REPORTS OF THE COUNCIL ON LONG RANGE PLANNING AND DEVELOPMENT

The following reports, 1–2, were presented by H. Hugh Vincent, MD, Chair:

1. PROPOSAL FOR A SENIOR PHYSICIANS SECTION

Reference committee hearing: see report of Reference Committee F.

HOUSE ACTION: RECOMMENDATIONS ADOPTED AND REMAINDER OF REPORT FILED
See Bylaws, §7.90.

In December 2011, the Council on Long Range Planning and Development (CLRPD) received a letter of application from the Senior Physicians Group (SPG) for a change in status from an advisory committee to the American Medical Association (AMA) Board of Trustees (BOT) to a section, the Senior Physicians Section. In accordance with AMA Policy G-615.001, "Establishment and Function of Sections," the CLRPD will use the criteria that are set forth in evaluating requests for the formation of new member component groups or a change in status for existing groups and will make recommendations to the House of Delegates (HOD) for further action. The AMA Bylaws on Sections (§7.00) define an AMA section and identify the process by which any new section will be formed and/or change its status and identify each section as fixed or delineated. This report outlines the CLRPD's evaluation of the proposal for a change in status for the SPG. The Appendix provides relevant AMA policies.

APPLICATION OF CRITERIA

Following initial review and discussion of the SPG proposal for a section, the CLRPD posed additional questions to the SPG for clarification of some of the information presented in its letter of application. This part of the report presents each criterion followed by material excerpted from the SPG letter of application and its response to CLRPD's request for additional information. An assessment of how this information aligns with the six criteria is included.

1. Issue of Concern - Focus will relate to concerns that are distinctive to the subset within the broader, general issues that face medicine. A demonstrated need exists to deal with these matters, as they are not currently being addressed through an existing AMA group.

The SPG serves to provide a dedicated forum within the AMA to create awareness of senior physician issues and strengthen the AMA's ability to represent this physician constituency. In the last few years, the SPG has evolved to identify and address issues of significance and to provide educational opportunities to senior physicians attending AMA meetings. These issues include reentry for senior physicians, practice patterns, retirement challenges, competency issues, and recertification.

Many senior physicians are willing to volunteer their services to the indigent and uninsured. However, current economic conditions may prompt other senior physicians to delay retirement or to return to practice. Findings from a May 2011 survey by the AMA's Market Research and Analysis Group indicate that over 50 percent of the 2,305 senior physician respondents were working either full-time or part-time. Nearly 72 percent of the survey respondents indicate that licensure is a significant issue. With only 27 states allowing for special licensure provisions, the cost of maintaining active licensure may be prohibitive for many retired or semi-retired physicians. State-to-state licensing reciprocity also becomes significant given that many individuals retire in a different state from where they practiced. Senior physicians are looking for guidance pertaining to practice options, including information on reentry programs and assistance in reactivating their physician licenses.

CLRPD Assessment: According to the U.S. Census Bureau, the number of individuals age 65 and over comprised 13 percent of the population in 2010 and is expected to make up the largest segment of the population in the future. As the population ages, the distinctive set of professional concerns facing senior physicians may become more prominent. The efforts of the SPG contribute to advocacy on issues of interest to senior physicians and program development to meet the needs of this physician segment. These needs are not being addressed by another existing AMA group.

2. Consistency - Objectives and activities of the group are consistent with those of the AMA. Activities make good use of available resources and are not duplicative.

The SPG mission statement reads as follows:

> The mission of the Senior Physicians Group is to inform, assist, and provide group educational opportunities to members of the AMA; to assist in crystallizing the needs and desires of senior physicians (age 65 and above) and advocate on their behalf; to act as a link between grassroots senior physician groups throughout the United States to the policies and actions of the AMA; to bring to the notice of members items pertaining to the well-being of senior and retired physicians; to make suggestions for meeting those needs; to encourage older physicians around the country to join or rejoin the AMA, and to serve as a liaison between the AMA senior staff and Board of Trustees, and senior physicians interested in retaining their attachment to organized medicine.

