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


Presented by: Darlyne Menscer, MD, Chair

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

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

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

DEFINING THE VALUE OF RESIDENT AND FELLOW SERVICES

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

Recently, this idea has been challenged by economists. They define public goods as resources that are nonrival and nonexcludable, which means one does not have to compete to use them and one cannot be excluded from using them. Classic examples include parks, libraries, and national defense. Economists argue that medical training does not meet these prerequisites. Training creates human intellectual capital owned by the resident that can be used in a variety of ways, including non-patient care activities. For example, a physician may take his or her training into the financial...
or pharmaceutical industry. Or, once trained, a physician may choose not to see Medicare patients, even though Medicare financially supported the physician’s training.\(^3\)

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

### Data on resident and fellow compensation

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

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

### The adequacy of resident and fellow compensation

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

Interestingly, a recent study suggests that perhaps it is residents’ choices rather than the match that depresses salaries. An economic model of the residency market demonstrated that when residents value a program’s quality (or reputation), salaries become lower than a benchmark standard. The markdown is due to an "implicit tuition" arising from residents’ willingness to pay for training at a program and a limited number of available positions at the most prestigious programs.\(^10\)
Perhaps more important than surveys of satisfaction, data suggest resident salaries have not kept pace with medical school loan debt or inflation. As one medical student recently wrote, “My spouse is also in medicine…in a year and a half we will begin life making a combined ~100K with ~500K in debt” from educational debt alone. An AAMC analysis demonstrates that, when adjusted for the Consumer Price Index, 2014 GY1 salaries were the lowest since 2008.

In 2015, the average debt of indebted graduating medical students (81% have educational debt) was over $180,000. The trend of increasing educational costs for students shows no signs of slowing. According to a 2010 study, the three-year inflation rate of medical school tuition and fees was more than 21%, far outpacing the national inflation rate of 3.4% during the same period of time. Aside from debt accrued, medical students also lose out on potential earnings. It has been estimated that during their time in training, often close to a decade after completion of an undergraduate degree, medical students lose at least a half-million dollars of potential earned income that could have been generated by choosing a different profession. Combine this the increasing cost of medical education and it is evident why some are now calling medical school a bad financial decision.

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

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

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

Residents who are unhappy with their salary identify several reasons they believe their compensation to be low. First and foremost these residents cite data demonstrating that they make money for hospitals that is not reflected in their take home pay. It is possible to test this hypothesis: When hospitals lose a residency program, it creates a natural experiment to determine the costs associated with covering those positions. A hospital that sponsored a surgical residency program had to hire approximately two and a half physician assistants (PAs) to match the services provided by one surgical resident when the program closed in 1998. Although surgeries went faster without a trainee, the PAs were not equipped to manage complex surgical patients pre- and postoperatively. Further, the hospital found that the loss of the program’s 10 residents equated to a $2 million loss, due to cost of replacement staff and reduced Medicare reimbursements.
More recent studies have also suggested that significant costs are accrued when ancillary staff are hired to replace resident physicians. In one study, mid-level providers were teamed with hospitalists on one service, which was then compared to a service of residents teamed with hospitalists. Mid-level providers tend to receive higher salaries than residents while typically working fewer hours per week. Costs were calculated to include non-compensation expenses, i.e., support of the GME infrastructure. The resident/hospitalist teams had total lower patient care costs and shorter length-of-stay than mid-level provider/hospitalist teams, with no difference in mortality and readmission rates. Patient satisfaction was reported as higher with the resident/hospitalist teams as well. The study concluded that the institution could save $5 million annually by replacing all its mid-level provider teams with residents. Replacing internal medicine residents at one institution with attending physicians, which would result in higher salaries, hiring additional physicians, and loss of Medicare GME funding, was projected to cost the institution $2.1 million. Excluding GY1 residents, surgical residents at a single institution were estimated to generate over $94,000 of billable services in a study in which their activities were hypothetically billed as “junior associates.”

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

Alternatives to current compensation practices

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

Another proposal would not alter resident/fellow salaries but rather shorten the education/training period (undergraduate as well as graduate), thereby reducing the opportunity costs of medicine’s prolonged educational pipeline (versus most other professions). Although residents and fellows would continue to receive a salary that is likely to be well below their peers in, for example, the business community, they would realize their full income potential earlier than what is possible currently. Theoretically, this would create a younger physician workforce, thereby increasing years of productivity. Another possible benefit would be the creation of more first-year positions: Reducing a three-year program to two years, but maintaining the same number of total positions,
would increase the GY1 class size. This would reduce the current increased competition among
students for first year positions, which should in turn reduce the application costs and interview
expenses involved in the Match.

