

Defining the Role of University of Kentucky HealthCare in Its Medical Market—How Strategic Planning Creates the Intersection of Good Public Policy and Good Business Practices

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Abstract

In response both to national pressures to reduce costs and improve health care access and outcomes and to local pressures to become a top-20 public research university, the University of Kentucky moved toward an integrated clinical enterprise, UK HealthCare, to create a common vision, shared goals, and an effective decision-making process. The leadership formed the vision and then embarked on a comprehensive and coordinated planning process that addressed

financial, clinical, academic, and operational issues.

The authors describe in depth the strategic planning process and specifically the definition of UK HealthCare's role in its medical marketplace. They began a rigorous process to assess and develop goals for the clinical programs and followed the progress of these programs through meetings driven by data and attended by the organization's senior leadership. They describe their approach to

working with rural and community hospitals throughout central, eastern, and southern Kentucky to support the health care infrastructure of the state. They review the early successes of their strategic approach and describe the lessons they learned. The clinical successes have led to academic gains. The experience of UK HealthCare suggests that good business practices and good public policy are synergistic.

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The health care system continues to evolve, and all academic health centers (AHCs) must be prepared to adapt and respond to the pressures within their health care communities. There is tremendous impetus for change. Health

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care costs continue to rise rapidly, exceeding the rate of inflation and making care unaffordable for an increasing number of individuals.¹ Many smaller companies no longer offer health insurance to their employees.² In 2001, approximately two million Americans experienced bankruptcy due to unpaid medical bills.³ In many regions, the health insurance markets are consolidating, dramatically altering the local market dynamics.⁴ At the same time, baby boomers continue to age, resulting in an increased demand for services, leading, in turn, to a pending surge in Medicare demand. The public continues to be concerned about quality, safety, and access.⁵ As a result, there is a mounting need to reduce costs while simultaneously improving access and outcomes.

At the same time, AHCs have become more dependent on clinical income to support their multiple academic missions.⁶ AHCs are not immune to the health care market pressures. Efforts to reduce health care costs will likely erode existing operating margins, as a result threatening special programs such as funding for graduate medical education

and the care of the uninsured. In most regions, AHCs are often uniquely and best suited to care for very ill and complex patients. Historically, managing complex patients has provided AHCs with the greatest contribution margins. It is likely that complex care will remain AHCs' best hedge against revenue vulnerability.⁴ Given the potential and unknown threats, AHCs need to plan and prepare to respond to these evolving market forces by focusing on maintaining the stability of their operating margins.

As we described in a previous publication,⁷ at the University of Kentucky (UK), we had chosen to move toward an integrated clinical enterprise to develop a common vision, connected goals, and a cohesive decision-making process. The UK HealthCare Clinical Enterprise comprises all of the various health care units (e.g., hospital system, health-related colleges, and the physician practice) within UK under a unified and integrated governance and management structure. The clinical enterprise developed a transparent decision-making process and an integrated financial superstructure to allocate resources to meet institutional needs. The executive

vice president for health affairs (EVPHA) has responsibility for, and fiscal authority over, the entire clinical enterprise including the hospital, the practice plan, the College of Medicine (COM), and the clinical activities of the other five health-related colleges at UK (Dentistry, Health Sciences, Nursing, Pharmacy, and Public Health). The six deans are responsible for the management and performance of their faculty and the academic programs. There is a single chief financial officer (CFO) who directs the budgeting process and has the final sign-off of all budgets within the system. With this model in place, UK HealthCare Enterprise entered into a very structured and integrated planning process and developed a coordinated, comprehensive plan for the financial, clinical, facility, capital equipment, operational, and academic domains.

In this report we summarize the development and deployment of the strategic plan at UK that will hopefully serve as a case study for other AHCs as they continue to respond to the pressures within their own local health care markets. The success of UK HealthCare has been predicated on several key approaches: (1) an enterprise model that allows for an integrated and comprehensive planning process, (2) an ability to allocate resources effectively to build the necessary programs and infrastructure, and (3) a unified approach in creating a regional network that enhances the capacity and capabilities of the local medical community to ensure the financial viability of the local health care providers while increasing appropriate referrals to the AHC.

Governance and Vision

The EVPHA realized that it was necessary to reengage and reinvigorate the governance structure of the clinical enterprise to develop and implement a shared vision. Recognizing that this effort would take months to evolve and take shape, he began immediately. Consequently, he reorganized the Hospital Committee (previously a five-member subset of the Board of Trustees of UK) into the University Health Care Committee to emphasize the fiduciary oversight for all clinical and academic functions at the AHC and not just the hospital (Figure 1). The committee members added three community leaders, chosen because of specific



Figure 1 UK HealthCare planning and governance structure.

expertise, to the University Health Care Committee. All trustees of UK are invited to attend all meetings of this committee. Community leaders have come to covet their seats on the committee even though they are nonvoting committee members. The vast majority of the trustees attend all of the committee’s meetings and retreats. The engagement of the Board of Trustees has facilitated expeditious decision making involving substantive strategic and financial initiatives.

