Introduction

This book began with a set of questions. What are society's health needs in the twenty-first century? What kind of health system will be able to meet those needs? How can academic health centers (AHCs)[1] and other health sector leaders help create a health system and health organizations that meet the health challenges of the twenty-first century? What capabilities should AHCs and other health care organizations develop for short- and long-term success in such a health system?

This book is based on a series of reports produced by the Blue Ridge Academic Health Group (Blue Ridge Group). The Blue Ridge Group seeks to help academic health centers better meet the needs of society. Towards that end, the Group has explored a set of pivotal health policy, leadership, and management issues and identified ways that AHCs can strengthen their viability while striving to improve the health of individuals as well as the general population. Through the course of its work, the Blue Ridge Group has developed a framework for how the health system and health care organizations should evolve to meet the challenges of improving health in the twenty-first century.

The Blue Ridge Group began its work in 1997 with three basic premises. First, demographic changes, technology, economic forces, and societal developments demand new approaches in health care delivery systems, education, and research. Second, the reforms that created upheavals in the health care delivery system during the 1980s and 1990s were primarily structured to achieve financial objectives. Yet, the potential exists for fundamental changes in the health sector to improve health *and* better manage costs. Third, AHCs

[1] As described in Chapter 1, an academic health center (AHC) is a health education, research, and service center that encompasses a school of allopathic or osteopathic medicine, a teaching hospital with associated primary and secondary care sites, and at least one additional health sciences professional school such as a school of nursing, dentistry, or pharmacy. There are over 100 such centers in North America and they typically are major institutions in their own regions and perform much of North America's biomedical research, education, and health care service delivery including a disproportionate share of care for the society's lower socio-economic groups.

play a unique role in the US health care system as they develop, apply, and disseminate knowledge to improve health and educate many if not most health workers. In so doing, they assume responsibilities and encounter challenges other health care provider institutions typically do not bear. Thus, AHCs face additional risks as they grapple with the evolving health care environment. And, at the same time, they hold within their talented workforce the opportunity to be the fulcrum for constructive change.

The Blue Ridge Group's first report focused fairly narrowly on how AHCs could use business practices to strengthen their financial viability and protect their tradition of public service. Despite the brevity of this report, it introduced themes that would be revisited and expanded upon in later reports (e.g., performance measures, broadening AHC mission). The second report's scope was significantly broader as the Blue Ridge Group studied the issue of the uninsured and concluded that this complex challenge can only be addressed fully in the context of a *value-driven health system* for the United States. The concept of a value-driven health system became a cornerstone for all subsequent work of the Blue Ridge Group and continued to evolve as the Group explored organizational issues such as leadership, culture, knowledge management, and e-health.

This volume updates and restructures the content of the first six Blue Ridge Group reports (Blue Ridge Group, 1998a, 1998b, 2000a, 2000b, 2001a, 2001b).[2] Two invited chapters, six invited case studies, and nine invited commentaries provide additional depth and breadth for the themes originally addressed by the Blue Ridge Group. David Blumenthal's description of the challenges facing twenty-first century health care organizations and the status of AHCs in the United States sets the stage for this volume by pointing to the need for dramatic changes in AHCs and the health system as a whole. Chapter 2 explores what those changes should be and presents the framework of a value-driven health system. Chapters 3 through 6 address specific issues – leadership, culture, knowledge management, and e-health – that require attention and action by twenty-first century health care organizations. Tom Smith's discussion of the challenges facing European AHCs highlights the similar issues facing US and European AHCs and the potential for international collaboration on organizational and health system development.

This book has two goals. First, we seek to advance understanding of and the need for a value-driven health system in the United States. Second, we seek

[2] The Group's seventh report, *Reforming Medical Education: Urgent Priority for the Academic Health Center in the New Century*, was published in 2003 and its eighth report, *Converging on Consensus? Planning the Future of Health and Health Care*, was published in 2004.

to provide AHC leaders, senior administrators, faculty, policy-makers, and interested scholars with a guide to the essential tasks for fostering a value-driven culture for their organizations and building a value-driven health system anywhere in the world where biomedical research, teaching, and services coexist.

