Attitudes and Knowledge Regarding Health Care Policy and Systems: A Survey of Medical Students in Ontario and California

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ABSTRACT

BACKGROUND Future physicians should lead the healthcare transformation taking place in North America. We conducted a survey to describe American and Canadian medical students' knowledge and views regarding healthcare policy and systems, with emphasis on attitudes towards universal care.

METHODS A web-based survey was administered during the 2010-2011 academic year to students in 5 medical schools in Ontario and 4 in California. The survey collected demographic data, and evaluated attitudes and knowledge regarding broad healthcare policy issues and healthcare systems. An index of support for universal healthcare was created, and logistic regression models were used to examine potential determinants of such support.

RESULTS 2,239 students responded, 60.4% from Ontario and 39.6% from California, representing 43% of eligible subjects. Support for universal health care coverage was significantly higher in Ontario (87%) versus California (51%), $p<.001$. In California, female gender, politically non-conservative self-description, intent to be involved in healthcare policy as a physician, and primary care orientation were associated with increased support for universal coverage. In Ontario, politically liberal self-description and accurate knowledge of the Canadian system were associated with increased support. A single payer system was the preferred system of practice by 35.6% and 67.4% of California and Ontario students, respectively. The quantity of healthcare policy instruction in the curriculum was judged too little by 73.1% and 57.5% of California and Ontario students, respectively.

CONCLUSIONS Ontario medical students are significantly more supportive of universal access than their California counterparts. A majority of students in both regions identify significant curricular deficiencies in healthcare policy instruction.

INTRODUCTION

Despite strong economic, political, and cultural bonds, the United States and Canada have very different healthcare delivery systems. The United States has a multi-payer system consisting of a large number of private insurers and multiple public programs. In 2011, 48.6 million people in the United States were un-insured, representing 15.7 percent of the population.[1] Canada provides universal, publicly funded, single-payer health insurance to all citizens and legal residents. Waiting periods prior to receiving evaluation and treatment of many medical conditions are common. In 2011, 2.8% of all Canadians waited for an estimated 941,321 procedures.[2] Beyond insurance coverage and waiting times, the differences between the United States and Canada impact multiple aspects of healthcare, including physician and hospital reimbursement, administrative overhea, medical malpractice, and availability of medical resources. Patients, as well as physicians, are profoundly affected by all of these.

Both countries are undergoing significant transformations of their healthcare systems. In the United States, the Patient Protection and Affordable Care Act, passed in 2010 and upheld by the United States Supreme Court in 2012, seeks to expand healthcare coverage, constrain the growth in healthcare expenditures, and improve the quality of care. Many doubt whether it can achieve all its goals, leaving significant room for further reforms.[3] In Canada, a significant paradigm shift in healthcare has been advocated by the Canadian Medical Association, including establishment of a charter for patient-centered care, enhancing timely access to care, and replacing global budgeting with activity-based funding.[4] Progress has been quite slow.

It is not clear when and how physicians formulate their beliefs and attitudes on healthcare policies and delivery systems. Recent reports have questioned the adequacy of health policy education in U.S. medical schools.[5,6] If medical students receive little formal education on healthcare policy, how do they formulate their beliefs and attitudes on these issues? What global policies and over-riding philosophies in healthcare provision are they likely to support? As future physicians, are they equipped to help shape, let alone lead, the healthcare transformation? In this study, we investigated these questions in a broad-based manner through surveying medical students in the largest US state, California, and the largest Canadian province, Ontario. The primary aim of our study was to assess students' knowledge, beliefs, and attitudes towards broad healthcare provision principles and policies, constraint of healthcare costs, and healthcare systems. We also used the study to examine support for universal healthcare coverage in both countries, identify determinants of such support, and elucidate differences in attitudes between American and Canadian medical students.

METHODS

Survey Development

Since no standardized or validated questionnaire existed, a new instrument was developed, generating potential items based on a comprehensive literature review and discussions with individual experts in the field. The instrument consisted of several sections including: demographic characteristics of the students; self-perceived, as well as objectively assessed, student knowledge of their own or their neighbour country's healthcare systems; sources of such knowledge; the amount of medical school instruction received on this topic; students' current or future participation in medical organizations

that address health policy issues; student attitudes regarding universal access, governmentally sponsored healthcare delivery, and various strategies to constrain healthcare costs; student views on how various types of health delivery systems might affect issues such as access, quality, choice, innovation, and physician autonomy; and which type of delivery system the students would prefer to practice in and to be cared for by if they were a patient.

