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A Tale Of Two Systems: The Changing Academic Health Center

Premier teaching institutions in London and Boston faced challenges during the 1990s—and adapted to survive.

by David Blumenthal and Nigel Edwards

PROLOGUE: Observers of the U.S. health policy scene are seldom surprised when they learn of another merger involving academic health centers (AHCs). The litany of complaints from AHCs and their supporters about growing financial pressures and the adaptive strategies that AHCs are employing to survive have become staples of any discussion involving academic medicine in America. What Americans may be more surprised to learn is that a similar drama is unfolding on the other side of the Atlantic as well. In this paper David Blumenthal and Nigel Edwards explore two recent mergers—one in Boston, one in London—involving prestigious AHCs. They find both striking similarities in the pressures that contribute to mergers and other cost-cutting strategies and important differences in the respective situations of the institutions involved.

Blumenthal is a physician with a long-standing interest in AHCs and an impressive string of publications to his credit. He is director of the Institute for Health Policy at the Massachusetts General Hospital/Partners Health Care System in Boston and a professor of medicine and health care policy at Harvard Medical School. Blumenthal received his medical training at Harvard University, where he also earned a master's degree in public policy. Edwards, also a prolific writer, is policy director of Britain's National Health Service (NHS) Confederation, a membership organization that represents more than 95 percent of NHS organizations. He holds a master of business administration degree from the University of Westminster.

ABSTRACT: Major changes in academic health centers (AHCs) may not be confined to the United States. Both Partners HealthCare System in Boston and University College London School of Medicine/University College Hospital Trust in London have recently undergone mergers, downsizing, and cost cutting on unprecedented scales. A comparison of the recent histories of these eminent AHCs reveals striking similarities in the clinical and academic pressures bearing down upon them and in their responses. It also reveals important differences in their situations and actions, traceable in large part to the contrasting roles of governments and markets in the health care economies of these two countries.

CONSIDER THE FOLLOWING TRUE STORY: Under pressure to contain health care costs, two major urban teaching hospitals merge. Five smaller nearby hospitals join the merged entity over the next several years. The medical school affiliated with these hospitals merges with several other local medical schools. Elsewhere in the same city, other teaching facilities undertake mergers of their own. The result is that some of the nation's most distinguished medical schools and teaching institutions downsize, lose their age-old independence, and become part of much larger, more complex, and unfamiliar health and academic systems.

To observers in the United States, this tale sounds all too familiar. With minor modifications, it could be describing Boston, New York, Philadelphia, St. Louis, or San Francisco, all of which have witnessed mergers and other major changes among local academic health centers (AHCs). But, in fact, the events outlined above describe the recent history of University College London School of Medicine (UCLSM) and its affiliated University College Hospital Trust (UCHT), an AHC complex located in London and separated from the United States not only by the Atlantic Ocean but by huge differences in the wealth, size, organization, and financing of the health care system in which it resides. Intrigued by the similarities, we sought to understand what forces might have given rise to the common experiences of British and American AHCs, and whether there might be broader lessons for AHC policy and management in these two countries.

This paper explores these issues using comparative case studies of UCLSM/UCHT and Partners HealthCare System (PHCS), a Harvard-affiliated AHC in Boston. Both of these institutions are large, research-intensive, and prestigious institutions located in cities that are centers of teaching, research, and patient care. In addition, both have been transformed by fundamental changes in their organization and governance. Through focusing on these two prominent centers, we hope to provide depth and texture to a description of similarities and contrasts in the experiences of at least some AHCs in the United Kingdom and the United States. How-

ever, any gain in depth may carry some cost in generalizability. Therefore, this paper is best regarded as an exploratory study suggesting hypotheses about influences on AHCs during the decade of the 1990s.

The London Centers

■ **Forces for change.** London has long been the center of the British academic medical establishment. Half of U.K. biomedical research spending occurs in London, whose medical schools and hospitals educate 25 percent of the country's undergraduate medical students and 50 percent of its postgraduate trainees.¹ As of the early 1990s London contained eleven independent medical schools, seven specialized postgraduate institutes, and an even larger number of affiliated teaching hospitals, including many with international reputations. Nonetheless, it faced a number of challenges.

