Published in final edited form as:

Acad Psychiatry. 2013 March 1; 37(2): 72–75. doi:10.1176/appi.ap.11120209.

Restructuring Academic Health Centers to Advance Interdisciplinary Collaborations: Opportunities for Psychiatry Departments

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Healthcare reform initiatives have highlighted the importance of interdisciplinary teams, especially within psychiatry departments, where multiple disciplines already work together (1). The goal of these collaborations is to optimize patient outcomes. A succession of Institute of Medicine (IOM) reports has reaffirmed that optimal clinical services require health professionals (not just physicians) to collaborate in order to foster wellness, manage acute and chronic illness, and provide compassionate care across the life continuum. The IOM report titled, “Health Professions Education: A Bridge to Quality” (2), observed that the training of healthcare professionals must change because, once in practice, they are asked to work in interdisciplinary teams, yet they are not educated together or trained in team-based skills. To achieve this educational goal, the IOM report titled, “Crossing the Quality Chasm” (3) observed that, across professional schools, there are shared competencies that should be identified and integrated into the educational programs. The report went on to recommend that accreditation, credentialing, and licensing organizations provide competency-based oversight across disciplines. These recommendations were reaffirmed more recently by a Josiah Macy Jr. Foundation report (4).

When the IOM evaluated rural health care (5), one of its recommendations for schools of medicine, dentistry, nursing, allied health, public health, and behavioral health was to develop curricula in order to improve health care in rural communities. These curricula would include a core competency for all disciplines to be able to provide interdisciplinary care. The report also advocated for cross-training in key shortage areas for rural communities. For example, the report expressed particular concern over the lack of mental health and substance abuse programs, and recommended that all physicians, nurses, and allied health professionals who work in rural settings, regardless of specialty, receive training in the recognition and treatment of psychiatric disorders, including alcoholism and substance abuse.

Finally, the IOM expressed concern over the quality of care in long-term care facilities (6) and the shortage of clinical services being provided to an aging population (7). Among their many recommendations in both reports was the need to improve the training and

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competencies of all healthcare professionals in the field of geriatric medicine, including paid caregivers, informal caregivers, and traditional specialties, such as nursing and medicine. The reports also discussed the need for educating and training multidisciplinary teams to provide clinical care (6, 7).

Articles that support the need for multidisciplinary and team approaches to clinical problems have also been published in the psychiatric literature (8–11). Since psychiatrists have extensive experience in collaborating with social workers, psychologists, psychiatric nurses, and other mental health professionals, they are well-positioned to assist other healthcare professionals in such team approaches. As the five IOM reports emphasized (1–3, 5–7), there is a compelling need to have care delivered through collaboration and integration. This goal has been articulated by the leadership at UC Davis (12) and has led to the changes described in this article. To create more multidisciplinary and team approaches to education and clinical care, the University of California, Davis Health System made structural reforms to better achieve these goals. This article discusses the reforms made at UC Davis.

Academic Health Centers

Academic Health Centers (AHCs) are well positioned to lead health reform and to advance inter-professional approaches, for several reasons.

- AHCs are a predominant site for training the next generation of health professionals and for providing a foundation for healthcare professionals to work collaboratively after training. This is especially true for psychiatry, which has significant experience with team-based approaches.
- When scientists and their scholars-in-training bring diverse disciplinary perspectives to conducting team research, there is great potential for true advancement (13, 14). This is certainly true in the neurosciences, where psychiatrists, neurologists, neurosurgeons, psychologists, and behavioral scientists frequently work together with a broad array of basic-science researchers on joint projects.
- AHCs include major healthcare delivery systems that provide myriad services, from safety-net care to state-of-the-art quaternary care that can function as ideal venues for the development of team-care delivery models.

