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Educating Health Professionals Collaboratively For Team-Based Primary Care

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ABSTRACT Team-based primary care offers the potential to dramatically improve the quality and efficiency of care, but its broader adoption is hindered by an education system that trains health professions in silos. Collaborative models that educate multiple practitioners together are needed to create a new generation of health professionals able to work in efficiently functioning teams. Changes in professional cultures, organizational structures, clinical partnerships, admissions, accreditation, and funding models will be required to support the expansion of collaborative education effectively.

The crisis in primary care presents enormous challenges to health care leaders and policy makers. Unprecedented demand for health services and overworked health professionals have left patients struggling to gain timely access to primary care services. This “perfect storm” creates a unique opportunity to put into practice innovative models that will improve the availability and quality of primary care through the formation of highly effective primary care teams.

Before the full benefits of primary care teams can be achieved, the education system for health professionals must first implement farsighted changes that will reach from administration to financing, and from the classroom to the examination room. Collaborative education is the change that is needed. What’s required, in the words of Loren Roth of the University of Pittsburgh School of Medicine, “is a revolution in how we train our providers” (personal communication, 10 August 2009).

Team-Based Care

Care teams—typically led by physicians and including nurse practitioners, physician assistants, registered nurses, social workers, nutritionists, pharmacists, and medical assistants—

are hardly new. An early example of team-based care included Martin Cherkasky’s outreach program at New York City’s Montefiore Hospital in the 1940s.¹

The work of Thomas Bodenheimer shows that increased coordination achieved by primary care teams leads to better clinical and financial performance and reduces clinicians’ workload.² Data from Kaiser Permanente Georgia demonstrate that “high-functioning care teams”—defined as those whose practice climate features high levels of collaboration and teamwork—performed 40–90 percent better than low-functioning teams in caring for chronic diseases, including diabetes, hypertension, and asthma.³ In the United Kingdom, Stephen Campbell and colleagues note that care teams were the “only variable that was associated with high quality care across a range of aspects of care.”⁴

Team-oriented training approaches have resulted in improved interpersonal working relations, primary care staff members’ better comprehension of each other’s roles, and increased levels of job satisfaction and teamwork.^{5,6} Team-based primary care is recognized as a central component of the 2007 Joint Principles of the Patient-Centered Medical Home^{7,8} and as integral to facilitating communications with patients and coordination of care.^{9–12}

International Perspectives On Team-Based Care

Multidisciplinary care teams are common in many countries, particularly the United Kingdom, Germany, and the Netherlands. And in the United Kingdom, Germany, and New Zealand, nonphysicians routinely provide primary and chronic illness care.¹³

New Zealand's Care Plus service program focuses on chronic disease care teams in local primary care organizations. The program has received positive evaluations from both patients and care teams.¹⁴⁻¹⁶ The Australian Primary Care Collaborative Program recognizes care teams as a sustainable change in health care delivery. The program has increased the use of best practices and has led to demonstrable improvements in patient care.¹⁷

Collaborative Education

Collaborative education, also known as interprofessional education, occurs "when members (or students) of 2 or more professions associated with health or social care engage in learning with, from, and about each other."¹⁸ Bringing together students from multiple health professions for collaborative training is an essential bridge between the potential of team-based care and the realization of efficient care delivery and improved patient outcomes.

Traditional education in the health professions emphasizes separate, specialized training that does little to prepare students in medicine, nursing, and other fields to work together, form teams, or share care responsibilities.

In contrast, collaborative education is built on the principles of coordination and cooperation among all practitioners. Collaboration can take many forms in many venues, from the classroom to the clinic or the community, and within the confines of a single institution or in partnerships among multiple organizations. Some educational institutions offer courses in team development, while others provide courses focused on chronic disease care, patient safety, and health care ethics, to highlight the importance of teamwork in those areas. Another approach is to use a case-based curriculum, in which students from multiple disciplines work together to diagnose and treat fictional patients.

These and other approaches demonstrate the value of collaboration to the delivery of high-quality care. Exhibit 1 in the Appendix includes examples of collaborative education.¹⁹

ORIGINS OF COLLABORATIVE EDUCATION Collaborative education in the health professions emerged in both academic institutions and the literature around 1970. Early examples occurred

at the Nevada Health Sciences Program; Ohio State University; Indiana University; and the Universities of British Columbia, Miami, and Minnesota.¹

Pivotal initiatives included the Institute of Medicine's 1972 conference on Education for the Health Team and the launch of the Health Manpower Education Initiative Awards by the Office of Interprofessional Programs in the then-named U.S. Bureau of Health Manpower. The bureau provided grant funding for experiments in collaborative education, beginning with those of the University of Hawaii and the American Medical Student Association.

Only ten years later, the grants were dramatically scaled back—a harbinger of the challenges faced by today's collaborative education efforts. Once external funding for collaboration was no longer available, traditional disciplinary divisions resurfaced. Collaborative learning programs, including promising initiatives at the Universities of Nevada and Georgia, were considered too expensive¹ and were discontinued.

