The Effects of a Changing Environment on Relationships between Medical Schools and Their Parent Universities

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ABSTRACT

Medical schools differ from other university graduate schools in that community settings, hospitals, and ambulatory care facilities are required for medical education, and most of these settings are either owned by or closely affiliated with the university. Thus, the extraordinary changes in recent years in the organization, delivery, and financing of health care have required the attention not only of the leadership of academic medical centers (i.e., medical schools and their owned or closely affiliated teaching hospitals) but also of the administrators and boards of their parent universities. Many university-wide structures and policies that previously served the medical school well in accomplishing these missions may now be viewed as inflexible by the faculty and administration of the school. Conversely, the historically distant governance and administrative oversight of the medical school has become a concern for some at the university, given the huge budgets of the school, its faculty practice, and its affiliated hospital(s).

From information derived mainly from annual visits to 14 medical schools from 1996 through June 2000, the authors review the issues between medical schools and their parent universities and the strategies being used to resolve them. These strategies include changes in the governance, organization, and management of the medical school, such as unified authority for health affairs, reengineered administrative systems, and increased autonomy in decision making. The authors conclude that these strategies appear to be working on behalf of not only the medical school but, in some instances, the university at large. They also comment on possible negative implications of the greater separation of the medical school from its parent university.


Medical schools differ from other university graduate schools in that community settings, hospitals, and ambulatory care facilities are required for medical education, and most of these settings are either owned by or closely affiliated with the university. Thus, the extraordinary changes in recent years in the organization, delivery, and financing of health care have required the attention not only of the leadership of academic medical centers (i.e., medical schools and their owned or closely affiliated teaching hospitals) but of the administrators and boards of their parent universities as well.

Medical schools also differ from their parent universities in the nature and pace of change that they experience. This difference is aptly described in the following comment by Charles Phelps, PhD, provost of the University of Rochester.

No matter what the nature of the health care market, academic medical centers, in many ways, simply have different value structures than other parts of the parent university. The celebration of academic freedom translates not only into a paradigm of intellectual freedom but also one of unfettered allocation of time of the faculty member.

This culture stands in stark contrast to the clinical world of the academic medical center. While this world embraces and
Table 1 presents basic organizational characteristics of the 14 medical schools discussed in this article.*

<table>
<thead>
<tr>
<th>Institution</th>
<th>Total Faculty</th>
<th>Practice Plan</th>
<th>Ownership of Principal Teaching Hospital</th>
<th>Legal Structure</th>
<th>Relation to University</th>
</tr>
</thead>
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<tr>
<td>UCLA School of Medicine</td>
<td>1,046</td>
<td>Medical school based</td>
<td>Part of university</td>
<td>Part of university</td>
<td>Related/Proximate</td>
</tr>
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<td>1,078</td>
<td>Medical system based</td>
<td>Separate not-for-profit corporation</td>
<td>Separate not-for-profit corporation</td>
<td>Related/Proximate</td>
</tr>
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<td>Medical school based</td>
<td>Part of university</td>
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<td>Related/Proximate</td>
</tr>
<tr>
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<td>1,050</td>
<td>Hospital based</td>
<td>Separate not-for-profit corporation</td>
<td>Separate not-for-profit corporation</td>
<td>Related/Distant</td>
</tr>
<tr>
<td>Northwestern U. School of Medicine</td>
<td>1,336</td>
<td>Teaching hospital based</td>
<td>Part of university</td>
<td>Part of university</td>
<td>Related/Proximate</td>
</tr>
<tr>
<td>Southern Illinois U. School of Medicine</td>
<td>1,078</td>
<td>Medical school based</td>
<td>Separate not-for-profit corporation</td>
<td>Separate not-for-profit corporation</td>
<td>Related/Distant</td>
</tr>
<tr>
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<td>727</td>
<td>Hospital based</td>
<td>Part of university</td>
<td>Part of university</td>
<td>Related/Proximate</td>
</tr>
<tr>
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<td>Part of university</td>
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<td>Related/Proximate</td>
</tr>
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<tr>
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<tr>
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<td>Related/Proximate</td>
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<tr>
<td>U. of Texas Southwestern School of Medicine</td>
<td>1,134</td>
<td>Medical school based</td>
<td>Part of university</td>
<td>Part of university</td>
<td>Related/Proximate</td>
</tr>
</tbody>
</table>