Similarly, the EVPHA also recognized that engagement and participation of the faculty and staff were essential to move forward. Therefore, he established the UK HealthCare Advisory Committee comprising the deans of the six health-related colleges, each clinical chair in the COM, several senior clinical faculty, representatives of the basic sciences, and seven administrative individuals. A committee of this size, meeting quarterly, must function from a global perspective and cannot maintain day-to-day management. This committee reviews the organization’s financial performance and participates in strategic and facilities planning decisions.

An Executive Committee (Figure 1) was created beneath the UK HealthCare Advisory Board to allow more timely and detailed analysis and oversight. The EVPHA chairs, and the dean of the COM cochairs, this committee, which includes six departmental chairs, four senior faculty, eight administrators, the directors of the Cancer Center and Neuroscience Center, and the deans of the College of Pharmacy and the College of Dentistry. The charge to this committee is broad and deep (List 1). To engender trust, the EVPHA thought establishing a culture of transparency to be critical; therefore, this group reviews in detail the finances of all elements of

List 1

UK HealthCare Executive Committee Charge

- To develop appropriate charges for the standing committees
- To populate standing committees
- To understand and monitor cash management and the analysis plan
- To review and monitor the budgeting process and actual the financial performance of the various elements of the clinical enterprise
- To review and monitor strategic planning and contract initiatives
- To review and approve contracting decisions
- To review and monitor the facilities plan
- To review, endorse, and monitor operations, quality, and safety initiatives
- To review and monitor information systems initiatives
- To develop guidelines for malpractice coverage
- To be the steering committee for strategic planning
- To review marketing for clinical enterprise

UK HealthCare. Although very time consuming, attendance and engagement by members has been exemplary, reflecting substantial buy-in.

To forge a vision and develop accepted tactics to implement this vision, the EVPHA took the entire enterprise through concurrent coordinated planning processes involving finances, facilities, strategy, and academics (Figure 1). Ultimately, the Executive Committee vetted and reviewed, and the UK HealthCare Advisory Committee and the UK Board of Trustees endorsed, all elements of the processes. The leadership broadly communicated the goals and tactics as they were approved and accepted to the faculty and staff through multiple open forums and electronic communiqués. The leaders used numerous other modalities and events (e.g., departmental and division meetings, organizational publications) to make the vision and tactics visible and acceptable to the entire faculty and staff.

Strategic Plan

UK HealthCare’s role in the medical marketplace

As a result of these enterprise efforts, a very broad consensus—that UK

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HealthCare had to support and strengthen the health care system of central, southern, northern, and eastern Kentucky by both expanding and assuring access to advanced subspecialty care while at the same time improving availability of and access to quality health care at rural hospitals and clinical sites—eventually emerged.

The faculty quickly accepted and embraced the concept that UK HealthCare, as the only AHC serving nearly two million citizens of the commonwealth in central, eastern, southern, and northern Kentucky, needed to emphasize access to advanced subspecialty care. The sound bite that best captured this sentiment was “UK HealthCare has to assure all Kentuckians access to the very best advanced subspecialty care, so they don’t have to worry about whether their insurance allows them to go to an out-of-state facility.” By differentiating UK HealthCare as the provider of advanced subspecialty care in its market place, it then became important to become competitive on a national level. The faculty quickly concluded that this sentiment meant that they were no longer competing with the other community providers in town, but were clearly attempting to be as good as—or better than—other nationally recognized providers of subspecialty care in scope, span, and quality. This challenge galvanized and energized them. The faculty had seen some attrition in market share. Losing in the local marketplace was demoralizing and led to lowered expectations. To compete nationally was a goal that inspired the faculty and gave them challenges that they could embrace.

Internal and market assessments

To be able to compare well on a national level in advanced subspecialty care meant that the faculty and the entire clinical enterprise needed to complete a very frank assessment of the state of clinical programs, then develop realistic and appropriate goals and, more importantly, commit to these goals even if this meant making compromises and changing behaviors to make sure these goals were achieved.

