The landscape of academic medicine and health care in the United States

Photo courtesy: University of Colorado Anschutz Medical Campus.

Lilly Marks, Introduction by Richard L. Byyny, MD, FACP

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Introduction

by Richard L. Byyny, MD, FACP

Academic health centers (AHCs) have developed and evolved since the 1890s as the major educators of the nation's health care workforce. They play a central role in medical research and innovation, and are the source of major advances in medicine and public health.

Medical education at the end of the 19th century was disorganized with apprenticeship medical education taking place at 160 proprietary medical schools that housed 24,000 students taught by salaried faculty in urban areas. It was unusual to have students with more than a high school education.

Johns Hopkins opened its hospital in 1867, and its medical school in 1892, and was the first institution to integrate research, education, and clinical hospital practice within the same institution.

Alpha Omega Alpha (ΑΩΑ) Honor Medical Society followed shortly thereafter. It was founded in 1902 by William Root and a small group of medical students at the College of Physicians and Surgeons of Chicago, who established the motto "Worthy to serve the suffering." In 1910, the Flexner Report strongly encouraged medical schools to integrate clinical education, research, and patient care, and established the biomedical model as the standard for medical education. All physicians had a responsibility to generate new information and create progress in medical science through both laboratory and clinical science.

Science, as the animating force in the physician's life was the overarching theme in Flexner's conception of the ideal physician. Hopkins students spent their first two years in the basic laboratory sciences before progressing to their clinical training on wards in the university's hospital. The quality of the student body was ensured by requiring that all students had a university education prior to admission to medical school.

By 1915, the majority of states had enacted state licensing laws formalizing the requirement for medical education.[1] Medical professors were to dedicate their lives to clinical care, research and teaching. It was the development of the three legged stool—clinical care, research, and teaching—in academic medicine.

In the 1930s, an internship became required for medical licensure. A year of postgraduate medical education, known as "internships," were initially hospital-based. Interns were also called "house staff," since they lived and practiced under the supervision of a senior physician in a hospital setting.

Throughout this time, medical care was very rudimentary. There were few effective procedures and antibiotics had not yet been produced. There were few medications for acute or chronic disease. Most people avoided hospitals and hospitalization if at all possible. The length of hospital stay, if required, was often one to two weeks. Good nursing care and pain medications were available to provide time for healing and recovery by the patient.

Postgraduate clinical training, referred to as residency, became required for graduating medical school students following World War II. Since that time, residencies developed into a commitment for additional training of between three and seven years depending on the specialty of medicine being studied. For subspecialty fields, additional clinical training is often required in the form of a fellowship. Resident education provides the critical experiential patient and practice necessary to prepare physicians. This includes the gradual, graded assumption of supervised experiential learning and responsibility, and the importance of studying patients and problems in-depth with faculty committed to teaching, patient care, research, and scholarship. The residency experience teaches competence, caring, and character. Professionalism and moral principles are also important, including putting the patient first and adhering to professional values to serve patients and the public.

In 1944, the Public Health Service Act authorized the National Institutes of Health to conduct clinical research. Congress provided funding to build a research hospital on the NIH campus in Bethesda, MD. The hospital opened in 1953 with the clinical center for research. In 1956, the initial NIH grant program was expanded to support medical and clinical research at the NIH, and to grantees in academic health centers. Today, the NIH distributes more than 80 percent of its funding for research to other institutions, mostly to research at AHCs.

Since the uniting of the Johns Hopkins hospital and medical school in the late 1800s, AHCs have emerged as key organizations and players in the complex care of patients; clinical and research education; facilities and centers for medical research, innovation, technology, and treatments; and complex patient and clinical care. It is estimated there are now more than 100 academic health centers in the United States.

The majority of AHCs are affiliated with a university where the hospital and medical school are under common ownership; some are associated with health science universities; and others are connected to a parent university with the hospital component existing as a separate corporation. It is often said, "If you have seen one AHC, you have seen one AHC," as they are unique and vary so much.

All AHCs do have three things in common: a faculty that is heavily involved in biomedical or clinical research; a commitment to patient care that is usually highly specialized; and a major commitment to pre- and post-doctoral teaching and training in medicine and often other health professional education. AHCs have had a major impact on health care education, medical innovation, clinical care, technology, and with their concentration of faculty, students, and staff they have a commitment to develop new knowledge and apply it to improve patient care. They impact society in many ways, including development of new treatments, technologies, and applications; evaluation and adoption of new devices, therapies, and procedures; engagement in emerging and established technologies; development of health policy and practice models; provision of care for complex patients and diseases; and a responsibility to serve as key advisors to both the public and private sectors.

