

Introduction

The American Medical Student Association Foundation is committed to preparing and encouraging medical students to serve the health care needs of all Americans, particularly underserved populations. AMSA has noted that medical students often demonstrate high levels of both interest and confusion about the health care system in which they will practice, while often being unaware of the advantages and disadvantages of potential policy reforms. Consequently, their ability to become broader advocates for their patients and the public might be compromised. In order to help direct medical education reforms that would enable medical schools to better address issues of health policy and disparities in health access, AMSA developed a nationwide study of medical students that was designed to: 1) measure students' attitudes and knowledge of issues about the American health care system, specifically regarding access to care, options for health care reform, and racial/ethnic disparities in health access; 2) make comparisons and contrasts between this cross-section sample of first and fourth year students; 3) examine the relationship of variables such as students' demographics, faculty, and curricula on students' knowledge and attitudes.

To our knowledge, this was the first nationwide, randomized study of medical students' knowledge and attitudes about health policy, health care delivery, options for health care reform, and racial/ethnic disparities in health care access. First and fourth year students were surveyed.

The survey was distributed in a written format to a random sample of first and fourth year medical students drawn from the AMA MasterFile. With follow-ups via both written and phone reminders, the overall response rate was 57%. The questionnaire included 49 questions, many with sub-parts. The survey contained both original and previously published questions. Surveys were distributed in early March 2002, and the closing date was mid-May 2002.

The respondents' demographic characteristics included the following: more often male than female for both first and fourth year students (55% v. 45%); approximately 2/3 students grew up in urban/suburban areas (v. small town/rural); approximately 3/4 students had undergraduate majors in sciences; approximately 6/10 first year students and 7/10 fourth year students planned to enter a specialty field (v. primary care); 3/4 students estimated their debt at the end of medical school would be greater than \$50,000, nearly 1/2 students believed it would be greater than \$100,000; approximately 4/10 students experienced a period of time in the past when they were uninsured, and a majority of students reported a period of time when a family member had been uninsured; students' racial backgrounds were roughly similar to the nationwide student population; respondents amongst first years were equally divided between public and private schools, while fourth year respondents more often came from public schools.

Preliminary Results Quantitative Analysis -

Results concerning the adequacy of curricula on health policy, health care delivery, and options for health care reform:

- 1) Both first and fourth year students overwhelmingly believed that an understanding of the topics of health policy, health care delivery, and options for health care reform was "very important" to their future practice of medicine.
- 2) Both first and fourth year students, with a higher percentage of fourth year students, were more often dissatisfied than satisfied with their exposure to these topics in both their pre-medical and medical school coursework.
- 3) First year students were more often satisfied than dissatisfied with their exposure to these topics through extracurricular activities and speakers, while fourth year students were approximately equally often satisfied, neutral, or dissatisfied.
- 4) Both first and fourth year students overwhelmingly agreed that more time in the medical school curriculum should be devoted to learning about these topics and that they would prefer increased exposure to these topics.
- 5) Medical students' knowledge of these topics was generally similar between the first and fourth year students surveyed. For example, similar percentages said they "don't know" in response to a question about which type of health care system would provide the best health care to the most people for the least amount of money, and nearly identical percentages in each class correctly answered the questions that tested objective knowledge (a series of 12 T/F questions and two multiple choice questions).

Results concerning knowledge/attitudes about health care access and options for health care reform:

- 1) Using a recent Harris poll question to judge the importance of political action on various health care issues, a large majority of medical students reported that it was "extremely" or "very" important to (in order of most importance): 1) expand health care coverage for the uninsured, 2) enact a patients' bill of rights, and 3) provide a Medicare prescription drug benefit. A plurality believed strengthening the public health system in preparation for a bioterrorism event was "somewhat" important.
- 2) An overwhelming majority of both first and fourth year students believed that health care is a right. 90.1% of first year students agreed (62.1% strongly agreed) that everyone is entitled to adequate medical care regardless of ability to pay, while 88.2% of fourth year students agreed (62.0% strongly agreed).
- 3) A majority of both first and fourth year students believed that on a theoretical basis, some form of a universal health care system, either "single-payer" or "multi-payer" would provide the best health care to the most people for the least amount of money, with a large majority of those responses falling into the "multi-payer" category. However, approximately 20% of respondents in each class answered that they "don't know."

a. Anticipation of entering primary care versus a specialized field did not affect whether students believed that universal health care of some form would be best, but those planning on entering primary care were slightly more likely to agree with the "single-payer" option.