Although the Blue Ridge Group focuses its attention on AHCs, the Group addresses issues faced by all health care organizations grappling with increasingly powerful market forces, growing societal expectations, growing consumerism, diffusion of new technology, a constantly expanding base of medical knowledge, reimbursement mechanisms that do not reinforce desired behaviors, and inadequate national health policy on the uninsured. This book explores how health care organizations may improve their performance in terms of quality and efficiency and how they can help to influence changes in the broader health system. It highlights innovative practices consistent with value-driven care and identifies where additional practical action is needed. Thus, this text may be of interest to all individuals in the health sector committed to creating health care organizations capable of meeting the health challenges of the twenty-first century.

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1 Academic health centers: current status, future challenges

David Blumenthal, M.D., M.P.P.

Introduction

The decade of the 1990s was unprecedented in the history of the modern academic health centers (AHCs) in the United States, as it was for health care institutions generally. The nation's 125 AHCs had for the previous 40 years grown steadily larger, more powerful, and more lustrous. They had built or acquired hospitals, outpatient buildings, and research facilities. Their faculties had captured an enviable share of Nobel prizes in their fields and pioneered life-saving treatments for cardiovascular disease, cancer, and other illnesses. Despite occasional storms associated with the introduction of new Medicare payment policies (i.e., diagnosis-related groups or DRGs and the resource-based relative value system or RBRVS), AHCs' clinical facilities had mostly sailed to higher volumes of patient care, higher clinical income, and increasing fiscal reserves. If few administrators or board members from parent universities understood the intricacies of these complex medical institutions – their peculiar organizational structures, accounting practices, promotion rituals, and cultures – well, there were other parts of the university that were both more comprehensible and more problematic. Academic health centers did not appear broken, or to need fixing.

All that changed dramatically for many AHCs and their parent universities in the middle and late 1990s. Out of a seemingly clear horizon, a tidal wave of red ink crashed across the balance sheets of some of the nation's most eminent and heretofore invulnerable AHCs. In anticipation or response, many AHCs embarked on unprecedented internal reforms: buying up primary care practices, selling teaching hospitals, creating new internal

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organizational arrangements such as physician–hospital organizations and integrated faculty group practices, and merging with teaching hospitals and schools from other universities. In many cases, these radical course changes seemed only to make matters worse – and infinitely more confusing to those leading, working in, or developing policy for these huge, apparently floundering health care institutions.

This chapter reviews the current status of and future challenges for AHCs. It begins by defining what an AHC is and what confers distinctive identity to AHCs in the modern US health care system.

Defining and describing the AHC

Academic health centers consist of medical schools and their closely affiliated or owned clinical facilities and professional schools. There are roughly 125 such complexes in the United States. Parent institutions wholly own some of these institutions (e.g., University of Pennsylvania Health System; Johns Hopkins University Health System; University of California San Diego; University of Virginia). Other AHCs consist of close affiliations between medical and other health professional schools and independent nonprofit and for-profit clinical entities (e.g., Harvard Medical School and its clinical affiliates; Washington University and the BJC Health System; Columbia and Cornell Medical Schools and the NewYork–Presbyterian Health System).

Diversity, commonality, and complexity

Recently, the clinical component of the AHC has become increasingly diverse. For much of the twentieth century, AHCs' clinical facilities typically included hospitals and faculty group practice plans. In the 1990s, as part of their response to external financial threats, a number of AHCs sought to compete more effectively in clinical markets by creating integrated health care systems. Thus, the AHC of the early twenty-first century frequently includes networks of primary care physicians, community hospitals, community health centers, nursing homes, health plans, and home health care services. At the same time, some AHCs decided to shield themselves from market forces by withdrawing from formal ownership of any clinical facilities, selling off hospitals and even faculty group practices (Blumenthal and Weissman, 2000). The AHC sector thus constitutes a varied and evolving set of institutions.

This variety should not, however, obscure their commonality. Regardless of their precise organizational and ownership arrangements, AHCs share certain common purposes and missions. They exist to improve the health of their communities and the larger society in which they reside (Blue Ridge Academic Health Group, 2000; Commonwealth Fund Task Force on Academic Health Centers, 2003). In this endeavor, they have capabilities and roles that set them apart to some extent from other institutions in our health care system. These distinctive capabilities lie in the areas of biomedical research, education of health professionals, provision of rare and high technology medical services, and continuous innovation in patient care. In addition, many AHCs play a major role in caring for poor and uninsured patients in their communities. The distinctive roles and capabilities of AHCs are often referred to as their "social missions."

