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Looking to the Future

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### Journal

Academic Medicine, Publish Ahead of Print(&NA;)

## ISSN

1040-2446

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## **Publication Date**

2019-09-01

## DOI

10.1097/acm.000000000002621

Peer reviewed



## **HHS Public Access**

Author manuscript *Acad Med.* Author manuscript; available in PMC 2020 July 29.

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

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Other disclosures: None reported.

Ethical approval: Institutional review board approval of study exemption was obtained at all seven participating institutions.

*Previous presentations:* Poster presentation on March 29, 2018, at the Society of General Internal Medicine's 2018 annual conference. Oral presentation on October 1, 2018, at the American College of Emergency Physicians Research Forum. Oral presentation on October 23, 2018, at the American College of Surgeons Clinical Congress.

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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).<sup>1–3</sup> Although the ACA has survived numerous legal challenges, <sup>4,5</sup> many of its key provisions have been altered or repealed. This will have important consequences for patients and physicians.<sup>6,7</sup> 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.<sup>8–10</sup> While public support for the ACA increased seven percentage points between 2010 and 2017,<sup>10</sup> 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. <sup>11–26</sup>

Physician opinions regarding the ACA have not been assessed nationally and across all specialties since 2012;<sup>11</sup> similarly, medical students' opinions have not been assessed since 2014.<sup>21</sup> 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.<sup>22</sup> By 2014, a multi-institutional survey of medical students found that 69% supported and 75% understood the ACA.<sup>21</sup>

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,<sup>27</sup> multiple attempts were made to "repeal and replace" the ACA,<sup>6,28</sup> and social media has increased public awareness of and engagement in the health care debate.<sup>29</sup> Furthermore, medical students may hold distinct opinions compared to practicing physicians, and their views are likely more representative of the future physician workforce.<sup>30</sup> For example, women are 34% of the physician workforce, but comprise more than half of medical school trainees.<sup>31,32</sup>

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 (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.<sup>12,21,22</sup> 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.<sup>21</sup> 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 t-tests.

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) (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).<sup>33,34</sup> 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 (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 self-reported 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 (OR = .01; 95% CI .01, .02) and moderate students (OR = .07; 95% 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 (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 (OR = 2.33; 95% 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 (OR = .43; 95% 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 (OR = .25; 95% CI .17, .36) and conservative political ideology (OR = .09; 95% 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 (OR = .14; 95% CI .08, .23) and conservative political ideology (OR = .04; 95% CI .02, .07) compared to liberal political ideology were negatively associated with support for mandated contraceptive coverage. Female sex (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 (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 (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 (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%,<sup>10</sup> 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.<sup>35</sup> 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.<sup>36,37</sup> One primary purpose of the ACA was to expand coverage, especially for America's most vulnerable citizens;<sup>2</sup> 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;<sup>22</sup> since 2014, support and understanding have increased 16 percentage points and 7 percentage points, respectively.<sup>21</sup> Objective student knowledge of the ACA has also improved compared to a 2014 student survey.<sup>21</sup> 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.<sup>21</sup> 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 and support across all political ideologies including among conservatives, a political leaning generally associated with disagreement with the ACA.<sup>35</sup> 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.<sup>38</sup>

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.<sup>40</sup> Our findings suggest that medical students would be receptive if academic institutions expanded evidence-based principles to include health care policy evaluation.<sup>41</sup> 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.<sup>42–44</sup>

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.<sup>21,45</sup> 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,<sup>45</sup> compared to 57.6% in 2014,<sup>21</sup> 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.<sup>30</sup> Women were less than one third of matriculants to medical school in the 1980s,<sup>46</sup> but now comprise over one half of medical students.<sup>32</sup> Additionally, from 1983 to 2013, the number of physicians who owned their own practice declined from 76.1% to 47.1%.<sup>47</sup> 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,<sup>10,11</sup> 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.

#### Acknowledgments:

The authors wish to thank the mentors at each participating school including Dr. John Hughes, Dr. Erik Wallace, Dr. Meredith Lora, Dr. Ann-Gel Palermo, and Dr. Tonya Fancher. Thanks are also extended to Dr. Priscilla Wang who helped develop this project.

*Funding/Support:* Research reported in this publication was supported by the National Center for Advancing Translational Sciences of the National Institutes of Health Award Number UL1-TR002494. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

#### References

- Blumenthal D, Abrams M, Nuzum R. The Affordable Care Act at 5 years. New England Journal of Medicine 2015;372:2451–2458. [PubMed: 25946142]
- Obama B United States health care reform: Progress to date and next steps. JAMA. 2016;316:525– 532. [PubMed: 27400401]
- 3. Patient Protection and Affordable Care Act. 42 U.S.C. § 18001 et seq. 2010.

