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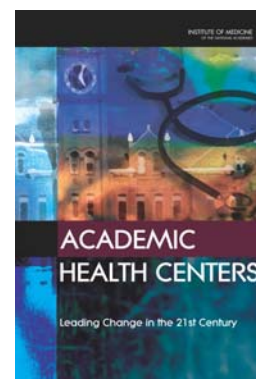
Shaping the Future for Health

ACADEMIC HEALTH CENTERS: LEADING CHANGE IN THE 21ST CENTURY

Health care is changing in very fundamental and important ways. Biomedical and other technological advances create a constantly expanding knowledge base to be harnessed and applied so its benefits can reach people. Our concepts of medicine, health, and preventive care will be fundamentally redefined as knowledge from human genome research and other new sciences offer new treatments and the ability to customize care to meet individual needs and characteristics. Peoples' health needs are shifting from the treatment of acute illness to the management of chronic conditions, which are the leading cause of illness, disability, and death, and account for the majority of health resources used today. Expanding technology and knowledge provides opportunities for the health care system to achieve goals of much higher levels of quality and safety.

Academic health centers (AHCs) play a particularly important role in responding to these forces because they are the places that train health professionals, conduct research that advances health, and provide care especially to the most ill and poorest populations. The IOM Committee on the Roles of Academic Health Centers came together in 2001 to consider how AHC roles in education, research and patient care will need to adapt if they are to continue to meet the public's needs in the coming decades. For this study, an AHC is the constellation of functions and organizations that are committed to improving the health of patients and populations through the integration of their roles in research, education, and patient care to produce the knowledge and evidence base that becomes the foundation for both treating illness and improving health.

This report provides a two-part plan to guide the types of adaptations that will be required of AHCs in the future. The first part identifies actions by AHCs as well as public policy steps to transform each of the AHC roles to respond to the trends identified above. The public policy actions are intended to spur AHCs to undertake the types of changes that will be needed. In the area of education, Congress should create a dedicated fund to support innovation in the education of health professionals; in response, AHCs should reform the methods, approaches, and settings used in clinical education. In the area of patient care, public and private payers, and foundations should support experimentation to redesign processes of care to improve health for both patients and populations; in response, AHCs will need to create the structures and team approaches in care to focus on improving health. In the area of research, federal funding agencies



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should support collaborations by the mix of scientists who do different types of research; in response, AHCs will need to examine how they can improve linkages across their research programs in biomedical, clinical, health services, and prevention research.

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AHCs will not be able to take on the changes called for in each role with minor adaptations or by looking at each role in isolation from the others. Adding one more course to an already over-crowded curriculum or doing one more research study will not be sufficient. In taking on the challenges set forth, AHCs will need to recognize the interdependent and complementary nature of their traditionally independent roles within an overall context that encompasses a commitment to improving the health of patients and populations. Thus, the second part of the plan identifies three strategic management systems that all AHCs will need to establish to enable a more coordinated and cohesive system-wide view across its multiple roles and organizations — information systems to manage the information and knowledge that is used and produced by AHCs, accountability systems to establish and measure goals for change, and systems to develop and support AHC leadership. The unique contribution of AHCs in the coming decades will lie in their ability to achieve an integration of their roles within medicine and across all health sciences, including public health, nursing, dentistry, pharmacy, and others, to improve the health of all Americans.

TRANSFORMING THE ROLES OF AHCS

AHC as a Reformer: The Education Role

To respond to the changing needs of the population and changing demands of practice, AHCs should play a leading role in transforming the content, methods, approaches, and settings used in health professions education.

Recommendation 1:

AHCs should take the lead in reforming the content and methods of health professions education to include the integrated development of educational curricula and approaches that:

- a. Enable and encourage coordination among deans of various professional schools and leaders across disciplines (such as medicine, dentistry, nursing, public health, pharmacy, social work, and basic sciences) to remove internal barriers to interprofessional education.
- b. Ensure that all teaching environments—from the classroom to sites for clinical rotations and preceptorships, and practice—are exemplars for the future of health care delivery (e.g., by modeling team-based care and using information technology) and, in collaboration with local health care leaders, demonstrate how to improve health for populations and communities, as well as individual patients.
- c. Emphasize training in skills that will be needed to improve health, such as the theory and computational skills necessary to comprehend the new biological sciences, as well as the social and behavioral sciences.
- d. Develop, recognize, and reward those who teach and conduct research on clinical education.

Financing Reform of Clinical Education

Support should be provided for both short- and long-term reforms in health professions education to encourage the training of a workforce that will be prepared to work in interdisciplinary, health-oriented, information-driven models of care. The committee does not

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question continued support for health professions education, but believes that current methods are insufficient to support future needs.

Recommendation 2:

Congress should support innovation in clinical education through changes in the financing of clinical education.

- a. Congress should create an ongoing fund that provides competitive grants to support educational innovation.
 - Funds should support educational innovations such as use of clinical information systems, testing of new educational approaches in hospital and nonhospital settings, and evaluation of curricular and other needed reforms in clinical education. Priority for such funds should be given to those organizations that integrate the training of multiple health disciplines (e.g., medicine, nursing, pharmacy, therapy, public health, administration) and that use information technology in their clinical education programs.
 - To create this education innovation fund, Congress should redirect the portion of the funding provided for indirect medical education that exceeds the additional costs of caring for Medicare patients that are attributable to teaching activities (commonly referred to as the “empirical amount”). Availability of these funds should be contingent upon implementing innovations in clinical education and training environments.
- b. In addition, Congress and the Administration should promptly revise the current statutory framework of Medicare support for graduate medical education to support more interdisciplinary, team-based, nonhospital training that aims to improve the health of patients and populations. Revisions should include consideration of whether other payers should provide specific support for the education of health professionals; examine the relationship between support for the training of physician and nonphysician clinicians; assess the appropriate recipient of support; and identify mechanisms for accountability for both the disbursement and use of public funds.

