

## 1 **AAIM Position Paper**

### 2 **Meeting the Nation's Need for Physician Services: A Response to the Anticipated** 3 **Physician Shortage**

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#### 7 **Introduction:**

9 After two decades of consistent predictions that the United States would face a physician  
10 surplus, leading professional organizations and advisory boards have now altered their  
11 calculus and sounded the alarm that the nation may soon face physician shortages (1-5).  
12 These organizations are calling for teaching hospitals, medical schools, and the federal  
13 government to respond to predicted shortages, which are expected as soon as 2020 (6-8).

15 The primary determinant of the number of recently practicing physicians in the United  
16 States is the number of graduate medical education (GME) positions or training slots.  
17 These slots represent the only pathway to licensure for medical practice in the United  
18 States. Since the number of federally funded residency positions has remained relatively  
19 unchanged since the Balanced Budget Act of 1997, the flow of new physicians into the  
20 workforce has been limited despite evidence of growing demand.

22 In response to a projected physician workforce shortage, the Alliance for Academic  
23 Internal Medicine (AAIM) recommends:

- 24 • Strategically increasing the number of Medicare-funded post-graduate year one  
25 (PGY-1) positions in primary care specialties to adequately meet the nation's health  
26 care needs as defined by the Council on Graduate Medical Education (COGME). In  
27 addition, AAIM believes new primary care slots should be added in geographic areas  
28 of demonstrated need. Funding for all GME positions should be provided by all  
29 health care insurers.
- 30 • Enhancing the attractiveness of primary care careers by fixing the dysfunctional  
31 physician reimbursement system, applying innovations to educational models,  
32 increasing job satisfaction for current and future primary care practitioners, and  
33 providing incentives for geographic distribution of primary care physicians in areas of  
34 greatest need.
- 35 • Increasing efficiency in the health care delivery system by broadening the use of  
36 electronic health records (EHRs) and other advances in health information technology  
37 and capitalizing on the use of physician extenders. Additional options for improving  
38 health care delivery should be considered.

40 AAIM advocates allowing strategic growth in PGY-1 positions in primary care  
41 specialties and geographic areas for which shortages can clearly be demonstrated. This  
42 approach would prevent an unregulated stampede toward more positions for highly  
43 specialized training programs, which might serve to increase health care costs without  
44 adding physicians to address health care needs.

1 In this position paper, AAIM reviews the data that support the view that the United States  
2 faces the prospect of a shortfall of physicians, describes certain aspects of these data  
3 particularly as they relate to the supply of primary care physicians, addresses the  
4 mechanisms necessary for expanding the pool of practicing physicians through increasing  
5 Medicare funded GME slots, discusses particular issues of relevance, including the  
6 expansion of programs that distribute physicians to geographic areas of need, and  
7 comments on steps that can be taken to improve the efficiency of physician work.  
8

## 9 **Part I: Predictions of a Physician Shortage**

10  
11 COGME issued its *Physician Workforce Policy Guidelines for the United States 2000–*  
12 *2020* in January 2005. (9) The report reviewed the supply, demand, and need for  
13 physicians through 2020. COGME noted that although the absolute number of  
14 physicians would increase by 24% from 2000 to 2020, the population growth would  
15 exceed the rate of growth of physicians, resulting in a decrease in the ratio of physicians  
16 per 100,000 Americans. COGME predicted that changes in physician lifestyle could  
17 result in a decrease in the effective number of full time equivalent physicians. This  
18 decrease was largely attributed to the increase in the number of women pursuing careers  
19 in medicine. COGME also postulated that the demand for physician services will grow  
20 as the elderly population increased as a proportion of the total population. Based on a  
21 detailed analysis, the council concluded that US medical school enrollment needed to  
22 increase by 15% by 2012. In addition, federal funding for residency and fellowship  
23 positions needed to increase to allow for postgraduate training of these new graduates.  
24

25 In June 2006, the Association of American Medical Colleges (AAMC) issued the *AAMC*  
26 *Statement on the Physician Workforce*, which claimed there was “sufficient evidence” to  
27 recommend increasing by 30% the number of entry-level physicians in Liaison  
28 Committee on Medical Education accredited medical schools by 2012. (10) AAMC felt  
29 this could be accomplished by increasing enrollment at existing schools as well as  
30 creating new medical schools. According to the statement, increased funding for GME  
31 positions should occur simultaneously to ensure graduating medical students could  
32 receive appropriate postgraduate training.  
33

