The High Price of a Dream Job

A Four Year Look at the Rising Costs of Medical Education, Funding, and the Role of the Medical Student

AAMC-OSR Student Affairs Committee and OSR Administrative Board

Richie Edeen, MSIV, University of Texas Health Science Center San Antonio; Ryan Alanzalon, MSIV, New York University School of Medicine; Samuel Carmichael, MSIII, University of Kentucky College of Medicine; Meredith McKean, MSIII, University of Iowa-Carver College of Medicine; John Mahajan, MSIII, Keck School of Medicine of the University of Southern California; Katie Spina, Boston University School of Medicine; Marie Caulfield, AAMC; Colleen Kays, MSIII, Columbia University College of Physicians and Surgeons; Javad Azadi, MSIII, Johns Hopkins University School of Medicine; Jenny Olges, M.D.

Abstract

The cost of medical education has rapidly increased over the past 20 years as tuition rates have risen out of proportion to inflation. In 2010, the OSR Administrative Board developed a survey for OSR representatives in an attempt to get an updated picture of medical student debt, as well as to discern how students are currently involved in the process of setting tuition, the origin of medical school funding sources, and what is being done at the university level to help alleviate and educate students about their escalating debt. Results of the survey included the following: over the four years examined, tuition has risen out of proportion to the national inflation rate at most schools, nearly doubling for in-state resident tuition at public universities. Also, only a small component of overall medical school funding was found to come from tuition and fees, and sources are widely varied. Thirdly, a wide array of programs have been implemented, or planned, at the university level to help alleviate and educate students about debt. Also, while a number of universities have student involvement in the tuition-setting process, this involvement has not been shown to impact the rate of tuition and fee inflation. Lastly, for the most part, students found their respective university administrations open to discussion with a willingness to answer questions regarding the current state of student tuition and fee structure. The results of this survey show that both students and university administrators thought that the level of increasing debt among medical students is a continuing problem and requires action to be taken from all parties involved to help control this growing dilemma in order to ensure reasonable costs for future classes of medical students and emerging physicians.

Introduction

Medical school costs have rapidly increased over the past 20 years as tuition rates have been rising out of proportion to inflation.[1] In 2004 and again in 2007, the AAMC examined this issue and charted some dangerous trends. According to the 2007 Medical School Tuition and Young Physician Indebtedness update, projections showed that graduates in 2033 would be graduating with a debt of nearly three-quarter of a million dollars, putting many physicians in the position of paying off loans throughout their careers. To continue to explore the rising cost of medical school attendance and the current state of medical education debt, the AAMC-Organization of Student Representatives (OSR) Administrative Board and the OSR Student Affairs Committee initiated a project to encourage OSR representatives to learn more about how decisions regarding tuition and fees are determined. The goal of the study was not only to provide an update on rising debt, but also to assess how rising debt is being addressed at the institutional level at all schools as well as how students are involved in the tuition setting process. The OSR wanted to not only highlight the gravity of the financial problems facing medical students, but to also give them some insight on what they can do at their own institutions to have a positive impact in attempting to help control the cost of attending medical school as both students and future physicians.

A survey was sent to OSR representatives at AAMC member institutions. Questions for the survey were developed by the OSR Student Affairs Committee, AAMC-OSR Administrative Board, and AAMC staff. In addition to addressing the questions listed above, the exercise also requested information on what schools are doing to help alleviate debt and educate their students on their increasing debt burdens. Students were encouraged to meet with administration in an effort to create transparency and begin to get students' "feet in the door" to discuss student involvement in the process. Institution reported data on tuition and fees, scholarships, student debt, and school initiatives to reduce debt, were provided to OSR representatives before completing the survey with their administrators.

The OSR Tuition and Student Debt Survey was sent to OSR representatives at 119 medical schools. Survey responses were submitted by 47.9% (N=57) of schools. The present report summarizes the inflation data and school initiatives related to decreasing medical school indebtedness, using institutionally reported data from all 119 schools. The report also presents information on student representation and the tuition-setting process as well as the sources schools draw funding from, but only for those schools that returned a survey.