Questions addressing student beliefs and attitudes used five point Likert scales ranging from one (strongly agree) to five (strongly disagree). Questions assessing students' objective knowledge of the American and Canadian healthcare delivery systems used a multiple choice format.

A draft survey was then pilot-tested with a group of 20 medical students from the United States and Canada who attended institutions not included in the study. The pilot-testing was done to ensure that students responded to the intended referential and connotative meaning of each question, to assess reproducibility, and to assess survey timing. Based on the comments from the pilot study, two questions were refined for clarity and one question was dropped. The final design was reviewed by a statistician. The survey is attached in Appendix 1.

Participants

The authors selected the eight allopathic medical schools in California and five medical schools in Ontario as potential sites for survey administration. A sixth school in Ontario, the Northern Ontario School of Medicine, was not invited to participate because the authors believed that its community-based medical education and specific social

accountability mandate to the communities of Northern Ontario might result in an inherent bias in student responses.

An invitation to participate was sent to the assistant or associate dean for undergraduate education or student affairs in each medical school. The following institutions allowed their students to participate: McMaster University, University of Ottawa, University of Toronto, Queen's University, Western University, the University of California Irvine, Loma Linda University, the University of California Los Angeles, and the University of California Davis. The survey was administered electronically using Survey Monkey during the 2010-2011 academic year. Each school provided the authors with the number of students to allow assessment of response rates.

Data Analyses

Data are presented as proportions for categorical data and means $\pm$ SD for continuous data (e.g. Likert scale questions). Differences in level of support for each statement between California and Ontario students were analyzed using t tests. Logistic regression models were used to examine the association with several potential determinants of support for universal healthcare coverage. Students were considered supporters of universal healthcare if they agreed or strongly agreed with all of the following three statements:

1. Access to health care is a fundamental human right.
2. I plan to support universal health coverage as a physician.
3. The government should guarantee health care access to all citizens.

Paired t-tests were used to assess changes in the mean rating of students' self-reported understanding of their own, and others', health care systems before starting medical school and at the time of the survey.

All statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS), version 20.0.

Study Approvals

The study was approved by the institutional review boards of the McGill University Faculty of Medicine (A07-E48-10B) and the University of California Irvine School of Medicine (2010-7775). Four institutions accepted these approvals as sufficient, while four obtained internal approvals.

RESULTS

A total of 5221 students were eligible to participate, 2058 in California and 3163 in Ontario. The survey was completed by 2239 students, a response rate of 42.9%, nearly identical between California (43.1%) and Ontario (42.8%). The response rates for individual schools ranged from a low of 20.0% (University of California Davis) to a high of 53.4% (University of California Los Angeles). The distribution of responders by year in medical school was as follows: I-31%, II-28%, III-23%, IV-18%, and did not differ between California and Ontario. The demographics and characteristics of responders are shown in Table 1.

The answers to Likert scale questions are shown in Table 2. Canadian students were consistently stronger supporters of a right to healthcare access and universal healthcare principles than their American counterparts. Support for a governmental role in healthcare provision was also stronger in Ontario. However, it decreased in both groups as governmental involvement increased from guaranteeing universal access, to providing universal healthcare at the cost of increased taxation, to regulating the price of healthcare services. Students in both localities had equally little enthusiasm for decline in

physicians' incomes. Canadian students were less likely to support the concept of for-profit hospitals.

Students' choices of the best healthcare system to achieve intended outcomes are shown in Table 3. A majority of Canadian students (67.4%) preferred to practice in the single-payer system, and to be treated in the same (56.2%). The single-payer system was also the most favored for practice by California students (35.6%), closely followed by a multi-payer system (34.4%). American students were evenly split in their preference for treatment between the single-payer (33.0%) and the multi-payer system (33.5%).

