Cardiology Business Strategy:

A Partnership Model for Footprint Expansion and Growth of Market Share

Business Plan

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Business plan being submitted in partial fulfillment of the requirements for Fellowship in the American College of Medical Practice Executives

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Project Summary:

This business plan is for an academic medical center based cardiology program to expand physician coverage, geography covered, and market share through a professional services agreement (PSA) with a community hospital in an adjacent community. Cardiology is a very prevalent disease in what is termed the 'Coronary Valley' in the southeastern United States which drives demand for facilities to offer programs to care comprehensively for these patients. As an academic medical center that is reliant on referring facilities to send high case mix index (CMI) (high acuity, sick) patients to maintain appropriate volumes and revenues we must build relationships that will hardwire these referral patterns into the future. The referring hospital is looking for physician coverage and expertise that might be difficult to obtain without a partnering facility.

This business plan will focus on the PSA model including the incremental impact to both facilities engaged in the relationship. In this plan, the referring facility has a therapeutic cardiac catheterization lab that must be staffed 24x7x365 to handle emergent heart attack cases. The recruitment of board certified interventional cardiologists to provide around the clock coverage is a difficult task especially in a facility where the current volumes don't warrant that many interventional physicians for anything other than call coverage. The facility is currently using very expensive locum tenens to cover the call. Through the PSA model and joint efforts at strategic growth, we believe we can achieve a more sustainable, higher quality program with consistent physician coverage while at the same time achieving wins for the academic medical center through improved communication and a streamlined pathway for patient referral for those patients too sick to remain in the community.

Executive Summary:

a. The Company – The focus of this business proposal is to provide physician (cardiologist) coverage from the 1,086-bed state flagship academic medical center to a 173-bed for-profit acute care hospital facility that is approximately 45 minutes west of the academic center in a community of 27,885 people. Hereafter, the 173-bed facilities market will be referred to as the target market.

b. Market Opportunity – There are currently 1,266 cardiovascular discharges from the target market area with 670 of these patients staying in the county at the 173-bed hospital, 132 patients coming to the academic center and the final 464 going somewhere besides the local hospital or the academic center. This volume creates an opportunity for growth for both institutions and will create the foundation for a sustainable community based Cardiovascular (CV) program into the future. The goal is to keep as much of the care local and only when the acuity warrants would patients leave the community for the academic center.

c. Capital Requirements – No additional capital investment will be required. The target market hospital currently has a fully functioning outpatient clinic and testing area as well as a modern catheterization suite. As market demands and growth warrant, additional capacity may need to be added to maintain access, but that will be well into the future. The other possible future capital expense would be the potential for additional outreach clinics in communities surrounding the target market to continue capturing market share and growing volume but that is not the focus of this plan nor would that be required initially.

d. Mission Statement -- The mission of the academic medical center is “to be committed to the pillars of academic health care – research, education and clinical care. Dedicated to the health of the people of our state, we will provide the most advanced patient care and serve as an information resource. We will strengthen local health care and improve the delivery system”. As such, this proposal fits squarely into the mission of the academic center to support and partner with community hospitals. The target market hospital’s mission is “above all else, we are committed to the care and improvement of human life” and vision “to be the first choice for health services by meeting and exceeding the expectations of our patients, families, employees and physicians”. This too supports the notion that the best health care occurs locally and only when the acuity warrants should patients leave for a higher level of care.

e. Management – The current management of the academic center’s CV institute will be responsible for working with the administration from the target market hospital on the implementation of this proposal. The academic center will be responsible for the recruitment and vetting of physician candidates. The target hospital’s administration will manage the day-to-day operations of the outpatient clinic and testing area as well as the catheterization lab in which the recruited physician would work. The target hospital will be responsible for all billing and collection and will reimburse the academic center for the physician’s salary, benefits, malpractice and administrative overhead.

f. Competitors – The major competitors for this initiative are the two other large community hospitals both located within a mile of the academic facility. There are no other direct or indirect competitors within the county of the target market facility and there are no other large hospitals in the counties that touch that county. The existing cardiologists in the target

community are divided into two groups. The first are the two employed cardiologists and the locum tenens physicians currently working for the hospital. Second are two cardiologists that work embedded into an internal medicine primary care group. Both groups are currently collegial and share call. The competitive group's physicians are aging and there has been no effort to grow that practice.