Tuition Inflation

To examine how the rate of tuition inflation compares to the U.S. economy as a whole, U.S. inflation rates were calculated for different regions based on the Consumer Price Index. When compared to inflation in the general economy, overall medical student tuition has outpaced U.S. inflation. In some instances, depending on the class of institution, tuition inflation was over twice that of the U.S. economy for the years examined. Table 1 lists inflation rates for regions corresponding to the AAMC's regional breakdown. The final column lists the total combined inflation rate for the four-year period that was examined in the survey for each respective region.

Table 1: U.S. inflation by AAMC region from 2006 – 2009*

	2006	2007	2008	2009	Total
Northeast	3.60%	2.60%	4.00%	0.00%	10.20%
Central	2.40%	2.70%	4.00%	-0.60%	8.20%
Southern	3.40%	2.90%	4.20%	-0.40%	10.10%
Western	3.40%	3.20%	3.50%	-0.40%	9.7%

*Inflation rate is calculated based on the CPI for the given years, according to region. CPI information is provided by the United States Bureau of Labor Statistics. All values are given for the calendar year listed. Data broken down by Academic year yield similar results.

In examining medical schools, four-year tuition inflation rates plus fees were calculated for each school using institution reported data from the AAMC Tuition and Debt Survey for the school years 2006-2007 through 2009-2010. Inflation was calculated separately for the tuition and fees of residents and nonresidents.

Table 2: Three-year Inflation Rate of Tuition + Fees for All Schools

	Resident		Nonresident	
	Public (N=71)	Private (N=46)	Public (n=68*)	Private (n=46)
Northeast	18.0%	15.8%	17.4%	15.6%
Central	16.0%	12.7%	12.5%	12.5%
Southern	25.0%	14.2%	11.0%	12.5%
Western	23.2%	13.8%	19.3%	13.8%
Total	21.1%††	14.5%††	13.85	14.0%

*This number differs from the resident data because three schools do not admit nonresident students.
††p<.005

According to the results, inflation of resident tuition and fees was significantly higher for public than private schools (F=8.517, P<.005). There was not a significant difference between public and private schools for nonresident tuition and fees inflation, nor were there significant effects by region of the country on inflation for either residents or nonresidents.

Table 3 presents the inflation rates for only those schools that participated in the survey. The pattern of inflation of tuition and fees for those schools whose representative submitted a survey was similar to that of the overall sample of schools. Inflation of resident tuition and fees was higher at public institutions (F=5.39, p<.05), and there was no significant effect for region of the country.

Table 3: Three-year Inflation Rate for Schools with Completed Surveys – Private/Public Status and Region

	Resident		Nonresident	
	Public (N=36)	Private (N=21)	Public (n=35*)	Private (n=21)
Northeast	21.4%	15.5%	21.4%	15.5%
Central	16.9%	12.7 %	12.2%	12.3%
Southern	28.7%	16.0%	11.2%	11.4%
Western	21.3%	9.9%	17.5%	9.9%
Total	22.6%†	14.4%†	13.6%	13.0%

*This number differs from the resident data because one school does not admit nonresident students.
†p<.05

The relatively large increases in resident tuition at public institutions suggest that these public institutions are being confronted with decreased state funding and support, given the state of the current economy. Notably, at public schools, resident tuition is still only approximately 55% of non-resident tuition (2009-2010 data), up from about 52% (2006-2007 data). With multiple states looking to close relatively sizable budget deficits, it is a common belief that public institutions will continue to feel the need to raise tuition and fees as a reactionary measure.

Private institutions have also not been immune to sizable tuition increases over the past few years. While the rates of tuition growth have been lower compared to public institutions, for the 2008-2009 academic year, average costs for resident tuition, fees and insurance of AAMC member private institutions was $41,200, which is over $17,000 more than the average resident costs at public institutions for this time. Private institutions typically rely more upon endowments, investments, and research funding. All of these sources have been greatly affected by either past or current economic conditions.