- Steinbrook RU.S. Supreme Court's exoneration of the Affordable Care Act. BMJ. 2015;350:h3507. [PubMed: 26116566]
- Landers RM. The denouement of the Supreme Court's ACA drama. New England Journal of Medicine. 2012;367:198–199. [PubMed: 22747179]
- United States Congress Congressional Budget Office. Repealing the Individual Health Insurance Mandate: An Updated Estimate. https://www.cbo.gov/publication/53300. Revised 11 8, 2017 Accessed January 5, 2019.
- United States Congress Congressional Budget Office. The Effects of Terminating Payments for Cost-Sharing Reductions. https://www.cbo.gov/publication/53009. Revised 8 15, 2017 Accessed January 5, 2019.
- Levinsohn E, Weisenthal K, Wang P, et al. No time for silence: An urgent need for political activism among the medical community. Acad Med. 2017;92:1231–1233. [PubMed: 28422815]
- American Medical Association.Madara JL AMA urges senate to reject efforts to repeal or replace ACA. https://www.ama-assn.org/ama-urges-senate-reject-efforts-repeal-or-replace-aca. Published 7 21, 2017 Accessed January 5, 2019.
- Blendon RJ, Benson JM. Public opinion about the future of the Affordable Care Act. New England Journal of Medicine. 2017;377:e12. [PubMed: 28813210]
- Antiel RM, James KM, Egginton JS, et al. Specialty, political affiliation, and perceived social responsibility are associated with U.S. physician reactions to health care reform legislation. Journal of General Internal Medicine. 2014;29:399–403. [PubMed: 24307259]
- Pollack CE, Armstrong K, Grande D. A view from the front line: Physicians' perspectives on ACA repeal. New England Journal of Medicine. 2017;376:e8. [PubMed: 28122190]
- Swan GA, Foley KL. The percieved impact of the Patient Protection and Affordable Care Act on North Carolina's free clinics. North Carolina Medical Journal. 2016;77:23–29. [PubMed: 26763240]
- Rocke DJ, Thomas S, Puscas L, Lee WT. Physician knowledge and attitudes toward the Patient Protection and Affordable Care Act. Otalaryngology–Head and Neck Surgery. 2014; 150:229–234.
- Shubinets V, Gerety PA, Panucci CJ, et al. Attitude of hand surgeons toward the Affordable Care Act: A survey of American Society for Surgery of the Hand. Journal of Orthopaedics. 2016;14:38– 44. [PubMed: 27822000]
- Israel JS, Chen JT, Rao VK, Poore SO. Plastic surgeons' perceptions of the Affordable Care Act: Results of a national survey. Plastic and Reconstructive Surgery–Global Open. 2015;3:e293. [PubMed: 25674374]
- 17. Ganjian S, Dowling PT, Hove J, Moreno G. What physicians from diverse specialties know and support in health care reform. Family Medicine 2015;47:283–291. [PubMed: 25853599]
- Kannan S What the ACA Should Have Included–Physician perspectives at the University of Pennsylvania. AMA Journal of Ethics. 2015;17:680–688. [PubMed: 26158817]
- 19. Anderson BL, Urban RR, Pearlman M, Schulkin J. Obstetrician-gynecologists' knowledge and opinions about the United States Preventative Services Task Force (USPSTF) committee, the Women's Health Amendment, and the Affordable Care Act: National study after the release of the USPSTF Breast Cancer Screening Recommendation Statement. Preventative Medicine. 2014;59:79–82.
- 20. Frake PC, Cheng AY, Howell RJ, Patel NJ. Resident physicians' perspectives on health care reform. Otolaryngology–Head and Neck Surgery. 2011;145:30–34. [PubMed: 21521886]
- Winkelman TN, Lehmann LS, Vidwan NK, et al. Medical students' views and knowledge of the Affordable Care Act: A survey of eight U.S. medical schools. Journal of General Internal Medicine. 2015;30:1018–1024. [PubMed: 25753386]
- Winkelman TN, Antiel RM, Davey CS, Tilburt JC, Song JY. Medical students and the Affordable Care Act: Uninformed and undecided. Archives of Internal Medicine. 2012;172:1603–1605. [PubMed: 23007219]
- Meurer J, Ferda N, Chelius T, et al. Medical student views of the Affordable Care Act. Wisconsin Medical Journal. 2015;114:247–252. [PubMed: 26854312]