g. Competitive Advantages – This proposal will bring together two dominant hospital facilities that jointly, by leveraging each entities strengths, can develop a dominant service offering. The target market hospital is a high performing facility with multiple acknowledgements by accrediting bodies for excellence in CV care and the academic center is the regional market leader in volumes with an established high quality reputation especially for high acuity, tertiary services. The greatest challenges will be the promotion of the relationship and convincing both referring providers and their patients that there is often no need to travel for CV services and that if needed this relationship will allow for a smooth transition of care into the academic setting.

h. Financial Projections – The target hospital is currently spending $800,000 annually for 20 days a month of locum tenens catheterization lab call coverage. This augments the 10 days of coverage they currently get from the existing interventional cardiologist. Our proposal will take these funds and use them to recruit an additional full time interventional cardiologist that will not only assist with call coverage but will be available to assist with other patient care duties outside of call. This will allow for additional revenue capture over and above what is currently being generated within the target market's system. The overall goal of the project is to be at historical breakeven from a cost standpoint and grow the total volumes to the two institutions.

Part I: The Organizational Plan:

1. Summary Description of the Business – This business proposal is to develop a joint cardiology practice located in the target hospital but staffed by physicians from a nearby academic medical center.

a. Mission – The mission of this endeavor will be to grow the level of patient acuity that can be cared for in the target hospital while ensuring a smooth transition to a higher level of care when warranted. This will be done with the value equation in mind (value = quality/cost). Because of the prevalence of CV disease in the region, there is also a belief that there remains opportunity to continue to expand and grow the access points, services and thus volumes from that region.

b. Business Model – Currently, it would be common practice for the target hospital to attempt to recruit and hire physicians without help from a partner. This approach was tested in this situation without success. An alternative model, the academic institution hires and places physicians in the community in academic outreach practices, was trialed in other communities previously and it failed for a number of reasons (primarily lack of buy-in from the target market hospital facility). This blended model has been identified as the best scenario where the target hospital gets assistance with recruitment and vetting of the physician. The academic center gets an employed physician in the community at nearly no risk/cost to the academic center. The physician gets an arrangement with the opportunity to work in a community setting and earn community “private practice” dollars while still

being associated with a large group of colleagues and the expertise at the academic medical center.

c. SWOT Analysis – Strengths, Weaknesses, Opportunities and Threats

Strengths

- The academic center employs highly trained, subspecialty CV physicians and has a reputation and a brand that is attractive.
- The academic center has the ability to recruit well-trained physicians including, but not limited to, trainees coming out of its residency and fellowship programs.
- The target hospital has minimal competition within its five county service region and is an area that continues to see population growth.
- The target hospital has an excellent reputation as a high performing facility in an attractive location that should be easy to sell to recruits.

Weaknesses

- There is currently not enough volume to support adding additional physicians to the community without the risk of negatively impacting the production of the current physicians.
- The current physicians will have to transition to employment by the academic center. While the goal would be to “keep them whole”, this is a change and as such can lead to anxiety.
- The use of locum tenens physicians is not ideal. There is no continuity. There is no practice development mindset or motivation. They come at a very high cost.

Opportunities

- Build a higher quality product offering for the patients of this region.
- Expand volumes for both partners by capturing existing market as well as expanding to new outreach areas around the target hospital service area.
- Improve the quality of the clinical services offered at the target facility.
- Grow high CMI market share for the academic facility.

Threats

- Patients self-refer out of the system. There is significant leakage from these "bedroom communities" into the big city in this manner.
- One of the other major providers in the big city begins to see volume declines and so elects to build a competitive practice in the target community.
- Business does not grow over time and so there is inadequate case volume to satisfy and thus retain the physician workforce.

d. Strategy – The business strategy is to design a product that costs no more than the current product (total expense of current physicians plus locum tenens) but that offers a high quality of service in the community. This will occur through a stable cohort of physicians all working as a team. There will also be back up from the academic center for subspecialty expertise including the potential for outreach clinics for many of these subspecialties (heart failure, electrophysiology, adult congenital heart disease, cardio-oncology etc.). By up titrating the level of care in the target community it will allow more patients to receive care

there, build the community confidence in the local provider and grow the overall volumes coming into the new practice.

e. Strategic Relationships -- The major relationship is between the academic medical center and the target community hospital. This will be handled contractually through the PSA. The other critical relationships will be between the primary care referral base and the cardiologists, the cardiologists and their peers at the academic institution and finally between the institutions and the public.

f. Key Stakeholders/Key Decision-Makers – The primary decision makers in the proposal will be the executive teams from the two facilities as well as the physicians. The CEOs of both organizations will have the final go/no-go decision with the operations, legal, marketing, business and market development teams all providing expertise and input to assist in the decision.