Barriers to Multidisciplinary Approaches

Financial reimbursement and support models for AHCs often do not align incentives around inter-professional approaches or between the hospital and the physician. For instance, physicians are reimbursed for their professional services in outpatient and inpatient settings, yet the nurses and most allied health professionals receive no direct financial incentives for improving the quality of clinical services through team-based care. Also, in full-risk, capitated contracts, the health system receives a fixed per-member, per-month payment; yet most institutions use fee-for-service reimbursement models for physicians, which reward longer lengths of stay or more outpatient visits. On the other hand, the hospital receives a fixed dollar amount, usually much less than its actual costs.

In psychiatry, payers may discourage collaborative care and encourage split care, whereby psychiatrists prescribe medications, and other mental health professionals provide psychotherapy services. This is sometimes done because non-psychiatrists are reimbursed at lower rates than psychiatrists for psychotherapy. Such practices may lead to communication difficulties between providers and fragment or otherwise lower the quality of care for patients (15).

Few AHCs have been leaders in developing new models that integrate health care in order to foster inter-professional collaborations that serve broad populations and address the social determinants of health (16). Although there has been some increase in the number of schools sponsoring inter-professional curriculum pilot projects (17), most are isolated experiences that are frequently elective, and most are predominantly focused on primary-care training, not specialty care. Despite initiatives to drive interdisciplinary research (18), most universities have struggled to provide adequate incentives for such collaborations.

The very structure of academic health centers is a powerful barrier to achieving the functions needed for fundamental reform. The historical evolution of health-profession educational institutions has fostered distinct profession-specific cultures, redundant infrastructures, and disparate academic reward structures that favor individual accomplishment, rather than teamwork. With these structural barriers firmly entrenched, AHCs have not been able to respond efficiently to calls for inter-professional education, research, and student-focused learning linked to person/family/community-centered care.

Model Academic Health Centers

As long as the “structure” of AHCs is hierarchical and profession-centered, the function will remain siloed by discipline, and true inter-professional approaches to improved healthcare will not be realized (19). Consistent with the Bauhaus design principle of “form follows function,” AHCs should be redesigned by starting from the desired goals and then creating the best structure to achieve these goals (20).

A new approach to designing AHC structure is needed to create an interdisciplinary culture and infrastructure to drive effective health outcomes. An organization should first build consensus around the desired goals and then define measurements of success and strategies. Finally, it should create a structure that promotes the achievement of the goals. This structure should seek to increase the ability to achieve excellence in inter-professional education, stimulate interdisciplinary team science, and accelerate healthcare redesign efforts to lead reform and improve health outcomes. A new organizational structure, the UC Davis “Schools of Health,” was created on the basis of this philosophy.

UC Davis Schools of Health

As previously reported (21), the UC Davis Medical School and Hospital function as an integrated structure, with a single leadership team and strategic plan. The creation of a new nursing school, the Betty Irene Moore School of Nursing, and the expansion of public health and health informatics programs provided another opportunity to increase inter-professional approaches.

The “Schools of Health” was created to promote cohesion among leadership, faculty, staff, and students; to optimize resource-sharing, foster unification of core disciplines, and allow more efficient delivery of support services. The term, Schools of Health, was selected to include the new nursing school and also the health informatics program.

The UC Davis Schools of Health constitutes an interrelated organizational structure that maintains strong disciplinary identities, while removing barriers to interdisciplinary collaboration. Joint leadership, core values, strategic approaches, and finances facilitate innovative inter-professional activities. Consolidated external relations with affiliated hospitals, community, and government agencies promote consistent messaging and positioning.

Joint core values drive strategic planning and actions across the entire health system. The values are 1) excellence; 2) compassion; 3) diversity; 4) social responsibility; 5) leadership; and 6) teamwork/collaboration.

Core academic disciplines are fundamental across all health professions, providing the substrate for the development of the shared knowledge required across professional curricula. These disciplines include clinical sciences; basic physical and social sciences; health informatics and information sciences; arts, humanities, and ethics; policy, economics, and law; and organizational behavior and leadership.

Relationships with clinical affiliates (in our case, affiliated community hospitals, the Department of Veterans Affairs Medical Center, and Northern California Shriners Hospital) and academic partners are optimized with clear communication and a consistent approach to agreements. This model also supports coordinated efforts with state and federal agencies, as well as key health-system advisory boards.