Clinical care. In the clinical arena, the most significant challenge was the enactment in 1991 of major reforms in the British National Health Service (NHS). These reforms were intended to improve efficiency and promote responsiveness to patients by introducing competition into this archetypal single-payer system.² The reforms attempted to create markets internal to the NHS in which hospitals and providers of health services in the community (organized into self-governing "trusts") would compete for the business of a new species of local purchasers, called health authorities, which would purchase health services for residents of their localities. To promote cost-consciousness, health authorities were to receive a fixed amount per resident per year, and providers were required to set prices equal to cost. Hospitals in the future would be funded on the basis of the cost and volume of services provided, rather than on the basis of historical budgets trended forward.

Political interference and the absence of meaningful competition prevented the reforms from fully functioning in many places, but in a few localities, such as London, the reforms did create conditions that promoted major change.³ With the plethora of hospitals in London and its suburbs, there was ample opportunity for competition for both routine and complex cases. Furthermore, in London the normal political reflex to protect threatened providers was tempered somewhat by the long-standing perception, based on independent reports, that the city was overbedded and commanded disproportionate resources compared with the rest of England.⁴

The implications for London AHCs are illustrated by developments affecting UCLSM and its major teaching hospitals, University College Hospital (UCH) and Middlesex Hospital (MH). The 1991 reforms led to the formation of the Camden and Islington

Health Authority (CIHA), responsible for purchasing hospital and community-based services for residents of the area in which UCH and MH were located. The two general hospitals were within a half-mile of one another, chronically in deficit, and considerably more costly than suburban hospitals, to which the CIHA could, if necessary, send patients with routine illnesses. The CIHA also had a wide choice of other tertiary and quaternary (rare and highly specialized services) providers. Shortly after it formed, it approached the management of MH and UCH and notified them that, unless they could greatly reduce their prices, the CIHA would be forced to direct patients elsewhere, which would effectively have closed the two institutions.

It should be noted, however, that the CIHA's ability to affect so drastically the future of health care facilities in its jurisdiction was potentially constrained by at least one important fact: The board of the CIHA, like all health authorities, was appointed by the secretary of state for health and could be removed at his discretion. Thus, the CIHA was politically accountable in ways that are not true of U.S. private purchasers. The CIHA had to consider the effects of its actions not only on the costs of care but also on access to services, local employment, and other governmental priorities as well.

Academic affairs. UCLSM and its affiliated hospitals, along with most British academic institutions, also faced significant academic challenges in the early 1990s. By the end of the 1980s worldwide trends in biomedical research had created new opportunities for interdisciplinary research and for large-scale clinical studies to apply basic research findings.⁵ Taking advantage of these opportunities required the formation of large, multidisciplinary teams of investigators; new sources of capital to hire the necessary researchers and buy modern equipment; and access to large patient populations.⁶ Small by U.S. standards, London's many schools and teaching hospitals (including UCLSM and its teaching affiliates) were not independently prepared for these challenges.

At the same time, London's academic institutions faced increased competition for available research funds. The Department of Education, which had long provided core research funding to universities without formal accountability, began a Research Assessment Exercise (RAE) that ranked each university or school on a 1-5 scale and awarded research funds based on merit. Quality standards in biomedicine explicitly emphasized capability for interdisciplinary research. Competition was increasing for industrial funds as well, including the multinational pharmaceutical industry.⁷

Still another threat to clinical research emanated from the 1991 NHS reforms. The prospect that health authorities would choose

trusts on the basis of price focused attention on the higher costs of teaching hospitals and the contribution of clinical research to these costs. AHC leaders became concerned that they would lose patients and extra clinical revenues needed to conduct clinical research.

Pressure also was growing on London AHCs with respect to their teaching missions. Several professional and governmental reports in the early 1990s set new standards for under- and postgraduate medical education.⁸ These emphasized, among other things, the need to provide more exposure to community-based practice, since technological change was moving so much care out of the hospital. Recommendations also set standards for the minimum number of cases to which house officers and registrars (the equivalent of residents and interns) had to be exposed. Collectively, these changes required that medical schools and hospitals acquire access to community-based training sites and also to larger volumes of inpatients.

