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# Looking to the Future: Medical Students' Views on Health Care Reform and Professional Responsibility 

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#### Abstract

Purpose-Although medical students will influence the future U.S. health care system, their opinions on the Patient Protection and Affordable Care Act (ACA) have not been assessed since the 2016 presidential election and elimination of key ACA provisions. Understanding medical students' views on health care policy and professional obligations can provide insight into issues that will be shaped by the next generation of physicians.

Method-From October 2017 to November 2017, the authors conducted an electronic survey of medical students from seven U.S. institutions to elicit opinions regarding the ACA and their professional responsibility to address health policy. Participant demographics and responses were tabulated, and multiple logistic regression models were used to assess the associations of demographic characteristics with student opinions.

Results-Completed surveys were returned by 1,660/4,503 (36.9\%) eligible medical students. Respondent demographics were similar to national estimates. In total, $89.1 \%(1,475 / 1,660)$ supported the ACA, and $82.0 \%(1,362 / 1,660)$ reported they understood the health care law. Knowledge of the law's provisions was positively associated with support for the ACA ( $P<.001$ ). Most students $(85.8 \% ; 1,423 / 1,660)$ reported addressing health policy to be a professional responsibility. Political affiliation was consistently associated with student opinions.

Conclusions-Most medical students support the ACA, with greater levels of support among medical students who demonstrated higher levels of objective knowledge about the law. Furthermore, students indicated a professional responsibility to engage in health policy, suggesting tomorrow's physicians are likely to participate in future health care reform efforts.


In 2010, the U.S. health care system was reshaped by passage of the Patient Protection and Affordable Care Act (ACA). ${ }^{1-3}$ Although the ACA has survived numerous legal challenges, 4,5 many of its key provisions have been altered or repealed. This will have important consequences for patients and physicians. ${ }^{6,7}$ Given the potential impact of such changes, it is imperative that policymakers understand the evolving opinions of the public and of practicing and future physicians. ${ }^{8-10}$ While public support for the ACA increased seven percentage points between 2010 and 2017, ${ }^{10}$ a paucity of opinion data exists for current and future physicians. Among 163 peer-reviewed articles we identified through a literature search, ten articles examined physician views and six examined student views of the ACA. 11-26

Physician opinions regarding the ACA have not been assessed nationally and across all specialties since 2012; ${ }^{11}$ similarly, medical students' opinions have not been assessed since $2014 .{ }^{21}$ The limited data that exist suggest evolving opinions regarding the ACA among medical students. In 2011, a survey of Minnesota medical students found that less than half
of respondents supported and/or understood the ACA. ${ }^{22}$ By 2014, a multi-institutional survey of medical students found that $69 \%$ supported and $75 \%$ understood the ACA. ${ }^{21}$

Since last assessed, medical students' opinions may have evolved for several reasons: control of the federal government shifted from one major political party to another, ${ }^{27}$ multiple attempts were made to "repeal and replace" the ACA, 6,28 and social media has increased public awareness of and engagement in the health care debate. ${ }^{29}$ Furthermore, medical students may hold distinct opinions compared to practicing physicians, and their views are likely more representative of the future physician workforce. ${ }^{30}$ For example, women are $34 \%$ of the physician workforce, but comprise more than half of medical school trainees. ${ }^{31,32}$

Given these recent events, we conducted a survey at seven academic medical institutions across the United States to characterize medical students' knowledge of and opinions about the ACA. Furthermore, we ascertained students’ views toward their professional responsibility to engage with public policy. We hypothesized that current medical students would be knowledgeable and enthusiastic about their role in the formation of public policy; in detailing their opinions, our study provides insight into the issues that will be shaped by tomorrow's physicians.