2. Products or Services

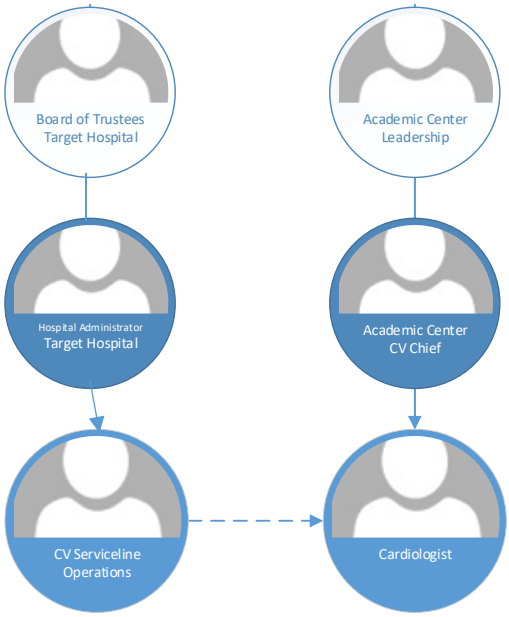
The product/service offered in the proposal is the full complement of cardiology clinical care typically able to be offered in a community setting. This includes but is not limited to outpatient clinic exams, diagnostic testing (cardiac ultrasound, cardiac nuclear imaging, heart rhythm testing etc.), invasive cardiac diagnostics and therapeutics (diagnostic and interventional coronary procedures, peripheral vascular procedures, device implants etc.) and inpatient consults.

3. Administrative Plan

Management of the cardiology practice and all activities at the target hospital facility will fall to the administration of that facility. This includes the facilities, equipment, staffing, and

billing and collections activity. 100% of the risk with the payers will be borne by the target facility. The academic center will be responsible for recruitment of the physician (expense paid by the target hospital) and the ongoing relationship development to ensure the physician remains engaged and satisfied with the affiliation and engagement. The two organizations will jointly monitor and manage quality. Data will be shared through a business associate agreement (BAA) to allow for full disclosure and adequate monitoring of outcomes. National benchmarks will be used to ensure that the level of care meets and hopefully exceeds expectations. Any issues identified will be jointly worked through using standard route cause analysis and performance improvement tools and processes.

The organizational chart is as follows:



4. Operational Plan

Project Timeline/Milestone Work Plan	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Project Conceptual Approval						
PSA through legal and signed						
Recruitment of physician initiated						
Physician recruitment completed						
Practice transitions physicians						
Marketing/liaison activities begun						

Potential Operational Roadblocks and Resolutions – The above timeline represents the ideal sequence of events that should occur to recruit and place physicians in the target hospital. There are several critical milestones that if not met could derail the project. The first is the project approval and the initiation of the legal review process. Our standard PSA template has been well vetted and so we are hopeful that won't be an insurmountable hurdle as much of the work has been done for previous engagements. The second major hurdle is the recruitment of the physician. This has the probability to be the biggest roadblock depending on what time of year this process is initiated. Recruitment is seasonal and if we miss that targeted time, it could take longer than expected to land a qualified candidate that is agreeable to all parties. Once the physician is on board then it will just be a matter of getting the word out through the marketing and physician liaison programs to the referring providers and patients.

Part II: Marketing Plan

1. Overview and goals of the marketing strategy – Utilizing the 4 P's of marketing (Product, Place, Promotion and Price) we will develop a strategy to grow the CV business in this market. The *product* is community CV clinical care and frankly, the services we will offer

would not be starkly different from any other cardiology practice and so not a differentiator. *Price* is also not a factor as typically that is covered by a third party and not used to make healthcare decisions. *Place* is the opportunity to expand and differentiate through outreach clinics in surrounding communities. There are several opportunities to expand into markets with no CV presence currently but where there is a patient and primary care base to draw from. The primary responsibility for *promotion* of the new physicians and the services that they provide will be on the target hospital. However, the academic center offers a marketing affiliate agreement that will allow the two institutions to jointly market their programs and share the cost. This involves an affiliate contract and a small fee to cover the value of the academic brand. If the target hospital chooses to go this route, this affiliation will allow compliant co-marketing activities including full engagement of the academic physician liaison program in the target community.