- Beverly EA, Skinner D, Bianco JA, Ice GH. Osteopathic medical students' understanding of the Patient Protection and Affordable Care Act: A first step toward a policy-informed curriculum. Journal of the American Osteopathic Association. 2015;115:156–165.
- 25. Dugger RA, El-Sayed AM, Messina C, Bronson R, Galea S. The health policy attitudes of American medical students: A pilot survey. PLoS One. 2015;10:e0140656. [PubMed: 26473599]
- Huntoon KM, McCluney CJ, Scannell CA, et al. Healthcare reform and the next generation: United States medical student attitudes toward the Patient Protection and Affordable Care Act. PLoS One. 2011;6:e23557. [PubMed: 21931604]
- 27. McKee M, Greer SL, Stuckler D. What will Donald Trump's presidency mean for health? A scorecard. Lancet 2017;389:748–754. [PubMed: 28109540]
- United States Congress Congressional Budget Office. Congressional Budget Office Cost Estimate: H.R. 1628. American Health Care Act of 2017. https://www.cbo.gov/publication/52752. Revised 5 24, 2017 Accessed January 5, 2019.
- American Press Institute. How Millennials Get News: Inside the Habits of America's First Digital Generation. http://www.mediainsight.org/PDFs/Millennials/AP\_NORC\_API %20Millennials\_Topline\_REVISED.pdf. Revised 2016 Accessed January 5, 2019.
- Bonica A, Rosenthal H, Rothman DJ. The political polarization of physicians in the United States: An analysis of campaign contributions to federal elections, 1992 through 2012. JAMA Intern Med 2014;174:1308–1317. [PubMed: 24887456]
- Henry J Kaiser Family Foundation. Profesionally Active Physicians by Gender. (https:// www.kff.org/other/state-indicator/physicians-by-gender/?currentTimeframe=0&sortModel=%7B %22colId%22:%22Location%22,%22sort%22:%22asc%22%7D). Revised 3 2018 Accessed January 5, 2019.
- 32. Association of American Medical Colleges. Heiser S More Women Than Men Enrolled in U.S. Medical Schools in 2017. https://news.aamc.org/press-releases/article/applicant-enrollment-2017/. Published 12 18, 2017 Accessed January 5, 2019.
- Association of American Medical Colleges. Matriculating Student Questionnaire. All Schools Summary Report, 2017. https://www.aamc.org/download/485324/data/msq2017report.pdf. Revised 12 2017 Accessed January 5, 2019.
- Washko MM, Snyder JE, Zangaro G. Where do physicians train? Investigating public and private institutional pipelines. Health Affairs 2015;34:852–856. [PubMed: 25941288]
- 35. Henry J Kaiser Family Foundation. Kaiser Health Tracking Poll: The Public's Views on the ACA. https://www.kff.org/interactive/kaiser-health-tracking-poll-the-publics-views-on-the-aca/#? response=Favorable--Unfavorable&aRange=twoYear. Published 5 10, 2018 Accessed January 5, 2019.
- 36. Henry J Kaiser Family Foundation. Kirzinger A, DiJulio B, Muñana C, Brodie M Kaiser Health Tracking Poll–November 2017: The Role of Health Care in the Republican Tax Plan. https:// www.kff.org/health-reform/poll-finding/kaiser-health-tracking-poll-november-2017-the-role-ofhealth-care-in-the-republican-tax-plan/. Revised 11 15, 2017 Accessed January 5, 2019.
- Henry J Kaiser Family Foundation. Sobel L, Salaganicoff A, Rosenzweig C The Future of Contraceptive Coverage. https://www.kff.org/womens-health-policy/issue-brief/the-future-ofcontraceptive-coverage/. Revised 1 9, 2017 Accessed January 5, 2019.
- Hall MA, Lord R. Obamacare: What the Affordable Care Act means for patients and physicians. BMJ. 2014;349:g5376. [PubMed: 25338761]
- Charlito B Medical students, faculty rally to save Obamacare. Reuters News. https:// www.reuters.com/article/us-usa-medical-protests/medical-students-faculty-rally-to-try-to-saveobamacare-idUSKBN15E2SJ. Revised 1 30, 2017 Accessed January 5, 2019.
- 40. Guyatt G, Cairns J, Churchill D, et al. Evidence-based medicine: A new approach to teaching the practice of medicine. JAMA. 1992;268:2420–2425. [PubMed: 1404801]
- Gordon PR, Gray L, Hollingsworth A, Shapiro EC, Dalen JE. Opposition to Obamacare: A closer look. Acad Med. 2017;92:1241–1247. [PubMed: 28445216]
- 42. Croft D, Jay SJ, Meslin EM, Gaffney MM, Odell JD. Perspective: Is it time for advocacy training in medical education? Acad Med. 2012;87:1165–1170. [PubMed: 22836845]

