

HOD ACTION: Council on Medical Education Report 4 adopted as amended and the remainder of the report filed.

REPORT OF THE COUNCIL ON MEDICAL EDUCATION

CME Report 4-A-16

Subject: Resident and Fellow Compensation and Health Care System Value
(Resolution 328-A-15, Resolution 321-A-15)

Presented by: Darlyne Menscer, MD, Chair

Referred to: Reference Committee C
(Albert M. Kwan, MD, Chair)

1 Resolution 328-A-15, introduced by the Resident and Fellow Section, asked that our American
2 Medical Association (AMA) develop recommendations for appropriate protections and increases to
3 resident and fellow compensation and benefits with input from residents, fellows, and other
4 involved parties including residency and fellowship programs. Both Resolution 328-A-15 and
5 Resolution 321-A-15, introduced by the Texas Delegation, asked that the AMA evaluate and work
6 to establish consensus regarding the appropriate value of resident and fellow services (economic or
7 otherwise), and address this in upcoming reports regarding graduate medical education financing.
8

9 Due to the complexity of the issue and concerns of potential unintended consequences shifting the
10 discussion from the educational focus of graduate medical education (GME) to one of service and
11 financial considerations, both resolutions were referred to the Council on Medical Education by the
12 AMA Board of Trustees for a report back to the House of Delegates. Accordingly, this report: 1)
13 describes the “public good” of training physicians; 2) provides data on compensation for residents
14 and fellows; 3) presents perceptions of adequacy of current compensation; 4) presents information
15 on the relative costs to institutions to train residents and fellows, and what revenue to institutions
16 may be attributed to the work of residents and fellows; and 5) describes proposals for alternatives
17 for compensating residents and fellows.
18

19 DEFINING THE VALUE OF RESIDENT AND FELLOW SERVICES

20
21 As the United States attempts to constrain health care spending, costs associated with training
22 physicians have come under scrutiny. Spending on GME amounts to approximately \$16 billion
23 annually.¹ This cost has been justified with the supposition that GME is a public good, as put
24 forward by the House of Representatives’ Committee on Ways and Means in 1965: “. . .
25 [E]ducational activities enhance the quality of care in an institution, and it is intended, until the
26 community undertakes to bear such educational costs in some other way, that part of the net cost of
27 such activities (including stipends of trainees, and compensation of teachers and other costs) should
28 be borne to an appropriate extent by the hospital insurance program.”²
29

30 Recently, this idea has been challenged by economists. They define public goods as resources that
31 are nonrival and nonexcludable, which means one does not have to compete to use them and one
32 cannot be excluded from using them. Classic examples include parks, libraries, and national
33 defense. Economists argue that medical training does not meet these prerequisites. Training creates
34 human intellectual capital owned by the resident that can be used in a variety of ways, including
35 non-patient care activities. For example, a physician may take his or her training into the financial

1 or pharmaceutical industry. Or, once trained, a physician may choose not to see Medicare patients,
 2 even though Medicare financially supported the physician's training.³

3
 4 It can also be argued, however, that GME does indeed provide an important public good.
 5 Accessing patient care provided by a resident does not prevent another patient from accessing care
 6 from that resident, which is a nonrival feature. Further, trainees have little say regarding whom
 7 they treat, meaning resident services are nonexcludable. Patients at teaching hospitals are not
 8 denied access to care, and in fact, academic medical centers frequently take patients no one else
 9 will, specifically those who cannot pay.⁴ Proponents of government-funded GME affirm that
 10 regardless of actions after residency, during training resident physicians provide a service that
 11 indeed meets the definition of a public good.

12
 13 *Data on resident and fellow compensation*

14
 15 On average, a first-year (GY1) resident earns \$51,586 per year, with variation between regions of
 16 the country and less so by hospital ownership. For example, the average GY1 resident income in
 17 the Northeast is around \$54,000, while in the South the average income is \$49,475, the
 18 presumption being that the difference in incomes is based on cost of living.⁵ The table below, from
 19 the Association of American Medical Colleges (AAMC), outlines average resident income by year
 20 in 2014.

