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Nova Southeastern University
Society of General Internal Medicine Offers Report on Inadequacy of Graduate Medical Education

The Graduate Medical Education (GME) system in the United States is not training enough physicians or addressing the geographic and specialty needs of the nation, a 2014 report of the Health Policy Education Subcommittee of the Society of General Internal Medicine (SGIM) said. While GME produces 25,000 new physicians from over 8,000 residency and fellowship programs annually, it is not meeting the needs of the nation—where there will be an estimated shortage of 90,000 physicians by 2020.

In addition, GME is not producing graduates who are sufficiently trained to provide cost-effective and evidence-based care while continuing to offer training almost entirely in hospital-based environments. The report also said there needs to be more experience provided to residents in patient safety, quality improvement, chronic disease management, care of the elderly, and coordination of care in interprofessional teams.

SGIM recommended accurate workforce needs assessment, expanded GME funding, more transparency on the use of GME dollars, as well as implementation of incentives that increase accountability of GME-funded programs. The study pointed out that only 20.9 percent of graduating residents who complete residencies in internal medicine, family medicine, and pediatrics will practice primary care, with the other residents entering subspecialty training or serving as hospitalists.

With 80 million baby boomers becoming eligible for Medicare and the introduction of the Affordable Care Act (ACA) expanding health insurance coverage, the gap in primary care physicians will widen. SGIM recommended an increase in physicians who practice primary care to a level of 40 percent compared to the current 32 percent. Medicare covers 40 percent of the cost of GME with the remainder coming from Medicaid, Department of Defense, Department of Veterans Affairs, Health Resources and Services Administration, and teaching hospitals. Specific recommendations of SGIM included:

- A workforce analysis supported by full funding of the National Healthcare Workforce Commission as established by the ACA.

- GME dollars spent transparently and exclusively for residents training and related costs.

- GME–funded training programs that demonstrate graduates have the competencies necessary to practice medicine in the 21st century.

- GME should provide incentives to institutions and training programs to align the practice patterns of graduates with national and regional workforce needs.

- Funding must be available for GME innovations designed to positively impact the workforce.

Increased Medical School Applications May Not Solve Physician Shortage

While the shortage of physicians is expected to escalate, the number of applicants to medical school is increasing faster than the number of openings. In 2013, 43,000 applicants applied to U.S. medical schools and only 42 percent were accepted—the lowest acceptance rate in more than 10 years. The number of graduates of medical schools, while increasing the last 10 years, has done so modestly.

In Minnesota, where they estimate a shortage of 2,000 physicians in the next decade, the University of Minnesota and the Mayo Clinic medical schools are at capacity. In order to head off the physician shortage, the Association of American Medical Colleges (AAMC) in 2006 called on medical schools to increase admissions by 30 percent. The University of Minnesota in Minneapolis, for example, expanded its class size to 170 from 165 as a result of the request by the AAMC, but it cannot grow further due to an inadequacy of residency programs. Mark Rosenberg, M.D., vice dean for medical education, said unless there is an increase in the number of residency positions, increasing the class size is not going to do any good. Some applicants who are unsuccessful earning a place the first time they apply attempt to improve their portfolio and try again. While some are successful, others may need to select an alternative career choice.


History of Medical Licensure Since 1900s Key Junctures

In the early 1900s, medical boards existed in all states and territories in the United States to examine and verify a prospective physician’s credentials for licensure. In the early 1960s, the medical boards made discipline a co-equal emphasis alongside the role of licensing examinations—evolving more recently to ensure continuing medical education. Among the important activities regarding medical licensing since the 1900s are:

• 1903 – Michigan extends unlimited practice rights to osteopathic physicians
• 1912 – Federation of State Medical Boards is established
• 1920s – Multiple states limit number of physicians by requiring basic science examinations and U.S. citizenship
• 1956 – State medical boards seek greater uniformity in medical practice acts
• 1961 – California becomes the first state to have public member on its medical board
• 1970 – California becomes the first state requiring continuing education for medical license renewal
• 1978 – All states use the federation Licensing Examination or the National Board of Medical Examiners or the National Board of Osteopathic Examiners


Innovative Flipped Classrooms Improve Health Professions Courses

A growing body of literature discusses the need to rethink the traditional in-class, lecture-based courses in health professions education. Proposed models include the flipped classroom, in which students learn on their own from offloaded content and engage in student-centered learning activities while in the classroom.