- 43. Gordon PR. How can physicians educate patients about health care policy issues? Acad Med. 2016;91:1333–1336. [PubMed: 27556673]
- American Medical Association. AMA Code of Medical Ethics. https://www.ama-assn.org/sites/ default/files/media-browser/principles-of-medical-ethics.pdf. Revised 6 2016 Accessed January 5, 2019.
- Frank E, Carrera J, Dharamsi S. Political self-characterization of U.S. medical students. Journal of General Internal Medicine 2007;22:514–517. [PubMed: 17372802]
- Association of American Medical Colleges. U.S. Medical School Applicants and Students 1982– 1983 to 2011–2012. https://www.aamc.org/download/153708/data/. Revised 2012 Accessed January 5, 2019.
- American Medical Association. Murphy B For first time, physician practice owners are not the majority. https://wire.ama-assn.org/practice-management/first-time-physician-practice-owners-arenot-majority. Published 5 31, 2017 Accessed January 5, 2019.

# 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,  $2017^a$ 

| Sex         Male       772 (47.3)       47.2         Male       772 (47.3)       52.8         Fenale       859 (52.7)       52.8         Fenale       859 (52.7)       52.8         Medical school class       813 (25.2)          First       413 (25.2)          First       390 (18.6)          Second       306 (18.6)          Second       306 (18.6)          Iritid       80 (4.8)          Other       80 (4.8)          Other b       80 (4.8)       7.4         Non-Hispanic Black       82 (4.9)       7.4         Mised race/AIAN/HPVother       93 (5.6)       4.5         Mised race/AIAN/HPVother       93 (5.6)       4.5         Mised race/AIAN/HPVother       93 (5.6)       7.4         Mised race/AIAN/HPVother       93 (5.6)       4.5         Mised race/AIAN/HPVother       92 (5.5  | Characteristic                        | Participating<br>schools, no. (%) | Nationally, % |
|--|---------------------------------------|-----------------------------------|---------------|
| 772 (47.3)<br>859 (52.7)<br>859 (52.7)<br>80 (23.8)<br>306 (18.6)<br>306 (18.6)<br>306 (18.6)<br>453 (27.6)<br>80 (4.8)<br>80 (4.8)<br>80 (4.8)<br>80 (4.8)<br>922 (18.2)<br>945 (56.9)<br>170 (10.2)<br>945 (56.9)<br>170 (10.2)<br>945 (56.9)<br>923 (55.6)<br>923 (55.6)<br>923 (55.6)<br>923 (55.6)<br>923 (55.6)<br>923 (55.6)<br>923 (58.4)<br>923 (58.8)<br>923 (10.0)  | Sex                                   |                                   |               |
| 859 (52.7)<br>(320)<br>(320)<br>(330 (18.6)<br>(330 (18.6)<br>(45.3)<br>(45.8)<br>(45.8)<br>(4.8)<br>(45.8)<br>(4.1)<br>(4.1)<br>(4.1)<br>(58.4)<br>(4.1)<br>(68.4,1)<br>(68.4,1)<br>(51.6)<br>(737 (44.4)<br>(737 (48.4)<br>(737 (58.6)<br>(738 (58.6)<br>(                            | Male                                  | 772 (47.3)                        | 47.2          |
| 413 (25.2)         390 (23.8)         306 (18.6)         306 (18.6)         453 (27.6)         80 (4.8)         80 (4.8)         80 (4.8)         92 (18.2)         945 (56.9)         170 (10.2)         945 (56.9)         923 (55.6)         <  | Female                                | 859 (52.7)                        | 52.8          |
| 413 (25.2)         390 (23.8)         390 (18.6)         453 (27.6)         80 (4.8)         80 (4.8)         80 (4.8)         92 (18.2)         945 (56.9)         170 (10.2)         945 (56.9)         170 (10.2)         923 (55.6)         737 (44.4)         803 (48.4)         924 (14.6)         925 (55.6)         926 (5.8)         96 (5.8)         95 (56.0)   | Medical school class                  |                                   |               |
| 390 (23.8)<br>306 (18.6)<br>453 (27.6)<br>80 (4.8)<br>80 (4.8)<br>302 (18.2)<br>82 (4.9)<br>945 (56.9)<br>170 (10.2)<br>170 (10.2)<br>945 (56.9)<br>170 (10.2)<br>923 (55.6)<br>737 (44.4)<br>737 (44.4)<br>803 (48.4)<br>242 (14.6)<br>96 (5.8)<br>96 (5.8)   | First                                 | 413 (25.2)                        | ;             |