4) When asked a slightly different version of the question, i.e., what their preference was for the type of system we should have, and what students thought the preferences of doctors and patients would be, the responses were quite varied. See Table X.

a. A majority of both first and fourth years favored some sort of universal health care system (more often they favored "multi-payer,") and fourth years favored universal health care less than first years, 61% v. 70.1% and more often favored "marketplace" fee-for-service than first years, 35% v. 25.1%.

b. A vast and nearly identical majority of both first (77.6%) and fourth (76.3%) students thought that doctors' preferred fee-for-service in a competitive marketplace, "the predominant mode of coverage in the 'old' American system."

c. Finally, a vast and nearly identical majority of both first (85.7%) and fourth (81.3%) students thought that patients preferred some sort of universal health care system, either "single-payer" or "multi-payer." Interestingly, "single-payer" received the most responses in the patient preference category, more even than "multi-payer" amongst first year students.

d. When demographic characteristics were taken into consideration, students' preferences for a universal health care system still tended to decline between the first year and fourth year respondents. Meanwhile, the overall percentages in favor of some form of universal health care often remained similar (gender was a notable exception, as higher percentages of women favored some form of universal health care), but the percentage of those favoring single-payer varied (e.g., the percentage was higher amongst those who majored in the social sciences/humanities and those planning to enter primary care).

5) When asked questions about the American health care system compared to those of other industrialized nations':

a. A majority of first and fourth year students believed that the U.S. did worse in regards to access to care, patients' out-of-pocket costs, intrusion on physician autonomy, the degree of administrative burden (paperwork) for physicians, and medical student debt.

b. A majority of first and fourth year students believed that the U.S. did better in regards to freedom of choice of physician, length of wait for treatments, provision of high quality of care, and development of innovative medical technologies. In general, fourth year students tended to rate U.S. performance higher than first year students.

c. A sizable percentage (> 10%) of respondents said they "don't know" for questions about freedom of choice of physician (first year students), length of wait for certain treatments (first year students), freedom from interference in physicians' treatment decisions (both classes), administrative burden on physicians (both classes), patients'

out-of-pocket costs (both classes), and magnitude of medical students' debt (both classes).

6) Students were asked four other questions regarding access to care that have data to support a "correct" answer, but they were phrased in Likert (strongly agree to strongly disagree format):

a. 84.0% of first year students and 71.5% of fourth year students disagreed with the premise that "people without health insurance still have access to all of the health care they really need."

b. 52.0% of first year students and 61.7% of fourth year students agreed that Medicare is "an effective program that guarantees access to health care for all elderly persons in the U.S."

c. 89.1% of first year students and 95.2% of fourth year students disagreed that "receiving routine care in the emergency department is an effective way for uninsured patients to receive care."

d. 74.2% of first year students and 57.5% of fourth year students disagreed that "the U.S. cannot afford a universal health care system."

Results concerning influences on attitudes about "universal health care:"

1) Various influences were inquired about in regards to whether they had caused the students to support or oppose "universal health care," defined as "guaranteed access to affordable and comprehensive health care for all Americans." In general, the influences were more often positive than negative.

2) Personal experiences, educational experiences, and the media all caused students to support universal health care. The three influences that were most likely to create support were 1) extracurricular learning, 2) elective coursework and 3) required coursework. The influences that were most likely to create opposition were 1) residents, 2) faculty/attending physicians, and 3) opinions of family who were health professionals.

Results concerning knowledge/attitudes about racial/ethnic disparities in health access:

1) Similar majority percentages of both first and fourth year students believed that, in relation to the average white person in terms of having health insurance, African-Americans were "worse off", Latinos were "worse off", and Asian-Americans were "just as well off."

2) A majority of both first and fourth year students believed that the health care system treats people unfairly based on the following, either "somewhat often" or "very often": health insurance (84.7% of first years and 76.9% of fourth years); the amount of money a person has (77.4% of first years and 60.5% of fourth years); how well a person speaks English (80.7% of first years and 72.2% of fourth years); and the race/ethnic background of a person (59.7% of first years and 50.5% of fourth years).