Medical School Funding Sources

Another aspect of the Tuition and Student Debt Survey was an evaluation of the major funding sources for medical education across the United States. The majority of medical schools reported that both endowment and tuition comprise less than 5% of their operating budget. In contrast, 39% of institutions indicate "other" as the largest contributing funding source. Most commonly, the category of "other" was specified as funding related to practice plans or other faculty clinical services. Intermediate levels of support (10-20% of budget) were supplied by hospital and state sources in 44% and 36% of schools, respectively. Lastly, research comprised 20-30% of funding in 35% of institutions. Taken together, primary funding sources for medical education include: research, hospital support, practice plans and state support, in the case of public schools. Tuition and endowments represent limited funding sources in the majority of institutions. (Figures 1-3)

Figure 1: How much do Tuition (N=36) and Endowment (N=32) contribute to funding your medical school?

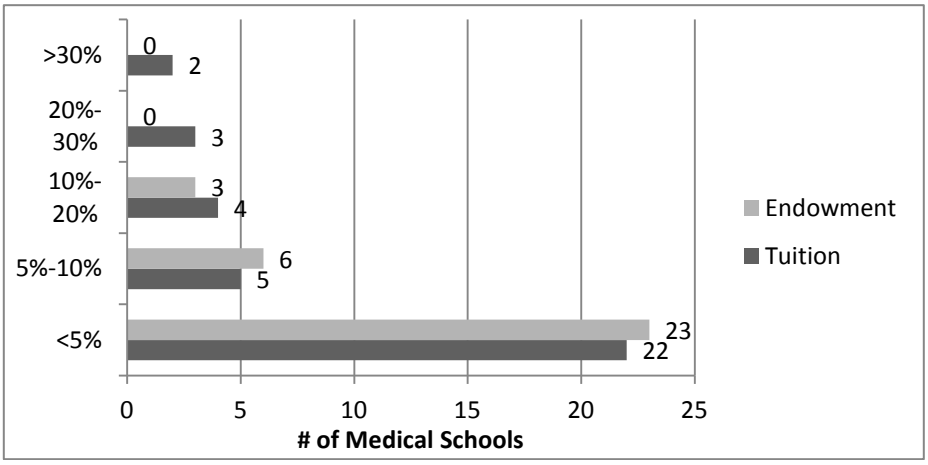


Figure 2: How much do Hospital Support (N=34) and the State (N=36) contribute to funding your medical school?

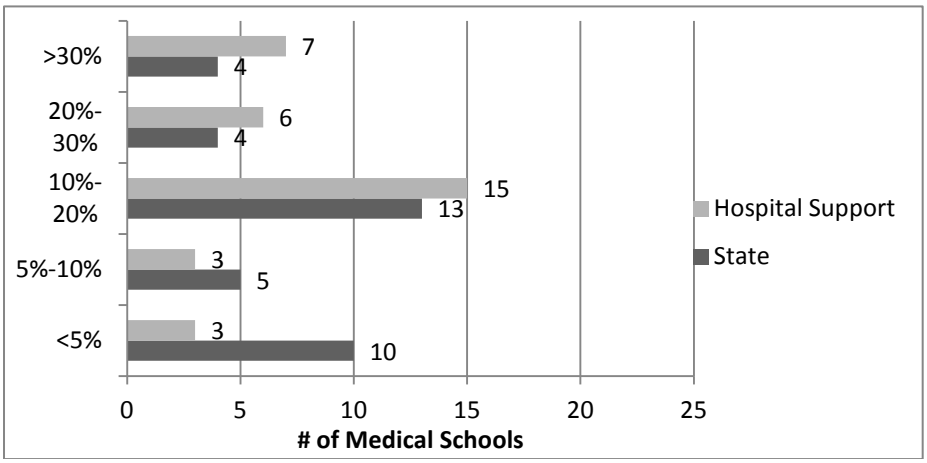
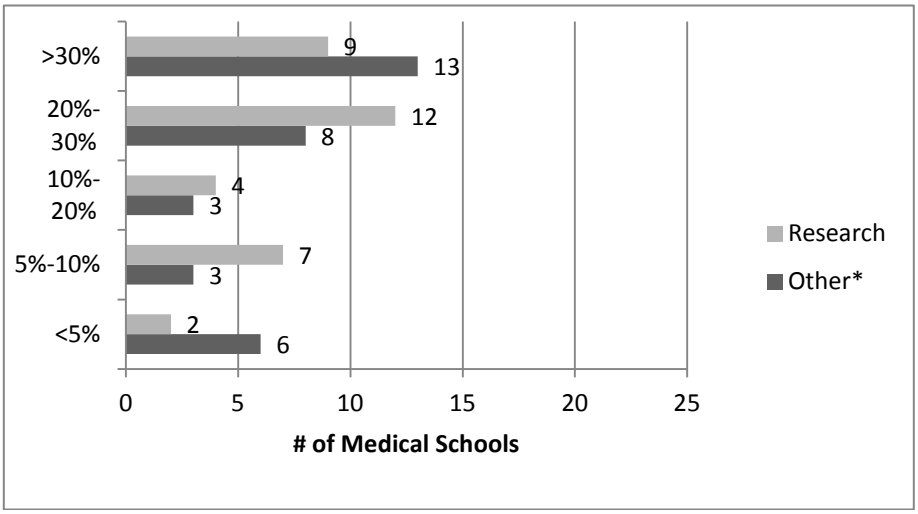


