

HOD ACTION: Council on Medical Education Report 11 adopted and the remainder of the report filed.

REPORT 11 OF THE COUNCIL ON MEDICAL EDUCATION (A-09)
Integrating Content Related to Public Health and Preventive Medicine Across the Medical Education Continuum
(Reference Committee C)

EXECUTIVE SUMMARY

This report will: 1) identify ways in which medical students are educated in public health; 2) report on strategies for integrating public health-related content across the medical education continuum; 3) briefly discuss the American Medical Association's advocacy efforts on relevant federal legislation; and 4) provide recommendations.

Medical schools educate students in public health content in three ways: 1) individual courses in public health-related topics; 2) infusion of public health content throughout the curriculum; and 3) joint degree programs. While the majority of medical schools include public health content in their curricula, there is concern that this content is not always given importance within programs.

Strategies to improve public health education across the medical education continuum include:

- Establishing curricula which are developed jointly by medical schools and schools of public health;
- Developing linkages between physicians and public health organizations;
- Creating practice-based learning opportunities;
- Educating medical students and physicians to treat patients within the contexts of their communities; and
- Increasing public health-related content in Continuing Medical Education (CME) programs.

This report recommends that our AMA: 1) encourage medical schools, schools of public health, graduate medical education programs, and key stakeholder organizations to develop and implement longitudinal educational experiences in public health for medical students in the pre-clinical and clinical years and to provide both didactic and practice-based experiences in public health for residents in all specialties including public health and preventive medicine; 2) encourage the Liaison Committee on Medical Education and the Accreditation Council for Graduate Medical Education to examine their standards to assure that public health-related content and skills are included and integrated as appropriate in the curriculum; 3) actively encourage the development of innovative models to integrate public health content across undergraduate, graduate, and continuing medical education; 4) through the Initiative to Transform Medical Education (ITME), work to share effective models of integrated public health content; 5) support legislative efforts to fund preventive medicine and public health training programs for graduate medical residents; and 6) urge Medicare to include resident education in public health graduate medical education funding and encourage other public and private funding for graduate medical education in prevention and public health for all specialties.

REPORT OF THE COUNCIL ON MEDICAL EDUCATION

CME Report 11-A-09

Subject: Integrating Content Related to Public Health and Preventive Medicine Across the Medical Education Continuum

Presented by: Claudette Dalton, MD, Chair

Referred to: Reference Committee C
(Rodney G. Hood, MD, Chair)

1 At its 2008 Annual Meeting, the American Medical Association (AMA) House of Delegates
2 adopted the recommendations in Council on Medical Education (CME) Report 8, “One-Year
3 Public Health Training Options for all Specialties.” Recommendation 2 of that Council report asks
4 that “our AMA, in the context of its Initiative to Transform Medical Education (ITME), study
5 opportunities for integrating content related to public health and preventive medicine across the
6 medical education continuum and report back at the 2009 Annual Meeting.” (Policy D-295.935
7 One-Year Public Health Training Options for All Specialties, AMA Policy Database.)
8

9 In response to the recommendation, this report will:

- 10 1. Identify ways in which medical students are educated in public health;
- 11 2. Report on strategies for integrating public health-related content across the medical
12 education continuum;
- 13 3. Briefly discuss the AMA’s advocacy efforts on relevant federal legislation; and
- 14 4. Provide recommendations.

15 16 BACKGROUND

17
18 The AMA Initiative to Transform Medical Education (ITME) aims to:

19
20 Promote excellence in patient care by implementing reform in the medical education and
21 training system across the continuum, from premedical preparation and medical school
22 admission through continuing physician professional development.¹
23

24 Through improvement in medical education, ITME enhances the AMA’s mission “to promote the
25 art and science of medicine and the betterment of public health as well as the AMA’s core values
26 and vision.”²
27

28 ITME has identified ten key recommendations for change across the medical education continuum.
29 Recommendation 3 states:

30
31 Introduce core competencies across the medical education continuum in new and expanded
32 content areas that are necessary for practice in the evolving health care system.³
33

34 Key to this recommendation is that new content, such as public health-related topics, should be
35 integrated across the medical education continuum. This perspective echoes that of the Institute on

1 Medicine (IOM). For example, in its 2007 report entitled *Training Physicians for Public Health*
2 *Careers*, the IOM recommends: 1) training in public health for all medical students; 2) increased
3 training capacity for public health/general preventive medicine residency programs; and 3)
4 assessment of training needs for physician employees of governmental public health agencies.⁴