Student responses were analyzed to assess the progression of their self-reported understanding of their own healthcare system, as well as other systems, since their enrollment into medical school. For California students, the mean $\pm$ SD score (1 = excellent, 4 = poor) of understanding their own, and other, healthcare systems improved from 3.16 $\pm$ .83 to 2.55 $\pm$ .79, and 3.46 $\pm$ .75 to 3.09 $\pm$ .81, respectively. For Ontario students, the mean score of understanding their own, and other, healthcare systems improved from 2.79 $\pm$ .79 to 2.17 $\pm$ .65, and 3.35 $\pm$ .76 to 2.98 $\pm$ .77, respectively. All these improvements were statistically significant, $p < .0001$. The quantity of instruction received on healthcare policy was rated as "too little" by 73.1% of California, and 57.5% of Ontario, students. The quality of instruction on healthcare policy was rated as excellent or good by 26.5% of California, and 39.3% of Ontario, students. In California, the news media was the most common primary source of information on the US (37.9%) and other countries' healthcare systems (44.0%), while the medical school curriculum was chosen as the source of information by 8.0% and 6.7% of students. In Ontario, the news media was also the most common primary source of information on the Canadian

(28.0%) and other (57.9%) healthcare systems, while the medical curriculum was chosen as the source of information by 26.7% and 12.8% of students. A100% score on the four multiple choice questions pertaining to the US healthcare system was achieved by 37.3% of California and 5.2% of Ontario students, while a 100% score on the four questions pertaining to the Canadian healthcare system was achieved by 37.3% of Ontario and 10.6% of California students.

The regression analysis showed support for universal healthcare to be significantly higher in Ontario vs. California, 86.8% vs. 51.1%, $p < .001$. Logistic regressions predicting support for universal healthcare coverage are shown in Table 4. Among American students, female gender, intent to be involved in healthcare policy as a physician, and politically non-conservative self-description were associated with increased support, whereas those with a non-primary care orientation were less likely to support universal healthcare. Among Canadian students, politically liberal self-description and accurate knowledge of the Canadian system were associated with increased support of universal healthcare.

DISCUSSION

The primary aim of our study was to assess medical students' knowledge, beliefs, and attitudes towards broad healthcare provision principles and policies. The study also provided a unique opportunity to compare student views in two countries with significantly different healthcare systems, and to gather data on student characteristics in each country. In this context, we believe that the study is the first of its kind.

The structure of medical education in Ontario and California is similar, consisting of 4 years of medical education following the completion of at least an undergraduate

degree. However, in contrast to California, the majority of Ontario students were female, and a larger proportion, almost 1 in 4, held graduate degrees. The debt burden was much lower for Ontario students. More than 1 in 3 Ontario medical students planned to pursue a primary care specialty, 30% higher than in California. Debt burden may potentially be implicated in these choices. In addition, the creation of patient-centered medical homes by the Ontario government has been shown to substantially increase the income of family physicians, as well as the percentage of medical students choosing primary care.[7] The majority of Ontario students characterized themselves as liberal or very liberal, coinciding with the general political character of Canada.

Our study measured support for universal healthcare through individual questions, as well as a composite index. At every level, support was substantially higher among Ontario students. The composite index represented a measure of solid support for universal access, since it included a fundamental value (access to healthcare is a fundamental human right), a personal commitment (I plan to support universal healthcare coverage as a physician), and a policy statement (the government should guarantee healthcare access to all citizens). The most prominent difference between California and Ontario students was the significantly higher proportion of Ontario students who agreed with all three statements, 87% vs. 51%. Among California students, female gender, anticipated primary care field of practice, and politically liberal self-characterization represented determinants of support for universal health care. These three factors were substantially more prevalent in the Ontario student cohort.

A few American studies over the past 20 years have shared our aim of elucidating medical students' attitudes regarding health care delivery, and specifically universal

access, as the healthcare reform debate has waxed and waned in the United States.[8-10] To our knowledge, no this is the first study conducted in Canada. These previous American studies have all shown support for universal access by a majority of US medical students, although the level of support differed. In 1994, a study of first year students in the University of California's five medical schools showed that two thirds favored a national health insurance plan.[8] In 2006, during a time of relative silence in the healthcare reform movement, Huebner et al found overwhelming support for the principal of universal access, with 90% of first year students and 88% of fourth year students agreeing with the statement that "everyone is entitled to adequate medical care regardless of ability to pay." [9] However, a disconnect was found between students' support for this principle and their support for reform that would achieve it. Support for such reform declined from 70% to 61%, when first and fourth year students were polled.[9] The influences that were most likely to create opposition to universal healthcare were residents, faculty and attending physicians, and opinions of family who were health professionals.[9] More recently, in a prospectively followed cohort of students, Frank et al. also found that support for universal healthcare decreased with progressive advancement in medical school.[10] As in our study, predictors of support included female gender, liberal political orientation, and plans to pursue a primary care residency.[10] Previous studies have shown that support for universal access, and social justice principles in general, declines progressively during medical education.[11,12] The decline was found to be most strongly influenced by inherent characteristics of the student, rather than the type of medical school or progression in the curriculum. This decline continues after graduation. With few exceptions, physician surveys have shown less support for universal access legislation, and specifically a

single-payer system, than student surveys.[13-15] If a goal of medical education is to create physicians who support a fundamental right to healthcare, recruitment strategies may be as important as, if not more important than, the curriculum's influence.

