Choces Your Choice For A Lifetime. Rush Heart Institute – A New Era has Come to East Mississippi, West Alabama in Cardiac Care In matters of the heart, Mississippi leads the nation. Cardiac Recovery Unit But don't break out the bubbly just yet. This distinction has to do with heart-related deaths - Mississippi has more per capita due to cardiovascular disease annually than all fifty states, Puerto Rico and the District of Columbia. It's a distinction that rankles Rush Hospital's Emergency Services director Charlotte Keeton, R.N. "We at Rush want to be a major contributor for improving those statistics among the people we serve," says Keeton. Rehab Now, after years of planning for equipment and facility upgrades, Rush Hospital has fully entered the arena against the state's number one health enemy. The Rush Heart Institute is now on-line and already making a difference. (continued on page 2) Heart Station Surgery Cath Lab Total Heart Care Rush Heart Institute

Rush Heart Institute -

A New Era has Come to East Mississippi, West Alabama in Cardiac Care

(continued)

Rush administrators emphasize that the cardiac care program's mission isn't to take patients away from other programs in the region, but to offer another cardiac care source to a population needing more.

"Our cardiac care program is the direct result of a change in the state's health mission a number of years ago that identified cardiovascular care as deficient in the entire state, especially in outlying areas away from urban centers," says Wallace Strickland, President and CEO of Rush Health Systems. "We deepened our range by enhancing the things we were already doing, and adding new services such as open heart surgery."

The Rush Heart Institute is actually a chain of heart-related services that could stand on their own, but together pack an impressive punch against cardiovascular disease. Some patients may use the entire array of services – from Chest Pain ER to Cardiac Rehab – while others may choose to benefit from only one or two. All patients, though, have something in common – when it comes to Cardiac Care at Rush they have choices, both within and without the program.

"We're offering a complete package of heart care with specialized physicians, support staff and upgraded facilities," says Strickland. "But we're also providing options. A person might use catheterization services here and another provider for surgery, or vice-versa. The key is, we're enriching their choices."

Most of the Rush Heart Institute's services are long-time fixtures at Rush. But what has changed with the addition of new services is the blending of all of them into one delivery system. Now, each service relates intimately with all the others to achieve one goal – the best possible outcome for each Rush heart patient.

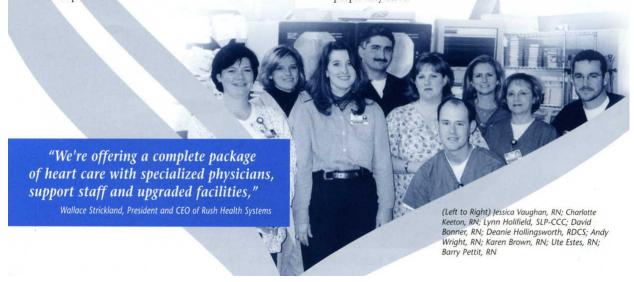
That hasn't just happened. It takes effort and sacrifice within each individual service to rise above the normal human tendency to guard turf. But rise above it they have, from physicians deeply committed to staff members working through difficulties with constant communication.

"There is a chain of good relations throughout the entire program, each discipline listening to the others," says Keeton. "We're united, thanks to superb leadership from our administration. They've helped to clarify the vision of comprehensive heart care that promises success for us and our patients."

That clarity of vision refers to everyone's understanding that cardiac care cuts across several continuums. To see only a new stand-alone heart program or an add-on service, is to miss its wider impact.

"Heart disease touches nearly every aspect of patient care," says Chuck Reece, Chief Administrative Officer at Rush Foundation Hospital. "It's a major factor in primary care, extended acute care, home health and public education. The Rush Heart Institute is our acknowledgement that we must take an integrated approach to heart disease across diverse specialties, programs and disciplines if we're to reduce its impact on our state and region."

In the end, the Rush Heart Institute is really about winners and losers. The people of East Mississippi and West Alabama are the winners now with fresh choices and a developing resource of the best this country has to offer in cardiac care. The ultimate loser will be heart disease itself. It is the mission of the physicians, staff and administrators of Rush Heart Institute to strip this foe of its fangs and improve the quality of life for the people they serve.