This report was stimulated by observations made at a sentinel network of 14 medical schools over the course of more than four years (1996–June 2000) by staff of the Center for the Assessment and Management of Change in Academic Medicine of the Association of American Medical Colleges. This network was created to monitor the impact of the changing health care environment on the missions of medical schools and teaching hospitals and to track (and report) how these institutions were managing change. The sites were selected to reflect the diversity that exists among medical schools and teaching hospitals throughout the country. Their mix displays differences in the spectrum of missions (e.g., community-based versus research-intensive), care to the indigent, geographic location, size, and ownership (e.g., public or private).

Table 1 presents basic organizational characteristics of the...
14 schools.* These schools were visited annually from 1996 through June 2000. At each visit, interviews were conducted with senior administrative staffs of the academic medical center (AMC). Challenges faced by the AMC and its responses to these challenges were recorded at each visit.

The phrase “When you’ve seen one medical school, you’ve seen one medical school” is commonly used to describe trends in academic medicine. It is certainly true that medical schools differ greatly in the ways they focus and distribute their missions and how they organize and manage these missions. On the other hand, our visits uncovered a common pattern of concerns centered around university policies and their impacts on the medical school. The observations presented here are informed by impressions and conversations with individuals at each of the 14 AMCs, along with more detailed information concerning changing medical school–university relationships obtained from in-depth interviews with staff and faculty of three of these AMCs and their parent universities (Oregon Health Sciences University, Pennsylvania State School of Medicine, and the University of Rochester Medical Center). Information was also obtained from senior officials of the University of North Carolina at Chapel Hill School of Medicine. While our choice of case studies was by no means random, we believe that the sample represents an interesting and diverse set of responses to common issues. Both medical school and university officials have their own lists of issues concerning their institutions’ relationships with the other; our focus in this paper, however, is on those areas that medical school and other AMC administrators identified as important and problematic.

Observations from these AMCs were supplemented by a survey, conducted in October 1998, of the deans of all U.S. medical schools. The survey focused on changes in the governance of the medical school or AMC and the principal reasons for these changes. In that study, we asked whether a dedicated sub-board of the trustees of the university had been appointed to oversee the activities of the medical school. Where medical school and hospital were both owned by the university, did such sub-boards have oversight of both? Where sub-boards had been established, did they have fiduciary responsibility for the medical school and (where appropriate) the hospital/health/system? How often did the sub-boards meet? Did the boards provide support for strategic directions and changes desired by the medical school dean? Responses from public and private medical schools were analyzed separately.

ISSUES

While the full range of issues encountered during the four years reported on here was large and varied, our case studies identified a set of issues common to many: policies relating to faculty appointment, promotion, and tenure; personnel policies relating to salary and benefits for faculty and staff (especially skilled technical staff); financial reporting and management systems; other financial issues such as allocated overhead; information management systems; and access to capital.

Appointment, Promotion, and Tenure Issues

The number and mix of faculty in clinical departments of medical schools have expanded significantly over the past decade. The principal growth has been among faculty whose main responsibilities are in patient care and teaching. The result is a large cadre of physicians whose work life as faculty is ever more dissimilar to that of faculty in other parts of the university.

Numerous factors are responsible for this shift:

- a marked expansion of the clinical enterprise of AMCs;
- the increase in the amount of medical students’ and residents’ education taking place in ambulatory settings;
- an increased demand for clinical faculty in the teaching of students in integrated curricula (e.g., curricula using problem-based learning exercises) in the first two years of medical school;
- the expansion of the research agenda of AMCs to include clinical trials, health services research, and ethics, areas of inquiry that have historically been considered “soft” by many medical schools and universities; and
- the reality that in an increasingly competitive environment for patient care and research, fewer and fewer faculty can be expected to maintain a productive research enterprise and at the same time teach and provide patient care. Partly as a result to this pressure, the so-called academic “triple-threat” faculty are disappearing.