21

	Year of Training	Institution Count	Mean Actual Stipend	25th Percentile	Median	75th Percentile
Current Year Stipends	1st Post-MD Year	184	\$51,586	\$49,396	\$51,250	\$53,273
	2nd Post-MD Year	184	\$53,500	\$51,156	\$52,949	\$55,338
	3rd Post-MD Year	184	\$55,502	\$52,818	\$55,029	\$57,135
	4th Post-MD Year	182	\$57,682	\$54,677	\$57,201	\$59,723
	5th Post-MD Year	175	\$60,023	\$56,771	\$59,542	\$62,306
	6th Post-MD Year	165	\$62,379	\$58,911	\$61,755	\$64,684
	7th Post-MD Year	150	\$64,775	\$60,827	\$63,809	\$67,737
	8th Post-MD Year	89	\$67,236	\$62,380	\$67,167	\$70,597

22
 23 *The adequacy of resident and fellow compensation*

24
 25 Although 62% of residents surveyed believe they are well compensated,⁶ some feel they should be
 26 able to negotiate their salaries.⁷ In 2002 three resident physicians filed a class action lawsuit stating
 27 that the residency match program, which uses an algorithm to place graduating medical students
 28 into training programs, fosters a system that prevents competition for students and thus depresses
 29 resident salaries, and therefore violates antitrust laws.⁸ This prompted legislation in 2004 that
 30 protected the residency match programs from antitrust litigation (Pub. L. 108–218). Even now,
 31 medical residents are attempting to form collective bargaining units to improve their annual
 32 income. Residents at the University of Washington recently unionized, and negotiations between
 33 the union and the institution focus on resident pay and benefits.⁹

34
 35 Interestingly, a recent study suggests that perhaps it is residents' choices rather than the match that
 36 depresses salaries. An economic model of the residency market demonstrated that when residents
 37 value a program's quality (or reputation), salaries become lower than a benchmark standard. The
 38 markdown is due to an "implicit tuition" arising from residents' willingness to pay for training at a
 39 program and a limited number of available positions at the most prestigious programs.¹⁰

1 Perhaps more important than surveys of satisfaction, data suggest resident salaries have not kept
2 pace with medical school loan debt or inflation. As one medical student recently wrote, “My
3 spouse is also in medicine...in a year and a half we will begin life making a combined ~100K with
4 ~500K in debt” from educational debt alone.¹¹ An AAMC analysis demonstrates that, when
5 adjusted for the Consumer Price Index, 2014 GY1 salaries were the lowest since 2008.⁵
6

7 In 2015, the average debt of indebted graduating medical students (81% have educational debt) was
8 over \$180,000.¹² The trend of increasing educational costs for students shows no signs of slowing.
9 According to a 2010 study, the three-year inflation rate of medical school tuition and fees was more
10 than 21%, far outpacing the national inflation rate of 3.4% during the same period of time.¹³ Aside
11 from debt accrued, medical students also lose out on potential earnings. It has been estimated that
12 during their time in training, often close to a decade after completion of an undergraduate degree,
13 medical students lose at least a half-million dollars of potential earned income that could have been
14 generated by choosing a different profession.¹⁴ Combine with this the increasing cost of medical
15 education and it is evident why some are now calling medical school a bad financial decision.
16

17 Many residents, and in particular fellows, supplement their salary by moonlighting. The ACGME
18 requires that all moonlighting hours be included in the 80-hour work week. Some programs have
19 restrictions regarding moonlighting (depending upon year of training, the host institution, and the
20 number of hours), but enforcement is dependent upon the reporting of such hours (especially
21 moonlighting at an external institution).¹⁵ Trainees may benefit from the additional clinical
22 experiences and financial gain. Some research has found that residents who moonlight may
23 experience improved well-being, possibly from enhanced personal achievement and reduced
24 financial concerns.¹⁶ However, concerns about fatigue, stress and burnout among trainees, possibly
25 resulting in depression, risk of patient harm, and compromised care, require careful balance of
26 moonlighting activities with clinical duties and personal well-being.
27

28 *The costs and economic value to institutions of training residents and fellows*

29

30 The cost of training a resident is variable, based on specialty, length of training, and many other
31 unaccountable components. The average GME cost reported to the Centers for Medicare &
32 Medicaid Services in 2008, per full time resident, was \$141,240, with a range that varies based on
33 number of residents within the program, type of hospital ownership, and other factors.¹⁷ The
34 weighted average per-resident amount paid by Medicare in 2008 was \$98,846, which has been
35 estimated as approximately 76% of the direct GME cost. However, many of these calculated costs
36 are based on direct expenses, i.e., cost of resident salary and benefits, attending physician
37 compensation, and direct teaching expenses. These figures do not account for less tangible costs,
38 such as reduction in physician productivity^{18,19} or costs associated with purchase and maintenance
39 of education materials.²⁰
40