Deanie Hollingsworth, RDCS performs a sonogram

Perhaps you know someone – a father, a sister, a friend – who suddenly didn't feel just right. An unusual pain, persistent fatigue, or a sense of unease led them to visit a physician or a hospital emergency room. Eventually, they were told it was nothing – just go home and rest.

You remember all this because eventually that "nothing" was really something, a warning sign of cardiovascular disease. Because it wasn't recognized, it wasn't treated. In the end, the patient's quality of life diminished or, even more tragically, their life ended prematurely.

Dr. James Cady, Medical Director for Rush Emergency Room, doesn't want that to happen to any patient who visits Rush with chest pains.

"Our greatest concern is for those patients in what we call the 'gray zone.' They're typically in their forties with risk factors for heart disease like high blood pressure or diabetes. They may have some pain or discomfort in their chest. A preliminary examination shows they aren't having a heart attack."

Some of those patients, however, do have extensive heart disease that must be treated or serious life consequences will result. The key for Dr. Cady and his staff is to identify those patients quickly and efficiently. That's why they've instituted Chest Pain ER.

Chest Pain ER and Heart Station:

Putting Heart Patients on the Right Track

Chest Pain ER is a comprehensive program designed to route patients complaining of chest pains to a special unit that begins diagnostic examinations in minutes. Once that examination begins it doesn't stop until the staff can confidently rule out a heart condition, or route a true heart patient to the next step in the treatment process, the Rush Cath Lab.

"When a patient walks in the door with chest pains or discomfort, our number one priority is to rule out a heart condition first," says Barry Pettit, a registered nurse with Chest Pain ER.

To accomplish this mission, the Rush Heart Station, an adjunct service of the heart program, uses both traditional and new technology tools to pinpoint the condition and function of the heart from a number of different aspects.

"We use a variety of EKG monitoring devices, traditional stress test by treadmill, a chemically-induced stress test, and enzyme measurement tests, to name just a few," says Deanie Hollingsworth, coordinator for the Heart Station. "Because we've combined these into one service package, we can cut through a lot of waiting time and arrive at answers quicker and more efficiently."

Even so, this phase of treatment can take some time. Enzyme tests in particular are more accurate if measured at early and late intervals during the day. In the past, that required in-patient admission, a cumbersome and costly task that involved

referral by a cardiologist. To streamline this process, The Rush Chest Pain ER has a four-bed observation unit that can accommodate patients overnight without a full hospital admission.

"There are a number of advantages to this," says Dr. Cady. "We avoid the traditional admission process, which reduces cost to the patient and their insurer, and we relieve cardiologists of the burden of referral. It also keeps the patient within the ER environment."

Dr. Cady says the program is working smoothly, and word is apparently getting out. This past December visits to Chest Pain ER doubled over visits from December 2001.

"We are, in essence, a gateway for patients to enter the Rush heart program," says Dr. Cady. "Chest Pain ER makes sure the right patients receive the cardiovascular care they need – and that they're not turned away for lack of a proper diagnosis. That's our ultimate goal."



(Left to Right) Gay Flake, RN; Lisa Turner, RN; Dr. James Cady; Shannon Rawson, RN; Barry Pettit, RN



Cath Lab: Rush's Veteran Cardiac Service Blends Diagnosis and Treatment for Heart Patients



(Left to Right) Jamie Davis, RN; Jay Ziller, RN; Ute Estes, RN; Dr. Charles Davenport; Andy Wright, RN; Rodney Daniels, RN; Karen Ford, RN; Tony Nelson, RN

Critical. Strategic. Versatile.

There are plenty of adjectives to describe the Rush Cath Lab and its role in the new Heart Institute. Essentially, it serves at the intersection of diagnostics and intervention, a veteran service for cardiac care that has eased the monumental task of forming a new, comprehensive heart program.

The Rush Cath Lab first began operations in 1995 with one suite. As the field of catheterization blossomed with interventions like angioplasty and stent placement, Rush cardiologists kept pace with these innovations. The result: a steady growth of patients.

According to cardiologist Dr. Charles Davenport, patient growth led to the construction of a second cath suite.