■ **The UCLSM/UHT response.** *Clinical care.* Under pressure from purchasers, including the CIHA and the NHS, the Middlesex and University College Hospitals agreed in 1991 to take a series of steps to reduce their costs and prices and compete more effectively for patient volume. The first critical initiative was to reduce the size of the physical plant through a complete merger of MH and UCH, which together became the University College Hospital Trust (UCHT). Much of the old UCH was closed. Between 1994 and 1997 the trust cut staff by 25 percent across the board, introduced clinical pharmacists to control drug costs, and substituted less-expensive staff for registered nurses. Total savings were estimated at £23.5 million (\$37.6 million) over three years, compared with the 1997–1998 budget of approximately £204 million (\$326.4 million).

These initiatives produced a number of salutary effects. In the highly regulated internal market, perhaps the most important result was to secure the support of the CIHA and governmental health authorities. Because of its accountability to government, the CIHA had to be responsive to the political consequences of closing the major hospitals in its area. Aware that eliminating the two hospitals would have been very unpopular in central London, the government was receptive to a strategy that promoted efficiency without crippling these institutions. The MH/UCH merger offered an acceptable alternative, and the CIHA and the NHS therefore facilitated it through several devices. The NHS provided supplemental transition payments to UCHT for the first several years, enabling it to reduce prices until cost cutting took effect. In 1993 the government also approved the construction of a new hospital (a rare event in the NHS) for the trust, with a much smaller and more efficient plant. After a highly visible public debate in Parliament and the local press,

spiced by street demonstrations in support of MH and UCH, the CIHA decided to use the trust as its preferred local provider. In addition, the CIHA and the government strongly encouraged five smaller specialty hospitals nearby to merge into UCHT between 1991 and 1996. The purpose was to improve the economic and clinical viability of the trust's specialty services by reducing competition and increasing the trust's tertiary referrals from inside and outside London. By 1997 the trust's 900 beds and £204 million budget made it the fourth-largest medical center in the United Kingdom.

With this series of responses, UCHT and its allies seem to have largely succeeded in protecting its clinical volumes. Collectively, the seven institutions that now form the trust had 52,000 admissions in 1991. As health authorities outside London sought to place routine admissions in local suburban hospitals, admissions at UCHT fell to 49,000 in 1994. However, by 1997 they had risen again to 52,000. Officials attribute the resurgence partly to the trust's ability to attract more tertiary referrals: In 1997 UCHT had referrals from every health authority in the country.

Academic affairs. Perhaps the most important academic action taken by UCLSM authorities was strong support in discussions with governmental authorities of the clinical mergers that formed UCHT. Recognizing the need for larger, wealthier academic and clinical institutions to support their research and teaching ambitions, the academic leadership of the medical school and its parent university had for years advocated teaching hospital mergers. They had, in fact, led the way by promoting consolidation in the London academic establishment. As previously noted, London started the 1990s with eleven independent medical schools and seven specialized postgraduate research institutes. In the late 1980s and 1990s a series of mergers eliminated all of the independent institutes and all but five of the medical schools. A total of nine medical schools and institutes merged into UCLSM alone. The purpose was to develop critical mass for research and to combine the clinical research capabilities of these independent schools with the basic science capabilities of University College London and its medical school. When the CIHA threatened to close MH and UCH, academic leaders at UCLSM appealed directly to the secretary of state for health, arguing that a national research resource would be undermined if UCLSM's clinical affiliates were shut down. Interviews with CIHA officials suggest that these arguments were persuasive.

UCLSM also took steps to improve its internal research management. Particularly important in this regard was an initiative to provide internal quality review for applications for so-called Culyer funds, which provide support for the extra costs of clinical research

at teaching hospitals. After the 1991 reforms the NHS for the first time gave explicit recognition to these costs and convened a commission, chaired by Anthony Culyer, to make recommendations on how to deal with them. Based on the Culyer Commission report, the NHS started awarding payments to teaching institutions, totaling £450 million in 1997, to support the clinical costs of research.⁹ The research directorate of UCLSM manages Culyer funds, applying rigorous internal peer review of clinical research projects before passing them on to the NHS.

Still another academic benefit of the UCLSM/UCHT mergers was the creation of new opportunities for graduate and undergraduate medical education. Through its academic and clinical mergers, UCLSM gained access to clinical placements for its students at multiple hospitals throughout the London region, including their outpatient clinics. This assured access to needed inpatient and outpatient clinical material for educational purposes.