Limited interprofessional education efforts continued in the 1990s and early 2000s. The Pew Health Professions Commission and the John A. Hartford Foundation Geriatrics Interdisciplinary Team Training initiative worked together at clinical sites, including Rush-Presbyterian-St. Luke's Medical Center, in Chicago, and Mount Sinai Medical Center, in New York City.

BENEFITS OF COLLABORATIVE EDUCATION Effective collaborative education provides students with an understanding of the roles and responsibilities of other health professions. It also teaches specific management techniques that are vital to real-world team functioning.

Simply enrolling students from several different health professions in shared classes—often basic science courses such as anatomy and physiology—allows students in each profession to realize that their peers in other fields have common background knowledge and fundamental competencies in patient care.

Collaborative education develops communication and listening skills, as well as an appreciation of the abilities of all health professionals—particularly as leaders of care teams. Effective programs teach students how to manage professional relationships and resolve conflicts.

By training students together, these programs provide a level playing field on which people from different disciplines and at various levels of training can share their thoughts and concerns about patient care. The approach is a more open and egalitarian than is the approach in traditional education.²⁰

Although these benefits are widely cited by

proponents, detailed evidence of their impact remains limited. The Cochrane Collaboration's 2008 systematic review of published material on the effects of interprofessional education found no consistent body of evidence demonstrating its benefits in terms of professional behavior or clinical outcomes.²¹

BARRIERS TO COLLABORATIVE EDUCATION

Common barriers that prevent or inhibit institutions from implementing collaborative education include entrenched cultures, administrative rigidity and coordination challenges, curricular requirements associated with licensing and certification, and funding limitations.

► **CULTURE:** The traditional cultures in the health professions often stand firmly in the way of collaborative education. A significant lack of communication across disciplines, driven by the highly compartmentalized structure of the health care system and exacerbated by preconceptions about professional roles and responsibilities, impedes collaboration.

Competition and even distrust between the professions on the part of both students and faculty also stand in the way of effective collaborative education. Of particular concern is the traditional hierarchical structure that considers physicians to be the primary decision makers and relegates others to a secondary status.

► **ADMINISTRATION:** Even within the same institution, medical, nursing, and other health professions schools are administratively separate, creating logistical challenges for collaborative education. Conflicting academic calendars and separate faculties make it hard to schedule shared courses and other activities. Differences in tuition structures also make it difficult to organize, offer, and bill for shared courses. Programs with separate campuses face the added challenge of geographic separation.

► **CURRICULA:** All of the health professions must impart a tremendous amount of information to students. Curricula are jam-packed, and programs are under pressure from accreditation and licensing bodies to ensure that students acquire essential skills and competencies. Such requirements make it very challenging to add any new courses or training experiences, including collaborative education.

In many ways, clinical rotations are an ideal setting for students to apply their collaborative education experiences to direct patient care. Students learn how to provide care in these rotations and often emulate and share the behavior of their preceptors.

However, clinical experience can also undo prior collaborative training. This is particularly likely if students work with practicing clinicians

who are not experienced with or amenable to the team-based model.

► **FUNDING:** Finally, the absence of substantial and sustained funding for collaborative education makes it difficult for institutions to make long-term commitments to such initiatives. Although foundations and some federal grants have supported these efforts, recipients of short-term funding report that once the money dries up, the programs typically shut down. The absence of evidence that collaborative education is effective continues to hamper efforts to develop sustainable funding sources.

Common Principles

A small but growing number of colleges and universities across the nation—including Saint Louis University and the University of Pittsburgh—have successfully implemented collaborative education programs in the health professions. The approaches vary, but a set of common principles underlies these initiatives. The same principles are cited by leaders in collaborative education as fundamental to both the creation of effective care teams for tomorrow and the revolution in health professions education that is required to produce those teams.

These concepts were identified and endorsed at a meeting on October 27, 2009, at which the New England Healthcare Institute brought together six pairs of medical and nursing school deans, representing leading collaborative education programs. The principles are based on the insights of these academic leaders and feedback from an expert audience that included key health care stakeholders.

CONDUCT AND EVALUATE DEMONSTRATIONS

Despite expert consensus and extensive anecdotal reports of the connections between collaborative education and better team-based care and improved patient outcomes, there has been little scientific research on those connections. Therefore, the first principle is that rigorous evaluation of how collaborative training affects students' abilities as clinical team members and the care they give their patients is critical in making the case for collaborative education.

REFORM LEADERSHIP CULTURES The success of collaborative education programs depends in large part on institutional leadership. Students appear to be strongly in favor of collaborative education, and many expect it to be a part of their training.

Educators should capitalize on this student sentiment by garnering support for collaborative education from university presidents, academic health center executives, chancellors, and deans. Strong administrative support sends a

clear message that collaborative education is a priority.

