Expansion in a Time of Consolidation

With cost-cutting efforts underway at nearly every hospital, facility expansion and investment in new capital equipment might seem a tough sell to hospital administrators. But, that's just what Barry T. Katzen, MD, and Miami Cardiac & Vascular have been working toward. Dr. Katzen discusses the institute's decision to initiate a $120 million expansion, as well as the challenges of seeing the plan through in a daunting financial climate.

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How would you briefly describe the facility at Miami Cardiac & Vascular Institute (then the Baptist Cardiac & Vascular Institute) at the time you decided that an expansion would be beneficial? Even then, it was one of the top centers in the world for this kind of care, but clearly you envisioned it being more.

Dr. Katzen: The Institute was founded in 1987, and following the initial development stage, we opened the new facility in 1992. It was a very unique operational and architectural design that had functioned quite well, but was beginning to get stale in 2008. We had begun to add equipment in places that it shouldn't go, so I felt that the institute was becoming physically cramped and, from a technology point of view, was not equipped to provide state-of-the-art endovascular therapies.

We found that the existing suites, which seemed very large when they were built, now seemed small when performing complex procedures with multiple disciplines involved—sometimes 10 to 15 people and support equipment. Both geographically and architecturally, the situation was not optimal. The goal of the Institute was always to be a leader in this field, but when we designed the facility, procedures that subsequently evolved hadn't yet existed. So we thought, if we were going to design a new facility, how could we avoid the same problem?

We began a brainstorming process with interventionists, cardiologists, vascular surgeons, anesthesiologists, perfusionists, allied health personnel, administration, and our architects to design the optimal facility for the future, for procedures that did not yet exist. It turned out to be an interesting intellectual activity, which led to a lot of features that came into the current design of the new institute facility.

We spent time looking back at what we had accomplished. We had developed a unique facility that became the model for many other institutions, drawing site visits from around the country. It was built as an architectural expression of the philosophy of the institute: transparency. Working in the sunshine meant that everybody's work was going to be open to the scrutiny, evaluation, and visibility of everyone else who was there in a fishbowl environment, the opposite of traditional surgery environments, where procedure rooms are generally isolated. Up until then, most angio suites and cath labs were similar.

It was also a multidisciplinary environment in which people were actually working side by side. One of the things we did from the beginning was to put all of the similar technology in the same geographic place and comingled them. So, we took the interventional radiology environments, the interventional cardiology environments, the neuro environments, and evolving endosuites, and put them all in a single place in a horseshoe configuration.

Instead of having a cardiology side, a radiology side, and a neuro side, etc., the rooms were interdigitated, so it was cardiac next to vascular next to cardiac next to neuro, rotating around with a common control area, which both enabled and forced physicians of different disciplines to literally work side by side, rather than simply in the same general area.

Whom did you have to convince about the need to both expand and upgrade the institute?

Dr. Katzen: There are some larger trends going on in health care within hospitals; hospitals are rapidly expanding, and systems are growing. There is a lot of merger and acquisition activity going on at the not-for-profit level as hospitals try to position themselves for survival in the future.

Our health system, Baptist Health of South Florida, had been getting bigger and bigger. The Institute, which is at the flagship hospital of the system, was one entity in a system that was much larger than it had been before. The facility expansion discussions started when I went directly to the CEO of the system and made the argument that a health care system our size deserves a national-level Center of Excellence as it relates to cardiac and vascular care, and we couldn't get there with what we had. The commitment to expansion was not only based on the business case, but on the 25-year track record of true multidisciplinary collaboration that had resulted in an extremely successful business and clinical model.

What was the initial reaction?

Dr. Katzen: The initial reactions were, "What is that going to mean specifically? How much space? What can we do?" They agreed to it in principle, but then we actually had to start developing plans to see what could be done. It was greatly facilitated by philanthropy, coming from a grateful patient who embraced our vision, and had the capacity to influence the process financially. The CEO of Baptist Hospital was of course very supportive of the entire project. All of this was driven not only by bricks and mortar, but by the "big idea" that would drive new and unique programs, operational efficiency, and be compatible with new strategic directions.

This expansion does not involve the addition of more beds, as one might imagine it would. Why is that, and was there any pressure to add more patient volume and revenue potential in order to offset the costs of expansion?

Dr. Katzen: We had found there were certain things limiting us operationally in our own particular geographic footprint. One was that we had 11 procedural suites and 13 pre- and postprocedure beds, which was operationally impossible. It turned out that our throughput was being limited because we had to prepare and recover patients on another floor. My long-term colleague, Carol Mascioli, the current COO of MCVI, made a pretty strong business case that if we expanded our pre- and postprocedure area and had the appropriate ratio of preparation and recovery beds per suite, we would increase our operational throughput. That became an important business-driver.

