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Advancing the Academic Health System for the Future

A Report from the AAMC Advisory Panel on Health Care

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Manatt Health, the healthcare division of Manatt, Phelps & Philips, LLP, is a fully-integrated, multi-disciplinary legal, regulatory, advocacy and strategic business advisory healthcare practice. Manatt Health's extensive experience spans the major issues re-inventing healthcare, including Medicaid re-design and innovation; payment and delivery system transformation; health IT strategy; health reform implementation; healthcare mergers and acquisitions; regulatory compliance; privacy and security; corporate governance and restructuring; pharmaceutical market access, coverage and reimbursement; and game-changing litigation shaping emerging law.

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Executive Summary

A revolution under way in health care is fundamentally changing how every academic medical center (AMC) operates. Health care reform is challenging academic medicine to reinvent its approach to the triple mission. Changing economics, market consolidation, fiscal pressures, and payers' new focus on higher quality and lower cost require a new operating model for academic medicine. Every aspect of AMCs will undergo transformation in the decades ahead: how care is delivered, how students and residents are educated and integrated into clinical care, how the research enterprise is organized and funded, and how the missions come together in a new and meaningful way.

For the past year, the AAMC Advisory Panel on Health Care has worked to develop common themes and leadership principles to help AMCs create sustainable models for the future. This resulting report, *Advancing the Academic Health System for the Future*, is organized around eight themes developed from interviews with 13 leading academic health systems the panel members believe represent the vanguard of academic medicine:

Advancing the Academic Health System for the Future	
1. *The AMC of the future will be system-based,* with a broad regional presence and clinical services aligned across the continuum of care.	**2.** *Academic health systems require strong and aligned governance, organization, and management systems* committed to a unified direction, transparency, and internal and external accountability for performance.
3. *University relationships will be challenged to evolve as academic health systems grow and develop*, requiring leadership and structure to support clinical expansion, community engagement, alignment on financial requirements, and implementation of productive industry relationships.	**4.** *Growth and complexity of academic health systems requires an enhanced profile and responsibilities for department chairs, new roles for physician leaders, and evolution of practice structures* to focus on organizational leadership designed to lead clinicians into a new era.
5. *Transparency in quality outcomes and financial performance across the academic health system is central to high achievement* that is demonstrable to patients and purchasers.	**6.** *Competitive viability and long-term mission sustainability will require radically restructuring the operating model for cost and quality performance*.
7. *Academic health systems must begin the movement to population health now,* as purchasers look to reward organizations that can demonstrate improved outcomes for attributed populations of patients, and as community leaders address the social determinants of health.	***8.*** *Academic health systems must conduct candid assessments of strengths and weaknesses essential to achieve change; and must revamp organizational culture if necessary.*

These themes represent a recognition in academic medicine that integrated health systems and improved health outcomes are crucial for success in the future. As institutions that conduct basic and translational research, identify new therapies for disease, study and compare models of care, concentrate the resources needed for highly specialized care, serve as anchor institutions in their home communities, and prepare the next generation of clinicians, academic health systems are uniquely positioned to effect disruptive change in health care. But they also must act forcefully to decrease the total cost of care, introduce innovative models of care, increase integration across the continuum of care, and right-size their missions to achieve strategic and fiscal sustainability. The generational shift toward a distributed model of care must be recognized and embraced as academic medicine continues its work in improving health and advancing medicine through discovery and innovation.

This report is intended for use by the leaders of academic medical centers, medical schools, faculty group practices, and universities as they consider the many challenges ahead and wrestle with the tough decisions they must make. The report also includes an assessment tool that will help leaders evaluate their progress in moving their organizations forward as systems of care. The Panel trusts that the report will promote useful discussion within the leadership of academic medical centers and serve as a stimulus for undertaking the challenging work of meaningful change: toward a thriving *academic health system for the future.*

Institutional Profiles Available at:
https://www.aamc.org/advancingamcs
Note: Throughout this report, references to these institutions are contained in ***bold italics.***

The Case for an Academic Health System

Academic medical centers have thrived for years; many have realized operating margins that they have re-invested in facilities, programs, and their academic missions. This success has come despite the dire predictions of the late 1990s, when "managed competition" was first discussed as a solution[1] to the flaws in the health care system. Investment in sub-specialized services for which premium prices are charged has allowed AMCs to sustain the capacity to provide significant health care resources communities depend on such as level-1 trauma centers, burn units, pediatric intensive care services, mental health care and more. Over the past two decades, AMCs have significantly expanded their clinical faculty, marketed their expertise in complex clinical care, and improved customer service and patient care by building sophisticated inpatient facilities and ambulatory care centers. As a result of this growth, many AMCs have been able to leverage their size, unique services, and market prominence in contract negotiations with commercial and other payers.

However, tectonic forces are causing upheaval in health care; academic medical centers must evolve rapidly or risk becoming high-priced, anachronistic institutions in a landscape of highly organized health systems. In coming years, academic medical centers will operate in a competitive environment in which payers seek to keep their premium increases at or near consumer price index (CPI) levels, leading to hospital and physician rate increases at similar levels. The result will be limited networks and selected providers willing to meet this price point while satisfying the payer's quality measures. The premium pricing that AMCs have been able to negotiate will not be maintained, at least not for services widely available in community settings. The continued pressure on Medicaid and Medicare reimbursement will drive all rates down. With labor and supply costs easily outpacing the consumer price index (CPI) by two to four percentage points, clinical margins will collapse, putting enormous tension on the component parts of the AMC to compete for scarce resources and limiting the ability of clinical services to cross-subsidize the academic missions. A "worst-case" scenario, and approaches to address it, was highlighted by UHC's Endurance Project—a case study of a fictional AMC challenged to deliver all clinical services at Medicare rates.[2]

As the Endurance Project so starkly illustrated, the diminishing ability to shift costs to commercial payers will force AMCs to re-examine how they function and to understand the critical need to restructure their operating models. In this dynamic and demanding health care environment, some AMCs will thrive. They will transform themselves, reduce their costs, and implement new operating models that can be sustained with sharply reduced clinical reimbursement. They will find new ways to support the vitality and integration of the clinical, educational, and research missions. These academic medical centers of the future will have increased scale; nimble, more agile structures; restructured and radically reduced costs; high

[1] Enthoven, Alain C., "The History and Principles of Managed Competition," *Health Affairs*, 12, no supply 1 (1993): 24-48.

[2] Robertson, Tom et al., "UHC Endurance Project: Readying the AMC for a Decade of Change," University Health System Consortium, 2012

degrees of alignment across their missions and with their affiliated or parent university; and will be capable of managing risk and caring for patients and assigned beneficiaries across the continuum. They will be academic health *systems* that are focused on improving health as well as delivering health care. The prototypes of these next-generation systems are emerging today and are the focus of this report.

Far-sighted leaders know that they must prepare for a radically different future and brave these challenges today. They recognize that every aspect of AMCs will be transformed in the next decade and are undertaking that work now. As one recent AAMC chair said, "While our core values and purpose as academic medical centers are immutable, all else in academic medicine is changeable—in fact, needs to be changed—to accommodate a changing world. Everything about how we are structured and organized must be in play. Everything about our academic culture, with regents, provosts, deanery, and the academic senate… is in play. Everything about how we educate students and residents, how we deliver care, how we organize ourselves for research, is in play."[3]

How to Use This Report

This report is intended for use by the leaders of AMCs, medical schools, faculty group practices, and universities as they wrestle with the tough choices ahead. Companion appendices to the report include:

- Profiles of 13 leading AMCs forming systems of care, organized around critical dimensions relevant to this project available online at www.aamc.org/advancingamcs
- A self-assessment tool for leaders of AMCs to use for the candid reflection the Panel recommends
- Discussion questions linked to this report to assist leaders in engaging in structured dialogue

An additional resource is the profiles conducted by the AAMC in its *"Readiness for Reform"* series, which address individual dimensions of transformative change.

Although the themes we have identified are broadly applicable across academic medicine, AMCs are diverse and heterogeneous, with a variety of ownership structures, distinct clinical markets, and diverse academic priorities. The purpose of this report is not to present one "right" way forward; but rather to understand the requirements for future success as a system, which precursor models are instructive examples, and characteristics new models will have. The Panel hopes that this report promotes useful discussion among the leaders of academic medical centers and inspires them to begin the challenging work of meaningful change: *toward an academic health system for the future.*

[3] Laret, Mark R., AAMC Chair's Address, "Thinking Differently about Academic Medicine," AAMC 123rd annual meeting, San Francisco, California, November 4, 2012.

Chapter 1. The Academic Medical Center of the Future Will Be System-based

Consolidation among hospitals is creating larger integrated delivery systems, many of which also are pursuing vertical integration as payers. In market after market, from coast to coast, the pace of system formation and consolidation is accelerating. Health reform initiatives such as accountable care organizations (ACO) and episodic/bundled payment programs also encourage the system model. Third-party payers are establishing new partnerships with these health systems and are developing branded, limited network products. In the Panel's view, the implications of rapidly consolidating markets are profound. AMCs have four options: *form* a system (if they have capital and wherewithal to do so), *partner* with others in a collaborative network model, *merge* into a system, or be prepared to *shrink* in isolation. Examples of each option can be found across the country, occurring in response to unique institutional and marketplace factors.

Figure 1: Options for AMCs in Health System Formation

AMCs must determine type and nature of their future system identity

Merge / Affiliate with Mega-System	Specialized Complex Care Leader	High Performance Regional System	Public Entity Statewide Hub	Population Health Manager
➢Merge or establish primary preferred affiliation with large health system and become the "academic brand" for the system	➢Renown regional, national, international for a selected comprehensive specialty service (e.g. Cancer) ➢ Contractor to large systems ➢ Expert at Complex Care management ➢ Very strong Brand promise	➢ Independent AMC with tightly controlled system of care in attractive geography ➢ Market share leader in an attractive "sub-regional" geography with "must-have" status ➢ Strong brand promise	➢Sole/primary AMC in state ➢ Safety net provider for state; major Medicaid provider ➢ Tertiary/quartenary care provider for specialized services ➢Referral based services combined with local primary care	➢Regionally / nationally distributed health care system ➢Risk bearing "population manager" ➢ Health Plan or payer partnership to support ➢Clinically integrated network of faculty and community based physicians
Loyola (Trinity) **U. Minnesota Medical Center (Fairview)**	**M.D. Anderson** **CHOP**	**Penn Medicine** **Yale New Haven Health** **Emory Healthcare**	**U. Of Iowa Healthcare** **UNM Health Sciences** **UAB Health System**	**UPMC** **VCU Health System**

Systems of Care

Assembly of these large systems is one step toward transformation; making them operate efficiently to deliver optimal clinical services is another. Both require large financial investment, necessitating operating scale or access to new sources of capital. These investments permit the development and acquisition of primary care, clinical informatics, risk-bearing vehicles (HMO, ACO), implementation of population health management capabilities, health information exchanges, provider health plans, medical homes, expanded community-based interdisciplinary services, chronic disease management, transition programs from hospital to home, remote monitoring and other advanced information technologies, and myriad other requirements for improving population health.

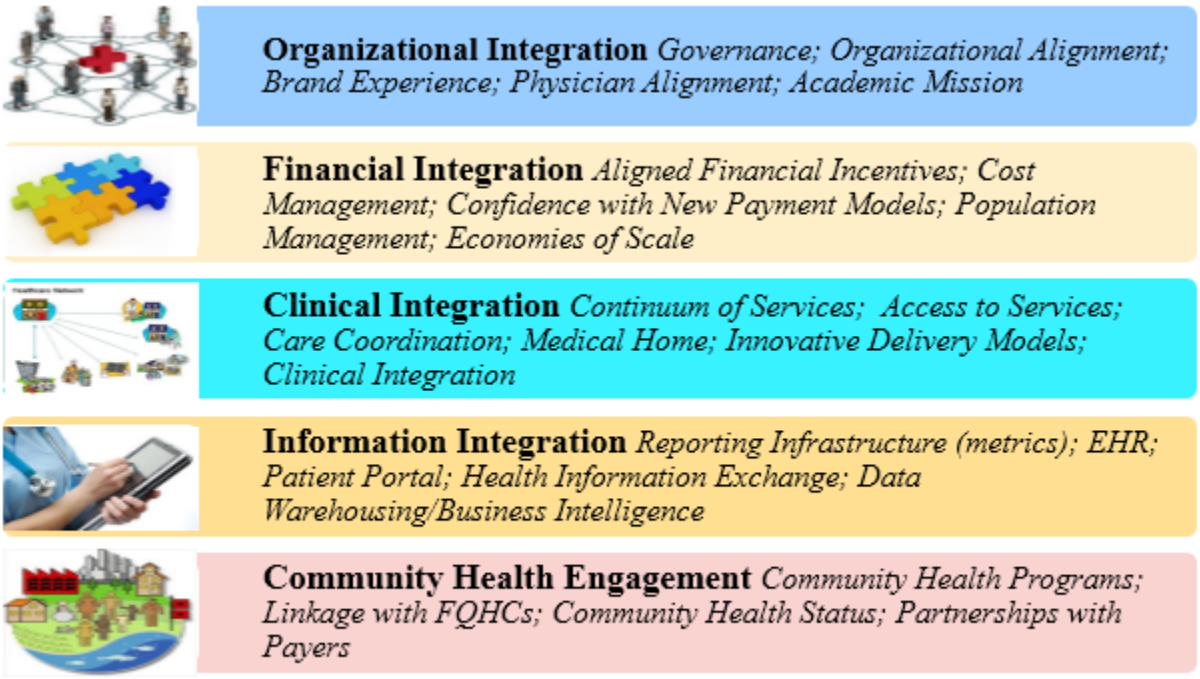
Successful systems will include clinically integrated networks of physicians that can emulate important attributes of a high-functioning group practice, including use of evidence-based protocols, coordination around the patient, and shared economic incentives. Success will require both clinical informatics and highly engaged clinical leadership.

Due to these extensive requirements, some AMCs are choosing to create partnerships with for-profit health care organizations, combining their specialty services expertise with the operating expertise and access to capital of the partner. This combination then can be exercised in a joint-venture model for the acquisition of independent hospitals. Variants of this strategy have been implemented by Duke with LifePoint Hospitals, Inc. and the ***Cleveland Clinic*** with Community Health Systems, Inc.