Whether the culture of many American medical schools promotes or discourages support for universal healthcare may be a matter of debate. However, there is general consensus that the state of health policy education in North American medical schools is poor. In our study, only one third of all students demonstrated accurate knowledge of the basics of their own healthcare system**,** and less than 1 in 10 students understood the basics of the neighboring country's healthcare system. For example, less than 60% of California students correctly answered the question regarding the Patient Protection and Affordable Care Act of 2010, despite a recent survey showing that 80% of students are supportive of the law.[16] The Canadian system was correctly characterized as a single-payer system by 62% of California students, and only 76% of Ontario students. A large majority of students in both localities rated the quantity of healthcare policy instruction as too little, and a minority rated the quality as good or excellent. The news media was the most common source of information on the healthcare system in both countries. The medical curriculum ranked quite low as a source of information. These deficits have been consistently reported in previous medical student surveys.[17,18] If students graduate without adequate knowledge of healthcare policy or alternative health care systems, they are highly unlikely to acquire that knowledge as physicians. For example, studies have shown that American physicians, both primary practitioners and specialists, have inaccurate impressions of the Canadian system.[13,19]

The need for integration of healthcare policy instruction in medical school curricula is urgent. [5,6] In our study, students did not report a strong commitment to become involved or take leadership in healthcare policy issues as physicians. There is also evidence that integration of healthcare policy instruction into the curriculum, both at the student and the resident levels, yields the intended results of increased knowledge, participation, and action. [17,18,20,21]

The single-payer system was chosen as the most favored system in which to practice by a majority of Canadian students, and the most favored system in which to be a patient by a smaller majority. Approximately one-third of American students also favored the single payer system for both. Canadian students also significantly preferred the single payer system for most patient-oriented outcomes. Interestingly, American students did not strongly prefer the multi-payer system, and in many cases rated the single-payer system higher. The exception in both groups was the intended outcome of fostering technological innovation, where an entirely private system received a plurality of votes. The knowledge deficit was again obvious in system choice for some physician-oriented outcomes, such as micromanagement of physician decisions or financial conflict of interests. The strengths of the single-payer system in these areas were not evident to California students.

Attitudes towards healthcare policy and preferences of healthcare systems by physicians are complex issues that may be impacted more by personal values, culture, and citizenship than by facts and figures. For example, in a study of American and Canadian pediatric surgeons who trained and/or practiced in both countries, American surgeons preferred the US system by a 2:1 margin while Canadian surgeons preferred

their system by a 5:1 margin, despite direct exposure of the entire group to both systems.[22] These differences persist from the individual physician level to the organizational level. While the Canadian Medical Association has supported the Canada Health Act since its enactment, the American Medical Association has been consistently opposed to a similar system.[4,23] The differences are deep-rooted and embedded in the history, politics, and cultural traditions of both countries. Despite these limitations, many would agree that medical schools and academic medicine in general have a responsibility to train socially responsible physicians who advocate for universal healthcare access of appropriate quality and cost. This can only be achieved if high quality and sufficient quantity instruction on healthcare policy and healthcare systems is integrated into medical school curricula in the United States and Canada, a challenge yet to be met.

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Table 1: Demographics and Characteristics of the Study Population

Characteristic	California	Ontario
Female gender (%)	46.8	60.5
Age 22-25 years (%)	57.2	62.6
Age 26-29 years (%)	28.8	25.3
Pre-medical degree (%)	100	96.1
Master degree (%)	8.6	19.3
Ph.D. degree (%)	2.0	3.8
Anticipated training in primary care (%)	28.3	37.2
Anticipated debt > $150,000 (%)	47.9	14.1
First or second degree family member physician (%)	42.9	36.5
Politically conservative or very conservative (%)	21.6	11.1
Politically moderate (%)	37.3	28.6
Politically liberal or very liberal (%)	41.0	60.3
Members of organizations that address health care policy (%)	48.2	62.5
Leaders in organizations that address health care policy (%)	8.1	2.8