AHCs envelop all aspects of medical education including educating undergraduates and graduate medical students; myriad health professionals; public health specialists; and dental, nursing, and pharmacy students. They also provide postgraduate health and medical education for health care practitioners.

The sources of funding for AHCs are complex and often obfuscated. Primarily, revenue comes from the clinical care of patients; private and government research funding; tuition, fees, and state government funding; and gift and endowment income. Although cross-subsidization within AHCs cannot be easily quantified, it is likely that patient care is subsidizing both research and education in nearly all AHCs.

A current example of the plight of one of the components of the AHC is Hahnemann University Hospital. Hahnemann, a teaching hospital, provided care for Philadelphians starting in 1848, but its recent history has been one of financial turmoil that culminated in its swift closure in the summer of 2019. After decades of financial uncertainty and months of speculation, faculty, staff, and residents and fellows, many of whom had persevered through a bankruptcy in the late 1990s, and the closure of the Medical College of Pennsylvania (MCP) in 2005, were given three months to prepare for the closing of the hospital, and secure new employment.[2]

AHCs are now on the frontlines of the Covid-19 pandemic. They have been at the center of our nation's response providing patient care, research, treatment, and public health. The pandemic has also revealed many shortcomings in leadership, preparedness, science, and public health. However, physicians, nurses, health professionals, first responders, and AHCs, have been extraordinary in their response. We at ΑΩΑ and our members express our deep appreciation and gratitude for all they do and are doing.

In 1977, I had the opportunity to first work with Lilly Marks. As the Vice Chairman of Medicine at the University of Colorado School of Medicine she collaborated with me to establish one of the first Divisions of General Internal Medicine at an AHC. Since that time, she has been a leader locally, regionally, and nationally in academic medicine and academic health centers, government, society, and for the Federal Reserve. She has also been a presenter in the ΑΩΑ Fellow in Leadership Program. Throughout the years, Mrs. Marks has remained an important colleague, role model, and intermittent coach for me.

As Chair of the Board of the Association of American Medical Colleges, Mrs. Marks presented her experiences and concerns about AHCs. In this issue of *The Pharos* she recaps her November 2019 presentation on AHCs and their missions in health care, education, research, public health, and community service.

The landscape of academic medicine and health care in the United States

by Lilly Marks

Editor's Note: The following editorial is an excerpt of Mrs. Marks' address as Chair of the Association of American Medical Colleges, presented during the Association's November 2019 annual meeting.

Those who have visited the magnificent national parks of Utah—Bryce, Zion, Arches—have seen the spectacular landscapes shaped by the powerful

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forces of wind, water, and erosion. The changing landscape of academic medicine is invariably being reshaped by the powerful environmental forces of demographics, economics, politics, and the marketplace, all of which are converging to challenge—and potentially erode—the core missions of academic medicine.

Academic medical institutions are unified by the same missions. Collectively, they are the major educator of the nation's health care workforce. They are the epicenter of medical research and innovation. And, they are recognized for their comprehensive, leading-edge clinical care across all specialties, ages, and economic sectors of society.

The education, research, and patient care that is provided by academic medical centers are critical public services. Yet virtually all academic medical institutions now face the enormous challenge of funding and delivering these public goods in an era when society is questioning the value of higher education, the veracity of science, and the cost and value of the health care services provided.

Academic medicine is being challenged, first and foremost, by strong external forces. Over the past decade, many medical schools have had to adapt to significant declines in state and institutional support for education—cuts that cannot realistically be mitigated by further increases in medical school tuition.

The research mission of academic medical centers faces similar funding pressures. To sustain viable and successful research programs requires more than external grant support alone. Multiple cost studies demonstrate that internal cross-subsidies and investments, ranging from 30 percent to 50 percent, are also required of institutions that want to be players in the research arena. Thus, most medical schools are engaged in a perpetual search for the revenue sources necessary to cross-subsidize critical education and research programs.

Where can those additional funds be found? For most medical school, it's the clinical margins that provides the primary source of vital academic subsidy support. The revenue generated by the clinical mission represents 60 percent or more of the average medical school budget.

The problem is that clinical enterprises are facing the greatest external challenges of all of the missions attributed to academic medical centers. It would be nice to believe that what is currently being experienced is temporary. That the storm will pass, and things will return to normal. Unfortunately, that is simply not true.

The "new normal" in health care

Academic medical centers cannot escape the realities that are conspiring to create what is the "new normal" in health care. This new normal is defined, first, by the inexorable rise in health care costs brought on by the mounting

pressures of an aging society, the impact of the nation's unaddressed social determinants of health, and the enormous power, profits, and leverage of a market-driven and rapidly consolidating health care industry.

