

Cath Lab Digest

A Product, News and Clinical Update for the Cardiac Catheterization Laboratory Specialist

CARDIOVASCULAR INFORMATION SYSTEMS (CVIS)

ECG Management System Improves Care, Recovers Significant Revenues

By Kerry Hamilton, Operations Manager of Heart and Vascular Care, Southern Regional Medical Center

I have worked in healthcare for two decades, the last 11 years of which have been at Southern Regional Medical Center (SRMC) in Riverdale, Ga. When I joined the heart and vascular care team at SRMC, our entire cardiology suite had information systems in place — yet like many hospitals around the country, our workflow remained error-prone because, despite the technology, we remained paper-based. In particular, our laborious process in electrocardiogram (ECG) management resulted in lost ECGs, missed revenue and report turnaround times that could take up to four days. These delays and losses negatively impacted not only our department but several other hospital departments, including the OR, as well as our financial bottom line.

In December 2009, we left our previous technology system behind and implemented Horizon Cardiology, a cardiovascular information system (CVIS) from McKesson that includes a web-enabled ECG management solution. Being web-enabled allows our cardiologists to review and report on their ECGs when and where it is convenient for them, allowing them to be more productive.

My specialty is cardiology, so I have seen many different systems, but I have never seen anything as seamless and efficient as Horizon Cardiology ECG Management. And the financial impact was significant.

Challenges

Before implementing the McKesson solution, we had five full-time techs that spent approximately 75% of their day performing administrative duties for ECG because the entire process, even charging, was manual. Here's how it worked: A tech would perform a test, upload it into the management system and then the cardiologist would have to come to the department to read it. Our techs developed a work-around by printing out each ECG and putting it in a patient folder. The cardiologists would be seen carrying a huge stack of these patient folders around the hospital. After the cardiologists marked up the ECGs, they would be transcribed back into the system by my techs, and the cardiologist would then log into medical records to sign the transcribed reports. As a result of this workflow, ECGs were often lost and our turnaround time hovered between three to four days.



Kerry A. Hamilton, BBA-HCM, Operations Manager, explains how an integrated CVIS and ECG management system improved their efficiency, and bottom line.

We all know that when your hospital's referring physicians and surgeons aren't happy, nobody is happy. We experienced a backlash from referring physicians because the cardiology department's lagging turnaround time delayed their ability to treat patients.

The OR was also impacted. During pre-op, patients were given an ECG. If it wasn't read by a cardiologist, the anesthesiologist and surgeon wouldn't begin the surgery because the patient hadn't been cleared. My staff would have to interrupt their current work to get the chart, run around to find a cardiologist to read the ECG, and then fax the report to the OR. Our ECG process resulted in more than 20 delays of surgical procedures each month, which resulted in a significant hospital expense.

My staff also had to handle all the billing, and with approximately 2,400 ECG readings a month, you are going to miss some billings if you are doing

it manually. We used different vendors, without interfaces, for our HIS, CVIS and ECG management, so if a patient receiving an ECG wasn't in the HIS system, there was a chance that the patient bill for that ECG would fall through the cracks.

Solutions

I served on the vendor selection committee alongside the SRMC Director of Heart and Vascular Care Donna Waggoner, IT personnel and cardiologists. There were many reasons why we all chose McKesson.

We found the ease of use of Horizon Cardiology to be incredible and the image quality to be the best I have seen. We also loved the ability to have a single system solution for CVIS, including ECG management. Because the ECG management is web-enabled, we could allow our 28 cardiologists on staff to read ECGs anywhere: on the floors, in their office, waiting to do a procedure, or even remotely from home. In addition, we chose McKesson's HorizonWP Physician Portal so that all of our clinicians could have the same convenience of immediate access to the cardiologist's reports and images from anywhere.

The implementation was scheduled



Southern Regional Medical Center EKG team (from front to back): Kerry A. Hamilton, BBA-HCM, Megan Moore (EKG Technician), Norma Dorsey, CCT (Lead EKG/Stress Technician), Jacqueline Manley (EKG Technician).

My techs now spend 5% instead of 75% of their time with administrative tasks, so they've been cross-trained to work the stress lab as well.

to take 30 days; however, McKesson was able to complete everything in three weeks with zero setbacks and everything working perfectly. That included an additional wrench I threw into the plan. With our previous system, we knew we were missing revenue because of our tremendous amount of paper. During the implementation, I posed a question to McKesson. I wondered if they could hook up Horizon Cardiology to our STAR 2000 HIS so that when the physician finalizes a report, it would alert the HIS and produce a bill. Our McKesson team built the connections, and now cardiologists read ECGs, click a button and the patient is billed.

Results

The ability to streamline our process using Horizon Cardiology ECG Management has resulted in reallocating the freed-up clinical resources, improving patient care by reading ECGs faster, accelerating report turnaround time, making our doctors happy, and capturing additional revenue.

We have eliminated administrative waste. My techs now spend 5% instead of 75% of their time with administrative tasks, so they have been cross-trained to work in the stress lab as well.

Cardiologists, who are typically apprehensive to implement new technology, immediately embraced the system. Our compliance is 100% and a big factor is that our cardiologists can read ECGs remotely, which they do 90% of the time. They perform 25,000 ECGs a year and now not even one is ever lost. The system allows cardiologists to read the report and sign off within seconds. Report turnaround time has been reduced

from up to four days to less than five hours. The system has also eliminated delays in surgery. In the past, if a critical finding was in an ECG, delays in reading it compromised the patient's safety. Now, the technology allows the situation to be handled rapidly, allowing our clinicians to provide the highest level of patient care.

As a nonprofit, every dollar is crucial and all savings are reinvested to further improve our ability to take care of our patients. McKesson was able to link our CVIS to our HIS, enabling SRMC to discover and bill \$500,000 in missed ECG charges from this fiscal year alone. This financial gain has given us a tremendous opportunity to help our community. ■

Supported by McKesson