To complete this process in a timely manner, leaders allocated significant internal and external resources to the strategic planning process. At the onset of

the process, UK leadership performed an in-depth assessment of the market using key data, including demographic information from both state and federal government sources, significant inpatient and limited outpatient market data from our state government and state hospital association, and AHC benchmarking data from the University HealthSystem Consortium. The assessment involved a very detailed data analysis performed at the service line and payer level within defined geographic markets. In addition to this, we performed demographic assessments within the same geographic regions, objectively measuring the size and scope of each service line and delineating their impact on the (1) hospital, (2) COM, and (3) relevant departments. This assessment provided the clinical enterprise with both objective baseline information and extensive information related to the flow of referrals and consumer preferences. Augmenting this data analysis was an interview process of faculty and senior leadership. We performed more than 100 interviews of faculty, staff, patients, and community providers to gather additional information about historical performance, service line trends, and market changes. Also, through a variety of market research studies, we obtained information concerning local, regional, and national perceptions of these programs.

From the start of the market assessments to the development of the final recommendations, the strategic planning process took approximately six months. At the conclusion of this process, we identified transplantation, pediatric subspecialties, cardiovascular medicine, neurosciences (including neurosurgery and neurology), oncology, gastroenterology, and orthopedics as services and clinical lines that needed to be bolstered if they were, in fact, to reach national prominence. We developed a planning process, implementation plan, and comprehensive evaluation approach for each of these clinical areas.

After what at times became almost painful introspective analyses, we set graduated goals for each program including (1) recruitment targets, (2) volume goals for inpatient admissions and outpatient activity as well as procedure numbers and ancillary use, (3) financial effects on the totality of the

enterprise but also on the hospital, COM, department, and/or division, (4) marketing objectives, (5) patient satisfaction goals, and (6) quantitative goals for quality, safety, and service.

Simultaneously, the financial team developed an economic needs assessment for recruitment of faculty and support staff as well as capital for each program to ensure that adequate resources would be available to support the various initiatives. The facilities team looked at space requirements including inpatient, outpatient, procedure, and academic space. Multiple levels of leadership coordinated and evaluated, and then discussed, all the planning processes to ensure buy-in from the entire organization.

Need for a regional network

Developing a consensus that we would emphasize advanced subspecialty and quaternary care on campus was almost spontaneous. In contrast, defining an approach to our relationship with regional providers was controversial and required extensive discussion. UK physicians had been conducting outreach clinics at various distant locations for a very long time. For the most part, these efforts had occurred on an individual or ad hoc basis with no central coordination and no defined set of expectations. The intent of these individual efforts had been to identify cases to bring back to the UK campus in Lexington with very little regard for the consequences to either local providers or the community hospital. Nonuniversity specialists had also done substantial outreach and had been more effective than their UK counterparts because their energies had focused almost exclusively on clinical activity. The community specialists had stripped the rural areas of every last possible ancillary, bringing them back to their local practices in Lexington. Rural hospitals were threatened by this approach and could not differentiate university from community specialists, except that the community physicians provided better service. As far as rural providers and hospitals were concerned, all Lexingtonians were carpetbaggers with a very self-centered agenda.

To reassess its relationships with regional providers, senior leadership of the clinical enterprise spent a significant amount of time traveling throughout the state to meet with leadership of community

hospitals and physician practices. UK leadership sought feedback from community practitioners as to how UK HealthCare should reshape its role in their communities to better serve their patients. With this feedback and after much debate as an organization, we came to agree that we needed to rethink and redefine our relationships with the community, especially rural providers. We also realized that we had to take a complete inventory of outreach efforts and develop a process to strategically control these efforts. We therefore insisted that all clinicians report their ongoing outreach efforts. To enforce this documentation process, we set a policy that if physicians did not properly register an outreach effort within the COM, they would not receive malpractice coverage for that activity. In addition, any new efforts had to receive prior authorization if the clinician wanted malpractice coverage for that site. This condition of participation (some viewed it as a threat) led to complete reporting of active outreach sites and preauthorization for contemplated new sites. The comprehensive list revealed more than 150 off-campus practice sites of various size and scope spread over the eastern half of Kentucky (Figure 2).

As we debated the role of rural hospitals in their community and our potential relationships with them, we came to realize that small rural hospitals were critical to their communities and

counties. They represented the first line of care, and most individuals did not want to travel many miles for basic emergency care or other fundamental services. People in Kentucky, and we suspect people elsewhere, want to stay close to home and family for health care for as long as possible. They are willing to go to a larger center for complex care, but only after they have exhausted appropriate options locally. Furthermore, in many rural counties, these small hospitals are one of the larger employers and are economically critical. Consequently, we came to the realization that good public policy dictated that UK HealthCare support these rural providers rather than compete with them.

