



Albert Luce Jr. Heart Institute

The Medical Center of Central Georgia Engineers a Heart and Vascular Institute for the 21st Century

New Building Provides Opportunity for Across-the-Board Process Improvements, Advanced Information Systems and Leading-Edge Care

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Suellen Richardson
Assistant Vice President
The Georgia Heart Center

Highlights

State-of-the-Art Building with State-of-the-Art Software.

When The Georgia Heart Center broke ground on a new building that would house all cardiac and vascular care under one roof, administration, IT and clinicians realized they needed processes and systems just as state-of-the-art as the new building itself.

Enterprise-wide Commitment to Advanced Technologies.

MCCG sees advances in technology as advances in medical care as a whole—from new billing and clinical documentation options to automated registry participation to clinical documentation. All support MCCG’s goal of delivering high-quality, seamless care to its community.

Process Improvements Integral to CVIS Building and Implementation.

In preparation for the opening of the new building, Heart Center staff spent significant time creating workflow schemes and soliciting evaluations from multiple sources. They have used the same methods for building and implementing their cardiovascular information system (CVIS).

Success in a Highly Competitive CV Market. Over 80 miles from the Atlanta metropolitan area, The Georgia Heart Center pulls patients from all over the state because of its top-quality cardiac and vascular care.

great applications

BUILDING CARDIOLOGY CENTERS OF EXCELLENCE

On May 19, 2008, The Medical Center of Central Georgia opened the doors of its new Heart Center, the Albert Luce Jr. Heart Institute in downtown Macon. Patients were greeted by a state-of-the-art facility, replete with the best medical devices, next-generation software, fully automated systems—and of course highly skilled, highly trained physicians, clinicians and staff.

The new building is the physical expression of years of planning, but it is hardly the culmination. Healthcare is continually evolving, and therefore so is The Georgia Heart Center. Physicians and staff see each new advance as part of an ongoing progression from the cardiac and vascular medicine of today to the leading-edge care of tomorrow.

The second-largest hospital in the state, MCCG is over 80 miles away from the Atlanta metropolitan area. Despite its relatively remote location, MCCG provides care that is second to none and treats patients from nearly 80% of Georgia's counties, including those that might otherwise travel to Atlanta for treatment.

The cardiovascular service line has been at the forefront of MCCG's success. In 1977, The Georgia Heart Center at MCCG performed the first open heart surgery in Central Georgia. It is also the region's first cardiac center to offer the less invasive "beating heart" surgery and the sole provider of da Vinci® Robotic Surgery.

The result of this commitment to quality: The Georgia Heart Center is the fastest-growing cardiac and endovascular center in the Southeast.

"We serve our immediate community and we're the urban hospital for these rural hospitals in central Georgia. We want to give them access to our technology as much as we can," explains Georgia Heart Center Assistant Vice President Suellen Richardson. "We think this improves the access to healthcare for everybody."

Process Improvements Support Enterprise-wide Integration of Electronic Health Records

MCCG is moving toward electronic patient records in all clinical areas; fully integrated systems and fully automated processes can help them reach this goal. The Georgia Heart Center has been working on updating processes and technology for over five years. "It's something we've been paying attention to," says Cardiovascular Business Operations Director Cindy Hutcheson, a 24-year veteran of MCCG who joined the Heart Center in January 2007, just before they went live with LUMEDX's Apollo clinical data repository.

Plans for housing all heart and vascular care under one roof sparked interest in making broad changes in processes.



Engineering a Brand New Building and Brand New Systems – Concurrently!

Constructing a new building while creating a new healthcare ecosystem to support it is a big project. Here's MCCG's approach:

Rethink, reinvent. Don't just continue doing everything in the same way. Think about how things can be done differently—and better.

Nothing is too small to ignore. Evaluate each process and each step.

Plan, meet, coordinate, collaborate. Including physicians, clinicians, staff, IT and administration in decision-making ensures that process changes are process improvements.

View processes as fluid and evolving, and **keep the future in mind.**

Understand that in today's healthcare climate a hospital's **success hinges on data.**

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“The hospital’s philosophy is that it takes many sources to deliver and achieve quality healthcare,” says Suellen. The Heart Center staff recognized the parallels between a CVIS, which brings together data and images from disparate areas, and the guiding principles of their facility. Thus they knew that they could apply the same kind of process-improvement methods they were using for their new building to build their CVIS.

Building a CVIS: Strategic Planning and Conscious Collaboration

MCCG’s IT department worked closely with staff from the Heart Center to plan and implement carefully. “Initial planning and vendor selection took at least six months,” says Application Systems Director Stephanie Parker. “After we chose Apollo and decided on modules, we started implementation.”