## Method

## Participants

Between October 12, 2017, and November 27, 2017, we emailed questionnaires to all medical students $(\mathrm{n}=4,503)$ enrolled at seven medical schools: Emory University School of Medicine, Icahn School of Medicine at Mount Sinai, Northwestern University Feinberg School of Medicine, University of California Davis School of Medicine, University of Colorado School of Medicine, the University of Minnesota School of Medicine (Twin Cities and Duluth campuses), and Yale School of Medicine. We selected these programs based on varying geographic locations, mix of public and private settings, and the presence of a local faculty member willing to distribute the survey instrument. We obtained complete medical student email lists after institutional review board (IRB) approval and authorization by the administration at each participating medical school. We used Qualtrics (Qualtrics, Inc., Provo, UT) for survey distribution at all but one school where, at the request of its office of medical education, we used SurveyMonkey (SurveyMonkey, Inc., San Mateo, CA) with comparable formatting, distribution, and collection settings. Responses were anonymous, but each survey was unique to that study participant and could not be shared or completed more than once. Participants were not given an incentive for completing the survey. Nonresponders received three standardized reminder emails after the initial survey invitation.

## Survey instrument

We adapted the survey tool from previously published surveys of practicing physicians and medical students. ${ }^{12,21,22}$ A panel of medical students and faculty at participating institutions reviewed potential questions from these surveys and excluded questions that were redundant or no longer relevant given policy changes since publication of the prior studies. We piloted
the survey using a group of three medical students from Northwestern University. The final survey is available in the Supplemental Digital Appendix 1.

Respondents used a five-point Likert scale (strongly disagree, disagree, no opinion, agree, or strongly agree) to indicate their level of agreement with statements regarding the ACA in general, specific provisions within the ACA, and professional obligations related to health policy. We assessed knowledge of the ACA provisions using eight previously published true or false questions. ${ }^{21}$ Study participants also provided demographic characteristics (i.e., age, sex, race/ethnicity, year in medical school), anticipated specialty type, and self-identified political affiliation (liberal, somewhat liberal, moderate, somewhat conservative, or conservative). For the purposes of this study, we did not disaggregate ethnic identifications by subgroups for analysis. Anticipated career specialties were aggregated into five groups: primary care (pediatrics, family practice, internal medicine, medicine/pediatrics, and emergency medicine), surgical specialties (general surgery, orthopedic surgery, neurological surgery, otolaryngology, plastic surgery, urology, and ophthalmology), non-surgical specialties (anesthesiology, dermatology, neurology, pathology, psychiatry, radiology, radiation oncology, and physical medicine and rehabilitation), obstetrics/gynecology, and unknown/not specified.

## Statistical analyses

We included a survey in the analysis sample if the respondent answered at least six of the first seven questions about health care policy issues. We first tabulated and summarized demographic characteristics for our study population. Next, we examined responses to each statement among our full sample and stratified by respondents' reported political ideology. Likert scale responses were collapsed into three categories: agree (strongly agree and agree), neutral, and disagree (strongly disagree and disagree). We compared agreement (agree vs. disagree/neutral) with statements by political affiliation using chi-squared tests.

We calculated a cumulative knowledge score for all participants who answered each of the eight true or false questions about knowledge of the ACA. We explored associations between knowledge of the ACA, demographic characteristics, support for the ACA, and support for individual components of the ACA using ANOVA models and two-sample ttests.

Finally, we used multiple logistic regression models to assess independent associations between hypothesized predictors (age, race, sex, specialty choice, political affiliation, year in medical school) and respondents' opinions regarding the ACA and professional responsibility to engage with health policy. SAS statistical software, version 9.4 (SAS Institute Inc., Cary, NC) was used for all statistical analyses with alpha significance level of . 05 indicating statistical significance.

## Results

## Demographic characteristics

Of the 4,503 medical students we asked to participate, 1,660 responded ( $36.9 \%$ ). Response rates varied by institution, ranging from $28.9 \%$ (191/660) to $45.5 \% ~(305 / 670)(\mathrm{SD}=6.6 \%)$.

Race and sex distributions of respondents were similar to nationally reported medical student demographics; however, private schools and schools located in the West or Midwest were overrepresented in our sample (Table 1). ${ }^{33,34}$ Three-fourths of respondents identified as liberal ( $77.7 \% ; 1,271 / 1,660$ ), with the remainder identifying as moderate $(12.2 \% ; 199 / 1,660)$ or conservative $(7.2 \% ; 118 / 1,660)$. Nearly half of respondents $(48.4 \% ; 803 / 1,660)$ anticipated a specialty in primary care.

