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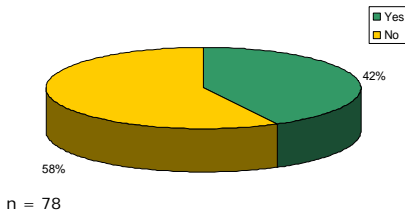
## Cardiovascular Information Systems The Heart of Program Success

By Katherine Kay Brown, RN, MSN

More than ever before, detailed healthcare information is available to the general public, providing consumers with multiple sources for making decisions about the type of care they receive and where. In today's increasingly competitive environment for cardiovascular (CV) services, hospitals must be able to not only document clinical, cost, and satisfaction outcomes, but also **market** their programs using this significant data. Furthermore, governmental agencies, insurers that 'pay for performance,' and firms that generate public reports are scrutinizing CV programs and requesting additional clinical and cost data on outcomes.

But, the ability to compile comprehensive, real-time, valid data poses a continual challenge for most hospitals. The *Corazon National Benchmarking Survey* of 101 hospitals across the nation revealed that less than half of the respondents reported owning a cardiovascular information system (CVIS) as shown in the graph below.

### Is a cardiac-specific information system in place at your facility?



Too often, hospitals rely on time-consuming and cumbersome manual data collection, which may result in inefficiencies when extracting, aggregating, and analyzing the data. Furthermore, the labor-intensity required with manual data collection could lead to infrequent, retrospective, and/or questionable reports.

Corazon believes that a cardiovascular information system can greatly improve overall quality of patient care, staff productivity, and CV program profitability through efficient information management. Data can be integrated from multiple hospital systems and technologic modalities through direct point-of-care data-entry into one location. As a central repository, the CVIS can generate detailed reports and analyses to best manage cardiovascular operations. Some advanced systems even offer image storage and management to create a cardiovascular electronic medical record.

Indeed, an organization's ability to 'mine' and use the often-disparate sources of patient

information can be key to cardiovascular program success. And, hospitals that have the impetus to participate in local, state, national, or governmental registries are typically more focused on using data as a catalyst for internal change, which can lead to better outcomes and an increase in market share. Data submission to the ACC (American College of Cardiology) and STS (Society for Thoracic Surgeons) registries allows hospitals to benchmark their outcomes with other peer programs on a national level.

A CVIS can also enhance the ability to perform clinical research, measure clinical and fiscal program performance, and monitor physician-specific outcomes. The CVIS likewise allows data to be gathered at the point-of-care – as a byproduct of standard clinical documentation or through key interfaces with other hospital systems – producing real-time reports, helping clinicians address issues as they occur.

But how does an organization choose from the multiple CV information systems available? Corazon's recommends the following steps for effective database selection:

#### Step #1 – Form a CVIS Selection

**Committee**, including clinicians and IT staff. Physicians must be involved as their buy-in is contingent upon meeting the needs of the entire CV service line, including cardiology and CV surgery. Separate systems can lead to a lack of program integration and as a result, inaccurate or incomplete data. The Service Line Administrator and a representative from the Finance Department can help to demonstrate how a CVIS benefits the organization as a whole – clinically, operationally, and financially.

#### Step #2 – Determine cardiovascular specialties to be serviced by the CVIS.

Fortunately, these systems can be purchased in modules and expanded over time. Hospitals often purchase a system for the highest cost areas first – the Cardiac Cath Lab and Cardiac Operating Room, while modules for electrophysiology and echocardiography can be added later.

#### Step #3 – Evaluate program needs vs. system capabilities.

When selecting a CVIS, it is important to understand the CV program's information system needs compared to capabilities of the various systems available. For instance, is the hospital interested in detailed benchmarking services including costs? Longitudinal data collection and clinical research? Inventory management? Procedure scheduling? Digital image storage

capability? Physician office integration?

Expanding the system to other service lines?

Product flexibility is equally important.

Are clinicians able to customize data fields or add data elements? Is the CVIS easy to use for data entry and extraction? Is the system capable of risk stratifying? Are reports easy to generate and provide statistical analysis?

**Step #4 – Distribute a detailed request for proposal (RFP)** to vendors with systems that most closely meet the CV program needs. After RFP results are analyzed, on-site vendor presentations should be scheduled, including time for Q&A. We also recommend a site visit in order to see the CVIS "in action" and gain "lessons learned" from a program already using the system.

Depending on the situation, a 10-week timeline is feasible for the CVIS selection process; but, the selection process should not be taken lightly. Choosing a CVIS will result in a long-term relationship between the hospital and vendor with multiple service needs. Corazon advises choosing a vendor with cutting-edge technology and a visionary outlook, since continual system updates will be necessary to ensure a state-of-the-art CVIS product.

In Corazon's experience, information is often **the** most powerful stimulus to affect change and improvement in cardiovascular services. However, the data retrieved from an information system is only as good as the data entered. As cardiac programs work to improve care, identify performance improvement opportunities, and decrease costs, it is essential to provide credible information that can be 'sliced and diced.' Report cards and benchmarks that offer an accurate and timely perspective on clinical practice and business operations can frequently set the stage for CV excellence.

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**Katherine Kay Brown is a Director with Corazon, a national leader in specialized consulting services for cardiovascular 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 cardiovascular programs.**

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