

**HOD ACTION: Recommendations in Council on Medical Education Report 2 adopted as amended and the remainder of the report filed.**

REPORT 2 OF THE COUNCIL ON MEDICAL EDUCATION (A-23)  
Financing Medical Education (Resolution 306-A-22)  
(Reference Committee C)

EXECUTIVE SUMMARY

As the cost of medical education continues to rise, it is imperative to understand the factors that impact this investment. These factors include the type of institution one attends, the cost of attendance, and a student's education and noneducation debt. Private institutions tend to cost more than public institutions, with private nonprofit institutions being more expensive than private for-profit institutions. Cost of attendance is determined by the published tuition and required fees; books and supplies; and the weighted average cost for room, board, and other expenses for four years at each institution. Education debt encompasses both premedical and medical education debt. Education debt incurred before starting medical school remains remarkably stable, as is the percentage of graduates reporting such debt. While private medical school graduates are slightly less likely to have debt, their individual debt levels are typically higher than public school graduates as private schools tend to be more expensive to attend than public schools. The Council on Medical Education recognizes that cost and debt is not necessarily a 1:1 relationship and believes these factors should not be conflated.

While costs to attend medical school are rising, another interesting trend is also emerging—a decline in the percentage of graduates who have debt. The proportion of those reporting no debt seems to be clustered among students from wealthy backgrounds. Earlier research supports that household income and education levels are tightly linked in the United States. Specifically, higher levels of education are correlated with higher household income and vice versa.

There are also variations in student indebtedness by race and ethnicity. In 2019, Black allopathic and osteopathic medical graduates had the highest median education debt. Asian allopathic and osteopathic medical graduates had the lowest median education debt. In that same year, 91 percent of Black allopathic medical graduates, 84 percent of Hispanic allopathic medical graduates, and 80 percent of American Indian allopathic medical graduates reported having medical education debt compared to 75 percent of white allopathic medical graduates and 61 percent of Asian allopathic medical graduates. Among all osteopathic graduates who reported debt in 2019, 92 percent were Black, 84 percent were Hispanic, 85 percent were white, and 74 percent were Asian.

While indebtedness impacts most graduates, the majority do not enter loan forgiveness programs. While the time to pay off debt varies, compensation after residency is enough to repay all levels of educational debt. The cost of medical education and student debt are likely to be barriers to diversity in the physician workforce and deterrents for potential applicants with fewer financial resources. However, the cost of medical education does not appear to be a factor in limiting the overall size of the applicant pool as the majority applicants tend to come from backgrounds with higher socioeconomic status.

The Council on Medical Education recommends reaffirming AMA Policy D-305.952, "Medical Student Debt and Career Choice"; amending Policy D-295.316, "Management and Leadership for Physicians"; amending Policy H-305.925, "Principles of and Actions to Address Medical Education Costs and Student Debt"; and adopting new policy encouraging higher utilization of financial information available through medical education organizations in addition to federal, state, and local financial resources.

**HOD ACTION: Recommendations in Council on Medical Education Report 2 adopted as amended and the remainder of the report filed.**

REPORT OF THE COUNCIL ON MEDICAL EDUCATION

CME Report 2-A-23

Subject: Financing Medical Education (Resolution 306-A-22)

Presented by: John P. Williams, MD, Chair

Referred to: Reference Committee C

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1 American Medical Association (AMA) Policy D-305.951, “Medical Education Debt Cancellation  
2 in the Face of a Physician Shortage During the COVID-19 Pandemic,” directs our AMA to:

3  
4 Study the issue of medical education debt cancellation and consider the opportunities for  
5 integration of this into a broader solution addressing debt for all medical students and  
6 physicians.

7  
8 In addition, Resolution 306-A-22, “Creating a More Accurate Accounting of Medical Education  
9 Financial Costs,” introduced by the Illinois Delegation and the American Society of  
10 Anesthesiologists, asked that the AMA “study the costs of medical education, taking into account  
11 medical student tuition and accrued loan interest, to come up with a more accurate description of  
12 medical education financial costs.” This item was referred by the House of Delegates (HOD) to  
13 explore the issue of debt cancellation further and develop recommendations for broader solutions to  
14 medical student and physician indebtedness. This integrated report is in response to both the policy  
15 directive and the referral.

16  
17 **BACKGROUND**

18  
19 *The price of medical education*

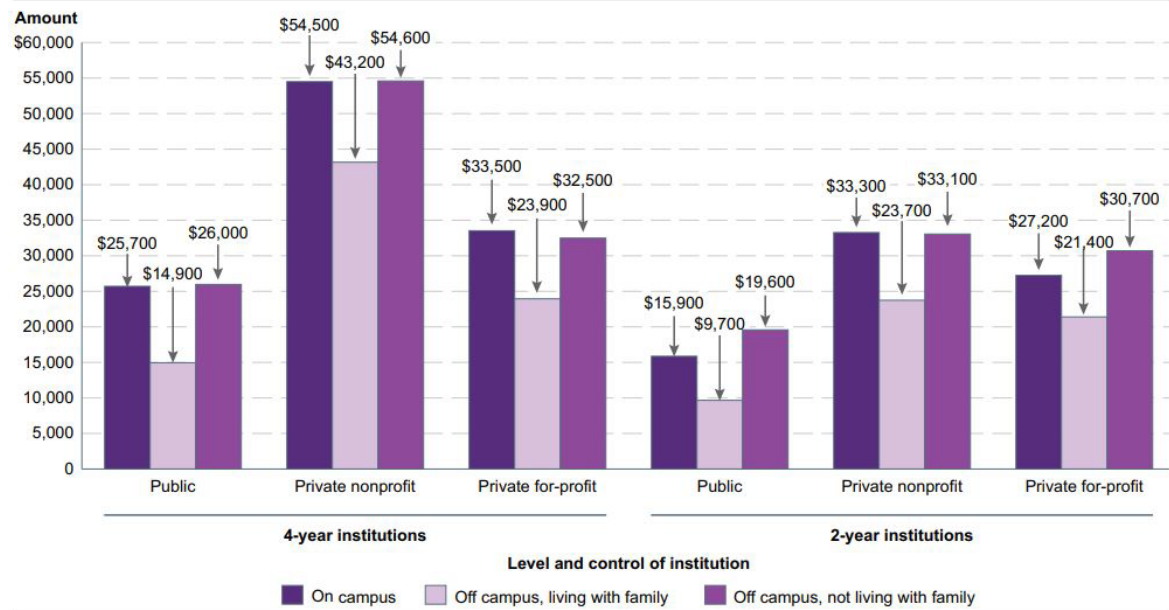
20  
21 The road to becoming a physician has increasingly become an expensive one, with each step  
22 having associated costs. For some, the road includes private tutoring, test preparation courses,  
23 and/or postbaccalaureate premedical programs. Beyond tuition and student fees, costs toward  
24 becoming a physician also include the Medical College Admission Test<sup>®</sup> (MCAT<sup>®</sup>); applications to  
25 medical school; the United States Medical Licensing Examination<sup>®</sup> (USMLE<sup>®</sup>) and/or the  
26 Comprehensive Osteopathic Medical Licensing Examination of the United States (COMLEX-  
27 USA); and applications for residency, board certification, and state licensure. Some physicians also  
28 assume responsibility for the cost of their education beginning with their undergraduate education;  
29 this has been factored into the discussion of premedical education debt to create a more  
30 comprehensive description of medical education financial costs. It is also important to emphasize  
31 that cost and debt are not necessarily a 1:1 relationship, and the Council believes these factors  
32 should not be conflated.

33  
34 Several studies have attempted to determine the cost of education for medical students. A study  
35 conducted in 1997 at the University of Texas-Houston Medical School found that the annual total  
36 cost (instructional, educational, and research) of the educational program was \$90,660 per student  
37 in the 1994-95 academic year.<sup>1</sup> This same study developed a cost-construction model to assess the

1 cost for educating undergraduate medical education (UME) students at the institution. The study  
 2 identified the cost of the entire program as well as instructional costs (direct-contact teaching),  
 3 educational costs (instructional costs plus supervision), and milieu costs (educational costs plus  
 4 research costs) and provides a glimpse into some of the costs tuition covers. Another study that  
 5 same year reviewed 20 years of published data and determined that total educational resource costs  
 6 fell into a range of \$72,000 to \$93,000 per student per year in 1996 dollars, or approximately  
 7 \$136,800 - \$176,700 in 2023.<sup>2</sup>

8  
 9 The National Center for Education Statistics monitors cost trends for undergraduate institutions.  
 10 Total cost of attendance (COA) is determined by the published tuition and required fees; books and  
 11 supplies; and the weighted average cost for room, board, and other expenses for four years at each  
 12 institution. The average COA can be varied when considering a student’s living arrangement (e.g.,  
 13 a student may live on campus; off campus with family; or off campus but not with family). To  
 14 demonstrate the range in COA for students, the average COA for a full-time student enrolled in a  
 15 baccalaureate program at a four-year public institution living off campus with family was \$14,900  
 16 in academic year (AY) 2020-2021. In that same year, the average COA for a full-time student  
 17 enrolled in a baccalaureate program at a four-year private nonprofit living off campus, not with  
 18 family, was \$54,600.<sup>3</sup> Figure 1 further illustrates the range of total costs for baccalaureate  
 19 programs by type of institution and student living situation.

Figure 1. Average total cost of attending degree-granting institutions for first-time, full-time undergraduate students, by level and control of institution and student living arrangement: Academic year 2020–21. Reprinted from the National Center for Education Statistics. (2020). Price of attending an undergraduate institution. The Condition of Education. Accessed January 2023. [https://nces.ed.gov/programs/coe/pdf/2022/cua\\_508.pdf](https://nces.ed.gov/programs/coe/pdf/2022/cua_508.pdf).