## Views regarding the ACA and physician advocacy

A majority of respondents agreed with the statements "I understand the basic components of the Affordable Care Act" $(82.0 \% ; 1,362 / 1,660)$ and "I support the Affordable Care Act" ( $89.1 \% ; 1,475 / 1,660$ ) (Table 2). Most indicated agreement with key ACA provisions that require Americans to have health insurance $(82.3 \% ; 1,363 / 1,660)$ and require health insurance plans to cover contraception $(91.7 \% ; 1,519 / 1,660)$. Fewer than one in ten agreed that the ACA would negatively affect their careers $(8.0 \% ; 133 / 1,660)$. The majority $(85.8 \%$; $1,423 / 1,660$ ) also indicated that addressing health care policy issues was within the scope of a physician's responsibilities.

Levels of support for the ACA significantly differed between moderate or liberal students and conservative students $(P<.001)$. In total, $35.6 \%(42 / 118)$ of conservative students, $73.1 \%(144 / 197)$ of moderate students, and $97.3 \%(1,235 / 1,269)$ of liberal students indicated support for the ACA (Table 3). Moreover, relative to their conservative counterparts, a larger proportion of liberal medical students held favorable views of individual components of the ACA and indicated belief in a professional obligation to address health care policy issues. Moderate and liberal students were significantly less likely than conservative students to view the health care law as potentially harmful to their future careers $(P<.001)$ and were more likely to support requiring all Americans to have health insurance ( $P<.001$ ) or mandated contraceptive coverage ( $P<.001$ ). Finally, when compared to conservative and moderate students, liberal students were less likely to view addressing health policy as being outside the scope of the professional obligations of a physician $(P<.001)$.

## Knowledge of the ACA

Overall, students averaged 6.8 correct answers out of 8 questions regarding provisions of the ACA ( $\mathrm{SD}=1.22$ ). The majority of medical students answered each question correctly, with correct response rates for each question ranging from $64.9 \%(1,074 / 1,654)$ to $97.8 \%$ (1,614/1,650). Additional details are available in Supplemental Digital Appendix 2, available at [LWW INSERT LINK]. Knowledge scores were significantly associated with selfreported knowledge ("I understand the basic components of the ACA") ( $P<.001$ ). ACA mean knowledge scores were significantly higher for third- and fourth-year medical students (6.95 and 6.88, respectively) in comparison to their first- and second-year colleagues (6.61 and 6.79 , respectively) ( $P=.001$ ). Liberal students had significantly higher mean knowledge scores (6.85) than their moderate (6.59) and conservative classmates (6.64) ( $P<.001$ ). In unadjusted analyses, there was a significant positive association between knowledge scores and support for the ACA $(P<.001)$, support for requiring all Americans to have health insurance $(P=.01)$, and support for mandated coverage for contraception ( $P=.02$ ). Lower
knowledge scores were significantly associated with agreement that the health care law would have a negative influence on respondents' careers as physicians ( $P<.001$ ).

## Multiple regression models

In adjusted analyses, political affiliation was significantly associated with support for the ACA (Table 4). In comparison to liberal students, conservative ( $\mathrm{OR}=.01$; $95 \% \mathrm{CI} .01, .02$ ) and moderate students $(\mathrm{OR}=.07 ; 95 \% \mathrm{CI} .05, .12)$ were less likely to indicate support for the health care law. In addition, students were significantly more likely to view the ACA as having a negative influence on their career if they identified as moderate ( $\mathrm{OR}=5.00 ; 95 \%$ CI 2.96, 8.45) or conservative (OR 20.40; $95 \%$ CI $12.24,34.03$ ) when compared to liberal self-identification. Students who intended to pursue a surgical specialty ( $\mathrm{OR}=2.33 ; 95 \% \mathrm{CI}$ $1.37,3.98)$ were also significantly more likely to endorse this view than those intending to enter primary care. In contrast, female students ( $\mathrm{OR}=.43$; $95 \% \mathrm{CI} .27, .69$ ) were less likely to agree that the law would negatively influence their career in medicine when compared to male students.