The SPG provides its members with volunteer and education opportunities. For example, the Senior Ambassador Program equips physicians to present health talks to local lay groups. This program helps bridge the gap between the profession and the community by providing physicians an opportunity to help patients and their families better understand medical issues. A program of this nature may lend support to improving health outcomes, one of the new AMA strategic direction's focus areas. Another key activity is the ongoing exploration of state programs and policies for reentry and medical malpractice insurance. SPG efforts include providing guidance for retiring physicians, as well as maintaining a comprehensive list of state licensure and liability laws for volunteer physicians.

CLRPD Assessment: The SPG supports projects of interest to senior physicians, including communication of volunteerism opportunities, advocacy related to senior physician issues, and ongoing development of member benefits and activities. The activities of the SPG are consistent with its objectives, yet distinct from those of other groups in the AMA.

3. Appropriateness - The structure of the group will be consistent with its objectives and activities.

The SPG has a seven-member governing council with its members nominated by the Federation and appointed by the BOT. The SPG Governing Council meets twice a year in connection with the AMA Annual and Interim Meetings to consider issues of concern to the constituency, plan educational activities, and conduct a needs assessment of existing programs. Further, the SPG has a State Liaison Program which allows for advocacy and coalition building. During the HOD meetings, the SPG State Liaisons convene to discuss emerging senior-oriented issues and concerns, exchange relevant information between the SPG and other senior organizations, and support efforts to advance leadership among senior physicians.

CLRPD Assessment: The structure of the SPG is conducive to sharing key concerns and identifying meaningful opportunities for senior physicians, which supports the objectives of this group. In accordance with the AMA Bylaws, sections are required to have an elected governing council from the voting members of that section and establish a business meeting that would be open to its members. The State Liaison Program creates an avenue for a voting body to elect SPG Governing Council members and provides a foundation for conducting business meetings. With forty-three states having liaisons, this group has progressed in securing representation on senior-oriented issues and activities.

4. Representation Threshold - Members of the formal group would be based on identifiable segments of the physician population and AMA membership. A substantial number of members would be represented by this formal group. At minimum, this group would be able to represent 1,000 AMA members. It is important to note this threshold will not be used to determine representation, as each new section will be allocated only one delegate and one alternate delegate in the AMA HOD.

The qualifying criterion for membership in the SPG is to be a physician age 65 years and over, regardless of employment status. All AMA members 65 years of age and over are automatically enrolled in the SPG. According to the "Demographic Report of the House of Delegates and AMA Leadership" (BOT Report 6-A-12), there were 55,243 AMA members age 65 and over by year-end 2011.

CLRPD Assessment: Members of this segment can be easily identified because representation for this group is determined by age. With more than 55,000 AMA members age 65 and over, the threshold criterion representing

1,000 AMA members has been met. Further, the SPG can demonstrate an ongoing and viable group of physicians will be represented by a section. The potential number of senior physicians may increase with the aging of the U.S. population. As the percentage of physicians in this demographic group increases, it may be beneficial for the AMA to partner with this growing segment of the medical profession.

5. Stability - The group has a demonstrated history of continuity. This segment can demonstrate an ongoing and viable group of physicians, who will be represented by this section. Both the segment and the AMA will benefit from an increased voice within the policymaking body.

For the past 37 years, the AMA has housed and supported a senior physicians' organization in various forms, namely, the American Retired Physicians Association (ARPA) and the American Association of Senior Physicians (AASP). The group was formed to provide opportunities for senior physicians to stay involved with the AMA and the medical field. In 1994, the AASP Board of Directors voted to dissolve the organization, amalgamate into the AMA, and become the AMA-Senior Physician Services. In 2006, the SPG began to formally exist as an AMA special group, with a governing council and charter. In 2007, the SPG Governing Council moved its winter meeting from an offsite location to the AMA's Interim Meeting for active participation in the reference committee hearings during HOD proceedings. Also, the SPG Governing Council began planning caucuses, now officially known as the Meeting of the State Liaisons.

CLRPD Assessment: The SPG has a history of more than 30 years with the AMA. Since its inception as an AMA special group, the SPG has taken steps to align its structure with the policymaking activities of the AMA. The SPG Governing Council has worked to build a solid foundation for the group, which, at this stage, would benefit from a delegate's voice to address issues of concern in the HOD.