As fewer and fewer new clinical faculty fit the “traditional” investigator–teacher model, their careers can no longer be evaluated by the same factors as are the careers of other faculty. Many medical schools have recognized this fact and have taken steps to redefine criteria for faculty appointments, titles, promotion, and tenure. Examples of such changes include creation of business plans at the time of

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*The University of California, Los Angeles (UCLA) School of Medicine; Emory University School of Medicine; Georgetown University School of Medicine; University of Iowa School of Medicine; University of Michigan School of Medicine; Mt. Sinai School of Medicine; University of Miami School of Medicine; University of Nevada School of Medicine; Penn State College of Medicine; Oregon Health Sciences University; University of Rochester School of Medicine; Southern Illinois University School of Medicine; and University of Texas Southwestern School of Medicine.
appointment, growth in the percentage of faculty on non-tenure tracks, explicit financial definitions of tenure, use of bonuses and productivity incentives, and changes in definitions of faculty benefits.

In several cases these changes have been viewed with alarm by the university faculty, who see them as challenges to traditional faculty benefits and expectations. Instead of recognizing the differences between medical faculty and other faculty (particularly the diverse faculty of clinical departments), some have been preoccupied with common expectations among faculty and are concerned that similar changes in appointments, promotion, and tenure will ultimately be applied to them. In several cases, medical school and university undergraduate faculty have challenged these changes by claiming they violate the legal contract between the individual and the institution. In at least one case (Georgetown) the university has sided with the faculty, requiring the medical school to reverse its plan to introduce periodic review of tenured faculty and reduce salaries in the event of financial exigency. In all the schools studied, appointment, promotion, and tenure criteria have become sensitive issues for both the medical school and the university.

Infrastructure

Our case studies uncovered several areas of concern relating to university-wide policies and procedures. Several involve financial issues. While these issues are sometimes less visible than those directly involving faculty, they are no less important to the medical school's ability to remain efficient and competitive in the health care marketplace. We focus on the most important of these issues here—issues that we arbitrarily label infrastructure issues.

Personnel policies are a case in point. At many institutions, the labor market for some health care workers is more competitive than is the case with most categories of university employees, with the possible exception of technicians trained in the computer sciences. Nurse specialists, operating room technicians, staff skilled in the use of the diagnostic and therapeutic tools of the subspecialist, and research assistants in many fields are examples of types of staff with well-paying positions whose wages and benefits may exceed the wages and benefits specified by policies of the university at large. Centralized university personnel policies may not accommodate these staffing needs. For medical schools to compete for such staff in an increasingly competitive market, more flexibility in such policies is required.

Financial management and reporting systems represent another source of tension between medical schools and their parent universities. At most medical schools, the sources of dollars used to fund the school's missions are better understood than how they are used. Historically, clinical dollars have been used to support research and teaching, but how much for the former and how much for the latter is often not clear. Department chairs must integrate information from disparate sources, including the university, hospital, faculty practice, and department, in order to develop and manage their budgets. The ways in which the relatively limited funds are allocated to departments by the deans from sources such as undesignated endowment and tuition are most often not documented. Usually, these fund transfers are handled in confidence, with individual departments being quite uninformed (and often misinformed) about who is receiving what. As resources shrink (particularly those from patient care services), increasing the need for productivity and accountability, medical schools are introducing the principles and tools of "mission-based" budgeting and management.

Understanding how funds flow (including cross-subsidies), defining funds for specific missions, strengthening the accountability of faculty for their contributions to teaching, research, and patient care, and sharing financial information with faculty through an "open book" are important outcomes of this approach to budgeting and financial management. Many universities, however, manage accounts centrally, including accounts assigned to medical school departments, divisions, or even individual faculty—accounts that may be invisible to the medical school dean. Central management of such accounts may thus limit the ability to fully implement the principles of mission-based management.

At many institutions, fund transfers between the medical school and the parent university have historically been from the school to the university. The sizes of the transfers have been significant for many universities that own their own teaching hospitals, given the impressive operating surpluses that many such hospitals generated over the past decade or more. These transfers may take the form of direct transfers (such as occurs at UCLA). More commonly, they appear in the form of allocated costs for central university services (as is the case at Georgetown, Rochester, and Emory), sometimes without a chain of accountability. Declines in the operating margins of many teaching hospitals in the late 1990s exacerbated the tension between hospital, medical school, and university over the allocation of costs. The AMC is no longer able to serve as a ready source of funds for university accounts while remaining competitive in the health care marketplace.