"Last year, cardiologists at Rush performed an increased number of caths," says Dr. Davenport. "The second lab has been a major help in accommodating this growth. It helped reduce the bottleneck of so many cases operating in one suite."

The Cath Lab has also kept pace with the evolution of Rush's cardiac care. As the different elements of the heart program have come on line, the expectations for care have also increased. The Cath Lab has stepped up to meet these new challenges, such as 24/7 call teams.

"It's vital to our heart program to have a cath lab ready to function at a moment's notice," says Ute Estes, RN. "We now have call teams who are available at all times, every day of the week to come in. Once ER and Heart Station identify a patient who needs a cath, they notify a cardiologist and the call team. Our goal is to promptly assemble the team and proceed the cath."

Another challenge is adapting to new services now available through the Rush Heart Institute, including open heart surgery. By all accounts, the Cath Lab is growing in its role as an important member of a comprehensive team.



Rush Participates in CRUSADE Program

Over a million people each year walk into emergency rooms or primary care providers complaining of pain in their chest. Known to physicians as Acute Coronary Syndrome, chest pain is now universally recognized as a strong indicator of possible heart problems caused by blockage in the coronary arteries.

The question cardiologists continually ask is: are we doing enough to quickly and effectively diagnose heart disease and initiate proper treatment? The Duke Clinical Research Institute is coordinating a program that will help answer that question.

Known as CRUSADE, the program collects and analyzes chest pain data from approximately 400 hospitals across the nation, including Rush Foundation Hospital. Every quarter, the institute sends out their data assessment to the participating hospitals including percentile ranking of hospitals of similar size in a variety of categories.

"The study measures the speed of incoming ER patients to receive an EKG. The national average is between twelve and fifteen minutes, while Rush averaged six to eight minutes. I think that shows the positive effect Chest Pain ER and other aspects of the heart program are going to have," says Dr. Davenport.

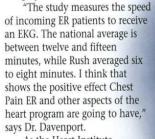
"The program is focusing on one particular population of patients," says Rush cardiologist Dr. Charles Davenport. "To put it simply, these are patients who have chest pains or with abnormal enzyme levels that might indicate a heart attack, yet not indicated by EKG readings."

CRUSADE basically measures what ER physicians and cardiologists do when a patient presents with chest pains: what kinds of tests, treatments or medications each patient receives and at what time intervals. It also follows these patients through their subsequent care, attempting to find patterns between the kinds and speed of care and the eventual outcome. Researchers hope to find connections between treatments and outcome that could help improve and standardize care.

Participating hospitals also benefit from the assessments they receive back from Duke. "The comparison assessments are extremely helpful to our heart program," says Dr. Davenport. "They help us focus on problem areas where we need to improve procedures or performance."

In the most recent released data from the third quarter of last year, Dr. Davenport says Rush scored in the top 5-

percentile range in a very important category.



As the Heart Institute continues to strengthen, Dr. Davenport believes CRUSADE will serve as an important benchmark to measure success.

Dr. Charles Davenport, cardiologist





Dr. Michael Ard has opened the Family Medicine Clinic of Louisville, in conjunction with Medical Foundation, Inc. in January, 2003.

A native of Pontotoc, Mississippi, Dr. Ard grew up in Vicksburg. He graduated from the University of Mississippi School of Medicine in 1979, then completed his internship and Family Practice residency at UMC in 1983. During most of his career, Dr. Ard has practiced in the East Central Mississippi region, particularly Starkville and Louisville, as well as at Rush Foundation Hospital's Emergency Room.

He and his wife Susan have two daughters, Erin, a high school senior, and Anna, an eighthgrader. Away from his duties as a physician, Dr. Ard enjoys deer and turkey hunting and coaching softball.

