

HOD ACTION: Council on Medical Education Report 4 adopted as amended and the remainder of the report filed.

## REPORT OF THE COUNCIL ON MEDICAL EDUCATION

CME Report 4-A-08

Subject: Educational Implications of the Medical Home Model

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Referred to: Reference Committee C  
(David M. Lichtman, MD, Chair)

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### **Introduction**

In 2000, 125 million (45%) Americans had at least one chronic condition and 22% suffered from multiple chronic conditions. By 2020, the number of Americans with chronic conditions is expected to reach 157 million. Direct medical costs for chronic conditions were \$510 billion in 2000 and are estimated to reach \$1.07 trillion by 2020. Yet, physicians both work and train in environments that emphasize providing episodic, acute care instead of the coordinated, continuous care needed to effectively manage chronic conditions.

The Council on Medical Education formed the Task Force on the Educational Implications of the Medical Home Model in September 2007 and hosted an educational session during its General Session Meeting on November 9, 2007. The session addressed the educational implications of the “medical home” concept and the chronic care model.

This first report of the Task Force summarizes the history leading up to the patient-centered medical home concept, the progress made to date, and the implications for medical education. This report intersects with two major initiatives.

- In February 2007, the American Academy of Family Physicians (AAFP), American Academy of Pediatrics (AAP), American College of Physicians (ACP), and American Osteopathic Association (AOA) issued the *Joint Principles of the Patient-Centered Medical Home* (PC-MH).
- In December 2005, the American Medical Association (AMA) launched the Initiative to Transform Medical Education (ITME) directed at educational reform. Its goal is to identify and redress any gaps in the medical education and training system across the continuum from pre-medical preparation and medical school admission through continuing physician professional development.

### **The Patient-Centered Medical Home Model**

The Patient-Centered Medical Home (PC-MH) model of care is designed to put the needs of the patient first and to create a base from which health care is coordinated. This approach is based on each patient having an ongoing relationship with a personal physician trained to provide first

1 contact and ensure continuous, comprehensive care for all stages of life and across the entire health  
2 care system. As this concept is being embraced by the Centers for Medicare and Medicaid  
3 Services, private payers, and large, self-insured employers, medical home demonstration projects  
4 have proliferated in the last year to test the medical home approach for patients with multiple  
5 chronic conditions. Such new models would reward greater collaboration among physicians,  
6 hospitals, and other stakeholders for innovating cost-effective approaches to care that meet the  
7 patient's overall health care needs.

8  
9 The PC-MH model is a comprehensive approach to providing care for people of all ages and  
10 medical conditions throughout all stages of life: acute care; chronic care; preventive services; and  
11 end-of-life care. It is a way for a physician-led medical practice, chosen by the patient, to  
12 coordinate health care services for that patient who confronts a complex and confusing health care  
13 system and disparate insurance industry practices. In a medical practice that operates a PC-MH,  
14 the principal care physician leads a team of qualified health care professionals who collectively  
15 take responsibility for the ongoing care of the patient. Principal care physicians include medical  
16 specialists and subspecialists when they are the patient's principal source of care. Under this  
17 model, it may be appropriate for oncologists to coordinate the care of cancer survivors,  
18 cardiologists for patients with end-stage heart failure, nephrologists for patients with kidney failure,  
19 and pediatric pulmonologists for children with cystic fibrosis. Reimbursement is based on the  
20 added value of activities that fall outside of face-to-face patient visits, including coordination  
21 among providers and secure e-mail and telephone consultations.

22  
23 The "medical home" concept, initially introduced in 1967 by the AAP, was used to describe a  
24 single source of medical information about a patient, but gradually grew to include a partnership  
25 approach with families to provide primary health care that is accessible, family-centered,  
26 coordinated, comprehensive, continuous, compassionate, and culturally effective. These precepts  
27 about primary care were embraced in the 1990s by the Institute of Medicine (IOM), which  
28 specifically mentioned the "medical home." Later, the IOM reports influenced the specialty of  
29 Family Medicine to use the term "medical home" in the family medicine literature.

