



Health Care Visions News

From The Cardiovascular Specialists

1ST QUARTER 2005

“The Care You Want Is Here”

Barberton Hospital (BH) in Barberton, Ohio embarked on a mission to not only develop dedicated cardiac catheterization services, but to offer open heart surgery services as well. With much planning, dedication and hard work on the part of key players and dedicated staff members, that mission was accomplished this fall. Barberton Hospital had performed cardiac catheterizations for nearly 10 years, but lacked a dedicated cardiac catheterization laboratory until October, 2003. A phased approach was used. Phase 1 to plan for two dedicated cardiac catheterization laboratories; Phase 2 for an open heart surgery program using the One Stop Post Op™ model for patient care.



Barberton Dry Run Mock Surgery

12 lead EKG interpretation, arrhythmia and pacemaker review.

Phase two was content specific to pre, intra and post care of the interventional cardiac catheterization patient and the open heart surgery patient. It included overview of interventional procedures, overview of open heart surgery procedures, post procedure and post operative complications, hemodynamic management of the patients and case studies.

Staff education was provided to over 100 staff members including those from ICU, Operating Room, Cath Lab, ancillary and support areas. In order to have the content preserved for orientation and education of new employees, BH had the sessions professionally recorded.

In the months leading up to the implementation, Barberton Hospital requested that HCV perform a program planning assessment to provide a status report of readiness for program initiation. This report addressed any last minute details to insure that all areas of program planning were on target. Immediately prior to program start-up, a dry run was held using a mock patient who went through every step of the patient care process: from registration and pre-op teaching, pre-op care, intra-operative procedure (including prepping, draping and a complete run through of the surgery including instrumentation) and post operative care. This allowed for all systems, processes and equipment to be tested prior to the first case and completed the staff education process.

On October 11, 2004, the first open heart surgery case was performed by Dr. Robert Debski and his cardiac surgical team. It was Health Care Visions' pleasure to work with such a dynamic group of people and play a role in Barberton Hospital's great success!

Health Care Visions (HCV) worked with Barberton Hospital on the planning and implementation for the cardiac catheterization laboratories and on October 6, 2003, two new dedicated rooms were opened in an area that was a combination of new construction and existing space renovation. State-of-the-art equipment and well trained staff members made the expansion of these services a pleasant and welcomed event for the hospital and medical staff.

Barberton Citizen's Hospital Can Now Say “The Care You Want Is Here” as Their Cardiac Catheterization Laboratory and Cardiac Surgery Program is Successfully Implemented

Following the expansion of cardiac catheterization services, the hospital was ready to move to Phase II planning for open heart surgery services. Health Care Visions assisted BH with implementing the One Stop Post Op™ model of patient care,

including staff education and dry run exercises (mock patient scenarios prior to implementation).

Education and resources were provided to key department managers to assist in implementing and staffing the model. Accommodation codes (or levels of patient care) were developed for the model and staff education was provided.

Staff education was viewed by the hospital to be a critical component of the program planning. HCV, with the help of Barberton Hospital's Staff Education Department, performed a staff educational assessment. From that assessment, a staff education plan (also in two Phases) was developed and implemented. The first phase included a review of topics to establish a defined baseline for staff education and competency. The content included a review of cardiac anatomy and physiology, review of intra-aortic balloon pumping, review of cardiac catheterization procedures, sheath removal and management, acute myocardial infarction care, cardiovascular assessment, cardiovascular pharmacology,

SUPPLY INVENTORY MODELS FOR THE CARDIAC CATHETERIZATION LABORATORY *AN IMPORTANT PROCESS OF EXPENSE CONTROL*



Rose Czarnecki

During the past 30 years, the number of cardiac catheterization labs and associated procedures has grown, making it one of the fastest-growing clinical services. Until recently, revenues have kept pace with this expansion. The average operating margin for a procedure is currently between \$1,000 and \$1,800. In order to maintain attractive profit margins, hospitals can implement certain processes to monitor and control their operating costs. One "smart" process is to develop and maintain inventory control methods to manage supply inventory and purchasing practices.

The first inventory control/purchasing practice to consider is consignment. Consignment can be defined as goods placed at a customer's location, with ownership of these goods remaining with the supplier. Payment is not made until the item is actually used. The advantage of this model is that there are not any associated up front purchase expenses for the organization.