NOTE: Data are for the 50 states and the District of Columbia. The total cost of attending a postsecondary institution includes tuition and required fees; books and supplies; and the average cost for room, board, and other expenses. Student charges data for 2019–20 were collected prior to the outbreak of the coronavirus pandemic and therefore do not reflect any adjustments institutions might have made later in the academic year due to the pandemic. Tuition and fees at public institutions are the lower of either in-district or in-state tuition and fees. Excludes students who previously attended another postsecondary institution or who began their studies on a part-time basis. Data are weighted by the number of students at the institution who were awarded Title IV aid. Title IV aid includes grant aid, work-study aid, and loan aid. Although rounded numbers are displayed, the figures are based on unrounded data.  
 SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Winter 2020–21, Student Financial Aid component; and Fall 2020, Institutional Characteristics component. See *Digest of Education Statistics 2021*, table 330.40.

20 The variation in COA continues through medical school. According to the Association of  
 21 American Medical Colleges (AAMC), the median four-year COA in 2019 at a public allopathic  
 22 medical school was \$250,222 and \$330,180 at a private allopathic medical school.<sup>4</sup> For osteopathic  
 23 medical colleges, in AY 2021-2022, the average four-year COA at a public osteopathic medical

1 college was \$281,946 and \$337,144 at a private osteopathic medical college.<sup>5</sup> As of 2022, of the  
2 total 155 allopathic medical schools, 93 are public and 62 are private.<sup>6</sup> Of the 38 accredited  
3 colleges of osteopathic medicine, 31 of the schools are private and seven of the schools are public.<sup>7</sup>  
4

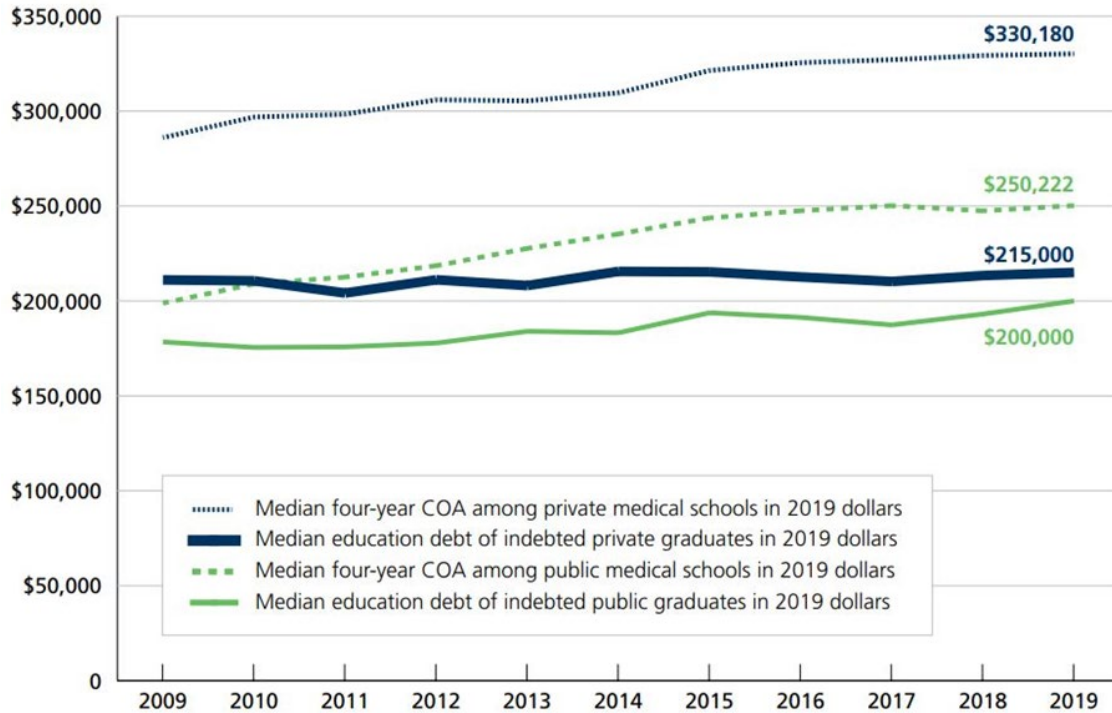
5 *Data on cost of attendance and education debt*

6  
7 The AAMC utilizes several tools to assess trends related to COA and education debt, including the  
8 Tuition and Student Fees Questionnaire (TSF), the AAMC Medical School Graduation  
9 Questionnaire (GQ) and the Liaison Committee on Medical Education (LCME) Part 1B Student  
10 Financial Aid Questionnaire. The TSF is administered to all allopathic medical schools to assess  
11 tuition, fees, and health insurance costs for both resident and nonresident students reported by  
12 accredited medical education programs. The GQ is administered annually to all graduating medical  
13 students to evaluate the medical school programs and medical student experiences, including  
14 financial aid and indebtedness. The LCME Part 1B Student Financial Aid Questionnaire is  
15 administered annually to allopathic medical schools and incorporated into the AAMC's Medical  
16 School Profile System to provide schools with benchmarking reports. The American Association of  
17 Colleges of Osteopathic Medicine (AACOM) also assesses trends related to COA and education  
18 debt through its Annual Osteopathic Medical School Questionnaire and Graduating Seniors  
19 Survey. The Osteopathic Medical School Questionnaire is administered to osteopathic medical  
20 colleges.  
21

22 When discussing medical student debt and the resolution of that debt, the terms loan forgiveness  
23 and debt cancelation are often used interchangeably. According to the U.S. Federal Student Aid  
24 website, the terms "mean nearly the same thing," with the difference being mainly in the  
25 circumstances surrounding the termination of requirements to repay the loan.  
26

27 The type of school a student attends is a factor in determining their potential debt level. Further,  
28 costs of attending medical school may vary by year at the same school due to fluctuation in tuition  
29 and fees and tends to be more expensive in the third and fourth year.<sup>8</sup> While private medical school  
30 graduates are slightly less likely to have debt, their individual debt levels are typically higher than  
31 those of public school graduates as private schools tend to cost more to attend than public schools.  
32 Additionally, public schools generally enroll more students. Figure 2 highlights the median COA  
33 among private and public schools compared to the education debt of allopathic medical school  
34 graduates who attended private and public schools.

Figure 2. Inflation-adjusted median education debt levels and four-year cost of attendance (COA), 2009-2019 (in constant 2019 dollars). Reprinted from Youngclaus J, Fresne JA. Physician Education Debt and the Cost to Attend Medical School: 2020 Update. Washington, DC: AAMC; 2020. Accessed January 2023.

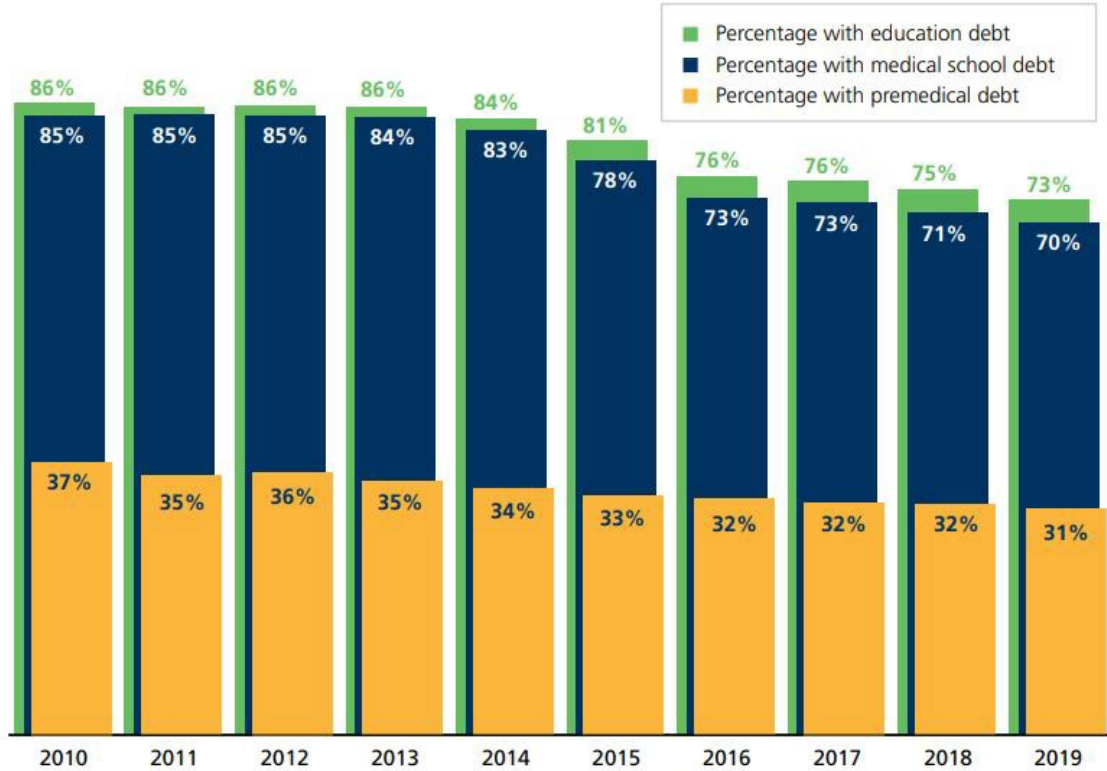


Source: AAMC Medical School Graduation Questionnaire (GQ) and Tuition and Student Fees Questionnaire (TSF).