Furthermore, we also came to realize that to support advanced subspecialty programs, culling referrals from a very large population base was necessary. As an example, we set a target of performing 120 kidney transplants. Given the national renal transplant rate of 56 kidney transplants per one million, we needed to capture referrals from a population of at least two million people to achieve our target. This realization reinforced the notion that we needed to work with rural providers, predominately to try to build relationships and to access their most complicated patients—individuals who needed to be moved to a higher level of care than that available in a small, rural hospital. We were not interested in competing for their “bread-

and-butter” patients, but we were intent on developing relationships that solidified referral patterns of complex patients.

Implementation

Internal monitoring

A group that includes the EVPHA, the dean of the COM, the enterprise chief clinical officer, the enterprise CFO, the chair of the appropriate department, the appropriate division chief and service line chief, the support staff from enterprise finance, marketing, and planning, and support personnel from the various departments and the divisions monitors follow-up of subspecialty initiatives and evaluate progress. Individuals responsible for enterprise strategic initiatives present relevant data, and all participants comment. These groups initially met monthly, but, with progress and more cohesive organization, they have since moved to quarterly meetings. The data books, which cover all information to be discussed and can be as many as 100 pages of quantitative information, are distributed in advance of the meetings. The meetings last as long as necessary to ensure sufficient time to assess present status, to judge progress, and ultimately to recalibrate goals and to refine tactics if needed—usually at least two to three hours. When those present cannot review all topics at a single meeting, they reschedule a timely follow-up.

Secondary and Tertiary Markets

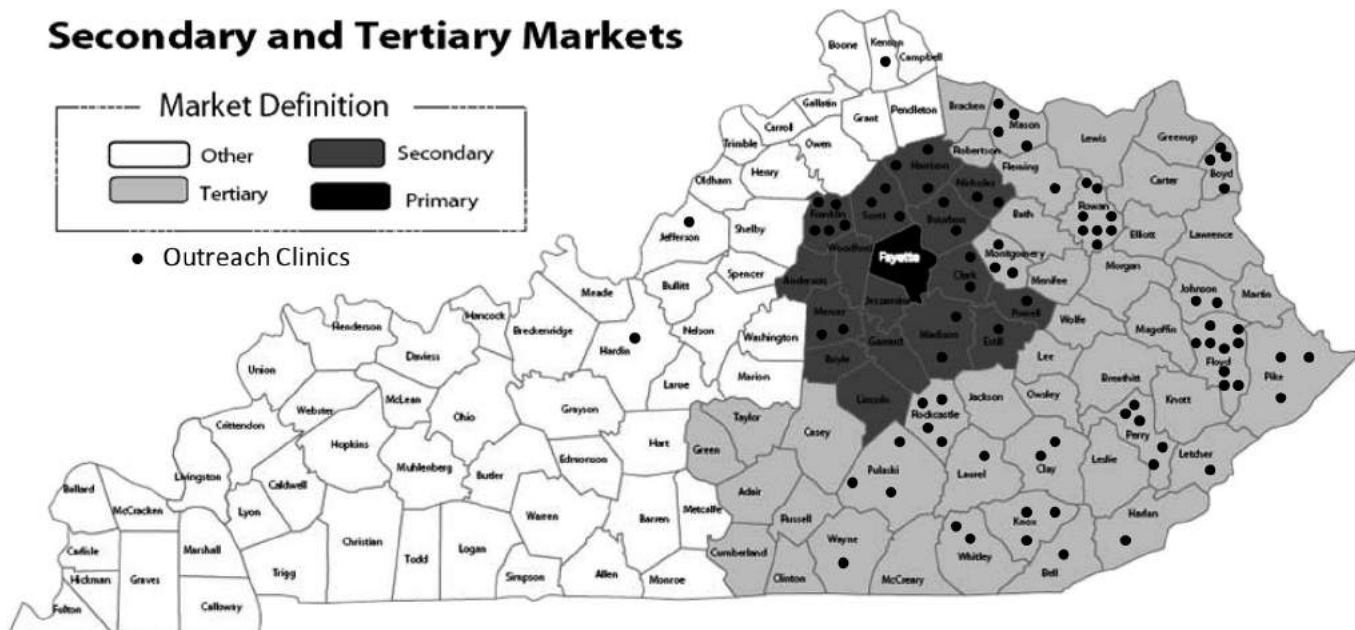


Figure 2 UK HealthCare market place and outreach clinics.

As these follow-up meetings have become more organized, cohesive, and focused on quantitative data, the engagement and commitment of all participants has dramatically improved. All involved in the quarterly meetings are certain and secure that the strategies will either be reaffirmed or adjusted and goals will be recalibrated as necessary. The accountability at these meetings is palpable, and the heightened sense of responsibility has actually improved collaborative working relationships among individuals. As described in the Early Successes section below, all clinical initiatives have been substantially successful, and most have seen significant increases in market share.