The authors discuss a course conducted at the University of North Carolina in which all lectures are offloaded to self-paced online videos. Class time is used to engage students in active learning exercises. Little has changed in how medical education is structured and delivered to health professionals, with in-class lectures prevailing in classrooms nationwide. Studies show student attention declines after the first 10 minutes of class and the average medical student has an average of a 15-20 minute attention span at the beginning of the class.

Furthermore, even though attention returns at the end of the class, only 20 percent of the material is remembered. Information can be read and learned by students on their own, but coaches are needed to challenge thinking and guide students, as well as to solve problems and encourage learning and application. Active learning engages students, enhances their learning outcomes, and improves motivation and attitudes. It also stimulates higher-order thinking, problem solving, and critical analysis. Flipped classrooms are student-centered, requiring each student to come to class with a basic understanding of the material, making them able to participate in class discussion.

The result is self-paced learning with students controlling when and how much content they view. Instructors become facilitators of learning, organizing interactive experiences that challenge the student’s thinking and promotes innovation through collaboration. The flipped classroom transfers the learning experience of a large class of health professions students beyond the classroom.

New Jersey Policymakers Seek Solutions to Future Physician Shortages

In New Jersey, policymakers are attempting to address a rising doctor shortage—an issue exacerbated by many factors and evolving faster than predicted. The demand for physicians is expected to increase as a result of the Affordable Care Act (ACA). Steven G. Littleson, FACHE and president of Jersey Shore University Medical Center, said the ACA is expected to expand coverage to 25 million more Americans.

The New Jersey Council of Teaching Hospitals estimated that by 2020 the state would experience a shortage of more than 2,800 primary care physicians. The estimate was based on the assumption that most internal medicine residents would choose to specialize in primary care; however, recent surveys show roughly 80 percent of these residents select other specialties. Deborah S. Briggs, council president and chief executive officer, said the situation is worsening and suggested several solutions, including increasing Medicaid reimbursement in the state, expanding the student loan redemption program, and addressing the New Jersey’s malpractice laws.

Many medical residents are leaving states with higher costs and lower reimbursement rates, as the amount of student debt these residents carry increases—especially those entering lower-paying specialties such as family practice or obstetrics and gynecology. A recent survey of New Jersey’s medical residents revealed that in 2013, only 34 percent planned to practice in the state. Student debt in the state is rising in kind, with 44 percent of residents owing over $200,000. In 2012, 39 percent of residents planned to stay in state and 38 percent owed $200,000. Primary care physicians are finding themselves in an even worse situation, with 48 percent reporting a debt load of $200,000 or more.

In New Jersey, Sen. Robert W. Singer (R-Monmouth and Ocean) introduced S-162, a bill offering a loan forgiveness program that replaces the current one, which Singer believes is too restricting. The new program would forgive student loans for doctors that practice in the state for at least 10 years—compared to the existing program that provides a maximum of $120,000 in loan redemption limited to practices within certain geographic locations. Unfortunately, the bill does not yet have a funding source.

Updated Education Models Could Reduce Redundancies, Create More Primary Care Physicians

In 2011, the Blue Ribbon Commission for the Advancement of Osteopathic Medical Education was established by the American Osteopathic Association and the American Association of Colleges of Osteopathic Medicine to propose new models of education designed to address future health care needs in the United States. Competency-based training was one of the key principles of the proposed new educational model. Integration of undergraduate and graduate medical education, the Commission concluded, would reduce redundancies.

This practice has the potential to shorten the amount of time to complete training. Some members of the panel, however, are concerned about a shorter period of training because it may not lead to quality physicians. The report indicated there already are many medical schools with a three-year curriculum and family physicians have been able to complete the course of study in fewer than 7 years.

Lake Erie College of Osteopathic Medicine, cited as an example in the report, has demonstrated performance on the Comprehensive Osteopathic Medical Licensing Examination Level 1 and Level 2-Cognitive Evaluation similar to students in four-year programs. The Commission determined physicians completing such a program would be able to deliver high quality care in a community-based setting. Furthermore graduates of the program could also elect and be prepared to pursue specialty training. Additional issues to be addressed include accreditation and funding of such programs. Regardless of the length of training, the graduate will neither be less nor more superior.

(Kitchenman, A. Trends toward greater doctor shortage worry state legislators. NJ Spotlight; September 25, 2013).