Willie Buckley: Rush Heart Institute Offers a Choice for Health

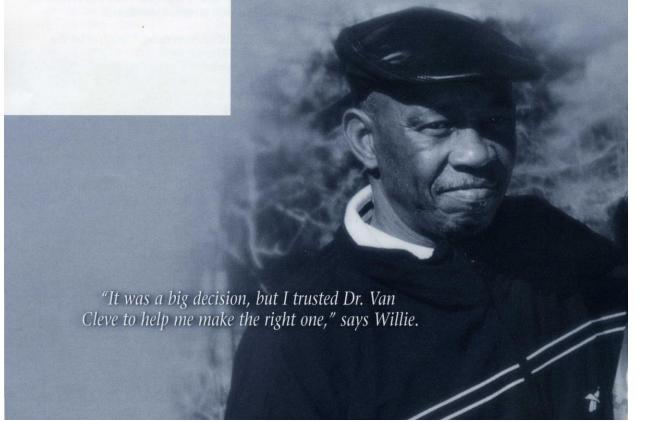
Willie Buckley wasn't used to feeling bad. He had worked hard all his life, first as an auto mechanic and then as a construction contractor. Suddenly, he began to feel tired and sometimes hard to catch his breath.

In 1991 he went to his doctor for answers. They found that the aortic valve in his heart was defective, that it couldn't keep up with the pumping action of his heart. Considering all things, he decided he could live with it for a while.

And, that's what he did until the fall of 2002. The week before Thanksgiving he felt worse than he ever had. Driving from his home in Newton, he and his wife Betty went to the Rush ER where Dr. Melissa Campbell attended to him.

"We were there a while, and they ran a number of tests," says Willie. "Dr. Campbell came in and told us she didn't like what she saw from those tests. She was very thorough and caring – she took her time with me."

Though he may not have realized it at the time, Willie Buckley had just accessed the first link in the chain of care for the Rush Heart Institute, the





Chest Pain ER. Dr. Campbell had picked up on symptoms that were consistent with congestive heart failure. She recommended that he see a cardiologist.

"She first asked me if I had a doctor in mind," says Willie. "When I said I didn't, she referred me to Dr. Davenport."

In seamless fashion, Willie moved to the next link in Rush Heart care to Dr. Charles Davenport and the staff of the Rush Cath Lab. They performed a catheterization to determine the exact cause of his symptoms. Sure enough, they found that the defective valve had seriously deteriorated over the years. Willie now faced another choice.

"After the cath, we explained to Mr. Buckley his options," says Dr. Davenport. "I found him to be highly motivated to improve his condition, so he chose surgery to replace the defective valve."

Dr. Davenport next consulted with Rush's cardiovascular surgeon Dr. Dan Van Cleve. Dr. Van Cleve met with Willie and Betty and explained what he was facing. "I like to sit down with patients and their families and explain exactly what I'm going to do, in terms they can understand, including any options they may have," says Dr. Van Cleve.

For Willie, he would have a choice of the kind of valve Dr. Van Cleve would use as a replacement. The choices fell into two categories: mechanical vs. live tissue. Both had their advantages and disadvantages. Given his age, Willie chose the mechanical valve.

"It was a big decision, but I trusted Dr. Van Cleve to help me make the right one," says Willie. Not long after, Willie underwent the valve replacement surgery. The next day in the Cardiac Recovery Unit, he met with a little surprise. "Someone from the Rush Rehab department came in and got me up out of bed. I wasn't expecting that," says Willie. "But it really didn't hurt as bad as I thought it would."

In fact, Willie's caregivers were a little surprised by his response to therapy. "They told me that patients didn't get up and go as quickly as he did," says his wife Betty. "I know God was helping him recover."

Within a few days, Willie returned home. A few months after his surgery he had completed his post-operative cardiac rehab program, as well as checked back with Drs. Davenport and Van Cleve. Both were pleased with his progress, as was Willie himself.

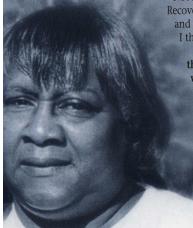
"I can breathe now, and I'm starting to feel more energy," says Willie. "I'm not back to full tilt vet, but I am getting up and around. I'm feeling better than I have in years."

The Buckleys give credit to the Lord first, and then to everyone who cared for Willie at Rush. They were especially impressed with how the physicians and staff kept them informed and included them in decisions.

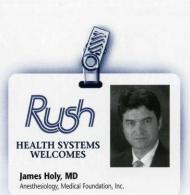
> "Everyone was so patient with us," says Betty. "They took the time to explain everything and didn't make you feel like you didn't know anything. It's a real blessing to have this kind of care."