Adjusted for other factors, moderate ( $\mathrm{OR}=.25$; $95 \% \mathrm{CI} .17, .36$ ) and conservative political ideology $(\mathrm{OR}=.09 ; 95 \% \mathrm{CI} .06, .14)$ were associated with a lower likelihood to support the individual mandate ("I support requiring all Americans to have health insurance") compared with liberal political ideology (Table 4). Similarly, moderate ( $\mathrm{OR}=.14$; $95 \%$ CI $.08, .23$ ) and conservative political ideology $(\mathrm{OR}=.04 ; 95 \% \mathrm{CI} .02, .07)$ compared to liberal political ideology were negatively associated with support for mandated contraceptive coverage. Female sex ( $\mathrm{OR}=3.20 ; 95 \%$ CI $1.95,5.25$ ) compared to male sex was positively associated with support for contraceptive coverage, while Non-Hispanic Asian race/ethnicity ( $\mathrm{OR}=$. $56 ; 95 \%$ CI $.32, .99$ ) compared with Non-Hispanic white race/ethnicity was negatively associated with support for contraceptive coverage. Students intending to pursue a nonsurgical specialty ( $\mathrm{OR}=2.02 ; 95 \%$ CI $1.13,3.59$ ) were more likely to agree that addressing health care policy falls outside the scope of the professional obligations of a physician when compared to students intending to enter a primary care specialty. Likewise, conservative (OR $=2.75 ; 95 \%$ CI $1.42,5.34)$ and moderate students $(\mathrm{OR}=4.02 ; 95 \%$ CI $2.43,6.63)$ were more likely to agree than their liberal counterparts that addressing health policy was not a professional responsibility of a physician.

## Discussion

In this survey of medical students at seven geographically diverse institutions, $89.1 \%$ of responding students reported support of the ACA. Although liberal political ideology was strongly associated with support for the ACA and its individual components, medical students across all political beliefs demonstrated increased levels of support when compared to the general public, with $97.3 \%$ of liberal students, $73.1 \%$ of moderate students, and $35.6 \%$ of conservative students in support. In contrast, recent studies of the general public report overall support to be $49 \%,{ }^{10}$ with a Kaiser Family Foundation poll also completed in 2017 reporting only $80 \%$ of liberals, $43 \%$ of independents, and $18 \%$ of conservatives as viewing the law as favorable. ${ }^{35}$ Likewise, the individual components of the ACA were popular across all student political ideologies relative to available public opinion data; overall, $91.7 \%$ of
students expressed support for mandated contraceptive coverage and $82.3 \%$ voiced support for the individual mandate- 20 and 40 percentage points higher than the general public, respectively. ${ }^{36,37}$ One primary purpose of the ACA was to expand coverage, especially for America's most vulnerable citizens; ${ }^{2}$ our findings highlight the modern medical student's commitment to this same goal.

Compared with prior cohorts of medical students, since 2012, overall support for the ACA has increased 35 percentage points and self-reported understanding of the ACA has increased 41 percentage points; ${ }^{22}$ since 2014, support and understanding have increased 16 percentage points and 7 percentage points, respectively. ${ }^{21}$ Objective student knowledge of the ACA has also improved compared to a 2014 student survey. ${ }^{21}$ Given the positive association between both subjective and objective knowledge and support for the ACA, we hypothesize that a more knowledgeable student population may explain the temporal rise in the ACA's popularity over time. ${ }^{21}$ We recognize that the inverse may be true-that medical students who support the ACA (and are more knowledgeable about the law) are increasingly entering medical school. However, we believe it is more likely that improving knowledge has led to increased support given the significant associations between knowledge and support across all political ideologies including among conservatives, a political leaning generally associated with disagreement with the ACA. ${ }^{35}$ Medical students, who learn and work with patients affected by the ACA, are likely to gain an in-depth understanding of how the health care law has affected accessibility, affordability, and quality of care. ${ }^{38}$

Furthermore, our study also suggests that students are motivated to take ownership of issues pertaining to health care policy. In total, $85.8 \%$ of responding students reported that health care policy issues fall within the scope of their professional obligations. This majority may help explain the present wave of medical student political activism: today's medical students may consider civic engagement to be within the scope of their professional responsibility. 8,39