Even though it is still too early to judge the success of these and other efforts, several potential benefits are apparent. If size proves critical to academic viability in the future, then the combination of nine medical schools and institutes and seven clinical facilities has positioned UCLSM/UCHT well. It has become one of the largest research centers in western Europe, with more than 5,000 biomedical researchers and a 1997–1998 research budget of approximately £80 million, which would place it among the top-ten U.S. AHCs.¹⁰ At the Institute for Child Health, a trust subsidiary, success rates for extramural grant applications have increased from 19 percent to 50 percent. In the competition for Culyer funds, UCLSM/UCHT officials were pleased with their 1997 award of £33 million, the second-largest grant to any U.K. institution and an amount they deemed sufficient to cover their legitimate needs.

The Boston Centers

■ **Forces for change.** Boston, Massachusetts, has long boasted one of the most prominent academic medical establishments in the world. At the dawn of the managed care era in the early 1990s, Boston was home to three medical schools and eight major affiliated teaching hospitals. The largest of these, Massachusetts General Hospital (MGH) and Brigham and Women's Hospital (BWH), were regularly ranked among the ten most prestigious U.S. hospitals in the widely cited annual poll conducted by *U.S. News and World Report*.¹¹ As a group, Harvard Medical School and its affiliated hospitals constituted the leading recipient of funding in the United States from the National Institutes of Health (NIH).¹² However, in the eyes of many leaders of Boston's AHCs, several forces posed major threats

in the early 1990s to their eminence and even their survival.

Clinical care. The first such threat consisted of the growth of managed care and health care competition. Extrapolating from the California experience with managed care, consultants to some Boston teaching hospitals predicted in 1994 that hospital admissions in the overbedded Boston market might fall by 20–40 percent over the next five years. The numbers of hospitals and beds in Massachusetts were already rapidly declining, on the way to falling respectively from 110 and 24,000 in 1986 to 88 and 18,000 in 1996. Because prices at Boston AHCs were more than 30 percent above those of community hospital competitors, AHCs became concerned that price-sensitive managed care organizations would direct their less severely ill patients to cheaper community hospitals.

If California's aggressive style of managed care had arrived in Boston, it would have found Boston's teaching hospitals particularly vulnerable because of local market characteristics. A number of the community hospitals in nearby suburbs enjoyed excellent reputations for clinical quality and patient amenities. There also was intense competition among AHCs themselves for complex cases.

Academic affairs. Boston AHCs also faced looming academic challenges not unlike those confronting UCLSM and its affiliates. Through the early and mid-1990s NIH appropriations were largely stagnant in real terms, which intensified competition among U.S. AHCs for federal research funding.¹³ Rising industrial spending on research and development made private companies, many of them multinational, the leading supporters of research in the United States.¹⁴ Thus, competition for industrial support of academic biomedical research also intensified. As with UCLSM/UCLHT, adapting to the changing research environment required size, access to capital and patients, and the ability to attract the world's most talented investigators.

■ **The PHCS response.** In 1993 the board chairmen and chief executives of BWH and MGH began talking about developing a common strategy to respond to managed care and the other challenges. Drawing on his knowledge of other industries that had been forced to downsize because of reduced demand and excess capacity, John McArthur, dean of the Harvard Business School and chairman of the BWH board, felt that combining with a powerful partner to eliminate excess costs and increase market power was essential for the survival of BWH and its academic mission. His views were shared by MGH board members and administrators. In a series of rapid, confidential discussions in late 1993, MGH and BWH designed Partners HealthCare System (PHCS). The core of PHCS was the close affiliation and joint governance of the 1,000-bed MGH and the 751-bed BWH. The combination of these two institutions was

intended to power a comprehensive strategy for ensuring the survival of these hospitals and their research and teaching missions.

Clinical care. In the clinical arena, PHCS sought to assure the market share and margins of its institutions. To protect market share, PHCS used two devices. First, the affiliation of MGH and BWH reduced the competition facing each institution in the area of highly specialized tertiary and quaternary services. PHCS leaders calculated that once the two were joined, no managed care organization could survive in Boston without offering PHCS as a referral option.