6. Accessibility - Provides opportunity for members of the constituency, who are otherwise under-represented, to introduce issues of concern and to be able to participate in the policymaking process within the HOD.

According to the 2012 AMA demographic report, the total number of U.S. physicians 65 years of age and over is 241,151. Of this number, slightly more than one-quarter of physicians in this age group are members of the AMA.

CLRPD Assessment: Accessibility relates to a group having an opportunity to engage in the policymaking process of the HOD with respect to their specific issues of concern. A group with a large number of individuals is not necessarily guaranteed access to this process. Consequently, the perspectives of a group may not be truly represented, as is the case with the SPG.

Often issues of specific concern to senior physicians are not brought forward for discussion in the house of medicine, as evidenced by limited AMA policy on these matters. A review of AMA PolicyFinder revealed that there are only two policy statements specifically related to professional issues for senior physicians. AMA Policies D-160.991 and D-275.984, adopted in 2004, relate to licensure and liability for senior physician volunteers. Even with a considerable number of physicians age 65 and over in the HOD, many members of this group have an obligation to represent the priorities of their respective state or specialty delegations. Given the limited opportunity to present issues of concern specific to this demographic group, the CLRPD believes it would be appropriate to afford the senior physicians with an opportunity for a focused voice on issues affecting physicians in the later stages of their careers.

DISCUSSION

The CLRPD engaged in several extended deliberations regarding the SPG's request for a change to section status and on two occasions met with members of the group to discuss its letter of application. It is important to note that in 2010, the SPG submitted a resolution, "Establishment of a Senior Physicians Section," which was not adopted. In its review of the SPG letter of application, the CLRPD noted that the SPG Governing Council has demonstrated a commitment to building a stronger group for the AMA and its members. Since the previous proposal for section status, the SPG has addressed many of the concerns raised in CLRPD Report 1-I-10. For instance, the former parameters for membership in the SPG were ambiguous and presented a challenge in determining the need for representation. The qualifying criterion for membership in the SPG has been modified to include physicians age 65 and over, regardless of employment status. As a result, members of this segment can be easily identified.

U.S. Census Bureau projections indicate that there will be a significant increase in the population over age 65. Recent estimates indicate that there are 78 million Baby Boomers; many have begun to move into the ranks of the age 65 and over population and will continue to move into this segment through 2029. According to AMA Masterfile data, there are 985,375 total U.S. physicians. Of this number, 424,195, or 43 percent, are Baby Boomers. As more physicians become a part of this demographic group, it will become increasingly important that they have a section to represent their perspectives.

The issue of unique concerns was considered as part of the rationale for establishing sections within the AMA. Senior physicians often have a distinct set of experiences related to medical practice and patient care. Similar to other AMA sections, the SPG holds governing council meetings in conjunction with HOD meetings, engages in advocacy and coalition building, and provides opportunities for education and involvement. Based on the assessment of the proposal for a Senior Physicians Section using the adopted criteria, the CLRPD has determined that the proposed section meets the criteria.

Granting the SPG section status will allow the SPG an opportunity to have focused representation in spite of having a large number of delegates that are part of the same demographic group. The CLRPD acknowledges that this circumstance presents a dichotomy; however, the Council believes it is appropriate to provide the SPG with an opportunity to have their issues heard in the HOD by granting them with delineated section status. Furthermore, delineated sections are subject to a five-year review after which time the role of this section can be evaluated.

RECOMMENDATIONS

The Council on Long Range Planning and Development recommends that the following recommendations be adopted and the remainder of the report be filed:

1. That our American Medical Association transition the Senior Physicians Group to the Senior Physicians Section as a delineated section.

2. That our AMA develop bylaw language to recognize the Senior Physicians Section.

APPENDIX: Relevant AMA Policy

B-7.01 Mission of the Sections
7.01 Mission of the Sections. A Section is a formal group of physicians or medical students directly involved in policymaking through a Section delegate and representing unique interests related to professional lifecycle, practice setting, or demographics. Sections shall be established by the House of Delegates for the following purposes:

7.011 Involvement. To provide a direct means for membership segments represented in the Sections to participate in the activities, including policy-making, of the AMA.

