included opinion of Medicaid expansion as a predictor variable. In the second regression model we included the support of ACA legislation as a predictor variable. The dependent variables for the second set of regression models include (1) number of questions correct and (2) tertiles of correct answers. Tertiles were defined as those who ranked in the top 25% of all respondents, those who ranked in the bottom 25% and those between. Possible predictor variables included the same ones listed above.

All analyses were performed using SAS® Proprietary Software 9.3 (TS1M0). For the multivariate models, we allowed predictor variables to remain in the model if the parameter estimate was p<0.1. However, for post-hoc analysis and all other comparisons, the significance level was defined as p<0.05.

Results

One hundred and eight of 368 members of the APD listserv completed the survey (response rate of 29.3%). Of responders, 66 (61.1%) were male and the majority have been in practice for greater than 10 years (85.9%). Ninety-six percent of responders practice in an academic setting. When designated by subspecialty, 80 (75%) reported themselves as general dermatologists, 16 (15%) procedural dermatologists, five (4.7%) pediatric dermatologists, and four (3.7%) dermatopathologists. Two responders (1.9%) did not classify their practice as any of those subspecialties (Table 1). Twenty-six states had at least one representative.

Overall, 61 responders (57.5%) support the ACA whereas 32 (30.2%) oppose it. The remainder reported having “no opinion.” Only 36 (33.3%) rated their knowledge of the ACA as “good/great,” and 67 (62%) believed that the ACA will change their practice. Of the seven questions that assessed knowledge of the content of the ACA, the mean for items answered correctly was 4.5 (SD: 0.69) out of seven (64.3%).
When asked if all citizens in all states would have the opportunity to have health insurance under the ACA, only 53 (49.5%) responded correctly that they would not. However, ninety-four (87.0%) respondents correctly answered that health insurances cannot exclude patients based on preexisting illnesses under the ACA. Eighty eight responders (82.2%) were aware that children can remain on a parent’s insurance plan until the age of 26. A survey item regarding implementation of the insurance marketplaces yielded only 64 correct answers (59.3%). Eighty-one of the responders (75%) knew that the sustainable growth rate formula (SGR) was not repealed by the ACA whereas four (3.7%) thought it was repealed and 23 (21.3%) answered “I do not know.”

When asked about the Physician Quality Reporting System (PQRS), 79 responders (73.2%) recognized that melanoma was the only dermatologic disease included in the PQRS at the time of the survey. The fewest correct answers were recorded for a follow-up question regarding the year in which physicians will need to report measures included in PQRS to avoid a payment penalty. Only 28 (25.9%) correctly answered 2014, whereas 41 (38.0%) answered 2015 or 2016, five (4.6%) answered “there is no plan to implement any penalty for not reporting quality measures,” and 34 (31.5%) answered that they “did not know.” A summary of results can be found in Table 2.

For the model in which the dependent variable was support of the ACA, the statistically significant predictors were type of practice (p=0.02) and opinion on Medicaid expansion (p=0.0036). Post hoc analysis revealed that those who supported Medicaid expansion were 14% (p=0.003) more likely than those...

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**Table 1. Demographics of survey participants.**

<table>
<thead>
<tr>
<th>Demographics of survey participants</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>66 (61.1)</td>
</tr>
<tr>
<td>Female</td>
<td>40 (37.7)</td>
</tr>
<tr>
<td><strong>Years in practice</strong></td>
<td></td>
</tr>
<tr>
<td>&gt;30 years</td>
<td>25 (23.2)</td>
</tr>
<tr>
<td>10-30 years</td>
<td>57 (52.8)</td>
</tr>
<tr>
<td>5-10 years</td>
<td>14 (13.0)</td>
</tr>
<tr>
<td>&lt;5 years</td>
<td>12 (11.1)</td>
</tr>
<tr>
<td><strong>Practice venue and make-up</strong></td>
<td></td>
</tr>
<tr>
<td>Academic</td>
<td>103 (96.3)</td>
</tr>
<tr>
<td>Private Practice</td>
<td>4 (3.7)</td>
</tr>
<tr>
<td><strong>General dermatology</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>80 (74.8)</td>
</tr>
<tr>
<td><strong>Procedural dermatology</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16 (15.0)</td>
</tr>
<tr>
<td><strong>Pediatric dermatology</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 (4.7)</td>
</tr>
<tr>
<td><strong>Dermatopathology</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 (3.8)</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 (1.9)</td>
</tr>
<tr>
<td><strong>How would you rate your knowledge of the ACA?</strong></td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>11 (10.2)</td>
</tr>
<tr>
<td>Fair</td>
<td>61 (56.5)</td>
</tr>
<tr>
<td>Good</td>
<td>28 (25.9)</td>
</tr>
<tr>
<td>Great</td>
<td>8 (7.4)</td>
</tr>
<tr>
<td><strong>Will the ACA change your practice?</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>67 (62.0)</td>
</tr>
<tr>
<td>No</td>
<td>17 (15.7)</td>
</tr>
<tr>
<td>I do not know</td>
<td>24 (22.2)</td>
</tr>
<tr>
<td><strong>Do you support this legislation?</strong></td>
<td></td>
</tr>
<tr>
<td>Total number of dermatologist who support this legislation</td>
<td>61 (57.5)</td>
</tr>
<tr>
<td>Total number of dermatologists who are against this legislation</td>
<td>32 (30.2)</td>
</tr>
<tr>
<td>Total number of dermatologists who have no opinion</td>
<td>13 (12.3)</td>
</tr>
</tbody>
</table>
against Medicaid expansion and 15% (p=0.005) more likely than those with no opinion about Medicaid expansion to support the ACA.