Second, using capital reserves from the two founding partners, PHCS set about building an integrated delivery system (IDS). The IDS included a primary care network that aspired to recruit 1,000 primary care physicians caring for 1.5 million patients in eastern Massachusetts by 2000. PHCS hoped that even with the rise in managed care, creating an IDS would improve service, reduce costs, and thus ensure a continuing flow of routine and complex cases to all of its institutions, including the downtown teaching hospitals.

PHCS also launched initiatives to bolster margins on the clinical business it attracted. It hoped that the prestige of its downtown hospitals and the size of its IDS would prevent managed care plans from extracting the kinds of discounts they had achieved in California and other highly competitive markets. PHCS's unstated trump card in pricing negotiations was that if local managed care plans pressed too hard, PHCS had the capital and the brand recognition (through MGH and BWH) to start a competing organization.

PHCS hoped as well to reduce its costs through economies of scale and intensive cost-reduction efforts. It planned to combine administrative functions for member institutions in such areas as finance, development, public affairs, and legal affairs. Each of the founding partners launched efforts at clinical process redesign, encouraging the use of clinical guidelines and other devices to streamline the management of inpatient care. For BWH and MGH alone the initial strategic plan outlined a program of cost reductions totaling \$240 million over three years, including elimination of 500 of the 1,751 beds at the two hospitals over three years.

Judging the effects of these various clinical initiatives is difficult. Data are incomplete, and it is impossible to be certain of what would have occurred if PHCS had never been formed. Its major accomplishments in the clinical arena seem to have been its success in building its IDS, protecting and augmenting its market share, fending off price challenges, and reducing its costs.

By the end of 1998 PHCS was well on the way toward meeting its targets for building its IDS. It had more than 900 primary care physicians (most in affiliated rather than owned practices) in its

network and had acquired four suburban community hospitals that were strategically located in the northern and western suburbs. Added to its mental hospital, the prestigious McLean Hospital, and its rehabilitation hospital, Spaulding Rehabilitation Hospital, these assets made PHCS the largest provider in eastern Massachusetts.

As if to confirm predictions of the effects of managed care, bed use per thousand residents in Boston fell from 1,200 days in 1993 to 850 in 1996. Over the same period inpatient volume in PHCS-affiliated hospitals dropped from more than 104,000 admissions in 1993 to 92,608 in 1996. However, at the same time, PHCS's inpatient market share also was starting to increase, growing by 14 percent between 1994 and 1998, to 17 percent of Boston's total. Admissions rebounded to 95,176 in 1996 and reached 102,525 in 1998. Much of PHCS's increased inpatient business came at the expense of other AHCs, including New England Medical Center and Boston Medical Center, which had experienced declining volumes and market shares during this period. Near the end of the 1990s PHCS even began to draw market share from CareGroup, the other local Harvard-affiliated AHC (consisting of the merger of the Beth Israel and Deaconess Hospitals), which had been much slower than PHCS to start a network and not as successful in building its primary care affiliates. PHCS officials attribute their success in part to their network, pointing out that growth in admissions has often derived from communities where PHCS has developed new relationships with primary care physician practices. One major local managed care organization reports that its Partners-affiliated primary care providers refer 65 percent of their tertiary care patients to BWH and MGH, compared with 35 percent among its nonaffiliated providers. Furthermore, BWH and MGH market shares are growing in communities with substantial PHCS presence and declining elsewhere.

PHCS's ability to use its power in the Boston market to prevent price reductions has also become increasingly clear. For example, after PHCS lost considerable money in 1997 on its first large capitated contract with HMO Blue, the managed care subsidiary of Blue Cross/Blue Shield of Massachusetts, it successfully renegotiated a retrospective increase in capitated payments. In 1999 negotiations with Tufts Affiliated Health Plan (TAHP), another major Boston health maintenance organization (HMO), were stalled over prices until PHCS threatened to close its network to new Tufts patients. To underline its determination, PHCS asked for and received signed letters of support from all of its more than 900 primary care physicians and delivered them to TAHP officials. Immediately after the letters arrived, TAHP moved much closer to the PHCS position, and a new contract was signed shortly thereafter. According to PHCS

“A common national force affecting both AHCs was strong pressure to contain costs and increase efficiency.”

documents, cost-reduction efforts have lowered inpatient expenses at BWH and MGH by \$200 million over five years. Costs per case-mix-adjusted discharge, corrected for inflation, have fallen 20 percent over the same period.