"Just in time" ordering, or the "JIT" model, was first developed in Japan and popularized by the Toyota Corporation in the 1970's. JIT is based on the time-honored concept of "optimal cost/quality relationship" which came about in an effort to rebuild the Japanese economy after World War II. It was done when resources were scarce and the Japanese had to bring quality products into circulation without a large supply inventory. Therefore, they ordered just enough supplies to manufacture their products when needed. In the cath lab, this means ordering supplies "just in time" for use. "If there is a case which

requires a special balloon, ordering is done for one balloon for that procedure. This eliminates the product sitting on a shelf, taking up much needed space, and possibly expiring before use.

Bulk ordering allows the institution to buy large quantities of a supply in exchange for a price break. This has the potential to save a hospital quite a bit of money, but only if it is a product that is frequently used and would be purchased regardless. There is a risk if the product, which is now owned, becomes obsolete, forcing cath labs to use up their large supply before purchasing newer, perhaps superior items.

Bar coding is another option to consider. A bar code is a set of characters, encoded as a series of vertical bars and spaces that is scanned, decoded and transmitted by a special bar code reader to a computer. The computer is then able to access and/or update information about the item scanned from a database that contains information about the item. This information may include price, vendor name, quantity on hand, description, etc.

Health Care Visions recently conducted a survey of 70 cardiac catheterization labs throughout the country. The survey was geared to inventory management, and the results were not surprising. Widespread variation occurs with process but all managers reported growing concern and a need for change.

The survey disclosed that most managers are doing their own purchasing or using a combination of buying outright, consignment, just in time and/or bulk purchasing. Labs that perform 1,000 or less procedures per year reported that most of their

inventory is outright purchase or a combination of methods that include outright purchase. Typically, a staff member manually counts inventory and replaces what is needed. Some managers feel they have better control over inventory with this hands-on approach, but recognize that when their volumes grow, this method may become too time consuming and no longer meet their needs. In addition, these managers believe they are unable to control pricing.

Labs that perform more than 1000 procedures per year reported using a combination of manual purchase, consignment and/or bulk purchasing. These managers reported being pleased with the financial savings associated with consignment. Supplies are paid for when they are used, without the responsibility of paying for expired items. Bulk purchasing provided good discounts and savings; however, most managers felt that purchasing large quantities of a certain supply created space issues in their labs. Some managers felt they were often left with products sitting on their shelves since they were unable to use the amount they had to bulk order. They also identified that they were responsible for monitoring and rotating their inventory in order to avoid items from expiring. The managers who reported being very pleased with bulk purchasing were able to identify processes they had in place to control some of the above issues. Keeping a 30-day supply of the items can help avoid being caught with products that have expired or are no longer the most current technology. Contracting with the vendor to keep track of inventory and allowing for return of supplies that are not used or are no longer current can help make this purchasing method more user friendly.

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MESSAGE FROM THE PRESIDENT

I wish every one of our readers a great New Year!



Barb Sallo

I want to share with you some information, that remains a hot topic for cardiovascular programs: Diagnostic Imaging Utilization.

Health Care Visions presented an audio-conference on emerging technologies to diagnose CV disease in October and attendance was at an all time high.

Diagnostic imaging is the fastest growing medical expenditure in the US,

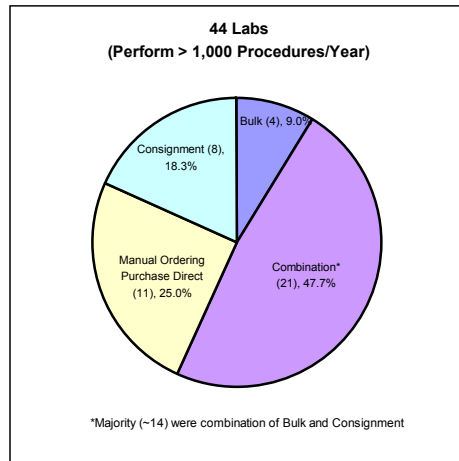
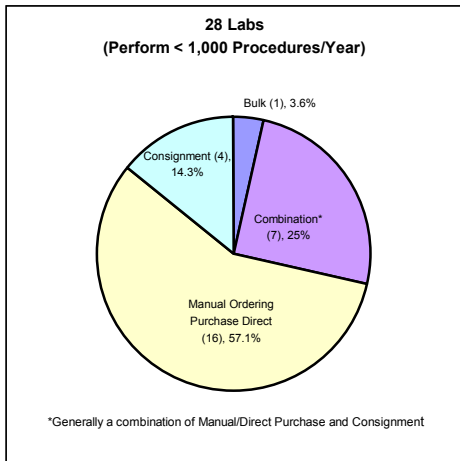
with an annual 9% growth rate—more than twice that of general medical expenditures (4.1%) according to the American College of Radiology Web site (May 2004). The cost of diagnostic imaging is projected to increase 28% between 2000 and 2005 to nearly \$100 billion annually according to a Booz Allen Hamilton analysis.