In addition, the medical school's research faculty often feel that the university does not send appropriate amounts of overhead costs recovered from granting agencies back to the medical school to support the research infrastructure.

A critical source of tension is access to capital. At many AMCs, both research and patient care are "growth industries," and the need for improved facilities to compete for
patients and for research funds is often pressing. Access to capital through the parent university may be limited, given competition within the university for funds available through the issuance of bonds. At Emory, surpluses generated by the AMC are transferred to the university, yet the latter does not provide the AMC with access to capital. Predictably, these arrangements have led to tensions between the AMC and the university, especially with regard to the financing of new facilities.

It is not uncommon for universities to separate the financial risk of the clinical enterprise from that of the university. In most cases the hospital is made to assume risk for its own debt, while the medical school remains connected to the university. At the University of Rochester, however, Strong Memorial Hospital, the School of Medicine, and the School of Nursing assume a single financial debt risk separate from the rest of the university. At one time it was considered mutually advantageous to have the university and the medical center share financial risk; the university benefited from hospital revenues, while the medical center made use of the university endowment. With the uncertainties of the current health care environment, the danger associated with the clinical enterprise outweigh the advantages, making separate debt streams desirable.

Finally, the need for continual improvement in information systems concerns administrators at several medical schools. Among integrated AMCs, conflicts over the architecture and uses of information systems may occur. The information management infrastructure needed to meet the patient care and financial reporting objectives of an expanding clinical enterprise may conflict with university-wide strategies for the academic uses of information management technology.

**Academic Issues**

In recent years, university governing bodies and administrators have had to devote increasing time and attention to the affairs of their medical schools. The reasons are multiple. They include the increasing proportion of the university budget represented by the medical school’s budget, or by the budget of the medical school and hospital when under common ownership. In some cases the medical school’s or the AMC’s budget represents as much as two thirds of the budget of the entire university. Given uncertainties about the reimbursements for patient care services and the heavy dependence of the medical school upon extramural research funding, it is not surprising that university administrators and governing bodies feel the need for closer oversight of the medical school and its teaching hospital partners.

University administrators are also concerned that the excessive time that they, medical school leaders, and faculty devote to patient care issues will ultimately detract from the core missions of the university: teaching and research.

**Strategies to Address the Issues**

In our interviews with the leadership of AMCs and their parent universities, we were impressed by the extent to which key issues, many of longstanding duration, were being resolved collegially and in ways that provide the medical school with the autonomy it needs while retaining, within the university, the ultimate level of authority that it must have.

Changes in governance and in organization and management have been the key drivers that have provided medical schools (or AMCs) with the flexibility needed to address their missions in the face of an increasingly competitive and rapidly changing external environment. For the most part, these changes have been comprehensive and global. Piece-meal strategies that resolve only the issue of the moment have been of limited value. For example, one of the institutions that provided information for this study (the University of North Carolina at Chapel Hill School of Medicine) recognized the need, some years ago, for different wage and salary policies for nurses. In addressing only that issue, however, the institution failed to resolve the larger issues of the need of the AMC for greater autonomy in personnel policies generally. Only recently has a satisfactory strategy been developed for the core issue.

**Changes in Governance**

Among the institutions we visited, changes in governance have taken one of two forms: (1) corporate restructuring and (2) reorganization of the existing governance structure to achieve a more intimate relationship between the medical school (or AMC) and the board of the university. Corporate restructuring usually involves a formal change in the legal status of the medical school and/or teaching hospital, resulting in a new legal entity, separate from the main university. Reorganization of the governance structure involves a restructuring of the relationship between the university board and the medical school and/or hospital. The three brief case studies described a little later in this article are illustrative. The first, from Oregon Health Sciences University, represents a unique approach for a public medical school. The second and third, at the University of North Carolina and the University of Rochester, respectively, demonstrate more common patterns of reorganization.