| 306 (18.6)<br>453 (27.6)<br>80 (4.8)<br>80 (4.8)<br>302 (18.2)<br>82 (4.9)<br>945 (56.9)<br>170 (10.2)<br>945 (56.9)<br>170 (10.2)<br>945 (5.9)<br>923 (55.6)<br>737 (44.4)<br>737 (44.4)<br>737 (44.4)<br>923 (55.6)<br>923 (55.6)<br>923 (55.6)<br>923 (55.6)<br>923 (55.6)<br>737 (44.4)<br>737 (44.4)<br>735 (15.0)  | Second                                | 390 (23.8)                        | ;             |
| 453 (27.6)<br>80 (4.8)<br>80 (4.8)<br>302 (18.2)<br>32 (18.2)<br>82 (4.9)<br>945 (56.9)<br>170 (10.2)<br>170 (10.2)<br>170 (10.2)<br>945 (56.9)<br>93 (56.9)<br>923 (57.6)<br>737 (44.4)<br>737 (45.8)<br>737 (45.8)<br>736 (5.8)<br>736 (5.8)   | Third                                 | 306 (18.6)                        | ;             |
| 80 (4.8)<br>302 (18.2)<br>302 (18.2)<br>82 (4.9)<br>945 (56.9)<br>170 (10.2)<br>170 (10.2)<br>68 (4.1)<br>68 (4.1)<br>68 (4.1)<br>68 (4.1)<br>737 (44.4)<br>737 (44.6)<br>736 (5.8)<br>96 (5.8)  | Fourth                                | 453 (27.6)                        | :             |
| 302 (18.2)<br>82 (4.9)<br>945 (56.9)<br>170 (10.2)<br>170 (10.2)<br>68 (4.1)<br>68 (4.1)<br>68 (4.1)<br>737 (44.4)<br>737 (44.4)<br>732 (55.6)<br>732 (55. | $\operatorname{Other}^{b}$            | 80 (4.8)                          | -             |
| 302 (18.2)<br>82 (4.9)<br>945 (56.9)<br>170 (10.2)<br>170 (10.2)<br>68 (4.1)<br>68 (4.1)<br>68 (4.1)<br>737 (44.4)<br>737 (44.6)<br>736 (5.8)<br>746 (5.8)<br>746 (5.8)  | Race/ethnicity <sup>C</sup>           |                                   |               |
| 82 (4.9)<br>945 (56.9) 6<br>945 (56.9) 1<br>170 (10.2) 1<br>00ther 93 (5.6) 4<br>68 (4.1)<br>68 (4.1)<br>5<br>737 (44.4) 5<br>737 (44.4) 5<br>737 (44.4) 5<br>737 (44.4) 5<br>737 (44.4) 5<br>737 (44.4) 5<br>737 (44.6)<br>96 (5.8)<br>96 (5.8)   | Non-Hispanic Asian                    | 302 (18.2)                        | 24.7          |
| 945 (56.9)<br>170 (10.2)<br>73 (5.6)<br>68 (4.1)<br>68 (4.1)<br>923 (55.6)<br>737 (44.4)<br>737 (44.4)<br>737 (44.4)<br>737 (44.4)<br>737 (44.4)<br>737 (44.4)<br>737 (45.6)<br>96 (5.8)<br>96 (5.8)   | Non-Hispanic Black                    | 82 (4.9)                          | 7.4           |
| 170 (10.2)       /other     93 (5.6)       68 (4.1)       68 (4.1)       923 (55.6)       737 (44.4)       737 (44.4)       803 (48.4)       242 (14.6)       96 (5.8)       265 (16.0)  | Non-Hispanic White                    | 945 (56.9)                        | 61.7          |
| Vother 93 (5.6)<br>68 (4.1)<br>923 (55.6)<br>737 (44.4)<br>803 (48.4)<br>242 (14.6)<br>96 (5.8)<br>265 (16.0)  | Hispanic                              | 170 (10.2)                        | 10.1          |
| 68 (4.1)<br>923 (55.6)<br>737 (44.4)<br>803 (48.4)<br>242 (14.6)<br>96 (5.8)<br>265 (16.0)   | Mixed race/AIAN/NHPI/other            | 93 (5.6)                          | 4.5           |
| 923 (55.6)<br>737 (44.4)<br>803 (48.4)<br>242 (14.6)<br>96 (5.8)<br>265 (16.0)   | Missing/not specified                 | 68 (4.1)                          |               |
| 923 (55.6)<br>737 (44.4)<br>803 (48.4)<br>242 (14.6)<br>0gy 96 (5.8)<br>alty 265 (16.0)  | Private or public school <sup>d</sup> |                                   |               |
| 737 (44.4)<br>803 (48.4)<br>242 (14.6)<br>0gy 96 (5.8)<br>alty 265 (16.0)  | Private                               | 923 (55.6)                        | 46.7          |
| ogy<br>alty  | Public                                | 737 (44.4)                        | 53.3          |
|  | Intended specialty $^{e}$             |                                   |               |
|  | Primary care                          | 803 (48.4)                        | :             |
| 26   | Surgical specialty                    | 242 (14.6)                        | :             |
|  | Obstetrics/gynecology                 | 96 (5.8)                          | -             |
|  | Non-surgical specialty                | 265 (16.0)                        | -             |