DEVELOP COLLABORATIVE COMMITTEES AND CENTERS Interdisciplinary faculty committees can serve as planning bodies to develop collaborative education programs and foster interdisciplinary faculty relationships. Establishing formal interdisciplinary education centers to house and coordinate collaborative education allows robust collaborative activities to flourish.

Interdisciplinary centers generally include representatives of all of the health professions programs at an institution. They may include adjunct faculty who offer traditional education and faculty who focus on collaborative education. Often, the leaders of these centers report to a panel of deans or an administrator in charge of all health sciences programs.

FORGE CLINICAL PARTNERSHIPS Students' clinical experience shapes the way in which future providers deliver care and collaborate with others. Therefore, institutions must develop improved clinical training partnerships at sites that use primary care teams successfully. Such partnerships can address the disconnect between students' preclinical education and their clinical experiences.

This will require institutions to recruit as new partners clinical sites that use primary care teams and to support team-based practice at all clinical sites.

REVISE ADMISSIONS POLICIES Current admissions policies, particularly in medical schools, stress scientific knowledge over social and inter-professional skills and experiences. As a result, the Medical College Admission Test (MCAT) may be filling the education pipeline with future physicians who have a great deal of medical knowledge. Meanwhile, medical schools may not be admitting students with abilities that are important for successful team-based care, such as communication, leadership, and interpersonal skills.

Revised examinations would make it easier to identify students who are well suited to lead and practice within teams. Broader admissions policies would ensure that such students are welcome in health professions education.

ENGAGE ACCREDITATION AND PROFESSIONAL SOCIETIES Accreditation bodies and professional societies have the power to shape the policies of health professions programs by requiring inter-professional education for accreditation. Such action as part of quality improvement efforts mandated by accreditors would legitimize collaborative education in the eyes of many skeptics, foster the view of it as central to the mission of the health care system, and unlock financial resources for new educational programs.

DEVELOP SUSTAINABLE PUBLIC FUNDING Public policy makers must be engaged in developing and expanding collaborative education for primary care. Sustained investment has been lacking and will be required to create lasting change.

Even more important than money is the mandate for collaborative education that the government's provision of financial support would demonstrate. Government funding is seen as evidence of a long-term commitment, allowing educational institutions to invest in new programs with greater confidence.

The Canadian experience suggests that national political support in the form of funding from Health Canada was key to empowering individual educators to push for collaborative education at their institutions. Public policy makers in the United States should explicitly include collaborative education as part of the implementation of national health care reform. They should back up this commitment with significant financial resources from the Health Resources and Services Administration's Bureau of Health Professions.

Policy Actions

Public and private policy makers need to take certain steps to make collaborative education for primary care a reality. First, the federal government should follow Canada's lead and create a national center to support the development, demonstration, and dissemination of collaborative education activities.

Second, the Centers for Medicare and Medicaid Services and the Accreditation Council for Graduate Medical Education should require primary care residency programs to identify and work with sites using team-based care, to incorporate team-based training in their curricula and encourage meaningful collaboration among a variety of health professionals.

Third, the Liaison Committee on Medical Education, the American Association of Colleges of Osteopathic Medicine, the National League for Nursing Accrediting Commission, and other accrediting bodies should jointly identify existing best practices and support demonstrations of team-based education and practice within and across professional schools. The ultimate goal should be the promulgation of collaborative accreditation standards.

Fourth, the Association of American Medical Colleges (AAMC), through its Medical School Objectives Project, and the American Nurses Association, through its American Nurses Credentialing Center, should collaborate to promote interprofessional education among their members and throughout their professions.

Fifth, the National Quality Forum, Leapfrog Group, Joint Commission, and other national organizations that define and promulgate quality-of-care requirements should include team-based care as a best practice for the promotion of quality outcomes.

Sixth, as part of its current review of the MCAT, the AAMC should revise the exam to better identify candidates with strong interpersonal skills.

Seventh, academic institutions should create collaborative education centers to serve as catalysts for institutionwide interprofessional education activities and as focal points for securing additional financial and staff resources.

Finally, collaborative education programs should develop robust mechanisms to demonstrate and measure the impact of such education on the quality and efficiency of health care.

Conclusion

As Americans work to reform our health care system so that we receive higher-quality care at a lower cost, many stakeholders see substantial opportunity in the expansion of primary care teams. A compartmentalized health professions education system makes it difficult to adequately prepare future practitioners to work in teams. In this article we have suggested that expanding collaborative education is key to the creation of efficiently functioning teams that generate clinical benefits.

If the required revolution in medical professionals' education is successful, the primary care system of tomorrow will be more collaborative, more efficient, and more effective than the system of today. And patients will receive higher-quality care. ■

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NOTES

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- The Appendix can be accessed by clicking on the Appendix link in the box to the right of the article online.
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