These accomplishments must be balanced against a number of problems. Although the primary care network, the core of its IDS, may have increased market share and prices, it has had a considerable financial cost as well: an operating deficit of \$16.8 million in 1998. Positive margins from PHCS hospitals offset these losses until 1999, when negative operating margins were anticipated. This reflects in part the effects of declining governmental payments from Medicare under the Balanced Budget Act (BBA) of 1997, as well as cost increases in pharmaceuticals and supplies. Despite its strong position in the Boston market and internal cost-reduction efforts, even PHCS has not been able to entirely overcome the effects of competitive market forces, government cost cutting, and technological change on its bottom line.

Academic affairs. PHCS has taken a number of steps to improve its competitiveness and effectiveness in academic areas. It appointed a vice-president for academic programs and centralized research administration. To facilitate cooperation between researchers at the two hospitals, a small grant program was established that provided funds exclusively for projects involving collaboration between them. For the first time researchers at the two institutions have begun submitting joint proposals to federal and nonprofit funding sources. Finally, PHCS has begun trying to use the increased size and scope of its research capabilities and clinical reach—including its primary care network—to attract industrial research sponsors.

Research within PHCS has thrived since its formation, although it is difficult to say how much of that success is attributable to the formation of PHCS itself. BWH and MGH together will spend \$410 million for research in 1999, compared with \$312 million in 1994, an annual rate of increase exceeding 9 percent. Marketing PHCS to industrial sponsors has spawned several major agreements. One is an arrangement between PHCS and Merck-Medco, a pharmaceutical benefit management (PBM) company, to use the Partners network to develop a new generation of disease-management strategies in such areas as coronary artery disease and gastrointestinal disorders. This clinical research initiative would never have materialized

without the formation of PHCS and its network. An NIH-funded clinical trial has been initiated using network physicians. PHCS-supported personnel recruit and manage patients in local physicians' offices, thus easing physicians' fears that enrolled patients will be "stolen" by downtown doctors. PHCS also has developed basic research relationships with industry by forming long-term partnerships with two local biotech companies, Genzyme and Millenium Pharmaceuticals.

Implications For Academic Medicine

Our review of the recent experiences of these two institutions reveals remarkable similarities and also important differences. These suggest intriguing hypotheses and questions about the forces affecting AHCs in modern health care systems, the options for AHCs in responding to them, and the implications of these forces and responses.

■ **Similarities between PHCS and UCLSM/UCHT.** In their recent transformations, both PHCS and UCLSM/UCHT were responding to a similar combination of extranational, national, and local factors. This raises questions about whether these forces will affect comparable large, prestigious AHCs in major urban markets elsewhere in the United States, the United Kingdom, and perhaps even other Western nations.

A common extranational force affecting these AHCs was the changing nature of their academic work. Academic factors have received much less emphasis than cost and clinical pressures on AHCs but may be equally profound in their effects on premier centers of health care research and teaching that wish to compete for the world's most talented faculty and provide world-class educational experiences for their trainees.¹⁵ Trends in the biological sciences seem to favor large, wealthy AHCs with interdisciplinary faculty and access to large patient populations.¹⁶ As technology reduces inpatient volumes, trends in medical education also seem to favor sizable AHCs that can attract both common and uncommon cases for instructional purposes.

A common national force affecting both PHCS and UCLSM/UCHT was strong pressure in their respective health systems to contain costs and increase efficiency in clinical activities. Although the methods by which the two health systems pursued these goals differed somewhat—one relying largely on markets and managed care, the other on a combination of governmental pressure and quasi-markets—the effects on the AHCs we studied were remarkably similar. Major teaching hospitals in both London and Boston were faced with the prospect of declining demand for their services, falling inpatient volumes, reduced revenues, and threats not only to

their ability to sustain their academic missions but to their survival as institutions. The recent history of these two AHCs suggests the power of systemwide cost-containment efforts to affect the circumstances of local AHCs and raises questions about whether academic institutions in other countries that are undertaking aggressive cost-control programs will be similarly affected.