A common characteristic of these social missions is that they are unlikely to be optimally produced and distributed in freely competitive private markets. Several missions have attributes that economists associate with public goods (Garber, 1995). Basic biomedical research is a classic public good. Other missions of AHCs do not meet the classic definition of public goods but, nevertheless, have characteristics which make it unlikely that they will be handled well by private markets. Some of these mission-related activities produce so-called merit goods (Allan, 1971). Private markets for merit goods exist because these goods benefit the individuals who purchase them. Consumption of merit goods also benefits other members of society; that is, the use of these goods has positive externalities. Medical education is an example of a merit good. By paying tuition, medical students are prepared for a career that benefits them financially. At the same time, society clearly benefits from having a well-educated medical profession with certain characteristics. Left to their own devices, medical students paying the full cost of their education may choose to enter specialties that maximize their own future income, and neglect areas of work (such as geriatrics, primary care, and care for poor and uninsured patients) whose full social benefits may not be rewarded in current health care markets.

Academic health centers play a prominent role in the following social missions that have characteristics of either public or merit goods:

1. AHCs perform nearly 30 percent of all the health care research and development in the United States and more than 50 percent of research supported by the National Institutes of Health (NIH).
2. AHCs train the great majority of the nation's allopathic medical students and nearly half its residents and interns.

3. AHCs provide large amounts of specialized, costly services (such as burn, transplant, and trauma care).
4. AHCs play major roles as safety net institutions caring for poor and uninsured patients in their communities.
5. AHCs are uniquely suited to conduct clinical research that enables the innovation of clinical care.

The effort to serve these multiple and complex missions makes AHCs extraordinarily complex institutions. From the special standpoint of their parent universities, AHCs are rendered more confusing by having one foot solidly rooted in the university, and the other planted just as firmly in the turbulent health care market place. Some elements of AHC faculty, such as their basic investigators and heavily committed teachers, occupy themselves with work that is absolutely typical of the university faculty in the arts and sciences and other professional schools. In contrast, many clinical faculty seem to be providing what look like routine health care services, and to have earned faculty status (including tenure) by virtue of the quantity and quality of services provided. The law or business school analogy would be to grant tenure to law professors if they achieved partnership in university-owned or affiliated law firms, or to business professors if they became chief executive officers (CEOs) of university-owned or affiliated businesses.

Nevertheless, clinical faculty contribute to core academic activities. They provide supervision to medical students and residents in patient care settings, thus assuring the competence of graduates. They participate in clinical innovation, using protected time afforded by faculty status to conduct funded and unfunded clinical research that translates basic knowledge into applied technologies (Weissman *et al.*, 1999). The revenues from their clinical activities support research and teaching. In one study, 30 percent of clinical revenues of faculty group practices were diverted to fund academic activities within those practices and at affiliated medical schools (Jones and Sanderson, 1996).

Financing

Uniform, integrated financial data on the diverse components of AHCs as we have defined them are virtually nonexistent. To understand their finances, Figure 1.1 shows trends in the contribution of various sources to the income of medical schools for which data are available. As these data make clear, medical schools have become increasingly dependent on clinical revenues, and grants and contracts supporting research. The latter component has

