

## Cardiac Imaging with an Eye for the Bottom Line

New imaging technology in the cardiovascular arena has attracted the interest of healthcare leaders. While market demand and economics continue to drive advances in diagnostic imaging in cardiovascular services, the cost of new and changing technology and surrounding questions about the proven clinical value have delayed many decisions to purchase in organizations across the country.

The decision to acquire new imaging technology is also compounded by third-party payor restrictions on utilization and reimbursement, as well as growing concerns about 'imaging' turf battles among several clinical specialties. Questions as to who 'owns' the new equipment, where it is located, and who performs and interprets the study, are still left unanswered for many hospitals evaluating innovative imaging technology for the cardiac patient. Corazon recommends taking an objective approach to evaluate the clinical, quality and market share goals and financial implications, with the cardiac patient's needs at the center of decision-making for new technology.

For example, the purchase of a 64-slice CT or MRI will require a significant capital investment, and perhaps new or renovated space to accommodate the size of the equipment or staff training in the use of the new technology. While these and other challenges may exist, there are considerable benefits to be realized by taking advantage of a cutting-edge imaging technology.

1) **Clinical Merit** is the primary factor to be weighed when considering the adoption of advanced imaging technology. Recent advances in Multi-Slice Computed Tomography (MSCT) and Cardiac Magnetic Resonance (CMR) imaging used for coronary angiography have led to a high degree of accuracy in diagnosing coronary artery disease. As clinical research accumulates and the technology improves, these non-invasive modalities are emerging with the potential to accurately diagnose the presence or absence of coronary artery disease without the need for an invasive cardiac catheterization procedure in many patients. Screening can be done sooner, and using cutting-edge non-invasive imaging greatly reduces the risk of complications and enlarges the pool of eligible candidates that can undergo a CT or MR study. Today, although very promising, CT and MR imaging are seen as a complement—not an alternative—to cardiac angiography until the technology is further developed and tested.

2) **Market Advantage** can be derived through advancing technology to stay ahead of the competition and be on the forefront of progressive cardiac care delivery. Differentiating from other providers—locally, regionally, and nationally—is another factor to examine in evaluating the acquisition of advanced cardiac imaging technology. Acquiring state-of-the-art non-invasive imaging capability can attract new referrals and market share and new volume to the cardiac program by a) self-referrals from the well-informed patient; b) referrals from the medical community to a unique technology; and c) a larger pool of patients with minor symptoms that can access a non-invasive, low-risk, accurate study that can diagnose whether or not disease

requiring treatment is present. In essence, the addition of more sophisticated imaging for cardiac disease enlarges the population of patients to be evaluated, and thus creates a wider funnel of entry to the cardiac care continuum. Further, referring physicians and savvy patients generally prefer facilities that offer the latest in the field. This provides a marketing opportunity to make the community aware that cutting-edge technology is available to quickly and safely diagnose cardiac disease.

3) **Operational Needs. Quality:** A distinct joint forum on technology performance, evaluating technical ability, study outcomes, and interpretations should be convened to review and assess performance data as the new imaging study is adopted by the organization. This process will allow the organization to evaluate the clinical merit, operational benefits, and financial repercussions that may be readily redirected if adverse outcomes surface. **Location:** Though adaptable space that can flex for future growth in technology is ideal, it is common to integrate new equipment into an existing space when possible to save capital dollars and avoid disruption. Consideration should be given to all clinical applications of the new modality, and the related department adjacencies. For some high-volume programs, placement of dedicated CT and/or MR capabilities within the Cardiology Department was the best option. In others, locating the equipment within

Radiology or near the Emergency Department made the most sense, to allow non-cardiac as well as cardiac patients benefit from the technology. Such location decisions depend on the organizational objectives, patient volumes, program design and physician interests, and the available facility space.

**Study Interpretation:** The designation as to who will interpret or 'read' the cardiac imaging studies is a prime consideration when adding new cardiac imaging capabilities. This is a new wrinkle to the existing contention between these disciplines about study ownership in Nuclear Cardiology and Peripheral Vascular imaging and intervention. In recent months, the American College of Radiology is encouraging limits on the provision of high-end imaging by non-radiologists. In response, during this year's ACC meeting, the Society of Cardiovascular Computed Tomography (SCCT) was formed with the top priority of facilitating training for cardiologists.

These organizational turf battles between cardiology and radiology specialty groups can create major obstacles. Medical staff conflict and unrest, and threats to quality assurance can result when such issues remain unresolved. Corazon recommends forming a group of physician stakeholders to identify the issues and devise solutions and compromises that result in uniform credentialing and shared reading privileges for all medical specialists.

4) **Financial Implications:** Acquiring new imaging technology for your cardiac program can be a valuable investment, despite the difficulties that may accompany the change in practice. The capital investment should be

forecasted against expected reimbursement and other marketing and clinical benefits. Optimizing reimbursement for procedures with new, sometimes unfamiliar technology can be a challenge. In fact, confusion around coding for cardiac imaging procedures already exists and will likely continue in the months ahead. For instance, most cardiac CT exams are performed as a CT angiographic examination of the chest and are billed for CPT 71275—a code also applied to non-cardiac exams. This impacts both reimbursement and the utilization analysis for providers and payors. A new unlisted CPT code, 76497, covers a number of cardiac-specific procedures, and has been identified for use through the end of CY 2005. As of January 1, 2006, CT angiography will have specific Category III CPT codes to be used for gathering data on emerging cardiac CT procedures, though without accompanying relative value units (RVUs) that determine reimbursement. Corazon highly recommends a well-defined coding process for new cardiac imaging studies to assure accurate documentation and coding practice—for coders and physicians—and corresponding reimbursement that is appropriate for cardiac imaging procedures. Coding and payment outcomes should be compared and monitored through tracking reports and record reviews to optimize reimbursement.

5) **Plan for the Future:** Over the last several years, advances in imaging technology have offered promise to cardiac care providers and their patients. As this technology emerges and develops, organizations are wise to strategically plan for further technology changes on the horizon. Innovation and futuristic thinking in technology change is central to creating a strategic vision and plan for the cardiovascular service line that integrates the related medical specialty needs in cardiology and radiology.

The accelerating pace of clinical innovations, particularly within cardiac imaging, requires organizations to rigorously evaluate the clinical, cost, and quality ramifications. Close scrutiny of the implications of expensive new technology is necessary to ensure the decision to acquire or delay purchase is made in the best interest of the hospital and medical staff, with the patient's interest at heart.

Organizations with a formal model to evaluate and implement new clinical technology are in the best position to meet quality and compliance objectives, while maintaining a positive bottom line for the program. This action offers the safest means to advance clinical quality and manage the costs of new and exciting cardiac technology.

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