Willie feels the same. "I am 100 percent satisfied with my treatment. Nobody could have done it better - I'd recommend Rush to anyone."









Dr. James Holy, an anesthesiologist now affiliated with Medical Foundation, Inc., is a native of Jackson, Mississippi. In 1981 he earned his Bachelor of Business Administration from Millsans College and began a career as a certified public accountant. After several years in that field, he decided to pursue medicine and entered the University of Mississippi Medical Center,

graduating in 1993.

Dr. Holy now serves exclusively as an anesthesiologist for Rush's cardiovascular surgery program, in his words a demanding but rewarding position. His three daughters, ages 14, 11 and 9, live in Jackson. In his spare time, Dr. Holy enjoys woodworking and backpacking

Open Heart Surgery:

A Desire to Help the Entire Cardiac Team

(Left to Right) Kristen Kelly, RN; Fran Rigdon, RN; Dr. Dan Van Cleve; Jennifer Cafferty, RN; Jessica Vaughan, RN; Neva Jo Pettigrew, RN; Celeste Taylor, RN; Tammy Rogers, RN

Rush's cardiovascular surgical team can say it by heart: "I'm just happy to be here and hope I can help the ball club." That's because their new leader, cardiovascular surgeon Dr. Dan Van Cleve, says it all the time.

Obviously, the line from the film Bull Durham has special meaning for him. Maybe, like the film's characters, it's because Dr. Van Cleve was once a standout baseball player with the Mississippi State Bulldogs, then for a couple of years with the Texas Rangers organization

before going to medical school.

Then again, maybe it's because there's a bit of irony in it. Unlike Bull Durham's main character Crash Davis for whom the line is merely a standard cliché to feed the media, Dr. Van Cleve actually means it. He is "happy to be here," and, by all accounts, he really does want to help his new team, the Rush Heart Institute.

"I think teamwork is very important – what we do here can't depend on any one person," says Dr. Van Cleve. "Even though we haven't been together very long, I believe we've already developed a great team in

every aspect – in nursing, perfusion, anesthesia, cardiology and our other support roles."



Dr. Dan Van Cleve



- · A native of Jackson, Mississippi.
- Earned a Bachelor of Science degree in Chemistry from Mississippi State University in 1986. Was a standout baseball player with the Mississippi State Bulldogs.
- Played professional baseball within the Texas Rangers organization for two years.
- Returned to medical school and earned his degree from the University of Mississippi Medical Center in 1993.
- Completed a general surgery residency in 1998 at Baylor College of Medicine, Houston, Texas.
- In 2002, completed a fellowship and residency program in cardiovascular surgery at nationally recognized Texas Heart Institute in Houston where he participated in over 2,000 open heart procedures.

Open heart surgery has acquired the stereotype of the heroic, lone surgeon rescuing patients single-handedly. That isn't what Dr. Van Cleve learned from his mentors at Texas Heart Institute. "Team" permeates not only what Dr. Van Cleve does personally, but also what he instills in his staff toward the entire heart program.

"Dr. Van Cleve has definitely brought a lot of confidence to us and the entire heart program," says Karen Brown, a nurse on the OR staff. "His energy is contagious. He makes you believe you can do it."

To say they're "excited" is an understatement. Not only are they fitting well with their new leader and his surgical practice and philosophy, they're also busy – very busy. If the surgical pace continues as it has since Dr. Van Cleve's arrival in December 2002, Rush Open Heart will perform three times the projected surgeries this year.

So, what is it that drives this confidence?
"I credit a lot of it with my training,"
says Dr. Van Cleve. "Texas Heart espouses a
no-nonsense approach, simple and direct.
Their philosophy doesn't discount
technology, but you as a surgeon should

manage it, not the other way around."

Another source of his confidence is his understanding of the big picture for heart care at Rush. Although he has an awesome responsibility as Rush's cardiovascular surgeon, he also realizes the entire program doesn't rest on his or his team's shoulders.

"I'm just one part of the puzzle, so to speak," says Dr. Van Cleve. "It's one of the things I emphasized when I first sat down with administration to talk about my coming here. If we're going to succeed it has to be a total approach – not just intervention but prevention as well."