In addition to regional systems of care, some AMCs are expanding the scale of their core complex tertiary and quaternary care services through high-value "centers of excellence" that extend beyond the health system's geographic region and attributed population. For example, the ***Cleveland Clinic*** has developed numerous partnerships with large employers (Walmart, Lowe's, Boeing) to provide services such as cardiovascular surgery and orthopedic surgery at set prices, offering high-value, cost-effective options for purchasers. By focusing on expanding core complex care services that the AMC already delivers locally in a high-quality manner into regional, national, and international markets, the AMC can develop and optimize a local population health approach to support the entire system.

The greatest challenge for any system of care—academic or nonacademic—is to achieve a high degree of integration that permits systems-based collaboration and efficiency initiatives to be successful. Five levels of integration are needed to succeed as a health system:

Figure 2: Five Levels of Integration for an Academic Health System



Source: Manatt Health Solutions

Implications for AMC Leaders

The challenges faced by AMC leaders who want to transform their institutions are significant and are often deeply embedded in institutional culture:

- The innate conservatism and fragmented operating structures of academic centers often render them averse to taking the risks necessary to succeed under alternative payment systems.
- Chairs are focused more on the success of their own departments than the success of the institution as whole.
- Educational inefficiencies are accepted as mission-necessary.
- Faculty practices are hardwired for fee-for-service in terms of their structure, rewards systems, and specialty mix.
- Business rigor is unevenly applied across the enterprise.
- An inward-looking mentality may overemphasize resource control.

These challenges make preparing for a new paradigm *as a system of health care* a serious—and in many cases daunting—undertaking for AMCs. Leaders must become agents of change rather than protectors of the status quo. The broad gap in readiness to operate as a system, the lack of well-established primary care systems, troubled histories of engagement with local communities, limited experience in managing risk contracts, relatively high cost structures, and inexperience with partnerships combine to create a significant handicap for even the most far-sighted and determined leaders. The added complexity of aligning an expanding clinical enterprise to educational and research programs also in need of re-engineering creates a further challenge for leaders. As an additional disincentive to change, moving too quickly to alternative payment

systems jeopardizes traditional revenue streams upon which the economic ecosystem of the enterprise balances.

Panel members concurred in the view that complex comprehensive care is a necessary but insufficient clinical platform for the future. AMCs must become capable of managing the care of patients across the continuum of care, think outside the walls of their acute care facilities, and establish new partnerships with non-academic providers as well as with payers who can bring needed capabilities, knowledge, and experience. Added to the downward pressure of clinical revenue are projected reductions in NIH funding, which create a new context for leadership discussions of priorities and investment.

Leaders must therefore rally all the constituents in their institutions around a far-reaching agenda for change. All of the AMCs profiled in this report have leaders who are vigorously developing systems of care and pursuing integration in several or all of the indicated areas. They are re-branding themselves to communicate their system identity. ***Emory Healthcare***, ***University of Iowa Healthcare***, ***Penn Medicine***, ***UAB Medicine***, ***UCLA Health***, ***VCU Health System***, ***Yale New Haven Health System,*** and ***UNM Health System*** all connote *systems of care* rather than a hospital, a physician group, a campus, or a defined location. This is not a subtle shift, and signals the commitment for developing systems of care with an enhanced identity for the clinical enterprise and its extension into the community and the region. Furthermore, leaders should consider the following:

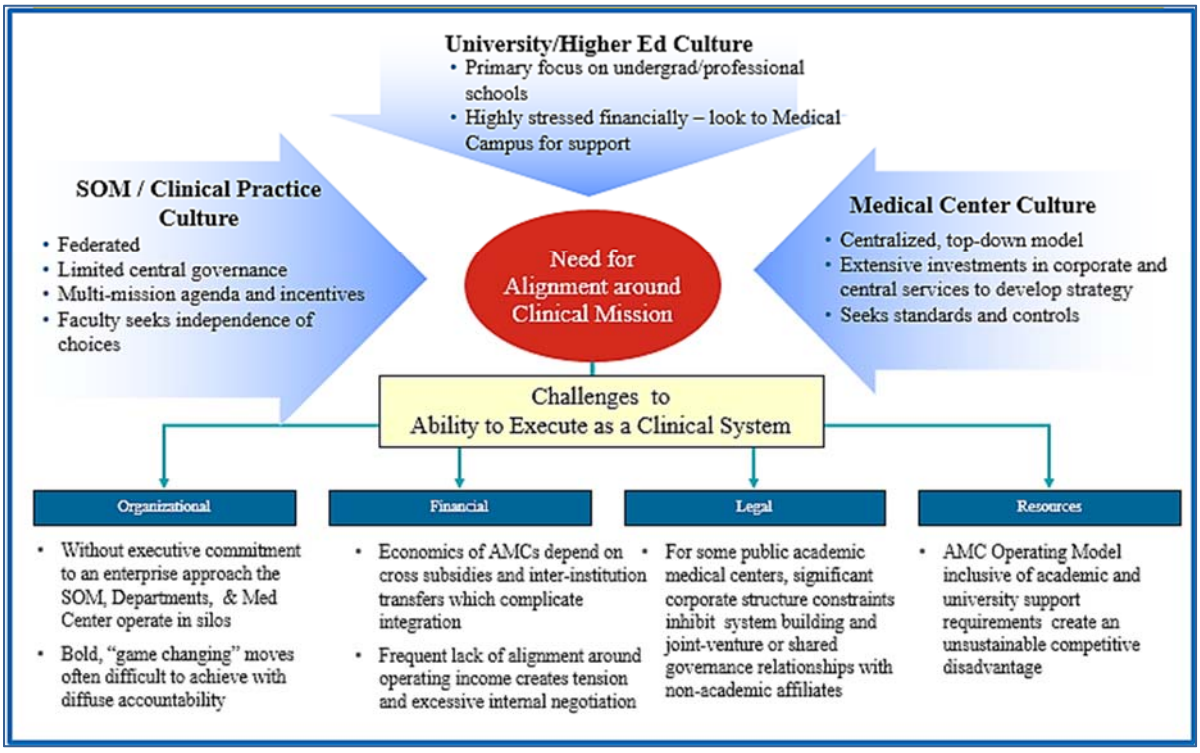
- Rapid system formation is resulting in larger, more comprehensive, and more complex academic health systems. The answer to "How big is big enough?" remains specific to institutions; however, the profiled institutions mention targets for covered lives in the 1 to 1.5 million range, in addition to continued growth of specialty programs that access broader regional, national, and in some cases international populations.
- AMCs must determine whether they will be the locus for rapidly developing networks of physicians—employed and affiliated, faculty and non-faculty—and other clinical and community partners to sustain a comprehensive system of care that can take on population health management responsibility, compete with non-academic systems in limited network models and in price-sensitive environments, and maintain commitment to the academic mission.
- Because of the extensive investments required to form and operate a leading system of care inclusive of multiple hospitals, physician groups, continuum of care services, HMO or population health vehicle, integrated IT, and related services, *access to capital* will be a determinant of future system success. It is likely that many institutions will need to partner with others—ranging from faith-based systems to for-profits—to achieve the degree of scale and capital needed.

Chapter 2. Academic Health Systems Require Strong and Aligned Governance, Organization, and Management Systems Committed to a Unified Direction, Transparency, and Accountability for Performance

The work of building health care systems is hard and expensive. In most cases, the execution of system strategy represents a "bet-the-ranch" proposition for the institution and entails fundamental shifts in behaviors and tactics. It requires a high degree of discipline to drive down operating costs and utilization, while simultaneously reaching out to new partners across the region, forging relationships and partnerships that incorporate community-based institutions and physicians. AMCs that are internally absorbed by repetitive and difficult discussions about internal power issues cannot make system decisions with the clarity and speed required. Traditional consensus-based decision processes and operating silos run counter to a system-based model (Figure 3), creating friction between the stakeholders. Accountability between the operating units in academic centers is often poorly understood, uneven, or absent. The result is that change or commitment to major new initiatives requires complicated and protracted negotiations with a number of stakeholders.

The institutions profiled for this report are solving these organizational barriers to change. They have implemented decision-making processes aligned across their hospital, faculty practice, and school; strengthened management accountability; and instituted enterprise-level management structures to enhance the management of these ever larger and more complex organizations.

Figure 3: Barriers to Systemic Change in Academic Medical Centers



Organizational Alignment

The institutions profiled have differing corporate and organizational structures: public and private, one senior leader over all missions or different accountability structures for academic and clinical, one corporate structure or distinct but affiliated institutions. Rather than assess the merits of these different models, the Panel focused its discussions on how leaders work together *and become aligned* to succeed as a system of care. The Panel felt strongly that the answer to better alignment is not necessarily centralized governance but rather agreement on goals and willingness and commitment to work together to achieve them. As one AMC leader aptly stated, "Ultimately, we will be judged by what we achieve. AMCs that pay excessive attention to the 'right' process or the 'right' structure will miss opportunities, while running the risk of being bypassed by others who correctly home in on the only thing that matters: getting results."[4] A number of the institutions profiled are organizing themselves to achieve results:

- The ***Cleveland Clinic***, which reports through a CEO to a Board of Governors, has strengthened its emphasis on alignment by establishing a *Clinical Enterprise Leadership Team* that includes leaders from all the clinical institutes and centers. The goal of this team is to move the strategic direction of the Clinic across silos to achieve an integrated model.
- The ***UAB Health System*** is the entity created to jointly manage UAB Hospital and health system and University of Alabama Health Services Foundation (Kirkland Clinic), reporting through a CEO to a Health System Board. UAB Medicine, the academic component of the health system, is managed by the Joint Operating Leadership, which is composed of the dean, the CEO, and the president of the practice plan. The JOL meets bi-weekly with the UAB President and incorporates decision processes that have been crucial to the ability of UAB to be nimble, allowed the components to be mutually supportive, and assisted the development of proactive responses to health care reform.
- All clinical services are organized under ***Emory Healthcare*** (EHC) under the responsibility of the EVP Health Affairs. Emory Healthcare integrates clinical services under a CEO and academic services under the dean. Emory utilizes two major groups of leaders for strategic decision making. The first, the Executive Leadership Group, is focused on EHC's implementation of strategy to advance academic medicine and institutional development. The second, the Academic Medical Center Initiatives Group, is focused on implementation of its strategic vision: optimal integration of education, research, and health care, referred to as "Emory Medicine."
- ***UCLA Health*** has established a non-fiduciary Board of Overseers so that it can benefit from the kind of governance structure typical of private health systems. This new Board is providing direction for the enterprise strategy, requiring transparency, and enhancing the strategic decision making at UCLA Health. UCLA has also designated a Health System President, with responsibility for all clinical services; and a Health Systems Executive Team, responsible for senior decision making. This Team includes all senior

[4] Ralph Muller, CEO, University of Pennsylvania Health System, *AAMC Integrative Leadership Proceedings*, October 2009.

executives responsible for academic and clinical services; the Chairs are represented through one designated Chair.

- In the case of the ***University of New Mexico Health System***, the CEO of the Health System is also the dean of the School of Medicine. Core Leadership and Health System Operation teams meet weekly with a focus on integrated Health System strategy and operations. Any strategic issue relating to the clinical enterprise is brought before a committee of chairs. Big decisions are brought to them early on for reactions and feedback. The Health System team then implements decisions based on this process.
- ***University of Iowa Health Care*** is an integrated system, with a leadership cabinet consisting of the Vice President for Medical Affairs, CEO of the hospital, dean, chief medical officer, general counsel, chief financial officer, chief nursing officer, and two elected physician chairs. The dean of the School of Medicine has established four working groups of department chairs who are tasked with generating ideas and strategies that will prepare the organization for the future. These groups meet regularly across four thematic areas linked to the inter-disciplinary strategy of the school: Basic Sciences, ACO and Outpatient Services, ICU and Inpatient Services, Diagnostic and Molecular Therapeutics.

These team-based structures are proving effective because of their leaders' trust and commitment to collaboration, accountability for results, and ability to resolve issues. Leaders in these organizations are having honest conversations about allocation of resources, establishing clear priorities, and seeking to simplify decision making. These discussions are enhanced when the executive and clinical leadership teams have an aligned incentive compensation system in which goals and objectives are shared by the clinical chairs and executive leadership. This is the approach taken by, among others, ***Vanderbilt University Medical Center***, ***Penn Medicine***, and ***Johns Hopkins Medicine.***

Management Systems

Leadership alignment depends for its success on the support of management systems capable of providing the depth and expertise needed to engage in and resolve complex operating challenges. New capabilities also must be established to address the burgeoning needs of a broad health care system undertaking programs related to population health. Management system priorities include:

- **Information Systems.** The ability to drive operational, clinical, and financial performance, as well as succeeding in risk-based contracting, is contingent upon good information. Additionally, institutions are defining themselves in new areas of personalized medicine, clinical effectiveness, integrated practice units that are redesigning care, and application of LEAN methods based on activity-based costing. Establishing a single, well-resourced information services organization under the capable leadership of a strategically positioned Chief Information Officer and a powerful Chief Medical Information Officer is a significant step several exemplar organizations have taken, including ***VUMC***, Johns Hopkins Medicine, ***UCLA***, and ***Penn Medicine***.
- **Finance.** Finance must be considered a strategic function for the next-generation academic medical center. Strategic financial forecasting for all the components, and

increasingly for the system, is essential for projecting resource requirements and balancing sources and uses of funds. With access to capital becoming more critical, the corporate finance function must become more sophisticated. The ability to price new types of contracts successfully, whether bundles, shared savings, or risk-based, requires expert financial analysis. The larger national systems and publicly traded hospital systems have steadily been enhancing their offices of finance. Johns Hopkins Medicine has paid particular attention to an integrated, enterprise-wide financial function. ***Emory Healthcare***, ***UAB Health System***, ***UPMC***, ***PENN Medicine***, ***VCU Health System***, ***Montefiore***, and ***VUMC*** have developed sophisticated financial management functions.

- **Building Leadership Capacity.** The needs of the emerging academic health system are so fundamentally different that building leadership capacity becomes a strategic dimension of the utmost importance. A number of organizations have entered into partnerships with their affiliated business schools to prepare faculty for leadership roles, as ***Penn*** has done with Wharton and the ***University of North Carolina*** with the Kenan-Flagler Business School. The ***Cleveland Clinic*** started its Leadership Academy in 2002 with the emphasis on developing its next generation of physician leaders. The Academy subsequently broadened its mission to address leadership needs of researchers, nurses, and executives, and operates satellite programs in Canada and Abu Dhabi.