7.012 Outreach. To enhance AMA outreach, communication, and interchange with the membership segments represented in the Sections.

7.013 Communication. To maintain effective communications and working relationships between the AMA and organizational entities that are relevant to the activities of each Section.

7.014 Membership. To promote AMA membership growth.

7.015 Representation. To enhance the ability of membership segments represented in the Sections to provide their perspective to the AMA and the House of Delegates.

7.016 Education. To facilitate the development of information and educational activities on topics of interest to the membership segments represented in the Sections.

G-615.001 Establishment and Function of Sections

1. Our AMA adopts the following criteria in consideration of requests for establishing or changing the status of member component groups:
   A. Issue of Concern - Focus will relate to concerns that are distinctive to the subset within the broader, general issues that face medicine. A demonstrated need exists to deal with these matters, as they are not currently being addressed through an existing AMA group.
   B. Consistency - Objectives and activities of the group are consistent with those of the AMA. Activities make good use of available resources and are not duplicative.
   C. Appropriateness - The structure of the group will be consistent with its objectives and activities.
   D. Representation Threshold - Members of the formal group would be based on identifiable segments of the physician population and AMA membership. The formal group would be a clearly identifiable segment of AMA membership and the general physician population. A substantial number of members would be represented by this formal group. At

minimum, this group would be able to represent 1,000 AMA members. It is important to note this threshold will not be used to determine representation as each new group will be allocated only one delegate and one alternate delegate.

E. Stability - The group has a demonstrated history of continuity. This segment can demonstrate an ongoing and viable group of physicians will be represented by this section and both the segment and the AMA will benefit from an increased voice within the policymaking body.

F. Accessibility - Provides opportunity for members of the constituency who are otherwise under represented to introduce issues of concern and to be able to participate in the policymaking process within the HOD.

2. Our AMA will consider requests for a change in status for existing groups or formation of new groups by letter of application to the CLRPD, which will make recommendations to the BOT and HOD for further action. (CLRPD Rep. 1, I-10)

G-615.002 AMA Member Component Groups
A "Section" is a formal group of physicians or medical students directly involved in policymaking through a delegate and representing unique interests related to professional lifecycle, practice setting, or demographics. Each Section will continue to have representation in the House of Delegates. There will be two types of Sections, fixed and delineated.
"Fixed Sections" will represent the natural cycles related to a physician's career span. Since members of these groups would have limited opportunities for representation through their state/specialties societies, the need for focused representation will be enduring.
"Delineated Sections" will allow a voice in the house of medicine for large groups of physicians, who are connected through a unique perspective, but may be underrepresented. These Sections will often be based on demographics or mode of practice. Delineated Sections will have a single delegate and alternate delegate in the HOD, and will operate under Internal Operating Procedures approved by the Board of Trustees. Delineated Sections will be reviewed every 5 years by the Council on Long Range Planning, which will make recommendations through the Board of Trustees to the House of Delegates, for renewal of the Section, based on criteria adopted by the House. The review provision allows for fluidity in the Association's structure as the activities and impact of the member groups are routinely evaluated.
An "advisory committee" is an entity whose activities relate to education and advocacy. An advisory committee will have a governing council and a direct reporting relationship to the BOT. Advisory committees, however, will not have representation in the HOD. Advisory committees will operate under a charter that will be subject to review and renewal by the BOT at least every four years.
An "ad hoc committee" is a special committee, workgroup, or taskforce appointed by the BOT, the Speaker of the House, or the House of Delegates. These committees will operate for a specific purpose and for a prescribed period of time.
A "caucus" is an informal group of physicians (from specialty and/or geographic medical groups or focused interest areas) who meet at the Annual and/or Interim meetings to discuss issues, pending resolutions and reports, candidates, and possible actions of the HOD. With the exception of AMA Section caucuses, these groups will not have a reporting relationship or resources allocated by the AMA. (CC&B Rep. 5, A-11)

