Lessons from Eight Strategic Health Systems …

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Eight Strategic Health Systems: The Path to Integrated Care

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INTRODUCTION

For more than 30 years, I've been privileged to work with some of America's most respected hospitals and health systems as they've made their most important decisions and designed their futures. That experience has provided rich insights on how these complex organizations deal with uncertainty and resistance as they seek to achieve their aspirations. Strategic decisions are big decisions. Their impact takes time to play out. In identifying these eight health systems, I focused on a period of roughly the last decade for comparative purposes. But each of the health systems has been pursuing a value proposition of delivering integrated care for more than three decades and for some it's been a century-long commitment.

These are very different organizations serving unique markets. As might be expected, they took different paths in delivering on their value proposition. Surprisingly, I found that they pursued the same strategies although with differing emphasis over time. This monograph seeks to identify those strategies. I also found that there were common themes related to executing against those strategies. I share those themes as well.

On any measure of performance, these are elite enterprises. Their example holds priceless lessons for other health systems seeking to build sustainable success.

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Eight Strategic Health Systems: The Path to Integrated Care

Listed below are eight strategic health systems whose strategic decisions have positioned them particularly well in the past and promise to do so in the future. Respected leaders in the industry helped identify these organizations. I relied on personal interviews and extensive review of industry literature and data. And I drew on my own experience working with health systems to develop strategic plans over the past 30 years. Key selection criteria included reputation, geographic influence, strategic coherence over time and demonstrated performance, particularly related to quality.

For three decades, these eight health systems have shared a single value proposition – the delivery of integrated care. Being strategic is important to health care organizations as well as to those they serve. In this case, the commitment to a value proposition of delivering integrated care has provided significant advantages related to value. As Harvard strategist, Michael Porter, and others have suggested, value is the source of all strategic advantage. Like a cut diamond, value is multifaceted. Its clarity and sparkle depend on a number of attributes including reliability, safety, availability, experience and price. Nothing influences a health system's ability to deliver value more negatively than fragmentation.

Integration is the antidote to fragmentation. And fragmentation remains the greatest threat to value in health care. Autopsy just about any medical accident, misdiagnosis, lack of timely care, disaffected patient or wasted resource and you'll find fragmentation as a root cause.

For these eight organizations, integration has been about creating a connected and coordinated system that delivers care distinguished by markedly enhanced value including quality, safety, accessibility, satisfaction and affordability.

Each of these health systems faced tough competitors. But the real competition has been between fragmentation and integration. Fragmentation is well entrenched, has strong champions, pushes back and evolves. It is a slippery foe. Strategy is about moving from a place in the present to a better place in the future in the face of resistance and uncertainty. Fragmentation offers plenty of resistance and uncertainty.

Harvard professor, Clayton Christensen, author of The Innovator's Dilemma, is well known for his concept of disruptive competition. He applied his thinking to health care in a later book called The Innovator's Prescription. Christensen uses a metaphor to describe the fragmentation in health care and the proper role of size, *"A good way to visualize it is if you take the cover off of your Dell computer, every component was made by a different company. It was assembled by a different company, designed by a different company. If you ask that industry to rethink the basic architecture or concept of a computer, they can't do it. Intel can give you faster processors, Microsoft can give you Vista, Seagate more gigabytes on the drive. But none of them have the technical or commercial scope to wrap their arms around the whole system and rethink what it is. Most of America's health care system is structured like a Dell computer. So hospitals can utilize their operating suites better, Blue Cross can process paperwork better. But there are only a few institutions that have the scope to rethink it all . . . that can wrap its arms around all of the pieces of the system to just re-architect it."* These eight health systems have demonstrated they have the kind of scope Christensen describes:

Advocate Health Care (IL) – Grew out of the merger of two health systems with flagship hospitals already recognized for quality and advanced capabilities. An early mover on physician employment and group practice formation. Turned its PHOs into a super-PHO and became the national benchmark for Clinically Integrated Networks.

Banner Health (AZ) – Built around a flagship hospital and a strong operating company model. Leadership and governance were centralized while care and management processes were standardized. Banner grew aggressively through acquisitions and new hospital construction.

Baylor Scott & White Health (TX) – Two respected but unique organizations came together to form a delivery system serving a wide swath of north and central Texas (Dallas and Temple). Scott & White brought its highly integrated multispecialty group practice model and its health plan to the merger while Baylor brought a robust network of hospitals, surgery centers and entrepreneurial partnerships.

Cleveland Clinic (OH) – Few organizations have been as clinically innovative and tenacious as the Cleveland Clinic has been from its founding. Focused intently on the heart, it has leveraged its world class reputation into other services and diseases. A pioneer in transparency related to demonstrated value and bundled contracts. It has combined one of America's premier multispecialty group practices with community hospitals and independent physicians to produce a powerful economic engine.

Geisinger Health System (PA) – A large, sophisticated medical center in a small town serving a big chunk of rural Pennsylvania, Geisinger has focused on building deep intellectual capital related to the management of care. It is internationally recognized for innovating at the interface between health insurance, inpatient care, outpatient care and physician practice. Few organizations have positioned themselves as purposefully as Geisinger for the transition from volume to value.

Intermountain Healthcare (UT) – Quality icon, the late W. Edwards Deming, served as a central point of inspiration for Intermountain's relentless battle to drive out variation. While many health systems treated total quality management and its variants as a passing fad, Intermountain dug in and made it a way of life. The presence of Intermountain contributes greatly to Utah's position as one of America's healthiest places to live.

Mayo Clinic (MN) – No organization has built as strong a brand for quality as Mayo. Its strength flows, to a great extent, from the team-based multispecialty group practice model that has been central to its operations since its founding along with its unwavering focus on putting patient interests first. The Mayo Way is well engineered and nonnegotiable. No organization has deeper, better connected data. Once satisfied to be insular, Mayo is stirring.

Sentara Healthcare (VA) – When other systems experimented with ownership of health plans then exited in the face of losses, Sentara persevered. When physician employment became too big a financial burden for others, Sentara doubled down. Because it persisted when others folded, it was able to put more than two decades of experience into its intellectual bank vault. It learned to meld a managed care enterprise, a hospital enterprise and a physician enterprise into a formidable integrated delivery system.

These eight health systems didn't wait for health care reform to move them down the path towards integration and value. Indeed, their initiatives provided models that CMS and other government agencies have attempted to emulate. These health systems positioned themselves to manage care by moving down one of four integration pathways.

For Mayo and Cleveland Clinic, the integration path was paved by their century-old multispecialty group practice model in which team-based delivery of coordinated care wasn't an option but a requirement. Intermountain, Baylor Scott & White and Sentara moved toward integration by owning a health plan. Geisinger had the benefit of an already well developed multispecialty group practice model when it stepped into health plan ownership. Advocate's path ran through development of its Physician Hospital Organization and Clinically Integrated Network. For Banner, the path involved creating a tight operating company model across every piece of the system including hospitals and physician practices. These four paths have coalesced over time as they've converged on the same destination – integrated care.

Two shared characteristics differentiated all eight systems. First, each had a well established reputation for delivering high quality care. This reputation often had been resident in star physicians and flagship hospitals prior to building out the system. The second common point of differentiation was wide geographic distribution usually developed as a result of acquisition and mergers. Such wide distribution expanded access, created leverage with insurers and pushed their brand identity into new markets. Wide geographic distribution also diversified the health systems' portfolio of markets so a slowdown or setback in one market could be averaged out across the others.

Focus is an essential characteristic of any truly strategic organization. These health systems demonstrated an ability to hone in on those strategic commitments that made the greatest contribution to their value proposition of integrated care. Ten driving strategies can be seen at work across the eight health systems over the past decade. The emphasis related to each of these strategies varied over time and by organization. They are interrelated and not in priority order:

Offer advanced capabilities to sustain consumer awareness and preference. Advanced clinical capabilities in the form of physician expertise and technology were legacy commitments emphasized from the onset at Mayo, Cleveland Clinic and Geisinger and imbedded in the flagship hospitals of the other five health systems.

Fortify a quality brand. Advanced clinical capabilities carried with it an expectation of higher quality outcomes. But to be sustained, differentiation on the basis of quality had to be demonstrated with data that evidenced superior outcomes. Because of their higher levels of integration, these systems have been able to provide such evidence.

Standardize care processes and management. Key to quality and affordability is driving out variation wherever possible. And moving beyond variation requires standardization. Quality of care, quality of leadership and quality of management all rely on a degree of standardization. It is impossible to deliver a quality service without the reliability and consistency that standardization delivers.

Require teamwork. Addressing America's tradition of independence in medicine is fundamental to delivering care that is coordinated. Teamwork is essential to bringing to bear multiple sources of expertise and experience. To have an impact, teamwork can't be optional and it must be facilitated by structure and technology.

Develop partnerships of trust with physicians. There is absolutely no way to effectively manage the quality, access and cost of care without active and committed involvement of physicians. And there's no way to foster productive physician involvement without including them as trusted partners in the system's most important work.

Create proximity and productivity through electronic linkages. It's not practical to move all physicians and patient care into close physical proximity with one another. So the benefits of proximity and connection have to be created electronically. Providing the right information at the right time to the right people in the right place is the highest use of information technology in health care.

Manage risk. It's never a good idea to turn your back on risk. Risk invariably has two traveling partners – danger and opportunity. These health systems embraced and managed risk in its many forms – in new ventures, in innovation, and in business arrangements. When they began their pursuit of integration there were few maps to guide them.

Pursue growth that expands access and influence. The best use of size is to make expertise and services more broadly available. For a health system, market influence arises from the number of individuals served. More patients and enrollees mean more influence. Access is obviously critical to market share. And profitable market share growth is the surest way to improved financial performance. It also deepens experience.

Restructure to enhance integration. Strategy drives structure, or at least it should. These health systems either designed themselves from the onset for integration or fundamentally restructured themselves to enhance connections, communication and coordination system wide.

Cultivate network effects. The most recent phase in integrating these health systems has been their investments in extending themselves beyond their core campuses and facilities through networks of affiliation. Bricks and mortar are notoriously immobile, expensive and difficult to merge. Knowledge, on the other hand, is inherently portable and malleable. Through arrangements that resemble franchising of intellectual property, these health systems are leveraging their deep investments in expertise and innovation.

It's often suggested that strategic success depends not only on the quality of the strategy but also the quality of execution. There was a consistent set of behaviors that characterized the execution of strategic commitments by each of the eight health systems:

Continuity and consistency over extended periods of time. These organizations stuck to their commitments even through periods of significant uncertainty and disruption. They also extended their strategies across their entire system along with the operational activities needed to support them. Ultimately, an organization's strategic mindset must emanate from its leaders. Longevity in leadership was key. CEO tenures ranged from 7 years to 21 years with an average of about 14 years.

Flexible persistence gave rise to purposeful agility and opportunism. Mayo Clinic was born out of a storm – an F5 tornado hit Rochester in 1883. That disaster precipitated the formation of the clinic and solidified the core beliefs of its founders. Cleveland Clinic burned to the ground about the same time the banks failed in 1929. Instead of walking away, the founders rebuilt the Clinic and added two floors. None of the systems progressed out of quick, bold strokes. Instead, they experimented their way forward. They gradually invented their own paths toward integration.