Because the Heart Center’s goals are so ambitious and so many people are affected by IT and administrative decisions, communicating with physician groups, nurses, staff and other stakeholders has been critical to the project. “We have an EP meeting quarterly. We meet with the Vascular group monthly. We have a meeting with the cardiologists quarterly. And we have separate IT/Administration meetings and IT meetings, usually weekly,” Cindy says. Collaborating with all the end-users has both shaped the project and ensured a smooth implementation.

“We’ve been very methodical about how we approach process and tech improvements to make sure we’re not duplicating any work. For example, the nursing assessment of a patient goes into our HIS,” says Suellen.

National Registry Participation and Data Ownership

“When I joined The Georgia Heart Center, we had just started talk about implementing the clinical documentation piece. The goal was to more properly document cases. We also wanted to have all the data so that we could analyze operations and care patterns, those types of things. We wanted to be able to drill down to the nth degree. Because other areas of the hospital don’t always get down to the level of analysis that the Heart Center needs,” Cindy says.

The Georgia Heart Center understands that in today’s healthcare climate a hospital’s success hinges on data. One of the first steps the Heart Center team took was to automate their national registry participation. The Heart Center has been participating in the ACC-NCDR® CARE and ICD registries for two years.

“We register all patients, not just Medicare,” says Cindy. “We do that for a few reasons. One is practical, because the staff does not necessarily know the payer mix at the time the patient comes in for a procedure. And registering all our

ALBERT LUCE JR. HEART INSTITUTE

- 13 procedure labs for cardiac and endovascular patients
- 10 diagnostic testing rooms (for ultrasounds, treadmill stress tests and other procedures) 60 patient rooms
- 42 recovery rooms

THE GEORGIA HEART CENTER PROCEDURE VOLUMES

- 24890 invasive procedures per year
- Caths: 7800 per year; 2100 of these were interventions
- EP: 2000 per year
- Peripheral vascular: 2300 per year

patients provides us with more data that we can use for our own purposes.” This allows the Heart Center to set its own internal benchmarks, analyze performance metrics and make changes in processes as necessary.

Automating the CV Inventory and Billing Process

Another key piece of The Georgia Heart Center’s CVIS is their automated billing system, connected to purchasing and materials management.

“During a patient case we have all the inventory loaded into Apollo in each of the modules. The staff will pick out what we’re using or have used for any case or procedure,” says Cindy. Interfaces connect Apollo to MCCG’s EHS system. Apollo automatically sends information about inventory usage. If inventory is low, a trigger generates purchase orders.

Automated inventory information can be filtered to show what is available for use in each location. This informs staff when they need to reorder a product—and helps the Heart Center assess what they’re using most. This paves the way for further analysis.

Product usage data is linked to the patient’s medical record, “We have a billing number stored in Apollo. As a product is used, it’s checked off that it’s now billable. It will then come up much faster on a bill. Billing is much quicker because it used to be done manually with a charge sheet. This is just generally a much better way of matching revenue to expense too.”

Next Steps: Scanning Products, Structured Physician Reporting and More

“We’re still implementing,” says Cindy. “It’s a process. We have a lot we want to do. Our next steps are to finalize how we are going to scan products, our inventory. And implementing CardioDoc [structured physician reporting], because that’s the part the physicians are really looking forward to.”

“The Clinical Documentation [ClinDoc] has been very easy for the end users to get in and do their documentation. That has really helped their workflow,” says Stephanie. Automated scheduling [CardioSchedule] is running smoothly. Before they go live with other modules, the team at MCCG and the Heart Center will apply the same process-improvement techniques they’ve been employing the past several years.

“We always want to make sure we have everything in place for doctors and the rest of the clinical staff before we go live,” says Cindy. At The Georgia Heart Center, this kind of sensitivity to the unique workflows of each clinical area—each department, each part of the cardiovascular enterprise—is coupled with a strong sense of purpose.

Explains Suellen, “Doing this is a way to get us prepared for the future. Healthcare and heart care are changing. It’s all going to be very different 10 years from now. We want to be ready for these changes.”

LUMEDX SOLUTIONS AT THE GEORGIA HEART CENTER

- Apollo Advance™ Clinical Data Repository
- CardioChart™ Web-Enabled Patient Record
- CardioDoc™ Structured Physician Reporting
- CardioInventory™ Inventory Management
- CardioManager™ Outcomes Dashboard
- CardioSchedule™ Real-Time Patient & Resource Scheduling
- CardioGate™ Interface Manager
- ACC Registry Module
- STS Registry Module
- EP Lab Implantables Module
- HL7 ADT Interface