1 While costs to attend medical school are rising, another emerging trend indicates a decline in the  
 2 percentage of graduates who have debt. In 2013, the AAMC found that 14 percent of graduates had  
 3 no debt. This percentage nearly doubled to 27 percent in 2019.<sup>9</sup> While the proportion of those  
 4 reporting no debt seems to be clustered among students from wealthy backgrounds, several other  
 5 variables have been identified to explain this decline, including the impact of new allopathic  
 6 medical schools, changes to federal loan programs, increased use of scholarships, and changes in  
 7 self-reported parental income. Additionally, a 2021 [report](#) by the Council on Medical Education,  
 8 “Medical Student Debt and Career Choice,” revealed that the data in aggregate may conceal the  
 9 actual debt load faced by individual students and that a significant subset of students have outside  
 10 funding sources to offset debt.

11  
 12 Annual levels of premedical school debt, which is education debt incurred before starting medical  
 13 school, are remarkably stable, as is the percentage of graduates reporting such debt. According to  
 14 the AAMC GQ, roughly one-third of allopathic medical graduates reported having premedical  
 15 school debt, and the median premedical school debt amount was exactly \$25,000 in each of the  
 16 past four years. Osteopathic medical graduates reported higher levels of pre-medical education  
 17 debt: \$51,116 in 2021, \$51,230 in 2020, and \$52,348 in 2019.<sup>10</sup> Figure 3 illustrates the percentage  
 18 of U.S. allopathic medical school graduates with education, medical school, and premedical school  
 19 debt from 2010 to 2019.

Figure 3. Percentage of U.S. medical school graduates with education, medical school, and premedical debt, 2010-2019. Reprinted from Youngclaus J, Fresne JA. Physician Education Debt and the Cost to Attend Medical School: 2020 Update. Washington, DC: AAMC; 2020. Accessed January 2023.



Source: AAMC Medical School Graduation Questionnaire (GQ).

1 The education debt of graduates varies by family income level. In 2019, the AAMC Matriculating  
 2 Student Questionnaire (MSQ) found that as the level of family income increases, the percentage of  
 3 funds projected to come from personal/family sources rises and the percentage from loans and  
 4 scholarships declines. This finding is consistent with data from the AACOM Graduating Seniors  
 5 Survey. For the past 30 years, data regarding debt and family income have been consistent, with  
 6 more than half of medical school graduates belonging to families in the top quintile of U.S. family  
 7 income. Earlier research supports that household income and education levels are tightly linked in  
 8 the United States. Specifically, higher levels of education are correlated with higher household  
 9 income and vice versa.<sup>11,12</sup> This is consistent with the 2019 AAMC GQ data, which found that the  
 10 higher the family income level, the less likely graduates are to have premedical debt. Figure 4  
 11 illustrates the relationship between family income and premedical debt.

Figure 4 . Percentage of 2019 medical school graduates with premedical debt and median premedical debt amount by quintile of family income. Reprinted from Youngclaus J, Fresne JA. Physician Education Debt and the Cost to Attend Medical School: 2020 Update. Washington, DC: AAMC; 2020. Accessed January 2023.

Quintile of U.S. Income	Sample in this family income quintile	With premedical debt	Median premedical debt for those with such debt
1st (Lowest)	4%	51%	\$30,000
2nd	7%	49%	\$27,000
3rd	10%	51%	\$25,000
4th	23%	45%	\$25,000
5th, top 81%-95%	30%	30%	\$25,000
5th (Highest), top 5%	26%	12%	\$27,750
Family income not provided	N/A	28%	\$27,000

Source: AAMC Medical School Graduation Questionnaire (GQ), 2019, and corresponding Matriculating Student Questionnaire (MSQ). Family income quintiles are based on U.S. Census data.

1 There are also variations in student indebtedness by race and ethnicity. In 2019, 91 percent of  
 2 Black allopathic medical graduates, 84 percent of Hispanic allopathic medical graduates, and 80  
 3 percent of American Indian allopathic medical graduates reported having medical education debt  
 4 compared to 75 percent of white allopathic medical graduates and 61 percent of Asian allopathic  
 5 medical graduates. Among allopathic medical school graduates who reported multiple  
 6 combinations of race and ethnicity or “other,” 71 percent reported having educational debt.<sup>1</sup> In that  
 7 same year and among all osteopathic graduates who reported debt, 92 percent were Black, 84  
 8 percent were Hispanic, 85 percent were white, and 74 percent were Asian. Those who indicated  
 9 they were American Indian and Alaska Native, Native Hawaiian and Pacific Islander or multiple  
 10 races were categorized as “all others” and in this group 74 percent reported debt.<sup>5</sup> Due to the  
 11 limited number of AI/NA osteopathic medical graduates, their median education debt is unknown.  
 12

13 In 2019, Black allopathic and osteopathic medical graduates had the highest median education  
 14 debt, of \$230,000 and \$304,908, respectively. Asian allopathic and osteopathic medical graduates  
 15 had the lowest median education debt, at \$180,000 and \$229,921, respectively. Hispanic allopathic  
 16 and osteopathic medical graduates had median education debt of \$190,000 and \$299,946,  
 17 respectively. White allopathic and osteopathic medical graduates had a median education debt of  
 18 \$200,000 and \$270,000, respectively. AI/AN allopathic medical graduates had the second highest  
 19 median education debt, at \$212,375.<sup>1,5</sup>  
 20

21 The Council on Medical Education recently reported that claims that education debt influences  
 22 specialty choice are unfounded and “a comprehensive review of the academic literature yielded  
 23 numerous research reports indicating little to no connection between specialty choice and economic  
 24 factors such as debt and income potential.<sup>13</sup> Phillips et al. found that “students from lower-income  
 25 families are more likely to eventually practice primary care. Additionally, public school graduates  
 26 were 30 percent more likely to choose primary care and twice as likely to select family medicine”  
 27 as a subspecialty.<sup>14</sup> Additionally, Kahn and Nelling found that “pursuing a medical degree is  
 28 financially beneficial” and “the numbers of physicians graduating each year has begun to increase  
 29 due to gradual expansion of class sizes and the establishment of new medical schools.”<sup>15</sup> For  
 30 instance, 16 allopathic medical schools, and 12 osteopathic medical schools have opened in the  
 31 past 10 years. This finding is further supported by the AAMC and AACOM, as both have  
 32 witnessed an increase in the number of applicants and overall enrollments over the last decade for  
 33 allopathic and osteopathic medical school programs.<sup>16,17</sup>  
 34

35 Data from the AAMC demonstrate that the number of applicants to allopathic medical schools has  
 36 increased from 48,014 in AY 2013-14 to 62,443 in AY2021-22 for an increase of 30 percent. For

1 the same period, matriculants increased from 20,055 to 22,666 for an increase of 13 percent. The  
 2 same data demonstrate a matriculant to applicant ratio of 0.41 in 2013-14 decreasing to 0.36 in  
 3 2021-22 despite an increase in the number of schools and total number of admissions. Collectively,  
 4 these data suggest that increasing cost of medical education and rising student debt are not limiting  
 5 interest or enrollment in medical education.

6  
 7 *Data on Noneducation Debt*

8  
 9 The AAMC GQ also analyzes noneducation debt in five categories: credit card, car, residency  
 10 relocation loan, mortgage, and other. The AAMC GQ data from 2019 highlight that noneducation  
 11 debt is not common and the median amounts (excluding mortgages) are significantly lower than the  
 12 median education debt amounts. Figure 5 provides an overview of the noneducation debt data for  
 13 allopathic medical school graduates in 2019.

Figure 5. Noneducation debt data for medical school graduates, 2019. Reprinted from Youngclaus J, Fresne JA. Physician Education Debt and the Cost to Attend Medical School: 2020 Update. Washington, DC: AAMC; 2020. Accessed January 2023.

Type of noneducation debt	Percentage with this debt	Median amount for graduates with this debt
Credit card	13%	\$5,000
Car loan	7%	\$10,000
Residency relocation loan	3%	\$10,000
Other debt	1%	\$9,000
Sum of all four nonmortgage debt categories	18%	\$10,000
Mortgage	4%	\$150,000

Source: AAMC Medical School Graduation Questionnaire (GQ), 2019.

Note: The percentage values were rounded off.

14 The following combinations were the most reported in the subset of graduates with noneducation  
 15 debt: 45 percent reported having credit card debt only, 18 percent reported having car debt only, 17  
 16 percent reported having both credit card and car debt, and 7 percent reported having both credit  
 17 card and residency relocation debt. All other possible combinations occurred less than 3 percent of  
 18 the time. These findings were consistent with the 2018 data. Additionally, nonmortgage,  
 19 noneducation debt was more common among graduates who identified as married or having  
 20 dependents. Figure 6 divides allopathic medical graduates into four groups based on their marital  
 21 status and whether they have dependents and shows their debt characteristics.



Figure 6. Percentage of selected debt characteristics of 2019 graduates by marital and dependents status. Reprinted from Youngclaus J, Fresne JA. Physician Education Debt and the Cost to Attend Medical School: 2020 Update. Washington, DC: AAMC; 2020. Accessed January 2023.