D-160.991 Licensure and Liability for Senior Physician Volunteers
Our AMA (1) and its Senior Physician Group will inform physicians about federal and state-based charitable immunity laws that protect physicians wishing to volunteer their services in free medical clinics and other venues; and (2) will work with organizations representing free clinics to promote opportunities for physicians who wish to volunteer. (BOT Rep. 17, A-04)

D-275.984 Licensure and Liability for Senior Physician Volunteers
Our AMA (1) and its Senior Physician Group will inform physicians about special state licensing regulations for volunteer physicians; and (2) will support and work with state medical licensing boards and other appropriate agencies, including the sharing of model state legislation, to establish special reduced-fee volunteer medical license for those who wish to volunteer their services to the uninsured or indigent. (BOT Rep. 17, A-04)

2. INFORMATION FOR PHYSICIANS: TRENDS WORTH WATCHING

Informational report; no reference committee hearing.

HOUSE ACTION: FILED

The American Medical Association (AMA) Council on Long Range Planning and Development (CLRPD) presents this informational report to raise awareness of the *Health Care Trends* resource, which is a compilation of pertinent trends taken from professional, governmental, and non-governmental sources. It is a dynamic tool, which paints a full picture of the major issues and trends that influence health care delivery. Importantly, this resource extends beyond reporting current trends and predicts the impact that they may have on patients, physicians, and other key stakeholders, such as policy makers, medical schools, and hospitals. The primary target audience for the *Health Care Trends* resource is physicians, including the AMA Board of Trustees, the House of Delegates, and the Federation, because it is vital for physicians to understand today's health care trends so they can prepare to meet the

needs of tomorrow's patients—in their professional roles, personal practices, and in advocating for patients in the nation's health care system.

Health Care Trends has taken on many manifestations since its inception in the 1990s. The *Health Care Trends* resource (also known as the Environmental Analysis Report) evolved from a series of individual reports related to the future of medical practice to a book format addressing several topics. In order to ensure that the information presented is relevant and timely, individual sections are developed and posted on the AMA CLRPD website, ama-assn.org/go/healthcaretrends. The 2010-2012 edition of *Health Care Trends* is available in an electronic format only and contains eleven sections: 1) Health Economics; 2) Public Health Infrastructure; 3) Patient Expectations and Perceptions; 4) Health Inequities; 5) Globalization; 6) Science and Technology in Medicine; 7) Health Care Resources; 8) Demographics and the Health Status of the U.S. Population; 9) Medical Practice and Quality; 10) Physician Payment; and 11) Medical Education. The *Health Care Trends* resource may be downloaded upon the completion of a brief registration form. The section descriptions and registration links may be accessed by selecting the appropriate section title or titles.

The sections of the *Health Care Trends* resource provide an extensive overview of broad-ranging issues and trends impacting the health care environment. On average, each section may range from eight to 20 pages in length, excluding the references. In order to accommodate readers with limited time, fact sheets have been developed to provide readers with a condensed overview of the topics covered in the resource. The fact sheets, which are four to five pages in length, highlight the key trends and related implications presented in the corresponding sections. Fact sheets for the most recent sections – Science and Technology in Medicine; Health Care Resources; Demographics and the Health Status of the U.S. Population; Medical Practice and Quality; Physician Payment; and Medical Education – are posted on the *Health Care Trends* webpage. As a note, the full chapters will continue to be available for readers interested in comprehensive coverage of the topics found in the *Health Care Trends* resource. For your reference, the "Medical Education" fact sheet is included in the Appendix of this report.

Today's rapidly changing health care environment presents opportunities and challenges for medical education. Medical education will need to transform so that current and future physicians are equipped with the necessary knowledge, skills and abilities to effectively practice within the evolving health care system. The medical education continuum will need to align closely with the current practice of medicine and prepare students to deal with the myriad changes influencing the health care system: state and federal regulations, scientific and technological advancements, practice management, patient needs and expectations and changing delivery models. Key changes to medical education will contribute significantly to the ability of our nation's health care system to provide collaborative, high-quality and cost-effective care to better serve every patient.