Table 2: Student Responses to Likert Scale Questions

	California	Ontario	p
Future Plans			
I plan to become involved in health care policy as a physician.	2.49 ± .93	2.52 ± .92	.52
I plan to take leadership in health care policy as a physician.	2.88 ± .96	2.87 ± .92	.80
I plan to support universal health care coverage as a physician.	2.33 ± 1.12	1.52 ± .63	<.001
I do not expect to have time to be politically active as a physician	3.21 ± 1.02	3.27 ± .92	.15
Health Care Provision and Policy			
Access to health care is a fundamental human right.	2.04 ± 1.20	1.35 ± .64	<.001
The government should guarantee health care access for all citizens.	2.22 ± 1.21	1.49 ± .70	<.001
The government should provide health care access for all citizens, even if higher taxation is needed to generate sufficient revenue.	2.47 ± 1.24	1.70 + .76	<.001
The government should regulate the prices of health care services.	2.66 ± 1.19	1.97 ± .87	<.001
Health care services would improve if the government had no involvement in health care.	3.74 ± 1.09	4.19 ± .80	<.001
All citizens should have access to the same standard of medical care without regard to their financial means.	2.44 ± 1.23	1.71 ± .10	<.001
All children should have access to the same standard of medical care without regard to their parents' financial means.	1.80 ± .97	1.36 ± .63	<.001
Control of Medical Costs: To constrain health care costs…			
Physicians should accept a cut in pay.	3.56 ± 1.09	3.53 ± 1.03	.75
Insurance companies should lower their profit margin.	1.81 ± .94	2.02 ± .89	<.001
Drug companies should lower their prices.	2.01 ± .99	2.01 ± .89	.91
Hospitals should decrease their operating costs.	2.47 ± .96	2.78 ± 1.01	<.001
Hospitals should not be operated for profit.	2.74 ± 1.14	2.00 ± .98	<.001

Results are expressed as Likert scale means ± SD. 1 = Strongly Agree, 5= Strongly Disagree

Table 3: Choice of Health Care System to Achieve Intended Outcome

Intended Outcome	Location	Government Owned %	Single Payer %	Multi-payer %	Entirely Private %	No Preference %
Access to care for everyone	California	43.0%	33.0%	18.4%	1.9%	3.6%
	Ontario	43.4%	47.0%	7.2%	.2%	2.2%
Care of the highest quality	California	4.5%	26.7%	34.1%	26.3%	8.5%
	Ontario	8.6%	40.3%	28.9%	15.4%	6.8%
Appropriate delivery of health care Services (i.e. avoidance of over-treatment or undertreatment)	California	15.0%	39.5%	28.0%	10.2%	7.3%
	Ontario	20.9%	53.2%	18.9%	2.5%	4.5%
Prevention of illness/disease	California	20.1%	39.1%	23.0%	6.8%	11.0%
	Ontario	30.5%	46.5%	12.6%	2.1%	8.4%
Fostering technological innovation	California	5.0%	12.5%	31.2%	42.8%	8.5%
	Ontario	4.5%	13.4%	29.7%	41.5%	10.9%
Least waiting time for treatments	California	3.4%	13.4%	24.1%	50.6%	8.4%
	Ontario	5.4%	13.5%	35.7%	37.3%	8.2%
Freedom of choice of physician	California	5.6%	16.6%	24.4%	44.0%	9.5%
	Ontario	5.5%	26.3%	29.5%	27.6%	11.0%
Adequate physician income	California	3.9%	15.3%	27.6%	38.1%	15.2%
	Ontario	5.5%	32.1%	23.3%	21.1%	18.0%
Least paperwork / bureaucratic burden for physicians	California	20.3%	17.8%	11.9%	35.6%	14.4%
	Ontario	24.3%	22.3%	8.5%	22.2%	22.7%
Least interference with physicians' decisions about patient care	California	8.3%	18.2%	17.5%	40.7%	15.4%
	Ontario	10.8%	36.0%	11.2%	26.4%	15.7%
Fewest potential financial. conflicts of interest for physicians	California	38.3%	25.1%	14.4%	10.9%	11.2%
	Ontario	47.9%	34.1%	5.2%	3.8%	9.0%

Table 4: Logistic regressions predicting support for universal healthcare coverage