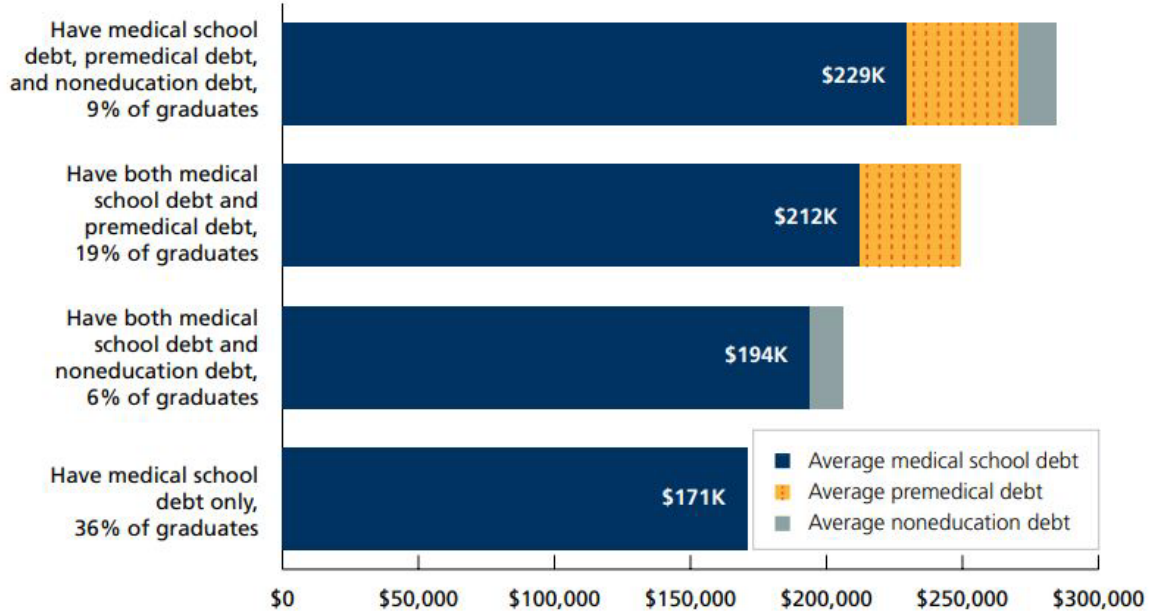
Debt Characteristic	No Dependents (93%)		With Dependents (8%)	
	Single (76%)	Married (17%)	Married (7%)	Single (1%)
Percentage of all nonmortgage, noneducation debt held	55%	21%	21%	3%
Percentage with nonmortgage, noneducation debt	15%	21%	37%	43%
Median nonmortgage, noneducation debt	\$8,000	\$10,000	\$15,000	\$15,500
Percentage of females/males	52%/48%	49%/51%	31%/69%	44%/56%
Percentage graduating from public/private medical schools	58%/42%	69%/31%	70%/30%	73%/27%
Percentage of group with education debt	72%	75%	77%	91%
Median education debt of indebted graduates	\$200,000	\$200,000	\$210,000	\$250,000

Source: AAMC Medical School Graduation Questionnaire (GQ), 2019.

Note: Nonmortgage, noneducation debt = credit card + car + residency relocation + other. Single = single (never legally married) or divorced, widowed, or separated but still legally married. Married = legally married, common law, or civil union.

1 Another pattern has emerged while surveying medical education debt. That is, the average level of  
 2 medical school debt per graduate increases as the types of debt held increases. Only 30 percent of  
 3 medical school graduates have no medical school debt at all. For those who do have debt, 36  
 4 percent have medical school debt only, 19 percent have medical school debt and premedical school  
 5 debt, and 9 percent have medical school debt, premedical school debt, and noneducation debt. Only  
 6 6 percent of graduates have both medical school debt and noneducation debt. Figure 7 shows the  
 7 average amount of debt among each of these groups.

Figure 7. Average medical school debt by type of debt held by 2019 indebted graduates. Noneducation debt excludes mortgage data and includes credit card, car, residency relocation, and other debt. Not shown are the 30 percent of graduates with no medical school debt. Reprinted from Youngclaus J, Fresne JA. Physician Education Debt and the Cost to Attend Medical School: 2020 Update. Washington, DC: AAMC; 2020. Accessed January 2023.



Source: AAMC Medical School Graduation Questionnaire (GQ), 2019.

1 AACOM monitors non-educational debt in aggregate, categorized by graduates of public and  
 2 private schools. Table 1 outlines the reported non-educational debt of graduating seniors for the  
 3 most recent three years for which data are available.

Reported non-educational debt	Debt#			% in debt		
	All schools	Public	Private	All schools	Public	Private
2020-2021	\$30,486	\$28,011	\$30,881	33%	33%	33%
2019-2020	\$25,205	\$23,518	\$25,537	37%	36%	37%
2018-2019	\$24,731	\$24,834	\$24,712	38%	36%	38%

\*All debt data are self-reported by respondents of the survey.

#Mean taken from responses greater than zero.

Source: American Association of Colleges of Osteopathic Medicine. 2020-2021 Academic Year, AACOM Graduating Senior Survey, Summary Report. Published October 2021. Accessed March 20, 2023.

4 *Understanding the impact of accrued interest on debt*

5

6 Paying off education debt takes a considerable amount of time. A 2019 survey of physicians who  
 7 had graduated from medical school in 2015 or earlier found that 35 percent had paid off their  
 8 student loans. Of the respondents that still reported debt, 80 percent had more than \$100,000 in  
 9 debt and 32 percent had more than \$250,000.<sup>18</sup> Assessing the impact of accrued interest on  
 10 education debt is complicated, beginning with interest rates. Congress sets the interest rates for  
 11 federal student loans, while private lenders establish their own rates. Borrowers also have the  
 12 option of fixed or variable rates for their loans. Fixed loan rates remain the same for the duration of

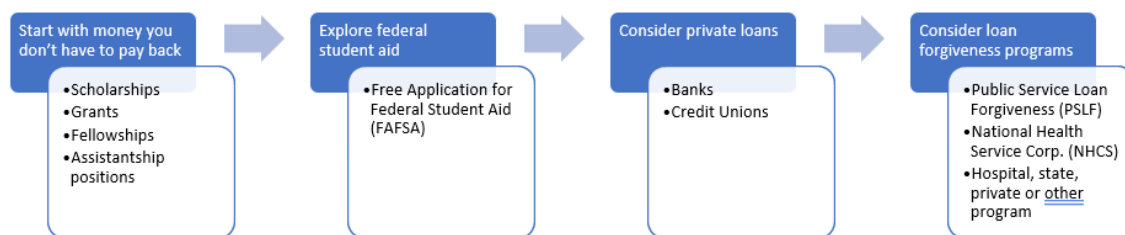
1 the repayment term. Variable interest rates are based on debt market conditions and can fluctuate  
 2 over time. Like fixed rate loans, payments on variable rate loans are initially applied to the interest  
 3 and then the principle. Variable interest rates tend to initially be lower than fixed interest rates, but  
 4 they can increase significantly depending on market conditions, which makes them a riskier option  
 5 for borrowers.<sup>19</sup> At the time of this report, federal student loans offer fixed interest rates of 6.54  
 6 percent or 7.54 percent, while private lenders offer fixed or variable interest rates ranging between  
 7 3.5 to 15 percent.<sup>20</sup> If a borrower is on an extended payment plan or has deferred their payments,  
 8 the interest continues to accrue. Negative amortization occurs when the monthly interest accruing  
 9 is higher than the monthly loan payment one makes. Negative amortization can occur during  
 10 residency; however, with rare exceptions, compensation after residency is enough to repay all  
 11 levels of educational debt.

### 12 *Mechanisms to pay for medical education*

13 As discussed in an earlier Council [report](#) on medical student debt and career choice, the relative  
 14 lack of financial education among medical students is a concern. A study of first- and fourth-year  
 15 medical students by Jayakumar et al. found low levels of financial literacy and lack of preparedness  
 16 for managing personal finances, including strategies for effective saving and investing and practice  
 17 management.<sup>21</sup> Equally concerning, the study's authors describe the lack of improvement in  
 18 financial literacy between entering and graduating medical students, regardless of whether their  
 19 medical school offered such education.

20 The AAMC Financial Information, Resources, Services, and Tools ([FIRST](#)) program provides free  
 21 resources, including publications, videos, webinars, infographics, and charts to help students and  
 22 residents make informed financial decisions related to their education. In addition, colleges and  
 23 universities have offices of financial aid to support and assist students with their financial concerns.  
 24 [Sallie Mae](#) provides guidance on how to create a plan to pay for aspiring physicians. They offer a  
 25 three-step approach to help inform students how to control costs associated with medical school.  
 26 The model below outlines these three steps and includes a fourth step to include loan forgiveness  
 27 programs, which have been historically underutilized.

28 *Figure 8. Creating a plan to pay for medical school*



29 *Source: Sallie Mae, Paying for Medical School, <https://www.salliemae.com/student-loans/graduate-school-information/ways-to-pay-for-graduate-school/paying-for-medical-school/>. Accessed March 20, 2023.*

### 30 *Loan forgiveness opportunities and limitations*

31 There are a variety of loan forgiveness programs at the federal, state and local level. The most  
 32 popular program among medical school graduates is the Public Service Loan Forgiveness (PSLF)  
 33 program. A 2017 Council [report](#), “Expansion of Public Service Loan Forgiveness,” provides  
 34 additional background on the PSLF program, which promises cancellation of remaining federal  
 35  
 36

1 student loan balances after 10 years' worth of payments made while employed by an eligible  
 2 nonprofit or government agency. Payment amounts during the 10-year period are income-based.  
 3 Physicians can use their time in residency toward the 10-year requirement if they make regular  
 4 payments during those years and their employer is a nonprofit teaching hospital. Following  
 5 residency, physicians can continue in a nonprofit for the remaining payment years.

6  
 7 While indebtedness impacts most graduates, the majority do not enter loan forgiveness programs.  
 8 Only 34 percent of indebted allopathic medical graduates report plans to pursue PSLF. Among  
 9 indebted osteopathic medical graduates, this percentage is higher, with 50 percent reporting they  
 10 will participate in a loan forgiveness program and, of those, 70 percent reporting they plan to  
 11 pursue PSLF.<sup>2,5</sup> Figure 9 breaks down the various details of indebted allopathic medical graduates'  
 12 plans to enter loan forgiveness programs.

Figure 9. Various Details of Indebted Graduates by Plans to Enter a Loan Forgiveness Program, 2019 Only. Reprinted from Youngclaus J, Fresne JA. Physician Education Debt and the Cost to Attend Medical School: 2020 Update. Washington, DC: AAMC; 2020. Accessed January 2023.