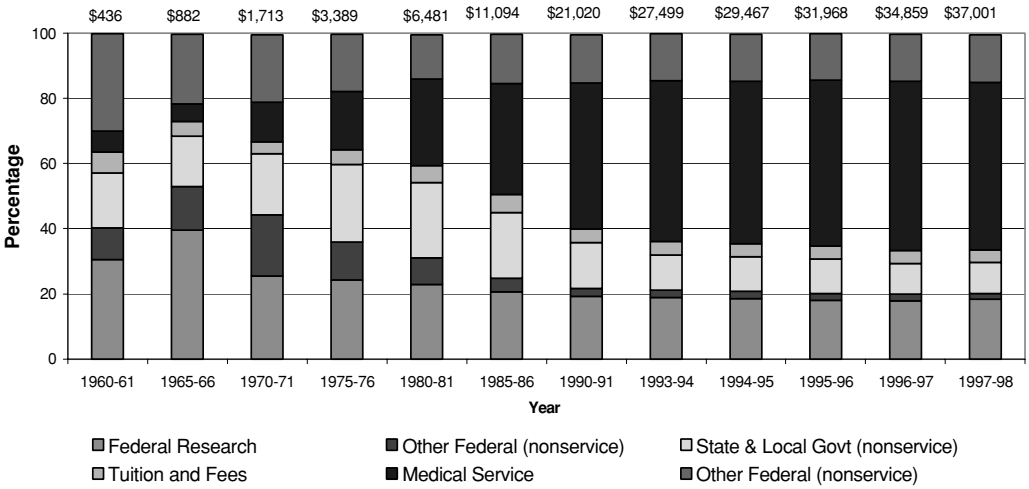


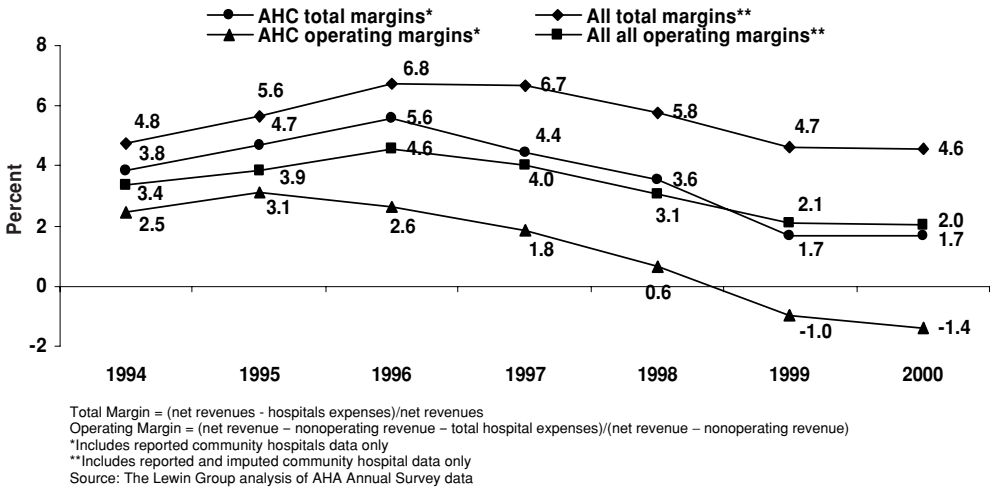
Figure 1.1 Revenues for the programs of US medical schools

grown dramatically over the last five years as Congress has doubled the budget of the National Institutes of Health. This may partly explain why medical schools seem to have suffered less than hospitals over the last five years, despite the vulnerability of clinical incomes to market forces. Schools were able to continue to raise faculty salaries throughout the late 1990s at or above the rate of inflation (Studer-Ellis, Gold, and Jones, 2000). In contrast to medical schools, AHC clinical facilities (with a handful of exceptions) realize virtually all their revenues from clinical sources, which makes them much more vulnerable than medical schools and other health professional schools to perturbations in health care markets.

Current status

The extent of the financial difficulties plaguing AHCs is surprisingly hard to pinpoint because of time lags in available data, variable accounting practices, and anomalies in the way universities and their affiliated institutions keep their books. Nevertheless, it seems clear that 1999–2000 constituted a period of unprecedented financial stress for these institutions. Figure 1.2 shows trends in total and operating margins for AHC hospitals during the 1990s and into the year 2000.

As these figures make clear, total margins for AHC hospitals averaged one to two percent nationally in 1999–2000, compared to five to six percent in the



Total Margin = (net revenues - hospitals expenses)/net revenues
Operating Margin = (net revenue – nonoperating revenue – total hospital expenses)/(net revenue – nonoperating revenue)
*Includes reported community hospitals data only
**Includes reported and imputed community hospital data only
Source: The Lewin Group analysis of AHA Annual Survey data

Figure 1.2 Trends in the aggregate total margins and operating margins for AHCs, 1994–2000

mid 1990s. Operating margins were negative by the end of the decade. AHCs performed considerably less well throughout the decade than did nonAHC facilities. In 1999, the major clinical affiliates of 14 of the 18 medical schools that received the largest amounts of NIH research funding suffered operating losses, received a negative outlook from bond-rating agencies, or had their bond ratings downgraded. Incomplete, unaudited quarterly reports nevertheless suggest that after several years of decline, average teaching hospital operating margins stabilized and even increased for private AHC hospitals, though declines continued for public-owned facilities.