Regional network

The ultimate approach that we adopted was first to engage rural hospitals and physicians in an analysis of unmet medical needs in their communities that they wanted UK to fill. We never approached hospital leaders with a preconceived notion of what they might want or, even more importantly, what we wanted to provide in that community. Furthermore, we always committed to using, to the extent possible, local physicians as consultants and local ancillary services when our outreach physicians practice in those communities. Outreach physicians would also do some of their less complex procedures in these local communities. By using local ancillaries and allowing rural hospitals to capture facilities fees, we very substantially increase their revenue base. As an example, as we developed outreach programs in oncology and sent our oncologists to several rural locations, we worked with the local hospitals' pharmacists and nurses to develop the capacity to provide chemotherapy at the local facility while maintaining control over quality. Once certain that we could provide chemotherapy in a safe environment in coordination with local practitioners, we could then achieve less complex chemotherapy treatments in the communities. Our gastroenterology outreach doctors also do diagnostic endoscopies in the community and bring patients to the AHC only if they need therapeutic or more sophisticated procedures such as a complex endoscopic retrograde cholangiopancreatography. The community, the local medical staff, and the administrative leadership of these hospitals appreciated the commitment to

expand local medical capabilities and to enhance their revenue.

Senior leadership committed to checking in with local administrators and physicians periodically to make sure that UK was, in fact, fulfilling its commitments of providing excellent service in a timely manner and using local facilities to the most reasonable extent possible. When we achieved success in any given specialty, we would then ask whether there were any other services that the community would like to have UK HealthCare provide. Inevitably, the local providers and hospitals would test us initially, but if we delivered on our promises, they would ask for additional services. Eventually, local boards, administrators, and medical providers accepted the premise that we were trying to expand services at their facilities with the intent to keep appropriate patients closer to home while streamlining referrals to a quaternary center when necessary.

After some period of time and the development of a reasonable amount of trust, we started exploring an additional model of engagement with some rural hospitals—community divisions. For some basic services like general surgery, orthopedics, and cardiology, small communities can support only a single individual or partial practitioner. Successful practice becomes difficult for these practitioners because they are extraordinarily busy and overcommitted and because they do not have appropriate backup and support. We felt that we might be able to recruit an individual into a community or several individuals into several communities and then maintain these individuals as faculty. We could help cover them appropriately, so they could take time off and feel less isolated. By participating in educational teaching programs, they might also feel connected intellectually. The intent was for some community division members to receive backup directly from UK while other members' areas would overlap, allowing them to share coverage and thereby function as a small group, related to UK. All community-based academic physicians are expected to give a small amount of time to clinical activity at the AHC, participate in educational experiences themselves, provide educational opportunities for fellows, residents, and medical students, and be a

source of patients for enrollment into clinical trials. We encourage these community-based physicians to live in their local communities and participate in appropriate civic activities. To date, we have established a community division in cardiology and are finalizing divisions in orthopedics, general surgery, and obstetrics–gynecology. The community division model has engendered considerable interest, but its success is yet to be proven.

As relations continued to mature, we started to comarket clinical services. As an example, we have extended Markey Cancer Center designation to four hospitals and advertised them as such (Figure 3). To achieve this designation, the hospitals must meet the following criteria: (1) the hospitals' pharmacists and nurses undergo training by our staff in the proper administration of chemotherapy, (2) the hospitals become part of our Tumor Board, and (3) we develop and review all standards for various therapeutic approaches to specific cancers. We also help them develop community screening and educational programs. We felt that we must be able to ensure that patients would get treatment at a Markey Cancer Center affiliate equivalent to what they would receive in Lexington at the parent Markey Cancer Center itself. When we are comfortable that the hospital has sufficiently addressed all quality and safety issues, we then advertise local facilities as Markey Cancer Center affiliates. This has been extremely well received by the communities and the local physicians. We are now establishing affiliate programs for the Gill Heart Institute, the Kentucky Children's Hospital, the Kentucky Neurosciences Institute, the transplantation program, and the high-risk obstetrics –gynecology program.

With these outreach efforts and relationships, a significant number of patients have been able to remain in their community for a much greater portion of their health care needs. This benefit has also translated into higher utilization of ancillary services in the community, which is a strong economic boast to the local providers. The community physicians have also benefited by being more actively involved in the continuum of care of their patients. We feel strongly that good public policy—keeping patients close to home in a relatively low-

