REPORTS OF THE COUNCIL ON MEDICAL EDUCATION

The following reports were presented by Niranjan Rao, MD, Chair.

1. GUIDING PRINCIPLES AND APPROPRIATE CRITERIA FOR ASSESSING THE COMPETENCY OF PHYSICIANS ACROSS THE PROFESSIONAL CONTINUUM

Reference committee hearing: see report of Reference Committee C.

HOUSE ACTION: RECOMMENDATIONS ADOPTED AS FOLLOWS
TITLE CHANGED
REMAINDER OF REPORT FILED
See Policy TBD

At the 2018 Interim Meeting of the American Medical Association (AMA) House of Delegates, the AMA Council on Medical Education presented Report 1-I-18, "Competency of Senior Physicians," which was in response to AMA Policy D-275.956, "Assuring Safe and Effective Care for Patients by Senior/Late Career Physicians," which directs the AMA to: "1) identify organizations that should participate in the development of guidelines and methods of screening and assessment to assure that senior/late career physicians remain able to provide safe and effective care for patients; and 2) convene organizations identified by the AMA to work together to develop preliminary guidelines for assessment of the senior/late career physician and develop a research agenda that could guide those interested in this field and serve as the basis for guidelines more grounded in research findings."

The HOD referred the report for further study. This report is in response to that referral. Due to the impact of COVID-19, this report was deferred for business until the N-21 Meeting of the House of Delegates.

It is important to note that this report does not mandate an assessment. The intent of this report is to outline a set of guiding principles to provide direction and serve as a reference for guidelines for screening and assessing late career physicians.

BACKGROUND: SCOPE OF THE ISSUE

The total number of physicians 65 years and older has increased greatly, from 50,993 in 1975 to 343,694 in 2019.[1] Physicians 65 and older currently represent 29.8 percent of all physicians in the United States.[1] Within this age group, two-fifths (43.6 percent) are actively engaged in patient care, while nearly half (49.3 percent) are listed as inactive in the AMA Physician Masterfile. The remainder are involved in teaching, administration, medical research or non-patient care.[1] Additionally, more than a quarter of physicians practicing in rural communities are age 60 years or older.[2-3] Many physicians are hesitant to retire and may continue to practice into their 70s and 80s due to professional satisfaction, increased life expectancy, and concerns regarding financial security.[4]

There is evidence that physical health and some cognitive abilities decline with aging.[5] For example, recent studies have associated hearing loss, which is one of the most prevalent disorders of aging, with dementia and decreasing cognition.[6-7] Research also shows that cognitive dysfunction is more prevalent among older adults, although aging does not necessarily result in cognitive impairment.[8] The effect of age on any physician's competence can be highly variable, and aging is just one of several factors that may impact performance.[4,9] Other factors may influence clinical performance, e.g., practice setting, lack of board certification, high clinical volume, certain specialty practices, etc.[10, 11] Fatigue, stress, burnout, and health issues unrelated to aging are also risk factors that can affect clinical performance.[11] Performance also may be broadly determined by characteristics ranging from intelligence to personality.[5] However, some attributes relevant to the practice of medicine—such as wisdom, resilience, compassion, and tolerance of stress—may actually improve as a function of aging.[9, 12-15]

Although age alone may not be associated with reduced competence, the variation in cognitive abilities as physicians age suggests that the issue cannot be ignored. While physicians may retain expertise from years of experience, in some specialties (especially in procedurally oriented disciplines), the accuracy and precision of a practitioner's skills tend to deteriorate without continued practice and repeated training.[16] When a performance issue becomes apparent, the

physician and health care system must ensure that the physician can demonstrate the necessary competence for practice skills or procedural expertise, retrain for the necessary skills, or retire that procedural expertise from their practice.[16,17]

There are a limited number of validated tools for measuring competence/performance, but these tools are primarily used when a physician is "referred for cause." In addition, physicians' practices vary throughout the United States and from specialty to specialty. A few hospitals have introduced mandatory age-based evaluations, but there is no national standard.[18-19] Furthermore, there is cultural resistance among physicians to externally imposed assessment approaches and concern about discriminatory policies and procedures.

Knowing when to give up practice remains an important decision for most doctors and a critically difficult decision for some.[20] Older physicians have decades of experience and contributions to medicine and to their patients. So, as they experience health changes that may or may not allow continued clinical practice, they deserve the same sensitivity and respect afforded their patients.[21] Shifting away from procedural work, allocating more time with individual patients, using memory aids, and seeking input from professional colleagues may help physicians successfully adjust to the cognitive changes that accompany aging yet continue providing valuable health care services for years to come.[9,20]

PHYSICIANS' PROFESSIONAL RESPONSIBILITIES

Council on Ethical and Judicial Affairs (CEJA) Report 1-I-19, "Competence, Self-Assessment and Self-Awareness" notes that, "to fulfill their ethical responsibility of competence, physicians at all stages in their professional lives should cultivate and exercise skills of self-awareness and active self-observation; take advantage of tools for self-assessment that are appropriate to their practice settings and patient populations; and be attentive to environmental and other factors that may compromise their ability to bring their best skills to the care of individual patients." In its report, CEJA recommends that "individual physicians and physicians in training should strive to: recognize that different points of transition in professional life can make different demands on competence; and maintain their own health, in collaboration with a personal physician, in keeping with ethics guidance on physician health and wellness."

The AMA *Code of Medical Ethics* has always stated that physicians of all ages must maintain their health and wellness, and, if a health issue arises, they must seek appropriate help from a personal physician whose objectivity is not compromised to honestly assess their ability to continue practicing safely.[22] The prohibition of self-treatment is imperative. However, a recent review of studies associated with self-diagnosis, self-referral, and self-treatment among physicians showed that self-treatment is strongly embedded within the culture of physicians and medical students as an accepted way to enhance/buffer work performance.[23] This may be due to a culture in medicine that physicians do not expect themselves or their colleagues to be sick.[23] In response, many hospitals are beginning to establish health and wellness committees to confidentially address concerns regarding practitioners' health.

It is also in physicians' best interest to proactively address issues related to aging in order to maintain professional self-regulation. Since its adoption at the founding meeting of the AMA in 1847, the AMA *Code of Medical Ethics* has articulated the values to which physicians commit themselves as members of the medical profession. Chapter 9, Opinions on Professional Self-Regulation, states, "Society permits medicine to set standards of ethical and professional conduct for physicians. In return, medicine is expected to hold physicians accountable for meeting those standards and to address lapses in professional conduct when they occur."[24] Self-regulation is an important aspect of medical professionalism, and helping colleagues recognize their declining skills is an important part of self-regulation.[25] Furthermore, contemporary methods of self-regulation (e.g., clinical performance measurement; continuing professional development requirements, including novel performance improvement continuing medical education programs; and continuing board certification programs) have been created by the profession to meet shared obligations for quality assurance and patient safety.

From a public protection perspective, the objective assessment option seems like an important intervention, given the strong impact of aging on performance, the extreme variability of cognitive function among older physicians, and the well-documented inability of physicians to self-assess—particularly among those physicians who are less competent.[26] In the literature, Eva advised caution regarding the above interventions, with significant resource and administrative implications; they should not be universally mandated but implemented through a case-by-case, assessment-driven process, given the extreme variability of cognitive findings among older physicians.[27] External, objective assessment also seems essential, given that non-analytic processes may be even less accessible to critical self-appraisal than the more conscious analytical processes.

The Joint Commission's Requirements

Health care entities that credential or employ physicians have an obligation to assess physicians' health in the hiring and privileging process. The Joint Commission standard MS.11.01.01 is specifically written to encourage medical staff to identify and manage matters of individual health for licensed independent practitioners which are separate from actions taken for disciplinary purposes. The standard focuses on the education of physicians to recognize issues in others and encourages self-referral to facilitate confidential diagnosis, treatment, and rehabilitation by assisting a practitioner to retain and regain optimal professional functioning consistent with the protection of patients. If it is determined, however, that a physician is unable to practice safely, The Joint Commission standard calls for the matter to be reported to the medical staff leadership for appropriate corrective action.[28]

WORK GROUP MEETINGS

To fulfill the directive of Policy D-275.956, the Council on Medical Education, in collaboration with the Senior Physicians Section, identified organizations to participate in a joint effort to develop guidelines for screening and assessing the late career physician. As summarized below, a work group meeting and two conference calls were convened to develop a research agenda that could guide those interested in this field and serve as the basis for guidelines supported by research.

March 16, 2016 Work Group Meeting

The work group meeting, held March 16, 2016, brought together key stakeholders that represented physicians, medical specialty societies, accrediting and certifying organizations, hospitals and other health care institutions, and patient advocates as well as content experts who research physician competence and administer assessment programs. Work group participants concurred that this first meeting raised important issues related to the rationale for developing guidelines to screen and assess the competence and practice performance of late career physicians, which is challenging for a number of reasons. Discussion centered around the evidence and factors related to competency and aging physicians, existing and needed policies, screening and assessment approaches, and legal requirements and challenges. Although current evidence and initial research pointed toward the need for developing guidelines, most work group participants felt that additional information/data should be gathered on aging physicians' competence and practice performance. In addition, the participants felt that a set of guiding principles should be developed to reflect the values and beliefs underlying any guidelines that may be developed for screening and assessing late career physicians.

July 19, 2016, Work Group Conference Call

The purpose of this conference call was to convene a smaller group of participants to develop guiding principles to support the guidelines to screen and assess late career physicians. During the call, the conversation focused upon the thresholds at which screening/assessment should be required. Although physicians of all ages can be assessed "for cause," the group discussed whether age alone is a sufficient rationale for monitoring beyond what is typical for all physicians. Other factors discussed included the influence of practice setting and medical specialty, as well as the metrics and standards for different settings that would have to be developed to determine at "what age" and "how do you test," etc. The need for surveillance, associated risk factors, and the ability to take appropriate corrective steps, if needed, were also discussed. It was noted that there is a need to be able to fairly and equitably identify physicians who may need help while assuring patient safety. It was also noted that very few hospitals have specific age guidelines, and evidence shows that the number of disciplinary actions increases between ages 65 and 70. The cost of and who will pay for screening/assessments were also discussed.

The group felt that more information and data were needed before the guiding principles could be finalized and agreed to reconvene after gathering more information and studying evidence-based data from the United States and other countries related to age and risk factors.

December 15, 2017, Work Group Conference Call

The purpose of this conference call was to reconvene the same smaller group of participants to review the literature and data that had been gathered and finalize guiding principles to support the guidelines to screen and assess late career physicians. Background information to help guide the guiding principles included:

1. Results from a survey of members of the Federation of State Medical Boards (FSMB), Council of Medical Specialty Societies (CMSS), and International Association of Medical Regulatory Authorities (IAMRA) regarding the screening and assessment of late career physicians.

2. A literature review of available data related to late career physician screening and assessment, focusing on international work in this area.

3. Data from large health systems regarding their screening and assessment policies and procedures.

Survey Results Related to Screening and Assessing Late Career Physicians

To support the development of guiding principles, data were gathered through surveys of professional associations (CMSS), state medical boards (FSMB), and international regulatory authorities (IAMRA). The goal was to learn if these organizations had processes in place to screen and assess late career physicians for clinical or cognitive competence and, if not, whether they had considered developing such processes.

The survey data showed that most respondents were not screening or assessing late career physicians, although a slightly larger number of respondents have thought about the issues around doing so.

Most respondents did not have clinical or cognitive screening/competence assessment policies in place. In addition, most did not know (42, or 46.7 percent) or were unsure (26, or 28.9 percent) whether other organizations had age-based screening in place. Regarding whether age-based screening should be included within physician wellness programs, only 28 (32.9 percent) said yes and nine (10.6 percent) no, while more than half, or 48 (56.5 percent) were unsure.

Respondents were asked if their organizations/boards offered educational resources regarding the effects of age on physician practice; eight (9.2 percent) said yes, 72 (82.8 percent) said no, and seven (8.0 percent) were unsure. The survey also asked organizations if they were interested in resources that promoted physician awareness of screening aging physicians in practice. Very few groups offered these types of resources, but 100 percent (11) of IAMRA respondents, 60.8 percent (31) of FSMB respondents, and 25 percent (3) of CMSS respondents were interested in offering them.

HIGHLIGHTS FROM THE LITERATURE REVIEW

As summarized below, the current literature on age and risk factors associated with the assessment of late career physicians (in the United States and internationally) is significant and offers some direction for appropriate solutions to this challenge.

Recently published peer-reviewed studies focus on institutional policies related to cognitive assessment of late career physicians. Dellinger et al. concluded that as physicians age, a required cognitive evaluation combined with a confidential, anonymous feedback evaluation by peers and coworkers, including a focus on wellness and competence, would be beneficial both to physicians and their patients.[29] The authors also recommended that large professional organizations identify a range of acceptable policies to address the aging physician, while leaving institutions the flexibility to customize the approach.[29] Hickson et al. suggested that evaluation tools be integrated into an evidence-based longitudinal assessment of cognitive and behavioral skills that allows for reliable determination of a physician's ability to practice.[30] However, the process of identification of physicians with declining cognitive and clinical skills must be done with an awareness of laws protecting colleagues from discrimination.[30] Institutions such as Cooper University Health Care in Camden, New Jersey, are developing late career practitioner policies that include cognitive assessment along with peer review and medical assessment to assure both the hospital and physicians that physician competency is present and that physicians can continue to practice with confidence.[31]

Studies related to the utility of professionalism, self-reporting, and peer review in heading off competency issues indicate that these methods are not always reliable. For example, DesRoches et al. found that more than one-third of physicians were not clear on their obligation to report a colleague who is impaired or incompetent, one-third were unprepared to deal with such colleagues, and many appeared to not take action. Among the 17% of physicians who reported being aware of an impaired or incompetent colleague, one-third said that they did not report that individual.[25,32,33] Since early "red flags" of cognitive impairment may include prescription errors, billing mistakes,

irrational business decisions, skill deficits, patient complaints, office staff observations, unsatisfactory peer review, patient injuries, or lawsuits, Soonsawat et al. encouraged improved reporting of impaired physicians by patients, peers, and office staff.[4]

A study that utilized the national Patient Advocacy Report System (PARS®) database showed that patients may provide an important source of information for health care organizations interested in identifying professionals with evidence of cognitive impairment.[34] LoboPrabhu et al. suggested that either screening for cognitive impairment be implemented at a certain age or that rigorous evaluation after lapses in standard of care be the norm, regardless of age.[35]

Any screening process needs to achieve a balance between protecting patients from harm due to substandard practice while ensuring fairness to physicians and avoiding any unnecessary reductions in workforce.[5] A recent study of U.S. late career surgeons showed that a steady proportion of surgeons, even in the oldest age group (>65), are still learning new surgical innovations and participating in challenging cases.[36] Individual and institutional considerations require a dialogue among the interested parties to optimize the benefits while minimizing the risks for both.[37-38]

In 2018, the Society of Surgical Chairs (SCS) conducted an anonymous survey of its membership. The survey respondents defined an age for an aging surgeon as follows: 25 (53 percent) selected 65 years of age and 14 (30 percent) selected 70 years of age, while none believed that surgeons younger than 60 years would be considered an aging surgeon.[39] These results are consistent with a 2013 Report from the Coalition for Physician Enhancement Conference in which 72 percent of their respondents recommended screening beginning at ages 65 to 70 years.[9, 39] In 2019, the SCS released transition recommendations for the senior surgeon which include mandatory cognitive and psychomotor testing of surgeons by age 65, possibly as part of regular professional practice evaluations; discussions with surgeons about career transition starting early in their careers; careful consideration of the financial needs, work commitments, and various concerns of retiring surgeons; and creation of opportunities for senior surgeons in modified clinical or nonclinical roles (e.g., teaching, mentoring, or coaching and/or administrative).[72]

The international community continues to address this topic. In Canada, the aging medical workforce presents a challenge for medical regulatory authorities charged with protecting the public from unsafe practice. However, Adler and Constantinou argued that normal aging is associated with some cognitive decline as part of the aging process, but physicians, as highly educated individuals with advanced degrees, may be less at risk.[20]

A review of the aging psychiatric workforce in Australia showed how specific cognitive and other skills required for the practice of psychiatry vary from those applied by procedural specialists.[40] In 2017, the Medical Board of Australia proposed requiring physicians to undergo peer review and health checks at age 70 and every three years thereafter.[41] There is some uniformity in the way that Australian regulatory bodies deal with impairment that supports the dual goals of protecting the public and rehabilitating the physician.[42] However, there are no agreed-upon guidelines to help medical boards decide what level of cognitive impairment in a physician may put the public at risk.[20] In Australia, the primary approach to dealing with older physicians (age 55 and older) is individualized and multi-level, beginning with assessment, and followed by rehabilitation where appropriate; secondary measures proposed for older impaired physicians include early notification and facilitation of career planning and timely retirement.[42]

It is the responsibility of licensing bodies in New Zealand, Canada, and the United Kingdom to use reasonable methods to determine whether performance remains acceptable.[43] For example, the College of Physicians and Surgeons of Ontario (Canada) assesses all practicing physicians not assessed in the last five years at age 70 and then every five years as long as they are in active practice, via chart review.[44, 45] However, high performance by all physicians throughout their careers cannot be fully ensured, and so it is not clear that an age threshold is the best method of assessment

A better understanding of physician aging and cognition can inform more effective approaches to continuous professional development and lifelong learning in medicine—a critical need in a global economy, where changing technology can quickly render knowledge and skills obsolete.[8] The development of continuing board certification programs provides an opportunity to study the knowledge base across the professional lifespan of physicians.[46, 47] For example, a recent study of initial certification and recertification examinees in the subspecialty of forensic psychiatry, using a common item test question bank, compared two examinee groups' performance and demonstrated that performance for those 60 and older was similar to that of those younger than 50. Diplomates recertifying for the second time outperformed those doing so for the first time.[48]

The Royal Australasian College of Surgeons developed strategies to support late career surgeons over 65 years of age (expected to be about 25 percent of surgeons by 2050). It also wrote a position statement that provides clear guidelines to aging surgeons, with a focus on continuing professional development.[49, 50] An assessment of the competence of practicing physicians in New Zealand, Canada, and the United Kingdom showed that maintenance of professional standards by continuing education did not identify the poorly performing physician; rather, assessment of clinical performance was needed.[43] Therefore, the most common approach to assessment may be responsive—following a complaint—or periodic, either for all physicians or for an identified high-risk group. However, a single, valid, reliable, and practical screening tool is not available.[43]

A review of the European literature to explore the effects of aging on surgeons' performance and to identify current practical methods for transitioning surgeons out of practice at the appropriate time and age was completed. The reviewers suggested that competence should be assessed at an individual level, focusing on functional ability over chronological age; this may inform retirement policies for surgeons, which differ worldwide.[36] Research conducted in Canada suggested that some interventions (external support, deliberate practice, and education and testing) might prove successful in remediating older physicians, who should be tested more thoroughly.[27]

Careful planning, innovative thinking, and the incorporation of new patterns of medical practice are all part of this complex transition into retirement in the United States.[37, 51] A literature review that looked at retirement ages for doctors in different countries found that most countries had no mandatory retirement age for doctors.[52] Anecdotal reports published in the *British Medical Journal* suggested that the decision to retire is getting harder for some physicians because requirements for reappraisal and other barriers are discouraging some from considering part-time work after retirement.[53, 54] In Canada, Ireland, and India, the retirement age (65) is limited to public sectors only, but older physicians can continue to practice in the private sector.[52] In Russia and China, the mandated retirement age is 60 for men and 55 for women.[52]

Studies show that doctors can mitigate the impact of cognitive decline by ceasing procedural work, allocating more time to each patient, using memory aids, seeking advice from trusted colleagues, and seeking second opinions.[20] Peisah et al. (Australia) proposed a range of secondary and primary prevention measures for dealing with the challenge of the older impaired doctor; these included educating the medical community, encouraging early notification, and facilitating career planning and timely retirement of older doctors.[42] Racine (Canada) suggested that physicians retire before health or competency issues arise.[55] Lee (Canada) suggested that older practicing physicians consider slowing down in aspects of practice that require rapid cognitive processing and listen carefully to the concerns of colleagues, patients, friends, and family.[56] The University of Toronto, Department of Surgery, has developed Guidelines for Late Career Transitions that require each full-time faculty surgeon to undergo an annual assessment of academic and surgical activity and productivity. As surgeons age, the University creates individual plans for a decrease in on-call surgical responsibilities and encourages late career surgeons to engage in greater levels of teaching, research, and administration.[57]

How Some U.S. Organizations Are Addressing the Screening and Assessment of Competency of Late Career Physicians

The public call for increased accountability led regulators and policymakers to consider implementing some form of age-based competency screening to assure safe and effective practice.[9] The work group concurred that it was important to investigate existing screening practices and policies of state medical and osteopathic boards, medical societies, large U.S. health systems, and remediation programs. Some of the more significant findings are summarized below.

All physicians must meet state licensure requirements to practice medicine in the United States. In addition, some hospitals and medical systems have initiated age-based screening,[18, 19] but there is no national standard. In many instances, older physicians are not required to pass a health assessment or an assessment of competency or quality performance in their area or scope of practice.

The American College of Surgeons (ACS) explored the challenges of assessing aging surgeons. Recognizing that the average age of the practicing surgeon is rising and approximately one-third of all practicing surgeons are 55 and older, the ACS was concerned that advanced age may influence competency and occupational performance. In January 2016, the ACS Board of Governors' Physician Competency and Health Workgroup published a statement that emphasized the importance of high-quality and safe surgical care.[56] The statement recognized that surgeons are not immune to age-related decline in physical and cognitive skills and stressed the importance of a healthy lifestyle. The ACS

recommended that, starting at ages 65 to 70, surgeons undergo a voluntary and confidential baseline medical examination and visual testing for overall health assessment, with regular reevaluation thereafter. In addition, the ACS encouraged surgeons to voluntarily assess their neurocognitive function using confidential online tools and asserted a professional obligation to disclose any concerning findings, as well as inclusion of peer review reports, in the recredentialing process.[58]

The American College of Obstetricians and Gynecologists (ACOG) recommends that when evaluating an aging physician, focus should be placed on the quality of patient care.[59] ACOG's recommendations regarding the late career obstetrician-gynecologist also state that: 1) it is important to establish systems-based competency assessments to monitor and address physicians' health and the effect age has on performance and outcomes; 2) workplace adaptations should be adopted to help obstetrician-gynecologists transition and age well in their practice and throughout their careers; and 3) to avoid the potential for legal challenges, hospitals should address the provisions of the Age Discrimination in Employment Act, making sure that assessments are equitably applied to all physicians, regardless of age.[59]

At Kaiser Permanente, within its federation of contracted Permanente Medical Groups, physicians are classified as "in partnership" or "incorporated" based on how the Permanente Medical Group in the applicable geographic region has been established as a legal entity. In a region where a partnership exists, such as Southern California, the normal retirement age as a partner is at the end of the calendar year when one turns 65.

The University of California, San Diego, Physician Assessment and Clinical Education (PACE) Program is the largest assessment and remediation program for health care professionals in the country. Recently, PACE conducted a pilot screening project to assess physicians. Thirty volunteer physicians, aged 50 to 83, were recruited to participate in the screening regimen. Preliminary data analysis showed that some late career physicians performed less than optimally (seven of 30 participants). However, the pilot study did not have sufficient power to reach significance. Also, it did not include enough participants to provide a breakdown on specialties.[60]

How Some Hospitals are Addressing the Screening and Assessment of Competency of Late Career Physicians

Studies show that a more proactive and physician-friendly approach for evaluating physicians of all ages is to utilize multisource feedback or 360-degree survey screenings, either routinely as part of the recredentialling process or, alternatively, when significant risk factors occur, such as adverse events or patient complaints.[17, 61-67] For the 360-degree screening, physicians are invited to select raters such as colleagues and staff with whom they work, and the chief/leader of the department "validates" the list by ensuring the final rater pool is a comprehensive and representative sample. A 360-degree survey, validated against quality indicators such as malpractice claims and patient satisfaction, is sent to the selected raters so they can provide qualitative and quantitative feedback to the physician. Finally, comments and/or questions associated with cognitive impairment (e.g., seems forgetful about important information), irritability or compromised communication (e.g., overreacts to small mistakes), and competence (e.g., has sound clinical judgment) are scored and compared against national benchmarks for the physician's specialty. Physicians scoring in outlying ranges are referred for a second-line assessment, such as discussions with the clinical supervisor, peer review, practice evaluation, and/or cognitive screening. If that assessment is positive for significant findings, the physician may be referred for a third-line evaluation, including physical or mental health testing and/or a comprehensive neurocognitive assessment. The Medical Staff Peer Review Committee assesses the findings in terms of the potential to impair the physician's quality of care and makes a recommendation to the credentials committee. The assessed physician is encouraged to review the survey results with a trained coach.