Plan to Enter	Percentage of sample	Median education debt	Percentage of graduates of public/private schools	Education debt level		
				Lowest third <\$160,000	Middle third \$160,000-\$246,000	Highest third >\$246,000
Public Service Loan Forgiveness (PSLF)	34%	\$240,000	57%/43%	16%	36%	48%
Other Federal, including National Health Service Corps (NHSC)	3%	\$200,000	66%/34%	3%	2%	3%
Hospital, state, private, or other program	8%	\$220,000	70%/30%	6%	8%	9%
No plans to enter a program	56%	\$175,000	63%/37%	75%	53%	40%
Total percentage, median education debt, and overall percentage of respondents in public/private schools	100%	\$200,000	61%/39%	100%	100%	100%

Source: AAMC Medical School Graduation Questionnaire (GQ), 2019.

Note: Total percentages might not equal 100 percent due to rounding. The "Other Federal" category is for the National Health Service Corps (NHSC), the Indian Health Service Corps, the armed services (Navy, Army, Air Force), and other uniformed services. Public Service Loan Forgiveness (PSLF) is a Department of Education program.

13 *The business of medical education*

14  
 15 The true cost of undergraduate medical education is difficult to determine for several reasons.  
 16 Medical education programs are typically imbedded in increasingly complex medical schools.  
 17 Medical schools often have multiple mission areas and educational programs that share common  
 18 resources and infrastructure. Faculty within the schools often have roles and responsibilities  
 19 beyond the educational program, with some having minimal contribution to the education of  
 20 medical students. The funding models for schools and faculty vary widely, often with funds  
 21 flowing in opposing directions between medical schools and clinical affiliates. Teaching students,

1 engagement in faculty governance of the educational program, faculty development as teachers,  
2 and other roles result in decreased clinical and research productivity, which in turn results in  
3 opportunity cost for the medical school, clinical affiliates, and other providers. The models for  
4 funding these opportunity costs vary across and within institutions, rendering an accurate cost  
5 analysis difficult at best.

6  
7 The effects of the increasing cost of medical education and increasing student debt on health care  
8 costs in general are even more difficult to determine but may be negligible in the totality of the  
9 nation's health care costs. As noted above, there are opportunity costs for clinical faculty who teach  
10 medical students by way of decreased productivity. Approximately 18 percent of physicians in the  
11 U.S. have faculty appointments,<sup>22</sup> but the number of these physicians who make a significant  
12 contribution to medical student teaching is unknown, as is the percentage of their time spent  
13 teaching medical students and the funding source for these activities. Further, physician incomes  
14 make up only 10 percent of total health care spending.<sup>23</sup> Taking all these factors into consideration,  
15 educating medical students probably has minimal impact on current health care costs. There are  
16 also direct costs incurred to support medical students in clinical settings, but these are also very  
17 small in the context of a health system. Downstream, medical school graduates in clinical practice  
18 have little control over clinical income by way of reimbursements, as these are largely set by third  
19 party payers. In summary, while the actual effect of the cost of medical student education on the  
20 health care system is not known, the contribution is probably relatively small in comparison to  
21 other drivers of health care costs.

22  
23 While the cost of medical education and student debt are likely to be barriers to diversity in the  
24 physician workforce and deterrents for potential applicants with fewer financial resources, the cost  
25 of medical education does not appear to be a factor in limiting the overall size of the applicant pool.

#### 26 27 *Return on educational investment for physicians*

28  
29 Another consideration is the reality and perception of educational debt for physicians versus  
30 physician income, compared to nonphysicians. According to the U.S. Bureau of Labor Statistics  
31 May 2021 report on Occupational Employment and Wage Statistics, the annual mean income for  
32 physicians in general was \$252,480, with a range across specialties of \$198,420 for pediatricians to  
33 \$353,970 for cardiologists. By comparison, the average income for four-year college degree  
34 graduates was \$59,600, versus \$44,100 for an associate degree and \$36,600 for high school  
35 graduates.<sup>24</sup> For physicians, using the general annual mean income and a 30-year full-time practice  
36 life, the projected lifetime income amount would be \$7.574 million in 2021 dollars. By  
37 comparison, the average tuition (not COA) for an MBA degree in 2022 was \$62,460, and the  
38 annual average salary for holders of MBA degrees was approximately \$115,000,<sup>25,26</sup> for a projected  
39 30-year lifetime income of \$3.450 million in 2022 dollars. Further, debt repayment as a percentage  
40 of income is highly likely to decrease over time, as overall income increases with inflation and  
41 cost-of-living increases in income, while the amount of fixed loan repayments remains constant.  
42 Taken in the context of anticipated income and the effects of inflation on the value and payments of  
43 long-term loans, medical education costs and student loans are still a good long-term investment.

44  
45 Of course, these calculations do not take into consideration the length of the training program and  
46 the positive and negative effects of medical education on lifestyle and family. Nor do they factor  
47 the disproportionate effect that the cost of medical education, and debt, may have on the  
48 development of a diverse workforce. But the data clearly show that the investment in medical  
49 education, even with educational debt, is a good one. Given the many benefits, both tangible (e.g.,  
50 financial) and intangible (societal standing afforded physicians in the U.S.), the medical  
51 community and society in general must consider if the cost of medical education and educational

1 debt of medical students is misaligned with the ability to repay the debt and with the levels of  
2 income that typically follow.

3  
4 SUMMARY AND RECOMMENDATIONS

5  
6 Like medical school tuition, medical education debt is rising. A closer look at the data  
7 demonstrates that rising education debt represents a greater burden for specific demographics of  
8 medical school graduates, including those whose are in the lower quintiles of U.S. family income  
9 and marginalized racial groups. Efforts to diversify the physician workforce may benefit by  
10 focusing support for these groups most negatively impacted, as their experiences may contribute to  
11 improve both quality of care and access to care. That said, there is little solid evidence for a strong  
12 link between debt and career choice. Although the average amount of education debt for medical  
13 school graduates is in the six figures, the most indebted medical school graduates do not enter loan  
14 forgiveness programs and can repay any amount borrowed regardless of specialty practice or where  
15 they live, in part due to the flexible nature of federal repayment plans that link payments to income  
16 and expectations for income after completion of training.<sup>27</sup>

17  
18 The AMA has extensive policy in support of debt relief programs, including federal programs such  
19 as the National Health Service Corps and Indian Health Service, along with comparable programs  
20 from states and the private sector, in that “the costs of medical education should never be a barrier  
21 to the pursuit of a career in medicine nor to the decision to practice in a given specialty” (H-  
22 305.925, “Principles of and Actions to Address Medical Education Costs and Student Debt”).  
23 Additionally, the AMA has numerous policies that address medical schools and the cost of medical  
24 education, including tuition and loans. Policy H-305.925(16) states that the AMA will continue to  
25 study medical education financing, so as to identify long-term strategies to mitigate the debt burden  
26 for medical students. The issue of medical education financial costs was recently studied in Council  
27 on Medical Education Report 4-N-21, “Medical Student Debt and Career Choice,” which was  
28 adopted at the November 2021 Meeting. While the AMA also advocates for the “development of  
29 personal financial literacy capabilities” (D-295.316, “Management and Leadership for  
30 Physicians”), there continues to be a need to increase medical students’ financial literacy as they  
31 plan for their future. In support of this need, the AMA continues to help individual medical  
32 students and physicians gain this financial education by offering medical school debt management  
33 solutions through [Laurel Road](#) as well as other [loans and financial services](#).

34  
35 The Council on Medical Education therefore recommends that the following recommendations be  
36 adopted in lieu of Resolution 306-A-22 and the remainder of this report be filed:

- 37  
38 1. That Policy D-305.952, “Medical Student Debt and Career Choice,” be reaffirmed. (Reaffirm  
39 HOD Policy)  
40  
41 2. That Policy H-305.925, “Principles of and Actions to Address Medical Education Costs and  
42 Student Debt,” be amended by addition of a new point (23), to read “(23) continue to monitor  
43 opportunities to reduce additional expense burden upon medical students including reduced-  
44 cost or free programs for residency applications, virtual or hybrid interviews, and other cost-  
45 reduction initiatives aimed at reducing non-educational debt.” (Amend HOD Policy)  
46  
47 3. That our AMA encourage medical students, residents, fellows and physicians in practice to  
48 take advantage of available loan forgiveness programs and grants and scholarships that have  
49 been historically underutilized, as well as financial information and resources available through  
50 the Association of American Medical Colleges and American Association of Colleges of  
51 Osteopathic Medicine, as required by the Liaison Committee on Medical Education and

- 1 Commission on Osteopathic College Accreditation, and resources available at the federal, state  
2 and local levels. (New HOD Policy)  
3  
4 4. That Policy D-305.984 (5), "Reduction in Student Loan Interest Rates," be rescinded, as having  
5 been fulfilled by this report:
5. That our AMA support federal efforts to forgive debt incurred during medical school and other  
higher education by physicians and medical students, including educational and cost of  
attendance debt. (New HOD Policy)

Fiscal note: minimal

## APPENDIX: RELEVANT AMA POLICIES

### Principles and Actions to Address Medical Education Costs and Student Debt H-305.925

The costs of medical education should never be a barrier to the pursuit of a career in medicine nor to the decision to practice in a given specialty. To help address this issue, our American Medical Association (AMA) will:

1. Collaborate with members of the Federation and the medical education community, and with other interested organizations, to address the cost of medical education and medical student debt through public- and private-sector advocacy.
2. Vigorously advocate for and support expansion of and adequate funding for federal scholarship and loan repayment programs--such as those from the National Health Service Corps, Indian Health Service, Armed Forces, and Department of Veterans Affairs, and for comparable programs from states and the private sector--to promote practice in underserved areas, the military, and academic medicine or clinical research.
3. Encourage the expansion of National Institutes of Health programs that provide loan repayment in exchange for a commitment to conduct targeted research.
4. Advocate for increased funding for the National Health Service Corps Loan Repayment Program to assure adequate funding of primary care within the National Health Service Corps, as well as to permit: (a) inclusion of all medical specialties in need, and (b) service in clinical settings that care for the underserved but are not necessarily located in health professions shortage areas.
5. Encourage the National Health Service Corps to have repayment policies that are consistent with other federal loan forgiveness programs, thereby decreasing the amount of loans in default and increasing the number of physicians practicing in underserved areas.
6. Work to reinstate the economic hardship deferment qualification criterion known as the "20/220 pathway," and support alternate mechanisms that better address the financial needs of trainees with educational debt.
7. Advocate for federal legislation to support the creation of student loan savings accounts that allow for pre-tax dollars to be used to pay for student loans.
8. Work with other concerned organizations to advocate for legislation and regulation that would result in favorable terms and conditions for borrowing and for loan repayment, and would permit 100% tax deductibility of interest on student loans and elimination of taxes on aid from service-based programs.
9. Encourage the creation of private-sector financial aid programs with favorable interest rates or service obligations (such as community- or institution-based loan repayment programs or state medical society loan programs).
10. Support stable funding for medical education programs to limit excessive tuition increases, and collect and disseminate information on medical school programs that cap medical education debt, including the types of debt management education that are provided.
11. Work with state medical societies to advocate for the creation of either tuition caps or, if caps are not feasible, pre-defined tuition increases, so that medical students will be aware of their tuition and fee costs for the total period of their enrollment.
12. Encourage medical schools to (a) Study the costs and benefits associated with non-traditional instructional formats (such as online and distance learning, and combined baccalaureate/MD or DO programs) to determine if cost savings to medical schools and to medical students could be realized without jeopardizing the quality of medical education; (b) Engage in fundraising activities to increase the availability of scholarship support, with the support of the Federation, medical schools, and state and specialty medical societies, and develop or enhance financial aid opportunities for medical students, such as self-managed, low-interest loan programs; (c) Cooperate with postsecondary institutions to establish collaborative debt counseling for entering first-year medical students; (d) Allow for flexible scheduling for medical students who encounter financial difficulties that can be remedied only by employment, and consider creating opportunities for paid



employment for medical students; (e) Counsel individual medical student borrowers on the status of their indebtedness and payment schedules prior to their graduation; (f) Inform students of all government loan opportunities and disclose the reasons that preferred lenders were chosen; (g) Ensure that all medical student fees are earmarked for specific and well-defined purposes, and avoid charging any overly broad and ill-defined fees, such as but not limited to professional fees; (h) Use their collective purchasing power to obtain discounts for their students on necessary medical equipment, textbooks, and other educational supplies; (i) Work to ensure stable funding, to eliminate the need for increases in tuition and fees to compensate for unanticipated decreases in other sources of revenue; mid-year and retroactive tuition increases should be opposed.

13. Support and encourage state medical societies to support further expansion of state loan repayment programs, particularly those that encompass physicians in non-primary care specialties.

14. Take an active advocacy role during reauthorization of the Higher Education Act and similar legislation, to achieve the following goals: (a) Eliminating the single holder rule; (b) Making the availability of loan deferment more flexible, including broadening the definition of economic hardship and expanding the period for loan deferment to include the entire length of residency and fellowship training; (c) Retaining the option of loan forbearance for residents ineligible for loan deferment; (d) Including, explicitly, dependent care expenses in the definition of the “cost of attendance”; (e) Including room and board expenses in the definition of tax-exempt scholarship income; (f) Continuing the federal Direct Loan Consolidation program, including the ability to “lock in” a fixed interest rate, and giving consideration to grace periods in renewals of federal loan programs; (g) Adding the ability to refinance Federal Consolidation Loans; (h) Eliminating the cap on the student loan interest deduction; (i) Increasing the income limits for taking the interest deduction; (j) Making permanent the education tax incentives that our AMA successfully lobbied for as part of Economic Growth and Tax Relief Reconciliation Act of 2001; (k) Ensuring that loan repayment programs do not place greater burdens upon married couples than for similarly situated couples who are cohabitating; (l) Increasing efforts to collect overdue debts from the present medical student loan programs in a manner that would not interfere with the provision of future loan funds to medical students.

15. Continue to work with state and county medical societies to advocate for adequate levels of medical school funding and to oppose legislative or regulatory provisions that would result in significant or unplanned tuition increases.

16. Continue to study medical education financing, so as to identify long-term strategies to mitigate the debt burden of medical students, and monitor the short-and long-term impact of the economic environment on the availability of institutional and external sources of financial aid for medical students, as well as on choice of specialty and practice location.

17. Collect and disseminate information on successful strategies used by medical schools to cap or reduce tuition.

18. Continue to monitor the availability of and encourage medical schools and residency/fellowship programs to (a) provide financial aid opportunities and financial planning/debt management counseling to medical students and resident/fellow physicians; (b) work with key stakeholders to develop and disseminate standardized information on these topics for use by medical students, resident/fellow physicians, and young physicians; and (c) share innovative approaches with the medical education community.

19. Seek federal legislation or rule changes that would stop Medicare and Medicaid decertification of physicians due to unpaid student loan debt. The AMA believes that it is improper for physicians not to repay their educational loans, but assistance should be available to those physicians who are experiencing hardship in meeting their obligations.

20. Related to the Public Service Loan Forgiveness (PSLF) Program, our AMA supports increased medical student and physician participation in the program, and will: (a) Advocate that all resident/fellow physicians have access to PSLF during their training years; (b) Advocate against a monetary cap on PSLF and other federal loan forgiveness programs; (c) Work with the United

States Department of Education to ensure that any cap on loan forgiveness under PSLF be at least equal to the principal amount borrowed; (d) Ask the United States Department of Education to include all terms of PSLF in the contractual obligations of the Master Promissory Note; (e) Encourage the Accreditation Council for Graduate Medical Education (ACGME) to require residency/fellowship programs to include within the terms, conditions, and benefits of program appointment information on the employer's PSLF program qualifying status; (f) Advocate that the profit status of a physician's training institution not be a factor for PSLF eligibility; (g) Encourage medical school financial advisors to counsel wise borrowing by medical students, in the event that the PSLF program is eliminated or severely curtailed; (h) Encourage medical school financial advisors to increase medical student engagement in service-based loan repayment options, and other federal and military programs, as an attractive alternative to the PSLF in terms of financial prospects as well as providing the opportunity to provide care in medically underserved areas; (i) Strongly advocate that the terms of the PSLF that existed at the time of the agreement remain unchanged for any program participant in the event of any future restrictive changes; (j) Monitor the denial rates for physician applicants to the PSLF; (k) Undertake expanded federal advocacy, in the event denial rates for physician applicants are unexpectedly high, to encourage release of information on the basis for the high denial rates, increased transparency and streamlining of program requirements, consistent and accurate communication between loan servicers and borrowers, and clear expectations regarding oversight and accountability of the loan servicers responsible for the program; (l) Work with the United States Department of Education to ensure that applicants to the PSLF and its supplemental extensions, such as Temporary Expanded Public Service Loan Forgiveness (TEPSLF), are provided with the necessary information to successfully complete the program(s) in a timely manner; and (m) Work with the United States Department of Education to ensure that individuals who would otherwise qualify for PSLF and its supplemental extensions, such as TEPSLF, are not disqualified from the program(s).

21. Advocate for continued funding of programs including Income-Driven Repayment plans for the benefit of reducing medical student load burden.

22. Strongly advocate for the passage of legislation to allow medical students, residents and fellows who have education loans to qualify for interest-free deferment on their student loans while serving in a medical internship, residency, or fellowship program, as well as permitting the conversion of currently unsubsidized Stafford and Graduate Plus loans to interest free status for the duration of undergraduate and graduate medical education.

#### Cost and Financing of Medical Education and Availability of First-Year Residency Positions H-305.988

Our AMA:

1. believes that medical schools should further develop an information system based on common definitions to display the costs associated with undergraduate medical education;
2. in studying the financing of medical schools, supports identification of those elements that have implications for the supply of physicians in the future;
3. believes that the primary goal of medical school is to educate students to become physicians and that despite the economies necessary to survive in an era of decreased funding, teaching functions must be maintained even if other commitments need to be reduced;
4. believes that a decrease in student enrollment in medical schools may not result in proportionate reduction of expenditures by the school if quality of education is to be maintained;
5. supports continued improvement of the AMA information system on expenditures of medical students to determine which items are included, and what the ranges of costs are;
6. supports continued study of the relationship between medical student indebtedness and career choice;

7. believes medical schools should avoid counterbalancing reductions in revenues from other sources through tuition and student fee increases that compromise their ability to attract students from diverse backgrounds;
8. supports expansion of the number of affiliations with appropriate hospitals by institutions with accredited residency programs;
9. encourages for-profit-hospitals to participate in medical education and training;
10. supports AMA monitoring of trends that may lead to a reduction in compensation and benefits provided to resident physicians;
11. encourages all sponsoring institutions to make financial information available to help residents manage their educational indebtedness; and
12. will advocate that resident and fellow trainees should not be financially responsible for their training.

#### Reduction in Student Loan Interest Rates D-305.984

1. Our AMA will actively lobby for legislation aimed at establishing an affordable student loan structure with a variable interest rate capped at no more than 5.0%.
2. Our AMA will work in collaboration with other health profession organizations to advocate for a reduction of the fixed interest rate of the Stafford student loan program and the Graduate PLUS loan program.
3. Our AMA will consider the total cost of loans including loan origination fees and benefits of federal loans such as tax deductibility or loan forgiveness when advocating for a reduction in student loan interest rates.
4. Our AMA will advocate for policies which lead to equal or less expensive loans (in terms of loan benefits, origination fees, and interest rates) for Grad-PLUS loans as this would change the status quo of high-borrowers paying higher interest rates and fees in addition to having a higher overall loan burden.
5. Our AMA will work with appropriate organizations, such as the Accreditation Council for Graduate Medical Education and the Association of American Medical Colleges, to collect data and report on student indebtedness that includes total loan costs at completion of graduate medical education training.