| 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                   | 258 (15.5)                        | 31.2          |
| Age                     |                                   |               |
| 19–24                   | 539 (33.0)                        | :             |
| 25–27                   | 706 (43.2)                        | -             |
| 28                      | 388 (23.8)                        | 1             |

Abbreviations: AIAN indicates American Indian or Alaskan Native; NHPI, Native Hawaiian or Pacific Islander.

<sup>a</sup><sup>2</sup>Data source: Association of American Medical Colleges. Matriculating Student Questionnaire. All Schools Summary Report, 2017<sup>33</sup>, and Washko et al.<sup>34</sup> 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<sup>33</sup>; 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%

 $^{\mathcal{C}}$  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<sup>e</sup>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

Rook et al.

| Strongly disagree<br>/disagreeStrongly disagree<br>/disagreeNeutralStrongly disagree<br>/disagreeNeutralStrongly disagree<br>/disagreeNeutralStrongly disagreeGeneral ACA opinions<br>I understand the basic components of the Affordable Care Act.149 (9.0)149 (9.0)1,362 (82.0)1,362 (82.0)I understand the basic components of the Affordable Care Act.79 (4.8)10.2 (6.2)1,475 (89.1)1,365 (82.0)The Affordable Care Act will have a negative influence on my future career in medicine.71,113 (71.1)346 (20.8)133 (8.0)ACA provision opinions1,181 (71.1)346 (20.8)133 (8.0)133 (8.0)Support requiring all Americans to have health insurance.130 (7.9)164 (9.9)1,363 (8.2.3)I support requiring health insurance plans to cover contraceptive methods and education.91 (5.5)47 (2.8)1,519 (91.7)Professional requiring 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)100 (60)  |  |                                | No. (%) <sup>a</sup> |                          |
|--|--|--------------------------------|----------------------|--------------------------|
| components of the Affordable Care Act.       149 (9.0)       149 (9.0)       1,3         le Care Act.       79 (4.8)       102 (6.2)       1,4         Act will have a negative influence on my future career in medicine.       1,181 (71.1)       346 (20.8)         s       1,181 (71.1)       346 (20.8)       1,3         Americans to have health insurance.       1,30 (7.9)       164 (9.9)       1,3         Americans to have health insurance.       130 (7.9)       164 (9.9)       1,5         Americans to have health insurance.       91 (5.5)       47 (2.8)       1,5         ifty opinion       1,423 (85.8)       136 (8.2)       1,56       20.8)   | Statement  | Strongly disagree<br>/disagree | Neutral              | Strongly agree<br>/agree |
| omponents of the Affordable Care Act. $149 (9.0) 149 (9.0) 1, 3$ c Care Act. $79 (4.8) 102 (6.2) 1, 4$ c Care Act. $79 (4.8) 102 (6.2) 1, 4$ ct will have a negative influence on my future career in medicine. $1,181 (71.1) 346 (20.8)$ c mericans to have health insurance. $1,30 (7.9) 164 (9.9) 1, 3$ th insurance plans to cover contraceptive methods and education. $91 (5.5) 47 (2.8) 1, 5$ ty opinion $0$ opicy issues, as important as that may be, falls outside the scope of the professional obligations of a physician. $1,423 (85.8) 136 (8.2)$  | General ACA opinions   |                                |                      |                          |
| • Care Act.       79 (4.8)       102 (6.2)       1,4         • t will have a negative influence on my future career in medicine.       1,181 (71.1)       346 (20.8)         • mericans to have health insurance.       130 (7.9)       164 (9.9)       1,3         • th insurance plans to cover contraceptive methods and education.       91 (5.5)       47 (2.8)       1,5         • opinion       1,423 (85.8)       136 (8.2)       136 (8.2)  | I understand the basic components of the Affordable Care Act.  | 149 (9.0)                      | 149(9.0)             | 1,362 (82.0)             |