Figure3: How much do Research (N=34) and other sources* (N=33) contribute to funding your medical school?



*****Other sources were identified most commonly as funding related to practice plans or other faculty clinical services.

It can be argued that because most institutions rely on tuition as a relatively small component of their overall budgets, holding tuition rates steady for a period of time would have a more positive effect on students than the negative effect experienced by the institution. When looking at resident tuition at public universities, as their level of tuition inflation was highest, universities gained the highest increases in funding from tuition inflation in this group. If tuition rates were held steady over a period of four years, these students would be protected from a greater than 20% increase in their tuition. Because tuition and fees make up such large component of total financial burden as a student, this savings would represent a value that is very substantial relative to the students' overall budget. On the other hand, the effect of

money lost by universities when not raising rates this 20% represents a significantly lower proportion of the universities' overall operating budget, an approximately 1% decrease in funding when the calculations are carried out.

The authors do not intend to imply that this loss of funding is insignificant, but rather, compared to the total overall budget, it translates to significant savings on behalf of the students. With the understanding that all university and medical school budgets are tight and every dollar is important, including a 1% loss, the same has to be pointed out about students, most of whom are also feeling the same effects of a down economy. These students would greatly benefit if their tuition were not raised over 20%. Also, this example only utilized resident students at public universities. If tuition was held amongst all types of institutions, the loss to universities would be comparatively less than in the example above, while any hold on the increase in tuition and fees, from 10-20% increase in our study, would translate to savings on behalf of the students that is surely have a significant positive impact. It is recognized that some schools count on tuition more than the example listed here and increases in tuition have a greater impact on their budgets, but these schools do not make up the majority. Finally, the authors also recognize that schools will have individual restrictions on how tuition dollars can be spent and which sources can be drawn from to pay for medical student training and education. The 3-5% that tuition contributes to the overall budget likely comprises a significant portion of the costs of training the students. This simply shows that the examination of cost structure and determination of tuition and fee setting needs to be considered by members of the university administration when considering budgets at their respective institutions.