5
6 INTEGRATING PUBLIC HEALTH AND PREVENTIVE MEDICINE CONTENT

7
8 For the past century, there has been a clear divide between medicine and public health. Medicine
9 has focused on the doctor and patient relationship while public health has remained population-
10 focused. Training in medicine continues to be based on the biomedical model while training in
11 public health is based on epidemiology.⁵ The 2007 IOM report specifically addresses this chasm
12 and calls for medicine and public health to “work in concert” to address the threats to the nation’s
13 health and welfare. Further, Phase 1 (Problem Identification) of ITME identified the preparation of
14 physicians to “serve as advocates for patients” as a gap in physician training. The 2005 ITME
15 report states:

16
17 Physicians are generally not prepared to be advocates for patients related to issues of social
18 justice (for example, elimination of health care disparities, access to care) and to be citizen
19 leaders inside and outside of the medical profession. This also includes engaging in
20 advocacy on public health issues.

21
22 A copy of the 2005 report can be accessed at:
23 <http://www.ama-assn.org/ama1/pub/upload/mm/377/itmebook.pdf>.

24
25 EDUCATION IN PUBLIC HEALTH

26
27 Medical schools educate students in public health content in three ways: 1) individual courses in
28 public health-related topics; 2) infusion of public health content throughout the curriculum; and 3)
29 joint degree programs.

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31 *Public Health Courses in Medical School Curriculum*

32
33 The 2007 IOM *Training Physicians for Public Health Careers* report calls for all medical students
34 to have some training in public health-related topics. Courses may include “epidemiology,
35 environmental health, cultural competencies and public health ethics...leadership, clinical and
36 community preventive services as well as public health emergency preparedness.”⁶

37
38 The 2008 Liaison Committee on Medical Education (LCME) Annual Medical School
39 Questionnaire asked schools to identify whether or not specific topic areas are included in required
40 coursework or offered as electives. Table 1 below lists public health-related topic areas and the
41 number and percentage of medical schools which require them.

Table 1: Medical Schools (N=126) Teaching Public Health-Related Topics as Part of a Required Course

Public Health-Related Topic Area	Topic Included in One or More Required Course(s)	
	#	%
Biological/Chemical Terrorism	100	79.4
Community Health	120	95.2
Cultural Diversity	125	99.2
Culturally-related Health Behaviors	121	96.0
Environmental Health	108	85.7
Epidemiology	122	96.8
Population-based Medicine	117	92.9
Prevention/Health Maintenance	124	98.4
Public Health Systems	99	78.6

1 Source: 2008 LCME Part II Annual Medical School Questionnaire

2

3 Table 1 shows that the majority of medical schools are including the nine listed public health-
 4 related topics in required courses. There is no information, however, on the specific content that is
 5 taught or the formats used for teaching.

6

7 While the majority of medical schools include public health content in their curricula, there is
 8 concern that the information is not always given importance within programs. What students learn
 9 during the preclinical phase of the curriculum tends to be scientific information that they are
 10 expected to master and which may be perceived by students to be evaluated more rigorously than
 11 non-biomedical subjects. The way the formal curriculum is structured may, therefore, give learners
 12 an impression that non-biomedical subjects are less relevant to and important for their development
 13 as physicians. The messages students receive from faculty through the informal or hidden
 14 curriculum may also serve to reinforce the idea that public health-related content is not relevant to
 15 the physician's role. This impression could be reinforced through the lack of attention to public
 16 health issues during informal teaching sessions or the limited knowledge about public health
 17 concepts displayed by mentors and supervisors. A comprehensive discussion on the medical
 18 education learning environment including the impact of both the formal and hidden curricula can
 19 be found in the ITME 2007 report *Recommendations for Optimizing the Medical Education*
 20 *Learning Environment*.³

21

22 As a consequence of both the formal curriculum and the lack of attention to public health issues in
 23 other teacher-learner interactions, many medical students do not believe that they receive adequate
 24 instruction in public health. Of the more than 13,000 fourth-year medical students responding to
 25 the 2008 AAMC Medical School Graduation Questionnaire, 34% reported the time devoted to
 26 instruction in public health was inadequate.