Multiple studies show that a very small percentage (2 percent to 8 percent) of clinicians are associated with patterns of unprofessional behavior and performance. Of those physicians who receive awareness interventions, most respond (>75 percent), but some who do not change may be affected by some form of cognitive impairment.[30] The 360-degree survey process is currently used at hospitals such as Massachusetts General Hospital, Brigham and Women's Hospital, and University of Michigan to assess physicians on various core competencies.[67]

The Medical Executive Committee at Yale New Haven (Connecticut) Hospital elected to require a neurologic and ophthalmologic examination of all applicants for reappointment to the medical staff who are aged 70 years and older.[68,69] From October 2017 through January 2019, 141 clinicians underwent a neuropsychological assessment. After completion of screening and/or full neuropsychological testing, the hospital's Medical Staff Review Committee determined that 18 (12.7 percent) of the clinicians were found to have impaired cognition, raising concerns about their

clinical abilities.[68] None of these 18 clinicians had previously been brought to the attention of medical staff leadership because of performance problems.[68] These 18 clinicians elected to discontinue their practice or moved into a closely proctored environment. All of these physicians agreed to make changes in their practice voluntarily.[68] In early 2020, a lawsuit was filed by the U.S. Equal Employment Opportunity Commission (EEOC) on behalf of the medical staff alleging that Yale New Haven Hospital violated federal law by adopting and implementing a discriminatory "Late Career Practitioner Policy".[70]

Another lawsuit was filed by the Equal Employment Opportunity Commission (EEOC) against Hennepin Healthcare System, Inc., a healthcare provider in Hennepin County, Minnesota, to resolve investigations conducted by the EEOC under the Age Discrimination in Employment Act of 1967, as amended (ADEA), and the Americans with Disabilities Act of 1990, as amended (ADA). The EEOC investigation determined Hennepin's "Late Career Practitioner Policy" discriminated against practitioners aged 70 and older which required them to participate in age-related screenings. In January 2021, the EEOC announced a settlement which will provide monetary relief to affected staff for out-of-pocket costs not covered by insurance. For the next three years, Hennepin must report to the EEOC on formal complaints related to age discrimination, unlawful medical inquiries, and/or any such retaliations, and notify its employees of the resolution.[71]

PROPOSED GUIDING PRINCIPLES

The Council on Medical Education proposes a set of guiding principles as a basis for developing guidelines for the screening and assessment of late career physicians. The underlying assumption is that guidelines must be based on evidence and on the principles of medical ethics. Furthermore, guidelines should be relevant, supportive, fair, equitable, and transparent, and not result in undue cost or burden to late career physicians. The primary driver for the establishment of guidelines should be to fulfill the ethical obligation of the profession to the health of the public and patient safety.

The Council developed the following eight guiding principles with extensive feedback from members of the AMA Work Group on Assessment of Senior/Late Career Physicians, as well as feedback from other content experts who research physician competence and administer screening and assessment programs.

1. *Evidence-based:* Guidelines for assessing and screening late career physicians should be based on evidence of the importance of cognitive changes associated with aging that are relevant to physician performance. Some physicians may suffer from declines in practice performance with advancing age. Research also suggests that the effects of age on an individual physician's competency can be highly variable, and since wide variations are seen in cognitive performance with aging, age alone should not be a precipitating factor.

2. *Ethical:* Guidelines should be based on the principles of medical ethics. Self-regulation is an important aspect of medical professionalism. Physicians should be involved in the development of guidelines/standards for monitoring and assessing both their own and their colleagues' competency.

3. *Relevant:* Guidelines, procedures, or methods of assessment should be relevant to physician practices to inform judgments and provide feedback regarding physicians' ability to perform the tasks specifically required in their practice environment.

4. *Accountable:* The ethical obligation of the profession to the health of the public and patient safety should be the primary driver for establishing guidelines and informing decision making about physician screening and assessment results.

5. *Fair and equitable:* The goal of screening and assessment is to optimize physician competency and performance through education and modifications to a physician's practice environment or scope. Unless public health or patient safety is directly threatened, physicians should retain the right to modify their practice environment to allow them to continue to provide safe and effective care.

6. *Transparent:* Guidelines, procedures, or methods of screening and assessment should be transparent to all parties, including the public. Physicians should be aware of the specific methods used, performance expectations and standards against which performance will be judged, and the possible outcomes of the screening or assessment.

7. *Supportive:* Education and/or remediation practices that result from screening and /or assessment procedures should be supportive of physician wellness, ongoing, and proactive.

8. *Cost conscious:* Procedures and screening mechanisms that are distinctly different from "for cause" assessments should not result in undue cost or burden to late career physicians providing patient care. Hospitals and health care systems should provide easily accessible screening assessments for their employed late career physicians. Similar procedures and screening mechanisms should be available to late career physicians who are not employed by hospitals and health care systems.

AMA POLICY

AMA policy urges members of the profession to discover and rehabilitate if possible or exclude if necessary, physicians whose practices are incompetent and to fulfill their responsibility to the public and to their profession by reporting to the appropriate authority those physicians who, by being impaired, are in need of help or whose practices are incompetent (H-275.998). AMA policy urges licensing boards, specialty boards, hospitals and their medical staffs, and other organizations that evaluate physician competence to inquire only into conditions that impair a physician's current ability to practice medicine (H-275.978[6]). AMA policy also reaffirms that it is the professional responsibility of every physician to participate in voluntary quality assurance, peer review, and CME activities (H-300.973 and H-275.996). These and other related policies are shown in the Appendix.

SUMMARY AND RECOMMENDATIONS

The Council on Medical Education concurs that physicians should be allowed to remain in practice as long as patient safety is not endangered and they are providing appropriate and effective care. However, data and anecdotal information support guidelines for the screening and assessment of late career physicians. The variations in cognitive skills as physicians age, as well as the changing demographics of the physician workforce, are key factors contributing to this need. Physicians must lead in developing standards for monitoring and assessing the competency of themselves and their peers; otherwise, other entities, may move for nationally implemented guidelines and a mandatory retirement age that lack a solid evidence base. The guiding principles outlined in this report provide direction and serve as a reference for setting priorities and standards for further action.

It is important to note that this report does not mandate an assessment. Its intent, rather, is to outline a set of guiding principles to provide direction and serve as a reference for guidelines for screening and assessing late career physicians.

The Council on Medical Education therefore recommends that the following recommendations be adopted and that the remainder of the report be filed.

1. That our American Medical Association (AMA) support the following Guiding Principles on the Assessment of Physicians Across the Professional Continuum:

   a) Evidence-based: Guidelines for screening and assessing physicians across the professional continuum should be based on evidence of the importance of cognitive changes associated with aging and other factors that may impact physician performance. Some physicians may suffer from declines in practice performance with advancing age, acquired disability, or other influences. Research suggests that the effect of age on an individual physician's competency can be highly variable. Since wide variations are seen in cognitive performance with aging, age alone should not be a precipitating factor.

   b) Ethical: Guidelines should be based on the principles of medical ethics. Self-regulation is an important aspect of medical professionalism. Physicians should be involved in the development of guidelines and standards for monitoring and assessing both their own and their colleagues' competency.

   c) Relevant: Guidelines, procedures, or methods of assessment should be relevant to physician practices to inform judgments and provide feedback regarding physicians' ability to perform the tasks specifically required in their practice environment.

d) Accountable: The ethical obligation of the profession to the health of the public and patient safety should be the primary drivers for establishing guidelines and informing decision making about physician screening and assessment results.

e) Fair and equitable: The goal of screening and assessment is to optimize physician competenc and performance through education, remediation, and modifications to a physician's practice environment or scope. Unless public health or patient safety is directly threatened, physicians should retain the right to modify their practice environment to allow them to continue to provide safe and effective care.

f) Transparent: Guidelines, procedures, or methods of screening and assessment should be transparent to all parties, including the public. Physicians should be aware of the specific methods used, performance expectations, and standards against which performance will be judged and the possible outcomes of the screening and assessment.

g) Supportive: Education and/or remediation practices that result from screening and assessment procedures should be proactive, ongoing, and supportive of physician well-being.

h) Nonburdensome: Procedures and screening mechanisms that are distinctly different from "for cause" assessments should not result in undue cost or burden to physicians. Hospitals and health care systems should provide easily accessible screening assessments for their employed physicians. Similar procedures and screening mechanisms should be available to physicians who are not employed by hospitals and health care systems.

i) Due Process: Physicians subjected to screening and assessment must be afforded due process protections, including a fair and objective hearing, before any action may be taken against the physician.

2. That our AMA encourage the Council of Medical Specialty Societies and other interested organizations to develop educational materials regarding decline of cognitive and psychomotor performance throughout a physician's career and the resulting impact on the quality and safety of physician practice.

3. That Policy D-275.956, "Assuring Safe and Effective Care for Patients by Senior/Late Career Physicians," be rescinded, as having been fulfilled by this report.

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APPENDIX - AMA Policies

D-275.956, "Assuring Safe and Effective Care for Patients by Senior/Late Career Physicians"
Our American Medical Association: (1) will identify organizations that should participate in the development of guidelines and methods of screening and assessment to assure that senior/late career physicians remain able to provide safe and effective care for patients; and (2) will convene organizations identified by the AMA to work together to develop preliminary guidelines for assessment of the senior/late career physician and develop a research agenda that could guide those interested in this field and serve as the basis for guidelines more grounded in research findings.
(CME Rep. 5, A-15)

H-275.936, "Mechanisms to Measure Physician Competency"
Our AMA: (1) continues to work with the American Board of Medical Specialties and other relevant organizations to explore alternative evidence-based methods of determining ongoing clinical competency; (2) reviews and proposes improvements for assuring continued physician competence, including but not limited to performance indicators, board certification and recertification, professional experience, continuing medical education, and teaching experience; and (3) opposes the development and/or use of "Medical Competency Examination" and establishment of oversight boards for current state medical boards as proposed in the fall 1998 Report on Professional Licensure of the Pew Health Professions Commission, as an additional measure of physician competency.

(Res. 320, I-98 Amended: Res. 817, A-99 Reaffirmed: CME Rep. 7, A-02 Reaffirmed: CME Rep. 7, A-07 Reaffirmed: CME Rep. 16, A-09 Reaffirmed in lieu of Res. 313, A-12 Modified: Res. 309, I-16)

H-275.996, "Physician Competence"
Our AMA: (1) urges the American Board of Medical Specialties and its constituent boards to reconsider their positions regarding recertification as a mandatory requirement rather than as a voluntarily sought and achieved validation of excellence; (2) urges the Federation of State Medical Boards and its constituent state boards to reconsider and reverse their position urging and accepting specialty board certification as evidence of continuing competence for the purpose of re-registration of licensure; and (3) favors continued efforts to improve voluntary continuing medical education programs, to maintain the peer review process within the profession, and to develop better techniques for establishing the necessary patient care data base. (CME Rep. J, A-80; Reaffirmed: CLRPD Rep. B, I-90; Reaffirmed: Sunset Report, I-00; Reaffirmed: CME Rep. 7, A-02; Reaffirmed: CME Rep. 7, A-07; Reaffirmed: CME Rep. 16, A-09; Reaffirmed in lieu of Res. 302, A-10; Reaffirmed in lieu of Res. 320, A-14)

H-275.998, "Physician Competence"
Our AMA urges: (1) The members of the profession of medicine to discover and rehabilitate if possible, or to exclude if necessary, the physicians whose practices are incompetent. (2) All physicians to fulfill their responsibility to the public and to their profession by reporting to the appropriate authority those physicians who, by being impaired, need help, or whose practices are incompetent. (3) The appropriate committees or boards of the medical staffs of hospitals which have the responsibility to do so, to restrict or remove the privileges of physicians whose practices are known to be incompetent, or whose capabilities are impaired, and to restore such physicians to limited or full privileges as appropriate when corrective or rehabilitative measures have been successful. (4) State governments to provide to their state medical licensing boards resources adequate to the proper discharge of their responsibilities and duties in the recognition and maintenance of competent practitioners of medicine. (5) State medical licensing boards to discipline physicians whose practices have been found to be incompetent. (6) State medical licensing boards to report all disciplinary actions promptly to the Federation of State Medical Boards and to the AMA Physician Masterfile. (Failure to do so simply allows the incompetent or impaired physician to migrate to another state, even after disciplinary action has been taken against him, and to continue to practice in a different jurisdiction but with the same hazards to the public.) (CME Rep. G, A-79; Reaffirmed: CLRPD Rep. B, I-89; Reaffirmed: Sunset Report, A-00; Reaffirmation I-03; Reaffirmed: CME Rep. 2, A-13)

H-275.978, "Medical Licensure"
The AMA: (1) urges directors of accredited residency training programs to certify the clinical competence of graduates of foreign medical schools after completion of the first year of residency training; however, program directors must not provide certification until they are satisfied that the resident is clinically competent;
(2) encourages licensing boards to require a certificate of competence for full and unrestricted licensure;
(3) urges licensing boards to review the details of application for initial licensure to assure that procedures are not unnecessarily cumbersome and that inappropriate information is not required. Accurate identification of documents and applicants is critical. It is recommended that boards continue to work cooperatively with the Federation of State Medical Boards to these ends;
(4) will continue to provide information to licensing boards and other health organizations in an effort to prevent the use of fraudulent credentials for entry to medical practice;
(5) urges those licensing boards that have not done so to develop regulations permitting the issuance of special purpose licenses. It is recommended that these regulations permit special purpose licensure with the minimum of educational requirements consistent with protecting the health, safety and welfare of the public;
(6) urges licensing boards, specialty boards, hospitals and their medical staffs, and other organizations that evaluate physician competence to inquire only into conditions which impair a physician's current ability to practice medicine. (BOT Rep. I-93-13; CME Rep. 10 - I-94);
(7) urges licensing boards to maintain strict confidentiality of reported information;
(8) urges that the evaluation of information collected by licensing boards be undertaken only by persons experienced in medical licensure and competent to make judgments about physician competence. It is recommended that decisions concerning medical competence and discipline be made with the participation of physician members of the board;
(9) recommends that if confidential information is improperly released by a licensing board about a physician, the board take appropriate and immediate steps to correct any adverse consequences to the physician;
(10) urges all physicians to participate in continuing medical education as a professional obligation;
(11) urges licensing boards not to require mandatory reporting of continuing medical education as part of the process of reregistering the license to practice medicine;
(12) opposes the use of written cognitive examinations of medical knowledge at the time of reregistration except when there is reason to believe that a physician's knowledge of medicine is deficient;
(13) supports working with the Federation of State Medical Boards to develop mechanisms to evaluate the competence of physicians who do not have hospital privileges and who are not subject to peer review;
(14) believes that licensing laws should relate only to requirements for admission to the practice of medicine and to assuring the continuing competence of physicians, and opposes efforts to achieve a variety of socioeconomic objectives through medical licensure regulation;
(15) urges licensing jurisdictions to pass laws and adopt regulations facilitating the movement of licensed physicians between licensing jurisdictions; licensing jurisdictions should limit physician movement only for reasons related to protecting the health, safety and welfare of the public;

(16) encourages the Federation of State Medical Boards and the individual medical licensing boards to continue to pursue the development of uniformity in the acceptance of examination scores on the Federation Licensing Examination and in other requirements for endorsement of medical licenses;
(17) urges licensing boards not to place time limits on the acceptability of National Board certification or on scores on the United State Medical Licensing Examination for endorsement of licenses;
(18) urges licensing boards to base endorsement on an assessment of physician competence and not on passing a written examination of cognitive ability, except in those instances when information collected by a licensing board indicates need for such an examination;
(19) urges licensing boards to accept an initial license provided by another board to a graduate of a US medical school as proof of completion of acceptable medical education;
(20) urges that documentation of graduation from a foreign medical school be maintained by boards providing an initial license, and that the documentation be provided on request to other licensing boards for review in connection with an application for licensure by endorsement;
(21) urges licensing boards to consider the completion of specialty training and evidence of competent and honorable practice of medicine in reviewing applications for licensure by endorsement; and
(22) encourages national specialty boards to reconsider their practice of decertifying physicians who are capable of competently practicing medicine with a limited license.
(CME Rep. A, A-87 Modified: Sunset Report, I-97 Reaffirmation A-04 Reaffirmed: CME Rep. 3, A-10 Reaffirmation I-10 Reaffirmed: CME Rep. 6, A-12 Appended: Res. 305, A-13 Reaffirmed: BOT Rep. 3, I-14)

2. A STUDY TO EVALUATE BARRIERS TO MEDICAL EDUCATION FOR TRAINEES WITH DISABILITIES

Reference committee hearing: see report of Reference Committee C.

HOUSE ACTION: RECOMMENDATIONS ADOPTED AS FOLLOWS
REMAINDER OF REPORT FILED
See Policies TBD

American Medical Association (AMA) Policy D-295.929, "A Study to Evaluate Barriers to Medical Education for Trainees with Disabilities," directs our AMA to "work with relevant stakeholders to study available data on: (1) medical trainees with disabilities and consider revision of technical standards for medical education programs; and (2) medical graduates with disabilities and challenges to employment after training."

This report, which is in response to this directive, includes: 1) a brief summary of the Americans with Disabilities Act and its later amendment, as well as a summary of Section 504 of the Rehabilitation Act of 1973; 2) a review of available data on the prevalence of disabilities among medical students, residents, and physicians; 3) examples of accommodations made for medical learners and physicians as well as types of barriers; and 4) a discussion of proposed recommendations.

BACKGROUND

The Americans with Disabilities Act (ADA), which was enacted in 1990 and amended in 2008, protects people with disabilities from discrimination; works to provide fair access to goods, services, and education; and promotes equal opportunity. The ADA was amended to specify and expand on who is considered disabled and lowered the burden of proof to establish oneself as a person with a disability. The law requires an interactive process between a job applicant (or employee or student) and the employer (or educational program) to share information about the nature of the disability and limitations that may affect the individual's ability to perform essential duties. The employer (or educational program), in turn, must engage in a flexible dialogue that addresses the employee's specific disability and investigate reasonable accommodations that allow equal access to the work (or educational) environment.[1] Section 504 of the Rehabilitation Act of 1973 works with the ADA, in that it prohibits discrimination against an otherwise qualified person with a disability in programs or activities that receive federal funding.[2,3]

In the amended ADA, a disability is defined as a "physical or mental impairment that substantially limits one or more life activities; a record (or past history) of such an impairment; or being regarded as having a disability."[4] This contrasts with an impairment, which is a loss of function that results from some cause, injury, or body part. An impairment does not need to significantly restrict a major life activity to be considered as substantially limiting and

not every impairment will qualify as a disability. An individualized assessment is required to determine if an individual's impairment substantially limits a major life activity as compared to most people in the general population. With the exception of eyeglasses or contact lenses, a determination of whether an impairment substantially limits a major life activity is made without regard to improvement resulting from mitigating factors, such as medication or hearing aids. Non-ameliorative effects also may be considered when determining if an impairment is substantially limiting, including negative side effects of medication or burdens associated with following a particular treatment regimen.[4,5]

Medical School Accreditation Standards Regarding Student Disabilities

The Liaison Committee on Medical Education (LCME) accredits medical education programs leading to the MD degree in the United States. Requirements concerning medical students with disabilities are addressed in Standard 10.5: A medical school develops and publishes technical standards for the admission, retention, and graduation of applicants or medical students in accordance with legal requirements. Element 10.5 provides further detail:

> Element 10.5: Technical standards for the admission, retention, and graduation of applicants or medical students: A statement by a medical school of the: 1) essential academic and non-academic abilities, attributes, and characteristics in the areas of intellectual-conceptual, integrative, and quantitative abilities; 2) observational skills; 3) physical abilities; 4) motor functioning; 5) emotional stability; 6) behavioral and social skills; and 7) ethics and professionalism that a medical school applicant or enrolled medical student must possess or be able to acquire, with or without reasonable accommodation, in order to be admitted to, be retained in, and graduate from that school's medical educational program.[6]

In addition, schools are to communicate Standard 10.5 in hard copy and/or online in a manner that is easily available to and accessible by the public.

In assessing compliance with Standard 10.5, the LCME survey team during the site visit (typically occurring every eight years) will ask the school to provide the following information:[7]

1. How does the medical school disseminate its technical standards for admission, retention, and graduation to potential and actual applicants, enrolled medical students, faculty, and others?

2. How are medical school applicants and/or medical students expected to document that they are familiar with and capable of meeting the technical standards, with or without accommodation (e.g., by formally indicating that they have received and reviewed the standards)?

In addition, Element 3.4, Anti-Discrimination Policy, requires that a medical school has policy in place to ensure that it does not discriminate on the basis of age, disability, gender identity, national origin, race, religion, sex, sexual orientation, or any basis protected by federal law. This language, revised by the LCME in October 2019, is in effect for schools in the academic year 2021-2022. Schools will be asked to describe how their anti-discrimination policy is made known to members of the medical education community.

The American Osteopathic Association's Commission on Osteopathic College Accreditation (COCA) accredits medical education programs leading to the DO degree in the United States. Element 9.1 addresses admissions policies for a college of osteopathic medicine (COM):

> A COM must establish and publish, to the public, admission requirements for potential applicants to the osteopathic medical education program and must use effective policies and procedures for osteopathic medical student selection for admission and enrollment, including technical standards for admissions. A COM must tie all admissions to the COM mission.
>
> Submission 9.1: Admission Policy
> 1. Provide all admission requirements and policies and procedures for osteopathic medical student selection and enrollment.
> 2. Provide a copy of the technical standards required of matriculants.
> 3. Provide a public link to where the documents are published.

In addition, Element 1.5 addresses non-discrimination:

> A COM must demonstrate non-discrimination in the selection of administrative personnel, faculty and staff, and students based on race, ethnicity, color, sex, sexual orientation, gender, gender identity, national origin, age or disabilities, and religion.[8]

Furthermore, the Educational Council on Osteopathic Principles (ECOP) has recommended non-academic criteria for admission and continued program participation for osteopathic medical students enrolled in DO programs. A "Technical Standards Document," made available through ECOP and distributed by the American Association of Colleges of Osteopathic Medicine (AACOM) defines the reasonable expectations of osteopathic medical students and physicians in performing common and important functions of the osteopathic physician.[9]

Residency/Fellowship Program Accreditation Standards Regarding Trainee Disabilities

The Accreditation Council for Graduate Medical Education (ACGME) accredits residency and fellowship programs and sets requirements for programs as well as the institutions in which training occurs.

The ACGME's Common Program Requirements (CPRs) outline resources that must be provided to residents and fellows.[10] The program, with its sponsoring institution, must ensure a healthy and safe learning and working environment that, among other things, provides "accommodations for residents with disabilities consistent with the Sponsoring Institution's policy." [I.D.2.e]. In addition, the program director and the leadership team must "ensure the program's compliance with the Sponsoring Institution's policies and procedures on employment and non-discrimination" [II.A.4.a).(13)]. Finally, the learning environment must be a "professional, equitable, respectful, and civil environment that is free from discrimination, sexual and other forms of harassment, mistreatment, abuse, or coercion of students, residents, faculty, and staff" [VI.B.6.].