Non-negotiable commitments were essential to fighting fragmentation. Each of these organizations demonstrated tightness not found in most other health systems. Some things were beyond negotiation. Driving out variation was not optional. Executives, physicians and staff were required to adhere to standards that yielded integration and value.

Focused accountability in pursuit of value ran through each of the health systems. Constructive competitiveness drove them to demonstrate superior performance against a worthy standard – value. Because of the clarity of their intentions, including their establishment of measurable goals, accountability for value became a reality rather than a nebulous and unfocused aspiration.

It's taken at least 30 years for these eight health systems to deliver on their value proposition of integrated care. Other health systems can accelerate and strengthen their commitment to value by emulating the lessons they embody. No commitment will serve them or American health care better.

A more detailed overview of the eight health systems begins on page 10.

Eight Strategic Health Systems

	Primary Location	*Employed Physicians*	*Hospitals*	*Beds*	*Enrolled Lives*	*Revenues*	*CEO*	*CEO Tenure*
Advocate Health Care	Chicago IL	1,150	12	3,600	NA	$ 5.4 billion	James Skogsbergh	14 yrs.
Banner Health	Phoenix AZ	1,900	29	5,150	NA	$ 7 billion	Peter Fine	16 yrs.
Baylor Scott & White Health	Dallas & Temple TX	2,060	47	5,260	220,000	$ 7.5 billion	Joel Allison	16 yrs.
Cleveland Clinic	Cleveland OH	3,430	11	3,540	NA	$ 7.2 billion	Delos Cosgrove, MD	12 yrs.
Geisinger Health System	Danville PA	1,600	12	1,470	510,000	$ 4.6 billion	Glenn Steele, MD / David Feinberg, MD	16 yrs.
Intermountain Healthcare	Salt Lake City UT	1,400	22	2,630	800,000	$ 6.1 billion	Charles Sorenson, MD	8 yrs.
Mayo Clinic	Rochester MN	3,900	24	3,350	NA	$ 10.3 billion	John Noseworthy, MD	7 yrs.
Sentara Healthcare	Norfolk VA	770	12	2,710	450,000	$ 4.9 billion	David Bernd / Howard Kern	21 yrs.

Eight Health Systems; One Value Proposition – The Delivery of Integrated Care

	Path to Integration	*Differentiation*	*Driving Strategies**	*Execution**
Advocate Health Care	PHO/Clinically Integrated Network	- Regional distribution - Quality	- Advanced clinical capabilities - Quality brand - Standardization of care and management - Teamwork among physicians and other caregivers - Partnerships of trust with physicians - Electronic linkages - Managing risk - Growth for access and leverage - Restructured for integration - Network development	- Continuity and consistency - Flexible persistence - Non-negotiable commitments - Focused accountability
Banner Health	Tight operating company model	- Regional distribution - Quality		
Baylor Scott & White Health	Health plan ownership	- Regional distribution - Quality - Balancing hospital, physician, health plan		
Cleveland Clinic	Multispecialty group practice	- Heart focus - International recognition and reach - Quality		
Geisinger Health System	Multispecialty group practice Health plan ownership	- Care management - Regional distribution - Quality - Balancing hospital, physician, health plan		
Intermountain Healthcare	Health plan ownership	- Regional distribution - Quality		
Mayo Clinic	Multispecialty group practice	- Coordinated and comprehensive - International reputation and reach - Quality - Patient centered - Data rich		
Sentara Healthcare	Health plan ownership	- Regional distribution - Quality - Balancing hospital, physician, health plan		

**Applies across all eight health systems.*

Advocate Health Care

Advocate Health Care resulted from the merger of Evangelical Health System and Lutheran General Health System in 1995. The merger was strategic from the onset. Lutheran General Medical Center had grown into a large tertiary-level teaching hospital in Chicago's northwestern suburbs. Evangelical included Christ Hospital in the southwestern suburbs. Christ was very similar in size and capability to Lutheran General with both institutions featuring a high degree of subspecialization compared to the smaller community hospitals that characterized the suburbs. Both Lutheran General and Evangelical created their own employed physician groups. After the merger, those two groups were integrated. Advocate grew into a hospital system strategically located throughout the Chicago metropolitan market and in downstate Illinois.

To further strengthen its geographic reach and its position in multispecialty group practice, Advocate acquired a well established and respected medical group in the western suburbs. This gave it increased leverage with nonaligned hospitals in that market. It also brought the system deeper management expertise related to multispecialty group practice. To the extent there was still a gap in the geographic reach of Advocate's delivery system, it was along Chicago's suburban north shore. This gap was addressed when Advocate and NorthShore Health announced their intention to merge in 2015. (The FTC sought to block the merger but lost in June of 2016. It has appealed.)

Tough minded consistency is key to strategic success. A community hospital in the western suburbs had initiated affiliation discussions with Advocate but was unwilling to accept its single board governance structure insisting instead on local representation. For CEO, Jim Skogsbergh, and Advocate a centralized board was a non-negotiable requirement so they walked away.

Its disciplined geographic build out gave Advocate leverage and influence in the otherwise relatively fragmented Chicago market. But it was pioneering work related to turning the still largely theoretical notion of Clinically Integrated Networks into a valuable reality that really set Advocate apart. Advocate employed 600 physicians across the system but through a carefully orchestrated outreach to independent physicians it expanded its network to over 5,000 physicians.

According to Skogsbergh, *"Our Clinical Integration model is our secret sauce. It's a model that's constantly being tweaked, constantly being adjusted."* Like the other systems, Advocate did not have the benefit of emulating proven structures and methods. It had to invent them as it went along. Its transformation into a truly integrated delivery system was not the result of bold strokes. It progressed incrementally and experimentally. In 2004, Advocate had established Advocate Physician Partners which built upon the system's previous development of PHOs for each of its hospitals. Advocate had rolled these PHOs into a "super PHO," a move that soon attracted the attention of insurers who viewed it as a pricing threat. Advocate prevailed in a lawsuit brought by one of the insurers. That victory gave it the running room it needed to more fully integrate its partnerships with physicians and translate that integration into improved value.

Vertical and horizontal integration across the delivery of care enhanced Advocate's ability to manage chronic disease. It put its initial focus on diabetes and asthma. By 2007, these efforts were producing savings of approximately $600,000 and $2 million respectively. More importantly, significant improvements in health status were being achieved. According to Advocate's study, the asthma initiative saved 4,075 days annually from absenteeism while the diabetes effort documented 5,000 years of life, 8,000 years of sight and 6,000 years free from kidney disease.

Physician participation and commitment have been key to Advocate's success. Many physicians were initially reluctant to join the network. But that began to fade as Advocate Physician Partners demonstrated results and participating physicians started to encourage their colleagues to sign on. The network was physician driven. Physicians established performance targets based on national best practices, research findings and recognized benchmarks. Physicians were financially rewarded for the results they produced and weren't rewarded when performance fell short. There were financial incentives designed to encourage teamwork.

Today, physician participants in the network recognize that to succeed they have to communicate and collaborate to coordinate and improve care. They receive their performance results on a quarterly basis. Interestingly, the transparency and integrity of the performance data has encouraged constructive internal competition among physicians as they seek to outperform one another.

A key moment for Advocate came when it was presented with an attractive contract by a major insurer. It was a very good deal for Advocate but it could have put physicians at a disadvantage. According to Skogsbergh, *"We said no to the lucrative contract and said yes to our physicians. They remembered that."*

Building the infrastructure for integrated care is expensive. It requires dedicated staff and leadership. And it takes good data available where it's needed by clinicians. Advocate invested in creating comprehensive patient profiles supported by a single streamlined database that Advocate Physician Partners physicians can access for patients seen at any Advocate facility. This was supplemented by a single electronic medical record system and computerized physician order entry. According to Skogsbergh*, "The proper use of data can get you to a solution quicker. The approach at Advocate has been consistent: Give really smart people really good data and they'll usually come to the same decision."*

Advocate has sought to democratize innovation rather than embrace a centralized innovation center approach. Microsoft's Dennis Schmuland identified some of the issues with a centralized approach, *". . . the Innovation Center approach constrains the organization to handle only a few carefully chosen, usually high profile projects at a time, forcing the organization into making a few big bets rather than a large number of small bets that could add up to make a much bigger impact. The Innovation Center approach also shifts the responsibility for innovation to a small elite group of 'innovation experts', leaving 99% of associates disengaged in the innovation process. Of course everyone is invited to 'submit their ideas' to the innovation center, but this creates a lottery-like experience for employees because winning tickets are rare and the cost and emotional disappointment of submitting ideas that don't make the cut quickly extinguishes the initial excitement of each idea submitter."* Advocate has sought to push processes and tools out to frontline employees along with encouragement to reinvent clinical and nonclinical processes.

Advocate eventually extended the partnership approach it had taken with physicians to insurers. If you own a health plan, other insurers are quite naturally prone to regard you as a competitor. And if you're a provider, the insurers always have a vested interest in driving down your rates. In 2011, Advocate found itself in an increasingly public dispute with Blue Cross Blue Shield of Illinois. Both reached a point where they decided it was better to partner than fight. The result was a successful shared savings contract. The partnership has promised to deliver a health plan priced well below that of the current market. Skogsbergh describes the situation Advocate and other health systems have faced, *"We saw a situation . . . where we had the same scene play out time after time in which the contract with insurance companies would be up and they'd be saying 'you're too expensive' and we would approach it by saying 'we're not being paid enough.' There's this brinksmanship and it really wasn't working for us, and it wasn't working for the insurance company."* That moved Advocate towards contracts in which they are paid for better outcomes at a lower cost. In 2015, its cost per discharge day was lower than it was five years earlier. Its fully capitated contracts constitute about 20% of its revenues while the majority are in some sort of risk contract.

Early on in Skogsbergh's tenure, Advocate made a commitment that it would be, first and foremost, a safe clinical enterprise. That commitment underpinned all the others. Its focus on partnership sprung from a realization that care can't be managed for safety or anything else absent productive collaboration between the many individuals involved in delivering it. *"I'm amazed when I hear some of my peers say that their number one priority is to stay independent . . . The key,"* according to Skogsbergh, *"is not independence but how you better serve the community with better health care. And key to that is partnering with others to get the resources you need. It doesn't need to be a full asset merger. There are lots of different partnerships and different paths you can take to get there."* A spirit of partnership made the Advocate Medical Group possible and solidified the Advocate Physician Partners network. But there were threats to unity across the partnership. Seeing unionization as a force for fragmentation and conflict, Advocate tenaciously resisted the efforts of organized labor in a market where unions have lots of clout.