34 Both of these reports represented a reversal from previously stated positions. Between  
35 1992 and 1998, COGME issued several reports suggesting that there could be a future  
36 surplus of physicians in the United States. (11) The predictions of a physician surplus  
37 were predicated on the fact that managed care would result in great efficiencies and  
38 reduce demand for physician services. However, a surplus of physicians did not develop;  
39 instead, the rising demand for services, population growth, and shifts to an older  
40 population resulted in COGME reassessing its position in the 2006 report.  
41

42 While academic institutions have responded to the calls from COGME and AAMC with  
43 an increase in allopathic medical school class size and the creation of several new  
44 medical schools, annual growth in federal funding for expanding additional US GME  
45 programs has remained nearly flat. Increases to positions funded by other sources, while  
46 they exist, have been minimal (12).

1  
2 Extensive data support the observation that the number of US medical school graduates  
3 pursuing a career in primary care is decreasing. For example, 3,884 US medical students  
4 matched into IM residency positions in 1985 compared to 2,660 in 2008. In a recent  
5 study by Hauer et al, only 24 (2%) of the 1,177 students across the 11 medical schools  
6 who participated in the study were planning to pursue a career in general internal  
7 medicine. (13) Conversely, while interest of US seniors in general internal medicine has  
8 declined, the proportion of residents choosing specialty fellowships has increased. (14)  
9 According to Hauer's study, students perceived general internal medicine as a low-  
10 satisfaction, low-income, and uncontrollable career; today's medical students prioritize  
11 lifestyle issues in career selection. The potential consequence of declining interest in  
12 general internal medicine careers is a decrease in the delivery of preventive measures and  
13 sound treatment of common chronic ailments that contribute to mortality. This  
14 consequence has direct implications for the growing number of elderly in the nation's  
15 population who require coordination of treatments for complex, chronic co-morbidities.  
16

17 The growth of the Medicare population is expected to double between 2005 and 2020,  
18 outstripping the supply of geriatricians to such a degree that the strategy for meeting  
19 geriatric services has had to change by necessity. Elderly patients usually have chronic  
20 health conditions that require skilled clinicians to coordinate complex management. With  
21 so few practicing geriatricians and so few physicians-in-training selecting the field,  
22 improving geriatric knowledge among all primary care and specialty physicians is the  
23 new approach for providing high-quality care for the growing elderly population. (15)  
24

25 Another factor with implications for ensuring an adequate supply of physicians is the  
26 geographic maldistribution of physicians in the United States. Since 2002, numerous  
27 studies have examined physician workforce needs in a number of states. Several studies  
28 support the existence of a shortage most pronounced in rural areas and center urban  
29 neighborhoods. (16, 17) A recent study of 20-year trends in geographic variation of  
30 physician distribution shows that an increase in practicing physicians by 51% did not  
31 translate into regional variation of practice location. Instead, despite long-standing public  
32 policies, physicians continued to locate in areas of adequate-to-high physician-to-  
33 population ratios, further compounding issues for health professionals shortage areas.  
34 (18)  
35

## 36 **Part II: Physician Supply**

37

38 Assessing the country's future needs for physicians is a challenging task involving  
39 complex estimations of supply and demand. The supply side involves the coalescence of  
40 the output from multiple training pathways for initial medical degrees as graduates enter  
41 the final common pathway of residency training.  
42

43 The largest output of physicians entering into the "funnel" of GME comes from US  
44 allopathic medical schools. In 2005, there were 15,760 graduates of US allopathic  
45 schools and 2,800 graduates of US osteopathic medical schools who became eligible to  
46 enter GME programs. (19, 20) Available to these new graduates were a total of 24,269  
47 first-year GME positions in training programs approved by the Accreditation Council for

1 Graduate Medical Education (ACGME) and the American Osteopathic Association. (21,  
2 22) The gap between the number of available positions and the total graduates of US  
3 programs was filled by approximately 6,000 graduates from medical schools in other  
4 countries.