Implications for Leadership

The foundation for the academic health system of the future will be a strong team structure made up of sophisticated and capable executives supported by excellent management systems. Personal leadership skills and the ability to work across boundaries with colleagues will be the defining characteristics for successful AMC executives. Principles that these leaders and teams will need to uphold include:

- **Trust.** The basis for success requires that the leaders and teams believe that they are dealing with forthright partners.
- **Unified Direction.** The task of establishing a successful academic health system will require that leaders prioritize collective needs over individual gains.
- **Transparency.** Collective visibility into the team's progress against agreed-upon strategies and objectives, and a clear understanding of operating, clinical, and financial performance are needed for a team to function at its highest potential.
- **Accountability.** Leaders must be accountable to each other for executing and achieving results.
- **Communication.** Leaders must ensure that information permeates the organization; they cannot achieve results if they are isolated and the directions in which they are leading the organization are not understood.

Chapter 3. University-Clinical System Relationships Will Be Challenged to Evolve as Academic Health Systems Grow and Develop

The complex interplay of agendas and interests between universities and their owned or affiliated health systems is becoming more intense. Often, the university's community engagement commitment leverages the extension of the academic health system into population health. The obligation—and often the pressure—that universities feel to address health disparities in their communities creates further tension and more stress on already stretched resources. Similarly, the universities' aspirations and interest in globalization may also motivate the extension of academic and global programs, which can stretch available resources and prove to be a significant distraction from the concentration needed in the home territory.

On the other hand, the strategic imperatives of the clinical system for dynamic growth and regional presence can pose vexing organizational and policy questions for many universities whose leaders are simultaneously seeking to address a "liquidity crisis" and their own need for innovation in the face of such disruptions as the power of open-access online education.[5] With weakening balance sheets, cuts in state funding, and ballooning expenses, a number of universities look to their clinical systems as a source of funds. In these cases, they may seek to have the medical school and/or the clinical system shoulder more overhead. They may also seek to increase the transfers to the central university. However, these funds are not likely to continue to be as available. Declining Medicare reimbursements, sparse Medicaid reimbursements, and the push by payers to redesign care to keep patients out of hospitals are squeezing hospital margins. While many AMCs have managed to mitigate these effects by enhancing their service mix with commercial patients and incrementally reducing their costs, the expectation of most AMC leaders is that the ample margins of the past decade will evaporate in the future. The potential collapse of acute care clinical margins will put enormous pressure on the entire academic medical enterprise to find other ways to support research, education, and university needs.

The imperative to manage population health requires clinical systems to assume increasing degrees of financial risk for beneficiary health care costs. With the extensive size and scale of most university-based clinical systems, the assumption of risk must be considered a potential liability for the university, and arms-length governance and organization models for clinical services will insulate on the downside. Implementing these models runs counter to the desire to leverage the clinical system for greater fiscal support, and therefore to have them "closer" to the parent.

Public universities are especially vulnerable to these challenges. As states have reduced their funding, public universities have looked to close the gap by enhancing their medical schools to augment research funding, and affiliated clinical entities to increase clinical income. Although there was a pronounced shift toward separation of higher education from health sciences in the

[5] Denneen, Jeff and Tom Dretler, 2013. "The financially sustainable university." Bain & Company, Sterling Partners.

1990s, largely to protect the parent university from the potential financial risk of large medical centers, the success of medical centers in recent years has reversed this trend.

Continued cuts in funding for higher education are forcing universities to look to their health systems to provide increased overhead payments and direct support payments. However, this may prove self-defeating. Absent a strategy for continued clinical success, excessive requirements for funds transfer may lead to a health system optimizing its current financial performance (with a focus on maximizing its fee-for-service business and pricing) while sub-optimizing its downstream potential (by underinvesting in new capabilities that will be needed for future success). Realizing these are important issues, ***Emory University*** added a health system CEO, Steven Lipstein of Barnes-Jewish-Christian, to its University Board. Important discussions between the university and health system leadership occur to align strategic objectives and establish more informed decision processes that can balance the needs of all constituents.

Governance Challenges for Public Universities

As an academic health system's clinical scope and scale grows, the governance requirements for clinical oversight become far more critical, both to the ability to lead the system itself and to ensure risk management for the university. In some cases, clearly distinct governance should be established for clinical services to provide the operating structure needed to support the growth of the system. This is the case for ***UAB Medicine***, organized as a distinct 501(c)(3), and the ***VCU Health System***, organized as a Health Authority. ***UCLA Health*** has established a non-fiduciary Board, comprising external business and health care leaders, to provide oversight and direction for its development.

Figure 4: Clinical Enterprise Governance Goals

- **Best Governance Practices:** Ensure good governance practices for clinical and financial decisions consistent with the scale of clinical services, providing accountability and long-term orientation. Extend governance across all clinical services.
- **Aligned Incentives:** Align quality, operational, and financial incentives across all dimensions of clinical services, with clear goals for efficiency.
- **Nimbleness:** Provide the clinical enterprise with capacity for quick and nimble decision-making.
- **Board Expertise:** Provide expertise in business and health care management for the clinical enterprise.
- **Health System Development:** Provide a legal structure and process that simplifies incorporation, affiliation, and joint ventures with other health care entities.
- **Risk Profile:** Provide the basis for the clinical system to assume financial risk through an HMO or ACO vehicle, while insulating the parent university from significant downside losses that may occur in a worst-case situation.

To attract these clinicians into its orbit, preferred policies for compensation and streamlined approaches to faculty appointment often run counter to university policies that question the influx of individuals who do not have an academic profile. Some institutions have addressed these issues by having distinct processes and expectations for the medical campus and the rest of the university.

Another challenging issue relates to the collaboration with industry and the management of intellectual property. As the same time that federal funding for research continues to fall, clinical income is reduced and the system support for the medical school research mission inevitably declines. Alternative sources of support for biomedical research must be found. One such source is collaboration with industry, which needs the basic science innovation of medical school researchers and can monetize intellectual property to accelerate translation into clinical practice. ***VUMC*** operates the largest biomedical informatics center team in academic medicine, built by physicians with clinically oriented focus areas. In addition to traditional research, the center offers information and consultation services and support for medical center operations, and has developed various products and services in conjunction with or sold to industry partners.

Industry partnerships are not a reliable and immediate replacement source of revenue for federal funding; but rather are often in evidence when a compelling health-related question can be answered by the collaboration that will yield downstream positive impact. The academic health system of the future will strongly value a collaborative—indeed in some cases symbiotic—relationship with industry, regulatory agencies, and social sectors, requiring greater degrees of freedom with which to structure these relationships.

Implications for Leadership

Evolving a mutually beneficial relationship between a growing and expanding clinical system and its parent university will be a signal dimension of the effective academic health system for the future. Characteristics of an evolved relationship will include:

- **Strategic direction setting and dialogue** between the university and academic health system leadership to plan for and address opportunities and vulnerabilities
- **Transparency in funds flows** between the academic center and the university, with resource management based on strategic financial planning
- **University practices and policies** supportive of clinical system requirements for growth
- **Intellectual property policies** that encourage principled industry collaboration

Chapter 4. Growth and Complexity of AMC Systems Requires an Enhanced Profile and Responsibilities for Department Chairs, New Roles for Physician Leaders, and Evolution of Practice Structures

The need for leadership from department chairs has never been greater. A defining attribute of academic medicine is the role and structure of clinical departments and the leadership provided by their chairs. The integrity and autonomy of the clinical department as a professional and operational structure has been fundamental to the growth and success of academic centers. In debates regarding the future of the departmental model, there are arguments for considering alternative models for clinical organization (such as services organized around the patient and disease themes as implemented by the ***Cleveland Clinic***), and arguments for reinforcing the departmental model (a proven unit for accountability management and integrating the missions).

In this report, we have focused on how the chairs will work together to meet new demands for growth, integrate with the management team of the clinical system, and effectively balance their academic and clinical responsibilities. The institutions profiled for this report have made important shifts in their expectations for department chairs, reflected in the nature and types of chairs they are recruiting.

The Panel concluded that a critical attribute for "the chair of the future" will be the ability to lead the faculty during a time of change. As one dean's charge to a search committee put it, "Most critical is the ability of the leader to motivate and inspire and bring the department together." This was a sentiment strongly echoed by the Panel. However, leading change within the department and participating as an effective team member within the clinical system do not mean abrogating decision making or taking the party line.

One chairman of a leading department of medicine cites the "Abilene Paradox" as an example of the need for true diversity of opinions and honest discussion of issues prior to decision making. (A group of people collectively decide on a course of action, a trip to Abilene on a hot dusty day that is counter to the preferences of many of the individuals in the group. It occurs because of a breakdown of group communication in which each member mistakenly believes that his or her own preferences are counter to the group's and, therefore, does not raise objection.) At the same institution, the chancellor cites Intel's management maxim, "Disagree, then commit" to articulate a philosophy of leadership that values early disagreement and spirited debate, but then unites around the decision and commits to its execution.[6] This will be a challenge in many institutions where a culture that embraces traditional academic freedoms conflicts with the need to unify around a shared decision.

Clinical chairs in our profiled institutions are expected to form highly collaborative teams working within a strategic context for academic and clinical growth. The expressions of this teamwork are myriad: from recruiting within an enterprise plan, to joint accountability for

[6] Talmadge King, M.D., chair of Medicine, UCSF School of Medicine, and Susan Desmond-Heller, UCSF chancellor, raised the points in this section during a UCSF clinical enterprise strategic planning retreat, October 11, 2012.

achieving clinical results, to providing the needed clinical staffing for a remote location, to financial support for primary care development, to pooling departmental resources in a new funds flow model. The success of an increasingly interconnected and interdisciplinary health system requires this level of teamwork. For instance, successfully pricing and delivering a bundle of care requires agreement from anesthesia, pathology, and radiology to share resources equitably within the bundle. Destination program building requires not only a focus on the procedural service—liver transplant for instance—but also on the related services and ancillary areas. A successful liver transplant requires Hepatitis-C clinics; fetal surgery requires fetal diagnosis. There is no "opt-out" scenario for these cross-departmental programs— teamwork is essential. Institutions operating under a risk-based model find that the group practice model is necessary to make the economics and the clinical management work.

Clinical departments have been the operational and economic units for schools of medicine, some with a great deal of autonomy—organizations within an organization—with authority that extended from an individual clinician's schedule, managing ambulatory clinics, owning information technology resources, and driving affiliations regionally. However, a centralized approach to a number of these functions is desperately needed if the academic health system is to be agile, nimble, and able to outperform its competitors. ***UCLA Health*** and ***University of Iowa Health Care*****,** for instance, recently introduced same-day appointments for any patient requesting them, with centralized scheduling. ***VCU Health Center*** has integrated ambulatory clinic management with the hospital to enhance patient coordination. ***Penn Medicine*** coordinates regional outreach centrally through the faculty practice and has developed multi-specialty "Practice of the Future" sites that require staffing from many departments.

From the perspective of the chair, the trade-off for having less control over some functions is organizational enhancement that benefits the department. These include reducing the financial risk of the department and boosting the chair's role in policy- and direction-setting for the clinical system, while also shaping the future of their discipline. The intellectual engagement on both the local redesign work and reshaping the intellectual space of the discipline will characterize the next-generation department leader.

UAB Health System addressed these issues with a funds flow model that pools clinical revenues from the hospital and practice and pays out on an RVU-based model, insulating the department from both practice and payer mix risk. Strategic and policy decisions are made by the UAB Health System Board, of which half the members are leaders of the physician foundation. ***UCLA Health*** has implemented a decision process in which all major clinical initiatives are reviewed by a Strategy & Services Council, which includes the clinical chairs.

Managing Care as a Group Practice

An example of a successful group model approach to managing care can be found at the ***University of Colorado*** Denver faculty practices, which operate a risk-based program for the university's approximately 40,000 employees and their dependents. The approach is based on managing covered lives through a VEBA Trust (Voluntary Employees Beneficiary Association), and includes a risk-based payment model for the faculty practices through which departments and divisions receive per-member, per-month capitation financing and are at risk for all medical

physician services. Focusing on medical direction, the medical directors and allied teams created an evidence-based medical management program that combined accepted protocols as well as insurance-based coverage decisions. Discussions around approvals or denials are conducted among faculty clinicians and the medical directors with application of published criteria. Ultimately, this internal process created awareness within the clinical faculty of the importance of such practices. As consumers within the health plan themselves, the clinical faculty could connect these decisions to premium and total health care costs. The program lowered year-over-year benefit cost growth from 15 to 5.7 percent (Colorado average is 8 percent), while enhancing services to beneficiaries, creating a culture of cost awareness in the faculty, and expanding primary care practice. Building on this experience, University of Colorado Health (now consisting of the Poudre Valley Health System, the University of Colorado Hospital, and Memorial Health System) will offer self-insured employers an insurance product based on the UC Health network in 2014. It has established a new operating division to provide this service, which will include all administrative capabilities including medical management.

Future Success Requires Group Practice

The Panel recommends a true group practice as the basis for future health services management in highly competitive clinical markets. Fiscal integration of the professional fee revenues into a group practice model will provide the basis to address cost and productivity issues, implement service line programs, make strategic investments needed to create networks, and develop capabilities to succeed as systems of care. The pressure to function more effectively; to make investments in new facilities, IT, and patient service infrastructure; and to extend the reach of the faculty practice will require greater economic and administrative coordination among the clinical departments. The Panel recommends a practice model in which clinical practice revenues are pooled and clinical effort paid on a cost basis (equalizing distinct disciplines), with group decisions guiding the investment of practice operating income in the resources and tactics needed to achieve a market-leading position.

The report project team found scant evidence of faculty practices committed to the development of the group practice model, most likely due to the reality that fee-for-service remains dominant, and in most parts of the country fees have yet to be subjected to the significant erosion experienced for hospital reimbursements.