The ACGME's Institutional Requirements delineate the responsibility of the sponsoring institution regarding graduate medical education (GME). Among other services provided to trainees, such as behavioral health counseling, the institution "must have a policy, not necessarily GME-specific, regarding accommodations for disabilities consistent with all applicable laws and regulations." [IV.H.4.][11]

In all situations for UME and GME, accommodations for an individual with a disability are expected, provided that the accommodation does not fundamentally alter the program, service, or activity associated with the job function or if it would impose undue financial or administrative burden upon the program or institution.

PREVALENCE OF DISABILITIES AMONG MEDICAL STUDENTS, RESIDENTS/FELLOWS, AND PHYSICIANS

Among the employed U.S. adult population (ages 16 and older), 5.8 percent report some sort of disability (that is, difficulties with hearing, vision, cognition, mobility, self-care, and independent living). The most commonly reported disability for employed adults is mobility (2.0 percent), followed by hearing (1.8 percent), cognitive (1.7 percent), vision (1.3 percent), independent living (1.0 percent), and self-care (0.4 percent).[12]

Two major surveys have been conducted to assess the prevalence and categories of disabilities among students of MD-granting medical schools. Medical school staff responsible for assisting students with implementing accommodations for their disabilities were surveyed in 2016.[13] Complete data were provided by 89 of 133 schools surveyed. Disabilities were reported for 2.7 percent of total enrollment, ranging from 0 percent to 12 percent. Attention deficit hyperactivity disorder (ADHD) was the most prevalent disability (33.7 percent), followed by learning disabilities (21.5 percent); psychological disabilities, such as depression or anxiety (20.0 percent); chronic health issues (13.1 percent); other functional impairment (3.9 percent); visual impairment (3.0 percent); mobility disability (2.5 percent); and deafness (2.2 percent).

A follow-up survey in 2019 allows a comparison across time for the same schools.[14] Overall, the 87 schools that responded in 2019 with complete data reported that 2,600 students had a disability, representing 4.6 percent of enrollment, a 69 percent increase compared to 2016. Data for the 64 schools that responded to both surveys is presented in the table.

Number of MD students (percent) with a disability, 2016 and 2019

	2016	*2019*
ADHD	369 (32.3)	617 (30.4)
Learning disability	245 (21.4)	371 (18.3)
Psychological disability	233 (20.4)	655 (32.3)
Chronic health disabilities	152 (13.3)	365 (18.0)
Mobility disability	38 (3.3)	74 (3.6)
Visual disabilities	34 (3.0)	46 (2.3)
Deaf or hard of hearing	20 (1.8)	25 (1.2)
Other functional impairment	51 (4.5)	49 (2.4)
Overall disabilities	1,142 (2.7)	2,028 (4.6)

The increase overall, and the changes in the reported type of disability, may represent more students with disabilities being admitted to medical school, more existing students reporting a disability, more complete reporting by the schools, more psychological disability presenting during medical school (the largest difference between years), or a combination of these factors.[14]

A third survey has documented the prevalence and categories of disabilities among students of DO-granting medical schools.[15] Using the same techniques as the surveys of MD-granting schools, 32 eligible DO medical schools were surveyed, and 24 responded. Similar to MD schools, ADHD, psychological disabilities, and chronic health disabilities were most frequently reported. Compared to the total 2019 MD data (not shown), DO-granting schools reported significantly higher rates of ADHD (33.5 percent) among those students with a disability than MD-granting programs (29.1 percent), and lower rates of psychological disability (23.7 percent vs 32.3 percent). Other disabilities were reported at similar rates.

Less is known about the prevalence of disabilities in residents and fellows in GME. A recent survey of academic family medicine departments (n=191) concerning prevalence of residents with disabilities as well as residency program processes for accommodation, found relatively few department chairs reporting having residents in the preceding five years who had a disability. Fifty percent of the 66 respondents reported no resident with a disability, 16.7 percent reported one resident, and 33.3 percent reported two to five residents.[16] There are more than 700 family medicine GME programs in the United States, so these findings may not be representative of family medicine residency programs overall.

The GME environment, in which the learner is also an employee, may discourage trainees from disclosing disabilities, either during the interview for a residency position or after joining the program.[17] Furthermore, the difference in administrative structure in GME, compared to medical school, may challenge residents/fellows seeking accommodation, and thus deter them from reporting a disability.[18] Nonetheless, it can be assumed that disabilities reported in medical school will continue to be experienced by trainees in GME.

Information on the prevalence of disabilities among practicing physicians is also relatively scarce. One survey distributed in 2014 to 148 family medicine department chairs found that 31 (of the 88 respondents) reported faculty with a physical or sensory disability.[19] The most common disabilities reported for the 50 faculty members were mobility, hearing, and mental health problems. Only seven of the department chairs knew of these disabilities at hiring. A similar survey conducted in 2019 found fewer family medicine department chairs reporting faculty members with disabilities (21 chairs reporting out of 68 respondents).[16] Both surveys had low response rates, and it is likely that disability among faculty physicians is under-reported. A national survey of physicians in 2019 included questions regarding disabilities. Of 6,000 physicians (a representative sample), 178 (3.1 percent of the weighted sample) self-identified as having a disability. The most commonly reported disability was a chronic health condition (30.1 percent), followed by psychological (14.2 percent), other disabilities (e.g., essential tremors) (13.4 percent), hearing (12.1 percent), ADHD (10.4 percent), visual (7.8 percent), and learning (2.6 percent). Multiple disabilities were reported by 15.7 percent.[20] The proportion of physicians reporting a disability is considerably lower than that reported by the employed adult population overall[12] and may reflect under-reporting and/or that the profession of medicine is perceived as inhospitable and discouraging to those with disabilities.

EXAMPLES OF ACCOMMODATION

Similar to data on the prevalence of disabilities, information on the types of accommodations provided is more common for medical students than for physicians. The most frequent accommodations reported in 2016 by medical schools for students with disabilities include the following:

- Testing, such as providing extra time and/or low distraction environments (97.8 percent)
- Facilitated learning, such as note takers and/or recorded lectures (69.7 percent)
- Assistive technologies, such as text-to-speech (42.7 percent)
- Clinical, such as leaves of absence and/or relief from overnight call (34.8 percent)
- Housing, such as single rooms and reserved parking (23.6 percent)
- Hearing-related, such as employing a transcriptionist or sign language interpreter (18.0 percent)
- Ergonomic (15.7 percent)[13]

In the follow-up survey in 2019, questions about accommodations were divided into didactic and clinical environments and results were similar. Testing accommodations were most often reported in the didactic years (100 percent of schools), but 75 percent of schools reported this accommodation for the clinical years as well. Facilitated learning was reported only for didactic years by 77.4 percent of schools, as were ergonomic accommodations (35.7 percent). Accommodations in the clinical environment were reported by 68.7 percent of schools.[14] In the similar study of DO-granting schools, all DO students disclosing disability received a form of didactic or clinical accommodations, compared to 93.3 percent of MD students. Accommodations to the clinical environment, such as a decelerated clinical year or release from overnight call, were more frequently provided in MD-granting programs when compared to DO-granting programs (68.7 percent vs 21.7 percent).[15]

New and existing technologies allow trainees to meet standards and work within a clinical setting. For example, amplified and visual stethoscopes, standing wheelchairs, dictation software, and Communication Access Real-Time Translation have allowed students and physicians with disabilities, such as hearing/visual impairment or spinal cord injuries, to earn their medical degrees and enter practice. Intermediaries can also be used in the clinical setting, in which students or physicians direct trained professionals to perform actions that the disabled individuals cannot conduct themselves.[21] An example of an adaptive environment for a deaf medical student in a one-month visiting rotation in emergency medicine has been described in which a designated health care interpreter, captioning added to instructional videos in online learning platforms, an adaptive headset, and specialized medical sign language developed for the rotation (for terms not in American Sign Language) were successfully integrated into the rotation.[1]

In a study of family medicine faculty, the most commonly reported accommodations provided for faculty with disabilities were adjusting the work schedule and providing additional time to complete tasks. Also common was the use of assistive technology and durable equipment.[19]

In a review of medical school technical standards, found online or available upon request, roughly 40 percent of schools provided information on types of accommodations allowed for hearing, vision, and mobility disabilities. Of those, 97 percent allowed auxiliary aids for all three types of disabilities. A slightly smaller number of schools (approximately 85 percent) provided information on whether intermediaries (such as interpreters) were allowed as accommodations; few schools allowed them (approximately 15 percent).[3]

BARRIERS FACED BY TRAINEES

A recent report by the Association of American Medical Colleges (AAMC), "Accessibility, Inclusion, and Action in Medical Education: Lived Experiences of Learners and Physicians with Disabilities,"[18] represents the culmination of in-depth interviews with students, residents, and physicians with disabilities. Several of the report's many recommendations are highlighted below.

The report describes two types of barriers confronting students and residents with disabilities—structural and cultural. Structural barriers include restrictive and outdated policies and procedures, poor understanding of clinical accommodations, a lack of disability and wellness support services, and a physical environment that limits accessibility. These barriers can have immediate and practical implications for trainees.[21] Cultural barriers include the attitudes, beliefs, and values of the medical community.

Medical School Technical Standards and Facilitating Access

The technical standards (TS) that a medical school publishes are used to inform a prospective or current medical student about a school's expectations are for cognitive, sensory, and mobility abilities. The AAMC has released guidelines for TS and a handbook on students with disabilities, but it is up to schools to develop their own standards.[22] There is great variability between schools, with some using inclusive, detailed language and identifying possible accommodations, such as interpreters and transcriptionists. Other schools state, for example, that students need to hear "adequately" for communication and that an intermediary is not appropriate, or that "significant" disabilities must be disclosed. Leaving the definition of "adequately" and "significant" up to a prospective student may deter those with disabilities from applying.[22]

Clear, easily obtainable TS are important for prospective students with disabilities in ascertaining which schools may be welcoming and supportive. In 2016 Zazove et al. published the results of a study to determine the availability of TS in medical schools and evaluated the language used in TS relative to the ADA.[3] Their research covered the years 2012-2014 and included all MD- and DO-granting schools. They found that 84 percent of all schools had TS available on their websites. Ten percent of MD schools and six percent of DO schools did not have TS on their websites or make their TS available even after two inquiries. One-third of schools used language that expressed a willingness to provide accommodations for disabilities, 49 percent used equivocal language, five percent used unsupportive language, and 14 percent did not provide information on accommodations. One-third of schools required full function of hearing, 26 percent required full function of vision, and 24 percent required full mobility functionality. Roughly 10 percent did not provide information on function level required. Overall, schools with language in the TS that expressed a willingness to accommodate students with disabilities were also more likely to allow reasonable accommodations, assume responsibility for providing those accommodations (rather than the student), accept auxiliary aides, and accept intermediaries. Additional study is required to determine any changes in the number of schools making available their TS and their willingness to provide accommodations.

A criticism leveled at many TS is that there may be a focus on deficits rather than on the ability to perform the work.[23] An "organic" standard requires students to demonstrate physical, cognitive, behavioral, and sensory abilities without assistance. For example, students are expected to have hearing ability at a particular decibel level without assistance. A "functional" standard focuses on the student's abilities, with or without assistive technology or accommodation, and may state that students must be able to obtain the necessary information by hearing or other means. McKee et al.[23] discuss how organic TS are based on three assumptions that are not derived from empirical evidence: 1) accommodations pose patient safety risks; 2) accommodations are costly; and 3) graduates, even those with disabilities, should be able to pass licensure exams without accommodation.

Concerning patient safety, no legal case has been found to demonstrate harm to a patient based on an accommodation provided to a physician with a disability. Physicians and students with disabilities typically are aware of their limitations and develop strategies to adapt to the environment. The costs of accommodation vary greatly. The ADA does not allow cost to justify discrimination toward students or physicians with disabilities. Medical schools, residency/fellowship programs, and employers are ultimately responsible for paying for reasonable accommodations. Assistive technologies rapidly change, and appropriate, cost-effective accommodations can be found on industry and government websites. The ADA requires licensure examinations to provide appropriate accommodations such as sign language interpreters and extended test time. The incorporation of accommodation into the testing environment thus mimics the learning and practicing environment of the student or physician, and the examination assesses performance more accurately than if the disabled test taker were denied accommodation.[23]

The Association of Academic Physiatrists has addressed the issue of updating medical school TS.[24] Stating that a functional approach to TS promotes inclusivity by emphasizing abilities rather than limitations, its report describes standards that allow students to use accommodations and permit incorporation of technological and medical advances as they become available. Functional TS describe what skills the student must master—e.g., effective communication with patients and the care team—but not the manner in which the student must achieve them (e.g., must use vision, etc.). Changes in medical practice and medical education coincide with an increased use of assistive technology, for all health professionals regardless of limitations. Team-based care, new information management skills, and an emphasis on problem-solving skills rather than memorization of facts combined with competency-based education can allow for performance assessment of students with disabilities using reasonable accommodations. Students can demonstrate mastery of skills through alternative methods.

Entry to GME

Students in or graduates from MD-granting medical schools who are applying to U.S. residency programs generally must pass or at least have taken USMLE® Step 1 and Step 2 to be offered an interview invitation from a residency program. The National Board of Medical Examiners® (NBME), which co-owns the USMLE with the Federation of State Medical Boards, provides a process through which a prospective exam taker can request disability accommodations for the examinations. Extensive documentation of the disability as well as evidence of previous educational examination and educational accommodations is required. The NBME requests at least 60 days to process a request. Applicants who have applied for and received accommodations for Step 1 must apply again for accommodations for Step 2.[25] Medical schools provide timelines for students who may seek accommodation from the NBME and advise a minimum of 6 months to include document preparation, submission, and review by the NBME plus additional time in case of an appeal.[26,27] Students, however, have anecdotally reported lengthier response times from the NBME, resulting in delays in taking the exam(s), which have in turn impacted application to and acceptance into residency programs.

Similarly, students in or graduates from DO-granting institutions who are applying to U.S. residency programs generally must pass or at least have taken COMLEX-USA Examination Level 1 and Level 2 to be offered an interview invitation from a residency program. The National Board of Osteopathic Medical Examiners® (NBOME) provides a process through which a prospective exam taker can request disability accommodations for the examinations. Documentation of the disability and a completed application is required. The NBOME states that the process may require 90 days from receipt of a completed application to process a request, though additional time may be necessary prior to rendering a decision.[28]

Once in GME, similar to the undergraduate environment, structural barriers for disabled learners include an absence of 1) clearly defined policies and processes; 2) a knowledgeable and responsible point person for facilitating accessibility requests; and 3) an understanding of legal requirements under the ADA.[18]

The ACGME requires that sponsoring institutions have policy regarding accommodations for disabilities and that GME programs both provide accommodations for residents with disabilities consistent with the employing sponsoring institution as well as comply with that institution's policy on employment and nondiscrimination. Unlike medical school TS, there is no requirement as to where or how an applicant to a training program can find that information. A recent review was conducted of institutional policies of the 50 largest training institutions to assess compliance with the ACGME's Common Program Requirements and Institutional Requirements (I.D.2.e, and IV.H.4., respectively) concerning disability.[29] The review also analyzed GME policy in terms of alignment with recommendations included in the AAMC's report (mentioned above) on disability. The majority of institutions maintained a GME policy online (76 percent) or provided one upon request (18 percent). Of the 47 institutions with GME policy available, 32 (68 percent) contained a statement on disability in compliance with ACGME requirements, 23 with the statement found online. Of those institutions with a disability policy, 12 (38 percent) included language that encouraged disability disclosure, 17 (53 percent) provided a statement regarding the confidential nature of documentation regarding accommodation, and 19 (59 percent) described a procedure for disclosing disabilities and requesting accommodation. The AAMC report on accessibility and inclusion in medical education recommends institutions have on staff a designated point person(s) for disability concerns, through which accommodation requests should pass. Of the institutions with policy reviewed, only 5 reported such a process. Over half of the 32 institutions required residents to disclose a disability to program directors (some to program directors and a member of human resources), not in line with AAMC recommendations. In addition, findings from the survey of chairs of family medicine departments found that while 56.3 percent of chairs reported they had a written policy for disability disclosure, 36.6 percent did not know if they had one, and seven percent reported no written policy available. As found in the above study of institutions, over half of family medicine department chairs confirmed that the program director was the contact for disability disclosure, which can be a conflict of interest and against recommendations.[16]

Clearly stated and easily found accommodation policies can help applicants determine if a program and its institution are willing to work with the resident to maximize the learning environment. Ambiguous or absent policies may lead an applicant to assume that the program will not make accommodations, which will discourage applying to the program, or, if accepted, may prevent the resident from seeking assistance with a disability.[30] Students are encouraged to discuss accommodations with a program immediately after matching into the program to ensure ample time for implementing schedule changes or accommodations; however, students may be reluctant to do so if they perceive that a disability will be seen as a liability.[18, 30]

It is possible that some disabilities may be less apparent in virtual versus live interviews (e.g., physical disabilities). A review of the literature on best practices for virtual interviews for residency did not include a discussion on the impact of virtual interviews may have on disability disclosure.[31]

A designated, qualified person responsible for processing requests for accommodation and managing disability services is essential to ensure that residents are confident that the process is administered professionally and confidentially. A disabilities service provider may be within the human resources department or a part of an institution-wide disabilities committee. The provider or committee will be aware of the legal obligations of the ADA, unlike program directors or program staff, who may not be.[30] A program may offer accommodations to residents with apparent disabilities; residents with non- or less-apparent disabilities, but who are uncomfortable disclosing disabilities to program directors, may not receive an offer. Without clearly stated policy and an expert to manage the interactive process of determining reasonable accommodations, residents may fruitlessly disclose their disabilities to staff who are without knowledge or authority to assist and may experience delays in obtaining accommodations.[30]

BALANCE WITH PATIENT SAFETY

Melnick cautions that the laudable goal of increasing inclusion must be balanced against the medical profession's responsibility to place the interests of patients "above the interests of aspiring students."[32] Furthermore, the profession has done little to develop consensus on what accommodations would fundamentally alter the formation and assessment of a physician. Medical schools employ TS to provide guidance, but GME lacks similar standards. A goal of current medical education is to prepare a physician who can demonstrate proficiency in the undifferentiated practice of medicine. State licensing authorities lack consensus on what comprises essential physical and cognitive capabilities for physicians. Melnick proposes discussion and research on what those essential abilities are, so that individual learners with disabilities can be supported in a way that does not alter the profession's ability to teach and assess those essential abilities. Meeks et al.[21] also propose an ecological study to measure the performance path of learners with disabilities, identify what assistance and accommodations are best suited to various disabilities, track the employment experiences of physicians with disabilities, and examine the effect of those physicians on patient care. Little is known about the process by which physicians with disabilities find employment, although it is assumed that they are guided by past experience with the ADA process and responses of various educational and institutional administrations.

CURRENT AMA POLICY

AMA policies related to this topic are listed in the Appendix.

SUMMARY AND RECOMMENDATIONS

The medical education community should accelerate the pace of inclusion of physicians with disabilities for several reasons. The ADA stipulation that institutions cannot discriminate against a qualified individual on the basis of disability and requires institutions to make reasonable accommodations to allow the individual equal opportunity to participate in the institution's programs (or employment). Second, in 2016 the U.S. population was estimated to have a disability rate of 12.8 percent (some estimates are higher), increasing by 7.6 percent since 2010.[11] The rate at which medical students present with disabilities is also growing—specifically, 4.6 percent of students enrolled in 2019 compared to 2.7 percent in 2016. Although the number of physicians with disabilities in the health care workforce is small, estimated at 3.1 percent, it is believed that these physicians can better understand and empathize with patients with disabilities. A more diverse population of medical students and physicians, including those with disabilities, can introduce new approaches to care, both for patients with and without disabilities.[23] Improved education about disability coupled with the opportunity to learn directly from peers with disabilities in the medical education setting can challenge existing beliefs about disabilities and increase awareness of the potential of both patients and physicians with disabilities.[22]

To increase access to medical education for learners with disabilities, it is important that applicants, either to medical schools or residency programs, have ready access to the information necessary to make an informed decision about whether that educational environment has the appropriate resources and institutional culture to support necessary accommodations. Institutions should review and evaluate their technical standards to remove restrictive "organic" standards and replace them with "functional" standards that emphasize what learners can do rather than what they cannot do. Institutions, undergraduate and graduate, should have readily available designated disability service providers who are knowledgeable about the ADA and aware of current resources and strategies to best process

accommodation requests. Providers of high-stakes examinations need to remain responsive and flexible in reviewing and approving accommodations, especially if the number of exam takers with disabilities increases. Research on which accommodations are most effective in the patient care and learning environment will assist in determining future strategies for creating a safe and inclusive medical workforce. Future study may be warranted to examine challenges to employment after training for individuals with disabilities, as there are limited data available on physicians with disabilities in the workforce.

The Council on Medical Education therefore recommends that the following recommendations be adopted and the remainder of this report be filed:

1. That our American Medical Association (AMA) urge that all medical schools and graduate medical education (GME) institutions and programs create, review, and revise technical standards, concentrating on replacing "organic" standards with "functional" standards that emphasize abilities rather than limitations, and that those institutions also disseminate these standards and information on how to request accommodations for disabilities in a prominent and easily found location on their websites.

2. That our AMA urge all medical schools and GME institutions to a) make available to students and trainees a designated, qualified person or committee trained in the application of the Americans with Disabilities Act, Section 504 of the Rehabilitation Act of 1973, and available support services, b) encourage students and trainees to avail themselves of any needed support services, and c) foster a supportive and inclusive environment where students and trainees with disabilities feel comfortable accessing support services.

3. That our AMA encourage the National Board of Medical Examiners, National Board of Osteopathic Medical Examiners, and member boards of the American Board of Medical Specialties and the American Osteopathic Association to evaluate and enhance their processes for reviewing requests for accommodations from applicants with disabilities in order to reduce delays in completion of licensing and initial board certification examinations. This should include an assessment of the experience of those applicants and the development of a transparent communication process that keeps applicants informed about the expected timeline to address their requests. These processes should require neither proof of accommodation nor proof of poor academic performance prior to the time at which a need for accommodation was requested.

4. That our AMA encourage research and broad dissemination of results in the area of disabilities accommodation in the medical environment that includes: the efficacy of established accommodations; innovative accommodation models that either reduce barriers or provide educational approaches to facilitate the avoidance of barriers; impact of disabled learners and physicians on the delivery of health care to patients with disabilities; and research on the safety of established and potential accommodations for use in clinical programs and practice.

5. That our AMA rescind Policy D-295.929, "A Study to Evaluate Barriers to Medical Education for Trainees with Disabilities," as having been fulfilled by this report.

6. That AMA Policy D-90.991, "Advocacy for Physicians with Disabilities," be reaffirmed.

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APPENDIX - Relevant AMA Policy

D-90.991, "Advocacy for Physicians with Disabilities"
1. Our AMA will study and report back on eliminating stigmatization and enhancing inclusion of physicians with disabilities including but not limited to: (a) enhancing representation of physicians with disabilities within the AMA, and (b) examining support groups, education, legal resources and any other means to increase the inclusion of physicians with disabilities in the AMA.

2. Our AMA will identify medical, professional and social rehabilitation, education, vocational training and rehabilitation, aid, counseling, placement services and other services which will enable physicians with disabilities to develop their capabilities and skills to the maximum and will hasten the processes of their social and professional integration or reintegration.
3. Our AMA supports physicians and physicians-in-training education programs about legal rights related to accommodation and freedom from discrimination for physicians, patients, and employees with disabilities.

H-65.965, "Support of Human Rights and Freedom"
Our AMA:
(1) continues to support the dignity of the individual, human rights and the sanctity of human life, (2) reaffirms its long-standing policy that there is no basis for the denial to any human being of equal rights, privileges, and responsibilities commensurate with his or her individual capabilities and ethical character because of an individual's sex, sexual orientation, gender, gender identity, or transgender status, race, religion, disability, ethnic origin, national origin, or age; 3) opposes any discrimination based on an individual's sex, sexual orientation, gender identity, race, religion, disability, ethnic origin, national origin or age and any other such reprehensible policies; (4) recognizes that hate crimes pose a significant threat to the public health and social welfare of the citizens of the United States, urges expedient passage of appropriate hate crimes prevention legislation in accordance with our AMA's policy through letters to members of Congress; and registers support for hate crimes prevention legislation, via letter, to the President of the United States.
Work Plan for Maintaining Privacy of Physician Medical Information D-180.991
The AMA shall recommend that medical staffs, managed care organizations and other credentialing and licensing bodies adopt credentialing processes that are compliant with the Americans with Disabilities Act and communicate this recommendation to all appropriate entities.