27

28 *Infusing Public Health Content Across the Undergraduate Medical Education Curriculum*

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30 The 2007 IOM report supports the development of innovative models which infuse public health
 31 training throughout the medical school curriculum. The report recommends that key stakeholder
 32 groups such as the American College of Preventive Medicine and the Association of Schools of
 33 Public Health work together to develop these models.⁶

1 In 2003, the AAMC published the document: *Training Future Physicians About Weapons of Mass*
2 *Destruction: Report of the Expert Panel on Bioterrorism Education for Medical Students*. This
3 report provided general principles for curriculum content on weapons of mass destruction (WMD)
4 including biologic, chemical, physical, and radiological agents. The report calls for integrating
5 public health-related learning objectives into medical school curricula and stresses teaching about
6 the public health system including linkages between medicine and public health during an event
7 involving WMD. The report, including a full description of the general principles and public
8 health learning objectives, can be accessed at:
9 <http://www.aamc.org/newsroom/bioterrorism/bioterrorismrec.pdf>.

10
11 Some medical schools are moving beyond individual courses in public health-related topics to
12 adopt a more integrative approach which involves infusing more public health content over a
13 longer period of time. The AAMC Curriculum Management and Information tool yields eight
14 schools that have recently implemented such innovations to integrate public health content into
15 their curricula. Innovations include mini-seminars, group projects with community agencies,
16 studying with mentors, inclusion of public health content in clerkships, and inclusion of public
17 health content throughout undergraduate medical education. (For a list of schools and
18 accompanying descriptions of their public health-related curricula innovations see
19 <http://services.aamc.org/currdir/section1/innovations.cfm?data2=yes&keyword=public+health>.)

20
21 It should be noted that key to educating medical students about public health is the importance of
22 having sufficient numbers of well-trained faculty able and motivated to teach this content. This is
23 of particular concern because in 2000, less than 3 percent of medical school faculty held MPH
24 degrees and fewer had completed preventive medicine training or had board certification in
25 preventive medicine.

26 *Public Health in Graduate Medical Education*

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28
29 In graduate medical education, the Accreditation Council for Graduate Medical Education
30 (ACGME) Common Program Requirements include expectations that issues related to public
31 health be included in the educational program for all specialties. Among the ACGME six
32 competencies, *Systems-based Practice* is especially relevant to the integration of public health.
33 This competency states:

34
35 Residents must demonstrate an awareness of and responsiveness to the larger context and
36 system of health care, as well as the ability to call effectively on other resources in the
37 system to provide optimal health care.

38
39 This includes residents being able to “advocate for quality patient care and optimal patient care
40 systems” and “participate in identifying system errors and implementing potential systems
41 solutions” (see

42 [http://www.meded.umn.edu/med2010/program_proposal/documents/AHC_Appendix_5_ACGME](http://www.meded.umn.edu/med2010/program_proposal/documents/AHC_Appendix_5_ACGME_Competencies.pdf)
43 [Competencies.pdf](http://www.meded.umn.edu/med2010/program_proposal/documents/AHC_Appendix_5_ACGME_Competencies.pdf)).

44
45 Many specialties have included public health-related training as part of residency. Accreditation
46 requirements for pediatrics, for example, require structured activities designed to prepare pediatric
47 residents to be effective advocates for the health of children in the community. Further, many
48 family medicine residencies teach residents community-oriented primary care, which integrates
49 public health principles into primary care practice. In addition, there are many innovative
50 programs such as *Communities and Physicians Together* at the University of California, Davis in

1 Sacramento where residents in family medicine, internal medicine, and pediatrics learn public
2 health principles by partnering with community organizations to improve community health.

3 4 *Combined Degree Programs*

5
6 Medical students with an interest in public health can obtain a combined MD/MPH degree.
7 Seventy-seven medical schools in the U.S. offer a MD/MPH degree, which is more than double the
8 number of schools offering the option in 1994. There were a total of 974 students enrolled in the
9 74 schools reporting that they had the joint degree option in 2007-2008. Since the two degree
10 programs are independent, however, medical students are left to integrate the information on their
11 own. Upon graduation, physicians often have to choose between working with individuals in a
12 clinical setting or working with populations/communities in public health organizations. The
13 opportunity may be lost to utilize their knowledge and skills in both arenas.

14
15 One program offers a unique approach to address this issue. The UCB/UECSF Joint Medical
16 Program (JMP) is a partnership between the University of California, Berkley School of Public
17 Health and University of California, San Francisco School of Medicine. The mission of this 5-year
18 Master of Science/MD program "...is to train physician-leaders in the human, socio-cultural, and
19 bioethical contexts of health and disease." This program is unique because the UCSF Medical
20 School is "incorporated" into the UCB School of Public Health.⁷ More information about this
21 program can be found at: <http://jmp.berkeley.edu/>.

