Toward a *Virtuous Cycle*: The Changing Face of Academic Health Centers

Editor's Note: This month, the journal features a group of articles that tell important stories of change at 10 academic health centers in the United States. Dr. Steven A. Wartman served as guest editor for those articles and wrote this month's column discussing them. I thank him for that and also for his extensive efforts and those of his assistant, Alcenia McIntosh-Peters, in working with the authors and Al Bradford and his colleagues at the journal to develop and organize the articles so that they share valuable lessons and document pivotal events in an important part of the history of academic medicine.

—Steven L. Kanter, MD

In more than 50 visits to the nation's academic health centers during the past three years, I have seen firsthand the management and leadership challenges that are changing fundamentally the ways in which these organizations operate. These challenges have catalyzed a remolding of the academic health center (AHC) from an ivory tower to a complex business enterprise that captures the power of a *virtuous cycle*, whereby clinical revenue and academic performance support each other by being strategically and tactically aligned. The "virtue" is that each makes the other better.

An AHC is an accredited, degree-granting institution of higher education that consists of a medical school (allopathic or osteopathic), one or more other health professions schools or programs (including allied health, dentistry, graduate studies, nursing, pharmacy, public health, veterinary medicine), and an owned or affiliated relationship with a teaching hospital, health system, or other organized health care provider. There are more than 100 such entities in the United States, and they encompass both public and private university-based and freestanding institutions.

There is a perception that a wide variety of AHC organizational models abound, when, in fact, only two prototypical models have dominated over the last decades: (1) the fully integrated model, where academic, clinical, and research functions report to one person and one board of directors, and (2) the split/splintered model, where the academic and clinical/health system operations are managed by two or more individuals reporting to the same or different governing boards. Occasionally, some AHCs have cycled between these two organizational models, depending on the local economy, health market trends, university politics, or personalities of the leaders involved. Ultimately, the type of model existing at a given institution reflects the influence of a combination of history, politics, and economics.

As AHCs have evolved during the past 50 years, they have changed the nature of education in the health professions, prompted new arrangements for the delivery of health care, accelerated growth of federal involvement and influence in research, and created new linkages between academe and all sectors of the economy. They are major economic engines that are often one of a state's or region's largest employers. These achievements have been accomplished while responding to significant cultural, demographic, and sociopolitical changes in the United States. Perhaps less well appreciated is their ability to serve the nation even as they adapt and respond to economic forces outside of their control with the creation of new governance, management, educational, and clinical delivery models. As the U.S. economy has grown and evolved in recent decades, market forces have increasingly penetrated the AHC enterprise, subjecting it to pressures commonly seen in the commodity world; its "goods"—in this case, faculty, research, capital expansion, and others—are increasingly viewed by some observers as items that can be bought and sold.

The Bayh–Dole Act, passed in 1980, gave universities intellectual property control of the inventions that resulted from federal-government-funded research. This gave AHCs incentives to get involved in the commercialization of their research products (and, thereby, share in the profits); as a result, AHCs have developed technology transfer operations that have greatly expanded the interface between academe and industry. Bayh–Dole also has changed the way many faculty and academic administrators see their research enterprises, from the traditional view of research as the development of new knowledge to a broader view that includes new knowledge as the foundation for applied technologies and products, ultimately making it the basis of a profit center to build and sustain the institution.

Additionally, the far-reaching consequences of federal and state budget cuts, coupled with the long-standing antitax movement, have pressured public and private AHCs to aggressively seek new dollars. These dollars are needed not only to support growth and expansion but also to support essential but not always profitable mission areas, such as teaching, nascent research areas, and care of the underinsured and uninsured. These economic factors, coupled with transformations in science, technology, and society, have changed the face of AHCs.

The articles in this special issue of *Academic Medicine* describe a broad range of institutional responses to those challenges by a variety of public, private, and geographically dispersed AHCs. Apparent in all of the articles is the critical need to achieve strategic alignment, a form of the virtuous cycle, amongst the various components of the institution in order to be successful.