	California Adjusted OR (95%CI)	Ontario Adjusted OR (95%CI)
Age > 25 years	0.90 (0.60-1.34)	1.01 (0.63-1.63)
Female Gender	1.54 (1.09-2.19)*	1.31 (0.92-1.88)
Premedical Degree	0.96 (0.55-1.66)	0.99 (0.62-1.60)
3rd or 4th Year in Medical School	0.76 (0.51-1.12)	0.94 (0.63-1.40)
Anticipated Field		
Primary Care (reference)	1.00	1.00
Non-Primary Care	0.55 (0.36-0.83)**	0.71 (0.47-1.06)
Undecided	0.45 (0.28-0.72)**	0.84 (0.51-1.39)
Student Debt >$100,000	1.29 (0.89-1.87)	1.13 (0.78-1.62)
Physician Relative	0.78 (0.55-1.11)	0.78 (0.54-1.12)
Political Orientation		
Very Conservative/Conservative (reference)	1.00	1.00
Moderate	6.28 (3.65-10.81)***	1.44 (0.89-2.34)
Liberal/Very Liberal	31 (17.45-55.08)***	3.84 (2.36-6.24)***
Intent to be Active in Healthy Policy	1.81 (1.26-2.58)**	0.93 (0.65-1.33)
Membership in Organized Medicine	1.23 (0.85-1.77)	0.79 (0.54-1.15)
Accurate Knowledge of US System	0.95 (0.66-1.37)	0.64 (0.32-1.28)
Accurate Knowledge of Canadian System	0.84 (0.47-1.50)	1.73 (1.18-2.55)**

OR = odds ratio of support for universal healthcare coverage
CI = confidence interval
*P<0.05, **P<0.01, ***P<0.001

A Cross Border Survey of Medical Students' Knowledge and Attitudes on Health Care Delivery Systems in the United States and Canada

Section I: Introduction

Dear Medical Student,

We are a research team at the McGill University Faculty of Medicine, Montreal, Quebec, and the University of California, Irvine School of Medicine, Irvine, California, studying the knowledge and attitudes of medical students in the United States and Canada on health care policy issues and health care delivery systems. The study consists of a short survey of medical students in the province of Ontario and the state of California. As a future physician who could potentially shape the future of health care delivery, we value your opinion and hope that you will complete this survey. The questionnaire is 5 pages long and should take no more than 10 minutes to complete. Please note the following:

- You are being asked to participate in a research study about what medical students know and how they feel about the health care delivery systems in Canada and the United States.
- You are eligible to participate in this study if you are a medical student attending school in the Canadian province of Ontario or the state of California.
- The research procedures involve completing an anonymous on line survey.
- Possible discomfort(s) associated with the study are: None
- There are no direct benefits from participation in the study. However, this study may help medical educators develop more effective health policy related curricula, and may help health care policy-makers understand the views of future physicians.
- Participation in this study is voluntary. There is no cost to you for participating. You may refuse to participate or discontinue your involvement at any time without penalty. You may choose to skip a question or a study procedure.
- You will receive no compensation for participating in this research. However, **all survey participants will be entered into a raffle to win a free Apple Ipad.**
- All research data collected will be stored securely and confidentially as anonymous survey responses using Survey Monkey.
- Any information derived from this research project that personally identifies you will not be voluntarily released or disclosed without your separate consent, except as specifically required by law.

- If you have any comments, concerns, or questions regarding the conduct of this research please contact the researchers listed at the bottom of this form.

- If you are unable to reach the researchers listed at the bottom of the form and have general questions, or you have concerns or complaints about the research, or questions about your rights as a research subject, please contact UCI's Office of Research Administration by phone, (949) 824-6662, by e-mail at IRB@rgs.uci.edu or at University Tower - 4199 Campus Drive, Suite 300, Irvine, CA 92697-7600.

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Section II: Demographic information

1. **I attend medical school in:**
   a. California
   b. Ontario
2. **I attend medical school at:**
   a. Michael G. DeGroote School of Medicine, McMaster University
   b. University of Ottawa
   c. Queen's University
   d. University of Toronto
   e. Schulich School of Medicine, University of Western Ontario
   f. University of Californa, Irvine
   g. University of Californa, San Diego
   h. University of Californa, San Francisco
   i. UCLA David Geffen School of Medicine
   j. University of Californa, Davis
   k. Stanford University
   l. Keck School of Medicine of USC
   m. Loma Linda University
3. **Please enter your email address in the space below. (Students who complete the survey will be automatically entered into the Ipad raffle. Winners will be notified via email.)**
4. **Age**
   a. 18-21 b. 22-25 c. 26-29 d. 30-33 e. $\geq$ 34
5. **Gender**
   a. Male b. Female
6. **Ethnicity**

a. White (non-Hispanic)
b. Black or African-American (non-Hispanic)
c. Hispanic or Latino
d. Asian or Pacific Islander
e. American Indian, Alaska Native , First Nations, Métis, or Inuit
f. Other