For the second model, there were four independent variables that were significantly associated with support of Medicaid expansion. These included type of practice (p=0.0036), self-rating of knowledge (p=0.028), years of experience in dermatology (p=0.062), opinion regarding whether the ACA will change the way that participant practices medicine (p=0.04), and stance on the ACA (p=0.003). In post hoc analysis, those in general dermatology were 76% (p=0.033) more likely to support Medicaid expansion than those in procedural dermatology; those with good/great self-rating of ACA knowledge were 24% more likely (p=0.033); those with >30 years’ experience were 76% more likely than those in practice for 10-30 years; those who believe that the ACA will change the way dermatology is practiced were 83% more likely to support expansion than those who don’t (p=0.018); those who support the ACA were 81% (p=0.004) more likely than those against the ACA and 90% (p=0.01) more than those who have no opinion about the ACA to support Medicaid expansion.

For the model in which the number of questions correct was the dependent variable, self-rating of knowledge great/good was 58% more likely to get 1 more question correct (p=0.044) as was type of practice (p=0.004). In post-hoc analysis, those in procedural dermatology were 43% more likely to get one more correct question compared to those in general dermatology. When using tertiles, similar results were observed with self-rating and type of practice, but opinion on Medicaid expansion and stance on the ACA were also significant predictors. Those who opposed Medicaid expansion were more likely (78%) to score in a higher tertile (p=0.014). Those who were against the ACA were 86% more likely than those without an opinion to score in a higher tertile (p=0.037). In analyzing the tertiles, those in the top 25% answered 6-7 (out of 7) questions correctly, those in the middle 50th answered 4-5 questions correctly, and those in the lowest 25% answered 0-3 questions correctly.

Three questions in the survey assessed knowledge of accountable care organizations (ACO) and expansion of Medicaid. When asked if they knew what an ACO was and if they plan on joining one, 86 (80.4%) and 46 (43.0%) of responders answered yes, respectively. Thirty four (31.8%) and 13 (12.2%), respectively, will not join an ACO or have not thought about joining an ACO. There were 58 (54.2%) dermatologists who supported expanding Medicaid whereas 14 (13.1%) opposed expansion and 35 (32.7%) had no opinion. The final item of the survey assessed desire for more information on the ACA, for which 91 (85.1%) participants stated they would like to know more about the legislation.

Discussion

With passage of the ACA, sweeping changes have been implemented in the healthcare system including provider compensation, patient access to insurance coverage, and delivery of healthcare. Many articles focused on the content, implications, and viewpoints of this law. However, few studies assess understanding of it by providers. One study surveying ENT providers demonstrated that knowledge of the ACA was only fair. On average, only 74% of the questions were answered correctly.
and on three major topics physicians scored less than 60% [6]. Members of American lay public fared even worse. Another survey focused on primary care physicians in California. Ganjian et al. [7] showed that primary care physicians on average answered 72% of the knowledge questions correctly whereas other specialties answered 69% of the same questions correctly. In another study in 2011, as many as 40% of medical students admitted that they had no understanding of the ACA [8]. Some argue that this may be attributed to the lack of health policy education during training [9]. Although most studies focus on the opinions physicians have about the ACA, there have been limited data to assess knowledge and none focusing exclusively on dermatologists. Only one third of dermatologists surveyed rated their knowledge of the ACA as good or great. However, over 85% expressed an opinion about supporting the bill and 62% indicated that it will change the way they practice medicine. This reveals discordance between perceived importance of and ideological opinions about the bill, and self-reported knowledge of its contents.

The self-reported knowledge gap among responders corroborates the results of specific knowledge assessment items, on which only 64% were answered correctly. This lack of knowledge is likely multifactorial, explained by multiple changes to the legislation since it was passed, its length, and overall complexity. The item with the fewest correct responses involved payment penalties from lack of PQRS reporting. This knowledge gap is expected and reflects the subtle intricacies of the voluminous law. Although physicians first receive a payment penalty in 2015 and 2016 for insufficient PQRS reporting, this relates to reporting completed two years prior in 2013 and 2014, respectively. Indeed, 38% of the respondents thought that they needed to first participate in PQRS reporting in 2015 or 2016.

Interestingly, 25% of the responders were not aware that the SGR was not repealed by the ACA. Although the SGR has since been repealed, the questionnaire was completed prior to this recent change. It is concerning that a substantial proportion of academic dermatologists did not realize that the SGR was still viable at the time of the survey, with many of the medical societies, including the AAD and other dermatologic professional societies, lobbying against the SGR at the time.