41 Residents who are unhappy with their salary identify several reasons they believe their
42 compensation to be low. First and foremost these residents cite data demonstrating that they make
43 money for hospitals that is not reflected in their take home pay.²¹ It is possible to test this
44 hypothesis: When hospitals lose a residency program, it creates a natural experiment to determine
45 the costs associated with covering those positions. A hospital that sponsored a surgical residency
46 program had to hire approximately two and a half physician assistants (PAs) to match the services
47 provided by one surgical resident when the program closed in 1998. Although surgeries went faster
48 without a trainee, the PAs were not equipped to manage complex surgical patients pre- and
49 postoperatively. Further, the hospital found that the loss of the program’s 10 residents equated to a
50 \$2 million loss, due to cost of replacement staff and reduced Medicare reimbursements.²²

1 More recent studies have also suggested that significant costs are accrued when ancillary staff are
2 hired to replace resident physicians.²³ In one study, mid-level providers were teamed with
3 hospitalists on one service, which was then compared to a service of residents teamed with
4 hospitalists. Mid-level providers tend to receive higher salaries than residents while typically
5 working fewer hours per week. Costs were calculated to include non-compensation expenses, i.e.,
6 support of the GME infrastructure. The resident/hospitalist teams had total lower patient care costs
7 and shorter length-of-stay than mid-level provider/hospitalist teams, with no difference in mortality
8 and readmission rates. Patient satisfaction was reported as higher with the resident/hospitalist teams
9 as well. The study concluded that the institution could save \$5 million annually by replacing all its
10 mid-level provider teams with residents.²⁴ Replacing internal medicine residents at one institution
11 with attending physicians, which would result in higher salaries, hiring additional physicians, and
12 loss of Medicare GME funding, was projected to cost the institution \$2.1 million.²⁵ Excluding GY1
13 residents, surgical residents at a single institution were estimated to generate over \$94,000 of
14 billable services in a study in which their activities were hypothetically billed as “junior
15 associates.”²⁶

16

17 Institutional costs of training residents and fellows could be addressed in innovative ways, shifting
18 administrative thinking from an expenditure mindset to a more budget-neutral paradigm. A planned
19 statewide demonstration project in Nebraska, based on a proposal for national funding of
20 undergraduate and graduate medical education,²⁷ has secured all GME providers in the state, and
21 most private payers, in an all-payer partnership model that would relieve some of the pressure on
22 traditional payers. In this model, a Medical Education Workforce trust fund would fund GME
23 institutions according “to their ability to meet predetermined institutional, program, faculty, and
24 learner benchmarks.”

25

26 *Alternatives to current compensation practices*

27

28 Average resident salaries vary by region and year of training, not productivity. For example, a 4th
29 year surgical resident makes essentially as much as a 4th year psychiatry resident at the same
30 institution, regardless of hours worked and number of patients seen. Various suggestions have been
31 made, including paying residents by a program year adjusted hourly rate for each hour worked (up
32 to the 80-hour work limit). However, not only would this further exacerbate the “on the clock”
33 mentality that some program directors have identified with respect to their residents, it would
34 change the employment class of residents to a category not exempt from overtime law, meaning
35 hours worked over 40 would be paid at 1.5 times the regular rate.²⁸ Refining this model would
36 entail creating regional benchmarks for typical hours worked per week by program year in different
37 specialties to create weekly salaries, perhaps in three tiers. For example, a salary could be set for
38 residents in programs in which the average work hours per week were less than 50, another for
39 greater than 50 but less than 65, and a final tier for greater than 65. Stepwise increases would be
40 introduced for program year level.²⁸ Although it is unlikely that students would select a specialty
41 based solely on the value of the salary during residency, any variation in resident stipends could
42 potentially exacerbate the problem of students being influenced by a specialty’s monetary value.

43

44 Another proposal would not alter resident/fellow salaries but rather shorten the education/training
45 period (undergraduate as well as graduate), thereby reducing the opportunity costs of medicine’s
46 prolonged educational pipeline (versus most other professions).²⁹ Although residents and fellows
47 would continue to receive a salary that is likely to be well below their peers in, for example, the
48 business community, they would realize their full income potential earlier than what is possible
49 currently. Theoretically, this would create a younger physician workforce, thereby increasing years
50 of productivity. Another possible benefit would be the creation of more first-year positions:

51 Reducing a three-year program to two years, but maintaining the same number of total positions,

1 would increase the GY1 class size. This would reduce the current increased competition among
2 students for first year positions, which should in turn reduce the application costs and interview
3 expenses involved in the Match.

4
5 Moves to create a competency-based system of evaluation, assessment and advancement (versus
6 the current time-based paradigm) in both undergraduate and graduate medical education may
7 shorten the overall time before a physician may realize a full salary. Wholesale reduction in
8 training by entire years would require consensus among many specialties and subspecialties, and
9 based on concerns regarding the educational effects of reduced duty hours would be difficult to
10 achieve.³⁰ Most important, a reduced training period would not address anxieties that compensation
11 during training is inadequate.