7. **Highest level of education achieved prior to medical school**
   a. No degree b. Bachelor's degree c. Master's degree d. PhD e. Other (e.g. MPH, MBA)
8. **Current Year in Medical School**
   a. 1 b.2 c.3 d.4
9. **Anticipated field**
   a. Primary care (family medicine, general pediatrics, general internal medicine)
   b. Non-primary care
   c. Undecided
10. **What will be your anticipated debt at the end of medical school (undergraduate and medical school combined)?**
    a. Less than $50,000
    b. $50,000 - $99,999
    c. $100,000 - $150,000
    d. More than $150,000
11. **Are any of your first or second degree relatives (parents, siblings, uncles, aunts, cousins, grandparents) physicians?**
    a. Yes b. No
12. **How would you characterize yourself politically?**
    a. Very conservative b. Conservative c. Moderate d. Liberal e. Very liberal
13. **Please indicate your citizenship.**
    a. United States
    b. Canada
    c. Dual (U.S. and Canada)
    d. Other

Section III: Future plans

14. Please answer the following questions according to this scale:
1.Strongly disagree, 2.Disagree, 3. Neither agree nor disagree, 4.Agree, 5.Strongly agree

    a. I plan to become involved in health care policy issues as a physician.
    b. I plan to take leadership in health care policy issues as a physician.
    c. I plan to support universal health care coverage as a physician.
    d. Health policy will have no effect on how I care for my patients.
    e. I don't expect to have any time to be active politically as a physician.
15. Are you currently an active member of an organization that addresses health care policy issues (e.g. AMA, CMA, AMSA, CaHPSA)?
    a. Yes
    b. No

16. Do you currently hold a leadership role in an organization that addresses health care policy issues (e.g. AMA, CMA, AMSA, CaHPSA)?
    a. Yes
    b. No

Section IV: Attitudes on health care policy

17. Please indicate whether you strongly agree, agree, disagree, or strongly disagree with each of the following statements.

1.Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Strongly agree.

a. Access to health care is a fundamental human right.
b. The government should **guarantee** health care access for all citizens.
c. The government should **provide** health care access for all citizens, even if higher taxation is needed to generate sufficient revenue.
d. The government should **regulate** the prices of health care services.
e. Health care services would improve if the government had *no* involvement in health care.
f. All citizens should have access to the **same standard** of medical care without regard to their financial means.
g. All children should have access to the **same standard** of medical care without regard to their parents' financial means.

18. Please indicate whether you strongly agree, agree, disagree, or strongly disagree with each of the following statements.

1.Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Strongly agree.

a. To constrain medical costs, physicians should accept a cut in pay.
b. To constrain medical costs, insurance companies should lower their profit margin.
c. To constrain medical costs, drug companies should lower their prices.
d. To constrain medical costs, hospitals should decrease their operating costs.
e. To constrain medical costs, hospitals should *not* be operated for profit.

19. For each of the outcomes below, please choose which of the following systems you think will most likely achieve the intended outcome.

A. **Government-owned** public health care system, in which the government owns hospitals and other health care facilities and directly employs physicians
B. **Government-financed** public health care system, in which the government pays private entities to deliver health care
C. A **mixed private/public** system with a large role for the private sector, in which private insurance companies sell plans directly and the government provides insurance and a safety net for certain populations

D. **Entirely private** system, in which private insurance companies sell plans directly to individuals and businesses and private health care facilities and providers provide care to patients, with no government subsidies.
E. No opinion

1. Access to care for everyone
2. Providing care of the highest quality
3. Appropriate delivery of health care services (i.e. avoidance of over-treatment or under-treatment)
4. Preventing illness/disease
5. Fostering technological innovation
6. The least waiting time for treatments
7. Freedom of choice of physician
8. Adequate physician income
9. The least paperwork/bureaucratic burden for physicians
10. Least interference with physicians' decisions about patient care
11. Fewest potential financial conflicts of interest for physicians
12. In which system would you prefer to practice?
13. In which system would you prefer to be a patient?