#### Principles of and Actions to Address Primary Care Workforce H-200.949

1. Our patients require a sufficient, well-trained supply of primary care physicians--family physicians, general internists, general pediatricians, and obstetricians/gynecologists--to meet the nation's current and projected demand for health care services.
2. To help accomplish this critical goal, our American Medical Association (AMA) will work with a variety of key stakeholders, to include federal and state legislators and regulatory bodies; national and state specialty societies and medical associations, including those representing primary care fields; and accreditation, certification, licensing, and regulatory bodies from across the continuum of medical education (undergraduate, graduate, and continuing medical education).
3. Through its work with these stakeholders, our AMA will encourage development and dissemination of innovative models to recruit medical students interested in primary care, train primary care physicians, and enhance both the perception and the reality of primary care practice, to encompass the following components: a) Changes to medical school admissions and recruitment of medical students to primary care specialties, including counseling of medical students as they develop their career plans; b) Curriculum changes throughout the medical education continuum; c) Expanded financial aid and debt relief options; d) Financial and logistical support for primary care practice, including adequate reimbursement, and enhancements to the practice environment to ensure professional satisfaction and practice sustainability; and e) Support for research and advocacy related to primary care.

4. Admissions and recruitment: The medical school admissions process should reflect the specific institution's mission. Those schools with missions that include primary care should consider those predictor variables among applicants that are associated with choice of these specialties.
5. Medical schools, through continued and expanded recruitment and outreach activities into secondary schools, colleges, and universities, should develop and increase the pool of applicants likely to practice primary care by seeking out those students whose profiles indicate a likelihood of practicing in primary care and underserved areas, while establishing strict guidelines to preclude discrimination.
6. Career counseling and exposure to primary care: Medical schools should provide to students career counseling related to the choice of a primary care specialty, and ensure that primary care physicians are well-represented as teachers, mentors, and role models to future physicians.
7. Financial assistance programs should be created to provide students with primary care experiences in ambulatory settings, especially in underserved areas. These could include funded preceptorships or summer work/study opportunities.
8. Curriculum: Voluntary efforts to develop and expand both undergraduate and graduate medical education programs to educate primary care physicians in increasing numbers should be continued. The establishment of appropriate administrative units for all primary care specialties should be encouraged.
9. Medical schools with an explicit commitment to primary care should structure the curriculum to support this objective. At the same time, all medical schools should be encouraged to continue to change their curriculum to put more emphasis on primary care.
10. All four years of the curriculum in every medical school should provide primary care experiences for all students, to feature increasing levels of student responsibility and use of ambulatory and community-based settings.
11. Federal funding, without coercive terms, should be available to institutions needing financial support to expand resources for both undergraduate and graduate medical education programs designed to increase the number of primary care physicians. Our AMA will advocate for public (federal and state) and private payers to a) develop enhanced funding and related incentives from all sources to provide education for medical students and resident/fellow physicians, respectively, in progressive, community-based models of integrated care focused on quality and outcomes (such as the patient-centered medical home and the chronic care model) to enhance primary care as a career choice; b) fund and foster innovative pilot programs that change the current approaches to primary care in undergraduate and graduate medical education, especially in urban and rural underserved areas; and c) evaluate these efforts for their effectiveness in increasing the number of students choosing primary care careers and helping facilitate the elimination of geographic, racial, and other health care disparities.
12. Medical schools and teaching hospitals in underserved areas should promote medical student and resident/fellow physician rotations through local family health clinics for the underserved, with financial assistance to the clinics to compensate their teaching efforts.
13. The curriculum in primary care residency programs and training sites should be consistent with the objective of training generalist physicians. Our AMA will encourage the Accreditation Council for Graduate Medical Education to (a) support primary care residency programs, including community hospital-based programs, and (b) develop an accreditation environment and novel pathways that promote innovations in graduate medical education, using progressive, community-based models of integrated care focused on quality and outcomes (such as the patient-centered medical home and the chronic care model).
14. The visibility of primary care faculty members should be enhanced within the medical school, and positive attitudes toward primary care among all faculty members should be encouraged.
15. Support for practicing primary care physicians: Administrative support mechanisms should be developed to assist primary care physicians in the logistics of their practices, along with enhanced

efforts to reduce administrative activities unrelated to patient care, to help ensure professional satisfaction and practice sustainability.

16. There should be increased financial incentives for physicians practicing primary care, especially those in rural and urban underserved areas, to include scholarship or loan repayment programs, relief of professional liability burdens, and Medicaid case management programs, among others. Our AMA will advocate to state and federal legislative and regulatory bodies, among others, for development of public and/or private incentive programs, and expansion and increased funding for existing programs, to further encourage practice in underserved areas and decrease the debt load of primary care physicians. The imposition of specific outcome targets should be resisted, especially in the absence of additional support to the schools.

17. Our AMA will continue to advocate, in collaboration with relevant specialty societies, for the recommendations from the AMA/Specialty Society RVS Update Committee (RUC) related to reimbursement for E&M services and coverage of services related to care coordination, including patient education, counseling, team meetings and other functions; and work to ensure that private payers fully recognize the value of E&M services, incorporating the RUC-recommended increases adopted for the most current Medicare RBRVS.

18. Our AMA will advocate for public (federal and state) and private payers to develop physician reimbursement systems to promote primary care and specialty practices in progressive, community-based models of integrated care focused on quality and outcomes such as the patient-centered medical home and the chronic care model consistent with current AMA Policies H-160.918 and H-160.919.

19. There should be educational support systems for primary care physicians, especially those practicing in underserved areas.

20. Our AMA will urge urban hospitals, medical centers, state medical associations, and specialty societies to consider the expanded use of mobile health care capabilities.

21. Our AMA will encourage the Centers for Medicare & Medicaid Services to explore the use of telemedicine to improve access to and support for urban primary care practices in underserved settings.

22. Accredited continuing medical education providers should promote and establish continuing medical education courses in performing, prescribing, interpreting and reinforcing primary care services.

23. Practicing physicians in other specialties--particularly those practicing in underserved urban or rural areas--should be provided the opportunity to gain specific primary care competencies through short-term preceptorships or postgraduate fellowships offered by departments of family medicine, internal medicine, pediatrics, etc., at medical schools or teaching hospitals. In addition, part-time training should be encouraged, to allow physicians in these programs to practice concurrently, and further research into these concepts should be encouraged.

24. Our AMA supports continued funding of Public Health Service Act, Title VII, Section 747, and encourages advocacy in this regard by AMA members and the public.

25. Research: Analysis of state and federal financial assistance programs should be undertaken, to determine if these programs are having the desired workforce effects, particularly for students from disadvantaged groups and those that are underrepresented in medicine, and to gauge the impact of these programs on elimination of geographic, racial, and other health care disparities. Additional research should identify the factors that deter students and physicians from choosing and remaining in primary care disciplines. Further, our AMA should continue to monitor trends in the choice of a primary care specialty and the availability of primary care graduate medical education positions. The results of these and related research endeavors should support and further refine AMA policy to enhance primary care as a career choice.

Diversity in the Physician Workforce and Access to Care D-200.982

Our AMA will: (1) continue to advocate for programs that promote diversity in the US medical workforce, such as pipeline programs to medical schools; (2) continue to advocate for adequate funding for federal and state programs that promote interest in practice in underserved areas, such as those under Title VII of the Public Health Service Act, scholarship and loan repayment programs under the National Health Services Corps and state programs, state Area Health Education Centers, and Conrad 30, and also encourage the development of a centralized database of scholarship and loan repayment programs; and (3) continue to study the factors that support and those that act against the choice to practice in an underserved area, and report the findings and solutions at the 2008 Interim Meeting.

Strategies for Enhancing Diversity in the Physician Workforce D-200.985

1. Our AMA, independently and in collaboration with other groups such as the Association of American Medical Colleges (AAMC), will actively work and advocate for funding at the federal and state levels and in the private sector to support the following: (a) Pipeline programs to prepare and motivate members of underrepresented groups to enter medical school; (b) Diversity or minority affairs offices at medical schools; (c) Financial aid programs for students from groups that are underrepresented in medicine; and (d) Financial support programs to recruit and develop faculty members from underrepresented groups.
2. Our AMA will work to obtain full restoration and protection of federal Title VII funding, and similar state funding programs, for the Centers of Excellence Program, Health Careers Opportunity Program, Area Health Education Centers, and other programs that support physician training, recruitment, and retention in geographically-underserved areas.
3. Our AMA will take a leadership role in efforts to enhance diversity in the physician workforce, including engaging in broad-based efforts that involve partners within and beyond the medical profession and medical education community.
4. Our AMA will encourage the Liaison Committee on Medical Education to assure that medical schools demonstrate compliance with its requirements for a diverse student body and faculty.
5. Our AMA will develop an internal education program for its members on the issues and possibilities involved in creating a diverse physician population.
6. Our AMA will provide on-line educational materials for its membership that address diversity issues in patient care including, but not limited to, culture, religion, race and ethnicity.
7. Our AMA will create and support programs that introduce elementary through high school students, especially those from groups that are underrepresented in medicine (URM), to healthcare careers.
8. Our AMA will create and support pipeline programs and encourage support services for URM college students that will support them as they move through college, medical school and residency programs.
9. Our AMA will recommend that medical school admissions committees and residency/fellowship programs use holistic assessments of applicants that take into account the diversity of preparation and the variety of talents that applicants bring to their education with the goal of improving health care for all communities.
10. Our AMA will advocate for the tracking and reporting to interested stakeholders of demographic information pertaining to URM status collected from Electronic Residency Application Service (ERAS) applications through the National Resident Matching Program (NRMP).
11. Our AMA will continue the research, advocacy, collaborative partnerships and other work that was initiated by the Commission to End Health Care Disparities.
12. Our AMA opposes legislation that would undermine institutions' ability to properly employ affirmative action to promote a diverse student population.
13. Our AMA will work with the AAMC and other stakeholders to create a question for the AAMC

electronic medical school application to identify previous pipeline program (also known as pathway program) participation and create a plan to analyze the data in order to determine the effectiveness of pipeline programs.