An article on the PA Health Care Cost Containment Council (PHC4) examines the reasons for increasing utilization and costs, notes the benefits and suggests strategies for purchasers. To access the article (fyi Issue No. 27, August 30, 2004) go to the web site: www.phc4.org, click on the link to fyi *Paying for Performance*, scroll to the bottom of

that article and click on the link to PHC4 Archives. The first article listed is *The Growth in Diagnostic Imaging Utilization*.

Also in this newsletter, HCV Consultant Rose Czarnecki presents an overview of an article on inventory models that appeared in the latest Cath Lab Digest. This article was developed as a result of our hospital friends asking us questions on hospital inventory practices. We conducted a survey via e-mail and received some interesting answers. If you have any questions, issues or process areas that are appropriate for a survey, let us know—we'll conduct the survey and share the results.

Supply Inventory Models, Continued



Only 28% of the CCL managers surveyed use the just in time method in combination with other purchasing methods. These managers felt this method solved their space issues and was cost effective. The managers that did not utilize this method stated they would be concerned about the timely delivery of the product.

Purchasing strategies can help overall cost containment efforts demanded by

the current financial constraints of providing healthcare. It is important that careful consideration is given to which model, or combination of models, are put into place to maintain and grow profit margins of the cath lab. Focusing energy and attention on methods and results with a defined process of reporting and accountability will be the "trademark" of a successful cath lab manager.

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BLOOD FLOW IN FINGERTIP MAY BE ABLE TO DETECT EARLY HEART DISEASE



Marsha Knapik

While treatment and intervention for heart disease have made rapid advances, there is still a desire to have a method to detect heart disease early to allow for timely intervention to prevent major cardiac events. A simple non-invasive test that measures changes in the blood volume in the fingertip may be able to detect those patients with early stages of coronary disease. A recently published study (December 7, Journal of the American College of Cardiology) by Dr. Amir Lerman of the Mayo Clinic explained how the test may be able to identify those patients who exhibit cardiac symptoms such as chest pain, but have

no obvious risk factors and do not show blockages in their coronary arteries.

RH-PAT or reactive hyperemia peripheral arterial tonometry measures the changes in blood volume in the fingertip. A probe is attached to the fingertip and a baseline blood volume is measured. A blood pressure cuff is then inflated on the patient's arm to slow the blood flow. The cuff is left in place for approximately five minutes. When the cuff is released, measurements are taken to determine how quickly and what volume of blood returns to the fingertip. This allows for an assessment of the endothelial function of the blood vessels. It is believed that endothelial dysfunction in the blood vessels of the fingertips

would be reflective of dysfunction in the endothelium, or lining of the blood vessels in the coronary system.

The initial study was funded in part by the National Institutes of Health, the Mayo Foundation and the manufacturer of the probe, Itamar Medical, Ltd. It included 94 patients, 55 of whom demonstrated coronary endothelial dysfunction. Although good correlation has been found between the fingertip response and the coronary vessels, additional studies will be needed to determine if the technique will be useful in routine clinical settings. Should this test be validated by those additional studies, it may provide a simple, inexpensive method to provide early identification of patients at risk for coronary disease.

Health Care Visions
3283 Babcock Boulevard
Pittsburgh, PA 15237

Phone: (412) 364-3770
Fax: (412) 364-3161
E-mail: hcv@hcvconsult.com
www.hcvconsult.com

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