H-90.987, "Equal Access for Physically Challenged Physicians"
Our AMA supports equal access to all hospital facilities for physically challenged physicians as part of the Americans with Disabilities Act.

H-200.951, "Strategies for Enhancing Diversity in the Physician Workforce"
Our AMA (1) supports increased diversity across all specialties in the physician workforce in the categories of race, ethnicity, gender, sexual orientation/gender identity, socioeconomic origin and persons with disabilities; (2) commends the Institute of Medicine for its report, "In the Nation's Compelling Interest: Ensuring Diversity in the Health Care Workforce," and supports the concept that a racially and ethnically diverse educational experience results in better educational outcomes; and (3) encourages medical schools, health care institutions, managed care and other appropriate groups to develop policies articulating the value and importance of diversity as a goal that benefits all participants, and strategies to accomplish that goal.
9.5.4, "Civil Rights & Medical Professionals"

Opportunities in medical society activities or membership, medical education and training, employment and remuneration, academic medicine and all other aspects of professional endeavors must not be denied to any physician or medical trainee because of race, color, religion, creed, ethnic affiliation, national origin, gender or gender identity, sexual orientation, age, family status, or disability or for any other reason unrelated to character, competence, ethics, professional status, or professional activities.

AMA Principles of Medical Ethics: IV: Balance with patient safety

3. RURAL HEALTH PHYSICIAN WORKFORCE DISPARITIES

Reference committee hearing: see report of Reference Committee C.

HOUSE ACTION: RECOMMENDATIONS ADOPTED AS FOLLOWS
REMAINDER OF REPORT FILED
See Policies TBD

INTRODUCTION

American Medical Association (AMA) Policy H-465.988 (2,3,4), "Educational Strategies for Meeting Rural Health Physician Shortage," directs our AMA to:

> 2. work with state and specialty societies, medical schools, teaching hospitals, the Accreditation Council for Graduate Medical Education (ACGME), the Centers for Medicare and Medicaid Services (CMS) and other interested stakeholders to identify, encourage and incentivize qualified rural physicians to serve as preceptors and volunteer faculty for rural rotations in residency.

3. (a) work with interested stakeholders to identify strategies to increase residency training opportunities in rural areas with a report back to the House of Delegates; and (b) work with interested stakeholders to formulate an actionable plan of advocacy with the goal of increasing residency training in rural areas.

4. undertake a study of issues regarding rural physician workforce shortages, including federal payment policy issues, and other causes and potential remedies (such as telehealth) to alleviate rural physician workforce shortages.

This report, which is in response to this directive, builds on information from a previous Council on Medical Education report to the House of Delegates on this topic [Report 7-A-14, "Physician Workforce Shortage: Approaches to GME Financing"] and addresses the policy above by providing information on:

1. The current state of the rural physician workforce;
2. The impact of closing rural hospitals and critical access hospitals on the rural physician shortage;
3. Current efforts to address the rural physician workforce shortage; and
4. Current AMA policy.

CURRENT STATE OF THE RURAL PHYSICIAN WORKFORCE

There is broad recognition that the United States is facing a physician workforce shortage. In 2020, the Association of American Medical Colleges (AAMC) reported that the nation "could see an estimated shortage of between 54,100 and 139,000 physicians, including shortfalls in both primary and specialty care, by 2033" as demand for physicians continues to grow faster than supply.[1] The major factor driving demand for physicians continues to be a growing, aging population. According to the U.S. Census Bureau, the nation's population is estimated to grow by more than 10 percent by 2032, with those over age 65 increasing by 48 percent. Additionally, the aging population will affect physician supply, since one-third of all currently active doctors will be older than 65 in the next decade. The retirement of these physicians could have a significant impact on supply.[2]

The supply of practicing physicians in rural settings in the United States has been insufficient to meet the demand for health care services of the rural population. Physician shortages in rural settings have been an enduring and widespread concern, with only 12 percent of primary care physicians, and eight percent in other specialties, working in rural areas.[2] According to the 2010 Census, nearly 60 million people live in rural communities, and 20 percent of people in the U.S. are rural residents. The size of this population measured as a percent has been stable for several decades.[3] Additionally, more than 15 percent of these rural residents are members of racial/ethnic minoritized groups, and this percentage is growing.[4]

In response to growing frustrations regarding continued inequities and inefficiencies in the U.S. health care system, the leadership of seven national family medicine organizations initiated the Future of Family Medicine (FFM) project in 2002. Through this project, a new model of practice was adopted, proposing that a reasonable physician-to-population ration be 1:1,200.[5] In 2014, the primary care physician-to-population ratio was 1:1,300 persons in the United States as a whole, versus a 1:1,910 ratio in rural areas.[6] In 2019, the Federation of State Medical Boards reported there were 985,026 physicians with Doctor of Medicine (MD) and Doctor of Osteopathic Medicine (DO) degrees licensed to practice medicine in the United States and the District of Columbia and available to serve a U.S. national population of 327,167,434.[7] Of these physicians, only 11 percent (108,353) practiced in rural counties serving 14 percent (46.1 million) of the U.S. population.[8,9]

The impact of these numbers is real. Rural communities most likely to suffer from a shortage of physicians can be characterized as communities that have low population density, extreme poverty, and high proportions of racial and ethnic minorities, as well as a lack of physical and cultural amenities. These circumstances contribute to the difficulty in recruiting physicians to practice in these areas. Additionally, most of medical education is based in metropolitan areas limiting future physicians' exposure to medical practice in rural settings contributing to challenges in recruiting future physicians to train and practice in rural communities.

Studies have found that students who grew up in rural areas, as well as individuals who are racial and ethnic minorities and/or non-U.S.-citizen international medical graduates, are most likely to practice in medically underserved areas such as rural communities.[10,11] Pathman found that physicians who felt better prepared both medically and socially for practice in a rural environment stayed longer than those who felt unprepared or who were initially unaware of the

special characteristics of rural practice.[12] Additional factors associated with increased likelihood that a physician will choose a rural practice include training at a medical school with a mission to train rural physicians, training at an osteopathic medical school, or training that includes rural components such as rural rotations.[13]

While medical students from rural backgrounds are more likely to practice in rural settings compared to students from non-rural areas, there was a recent 28 percent decline in rural medical school matriculants. This decline occurred between 2002 and 2017 when the overall number of medical school matriculants increased by 30 percent. In 2016 and 2017, students from rural backgrounds made up only 4.3% of the incoming medical student body.[8] That said, a recent decline in the percentage of rural medical students who report an interest in practicing in small towns and rural communities is cause for concern as these communities struggle to sustain their access to health care. A multitude of factors may contribute to this decline, including inadequate exposure to rural medicine as a career pathway for both students in rural and nonrural environments, lack of pathway programs targeting rural students, and limited resources to support preparation for medical school and residency for rural students. The increasing number of rural hospital closures may also negatively impact medical student interest in pursuing a career in rural health.

According to the U.S. Government Accountability Office (GAO), 101 rural hospitals closed in the United States between 2013 and 2020. When rural hospitals closed, people living in areas who received health care from them had to travel farther to get the same health care services—about 20 miles farther for common services like inpatient care. People had to travel even farther—about 40 miles—for less common services like substance use disorder treatment. Before rural hospitals closed, counties where these hospitals were located had fewer doctors than counties without any closures. The number of doctors further decreased when hospitals closed.[14] Germack et al. found that rural hospital closures were associated with immediate and persistent decreases in the supply of physicians across multiple specialties.[15] For example, the percent of all rural counties in the U.S. without hospital obstetric services increased from 46 percent in 2004 to 55 percent in 2014.[16] In the period of 2004-2014, the closure of 14 rural hospitals with obstetrics units and the closure of 165 obstetric units within otherwise open hospitals, left the counties where they were located with no available obstetric services.[17]

Hospitals located in rural areas have been closing their doors more frequently and at higher rates than urban facilities in recent years—and a pattern of increasing financial distress suggests that more are likely to falter.[18] A February 2019 study found that 21 percent of U.S. rural hospitals remain at high risk of closing unless their financial situations improve. One factor driving the overall negative financial performance of rural hospitals is the losses they incur on reimbursement for Medicare patients. Excluding critical access hospitals, rural hospitals have an approximately negative 8.2 percent operating margin on Medicare patients, creating a dependence on commercial patients and employers to make up the difference.[19] Concurrently, a 2019 study of final-year medical residents found that "geographic location was their number one priority when considering a practice opportunity and 91 percent prefer to be an employee of a hospital, medical group or other facility than to be in private practice.[20] If the trend of rural hospital closures continues, physicians may be increasingly hesitant to accept positions at rural hospitals due to concerns about the financial viability of these institutions.

LEGISLATIVE PRINCIPLES TO REDUCE RURAL HEALTH DISPARITIES RELATED TO PHYSICIAN SHORTAGES

There are several current initiatives in Congress that seek to reduce the physician shortage. This includes efforts to increase Medicare support for GME, including increasing the number of Medicare-supported medical resident training positions as well as the number of physicians trained in pain management, addiction medicine, or addiction psychiatry. Another effort seeks to address the cap on full-time equivalent residents for purposes of payment for graduate medical education costs under the Medicare program for certain hospitals that have established a shortage specialty program. There are efforts underway to expand access to telehealth by waiving restrictions on Medicare payment for telehealth services. There are also efforts to examine strategies for increasing health professional workforce diversity.[1]

Current Graduate Medical Education Financing Structure

When considering health care workforce, it is important to "follow the money." The federal government is the largest contributor to physician training, through its funding of graduate medical education (GME), which exceeds $15 billion per year.[21] Funding for GME stems from both public and private sources as well as federal mandatory and discretionary appropriations. The payroll tax funds Medicare Part A, while insurance premiums and federal mandatory appropriations fund Medicare Part B. Insurance premiums also fund private payers. The federal mandatory

appropriations fund provides money to states through the federal Medicaid match and the Health Resources and Services Administration (HRSA). Meanwhile, the federal discretionary appropriations fund GME at the Department of Defense (DoD) and Veterans Health Administration (VHA). While most states support GME through their Medicaid program, some also provide GME support through state-based programs such as loan repayment incentives to address health workforce shortages.[22] Figure 1below outlines the flow of GME funding.

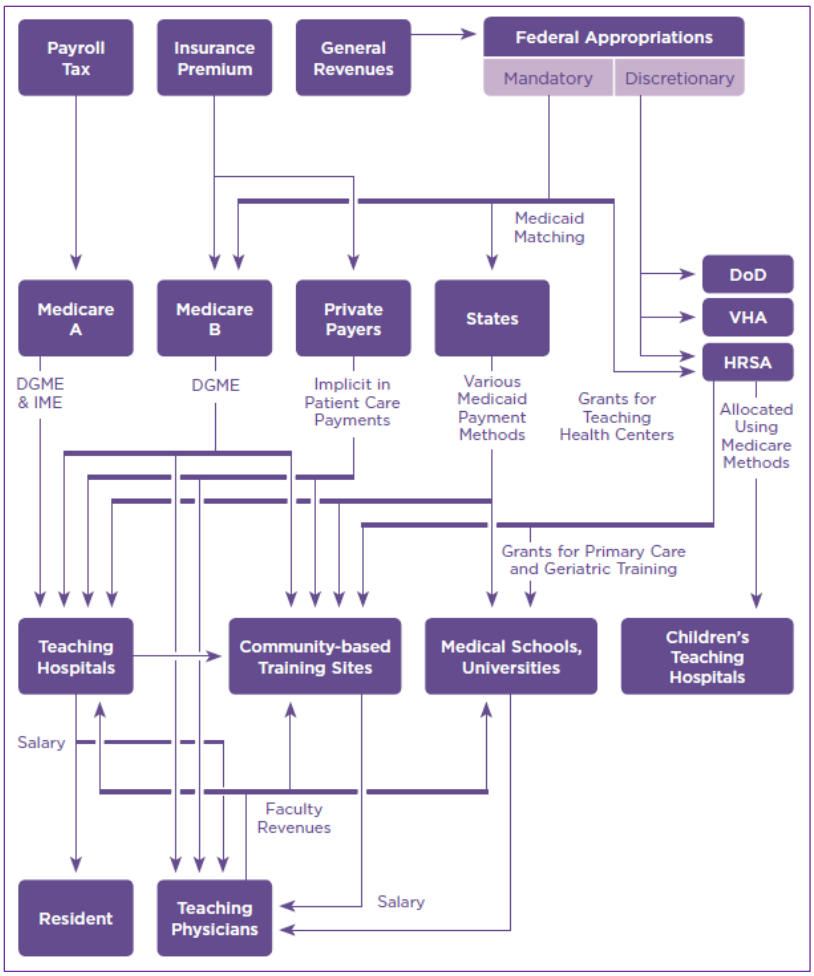

Figure 1: Flow of GME funding.

Note: DGME = direct graduate medical education; DoD = Department of Defense; HRSA = Health Resources and Services Administration; IME = indirect medical education.

Adapted from Wynn, 2012 (Committee of Interns and Residents Policy and Education Initiative White Paper, "Implementing the 2009 Institute of Medicine recommendations on resident physician work hours, supervision, and safety")

The most recent available estimates of GME funding by source indicate that Medicare is the single largest contributor to GME. A 2013 study by Henderson found that of the top three public contributors to GME, Medicare contributed $9.7 billion (~64 percent); Medicaid $3.9 billion (~26 percent); and the VHA $1.4 billion (~10 percent). Private funding for GME is difficult to quantify. Private insurers support GME by paying higher rates to teaching institutions and health systems. Hospitals, universities, physicians' organizations, and faculty practice plans also support residencies and fellowships. In addition, private philanthropy as well as gifts and grants from industry provide GME support.[23]

When Medicare began funding GME in 1965, payments to teaching hospitals were based solely on hospitals' costs. With the arrival of the Medicare prospective payment system (PPS) for acute care hospitals in 1983, Medicare established two GME funding streams for teaching hospitals: Direct Graduate Medical Education (DGME) funding

to cover the direct expenses related to residency training and Indirect Medical Education (IME) funding to help offset the additional costs of providing patient care thought to be associated with sponsoring residency programs.[24] Medicare GME was never intended to cover teaching costs for non-Medicare patients, and distribution of Medicare DGME and IME funds is governed by strict statutory formulas. Both the DGME and the IME formulas include variables that tie payment to a teaching institution's volume of Medicare patients. The DGME payment for an individual institution is calculated by multiplying three factors: weighted resident count, per-resident count, and Medicare day ratio. The weighted resident count is the rolling average of hospital's weighted number of full-time equivalent (FTE) residents in accredited programs in the most recent three-year reporting period. The per-resident amount is calculated by dividing the individual hospital's base year DGME costs by the weighted residents count, which is adjusted for geographic differences and inflation. The Medicare day ratio is the hospital's Medicare inpatient days to total inpatient days to approximate Medicare's share of training costs.[25] These formulas are not designed to account for differences in costs resulting from training residents of different specialties. The Department of Veterans Affairs, Medicaid, and the Children's Health Insurance Program are other federal sources of GME funding of varying levels. In addition, the Army, Navy, and Air Force support their own in-house residencies and fellowships to provide for the future physician workforce needs of those services. Figure 2 below highlights the breakdown of both mandatory and discretionary GME funding including the total funding, the number of trainees and cost per trainee.

Figure 2. Federal Funding for Graduate Medical Education (CRS, 2018)

Program Name *Control over trainees*	**Total Funding**	**Number of Trainees**	**Cost Per Trainee**
MANDATORY FUNDING			
Medicare GME Payments *The number of Medicare-supported residents and per-resident payment amount is capped for each hospital, but hospitals determine staffing needs and types of residents with the exception of certain primary care residents.*	FY2015 (est.): $10.3 - $12.5 billion	FY2015 (est.): 85,712 - 87,980 FTE (DGME) slots 85,578 - 88,416 FTE (IME) slots	FY2015 (est. average): $112,000 - 129,000 per FTE
Medicaid GME Payment *States are permitted to make these payments using their own criteria to determine which providers are eligible for payments.*	N/A.	N/A The Medicaid program does not require states to report these data.	N/A. The Medicaid program does not require states to report these data.
Teaching Health Centers GME *Payment Program* *Funding to applicant teaching health centers that meet the program's eligibility requirements.*	FY2018: $126.5 million (est.)	AY2016-AY2017: 742 FTE slots 771 total residents trained	N/A.
DISCRETIONARY FUNDING			
Veterans Affairs GME Payments *VA facilities determine their staffing needs and the number and type of residents supported.*	FY2017: $1.78 billion	AY2016-AY2017: 11,000 FTE slots and > 43,565 residents spent part of their training at a VA facility	FY2015 (est.): $137,792/resident
Children's Hospital GME Payment Program *Grant funding awarded to applicant children's hospitals that meet the program's eligibility requirements.*	FY2019: $325bmillion	FY2016-FY2017 58 hospitals received payments to support 7,164 FTE slots	N/A
Department of Defense GME Payments *Divisions of the armed forces determine their staffing needs and the number and type of residents supported.*	FY2012: $16.5 million	FY2017: 3,983 FTE residents	N/A

Source: CRS analysis of agency data, including review of various agency budget justification and The Robert Graham Center program data sourced from CMS Medicare hospital cost report data, and GAO report, *Physician Workforce: HHS Needs Better Information to Comprehensively Evaluate Graduate Medical Education Funding* (GAO-18-240, 2018).

Notes: AY = Academic year; Academic year 2016-2017 began on July 1, 2016, and concluded on June 30, 2017. DGME = direct graduate medical education. est. = estimate. FTE = full time equivalent. FY = fiscal year. IME = Indirect Medical Education. N/A = not available. VA = the Department of Veterans Affairs.

A key factor that may impact the physician workforce is the cap placed on Medicare GME funding more than two decades ago. The Balanced Budget Act (BBA) of 1997 (P.L.105-33) limited the number of medical residents at an

institution that could be counted for purposes of calculating DGME and IME payments to the number of trainees as of 1996. This limitation effectively prohibits existing teaching hospitals from receiving Medicare support for any medical residency positions added after 1996. As medical school enrollment continues to grow in attempts to address the physician shortage, which has increased 30 percent since 2002, the Medicare GME cap has made it difficult for the number of medical residency slots to keep pace, resulting in a bottleneck in physician training.[1] Between 2005 and 2015, the number of residents grew by 22 percent. Additionally, it should be noted that the Balanced Budget Act of 1999 (P.L. 106-113) increased the resident cap for rural hospitals to 130 percent of its 1996 level, thereby mitigating somewhat the full impact of the Medicare GME cap.

LEGISLATION TO ADDRESS THE PHYSICIAN SHORTAGE

The recent Consolidated Appropriation Act of 2021 included several efforts to address the physician shortage.

Promoting Rural Hospital GME Funding Opportunity

This section makes changes to the Medicare graduate medical education (GME) Rural Training Tracks (RTT) program to provide greater flexibility for hospitals not located in a rural area that established or establish a medical residency training program (or rural tracks) in a rural area. The program also provides flexibility for hospitals that establish an accredited program where greater than 50 percent of the program occurs in a rural area to partner with rural hospitals and address the physician workforce needs of rural areas.

Medicare GME treatment of hospitals establishing new medical residency training programs after hosting medical resident rotators for short durations

This section allows hospitals to host a limited number of residents for short-term rotations without being negatively impacted by a set permanent full time equivalent (FTE) resident cap or a Per Resident Amount (PRA). A hospital must report full-time equivalent residents on its cost report for a cost reporting period if the hospital trains at least 1.0 full-time-equivalent resident in an approved medical residency training program or programs in such period.

Health Workforce

Health Resources and Services Administration (HRSA) will make $50,000,000 available for grants to public institutions of higher education to expand or support graduate education for physicians provided by such institutions. Priority will be given to public institutions located in states with a projected primary care physician shortage in 2025 and are limited to public institutions in states in the top quintile of states with a projected primary care physician shortage in 2025.

Distribution of additional residency positions

This section supports Medicare physician workforce development by providing for the distribution of 1,000 additional Medicare-funded graduate medical education (GME) residency positions. Not less than 10 percent of the aggregate number of these new positions will be given to each of the following categories: rural hospitals, hospitals that are already above their Medicare cap for residency positions, hospitals in states with new medical schools or new locations and branch campuses, and hospitals that serve Health Professional Shortage Areas. However, a hospital may not receive more than 25 additional full-time equivalent residency positions.[26]

Council on Medical Education Report 7-A-14, "Physician Workforce Shortage: Approaches to GME Financing," outlined the impact of Congressional actions and the Affordable Care Act on expansion of GME, as well as a summary of state-level funding models for GME. Since that time, a number of legislative efforts have been proposed and/or passed to support expansion of GME, including the following two examples.

Rural Residency Planning and Development Grants

In 2019, HRSA awarded approximately $20 million to recipients across 21 states for a three-year period to develop new rural residency programs while achieving program accreditation through the Accreditation Council for Graduate Medical Education. The program is intended to expand the physician workforce in rural areas by developing new, sustainable residencies in family medicine, internal medicine, and psychiatry. Award recipients included rural

hospitals; community health centers; health centers operated by the Indian Health Service, Native American tribes or tribal organizations; and schools of medicine. The awards are intended to help recipients address challenges in securing sustainable financing and faculty support.[17]

PROGRAMS TO ADDRESS RURAL PHYSICIAN WORKFORCE SHORTAGES

Federal Efforts to Recruit and Retain Rural Health Physicians

The federal government has established several programs to recruit and retain a diverse workforce and encourage physicians to practice in shortage specialties and underserved communities such as rural settings. These programs include the National Health Service Corps (NHSC), Title VII of the Public Health Service Act, the Conrad 30 Waiver, and Area Health Education Centers (AHECs).

National Health Service Corps (NHSC)

Funded by HRSA, the NHSC awards scholarships and loan repayment to primary care physicians in eligible disciplines. The Consolidated Appropriation Act of 2021 provided an extension for community health centers, the National Health Service Corps, and teaching health centers that operate GME programs. This includes $4 billion in funding from 2019-2023 for community health centers and the National Health Service Corps and provides $310 million in additional funding from 2021-2023 for the National Health Service Corps. It also provides additional funding, until 2023, for teaching health centers that operate graduate medical education programs. In FY 2019, the NHSC received $319 million in award funding to recruit, retain, and support clinicians serving in high-need areas. These funds were used to pay tuition, eligible fees, other reasonable educational costs, and a living stipend in exchange for a service commitment to work at an NHSC-approved site in a high-need urban, rural, or frontier community for at least two years. Frontier areas are the most remote and sparsely populated places along the rural-urban continuum and are often thought of in terms of population density and distance in minutes and miles to population centers and other resources, such as hospitals. In 2019, the NHSC placed more than 1,750 primary care clinicians in NHSC-approved sites in rural and frontier areas.[27] The NHSC recently implemented the Rural Community Loan Repayment Program (LRP) for physicians working to combat the opioid epidemic in the nation's rural communities. The recent expansion of the NHSC is cause for optimism as more than 75 percent of clinicians in the NHSC report that they plan to stay in the practice where they fulfilled their commitment for loan repayment.[28]

Title VII of the Public Health Service Act

Title VII funding supports rural physician training grants by recruiting students who are most likely to practice medicine in underserved rural communities. Eligible entities are nationally accredited or Secretary of Health and Human Services-approved schools of allopathic or osteopathic medicine or any combination or consortium of such schools. Priority is given to entities that demonstrate (1) an established record of rural community institutional partnerships; (2) having successfully trained students who practice medicine in underserved rural communities; and (3) having a high percentage of graduates from an existing program who practice medicine in underserved rural communities.[29]

Conrad 30 Waiver program

The Conrad 30 Waiver program allows physicians who have completed the J-1 exchange visitor program to apply for a waiver from the two-year residence requirement upon completing their training. J-1 visa physicians can stay in the United States after their training if they get a waiver and practice for three years in an underserved area. These physicians provide the majority of primary care services in underserved rural communities.[30] Legislation is needed to reauthorize and improve the Conrad 30 waiver program to protect patient access to care in medically underserved areas such as rural communities.