Medical education in the United States stresses the importance of evidence to inform clinical practice. ${ }^{40}$ Our findings suggest that medical students would be receptive if academic institutions expanded evidence-based principles to include health care policy evaluation. ${ }^{41}$ Such an approach would enable students to identify policies to improve care and reduce costs for patients and populations. Given our finding that students believe health care policy is within the scope of their professional obligations, academic institutions could also provide formal advocacy training in their curricula to foster civic engagement among future physicians. ${ }^{42-44}$

Our study has several limitations. First, associations from cross-sectional studies cannot establish causal relationships. Second, although our sample represents geographically diverse public and private institutions, it was not a randomly selected group of institutions. Institutions were recruited for participation by the presence of a faculty member willing to distribute the survey. Consequently, this may have led to oversampling of particular groups and thus findings may not be generalizable to all medical schools. Notably, schools located in the South, a historically conservative region, were underrepresented.

Liberal students were a larger proportion of overall students responding to our survey compared with prior studies. ${ }^{21,45}$ While this could reflect sampling or response bias, we believe this reflects a trend toward more liberal political ideology among medical students. In $2003,40 \%$ of surveyed students identified as liberal, ${ }^{45}$ compared to $57.6 \%$ in $2014,{ }^{21}$ and $77.7 \%$ in this 2017 survey. Furthermore, we suspect that these students are more likely to remain liberal as they advance through their careers. Major determinants of conservative political ideology such as male sex and independent practice are declining among current medical practitioners. ${ }^{30}$ Women were less than one third of matriculants to medical school in the 1980s, ${ }^{46}$ but now comprise over one half of medical students. ${ }^{32}$ Additionally, from 1983 to 2013 , the number of physicians who owned their own practice declined from $76.1 \%$ to $47.1 \% .{ }^{47}$ These trends could result in a more liberal physician workforce, although further investigation of this hypothesis is needed. National medical organizations such as the American Medical Association and the Association of American Medical Colleges, or health policy organizations with polling experience, such as the Kaiser Family Foundation, could conduct periodic opinion surveys of physicians and medical students to capture the shifting policy priorities of health care providers.

This study captures the opinions of a sample of the next generation of physicians who will be responsible for patient care, during a time significantly affected by contemporary U.S. health care system changes. Medical student support for the ACA and its individual policies seems to be strong. From our findings, we suggest that it exceeds the support of both the general public and current practicing physicians, ${ }^{10,11}$ extending across demographic factors and political affiliations. By demonstrating participating students' strong sense of professional responsibility, this study provides evidence that many future physicians aspire to have a role in shaping health care reform. In characterizing their opinions, we hope to illustrate the health care system they desire and the policy issues toward which their efforts will be directed.

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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| Characteristic | Participating <br> schools, no. (\%) | Nationally, \% |
| :--- | ---: | ---: |
| Sex |  |  |
| Male | $772(47.3)$ | 47.2 |
| Female | $859(52.7)$ | 52.8 |
| Medical school class |  |  |
| First | $413(25.2)$ | -- |
| Second | $390(23.8)$ | -- |
| Third | $306(18.6)$ | -- |
| Fourth | $453(27.6)$ | -- |
| Other ${ }^{b}$ | $80(4.8)$ | -- |

> Table 1 Demographic Characteristics of 1,660 Participants at Seven Medical Schools Compared to National Medical Student Demographics, From a Study of Medical Students' Views on Health Care Reform and Professional Responsibility, $2017^{a}$


| Characteristic | Participating <br> schools, no. (\%) | Nationally, \% |
| :--- | :--- | :--- |


| Race/ethnicity ${ }^{c}$ |  |  |
| :--- | ---: | ---: |
| Non-Hispanic Asian | $302(18.2)$ | 24.7 |
| Non-Hispanic Black | $82(4.9)$ | 7.4 |
| Non-Hispanic White | $945(56.9)$ | 61.7 |
| Hispanic | $170(10.2)$ | 10.1 |
| Mixed race/AIAN/NHPI/other | $93(5.6)$ | 4.5 |
| Missing/not specified | $68(4.1)$ |  |
| Private or public school ${ }^{d}$ |  |  |
| Private | $923(55.6)$ | 46.7 |