5  
6 Based on 2007 enrollment, class size increases, and future enrollment at new medical  
7 schools, first-year enrollment into US medical degree programs is projected to increase  
8 from 16,488 in 2002 to nearly 19,909 in the 2012 academic year (AY). Similarly,  
9 substantial growth in first-year enrollment of osteopathic schools is expected from 2,148  
10 in AY 2002 to 5,227 in AY 2012 (a 70% increase). As a result, unless the number of  
11 first-year positions in GME training increases, there will be insufficient positions to  
12 accommodate all US medical graduates by the year 2012.

13  
14 It is estimated that international medical graduates (IMGs) now account for 24% of the  
15 total physician workforce. (23) Although concerns exist regarding the loss of these  
16 physicians from their countries of origin, the current demand for physicians in the United  
17 States can only be met by the continued training and retention of IMGs. If more  
18 residency positions are not funded, increasing the number of US graduates will be a zero-  
19 sum game in terms of the number of practicing physicians in the United States. (20) If the  
20 objective is to increase the number of primary care physicians, a decrease in training  
21 opportunities for IMGs could have the opposite effect. Currently, more than a quarter of  
22 the nation's primary care physicians are from this pool of physicians.

23  
24 The supply of physicians is also influenced by the rate at which physicians leave the  
25 practice of medicine. Just as the total US population has aged, the population of  
26 practicing physicians has also aged. It is estimated that in 2008 there will be 99,000 US  
27 physicians over the age of 65. (20) It is not possible to predict with certainty the rate at  
28 which these physicians will leave the workforce, but the impact could be substantial.  
29 Furthermore, the demographics of practicing physicians continue to change as more  
30 women enter medical training. Since female physicians tend to work fewer hours than  
31 male physicians, the changing gender mix may also lead to a future decrease in the full-  
32 time equivalent supply of physicians in practice. Both changing demographics and  
33 emerging expectations about professional life by both male and female physicians will  
34 lead to increasing numbers of practicing physicians with reduced work hours. (24, 25)

35  
36 Projections from 2007 suggest that the number of practicing physicians in the United  
37 States will increase from 733,852 in 2000 to 906,278 in 2010, and will rise further to  
38 988,100 in 2020. (26) However, in spite of the increase in numbers of physicians, the  
39 projected increase in population will mean that the ratio of active physicians to  
40 population (per 100,000) will increase only modestly from 278.5 in 2000 to 293.4 in  
41 2010, and will remain essentially unchanged for the next decade at 294.2 in 2020. (26)  
42 These statistics do not account for the anticipated functional reduction in work capacity  
43 anticipated as a result of changing lifestyles and patterns of practice. Assessing the need  
44 or demand of the population for physician services is a complex and controversial topic.  
45 However, it is clear that something must be done to accommodate the growing population  
46 as well as the growing number of medical students entering the pipeline.

1  
2 **Part III: Responding to Physician Workforce Projections**  
3

4 **AAIM recommends strategically increasing the number of Medicare-funded PGY-1**  
5 **positions in primary care specialties to adequately meet the nation’s health care**  
6 **needs as defined by COGME. In addition, AAIM believes GME slots should be**  
7 **added in geographic areas of demonstrated need.**  
8

9 Addressing the anticipated shortage of physician services is a complex program.  
10 According to COGME, meeting the nation’s future physician workforce demand and  
11 need will require increasing to 27,000 the number of physicians entering residency  
12 training each year by 2015. A global, unregulated increase in GME positions is unlikely  
13 to meet regional or specialty-specific shortages. Unregulated growth in the number of  
14 GME slots may also lead to increased costs the nation is ill-prepared to afford.  
15 Specifically orchestrating specialty selection among medical school graduates has been  
16 excluded from the conversation though it could potentially address the issue of increasing  
17 physician supply in response to demonstrated need. A deliberate and strategic increase  
18 should be considered to justify the creation of new GME slots.  
19

20 While physicians are free to move throughout the country after training, data suggests as  
21 many as half of physicians trained in a specific locale will stay there for their practice  
22 careers. (14) To allow residents to train in areas of demonstrated need, Medicare GME  
23 funding regulations must change to permit resident time spent outside of the academic  
24 health care setting to count for purposes of GME funding. This change would increase  
25 residents’ opportunities to practice in rural, suburban, and other underserved locations.  
26 While ultimate practice locations of physicians can not be controlled, increases in GME  
27 should be made with geographic factors in mind.  
28