Area Health Education Centers (AHECs)

Developed by Congress in 1971, Area Health Education Centers (AHECs) were established to recruit, train, and retain a health professions workforce committed to treating underserved populations. In 1972, Congress initially awarded funds to establish AHEC programs in 11 states. The AHEC program helps bring the resources of academic medicine to address local community health needs. AHECs have a continual focus on improving the health care system by

working with academic institutions, health care settings (including community health centers), behavioral health practices, and community-based organizations. Through these long-standing partnerships, AHECs employ traditional and innovative approaches to develop and train a diverse health care workforce prepared to deliver culturally appropriate, high-quality, team-based care, with an emphasis on primary care for rural and underserved communities. Presently, 235 centers across 56 AHEC programs are in operation in almost every state and the District of Columbia.[31] The national AHEC network consists of more than 300 AHEC program offices and centers, serving over 85 percent of the counties in the United States.[32]

Health Professional Shortage Area Physician Bonus Program

To offer an incentive to physicians who work in Medicare Health Professional Shortage Areas (HPSAs), CMS established the Health Professional Shortage Area Physician Bonus Program. The program provides a 10 percent bonus for Medicare-covered services to beneficiaries in a geographic HPSA. Paid quarterly, the bonus is based on the amount paid for professional services.

Additional Efforts to Recruit and Retain Physicians in Rural Areas

Grassroots organizations such as 3RNet have also established resources to support health care recruitment and retention efforts for rural communities. Founded in 1995, 3RNet's mission is to improve rural and underserved communities' access to quality health care through the recruitment and retention of physicians and other health care professionals, development of community-based recruitment and retention activities, and national advocacy on rural and underserved health care workforce issues. To achieve this mission, 3RNet developed a website (https://www.3rnet.org/), which serves as a clearinghouse for its members. Each member maintains state and regional pages within the 3RNet website, providing information about communities, available opportunities for physician employment, and loan repayment programs. Members and health care facilities can post opportunities directly to the website and members can access a candidate database. Notable members include both the Department of Veterans Affairs and the Indian Health Service. 3RNet has also collaborated with the NHSC on recruitment and retention trainings.[33]

The University of North Dakota School of Medicine and Health Sciences Center for Rural Health utilizes the Community Apgar Project (CAP) to assist rural hospitals in North Dakota in identifying strengths and challenges related to recruiting family medicine physicians through a research-validated questionnaire. The CAP was developed by the family medicine residency of Idaho and Boise State University. The University of North Dakota School of Medicine and Health Sciences Department of Family and Community Medicine, the North Dakota Center for Rural Health, and the North Dakota AHEC are currently utilizing the CAP process and methodology to examine what makes a community health care facility a good training environment for health professions education through a new tool called Health Professions Education in Rural Communities (HPERC). HPERC will provide data that can help determine site readiness for developing an educational campus for health professions students.[34]

Rural Training Tracks (RTT) were first established by Providence Northwest Washington Medical Group in 1986 in response to the lack of rural physicians produced by family medicine residency programs. The original "1-2" model provides for one year in an urban sponsoring institution, followed by two years in a more rural location. The initial programs experienced significant hardship due to a lack of funding and a general decline in student interest in family medicine. In response, a federally funded consortium of individuals and programs established the RTT Technical Assistance program (RTT TA) in 2010 to sustain the 1-2 RTT as a national strategy in training physicians for rural practice. While the project ended in August 2016, the RTT TA program was responsible for the creation of the RTT Collaborative, which currently works to sustain health professions education in rural places through mutual encouragement, peer learning, practice improvement, and the delivery of technical expertise, all in support of a quality rural workforce. In addition to providing technical assistance, the RTT Collaborative convenes an annual meeting, which is hosted by a participating program, to provide a collaborative forum for problem solving and innovation for the education of medical professionals in rural areas. A 2013 study found that at least half of RTT graduates reside in rural areas after graduation, two to three times the proportion of family medicine graduates overall, thereby demonstrating that RTTs are beneficial to increasing the supply of rural physicians.[35] A 2016 report found that among RTT graduates tracked after graduation (2008-2015), more than 35 percent of graduates were practicing in rural areas during most of that time, about twice the proportion of family medicine residency graduates overall. Rural practice choices were also persistent over time. Furthermore, the study found that 56 percent of RTT graduates provided health care in primary care Health Professional Shortage Areas (HPSAs) one year post-graduation, and by seven years post-

graduation, 50 percent were still in primary care HPSAs. These findings suggest that graduates of RTT programs provide care to rural and underserved populations at higher proportions than family medicine residency graduates overall, and these practice choices persist over time.[36] Opportunities to cultivate the RTT Collaborative could be explored, as this collaborative provides a pathway to identify, encourage, and incentivize qualified rural physicians to serve as preceptors and volunteer faculty for rural rotations during residency. However, it should also be noted that several ACGME Review Committees are now placing restrictions on distant sites that may impact the ability of urban centers to offer rural rotations.

In 2008, the University of Washington School of Medicine: Washington, Wyoming, Alaska, Montana, and Idaho (WWAMI) Program developed the Targeted Rural Underserved Track (TRUST) initiative to ensure access to health care in rural and underserved areas. TRUST utilizes an innovative four-year rural and underserved medical school curriculum that matches incoming students with a mentor and a community in a rural environment that they will continue to connect with during their four years of medical school. The goal of the TRUST program is to select students with rural and underserved backgrounds who are most likely to return to these areas. The students are also encouraged to choose specialties that serve those areas, generally a primary care specialty such as family medicine, internal medicine, or pediatrics.

Texas Tech University Health Sciences Center School of Medicine developed a rural residency track that provides residents with experience working one on one with a family physician practicing full-spectrum care including: general and preventive medicine, operative procedures, surgical obstetrics, and Texas-Mexico "border medicine" which focuses on improving health and quality of life along the U.S.-Mexico border. The program aims to increase the number of family medicine residents and mental health fellows providing care in both Midland and Odessa as well as rural communities across West Texas and eastern New Mexico.

In 2010, Columbia University College of Physicians and Surgeons and Bassett Medical Center joined forces to launch a new model of medical training to address the severe shortage of rural physicians and train a new generation of doctors capable of leading health systems that promote both quality of practice and cost-effective delivery of care.[37] Students begin their training for 18 months in Manhattan and then head to Cooperstown for two and a half years to obtain clinical training. Students experience both an urban health care setting and a rural health care environment, while being exposed to features not typically part of the medical school curriculum, such as finance, risk management, patient safety, quality improvement, and medical informatics. In addition, every Columbia-Bassett student receives grant funding at a minimum of $30,000 per year for all four years.

In 2019, Oregon Health & Science University (OHSU) and the University of California, Davis (UC Davis) were awarded $1.8 million by the AMA Reimagining Residency grant program to create educational interventions designed to expand access to quality health care between Sacramento and Portland through a network of teaching hospitals and clinics (in mostly rural areas). OHSU and UC Davis partnered to establish a GME collaborative known as the California Oregon Medical Partnership to Address Disparities in Rural Education and Health (COMPADRE). COMPADRE places hundreds of medical students and resident physicians to train with faculty and community physicians at 10 health care systems, 16 hospitals, and a network of Federally Qualified Health Center partners throughout Northern California and Oregon. The main goals of COMPADRE are to address health care workforce shortages in rural, tribal, urban, and other communities that lack resources; increase access to physicians; and improve the health of patients from ethnic and racial minoritized groups who are disproportionately affected by certain health conditions.[38]

Additionally, the AMA also awarded $1.8 million over five years to the University of North Carolina School of Medicine to support the significant expansion of the Fully Integrated Readiness for Service (FIRST) Program to new geographic areas of North Carolina and additional high needs specialties including family medicine, general surgery, pediatrics, and psychiatry. The FIRST Program was founded in 2015 at the University of North Carolina School of Medicine to link family medicine workforce pathways from medical school to residency and to service in rural/underserved North Carolina. Participating students have the opportunity to complete their medical degree in three years, followed by the opportunity for placement with the Family Medicine Residency program of North Carolina. FIRST scholar graduates commit to three years of service in an underserved area of North Carolina, during which time they receive ongoing support from UNC Family Medicine in partnership with the NC Office of Rural Health and Community Care, AHEC, Piedmont Health Services, and the North Carolina Academy of Family Physicians.

UTILIZATION OF TELEHEALTH TO ADDRESS RURAL PHYSICIAN WORKFORCE SHORTAGES

Telehealth broadly encompasses technology and health care fields that deliver education, health care, and medical services over a distance. Telehealth modalities for physician/patient interaction may be synchronous (live video), asynchronous (store and forward), remote patient monitoring, or mobile health. In addition, telehealth in rural areas provides the ability for physicians to consult with specialists. Telehealth allows for increased access to physicians, specialists, and other health care professionals for patients in rural areas. In July 2016, the AMA conducted a comprehensive study of physicians' motivations and requirements for the adoption of digital clinical tools. The AMA repeated the study in 2019 to determine the degree to which adoption has occurred in the past three years and to identify attitudinal shifts among physicians toward their use and adoption. The 2019 study found an increase in the number of physicians who see a definite advantage in digital tools; significant growth in the adoption of digital tools among all physicians regardless of gender, specialty, or age; increased adoption of remote care tools such as tele-visits and remote monitoring; and fairly high awareness of emerging technologies such as artificial or augmented intelligence.

Despite telehealth's promise as a means by which to alleviate the shortage of rural physicians, prior to the flexibilities provided during the COVID-19 Public Health Emergency (PHE), telehealth faced several barriers that hindered its widespread adoption in rural areas. Medicare's site of service payment differences impact payments for telehealth services. For example, the originating sites, which are based on the patient's location, were paid facility fees and the distant/receiving sites were paid according to the Medicare physician payment schedule. Additionally, infrastructure presents a challenge, in that many rural areas do not have access to adequate broadband service to allow for the use of telehealth. During the PHE, Medicare has allowed patients to receive telehealth services in their homes instead of having to go to a health care facility and has been paying for telehealth services at in-person office rates. The PHE policies are expected to continue at least through the end of 2021, and the AMA is supporting legislation that would make these flexibilities permanent.

As licensure requirements vary by state, the need for physicians to be licensed in multiple states can also present a burden and a barrier to telehealth implementation. To address this, in the past few years licensure compacts have been implemented in medicine across state lines to allow for provision of telehealth services to patients in these jurisdictions.[39] The Interstate Medical Licensure Compact (IMLC), which the AMA supports, expedites the process for licensure in multiple states. At the time of this report, 29 states, the District of Columbia, and Guam are members of the IMLC, and six other states have introduced legislation to adopt the IMLC this year. One of the promises of the IMLC is to reduce the burden of obtaining multiple state licenses to practice telehealth, while maintaining the important state-based licensure structure.

Credentialing and privileging are also challenging in telehealth delivery in rural locations due to the costs associated with credentialing. While the Centers for Medicare & Medicaid Services (CMS) approved proxy credentialing in 2011, not all state policies align with proxy credentialing, so this will remain a challenge in some areas.[40]

Despite these challenges, innovative models of health care delivery are being developed through telehealth. For example, telehealth provider Avera eCARE partners with health care systems, rural hospitals, outpatient clinics, and long-term care facilities to reach medically underserved populations in South Dakota, North Dakota, Minnesota, Iowa, Nebraska, Montana, Wyoming, and Kansas through telehealth. Avera eCARE has also expanded to include telehealth services for intensive care, emergency departments, pharmacy, long-term care, and correctional facilities. Avera eCARE programs seek to improve efficiencies while decreasing physician burnout and turnover and keeping patients closer to home, all while improving quality of care.

Using telehealth in intensive care units (ICUs) began in 1982 when the first clinical trial was conducted by Grundy et al. In Alaska, Providence Alaska Medical Center established in 2009 the eICU system, a patient monitoring system that uses telehealth to help care for critically ill patients in multiple hospitals from a single location. It is staffed with experienced intensivists and critical care nurses who monitor patients' vital signs, medications, test results, and other data, continuously analyzing their conditions. This allows critical care specialists to alert clinical staff at the bedside to potential problems before they occur and to guide interventions. The eICU allows staff in Anchorage, Alaska to help treat patients at three other hospitals in remote locations, while also adding an extra layer of care for patients in the Anchorage ICU. It costs Providence $2 million a year to operate the system; the rural hospitals pay about $40,000 a year to connect each bed to the system. Research shows that these monies are well spent. A 2011 study in *JAMA*

found that eICUs prevent deaths by helping doctors follow best clinical practices and showed that eICUs cut two days off the average length of an ICU stay.[41]

Project ECHO® (Extension for Community Healthcare Outcomes) was created in 2003 to increase chronic disease management capacity in rural New Mexico for patients with hepatitis C. To treat as many such patients as possible, Project ECHO provided a free educational model and mentored community physicians across New Mexico in how to treat patients with this condition. A 2011 study in the *New England Journal of Medicine* found that hepatitis C care provided by Project ECHO-trained community physicians was as good as care provided by specialists at a university.[42] The Project ECHO model utilizes telementoring, a guided practice model through which the participating clinician retains responsibility for managing the patient. Its principles include appropriate use of technology to leverage scarce resources, sharing best practices to reduce disparity, case-based learning to master complexity, and use of a web-based database to monitor outcomes and the program has been expanded to address other clinical needs beyond hepatitis C care.

Utilization of Technology to Enhance Educational Needs for Rural Training Programs

The PHE necessitated a sudden transition to remote learning in medical schools, and distance E-learning emerged as a new method of teaching to maintain the continuity of medical education. Distance E-Learning is defined as using computer technology to deliver training, including technology-supported learning—either online, offline, or both.[43] Distance E-learning may be beneficial in enhancing educational opportunities for trainees in rural training programs and support alignment with the ACGME Common Program Requirements for scholarship by increasing access to scholarly activities on quality improvement, population health, and teaching, in addition to more classic forms of biomedical research as the focus for scholarship.

Alternative Workforce Initiatives to Address the Physician Shortage in Rural Areas

One approach to meeting demand for primary care is a redefinition, and often expansion, of the scope of practice and licensure for non-physician practitioners, such as nurse practitioners and physician assistants. Many states have taken steps to increase the procedures, treatments, actions, processes, and authority that are permitted by law, regulation, and licensure for non-physician primary care providers. According to the AMA Advocacy Resource Center, 16 states require physician supervision or collaboration of nurse practitioners (NPs) to diagnose, treat, and prescribe; 10 states require physician supervision or collaboration of NPs to prescribe; 10 states require physician supervision or collaboration for a certain number of hours or years; and 15 states plus the District of Columbia allow NPs to practice independently.

DISCUSSION

Rural communities experience significant health disparities due to a number of institutional and structural factors, such as limited access to health care specialists and subspecialists and limited job opportunities for rural residents. According to the Centers for Disease Control and Prevention (CDC), rates for the five leading causes of death in the United States—heart disease, cancer, unintentional injury (including vehicle accidents and opioid overdoses), chronic lower respiratory disease, and stroke—are higher in rural communities.[44] This inequality is intensified as rural residents are less likely to have employer-provided health insurance coverage and, if they are poor, are often not covered by Medicaid. Unfortunately, the supply of rural physicians has not met the demand for health care services among these communities. To meet this need, investments are needed to increase the number of students from rural areas and other students committed to rural and family medicine who are enrolled in medical school and to increase resident exposure to rural practice opportunities.

The current structure of medical education is predominately based in metropolitan areas and disproportionately exposes future physicians to medical practice in urban and suburban settings.[3] While recruitment efforts have focused on strengthening the career pathways for those populations traditionally underrepresented in medicine (URM), these efforts tend to target racial and ethnic groups rather than explicitly targeting students from rural areas. Opportunities to increase rural students' exposure to careers in medicine should be explored to help expand rural physician pathways. Additionally, medical schools should consider rural background as an important component of a diverse student body. Medical schools should consider widespread adoption of holistic admissions practices that value a broad set of life and leadership experiences among applicants.

Beyond educational interventions, efforts should be made to decrease rural hospital closures, as physicians are not likely to practice in an area that is remote from a hospital. There is a symbiotic relationship between physicians and hospitals; research has found that rural hospital closures are associated with long-term decreases in the supply of rural physicians. Rural hospitals in states that had expanded Medicaid as of April 2018 were less likely to close compared to rural hospitals in states that had not expanded Medicaid. At the time this report was drafted, the North Carolina Rural Health Research Program had identified 163 rural hospital closures, 35 percent of which have occurred since 2016. In its 2018 report, the GAO found that from 2013 through 2017 rural hospitals located in the U.S. South represented 77 percent of rural hospital closures; Medicare Dependent Hospitals accounted for 25 percent; and for-profit rural hospitals 36 percent.

Addressing this issue is essential to ensuring an adequate supply of physicians for rural areas. The Association of State and Territorial Health Officials (ASTHO) reports that states are using a variety of measures to prevent rural hospital closures, including tax incentives, technical assistance, and increased Medicaid reimbursement rates. States are also working to improve rural health care access by creating new licensure options, reducing regulatory barriers for clinics that serve rural populations, and exploring legislation that would recruit and train a rural health workforce.[45]

RELEVANT AMA POLICY

Our AMA has numerous existing policies and directives that are relevant to the topic of rural health; these are shown in the appendix.

SUMMARY AND RECOMMENDATIONS

Addressing the gap of rural health services in the U.S. requires a multifaceted approach. In its role as convener of key organizations and stakeholders, our AMA continues to work to help identify ways to encourage and incentivize qualified physicians to practice in our nation's underserved areas. In addition, our AMA continues to advocate for state and national legislative action and other efforts that (1) expand the health careers pathways for Americans in rural areas and others interested in serving these populations; (2) fund residency training in rural areas; (3) promote telehealth and training in telehealth as a promising paradigm to bridge the gaps in care in rural areas; and (4) address the rising tide of rural hospital closures that threatens to further weaken the health care infrastructure in the rural U.S.

The Council on Medical Education therefore recommends that the following recommendation be adopted and the remainder of this report be filed:

1. That our AMA amend Policy H-465.988, "Educational Strategies for Meeting Rural Health Physician Shortage," by addition and deletion to read as follows: ~~Our AMA will undertake a study of issues regarding rural physician workforce shortages, including federal payment policy issues, and other causes and potential remedies (such as telehealth) to alleviate rural physician workforce shortages.~~ (4) Our AMA will encourage ACGME review committees to consider adding exposure to rural medicine as appropriate, to encourage the development of rural program tracks in training programs and increase physician awareness of the conditions that pose challenges and lack of resources in rural areas. (5) Our AMA will encourage adding educational webinars, workshops and other didactics via remote learning formats to enhance the educational needs of smaller training programs.

2. That our AMA monitor the status and outcomes of the 2020 Census to assess the impact of physician supply and patient demand in rural communities.

3. That our AMA amend Policy H-200.954, "US Physician Shortage," by addition to read as follows: "(13) will work to augment the impact of initiatives to address rural physician workforce shortages."

4. That our AMA reaffirm Policy H-465.988, "Educational Strategies for Meeting Rural Health Physician Shortage," which states, in part "(1.a) Our AMA encourage medical schools and residency programs to develop educationally sound rural clinical preceptorships and rotations consistent with educational and training requirements, and to provide early and continuing exposure to those programs for medical students and residents. (1.b) Our AMA encourage medical schools to develop educationally sound primary care residencies in smaller communities with the goal of educating and recruiting more rural physicians."

5. That our AMA amend Policy H-465.981, "Enhancing Rural Physician Practices," by addition of part five to read: "(5) Our AMA will undertake a study of structural urbanism, federal payment polices, and the impact on rural workforce disparities."

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APPENDIX - Relevant AMA Policy

D-305.967, “The Preservation, Stability and Expansion of Full Funding for Graduate Medical Education”
1. Our AMA will actively collaborate with appropriate stakeholder organizations, (including Association of American Medical Colleges, American Hospital Association, state medical societies, medical specialty societies/associations) to advocate for the preservation, stability and expansion of full funding for the direct and indirect costs of graduate medical education (GME) positions from all existing sources (e.g. Medicare, Medicaid, Veterans Administration, CDC and others).
2. Our AMA will actively advocate for the stable provision of matching federal funds for state Medicaid programs that fund GME positions.
3. Our AMA will actively seek congressional action to remove the caps on Medicare funding of GME positions for resident physicians that were imposed by the Balanced Budget Amendment of 1997 (BBA-1997).
4. Our AMA will strenuously advocate for increasing the number of GME positions to address the future physician workforce needs of the nation.
5. Our AMA will oppose efforts to move federal funding of GME positions to the annual appropriations process that is subject to instability and uncertainty.
6. Our AMA will oppose regulatory and legislative efforts that reduce funding for GME from the full scope of resident educational activities that are designated by residency programs for accreditation and the board certification of their graduates (e.g. didactic teaching, community service, off-site ambulatory rotations, etc.).
7. Our AMA will actively explore additional sources of GME funding and their potential impact on the quality of residency training and on patient care.
8. Our AMA will vigorously advocate for the continued and expanded contribution by all payers for health care (including the federal government, the states, and local and private sources) to fund both the direct and indirect costs of GME.
9. Our AMA will work, in collaboration with other stakeholders, to improve the awareness of the general public that GME is a public good that provides essential services as part of the training process and serves as a necessary component of physician preparation to provide patient care that is safe, effective and of high quality.
10. Our AMA staff and governance will continuously monitor federal, state and private proposals for health care reform for their potential impact on the preservation, stability and expansion of full funding for the direct and indirect costs of GME.
11. Our AMA: (a) recognizes that funding for and distribution of positions for GME are in crisis in the United States and that meaningful and comprehensive reform is urgently needed; (b) will immediately work with Congress to expand medical residencies in a balanced fashion based on expected specialty needs throughout our nation to produce a geographically distributed and appropriately sized physician workforce; and to make increasing support and funding for GME programs and residencies a top priority of the AMA in its national political agenda; and (c) will continue to work closely with the Accreditation Council for Graduate Medical Education, Association of American Medical Colleges, American Osteopathic Association, and other key stakeholders to raise awareness among policymakers and the public about the importance of expanded GME funding to meet the nation's current and anticipated medical workforce needs.
12. Our AMA will collaborate with other organizations to explore evidence-based approaches to quality and accountability in residency education to support enhanced funding of GME.
13. Our AMA will continue to strongly advocate that Congress fund additional graduate medical education (GME) positions for the most critical workforce needs, especially considering the current and worsening maldistribution of physicians.
14. Our AMA will advocate that the Centers for Medicare and Medicaid Services allow for rural and other underserved rotations in Accreditation Council for Graduate Medical Education (ACGME)-accredited residency programs, in disciplines of particular local/regional need, to occur in the offices of physicians who meet the qualifications for adjunct faculty of the residency program's sponsoring institution.
15. Our AMA encourages the ACGME to reduce barriers to rural and other underserved community experiences for graduate medical education programs that choose to provide such training, by adjusting as needed its program requirements, such as continuity requirements or limitations on time spent away from the primary residency site.
16. Our AMA encourages the ACGME and the American Osteopathic Association (AOA) to continue to develop and disseminate innovative methods of training physicians efficiently that foster the skills and inclinations to practice in a health care system that rewards team-based care and social accountability.
17. Our AMA will work with interested state and national medical specialty societies and other appropriate stakeholders to share and support legislation to increase GME funding, enabling a state to accomplish one or more of the following: (a) train more physicians to meet state and regional workforce needs; (b) train physicians who will practice in physician shortage/underserved areas; or (c) train physicians in undersupplied specialties and subspecialties in the state/region.
18. Our AMA supports the ongoing efforts by states to identify and address changing physician workforce needs within the GME landscape and continue to broadly advocate for innovative pilot programs that will increase the number of positions and create enhanced accountability of GME programs for quality outcomes.
19. Our AMA will continue to work with stakeholders such as Association of American Medical Colleges (AAMC), ACGME, AOA, American Academy of Family Physicians, American College of Physicians, and other specialty organizations to analyze the changing landscape of future physician workforce needs as well as the number and variety of GME positions necessary to provide that workforce.
20. Our AMA will explore innovative funding models for incremental increases in funded residency positions related to quality of resident education and provision of patient care as evaluated by appropriate medical education organizations such as the Accreditation Council for Graduate Medical Education.