Undergraduate medical education

In the United States, there are 137 accredited allopathic and 26 accredited osteopathic medical schools.[1,2] Allopathic medicine treats symptoms and diseases, in general, using medication or surgery. Graduates of allopathic medical schools receive a Doctor of Medicine (MD) degree. Osteopathic medicine, in addition to the same treatment options as allopathic medicine, incorporates approaches such as self-healing mechanisms and hands-on techniques to treat patients. Graduates of osteopathic medical schools receive a Doctor of Osteopathic Medicine (DO) degree. Regardless of whether a physician is an MD or a DO, he or she is required to pass a medical board examination in order to obtain a license to practice medicine.

Medical school enrollees

- Total allopathic medical school enrollment increased by 3 percent over last year, with 19,230 students in the 2011 entering class. The class size for medical schools has been steadily increasing since the Association of American Medical Colleges (AAMC) called for a 30 percent increase in enrollment to help alleviate anticipated physician work force shortages.[3]
- By 2013, it is predicted that there will be a 21 percent increase in the number of first-year medical students. This projected increase will likely be attributed to growth in medical school programs and the recent opening of nearly two dozen new medical schools.[4]

Medical school graduates

- In 2011, there were 17,364 allopathic medical school graduates, which represents a 3.1 percent increase over 2010.[5] The proportion of minority graduates (37.1 percent) has remained nearly the same over the last decade.[6]
- The number of osteopathic medical graduates was 3,631 in 2010. This number is expected to increase significantly when the newer colleges, branch campuses and teaching sites start to matriculate their first graduating classes.[7]

Medical school debt

- Annual tuition and fees at state medical schools in 2010–2011 averaged approximately $25,000 for state residents and $48,000 for non-residents. At private schools, tuition and fees averaged $42,000 for residents and $43,000 for non-resident students.
- Eighty-six percent of medical graduates have a debt burden after graduation. Of these graduates, 78 percent have obligations exceeding $100,000, and 33 percent have obligations in excess of $200,000.[8]

Environmental impacts on undergraduate medical education

Various factors within the evolving health care environment will influence medical education. These factors include: greater understanding of the role of behavioral and social factors on one's health, changes in the delivery of health care and increasing use of technology.

Behavioral and social science interventions
Behavioral and social science knowledge and skills can help physicians support their patients' health and wellness, explain disease etiology, improve adherence rates to existing treatments and develop new interventions. More than 50 percent of premature morbidity and mortality is caused by behavioral and social determinants of health. Accordingly, the AAMC identified five parameters for behavioral and social science interventions for health care goal attainment: (1) healthful mind-body interaction, (2) health promotion and wellness, (3) treatment adherence, (4) individualized chronic illness management, and (5) health care team efficiency.[10]

Changes to the MCAT
The new MCAT, to be introduced in 2015, is being redesigned to ensure that medical school applicants have an educational base that enables them to communicate well with patients and understand the social and behavioral factors that impact health. The new MCAT will reflect the recent changes in medical education, integrate socio-cultural and behavioral determinants of health and health outcomes, and demonstrate critical analysis and reasoning.

Competency-based medical education
A medical school or residency program using competency-based medical education defines a set of skills or competencies based on societal and patient needs, such as medical knowledge, patient care or communication approaches. The competency-based approach includes scientific knowledge within the broader context of a physician's tasks. Competency-based medical education is emerging in many of the requirements now faced by graduating medical students, residents and practicing physicians. This approach focuses on individual aptitudes and tailors the length and content of medical education accordingly.[11]

Interprofessional collaborative practice
Six national health profession associations and three private foundations developed a set of new core competencies for interprofessional education.

- The AAMC-issued report "Core Competencies for Interprofessional Collaborative Practice" proposed four domains of core competencies needed to provide integrated, high-quality care to patients within the nation's current, evolving health care system—values and ethics, roles and responsibilities of interprofessional partners, communication with appropriate parties, and delivery of patient/population-centered care.[12]
- Based on data from the 2010–2011 Liaison Committee on Medical Education Annual Medical School Questionnaire, 65 percent of all U.S. medical schools reported that they offered required interprofessional educational experiences that brought together medical students with students from other health professions' programs.[13]

Health information technology and increasing use of technology
As health information technology (HIT) becomes integral to medical practice as a means to promote quality improvement, patient-centered care and cost containment, it is essential that HIT competencies are incorporated into medical education curriculum.