12 13 EXISTING AMA POLICY

14
15 Current AMA policy relevant to this report includes the following:

16 17 H-305.930, Residents' Salaries

18 Our AMA supports appropriate increases in resident salaries.

19 20 H-305.988, Cost and Financing of Medical Education and Availability of First-Year Residency 21 Positions

22 Our AMA (10) supports AMA monitoring of trends that may lead to a reduction in stipends paid to
23 resident physicians; (12) will advocate that resident and fellow trainees should not be financially
24 responsible for their training.

25 26 H-310.912, Residents and Fellows' Bill of Rights

27 E. Adequate compensation and benefits that provide for resident well-being and health. (2) With
28 regard to compensation, residents and fellows should receive: b. Salaries commensurate with their
29 level of training and experience, and that reflect cost of living differences based on geographical
30 differences.

31 32 H-310.922, Determining Residents' Salaries

33 Our AMA encourages that residents' level of training, cost of living, and other factors relevant to
34 appropriate compensation be considered by graduate training programs when establishing salaries
35 for residents.

36 37 H-310.929, Principles for Graduate Medical Education

38 (7) COMPENSATION OF RESIDENT PHYSICIANS. All residents should be compensated.

39 40 SUMMARY AND RECOMMENDATIONS

41
42 Although most of the public would likely agree that a well-trained physician workforce is a public
43 good—however defined—financing for GME is currently under scrutiny, with some calling for a
44 reduction in the Medicare contribution. Proposals to raise the salaries of residents and fellows
45 would likely need to include suggestions on how that money could be carved out of the already
46 tight budgets of most training institutions. Compensation comparisons to other health care
47 providers, be they physicians or non-physicians, may lead some institutions to reconsider the entire
48 GME enterprise. Providing financial planning advice to residents and fellows, and detailing their
49 future ability to repay educational loans without substantial sacrifice,³¹ may not allay the worries
50 and frustrations of current trainees who may feel their earnings are comparable to minimum wage.
51 Developing a consensus as to the economic value of a resident or fellow will require information

1 that has been proven to be difficult to attain, namely, what are the ultimate costs to an institution to
2 train a physician. A fundamental philosophical consideration is that, while the resident or fellow
3 obviously provides an important source of labor to the institution, and is recognized as an
4 employee by the Internal Revenue Service,³² the trainee is there as a learner as well. Any
5 examination of how we measure the value of residents and fellows to our health system must bear
6 in mind that the ultimate goal is to prepare a new generation of well-skilled physicians.

7
8 The Council on Medical Education therefore recommends that the following recommendations be
9 adopted in lieu of Resolution 328-A-15 and Resolution 321-A-15 and that the remainder of the
10 report be filed.

- 11
12 1. That our American Medical Association (AMA) modify Policy H-305.988 by addition and
13 deletion to read as follows: “Our AMA...(10) supports AMA monitoring of trends that
14 may lead to a reduction in stipends compensation and benefits provided ~~paid~~ to resident
15 physicians; (12) will advocate that resident and fellow trainees should not be financially
16 responsible for their training.” (Modify HOD Policy)
- 17 2. That our AMA modify Policy H-310.922 by addition and deletion to read as follows: “~~Our~~
18 ~~AMA encourages that residents’ level of training, cost of living, and other factors relevant~~
19 ~~to appropriate compensation be considered by graduate training programs when~~
20 ~~establishing salaries for residents. Our AMA encourages teaching institutions to base~~
21 residents' salaries on the resident's level of training as well as local economic factors, such
22 as housing, transportation, and energy costs, that affect the purchasing power of wages,
23 with appropriate adjustments for changes in cost of living.” (Modify HOD Policy)
- 24 3. That our AMA encourage teaching institutions to explore benefits to residents and fellows
25 that will reduce personal cost of living expenditures, such as allowances for housing,
26 childcare, and transportation. (New HOD Policy)
- 27 4. That our AMA collaborate with other stakeholder organizations to evaluate and work to
28 establish consensus regarding the appropriate economic value of resident and fellow
29 services. (Directive to Take Action)
- 30 5. That our AMA monitor ongoing pilots and demonstration projects, and explore the
31 feasibility of broader implementation of proposals that show promise as alternative means
32 for funding physician education and training while providing appropriate compensation for
33 residents and fellows. (Directive to Take Action)
- 34 6. That our AMA continue to explore, with the Accelerating Change in Medical Education
35 initiative and with other stakeholder organizations, the implications of shifting from time-
36 based to competency-based medical education on residents’ compensation and lifetime
37 earnings. (New HOD Policy)

Fiscal Note: \$5,000

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