Skeptics correctly point out that the majority of the nation's AHC hospitals and medical schools continue in the black (at least judged by total margins), that a few bad years may not constitute a crisis, and that AHCs have often cried wolf about their finances in the past. Yet, it seems clear that, never since the Great Depression, have so many eminent university teaching facilities been in such distress simultaneously. Their extreme reactions seem to support their claims. AHCs do not lightly sell their teaching hospitals, especially to for-profit corporations, nor do they casually lay off 10 to 20 percent of their workforce, as have the University of Pennsylvania, Beth Israel Deaconness Medical Center, San Diego, San Francisco, and Stanford.

Since AHCs are such large, complex institutions, it should come as no surprise that the sources of their distress are similarly intricate and multifaceted. The advent of economic competition in health care during the 1990s took most AHCs (like most other health care institutions) by surprise. The prices

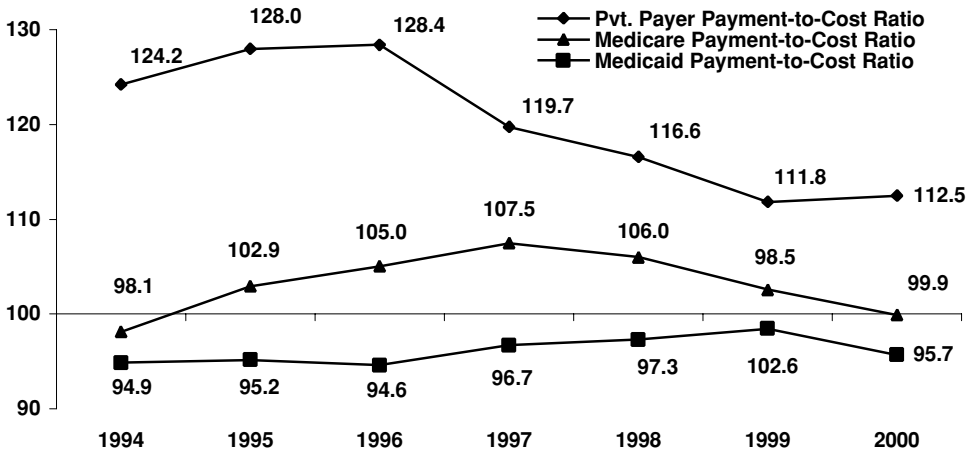


Figure 1.3 Trends in payment-to-cost ratios by payer for AHCs, 1994–2000

they could charge for patient care fell dramatically as a result of pressure from managed care companies, which were doing the bidding of cost-conscious employers. Traditionally, fees from private patients had been AHCs' most lucrative source of income. Over the last half of the 1990s, however, payment-to-cost ratios (Figure 1.3) for private payers declined precipitously. Then, in 1997, the federal government piled on the pressure by reducing Medicare payments for all hospitals (including AHCs) under provisions of the Balanced Budget Act (BBA) of 1997. AHCs, however, took a special hit that is not reflected in their simple payment numbers. This was because the Medicare program began reducing graduate medical education (GME) payments that provided extra payments to teaching hospitals to reflect the higher costs of care provided in these institutions. Even though some Medicare payments were restored through BBA revisions in 1999 and 2000, payments to AHCs did not regain pre-BBA levels, and further cuts in Medicare GME payments became effective in 2003 because of Congress' decision not to address Medicare payment issues in its 2002 lame duck session. Another factor affecting AHCs more severely than other hospitals was a rise in uncompensated care payments. As the Lewin Group has documented, public AHC facilities in particular have experienced disproportionate increases in uncompensated care, especially in markets of high managed care penetration (Dobson*et al.*, 2002).

The responses of AHCs to these developments in some cases helped, but in other cases exacerbated, their problems. A first response was to cut costs through reducing lengths of hospital stays and re-engineering clinical