University Implemented Programs

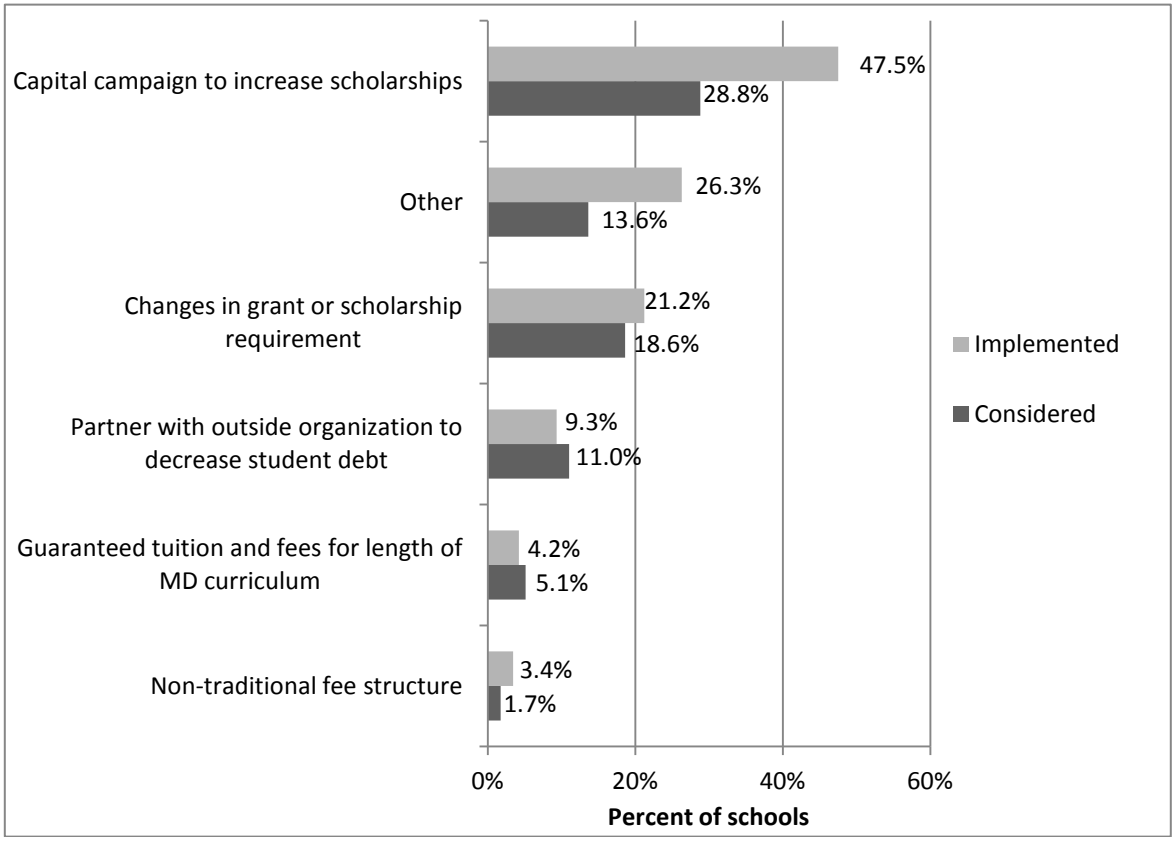
Open-ended responses were solicited to the request: "Please provide any additional information regarding initiatives or programs implemented or considered that were designed to help students' educational debt." Responses were collated from 15 surveys (Figure 4).

Among the respondents, the most commonly cited resource was capital campaign. Variations on this theme include: student phone-a-thons, dean-initiated one-time alumni giving, and longitudinal alumni giving. In the latter case, alumni and faculty commit to a minimum gift of $1000 per year for four years toward a single student. In the same vein, several schools indicated internal scholarship funding, sponsored by single or multiple benefactors. One school also indicated a partnership with an external foundation as a source for scholarship funding.

Medical colleges with surrounding rural or urban areas reported loan forgiveness programming for students who committed to serving in these areas following graduation. Both reporting institutions had associated time commitments and/or limited areas of specialization in order to qualify. One of the programs is completely sponsored by the institution and to which the Dean has committed to increasing funding with each increase in tuition.

Multiple programs cited their financial aid offices as a source for external scholarships. Moreover, financial management counseling and online resources are often additional provisions of the financial aid office. One school made mention of tuition guarantee, which would consist of fixing tuition for the duration of attendance, though it had yet to be implemented.