| Characteristic | Participating <br> schools, no. (\%) | Nationally, \% |
| :--- | ---: | ---: |
| Unknown/not specified | $254(15.3)$ | -- |
| Political ideology ${ }^{f}$ |  |  |
| Conservative | $118(7.2)$ | -- |
| Moderate | $199(12.2)$ | -- |
| Liberal | $1271(77.7)$ | -- |
| Region |  |  |
| Midwest | $583(35.1)$ | 28.1 |
| West | $512(30.8)$ | 13.0 |
| Northeast | $307(18.5)$ | 27.8 |
| South |  | 31.2 |
| Age | $539(33.0)$ |  |
| $19-24$ | $706(43.2)$ | -- |
| $25-27$ | $388(23.8)$ | -- |
| 28 |  | -- |

Abbreviations: AIAN indicates American Indian or Alaskan Native; NHPI, Native Hawaiian or Pacific Islander.
${ }^{\text {a }}$ Data source: Association of American Medical Colleges. Matriculating Student Questionnaire. All Schools Summary Report, 2017 ${ }^{33}$; and Washko et al. ${ }^{34}$ Percentages may not add to 100 because of rounding. Not all 1,660 students answered all questions, so characteristic totals vary. Percentages are calculated from each characteristic total. Some national data unavailable.
${ }^{b}$ Association of American Medical Colleges. Matriculating Student Questionnaire. All Schools Summary Report, 2017 33 ; data reported for White, Asian, and Black matriculants includes both Hispanic and non-Hispanic students. Hispanic status reported in addition to race/ethnicity thus total is greater than $100 \%$.
${ }^{c}$ MD with PhD, MPH, MBA, MHS, MSCR, JD, MS5 or other
${ }^{d}$ Private schools are Emory School of Medicine, Icahn School of Medicine at Mt. Sinai, Northwestern University Feinberg School of Medicine, Yale School of Medicine. Public schools include University of California Davis School of Medicine, University of Colorado School of Medicine, University of Minnesota School of Medicine - Twin Cities, University of Minnesota School of Medicine - Duluth.
${ }^{e}$ Primary care includes family practice, pediatrics, internal medicine, emergency medicine, and medicine/pediatrics. Surgical specialties include all surgical specialties except obstetrics/gynecology. Nonsurgical specialties include anesthesiology, dermatology, radiology, pathology, physical medicine and rehabilitation, psychiatry, and radiation oncology.
${ }^{f}$ Conservative status includes students who identified as somewhat conservative and conservative. Liberal status includes students who identified as somewhat liberal and liberal.
Table 2
Self-Reported Opinions Regarding the ACA and Professional Responsibility Among 1,660 Participants at Seven Institutions, From a Study of Medical Students' Views on Health Care Reform and Professional Responsibility, 2017

| Statement | No. (\%) ${ }^{\text {a }}$ |  |  |
| :---: | :---: | :---: | :---: |
|  | Strongly disagree /disagree | Neutral | Strongly agree /agree |
| General ACA opinions |  |  |  |
| I understand the basic components of the Affordable Care Act. | 149 (9.0) | 149 (9.0) | 1,362 (82.0) |
| I support the Affordable Care Act. | 79 (4.8) | 102 (6.2) | 1,475 (89.1) |
| The Affordable Care Act will have a negative influence on my future career in medicine. | 1,181 (71.1) | 346 (20.8) | 133 (8.0) |
| ACA provision opinions |  |  |  |
| I support requiring all Americans to have health insurance. | 130 (7.9) | 164 (9.9) | 1,363 (82.3) |
| I support requiring health insurance plans to cover contraceptive methods and education. | 91 (5.5) | 47 (2.8) | 1,519 (91.7) |
| Professional responsibility opinion |  |  |  |
| Addressing health care policy issues, as important as that may be, falls outside the scope of the professional obligations of a physician. | 1,423 (85.8) | 136 (8.2) | 100 (6.0) |