2. Market Analysis
    a. Target Market: As of the census of 2000, there were 66,798 people, 27,227 households, and 18,336 families residing within the urban service area. The racial makeup was 90.42% White, 7.35% African American, 0.13% Native American, 0.55% Asian, 0.02% Pacific Islander, 0.44% from other races, and 1.08% from two or more races. Hispanic or Latino of any race were 1.02% of the population. The target market for this effort are the counties that comprise 80% of the target hospitals discharges. This comprises a four county region to the northwest of the academic

medical center not directly adjacent to the county where the academic center is located.

b. Competition: There is only one comprehensive hospital facility (target hospital) in this four county area. There is no real competition other than patients leaving the market to pursue healthcare outside of the region.

Analysis below illustrates the target market's top-10 facilities for CV care by Sg2 sub-service line with the target and academic facilities highlighted. The remaining facilities are regional facilities elsewhere in the state. The 2nd and 4th columns represent referrals going to the community hospitals located in the same city as the academic facility, approximately 40 miles east of the target hospital.

Sg2 Sub-Service Line	Target		Academic									Market Total
CHF	206	19	19	16	2	2	9	3			12	288
CAD	132	7	23	4	7	4	6		2		7	192
Arrhythmia	114	18	13	18	10		1		2	1	8	185
PCI	74	17	7	9	7	1		3			3	121
Vascular - Surgical	9	32	12	22	3	1		1	1	3	4	88
Diagnostic Cath	42	15	12	5	3	3	4	1			2	87
EPS	13	19	5	13	4	1	1			1		57
CABG	1	38	5	2	1	2		3		1		53
Cardiology - Other	24	4	8	4		4	2		2		3	51
Pulmonary Embolism	33	5	2	2	1	2		1	1		2	49
Vascular - Medical	12	3	13	3	1					1	3	36
Valve Surgery		6	6	8	1	6		2				29
General Surgery - Other	6	2	2				1					11
Amputation	3	1	1	2	2	1					1	11
Transplant/VAD			3									3
All Other	**1**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**5**
Grand Total	**670**	**186**	**132**	**110**	**42**	**27**	**24**	**14**	**8**	**8**	**45**	**1,266**

Of the 1,266 CV discharges from the target market:

- 670 went to target hospital
- 132 went to academic center
- 464 went to facilities other than target and academic – **opportunity for both to capture part of this volume via joint business strategy.**

c. Market trends: Analysis below illustrates the target market's CV discharges from FY 2014 – FY 2016 by Sg2 CV sub-service line.

CV Discharges					
Sg2 Sub-Service Line	FY 2014	FY 2015	FY 2016	FY14-FY16 Growth %	FY14-FY16 CAGR %
CHF	**246**	**298**	**288**	**17.1%**	**8.2%**
Arrhythmia	199	194	185	-7.0%	-3.6%
CAD	**180**	**202**	**192**	**6.7%**	**3.3%**
PCI	135	147	121	-10.4%	-5.3%
Diagnostic Cath	98	107	87	-11.2%	-5.8%
Vascular - Surgical	112	91	88	-21.4%	-11.4%
Cardiology - Other	73	81	51	-30.1%	-16.4%
EPS	**54**	**59**	**57**	**5.6%**	**2.7%**
CABG	**54**	**51**	**53**	**-1.9%**	**-0.9%**
Pulmonary Embolism	45	57	49	8.9%	4.3%
Vascular - Medical	45	49	36	-20.0%	-10.6%
Valve Surgery	36	38	29	-19.4%	-10.2%
Amputation	23	11	11	-52.2%	-30.8%
General Surgery - Other	5	9	11	120.0%	48.3%
Chest and Respiratory System Procedures	4	4	1	-75.0%	-50.0%
Cardiac Surgery - Other	4	1	2	-50.0%	-29.3%
Transplant/VAD	1		3	200.0%	73.2%
Kidney Failure			1		
Pulmonology	1			-100.0%	-100.0%
General Medicine - Other			1		
Grand Total	**1,315**	**1,399**	**1,266**	**-3.7%**	**-1.9%**

Flat to increasing discharges over the last two years across the following sub-service lines (those with substantial volume): Congestive Heart Failure, Coronary Artery Disease, Electrophysiology Services, and Coronary Artery Bypass Graft.