Pressures from the system to contain costs were enhanced by similarities in the local markets of the two AHCs we studied. In both cities the presence of numerous AHCs and less expensive community hospitals increased competition for declining patient care business. Our study suggests that AHCs located in urban areas with an oversupply of health care resources may face much greater pressure to change than AHCs in other circumstances do. Our cases also suggest that competition among AHCs may be as important as competition between AHCs and community hospitals.¹⁷

Similarities in the strategies pursued by UCLSM/UCHT and PHCS were also quite striking and to some degree reflect the similarities in the forces to which they were responding. In both London and Boston premier teaching hospitals merged with competitors to create larger, more powerful clinical institutions. The purpose was to provide the critical mass needed to sustain world-class research and educational activities, to create new opportunities for cost reduction and improved efficiency, and to develop the market power necessary to deal with local competitive pressures. As long as the forces outlined above persist, AHCs in major urban markets may continue to merge in pursuit of the advantages that size confers, both academically and clinically.

A critical question for policymakers is whether such mergers are desirable in the long run. Although they clearly have a compelling short-term logic for institutions in the circumstances of our case-study sites, they also may have some important disadvantages. They require enormous investments of time from senior leaders, which distracts academicians from the daily work of patient care, teaching, and research. It is far from clear that AHCs have the infrastructures in terms of managerial talent and information systems to effectively run the much larger institutions that mergers create. Our case studies further suggest that mergers will result in smaller numbers of larger AHCs in urban areas that have served as leading centers of academic and clinical activity. This may result in reduced local and national competition both clinically and academically. Little is known about how competition in tertiary care and research markets affects the cost and quality of AHC products.

There also were similarities in the internal reforms that UCLSM/UCHT and PHCS undertook to reduce their costs and improve their

competitiveness. In the clinical arena, both organizations reduced the size of their physical plants, attempted to reengineer clinical processes, and combined administrative functions across previously independent institutions. In academic affairs, both attempted to reorganize and streamline research support functions. Our study suggests that major, research-intensive AHCs, even in very different settings, are likely to rely on the same strategies for improving the efficiency and quality of their work. This suggests that there may be important opportunities for cross-national learning in AHCs' cost-reduction and quality-improvement efforts.

■ **Differences between PHCS and UCLSM/UCHT.** A critical difference between the pressures facing the two systems concerned the role of government in motivating and managing the changes that each institution undertook. In the PHCS case, government was a distant bystander to events. In the UCLSM/UCHT case, although the internal market resulting from the 1991 reforms played a role, the NHS and the quasi-governmental CIHA were fundamental in creating the pressures and opportunities for change. In many ways, the internal market became a device for enabling governmental planning to shape the fate of UCLSM/UCHT. It is dangerous to generalize from two cases about the comparative effects on AHCs of market-driven compared to government-driven reform. On the one hand, the remarkable similarities between the responses and outcomes for the two systems suggest that the forces for change we identified are generic and powerful enough that it may not matter whether they work through markets or governments. On the other hand, even while forcing fundamental reforms at UCLSM/UCHT, the NHS, through special transition payments and Culyer funds, was preparing to safeguard the viability of the AHC chosen to survive. Government provided a safety net for the London site that apparently was not available in Boston.

The existence of this safety net may explain an important apparent difference in the status of PHCS and UCLSM/UCHT at the close of this decade. Although PHCS's clinical volumes, market share, and research funding continue to grow, and although it is by far the most secure AHC in its market, the success of its ambitious strategy of creating a regional IDS remains uncertain. The immediate future of UCLSM/UCHT seems much more secure in comparison.

One reason for the differences in their current status may be that UCLSM/UCHT has reached an accommodation with government in a health care system where governmental sanction can assure survival, whereas PHCS lives in a dynamic market in which government is trying to reduce the financial cushion afforded in the past by supplemental Medicare payments to AHCs. The inherent unre-

“Market-based reform will drive AHCs toward more extensive but also riskier responses than will government-driven efforts.”

dictability and relentlessness of markets makes it much harder for AHCs under market-driven health care reform to achieve stability. For better or worse, no peaceful end to the Boston tale is in sight.