Future Growth Requires Clinical Integration

A clinically integrated network that includes faculty and non-faculty physicians becomes essential as soon as the health system determines that it must introduce a risk-bearing product into its region. This approach includes the need for a committed, clinically integrated network throughout a target region in order to offer a comprehensive product to purchasers and avoid being excluded as narrow networks and private exchanges evolve. This extended network should complement the specialty faculty, including working within a coordinated clinical model that incorporates best practices, information exchange, and shared risk/return financial arrangements. Therefore, the clinical network should also include a cadre of closely affiliated, community-based, primary and specialist clinicians who retain a level of independence while simultaneously becoming clinically integrated with the rest of the clinicians for some services, thus allowing the

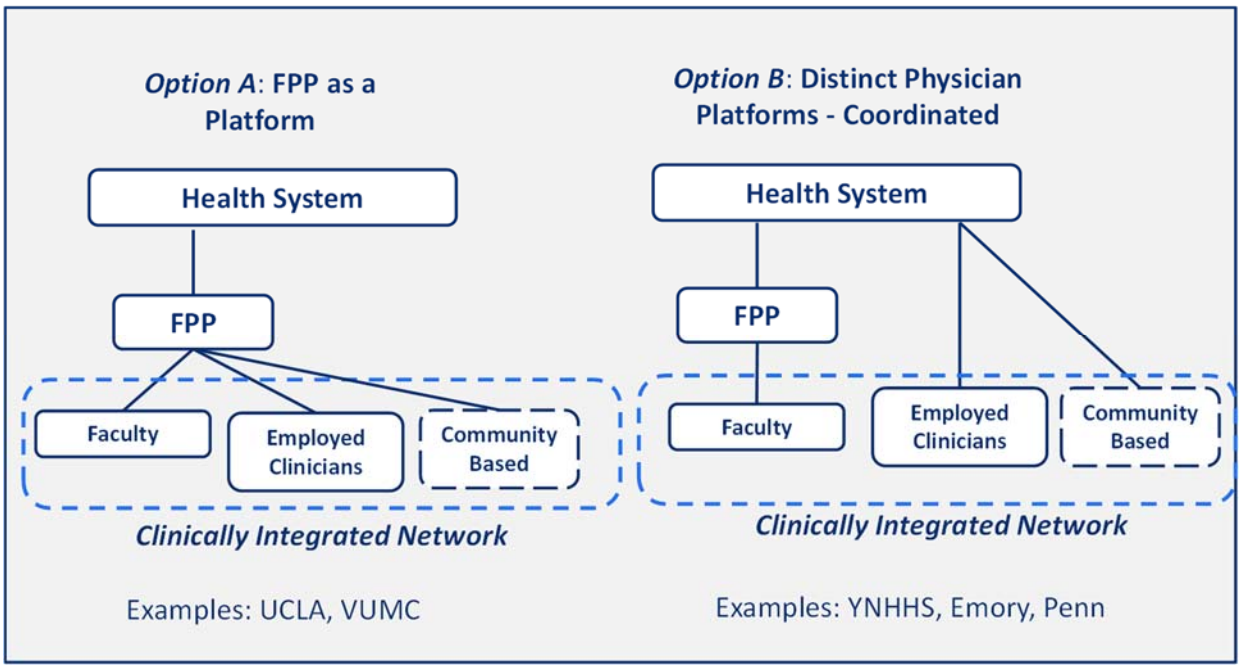
network to contract and coordinate for the clinical group as a whole. Some of these clinicians may devote a small portion of their time to teaching, but their fundamental role will be clinical care.

A central task for system leadership will be to anticipate these requirements and determine the best clinical services architecture to promote both growth and clinical integration. Leaders must also address "town gown" issues and reinforce the importance of non-faculty clinicians to the success of the system, while rooting out attitudes among faculty that disparage non-academic physicians. There are two broad options for linking faculty and non-faculty clinicians, as depicted in Figure 4, though hybrids of these also may develop, as at ***University of Iowa Health Care***. In the first, the faculty practice is utilized as a platform for developing the extended clinical services, leveraging the administrative leadership and MSO services. ***UCLA Health*** has taken this approach, by using the UCLA Medical Group as its platform for an extensive primary care development program that now includes approximately 200 primary care physicians and a handful of specialists. UCLA distinguishes the management of offsite practices from its faculty practice by employing a distinct management structure.

The second option is to have the faculty practice focus exclusively on its traditional boundary, while the health system establishes a distinct operating and management structure for off-site practices. This is the approach taken by ***Emory Healthcare*** for the development of its Emory Specialist Associates, which now numbers 130 employed physicians with a predominantly clinical orientation and organized as a group practice. Emory is currently bringing all its physician services together into a clinically integrated network with three main elements: the Emory Clinic (the faculty practice group), Emory Specialty Associates, and a group of non-employed non-faculty primary care physicians and specialists that are part of the network. All the practices share common EMR/HIE connectivity. Emory contracts as a clinically integrated network for community, FPP, and non-faculty employed physicians, so it meets the FTC definition for clinical integration. For the payer and patient, the network is the product, which permits Emory to offer different "products" to different insurers across seven hospitals and 2,000 doctors.

Penn Medicine has developed Community Care Associates, numbering close to 200 physicians and mid-level clinicians in a highly organized operating unit. ***Yale–New Haven Health System*** includes a rapidly growing foundation model multi-specialty group, the Northeast Medical Group (NEMG). Started in 2010, NEMG now numbers over 550 physicians, which includes all the hospital-based clinicians and employed primary care physicians. NEMG will also begin contracting for affiliated clinicians. NEMG contracts with the Yale Medical Group (the faculty practice) for billing and collections services. With more than 1,000 employees and over $115 million in revenue, NEMG has become a pivotal component of the evolution of the Yale system.

Figure 5: Options for Developing Physician Services



New Roles for Clinical Leaders

The work needed to transform an academic medical *center* into a *system* will require new or evolved clinical leaders. While each institution has different needs, the following are among the positions being created or enhanced:

- **Chief Clinical Officer.** This role is intended to strengthen the institution's ability to implement changes across the clinical departments and the medical center, and to lead clinical process re-engineering and physician network development. What distinguishes this role from a vice or associate dean of clinical affairs is the integrating responsibility with the medical center. In 2012, the ***UNM Health System*** created this role to "serve as a leader and architect of the strategic and operating plans for the UNM Health System" and to "develop and foster effective collaboration, alignment, and integration between components of the UNM Health System to ensure a coordinated approach to providing services."
- **System Chief Medical Officer (CMO).** Due to the burgeoning demands for clinical improvement and the imperative not only to deliver but to verify "best outcomes," the role of the CMO is becoming far more important. Whereas in the past this role tended to reside in the hospital, a health system CMO will have leadership responsibility over multiple sites for the application of best practices, accelerating the translation of clinical research into practice, and proposing innovations regarding new means of integrating services around patient needs.
- **Group Practice President.** As the faculty practice evolves towards greater integration, so, too, the role of the physician leader of the practice must evolve and be capable of

decisive institutional leadership. In some institutions, this leader also is responsible for managing ambulatory services in a centralized model.

- **Chief Medical Information Officer (CMIO).** The transformation of practice rests on a foundation of rich data that must be transformed into actionable information. With the massive investment in clinical systems that has been made, the return will be in enhanced decision support. The ability to direct this effort requires an outstanding CMIO at the helm. The CMIO for the ***Cleveland Clinic***, for instance, is focused on using technology to advance the future of medicine around three broad themes: personalization (highly customized services), population health (designing systems at population scale), and pervasiveness (ubiquitous access and computing).

While only the largest clinical systems will have all these roles, it is important for every organization to enhance physician leadership as part of a clinical enterprise strategic talent management program.

Implications for Leadership

The role of the clinical department, the chairs, the faculty practice, and physician leadership must take on new dimensions for the academic system of the future to realize its potential. Considerations for leadership include:

- The skills needed for the clinical chair will extend beyond academic and clinical leadership to include strong teamwork skills, and an ability to lead faculty through the significant changes ahead. Recruitment and selection processes should incorporate these requirements and coaching support should be provided the first year to reinforce the importance of leadership and teamwork. Clinical chairs must be capable of multiple allegiances: department, centers, institutes, the hospital, and the health system.
- A recognition of the need to extend clinical services well beyond the traditional faculty model, and thoughtfully establish a clinically integrated network capable of growth and integration with community affiliates and the extension of the practice with physician assistants, nurse practitioners, and other caregivers.
- Assessment of the physician leaders needed to move the system development forward and provide strong clinical management to a growing clinical enterprise. Positions may include a chief clinical officer, system chief medical officer, group practice president, and chief medical information officer.
- The establishment of a strategic management plan to develop and recruit the next generation of physician and nursing leaders.

Chapter 5. Transparency in Quality Outcomes and Financial Performance Across the Academic Health System Is Central to High Achievement That Is Demonstrable to Patients and Purchasers

A foundation for value-driven health care is transparency—of costs, quality, safety, effectiveness, patient experience, and pricing.[7] There is widespread interest in providing transparency for consumers of health care, with the federal government, states, payers, employers, and consumer advocates all supporting an agenda to increase the flow of information. This interest is analogous to the press for accountability in multiple areas of our society, ranging from government to financial institutions. The push to transparency in health care has resulted in an enhanced demand for comparative effectiveness research, which can provide the basis for comparisons of drugs, devices, treatments, and providers of services. As our information age continues to mature, it is inevitable that information linking outcomes to cost will become widely available and already is influencing purchasing decisions by employers, contracting by insurers, and health care decisions by consumers. This movement will have profound implications for AMCs, whose faculty and executive leadership share the belief—though with limited proof—that they deliver better value (better outcomes for the cost) than community-based institutions.

The focus on transparency in this report is a subset of these larger concerns. The academic health system for the future faces significant challenges, including:

- Understanding the true costs across hospitals and practices, a necessary component of taking on risk, including contracting for bundles of services
- Demonstrating quality outcomes over longer time periods, central to maintaining "premium" brand and pricing
- Becoming explicit about the value (quality/cost) that the AMC system provides in comparison to regional competition
- Allocating resources during a time of constraints, which necessitates a complete understanding of the economics of the entire enterprise

A surprising number of institutions have not taken the steps to accomplish transparency across their missions and organizational silos, despite repeated calls for intra-enterprise transparency dating back a decade and longer.[8] Fewer still have created the management and leadership processes needed to produce and evaluate these data, including preparing useful scorecards, aligning incentive compensation systems to results, and making results broadly available to consumers and purchasers. In addition, there are emerging concerns that public quality reporting will not reward high performers with premium pricing, such as experienced in California with

[7] The Healthcare Imperative: Lowering Costs and Improving Outcomes: Workshop Series Summary; Pierre L. Young and LeighAnne Olsen; Roundtable on Evidence-Based Medicine; Institute of Medicine; National Academies Press, 2010.

[8] For instance, see the University Health System Consortium work papers and case studies from the *UHC/AAHC Joint Research Symposium, Supporting the Academic Mission in Difficult Times,* September 2004.

state-level reporting.[9] To be prepared to meet this requirement, the Advisory Panel recommends that an important catalyst for organizational performance improvement and accountability is a commitment by AMCs to transparency of quality, performance, and financial information within their own institutions, across the clinical departments, and across all missions.

Transparency in Quality and Operational Performance

Transparency of clinical results has been proactively pursued by the ***Cleveland Clinic***. Since 2000, the Clinic has produced and published "Outcomes Books" for a number of its institutes, and since 2007, the data have been available on its website. Originally produced in part as a response to misleading data being prepared by a Cleveland employer coalition—data that was not severity adjusted—these highly detailed publications sprang from the goal of having every clinic physician compare his or her outcomes to peers. They are now intended for a physician audience and are mailed to specialists around the country. Drawing from a wide variety of process metrics, the Outcomes Books represent a long-term commitment to transparency and improvement. The ***Cleveland Clinic*** also prepares a Quality Performance Report intended for the general public and available on its website, which provides information on the clinic's performance compared with national averages on process measures related to care for heart attack, heart failure, stroke, pneumonia, surgical care, infection prevention, patient safety, outpatient primary care, and child asthma.

Every clinical service at every academic health system should measure clinical results and use those results to establish a path to improvement. This commitment will require the AMC system leadership to commit the resources necessary to accomplish this goal. Some examples of leading approaches include:

- ***Partners/MGH*** releases internally and externally on a semi-annual basis a quality dashboard containing over 200 data points benchmarked against competitors. The report card measures span several categories: HIT adoption, patient safety, clinical quality, prevention and chronic disease management, efficiency, and patient experience. Within individual departments, dashboards are compiled that show clinical quality performance indicators between physicians, driving physician compliance around quality metrics.
- ***Penn Medicine*** has made significant progress in the areas of mortality and hospital-acquired infections since the inception of its Blueprint for Quality and Patient Safety in 2007. Created by its chief medical officer, the *Blueprint for Quality* provides the framework for clinical strategy at Penn. It is a multi-year plan, updated annually, that establishes the improvement agenda with specific goals such as eliminating preventable deaths and preventable 30-day readmissions. The effector arm for the *Blueprint* is unit-based clinical teams (physician leader, nurse leader, project manager), which Penn considers its "Swiss army knife" for managing quality on the hospital units because of their flexibility in addressing any quality issue. Since its inception, risk-adjusted mortality has decreased by 45 percent over the past five years across the health system;

[9] Teleki, Stephanie and Maribeth Shannon. "In California, Quality Reporting At The State Level Is At A Crossroads After Hospital Group Pulls Out," *Health Affairs*, March 2012 vol. 31 no. 3: 642-646.

Penn is now top-ranked nationally. Central line catheter bloodstream infections decreased by 95 percent over a similar time period**.**

Many AMCs today are using the University Health System Consortium (UHC) quality reporting and benchmarking tools to compare themselves with peers, and are beginning to use this information in their marketing campaigns and on their websites. Yet despite the well-established provenance and increasing sophistication of UHC tools, they remain underutilized by some participants who have not systematically committed to a culture of continuous improvement. Further, relatively few organizations have a true understanding of the costs needed to operate a process and produce a given activity. In addition to sophisticated benchmarking and understanding of internal costs, the academic health system of the future must define new metrics for longitudinally captured information such as return to functionality, long-term outcomes, and other key metrics, and use these data to understand, continuously improve, and demonstrate value.[10]

Transparency in Financial Performance

A clear-eyed view of fiscal realities is essential to the long-term sustainability of academic medicine. To achieve this view, several of the profiled AMCs have established integrated financial and resource management processes. Since the late 1990s, Johns Hopkins Medicine has managed against a 10-year strategic financial and capital plan that addresses education, research, and clinical care requirements. This plan incorporates operational forecasts, capital requirements, debt, philanthropy, and state support projections. The ***UAB Health System*** provides extensive financial and operating results information to department chairs with the intent of achieving full financial transparency. ***Penn Medicine*** has integrated strategic capital and financial planning to support better enterprise decision making. ***Yale-New Haven Health*** has a highly developed cost accounting system that provides the capability for insight at a granular level. ***VUMC Health System*** was the originator of the now well-known "Numbers Day," during which leadership reviews the financial and operating results for the enterprise, encompassing all missions and operating units. Many institutions have now established similar approaches. The commitment to financial and operational transparency is critical to building the climate of trust, mutual accountability, and understanding of the institutional economics necessary to achieving the highest levels of performance.