System growth hasn't been pursued for growth's sake but to expand reach and access in order to impact value. Reflecting on how Advocate has changed since he arrived in 2001, Skogsbergh commented, *"We're a larger organization – but a tighter system today. When I got here, there were a lot of things that were optional for our hospitals. Different processes in place at different locations which can add up when you've got ten hospital campuses."*

In January of 2015, Advocate announced it had joined the Health Care Transformation Task Force, a national coalition of health systems committed to delivering value-based care and willing to go significantly at risk to do so. The group is headed by Trinity CEO and former Geisinger executive, Richard Gilfillan, M.D. On one hand, such a commitment can be regarded as a bold leap of faith. On the other hand, it can also be viewed as an effort to leverage decades of investment in demonstrating a value advantage.

Banner Health

At Banner Health there has, from the onset, been a commitment to adhere to a consistent operating model at each of the system's hospitals as well as across its related operating entities. Many hospital systems have continued to operate as loosely held conglomerates with member institutions generally allowed to do their own thing. This limits the ability to build to system wide integration. According to CEO, Peter Fine, key to Banner's progress has been its decision to apply a tight operating company model. According to Fine, *"We're an operating company, not a holding company. I think, as a key principle, you have to be technologically advanced, and you have to have the ability to move quickly. Therefore, I think an operating model is key in the future world, and that holding company models are going to be very difficult to manage because it's hard to implement change – you can't move quickly. We have a higher degree of focus on doing things in a similar way."* Echoing a theme that ran through the other seven systems, Fine emphasized, *"The removal of variability enhances reliability . . . The risk of being a population health management company is so great, that if you don't manage the clinical environment really, really well by reducing variability and increasing reliability, it puts the whole company at risk."*

Fine has also emphasized the unique mission of Banner: *"We don't see ourselves as a healthcare delivery organization. We see ourselves as a clinical quality company. There's significant difference from a cultural perspective."*

Service quality expert, Len Berry, has long argued that the key indicator of quality in a service like health care is reliability. Reliability rests at the heart of how Banner has sought to distinguish itself. At Banner, there was a way of doing things that emanated from the senior leadership team. It wasn't a dictatorship, but it wasn't a democracy either. This tightness allowed Banner to ramp up initiatives faster than other systems, including hospital acquisitions and physician employment. Its tight operating model and mission as a "clinical quality company" have underpinned a 20-year multi-phased strategic plan that runs through 2020.

Driving out variation means accepting and applying standards. One of Banner's affiliated hospitals was reluctant to undertake the effort needed to meet Leapfrog standards so Banner walked away from the relationship. Any ACO that is going to be sustainable must move toward standardization in order to generate value. In Banner's view, a statewide ACO forming in Arizona held too much potential across its many participants for compromises and divergence on standards so Banner elected not to participate. Instead, it decided to manage according to its own standards and those of world class players like MD Anderson. It launched its own ACO.

Essential to development of Banner's tight integration was streamlining governance to create a single board accountable for the entire system. Unified governance was essential to focusing on reduced variability and increased reliability. Fine explains, *"Our board burned the boats and there was no retreating… they said, 'we are now a board of a new organization, we are not representative of our past alliances.'"* Fine said, *"We're convinced that if you don't burn the boats and you leave a trap-door – a way of retreat – it will be exercised. And the board said, 'we can't do that.'"*

Recognizing the value of academic medicine to the delivery of leading edge care, Banner pursued a partnership with MD Anderson that involved building a new cancer hospital. It then made history by becoming the first community-based health system to acquire an academic medical center. The University of Arizona Medical Center and Health Network includes two medical schools, a faculty practice plan and three health plans.

The focus on academic health care was the result of a recognition that Phoenix, the sixth largest city in the country, did not have a university hospital. While the move promised to more fully differentiate the Banner brand, it also provided a powerful means of addressing the behavior challenges involved in productive physician engagement. Like Mayo Clinic, which has its own medical school and longstanding program of graduate medical education, Banner will be able to shape its physicians during their training including expanding their knowledge of the business and management challenges associated with delivering high-value care. Just as training programs will reshape physician relationships and roles, the relationship with the University of Arizona Medical Center will also help Banner attract top research and academic talent.

Although its partnership with MD Anderson has contributed to its reputation, Banner has learned that even world class brands require investment when it comes to local and regional markets. It spent millions to build awareness and preference for the MD Anderson-Banner brand. Consumers, according to Fine, continue to differentiate health care services largely on the basis of accessibility and convenience because it's still virtually impossible for them to do so on the basis of clinical quality. Not surprisingly, the MD Anderson-Banner partnership set off a reaction from its competitors who responded with expanded investments in oncology.

Banner has focused considerable attention on transforming its relationship with physicians including their roles in leadership. It established Chief Medical Officers at each of its hospitals but very intentionally focused them to clinical accountabilities only. It was the job of the hospital CEOs to deal with medical staff politics and business considerations. It also established "clinical consensus groups" comprised of physician peers who then were supported with data as they evaluated, adopted and adapted standards.

There was a realization that the challenge of engaging and integrating physicians was not an issue of technology but was instead a matter of behavior. Involvement and consensus among their peers made it hard for physicians to "opt out." According to Fine, *"The difficulties are long-standing patterns of behavior in what clinicians do. We have a process under our chief medical officer that takes discreet areas of clinical care, creates consensus groups to evaluate them at great length and looks for best practice. When we identify best practice, we get approval through the process and we implement it through the whole system. Physicians can opt out. But if they don't opt out, they're in . . ."* After its merger with the University of Arizona, it again found that many of its greatest challenges were behavioral. Faculty and staff morale was low. It was compelled to identify and leverage positive attitudes among faculty and to not get in the way when some physicians threatened to leave.

To continually improve clinical outcomes, Banner has stayed on the cutting edge of technological innovation. It has invested heavily in electronic connections that allow physicians and nurses in all of its facilities to stay connected. According to Fine, as of 2012 there were only about 97 hospitals in the nation that have been validated by HIMSS analytics as ranking at the top of the seven levels of electronic performance; 21 of those top-level hospitals are in the Banner Health System.

As a result of its investment in electronic connections, a doctor at a Banner facility in Wyoming can easily monitor a vacationing patient admitted to a Banner hospital in Phoenix. Physicians can also instantly contact nurses, who are equipped with small Vocera phones for hands free wireless communication.

The Banner Simulation Center is one of the world's largest simulation education facilities. It trains physicians, nurses, allied health providers and emergency responders using computerized mannequins, simulators and virtual-reality programs. With a hospital full of virtual-reality "patients," Banner health professionals can learn and perfect their medical techniques before they care for real patients.

The heart of the simulation education program is the 55,000-square-foot Banner Simulation Medical Center in Mesa, Arizona. It is complemented by other simulation sites in Arizona and Colorado as well as a mobile training program that serves hospitals throughout the Banner system.

Each of the eight systems has weathered crisis. For Banner, one of the most intense of storms it's faced came in the form of recent financial downturns driven by rapid declines in patient volume and reimbursement combined with a jolt to its investment returns. The total impact of revenue reductions were in the hundreds of millions. In Arizona, Medicaid now pays only seven cents on the dollar. In response, Banner instituted Lean, Six Sigma, and process reengineering to streamline its delivery of care and drive out wasteful variation. And it made the case for cost reduction to clinical and administrative staff across the organization then engaged them to help in a collaborative effort.

The effort is projected to put an additional $256 million on the organization's bottom line by 2017. According to a 2013 article in HealthLeaders, Banner's rules for cost reduction were as follows:

- *Cost-cutting would be done by empowered, cross-functional teams, whose recommendations would be respected and accepted whenever possible*
- *Changes that could negatively affect care delivery or patient experience would be unacceptable*
- *A soft landing would be provided for any employee whose job was eliminated*

With these rules in place, eight cross-functional teams – each composed of middle managers, a consultant guide, and a sponsor from the leadership team – were formed. During an intensive eight-week pilot, each team was trained. Then they analyzed the cost structure of one function and recommended cost reduction tactics.

Facing tough financial realities increased Banner's discipline and confidence. According to Fine, *"We started in 2009, a multiyear journey, to take an organization as big as ours and figure out how to break even on Medicare. We took over two hospitals with 40,000 admissions, primarily Medicare hospitals, that weren't making money when we took them over in 2008. We took $3 million of overhead out overnight by consolidating. . . The only way those (acquisitions) become really valuable is if the leadership takes out duplicative administrative costs. Otherwise, their costs increase by their inability to make tough decisions. Once you develop that kind of culture, it allows you to do things that were previously restricted. . . This is a tough business. It doesn't follow typical business norms. You can't walk into Walmart and walk out with [something] for free – but you can do that in health care."*

Like the other seven health systems, Banner is big. But like his fellow CEOs, Fine doesn't see size in itself as an advantage, *"To just be bigger isn't valuable. If you can't manage the business to get enhanced clinical outcomes, a stable financial environment, the ability to reinvest in yourself, you can't be successful as an operating company . . . If you are a holding company, I don't know how you get the required clinical results. We're going to get bigger because we think we still have room to spread our fixed overhead over a bigger base.*

I really think there's going to be some big, big, big systems nationally, and it's about asset acquisition. But I'm not sure asset acquisition is enough to create a successful organization and a better clinical product."

It's easy for leaders to disappear in large growing organizations, particularly in complex health systems with widespread geographic dispersion. The inhabitants of the corporate offices can become faceless, distant and, too often, increasingly irrelevant. Because of this, leadership visibility becomes essential as Fine relates, *"What I learned is visibility breeds credibility. Credibility breeds trust, and if you want to be trusted you better be visible. And I tell our new leaders that. It's the first thing they hear from me in monthly new leader orientation at Banner."* Fine shares another message with new leaders, *"You have to have a passion for complexity, and a high tolerance for ambiguity. Otherwise, you're doomed to an unsatisfying life as a leader in the health care field."*

Baylor Scott & White Health

When the possibility of a merger between Scott & White and Baylor Health first came up, there wasn't a lot of enthusiasm for the idea among board members. But absent some sort of tighter relationship, the two systems were constrained in terms of what they could talk about, let alone what they could do together in a region that was continuing to consolidate. So a disciplined process was undertaken to give key decision makers the information they needed to effectively evaluate the implications of such a combination.

Baylor already had a commanding position in the Dallas/North Texas region while Scott & White enjoyed similar strength in the Temple/Central Texas area. The numbers a merger would yield were impressive – 47 hospitals, 2,000 employed physicians, 35,000 employees, a health plan with 200,000 members. Both systems also enjoyed outstanding reputations for quality and strong consumer preference. A merger of equals was proposed with the combined board to be comprised of eight members from each of the original two systems.

While Baylor brought its 42 hospitals and 30 ambulatory surgery centers, Scott & White brought much more than a well established presence in central Texas. It embodied more than 100 years of experience with a multispecialty group practice model that was started at about the same time Mayo got its start. Scott & White had also helped pioneer managed care when it extended prepaid health care to railroad workers in the late 1880s. Indeed, the experience embedded in the Scott & White Health Plan would solidify and accelerate Baylor's moves to meet the challenges of value-based reimbursement and population health.

Any merger requires a restructuring of leadership. And questions of leadership can derail a merger or cripple it forever. At the highest level, the Baylor Scott & White merger embraced the dyad relationship that married physician leadership with administrative leadership. Scott & White's physician CEO, Bob Pryor, M.D., became president, chief operating officer and chief medical officer for the merged organization. He was focused to the clinical and operational aspects of the system while Baylor Health's CEO, Joel Allison, focused on overall direction and business concerns as well as ensuring that the full potential of integration was achieved. Culture is often identified as the culprit in failed mergers. During due diligence, a cultural audit determined that although the two systems had very different histories and structures, culturally they had much in common.