21. Our AMA will utilize its resources to share its content expertise with policymakers and the public to ensure greater awareness of the significant societal value of graduate medical education (GME) in terms of patient care, particularly for underserved and at-risk populations, as well as global health, research and education.
22. Our AMA will advocate for the appropriation of Congressional funding in support of the National Health care Workforce Commission, established under section 5101 of the Affordable Care Act, to provide data and health care workforce policy and advice to the nation and provide data that support the value of GME to the nation.
23. Our AMA supports recommendations to increase the accountability for and transparency of GME funding and continue to monitor data and peer-reviewed studies that contribute to further assess the value of GME.
24. Our AMA will explore various models of all-payer funding for GME, especially as the Institute of Medicine (now a program unit of the National Academy of Medicine) did not examine those options in its 2014 report on GME governance and financing.
25. Our AMA encourages organizations with successful existing models to publicize and share strategies, outcomes and costs.
26. Our AMA encourages insurance payers and foundations to enter into partnerships with state and local agencies as well as academic medical centers and community hospitals seeking to expand GME.
27. Our AMA will develop, along with other interested stakeholders, a national campaign to educate the public on the definition and importance of graduate medical education, student debt and the state of the medical profession today and in the future.
28. Our AMA will collaborate with other stakeholder organizations to evaluate and work to establish consensus regarding the appropriate economic value of resident and fellow services.
29. Our AMA will 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.
30. Our AMA will monitor the status of the House Energy and Commerce Committee's response to public comments solicited regarding the 2014 IOM report, Graduate Medical Education That Meets the Nation's Health Needs, as well as results of ongoing studies, including that requested of the GAO, in order to formulate new advocacy strategy for GME funding, and will report back to the House of Delegates regularly on important changes in the landscape of GME funding.
31. Our AMA will advocate to the Centers for Medicare & Medicaid Services to adopt the concept of Cap-Flexibility and allow new and current Graduate Medical Education teaching institutions to extend their cap-building window for up to an additional five years beyond the current window (for a total of up to ten years), giving priority to new residency programs in underserved areas and/or economically depressed areas.
32. Our AMA will: (a) encourage all existing and planned allopathic and osteopathic medical schools to thoroughly research match statistics and other career placement metrics when developing career guidance plans; (b) strongly advocate for and work with legislators, private sector partnerships, and existing and planned osteopathic and allopathic medical schools to create and fund graduate medical education (GME) programs that can accommodate the equivalent number of additional medical school graduates consistent with the workforce needs of our nation; and (c) encourage the Liaison Committee on Medical Education (LCME), the Commission on Osteopathic College Accreditation (COCA), and other accrediting bodies, as part of accreditation of allopathic and osteopathic medical schools, to prospectively and retrospectively monitor medical school graduates rates of placement into GME as well as GME completion.
33. Our AMA encourages the Secretary of the U.S. Department of Health and Human Services to coordinate with federal agencies that fund GME training to identify and collect information needed to effectively evaluate how hospitals, health systems, and health centers with residency programs are utilizing these financial resources to meet the nation’s health care workforce needs. This includes information on payment amounts by the type of training programs supported, resident training costs and revenue generation, output or outcomes related to health workforce planning (i.e., percentage of primary care residents that went on to practice in rural or medically underserved areas), and measures related to resident competency and educational quality offered by GME training programs.

D-400.985, “Geographic Practice Cost Index”
Our AMA will: (1) use the AMA Physician Practice Information Survey to determine actual differences in rural vs. urban practice expenses; (2) seek Congressional authorization of a detailed study of the way rents are reflected in the Geographic Practice Cost Index (GPCI); (3) advocate that payments under physician quality improvement initiatives not be subject to existing geographic variation adjustments (i.e., GPCIs); and (4) provide annual updates on the Centers for Medicare and Medicaid Services efforts to improve the accuracy of Medicare Economic Index weights and geographic adjustments and their impact on the physician payment schedule, and AMA advocacy efforts on these issues.

D-400.989, “Equal Pay for Equal Work”
Our AMA: (1) shall make its first legislative priority to fix the Medicare payment update problem because this is the most immediate means of increasing Medicare payments to physicians in rural states and will have the greatest impact; (2) shall seek enactment of legislation directing the General Accounting Office to develop and recommend to Congress policy options for reducing any unjustified geographic disparities in Medicare physician payment rates and improving physician recruitment and retention in underserved rural areas; and (3) shall advocate strongly to the current administration and Congress that additional funds must be put into the Medicare physician payment system and that continued budget neutrality is not an option.

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

H-200.954, “US Physician Shortage”
Our AMA:
(1) explicitly recognizes the existing shortage of physicians in many specialties and areas of the US;
(2) supports efforts to quantify the geographic maldistribution and physician shortage in many specialties;
(3) supports current programs to alleviate the shortages in many specialties and the maldistribution of physicians in the US;
(4) encourages medical schools and residency programs to consider developing admissions policies and practices and targeted educational efforts aimed at attracting physicians to practice in underserved areas and to provide care to underserved populations;
(5) encourages medical schools and residency programs to continue to provide courses, clerkships, and longitudinal experiences in rural and other underserved areas as a means to support educational program objectives and to influence choice of graduates' practice locations;
(6) encourages medical schools to include criteria and processes in admission of medical students that are predictive of graduates' eventual practice in underserved areas and with underserved populations;
(7) will continue to advocate for funding from public and private payers for educational programs that provide experiences for medical students in rural and other underserved areas;
(8) will continue to advocate for funding from all payers (public and private sector) to increase the number of graduate medical education positions in specialties leading to first certification;
(9) will work with other groups to explore additional innovative strategies for funding graduate medical education positions, including positions tied to geographic or specialty need;
(10) continues to work with the Association of American Medical Colleges (AAMC) and other relevant groups to monitor the outcomes of the National Resident Matching Program; and
(11) continues to work with the AAMC and other relevant groups to develop strategies to address the current and potential shortages in clinical training sites for medical students.
(12) will: (a) promote greater awareness and implementation of the Project ECHO (Extension for Community Health care Outcomes) and Child Psychiatry Access Project models among academic health centers and community-based primary care physicians; (b) work with stakeholders to identify and mitigate barriers to broader implementation of these models in the United States; and (c) monitor whether health care payers offer additional payment or incentive payments for physicians who engage in clinical practice improvement activities as a result of their participation in programs such as Project ECHO and the Child Psychiatry Access Project; and if confirmed, promote awareness of these benefits among physicians.

H-200.972, “Primary Care Physicians in Underserved Areas”
1. Our AMA should pursue the following plan to improve the recruitment and retention of physicians in underserved areas:
(a) Encourage the creation and pilot-testing of school-based, faith-based, and community-based urban/rural family health clinics, with an emphasis on health education, prevention, primary care, and prenatal care.
(b) Encourage the affiliation of these family health clinics with local medical schools and teaching hospitals.
(c) Advocate for the implementation of AMA policy that supports extension of the rural health clinic concept to urban areas with appropriate federal agencies.
(d) Encourage the AMA Senior Physicians Section to consider the involvement of retired physicians in underserved settings, with appropriate mechanisms to ensure their competence.

(e) Urge hospitals and medical societies to develop opportunities for physicians to work part-time to staff health clinics that help meet the needs of underserved patient populations.
(f) Encourage the AMA and state medical associations to incorporate into state and federal health system reform legislative relief or immunity from professional liability for senior, part-time, or other physicians who help meet the needs of underserved patient populations.
(g) Urge hospitals and medical centers to seek out the use of available military health care resources and personnel, which can be used to help meet the needs of underserved patient populations.
2. Our AMA supports efforts to: (a) expand opportunities to retain international medical graduates after the expiration of allocated periods under current law; and (b) increase the recruitment and retention of physicians practicing in federally designated health professional shortage areas.

H-240.971, "Elimination of Payment Differentials Between Urban and Rural Medical Care"
Our AMA (1) supports elimination of Medicare reimbursement differentials between urban and rural medical care; and (2) supports efforts to inform the Congress of the impact of such programs on the rural population.

H-400.988, "Medicare Reimbursement, Geographical Differences"
The AMA reaffirms its policy that geographic variations under a Medicare payment schedule should reflect only valid and demonstrable differences in physician practice costs, especially liability premiums, with other non-geographic practice cost index (GPCI) -based adjustments as needed to remedy demonstrable access problems in specific geographic areas.
(Sub. Res. 82, A-89 Reaffirmed: BOT Rep. DD, I-92 Reaffirmed: CMS Rep. 10, A-03 Reaffirmation A-06 Reaffirmation I-07 Reaffirmation A-08 Reaffirmation A-09 Reaffirmed: BOT Action in response to referred for decision Res. 212, A-09 Modified: CMS Rep. 4, A-11 Reaffirmed: CMS Rep. 1, I-11 Reaffirmed in lieu of Res. 122, A-12 Reaffirmed in lieu of Res. 113, A-13)

H-465.979, "Economic Viability of Rural Sole Community Hospitals"
Our AMA: (1) recognizes that economically viable small rural hospitals are critical to preserving patient access to high-quality care and provider sustainability in rural communities; and (2) supports the efforts of organizations advocating directly on behalf of small rural hospitals provided that the efforts are consistent with AMA policy.

H-465.980, "Rural Community Health Networks"
AMA policy is that development of rural community health networks be organized using the following principles: (1) Local delivery systems should be organized around the physical, mental and social needs of the community; (2) Clinical decision-making and financial management should reside within the community health network whenever feasible with physicians retaining responsibility for a network's medical, quality and utilization management; (3) Savings generated by community health networks should be reinvested in the local health care delivery system, rather than redirected elsewhere, since rural health systems and economies are fundamentally intertwined; (4) Patients should retain access to the spectrum of local health services, thereby preserving patient-physician relationships and continuity of care; and (5) Participation in rural community health networks should be voluntary, but open to all qualified rural physicians and other health care providers wishing to participate.

H-465.981, "Enhancing Rural Physician Practices"
The AMA: (1) supports legislation to extend the 10% Medicare payment bonus to physicians practicing in rural counties and other areas where the poverty rate exceeds a certain threshold, regardless of the areas' Health Professional Shortage Area (HPSA) status; (2) encourages federal and state governments to make available low interest loans and other financial assistance to assist physicians with shortage area practices in defraying their costs of compliance with requirements of the Occupational Safety and Health Administration, Americans with Disabilities Act and other national or state regulatory requirements; (3) will explore the feasibility of supporting the legislative and/or regulatory changes necessary to establish a waiver process through which shortage area practices can seek exemption from specific elements of regulatory requirements when improved access, without significant detriment to quality, will result; and (4) supports legislation that would allow shortage area physician practices to qualify as Rural Health Clinics without the need to employ one or more physician extenders.

H-465.982, "Rural Health"
The AMA: (1) encourages state medical associations to study the relevance of managed competition proposals to meeting health care needs of their rural populations; (2) encourages state associations to work with their respective state governments to implement rural health demonstration projects; and (3) will provide all adequate resources to assist state associations in dealing with managed competition in rural areas.

H-465.989, "Rural Health"
It is the policy of the AMA that: (1) the AMA closely monitor the impact of balance billing restrictions mandated by the Budget Reconciliation legislation on reimbursement levels and access to care in rural areas, and take action as needed to moderate that impact; (2) the AMA closely monitor implementation of the legislation establishing essential access community hospitals and rural primary care hospitals, to ensure that this program is implemented in a manner conducive to high quality of patient care and consistent with Association policy concerning the functions and supervision of physician assistants and nurse practitioners; (3) state medical associations be encouraged to monitor similarly and to influence any legislation or regulations governing the development and operation of such limited service rural hospital facilities in their own jurisdictions; and (4) the AMA establish

liaison with the American Hospital Association, Congress and the Centers for Medicare & Medicaid Services regarding any further development of essential access community hospitals and rural primary care hospitals grants.

H-465.990, "Closing of Small Rural Hospitals"
Our AMA encourages legislation to reduce the financial constraints on small rural hospitals in order to improve access to health care.

H-465.994, "Improving Rural Health"
1. Our AMA (a) supports continued and intensified efforts to develop and implement proposals for improving rural health care, (b) urges physicians practicing in rural areas to be actively involved in these efforts, and (c) advocates widely publicizing AMA's policies and proposals for improving rural health care to the profession, other concerned groups, and the public.
2. Our AMA will work with other entities and organizations interested in public health to:
• Identify and disseminate concrete examples of administrative leadership and funding structures that support and optimize local, community-based rural public health.
• Develop an actionable advocacy plan to positively impact local, community-based rural public health including but not limited to the development of rural public health networks, training of current and future rural physicians in core public health techniques and novel funding mechanisms to support public health initiatives that are led and managed by local public health authorities.
•. Study efforts to optimize rural public health.

H.465.997, "Access to and Quality of Rural Health Care"
(1) Our AMA believes that solutions to access problems in rural areas should be developed through the efforts of voluntary local health planning groups, coordinated at the regional or state level by a similar voluntary health planning entity. Regional or statewide coordination of local efforts will not only help to remedy a particular community's problems, but will also help to avoid and, if necessary, resolve existing duplication of health care resources. (2) In addition to local solutions, our AMA believes that on a national level, the implementation of Association policy for providing the uninsured and underinsured with adequate protection against health care expense would be an effective way to help maintain and improve access to care for residents of economically depressed rural areas who lack adequate health insurance coverage. Efforts to place National Health Service Corps physicians in underserved areas of the country should also be continued.

D-255.985, "Conrad 30 - J-1 Visa Waivers"
1. Our AMA will: (A) lobby for the reauthorization of the Conrad 30 J-1 Visa Waiver Program; (B) advocate that the J-1 Visa waiver slots be increased from 30 to 50 per state; (C) advocate for expansion of the J-1 Visa Waiver Program to allow IMGs to serve on the faculty of medical schools and residency programs in geographic areas or specialties with workforce shortages; (D) publish on its website J-1 visa waiver (Conrad 30) statistics and information provided by state Conrad 30 administrators along with a frequently asked questions (FAQs) document about the Conrad 30 program; (E) advocate for solutions to expand the J-1 Visa Waiver Program to increase the overall number of waiver positions in the US in order to increase the number of IMGs who are willing to work in underserved areas to alleviate the physician workforce shortage; (F) work with the Educational Commission for Foreign Medical Graduates and other stakeholders to facilitate better communication and information sharing among Conrad 30 administrators, IMGs, US Citizenship and Immigration Services and the State Department; and (G) continue to communicate with the Conrad 30 administrators and IMGS members to share information and best practices in order to fully utilize and expand the Conrad 30 program.
2. Our AMA will continue to monitor legislation and provide support for improvements to the J-1 Visa Waiver program.
3. Our AMA will continue to promote its educational or other relevant resources to IMGs participating or considering participating in J-1 Visa waiver programs.
4. As a benefit of membership, our AMA will provide advice and information on Federation and other resources (but not legal opinions or representation), as appropriate to IMGs in matters pertaining to work-related abuses.
5. Our AMA encourages IMGs to consult with their state medical society and consider requesting that their state society ask for assistance by the AMA Litigation Center, if it meets the Litigation Center's established case selection criteria.

4. MEDICAL STUDENT DEBT AND CAREER CHOICE

Reference committee hearing: see report of Reference Committee C.

HOUSE ACTION: RECOMMENDATIONS ADOPTED AS FOLLOWS
REMAINDER OF REPORT FILED
See Policies TBD

American Medical Association (AMA) Policy H-305.925 (22), "Principles of and Actions to Address Medical Education Costs and Student Debt," asks our AMA to:

Formulate a task force to look at undergraduate medical education training as it relates to career choice, and develop new polices and novel approaches to prevent debt from influencing specialty and subspecialty choice.

During the 2019 Annual Meeting of the AMA House of Delegates (HOD), testimony before Reference Committee C was in support of this addition to policy. Indeed, education debt continues to be a significant burden on medical students, residents, and physicians. The AMA has numerous policies on this topic and advocates to legislators for mechanisms to alleviate or eliminate education debt. Similarly, the AMA continues to call for improved workforce planning, to ensure access to health care services nationwide, particularly in underserved rural and urban areas and in specific fields of need (e.g., primary care).

DEVELOPMENT OF THE TASK FORCE

To implement the policy, the Council on Medical Education assigned the chair of its 2019-2020 undergraduate medical education committee (Robert Goldberg, DO) as lead for the task force, which comprised representatives of the following AMA sections, along with the National Association of Advisors for the Health Professions (NAAHP):

- Medical Student Section — Faith Crittenden
- Resident and Fellow Section — Gunjan Malhotra, MD
- Young Physicians Section — Hilary Fairbrother, MD, MPH
- Academic Physicians Section — Hal B. Jenson, MD, MBA
- Women Physicians Section — Anita Ravi, MD, MPH, MSHP
- Minority Affairs Section — Frank Clark, MD
- Senior Physicians Section — Louis Weinstein, MD
- NAAHP — Francie Cuffney, PhD

The task force held two teleconferences, in April and July; appointed representatives contributed the expertise and unique perspectives of their specific demographic groups to the background and recommendations of this report.

TRENDS IN MEDICAL STUDENT DEBT

As with tuition and expenses across higher education, data on medical student debt reflect a continuing upward trend. The Association of American Medical Colleges (AAMC) reports that median medical school debt in 2019 was $200,000, which increased from $195,000 in 2018.[1] Data for osteopathic medical school programs reflect a similar upward trend, according to the American Association of Colleges of Osteopathic Medicine (AACOM), with an overall median expected debt for matriculants in 2019 at $192,000—up nine percent over the previous two years.[2] AACOM data also show that median expected debt for entering students at private osteopathic schools is $200,000, versus $160,000 for those in public osteopathic schools.

These data show a significant and growing debt burden on medical students in aggregate but may disguise the actual debt load that many individual students face, due to a sizeable and growing cross-section of students who report no medical student debt. The proportion of those reporting no debt has been increasing and appears concentrated in students from wealthy backgrounds. The reported percentage of 2015 medical school graduates who graduated with no medical school debt was 21.5 percent; this figure grew to 28.7 percent for 2019 graduates.[1] Although this trend may at first glance seem positive, report Grischkan et al., it may have negative consequences both for the diversity of the physician workforce and physician distribution across medical specialties, in that "primary care-oriented fields seem to have less of an increase in graduates without debt."[3] In fact, as Grischkan et al. note, six specialties are experiencing the largest absolute increase in no debt; radiology, dermatology, neurology, obstetrics and gynecology, ophthalmology, and pathology—many of which are competitive choices for careers among medical school graduates seeking to match into a residency program. In short, it appears that higher overall debt is concentrated among a smaller number of individuals. This underscores the potential misinterpretations that may arise from viewing these data in aggregate, which may cloud the overall picture, as a significant subset of students have outside funding sources to offset debt, including personal or family wealth, scholarships, debt relief through military service, and loan forgiveness due to future service in an underserved urban and rural area.

One of the largest contributors to medical school debt is rising tuition. According to the AAMC, the cost of allopathic medical education has been increasing steadily for both public and private institutions, as shown in Table 1, with a 20

percent to 23 percent increase in less than a decade.[4] Similar data from the AACOM (see Table 2) show a 30 percent to 34 percent increase over 11 years.[5]

Table 1. Average tuition, U.S. allopathic medical school programs (public and private)

	2012-2013		2019-2020	
	In-state	Out of state	In-state	Out of state
Public	$23,954	$45,047	$32,520	$56,001
Private	$42,407	$43,943	$55,337	$56,946

Table 2. Mean tuition, U.S. osteopathic medical school programs (public and private aggregated)

2008-2009		2019-2020	
In-state	Out of state	In-state	Out of state
$33,420	$38,683	$50,563	$55,853

It is important to note that while tuition has been steadily increasing, it has not discouraged applications to medical school; this number as well as overall enrollments have continued to increase over the last decade for both allopathic[6] and osteopathic[7] medical school programs. These increases in tuition could influence specialty choice among graduates of public versus private medical schools in different ways. Phillips et al. reported that high educational debt deters graduates of public medical schools from choosing primary care but does not appear to influence private school graduates in the same way. They note that "[r]educing debt of selected medical students may be effective in promoting a larger primary care physician workforce."[8]

GAPS IN FINANCIAL LITERACY AMONG MEDICAL STUDENTS

While the increase in medical school costs is a significant factor in rising medical student debt, it is also important to consider the relative lack of financial education among medical students as a concern.

A study of first- and fourth-year medical students by Jayakumar et al. found low levels of financial literacy and lack of preparedness for managing personal finances, including strategies for effective saving and investing and practice management.[9] Equally concerning, the study's authors describe the lack of improvement in financial literacy between entering and graduating medical students, regardless of whether their medical school offered such education. They conclude that reform efforts in undergraduate medical education by institutions and policymakers should encompass improvements to existing curricula to fill this gap in medical students' knowledge, and ensure that financial counseling is tailored to meet students' needs and occurs before key personal finance decisions are made.

The Liaison Committee on Medical Education, which accredits medical school programs in the U.S. leading to the MD (allopathic) degree, includes as part of its accreditation standards a requirement that programs provide the following services to students:

> *12.1 Financial Aid/Debt Management Counseling/Student Educational Debt*
>
> *A medical school provides its medical students with effective financial aid and debt management counseling and has mechanisms in place to minimize the impact of direct educational expenses (i.e., tuition, fees, books, supplies) on medical student indebtedness.*

Similarly, the Commission on Osteopathic College Accreditation, the accrediting body for osteopathic medical school programs, has the following requirements related to debt counseling and student debt outcomes:

> *Element 9.7: Financial Aid and Debt Management Counseling*
>
> *A COM [college of medicine] must provide its students with counseling to assist them with financial aid applications and debt management.*
>
> *Submission 9.7: Financial Aid and Debt Management Counseling*
>
> *1. Provide a description of all financial aid and debt counseling sessions provided to its students, including:*

a. When the financial aid and debt counseling sessions are/were provided to the students;
b. The OMS year during which students are required to receive these sessions;
c. A roster of students that received financial aid and debt counseling.

Element 11.3: Student Debt Outcomes

A COM and/or its parent institution must collect and publish data on the debt load and student loan default rates of its students in such a way that applicants can be aware of the information.

Submission 11.3: Student Debt Outcomes

1. Provide the current average debt for the last four years of students.
2. Provide a public link to where the information is published.
3. For each of the four academic years preceding the submission of this information, provide the student loan default rate for all federal financial aid obtained under the Higher Education Act of 1965 (HEA), as amended, including financial aid provided under Title IV of the HEA.

DEBT AND DIVERSITY

In considering the connections between career choice and medical student debt, it is imperative to examine the differences in financial circumstances and barriers that exist for subsets of medical graduates.

Data regarding debt that account for racial/ethnic diversity of medical students and physicians demonstrate that Black/African American and Hispanic/Latina/o/x medical students graduate with higher levels of medical school debt compared to the overall population. According to AACOM, 91 percent of Black/African American and 88 percent of Hispanic/Latina/o/x entering students expect to graduate with medical education debt—versus 77 percent of Asian entering students and 86 percent of white students.[10] These trends have been supported by other studies that report higher debt burden in Black medical students compared to other races/ethnicities. A study by Dugger et al. found that 77.3 percent of Black medical students anticipated debt in excess of $150,000 upon graduation, versus White (65.1 percent), Hispanic (57.2 percent), and Asian students (50.2 percent).[11] These findings are supported by Jolly[12] and Phillips et al.[13] (Dugger et al. do note that Hispanic students are a "notable exception to this general relationship," and call for research of the "relatively high matriculation and low debt of Hispanics in comparison to other minority groups.")