30  
31 Community Care of North Carolina (CCNC) is a working example of a PC-MH. CCNC consists of  
32 15 not-for-profit health networks that coordinate care among physicians, local health departments,  
33 hospitals, social service agencies, and other community programs. The networks care for  
34 approximately 74 percent of the state's eligible Medicaid beneficiaries. Two independent  
35 evaluations of this program indicate that it has saved the state \$195 to \$215 million in 2003 and  
36 between \$230 and \$260 million in 2004 when compared to historical fee-for service programs.

### 37 38 **The Medical Home Model in Other Countries**

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40 A recent Commonwealth Fund International Health Policy Survey showed "other nations ensure  
41 the accessibility of care through universal health insurance systems and through better ties between  
42 patients and the physician practices that serve as the long-term *medical home*." Australia, Canada,  
43 Denmark, France, the Netherlands, New Zealand, Switzerland, and the United Kingdom ensure that  
44 all their residents have equitable access to primary care physicians, and Denmark utilizes the  
45 patient-centered primary care model. Physician payment systems in Belgium and the United  
46 Kingdom include primary care services and incentives for quality improvement and reporting.  
47 Denmark and the Netherlands provide incentives for care coordination.

1 Most doctors in Australia, New Zealand, and the United Kingdom routinely use their EMR systems  
2 to order tests, prescribe medications, and access patients' test results. Compared with doctors in  
3 the United States, doctors in these countries are more likely to receive computerized alerts about  
4 potential problems concerning drug dosages and interactions, have reminder systems notifying  
5 patients about preventive or follow-up care, and receive prompts to provide patients with test  
6 results.

### 7 8 **The Chronic Care Model**

9  
10 The Chronic Care model developed in the 1990s, based on the work of Ed Wagner, MD, and his  
11 colleagues, is an evidence-based strategy for improving the care of persons with chronic illness. It  
12 is applicable to the training of physicians as well as to practice in other venues. The Chronic Care  
13 model addresses two important core competency areas for residents endorsed by the Accreditation  
14 Council for Graduate Medical Education: practice-based learning and improvement, and systems-  
15 based practice. In practice-based learning and improvement, residents must be able to investigate  
16 and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve  
17 their patient care practices. In systems-based practice, residents must demonstrate an awareness of  
18 responsiveness to the larger context and system of health care and the ability to effectively call  
19 upon system resources to provide care that is of optimal value.

20  
21 The "Medical Home" and "Chronic Care" models differ from the "gatekeeper" model of the 1990s  
22 in that these models do not adversely set primary care against specialty care. The gatekeeper  
23 model was unsuccessful and did not allow primary care to remedy under-treatment and restrain  
24 over-treatment.

### 25 26 **Implications for Medical Education**

27  
28 Both the "Medical Home" and "Chronic Care" models provide excellent concepts around which  
29 patient care and teaching programs can be developed. All such models are patient-centered and  
30 emphasize quality and safety as well as the use of the best medical evidence across the entire  
31 spectrum of diseases and settings. In addition, these models emphasize coordination and continuity  
32 of care among specialists, the primary care physician, other health professionals, and the various  
33 institutional and community-based settings of care. Both models encourage patients to manage  
34 their own health and use information technology to support patient education, patient care  
35 planning, coordination of care, and monitoring of performance.

36  
37 Supervised practice plays a fundamental role in development of the skills and decision-making  
38 processes necessary to practice medicine. Medical students and doctors-in-training learn how to  
39 practice medicine by observing skilled clinicians caring for patients. Medical schools must place  
40 special emphasis on developing, supporting, and rewarding a cadre of clinical faculty who are  
41 committed to serving as role models in delivering quality care.

42  
43 To provide students, residents, fellows, and practicing physicians with the skills they will need for  
44 the 21<sup>st</sup> century, ITME has recommended that core competencies be introduced in new and  
45 expanded content areas. A new curriculum, focused on managing chronic disease, could reinforce  
46 the importance of translating research into practice, teach practice innovation and quality  
47 improvement, and provide outpatient training that reinforces the Chronic Care model.