According to Allison, *"There was nothing more important than ensuring we could preserve the cultures of both organizations built over the past century. Prior to the merger and since, we have walked away from deals and partnerships after realizing the other organization would not be a cultural fit . . . We said from day one that we wanted to be one system. We said there is always going to be a Baylor way of doing things and a Scott & White way. We need to get the best practices from the two."*

Although each of the other seven health systems had grown through mergers and acquisitions, none grew as much or as quickly as the result of a single merger. Integration of Baylor and Scott & White might have misfired or suboptimized as so many other health care mergers have. That didn't occur because leaders in both organizations anticipated the possible obstacles, planned for them, then executed with discipline. Baylor Scott & White didn't turn to outside consultants to facilitate integration activities. Instead, it named an insider as vice president for integration and made pulling the two organizations together her exclusive focus. According to Allison, *". . . organizations need to establish some 'non-negotiables' for employees and the organization to follow, and refer to them regularly. We have four: Put the patient at the center of all we do; stay true to our mission; live our values; and do the right thing for the right reason. It is amazing how many debates about what course of action to take in a tough situation can be easily resolved by these non-negotiables. These tenets guide how we think, behave and care for our patients. And as leaders, we must always walk the talk."*

Allison also framed the new system's overall strategies clearly: Flood communities with access points and primary care physicians. Get employers to offer employees a health plan that is data driven and has incentives to improve health and reduce costs. Engage patients in their own care. Take care of the ill but keep the healthy well.

The Baylor Scott & White Quality Alliance, a clinically integrated Accountable Care Organization, is built on a 4,600 physician network. 1,200 physicians and scientists were already employed in Scott & White's century-old multispecialty group practice. Prior to the merger, Allison had assembled HealthTexas Providers with 650 physicians and 150 advanced practice providers scattered across 250 delivery sites. That group served as a cornerstone for the larger ACO network.

As Allison pointed out, *"The Quality Alliance will plug in to the Scott & White health plan as a narrow network that we could offer to individuals, employers or commercial payers . . . The Quality Alliance board is made up of about 85% of physicians. They are working on every service line around the appropriate care guidelines and metrics. We do predictive modeling on patients. We feed all that data into these information systems and then we get back reports for our physicians on how we are doing. They get their own individual reports."*

The Quality Alliance was awarded a three-year accreditation by the National Committee for Quality Assurance in March of 2015. According to D Magazine, *"There are three levels that an ACO can reach: the first identifies programs that are in the formative stages, but 'have not yet reached full ACO capability.' These have the infrastructure in place, but are just getting started. The certification lasts two years. The second level, which the BSWQA achieved, means that the programs 'demonstrate a broad range of ACO capabilities.' The third is for programs that have demonstrated 'significant improvement' in population health.*

Baylor Scott & White first focused enrollment in its ACO to its own employees. Like the other health systems, it also targeted chronic diseases. Patients with chronic conditions were paired with health coaches and care coordinators. Deep data from Scott & White and its health plan has allowed Baylor Scott & White to focus on the 5% of the population who generate 50% of health care spending. According to Allison, *"Before we merged, we had on our strategic list the need for a financing mechanism, because it was our belief that we as providers were going to be taking more and more risk. So we were looking at developing a health plan from within, acquiring one, or partnering with one. When the discussions came about with Scott & White, we said this will help us get to where we wanted to be as an integrated delivery network."*

Baylor had always made good use of partnerships including deals with entrepreneurial investor-owned organizations. Such companies weren't stuck in the typical bricks and mortar mindset, and they had access to capital to fuel growth. Baylor partnered early with United Surgical Partners (USPI) (Allison has been on its board since 2002). The partnership with United Surgical allowed Baylor to move outpatient surgical capacity quickly into the Dallas market without the underperformance that has plagued so many hospital-owned surgery centers.

Other partnerships have contributed to Baylor Scott & White's strategic position including a significant affiliation with the Cleveland Clinic. In December of 2014, it became the third member of the Clinic's Cardiovascular Specialty Network and its exclusive partner for heart-care referrals in the Southwest.

In many of Cleveland Clinic's affiliations the affiliating partner seeks a relationship primarily to enhance and expand its capabilities and reputation. The Baylor Scott & White relationship with Cleveland Clinic was different given the system's existing preeminent position in heart care. It had already built the second largest heart transplant program in the world. Of the 1,150 cardiac surgery programs in the United States, only 14 were top ranked by the Society of Thoracic Surgeons. Two of those were the Cleveland Clinic and Baylor Scott & White. Cleveland Clinic contributes its world class reputation and methods as well as national contracts with major employers like Lowe's and Boeing. Its fixed price bundled contracts approach is being expanded to employers in Texas and Oklahoma. Even as the affiliation agreement was being finalized, the Cleveland Clinic had already referred five patients to Baylor Scott & White.

Through its affiliation with Baylor Scott & White, Cleveland Clinic gained a respected partner while it expanded its reach without investing in bricks and mortar in an unfamiliar market. *"The Cleveland Clinic considered 65 hospitals before selecting Baylor,"* said Dr. Joseph Cacchione, who chairs operations and strategy at Cleveland Clinic's Heart & Vascular Institute. The Clinic's CEO, Toby Cosgrove, commented, *"The next phase of the alliance will be to install the data and imaging connectivity that will allow seamless communication between Baylor and Cleveland. We have 4,000 heart operations (each year) and as you do more and more you see more nuances in how you deal with those that other people don't have the chance to see because they don't see the variety and that volume. It teaches you to look for things that are rare. The alliance allows us to share that experience in a very major way."*

At Baylor Scott & White, its Research Ventures is focused to fostering innovation through the system. It works with employees at all stages of the invention and discovery process to evaluate, protect, market and manage intellectual property. It also builds and maintains partnerships with investors, universities and companies. Research Ventures provides a single point of access for innovators throughout the entire system.

Growth has been a strategic imperative for Baylor and Scott & White. That imperative has continued post merger. In July of 2016, the system announced it would continue to push south into the Austin market with its acquisition of a 100-bed hospital in affluent Travis County, Texas. Population health reinforces the rationale for size. Reimbursement for the health of populations will always involve risk. It can cost more than you're being paid. The only way to manage that risk is to spread it out over a larger population.

Cleveland Clinic

The Cleveland Clinic had a direct connection with Mayo Clinic. Founder, George Crile, and Will Mayo developed many of their principles of organization and structure on the battlefields of World War I and then shared them as they traveled home together on a troop ship. It was that experience that generated Crile's foundational directive to always "act as a unit." To this day, Cleveland Clinic publishes and regularly updates its history in a book titled, Act as a Unit. And it was Will Mayo who gave the dedication speech when the Cleveland Clinic opened its new building in 1921.

The integrated multispecialty group practice pioneered at Mayo evolved at Cleveland Clinic in an environment much different than the rural one in which Mayo grew. Mayo drew its workforce from dairy farms. Cleveland Clinic was built with the sons and daughters of factory workers. Cleveland had been home to John Rockefeller and was once one of America's most prosperous cities. But like Detroit and other Midwestern manufacturing centers, it decayed into an impoverished shadow.

In May of 1929, an explosion destroyed the clinic building and killed 123 of its employees including one of its founding physicians. Within months, Cleveland's banks began to fail. Clinic leaders rebuilt the facility and added a third floor.

Given its current strength, its market dominance and world class reputation, its success might look to have been inevitable. But more than any of the other seven health systems, Cleveland Clinic went through periods when it had to fight for survival. It had to sustain its reputation as the nation's leading heart center for decades in the face of overwhelming investments by competitors, regionally and nationally. Just as threatening was the Clinic's location in Cleveland's deteriorating and increasingly dangerous urban core. Suburbanites didn't want to go downtown, and it became increasingly difficult to recruit the kind of top talent sustaining the Clinic's reputation required. To make things even more precarious, Cleveland Clinic had decided to follow Mayo Clinic to Florida by opening clinic operations on that state's east and west coasts. The Florida ventures were soon draining energy and dollars from the Clinic's main campus on Cleveland's Euclid Avenue. Leadership could have simply abandoned its downtown location. Instead, it decided to curtail its Florida operations and focus on turning the situation around at its Cleveland campus. It bulldozed a transformation of its neighborhood. It also enticed a luxury hotel to locate on campus and targeted an international clientele. It was the beginning of a renaissance for downtown Cleveland. The challenges Cleveland Clinic faced toughened it. It became a sharp-elbowed street fighter. Although the Clinic refocused on its Cleveland operations, it never gave up on Florida. In September of 2015, it announced it was investing $302 million in expanding Cleveland Clinic Florida in Weston and was adding a new 65,000-square-foot clinic and ambulatory surgery center in Coral Springs.

According to a 2015 Fierce Healthcare article by Zack Budryk, the Cleveland Clinic's transformation has been dramatic. During physician CEO Delos (Toby) Cosgrove's first year at the clinic, *"someone was shot dead at the clinic's front door. The bank in the basement was robbed. To avoid crime, patients were told to take a shuttle bus the half-block back to the hotel where they stayed. The executive offices were all made with bulletproof glass.*

The rough old neighborhood is a distant memory, replaced by a gleaming testament to modern medicine stretching out over 46 buildings and covering 167 acres. Protected by a dedicated 141-trooper force of state police, there is a conference center, a fancy hotel and a farmers' market.

Forty-two thousand people – the equivalent of 11% of Cleveland's population – work there, making it Ohio's second-biggest employer, after Wal-Mart."

While Mayo built its reputation across the entire continuum of specialties and services, Cleveland Clinic focused on the heart. It then extended its powerful brand to other services including ophthalmology and cancer and more recently to the brain while continuing to invest in maintaining its strong leadership position in heart care. Between 2004 and 2006, it expanded its heart and vascular institute to a million square feet in Cleveland.

Like Mayo, Cleveland Clinic leadership had recognized early the importance of ambulatory care and had built dedicated facilities on its main campus for delivering care on an outpatient basis. Rather than abandon its downtown location, Cleveland Clinic chose to ring Cleveland with some of the nation's earliest and most extensive suburban ambulatory care centers. It then outmaneuvered University Hospitals of Cleveland to acquire nine community hospitals for a fraction of their market value. Their owners were willing to sell at a discount because they recognized they would gain the Clinic's world class reputation through association.

Recognizing the importance of putting high utility data in the hands of physicians and other caregivers, Cleveland Clinic invested early and aggressively in information systems. As a result, Cleveland's independent physicians, who lacked such infrastructure, began to find themselves at a growing disadvantage in competing for managed care contracts. They also soon began to appreciate the power of the Cleveland Clinic's brand which translated into higher reimbursement from insurers as well as stronger preference among consumers.