Transparency in Pricing

Soon, all health services pricing will be transparent to consumers. The progressive shifting of costs to consumers by employers and its implications—such as high-deductible plans, defined contributions to private exchanges, and the convergence of private and government insurance markets—are creating urgency by consumers and regulators for pricing transparency. In the future health care market, substantially more costs will be borne directly by consumers. This trend is occurring rapidly with the rollout of the health care exchanges into the individual and

[10] Porter, Michael E. "Measuring Health Outcomes: The Outcomes Hierarchy," supplementary appendix to "What is value in health care?" *New England Journal of Medicine* 2010; 363:2477-81 (10.1056/NEJMp1011024).

small-group markets and with more employers providing employees with high-deductible plans, often combined with health savings accounts. A number of states, including New York, California, and Pennsylvania, have pressed forward with efforts to publish hospital pricing despite protestations from hospital leaders that these prices are inaccurate reflections of actual "wholesale" prices because they are based on chargemasters.

As health care economist Uwe Reinhardt commented in a recent *New York Times* blog post, "In a truly competitive market, both the prices and the inherent qualities of the goods or services being traded are known to all parties ahead of any trade. By contrast, in the American health care market, both the price and the quality of health care have been kept studiously hidden from patients." Academic medical center leaders should assume that within a few years pricing and quality outcomes—with all the attendant flaws of imperfect and inaccurate data systems—will be broadly available and may be used by consumers in their determination of where to seek care. Consumers will be assisted in their quest for information by social media platforms such as Health Grades that rely on patient satisfaction, often uncorrelated with clinical results, for their methodology. *Consumer Reports*, perhaps the most trusted source for consumer information, acknowledges the incompleteness of its data sets, yet rates hospitals and doctors based on publicly available data from CMS and state reporting, and has a number of user-friendly tools on its site for consumers.

As a result of price/quality comparisons, many academic medical centers may find themselves on the wrong side of public perceptions of "value." High retail pricing and inaccurate or incomplete outcomes data likely will disadvantage many academic medical centers. Addressing these issues, along with establishing new measures of outcomes that more precisely reflect the unique clinical contributions of the health system, will become a top priority for academic health system leaders in the years ahead.

Implications for Leadership

Clarity of understanding precedes action. A total commitment to transparency at all levels of the academic health system provides the basis for continuous improvement and mutual accountability for it. The leadership of the academic health system of the future should have, or put in place, the necessary components of full transparency:

- Coordinated or integrated strategic quality, operational, and financial planning
- Quality, operational, and financial information sharing across all organizational silos and operating units
- Participation in public reporting initiatives, including working with payers to standardize quality metrics, and preparation for public reporting of price, quality, and patient satisfaction results
- A culture of information sharing, mutual accountability, and a results orientation
- accountability structures that reach into the organization to serve as the basis for improvement efforts
- Continued state and national advocacy efforts that explain to policy makers, payers, and the public the unique role of academic health systems in delivering medical education, conducting research, and serving their communities

Chapter 6. Competitive Viability and Long-term Mission Sustainability Will Require Radically Restructuring the Operating Model for Cost and Quality Performance

The operating requirements for the AMC will be extensive. A new AMC operating model must accomplish these objectives:

- Deliver clinical services at a competitive cost per episode for comparable services available in community settings
- Maintain sufficient margin to re-invest in clinical leadership and growth
- Establish and maintain a high debt rating (Aa3/AA, 3 percent margin) as a means to maintain access to capital
- Maintain education and research, which requires investment and includes addressing the structural deficits inherent in both federally funded research and education (now combining to represent a deficit of expenses to non-clinical revenues in the range of 20 to 40 percent)

Balancing and aligning these objectives can be realized through a health system operating model that combines low-cost settings of care with a high-throughput destination site, optimizes service mix to most appropriate settings of care, and incorporates the management process and operating discipline to continuously assess and drive costs down. Commitment to both LEAN and broad-scale training is a necessary investment.

A System Operating Model

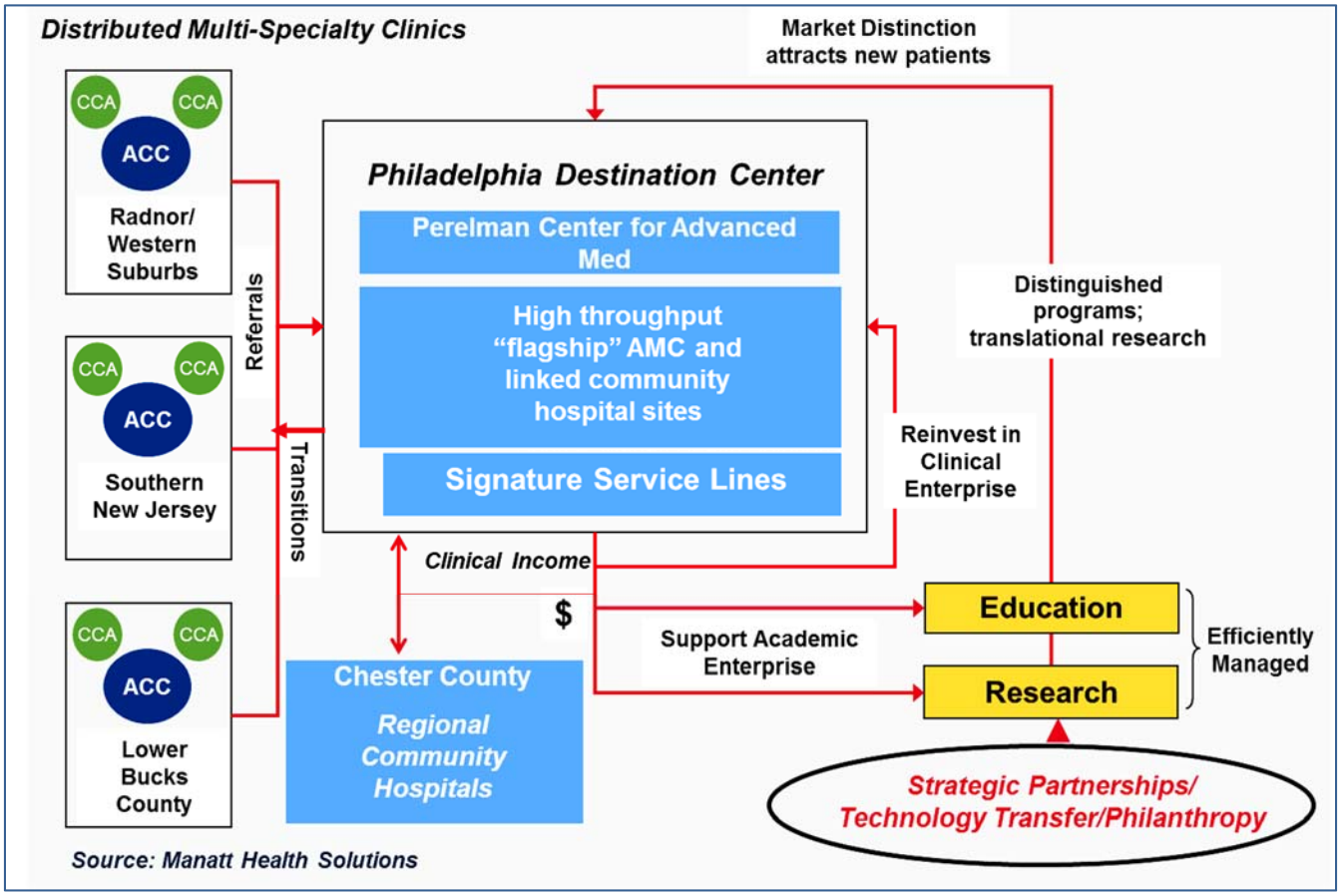
To illustrate, among the features of ***Penn Medicine's*** operating model are the following:

- A high-volume "flagship" academic medical center (Hospital of the University of Pennsylvania, a *U.S. News and World Report* Best Hospital), optimized within its facility constraints for both the highest acuity service mix and rapid throughput. Penn has made extensive use of redesign and automation in its management of beds, integrating bed management, environmental services, and patient transport into a single team. The Navicare bed management IT system provides support, resulting in a highly competitive length of stay of just under 5.5 days. A unified transfer center facilitates transfers to and from community-based sites.
- Three wholly owned community hospital sites, with their lower costs of care, two within Philadelphia and one in the western suburbs. Over the past decade, Penn has progressively optimized its services among these facilities, relocating services including rehabilitation, psychiatry, and orthopedics from HUP to Presbyterian Hospital and optimizing the service setting for each facility.
- A high-volume, ambulatory "destination center" optimized for clinical service integration and collaboration; and distributed multi-specialty "practice of the future" clinics in a broad range throughout the region.
- A post-acute rehabilitation joint venture that facilitates rehab care for Penn patients and contributes to shorter hospital stays and improved continuity of care.

- Highly efficient use of labor and capital, derived from extensive re-design initiatives combined with use of automation, resulting in labor and capital costs well below Council of Teaching Hospitals and Health Systems (COTH) averages as a percent of operating costs. Contributing to labor efficiency is centralization of administrative, back office, and system services, resulting in sophisticated management teams that add value in finance, operations, and information technology.

An expanding clinical base of revenues combined with strict cost control has enabled Penn to provide support—among the highest in the country—for education and research. Recently, Penn Medicine changed its approach to working with industry, further increasing its support from non-clinical sources for its extensive research programs.

Figure 6: Penn Medicine System of Care



A five-year alliance with Novartis to develop cancer immunotherapies based on the work of Carl June, M.D., provides operating and capital support for leading-edge research. The alliance includes up-front funding from Novartis for research sponsorship and dedicated facilities, and in return Penn is providing extensive rights to the research findings.

World-Class Operations

A system operating model will require a new level of sophistication and expertise in operational capabilities. Value-based payment models will require complex and precise documentation and reporting and sophisticated revenue cycle management. The consolidation of additional entities with the AMC will create new challenges from a multiplicity of legacy systems and multiple contracting entities that must be maintained. The national "mega-systems" are pioneering new models for delivering revenue cycle management. For instance, Dignity Health and Optum have established a joint venture with the sole purpose of bringing advanced analytics to revenue cycle management.

With supplies and contracted services typically in the range of 40 percent of costs, a world-class supply chain capable of high levels of innovation will be essential. Advanced supply chain management will include sophisticated contract management, advanced technology and clinical evaluation, high commitment to standards, and collaborative planning and forecasting with suppliers. The ***Cleveland Clinic*** and ***UPMC*** have recognized these requirements, and both are recognized in Gartner's Top 25 Healthcare Supply Chain leaders, alongside Becton Dickinson and Johnson & Johnson. With a $2 billion supply spend, in 2005 ***UPMC*** *hired* a Chief Supply Chain Officer, an executive from Alcoa, who not only infused industry talent into the organization but introduced innovation in the form of a virtual marketplace and high levels of automation, which in turn drove contract compliance to over 90 percent. ***UPMC*** established its Prodigo subsidiary to make these capabilities available to other health care organizations.

The Race to Scale

Health care systems keep getting bigger, and the question, "How big is big enough?" is one that every executive team is asking. The largest national systems are operating at a level of scale that substantially exceeds that of the largest AMC's clinical operations, as indicated in the table below.

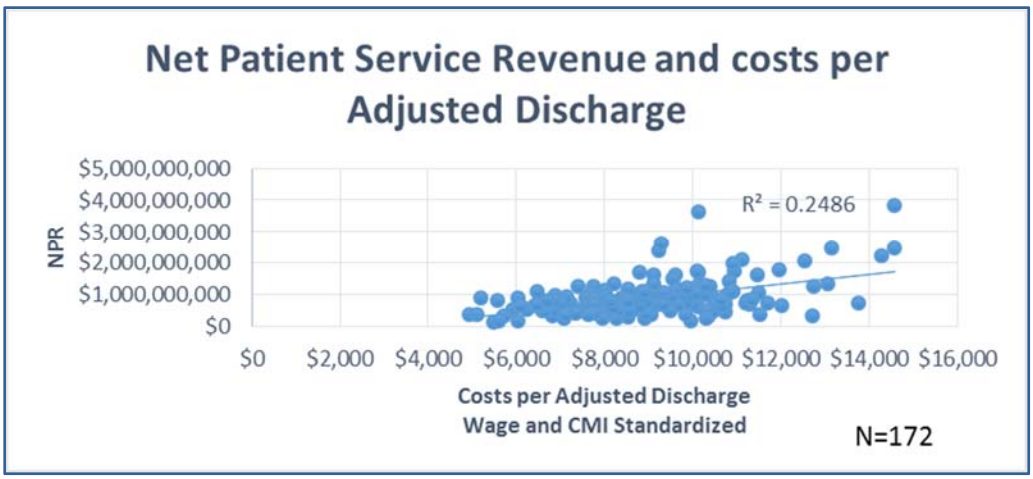
Figure 7: Health System Scale
(Net Patient Revenue – excludes professional services)

Health System	Annual Revenues
Kaiser Permanente	$50.6 billion (2012)
Hospital Corporation of America (HCA)	$36.8 billion (2012)
Ascension Health	$16.6 billion (2012)
Catholic Health Initiatives (CHI)	$12 billion (2012)
Dignity Health	$10.5 billion (2012)
UPMC	$10 billion (2013)
Tenet, Inc.	$9.9 billion (2012)
Cleveland Clinic	$6 billion (2012)
Montefiore Medical Center	$2.8 billion (2012)
Emory Healthcare	$2.4 billion (2012)
Partners Healthcare/MGH	$2.28 billion (2012)

The rationale for significantly enhanced scale may rest partially with potential operating efficiencies for supply chain management, information technology, clinical services such as laboratory and pharmacy, and with revenue cycle operations.

These benefits have not yet significantly been achieved by academic health systems. Analysis of data from the COTH annual data book indicates that unit cost structure (case mix, CMI, wage-adjusted cost per case) has a low correlation with scale as either net patient revenues or total expenses for this set of institutions.[11] The data for COTH organizations using 2012 values is indicated below, with an R-squared value of 0.2486 indicating a low correlation. The R-squared values for 2009, 2010, and 2011 are all under 0.20.

[11] Laurance Furnstahl, chief financial officer, Oregon Health & Science University, pointed out this lack of correlation to members of the project team.



This analysis suggests that economies of scale have not yet been reached in these organizations, or that the scale effects have been mitigated by additional costs needed to operate multiple sites and the diversification and expansion of services that accompany larger systems of care.