General dermatologists were more likely to support the ACA and Medicaid expansion when compared to their procedural dermatologist colleagues. However, medical dermatologists also performed worse on the knowledge survey. Thus, those dermatologists most likely to support the legislation were less knowledgeable about its contents. There is no obvious explanation for this finding. The different patient populations (both age and socioeconomic) that the subspecialties interact with may influence their viewpoints of the ACA and Medicaid expansion. In addition, it is possible that the subspecialty societies may focus on educating their members in different ways. The political, social, and medical implications of this finding should promote future discussion.

There are important limitations to this study. Since it surveyed approximately 30% of APD members, there may be a response bias in that responders may not be representative of the entire organization. The distribution of the survey to members of the APD may represent selection bias, as the majority of responders practice in an academic setting and may not be representative of the specialty as a whole. That said, the members of the APD are generally committed educators and administrative leaders within their respective programs. Therefore, regardless of whether this group has any less or more expertise than other dermatologists, they represent the conduit through which essential aspects of healthcare training, including healthcare policy, are exposed to residents and other trainees. Since academic dermatologists remain the most influential teachers during residency training, their opinions and knowledge are important to assess.

Although reasonable attempts to establish face and content validity were made, the survey only covered seven topics of the ACA, omitting many others. The topics chosen were deemed broadly representative of the ACA by experts in healthcare policy, covering a combination of patient care, payment options, and penalties that affect every dermatologist. Lastly,
since the survey was anonymous, there is no way to determine if participants completed multiple surveys.

As 85% of the participants would like to know more about the ACA, there continues to be a profound need for education on this subject. This may be accomplished through professional organizations providing educational programs such as learning modules, webinars, and lectures.

**Conclusion**

As the healthcare landscape changes, patients and doctors in training need guidance when encountering the complicated topic of healthcare reform. We must educate our patients on appropriate choices they will encounter as a result of the ACA. Since some aspects of the ACA affect reimbursement, healthcare providers must also realize the implications of changes set forth in the ACA. Only through knowledge can we help patients, trainees, and ourselves understand our evolving health care environment.

**References**


**Supplemental Document**

**APD Questionnaire**

1.) How would you rate your knowledge of the Patient Protection and Affordable Care Act (ACA)?
   a. Poor
   b. Fair
   c. Good
   d. Great

2.) Do you think the ACA will change the way you practice medicine?
   a. Yes
   b. No
   c. I don’t know

3.) Does the passage of the ACA give all citizens in all states the opportunity to have health insurance?
   a. Yes
   b. No
   c. I don’t know
   If no, who will be excluded?

4.) Does the ACA prohibit insurance companies from excluding consumers with preexisting medical problems?
   a. Yes
   b. No
   c. I don’t know

5.) With the passing of the ACA, until what age are young adults allowed to remain as a dependent on their parent’s insurance?
   a. 18 years old
   b. 21 years old
   c. 24 years old
   d. 26 years old
   e. 28 years old
   f. I don’t know

6.) When will the insurance marketplace (exchanges) be available for patients to purchase insurance?
   a. 2014
   b. 2015
   c. 2016
   d. I do not know
7.) Does the ACA include a repeal of the Sustainable Growth Rate Formula (SGR)?

*SGR specifies the formula for establishing yearly targets for physicians’ services under Medicare.

a. Yes
b. No
c. I don’t know

8.) Which disease is included in the Physician Quality Reporting System (PQRS) for 2014?

a. Eczema
b. Melanoma
c. Psoriasis
d. Non melanoma skin cancer
e. I don’t know

9.) What year will doctors need to report the quality measures included in the PQRS in order to prevent facing a penalty?

a. 2014
b. 2015
c. 2016
d. There is no plan to implement any penalty for not reporting quality measures
e. I do not know

10.) Do you know what an accountable care organization is?

a. Yes
b. No

11.) Do you plan on joining an accountable care organization?

a. Yes
b. No
c. I have not thought about it yet
d. I do not know what an accountable care organization is

12.) I am a:

a. Male
b. Female

13.) What is your ethnicity?

a. Non Hispanic
b. Hispanic

14.) I finished my dermatology training:

a. >30 years ago
b. 10-30 years ago
c. 5-10 years ago
d. <5 years ago
e. Still in training

15.) The majority of my practice is:

a. Military
b. Academic
c. Private Practice

16.) The majority of my clinical practice is:

a. General or Medical Dermatology
b. Procedural Dermatology
c. Pediatric Dermatology
d. Dermatopathology
e. Cosmetic Dermatology
f. Other

17.) In what state do you practice dermatology:

a. Please specify:

18.) Is your state planning on expanding Medicaid?

a. Yes
b. No
c. I do not know

19.) What is your opinion on expanding Medicaid?

a. For expanding Medicaid
b. Against expanding Medicaid
c. No opinion at this time

20.) What is your opinion of the ACA?

a. I support this legislation
b. I am against this legislation
c. I have no opinion

21.) Would you like to know more about the ACA?

a. Yes
b. No