

Cath Lab Digest

e-Consulting Helps Rural-Community Hospitals Get in the CV Game

By Thomas Wharton, MD and James Burns

Oftentimes, rural and community hospitals face many challenges when it comes to decisions about the scope of cardiovascular (CV) care they provide. Space constraints, regulatory issues, internal politics and financial limitations are all factors that impact a facility's strategic vision. Expanding a cardiac catheterization laboratory's scope of procedures to include interventional procedures presents huge obstacles — clinically, financially and operationally.

Often, these rural and community centers lack the resources and expertise to expand. On the one hand, smaller hospitals cannot afford to hire consultants to plan and implement their program. They also can't justify the time or money it would take to internally create the forms, documents, policies and procedures to develop a "best practices" program for primary and/or nonemergent angioplasty. On the other hand, with cardiovascular services accounting for up to 40% of a hospital's net revenue, hospital administrators see that a significant opportunity is being missed both financially and in terms optimal patient care.

Over the past 10 years, percutaneous coronary intervention (PCI) has gained wide acceptance as the preferred strategy for patients with ST-elevation acute myocardial infarction (STEMI) and other high-risk acute coronary syndromes (ACS) when delivered rapidly and expertly. However, it is a sad but true fact that only 20% of patients with STEMI are treated with primary PCI in the United States.^{1,2} Even worse, over one-third of patients with STEMI still do not receive any type of reperfusion therapy. This treatment gap clearly represents an urgent public health problem.

Hurdle #1: Searching for a Remedy

Clearly, starting an angioplasty program in a rural or community facility creates greater access to advanced care. It can also have a positive effect on the overall health of the community. However, developing a high-quality PCI program is no easy task. It takes a wealth of procedural and operational knowledge, attention to documentation and standards of care, detailed facility and equipment plans, and oftentimes, the recruitment and training of staff. In the ideal world, experienced staff members would collaborate to develop pathways and patient care protocols that utilize current best

practices and real-world experiences. However, for many remote hospitals considering the launching of a PCI program, experienced staff is a commodity in short supply. With time at a premium, it often doesn't make sense to utilize expertise in protocol development when that time could be spent training other staff.

This is where a new concept, called "e-consulting" is gaining a foothold. E-consulting for PCI program development offers a bridge to the experience and know-how that rural and community hospitals need in order to create and develop a sound program. The e-learning methodology allows users to access internet-based content to accelerate their learning of procedural knowledge at reduced costs, while gaining streamlined access to crucial information. When small teams at rural and community hospitals gain access to pre-packaged program development materials via the Internet, they can more quickly gain the expertise and tools they need to set up a cardiovascular program, resulting in improved access to cardiovascular services, while reducing costs and thus potentially increasing revenues.

e-Learning Coupled with a Proven Expert Structure

Naturally, the cornerstone of any successful angioplasty program is a proven implementation process. Regardless of where care is provided, establishing and maintaining the highest possible quality must be the overarching goal. With this in mind, a leading cardiac and vascular consulting organization set out to package their know-how and expertise into the industry's first-ever, Internet-based, e-learning program. Developed as a self-directed program with all the required guidelines, forms and structure, it was designed to provide rural and community hospitals with the tools needed to develop a top-notch, care-efficient and cost-effective angioplasty program. The key value comes from the time saved by tapping into a proven structure, while reducing costs by utilizing internal manpower resources for implementation instead of hiring a team of consultants.

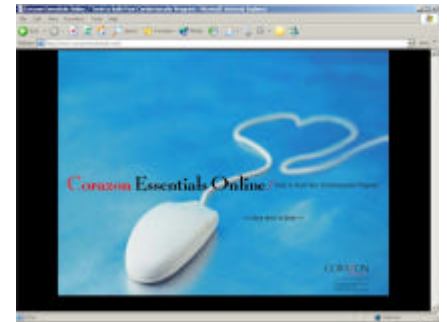


Figure 1. The online format allows for real-time updates with every industry change.

This e-learning program, called C.E.O. (Corazon Essentials Online) provides online access to the essentials needed to develop and implement a new angioplasty program. Organized into an online toolkit, it includes the latest industry literature, forms and documentation, planning guides, operational statistics and clinical practice protocols. More importantly, it was developed using the critical "lessons learned" from consultants who have set up start-up cardiac and vascular programs across the country. The self-study nature of the program enables clinicians at rural and community hospitals to use the online methodology at their own pace. Via the Internet, users gain easy access to a vast array of information and can readily modify it to suit the specific needs of their organization.

Joann Pritchett, RN, MSN, CCRN, from Tift Regional Medical Center, was one of first in the country to use the online program. "The methodology is quite user-friendly and convenient, and the overall value of the product is very good. It helped us to organize our tasks and set priorities." Tift used the online toolkit prior to implementing a PCI clinical study.

As Pritchett explained, "The methodology was very helpful in focusing our efforts toward what was essential to accomplish prior to implementation of a PCI clinical study. In particular, the policy / procedures / forms section was very beneficial to our efforts because it enabled us to put a number of procedures into place without starting from scratch."

When asked about the impact that the online program has had on the organization at large, Pritchett added, "The positive impact of the PCI program is limitless. At the very least, it

enables us to help people to stay in their community for their procedures. It also enables us to provide services to a highly underserved population here in rural South Georgia.” Pritchett has high praise for their in-house consulting group “who now have an in-depth knowledge of what we need to do in order to be ready to participate in the PCI clinical study.”