Perhaps a more compelling rationale for growing scale is that population health management requires it for providing a comprehensive regional network to purchasers and having a broader economic basis upon which to assume risk. Further, the ability to sustain the academic missions will rest in coming years on a smaller portion of clinical margin; a much expanded clinical footprint may be required to maintain needed levels, assuming that margin is indeed provided to support the mission from throughout the system. Of these considerations, the first may be able to be met without a wholly owned system of care, through partnerships and a network model of care.

Weighing these various factors, the Advisory Panel concluded that most AMCs today are simply not at the scale of operations needed to be strategically and operationally successful in the years ahead; and that they will need to be several orders of magnitude larger in order to do so or will need to rethink their operating model and their affiliations strategy. There will be, in other words, no substitute for the operating discipline, across all missions, needed to achieve the lower cost position needed in the future reimbursement environment. Scale effects may be able to be reached through partnership and affiliation. For example, Panel member Steven Lipstein, CEO of BJC Healthcare, described the BJC Collaborative, which links BJC with Cox Health, Memorial Health System, and St. Luke's Health System. This bold regional effort unites four strong organizations into a scale collaborative with $7.6 billion in revenues that serves 10 million people in southern Illinois, Missouri, and eastern Kansas. Focused initially on achieving cost reductions from supply chain, contracted services, clinical engineering, and information technology, the Collaborative also supports best practices and shared learning in a variety of areas including population health, legal services, government relations, employee benefits, and emergency preparedness.

Toward Patient-Centered Value

At most, few AMCs will be able to reach the levels of scale that produce operating advantage, whether singly or in a collaborative model. Other AMCs will need to establish updated and highly effective clinical delivery models, shifting their orientation strongly toward the delivery of value and basing their competitive strategies on demonstrable clinical results. For some years now, Michael Porter has made the compelling argument for rethinking delivery of services on a value basis that is focused on results.[12] The merits of this approach for AMCs is that it aligns payment incentives (primarily through bundled pricing), innovation, and patient-centered service delivery and establishes a basis for future competitive differentiation. Porter's recipe for delivering value is comprehensive and underpinned by information technology. It includes establishing services organized around patients (Integrated Practice Units, or IPUs), granular measurement of costs and outcomes and their improvement, bundled payments, rationalization into higher volume sites of services, and geographic expansion.

While a number of AMCs have taken this approach for specific services—transplantation in particular—few have undertaken it as the comprehensive transformation effort that Porter envisions. A feature of Porter's value framework of particular relevance to AMCs relates to measurement. He advocates for outcomes measures that reach beyond process and instead demonstrate measures of primary concern to patients: return to functionality, time to recovery, and sustainability of recovery. Among the profiled institutions for this report, ***UCLA Health*** has implemented an IPU (Integrated Patient Unit) model for kidney transplantation, aligning a bundled payment with continuous quality and process improvement initiatives and the application of clinical protocols across the service. As a result, UCLA is among the highest achievers in the one- and three-year post-graft survival rates. In 2007, the ***Cleveland Clinic*** reorganized its services around a patient-centric Institutes model. Each of its 18 Institutes incorporates the full spectrum of specialists and inpatient and outpatient services, with coordination by a multi-disciplinary team. The Neurological Institute, for example, includes neurosurgeons, neurologists, and psychiatrists.[13]

Implications for Leadership

Leaders of AMCs must boldly and forcefully restructure their operating models or risk becoming marginalized as providers in their regions, increasingly relegated to government payers or to a subset of the highest acuity patients. Restructuring the operating model entails:

- Focus on capacity management, length of stay, and throughput maximization to achieve high return on assets
- Commitment to operating practices such as LEAN that inculcate training throughout every level of the institution and reinforce continuous improvement as an operating discipline

[12] Porter, Michael E. and Thomas H. Lee, "The Strategy That Will Fix Healthcare," *Harvard Business Review*, October 2013.

[13] Harvard Business School, Cleveland Clinic: Growth Strategy 2012, Porter, M.E., Teisberg, Elizabeth O.

- Extension of these practices to education and research led by coordinated leadership that can act nimbly to assess and address coming declines in clinical income
- Extension of these practices to all mission areas, combined with coordinated leadership action to address coming declines in clinical income
- Achieving the highest levels of performance in revenue cycle and supply chain management
- Vigorous reaffirmation of a patient-centric, "customer first" culture in all operating divisions and processes
- Alignment and orientation of clinical services in a patient-centric organizational model

Chapter 7. The Academic Health System of the Future Will Manage the Health of the Populations It Serves

Managing beneficiary lives is a completely new paradigm for AMCs and most other health care organizations. *Population health* requires engaging patients and populations in a broad range of activities and services that seek to prevent disease, improve the long-term impact and success of individual medical interventions, improve the overall health of a defined set of beneficiaries, and ultimately improve the health status of the communities served. Those AMCs that have implemented population health characterize their approach as incorporating five characteristics:

Figure 8: Population Health Management Characteristics

- ***Patient-Centered:*** Ensures patients are engaged in the entire process of care, that decisions are well informed, and the needs and preferences of diverse patients are recognized.
- ***Community Engaged:*** Partners with communities to identify the needs of the communities it serves and works to enhance the capacity of the community to meet those needs and measurably improve the overall health of the community.
- ***Primary Care Based*:** Patient-centered medical homes serve as foundational elements for patient engagement, using shared clinical information and protocols to link to network specialists, hospitalists, long-term care and nursing homes, and home- and community-based service providers. Specialty care medical homes are emerging as important vehicles for limiting care fragmentation in specific populations.
- ***Health-IT Enabled*:** Links patients, their caregivers, and providers to health information to help prevent illness, and manage care in a coordinated model and supports targeted initiatives to address significant issues in quality.
- ***Academic:*** Committed to including residents, medical students, and other health professional students in support of population health, and identifying research opportunities that may translate into new approaches to improving health and effectiveness.

A commitment to these objectives is a stark contrast to those AMCs that focus almost exclusively on the highest acuity patients. This focus will remain a necessary but insufficient condition for success in the long term. A particular challenge is developing a comprehensive network of primary care clinicians and a community-focused system of care, which will be necessary for providing comprehensive, longitudinal care to the chronic and elderly patients of coming decades. AMCs have always been a locus for complex and specialized care, but managing the health of individuals and populations across the entire continuum will be a new skill for many.

A population health approach involves identifying opportunities for health improvement and identifying community strengths and resources, including public health, and connecting them with primary care and sub-specialty care to a larger base of primary and secondary care

physicians in a system model designed around a population.[14] The approach also includes new financial and organizational incentives for all clinicians to play a more active role in patient management and coordination, including having visibility and responsibility into the spectrum of services, from community-based prevention through post-acute care.

Developing an AHC-based Managed Care Model

Moving to a risk-based approach for beneficiary management requires focus on different market segments, including one's own employees, commercial, exchange, Medicaid, and Medicare Advantage insureds. Depending on an AMC's current organization and structure, clinical profile, and market situation, organizations could be faced with numerous opportunities and options. The table below illustrates population focus areas for several of the profiled institutions.

Figure 9: Managed Care Approaches

Institution	Population Health Approach/Product	Beneficiaries Included
Virginia Commonwealth University Health System	**Virginia Premier Health Plan**: 170,000 lives Medicaid managed care product with a recent expansion to dual-eligible beneficiaries in Richmond	Medicaid Dual-eligible
	Virginia Coordinated Care Program: Coordinates and provides hospital and ambulatory medical services to qualified uninsured individuals in the Richmond area with focused, complex care models for the patient population	Uninsured
UPMC	**Medicare Advantage Plan:** UPMC began its entrance into the population health and risk-bearing environment with the development of an 110,000 beneficiary MA plan.	Medicare
	UPMC Health Plan: Contracts with primary care providers using a PCMH/shared savings arrangement, leveraging the UPMC analytics capabilities to manage patients and connect to high-performing specialists	UPMC Employees Health Plan Beneficiaries
Montefiore	**Accountable Care Organization:** Currently manages 250,000 lives, including 20,000 in the Pioneer ACO program through a risk-sharing arrangement between the Montefiore IPA and a contracted care management organization	Medicare Commercial
Partners Healthcare/MGH	**Partners Population Health Management:** 600,000 managed lives through Medicare ACO and various commercial contracts	Medicare Commercial
University of	**VIVA Health:** Medicare Advantage and	Medicare

[14] "Principles of Community Engagement," 2nd edition, Clinical and Translational Science Awards Consortium; Community Engagement Key Function Committee; Task Force on the Principles of Community Engagement; NIH Publication No. 11-7782, June 2011.

Institution	Population Health Approach/Product	Beneficiaries Included
Alabama, Birmingham	commercial product for Alabama employers, including UAB System employees. Plan is a subsidiary of the UAB Health System.	UAB Employees Commercial

Managing One's Own Employees

Many systems begin with managing their own employees' health care (***UAB Health System***, ***UPMC***, and ***VUMC***), which allows them to develop care management approaches and understand how to improve outcomes and lower total cost of care. This capability can then be extended to non-employee beneficiaries through a targeted product.

An example of this approach is work undertaken by the University of Michigan faculty practice through its participation in the Medicare Physician Group Practice demonstration. The Faculty Group Practice built a complete care management system to address the entire disease spectrum. In the first year, common issues such as missed appointments and the correct use of medications were addressed by the initiation of a call-back program. In the second year, faculty focused on geriatric patients and expanded their presence into selected sub-acute care facilities. A palliative care service was launched, disease-specific registries were expanded, and IT tools to measure quality and cost performance were implemented. In the fourth year, a medical home infrastructure was implemented. At the conclusion of the fifth year, every high-risk group—dual eligibles, frail elderly, patients at risk in transition, patients needing palliative care—was being closely managed. These initiatives earned the faculty practice the distinction of being the best performer in the PGP demonstration.

UPMC is experimenting in similar ways with managing the care of employee health through the primary care faculty practices, with a shared savings program to reward positive clinical and financial outcomes. The shared savings arrangement incentivizes primary care doctors to seek out the best specialists for referrals and incentivizes specialists to adhere to clinical protocols and evidence-based medicine to achieve referrals.

The Networked Model

Some organizations are developing regional approaches, partnering with several systems across regions to care for large populations of patients. ***The University of Iowa*** has formed the University of Iowa Health Alliance to serve as an umbrella for numerous initiatives to employ and share best practices within the network, which has statewide reach, and to share potential costs related to population health management. The Alliance participants have also partnered to offer an insurance product on the state health exchange starting in October 2013.

Information Technology Is Fundamental

In order to achieve the goals of a population health model of care delivery, clinicians need access to sophisticated information management tools, and AMC leaders must have complete insight into their organizations' portfolio of clinical, administrative, and financial data, linked together and utilized to drive high-quality, patient-centered care. Specific information management tools include:

- **Registries and population health management tools** that offer point-of-care and back office clinical decision support and workflow tools to maximize intervention impact and patient management. Of particular importance is the ability to accurately and dynamically assess individual and group health risk and prepare interventions and case management accordingly.
- **Geo-mapping to support community-level dialogue,** by linking claims data, ED and other use rates, crime statistics, and other related social and health care data to identify "hot spots" and support community dialogue and targeted interventions.
- **Health information exchange** technology to seamlessly integrate clinical and financial data from all sites of care.
- **Patient-engagement tools and services** to assist patients in active home care and shared decision making in medical treatment scenarios.
- **Quality measurement and reporting** to demonstrate outcomes to purchasers and enhance clinical behavior around evidence-based guidelines and best practices.
- **Electronic health records** to keep consistent, portable patient information across the entire patient network.
- **Advanced analytics** to identify costly, at-risk patients and proactively employ specific interventions.

New organizational capabilities must also be developed that leverage these tools and training provided to system clinicians and staff. Improvements in transitions can yield significant gains, specifically from hospital-to-home and hospital-to-post-acute settings, through better discharge planning and follow up. AMCs must also develop the capacity to manage chronic disease in low-cost settings in the community, empower patients to better manage their diseases, and equip them, with the help of family or others, to prevent ED utilization and admissions. While AMCs must improve patient safety initiatives, particularly in inpatient facilities to prevent unnecessary complications, they also must work more broadly to develop the capacity to engage in preventive medicine to an extent unseen in most AMC settings.

Build or Buy?

Population health management capabilities require significant investment to secure the right technology and human capital; to develop the correct processes, policies, and procedures; and to ensure that practitioners have the necessary skill set. Some AMCs will have sufficient size and scale to "build" these capabilities, leveraging existing resources and supplementing where necessary. For instance, ***UPMC*** has built a sophisticated population health management capability using its owned health plan. Its approach includes HIE and EMR capabilities, a patented analytics and care management workflow platform, *Identifi,* and investments in clinical

infrastructure and processes that allow for the standardization of practices and policies that drive efficiency and quality. ***UPMC*** and the publicly traded Advisory Board have created a for-profit subsidiary, Evolent, to enhance and commercialize UPMC's care management and population health capabilities. Evolent's mission is to assist provider organizations in implementing at-risk, population health models.

Appendix A contains a summary listing of additional organizations providing population health management capabilities.

Implications for Leadership

AMCs must adopt a new paradigm of care delivery that expands beyond their core specialty care services market and incorporates population health capabilities. Payers will increasingly be looking for high-quality, cost-effective options for beneficiaries, and a premium will be placed on organizations that can deliver efficient, cost-effective, high-quality patient care for a defined population. Considerations for leadership include:

- An expectation that the health system of the future will be agile in identifying and segmenting populations by indicators such as health status, socio-economic status, and prevalent chronic conditions; and defining care environments that meet their needs
- The ability to define a population of beneficiaries to begin with, and work to develop population health capabilities either internally or in partnership with other organizations
- Pursuing a population health strategy alongside and complementary to a focus on specialty care services development and improvement
- Sophisticated IT systems, skilled data analysts and health services researchers, and physicians trained to understand the data and translate it into better care at the population level

Chapter 8. Academic Health Systems Must Conduct Candid Assessments of Strengths and Weaknesses Essential to Achieve Change

A starting point for leaders as they face changing market and policy dynamics is a candid assessment of their organizations' strengths and weaknesses. This assessment must be developed with input from all AMC leaders across all missions so that there is a shared understanding of weaknesses as well as strengths. A typical "Achilles heel" for many academic centers is creating a strategic plan that exceeds the resources or the capabilities of the organization. None of the progressive and innovative approaches highlighted in this report would have been possible without leaders' critical first step of reflecting internally, having frank exchanges of ideas and strategies, and determining where to prioritize. AMC system strategy is difficult and costly to execute and will require agreement on priorities with the full support of organizational leaders.