29 The Medicare program provides approximately 40% of total GME funding. All positions  
30 paid for outside of Medicare are supported by funding sources that vary by institution and  
31 state and are often subject to the annual appropriations process (27). An increase in  
32 PGY-1 slots to respond to health care needs is only possible with increased funding.  
33 AAIM understands the restrictions of state, institutional, and federal budgets to increase  
34 funding for medical education. With this in mind, AAIM supports moving toward a  
35 system in which all insurers contribute to GME costs.  
36

37 As long as Medicare funding is provided for GME positions, the per-resident amounts  
38 paid to hospitals must be reassessed. Per-resident amounts for Medicare direct GME  
39 payments were originally set in 1984. While adjustments have been made, the per-  
40 resident amount has not been altered to account for the changes in educational training.  
41 Mandated competency-based education and evaluation require significant resources as do  
42 simulation, centralized oversight of training, and faculty development. These changes  
43 and many others that require additional resources and resident time have not been  
44 considered in the current payment system.  
45

1 In 2005, the Centers for Medicare & Medicaid Services (CMS) redistributed 3,000  
2 unused GME slots to hospitals that demonstrated greatest need. While this redistribution  
3 helped more than 350 hospitals mostly in rural areas, it also proved disadvantageous in  
4 that congress lowered the percentage of indirect graduate medical education (IME)  
5 payments associate with the positions. AAIM recommends any increase in GME  
6 positions must include IME payments equal to those provided to existing positions.

7  
8 For hospitals and institutions with the capacity for new PGY-1 positions, funding should  
9 only be given with the guarantee that it will remain tied to the primary care specialty  
10 position. Funding must not be redirected to other specialty slots. In addition, institutions  
11 and hospitals must make a commitment to keep current levels of primary care positions in  
12 order to receive funding for additional positions. Any move to decrease current primary  
13 care slots and use the funding for other specialty positions or fellowship training will not  
14 result in a positive effect on the total output of physicians entering primary care. Also,  
15 institutions must document their means and ability to add positions with respect to  
16 teaching resources.

#### 17 **Section IV: Enhancing the Attractiveness of Primary Care Careers**

18  
19  
20 **AAIM recommends enhancing the attractiveness of primary care careers by fixing**  
21 **the dysfunctional physician reimbursement system, applying innovations to**  
22 **educational models, increasing job satisfaction for current and future primary care**  
23 **practitioners, and providing incentives for geographic distribution of primary care**  
24 **physicians in areas of greatest need.**

25  
26 If the capacity for graduate medical education in general internal medicine is enhanced  
27 by providing more funding for residency slots, simply increasing the number of graduates  
28 from US medical schools without improving the attractiveness of the general internal  
29 medicine will not result in the desired effect. Without providing incentives for selecting  
30 a career as a generalist in internal medicine, the larger class sizes will likely increase the  
31 number of specialists in a variety of attractive practice disciplines. In addition, it is  
32 important to restructure education, training, and reimbursement to ensure positive  
33 exposure to internal medicine by physicians-in-training and job satisfaction for those who  
34 choose a career in internal medicine.

35  
36 Studies of student career choice highlight lifestyle issues as a high priority in the  
37 decision-making process. Internal medicine has been identified as a specialty with  
38 uncontrollable lifestyle regarding work hours and patient care duties. In 2008, a study of  
39 clerkship students noted that both those choosing a career in internal medicine and those  
40 choosing careers in other specialties perceive internal medicine residents as less satisfied  
41 than residents in other specialties. (13) Exposure of medical students and residents to  
42 faculty who feel overwhelmed and devalued will worsen the drain on new physicians  
43 entering the field of primary care. In contrast, recruitment of an adequate number of the  
44 best senior medical students into internal medicine may increase with early exposure to  
45 satisfied faculty.