Finally, shared resources—including academic personnel, human resources, instructional design, advancement/fundraising, public relations, finances, and information technology—improve operational efficiencies and lower functional barriers to collaboration.

Benefits

The new paradigm has created benefits in education, research, and clinical care strategies.

Education

The Schools of Health concept has led to inter-professional education in the *PRogram In Medical Education (PRIME)*, which trains increasingly diverse professionals to practice in rural communities (Rural-PRIME). Many of the Rural-PRIME medical students have elected a fifth year of training to attain a Master of Public Health (M.P.H.) degree or a Master of Informatics degree. Psychiatry faculty have been quite involved in the PRIME programs, in part, because of the significant shortage of psychiatrists in rural settings.

Members of the first class of Master of Nursing (M.S.N.) students have joined medical students at one of the rural, inter-professional training locations, designated as “Rural Centers of Excellence.” All nursing graduate students are required to complete health

informatics courses. The inter-professional interactions of medical, nursing, public health, and informatics students will facilitate their ability and likelihood of working effectively together in the community after graduation.

The University's structure of graduate groups facilitates academic collaboration by bringing together faculty from departments across the campus who share common research interests spanning disciplines. The Schools of Health are charged with oversight of three health sciences-related graduate groups that specifically promote interdisciplinary education and research: Clinical Translational Research, Nursing Science and Health-Care Leadership, and Informatics.

Research

The Schools of Health model has helped advance interdisciplinary basic, translational, and clinical research education and career-development programs. The Clinical and Translational Science Center enrolls trainees from several schools (Schools of Medicine and Nursing as well as Veterinary Medicine, College of Engineering, and others). Schools of Health research training includes comparative-effectiveness research; health informatics; team science; and research methods, including biostatistics. Faculty from the Department of Psychiatry have facilitated such interactions and have contributed to and benefited greatly from these interdisciplinary programs.

Several prominent research examples include a first-round award of a Clinical Translational Science Award (CTSA), the "Building Interdisciplinary Research Careers in Women's Health (BIRCWH)" program, the Howard Hughes Medicine Institute "Integrating Medicine Into Basic Science" grant, and a stem-cell training award from the California Institute for Regenerative Medicine.

Clinical

The new structure has facilitated a readiness for reform. Active planning for an Accountable Care Organization and a Health Innovation Zone is underway. The faculty-practice group is responsible for providing sufficient clinical programs that create additional revenue that can be invested directly into interdisciplinary research and inter-professional education.

Although many believe that this type of transfer of resources from one mission to another may no longer be possible, the faculty and administration feel strongly that coordinated financing leverages both clinical quality and the academic mission of the Schools of Health.

The success of this model is dependent upon strong leadership and executive-level commitment. The executive leadership team, including the Vice Chancellor for Human Health Sciences, the leaders of the schools, the hospital Chief Executive Officer, the faculty-practice director, CFO, and CIO work closely with departmental chairs to develop joint strategies and oversee the execution of the vision. This collaboration leads to improved communication, efficient uses of resources, and achievement of shared goals. The strategic plan features Schools of Health strategies and tactics.

Conclusions

Innovation may best occur at the interfaces of disciplines and professions, where the payoff is greatest, but also the barriers may be most difficult to overcome. Psychiatry departments will play an important role in this transformation because of their long track record in facilitating collaborative team approaches. Unfamiliar concepts, cultural conflicts, and differing policies and procedures are disincentives to interactions outside of one's professional "comfort zones." Psychiatry can help other disciplines and clinical specialists to expand their comfort zones so they will consider additional alternatives that may be more innovative and collaborative. Other health science centers may be more complex, with schools of pharmacy, dentistry, and allied health, but we believe that our unifying approach can be successfully adapted in a range of AHC structures.

Acknowledgments

Funding: Gordon and Betty Moore Foundation, Betty Irene Moore School of Nursing; NIH/NCRR, Institutional Clinical and Translational Science Center (CTSC) 5UL1 RR024146.

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