Council Weighs Whether Lecturing Maximizes Learning

The President's Council of Advisors on Science and Technology calls for a 33 percent increase in the number of degrees granted in science, technology, engineering and mathematics (STEM) and recommended the adoption of active learning teaching practices to achieve that goal.

The Proceedings of the National Academy of Sciences reported data from 225 research studies revealing both the examination scores and the failure rates of STEM students that used either traditional lectures or active learning. Student examination performance increased by a standard deviation of 0.47 using active learning; furthermore, failure rates were shown to be 55 percent greater in traditional lectures compared to active learning.

Students in the traditional lecture program were 1.5 times more likely to fail than were students in active learning programs, while the average examination scores improved by 6 percent in the active learning sections. The study was the largest and most comprehensive meta-analysis done to date. The authors said questions need to be asked about continued use of traditional lectures and supported active learning as a validated teaching practice in classrooms.

One (1) hour of continuing medical education credit may be obtained by reading the *Medical Education Digest* and completing the following evaluation that is being used to assess the reader's understanding of the content. Please circle the answers you believe to be correct for all four questions located on this two-sided form. To acquire CME credit, physicians must mail, fax, or deliver the form (also available online at http://medicine.nova.edu), including both the completed quiz and evaluation form by **August 15, 2014** to: Office of Education, Planning, and Research, Nova Southeastern University College of Osteopathic Medicine, 3200 South University Drive, Fort Lauderdale, Florida 33328. Email: lspeiser@nova.edu; Fax: (954) 262-3536. Please complete and return the evaluation form attached on the reverse side by fax or email.

AOA or AMA No. __ Print Full Name ________________________________

The correct answers will be published in the next issue of the *Medical Education Digest*.

1. The benefits of employing a flipped classroom includes all except the following:
   a. Self-paced learning
   b. Additional memorization
   c. Stimulated problem solving
   d. Student-centered

2. In order to address the shortage of physicians, in addition to increasing medical school class size, it is necessary to:
   a. Increase tuition
   b. Make major changes in accreditation standards
   c. Increase number of residency positions
   d. Increase number of primary care residencies

3. The Society of General Internal Medicine recommends that the percent of physicians who practice primary care should be increased to a level of:
   a. 20 percent
   b. 30 percent
   c. 40 percent
   d. 50 percent

4. According to the Blue Ribbon Commission for the Advancement of Osteopathic Medical Education, shortening the osteopathic medical curriculum will result in a graduate who is:
   a. More superior
   b. Less superior
   c. Neither more nor less superior
   d. More likely to enter primary care

**Answers to May/June 2014 CME Questions:** 1. (D) 2. (A) 3. (A) 4. (A)

**Target Audience and Objectives**

The target audience includes physicians who have faculty appointments at a medical school or who train residents and fellows in hospital-based environments. It also includes non-physician faculty members who have the responsibility for teaching medical students and others who seek education in the continuum of medical education (e.g., residency, continuing education). Also, since residents are typically responsible during their training to train medical students, they too are part of the audience to which the *Medical Education Digest* is directed.

- To provide an overview from the world literature of medical education knowledge, concepts, and skills of contemporary, new, and innovative ways to facilitate learning among medical students, residents, and practicing physicians
- To identify sources of information regarding the medical education process
- To create curiosity among those responsible for the medical education process to read in depth some of those articles that are summarized in the *Medical Education Digest*. 
**Evaluation Form**

**Medical Education Digest**

In a continuing effort to fulfill your professional interests and to improve the educational quality of continuing education, please complete this form. Please darken bubble 🟫

1) Your field / degree: 🟫 MD 🟫 DO/AOA # ____________________________

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**Accreditation Statements**

**ACCME**

Nova Southeastern University Health Professions Division is accredited by the ACCME to provide medical education for physicians. This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education through Nova Southeastern University Health Professions Division. Nova Southeastern University Health Professions Division designates this educational activity for a maximum of one (1) hour towards the AMA Physician’s Recognition Award Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

**AOA**

Nova Southeastern University College of Osteopathic Medicine is an accredited Category 1 sponsor of the American Osteopathic Association. One (1) hour of continuing medical education credit in Category 1-B is being offered through the American Osteopathic Association for this program.

**Grievance Policy**

Complaints should be submitted in writing to the Department of Continuing Medical Education, Nova Southeastern University Health Professions Division, Terry Building, 3200 S. University Drive, Room 1459, Fort Lauderdale, FL 33328.