Assessing Your Organization's Hand

The Advisory Panel created a framework for evaluating an organization's strengths and weaknesses with respect to operating and succeeding in the increasingly competitive and fiscally constrained health care environment. Using a poker metaphor, the Panel developed a set of "cards" that an organization could hold in its hand. Some cards can be developed, some are a product of an individual market, some can be purchased, and some seem elusive. Each organization has a hand, the strength of which is determined by the individual cards they have to play and the hands of their respective competitors.

Figure 10: How Strong Is Your Hand?

Card	Characteristics
Unified Leadership and Culture	• Success will require leaders aligned around vision, strategy, and finances, as well as a commitment to accept change and to support decisions that value the success of the organization as a whole over its individual parts. • Leaders will create and maintain relationships with partners to achieve functional integration and reduce costs. Chairs will be willing to delegate some responsibility to a centralized management organization to achieve efficiencies and to take a strategic perspective that is system-based. • Strong physician leadership integrated with a health system management team will become essential to drive change through the organization. Increasingly, leadership with oversight for clinical services will rest the in hands of a group practice leadership team. • Organizations with a cohesive and unified leadership culture underpinned by mutual trust will take bold and innovative steps to become or remain the regional leader in health services.
Cost Management/ Quality of Care	• AMCs must develop an institution-wide level of quality, efficiency, and cost management that allows them to compete with their often more nimble community-based competitors. • The development of fiscally integrated service lines or institutes will provide integrated, high-quality, patient-centered care with efficiencies gained from

	reducing/eliminating duplicative administrative costs and from centralizing support functions. • A comprehensive cost management strategy must be deployed across all missions to eliminate redundancy and continuously improve processes, combined with quality improvement programs that push the organization to develop around patient needs. • Successful organizations will be able to demonstrate *value* to both patients and purchasers. A strong card will allow the institution to be competitive in the marketplace while maintaining premium pricing on some services, whereas a weak card will push the organization closer to an untenable financial position, requiring draconian cuts and leading to a downward spiral toward mediocrity.
Transparency	• Transparency of financial information across organizational entities is essential, with a complete understanding of the elements of financial success and its relationship to the academic enterprise critical to long-term financial sustainability. • Transparency of pricing information to consumers will increasingly be demanded by regulators, advocates, and consumers themselves as high-deductible plans become more prevalent. • Transparency of quality information will become increasingly critical as a competitive differentiator, as "value" becomes the central decision criteria for health care purchasers. • More advanced organizations with a strong history of fiscal transparency will be able to move to an organization-wide commitment to "our money, our success," not "my money, my success," as is common in AMCs today. A weak card means continued turf battles between departments and divisions for ever fewer resources. • Organizations committed to quality transparency will learn rapidly to address any weaknesses in particular departments or programs and to adopt methods of continuous improvement to improve outcomes.
Access to Capital	• The strength of an academic health system's balance sheet will dictate its options in the marketplace. The investments required to achieve and maintain market position are substantial and may include geographic expansion; further investments in information technology and informatics; access to physician practices through ownership, affiliation, or clinical integration; or starting or expanding a health plan. • A strong card will allow AMCs to move quickly on these investments, while a weak card limits the options for independence. In either case, organizations may seek third-party joint ventures to improve their ability to access capital.

Primary Care	• A limited network, including departmentally based primary care, is insufficient for AMCs to engage in population health activities and generate tertiary/quaternary referrals. AMCs will require future investment and/or partnerships with networks of PCPs in several different models. A primary care portfolio may consist of:
	  ○ Departmentally based physicians
	  ○ Employed clinicians in a stand-alone group practice
	  ○ Clinically integrated network(s) of affiliated but not employed clinicians.
	• A strong card will position AMCs well to manage defined populations and assume risk, while a weak card may debilitate AMCs through narrow networks and other avenues that will restrict AMCs from access to patients.

Analytics	• Transparency of data within the institution is a tool to improve quality and drive transformation across all missions. • The capacity to manage large data sets will be necessary to manage population health, adhere to evidence-based medicine, and enhance clinician behavior towards standardization around best practices. The ability to deliver and demonstrate value will require the ability to capture data across the health system network—even if not fully controlled. • A strong card will allow the clinical enterprise to pursue population health initiatives, reduce unnecessary utilization, and develop innovative partnerships with payers, while a weak card will leave transformation efforts blind in strategic direction.
Management of Risk	• The ability to execute at-risk contracts, bundled payments, HMO products, and capitation is essential to future success with commercial and public payers. A managed care product and/or experience managing the health of its own employees will strengthen the organization's hand and can be an important stepping stone to more comprehensive payment reform. • Explicit attention to, and investment in, the operational capabilities needed for data analysis, population management, and care coordination will support this shift. • A strong card means in-house experience, expertise, and the infrastructure in place to support full risk-based contracting, whereas a weak card means a continued futile reliance on a FFS payment environment.
Scale	• System-based care will require far greater scale, particularly for establishing a regional network, taking on financial risk, financing investments in clinical integration, and building capability for population health management. Scale can be achieved in a number of ways, from mergers to affiliations and joint ventures, with variations in between. Mega-systems will emerge in many markets, some on a national level. • Whatever strategy is used to achieve scale—and a wholly controlled, vertically integrated model will be beyond the reach of most academic systems—the strongest card will tie together organizations through shared goals, shared financial risk, and through joint decision-making, and will inhibit the ability of all parties to end the agreement and act independently. A single institution in a rapidly consolidating market will have a weak card, face marginalization, and be forced to take commodity pricing.
Brand	• Increasingly consolidated markets will require AMCs to define their brand and value proposition in the marketplace. • Leadership will need to ensure the tripartite mission remains vital as physician and affiliate networks expand beyond legacy AMC boundaries. • A strong card implies that even in the face of expansion, the brand will be protected and used judiciously, while a weak hand will mean brand dilution through an uncoordinated expansion and affiliation strategy.
Innovation	• Innovation within the enterprise will introduce new care delivery models, quality improvement activities, and approaches to complex care management, and will create new approaches to add value. • A strong card is a track record of developing care pathways, evidence-based guidelines, technological advances, and their rapid diffusion into effective practice, while a weak card—that is, poorly resourced and utilized innovation capabilities—will limit the organization's ability to differentiate itself from its competition.

Policy Leadership	• Taking active roles in ACOs, state policy and Medicaid reform, and regional system formation will help an organization influence overall policy formation at the state level that can benefit AMCs not only with regard to clinical care but also with regard to GME and research funding. • A strong card implies that the academic system is advancing important policy ideas, providing intellectual and organizational leadership for Medicaid reform, and advancing policy solutions for workforce development.

A Weak Hand Versus a Strong Hand

Only leadership can assess whether or not it has certain cards in its hand and whether or not other cards can be developed internally or acquired. Above all, clarity regarding the organization's assets and its weaknesses is essential to building leadership alignment about where to invest. Some cards are inherently more valuable than others and more critical to achieving a long-term, successful strategy. Perhaps the most critical cards are Unified Leadership and Culture, Cost Management and Quality of Care, and Transparency. These are foundational, and require changes in culture. System-building strategies will be ultimately unsustainable until these three cards are strongly held.

The organizations profiled in this report are all making advances in these foundational areas. The Panel recommends that AMCs start with these three cards both in their evaluation and in their plans for moving forward.

Implications for Leadership

The process by which AMCs and their leaders determine the path forward requires a strong commitment among all mission leaders to work collectively as a team in support of the success of the *system.* Step 1 must be a period of self-reflection during which institution leaders evaluate their current state capabilities—strengths and weaknesses—against the market they are operating in to develop a path forward. Leaders must agree with a starting point and begin to develop their hand the best way that they can—*then play their hand.*

Chapter 9. Concluding Perspectives and Questions for Academic Health System Leaders

This report highlights the lessons and approaches that can be learned from 13 organizations that have implemented academic health systems of care. These organizations have deliberately changed their structure, their strategy, their operating model, how they make aligned decisions, and the roles of faculty and community clinicians. We highlighted 13 of these progressive academic health systems, but other academic centers also are creating innovative new approaches to improving health care in their regions. We purposefully considered public and private institutions, integrated and independent teaching hospitals and health systems to underscore our perspective that neither structure nor ownership is the determinative factor. Instead, we focused on the leadership strategies, the culture of collaboration, and the willingness to innovate. The challenge of leadership in academic medicine is to manage change in institutions where traditions are in conflict with transformation.

Our conclusion from our observations of these leading institutions is that academic medical centers can indeed transform themselves and create effective systems of care that will deliver high value for their communities, patients, employers, payers, their own institutions, and their affiliated universities. As a starting point on the path to accomplishing similar objectives, we summarize below several critical questions for every academic health system and university leader to ask themselves:

- Is your organization in ***strategic alignment*** about the future requirements for success? Equally important, is your organization in ***economic alignment***—that is, are resources available balanced to the requirements for building the future system, and is the overall funds flow supportive of the strategy? If the answer is yes, what are the concrete results of alignment? If the answer is no, what are the specific obstacles to alignment and have you developed an approach to address them?

- As a system leader, are you taking action to create institutional change and transform the culture to one of collaboration and innovation? Are your organization and all the leaders in it focused on demonstrating financial, quality, and patient-centric results and strategically constructing systems of care? Can you name the three things you are doing that will result in transformational improvements in quality, customer experience, and operating performance? If these changes do not make someone uncomfortable, you are probably not doing enough.

- Is your leadership team in place? Do you have the right skills in place across the team, ranging from operational to clinical governance?

- Are you ready for the era of transparency and accountability—internally and externally?

- Have you planned for the significant commitment of investment dollars in future infrastructure that includes physician networks, IT and Informatics, and new programs? Does your strategic plan have a complementary investment plan so your resources support your strategies?

- Have you accelerated the work necessary to create linkages with community affiliates as networks formalize and grow? Is the physician practice structure in your organization ready to make strategic decisions, recruit new clinicians, incentivize physicians, and seek economies of scale? Do you have a clinically integrated network in place? Where is your faculty practice on the scale between the federated model and group practice model? Do your departments share money, space, and human resources and make strategic decisions together that are in the best interests of the whole organization? Have you planned for how to integrate community physicians or are you "making it up as you go along"?

- Have you embraced the role of non-physician clinicians as part of your care model? Are you strengthening primary care in every way possible and forming new care teams that will not be uniformly physician-driven? If not, why not? If there are cultural barriers, what is your organization doing to address them? Do you have an integrated plan for developing and recruiting these important caregivers? Is your medical school strategic plan aligned with your nursing school and other professional schools?

- Are you personally prepared to be an agent of change?

Next Steps: From Asking Questions to Beginning to Find Answers

The in-depth profiles of the 13 organizations interviewed for this report and a number of topic-specific profiles are available on the AAMC website.

We also have included a list of service providers your colleagues are utilizing to enhance population health competencies within their organizations.

In addition, we developed an assessment tool that will assist with your internal analysis of readiness. We recommend that you share the tool with your leadership colleagues to complete independently, and in a focused session discuss your results, observing how you agree or disagree. We also suggest you have a second set of conversations with your clinical leaders, an exercise appropriate for a leadership or department chair retreat.

From those conversations, you should elicit a commitment to work on two to three initiatives (at least one cultural) over the next three months that the group feels are critical to your success. You should leave the room with agreement about who will be responsible for leading the effort, who else needs to be consulted, who needs to be informed, and who needs to approve the effort. Progress against agreed-upon goals should become a standing item on your weekly meeting agenda.

The AAMC is ready to facilitate conversations between peer institutions that are focused on specific "cards" and will continue to populate the AAMC website with profiles and stories of how institutions are using this information to drive change.

All academic centers aspire to be leaders in transforming care, but high performers will be characterized by their ability to execute against the agenda for change outlined in this report.

Advancing the Academic Health System for the Future

Panel Report Discussion Questions for AMC Leaders

The AAMC Advisory Panel for Healthcare Report *Advancing the Academic Health System for the Future* details the rapidly shifting landscape for academic medicine as organizations move to reinvent their approach to care delivery, education, and research. The report is the product of both a qualitative case study series of leading academic medical centers (AMCs) that details innovative approaches being undertaken by leading AMCs and a series of workshops with AAMC Advisory Panel Members over the course of 2013. These workshops included deans, health system CEOs, faculty practice presidents, and other AMC leaders from a diverse group of AMCs that met several times to develop, discuss, and refine a series of themes and recommendations contained in this report. For more information visit www.aamc.org/advancingamcs.

This *Panel Report Discussion Questions for AMC Leaders* document contains several critical questions, organized around the Panel Report's nine chapters that AMC leaders should consider with their colleagues as they begin or continue the work of transforming their organizations for the future. The purpose of this document is to assist groups of AMC leaders in having targeted strategic discussions in various settings—retreats, regular leadership meetings, etc.—that will lead to action within the entire organization with the support and contributions from all mission leaders.

Chapter 1 - Theme 1 - The AMC of the Future Will Be System Based

Summary: AMCs of the future will require a broad regional presence and clinical services aligned across the continuum of care to succeed. While the form of system development will differ from institution to institution, AMCs must consider the steps required to develop the capacity to deliver care to a population across the continuum in a cost-effective, high-quality manner.

Questions for Leadership:

- What should determine the optimal size of our organization (consider market power, research and clinical missions, state or regional commitments, sunk investments)? What are the signs that we are to big?
- What will be the realistic capital requirements for expansion? Can we afford this? Who else needs to be informed or consulted as we expand?
- What will we "lose" as we grow to become a health care system of the size and scope we envision (Culture, focus on any of our other missions, nimbleness, and/or identity)?
- What other skill sets do we need to develop as we grow (managing the financial risk, capitation or bundling, data analytics)? Do we need to become an insurer as well as a provider of care?

Chapter 2 - Theme 2 – AMCs Require Strong and Aligned Governance, Organization, and Management Systems Committed to a Unified Direction, Transparency, and Accountability for Performance

Summary: Achieving major change within the academic center will require a strong team structure comprised of sophisticated and capable executives collaboratively making system-wide strategic decisions. Further, these leaders must be supported by management systems capable of carrying out large-scale change and solving complex challenges.

Questions for Leadership:

- How effective are we (honestly) in making decisions together? How are decisions really made in the organization?
- What is the baggage we keep carrying around that gets in the way of effective alignment?
- Do we trust each other enough to effectively share power?
- Does our current structure enhance effective alignment or interfere with it?