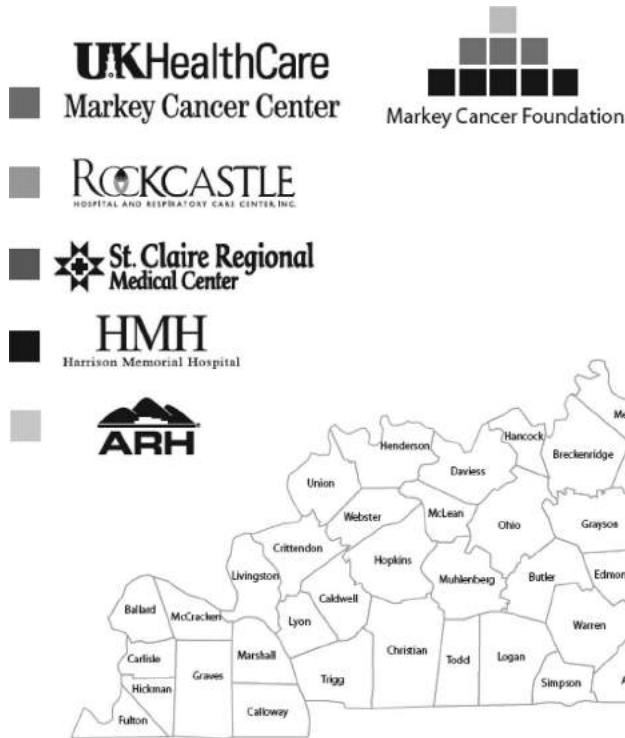


Figure 3 UK HealthCare–Markey Cancer Center affiliate network.

cost facility for as long as possible and appropriate—is also good business practice because of the relationships that evolve and the referral sources that develop for complex patients.

Early Successes

Our medical center came out of its tailspin in census very quickly and, in the subsequent four years, has grown dramatically. From a nadir of approximately 19,000 discharges in fiscal year (FY) 2003, we grew to approximately 27,500 discharges in FY2007, an increase of more than 40% (Figure 4). Our hospital became saturated with an occupancy of greater than 90%. Because of the increase in volume, UK had to acquire an additional community facility, Samaritan Hospital, to move low-acuity patients out of its main facility, Chandler

Hospital, to maintain the ability to serve additional complex referrals. With some residual activity from the private practice physicians at Samaritan Hospital and the continued growth of activity of the faculty, the two facilities, which really function as a single clinical operation under one license, will have approximately 33,000 discharges in FY2008. This dramatic growth in clinical

activity, with its attendant increased cash flow, has been critical in convincing our faculty that our goal of being a top-20 public research AHC is, in fact, attainable. At the end of FY2003, the medical center was a 25th-percentile AHC in size as measured by discharges per quarter (Figure 5), and small AHCs struggle to obtain top-20 public research status. By the end of FY2007, we were at

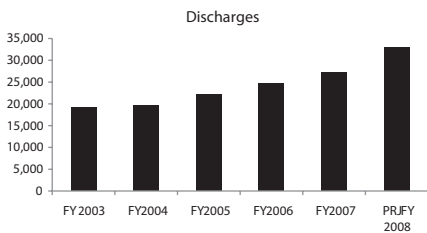


Figure 4 UK Chandler hospital discharges, 2003–2008.

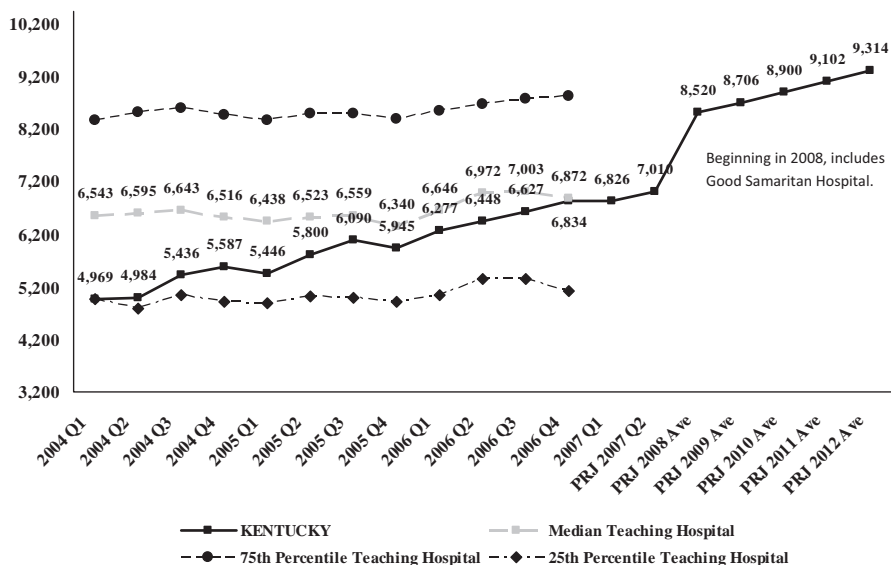


Figure 5 UK Chandler Hospital total discharges, 2004 to projected 2012, compared with other teaching hospitals. From the Association of American Medical Colleges Council of Teaching Hospitals Quarterly Survey of Hospital Operations & Financial Performance.

