

As seen in **Hospital News**

## Chest Pain Centers: The Latest Trend for Emergency Care of a Common Patient Population

By Kevin Miracle, Consultant

Chest pain is the second most common complaint of patients presenting to hospital Emergency Departments (ED), and is a symptom related to coronary artery disease, the leading cause of death in the United States. It is estimated that 5 million patients visit Emergency Departments annually in the U.S. and 1.6 million of these will have either a cardiac arrest or an acute myocardial infarction (AMI), while at least 500,000 are admitted with unstable angina. Furthermore, estimates show that costs associated with inpatient cardiac evaluations, which reveal negative findings, are the \$6 billion range annually.<sup>1</sup>

Given these high costs for evaluating and treating this large population in the ED, healthcare providers are starting to experience capacity and cost pressures and have begun to examine their processes for dealing with these patients. It has become imperative to decrease costs by reducing unnecessary hospitalizations, decreasing lengths of stay, and avoiding missed diagnoses (sending an AMI patient home). To balance the need for cost reductions while not sacrificing high-quality patient care, hospitals are developing new approaches to efficiently and effectively treat ED patients.

One such approach is the creation of a Chest Pain Center within the traditional Emergency Department setting. These Centers serve as the command post for quickly identifying and treating patients who are experiencing, or who are at risk to experience, an AMI. Rapid triage in this specialty area can distinguish between patients with acute coronary syndromes requiring admission and further treatment, and those that can be sent home. With a smoothly-functioning Chest Pain Center utilizing appropriate protocols, the time-to-treatment or time-to-discharge is reduced, which will create cost savings and improvements to the overall bottom line.

Given the operational and cost efficiencies that can be realized with implementing a Chest Pain Center, they have become the latest trend for providing comprehensive acute care for a common patient population. There are more than 1,500 hospitals in the United States that have either a certified or a self-designated Chest Pain Center. Considering the current growth rates and statistics that show the value of this service, all 5,400 hospitals in the United States could have a Chest Pain Center in their Emergency Departments within the next two to three years.<sup>2</sup>

Implementing a Chest Pain Center, however, is no easy task. This strategy requires a multi-disciplinary, vertically-integrated program for rapid evaluation and treatment of patients at high-risk for a coronary event and other patients with symptoms of chest pain that need to "rule out" for AMI. In Corazon's experience, Chest Pain Centers can come in all shapes and sizes, though several key elements are important to establishing an effective Center. In 2003, the Society of Chest Pain Centers launched the first accreditation program for hospitals across the country. According to this organization, the eight key elements of a Chest Pain Center are as follows:

- Integrated ED and emergency medical system.
- The ability to conduct an emergency assessment of patients with Acute Coronary Syndrome (ACS).
- The ability to conduct a rapid assessment of patients with low to moderate risk for ACS.
- Functional facility design for providing good cardiac care.
- Personnel trained in core competencies.
- An organizational structure that demonstrates support for the Center's mission.
- Ongoing process improvement that uses metrics to track and evaluate trends.
- A community outreach program for secondary prevention and symptom awareness.<sup>3</sup>

Nationwide outcomes have demonstrated that with the above components as part of a designated Chest Pain Center, rapid coronary reperfusion therapy in high risk patients is enhanced. Furthermore, they have also demonstrated that accelerated diagnostic protocols applied in the Center, in patients identified as "low-risk" on the basis of the initial presentation, are safe and accurate. Length of stay has been consistently reduced and subsequent risk in patients with negative evaluations is low. Initial data indicates that this strategy, as implemented in a comprehensive Chest Pain Center, is indeed cost effective.<sup>4</sup>

Corazon feels that implementing the Center cannot be the end-point, however. Programs must strive to achieve high-quality practice standards while reducing resource consumption and capturing reimbursement potential. To ensure a high-quality program and effective patient diagnosis, a quality assurance/quality improvement initiative should be in place. All components of the process need to be evaluated on a case-by-case basis, looking for outliers which create obstacles to the overall success of the program. As part of the QA/QI program evaluation, each case must be scrutinized from the initiation of EMS, through the Emergency Department, and to the remaining continuum of care.

In addition to evaluating the quality of care provided, attention should also be directed to the times associated with EMS transport, Emergency Department evaluation and intervention, arrival of the catheterization laboratory team, and subsequent transfer of the patient to the lab if necessary. Standards of acceptable times need to be determined for door-to-reperfusion, lab turnaround time, and appropriate care provision. Each case that falls out of the established range should be thoroughly reviewed to determine how the process can be improved, thus correcting any issues before the next patient presents.

As part of the early identification and treatment process, effective education programs geared to the general public should be incorporated in the marketing/outreach programs of the hospitals. Indeed, a Center can serve as a way to educate the community and increase awareness of the program. This can result in an increase in cardiac-related admissions and revenue to the hospital, while differentiating the facility from local or regional competitors. These campaigns can also notify the community of early recognition signs, while reinforcing the appropriate use of EMS systems at the right time for the right reasons.

When coupled with a community that understands the early warning signs of heart attack and a well-trained and responsive EMS system, a Chest Pain Center can improve quality and cost outcomes while delivering best-practice care that ultimately saves lives.

### References

- <sup>1</sup> Chest Pain Centers – Part 2: The Strategy of the Chest Pain Centers, *The Journal of Cardiovascular Management*, March/April 2002.
- <sup>2</sup> Comprehensive Strategy for Treatment of Patients in the Chest Pain Emergency Department, <http://openseason.com/chestpain/chestpaincenters/compstrat.html>.
- <sup>3</sup> Society of Chest Pain Centers: [www.sccpc.org](http://www.sccpc.org).
- <sup>4</sup> About the Society of Chest Pain Centers: [www.sccpc.org](http://www.sccpc.org).



Kevin is a Consultant with Corazon. Corazon is a national leader in specialized consulting services for CV program development from strategic business planning through clinical implementation. Corazon combines business planning, market and financial analysis, feasibility studies, clinical operations, Heart Hospital design, best practice benchmarking, and staff education for newly established or existing programs. Corazon is a 2003 Ernst & Young Entrepreneur of the Year Company.

Call 412-364-8200 or visit [www.corazon-consulting.com](http://www.corazon-consulting.com)