Declining discharges over the last two years across the following sub-service lines (those with substantial volume): Arrhythmia, Percutaneous Coronary Intervention, Diagnostic Cath, and Vascular – Surgical / Medical.

Overall, CV inpatient market is down 3.7% over the last two years, or -1.9% Compound Annual Growth Rate.

However, CV disease remains the number one cause of death in the United States. As technology continues to evolve the treatment options for this patient population will continue to expand.

d. Market research: The data used in this market analysis research came from the State Hospital Association database for inpatient data. Data was sorted to include CV data (Dx-09) for adults age 18 and older only.

3. Marketing Strategy

The marketing strategy will focus primarily on direct to referring physician advertising through the physician liaison program from both the target hospital and academic hospital liaison programs. We will also plan a few strategically placed billboards, local newspaper advertisements and participation in local health fairs as a part of the public awareness campaign.

A budget of $15,000 per year for three years will be established. Billboard and print media are very inexpensive in this market and so we have slotted $5,000 for those efforts. The remaining $10,000/annually will be spent on direct to physician advertising including continuing medical education activities to drive engagement with the cardiology practice.

4. Implementation of Marketing Strategy

Cardiology is a specialty service that generates the majority of referrals from primary care physicians. Direct patient referral does occur but is minimal compared to patients referred from other physicians. Cardiology also continues to be a specialty where demand often exceeds supply *i.e*. if you offer a convenient service that is friendly for patients and communicate well with the referring providers then filling appointment slots is not challenging. We also know the current target hospital owned cardiologists have limited new patient access with their next available new patient appointment greater than one month out.

Our physician liaison approach to generate referrals, will focus considerable effort on communicating and assuring that the practice is meeting the needs of the referring providers. This will be done through lunch and learns in the practices where the liaisons will discuss appropriate referrals and educate the referring providers on any new services or technologies that may be available for their patients. We will also plan continuing medical education (CME) events in the community to get the providers additional education about CV services as well as to provide them with required CME. This is where the majority of the marketing budget will be focused.

The liaison and practice administrative team will also develop relationships with the smaller referring hospitals in the surrounding counties to ensure that those providers are aware of the availability of these services and can refer patients as needed for the next level of care/specialty expertise. Using these relationships the team will work to identify other potential outreach locations in the future to continue to build referral volumes and secure the practices place in the market.

The focus of the billboard and print media will be around a “big city care close to home” campaign. We will highlight the capabilities of the care locally so that patients do not feel like they need to travel to receive top-notch care.

In an effort to streamline access and be as patient friendly as possible, the practice will offer patients the option of online appointment scheduling through their website. This will allow patients to choose a time that is convenient for them and will assist with driving traffic to the practices website. The website will also contain educational materials regarding the tests and treatments that patients may experience at the office.

These materials either already exist or will be developed in house so there is no cost to the practice for these.

PART III: Financial Documents

1. Summary of Financial Needs
    a. Financing – This project will not require financing, as the practice building already exists and the upfront operational costs of hiring additional physicians and covering their salaries will be self-funded and covered by the hospital from a cash flow perspective.
    b. Capital requirements – The only significant capital/cash needs will be for salaries while the insurance credentialing is undertaken for any new providers to the practice. This money will be recouped once the practice is able to process claims for the work. We would expect this to be no greater than 90 days from the time the new physician joins the practice.
    c. Resource Costs/Opportunity Costs – CV care remains a highly profitable “pillar” service for the hospital system. There is a halo effect to the rest of the health system from a strong CV program and so there is no downside to the rest of the system to focus effort and resources on building a strong CV services program.

2. Financial Statements

    a. Pro Forma Cash Flow Statement (Budget)

The following Cash Flow statement shows the cash projected to be received by the target hospital for the clinical effort on the part of the physicians. This cash would then be used to pay the contract cost to the academic center and the practice overhead expenses (staff, rent, utilities etc.). Since there are no initial capital expenditures the capital expense is shown here as $0.

Sources of Cash	Budget
Cash from Operations	
Clinical Operating Income	$4,200,000
Add: Depreciation and Amortization	_____
Cash Generated from Operations	$4,200,000
Cash from Other Sources	
Contributions and Investment Income	$0
Total Cash from Other Sources	_____
Total Sources of Cash	**$4,200,000**
Uses of Cash	
Capital Expense Requirements	
1. Capital Expense Required	$0
Subtotal Capital Budget	$0
Total Uses of Cash	$0
Total Cash Flow	**$4,200,000**

b. Three-Year Income Projection/Profit and Loss

The following income statement contains the projected contract amount between the target hospital and the academic center for the physician salaries, benefits and malpractice. This projects the income expected to be received from the contract and the project expenses for the salaries, benefits and malpractice. The remaining Net Income will be used to cover the administrative overhead that occurs with the maintenance of the contract at the academic center.