- The 2011 AMA report "Medical Student Access to Electronic Health Records" shared that students in about 90 percent of medical schools had access to an electronic health record (EHR) in the settings used for some clinical clerkships. The type of access to the EHR varied across institutions and hospital types.[14]
- In the 2011 AAMC Medical School Graduation Questionnaire, 91 percent of the 12,373 fourth-year medical students indicated that they had the "appropriate knowledge and skills to use a computer-based clinical record keeping program, both for finding and recording patient-specific information." Research on the use of EHRs in medical education and their impact on learners is limited.[15]

Graduate medical education

Following the completion of undergraduate medical education, physicians enter into a residency program through the National Resident Matching Program. The length of residency programs may range from three to seven years or more, depending on the medical specialty selected. In the 2010–2011 academic year, there were an estimated 111,586 active residents in Accreditation Council for Graduate Medical Education (ACGME) accredited programs. Doctors of Osteopathy (DOs) represented 7.2 percent of residents and have consistently increased in number each year in ACGME-accredited programs since 2005.[16]

Graduate medical education funding
- In 2010, total federal spending for hospital-based graduate medical education (GME) was about $9.5 billion through Medicare, $2 billion though Medicaid and $1 billion through the VA.[17]
- In 2010, 41 states were able to finance GME funding with Medicaid dollars, compared to 49 states in 2005.[18]

Environmental impacts on GME

There are various environmental factors influencing GME: resident duty hours, impact of delivery models, and the evolving role of science and technology in the medical education curriculum.

Resident duty hours

In response to concerns related to sleep deprivation recognition and management as well as patient safety, the ACGME issued seven new rules pertaining to work hours and training. Under these guidelines, first-year residents are limited to 16-hour shifts and no more than 80 hours per week.[19] Other changes include increased resident supervision in which all residents are required to have three levels of supervision with direct physician supervision for all first-year residents at all times.[20]

- In a 2010 residency program director survey, 87 percent of respondents stated that the new rules will lessen residents' ability to provide continuous care, and more than half of those surveyed believe residents' ability to gain competence in five core areas will be negatively impacted. Program directors in those specialties that require significant hands-on experience are particularly concerned.[21]

- In a 2010 resident survey, results were mixed about the perceived impact of the new rules. Nearly one-half of respondents believed the new rules will not positively impact their overall education, compared to 26 percent who believe they will. In regards to patients, 41 percent of residents believe the standards would not improve the quality of care, and 33 percent believe they will.[22]

ACGME Next Accreditation System

The ACGME introduced six domains of clinical competency—patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism and systems-based practice—to the medical profession. The ACGME has worked to align its accreditation system with the outcomes outlined in these competencies. This process resulted in the development of the Next Accreditation System (NAS), scheduled for phased implementation beginning with a pilot of seven specialties in July 2013. In 2014, this process will be expanded to the remaining 19 core specialties.[23]

Impact of delivery models

In order to align medical education more closely with current medical practice, various delivery models are being incorporated into clinical education. Leaders of teaching hospitals and residency programs are developing education programs consistent with practice requirements.

- **Patient-centered medical home (PCMH).** In an AAMC study of academic practices that have incorporated the PCMH, 76 percent of survey respondents indicated that team-based care was delivered in some form. These teams were comprised of physician and non-physician clinicians, as well as care coordinators, social workers and nutritionists.[24]

- **Accountable care organization (ACO).** In a 2011 *New England Journal of Medicine* report, 37 senior faculty members were surveyed regarding the establishment of ACOs within their academic medical centers. These faculty members expressed that they believed the ACO structure will prevent care coordination and cost savings; moreover, many shared doubts over whether their centers can achieve the ACO model.[25]

Use of technology

Introduction to the Practice of Medicine (IPM) is an interactive, Web-based educational series that helps institutions ensure that their residents meet the competencies required by the ACGME. The IPM provides continuous access to information on various topics, including sleep deprivation, confidentiality, health care quality and physician employment contracts. The IPM is the result of a collaboration of the American Medical Association, the Ohio State Medical Association and the Ohio State University Medical Center.[26]

Continuing medical education

Continuing medical education (CME) provides physicians with resources to maintain, develop, and increase knowledge and competencies related to advances in medicine and changes in health care delivery.[27]

- At least 16 states mandate the CME subjects that physicians must study. Of those, eight states have approved 14 new course requirements in the past five years. These requirements relate to a variety of issues, including domestic violence, the aging population and health disparities.