| <ul> <li>st will have a negative influence on my future career in medicine.</li> <li>1,181 (71.1) 346 (20.8)</li> <li>a.mericans to have health insurance.</li> <li>130 (7.9) 164 (9.9) 1,3</li> <li>a.mericans to cover contraceptive methods and education.</li> <li>b.mericans to cover contraceptive methods and education.</li> <li>b.mericans to cover contraceptive methods and education.</li> <li>c.mericans to cover contraceptive methods and education.</li> <li>c</li></ul> | I support the Affordable Care Act.   | 79 (4.8)                       | 102 (6.2)            | 1,475 (89.1)             |
| <ul> <li>mericans to have health insurance.</li> <li>130 (7.9) 164 (9.9) 1,3</li> <li>th insurance plans to cover contraceptive methods and education.</li> <li>91 (5.5) 47 (2.8) 1,5</li> <li>ty opinion</li> <li>policy issues, as important as that may be, falls outside the scope of the professional obligations of a physician.</li> <li>1,423 (85.8) 136 (8.2)</li> </ul>  | 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)                |
| o have health insurance. 130 (7.9) 164 (9.9) 1,3 e plans to cover contraceptive methods and education. 91 (5.5) 47 (2.8) 1,5 s, as important as that may be, falls outside the scope of the professional obligations of a physician. 1,423 (85.8) 136 (8.2)  | ACA provision opinions   |                                |                      |                          |
| e plans to cover contraceptive methods and education.<br>ss, as important as that may be, falls outside the scope of the professional obligations of a physician. 1,423 (85.8) 136 (8.2)   | I support requiring all Americans to have health insurance.  | 130 (7.9)                      | 164 (9.9)            | 1,363 (82.3              |
| es, as important as that may be, falls outside the scope of the professional obligations of a physician. 1,423 (85.8) 136 (8.2)  | I support requiring health insurance plans to cover contraceptive methods and education.   | 91 (5.5)                       |                      | 1,519 (91.7              |
| 1,423 (85.8) 136 (8.2)   | 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                 |
|  | $^{a}$ Percentages may not add to 100 because of rounding. Not all 1,660 students answered all questions, so totals vary.                  |                                |                      |                          |

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# 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

| Conservative <sup>a</sup> Moderate |  |
|------------------------------------|--|
|                                    | Liberal  |
|                                    |  |
| 8.0) 139/199 (69.8)                | 92/118 (78.0) 139/199 (69.8) 1,077/1,271 (84.7)  |
| 42/118 (35.6) 144/197 (73.1)       | 144/197 (73.1) <sup>C</sup> 1,235/1,269 (97.3) <sup>C</sup>  |
|                                    | ; 40/1,271 (3.2) <sup>C</sup>  |
|                                    |  |
|                                    | $132/198 (66.7)^{\mathcal{C}}  1,137/1,270 (89.5)^{\mathcal{C}}$   |
| (2.9) 163/199 (81.9)               | , 1,234/1,269 (97.2) <sup>C</sup>  |
|                                    |  |
|                                    | 54/1,270 (4.3) <sup>C</sup>  |
|                                    |  |
|                                    |  |
|                                    |  |
| $\omega$ 4 4 $\omega$ $-1$         | 42/118 (35.6) $144/197$ (73.1) <sup>c</sup> $1,235/1,269$ (97.3) <sup>c</sup> $50/118$ (42.4) $32/199$ (16.1) <sup>c</sup> $40/1,271$ (3.2) <sup>c</sup> $49/118$ (41.5) $132/198$ (66.7) <sup>c</sup> $1,137/1,270$ (89.5) <sup>c</sup> $66/118$ (55.9) $163/199$ (81.9) <sup>c</sup> $1,234/1,269$ (97.2) <sup>c</sup> $14/118$ (11.9) $29/199$ (14.6) $54/1,270$ (4.3) <sup>c</sup> |

 $^{\mathcal{C}}P<.001$  compared to "Conservative" (Pvalues not shown).