[^1]Table 3
Self-Reported Opinions Regarding the ACA and Professional Responsibility by Political Identity Among 1,660 Participants at Seven Institutions, From a Study of Medical Students' Views on Health Care Reform and Professional Responsibility, 2017

| Statement | Agreement, no. (\%) |  |  |
| :---: | :---: | :---: | :---: |
|  | Conservative ${ }^{a}$ | Moderate | $\text { Liberal }^{b}$ |
| General ACA opinions |  |  |  |
| I understand the basic components of the Affordable Care Act. | 92/118 (78.0) | 139/199 (69.8) | 1,077/1,271 (84.7) |
| I support the Affordable Care Act. | 42/118 (35.6) | $144 / 197(73.1)^{\text {c }}$ | 1,235/1,269 (97.3) ${ }^{\text {c }}$ |
| The Affordable Care Act will have a negative influence on my future career in medicine. | 50/118 (42.4) | $32 / 199(16.1){ }^{\text {c }}$ | 40/1,271 (3.2) ${ }^{\text {c }}$ |
| ACA provision opinions |  |  |  |
| I support requiring all Americans to have health insurance. | 49/118 (41.5) | $132 / 198(66.7)^{\text {c }}$ | 1,137/1,270 (89.5) ${ }^{\text {c }}$ |
| I support requiring health insurance plans to cover contraceptive methods and education. | 66/118 (55.9) | $163 / 199(81.9){ }^{\text {c }}$ | 1,234/1,269 (97.2) ${ }^{\text {c }}$ |
| Professional responsibility opinion |  |  |  |
| Addressing health care policy issues, as important as that may be, falls outside the scope of the professional obligations of a physician. | 14/118 (11.9) | 29/199 (14.6) | 54/1,270 (4.3) ${ }^{\text {c }}$ |

[^2]
Table 4
Adjusted Odds of Agreement With Statements Regarding the ACA and Professional Responsibility Among 1,660 Participants at Seven Institutions, From a Study of Medical Students' Views on Health Care Reform and Professional Responsibility, 2017 ${ }^{\text {a }}$

| Characteristic | I understand the basic components of the ACA | I support the ACA | The ACA will have a negative influence on my career in medicine | I support requiring <br> all Americans to have health insurance | I support requiring health insurance plans to cover contraceptive methods and education | Addressing health care policy falls outside the scope of the professional obligations of a physician |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sex |  |  |  |  |  |  |
| Male (reference) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Female | . $69(.52, .92)^{\text {c }}$ | 1.24 (.80, 1.92) | . $43(.27, .69)^{d}$ | 1.30 (.96, 1.76) | $3.20(1.95,5.25){ }^{\text {d }}$ | . 85 (.54, 1.33) |
| Year in medical school |  |  |  |  |  |  |
| Fourth (reference) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Third | $1.84(1.20,2.80)^{\text {c }}$ | . 78 (.41, 1.49) | . 78 (.38, 1.61) | . 89 (.56, 1.40) | . $80(.39,1.61$ ) | 1.61 (.82, 3.16) |
| Second | $1.65(1.11,2.44)^{\text {c }}$ | 1.05 (.56, 1.96) | 1.23 (.65, 2.32) | . 83 (.54, 1.29) | . 75 (.39, 1.44) | 1.82 (.96, 3.47) |
| First | $1.72(1.15,2.59)^{\text {c }}$ | . 82 (.44, 1.52) | 1.52 (.82, 2.83) | . 79 (.51, 1.23) | . 75 (.38, 1.45) | 1.01 (.49, 2.07) |
| PhD/Masters/other | $2.40(1.13,5.07)^{c}$ | 1.29 (.45, 3.73) | . 92 (.32, 2.65) | 1.09 (.52, 2.29) | 1.56 (.48, 5.02) | 1.03 (.33, 3.20) |
| Anticipated specialty |  |  |  |  |  |  |
| Primary care (reference) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Surgical specialty | 1.43 (0.93, 2.20) | . $87(.50,1.53$ ) | $2.33(1.37,3.98)^{\text {c }}$ | . 74 (.49, 1.11) | 1.10 (.62, 1.94) | 1.26 (.66, 2.38) |
| Obstetrics/gynecology | $2.38(1.11,5.13)^{\text {c }}$ | . 86 (.30, 2.42) | 2.04 (.71, 5.87) | 1.42 (.64, 3.16) | . $62(.21,1.81$ ) | 1.47 (.54, 3.99) |
| Non-surgical specialty | . 90 (.62, 1.32) | 1.03 (.56, 1.90) | 1.08 (.56, 2.06) | . 68 (.46, 1.02) | 1.33 (.69, 2.54) | $2.02(1.13,3.59)^{\text {c }}$ |
| Unknown | . $66(.45, .97)^{\text {c }}$ | . 79 (.43, 1.47) | 1.23 (.64, 2.37) | 1.04 (.66, 1.63) | 1.64 (.82, 3.28) | 1.43 (.76, 2.70) |
| Race |  |  |  |  |  |  |
| Non-Hispanic White (reference) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hispanic | 1.14 (.70, 1.86) | 1.23 (.61, 2.48) | . $81(.38,1.69)$ | 1.29 (.77, 2.16) | . $70(.35,1.41$ ) | . $53(.22,1.27$ ) |
| Non-Hispanic Black | . 59 (.34, 1.04) | 1.58 (.58, 4.31) | . 55 (.18, 1.69) | . 89 (.47, 1.68) | . 67 (.26, 1.72) | . 66 (.23, 1.93) |
| Non-Hispanic Asian | . $65(.46, .92)^{\text {c }}$ | 1.42 (.77, 2.61) | 1.34 (.77, 2.33) | 1.09 (.73, 1.62) | . $56(.32, .99)^{\text {c }}$ | 1.05 (.60, 1.84) |
| Mixed race/AIAN/NHP//other | 1.13 (.60, 2.13) | . $68(.29,1.61)$ | . 79 (.28, 2.25) | 1.24 (.63, 2.46) | . 73 (.27, 1.95) | . $92(.35,2.42$ ) |
| Political affiliation |  |  |  |  |  |  |
| Liberal/somewhat liberal (reference) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