While most health systems were just beginning to appreciate the importance of demonstrating a value advantage, Cleveland Clinic was already publishing its outcomes and distributing them in its lobbies as well as online. Visitors to its web site will find outcomes listed by specialty including cardiac surgery outcomes for fifteen types of operations. Its results enabled it to lead the industry in offering bundled pricing for services directly to employers not only in Ohio but nationally.

The clinic was also able to translate its integration into differentiated value for consumers by offering a well promoted second opinion program. It then began to offer next day appointments – a promise it has aggressively promoted in a variety of national ads in USA Today and the Wall Street Journal.

Perhaps no health care organization has demonstrated sustained application of principles of strategy advocated by Harvard's Michael Porter better than the Cleveland Clinic. CEO, Cosgrove, shared those principles in a 2013, article in the Harvard Business Review, "Value Based Health Care Is Inevitable and That's Good."

On value as the heartbeat of strategy. Cosgrove points to value as a game changer: "Vaccines. Anesthesia. Penicillin. Bypass surgery. Decoding the human genome. Unquestionably, all are life-saving medical breakthroughs. But one breakthrough that will change the face of medicine is being slowed by criticism, misunderstanding and a reluctance to do things differently. That breakthrough is value-based care, the goal of which is to lower health care costs and improve quality outcomes."

On industry and market structure. Cosgrove describes the significant shifts in industry structure: "Whether providers like it or not, health care is evolving from a proficiency-based art to a data-driven science, from freelance physicians to hospital-employed physicians, from one-size-fits-all community hospitals to vast hospital networks organized around centers of excellence."

On competing to be different. According to Cosgrove, "What makes Cleveland Clinic different stretches back to our founding 92 years ago as a physician-led group practice that runs a hospital – not a hospital that employs doctors."

On value proposition and value chain. Cosgrove identifies one of those discrete activities that help to make its value chain unique: "As a leader in electronic medical records, we have a wealth of data that can tell us what's working and what's not." Accumulating and distributing that wealth of data fortifies and leverages a value proposition built around a multispecialty group of physicians who are connected and coordinated by shared purpose and integrated systems of care.

On choosing what not to do. The clinic was willing to forgo other opportunities to build continued strength related to heart disease. It chose not to overinvest scarce capital in acquisitions. Instead, it traded the reputational value of its world-class brand for ownership and partnerships regionally, nationally and internationally. Recognizing that economies of scale are derived from geographical concentration of volume rather than from sheer size, it decided not to become a national multihospital conglomerate and opted instead to market bundled products to draw patients to Cleveland where it can deliver economies of scale that are real.

On fit and continuity. At the Cleveland Clinic, fit can be seen in the rapid adoption and use of information technology by physicians employed in its multispecialty group practice. And the clinic's long-standing commitment to ambulatory care facilities on its main campus and in the suburbs generates fit by making care available in the most convenient, affordable and clinically appropriate setting. The fit among the clinic's multispecialty group practice model, its advanced information technology and its ambulatory capacity allows it to offer patients and referring physicians next-day appointments.

On leveraging a cluster. The intense rivalry between the clinic and neighboring University Hospitals of Cleveland is the stuff of legend. Yet, through the movement of talent and ideas between the two organizations and other kinds of inevitable transference that result from proximity, they have lifted rather than diminished one another. The clinic and University Hospitals now share an academic relationship with Case Western University. Both organizations have invested heavily in rejuvenating downtown Cleveland. And while local officials bankrolled the marginal contributions of the Rock & Roll Hall of Fame, the clinic and University Hospitals turned health care into an economic juggernaut fueling the growth of high-paying jobs in northeastern Ohio.

In addition to being a respected executive and a world-renowned cardiothoracic surgeon, Cosgrove is an inventor widely recognized for his innovations in medical devices, some of which, in entrepreneurial fashion, he developed in his garage. Among his lasting contributions will be his efforts to expand that garage to the benefit of Cleveland by spearheading development of the city's Global Center for Health Innovation. Already, Cleveland-area health care startups lead the Midwest in attracting investment. Taken together, all of this yields a cluster advantage by which the center of gravity for reputation, innovation and value in health care has shifted decidedly north in Ohio.

In 2008, Cleveland Clinic Lerner College of Medicine – a partnership between Cleveland Clinic and Case Western Reserve University in Cleveland – became the first nearly tuition-free medical school in the country. Every student receives a full scholarship covering tuition and fees, as well as a stipend to cover the fifth year when they typically conduct research. Physicians on average incur $160,000 of debt to go through medical school. *"This is our investment and our intellectual capital for the future,"* Cosgrove said. Physicians are also offered jobs at Cleveland Clinic after their training. It's one way the Clinic is attacking a persistent physician shortage.

Like each of the other seven health systems, Cleveland Clinic has focused intensely on reducing its costs. According to Cosgrove, *"Had the Clinic not reduced the cost of providing care by $604 million over the last three years, 2015 would have been one of its worst financial years."* Instead, it was one of its best.

Some of those savings have fueled the clinic's bottom line. But they've also supported the delivery of care with a lower overall price tag. In 2013, Cedars-Sinai Medical Center in Los Angeles spent $146,165 per Medicare patient, according to the Dartmouth Atlas of Health Care. UCLA's Ronald Reagan Medical Center spent $137,248. The Cleveland Clinic spent $86,279. Mayo Clinic demonstrates similar affordability.

Given its accomplishments, the Cleveland Clinic might be forgiven if it paused to catch its breath. That's not likely to happen according to Cosgrove, *"Speed, at the end of the day, is the ultimate competitive advantage and always will be. Cleveland Clinic is committed to ensuring that patients can see a provider 'anytime, anywhere' whether in a hospital, ER or walk-in clinic. The clinic's average ED wait times are down to 13 minutes,"* Cosgrove said. *"The clinic also makes same-day appointments for 98 percent of people who request one."*

"Part of the secret of the organization's success is its use of distinct measures for all of its goals," Cosgrove said, *"from emergency department wait times to employee weight loss under its wellness program. Physicians are an incredibly data-driven group,"* he said, *"and if you want to make a change, you present the data and that makes the case for you."* In five years, the clinic went from last place to first in HCAHPS patient experience scores for hospitals with more than 1,000 beds.

Accountability matters. And there can't be meaningful accountability absent measurable goals. Cleveland Clinic puts physicians on a yearly contract, making it far easier to let them go if they fell short; a reality not lost on physicians who may be reluctant to meeting the Clinic's expectations.

Cosgrove acknowledges the clinic still falls short in some areas including the lack of doctor communication that remains the most common patient complaint. As a result, the Clinic has implemented mandatory communication courses.

Geisinger Health System

The service areas of Cleveland Clinic, Sentara and Banner have populations in the millions. Geisinger is located in a town with a population of 5,000. The surrounding counties have similarly low population densities. Geisinger's service area is spread wide – across 48 counties. It is a rural health system but with some remarkable distinctions. It serves more than 3 million people with twelve hospital campuses, two research centers and a 500,000-member health plan. It employs 30,000 including 1,600 physicians.

Geisinger expanded gradually through mergers and acquisitions with other Pennsylvania hospitals. It recently added AtlantiCare in New Jersey to the system. It was led from 2001 to 2015 by Glenn Steele, Jr., M.D. Ph.D., a surgeon. In 2010, physician, Richard Gilfillan, left his role as President of Geisinger's health plan to head up CMS's Innovation Center where the new payment models that have served as cornerstones of the Accountable Care Act were developed and deployed; many of them incorporating experience transferred from Geisinger.

Like Cleveland Clinic, Geisinger was founded as a physician led multispecialty group practice modeled on the Mayo Clinic. The paradox of a 500-bed, highly specialized medical center located in the midst of a thin population base is not completely unique. The Marshfield Clinic and Gunderson Clinic, both located in Wisconsin, represent similar phenomenon. Both were also founded on the Mayo example.

Geisinger's dyad organizational structure pairs physicians and administrators across more than 20 cross-disciplined services lines to plan, budget and evaluate one another's performance. This resulted in a team-based cultural transformation. Financial incentives and recognition are used to drive improvements in performance. Recognizing that integration is a continuous challenge, it recently named a Vice President for Integration.

What is truly unique about Geisinger is what it has done with the higher degree of integration embodied in its medical model. It has built a national reputation for innovating at the interface between health insurance, inpatient care, outpatient care and physician practice with a focus on patient safety and quality as well as evidence and value-based care. This has been made possible by its early adoption of electronic health records and new care models that it has since branded including ProvenCare® and ProvenHealth Navigator®.

ProvenCare is a portfolio of care processes many of which are package priced (bundled) and which have been redesigned to reliably administer coordinated evidence-based best practices. For Geisinger, pricing ProvenCare bundles at a discount has created an incentive for efficiency and avoidance of complications. ProvenHealth Navigator redesigns processes so that the primary care team can reliably meet the comprehensive needs of patients through intensive outpatient management.

In 2015, after Steele retired, David Feinberg, M.D., took his place. Feinberg quickly introduced ProvenExperience, another branded product that offers refunds to patients whose expectations weren't met.

"The way I see it, if you go into Starbucks and you're not happy with your order, they don't sip your latte and argue that they made it correctly. They just take care of you on the spot," Feinberg said. *"What matters to me is that every patient is satisfied with their treatment and so I started thinking, 'What is our guarantee? What is our refund?' We need to be disruptive to move the practice of providing great patient experience forward and so the decision was made to give unsatisfied patients their money back."*

A pilot of the program has been introduced at Geisinger Medical Center. A key component of the program is a patient app that allows surgery patients to determine the amount of the refund they want based on their co-pay.

If a patient paid a $1,000 co-pay and wasn't pleased with how office staff treated them, they can log into the app and select from a sliding scale how much of their co-pay they want refunded. They could choose from $1 to $1,000. Their refund would be processed within 3 to 5 business days.

ProvenExperience is an evolution of ProvenCare which succeeds in reducing mortality rates, improving outcomes and reducing costly readmissions. The New York Times had deemed it "surgery with a warranty" because if patients are readmitted within 90 days with a preventable complication, they are taken care of at no extra charge.

Feinberg remembers, *"In the beginning, I talked to other health system CEOs and industry leaders about ProvenExperience and they all said, 'Don't do it.' I really felt dejected,"* Feinberg explained. *"Then I thought about Kodak executives discussing digital photography. And Blockbuster talking about online video options. Were they also told 'Don't do it?' That's when I said to myself, 'We're doing it.'"*

Geisinger is a teaching hospital and conducts research with a focus on translating new models of patient care to clinical practice. In building its research and educational capacity, it sought physicians who might not have fit at many academic medical centers but brought a more active entrepreneurial spirit.