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The second factor was related to our case mix and patient type. Approximately 80% of the work we do is on an outpatient basis. We want to become more of an outpatient destination to compete with other outpatient centers, so the fact that there weren't additional beds was less of an issue. We also had additional bed capacity on campus. The Institute today has nearly 100 dedicated inpatient beds and 30 outpatient beds; within Baptist Health, there is a sophisticated transfer program that allows us to distribute patients to appropriate facilities.

Specifically, what does the expansion include? What technologies were key to the goal of creating the vascular facility of the future?

Dr. Katzen: The bulk of what we wanted to establish was a series of sophisticated, advanced endovascular suites, but for the centerpiece of the expansion, we are creating something called the Center for Advanced Endovascular Therapies. We decided to drive this with clinical specifications and create an environment in which we could do any type of predominantly image-guided procedure, where physicians of different disciplines could work together to create unique solutions for patients' problems.

We also talked about procedures that don't exist yet. For example, what if, in the future, someone can put a catheter in an artery and put some material in that will tag a tumor from red to green; a surgeon might then go in immediately with a laparoscope and remove the tumor if it can't be embolized. Or, let's say a patient comes in with an acute stroke, and he or she needs a hemicraniectomy and open chest and endovascular combination procedure as well—we wanted the capacity to do all such procedures in the same environment.

It's different than just having a hybrid room or a conventional operating room; those rooms are principally designed for surgical procedures in which imaging can be involved. These rooms are designed such that they can

always be doing image-guided procedures, either with ultrasound, laparoscopes, or any other type of imaging. To do that, the rooms need to be very big, have laminar airflow, and have unique lighting.

The other thing we wanted to try to create was an environment that was more conducive to training and education. Let's say you have a transcatheter valve replacement team that is doing a case, and your case demands are growing and you need to train a second transcatheter valve replacement team, how are you going to do that? In these procedures, if you are not one of the four or so people who are closest to the patient, you're not really seeing, hearing, or experiencing everything that is going on. We wanted to create a unique video integration environment in which people don't even have to be in the room to watch.

Two of the advanced endovascular suites are going to have walls made of glass with seating outside and a video system that will allow people to sit in a theater-style chair outside of the angio suite with an iPad and actually control what they're watching. Viewers from different disciplines or training can each have their own unique user interface that will allow them to pick and choose which parts of the procedure they want to watch, all with communication with the suites.

Once we establish that concept and the backbone of everything else we're building, we can create a situation in which we can communicate from room to room. If one clinician is in room A, he or she can talk to somebody or share an image with someone else in room B on the fly. We can log into a suite and monitor what's going on through the intranet, turn it into a webcast internally, or transmit it out to the world. All of those options will be available. Using and integrating technology to link people is one of the most important drivers.

Miami Cardiac & Vascular Institute's expansion isn't just physical, taking place at a time when there is a move toward service lines going beyond the walls of a particular hospital. Was that expansion going on at the same time as the physical expansion of the building?

Dr. Katzen: The expansion of the building started first. There are some competitive programs around our hospitals, and by making the huge commitment to advance the Institute in the direction that we were going, it seemed like a good time to revisit all of the various other hospitals and programs with the idea of integration. In the past, there had been some potential internal competition within the system, and now it's a very different type of integration. The new Institute at the Baptist campus is the flagship facility, but we also have facilities in South Miami Hospital and the other hospitals that provide different levels of service.

We have several operational goals. One is to leverage this new system to be able to funnel the more complex cases to come into this new facility, but also to drive volume where it is most appropriate at the other facility that does invasive work. We want to make sure any patient who reaches cardiac and vascular services in Baptist Health experiences the same quality and outcomes throughout.

We have also created a unique organizational structure to provide medical staff leadership across multiple entities and define who is "in" the Institute. We are using the successful model of the comanagement company that was pioneered by BCVI over 8 years ago. This new organizational structure is lead by a new dyad management structure with true physician/administration partnership. MCVI is now led by a Chief Medical Executive (myself) and my long-time colleague, Carol Mascioli, who is the COO. We are building out a system presence, and currently have a CEO champion, Bo Boulenger, the CEO of Baptist Hospital, to facilitate support among the CEOs of the various entities.

Have there been any growing pains?

Dr. Katzen: Of course, we are continuing to evolve and learn. We've learned a number of architectural lessons in working with heavy equipment manufacturers to design some first-in-the-world equipment. That had a significant effect on the actual construction of a building, not knowing all the specifications of the technology that's going in there.

The integration process is currently ongoing. We're now in the process of building a medical staff infrastructure that can cross multiple hospital lines, quality commitments, and technologies capable of conducting peer review across multiple hospitals and protecting that information, as well as the actual operational aspects of making it happen.

What advice would you give someone who is seeking to expand a facility?

Dr. Katzen: These types of projects have to start with the "big idea" and a clear vision that everyone can buy into. If you have a big vision, and you want to go in this type of direction, get the absolute and unequivocal commitment of the people who are leading the health care system first, so that you have top-down support for the initiatives and the goals you are trying to accomplish. In the complex health care systems of today, building from the bottom up has become much more challenging. ■