Figure 4: School has IMPLEMENTED or CONSIDERED programs designed to help reduce students' educational debt



Student Representation and Participation

As previously mentioned, the survey also inquired the level at which students are involved in the tuition setting process and what impact this has on how tuition changes are implemented, if at all. As students see their tuition rise year after year, only 38.6% of institutions surveyed responded that student representation is on the tuition setting board. This varied greatly by type of institution with 14.3% of private schools versus 52.8% of public schools having student representation on the tuition-setting board (See Table 4 below). There was a significant effect on type of institution regarding student representation ($X^2 = 8.29$, $p<.005$); however, student presence had no significant effect on the rate of inflation amongst institutions participating, whether private or public. Also, at the schools with student representation, medical students were not always informed that they are eligible to serve in this position. Student representation on the tuition-setting board could be an undergraduate or graduate student rather than a medical student and therefore, it is possible that medical student representation on the board could have a more substantial impact on tuition for medical students.

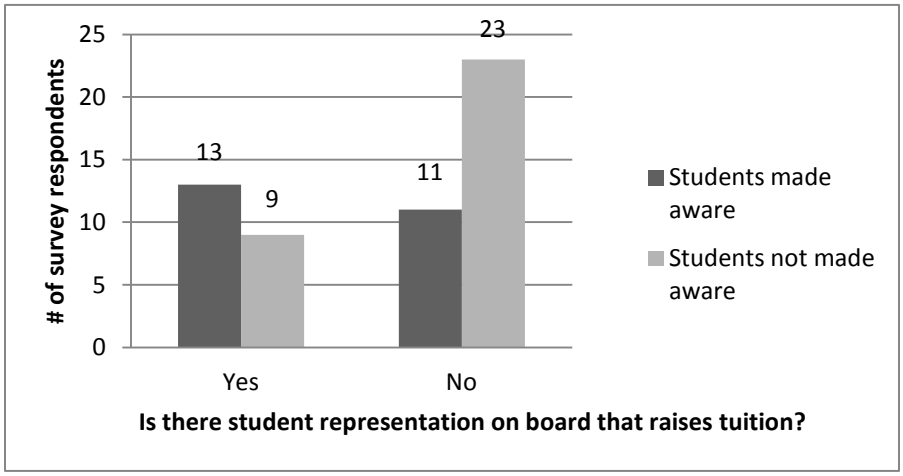
While the survey demonstrated that student representation had no impact on tuition rates, it did show that student representation did correlate with improved student awareness about tuition increases before finalization. Only 42.1% of schools notify students before finalizing tuition increases for the next academic year. Institutions where students are on the tuition-setting board are more likely to be informed of a proposed tuition increase ($X^2=3.90$, $p<.05$) (Figure 5). Therefore, at institutions where students are

informed of tuition increases, students will have greater opportunity to provide input and insight to the tuition-setting boards themselves before any decision is finalized.

Table 4: Three-year Inflation Rate for Schools with Completed Surveys – Private/Public Status and Student Representation

	Resident		Nonresident	
	Public (N=36)	Private (N=21)	Public (n=35*)	Private (n=21)
Student Representation	20.8%	19.9%	12.5%	19.9%
No Student Representation	24.8%	13.4%	13.6%	12.5%
Total	22.6%	14.4%	13.6%	13.0%

Figure 5: Relationship between student representation and communication with students about tuition increases.



The cumulative results of student involvement and interaction with the tuition-setting board and administrators show that opportunities are available for students to have discussions and input on increasing tuition. Though there are significantly more students on the tuition-setting board for public institutions, their presence currently does not impact the decision to raise tuition. While it is not clear which type of students sit on these boards, medical students should be made aware of their eligibility to be members. If medical students pursue this opportunity to have direct input, they will be taking an active role in the process. It is important for medical students to begin to address the issue if they hope to bring about control in costs. The data did show that student representation does correlate with increased acknowledgement to students regarding proposed tuition increases before decisions are finalized.

Some students commented that although this information is made available before a final decision, the information can be difficult to attain; thus transparency of tuition increases should be increased before decisions are finalized. Allowing medical students to be involved in the tuition-setting process directly by sitting on the board and indirectly by informing students of tuition increases before the decision is finalized, will increase transparency and encourage more student involvement as opposed to reactionary dissidence. Absence of transparency in setting tuition and fees has been recognized as a problem, in light of little data and information on precise sources of funding and spending regarding tuition and fees.[2] This opportunity for student involvement is an integral place to start for institutions lacking such representation.