Models of institutional alignment are addressed in three of the articles. Barrett describes the evolution of an organizational model from the University of Florida Health Science Center that started out fully integrated and, over time, became more compartmentalized. Now, that institution is moving toward "functional integration" of all components to achieve meaningful strategic planning and to increase clinical revenue to support the academic mission. Pomeroy and colleagues discuss the University of California–Davis, which is an excellent example of a fully integrated AHC where there is executive-level commitment to "a single strategic vision, unified leadership and collaborative financial and operational decision making." In contrast, the model embraced by the University of Pittsburgh, explained by Levine and colleagues, is one in which the academic and clinical partners are separately

governed but committed to the philosophy "What is good for one is good for both." Funds flows are detailed in long-term agreements. Both the University of California–Davis and Pittsburgh are exemplars of the "virtuous cycle" mentioned earlier, in which the clinical enterprise—through financial support—raises the level of the academic enterprise, which, in turn, raises the level of the clinical enterprise. This "virtuous cycle" is an important goal for AHCs because academic and clinical success depend equally on each other.

The research enterprise in AHCs is vital, yet the traditional means of success in this area are changing dramatically. New perspectives on the emerging research paradigm are offered by Balser and Baruchin in their article from Vanderbilt University. They observe that new scientific disciplines are evolving at the "interstices" of existing scientific disciplines and will continue to do so. The authors make a strong case for the development of a seamless interdisciplinary research framework in a rapidly evolving research environment that also requires aligned incentives and new output measures.

Sorensen, in his article about the University of South Carolina, addresses the research enterprise in relation to the institution's societal mission and presents a trenchant case for enhancing a research culture within a university and an entire state. The university reorganized into a Division of Health Sciences with a single leader and developed focused initiatives that stressed research incentivization. In addition, the state's two medical schools, three research universities, and four largest teaching hospitals created a new entity, Health Sciences South Carolina, to galvanize biomedical research in the state.

The University of Arizona and The Ohio State University illustrate the innovative use of tools and methodologies, ones generally applied to other industries, to foster their academic missions. Joiner and colleagues explain how The University of Arizona has applied such concepts as net present value and utility theory to its strategic planning. The authors note the implications of such strategies for newly recruited tenure-track faculty and candidly discuss the discomfort many faculty and department heads feel when using these kinds of unfamiliar methodologies. Similarly, Sanfilippo and colleagues show how The Ohio State University has taken on the sophisticated challenge of viewing an AHC in the context of a "service organization," in which the service–value chain model is applied to improving performance. This fresh approach, illustrating the importance of strong leadership, had a direct impact on institutional culture and fostered the achievement of strategic alignment.

Change can often be difficult, and Wilson and Krugman discuss how one institution, the University of Colorado Denver, managed two coincident massive changes: the relocation of an entire health sciences campus and the merger of the health sciences center with an urban comprehensive undergraduate and graduate research university. Both challenges were enormous, and it was most instructive for me to learn how they were managed successfully during overlapping periods of time.

Occasionally, an AHC faces a crucial event that threatens the very nature of the enterprise. Two institutions are described that found themselves in difficult situations but that devised ways to not only overcome their troubled circumstances but also to move forward successfully. Phillips and Rubenstein explain how the University of Pennsylvania was seriously considering the sale of its premier hospital after a series of substantial losses to the clinical enterprise. Instead, the leadership opted to embrace a closer relationship with the university at all levels and to integrate the management of the medical school with the health system. The results have been impressive in a relatively short period of time. Pizzo shows how Stanford University responded to the challenge of a costly (in terms of dollars and morale) failed merger by developing a new organizational plan and a realignment of its mission areas. As a result, the institution is successfully following a clear template for the future.

Together, these 10 articles present an important view of the evolutionary trends under way within the nation's AHCs. Individually, each offers specific contributions; viewed collectively, they address an underlying and unifying theme: the importance of striving for strategic alignment of the enterprise as a whole. The following quotes from these articles, taken as a group, present a well-articulated perspective on the issues surrounding institutional leadership, governance, management, and finance for the evolving AHC enterprise.