Geisinger's physicians have taken the general principles found in clinical guidelines and translated them into specifics. According to surgeon, Alfred Casale, M.D.: *"The [professional] guidelines for coronary grafting are about as good as any guidelines we have focusing on surgical procedure. But even they are very general, almost like 'eat your vegetables.' It is hard to measure that. We then translated those generalizations into specifics like 'eat 2 cups of broccoli every 24 hours,' because that could be measured . . . and followed."*

The breadth and depth of Geisinger allows it to provide laboratories in which to road test new models of care. According to Steele: *"We sit on both sides of the payor/provider continuum; we provide the care and then we oversee payment through our insurance company and that's a fundamental part of our success. It gives us a lot of flexibility to do interventions. So we are able to do live road tests where we reengineer the way we take care of heart disease or perform bypass surgery. We can change incentives and think long term about patient outcomes from both sides of the equation. When we started this it was a promissory note – a promise; now we have the evidence for change. We can show that it works. We make a difference for a large number of patients."*

Geisinger's ambitions are national – it is committed to extending its accumulated intellectual capital by marketing its methods to other U.S. health care organizations. In that way, leadership intends to generate a new revenue stream to help fund future investment. It also hopes to reshape the delivery of American health care. Commercial reimbursement rates have served as an opiate for the industry. Many, perhaps most, health systems are so addicted they may not be able to muster the energy, attention and resources needed to make a transition to value-based reimbursement. According to a MedPAC report, in 2015 rates that hospitals received from commercial payers were 50% above their costs and up to 75% higher than Medicare rates. Geisinger intends to position itself to help stem the nation's fee-for-service/commercial rate addiction.

Through the Geisinger Health Plan, created in 1985, the system has focused on improving population health through management of chronic conditions like asthma and diabetes. And like the other seven health systems, it documented its results including significantly reduced hospital admissions and hospital days. According to a study conducted by The Commonwealth Fund, Geisinger's mixed-health-plan provider network allowed it *"to collaborate with and influence care practices in non-Geisinger physician groups and hospitals (Geisinger patients account for 40 percent or more of the patient volume in 13 non-Geisinger hospitals). For example, placing nurse care managers employed by the health plan into both Geisinger and non-Geisinger primary care practices extend the system's integration and efficiency outside its organizational boundaries. This arrangement allows collaborative follow-up and performance reporting using the system-wide EHR."*

According to Steele: *"Our insurance company is going into non-Geisinger markets to see if we can create similar value re-engineering, but with non-Geisinger providers. Early results are promising. Second, we are going into new markets on both provider and payer sides of Geisinger to see if we can bring our successes elsewhere in and outside of Pennsylvania. And third, we have created xG Health Solutions which is a joint venture between Geisinger and Oak Investment Partners. With xG, we hope to sell our data-analytic capabilities and our value re-engineering transaction processes to other providers and other insurers. We want to take our success to a much bigger space and see if our innovation is scalable. It's all very systematic, and it's all about real live road testing, not just consulting power points."*

Geisinger has established itself as one of health care's most productive innovators particularly related to reinventing and reengineering processes of care. Ronald Paulus, M.D., M.B.A., described Geisinger's 'innovation architecture' as comprised of the following:

- *"convening teams of diverse stakeholders to identify the best care models for enhancing value in the prevention and treatment of disease;*
- *setting targets for care model redesign based on factors such as impact on populations and cost, variation in outcomes, interest among physicians, and gaps in performance;*
- *developing a clinical business case for the redesign including identifying efficiency and quality goals and developing a road map of needed changes and linkages in processes, analytic support, and financial and nonfinancial incentives;*
- *applying a variety of improvement approaches, including borrowing and adapting approaches that have worked in previous initiatives; and*
- *culling promising innovations for expansion"*

Geisinger's approach to innovation resembles the evolutionary process by which software is developed. Innovations failing to deliver results are dropped while those that meet or exceed expectations move forward. Importantly, reusable components and parts, including processes, software, technology or analytics, are stockpiled for new applications.

Key to innovation at Geisinger has been its early deployment of an EHR and supporting data infrastructure which allowed it to remove distance barriers, empower consumers, automate and standardize care and improve reliability. EHR adoption at Geisinger has been described as just the first step in a "long care transformation journey."

Geisinger's integrated structure has allowed its innovation to proceed most productively in what it describes as its sweet spot – the roughly one-third of patients to whom it is *". . . both financially (via its health plan) and clinically (via the provider enterprise) responsible."*

Innovation at Geisinger starts with a single, but not often asked, question, "What realistic care model will most reliably deliver the maximum health care value?" For Geisinger, "care model" is defined as *". . . the step-by-step approach to individualized preventive care and the diagnosis, treatment, management and engagement of all patients resulting in enhanced value . . . Financial, organizational and cultural barriers often deter fragmented health care delivery components from pursuing answers to this fundamental question."*

As with each of the eight health systems, there were key points when things could have turned out much differently. For Geisinger, one of those forks in the road was what Steele described as a "near death experience" – its failed merger with Penn State-Hershey Medical Center in 1999. It was costly and frustrating, but such experiences often help clarify what's important and what's possible. If the merger had been completed, making it work might have drained Geisinger of much of its energy and focus for years. After the merger failed, Steele told Geisinger's staff, *"We're going to create our own strategy and mission, and we are going to work hard – 24/7 – and after a few years, we will see incredible results . . . If you don't agree, you won't be here."* Steele reflected, *"Within five to six years of my arrival, we turned over 75 percent of our leadership without a revolution."* It was the kind of tough message complex organizations often need to stay on track.

In 2014, Geisinger turned all that hard work into a successful merger with AtlantiCare three hours away in New Jersey, a health system with an A+ bond rating but in need of the expertise Geisinger could bring along with a five-year $175 million capital commitment.

Intermountain Healthcare

Inspiration by W. Edwards Deming was a powerful catalyst for Intermountain's movement towards integration. When Brent James, a surgeon and biostatistician, was serving as executive director for Intermountain's Institute for Health Care Delivery Research, he attended a lecture by Deming. The world's leading quality expert offered a perspective unique within health care at the time – higher quality leads to lower cost. That idea combined with another to generate an innovative breakthrough in delivering health care. Intermountain had pioneered an activity-based cost accounting system across its various operating entities. So if quality cost less, Intermountain was in a good position to prove it.

James established training programs for management and physicians focused to clinical quality improvement. Some "early adopters" became zealots for quality but engagement of physicians in general stumbled before Intermountain discerned that the key was to provide them with data that had clear utility related to the delivery of care. Previously data had been financially based.

Fundamental to Intermountain's approach to quality was process management with measured outcomes. Productive processes by definition are a set of coherent activities that are connected. In other words, they are integrated. A process that is fragmented cannot deliver desired outcomes. At Intermountain, accountability for outcomes created the incentives needed to design well connected processes that worked. A fragmented organization will rarely be able to build integrated processes. And you can't build an integrated organization or integrated care absent integrated processes.

Another key to development of Intermountain's integration was a management structure that brought clinical management and administrative management together. Physicians joined with nurse administrators in dyads that produced integration of expertise and capability. Incentive compensation for senior management was restructured from goals that were nearly all financial to one-third based on medical outcomes, one-third on service outcomes and one-third on cost outcomes. Intermountain also integrated what had been parallel data systems, one clinical the other financial. According to James, *"Such integrated data systems isolate a key principle of data management – to obtain accurate data, collect data once at its point of origin."* The cost accounting system it pioneered has allowed Intermountain to model the impacts of new strategies. Size, in terms of volume, underpins Intermountain's shift to value. Many organizations may not be able to make the shift successfully because they lack the volume needed to average out their costs and quantify outcomes.

Like Sentara and Geisinger, Intermountain learned unique lessons from the interplay and interdependence that occurs when a health system owns hospitals, employs physicians and operates a health plan – lessons that positioned it well for transition from volume to value and population health. Intermountain soon discovered that much of the financial benefit of its investment in quality and integrated care was accruing to CMS and left the system with a net loss on Medicare reimbursement. Over time, it was able to transition to a strategy that more fully retained the financial fruits of its effort within the family by creating an equal split between Intermountain Health Services (the delivery organization), Intermountain health plans (the payer) and physicians.

It takes time to create meaningful integration. Intermountain has spent more than three decades gradually building the involvement and commitment that results in a demonstrable value advantage. This build out was consistent with Demings' observation, *"If you want to convert an organization and that organization contains n people, you first need to convert the square root of n."* James reflected on the 1,200 physicians Intermountain regarded as "core" and the 30 to 40 it would take to set off Demings' culture shift. When those 30 to 40 came on board as early adopters, there was a palpable change in the climate of the medical staff. And the message about a better way was coming not from James who was in the administrative offices but from respected physicians who were peers. They were saying, "I've done this. It's better for my patients, for my lifestyle and for my productivity."

Intermountain CEO, Charles Sorenson, M.D., emphasizes the key to engaging physicians: *"I've always believed that the most important way to engage physicians in this work is to be able to demonstrate to them that together we're achieving better outcomes for our patients by doing things in a defined and evidence-based way. And that's turning out to be the case. It's very motivating to a clinical team when they can look at their objectively measured outcomes and see they're performing at world-class levels."*

In engaging physicians, Intermountain conceived three rings of relationship. In Ring 1 were about 1,200 practicing primary care and specialist physicians, 400 of whom were employed, 60% of these salaried physicians were primary care physicians. 80% of the patients of the independent physicians in Ring 1 were insured by Intermountain health plans or received care at Intermountain facilities. Ring 2 was comprised of 50-100 physicians who utilized Intermountain for 40-60% of their patients. Ring 3 included 1,500 additional physicians who had only limited relationships with Intermountain.

Intermountain displayed an openness to new ideas that guided and fortified its path into the future. There was Deming but it also sought out partnership with Stanford Medicine focused to clinical research and improvements in the delivery of care. Harvard's Clayton Christensen, author of <u>The Innovator's Dilemma</u> and <u>The Innovator's Prescription,</u> has brought his insights to Intermountain as a member of its Board.

The next step beyond integration is putting it to work. Intermountain has made an outsized commitment to innovation. In retrospect, this stance is a result of its ongoing willingness to embrace and apply new thinking and was validated by the considerable impacts that flowed from its experience with quality improvement. Intermountain's structure for innovation includes:

- The Intermountain Foundry designed to help its employees bring their ideas to market.

- Strategic Investments develops partnerships with outside organizations through Intermountain investments and creating customer relationships with them.

- Salt Lake City Accelerator is a partnership with Zions Bank and Healthbox, a Chicago-based innovation company, to support outside entrepreneurs with products they are trying to bring to market. The Salt Lake City Accelerator is one of several Healthbox has embedded throughout the country.

- The Intermountain Transformation Lab grew out of a request by its chief technology officer for a small space to work on some devices. By 2013, the lab had 40 employees and 20,000 square feet of workspace. It focuses on devices and processes and has partnered with CenturyLink, Dell, Intel, Cerner and NetApp, among others.

- The Homer Warner Center for Informatics Research is a separate initiative which in 2013 had 60 employees.

Leaders at Intermountain have insisted that their goal is the transformation of health care rather than innovation – innovation that doesn't result in high quality and lower cost isn't meaningful.