Section V: Knowledge of health care policy

20. Please answer the following questions about your knowledge of health care policy. (*For the purposes of this questionnaire, "your" health care system refers to the health care system of the country in which you attend medical school, regardless of your nationality. "Other" health care systems refer to systems in any other country.)

1. How would you rate your understanding of your* health care system **before** starting medical school?
   a. Excellent b. Good c. Fair d. Poor
2. How would you rate your understanding of your health care system **now**?
   a. Excellent b. Good c. Fair d. Poor
3. How would you rate your understanding of health care systems in other countries **before** starting medical school?
   a. Excellent b. Good c. Fair d. Poor
4. How would you rate your understanding of health care systems in other countries **now**?
   a. Excellent b. Good c. Fair d. Poor

21. How would you rate the **quantity** of instruction on health care policy received in your medical school education?
   a. Too much b. Adequate. c. Too little d. N/A

22. How would you rate the **quality** of instruction on health care policy received in your medical school education?
   a. Excellent b. Good c. Fair d. Poor e. N/A

23. How would you characterize the instruction on health care policy received in medical school?
    a. Biased towards conservative policies
    b. Fair
    c. Biased towards liberal policies
    d. Don't know
24. What is your **primary** source of information about *your* health care system? (Please choose one.)
    a. Newsmedia
    b. Health care policy / medical journals
    c. Medical school curriculum
    d. Other formal studies (e.g. MPH, PhD)
    e. Medical school faculty
    f. Medical Organizations (e.g. AMA, CMA, AMSA, etc.)
    g. Friends / family
    h. Other ----------
    i. None
25. What is your **primary** source of information about *other* health care systems? (Please choose one.)
    a. Newsmedia
    b. Health care policy / medical journals.
    c. Medical school curriculum.
    d. Other formal studies (e.g. MPH, PhD)
    e. Medical school faculty
    f. Medical Organizations (e.g. AMA, CMA, AMSA, etc .)
    g. Friends/family
    h. Other ----------
    i. None

For the following questions, please choose the single best answer.

26. The **United States Medicare** Program
    a. Is available to all citizens without private insurance.
    b. Covers most health care services of all citizens 65 and older through government funds obtained from tax revenues.
    c. Forces physicians to accept Medicare patients if they want to maintain their licenses.
    d. Was initiated by the Clinton administration in the early 1990's
    e. Don't know
27. The **United States Medicaid** Program
    a. Is completely operated by the federal government.
    b. Allows states to set different criteria for enrollment beyond a federally mandated floor.
    c. Is available to all citizens who do not wish to buy private insurance.
    d. Allows non US citizens and non-permanent residents to buy into the program by paying a premium.
    e. Don't know

28. A health maintenance organization **[HMO]** (please choose one)
    a. Insures a patient for all covered health services for a fixed monthly premium.
    b. Does not require cash co-pays from enrolled patients.
    c. Is always owned by physicians
    d. Reimburses physicians separately for patients who are not HMO members.
    e. Don't know
29. The **Patient Protection and Affordable Care Act** of 2010 [the new U.S. health reform law]
    a. Requires Americans to pay a penalty if they do not obtain public or private health insurance.
    b. Regulates the price of commercial health insurance premiums
    c. Limits the fees payable to physicians
    d. Expands Medicare to cover the entire population
    e. Don't know
30. The current **Canadian** health care system.
    a. Provides a government-financed health insurance plan to all citizens.
    b. Reimburses all physicians a pre-determined salary for their work.
    c. Dictates to the patient which physician can be seen for a particular condition.
    d. Dictates to the physician the amount of health care services that must be provided in order to earn their salary.
    e. Don't know
31. The **Canadian** health care system can be best characterized as:
    a. A single payer health care system.
    b. A national health service where physicians receive salaries from the government.
    c. Under the exclusive control of the federal government.
    d. A system that prohibits any private insurance or privately administered health care services.
    e. Don't know
32. Which of the following is NOT a feature of the **Canada Health Act**:
    a. Public administration
    b. Universality
    c. Portability
    d. Coverage of health care services provided outside Canada
    e. Don't know
33. Which of the following proposals was NOT included in the Canadian Medical Association's (CMA) 2010 recommendations for health care reform?
    a. Pay-for-performance funding incentives
    b. The creation of a charter for patient-centered care
    c. Increased privatization of health care
    d. Efficient utilization of electronic health records
    e. Don't know