**Corporate restructuring.** Three of the 14 institutions in our study underwent corporate restructuring over the past five years. In the three instances, the changes involved spinning off all or part of the AMC into a separate legal entity,
although in a different form in each instance. Corporate restructuring itself is not a new phenomenon for medical schools. The 1980s saw a number of universities change the ways the medical schools and/or teaching hospitals were legally connected to them. The case studies discussed here remain noteworthy for several reasons. First, they occurred during a particularly turbulent time in health care. Second, they are intended to address, at least in part, the issues of flexibility and autonomy described in this article. Finally, they appear to be part of a larger trend toward universities' and medical schools’ redefining their relationship.

The Oregon Health Sciences University (OHSU) provides a case study of how one school changed it governance. While OHSU has long been a free-standing medical university (one of six in the country), until 1995 it was a part of the Oregon state system of higher education. In 1995, OHSU was separated from the higher education system and restructured as a quasi-public entity, with its own governing board, whose sole function is governance of the medical university. The need to change was prompted by several factors.

- First, reductions in discretionary funds available for higher education resulted in a decline in state funding to OHSU of more than 25% over a five-year period.
- Second, a rapid rise in the proportion of patients enrolled in managed care made the Oregon health care market highly competitive. The shift had a disproportionately negative impact on OHSU in that overhead costs, traditionally higher at AMCs, narrowed operating margins considerably.
- A third factor in the change involved the limitations of a bureaucratic system for higher education that was ill-suited to deal with the challenges of an institution with a large business and service component.
- Finally, as part of the Oregon State System of Higher Education, OHSU had limited access to capital for large building projects; the state system required that all building projects be approved by a process that identified priorities on all capital improvements within the entire system. OHSU was unable to move swiftly and efficiently on construction projects needed for health care services.

Some five years after the corporate restructuring, the move is considered to have been a success by medical school officials. OHSU has been able to respond more rapidly to the marketplace, and the medical school has made good progress in developing an infrastructure that is more responsive to competitive pressures, including a responsive system of financial reporting and management that does not have the constraints of the university systems.

Despite the positive aspects of the restructuring at Oregon, a few outstanding issues remain, particularly regarding the way the state pays for medical education and patient care. OHSU is highly dependent on the state legislature for support, a fact that came into sharp relief when the state underpaid the system for costs of care to Medicaid patients by some $18 million annually. While the state eventually reimbursed OHSU for the costs, the fact that the AMC is no longer able to depend on the university for lobbying efforts on its behalf requires OHSU to undertake independent initiatives. Finally, OHSU must manage its finances with the realization that the university system is no longer a financial safety net.

The separation of the hospital/health system and faculty practice from the medical school is another approach that was taken by both public and private medical schools among the sample that we visited. In one instance (at the University of North Carolina at Chapel Hill School of Medicine) the principal factor fueling the change was the need for greater flexibility. In at least one other (Penn State), the restructuring served the principal purposes of gaining market share for the clinical mission and reducing the financial liability to the university of an uncertain future for the financial health of the hospital/health system. Since our principal focus in this article is on strategies to increase the autonomy of the medical school, we will focus on the changes at the University of North Carolina at Chapel Hill School of Medicine. Further, an examination of the factors responsible for the deconstruction of the Penn/State Geisinger merger is beyond the scope of this article.

In 1998 the University of North Carolina (UNC) Health Care system was created, consisting of the UNC Hospital, a 1,000-member faculty practice group, a home health agency, and a health maintenance organization (HMO). With the creation of the system the hospital ceased to be a part of the UNC School of Medicine or the state system of higher education. The board of directors of the health care system, a separate and distinct body from that of the medical school, is accountable directly to the North Carolina legislature. In order to ensure that the hospital and medical school continue to share similar interests, the dean of the School of Medicine was appointed chief executive officer (CEO) of the new health care system (though the formal bylaws for the health care system do not require such an appointment).