Income Statement

Cardiology PSA Agreement

Financial Statements in U.S. Dollars	2019		2020		2021	
Revenue						
Gross Sales/Contracted Amount	2300000		2369000		2440070	
Less: Sales Returns and Allowances	0		0		0	
Net Sales		2300000		2369000		2440070
Gross Profit (Loss)		2300000		2369000		2440070
Expenses						
Physician Salaries	1725000		1776750		1830052	
Benefits	279000		287000		295000	
UK Overhead (Malpractice)	204000		210000		216000	
Total Expenses		2208000		2273750		2341052
Net Operating Income		92000		95250		99018
Net Income (Loss)		92000		95350		99018

c. Projected Balance Sheet

The projected balance sheet is based on the contractual projections for the academic medical center. There are no balance sheet liabilities for the academic center as part of this deal so that the only impact is the increase in cash related to the profit margin from the income statement.

Projected Balance Sheet

Asset Type	2019 Year 1	2020 Year 2
Current Assets	92,000	96,250
Current Liabilities	0	350
Long-term Liabilities	0	0
Total Assets	92,000	96,250
Total Liabilities	0	0
Balance	**92,000**	**96,250**

d. Breakeven Analysis

The structure of this deal is such that the productivity of the physicians determines the compensation that they receive. This compensation is basically a pass through the academic center to the target market hospital. The goal for the target market hospital is to maintain their current total expense of $2.3M annually. The contract amount sets that as the cap. For that amount, the target hospital gets an additional interventional cardiologists in lieu of the locum tenens physicians with the goal being that the new physician will be more productive than the call covering locums physicians. This increased revenue will make this a financial positive deal for the target hospital. So, in summary, the deal is established as a breakeven financial deal for both entities with an upside for the target hospital with increased production from the new physician. As volume continues to grow into the future, the added revenue (technical and

professional) will cover the expense of additional physician resources (either through a salary increase for the existing physicians or by adding additional physicians to the group).

e. Financial Statement Analysis

The financial documents reflect a profitable arrangement by expanding an existing service through a contractual relationship between two entities. By taking expenses associated with current locums tenens usage and using that to recruit and additional interventional cardiologist the two entities are able to build a plan that will enable growth in a breakeven low risk fashion. The only cash flow needs will be for the period while the new physician is awaiting full credentialing with the insurers. Thereafter, the compensation structure will allow for the flexing of the salaries as the volume warrants and yet it still remains a pass through between the two organizations. The practice will likely be a breakeven operational endeavor at best with the profit for both organizations being found in the downstream work done in the hospital facilities.

PART IV: Innovative Elements and Expected Business Outcomes

1. Impact on Population Health – The successful implementation of this model, over time, will allow for the stabilization and growth of the CV services in the region. This stabilization will mean that patients in this region have access to high quality, academic medical center validated CV clinical care but in a location close to home. With CV disease being a leading cause of death, especially in the coronary valley of the Southeastern USA, convenient access to high quality care will impact the outcomes of patients.

2. Greatest Challenge -- There are several challenges with an endeavor of this type including: gathering the data regarding the current productivity of the existing doctors, the total expense to the hospital, the marketing potential for the area and then building alignment among all parties as to the best path forward. The other major challenge is getting past the WIIFM (what's in it for me) with all parties and building trust that the final deal will be win-win for all. If there is not a level of trust and everyone is jockeying for advantage, then it makes it very difficult to get a three-way deal like this accomplished.
3. Next Steps – The next steps on this deal are: to work with the legal offices from both entities on the PSA agreement, begin recruitment for the additional interventional cardiologist and then begin laying the ground work for the marketing plan. Once the PSA is complete and the candidate is identified then the marketing plan should be set in motion.

   The future will entail additional expansion both in terms of sites of care as well as physician workforce as the volume and footprint grows.

   Citations:

   Market data for the target hospital market was acquired from the Kentucky Hospital Association (www.kyha.com)

   Community data was gathered from the United States Census Bureau (www.census.gov)