> Unless we are more creative and tenacious in transcending university and hospital organizational structures, we run the risk of jeopardizing our collective future.[1]
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> In an academic health center (AHC), research and clinical success are synergistic and interdependent.[2]
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> . . . the relationships between leaders are often the most important factor determining success or failure.[3]
>
> . . . when the proverbial wolf is at the door or, at least, is seen down the lane heading your way, difficult decisions can be made with relative ease.[4]
>
> . . . many of the most important scientific problems . . . cross disciplinary boundaries.[5]
>
> . . . an AHC-wide commitment to a model of full integration has resulted in an efficient, cost-effective, and reputation-enhancing foundation for quality and success.[6]
>
> A university must be administratively organized in a way that will facilitate achieving university-wide goals.[7]
>
> The fundamental challenge of leadership development was to get leaders to think, feel, and act as members of the same team.[8]
>
> Typically, incentive systems in academic medicine are designed by intuition, with insufficient attention to the large literature relevant to optimal design.[9]
>
> . . . the academic missions of the AHC can be substantially advanced with the financial support that the clinical enterprise has traditionally been able to provide.[10]

A clear response to the challenges facing the AHC community has been a distinct trend towards more "corporate" management. I have observed this transition in varying stages (depending on the particular institution). It is essentially characterized by a reorganization along nondisciplinary lines towards a management structure that, conceptually and operationally, spans the entire enterprise. This has resulted in, for example, expanded roles for individuals in existing positions (such as vice presidents for health affairs) or the creation of new roles (e.g., system-wide compliance officers or vice presidents for research) that extend beyond the

individual health professions schools, along with a greater emphasis on team-oriented approaches to strategic planning, operations, and problem solving.

My observations also reaffirm an earlier analysis[11] and include noticeably increased efforts to relate to stakeholders (e.g., the public, patients, practitioners, politicians, policy makers, and business community); an expanded international focus to increase global competitiveness; enhanced programs in translational and applied research in response to the growing pressure to accelerate the translation of biomedical research into practical implementation; and markedly enhanced businesslike operations with formal strategic planning, new methods of budgeting, and more rigorous assessment/accountability for faculty, staff, and administration.

It is clear that the central challenge for AHCs is to develop a form of the virtuous cycle in which clinical revenue and academic performance are functionally and strategically supportive of each other. Absent major changes in health care financing, this is critical for the growth and success of the AHC enterprise. If research is their ultimate scholarship and education their raison d'être, then patient care is the coin of the realm.

Not surprisingly, these trends and challenges have led to changes in leadership—the types and kinds of leaders being sought—and in the methodologies of academic administration. There is much more specificity now in leadership searches, and executive search firms, when they are used, are increasingly looking to find candidates with specific skill sets as opposed to general academic credentials. Especially valued are people and communication skills, including vision setting, team building and fund-raising, willingness to share the spotlight with others, a collaborative mindset, and administrative capabilities that facilitate the effective execution of plans and goals.

In sum, the coming years will see the continuing "horizontalization" and consolidation of the AHC enterprise throughout its mission and management areas. As this happens, AHCs will undergo a process of accelerated change as the result of strategic planning processes that drive their leaders to make hard decisions about resource allocation. These changes are essential to ensure accountability at higher levels of authority and buy-in from faculty and staff who must adapt to new rules that involve more interprofessional collaboration and institutional team-play. As these changes in the fundamental organization and management of AHCs continue to occur, it is critical that the new business paradigm does not overshadow the fundamental academic ethos that is so vital for the creativity, intellectual spirit, and unique public standing of these institutions.

It has never been more important for AHCs to take to heart the full implications of their societal missions as they evolve into global competitive enterprises. These institutions must continue to find innovative ways to maintain their commitment to the greater public good in all their activities and decisions as they lead the nation toward a better and more effective health care system.

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