The literature concerning medical school debt among students from groups historically marginalized in medicine is limited, it is important to consider additional disparities that exist in medical school. While the current evidence reflects higher amounts of debt for Black/African American and Hispanic/Latina/o/x groups, students from minoritized groups also experience a higher incidence of discrimination and burnout and may have more limited access to resources compared to non-minoritized medical students. Medical student debt levels are negatively associated with mental well-being and academic outcomes, according to a review by Pisaniello et al.[14] Perceived risk of not completing an educational program creates additional burden regarding one's ability to ultimately repay educational debt. It is important to lower these hurdles for minoritized students; improved strategies and programs for decreasing and mitigating medical school debt and its impacts is only one aspect of addressing systemic disparities within medical education.

FACTORS THAT INFLUENCE MEDICAL CAREER CHOICE

It is inarguable that high levels of medical school debt are a personal concern from a financial perspective for many medical students, trainees, and physicians. Increasing evidence suggests that the impact of debt on career choice is variable and is not strongly associated with specialty selection, including the choice of primary care fields.[15,16,17,18]

In contrast, the strongest and most predictive influences of specialty choice, according to the AAMC survey of 2019 medical school graduates,[1] are the following:

Influence	Percent
Fit with personality, interests, and skills	87.2
Content of specialty	83.4
Role model influence	50.9

These data have been consistent, in that they represent the three most frequently cited influences on specialty choice by each of the past five classes of medical school graduates, from 2015 to 2019.

A recent systematic literature review and meta-analysis of 75 studies encompassing more than 880,000 individuals by Yang et al.[19] outlined the factors influencing medical students' choice of subspecialty training; as shown, student debt was cited as a factor by the fewest respondents:

Factor	Percent
Academic interests	75.3
Competencies	55.2
Controllable lifestyles or flexible work schedules	53
Patient service orientation	50
Medical teachers or mentors	46.9
Career opportunities	44
Workload or working hours	37.9
Income	34.7
Length of training	32.3
Prestige	31.2
Advice from others	28.2
Student debt	15.3

Income is certainly among the drivers of career choice; this variable is even more critical when considering lifetime earning potential. Leigh et al. reported that estimates of additional lifetime earnings for the broad categories of surgery, internal medicine, and pediatric subspecialties and other specialties over that for primary care were $1,587,722, $1,099,655, and $761,402 respectively. For 41 specific specialties, the top additional earnings compared with family medicine as reference were neurological surgery ($2,880,601), medical oncology ($2,772,665), and radiation oncology ($2,659,657). The authors conclude, "After accounting for varying residency years and discounting future earnings, primary care specialties earned roughly $1 [million to] $3 million less than other specialties."[20]

Aside from the numbers, career satisfaction continues to be complex and multifaceted. Physician career satisfaction has been linked to better health care, patient satisfaction, and improved patient outcomes. Career satisfaction and dissatisfaction vary across specialty as well as by age, income, and region. A 2002 study by Leigh et al. found a "relatively high proportion of dissatisfied physicians among those practicing certain 'procedural' specialties" (including ophthalmology, otolaryngology, and orthopaedic surgery), which the authors deemed "puzzling" due to the high income and prestige associated with these fields. In contrast, physicians practicing some "cognitive" specialties (e.g., infectious diseases, geriatrics, and pediatrics) were unlikely to be dissatisfied. The authors conclude that the advent of recent changes wrought by managed care is responsible for the levels of dissatisfaction among these procedural fields.[21]

Several current and future events may also become relevant with regard to the impact of medical student debt upon career choice. With the transition of the United States Medical Licensing Examination® (USMLE®) Step 1 exam to pass/fail reporting, previously perceived barriers to consideration of certain specialties may become less relevant to applicants. Increasing emphasis on holistic review of applicants may also affect medical student specialty choice. In addition, given the impact of the COVID-19 pandemic, there may be significant changes in the application process resulting from necessary innovation to adapt to travel limitations. Although it would be impossible to predict the impact of the changing landscape of medical education and medical student assessment, these factors may become relevant over time and warrant continued monitoring and potential future study.

LOAN FORGIVENESS PROGRAMS AND FREE TUITION

In one study of the role of debt and loan forgiveness/repayment programs in osteopathic medical graduates' plans to enter primary care, the use of loan forgiveness programs has been associated with choosing primary care specialties. Scheckel et al. found that "Graduates with high debt burden were more likely to enter primary care fields and use loan forgiveness/repayment programs."[22] In addition, Richards et al. found a strong association between participation in loan forgiveness programs and medical service in underserved areas.[23] These programs therefore serve a dual purpose—to mitigate the impact of medical school debt on career choice and help increase the medical workforce in underserved areas.

Some, however, have questioned the value of loan forgiveness programs. In their study, Phillips et al. state that it is surprising that individuals with high debt were "significantly less likely to pursue a career with a government-owned or subsidized practice, including an FQHC [federally qualified health center], rural health clinic, the Indian Health Service, the Public Health Service, a state or local government-operated clinic, or the Department of Veterans Affairs."[8] They conclude, "Existing National Health Service Corps [NHSC] loan repayment opportunities may not offer adequate incentives to primary care physicians with high debt," and call for policy changes, including increased investment in the NHSC, reform of the Public Service Loan Forgiveness program, and federal support for academic primary care.

Similarly, Asch, Grischkan, and Nicholson comment that loan repayment programs can create "perverse incentives" and may conflict with each other, leading to a financial disincentive to enter primary care careers. They also state that loan repayment does nothing to address the underlying costs of medical education and only provides a benefit to those who pursue participation in such programs.[24]

Additionally, free tuition and full scholarships alone were also not associated with students choosing primary care, conclude Nguyen and Bounds; they posit that concerns with work environment and lifestyle may dissuade those who were initially interested in primary care from staying with that decision, aside from any tuition and scholarship assistance.[25] This finding is important, in that the number of medical schools offering free tuition is growing, with seven total as of April 2019 (although some such offerings are limited to the first few graduating classes at newly accredited medical schools).[26] An article in *AAMC News* on the increase in free medical schools notes that such efforts are unlikely to augment the primary care workforce, although they could attract a more diverse pool of applicants and allow for graduates to pursue their passion, regardless of profit. The article highlights data from the AAMC that debt has "little influence" on choice of specialty.[27] In addition, the authors opine that efforts to enhance compensation and reimbursements for primary care medical specialties, change negative perceptions of low prestige (all too common among a subset of medical education role models and mentors), and improve the primary care practice environment for these physicians could be more fruitful as a means to increase the primary care workforce. Future research by the Council on Medical Education and other stakeholders should monitor the impact of free tuition and scholarships on specialty choice and debt, as well as workforce composition and physician satisfaction.

CONCERNS WITH THE PUBLIC SERVICE LOAN FORGIVENESS (PSLF) PROGRAM

At the June 2021 of the AMA HOD, attendees discussed the Public Service Loan Forgiveness (PSLF) program. Discussion centered around concerns about the denial rate of PSLF applications, lack of transparency of and communication about program requirements, and oversight and accountability of PSLF loan servicers. Council on Medical Education offered to incorporate discussion of the issue into this report.

A 2017 report by the Council on Medical Education, "Expansion of Public Service Loan Forgiveness," provided background on the PSLF program, a taxpayer-funded program through which debt relief is afforded individuals to work in public service careers, such as teachers and social workers, as well as medical professionals. PSLF forgives the remaining balance on Direct Loans after the individual makes 120 qualifying monthly payments under a qualifying repayment plan while working full-time for a qualifying employer. According to Federal Student Aid, an office of the U.S. Department of Education (https://studentaid.gov/manage-loans/forgiveness-cancellation/public-service), PSLF requirements specify that recipients must:

- be employed by a U.S. federal, state, local, or tribal government or not-for-profit organization;
- work full-time for that agency or organization;
- have Direct Loans (or consolidate other federal student loans into a Direct Loan);
- repay loans under an income-driven repayment plan; and
- make 120 qualifying payments.

Despite the promise of the program, it has been beset by challenges and administrative difficulties, leading to "astronomical" denial rates, as the authors of Resolution 314-J-21 deemed it. A 2019 *New York Times*' article (https://www.nytimes.com/2019/11/28/us/politics/student-loan-forgiveness.html) ascribed blame for the program's failures to "loan servicers who at best failed to inform borrowers of what was needed to qualify, to the single company in charge of the program that has been repeatedly cited for shoddy service, mismanagement and poor record keeping, to lawmakers who wrote in a baffling list of requirements, and to the Education Department, which has failed to step in and correct the problem."

A 2019 report from the Government Accountability Office (https://www.gao.gov/products/gao-19-595) calls for increased availability of information on the program and decreasing/combining the number of application steps to make PSLF less confusing for borrowers.

A contrarian viewpoint, expressed by the founder of Student Loan Planner at https://www.studentloanplanner.com/pslf-snowball-effect/, takes a more sanguine approach to the PSLF and its prospects for debt relief. He writes, "The PSLF success rate for applications will be exponentially increasing over the next few years thanks to the 'PSLF Snowball Effect.'" For medicine in particular, he adds that, due to the timing of the development of the program, and the 10-year window for the 120-payment requirement, physicians will not be receiving PSLF "en masse" until 2024.

AMA'S FEDERAL ADVOCACY EFFORTS REGARDING STUDENT LOAN DEBT

The AMA's Advocacy Group has been active in advocating before Congress for legislation that ensures continued funding of key programs, such as loan forgiveness, that help ensure availability of physicians in specific fields of medicine and/or underserved geographic areas to satisfy the nation's health care workforce needs.

Consolidated Appropriations Act, 2021 (H.R. 133)

This legislation (see rules.house.gov/sites/democrats.rules.house.gov/files/BILLS-116HR133SA-RCP-116-68.pdf) encompasses extension for community health centers, the National Health Service Corps, and teaching health centers that operate graduate medical education (GME) programs. It includes $4 billion in funding from 2019-2023 for community health centers and the National Health Service Corps and provides $310 million in additional funding from 2021-2023 for the National Health Service Corps. It also provides additional funding, until 2023, for teaching health centers that operate GME programs. (Sec. 301)

Specific relevant sections of the legislation include the following:

Promoting Rural Hospital GME Funding Opportunity

This section makes changes to Medicare graduate medical education (GME) Rural Training Tracks (RTT) program to provide greater flexibility for hospitals not located in a rural area that established or establish a medical residency program (or rural tracks) in a rural area or establish an accredited program where greater than 50 percent of the program occurs in a rural area to partner with rural hospitals and address the physician workforce needs of rural areas. (Sec. 127)

Medicare GME treatment of hospitals establishing new medical residency training programs after hosting medical resident rotators for short durations

This section allows hospitals to host a limited number of residents for short-term rotations without being negatively impacted by a set permanent full time equivalent (FTE) resident cap or a Per Resident Amount (PRA). A hospital must report full-time equivalent residents on its cost report for a cost reporting period if the hospital trains at least 1.0 full-time-equivalent residents in an approved medical residency training program or programs in such period. (Sec. 131)

Student Financial Assistance

A total of $24.5 billion shall be provided for carrying out Title IV of HEA and the maximum Pell Grant that a student can be eligible for during 2021-2022 will be $5,432. (Title III)

Student Aid Administration

A total of $1.9 billion will remain available through September 30, 2022 to carry out HEA and the Public Health Service Act, allowing students to pick from multiple servicers for their student loans and providing more support and transparency for borrowers. (Title III)

Strategy to prioritize and expand educational and professional exchange programs with Mexico

The section calls for assessment of the feasibility of fostering partnerships between universities in the United States and medical school and nursing programs in Mexico to ensure that Mexican programs have accreditation standards that are in line with the Accreditation and Standards in Foreign Medical Education and Accreditation Commission For Education in Nursing, so that Mexican medical and nursing students can pass medical and nursing licensing examinations, respectively, in the United States. (Sec. 1904)

General Provisions

A total of $50 million for public service loan forgiveness under the normal terms. (Sec. 311)

Health Workforce

A total of $50 million will be available for grants to public institutions of higher education to expand or support graduate education for physicians provided by such institutions. Priority will be given to public institutions located in states with a projected primary care shortage in 2025. Grants are limited to public institutions in states in the top quintile of states with a projected primary care shortage in 2025. (Title II)

Distribution of additional residency positions

This section supports Medicare physician workforce development by providing for the distribution of 1,000 additional Medicare-funded GME residency positions. Not less than 10 percent of the aggregate number of these new positions will be given to each of the following categories: rural hospitals, hospitals that are already above their Medicare cap for residency positions, hospitals in states with new medical schools or new locations and branch campuses, and hospitals that serve Health Professional Shortage Areas. However, a hospital may not receive more than 25 additional full-time equivalent residency positions. (Sec. 126). On June, 28, 2021, the AMA provided comments about how the new 1,000 GME slots should be distributed. The AMA also signed on to a letter discussing this same issue.

Higher Education Emergency Relief Fund

Funding will be provided to defray expenses associated with COVID-19, to carry out student support activities authorized by the HEA that address needs related to COVID-19, and to provide financial aid grants to students which may be used for any component of the student's cost of attendance or for emergency costs that arise due to COVID-19, including tuition, food, housing, health care, or childcare. Additional funding will be provided for Historically Black Colleges and Universities, Tribal Colleges and Universities, Hispanic Serving Institutions, and certain other institutions. (Sec. 314)

FAFSA Simplification

This provision makes it easier to apply for federal aid and makes that aid predictable. This provision provides a formula for determining the amount of need that a student has including tuition, room and board, dependents, book stipends, transportation, and personal expenses. It also considers parents' and spouses' potential financial contributions or lack thereof. (Title VII)

Emergency Financial Aid Grants

Students receiving qualified emergency financial aid grants after March 26, 2020, will not have those grants included in their gross income for purposes of the Internal Revenue Code. (Sec. 277)

Other Loan Forgiveness Legislation

The AMA offered technical assistance toward creation of the Health Heroes 2020 Act (H.R. 6650/ S. 3634), which proposes to bolster the National Health Service Corps (NHSC) by providing an additional $25 billion for both loan repayment and scholarship programs in fiscal year 2020 to increase the number of medical professionals in underserved communities. In addition, the proposal increases the mandatory NHSC funding level from $310 million

to $690 million for fiscal years 2021-2026 to increase scholarship and loan forgiveness awards and meet the nation's growing health needs.

The AMA has voiced its support for the Strengthening America's Health Care Readiness Act, which increases supplemental funding for the NHSC by $10 billion. This increased funding will be used for additional loan repayment and scholarship programs. Moreover, the bill contains a 40 percent set-aside for historically underrepresented minorities in health care and provides mentoring and early recruitment for minorities. Additionally, the bill provides $50 million for a National Disaster Medical System (NDMS) pilot program, which would bolster health emergency surge capacity.

The AMA has also supported the Student Loan Forgiveness for Frontline Health Workers Act in the 116th and the 117th Congresses and urged the U.S. House of Representatives and the U.S. Senate to quickly pass this legislation. If adopted, this act would provide total student loan forgiveness for physicians, residents, and medical students who aid in responding to the COVID-19 crisis.

The AMA also drafted a letter to Congressional leaders in 2020 regarding the "phase four" coronavirus relief package intended to confront the economic impact of the COVID-19 pandemic. For resident physicians and early graduated medical students whose debt averages over $200,000 per individual, the AMA urged Congress to provide at least $20,000 of federal student loan forgiveness or $20,000 of tuition relief. The AMA believes these benefits should also be made available to third- and fourth-year medical students who are willing, and deemed competent, to begin providing early direct patient care for patients with COVID-19, or who are making other significant contributions to the pandemic response through research, public health, and telemedicine efforts.

Other AMA advocacy in 2021 toward alleviating the medical education debt burden includes the following:

- On March 24, the AMA signed on to a letter offering support for the "Resident Physician Shortage Reduction Act." This bipartisan legislation would gradually raise the number of Medicare-supported GME positions by 2,000 per year for seven years, for a total of 14,000 new slots. A share of these positions would be given to hospitals with diverse needs including hospitals in rural areas, hospitals serving patients from health professional shortage areas (HPSAs), hospitals in states with new medical schools or branch campuses, and hospitals already training over their caps. On April 8, the AMA sent a letter supporting S. 924, the "Rural America Health Corps Act." This legislation would establish a demonstration program to provide payments on qualified loans for individuals eligible for, but not currently participating in, the National Health Service Corps (NHSC) Loan Repayment Program who agree to a five-year period of obligated full-time service in a rural health professional shortage area.

- On May 13, the AMA sent letters supporting H.R. 2917 and S. 1443, the "Retirement Parity for Student Loans Act," which would permit 401(k), 403(b), SIMPLE, and governmental 457(b) retirement plans to make voluntary matching contributions to workers as if their student loan payments were salary reduction contributions.

- On May 18, the AMA signed on to a letter asking that federal support for physician training be included in upcoming legislative efforts to improve the nation's infrastructure, and reaffirmed our support for the "Resident Physician Shortage Reduction Act of 2021," which asks for 14,000 additional Medicare-supported GME positions.

- On May 24, the AMA sent a letter supporting H.R. 3441, the "Substance Use Disorder Workforce Act," which would provide 1,000 additional Medicare-supported graduate medical education (GME) positions in hospitals that have, or are in the process of establishing, accredited residency programs in addiction medicine, addiction psychiatry, or pain medicine.

- On May 25, the AMA sent a letter voicing support for S. 1438, the "Opioid Workforce Act of 2021," which would provide 1,000 additional Medicare-supported graduate medical education (GME) positions in hospitals that have, or are in the process of establishing, accredited residency programs in addiction medicine, addiction psychiatry, or pain medicine. This is the companion bill for the "Substance Use Disorder Workforce Act."

- On June 10, the AMA sent a letter in support of the "Doctors of Community Act" or "DOC Act." This legislation would permanently authorize the Teaching Health Center Graduate Medical Education (THCGME) program. As

such, if passed, this legislation would help ensure that patients in underserved areas continue to have access to needed health care services.

- On June 23, the AMA sent a letter voicing support for the "Physician Shortage GME Cap Flex Act of 2021." This legislation would help to address the national physician workforce shortage by providing teaching hospitals an additional five years to set their Medicare GME cap if they establish residency training programs in primary care or specialties that are facing shortages. (House; Senate)

- On July 1, the AMA sent a letter supporting H.R. 4122, the "Resident Education Deferred Interest (REDI) Act," which would allow borrowers to qualify for interest-free deferment on their student loans while serving in a medical or dental internship or residency program.

Higher Education Act (HEA) Reauthorization

The HEA was last comprehensively reauthorized in 2008 by the Higher Education Opportunity Act of 2008, which authorized most HEA programs through FY2014; it was extended through FY2015, under the General Education Provisions Act (GEPA). Many HEA programs that had been due to expire at the end of FY2015 were provided additional funding under a variety of appropriations bills and continuing resolutions, because Congress has not been able to agree on comprehensive reauthorization legislation. Earlier in 2020, Congressional lawmakers were close to reaching an agreement to update the HEA, but the emergence of the pandemic put this effort on hold. Today, with the potential growing for a long-term economic downturn related to the COVID-19 pandemic, and as more people seek to further their education as a result, the need to reauthorize the HEA is more pressing than ever, and the AMA will continue advocacy in this regard.

RELEVANT AMA POLICY

Our AMA calls for addressing and reducing the burden of medical education debt among students, residents/fellows, and physicians through the following policies:
- H-305.925, "Principles and Actions to Address Medical Education Costs and Student Debt"
- H-310.907, "Resident/Fellow Clinical and Educational Work Hours."

Similarly, the AMA backs strategies to combat rising costs for medical education:
- D-305-983, "Strategies to Combat Mid-year and Retroactive Tuition Increases"
- H-305.988, "Cost and Financing of Medical Education and Availability of First-Year Residency Positions"

The AMA supports loan forgiveness incentives and reduction in student loan interest rates for residents/fellows, physicians working in Veterans Affairs facilities, and those pursuing careers in research:
- D-305.984, "Reduction in Student Loan Interest Rates"
- D-510.990, "Fixing the VA Physician Shortage with Physicians"
- H-460.995, "Support for Careers in Research"

The AMA endorses expansion of financial incentives, aid, relief options to recruit and train primary care physicians, especially those in rural and urban underserved areas:
- H-200.949, "Principles of and Actions to Address Primary Care Workforce"
- H-465-988, "Educational Strategies for Meeting Rural Health Physician Shortage"

The AMA recommends increasing diversity in the physician workforce to address underserved areas via loan forgiveness programs and diversity pipeline programs, and improve transparency regarding tuition requirements:
- D-200.982, "Diversity in the Physician Workforce and Access to Care"
- D-200.985, "Strategies for Enhancing Diversity in the Physician Workforce"

SUMMARY AND RECOMMENDATIONS

After considering potential trends/solutions related to the connection between medical student debt and career choice and analyzing the peer-reviewed literature to ascertain whether existing data support these hypotheses, this report finds little solid evidence for a strong link between debt and career choice. This finding, however, may be limited by the lack of available data on the potentially intersecting impacts of race/ethnicity, socioeconomic status, and other key

sociodemographic factors. In addressing the workforce need for primary care and other fields, a more deliberate approach to planning by federal agencies and stakeholder organizations may be helpful. The composition of the physician workforce is ultimately the result of economic and personal decisions by individual students, residents, and physicians to pursue professional satisfaction in whichever medical field, practice setting, and location that is right for them. Balancing the impact of these individual choices with society's workforce and population health needs may require new and/or improved programs (including financial incentives) that serve as inducements for those decisions that best serve the common good and ensure access to needed health care services for all Americans, now and in the future.

In addition, the AMA should closely monitor the PSLF program, particularly over the next few years, to ensure that it is a viable option for debt relief for physicians. If the denial rates for physician applicants continue to remain unacceptably high, further federal advocacy to encourage reforms to the program is recommended, as reflected in the proposed emendations to AMA policy below.

The Council on Medical Education therefore recommends that the following recommendations be adopted and the remainder of this report be filed:

1. That our American Medical Association (AMA) encourage key stakeholders to collect and disseminate data on the impacts of medical education debt on career choice, especially with regard to the potentially intersecting impacts of race/ethnicity, socioeconomic status, and other key sociodemographic factors.

2. That our AMA monitor new policies and novel approaches to influence career choice based on the key factors that affect the decision to enter a given specialty and subspecialty.

3. That our AMA amend Policy H-305.925 (20), "Principles of and Actions to Address Medical Education Costs and Student Debt," by addition and deletion, to read as follows:

   Related to the Public Service Loan Forgiveness (PSLF) Program, our AMA supports increased medical student and physician ~~benefits~~ 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 ~~of the employer~~; (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 unacceptably 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).

4. That our AMA rescind Policy H-305.925 (22), "Principles of and Actions to Address Medical Education Costs and Student Debt," as having been fulfilled through this report:

~~Formulate a task force to look at undergraduate medical education training as it relates to career choice, and develop new polices and novel approaches to prevent debt from influencing specialty and subspecialty choice~~.

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APPENDIX – Relevant AMA Policy

H-305.925, "Principles of and Actions to Address Medical Education Costs and Student Debt"
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 benefits 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 PSLF program qualifying status of the employer; (f) Advocate that the profit status of a physicians 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.
21. Advocate for continued funding of programs including Income-Driven Repayment plans for the benefit of reducing medical student load burden.
22. Formulate a task force to look at undergraduate medical education training as it relates to career choice, and develop new polices and novel approaches to prevent debt from influencing specialty and subspecialty choice.