The availability of a safety net for UCLSM/UCHT may help to explain another important difference between the experiences of the two. In creating an integrated delivery system, PHCS's clinical strategy has been far more ambitious, costly, and risky than that of UCLSM/UCHT. The risks of an academic IDS are apparent in the continuing operating losses at PHCS and some other American AHCs whose financial viability may be threatened by the costs of primary care networks.¹⁸

Although a number of factors influenced Partners' decision to create such a network, including the availability of the capital reserves to fund it, that decision also represented in part a calculation about what was needed for PHCS to continue functioning as a premier academic institution. PHCS had to assume that it was largely on its own. It had to find the resources internally not only to survive but to cross-subsidize its academic missions. Size and market power would help, but so might having the ability to deliver and accept financial risk for the full spectrum of health care services. Then surpluses, wherever they appeared, could be captured and retained within the organization. An IDS offered this opportunity, as well as diverse options to redesign care, cut costs, and thus generate the required clinical margins. One hypothesis suggested by our case studies is that market-based health care reform will drive AHCs toward more extensive, innovative, but also riskier responses than will government-driven efforts to control health care spending. (A countervailing hypothesis might hold that a strong governmental presence simply suppresses innovation and risk taking.) Regardless of the underlying cause, the different responses of AHCs to market and governmentally dominated health reform suggest the need for additional studies to understand how these two approaches to reform will affect the future of AHCs' academic missions.

GIVEN THE COMPLEXITY of the institutions, markets, and health systems we studied, our investigation can only begin to explain the similarities, differences, and lessons of the recent histories of AHCs in the United States and the United Kingdom. Nevertheless, this preliminary study suggests that some of the forces affecting premier urban AHCs transcend national bounda-

ries, and that AHCs in very different health care systems may respond to these forces in similar ways. If confirmed by further research, these observations suggest that leaders of American AHCs should look beyond managed care, and beyond American institutions, to understand both the causes and optimal responses to the challenges they are facing. Policymakers, in turn, may wish to look beyond national borders to understand the implications of alternative approaches to cost control for the future of AHCs.

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NOTES

1. *The Contribution of London's Academic Medicine to Healthcare and the Economy*, Report Commissioned by the Deans of the Medical Schools of the University of London for Submission to the King's Fund London Commission (January 1997).
2. R. Klein, "Why Britain Is Reorganizing Its National Health Service—Yet Again," *Health Affairs* (July/Aug 1998): 111–125; and J. Le Grand, "Competition, Cooperation, or Control? Tales from the British National Health Service," *Health Affairs* (May/June 1999): 27–39.
3. *Ibid.*
4. L. Turnberg, "Health Services in London: A Strategic Review" (London: Department of Health, 18 November 1997).
5. Royal College of Pathologists, "Hard Choices: Shaping Public Science Policy for the New Millennium" (London: Royal College of Pathologists, 5 November 1997).
6. *Ibid.*
7. *Ibid.*
8. Department of Health, *Hospital Doctors: Training for the Future* (Calman Report) (London: Department of Health, 1993); and NHS Management Executive, "Junior Doctors: The New Deal" (Information pack) (London: Department of Health, 1991).
9. The size of the Culyer fund was determined by requesting estimates from all NHS hospitals of the clinical costs associated with research in their institutions. After the pool was established, the NHS solicited applications for funding from hospitals. In its second round of grants, the Culyer process will explicitly consider the quality of proposals. A portion of the Culyer funds will also be distributed based on relevance to the NHS's own research agenda.
10. Commonwealth Fund Task Force on Academic Health Centers, *From Bench to Bedside* (New York: Commonwealth Fund, 1999).
11. J. Chen et al., "Do 'America's Best Hospitals' Perform Better for Acute Myocardial Infarction?" *New England Journal of Medicine* 340, no. 4 (1999): 286–292.
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14. *Ibid.*
15. P. Griner and D. Blumenthal, "Reforming the Structure and Management of Academic Medical Centers: Case Studies of Ten Institutions," *Academic Medicine* 73, no. 7 (1998): 818–825.
16. D. Blumenthal, J.S. Weissman, and P. Griner, "Academic Health Centers on the Front Lines: Survival Strategies in Highly Competitive Markets," *Academic Medicine* 74, no. 9 (1999): 1038–1048.
17. *Ibid.*
18. *Ibid.*