Early in 2016, Intermountain's health plan, SelectHealth, guaranteed to hold yearly rate increases to one-third to one-half less than average rate increases nationally. This will result in savings of $2 billion to its customers over five years. Furthermore, the move will allow employers to enjoy greater predictability related to their health care expenditures. For most health systems, such a guarantee would be an exceedingly risky thing to do. It holds risks for Intermountain as well but less so because of the degree of integration and experience it's built. One-third of Intermountain's patients are already cared for under fixed fees. Intermountain's cost accounting system is regarded by many as one of the best in the industry. In 2016, it was instrumental in modeling a $700 million reduction in patient revenue and providing insight needed to manage volume and expense impact on the balance sheet. According to Joe Mott, the system's vice president for population health and health care transformation, *"If you manage away $1 million in emergency department revenue, you'd better be managing your staffing and supplies in the ED."*

There is another dynamic at work in Intermountain's ability to cap rate increases and go at risk for a fixed fee. Its reputation for quality and its market clout allow it to hang tough on certain non-negotiables. Doctors who are not employed by Intermountain must agree to use its electronic medical record and share outcomes information. Employers must agree to an exclusive relationship with SelectHealth, fund at least 70% of their employees' average premiums and contribute to a health savings account. Finally, enrollees must agree to participate in health risk assessments and screenings. All these requirements support Intermountain's commitment to accountability for value and the integration that requires. It's a commitment that has demonstrated big payoffs. In 2013, the Dartmouth Atlas suggested that hospitals nationally could lower their spending by 43% if they operated at an Intermountain benchmark.

Persistent and coherent adherence to a clear sense of mission has been key to Intermountain according to Sorenson, *"About 12 years ago, we recognized that Intermountain's primary responsibility isn't just managing beds or physician practices, although those are certainly core competencies. Our true core business is perfecting the clinical work process and delivering evidence-based best practices.*

IT has been absolutely key in the past 15 years. Intermountain has had a legacy of using medical informatics to improve care for over 35 years. We were extremely fortunate to have had the pioneering leadership of Dr. Homer Werner, who recognized the computer's ability to assist clinicians in management and analysis of mountains of complex data.

A good example of our clinical information system's usefulness is an antibiotic assistant program we've had for years. Decision support systems like these have made Intermountain's clinical information systems unique, which is the primary reason we've partnered with GE to build the next-generation enterprise-wide clinical information system, which will be called Qualibria."

Mayo Clinic

Each of the eight health systems moved to higher levels of integration along different timelines. Mayo Clinic established integration as a founding principle more than a century ago. Despite accusations from the medical establishment that Mayo was delivering "socialized medicine," its founders stuck to the importance of teamwork as a central tenet of integrated care. A working partnership of trust was forged between the clinic's founders and the Sisters of St. Joseph when they joined together to treat the victims of an F5 tornado that nearly destroyed Rochester, Minnesota in 1883. Then the sisters and Mayo teamed to build St. Mary's Hospital for the exclusive use of Mayo physicians. In emphasizing teamwork and insisting that the patient consideration be the only consideration, they launched a slow revolution.

Mayo care was standardized. This standardization provided consistency across time and place as did medical education that trained physicians to reflect Mayo's methods, values and culture. It is in Mayo that the first strategic strides toward high value integration in health care occurred. Then in fits and starts its example spread. Today, those who eventually adopted many of its lessons may not be fully cognizant of the legacy they've inherited.

Care that was connected was central to the emergent Mayo Way. The pioneering Mayo physician, Henry Plummer, designed a single standardized longitudinal patient record that was key. For the first time, physicians were connected across time, space and specialties by shared patient information and data. Plummer designed the clinic buildings from the ground up to facilitate the communication and coordination essential to Mayo's team-based multispecialty group practice model. He also designed the first interoffice telephone network and guided the phone company in installing it. Gravity and simple drop slots carried medical records and other essential patient information from one floor to another. As early as 1907, Mayo had constructed subterranean conveyor belts to carry patient records miles between the clinic and hospital. The clinic was eventually connected by tunnels and skywalks to neighboring hotels.

Ever since Plummer joined Mayo in 1901, the clinic has emphasized the importance of actively engineering care it delivers. As Mayo's physician CEO, John Noseworthy, has noted, *"One of our secrets is we've had a very strong tradition of engineering at Mayo Clinic. We have 100s of engineers that are integrated in many departments, and their science is efficiency. We've had a quality academy now for over 8 years that trains our staff on systems thinking and on driving out waste. We've published approximately one scientific or medical research paper a week on outcomes at Mayo Clinic, so well over 350 papers in the last 7 years on the quality initiative . . . We have 400 or more engineering projects in flight right now, many of which are conducted to improve the safety and quality of our care and reduce the cost of our care."*

Mayo has long enjoyed an international reputation. It has cared for Minnesota farmers and world leaders. But through the '80s the population that fueled most of its utilization came from within a relatively narrow ring of approximately 150 miles around Rochester, Minnesota. It became clear that if Mayo wanted to grow, it would need to tap into populations that were expanding faster than its traditional rural service area. So it decided to follow its patients as they aged by targeting robust growth in Florida and Arizona. It opened clinics in Jacksonville and Scottsdale respectively in 1986 and 1987. Not surprisingly, local physicians and hospitals were less than welcoming. In Florida, physicians took to sporting bumper stickers that read "Hold the Mayo."

Mayo's main campus and its medical model relied heavily on delivering care on an outpatient basis. Indeed, Mayo was focused to ambulatory care decades before other health systems found themselves compelled to move in that direction. So Mayo initially entered Florida and Arizona with ambulatory clinic operations only and partnered for inpatient capacity. It steadfastly stuck to its standards in designing and operating its new clinics. Staff was exported south from Minnesota to ensure preservation and extension of the Mayo culture. Sophisticated satellite communication systems were installed at the onset to allow physicians in Jacksonville and Scottsdale to collaborate easily with colleagues back in Rochester. Mayo lost money on its Florida and Arizona clinics for most of the 30 years it operated them. Some health systems might have abandoned them. But it stuck with its commitment eventually adding inpatient services at each campus; slowly building volume and profitability.

For decades now, visitors to Rochester, Minnesota, in the early morning hours before Mayo opened would have seen patients already gathered outside its doors. Many of these patients would have arrived without an appointment. Mayo remains one of the few health systems where patients without an appointment can expect to be welcomed, guided through a consistent registration process and see a physician by the end of the day. Prospective patients have long been able to call a single phone number and arrange an appointment at any of the three Mayo campuses. During that phone call, which takes no more than 15 minutes, they will receive instructions on what to do when they arrive on campus. Until about 10 years ago, upon registering, patients would have received a small folder with color-coded appointment cards nested inside that indicated the time and location of the various appointments Mayo had prescheduled for them. Eventually, these nested cards were replaced by an electronic system and printouts, but the highly engineered and efficient underlying registration process has remained relatively unchanged.

Although Mayo Clinic's founding principles continue to get consistent emphasis and application, there is one principle that is applied but is not often directly articulated – integration requires toughness. Standardization, teamwork, unwavering emphasis on the patient interest above all else – these commitments were not optional. Physicians and other staff unwilling or unable to meet them are weeded out before they are hired or asked to leave. They'll be treated gently and with grace, but they will not stay at Mayo. Toughness runs deep in the Mayo gene pool. In photos, Will Mayo could easily be mistaken for a kindly grandfather. But as his contemporaries soon learned, there were some things on which Will Mayo would not broach compromise. Over time, these non-negotiables formed the core of what became the Mayo Way. Still, there is no shortage of professionals eager to embrace Mayo principles. According to Noseworthy, *"Whenever we post a nursing position, we usually have over 20 applicants for that single position . . . We make a huge effort to articulate our culture, what it means to work at Mayo Clinic. We're very proud that our staff generally come and work at Mayo for their entire career. Our workforce is very, very stable. [For] our physician workforce . . . the turnover rate is about 1-2 percent, which is extraordinary in today's world.*

If [physicians] come from outside and we don't know them, they basically come for a 2- to 3-day visit where we watch them practice and teach as well as talk about their science to see if they're a good fit for us. Competence and passion and compassion are all necessary, but there has to be a fit.

We're not looking for individuals, we're looking for people who can be part of and lead teams, because teams and systems of care always beat individuals. When they're hired, they're kept on for 3 years before we decide whether they'll stay as full consultants."

Recognizing that capital and time are short, Mayo launched the Mayo Clinic Network in 2011. Rather than own affiliated hospitals, it has generally sought to partner with them. Hospitals nationally that meet Mayo standards enter into a relationship that in many ways resembles a franchise. As of this writing, there are more than 30 hospitals and health systems in the network, which spans coast to coast.

For a subscription fee, they gain access to Mayo Clinic's intellectual capital related not only to clinical care but to management as well. According to Noseworthy, *"Our board has approved our plan that by 2020 we will have a meaningful interaction with 200 million people a year through this mechanism. That's a few years away, but ultimately, why wouldn't we at Mayo share what we know with people everywhere remotely? That's our grand plan . . . we realized we had an opportunity to . . . scale our knowledge through a knowledge delivery strategy and not a merger and acquisition strategy.*

That's been the foundation of the Mayo Clinic Care Network . . . They're subscribing to our knowledge – care process models, order sets, patient education materials, and FAQs around thousands of medical conditions. Clinicians are getting a tool right on their desktop. And they can use that desktop tool to provide better care and keep the patient right there in Chicago, or Pikeville, or San Diego, and so on.

If that's not enough to answer the questions . . . it's very easy to contact the teams at Mayo to learn more information. And if that's not enough, let's do an e-consult."

In concept, eConsults would seem to be a fairly straightforward service offering. But it reflects years of intensive development and refinement that started in 2009 in Mayo's Center for Innovation (CFI). It began as a collaboration with Mayo's largest commercial payer, Blue Cross and Blue Shield of Minnesota, and a pilot clinic hundreds of miles distant in Duluth. As of 2015, 170 medical conditions appropriate for an eConsult had been identified and more than 14,000 eConsults had been completed.

The Mayo Care Network has allowed the CFI's staff and its projects to be more fully amortized by deploying them to member organizations. Participants pay Mayo a significant membership fee. Importantly, the network also allows Mayo to further expand and solidify its referral base and its brand nationally without risking significant capital.

Mayo's culture, capabilities and reputation, developed and refined over a century, have made something like its CFI possible. Nearly 40 high-level innovation projects were underway at Mayo for 2014. Although the CFI's staff of 60 full-time innovation professionals that year may have been relatively small by Fortune 500 standards, it was 60 times greater than would be found in most American hospitals and health systems.

Like the other seven health systems, Mayo is moving towards unified governance. In its regional markets, governance will be centralized by 2018. Just as Banner walked away from its affiliation with a hospital because of poor fit, Mayo, in March of 2016, made a similar move by disaffiliating with a hospital it ran in Georgia.

For most of its existence, Mayo remained an insular and at times parochial organization. Generally, its leaders limited outside relationships to other clinics, most of which had sprung from the Mayo tree including Cleveland Clinic and Geisinger as well as Ochsner in Louisiana, Guthrie in Pennsylvania, Lovelace in New Mexico, Scripps in California, Dean and Marshfield in Wisconsin and Carle in Illinois. All of these groups had suffered criticism and reproach from the medical establishment because they were formed around Mayo's multispecialty group practice model. This "Clinic Club" provided a forum for shared values and collaboration. But Mayo continued to be highly self reliant and, to a great extent, aloof. Only in the past decade has that changed. Mayo leaders have started to appear more frequently at national health care meetings and in the press.