H-310.907, "Resident/Fellow Clinical and Educational Work Hours"
Our AMA adopts the following Principles of Resident/Fellow Clinical and Educational Work Hours, Patient Safety, and Quality of Physician Training:
1. Our AMA supports the 2017 Accreditation Council for Graduate Medical Education (ACGME) standards for clinical and educational work hours (previously referred to as "duty hours").
2. Our AMA will continue to monitor the enforcement and impact of clinical and educational work hour standards, in the context of the larger issues of patient safety and the optimal learning environment for residents.
3. Our AMA encourages publication and supports dissemination of studies in peer-reviewed publications and educational sessions about all aspects of clinical and educational work hours, to include such topics as extended work shifts, handoffs, in-house call and at-home call, level of supervision by attending physicians, workload and growing service demands, moonlighting, protected sleep

periods, sleep deprivation and fatigue, patient safety, medical error, continuity of care, resident well-being and burnout, development of professionalism, resident learning outcomes, and preparation for independent practice.
4. Our AMA endorses the study of innovative models of clinical and educational work hour requirements and, pending the outcomes of ongoing and future research, should consider the evolution of specialty- and rotation-specific requirements that are evidence-based and will optimize patient safety and competency-based learning opportunities.
5. Our AMA encourages the ACGME to:
a) Decrease the barriers to reporting of both clinical and educational work hour violations and resident intimidation.
b) Ensure that readily accessible, timely and accurate information about clinical and educational work hours is not constrained by the cycle of ACGME survey visits.
c) Use, where possible, recommendations from respective specialty societies and evidence-based approaches to any future revision or introduction of clinical and educational work hour rules.
d) Broadly disseminate aggregate data from the annual ACGME survey on the educational environment of resident physicians, encompassing all aspects of clinical and educational work hours.
6. Our AMA recognizes the ACGME for its work in ensuring an appropriate balance between resident education and patient safety, and encourages the ACGME to continue to:
a) Offer incentives to programs/institutions to ensure compliance with clinical and educational work hour standards.
b) Ensure that site visits include meetings with peer-selected or randomly selected residents and that residents who are not interviewed during site visits have the opportunity to provide information directly to the site visitor.
c) Collect data on at-home call from both program directors and resident/fellow physicians; release these aggregate data annually; and develop standards to ensure that appropriate education and supervision are maintained, whether the setting is in-house or at-home.
d) Ensure that resident/fellow physicians receive education on sleep deprivation and fatigue.
7. Our AMA supports the following statements related to clinical and educational work hours:
a) Total clinical and educational work hours must not exceed 80 hours per week, averaged over a four-week period (Note: "Total clinical and educational work hours" includes providing direct patient care or supervised patient care that contributes to meeting educational goals; participating in formal educational activities; providing administrative and patient care services of limited or no educational value; and time needed to transfer the care of patients).
b) Scheduled on-call assignments should not exceed 24 hours. Residents may remain on-duty for an additional 4 hours to complete the transfer of care, patient follow-up, and education; however, residents may not be assigned new patients, cross-coverage of other providers' patients, or continuity clinic during that time.
c) Time spent in the hospital by residents on at-home call must count towards the 80-hour maximum weekly hour limit, and on-call frequency must not exceed every third night averaged over four weeks. The frequency of at-home call is not subject to the every-third-night limitation, but must satisfy the requirement for one-day-in-seven free of duty, when averaged over four weeks.
d) At-home call must not be so frequent or taxing as to preclude rest or reasonable personal time for each resident.
e) Residents are permitted to return to the hospital while on at-home call to care for new or established patients. Each episode of this type of care, while it must be included in the 80-hour weekly maximum, will not initiate a new "off-duty period."
f) Given the different education and patient care needs of the various specialties and changes in resident responsibility as training progresses, clinical and educational work hour requirements should allow for flexibility for different disciplines and different training levels to ensure appropriate resident education and patient safety; for example, allowing exceptions for certain disciplines, as appropriate, or allowing a limited increase to the total number of clinical and educational work hours when need is demonstrated.
g) Resident physicians should be ensured a sufficient duty-free interval prior to returning to duty.
h) Clinical and educational work hour limits must not adversely impact resident physician participation in organized educational activities. Formal educational activities must be scheduled and available within total clinical and educational work hour limits for all resident physicians.
i) Scheduled time providing patient care services of limited or no educational value should be minimized.
j) Accurate, honest, and complete reporting of clinical and educational work hours is an essential element of medical professionalism and ethics.
k) The medical profession maintains the right and responsibility for self-regulation (one of the key tenets of professionalism) through the ACGME and its purview over graduate medical education, and categorically rejects involvement by the Centers for Medicare & Medicaid Services, The Joint Commission, Occupational Safety and Health Administration, and any other federal or state government bodies in the monitoring and enforcement of clinical and educational work hour regulations, and opposes any regulatory or legislative proposals to limit the work hours of practicing physicians.
l) Increased financial assistance for residents/fellows, such as subsidized child care, loan deferment, debt forgiveness, and tax credits, may help mitigate the need for moonlighting. At the same time, resident/fellow physicians in good standing with their programs should be afforded the opportunity for internal and external moonlighting that complies with ACGME policy.
m) Program directors should establish guidelines for scheduled work outside of the residency program, such as moonlighting, and must approve and monitor that work such that it does not interfere with the ability of the resident to achieve the goals and objectives of the educational program.
n) The costs of clinical and educational work hour limits should be borne by all health care payers. Individual resident compensation and benefits must not be compromised or decreased as a result of changes in the graduate medical education system.
o) The general public should be made aware of the many contributions of resident/fellow physicians to high-quality patient care and the importance of trainees' realizing their limits (under proper supervision) so that they will be able to competently and independently practice under real-world medical situations.

8. Our AMA is in full support of the collaborative partnership between allopathic and osteopathic professional and accrediting bodies in developing a unified system of residency/fellowship accreditation for all residents and fellows, with the overall goal of ensuring patient safety.
9. Our AMA will actively participate in ongoing efforts to monitor the impact of clinical and educational work hour limitations to ensure that patient safety and physician well-being are not jeopardized by excessive demands on post-residency physicians, including program directors and attending physicians.

H-465.988, "Educational Strategies for Meeting Rural Health Physician Shortage"
1. In light of the data available from the current literature as well as ongoing studies being conducted by staff, the AMA recommends that:
A. Our AMA encourage medical schools and residency programs to develop educationally sound rural clinical preceptorships and rotations consistent with educational and training requirements, and to provide early and continuing exposure to those programs for medical students and residents.
B. Our AMA encourage medical schools to develop educationally sound primary care residencies in smaller communities with the goal of educating and recruiting more rural physicians.
C. Our AMA encourage state and county medical societies to support state legislative efforts toward developing scholarship and loan programs for future rural physicians.
D. Our AMA encourage state and county medical societies and local medical schools to develop outreach and recruitment programs in rural counties to attract promising high school and college students to medicine and the other health professions.
E. Our AMA urge continued federal and state legislative support for funding of Area Health Education Centers (AHECs) for rural and other underserved areas.
F. Our AMA continue to support full appropriation for the National Health Service Corps Scholarship Program, with the proviso that medical schools serving states with large rural underserved populations have a priority and significant voice in the selection of recipients for those scholarships.
G. Our AMA support full funding of the new federal National Health Service Corps loan repayment program.
H. Our AMA encourage continued legislative support of the research studies being conducted by the Rural Health Research Centers funded by the National Office of Rural Health in the Department of Health and Human Services.
I. Our AMA continue its research investigation into the impact of educational programs on the supply of rural physicians.
J. Our AMA continue to conduct research and monitor other progress in development of educational strategies for alleviating rural physician shortages.
K. Our AMA reaffirm its support for legislation making interest payments on student debt tax deductible.
L. Our AMA encourage state and county medical societies to develop programs to enhance work opportunities and social support systems for spouses of rural practitioners.
2. Our AMA will work with state and specialty societies, medical schools, teaching hospitals, the Accreditation Council for Graduate Medical Education (ACGME), the Centers for Medicare and Medicaid Services (CMS) and other interested stakeholders to identify, encourage and incentivize qualified rural physicians to serve as preceptors and volunteer faculty for rural rotations in residency.
3. Our AMA will: (a) work with interested stakeholders to identify strategies to increase residency training opportunities in rural areas with a report back to the House of Delegates; and (b) work with interested stakeholders to formulate an actionable plan of advocacy with the goal of increasing residency training in rural areas.
4. Our AMA will undertake a study of issues regarding rural physician workforce shortages, including federal payment policy issues, and other causes and potential remedies (such as telehealth) to alleviate rural physician workforce shortages.

D-305.984, "Reduction in Student Loan Interest Rates"
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.

D-510.990, "Fixing the VA Physician Shortage with Physicians"
1. Our AMA will work with the VA to enhance its loan forgiveness efforts to further incentivize physician recruiting and retention and improve patient access in the Veterans Administration facilities.
2. Our AMA will call for an immediate change in the Public Service Loan Forgiveness Program to allow physicians to receive immediate loan forgiveness when they practice in a Veterans Administration facility.
3. Our AMA will work with the Veterans Administration to minimize the administrative burdens that discourage or prevent non-VA physicians without compensation (WOCs) from volunteering their time to care for veterans.

4. Our AMA will: (a) continue to support the mission of the Department of Veterans Affairs Office of Academic Affiliations for expansion of graduate medical education (GME) residency positions; and (b) collaborate with appropriate stakeholder organizations to advocate for preservation of Veterans Health Administration funding for GME and support its efforts to expand GME residency positions in the federal budget and appropriations process.
5. Our AMA supports postgraduate medical education service obligations through programs where the expectation for service, such as military service, is reasonable and explicitly delineated in the contract with the trainee.
6. Our AMA opposes the blanket imposition of service obligations through any program where physician trainees rotate through the facility as one of many sites for their training.

H-460.995, "Support for Careers in Research"
Our AMA: (1) recognizes the serious decline in the number of physicians seeking to prepare for a career in research, which is fundamental to the advancement of the practice of medicine, and urges that: (a) medical students be made aware of the challenging and important career option of biomedical research, and (b) schools of medicine be made aware of the impending shortage and provide increased opportunities for students to participate in research; and (2) supports policies and legislation designed to increase the number of physician-investigators. Such support should include encouragement for training of physicians in careers in biomedical research and for supportive legislation to make physician-investigators eligible for forgiveness in certain government scholarship and loan programs for qualified candidates in numbers consistent with national needs.

H-200.949, "Principles of and Actions to Address Primary Care Workforce"
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.

D-200.982, “Diversity in the Physician Workforce and Access to Care”
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.

D-305.983, “Strategies to Combat Mid-year and Retroactive Tuition Increases”
Our AMA will: (1) assist state medical societies in advocacy efforts in opposition to mid-year and retroactive tuition increases, tuition taxes, and any other attendance-based taxes by any government entity at both public and private medical schools; (2) make available, upon request, the judicial precedent that would support a successful legal challenge to mid-year tuition increases; and (3) continue to encourage individual medical schools and universities, federal and state agencies, and others to expand options and opportunities for financial aid to medical students.

H-305.988, “Cost and Financing of Medical Education and Availability of First-Year Residency Positions”

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.

D-200.985, “Strategies for Enhancing Diversity in the Physician Workforce”
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 use holistic assessments of admission applicants that take into account the diversity of preparation and the variety of talents that applicants bring to their education.
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: (a) supports the publication of a white paper chronicling health care career pipeline programs (also known as pathway programs) across the nation aimed at increasing the number of programs and promoting leadership development of underrepresented minority health care professionals in medicine and the biomedical sciences, with a focus on assisting such programs by identifying best practices and tracking participant outcomes; and (b) will work with various stakeholders, including medical and allied health professional societies, established biomedical science pipeline programs and other appropriate entities, to establish best practices for the sustainability and success of health care career pipeline programs.
14. 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.

5. INVESTIGATION OF EXISTING BARRIERS FOR OSTEOPATHIC MEDICAL STUDENTS APPLYING FOR AWAY ROTATIONS

Reference committee hearing: see report of Reference Committee C.

HOUSE ACTION: RECOMMENDATIONS ADOPTED AS FOLLOWS
REMAINDER OF REPORT FILED
See Policies TBD

American Medical Association (AMA) Policy H-295.876 (3), "Equal Fees for Osteopathic and Allopathic Medical Students," asks that our AMA:

> work with relevant stakeholders to explore reasons behind application barriers that result in discrimination against osteopathic medical students when applying to elective visiting clinical rotations and generate a report with the findings by the 2020 Interim Meeting.

This report is in response to this policy.

Testimony on this topic during the 2019 Interim Meeting noted that U.S. osteopathic medical students are charged fees in excess of those charged to U.S. allopathic medical students for the same clinical rotations at some U.S. allopathic medical schools. These fees represent a financial barrier to career opportunities for osteopathic medical students in that these clinical experiences are often useful to support applications to graduate medical education (GME) programs. Testimony also noted that AMA policy "discourages discrimination against medical students by institutions and programs based on osteopathic or allopathic training…[and]…encourages equitable fees for allopathic and osteopathic medical students in access to clinical electives."

INTRODUCTION

Medical students seek elective clinical experiences at institutions other than their home institution ("away electives") for a number of reasons, including exposure to specialties and subspecialties not available at their home institutions, working with special populations, obtaining letters of reference to support residency applications, and experiencing diverse or different health care systems. Perhaps the most important reason students seek these experiences is to explore the training environment at institutions where they are considering applying for GME positions. In this regard, these away electives have the potential to benefit the student, the specialty program, and the institution hosting the elective, and potentially serve to help both learner and program achieve the best match to meet their respective objectives. Mueller et al, in a study of allopathic medical schools, found that the most common reason for a school to support a visiting medical student program was recruitment into its residency programs, and the most common reason for students to participate is to secure residency positions in those programs.[1]

BACKGROUND

The Association of American Medical Colleges (AAMC) supports students seeking away electives through the online Visiting Student Learning Opportunities (VSLO) program, which includes a Visiting Student Application Service (VSAS) for students and host institutions.[2] Most, if not all, allopathic medical schools utilize VSAS to manage visiting student applications. The fee to use VSAS is $40 for the first three applications and $15 per application thereafter. Institutions are also charged a fee to use the system, but the institutional fee structure is not published. The VSLO website notes that participating host institutions may have their own fee structures and may charge a processing fee or tuition but specifies that only the AAMC may charge fees that are referred to as application fees. Host institutions may charge applicants processing fees, registration fees, or other types of fees, as long as these fees are not labeled as application fees. VSLO also allows host institutions to select the home institutions from which they will accept applications.

The Accreditation Council for Graduate Medical Education (ACGME) reached an agreement with the American Osteopathic Association and American Association of Colleges of Osteopathic Medicine to develop a single accreditation system for GME in early 2014. Transition to the ACGME Single Accreditation System began in 2015, and by June 2020 the transition was complete. One benefit of the Single Accreditation System is to offer all U.S. medical school graduates a uniform GME pathway, allowing them to seek admission into any residency and fellowship

program. Any graduate of a college of medicine accredited by the Commission on Osteopathic College Accreditation (COCA), a medical school within the United States or Canada accredited by the Liaison Committee on Medical Education (LCME), or a medical school outside the United States or Canada that meets the established eligibility criteria is eligible to enter an ACGME-accredited program.[3]

Beginning in 2020, the National Resident Matching Program (NRMP) supported the first combined Match for allopathic and osteopathic medical students into programs accredited through the ACGME's Single Accreditation System.

THE ROLE OF ELECTIVE OPPORTUNITIES FOR VISITING MEDICAL STUDENTS IN RESIDENCY PROGRAM DECISIONS

As noted in the introduction, medical students seek away elective experiences to explore programs and make themselves known to the host programs. In this regard, the experiences are often referred to as "audition electives." The literature offers conflicting information about whether audition electives are important in securing a position. Data from the 2014 NRMP Program Director Survey showed that program directors consider the audition elective to be an important factor for deciding whom to interview and rank.[4] Some studies have demonstrated that audition electives are important in the selection of applicants,[5,6] while others have shown that audition electives have no effect on the selection of applicants.[1,7,8,9,10,11]

POTENTIAL BARRIERS IMPOSED UPON OSTEOPATHIC STUDENTS SEEKING ELECTIVE EXPERIENCES AT ALLOPATHIC SCHOOLS IMPOSE BARRIERS

To explore the concerns raised in Policy H-295.876 (3), AMA staff reviewed the websites of allopathic medical schools in six states (California, Florida, Illinois, New York, Ohio, and Texas) and 13 school websites identified by representatives of the AMA Medical Student Section. This sample represented 66 of the 144 allopathic medical schools in the United States that have graduated at least one full class of students. The websites from 15 of these schools indicated that visiting medical students must be from LCME-accredited schools, and four of the 15 explicitly stated that osteopathic medical students would not be accepted. For 11 of the school websites, either information on visiting medical students was not included or the visiting student websites were suspended due to the COVID-19 pandemic. The remaining 39 school websites indicated that both allopathic and osteopathic medical students could participate as visiting medical students. One of the schools indicated that osteopathic students would be accepted for most, but not all, of the electives. Three schools required passage of United States Medical Licensing Examination (USMLE) Step 1. Of the 39 schools accepting both allopathic and osteopathic medical students, 23 charged a fee. For 19 of these schools, the fee was the same for both allopathic and osteopathic medical students, with a range of $25 to $300 per elective request submitted (mean = $165). The remaining four fee-charging schools in this review charged a differential fee for allopathic and osteopathic student applicants. One school's fees were listed as $125 and $295 for allopathic and osteopathic students, respectively; one school's fees were listed as $150 and $4,150 for allopathic and osteopathic students, respectively; and one school's fees were listed as $500 and $5,000 for allopathic and osteopathic students, respectively. The fourth school listed a $30 processing fee for osteopathic students and $900 per week of elective for osteopathic students, while no fees were listed for allopathic students. The review did not explore the practices of GME programs that operate independently from medical schools but may offer clinical elective experiences for medical students.

Data from an unpublished survey of 182 allopathic schools and GME programs, conducted by the Council of Osteopathic Student Government Presidents, had similar findings. That study found that 24 of the surveyed programs did not accept applications for electives from osteopathic medical students, 35 programs listed "licensing exam disparities" including inequitable class ranking requirements and minimum scores for osteopathic students compared to allopathic students, and 14 programs listed financial disparities between allopathic student applicants and osteopathic student applicants in the application process.[12] (The authors of this study have asked for the following disclaimer: "This is unofficial student-collected information that is not yet submitted for official publication or research.")

HOW SOME FEE STRUCTURES AND OTHER BARRIERS DISADVANTAGE OSTEOPATHIC MEDICAL STUDENTS

The ACGME states that the benefits of the Single Accreditation System include offering all U.S. medical graduates a uniform education pathway, increasing collaboration among the medical education community, providing consistency across all residency and fellowship programs, reducing costs, and increasing opportunities for osteopathic GME. Despite these stated benefits, surveys of allopathic schools demonstrate that osteopathic medical students continue to face barriers in applying for away rotations at allopathic institutions and programs. These barriers include: 1) outright exclusion from participation; 2) the requirement for a passing USMLE score; and 3) inequitable fees. Upon finding these barriers while considering sites for away electives, osteopathic students would be deterred from applying for an elective opportunity, thus potentially decreasing the likelihood of applying to the program for residency or decreasing the likelihood of securing a position after application. Further, the existence of these barriers implies that osteopathic medical students are less welcome, or unwelcome, at the host institution. These barriers also have implications for educational experiences, in that osteopathic medical students may not be able to participate and learn in specialty and subspecialty areas not otherwise available to them at their home institutions.

While it is difficult to determine if these financial and other barriers to away experiences have affected the competitiveness of osteopathic medical students applying for ACGME-accredited residencies, Match data suggest a possible relationship between type of training and securing a residency position. Although NRMP data show that the match rates for senior osteopathic medical students in the United States have steadily but slowly risen from 82.7 percent in 2015 to 88.1 percent in 2019, during the same period match rates for seniors in allopathic programs were consistently higher, fluctuating between 93.9 percent and 94.3 percent. Beginning in 2020, the ACGME completed the transition to the Single Accreditation System to accredit participating osteopathic residency programs that were previously only accredited by the AOA, thereby offering all U.S. medical school graduates (allopathic and osteopathic) a uniform graduate medical education pathway and allowing them to seek admission into any residency or fellowship program. According to NRMP data for the 2020 match, 90.7 percent of osteopathic senior medical students and 93.7 percent of allopathic senior medical students matched to a PGY-1 position. However, data among specialties demonstrate notable differences between the match rates of allopathic and osteopathic senior student applicants. For example, the unmatched rate for osteopathic senior students ranking only one specialty was approximately double the unmatched rate for allopathic senior students in emergency medicine, neurological surgery, neurology, obstetrics and gynecology, orthopedic surgery, plastic surgery, and general surgery. It should be noted that it is unknown whether financial or other barriers to elective experiences played any role in these outcomes.[13]

Complicating this report are the effects of the COVID-19 pandemic, which has markedly limited away electives for all students and the effects of the increasing use of virtual interviews for residency programs and applicants. The planned conversion of USMLE Step 1 from a scored exam to pass/fail may also have future implications for this issue.

SUMMARY AND RECOMMENDATIONS

The AMA, in a joint statement with the American Osteopathic Association, has described the equivalency of training, licensure, and practice rights of allopathic and osteopathic physicians, and the vital role osteopathic physicians serve in the nation's health care delivery system.[14] Thus, it stands to reason that osteopathic medical students should have equal access to elective training opportunities.

Information collected from allopathic medical school websites indicates that barriers exist for participation of osteopathic medical students in elective experiences at some allopathic medical schools. The barriers include: 1) outright exclusion from participation; 2) the requirement for a passing USMLE score; and 3) inequitable fees. These barriers may deter osteopathic students from applying to or being accepted for a residency position. Programs that lack exposure to potential qualified osteopathic students may rank candidates disparately. These barriers on osteopathic medical students are in contradiction to the goal of the ACGME Single Accreditation System to offer all U.S. medical school graduates a uniform GME pathway.

Further, current AMA Policy H-295.876 discourages discrimination against medical students based on allopathic or osteopathic undergraduate medical education training and encourages equitable fee structures for allopathic and osteopathic medical student applicants to clinical electives.

The Council on Medical Education therefore recommends that the following recommendations be adopted and the remainder of this report be filed:

1. That our American Medical Association (AMA) amend Policy H-295.876 (2), "Equal Fees for Osteopathic and Allopathic Medical Students," by addition and deletion as shown below.

   Our AMA encourages equitable access to and equitable fees for clinical electives for allopathic and osteopathic medical students ~~in access to clinical electives, while respecting the rights of individual allopathic and osteopathic medical schools to set their own policies related to visiting students~~.

2. That our AMA encourage the Association of American Medical Colleges to request that its member institutions promote equitable access to clinical electives for allopathic and osteopathic medical students and charge equitable fees to visiting allopathic and osteopathic medical students.

3. That our AMA encourage the Accreditation Council for Graduate Medical Education to require its accredited programs to work with their respective affiliated institutions to ensure equitable access to clinical electives for allopathic and osteopathic medical students and charge equitable fees to visiting allopathic and osteopathic medical students.

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APPENDIX - Relevant AMA Policy

H-295.876, "Equal Fees for Osteopathic and Allopathic Medical Students"
3. Our AMA, in collaboration with the American Osteopathic Association, discourages discrimination against medical students by institutions and programs based on osteopathic or allopathic training.
4. Our AMA encourages equitable fees for allopathic and osteopathic medical students in access to clinical electives, while respecting the rights of individual allopathic and osteopathic medical schools to set their own policies related to visiting students.
Citation: Res. 809, I-05 Appended: CME Rep. 6, A-07 Modified: CCB/CLRPD Rep. 2, A-14

H-295.867, "Expanding the Visiting Students Application Service for Visiting Student Electives in the Fourth Year"
1. Our American Medical Association strongly encourages the Association of American Medical Colleges (AAMC) to expand eligibility for the Visiting Students Application Service (VSAS) to medical students from Commission on Osteopathic College Accreditation (COCA)-accredited medical schools.
2. Our AMA supports and encourages the AAMC in its efforts to increase the number of members and non-member programs in the VSAS, such as medical schools accredited by COCA and teaching institutions not affiliated with a medical school.
3. Our AMA encourages the AAMC to ensure that member institutions that previously accepted both allopathic and osteopathic applications for fourth year clerkships prior to VSAS implementation continue to have a mechanism for accepting such applications of osteopathic medical students.
Citation: Res. 910, I-09 Reaffirmed: CME Rep. 01, A-19

H-310.909, "ACGME Residency Program Entry Requirements"
Our AMA supports entry into Accreditation Council on Graduate Medical Education (ACGME) accredited residency and fellowship programs from either ACGME-accredited programs or American Osteopathic Association-accredited programs.
Citation: Res. 920, I-12