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| Characteristic | OR (95\% CI) ${ }^{\text {b }}$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | I understand the basic components of the ACA | I support the ACA | The ACA will have a negative influence on my career in medicine | I support requiring all Americans to have health insurance | I support requiring health insurance plans to cover contraceptive methods and education | Addressing health care policy falls outside the scope of the professional obligations of a physician |
| Moderate | . $36(.25, .52)^{d}$ | . $07(.05, .12)^{d}$ | $5.00(2.96,8.45){ }^{d}$ | $.25(.17, .36){ }^{d}$ | . 14 (.08, .23) ${ }^{\text {d }}$ | $4.02(2.43,6.63){ }^{d}$ |
| Conservative/somewhat conservative | . $51(.31, .82)^{c}$ | . $01(.01, .02)^{d}$ | 20.40 (12.24, 34.03) ${ }^{d}$ | . $09(.06, .14)^{d}$ | . $04(.02, .07)^{d}$ | $2.75(1.42,5.34)^{\text {c }}$ |
| Abbreviations: ACA indicates Patient Protection and Affordable Care Act; AIAN indicates American Indian or Alaskan Native; NHPI, Native Hawaiian or Pacific Islander. |  |  |  |  |  |  |
| ${ }^{\text {L }}$ Logistic regression models were run for agreement with each statement to estimate associations adjusted for the following factors: age (not reported), sex, medical school class, race/ethnicity, intended specialty, and political ideology. |  |  |  |  |  |  |
| $b_{\text {Odds ratio ( }}$ (95\% confidence interval) |  |  |  |  |  |  |
| ${ }^{c} P<.05$ ( $P$ values not shown). |  |  |  |  |  |  |
| ${ }^{d}{ }_{P<.001}(P$ values not shown). |  |  |  |  |  |  |


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[^1]:    Abbreviation: ACA indicates Patient Protection and Affordable Care Act.
    ${ }^{a}$ Percentages may not add to 100 because of rounding. Not all 1,660 students answered all questions, so totals vary.

[^2]:    Abbreviation: ACA indicates Patient Protection and Affordable Care Act.
    ${ }^{a}$ Conservative status includes students who identified as somewhat conservative and conservative.
    ${ }^{b}$ Liberal status includes students who identified as somewhat liberal and liberal.
    ${ }^{c} P<.001$ compared to "Conservative" $(P$ values not shown $)$.