Several factors led to the restructuring. Until the early 1990s the hospital had little or no flexibility for decision making in the areas of personnel, purchasing, or capital needs. A nursing shortage pushed wages up, while the hospital was unable to pay higher wages because of university-defined pay grades. The board of governors of the university (representing the state legislature) gave the hospital greater flexibility in setting wage levels for nurses. Shortly thereafter the hospital was also given greater flexibility in purchasing technology and medical instruments. In several other areas,
however, the hospital continued to operate at a disadvantage because it was under the rigid and slow-moving university governance structure. The hospital needed flexibility and authority in the areas of construction management, property acquisition, purchasing (beyond major medical technology), and personnel (beyond nursing).

In the early 1990s, state appropriations to the UNC hospital were reduced from $36 million to $18 million. In 1994 the state legislature called for a study to look at the appropriations the legislature was providing to the hospital for its services on behalf of the public. The study was to determine what the level of appropriations should be, and what changes should be made to the structure of the UNC hospital. The study resulted in three major recommendations. It concluded that the appropriations should be restored to their previous levels (approximately $36 million annually), that the hospital should be given greater flexibility so that it could become more competitive, and that the faculty practice plan should be organized into a single entity. The legislature was supportive of the idea of providing the hospital with greater autonomy. It recognized the hospital’s need to be nimble in an increasingly competitive environment. The UNC campus administration and governing body were generally supportive. There was some concern about how integrated the hospital should be with the rest of the UNC system, and how the integration would be accomplished. In the written document creating the UNC Health Care System, there is no specific linkage between the hospital (including the faculty practice) and the university.

Reorganization of existing governance. Among integrated AMCs, another approach to corporate restructuring involves the creation of a holding company under the umbrella of the university. Such an arrangement maintains a tight relationship with the university while limiting its financial liability. An example of such an arrangement is in place at the University of Rochester, where a fully developed integrated health care delivery system has been created. This system includes the university-owned Strong Memorial Hospital and a number of developed or acquired elements of an integrated system. The governance of the medical school and university hospital remains with the parent university board. The elements of the integrated delivery system other than the university hospital are a community hospital, two skilled nursing facilities, a living center, and a home care pharmacy system. These additional elements are organized under a holding company that operates under the umbrella of the university and is governed by a board consisting of both community members and members of the university board of trustees. Such an arrangement has provided a vehicle for the University of Rochester Medical Center to respond rapidly to the challenges posed by the changing health care environment in its region.

Reorganization of the existing governance structure appears to be the more common approach taken by private universities to provide the medical school with greater autonomy while achieving more intimate oversight. This conclusion is based upon a survey we conducted of all U.S. medical school deans in October 1998. The purpose of the survey was to determine whether a governing board dedicated to the medical school (or school and hospital in the case of integrated AMCs) had replaced the traditional “visiting committee” of the larger university board, historically a very loose approach to governance oversight. Seventy-five deans responded, representing 30 private and 45 public medical schools, 60% of the total group surveyed.

Thirty-five percent of the respondents reported having a dedicated sub-board responsible for medical school governance. Interestingly, private medical schools are much more likely than their public counterparts to have a dedicated sub-board of the larger university board of trustees charged with providing direct oversight of the school (67% of the responding private medical schools have sub-boards, compared with 13% of the responding public medical schools). The prevalence of such boards at private institutions suggests that change may be easier at private medical schools, where fewer constituents require input into the governance process. Secondly, the governance structure at many public universities is mandated by law, often making change difficult and unlikely.

Institutions with this new delegated form of governance report that the dedicated boards have a variety of responsibilities and characteristics. Half of all the dedicated boards include non-university trustee members. According to a number of deans, these members offer a level of community legitimacy and support that private medical schools often lack. It has been our observation that community representation on other types of medical school boards has had a positive influence as well. For example, at Emory, Southern Illinois, and Wisconsin, faculty practice boards have added community members. The deans at these schools report that their meeting agendas are more focused on meaningful issues, with less time devoted to trivial details. Almost all boards dedicated to the medical school have fiduciary responsibility for the school. Where the university also owns the hospital, dedicated boards frequently provide oversight of the entire medical center. Finally, consistent with literature on organizational theory, most dedicated boards are perceived by the dean or vice provost to be helpful in facilitating strategic change. At Rochester, some clinical faculty were not willing to bring their clinical practice accounts under the umbrella of the university until the chair of the university board exercised his leverage by indicating that this change would be required to retain a faculty appointment. The change did indeed take place, and threats by some faculty to relocate at competing institutions did not materialize.
Clearly it is more difficult to achieve a shared vision, integrated planning, and alignment of incentives among the medical school and its principal teaching hospital when they are not under common ownership. We found that at some such AMCs (e.g., those at Northwestern and Miami) joint trustee structures, consisting of university and hospital board members, seem to have facilitated these goals.