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

EXISTING AMA POLICY

Current AMA policy relevant to this report includes the following:

H-305.930, Residents’ Salaries
Our AMA supports appropriate increases in resident salaries.

H-305.988, Cost and Financing of Medical Education and Availability of First-Year Residency
Positions
Our AMA (10) supports AMA monitoring of trends that may lead to a reduction in stipends paid to
resident physicians; (12) will advocate that resident and fellow trainees should not be financially
responsible for their training.

H-310.912, Residents and Fellows’ Bill of Rights
E. Adequate compensation and benefits that provide for resident well-being and health. (2) With
regard to compensation, residents and fellows should receive: b. Salaries commensurate with their
level of training and experience, and that reflect cost of living differences based on geographical
differences.

H-310.922, Determining Residents’ Salaries
Our AMA encourages that residents’ level of training, cost of living, and other factors relevant to
appropriate compensation be considered by graduate training programs when establishing salaries
for residents.

H-310.929, Principles for Graduate Medical Education
(7) COMPENSATION OF RESIDENT PHYSICIANS. All residents should be compensated.

SUMMARY AND RECOMMENDATIONS

Although most of the public would likely agree that a well-trained physician workforce is a public
good—however defined—financing for GME is currently under scrutiny, with some calling for a
reduction in the Medicare contribution. Proposals to raise the salaries of residents and fellows
would likely need to include suggestions on how that money could be carved out of the already
tight budgets of most training institutions. Compensation comparisons to other health care
providers, be they physicians or non-physicians, may lead some institutions to reconsider the entire
GME enterprise. Providing financial planning advice to residents and fellows, and detailing their
future ability to repay educational loans without substantial sacrifice,31 may not allay the worries
and frustrations of current trainees who may feel their earnings are comparable to minimum wage.
Developing a consensus as to the economic value of a resident or fellow will require information
that has been proven to be difficult to attain, namely, what are the ultimate costs to an institution to
train a physician. A fundamental philosophical consideration is that, while the resident or fellow
obviously provides an important source of labor to the institution, and is recognized as an
employee by the Internal Revenue Service,\textsuperscript{32} the trainee is there as a learner as well. Any
examination of how we measure the value of residents and fellows to our health system must bear
in mind that the ultimate goal is to prepare a new generation of well-skilled physicians.

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

1. That our American Medical Association (AMA) modify Policy H-305.988 by addition and
deletion to read as follows: “Our AMA…(10) supports AMA monitoring of trends that
may lead to a reduction in stipends, compensation and benefits provided paid to resident
physicians; (12) will advocate that resident and fellow trainees should not be financially
responsible for their training.” (Modify HOD Policy)

2. That our AMA modify Policy H-310.922 by addition and deletion to read as follows: “Our
AMA encourages that residents’ level of training, cost of living, and other factors relevant
to appropriate compensation be considered by graduate training programs when
establishing salaries for residents. Our AMA encourages teaching institutions to base
residents’ salaries on the resident’s level of training as well as local economic factors, such
as housing, transportation, and energy costs, that affect the purchasing power of wages,
with appropriate adjustments for changes in cost of living.” (Modify HOD Policy)

3. That our AMA encourage teaching institutions to explore benefits to residents and fellows
that will reduce personal cost of living expenditures, such as allowances for housing,
childcare, and transportation. (New HOD Policy)

4. That our AMA collaborate with other stakeholder organizations to evaluate and work to
establish consensus regarding the appropriate economic value of resident and fellow
services. (Directive to Take Action)

5. That our AMA monitor ongoing pilots and demonstration projects, and explore the
feasibility of broader implementation of proposals that show promise as alternative means
for funding physician education and training while providing appropriate compensation for
residents and fellows. (Directive to Take Action)

6. That our AMA continue to explore, with the Accelerating Change in Medical Education
initiative and with other stakeholder organizations, the implications of shifting from time-
based to competency-based medical education on residents’ compensation and lifetime
earnings. (New HOD Policy)

Fiscal Note: $5,000
REFERENCES


25 Sharma N, Knohl S, Steinmann AF. Financing and Graduate Medical Education Workshop. ACGME. 2015. [https://www.acgme.org/acgmeweb/Portals/0/PDFs/2015%20AEC/Presentations/ses031.pdf](https://www.acgme.org/acgmeweb/Portals/0/PDFs/2015%20AEC/Presentations/ses031.pdf)