Student Representatives' Interactions with Administrators

The second part of the OSR Tuition and Debt Survey was aimed at creating a dialogue between students and university administrators to increase transparency between the two groups**.** The complexities of a medical school budget make it difficult to interpret funding sources and expenditures. However, transparency in determining tuition and fees as well as appropriation of funds is an important issue faced at many institutions. A major part of the AAMC-OSR Tuition and Debt Survey aims to address transparency, primarily through student ideas to increase transparency at respective institutions. Respondents were asked to "Please provide any suggestions you might have for your school's administration to create transparency for students regarding setting your institution's tuition and fees."

Transparency ranges widely among institutions, from true transparency to students facing difficulty even discussing this survey with administration. The most frequent suggestion to improve transparency was advance notification of tuition and fees increases prior to approval. Students also wanted an explanation of where funds would be allocated and how the information of increases was to become available to the students, i.e., via e-mail, on university closed or open access web pages, etc. Some students thought that although the information was available on their institutions' web sites, it often was difficult to navigate. Students reported being interested in receiving notification through email about tuition and fees increases for the upcoming year, before the year begins. There were many suggestions for student representatives' inclusion on board of trustee meetings that discuss tuition and fees, but as learned in this survey, this is not likely to have a positive effect on preventing increases in tuition. All the same, students thought it would empower them and allow information to be disseminated among the student body.

Transparency remains a difficult issue for students to broach. While some institutions are progressive in student involvement and transparency in determining tuition and fees, this does not seem to be universal, or even in the majority. At many institutions, the AAMC-OSR Tuition and Debt Survey represented the first dialogue held between students and administrations regarding improved tuition transparency. To acquire information for the debt and tuition survey, most students met with Student Affairs Deans or Financial Aid Officers. Of the 57 students completing the survey, 42 (73.7%) students completed this section. Of the 42 students, 38 (90.5%) were able to meet with an administrator to discuss tuition. The remaining students were unable to meet with administrators due to scheduling, time constraints, or their interactions took place via e-mail instead of in person.

The cumulative results on student involvement and interaction with the tuition-setting board and/or college administrators show that opportunities are available for students to have discussions and input on the tuition and fee-setting process. Again, the data did show that student representation does correlate with increased communication with students regarding proposed tuition increases before decisions are finalized, even if the effects on tuition and fees are not appreciable. The authors still feel that this is an important component in maintaining transparency as well as providing an opening for discussions about tuition and fees.

While the authors cannot speculate on the 26% of students who did not complete the second part of the survey, most students favorably described their meetings and interactions with administrators regarding the tuition and debt survey. Medical students and administrators should continue to foster discussions regarding student tuition and debt, as these meetings may lead to better solutions to increases in medical student costs. Though it was found in this analysis that having direct student involvement into the tuition and fee setting process did not have a significant effect on rate increases, open dialogue can always serve as a foundation for instituting change and should be considered necessary if students wish to effect change regarding this topic. This data seems to agree with the results of the AAMC's medical student Graduation Questionnaire (GQ).[3] According to the AAMC 2010 GQ, 79.4% of students were satisfied or very satisfied with the accessibility of their Office of the Dean of Students/Associate Dean for Students. 69.5% of students were satisfied or very satisfied with the awareness of student concerns and 67.2% were satisfied or very satisfied with their responsiveness to student problems. While not surprising data, it is comforting to know that students seem to be satisfied with medical school administration over all.