Chapter 3 - Theme 3 – University Relationships Will Be Challenged to Evolve as AMC Health Systems Grow and Develop

Summary: AMCs face numerous strategic imperatives for dynamic clinical system growth that can pose organizational and policy challenges for many University leaders. Governance and organization challenges must be met potentially with new operating systems for clinical services, and policies must adapt to enable health system leaders to build systems of care within their community and with strategic partners.

Questions for Leadership:

- Are we an asset or a liability for the University? Have we had that specific conversation with University leadership?
- What are the chances that the University would like to monetize the AMC as an asset and use it to expand their endowment?
- As a member of the University, are there things we can't do that are essential to our success? If so what are structural or organizational solutions

Chapter 4 - Theme 4 – Growth and Complexity of AMC Systems Requires an Enhanced Profile and Responsibilities for Department Chairs, New Roles for Physician Leaders, and Evolution of the Practice Structures

Summary: Department structures defined by their autonomy and independence must adapt to structures that enable collaboration and integration to achieve appropriate clinical growth with a new profile of chairs that is focused more on leadership and managerial skills rather than a "triple-threat" resume. Group practice models will continue to develop, and emerging clinical networks will require departments and AMC leaders to re-think collaborations and relationships with clinical community physicians that will support overall AMC system development.

Questions for Leadership:

- Are we, the chairs, described as high performing? If not, why not? If so, by what measure? Do we have the right people on the bus? Are we invested in departmental autonomy or institutional success?
- Is our group practice still federated? Do we share money, human resources, and space and allocate

them according to strategic need instead of power or history?
- Are we prepared to embrace community physician as part of our network? What will be their roles in the research and education missions?
- Can we answer the questions about faculty appointments, medical liability, group contracting, preferential commercial rates, provider based or office based designations, university or teaching hospital responsibilities, dean's taxes, EMR connectivity and costs, and optimal physician practice structure?

Chapter 5 - Theme 5 – Transparency in Quality Outcomes and Financial Performance across the AMC System is Central to High Achievement That Is Demonstrable to Patients and Purchasers

Summary: The foundation of value-driven healthcare at the heart of American healthcare reform is transparency—of costs, quality, safety, effectiveness, patient experience, and price. Purchasers will demand evidence of quality outcomes, and patients will demand the ability to compare quality and cost between providers in and out of provider networks. AMCs must develop the capacity and tools to measure operational efficiency, care quality, and the true cost of care and empower their physicians and managers to engage in continuous process improvement as a result.

Questions for Leadership:
- What are our examples of transparency around quality and outcomes? Do we have complete internal transparency? Do we have external transparency? If we don't, what is stopping us?
- Do we have internal financial transparency? What are the examples? If we don't, what are the concerns that are cited and is there a way we can effectively mitigate these concerns?
- How would you describe our culture around performance? Where would be place ourselves of the spectrum between open and honest accountability and a culture of risk aversion and blame?

Chapter 6 - Theme 6 – Competitive Viability and Long-term Mission Sustainability Will Require Radically Restructuring the Operating Model for Cost and Quality Performance

Summary: AMCs must be able to deliver clinical services at a competitive cost while simultaneously maintaining a sufficient margin, maintaining access to debt, and supporting the academic mission. This will require a more efficient operating model and a relentless focus on patient-centered care through a process of continuous process improvement within all missions.

Questions for Leadership:
- Do we really know our costs? If not, what would we need to do to understand the real costs of our services? Who needs to be committed to this within the organization?
- Are we ready for full internal and external price transparency?
- What changes would this require in our organization from a data, operations, finance, and culture perspective?
- If we are more expensive, how would we defend our costs effectively to someone outside our organization?
- Are there services that we should effectively compete on in terms of price in our market?

Chapter 7 - Theme 7 – The AMC of the Future Will Manage the Health of the Populations It Serves

Summary: AMCs must begin to develop the capabilities to actively manage a population of patients while simultaneously investing in their core tertiary/quaternary care services. Most systems will "begin" with a target population—their employees, a Medicare Advantage plan, a shared-savings contract, etc.—and will decide whether to "build or buy" the needed capabilities.

Questions for Leadership:

- What if we choose not to wade into population health? What would be the eventual impact on our organization?
- What does population health mean to our institution? Can we define the population? Do we have the capabilities to realistically manage the cost and quality of all the care given to these individuals?
- What is the current level of expertise internally?
- Are we managing the health care costs of our employees? If so, how are we doing? Is the cost growth year to year lower than our market? If not, why not? What are in the internal and external obstacles?
- How would you rate our analytic capacity to manage risk? If inadequate, where should this be on our capital and resource priorities? If we cannot afford to build should we buy? From whom?

Chapter 8 - Theme 8 – A Candid Assessment of Strengths and Weaknesses Is Essential to Achieve Change

Summary: A starting place for any team of AMC leaders is a self-evaluation of their "hand"—the cards they have to play, whether weak or strong. Some cards can be strengthened, some cannot be strengthened. After an evaluation of their "hand," AMC leaders can develop a comprehensive plan for moving their organization forward.

Questions for Leadership:

- What "cards" do we really have in our hand?
- Which ones should we focus on strengthening?
- Are there parts of the traditional AMC mission where we are weak but do not have the resources to effectively strengthen?
- Are we being honest enough with ourselves, or do we need an external entity to confirm or challenge our assumptions?

Chapter 9 – Concluding Perspectives and Questions

Questions for Leadership:

- What is our timeline for change?
- What are anticipated leadership transitions in our organization and can we leverage timing and opportunity to recruit people that fill gaps in our institutional skill set?
- What is the predictable future if we do nothing?

Attachment A: Self-Assessment

Evaluating the Strength of Your Position and Readiness for Transformation
What Cards Do You Hold?

A candid assessment of your organization's "hand" is essential to beginning a process of developing a comprehensive, system-based strategy to advance the organization forward. The assessment tool below will help you and your organization analyze your organization's current strengths and weaknesses as a foundation for beginning a conversation about the way forward.

Instructions

For each card, there are listed several components that could be in place within your organization. For each component, consider the description matches how things are at your organization and ask two questions:

- Does this exist at my organization? If I do, how strong is it in my organization? Is this a strategy that I can use to drive significant organizational change at my organization?
- How critical is this to me today and in developing my overall strategy to move my health system forward in the future and respond to the changing health care environment?

Scoring

1. **For each card, we ask "How Important is this Card to Me and My Organization"?**
   - [1] – Very important to me; critical to my organization's success
   - [2] – Important to me; will contribute to my organization's success
   - [3] – Somewhat important to me; may contribute to my organization's success
   - [4] – Not very important to me; may not contribute to my organization's success
   - [5] – Not important to me at all; will not contribute to my organization's success
2. **For each card component, ask, "How well does my organization perform?"**
   - [A] – Exceedingly well
   - [B] – Well
   - [C] – Fairly well
   - [D] – Not very well
   - [F] – We do not have this train

Card	Components	Grade [A-B-C-D-F]
Unified Leadership and Culture **How Critical is This For Me? (1-5)** ☐	Aligned leadership across missions around vision, and strategy. Aligned leadership across missions around finances. Leadership able to debate and ultimately support decisions that value the success of the *organization* as a whole over its individual parts, with a standard decision making process. Leaders amenable to collaboration to achieve functional integration and reduce costs across departments and divisions. Chairs willing to delegate some responsibility to centralized management organization to achieve efficiencies across departments, and a capable organization to accept those responsibilities. Strong physician leadership integrated with health system management team capable of driving change down through the organization. Oversight for clinical services will rest the in hands of small, consolidated and representative group.	
Cost Management/Quality of Care **How Critical is This For Me? (1-5)** ☐	Institutional wide level of quality, efficiency and cost management that allows us to compete with our community based competitors. Development of or thought toward the development of service lines or institutes that provide integrated, high quality, patient-centered care across departments. Commitment to enterprise wide continuous process improvement to gain efficiencies from reducing/eliminating duplicative administrative costs and from centralizing support functions. Comprehensive cost management strategy deployed across all missions to eliminate waste and continuously improve processes, combined with quality improvement programs that push the organization to develop around patient needs. Complete understanding of our cost structure—where they are, and what we can do to address it.	
Fiscal Transparency **How Critical is This For Me? (1-5)** ☐	Sharing of financial information across missions. Ability to collaboratively invest using common resources and investment capital from all three missions. Ability to engage in enterprise-wide financial planning. Moving to an organization-wide commitment to “our money, our success” not “my money, my success.” Combined medical center/SOM balance sheets for a true “system” financial balance sheet.	

Access to Capital **How Critical is This For Me? (1-5)**	Strong balance sheet for short-term, rapid investment needs. Limited debt obligations. Combined financial investment capital between the medical center and the school of medicine. Nimble decision-making process for capital investment decisions with a strong leadership team representing all missions.	
Primary Care **How Critical is This For Me? (1-5)**	Departmental commitment to developing primary care base in the community (Family Medicine, Internal Medicine, OB, etc.). Affiliation or clinical integration strategy in place to secure a strong primary care network. Financial resources dedicated to primary care development Contracting/affiliation vehicles in place to increase clinically focused primary care physicians that are part of the AMC network.	
Analytics **How Critical is This For Me? (1-5)**	Transparency of data within the institution (financial, clinical, etc.). Central HIE capability capable of integrating and normalizing data across sites of care. Analytics function that can produce meaningful, actionable financial and clinical outcomes reports down to the clinician level. Clinicians trained to use data and alter practice patterns to improve. Clinical commitment to adhere to evidence-based medicine, and enhance clinician behavior towards standardization around best practices.	
Management of Risk **How Critical is This For Me? (1-5)**	Existing experience with a risk-based contract (MA plan, commercial plan, ACO, bundled-payment, etc.). Risk-assumption infrastructure in place or in development (HIT/HIE, population health management tools, care coordination tools, etc.).	
Scale **How Critical is This For Me? (1-5)**	Growth strategy in place that can meet the needs of all three missions.	

Brand **How Critical is This For Me? (1-5)** [ ]	Strong brand in the community indicative of high-quality, innovative care. Brand management and protection strategy part of affiliation strategy discussions.	
Innovation **How Critical is This For Me? (1-5)** [ ]	Enterprise wide "HUB" of innovation that takes new care models and breakthroughs in research and translates them to practice. Innovative reputation in the community that differentiates us from our competition.	
Policy Leadership **How Critical is This For Me? (1-5)** [ ]	Senior leaders have policy formation and advisory positions at the state and local level. Active role in the thought leadership community around health care reform and the implications for it at AMCs.	

Self-Assessment Score Sheet

Instructions:

Please refer to your responses on [Pages xx-xx]. For each card, list the overall score for "How Critical Is This for Me?" in the second column. Also, for each card, count how many "A's," "B's," etc. you recorded for each and list in the left-hand column. Multiply by the assigned weight and then divide by the overall number of scores to give you a composite score for each card.

Composite Scoring
[A] – 4.1 – 5.0
[B] – 3.1 – 4.0
[C] – 2.1 – 3.0
[D] – 1.1 - 2.0
[F] – 1.0

What Your Scores Mean

- The card importance scores will help you rank which cards you believe are most critical to the success of your organization long-term.
- Your composite scores will help you understand the hand that you have, and the strength of it. It will identify key strengths and areas where you need to improve.
- The matched pairs of importance scores and composite scores will help you develop your strategic approach going forward:
  - A high importance score matched with a low composite score is indicative of a card that needs significant attention; a high importance score with a high composite score is a card ready to be played in your market.
  - A low importance score matched with a low composite score indicate cards that should not be focus areas in the near term; a low importance score with a high composite score are strengths that will not be significant in the near term, but should be protected.

Card	Card Importance Score	Scoring
Unified Leadership and Culture		**Number [A]_____ x 5 = _____** **Number [B]_____ x 4 = _____** **Number [C]_____ x 3 = _____** **Number [D]_____ x 2 = _____** **Number [F]_____ x 1 = _____ Total/7 = _____**
Cost Management/Quality of Care		**Number [A]_____ x 5 = _____** **Number [B]_____ x 4 = _____** **Number [C]_____ x 3 = _____** **Number [D]_____ x 2 = _____** **Number [F]_____ x 1 = _____ Total/5 = _____**
Fiscal Transparency		**Number [A]_____ x 5 = _____** **Number [B]_____ x 4 = _____** **Number [C]_____ x 3 = _____** **Number [D]_____ x 2 = _____** **Number [F]_____ x 1 = _____ Total/5 = _____**
Access to Capital		**Number [A]_____ x 5 = _____** **Number [B]_____ x 4 = _____** **Number [C]_____ x 3 = _____** **Number [D]_____ x 2 = _____** **Number [F]_____ x 1 = _____ Total/4 = _____**
Primary Care		**Number [A]_____ x 5 = _____** **Number [B]_____ x 4 = _____** **Number [C]_____ x 3 = _____** **Number [D]_____ x 2 = _____** **Number [F]_____ x 1 = _____ Total/4 = _____**
Analytics		**Number [A]_____ x 5 = _____** **Number [B]_____ x 4 = _____**

		Number [C]_____ x 3 = _____ **Number [D]_____ x 2 = _____** **Number [F]_____ x 1 = _____ Total/5 = _____**
Management of Risk		**Number [A]_____ x 5 = _____** **Number [B]_____ x 4 = _____** **Number [C]_____ x 3 = _____** **Number [D]_____ x 2 = _____** **Number [F]_____ x 1 = _____ Total/2 = _____**
Scale		**Number [A]_____ x 5 = _____** **Number [B]_____ x 4 = _____** **Number [C]_____ x 3 = _____** **Number [D]_____ x 2 = _____** **Number [F]_____ x 1 = _____ Total/1 = _____**
Brand		**Number [A]_____ x 5 = _____** **Number [B]_____ x 4 = _____** **Number [C]_____ x 3 = _____** **Number [D]_____ x 2 = _____** **Number [F]_____ x 1 = _____ Total/2 = _____**
Innovation		**Number [A]_____ x 5 = _____** **Number [B]_____ x 4 = _____** **Number [C]_____ x 3 = _____** **Number [D]_____ x 2 = _____** **Number [F]_____ x 1 = _____ Total/2 = _____**
Policy Leadership		**Number [A]_____ x 5 = _____** **Number [B]_____ x 4 = _____** **Number [C]_____ x 3 = _____** **Number [D]_____ x 2 = _____** **Number [F]_____ x 1 = _____ Total/2 = _____**

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