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1 Key skills identified by the ACP include an understanding of the importance of a multidisciplinary,  
2 team-based approach for both inpatient and outpatient care, learning how to assemble and work  
3 with non physician members of the health care team, innovative practice management concepts,  
4 and an adequate framework for understanding and adapting to evolving health care policy issues.  
5 The clinical education of medical students should emphasize multiple patient encounters in  
6 different health care settings to help students gain an understanding of the challenges patients with  
7 chronic illness face and to appreciate the importance of the doctor-patient relationship, which only  
8 comes from regular interactions with patients over time. The Society of Teachers of Family  
9 Medicine Special Task Force on the Future of Family Medicine is developing competency-based  
10 curricula for the PC-MH with a group visit module to provide a dynamic longitudinal method of  
11 teaching, whereby the student learns by planning, conducting, and debriefing about each visit with  
12 team members.

13  
14 The Academic Chronic Care Collaborative (ACCC) is an example of an ongoing network of 48  
15 teams from 22 teaching hospitals and systems that have committed to implementing the evidence-  
16 based “Chronic Care” model in their residency practices. The teams track the results of their  
17 efforts by monthly reports of both clinical and educational outcomes. The two most effective  
18 drivers of change have been organization-wide leadership and the academic culture, as well as the  
19 institution’s education mission and the need to address accreditation requirements.

## 20 21 **Model Curricula and Initiatives**

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23 A number of curricula and initiatives have been developed to assist in the implementation of the  
24 PC-MH and chronic care models. These include:

### 25 26 **Preparing the Personal Physician for Practice (P<sup>[4]</sup>) Project**

27 <http://www.transformed.com>

28  
29 The residency demonstration initiative known as the P<sup>[4]</sup> is a collaborative effort led by the P<sup>[4]</sup>  
30 Steering Committee in collaboration with the Association of Family Medicine Residency Program  
31 Directors, the American Board of Family Medicine, and TransforMED (a practice redesign  
32 initiative of the AAFP). Fourteen residency programs participate in the project.

### 33 34 **Improving Chronic Illness Care (ICIC)**

35 <http://www.improvingchroniccare.org>

36  
37 ICIC and the AAMC are facilitating the adoption of the Chronic Care model by academic medical  
38 centers nationwide through two collaboratives based in educational institutions. Nine universities  
39 and medical centers participate in the California Collaborative, and twenty-one universities and  
40 medical centers participate in the Academic Chronic Care Collaborative initiative, which employs  
41 the Breakthrough Series Collaborative model developed by the Institute for Healthcare  
42 Improvement.

### 43 44 **The National Center of Medical Home Initiatives for Children with Special Needs**

45 <http://www.medicalhomeinfo.org>

46  
47 This is a training curriculum developed by the American Academy of Pediatrics, Family Voices,  
48 the federal Maternal and Child Health Bureau, the National Association of Children's Hospitals and  
49 Related Institutions, and Shriners Hospitals for Children for primary care physicians, pediatric

- 1 office staff, child health advocates, allied health professionals, and parents of children with special
- 2 needs. The curriculum contains practical strategies, tools, and resources.

1 **Washington State Medical Home website**

2 <http://www.medicalhome.org>

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4 This web site is sponsored by the Washington State Department of Health-Children with Special  
5 Health Care Needs Program, American Academy of Pediatrics National Center of Medical Home  
6 Initiatives for Children with Special Needs, and other states to share practical and current tools,  
7 strategies, and information that help physicians and other health professionals in Washington State  
8 care for children, youth, and families, and support youth and families in understanding how to  
9 partner with their health care providers.

10  
11 **The AAP web site**

12 <http://www.medicalhomeinfo.org>

13  
14 This web site serves as the hub of national medical home activities for children and youth with  
15 special needs and contains information and tools for health care providers and families, national  
16 medical home training curriculum, and links to medical home projects and activities in all states.

17  
18 **The Center for Medical Home Improvement at the Hood Center for Children & Families**

19 <http://www.medicalhomeimprovement.org>

20  
21 Children's Hospital at Dartmouth-Hitchcock Medical Center developed the Medical Home Index  
22 and other medical home quality improvement tools for primary care providers, their office staff,  
23 and the children and families they serve.

24  
25 **“Patient-Centered Geriatric Care: Patients as Partners”**

26 <http://mtgec.umontana.edu>

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28 This is an annual continuing medical education conference sponsored by the Montana Geriatric  
29 Education Center and the University of Montana Skaggs School of Pharmacy.