Management and Leadership for Physicians, D-295.316

1. Our AMA will study advantages and disadvantages of various educational options on management and leadership for physicians with a report back to the House of Delegates; and develop an online report and guide aimed at physicians interested in management and leadership that would include the advantages and disadvantages of various educational options.
2. Our AMA will work with key stakeholders to advocate for collaborative programs among medical schools, residency programs, and related schools of business and management to better prepare physicians for administrative, financial and leadership responsibilities in medical management.
3. Our AMA: (a) will advocate for and support the creation of leadership programs and curricula that emphasize experiential and active learning models to include knowledge, skills and management techniques integral to achieving personal and professional financial literacy and leading interprofessional team care, in the spirit of the AMA's Accelerating Change in Medical Education initiative; and (b) will advocate with the Liaison Committee for Medical Education, Association of American Medical Colleges and other governing bodies responsible for the education of future physicians to implement programs early in medical training to promote the development of leadership and personal and professional financial literacy capabilities.
4. Our AMA will: (a) study the extent of the impact of AMA Policy D-295.316, "Management and Leadership for Physicians," on elective curriculum; and (b) expand efforts to promote the tenets of health systems science to prepare trainees for leadership roles and address prevalent challenges in the practice of medicine and public health.

## REFERENCES

- <sup>1</sup> Franzini, L., Low, M. D., & Proll, M. A. (1997). Using a cost-construction model to assess the cost of educating undergraduate medical students at the University of Texas–Houston Medical School. *Academic Medicine*, 72(3), 228-37.
- <sup>2</sup> Jones, R. F., & Korn, D. (1997). On the cost of educating a medical student. *Academic Medicine*, 72(3), 200-10.
- <sup>3</sup> National Center for Education Statistics. (2020). Price of attending an undergraduate institution. The Condition of Education. Accessed January 2023. [https://nces.ed.gov/programs/coe/pdf/2022/cua\\_508.pdf](https://nces.ed.gov/programs/coe/pdf/2022/cua_508.pdf)
- <sup>4</sup> Youngclaus J, Fresne JA. Physician Education Debt and the Cost to Attend Medical School: 2020 Update. Washington, DC: AAMC; 2020. Accessed January 2023. [https://store.aamc.org/downloadable/download/sample/sample\\_id/368/](https://store.aamc.org/downloadable/download/sample/sample_id/368/)
- <sup>5</sup> AACOM. 2020. *Osteopathic College Tuition and Fees (1st year) 2020-21 and Historical*. [https://www.aacom.org/docs/default-source/data-and-trends/2021-22-coa.pdf?sfvrsn=fa270097\\_10](https://www.aacom.org/docs/default-source/data-and-trends/2021-22-coa.pdf?sfvrsn=fa270097_10)
- <sup>6</sup> AAMC. 2022. *Organizational Characteristics Database Medical School Details*. <https://www.aamc.org/media/8656/download>
- <sup>7</sup> AACOM. (n.d.). *U.S. Colleges of Osteopathic Medicine*. <https://choosedo.org/us-colleges-of-osteopathic-medicine/>
- <sup>8</sup> Hussain, K. (n.d.). *How Much Does It Cost to Attend Medical School? Here's a Breakdown*. <https://students-residents.aamc.org/premed-navigator/how-much-does-it-cost-attend-medical-school-here-s-breakdown>
- <sup>9</sup> Youngclaus, J. An Exploration of the Recent Decline in the Percentage of U.S. Medical School Graduates With Education Debt. Analysis in Brief. 2018;18(4):1-3. Association of American Medical Colleges: Washington, DC. <https://www.aamc.org/media/9411/download?attachment>
- <sup>10</sup> AACOM. 2021. AACOM 2020-2021 Academic Year Graduating Seniors Survey Summary Report. [https://www.aacom.org/docs/default-source/data-and-trends/aacom-2020-2021-graduating-seniors-survey-summary-report.pdf?sfvrsn=628f0597\\_4](https://www.aacom.org/docs/default-source/data-and-trends/aacom-2020-2021-graduating-seniors-survey-summary-report.pdf?sfvrsn=628f0597_4)
- <sup>11</sup> Torpey, E. "Measuring the value of education," *Career Outlook*, U.S. Bureau of Labor Statistics, April 2018. Accessed January 2023. <https://www.bls.gov/careeroutlook/2018/data-on-display/education-pays.htm>
- <sup>12</sup> Youngclaus, J., & Roskovensky, L. (2018). An updated look at the economic diversity of US medical students. AAMC Analysis in Brief, 18(5), 1-3. Accessed January 2023. <https://www.aamc.org/media/9596/download>
- <sup>13</sup> See Kahn MJ, Markert RJ, Lopez FA, Randall H, Krane NK. Is medical student choice of a primary care residency influenced by debt? *Med Gen Med*. 2006;8(4):18. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1868367/>
- Frank E, Feinglass S. Student loan debt does not predict female physicians' choice of primary care specialty. *J Gen Intern Med*. 1999; 4(6):347-350. <https://onlinelibrary.wiley.com/doi/full/10.1046/j.1525-1497.1999.00339.x>
- McDonald FS, West CP, Popkave C, Kolars JC. Educational debt and reported career plans among internal medicine residents. *Ann Intern Med*. 2008;149(6):416-420. <https://www.acpjournals.org/doi/abs/10.7326/0003-4819-149-6-200809160-00008>
- For a different research approach leading to similar conclusions, see Marcu MI, Kellermann AL, Hunter C, Curtis J, Rice C, Wilensky GR. Borrow or serve? An economic analysis of options for financing a medical school education. *Acad Med*. 2017;92:966-975. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5483978/>
- <sup>14</sup> Phillips, J. P., Petterson, S. M., Bazemore, A. W., & Phillips, R. L. (2014). A retrospective analysis of the relationship between medical student debt and primary care practice in the United States. *Annals of Family Medicine*, 12(6), 542-549.
- <sup>15</sup> Kahn, M. J., & Nelling, E. F. (2010). Estimating the value of medical education: a net present value approach. *Teaching and Learning in Medicine*, 22(3), 205-208.
- <sup>16</sup> Association of American Medical Colleges. (2022, December 13). *Diversity Increases at Medical Schools in 2022*. [Press release]. <https://www.aamc.org/news-insights/press-releases/diversity-increases-medical-schools-2022>
- <sup>17</sup> Trends in Osteopathic Medical School Applicants, Applications, Enrollment, and Graduates. Bethesda, MD: American Association of Colleges of Osteopathic Medicine; 2020.



[https://www.aacom.org/docs/default-source/data-and-trends/trends-aeg.xlsx?sfvrsn=c3ba4c97\\_98](https://www.aacom.org/docs/default-source/data-and-trends/trends-aeg.xlsx?sfvrsn=c3ba4c97_98). Accessed January 2023.

<sup>18</sup> Weatherby Healthcare. 2019. *Weatherby Healthcare Medical School Debt Report 2019*. Accessed January 2023. <https://weatherbyhealthcare.com/blog/medical-school-debt-report-2019>

<sup>19</sup> Tretina, K., & Marquit, M. (2022, August 31). How Does Student Loan Interest Work? [Blog Post]. Retrieved from <https://www.lendingtree.com/student/student-loan-interest/>

<sup>20</sup> Johnson, H.D., (2023, January 26). *Best medical school loans for 2023*. <https://www.bankrate.com/loans/student-loans/medical-school-loans/>

<sup>21</sup> Jayakumar, K. L., Larkin, D. J., Ginzberg, S., & Patel, M. (2017). Personal financial literacy among US medical students. *MedEdPublish*, 6. Available at: <https://www.mededpublish.org/manuscripts/847>.

<sup>22</sup> Michas, F. (2022, June 8). Total number of active physicians in the U.S., as of May 2022, by state. Statista. Retrieved January 28, 2023, from <https://www.statista.com/statistics/186269/total-active-physicians-in-the-us/>

<sup>23</sup> Norbeck TB. Drivers of health care costs. A physicians foundation white paper--first of a three-part series. *Mo Med*. 2013 Jan-Feb;110(1):30-5. PMID: 23457745; PMCID: PMC6179628.

<sup>24</sup> U.S. Bureau of Labor Statistics. (2022, March 31). *May 2021 National Occupational Employment and Wage Estimates United States*. [https://www.bls.gov/oes/current/oes\\_nat.htm#00-0000](https://www.bls.gov/oes/current/oes_nat.htm#00-0000)

<sup>25</sup> Hanson, M. (2022, November 13). *Average Cost of a Master's Degree*. Education Data Initiative. <https://educationdata.org/average-cost-of-a-masters-degree>

<sup>26</sup> Raymond A. Mason School of Business. (2021, November). *How Much Does an MBA Increase Your Salary?* Online Business Blog. <https://online.mason.wm.edu/blog/does-an-mba-increase-salary>

<sup>27</sup> Prescott, J. E., Fresne, J. A., & Youngclaus, J. A. (2017). The Good Investment. *Academic medicine: journal of the Association of American Medical Colleges*, 92(7), 912–913. <https://doi.org/10.1097/ACM.0000000000001573>.