**Changes in Organization and Management**

Corporate restructuring and governance reorganization are rather radical responses to the tensions between medical schools and their parent universities. Such approaches to increasing flexibility and autonomy in decision making for the medical school may not be feasible or desirable to all institutions. Nonetheless, the significant contributions the AMC makes to the educational mission and the financial health of the universities provide an incentive to keep the medical school (and, for many institutions, the hospital as well) under direct university control. Other strategies may then be necessary to provide the AMC with the flexibility needed to remain competitive in the current health care environment. The strategies used by the schools in our case studies, both public and private, focus on administration and management.

**Unified authority.** In 1982, Robert Petersdorf and Marjorie Wilson noted that health sciences organizational configurations are still shifting in many universities. The sine qua non of being dean of the school of medicine is being dean of the faculty; it is equally clear that the hospital director must run the hospital. The other tasks related to getting the work of the medical center done can be arranged, shared, and delegated up, down, or laterally according to the people available, the setting, and the contingencies of the environment.

In recent years, where the medical school and teaching hospital have both been owned by the university, one organizational strategy that a number of institutions have pursued is the creation of a single point of authority for the medical school and clinical enterprise: the position of vice president for health affairs. In at least one case (at UCLA) the title of vice provost is used. All but one of the institutions that we visit regularly where the medical school and the principal teaching hospital are under common ownership have created this vice-president position, four within the past five years (at Miami, UCLA, Michigan, and Emory). From our observations, we conclude that this position facilitates integrated strategic thinking. It also permits the resolution of conflicts between clinical and core academic missions at the appropriate level in the university. Finally, it places the AMC in a more visible position within the university administrative structure.

Our observations confirm the findings of others that unification of authority does not, per se, predict the changes needed for an AMC to respond to the pressing challenges that it faces. The leaders that we observed developed methods to help resolve conflict. The most common was the creation of senior management teams involving the key stakeholders of an AMC. Thus, the creation of a medical-center-wide senior management team involving the leadership of the hospital, the faculty practice, and the medical school has been felt to be helpful in both resolving and avoiding conflicts (in addition to facilitating centralized financial management and budgeting, strategic planning, and development programs).

A unified position, however, is not an absolute requirement, as is exemplified by integrated AMCs where the dean of the school of medicine and the hospital/health system CEO share a common vision and work in a collegial fashion to achieve that vision. At the University of Iowa, the dean and the health system CEO essentially share the officer of medical center vice president. They speak with one voice, resolving conflicts and issues between them before addressing the faculty (downstream) or the university president and board (upstream). When one is not available, the other acts on behalf of all elements of the medical center. Obviously, the success of such an arrangement is dependent upon both a common vision and mutual respect.

Whether recent trends toward unified leadership of the academic and clinical missions of AMCs continue will likely be determined largely by trends in the structures of these institutions. If, as some believe will occur, more universities divest themselves of their teaching hospitals, this trend will obviously not continue.

**Reengineered administrative systems.** Several institutions we studied have moved to separate the administrative systems of the medical school from the rest of the university. Often, the many demands of the medical center add significantly to the complexity of these systems, particularly human resources and payroll. At one institution in our study (Rochester), the payroll system must run seven different payrolls each month to keep up with shift differentials and nonstandard schedules for nurses and technicians in the hospital, something that would not be required elsewhere in the university. By uncoupling these systems, the medical school has greater flexibility in creating its own systems adapted to the specific needs of the health care personnel, information systems, and hospital purchasing requirements, while the rest of the university is not burdened by these complexities.

Some AMCs have been able to achieve the level of flexibility they need in salaries and personnel by literally moving the personnel functions closer to “where the action is,” ei-
ther creating a satellite office at the medical center or relocating the entire office to the medical center. The latter approach has some merit when one recognizes that for integrated AMCs, the preponderances of university staff and budget reside within the medical center.