Len Berry, a marketing professor at Texas A&M and one of the world's top experts on service quality, took a sabbatical to study Mayo and put his findings into a book coauthored with Kent Seltman called Management Lessons from Mayo Clinic. The book became a business best seller and began to build a broader understanding that Mayo is not only one of the world's great medical treasures, it is also a management treasure. It is perhaps one of the best service organizations in America. Although many health systems now rely on management ideas introduced and pioneered at Mayo, the industry has been surprisingly slow to recognize its contribution. But the origins of multispecialty group practice, dyads, EMRs and patient-focused care that have become mainstays in a growing number of health systems can be traced back directly to the Mayo example.

Mayo has increasingly opened itself up to strategic partnerships. In doing so, it has in a very real way applied to itself as a health system the principles that the Mayos had championed at the clinic's founding – that no man alone can know enough and that a union of forces was necessary. So Mayo has embraced partnerships with IBM and United Healthcare for analytics and care management. For example, it announced a research strategic alliance with a subsidiary of United Health Group called Optum to put together a data center in Massachusetts focused to health care outcomes and cost.

Mayo has also partnered with Epic in information systems. In January of 2016, it announced a $46 million sale-lease back arrangement with Epic for its 62,000 square foot data center. And to build and fund the infrastructure it needs for continued growth, it has partnered with the city of Rochester and the state of Minnesota to invest $6.5 billion in one of the nation's most ambitious public works projects to:

- *Spend nearly $3.5 billion in capital improvements over the next 20 years to enhance facilities and expand services.*

- *Close a major "satisfaction gap" between patients' experiences on the Mayo Clinic campus and their experiences in Rochester by investing in new lodging and hospitality venues, entertainment, retail, and visitor attractions.*

- *Build additional public infrastructure, such as public parking, transportation, utilities, skyways, bridges, public meeting spaces, and more.*

As the result of those investments, Mayo and Rochester would become first to mind for "medical tourists" worldwide. According to an article in Fast Company, which used the word "aggressive" repeatedly, Mayo has proposed to turn Rochester into a global biotech hub and double its population. Its projected contributions to the Minnesota and Rochester economy are not unreasonable. In 2012, the Clinic already generated $1.5 billion annually in tax revenue. Mayo's international connections and client base have helped it line up private investors from the Middle East and China. Critics, not surprisingly, worry about the loss of Rochester's original character and suggest Mayo's real interest is in addressing the anticipated financial impacts of the Accountable Care Act. Fast Company suggests Mayo's plan *"isn't just about transforming the city. It's also about securing a mega hospital's revenue stream in the face of huge industry changes."* The New Republic was more direct in an article in 2013, *"Worried that Obamacare will hurt its bottom line, Mayo is betting its future on its ability to lure a greater percentage of the wealthiest and sickest patients to its dazzling high-tech hospitals . . . This race for supremacy includes not only American centers like the Cleveland Clinic, Houston's MD Anderson Cancer Center, and Baltimore's Johns Hopkins, but also ultra-toney destination hospitals sprouting in medical-tourist hotspots abroad, like Bangkok and Singapore. (Mayo's patients come from all fifty states and about 150 countries.)"*

Noseworthy confirmed that future reimbursement is a significant concern, *"Over 50 percent of the patients we see at Mayo Clinic are government-paid patients – Medicare largely, but some Medicaid – and because they are obviously older, they have more complex medical problems. We, like almost everybody else, struggle to pay for that because the government reimbursement doesn't cover our costs . . . that does drive us to make certain that we've created an efficient health care system."*

Being strategic doesn't always mean changing. Indeed, often times the clearest indication of a strategic mindset is a dogged willingness to stay the same. There is probably no better example of this than Mayo Clinic. The strategic principles at the heart of Mayo's success have remained relatively unchanged since they were first articulated by the clinic's founders more than a century ago.

Sentara Healthcare

Sentara was built around an existing flagship hospital which already enjoyed a strong brand identity in the Norfolk marketplace – Norfolk General Hospital. Rather than submerge the existing hospital's brand and sacrifice its considerable consumer equity, a new system name was joined with the existing hospital name – so the flagship became Sentara Norfolk General. This immediately drove existing differentiation and preference into the new Sentara brand. That same branding approach was consistently applied to the system's other hospitals as they came on board.

While health systems like Mayo and Cleveland Clinic had the benefit of building their brands over nearly a century, the Sentara brand was built over a decade. Standardization and tight integration have been essential to this brand building. The key to a powerful brand is consistency and reliability over time and space. These qualities can't be cultivated absent a willingness to establish certain non-negotiables. For Sentara, that's meant building consistency and reliability across 12 hospitals, 770 employed physicians, 450,000 enrollees and two states.

Sentara became one of the nation's most integrated health systems by persistently extending beyond the hospital enterprise into managed care and physician practices. Other health systems attempted similar diversification. The difference is that Sentara stuck with it. Most had abandoned their commitment to managed care and practice management when they encountered losses and operating difficulties. Sentara anticipated those challenges and treated them as the anticipated costs associated with entering new businesses. A similar pattern of persistence was demonstrated when it launched urgent care centers and other ventures.

When the topic of risk is mentioned, it is most often in the context of contractual arrangements with insurers and health plans. Sentara took on risk of this kind when it launched its Optima Health Plan in 1983. Unfortunately, "risk" has been robbed of much of its meaning by narrowly associating it with managed care contracting. Sentara was taking on a different, even more volatile, kind of risk when it stepped into new ventures like insurance as well as physician practice management and expansion beyond local market. There was risk too in structuring the health system around operating entities with seemingly divergent missions that included inpatient care, ambulatory care, primary care, specialty care and insurance. This ability to balance across such divergence and ambiguity became a cultural skill set that positioned Sentara to be uniquely effective in a world that's transitioning from volume to value.

Sentara leadership learned early to manage the seemingly inherent conflicts between the hospital enterprise, the physician enterprise and the managed care enterprise. CEO, Howard Kern, once jokingly remarked that as the executive in charge of the hospital enterprise at the time, he had worked intently to fill a new bed tower with patients while a fellow executive in charge of the Sentara health plan was working just as diligently to reduce the number of patients in those beds. It's the kind of schizophrenia that many hospitals are just now beginning to experience as they try to transition from inpatient care to population health. But as Kern now emphasizes, earlier tension in Sentara's missions was simply an early indicator of the change ahead, *"The prospect of doing a better job on the value side means there's going to be less utilization of inpatient hospital days and less utilization of the ER and high-cost diagnostics. But if you're a high-quality, value-driven provider organization, you also will attract more business . . ."*

Growth for Sentara was steady and deliberate, first across Virginia's Tidelands then upstate, all the while avoiding the heavy competition spilling out of Washington, D.C. Sentara's recently retired CEO, Dave Bernd, has suggested that there will eventually be only three health systems serving Virginia and one of these, of course, will be Sentara. Underpinning that position has been adherence to a set of driving strategies that members of the executive team once suggested they could see projected on the ceiling at night when they went to bed.

In complex organizations, there's always a need to be intentional. For Kern, the focus for intentionality is clinical quality, particularly driving out variation. This requires standardization. To facilitate the engagement needed for standardization, Sentara implemented a system wide structure it calls High Performance Design that cuts across its 12 hospitals, four medical groups and its ambulatory services. It relies on a core group of clinical leaders and administrators who identify best practices. Because they've had input and participation, members of this core group developed the shared purpose necessary to drive performance up and variation down across what otherwise might have remained fragmented silos.

Physician-administrator dyads have been applied at Sentara not only to the delivery of care but to management challenges as well. While the aforementioned High Performance Design cuts horizontally across Sentara's multiple operating entities, physician-administrator dyads allow a focus on "vertical" issues that exist within an entity.

According to Kern, *"Organizationally, we had cultures in our different hospitals and provider divisions that had evolved from years of being independent. Now they are part of an integrated system. The notion of being part of an integrated system doesn't happen naturally. It's got to be driven through a level of understanding, education and alignment, a shared common purpose. And so, we spent a lot of time culturally building that understanding.*

(Now) I think everybody gets it and (has) become more supportive. Absent that, you get everybody stuck in their silos and they're resistant to being told how to do things. The other key imperative is engaging them in the process. Everybody has to have a seat at the table and they have to feel like they're having an opportunity for input and participation."

Kern, like the CEOs of the other seven health system, emphasizes the importance of physician involvement, *"Physicians are key. We've engaged physicians in important leadership roles. We've brought in physician leaders from the community. We gave them a seat at the table and they've helped set the goals. The physician leaders are at the table with management, with nursing, helping to define the priorities that we're going to focus on."*

While Sentara is committed to standardization, it has recognized that there are advantages to remaining flexible. According to Kern, some variation is inevitable and necessary. But variation needs to be "intentional" rather than random. In other words, the variation should occur within boundaries that are explicit and understood. In order for data that underpins standardization to be accepted and applied, it has to be transparent in its origins and methodology. To be credible, data has to be accompanied by explanations about how it was derived. Kern suggests physicians need to be able *"… to kick the tires"* in order to be comfortable that the data is accurate.

Effective EMR deployment was foundational to each of the health systems including Sentara. Described under the broad description of "eCare," it was a comprehensive system deployed across all of Sentara's hospitals, physicians' offices, diagnostic sites and pharmacies. Sentara hospitals achieved a 90% adoption for its computerized order entry system within two weeks of it launch. Sentara was one of the few health systems that had achieved Stage 7 designation by HIMSS Analytics, the highest score for EMR adoption. Success of the effort was attributed to engaging physicians early and fully in the initiative.

Its structure for physician involvement with deployment of eCare included a Physician Advisory Group, Physician User Groups, Physician Hospital IT Steering Committees and a Medical Staff Officers Council among others. Physicians were compensated for the time they dedicated. Standardizing processes wherever possible supported rapid implementation across multiple sites. Extensive efforts were made to ensure that all employees had a clear vision of where the organization's efforts were headed and why. There were daily updates. Recognizing that the effort was, in reality, a change management program and a cultural shift was required, efforts were made to interject humor in an intentional manner.

Launching its health plans put Sentara in the "data-quality" management business including analyzing data regarding members and claims as well as using predictive analytics to identify risks and manage the delivery of chronic care. Sentara's Optima Health Plan has served as a catalyst for experimentation and better practices as well as a source of financial margins that have funded investments in improved care.

According to Kern, *"The health plan has been an important facilitator in experimenting and developing new clinical techniques and better practices. They've been an important facilitator and a financer of that process for the system. Having a health plan that's part of the organization is a built-in natural fit so that the provider entity and the health plan entity are tied at the hip. That works very well for us."*

Sentara has also used Optima to more successfully penetrate new markets. Its acquisition of a hospital in the lower Shenandoah Valley was synchronized with heavy marketing of its health plan recognizing that enrollees could then be steered towards Sentara providers.

Absent ownership of a health plan, other providers surrender revenues and control to insurance companies. They also become more vulnerable to insurer consolidation and may find themselves forced to seek out mergers with other providers simply to maintain a degree of market influence.