1 Students have also noted current negative perceptions related to the types of patients for  
2 which internists care. This perception predicates the need for increased effort from  
3 departments of internal medicine to provide adequate exposure in outpatient medicine to  
4 a realistic balance of the seriously ill patients who are hospitalized. The ACGME  
5 Educational Innovations Project (EIP) is exploring creative approaches to medical  
6 residency outpatient training. In several of the EIP's new models, medical residents  
7 spend concentrated time working as a team in the outpatient setting. These educational  
8 experiences more accurately reflect the reality of outpatient primary care medicine as it is  
9 practiced today. Whether these new experiences in medical residency training will result  
10 in more physicians-in-training considering a permanent career in outpatient primary care  
11 will require additional study. However, the concentrated exposure to outpatient general  
12 internal medicine by a team of trainees could prove more attractive than the traditional  
13 model of divided responsibilities between a busy inpatient rotation and a frenetic one-half  
14 day clinic each week.

15  
16 Aside from training, a major challenge primary care faces in becoming a successful  
17 career option is the current physician reimbursement system. Today's system proves  
18 lucrative for procedure-based specialties while primary care specialties are not adequately  
19 reimbursed for actual time spent delivering comprehensive patient care. Reviewing the  
20 process for determining the current value of physician services should be the first step in  
21 ensuring the work of primary care physicians is not devalued. The Medicare Payment  
22 Advisory Commission has made this recommendation to Congress along with  
23 recommendations to increase Medicare Part B payment for primary care services and  
24 establishing a "medical home" pilot project in Medicare. (28) The ultimate enhancement  
25 of adequate reimbursement by insurers and the government for high quality cognitive  
26 care will provide a tremendous incentive for physicians to seriously consider primary  
27 care as a career of choice.

28  
29 The increasing attention placed upon the concept of the "medical home" illustrates that  
30 primary care physicians would like to be able to lead health care delivery management  
31 efforts to provide high quality care to patients with complex medical problems.  
32 Understanding job satisfaction for the generalist requires more than examining the  
33 physician's income. Many generalists would be more satisfied if they had control over  
34 the time allotted for patient visits to deliver high quality care. Outpatient schedules with  
35 inadequate time to carefully evaluate the patient results in less than optimal care and  
36 increased frustration for physicians.

37  
38 Job satisfaction has the potential to increase with adequate professional support. As the  
39 number of primary care physicians decline, there will be fewer colleagues to share the  
40 clinical load. Increasing use of physician extenders may help to ease the burden of care;  
41 however, the prestige of the generalist must also be considered. Some have indicated that  
42 primary care will ultimately be provided solely by alternative health care providers with  
43 no need for the expertise of generalists. Professional respect must remain in the equation  
44 if this specialty of caring for the complex adult patient is to be attractive for new  
45 graduates. General internists should be recognized as a specialist physician who can care  
46 for a diversity of challenging medical problems.

1  
2 Successful distribution of physicians to locations where primary care physicians are most  
3 needed will require additional incentives. The National Institutes of Health has  
4 encouraged the recruitment and retention of physicians into clinical research by offering  
5 substantial loan repayment assistance. Financial incentives for loan repayment may be  
6 successful in attracting primary care physicians to locations of most need. While the  
7 political and other forces that would be needed to make these adjustments will require  
8 considerable strategy, these changes would improve the overall health of the nation if our  
9 best graduates were encouraged to consider primary care. Potential strategies for  
10 increasing the number of physicians in health professional shortage areas, including  
11 enhancing the National Health Service Corp, passing legislation such as the Rural  
12 Training Act, and increasing the number of waivers through the J-1 visa waiver program  
13 to its former status.

14  
15 The understanding that the primary care physician is essential to access and optimal  
16 health outcomes presents the need to address motivations underlying the current drain on  
17 these essential providers. Understanding how best to integrate these physicians with other  
18 professional colleagues such as nurse practitioners and physician assistants rather than  
19 promoting their displacement by these individuals will ultimately lead to the optimal  
20 team approach. Focusing on the needs of the future health care workforce is critically  
21 important, and national strategies are urgently required to avoid a shortage of primary  
22 care physicians. The challenge of appropriate funding will require consideration of  
23 redistribution of financial resources and reimbursement to reflect the fair cost of  
24 delivering high-quality care to the American population.

## 25 26 **Part V. Improve Health Care Delivery**

27  
28 **AAIM recommends increasing efficiency in the health care delivery system by**  
29 **broadening the use of EHRs and other advances in health information technology**  
30 **and capitalizing on the use of physician extenders. Additional options for improving**  
31 **health care delivery should be considered.**

32  
33 The projected physician shortage might also be mitigated by addressing issues bearing on  
34 maximizing the efficiency of physicians. In the future, optimizing efficiency may actually  
35 reduce the number of physicians required to provide optimal care. AAIM proposes  
36 improving the health care delivery system by promoting wide-spread use of EHRs.