As the team's proficiency develops, Dr. Van Cleve plans to introduce more innovations that will greatly enhance surgical safety and faster recovery. Just recently the team began to utilize endoscopic vein harvesting, a new technique that removes the vein portion from the

patient's leg for bypass grafting with only two small incisions.

"We have the capability to incorporate these innovations as they become accepted and available," says Dr. Van Cleve. "That especially includes the surgical suite. I believe it could stand toe to toe with the suites built in the new multi-million dollar Cooley building at Texas Heart."

Above all, Dr. Van Cleve

emphasizes the real strength of the program comes from "focusing on the fundamentals." He believes that performing the basics in consistent fashion will produce high results.

As Crash Davis also said, "We just want to give it our best shot and, Good Lord willing, things will work out." Dr. Van Cleve and his staff mean that one, too.

"It has been a dream of mine since the sixties to provide heart surgery and comprehensive heart care to patients at Rush."



Dr. and Mrs. Vaughan Rush tour the new cardiovascular surgery suite. Dr. Rush was on hand when Dr. Van Cleve performed his first heart surgery at Rush.



Post-Cardiac Treatment:

Taking the Final Steps to Full Recovery

After intervention or open heart surgery, a patient's battle with heart disease isn't over. There are a few final links in the chain of cardiac care, and they are no less important than those that preceded them. The skills of cardiologists and surgeons are all in vain without the dedicated skills of proper post-operative care and rehabilitation.

The first link a patient faces after surgery or intervention is Rush's Cardiac Recovery Unit, which only serves heart and

vascular surgery patients. Besides the specialized care required for post-operative heart and vascular patients, there is one major reason to keep them separated from the recovery areas of general surgery.

"The number one postoperative enemy for heart patients is infection," says Jessica Vaughn, a registered nurse with the Rush Cardiac Recovery Unit. "We concentrate on techniques and protocols that reduce the chance of it."

One of those techniques involves the use of specialized occlusive dressing for sutured areas. These are designed to remain in place for days. In fact, the patient removes the second application at home.

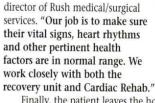
The nurses in the recovery unit have a saying for their patients: the one day you get to be sick is the day you have surgery. The day after surgery, they come to understand fully what they mean when the next link in the chain comes to call, therapists from Rush's Cardiac Rehab.

"Our first encounter with a patient is while they're in recovery the next day after surgery," says Lynn Holifield, director of Rush rehabilitation services. "Twice each day one of our therapists will get the patient up and walk them."

Holifield's staff doesn't take a weekend or holiday from this task. As long as there is a post-op heart patient in recovery, whether it's Saturday, Sunday, Christmas or Easter, someone from rehab will come by for this twice daily task.

Unless they require extended acute care, a job for The Specialty Hospital of Meridian, patients are usually recovered enough after a few days to finish the healing process at home. Before they go, though, they pass through one more link in the chain of care, the Step-Down Telemetry Unit.

"We're usually the last stop for a patient before they go home," says David Bonner,





Finally, the patient leaves the hospital for home. But, he

doesn't leave the chain of care just yet. Besides checkups with his cardiologist and surgeon, the patient has one more interaction with Rush. Once again, it's the caring staff of Cardiac Rehab that round out the patient's care.

"We provide a twelve-week therapy program that helps post-op patients regain their strength after surgery," says Holifield. "If a patient has other deficits, we can also incorporate sessions with speech and occupational therapists too."

Even after the initial program,

patients can continue for a monthly fee with an exercise therapist. According to Holifield, Rehab is working toward some additional certification that will increase recognition and coverage for these additional services with third party payers.

So here, in Rush Cardiac Rehab, a heart patient's long road to recovery comes to an end. A journey that began in Chest Pain ER months before comes to a close with a hug or handshake from a compassionate therapist. It's unlikely they'll remember every single person who helped them. For sure, though, they will remember this – every member of the Rush Heart Institute did whatever it took for however long it took to get them back on their feet.

That is the Rush Heart Institute Way.



CRU Nurses Jennifer Lafferty and Kevin Horne take care of heart surgery patient Ralph Donnersbach