Nowhere has the need for flexibility for medical schools been more apparent than in the area of financial management. Traditional university accounting systems that focus on fund accounting rather than more typical corporate accounting methods are no longer viable for medical schools in the current financial environment. The ability of medical schools to move forward with relevant financial reporting and management systems has been important for both strategic planning and annual budgeting. Mission-based management is one example of the changes in financial reporting and management that medical schools have adopted. Here is an example of the medical school functioning as a change agent for university-wide policies and procedures and for the introduction of financial systems and policies that ultimately become adopted throughout the university.

We have found that, for the most part, university officials and governing bodies have recognized the need for flexibility in appointment, promotion, and tenure guidelines at the medical school. The granting of some of the functions of a university provost to the vice president for health affairs has helped. Flexibility has facilitated the recruitment of a more diverse faculty and has helped to strengthen the accountability of faculty to the school and the school to its faculty. Most of the schools visited annually in our study have introduced annual performance reviews of faculty. These reviews serve to monitor the progress of young faculty, inform salary decisions, and may be helpful in identifying less productive faculty members and channeling them into new roles.

In many schools, tenured faculty undergo the same internal annual review as do other faculty. Some institutions have extended the pre-tenure probationary period for young faculty, recognizing the extensive lead time often required for the investigator–teacher to become independently funded. Most of the 14 schools have created faculty development programs, either formally or informally, designed to improve the research skills of young clinical investigators. At Iowa and Miami, a faculty mentor is appointed at the time of recruitment of a new faculty member. Finally, we see medical schools adapting to the changing mix of responsibilities by creating new tracks for those who do not fall into the typical investigator–teacher model. Often, these tracks include titles that distinguish them from traditional tenure-track faculty. Most commonly, they are not accompanied by tenure at the associate or full professor level. These adaptive measures are more likely to be successful when the university explicitly recognizes the need for flexibility and autonomy in medical school policies.

**CONCLUSIONS**

As we said earlier, AMCs are under increasing pressure to adapt to a rapidly changing environment. Declining revenues from patient care, loss of clinical subsidies for research, and the changing roles of physicians are among the most pressing challenges. As medical schools adapt at an increasing pace, their rate of change has exceeded that of the rest of the university. One result is the surfacing of issues that have required reexamination of the structure of governance and the organizational and management infrastructure of the medical school and its university parent. This reexamination has resulted in a variety of diverse strategies. While diverse, all share some common elements.

First, the strategies are intended to provide the medical center with greater autonomy in decision making. Whether or not the strategy involves a formal dissolution of the tie between the clinical enterprise of the medical center and the university, the medical center gains a degree of independence in setting policies. Second, each of the strategies described in this report is designed to increase the competitiveness of the medical center. Third, the strategies chosen reflect local circumstances that limit the range of options available to address these issues. Finally, these strategies have at their core the continued commitment to the core missions of the medical school.

Some of the strategies reported here are long overdue and will almost certainly stand the test of time. In this respect, the medical school appears to be functioning as an agent of change for the rest of the university. As pressures continue on AMCs to adapt to a rapidly changing environment, as key players look for ways to strengthen the competitiveness of the medical center, and as universities observe and participate in the change process, other institutions are increasingly likely to face similar issues. We believe that the strategies presented here should serve as a starting point for discussions between medical school and university leaders trying to bolster the competitiveness of the medical center while supporting the traditional medical school missions. No one strategy is superior to others; all are open to modification and adaptation to local circumstances.

On a larger scale, it is difficult to predict whether the changes described in this report will better serve the interests of other constituents, including the larger university community and the public. On the one hand, when a medical school gains independence from its parent, the university risks losing control over core academic values and opportunities for collaborative teaching and research. Over time, both sides may suffer without the intellectual synergy, common purpose, and shared culture of the tightly coupled institution. Fox and Ludmerer have explained, in eloquent terms, the concerns of many about the forces that have
pulled medical schools away from the university into the health care system. On the other hand, the greater separation of the medical school from its university parent might free the school to become more involved with its community. Greater attention to the health of the population could be one result, important for both medical education and the health status of the community.

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