America has created the most expensive health care system in the world. A system that the U.S., the richest country in the world, can no longer afford. For economic context, consider five cars from various manufacturers in the automobile industry, each of which can be purchased for about $27,000 or less.

Now, think of the U.S. health care industry. National studies report that the total cost of health care insurance and out-of-pocket costs for a family of four is now more than $28,000 annually. That's the equivalent of buying a new car for virtually every family in America—every year. That's not sustainable. The rising cost of health care is nothing short of a national crisis. And it's a crisis that many in health care have contributed to.

These environmental and economic realities ensure that health care—how it is organized, delivered, reimbursed, and governed—will remain a central focus of the public debate well into the future. Regardless of which side of the political spectrum prevails in the 2020 elections, the outcome of this national debate will have profound implications for patients. It will also have significant financial and programmatic implications for academic medical centers and their continued ability to deliver on the promise of their missions.

Yet these external forces are not the only challenges for the health care industry. The internal strategies institutions adopt in response to these environmental imperatives are also changing, and potentially eroding, the landscape of academic medicine.

Rebalancing

To remain successful in a rapidly changing health care environment, many institutions are restructuring and rebalancing both clinical and academic enterprises. From a clinical and economic perspective, these decisions make absolute sense.

But, also consider the serious implications these actions may have for medical schools, faculty, students, and missions. The external threats to clinical revenue and margins have led many academic medical centers to reorganize their structure, governance, physician employment, and cash flow models.

Many organizations have built or expanded their own health care systems by merging with, acquiring, or partnering with community hospitals, and, in some cases, with for-profit systems or even private equity firms. Strong market imperatives have driven these strategies, and many of them have been very successful in achieving the goal of protecting clinical revenues.

However, these actions have also created some unintended consequences. There are significant new internal challenges that come with merging different corporate and financial structures, governing boards, and the different cultures and DNA that characterize these new blended families.

But, there is another emerging trend. For a growing number of schools, the intensified focus and priority of protecting and growing the clinical enterprise is shifting the center of gravity and the locus of power away from the academic institution and toward the clinical enterprise, disrupting more equitable and collaborative partnerships.

While that may not have been the original intention, some fundamental questions must be asked:

- What does this shifting power equation mean for the role of deans and chairs and other academic leaders?
- Are voices and critical perspectives being muted or excluded from important enterprise-level discussions and decisions?
- What does it mean for faculty, who, in some cases, are already feeling marginalized, commoditized, undervalued, and burned out?
- What does it mean for learners who may face some uncertainty about the stability of their training opportunities?
- What does it mean for faculty practice organizations, some of which are being sold or transferred from the school to the hospital system, thus separating the stewards of the mission from the stewards of the money?
- Who prioritizes the use of the physician clinical revenue streams that medical schools have historically controlled—and relied upon—to provide critical subsidies to the academic missions that define and enhance both our schools and hospitals?
- Can academic medicine survive if margin is sought not as support for missions, but as the mission?

There are, of course, no easy answers. There is, similarly, no grand solution to the challenges ahead. But there are steps that can be taken as a community to promote the success of the clinical enterprise while protecting academic medicine's unique and differentiated role at the epicenter of American health care.

A new mindset

It will require the adoption of a new mindset and a more holistic approach to change. Institutions should expand their due diligence efforts when creating new clinical structures, systems, and relationships. Currently, extensive and sophisticated analysis of the risks and rewards of these new ventures to the clinical enterprise are conducted. Yet, there is often a failure to perform the same level of due diligence on the potential impacts—positive or negative—on the academic enterprise. It's time for that to change.

If this is a new normal in health care, ensuring that the integration of the clinical enterprise does not lead to the disintegration of the academic enterprise is a requirement. Time and political capital must be devoted to ensure that new structures, agreements, funds flow, and employment models provide the critical commitments and protections necessary for the survival of the academic missions.

Fundamental protections must be directly built into the basic architecture of new clinical enterprises. That hard work is often times avoided, relying instead on statements of good faith and goodwill. Statements alone won't withstand the tests of time, memory, or subsequent changes in leadership.

The ability to fuse the latest learning and medical discovery with the clinical care provided is the defining characteristic of academic medicine. It is the secret sauce that differentiates academic medicine from other clinical providers in the community.

There must be a commitment to the critical task of ensuring that the survival and integration of academic medicine's three missions will continue to blaze the way to better treatments, outcomes, and cures.

And for academic medicine to retain our position of national trust and leadership, we must also continue to ask ourselves other hard, uncomfortable questions. For example, is bigger better or is better better? They need not be mutually exclusive, but neither are they automatically the same.