Discussion

Taken as a whole, the results of the AAMC-OSR Tuition and Debt Survey are encouraging. It is not surprising that debt continues to increase and that students need to be prepared to deal with continually rising levels of debt as they embark on their journeys as young physicians. While this study and early reports continue to show similar results supporting the notion that tuition is rising faster compared to inflation, future studies need to examine the impact of this alarming level of debt. How is this looming debt affecting medical school applicants? Are medical schools "pricing-out" an entire population of under-represented applicants from applying? While medical schools have done a good job in increasing under-represented enrollment since the AAMC's induction of Project 3000 by 2000 in 1991, it is unclear at this time if steps have been taken to control debt as a factor for increasing under-represented enrollment. While the original plans for Project 3000 by 2000 did not make mention to the role that controlling costs will have in increasing enrollment among under-represented groups, the authors of this study were not able to find any subsequent literature examining the effects of rising tuition on the recruitment of under-represented groups.[4] While availability of financial aid and scholarships to under-represented students has been found to be a facilitator of success, the prospect of impending debt has not been specifically researched as an impedance to enrolling in medical school.[5] The option of choosing a ten-year repayment plan after graduation may become a thing of the past as more students may have debt amounts that require longer terms for repayment. With an average debt of $160,000, a 25-year repayment, one example of a repayment option that some students may have to utilize with continually rising costs will force these students to pay over $447, 000 at the current Direct Loans interest rate of 6.8%.[6] More research into this area needs to be undertaken to examine how anticipated debt level is affecting the demographic of students who apply to medical school. For many students, debt is an all but certain burden they are accepting before they matriculate. This may affect choice of institution, family planning and obligations as well as choice on location of future practice, among other things.

There is no definitive information on the exact role that looming debt may have in specialty choice, as the reasons vary significantly from student to student. When examining large groups of students, evidence has shown that debt is not a major contributing factor in specialty of choice when numerous subjects are pooled.[7] While these studies examine both student intent and actual outcomes, or which specialty students actually enter into, there has not been a definitive answer on exactly how debt plays a role in the decision making process. While debt has not been shown to be a primary issue in specialty choice, previous studies have shown that specialty choice is likely determined by multiple factors and this is very different from student to student.[7] According to the 2010 AAMC GQ, 23.5% of over eleven thousand respondents list level of educational debt as either a moderate or strong influence on specialty of choice and 38.7% listed income

expectations as moderate or strong influences on specialty choice. This in contrast to the top four listed influences; specialty content, personality fit, role model influence and work/life balance, all of which were ranked as a moderate or strong influence by 96-70% of respondents. It is difficult to exactly quantify where debt and income expectation rank in the decision making process in these 2,000 – 3,000 students who listed these as influential factors. Medical students see themselves as an altruistic group who have devoted their lives to serving others. It is not popular to say to oneself or others that you are choosing a specialty based on the desire to make more money. This goes against the medical student's internal image of themselves, so saying that they are not "in it for the money" maintains that self-image and original desire to get into medicine for the right, or altruistic, reasons. For this reason, questionnaires that ask reasons for specialty of choice may not be able to obtain the whole picture. While this explanation is anecdotal, there can be no doubt that the number of students who rank debt and income expectations as a major factor in considering specialty choice is sure to increase if tuition continues to grow at unchecked rates.

If there is an anticipated 37 million new insured Americans on the horizon, the AAMC estimates there will be a need for 45,000 new primary care physicians in the coming years and more of our medical graduates will be needed to fill these positions. While average debt level has not decreased in the 32 years since the statistic has been tracked by the AAMC, it is unknown if an impact can be made on the number of students choosing a primary care specialty, a group known to have lower reimbursement levels, if average debt could be held steady for a period of time. There are developing incentives that aim to encourage students to choose primary care professions, but not all of these can bridge the monetary gap caused by the high loans for many students. If maintaining or even decreasing debt helps sway a tenth of graduates every year into primary care careers, over a ten year span, this translates to thousands of new primary care physicians over the next decade. Further study is necessary to make definitive assumptions on this topic.

Whether or not the results of this study cause medical schools to reexamine their tuition and fee structure and institute changes that will pass savings forward to medical students, the findings from this study indicate that students want to be involved and that they want, at the least, to have a voice in how tuition is set at their schools. This is positive evidence that students are willing to be proactive about the topic. Definitive information on the implications that rising debt may have other than diminishing the power of young physician paychecks is imperative in moving forward. Further study needs to evaluate what effects student involvement truly has in the process of setting tuition and thus, determining young physician debt and the landscape of physicians in practice.

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