| Author     |
|------------|
| Manuscript |

## 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,  $2017^a$ 

|                                      |  |                      |   | $OR (95\% \text{ CI})^{b}$                                       | $q^{(I)}$   |  |
|--------------------------------------|--|----------------------|---|--|---|--|
| Characteristic                       | I understand the<br>basic components<br>of the ACA | I support<br>the ACA | The ACA will have a<br>negative influence on<br>my career in medicine | I support requiring<br>all Americans to<br>have health insurance | I support requiring health<br>insurance plans to cover<br>contraceptive methods and education | Addressing health care policy<br>falls outside the scope of the<br>professional obligations of a physician |
| Sex                                  |  |                      |   |  |   |  |
| Male (reference)                     | 1.00   | 1.00                 | 1.00  | 1.00   | 1.00  | 1.00   |
| Female                               | .69 (.52, .92) $^{\mathcal{C}}$                    | 1.24 (.80, 1.92)     | .43 (.27, .69) <sup>d</sup>   | 1.30 (.96, 1.76)   | $3.20(1.95,5.25)^d$   | .85 (.54, 1.33)  |
| Year in medical school               |  |                      |   |  |   |  |
| Fourth (reference)                   | 1.00   | 1.00                 | 1.00  | 1.00   | 1.00  | 1.00   |
| Third                                | $1.84\ {(1.20, 2.80)}^{\mathcal{C}}$               | .78 (.41, 1.49)      | .78 (.38, 1.61)   | .89 (.56, 1.40)  | .80 (.39, 1.61)   | 1.61 (.82, 3.16)   |
| Second                               | $1.65(1.11,2.44)^{\mathcal{C}}$                    | 1.05 (.56, 1.96)     | 1.23 (.65, 2.32)  | .83 (.54, 1.29)  | .75 (.39, 1.44)   | 1.82 (.96, 3.47)   |
| First                                | $1.72{(1.15, 2.59)}^{\mathcal{C}}$                 | .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                    | $2.40(1.13,5.07)^{\mathcal{C}}$                    | 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)      | $2.33(1.37,3.98)^{\mathcal{C}}$                                       | .74 (.49, 1.11)  | 1.10 (.62, 1.94)  | 1.26 (.66, 2.38)   |
| Obstetrics/gynecology                | $2.38(1.11, 5.13)^{\mathcal{C}}$                   | .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)  | $2.02(1.13, 3.59)^{\mathcal{C}}$   |
| Unknown                              | .66 (.45, .97) $^{\mathcal{C}}$                    | .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) $^{\mathcal{C}}$                    | 1.42 (.77, 2.61)     | 1.34 (.77, 2.33)  | 1.09 (.73, 1.62)   | .56 (.32, .99) $^{\mathcal{C}}$   | 1.05 (.60, 1.84)   |
| Mixed race/AIAN/NHPI/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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|                                    |  |                             |   | OR (95% CI)  | $q^{(1)}$   |  |
|------------------------------------|--|-----------------------------|---|--|---|--|
| Characteristic                     | I understand the<br>basic components<br>of the ACA | I support<br>the ACA        | The ACA will have a<br>negative influence on<br>my career in medicine | The ACA will have a I support requiring<br>negative influence on all Americans to<br>my career in medicine have health insurance | I support requiring health<br>insurance plans to cover<br>contraceptive methods and education | Addressing health care policy<br>falls outside the scope of the<br>professional obligations of a physician |
| Moderate                           | .36 (.25, .52) <sup>d</sup>                        | .07 (.05, .12) <sup>d</sup> | $5.00\left(2.96, 8.45 ight)^{d}$                                      | .25 (.17, .36) <sup>d</sup>  | .14 (.08, .23) <sup>d</sup>   | $4.02(2.43, 6.63)^d$   |
| Conservative/somewhat conservative | .51 (.31, .82) $^{\mathcal{C}}$                    | .01 (.01, .02) <sup>d</sup> | $20.40(12.24,34.03)^{d}$  | $.09(.06,.14)^d$   | .04 (.02, .07) <sup>d</sup>   | $2.75(1.42,5.34)^{\mathcal{C}}$  |

Abbreviations: ACA indicates Patient Protection and Affordable Care Act; AIAN indicates American Indian or Alaskan Native; NHPI, Native Hawaiian or Pacific Islander.

<sup>a</sup>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 specially, and political ideology.

bOdds ratio (95% confidence interval)

 $^{\mathcal{C}}P<.05$  (P values not shown).

 $d_{P<.001}$  (Pvalues not shown).