22
23 The JMP approach to integrating medicine and public health offers an example of how medical
24 schools can create opportunities to maximize intellectual and financial resources by collaborating
25 with schools of public health. Foreseeable limitations of a program structure such as JMP,
26 however, are time and cost. This is a five-year program which not only requires a greater time
27 commitment by students, but also could lead to higher debt incurred by students due to the cost of
28 the added year of training. These limitations illustrate the importance of medical schools
29 continuing to find ways to incorporate public health-related content throughout the regular
30 curriculum.

31 32 EDUCATING ON PUBLIC HEALTH ACROSS THE MEDICAL EDUCATION CONTINUUM

33
34 A review of the medical education literature found recommendations for strategies to improve
35 public health education across the medical education continuum. These include:

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- 38 • Establishing curricula which are developed jointly by medical schools and schools of
39 public health;
 - 40 • Developing linkages between physicians and public health organizations;
 - 41 • Creating practice-based learning opportunities;
 - 42 • Creating opportunities for physicians at the graduate and post-graduate levels to care for
43 patients in their communities over time;
 - 44 • Educating medical students and physicians to treat patients within the contexts of their
45 communities;
 - 46 • Preparing physicians to global threats to health such as responding to severe acute
47 respiratory syndrome (SARS);
 - 48 • Increasing the number of residency programs in public health; and
 - 49 • Increasing public health-related content in Continuing Medical Education (CME)
programs.

1 RELEVANT AMERICAN MEDICAL ASSOCIATION POLICY

2
3 Policy of our AMA supports continuing development of initiatives to bring schools of medicine
4 and public health into a closer relationship. Policy supports collaboration with national public
5 health organizations to explore ways in which public health and clinical medicine can become
6 better integrated, through such efforts as development of a common core of knowledge for public
7 health and medical professionals, as well as education vehicles to disseminate this information
8 (Policy H-440.912). AMA policy also supports enhancing the practice of medicine and public
9 health by expanding public health's understanding of medicine and medicine's understanding of
10 public health (Policy H-440.911).

11
12 In 2007, companion bills were introduced in the U.S. House of Representatives and the Senate for
13 funding preventive medicine residency training programs (H.R. 3404 and S. 1120). The AMA,
14 writing in support of S. 1120, stated:

15
16 By authorizing \$43 million for preventive medicine residency training programs and
17 financial assistance, including tuition and stipends, to resident physicians, S. 1120 would
18 help improve our nation's ability to promote healthy lifestyles and prevent disease,
19 disability, and premature death.

20
21 The House bill was reintroduced on February 9, 2009 as H. R. 916. The AMA continues its
22 support for this proposed legislation. Full text of bill H.R. 916 is available at:
23 <http://www.thomas.gov/cgi-bin/query/z?c111:H.R.916>.

24
25 SUMMARY AND RECOMMENDATIONS

26
27 Additional training programs and increased funding are needed to ensure a physician workforce
28 that is well-trained in public health to be able to adequately address threats to the nation's health,
29 including flu pandemic, bioterrorism, obesity, and health disparities. In response, the Council on
30 Medical Education recommends that the following be adopted and that the remainder of the report
31 be filed.

- 32
33 1. That our American Medical Association encourage medical schools, schools of public
34 health, graduate medical education programs, and key stakeholder organizations to
35 develop and implement longitudinal educational experiences in public health for
36 medical students in the pre-clinical and clinical years and to provide both didactic and
37 practice-based experiences in public health for residents in all specialties including
38 public health and preventive medicine. (Directive to Take Action)
39
40 2. That our AMA encourage the Liaison Committee on Medical Education and the
41 Accreditation Council for Graduate Medical Education to examine their standards to
42 assure that public health-related content and skills are included and integrated as
43 appropriate in the curriculum. (Directive to Take Action)
44
45 3. That our AMA actively encourage the development of innovative models to integrate
46 public health content across undergraduate, graduate, and continuing medical
47 education. (Directive to Take Action)
48
49 4. That our AMA, through the Initiative to Transform Medical Education (ITME), work
50 to share effective models of integrated public health content. (Directive to Take
Action)

- 1 5. That our AMA support legislative efforts to fund preventive medicine and public
2 health training programs for graduate medical residents. (Directive to Take Action)
3
- 4 6. That our AMA urge the Centers for Medicare and Medicaid Services to include
5 resident education in public health graduate medical education funding in the Medicare
6 Program and encourage other public and private funding for graduate medical
7 education in prevention and public health for all specialties. (Directive to Take
8 Action)
- 9
- 10 7. That Directive D-295.935 be rescinded. (Rescind HOD Directive)

Fiscal Note: \$3000 for advocacy activities and staff research and dissemination activities.

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