Naturally, the desire for rural and community hospitals to get into the advanced CV services game is there, if for no other reason than the clear benefit such services offer to patients. Recent data indicate that patients with ACS admitted to hospitals without PCI (angioplasty) services are less likely to be transferred and to receive timely intervention, which may result in higher mortality rates at these hospitals.³ (Roe MT, Boden WE, Chen AY, et al.) Clearly, there is an urgent need to increase the availability of PCI where the majority of these patients present. For many patients, that location is community or rural hospitals covering the broadest possible geographic regions where distance often prevents timely access to advanced cardiac care.

Even organizations unfamiliar with angioplasty services can easily adapt the information and approach to their situation. The C.E.O. online toolkit houses 12 applications that include over 200 Word, Excel, and PDF files in an easy-to-navigate arrangement. No document is more than three clicks away, and the samples can be modified and re-saved according to program- or hospital-specific needs.

Hurdle #2: Navigating Regulations

Increasing the number and distribution of qualified PCI centers has been a major step in enhancing access to rapid and expert PCI. Using an e-learning program can help rural/community hospitals in assembling the critical know-how. However, another issue is the often-discouraging state regulations and national guidelines. Some restrictive regulations limit PCI only to hospitals that perform bypass surgery. The impact is impaired access, and all too often, added pressure to open new low-volume heart surgery programs simply to support the much-more-needed PCI programs.

However, with improvements in technology and growing utilization rates based on successful outcomes at facilities both with and without open-heart surgery on-site, regulations governing the performance of PCI are slowly changing. The result is that angioplasty is fast becoming the new “gold standard” for Acute Myocardial Infarction. In fact, the use rates for PCI have increased over 25% in some areas while open-heart surgery procedures have declined 20%.⁴ While neither of these procedures provides a “cure” for coronary artery disease, the improvements in the long term success rate of PCI have created a new dynamic in the treatment of progressive heart disease: younger people are being treated sooner with PCI. This is helping to significantly postpone the need for total revascularization through surgery, sometimes for several years.



Figure 2. Current state PCI regulations across the country.

Currently, 31 states allow either primary or primary/elective PCI without on-site open heart surgical back-up, and this number is steadily increasing as various states across the country take another look at their regulations. Alabama and Georgia have recently approved select hospital participation in an upcoming a PCI clinical study. West Virginia and Pennsylvania have implemented demonstration projects, whereas other states, such as Massachusetts, allow facilities to perform PCI as part of their participation in other studies.

Although clinical outcomes, risk factors and procedure volumes have an effect on state regulations and the consequent growth of PCI, the leading principle behind regulatory changes in the angioplasty equation is simpler. Patients do not want to travel for healthcare services, especially when it means navigating congested urban areas. Utilization rates for advanced cardiac services increase significantly when these procedures are offered locally because oftentimes, patients who have historically avoided care begin to seek treatment when it is offered closer to home. Other factors contributing to this increase include a stronger presence of cardiologists in the community, improved outreach efforts, better patient education and greater community awareness.

Hurdle #3: Maneuvering through the Controversy

Even with changing regulations and opportunities to streamline program development with e-consulting, the movement of PCI away from surgical centers to community and rural facilities is not come without controversy. In much the same way that diagnostic catheterization was opposed in nonsurgical centers 15 years ago, opponents claim that PCI in nonsurgical centers is too risky, despite the fact that less than 0.4% of PCI cases require emergency open heart surgery,^{5, 6, 7, 8, 9, 10, 11} and less than 0.2% require emergency surgery within 2 hours.¹² However, for many, the rationale for providing emergent primary PCI for myocardial infarction is simple: the risk of transporting critically ill patients to a full-service cardiac center is much greater than the risk of performing the procedure on-site. Nonetheless, the waters become murkier when elective cases are considered. Some believe that nonemergent patients can be transferred for PCI with minimal risk, therefore implying that elective

cases are best treated in full-service centers. This obviously is not the ideal situation, as it creates two standards of care for PCI patients.

Elective PCI at hospitals with off-site cardiac surgical back up is currently given a “Class III” indication by the ACC/AHA PCI Guidelines¹³ on the basis of “consensus opinion of experts,” not on trials or studies (Level of Evidence C). Yet the evidence is mounting, both in the U.S. and abroad, that emergent, urgent and elective PCI can be performed safely and effectively at qualified nonsurgical hospitals in controlled circumstances. As the need for PCI grows, especially in the large population with high-risk ACS patients, the lack of local access to and underutilization of timely PCI can demonstrably result in inferior outcomes.

Looking Ahead—The Cost of Not Entering the PCI Market

Programs that offer diagnostic catheterization and drug therapy for AMI are at a crossroads. Both patients and third-party payors are realizing the clinical and financial desirability of completing their invasive cardiac care in one procedure instead of two procedures at two different hospitals. This realization, along with the arrival of new technologies such as multislice CT scanners and advanced MRI units, will begin to erode diagnostic catheterization volumes, as both chest pain and MI patients begin to bypass these services in favor of full-service PCI programs. In addition, many areas have already initiated policies for ambulance drivers and medics to take ACS patients directly to centers offering PCI programs for their care.

These issues aside, confusion still reigns, often clouding the truest, most obvious issues. For example, as smaller hospitals assess whether they can afford to enter the PCI market, Corazon Consulting reports that many of these organizations lose site of the real question that needs to be considered: Can your organization really afford *not* to enter the PCI market? With 20–40% of the average hospital’s net revenue stemming from cardiology services, any threat to the cardiac program becomes a threat to the organization as a whole. CMS recognizes the importance of advanced CV services and has once again refined reimbursement guidelines for PCI procedures. With this in mind, a successfully planned, well-managed angioplasty program can be profitable. Most importantly, it can sustain the facility in the long run, especially as the landscape of cardiac services continues to evolve.

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