3) Slim majorities of first year students and minorities of fourth year students believed, either "somewhat often" or "very often," that in our health care system, race/ethnic background affects how often a person can get: routine medical care when they need it (50.3% of first years and 39.9% of fourth years); specialized treatments or surgery when needed (53.5% of first years and 42.4% of fourth years); health insurance to pay for medical care (50.5% of first years and 45.3% of fourth years).

4) White respondents were less likely than racial minority respondents to say that the health care system treated people unfairly based on traits named above, or that racial/ethnic background affected whether a person could obtain health care. However, regardless of race fourth year students were less likely than first year students to agree.

5) Nearly identical percentages of both first (70.2%) and fourth (70.3%) year students agreed that it is important for our medical workforce to "mirror" the diversity of society.

6) High percentages of both classes, and more fourth year students (42%) than first year students (36.6%) disagreed that their school has adequate curriculum in place to teach about diversity issues.

7) Large majorities of both first year (78.8%) and fourth year (65.1%) students would prefer increased exposure in the medical school curriculum to teaching about "racial/ethnic disparities in access, cultural competency issues, and communicating effectively with patients that speak a language other than English."

Results concerning the background traits of respondents in regards to future practice desires, etc.:

1) For fourth year students, the level of anticipated medical school debt was directly associated with the importance of income for their future practice, and inversely associated with the desire to take care of needy populations (the associations were not as clear for first year students).

2) Amongst both first and fourth year students planning to enter primary care fields, they were placed lower value than those planning to specialize on income and autonomy in practice and higher value on working with needy populations and spending adequate amounts of time with patients (all comparisons statistically significant except for autonomy by fourth years).

3) Amongst both first and fourth year students, statistically significant differences occurred between those who thought more time should be spent learning about health policy than those who did not. Students that thought more time should be spent learning about health policy were more likely to want to work with needy populations, desire spending adequate time with patients, developing a trusting relationship with patients. Amongst fourth year students only, income was more important to those that did not think more time should be spent learning about health policy.

4) Both first and fourth year students highly valued various practice attributes such as income, intellectual satisfaction, autonomy, and the ability to spend adequate time with patients. However, fourth year students placed a higher value on income, and lower values on the ability to work with needy populations, spend adequate time with patients, and develop a trusting relationship with patients.

Results concerning medical students' desire to actively participate in the political process:

1) An overwhelmingly vast majority of both first (97.3%, with 63.8% saying "very important" and fourth (98.3%, with 62.4% saying "very important") year respondents believed that it was important for medical students and physicians to participate in the political process.

2) Approximately 3 of 4 respondents in both the first year and fourth year classes voted in the 2000 presidential election.

3) Examples of these beliefs and awareness of the importance of the political process include comments for curriculum ideas that included meeting with politicians and other policy-makers and a frequently mentioned desire for opportunities to participate in internships in government and political offices.

Qualitative Analysis - Written Comments by Respondents

1) Many students responded with written comments (286 of 770 = 38% of respondents), reflecting the high level of interest in this survey, the topics, and their importance to students as they pursue their medical educations and preparations to become a physician in the American health care system.

2) Three themes emerged in response to a question about what types of curricular innovations students would like to see to address the issues of health policy and access to health care: Unbiased Formatting; Longitudinal Design; Experiential Learning.

3) Regarding Unbiased Formatting, comments frequently decried the biased nature and tone of teaching about these topics during medical school. The comments reflected an understanding that these topics are complex, therefore; students desired to learn the basics and about different policy options so that they could be informed and make decisions for themselves. Students frequently mentioned wanting to learn about both the "pros and cons," and desired "fair and balanced presentations."

4) Regarding Longitudinal Design, students had various thoughts about when learning about these topics should take place in the curriculum. Some said it would be good to learn about them from the beginning, while others said that having clinical experiences would make these concepts easier to learn about and ground them in "real-world" situations. Residency was mentioned as a good time to learn about these concepts too.

5) Regarding a desire for Experiential Learning, many students said they would like to learn more about these concepts via lunchtime presentations and other traditional academic formats, but many students expressed a desire to "actively" learn about them through internships and meetings with policy-makers.

6) Many comments were offered about the virtues and vices of compulsory versus optional/extracurricular learning experiences for these topics.

7) Amongst the comments about compulsory coursework, students frequently mentioned that there was not enough time in the current curriculum to allow these topics to be adequately explored, and that any compulsory experiences would be met with resistance and likely disregarded as not as important to their overall medical educations.