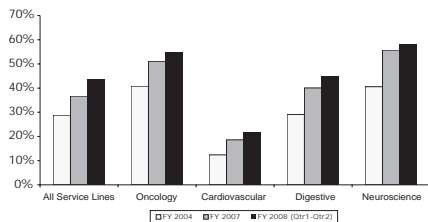


Figure 6 UK HealthCare market share by service line, FY2004, FY2007, and FY2008 (Qtr1–Qtr2).

the 50th percentile. By FY2008 and beyond as a combined entity (Chandler and Good Samaritan Hospitals), we will approach or exceed the 75th percentile in size as measured by discharges. As a large AHC, the faculty truly believe and are emboldened to aspire to become an upper-echelon AHC.

Because of our continued growth in volume, we have also adjusted our building projects accordingly. Initially, we were planning a 473-bed replacement facility, but now we are planning a 630- to 680-bed replacement facility. We are also designing and planning the facility for the possibility of accommodating another 180-bed tower as additional beds are needed in the long-term.

We have increased our market share dramatically comparing FY2004 with FY2008 (Qtr1–Qtr2) (Figure 6). All of the emphasized programs have grown in market share, with cardiology moving from 12.4% of market share up to 21.5%, digestive health moving from 29.1% to 44.9%, neurosciences moving from 40.6% to 58.3%, and oncology moving from 40.8% to 54.6%. The growth in the subspecialty areas did not follow the strategic plan exactly, but it did exceed targets for those specialty areas overall. Some specialty areas grew in certain services where growth was unanticipated but did not grow as much in others for which we had planned substantial growth. For example, cardiology did not grow as quickly as initially expected, although it is now meeting anticipated growth targets. Pediatrics has also recaptured much of its lost clinical activity and has grown by more than 1,800 admissions during the last several years, growing much faster than we ever projected. Transplantation has also shown growth in both procedures and listing of patients.

We have grown in Fayette County, our primary service area; in the surrounding

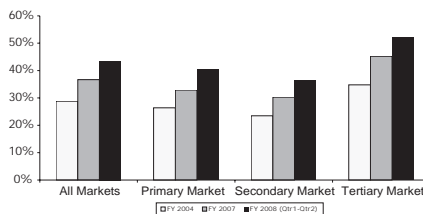


Figure 7 UK HealthCare market share by geographic service region, FY2004, FY2007, and FY2008 (Qtr1–Qtr2).

16 counties of the Bluegrass region representing our secondary service area; and in our tertiary service area comprising northern, eastern, and southern Kentucky (Figure 2). From FY2004 to FY2008 (Qtr1–Qtr2), UK HealthCare has seen its overall market share increase from 28.8% to 43.5%. The primary market increased from 26.4% to 40.4%, the secondary market increased from 23.5% to 36.3%, and the tertiary market increased from 34.8% to 52.2% (Figure 7). In fact, nearly 40% of our patients come from our tertiary service area, thus truly defining us as a referral facility.

Case mix index (CMI) is a measure of the intensity of a patient’s illness. The intensity level of cases referred to UK HealthCare significantly increases as the geographic origin of the patient becomes more distant from Lexington. This is evident based on FY2007 data. Within our primary market, UK HealthCare, with a CMI of 1.2598, is quite similar to the overall primary market, with a CMI of 1.2779 (Figure 8). As referrals are made to UK HealthCare from geographic regions beyond the primary market, UK HealthCare’s CMI increases significantly compared with the CMI of the region. This gap increases even more compared with referrals from other regions of Kentucky and places out of state. This intensity level from our outlying referral areas reflects both our desire and our ability to recruit complex patients.

This large increase in clinical activity has had a very positive effect on the hospital

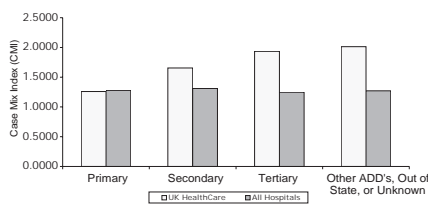


Figure 8 FY2007 UK HealthCare case mix index (CMI) by geographic regions.

budget and hospital performance. Our total operating revenue has gone from \$372 million in FY2004 to a projected \$711 million in FY2008. Our bottom line has gone from \$18 million in FY2004 to a projected \$38 million in FY2008, and our cash position has gone from \$235 million in FY2004 to a projected \$544 million in FY2008. We were also able to issue \$250 million in revenue bonds, which is inclusive of the cash position. We have performed sufficiently well to be able to convince the UK Board of Trustees to expand the initial phase of our rebuilding project from \$450 million dollars to \$525 million dollars.