- Another 16 states require physicians to take CME in specific subjects for medical licensure. The requirements for the course timetable and the number of credit hours vary from state to state. Sixty-five of the nation's 70 medical licensing boards require physicians to take CME to renew their medical license.

Predicted impacts for patients

- Increased use of technology may aid accessibility to physicians and allow for better patient-physician communication.

- Patient-practitioner race and ethnicity concordance has been recognized as a strategy for improving quality of care in minority populations. The diversity among current medical students may have implications for quality and access to care for segments of this underserved population as well as hinder strategies to address health care disparities.

- As the cost of medical education continues to increase and medical students feel compelled to opt for a specialty other than primary care, patients may experience more difficulty in obtaining primary care services, particularly in light of projected shortages. Further, some health care services may be provided by non-physician clinicians, such as nurse practitioners and physician assistants, working under the supervision of a physician.

Predicted impacts for physicians

- It is anticipated that trends in the cost of medical education and associated student debt will continue and may point toward hardship for physicians and their families, particularly for primary care physicians.

- Rising costs of medical education may deter some medical school applicants or increase the drop-out rate.

- With an increasing number of states mandating continuing education requirements, physicians may be under increased pressure to provide ongoing proof of clinical competence.

- Movement toward integrating social and behavioral sciences into undergraduate medical education curricula and clinical practice may have implications for CME offerings to physicians.

- Without sufficient resources, physicians will continue to encounter difficulty with re-entry to medical practice.

- As physicians are increasingly accepting employed positions, they will need support in maintaining employment or contractual relationships with hospitals, health systems and other entities.

- Developing ethical and professional standards to guide collaborative relationships among physician and non-physician clinicians may help lead to an appropriate balance of professional autonomy and supervision when care is provided by advanced clinicians.

Predicted impacts for medical schools and teaching hospitals

- Increasingly, medical schools and academic health centers will be more likely to account for how their funds are spent (i.e., patient care compared to research and education).

- In addition to basic biomedical research, medical schools may move into other areas of study (e.g., clinical, behavioral and health services research).

- As the educational benefits of medical student access to EHRs are being recognized, medical schools and teaching hospitals may need to integrate appropriate use of such systems into clinical training.

- The possibility of funding cuts in Medicare and Medicaid may endanger some residency programs, particularly those in primary care. However, the potential exists for unused Medicare-funded residency slots to be redistributed for programs that train more primary care physicians and general surgeons.

- With higher enrollment and graduation rates, competition will increase for residency positions in some specialties and geographic locations.

- Training gaps such as office-based practice competencies, care coordination, continuity of care, familiarity with clinical information technology, leadership and management skills, systems thinking and certain procedural skills may need to be incorporated in medical education competencies.

- In order to keep pace with changing competencies and emerging models of health care delivery, medical schools and academic health centers may need to undergo significant organizational and cultural changes.

- A confluence of factors—increased need for efficiency in physician training, projected work force shortages, growing medical school debt and increased emphasis on competency-based medical education—may serve to drive key changes in medical education, including increased individualized instruction and a shortened length of time required to educate physicians.

- The unintended consequences of limited resident duty hours (increased handoffs and cross-coverage) may contribute to a greater likelihood of unplanned changes in care and errors attributed to problems with the transfer of information. Dealing with these transitions will need to be adequately addressed in education and medical practice.

- The financial impact of duty hour restrictions for resident and fellow physicians will likely be felt by academic medical centers that must replace this inexpensive labor force with attending physicians or non-physician clinicians.
- Physicians' flat payment levels may exacerbate the physician shortage by triggering older physicians to retire early or potential medical students to choose other career fields.

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