8) Amongst the comments about optional/extracurricular experiences, students frequently mentioned that time constraints in the curriculum would make these the most attractive and acceptable.

Conclusions:

1) In general, overwhelming majorities of both first and fourth year students believed that the topics of health policy, health care delivery, options for health care reform, and racial/ethnic disparities in health access were very important to their future practice of medicine, and they believed that more time in the curriculum should be devoted to these topics.

2) In general, first and fourth year students often demonstrated similar levels of knowledge regarding these topics. This knowledge reflected in general, a good awareness of concepts, but poor knowledge of "the details." Most students correctly answered true/false questions about the consequences of lacking health insurance, but many medical students (one in three) could not correctly answer questions about the health of our system based on various indicators, and the approximate number of uninsured people in this nation. In addition, large percentages of students answered "don't know" (lower percentages of fourth years than first years) in response to questions about what they believed would be the best solution for health care reform and how the American health care system compares to those abroad. This also was exemplified by one non-respondent, who took the time to send back the survey and include a letter outlining her disgust with her lack of ability to answer many of the questions in the survey.

3) In general, fourth year students were less idealistic than first year students, as has been noted in previous studies. This was evidenced by their higher rating of the importance of income, declining interest (though still substantial and a majority) in curricula that would address these topics, and a decreased preference compared to first

years for some sort of universal health care system. Also, fourth year "regression" noted in some areas such as

4) Even though it is difficult to quantify and describe how the U.S. system compares to those of other nations', students seem to understand that trade-offs would exist, manifested in their commonly held beliefs that the U.S. system provides better quality, choice of physician, and innovations in medical technology. Becoming a "player" in that system, and perhaps immersed more in the "culture" or subject to the "hidden curriculum (Ludmerer, 2001)," higher percentages of fourth years consistently believed that the U.S. system outperformed the systems of other nations' on these characteristics. In addition, perhaps because medical students often provide care at academic health centers with missions to take care of underserved populations, a lower percentage of fourth year versus first year students believed that the U.S. system was worse than other nations in providing access to care. This was also evident by the fact that a lower percentage of fourth year students believed that people without health insurance could not access the health care they need.

5) Perhaps the discrepancy itself was unsurprising, but the magnitude of discrepancy between students' preferences for some sort of universal health care system (majority preferred "multi-payer") and their perceptions of the preferences of physicians (in essence their mentors) and the public (their future patients) was quite marked. Medical students apparently believe that the system that would serve their patients best is not the same as the one that would serve them best as future physicians. The exact reasons for this should be explored in further studies, but likely are manifested in their beliefs about how the U.S. system works better than those of other industrialized nations and the declining idealism of medical students between first and fourth year that was apparent in this study.

6) As a result of a lack of support from their both their training curriculum and culture, medical students undergo medical training in an environment that is not conducive to empowering them to become "patient population" advocates and influential leaders as physicians in local and national debates about health policy. However, students demonstrated a large awareness of the importance of these issues and the importance of their political activity as physicians, demonstrating the need for greater attention to these issues in the curriculum. Students clearly desire objective teaching and innovative experiential learning in these subject areas that does not place undue burden on them in an increasingly crowded medical school curriculum. Idealism is what draws most medical students to the profession, and it commits students and physicians to advocating first and foremost for their patients' best interests. Evidenced by this research, students seem to understand that their awareness of health policy and ability to be politically active also will allow them to better shape the American health care system for their patients and the profession of medicine.

Anticipated PRODUCTS:

Papers #'s 1: Subject: Medical Students' Attitudes about the American Health Care System and Universal Health Care

#2: Medical Students' Knowledge about the American Health Care System and their Desire to Learn More about Health Policy

#3: Medical Student's Attitudes about Racial and Ethnic Disparities in Health Access and their Curriculum about Them

Dissemination: AMSA Meeting; AAMC Meeting next year?; STFM next year? Others? AMSA Website; AMSA Press Releases about various papers and findings.

Future Studies:

Longitudinal tracking of current survey participants to follow attitudes and careers

Further exploration of the type of curricula students desire for these topics

(perhaps best explored via qualitative methods)

Further exploration of students' fears about "radical" health care reforms or reforms that would create a universal health care system

Future AMSA Curriculum Project/Grant