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AHC as a Modeler: The Patient Care Role

AHCs should be part of conceptualizing new models of care and communicating to payers and policymakers the characteristics of care models that are able to improve health, especially for those patients and populations at high risk for serious illness and those that are financially vulnerable since these populations are especially reliant on AHCs.

Recommendation 3:

AHCs should design and assess new structures and approaches for patient care.

- a. AHCs should work across disciplines and, where appropriate, across settings of care in their communities to develop organizational structures and team approaches designed to improve health. Such approaches should be incorporated into clinical education to teach health-oriented processes of care.
- b. Public and private payers, state and federal agencies, and foundations should provide support for demonstration projects designed to test and evaluate the organizational structures and team approaches designed to improve health and prevent disease. Demonstrations should target in particular (1) populations that are at high risk for serious illness, (2) populations that are financially vulnerable, (3) conditions that reflect disparities across the population, and (4) methods for supporting individuals’ involvement in and decisions about their health. Demonstrations

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should encompass both financing and delivery components, including the testing of organizational reforms that optimize work design and workforce management. Payers should streamline the process for incorporating successful demonstration results into coverage and payment policies.

AHC as a Translator of Science: The Research Role

AHCs will need to increase their emphasis on clinical, health services, and prevention research to answer questions about what works and does not work in health and to improve understanding of both the clinical and cost effectiveness of new technologies as well as current practices. Funders of health-related research, especially at the federal level, need to improve their coordination and communication to foster the types of collaborations needed across all areas of research and different scientists.

Recommendation 4:

Health-related research needs to span the continuum from discovery to testing to application and evaluation.

- a. AHCs should increase their emphasis on clinical, health services, prevention, community-based, and translational research that can move basic discoveries into clinical and community settings.
- b. Congress and the Administration should coordinate funding across agencies that support health-related research including the life sciences (biomedical, clinical, health services, and prevention research), the physical sciences, and other sciences that advance health. More coordinated funding efforts and the criteria for evaluating funding support should foster interdisciplinary and collaborative arrangements that cut across departments, professional schools, and institutions.

SYSTEMS FOR CHANGE INSIDE AHCS

Managing Information

To support the management of the clinical knowledge used and produced by AHCs, and to enhance the flow of information throughout the enterprise for integrated decision making, performance assessment, and financial management, AHCs must make the implementation of information and communications systems a higher priority. Capital for this purpose needs to be as high a priority as capital for new buildings and equipment.

Recommendation 5:

AHCs must make innovation in and implementation of information technology a priority for both managing the enterprise and conducting their integrated teaching, research, and clinical activities.

- a. AHCs should have information systems that span the enterprise for integrated decision making, performance assessment, and financial management.
- b. AHCs need to pioneer the use of information systems for clinical purposes and incorporate their use into clinical education and research.

Defining and Measuring Goals for Change

AHCs must set clear goals so that progress toward making changes in each of their roles can be steadily measured. Greater transparency will be required, especially in understand-

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ing the real financial resources within the AHC and the flow of funds among the schools, hospitals, practice plans, and the university.

Recommendation 6:

Both AHCs and the public should evaluate the progress of AHCs in: (1) redesigning the content and methods of clinical education; (2) developing organizational structures and team approaches in care to improve health; and (3) increasing emphasis on health services, clinical, prevention, and translational research.

- a. To aid AHCs in evaluating their progress, the Secretary of Health and Human Services should:
 - Identify broad areas of AHC performance (e.g., quality of education programs, financial accountability).
 - Establish an advisory group to suggest guidelines for measurement and examples of measures that could be used by AHCs.
 - Obtain information from AHCs related to the broad areas of performance and issue a report every 2 years on progress made in transforming the roles, and identifying areas of success as well as obstacles encountered.
- b. University leaders and/or AHC boards of trustees should establish mechanisms for accountability and transparency that can be used to assess their progress toward meeting the goals established for transforming the roles of AHCs.

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Developing Leadership

AHCs must improve their processes for identifying, preparing, and developing leaders who can generate and direct the recommended changes. Furthermore, AHCs should demonstrate leadership to guide the nation toward improved health.

Recommendation 7:

AHCs must be leaders and develop leaders, at all levels, who can:

- a. Manage the organizational and systems changes necessary to improve health through innovation in health professions education, patient care, and research.
- b. Improve integration and foster cooperation within and across the AHC enterprise.
- c. Improve health by providing guidance on pressing societal problems, such as reduction of health disparities, responses to bioterrorism, or ethical issues that arise in health care, research, and education.

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For More Information...

Copies of *Academic Health Centers: Leading Change in the 21st Century* are available for sale from the National Academies Press; call (800) 624-6242 or (202) 334-3313 (in the Washington metropolitan area), or visit the NAP home page at www.nap.edu. The full text of this report is available at <http://www.nap.edu>

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