Principal versus principles

Given the critical need for clinical revenue and margins, it is imperative to balance the necessary pursuit of "principal" with the protection of core values and "principles."

Financial and market imperatives require better alignment of institutions with the evolving consolidation and challenges of the health care landscape. Necessary efforts to evolve must not inadvertently compromise the essence of academic medical centers and the unique role they play in American medicine.

We are all stewards of academic medicine in this country. We cannot avoid the challenges and risks of traversing new landscapes. But we have an obligation, as leaders and faculty, to work collaboratively to sustain all three essential missions.

Achievable solutions

There are achievable solutions. Attention must be focused on improving not only institutional interests, but also America's health care system.

The power fueled by the collective intellect, honed by experience, and inspired by the heroic and transformational work that takes place within the walls of academic medical centers every day is incomparable. That incredible power must be harnessed for the good of all Americans.

There are two critically important issues in these challenging times: resilience and survival. On an individual level, resilience and burnout are growing concerns in the medical community. Meanwhile, on an institutional level, basic survival has recently been called into question as witnessed by the unfortunate demise of Hahnemann, the major teaching hospital affiliated with Drexel University College of Medicine.

No one can guarantee what the future holds, but I'd like to share a lesson I've learned over the years about resilience and survival because both are critical in shaping our future.

In the book *Good to Great*, management expert Jim Collins sought to identify the defining characteristics of great organizations and leaders. Among those he interviewed was Admiral James Stockdale, the highest-ranking prisoner of war held by North Vietnam. A POW for eight years, Stockdale's leadership was widely credited with saving many of his fellow prisoners.

Collins asked Stockdale to reflect on any differences between the prisoners who survived their captivity and those who did not. Most of the survivors, Stockdale said, exhibited a powerful psychological duality. They confronted the brutal reality of their circumstance, yet they still maintained a deep faith that they would prevail in the end.

By contrast, Stockdale observed that it was often the optimists who perished—those who told themselves that they would be saved by Christmas, or Easter, or their birthday, and they just needed to hold on until then. But year after year, those milestones came and went, and nothing changed. The optimists, said Stockdale, ultimately died of a broken heart.

There is a subtle difference between optimism and faith underlying what Collins labeled the Stockdale Paradox. Optimism is a passive hope. It relies on the belief that

circumstances will improve, irrespective of actions—a belief that the cavalry will ride in and save you.

Faith, however, is something far more substantial. Those with faith believe they will prevail but also understand the need to actively confront their circumstances in ways that might contribute to saving themselves.

The Stockdale Paradox resonates deeply because it echoes the most important lesson that I ever learned from my father.

I was born in a refugee camp in Germany following World War II. Both of my parents were Holocaust survivors. My father survived Auschwitz, my mother, Bergen-Belsen. When I was growing up, my parents rarely talked about their experiences except in the most general terms. As I grew older, I became interested in whether there were unique characteristics intrinsic to survival, and I had many profound conversations with my father.

He repeatedly told me:

"Lilly, to survive life's difficult challenges, you can never think of yourself as a victim.

"You don't have to experience something as horrific as war or a holocaust. Too often, people see themselves as victims of all types of environmental and human challenges."

He cautioned that if you believe you are a victim, it diminishes your resiliency. If you believe your fate is in someone else's hands, it inevitably weakens your response.

Over time, it makes you feel powerless, thinking your actions don't matter or affect the outcome. In life, you may actually encounter people who count on exploiting your anger, victimhood, helplessness, and hopelessness.

"The key to resilience and survival," my father explained, "is confronting your challenges every day with the courage, tenacity, and faith that what you do, and how you do it, makes a difference. What defines you are not the challenges that befall you. What defines you is how you respond."

There is a magnificent quote by another Holocaust survivor, the noted psychiatrist Victor Frankl. In his book *Man's Search for Meaning*, Frankl wrote, "Between stimulus and response, there is a space. In that space is our power to choose our response. In our response lies our growth and our freedom."

Academic medical centers and medical institutions are now in that space between stimulus and response that will determine their future. Just as individuals can take on a victim mentality in difficult times, institutional cultures can also develop a victim mentality.

"Between stimulus and response, there is a space. In that space is our power to choose our response. In our response lies our growth and our freedom."

—Victor Frankl
Man's Search for Meaning

These are clearly difficult times as the missions of academic medicine are being threatened. Some schools and health systems will succeed, while others may falter. Within that space is the choice to be the victims of change and circumstances, or the architects of change, responding boldly, resolute in the belief that our actions will make a difference.

We must choose to meet this moment with leadership, creativity, collaboration, and courage. To redouble our commitment to the indispensable and integrated missions at the heart of academic medicine. And to become the architects of change who will lead America's health care system into the future.

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