Relations with community hospitals improved quickly and dramatically after a brief period of testing. The hospitals and their physicians came to understand that we are true to our word regarding both increased utilization of local facilities and referral of cases to the AHC only when absolutely necessary. As we gained their trust, leaders of regional facilities began to ask for additional capabilities. As an example, at Rockcastle Hospital and Respiratory Care Center, which is approximately 35 miles south of Lexington, we provide a variety of services. We also provide extensive services at Harrison Memorial Hospital and St. Claire Regional Medical Center, which are 40 miles and 50 miles from Lexington, respectively (Figure 3, Table 1). We are also working with several other community hospitals in our region to develop an array of specialty services at their facilities as well. As we develop these relationships and begin to offer more and more specialty services to these communities in their local facilities, we build a relationship with them that extends beyond the specific services we provide at that facility.

Most importantly, we have come to realize that what we truly need to build is a virtual or real network of facilities that covers the 2 million people living in the geographic area for which we are primarily responsible (Figure 2). This network will ensure relationships with referring doctors and institutions that will allow us to keep low-cost patients in low-cost, local facilities while expediting the referral of complex patients to the AHC, thereby supporting the complex, advanced, subspecialty care that we uniquely provide. This is at the nexus of

Table 1
UK HealthCare Services at Surrounding Community Hospitals in Kentucky

Outreach service	St. Claire Regional Medical Center	Harrison Memorial Hospital	Rockcastle Hospital and Respiratory Care Center
Cancer center affiliate	X	X	X
Radiation therapy	X		
Chemotherapy	X		X
Oncology	X		X
Orthopedics	X		X
Neurosurgery	X	X	X
Ear, nose, throat	X		
Pediatric cardiology	X		
Pediatric sleep disorders	X		
Pediatric gastrointestinal	X		X
University HealthSystem Consortium purchasing affiliate	X	X	X
Endocrinology		X	
Adult gastrointestinal		X	X
Pulmonary		X	
Educational programs	X		
Adult cardiology	X	X	X
Children's hospital affiliate			X
General surgery		X	
Obstetrics-gynecology			X

good public policy complementing good business practices.

As we have improved clinically, we have also improved academically. Applications for the medical school freshmen class have grown from 941 in 2003 to 2,256 in 2008, and the research dollars have grown from \$104 million in FY2004 to \$119 million projected for FY2008. National Institutes of Health funding has increased from \$59.4 million in federal FY2003 to \$72.7 million projected for federal FY2008. Additionally, the dean of the COM led an academic planning process including the deans of the other health-related colleges to define an approach for pursuing both a multidisciplinary educational model across the health care colleges and a supportive master plan for associated academic and research facilities. We are strongly convinced that there is a significant correlation between excellence in clinical activity and excellence in academic productivity.

Additionally, as we have improved clinically, we have received several national awards. We were recognized by Solucient as one of the 2006 and 2007 100

Top Hospitals and were recently listed in *US News & World Report* as one of the nation's best hospitals for cancer care, for ear, nose, and throat diagnosis and treatment, and for obstetrics-gynecology. The University HealthSystem Consortium also awarded us with their Rising Star for improvement in quality and patient safety. These awards are welcome recognition for our efforts; more importantly, they have helped convince our faculty that we are capable of competing on a national level and that our ambitions of becoming a top-20 public research university are attainable.

Lessons Learned and Conclusions

1. Establishing a strategic plan is a process and not an event. Careful, detailed follow-up with appropriate individuals is absolutely critical to engage and focus all parties in order to achieve long-term success.
2. Defining the role of the institution allows faculty to understand who the real competition is and to focus their energies and enthusiasm. In our current circumstances, the faculty felt more comfortable competing as a referral facility than as a local provider.

3. Coordinated planning including strategy, facilities, and finance reassures the faculty in terms of comprehensiveness and feasibility.
4. Treating appropriate providers at a distance in a supportive manner establishes relationships that both expand over time and lead to stronger referral patterns of appropriate patients. Good public policy and good business practice can be synergistic. Supporting local facilities leads to support from local politicians who appreciate the institution's ability to help their communities.
5. The real fundamental need to establish a strong referral base creates a need to develop a virtual or real network that covers a large population base and secures the referrals in a mutually supportive way.
6. Clinical success supports and encourages academic success. Clinical success will also develop additional resources for academic engagement.

We understand that this model may not fit in all medical marketplaces, but there are some fundamental principles we have outlined that are likely applicable across the nation. AHCs play a key role in health care. Through a carefully planned and thoughtful process, we have begun to define UK HealthCare's role in our medical marketplace.

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