37  
38 A study conducted at community health centers concluded that EHRs present a clear  
39 value to patients and stakeholders. Patients received better care and payers were likely to  
40 reap EHR-related downstream benefits in avoided specialist, emergency room, and  
41 hospital spending. (29) EHRs help physicians and staff members view, chart, and  
42 interact with patients' health information in a timely and accurate manner. The benefits  
43 of EHRs range from information integration to increased efficiency of clinical processes.  
44 Other critical uses of health information technology include providing physicians access  
45 to some form of clinical decision support for patient care. While the data on  
46 computerized physician order entry systems is mixed and may prove cost-prohibitive for

1 some institutions, the use of order sets or clinical practice guidelines could serve to  
2 increase efficiency in patient care.

3  
4 Utilizing physician extenders can also increase efficiency by freeing up the primary  
5 physician's time and providing greater continuity of care. In primary care practices, nurse  
6 practitioners and physician assistants can improve productivity by taking responsibility  
7 for both direct and indirect patient care, including routine examination and review of  
8 medical histories, telephone triage, patient education, counseling, and health awareness.  
9 In addition, physician satisfaction with the physician extender model was very high. (30)

10  
11 Additional options for increasing efficiency in the health care delivery system should also  
12 be considered. Potential options include:

- 13  
14 1. Providing more sophisticated home specialty care, such as administration of simple  
15 chemotherapy, blood transfusion and platelet transfusion.
- 16  
17 2. Eliminating the use of expensive treatments for unresponsive patients.
- 18  
19 3. Creating systems to allow regional tele-consultation for access to specialists.
- 20  
21 4. Regionalizing expensive treatments.
- 22  
23 5. Applying the certificate of need system to private non-hospital facilities and hospitals  
24 to reduce the number of diagnostic and therapeutic radiological and other facilities.
- 25  
26 6. Providing transportation services to ensure the patient makes the medical  
27 appointment.
- 28  
29 7. Improving access to health care screening to reduce the need for future  
30 hospitalization.
- 31  
32 8. Granting continuing medical education credit to physicians who enroll patients in  
33 clinical trials, which are critical to improving health care outcomes.
- 34  
35 9. Reducing drug costs by allowing the federal government to devise a system to  
36 negotiate drug costs for all health care facilities in the country.

## 37 38 **Conclusion:**

39  
40 The nation is facing a physician shortage that is likely to adversely affect the health of the  
41 public. AAIM recommends increasing the supply of PGY-1 positions in primary care  
42 specialties. National numerical targets should coincide with the physician-to-population  
43 ratio adequate to meet the nation's health care needs as defined by COGME.

44  
45 The evidence that the nation faces a shortfall of physicians is compelling and difficult to  
46 ignore. At the same time, an unbridled increase in GME positions without respect to

1 specialty or practice region would be imprudent. AAIM believes that selective increases  
2 in GME slots can and should occur in primary care. Allowing local communities and  
3 their legislators to demonstrate the need for primary care providers could provide a  
4 mechanism to address the geographic maldistribution of physicians. In addition, steps to  
5 increase efficiency in the current health care delivery system and enhance the  
6 attractiveness of internal medicine, and specifically generalist careers, are a must.  
7 Ignoring the imminent shortage of physicians puts the nation's health and well-being at  
8 risk.

9  
10 Measures to increase primary care careers are desperately needed. While the payment  
11 system needs revamping, other measures such as loan forgiveness and an expansion of  
12 the National Health Service Corps are required. Understanding what attracts students to  
13 certain careers in medicine and the preferences of today's generation should lead to  
14 efforts to restructure education and training. AAIM has already begun such efforts with  
15 its statement, *Redesigning Residency Training in Internal Medicine: The Consensus*  
16 *Report of the Alliance for Academic Internal Medicine Education Redesign Task Force*.  
17 While the nation seeks to increase the physician supply, it also must examine and  
18 implement measures that will improve physician efficiency and effectiveness.

19  
20  
21

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