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31 **Challenges Faced by the Medical Education Community**

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33 A number of implementation issues will need to be addressed for the medical home concept to be  
34 generally incorporated as a teaching venue. To be successful, individuals and groups within and  
35 external to the medical education community will need to address institutional priorities at the  
36 clinic, residency, department, and university levels. The following issues will require  
37 consideration:

- 38
- 39 • Teaching sites would need to be restructured. Students and residents must work in  
40 teaching practices with medical home features, or the PC-MH initiative will be  
41 marginalized and lose credibility. This is an ambitious agenda. For family medicine alone,  
42 there are more than 100 medical school practices and more than 450 residency program  
43 practices that would need to become PC-MH teaching practices. Estimating that each  
44 medical school has approximately 30 to 50 community practices in which it places  
45 students, roughly 3,000 to 5,000 community teaching practices would need to be  
46 remodeled into the PC-MH model for family medicine.
  - 47
  - 48 • Financial barriers must be surmounted, as demonstrated by a California study examining  
49 primary care residency programs that implemented projects to improve the quality of

1 chronic disease training and patient care. These barriers include problematic  
2 reimbursements, uncertainties about billing and coding, and the lack of institutional  
3 resources for staff and for electronic health records, registries, or other information  
4 services. The study found that, although some grant funding was available, residency  
5 clinical revenues could not be easily reinvested in quality improvement because profits  
6 were slim or used to cross-subsidize other academic activities.

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- 8 • The payment systems used by Medicare, Medicaid, and most private payers must be  
9 redesigned to provide positive and sustained incentives for physician practices that  
10 organize themselves as a PC-MH, and to allow physicians to share in savings in other parts  
11 of Medicare, such as from reduced hospital admissions that result from patient-centered  
12 care in the office setting. Financing mechanisms for medical education also need to  
13 support innovation and broad-based changes in education and provide funding for faculty  
14 and trainees for their efforts in providing medical education in the context of the medical  
15 home. Although Congress enacted legislation that mandates a demonstration project of a  
16 Medicare medical home, which will include payment for care coordination by physicians,  
17 results from the demonstration may not be available until 2012 or later.
- 18
- 19 • Major stakeholders in PC-MH must develop uniform standards of measurement. The  
20 AAFP, the AAP, the ACP, and the AOA have been working with the National Committee  
21 for Quality Assurance (NCQA) to reach consensus on a set of measures that will provide a  
22 uniform way of implementing the concept of the medical home. The NCQA launched its  
23 Physician Practice Connections program to assess how medical practices are functioning as  
24 PC-MH. To be recognized as a patient-centered medical home, practices will need to  
25 demonstrate the ability to sufficiently meet the criteria of these standards.
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## 27 SUMMARY

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29 The AMA, through its Initiative to Transform Medical Education (ITME), is working  
30 collaboratively with other organizations to bring substantive improvements to medical education  
31 across the continuum aimed at enhancing physician and health system performance. The patient-  
32 centered medical home (PC-MH) model provides excellent opportunities for improving both  
33 patient care and teaching programs.

## 34 RECOMMENDATIONS

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37 Therefore, the Council on Medical Education recommends that the following be adopted and that  
38 the remainder of this report be filed.

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- 40 1. That our American Medical Association encourage the integration of medical education into  
41 Patient-Centered Medical Home (PC-MH) demonstration projects. (Directive to Take Action).
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- 43 2. That our AMA ask the Liaison Committee on Medical Education and the Accreditation  
44 Council for Graduate Medical Education to review their accreditation standards so as not to  
45 impede education in and about the PC-MH model. (Directive to Take Action)

- 1 3. That our AMA advocate for funding from all sources for medical schools and residency  
2 training programs to provide medical education in the context of PC-MH models. (Directive to  
3 Take Action)  
4
- 5 4. That our AMA monitor the evolution of the concept of the medical home and track the  
6 implementation by teaching programs, with a report back at the 2010 Annual Meeting.  
7 (Directive to Take Action)

Fiscal Note: \$2500 for staff time associated with this activity.

Complete references for this report are available from the Medical Education Group.